PROPERTY OWNERS WITHIN 200' OF THE SUBJECT PROPERTIES

TOWNSHIP OF MENDHAM, BLOCK 147, LOT 42.01, 42.02, 42.04, 42.05, 42.06, 42.07, 42.08, LOT 42.09, 42.10, 42.11, 42.12, 42.13, 42.16 BASED ON CERTIFIED LIST PROVIDED BY THE TAX ASSESSOR OF THE TOWNSHIP OF MENDHAM, DATED AUGUST 24, 2022

BLOC	K LOT	LOT ADDRESS	OWNER AND ADDRESS
146	19	41 COREY LN	ZAMMATARO, FRANK & JEANNIE, 41 COREY IN MENDHAM, NJ 07945
146	20	45 COREY LN	WEST, KENNETH W & KRISTINE, 45 COREY LN MENOHAM NJ 07945
147	2	52 HARDCRABBLE RD	MOREEN, JOSHUA D, 52 HARDSCRABBLE RD MENDHAM TWP, NJ 07945
147	3	52 COREY LN	SAUNDERS, GREGORY B SECOND/LIZA, 52 COREY IN MENDHAM, NJ 07945
147	4	50 COREY LN	HERMS, PETER S, 48 COREY LN MENDHAM, NJ 07945
147	5	48 COREY LN	HERMS, PETER S, 48 COREY IN MENOHAM NJ 07945
147	6	46 COREY IN	CHRISTIE, CHRISTOPHER J/MARY PAT, 46 COREY IN MENDHAM, NJ 07945
147	8	42 COREY LN	LONGO, ROBERT J & MARTA K., 42 COREY LN. MENDHAM, NJ 07945
147	9	40 COREY LN	VAN ETTEN, GLENN & KRISTIN, 40 COREY LN. MENDHAM, NJ 07945
147	10	38 COREY LN	CLEAR, ROBERT A & HELEN, 38 COREY IN MENDHAM NJ 07945
147	11	36 COREY LN	BYRNES, GERARD & PATRICIA, 36 COREY LN. MENDHAM, NJ 07945
147	15	67 TEMPE WICK RD	RIBACK, MITCHELL/DICKISON, KENNETH, 67 TEMPE WICK RD MENDHAM, NJ 0
147	16	TEMPE WICK RD	MENDHAM TOWNSHIP, 2W MAIN ST, PO BOX 520 BROOKSIDE, NJ 07926
147	<i>25</i>	S COBBLEFIELD DR	ACKERMAN, LAURA, 5 COBBLEFIELD DR MENDHAM, NJ 07945
147	<i>30</i>	15 COBBIEFIEID DR	PLIUTSINSKI, SERGEI/NATALIA, 15 COBBLEFIELD DR MENDHAM, NJ 07945
147	31	16 COBBLEFIELD DR	DAVID PULVER 2020 TRUST, 2711 RHONE DR PALM BEACH GARDENS, FL 33
147	<i>33</i>	3 MANOR HILL DR	ELAVIA, KURUS, 3 MANOR HILL DR MENDHAM, NJ 07945
147	34	4 MANOR HILL DR	MONAHAN, BRIAN W/SALLY I, 4 MANOR HILL DR MENDHAM, NJ 07945
147	<i>38</i>	73 BEVERLY DR	GREER, EDWARD/JEANNETE G, 73 BEVERLY DR BERNARDSVILLE, NJ 07924
147	<i>39</i>	75 BEVERLY DR	LEMBO, JASON R, C/O FREDCO, 315 HOME AVE., PASSAIC, NJ, 07055
			•

MASTRANGELO, DENNIS/LYNN, 70 BEVERLY DR BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 SIDIROPOULOS, CHARALAMBOSI JENNIFER, 71 BEVERLY DR BERNARDSVILLE, NJ 07924 3 EXMOOR DR LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 9 EXMOOR DR LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 13 EXMOOR DR LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 10 EXMOOR DR 10 EXMOOR DR, 10 EXMOOR DR MENDHAM, NJ 07945 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924

SNOOK, RANDOLPH C & DEANN M, 74 BEVERLY DR., BERNARDSVILLE, NJ 07924

4 EXMOOR DR LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 2 EXMOOR DR LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 HARDSCRABBLE RD 4 SUTTON PL EST LLC/MOHIN ABEDIN, 99 HUDSON ST. APT. 3006 JERSEY CITY, NJ 07302 LAWRENCE FARMLAND, L.L.C., 54 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 3 SUTTON PL SIDIROPOULOS, CHARALAMBOS/JENNIFER, 71 BEVERLY DR BERNARDSVILLE, NJ 07924 100 HARDSCRABBLE RD KEEBLER, HARRY W JR & THUM M., 361 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924 PADAVANO, KURT/JO ELLEN, 80 HARDSCRABBLE BERNARDSVILLE, NJ 07924

PADAVANO, KURT, 80 HARDSCRABBLE RD BERNARDSVILLE, NJ 07924

1025 LAUREL OAK RD

P.O. BOX 4830

TRENTON, NJ 08650-4830

P.O. BOX 490 76 SOUTH MAIN STREET ONE COMCAST CTR. CRANFORD, NJ 07016 AKRON. OH 44308 PHILADELPHIA, PA 19103 SOUTHEAST MORRIS CTY MUA MORRIS CTY MUNICIPAL NEW JERSEY AMERICAN

UTILITIES AUTHORITY

214A CENTER GROVE ROAD

VOORHEES, NJ 08043

74 BEVERLY DR

BOROUGH OF BERNARDSVILLE, BLOCK 8, LOT 2

BLOCK	LOT	LOT ADDRESS	OWNER AND ADDRESS
8	1	361 HARDSCRABBLE RD.	KEEBLER, HARRY W.JR & TRUDI M., 361 HARDSCRABBLE RD. BERNARDSVILLE, NJ 0792
8	3.01	351 HARDSCRABBLE RD.	YORK, LINDA M., 351 HARDSCRABBLE ROAD BERNARDSVILLE, NJ 07924
8	3.02	26 BEVERLY DR.	PARSELLS, GEORGE H., 26 BEVERLY DR. BERNARDSVILLE, NJ 07924
8	3.03	52 BEVERLY DR.	CIPRIANO, MELISSA, 175 FAIRFIELD AVE, SUITES-4C/D WEST CALDWELL, NJ 07006
8	3.04	70 BEVERLY DR.	MASTRANGELO, DENNIS & LYNN, 70 BEVERLY DR. BERNARDSVILLE, NJ 07924

JOCKEY HOLLOW ROAD/HARDSCRABBLE ROAD MENDHAM TOWNSHIP, 2 WEST MAIN STREET, BROOKSIDE, NJ 07926

NEW JERSEY AMERICAN 48 MIDDLE AVENUE WATER COMPANY 167 JFK PARKWAY

300 MADISON AVENUE PO. BOX 1911 SHORT HILLS, NJ 07078 MORRISTOWN, NJ 07962-1911 ZAYO 2561 BERNVILLE ROAD 100 RANDOLPH ROAD

BOROUGH OF BERNARDSVILLE 166 MINE BROOK ROAD BERNARDSVILLE, NJ 07924

35 IRONIA ROAD

MENDHAM, NJ 07945

290 MT. PLEASANT AVENUE

19 SADDLE ROAD

CEDAR KNOLLS, NJ 07927

BOROUGH OF MENDHAM, BLOCK 147, LOT 42.02 & 42.14

BASED ON CERTIFIED LIST PROVIDED BY THE TAX ASSESSOR OF THE TOWNSHIP OF MENDHAM, DATED AUGUST 24, 2022

BLOCK	LOT	LOT ADDRESS	OWNER AND ADDRESS
2401	15	125 HARDSCRABBLE RD	PETRUCCI, JAMES J & PATRICIA, 125 HARDSCRABBLE ROAD, MENDHAM, NJ 07945
2401	16	111 HARDSCRABBLE RD	DAVINO, ANTHONY, PO BOX 300 MENDHAM, NJ 07945
2401	17	77 HARDSCRABBLE RD	KUTLU, HAKAN M & KIMBERLY A, 77 HARDSCRABBLE RD MENDHAM, NJ 07945
2401	18	51 HARDSCRABBLE RD	DUBIN, WAYNE S/LYNN A, 51 HARDSCRABBLE RD MENDHAM, NJ 07945
2401	19	49 HARDSCRABBLE RD	PRACHT, MARKUS J, 49 HARDSCRABBLE RD MENDHAM, NJ 07945
2401	31	2 OAK FOREST LN	VEGA, TERESA MARY/MC TIGHE, ROBERT, 2 OAK FOREST LN MENDHAM, NJ 07945
2401	31.06	99 HARDSCRABBLE RD	IRENE, SANDY/ANNE/LAWRENCE/ROBERT, 99 HARDSCRABBLE RD MENDHAM, NJ 07945

P.O. BOX 1911 MORRISTOWN, NJ 07962-1911 ADDISON, TX 75001 PUBLIC SERVICE ELECTRIC & GAS Co. 80 PARK PLAZA PO BOX 900 NEWARK, NJ 07102 MENDHAM BOROUGH SEWER UTILITY

P.O. BOX 2749 MORRIS COUNTY PLANNING BOARD MORRISTOWN, NJ 07963-0900 300 RAHWAY AVE UNION, NJ 07830

900 ROUTE 202/206 NORTH BEDMINSTER. NJ 07921 AMERICAN WATER SSC/GENERAL TAX DEPT P.O. BOX 5627 CHERRY HILL, NJ 08034 CABLEVISION, ATTN: KATHY BAKER

APPROVED BY THE PLANNING BOARD OF THE TOWNSHIP OF MENDHAM ON______

PLANNING BOARD CHAIRMAN DATE PLANNING BOARD SECRETARY DATE TOWNSHIP ENGINEER DATE

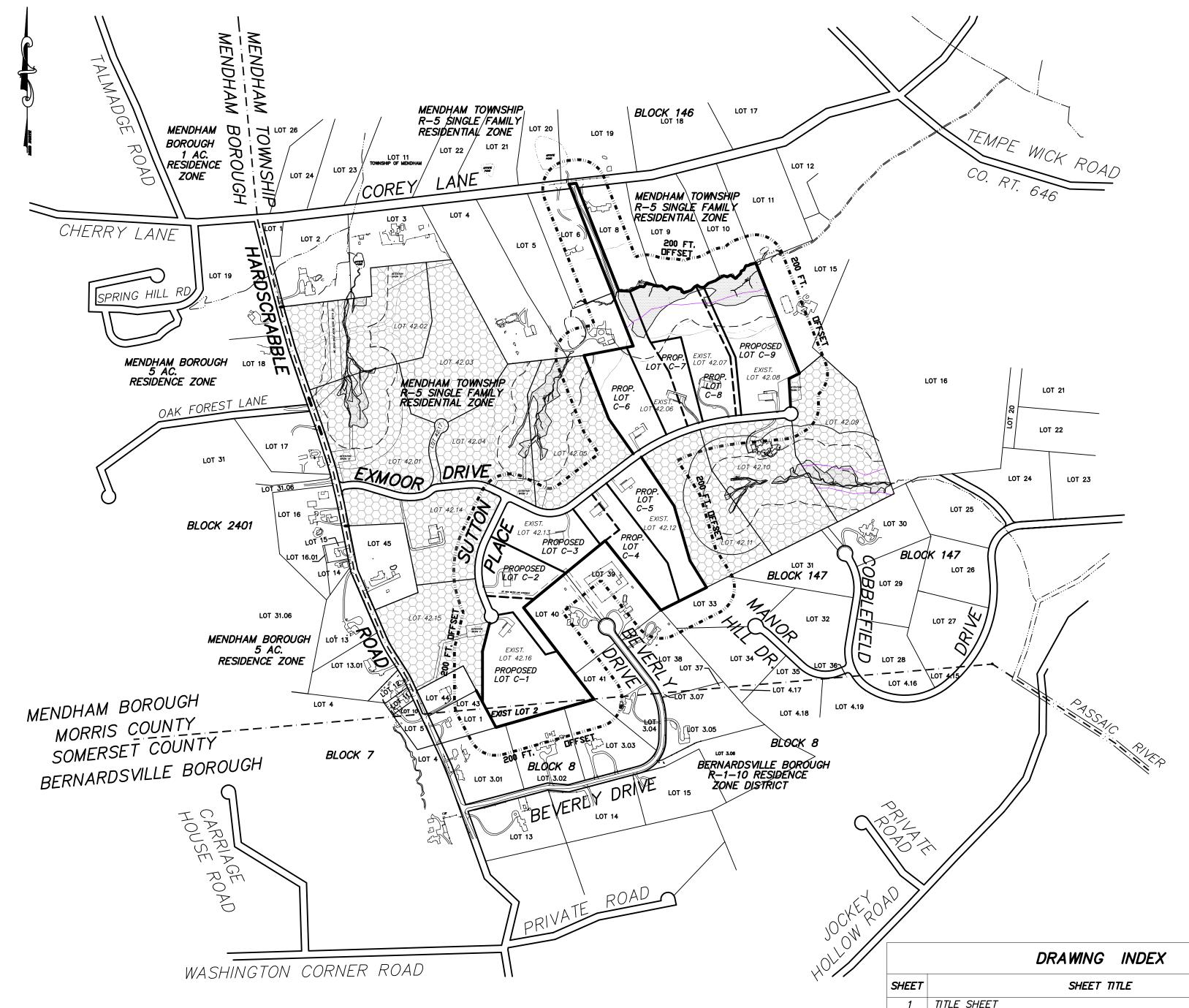
"LAWRENCE FARM ESTATES" PRELIMINARY & FINAL MAJOR SUBDIVISION EXMOOR DRIVE & SUTTON PLACE

LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TOWNSHIP OF MENDHAM, MORRIS COUNTY, NJ

LOT 2 ~ BLOCK 8

BOROUGH OF BERNARDSVILLE, SOMERSET COUNTY, NJ



KEY MAP

(IN FEET)

1 inch = 500 ft.

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591 N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

YANNACCONE

VILLA

& ALDRICH, LLC

CANDICE J. DAVIS

I.J. PROFESSIONAL ENGINEER NO 24GE04527000 DATE 10/04/22

54 HARDSCRABBLE ROAD NOT VALID WITHOUT SIGNATURE AND RAISED SEA BERNARDSVILLE, NJ 07924 THOMAS J. MALMAN, ESQ. PARSIPPANY, NJ, 07054 CIVIL ENGINEER & SURVEYOR CHRISTOPHER J. ALDRICH, P.L.S. YANNACCONE, VILLA, & ALDRICH, LLC

> DATE REVISION PROJECT TITLE : **LAWRENCE** FARM ESTATES MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE LOTS 42.06, 42.07, 42.08 &

10/04/22 PER PLN.BD.COMPLETE.& NJDEF

LOTS 42.12, 42.13, 42.16 ~ BLOCK 147 TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY LOT 2 ~ BLOCK 8 BOROUGH OF BERNARDSVILLE SOMERSET COUNTY. NEW JERSEY

SHEET TITLE :

TITLE SHEET

DRAWN DI:	DATE:
GY/JPW	SEPTEMBER 2, 2022
CHECKED BY:	SCALE:
GY/CJD	1" = 500'
w.o. 222040	
F.B.	
FILE:	
FILE PATH: M:\SEPTIC\DATA\2	222000\222040

SHEET 1 OF 15

FILE NAME: PB-01-TITLESHEET-rev1.DWG

DAVID C. KRUEGER ENVIRONMENTAL TECHNOLOGY, INC

ENVIRONMENTAL CONSULTANT

APPLICANT/OWNER

LAWRENCE FARMLAND. LLC

908-246-0283

ATTORNEY

C/O DAY PITNEY

973-966-8179

1 JEFFERSON ROAD

CANDICE DAVIS, P.E.

460 MAIN STREET

CHESTER, NJ 07930

P.O. BOX 459

908-879-6646

2 OVERALL EXISTING TRACT PLAN

12 SOIL LOG DATA SHEET

13 TYPICAL CONSTRUCTION DETAIL SHEET

3 ENVIRONMENTAL CONTRAINTS PLAN — EXISTING LOTS 42.12, 42.13, 42.16 & 2 4 ENVIRONMENTAL CONSTRAINTS PLAN - EXISTING LOTS 42.06, 42.07, 42.08

10 | EXISTING LANDSCAPING INVENTORY PLAN - Proposed Lots C-1, C-2, C-3, C-4, C-5

11 EXISTING LANDSCAPING INVENTORY PLAN - Proposed Lots C-6, C-7, C-8, C-9

8 | SLOPE ANALYSIS PLAN - Proposed Lots C-1, C-2, C-3, C-4, C-5

9 | SLOPE ANALYSIS PLAN - Proposed Lots C-6, C-7, C-8, C-9

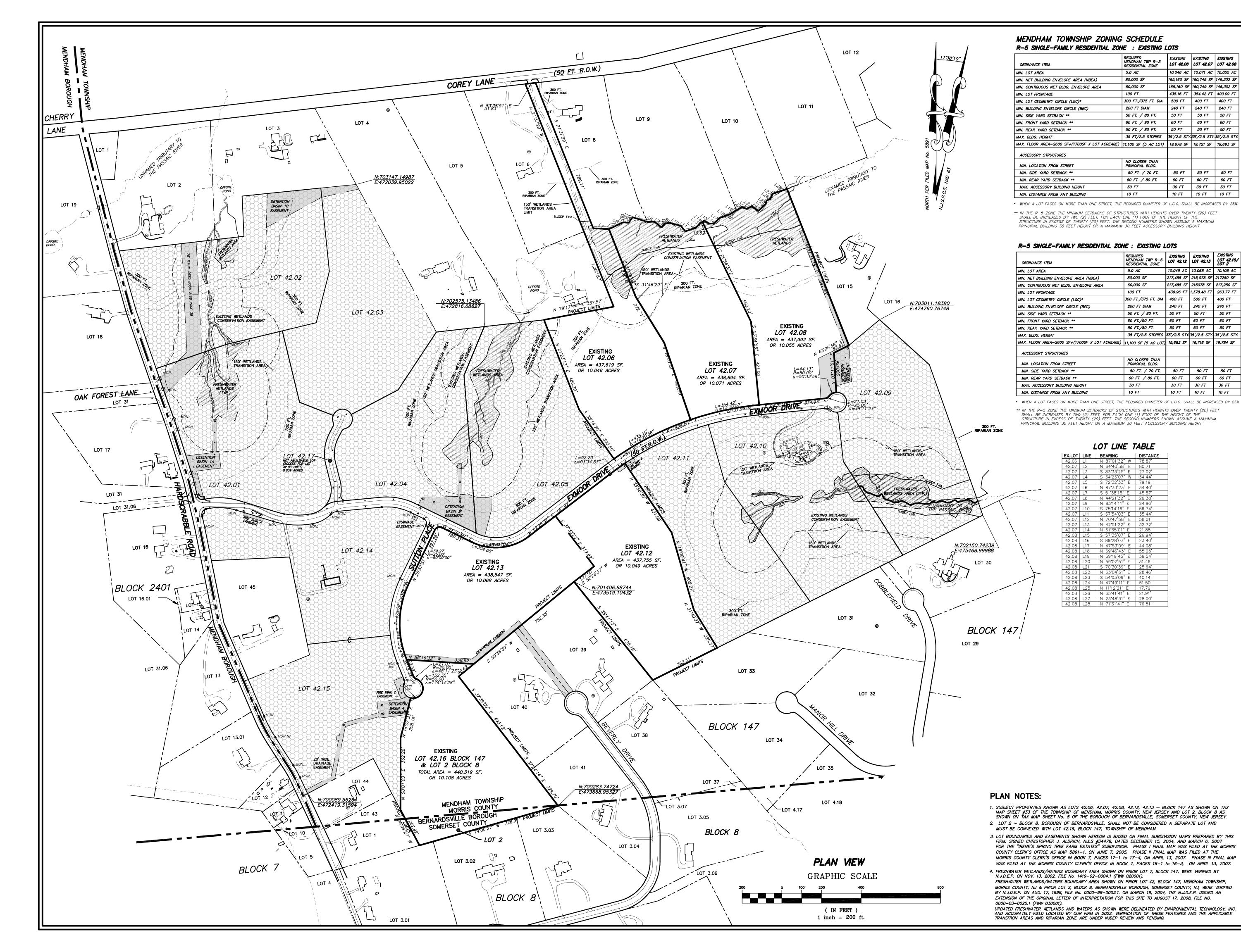
14 TYPICAL SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET

15 TYPICAL STORMWATER MANAGEMENT DETAIL SHEET

GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN - Proposed Lots C-1, C-2, C-3, C-4, C-5

GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN - Proposed Lots C-6, C-7, C-8, C-9

460 MAIN STREET P.O. BOX 50 CHESTER, NJ 07930 908-879-8509





YANNACCONE VILLA & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591

N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

CÁNDICE J. DAVIS

N.J. PROFESSIONAL ENGINEER NO. **24GE04527000** DATE **10/04/22**

CHRISTOPHER J. ALDRICH .J. PROFESSIONAL LAND SURVEYOR

NO. <u>34478</u> DATE 10/04/22

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL 1 | 10/04/22 | PER NJDEP

PROJECT TITLE :

DATE REVISION

LAWRENCE FARM ESTATES MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE

LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147 TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY LOT 2 ~ BLOCK 8 TAX MAP SHEET 8 BOROUGH OF BERNARDSVILLE

SOMERSET COUNTY, NEW JERSEY SHEET TITLE :

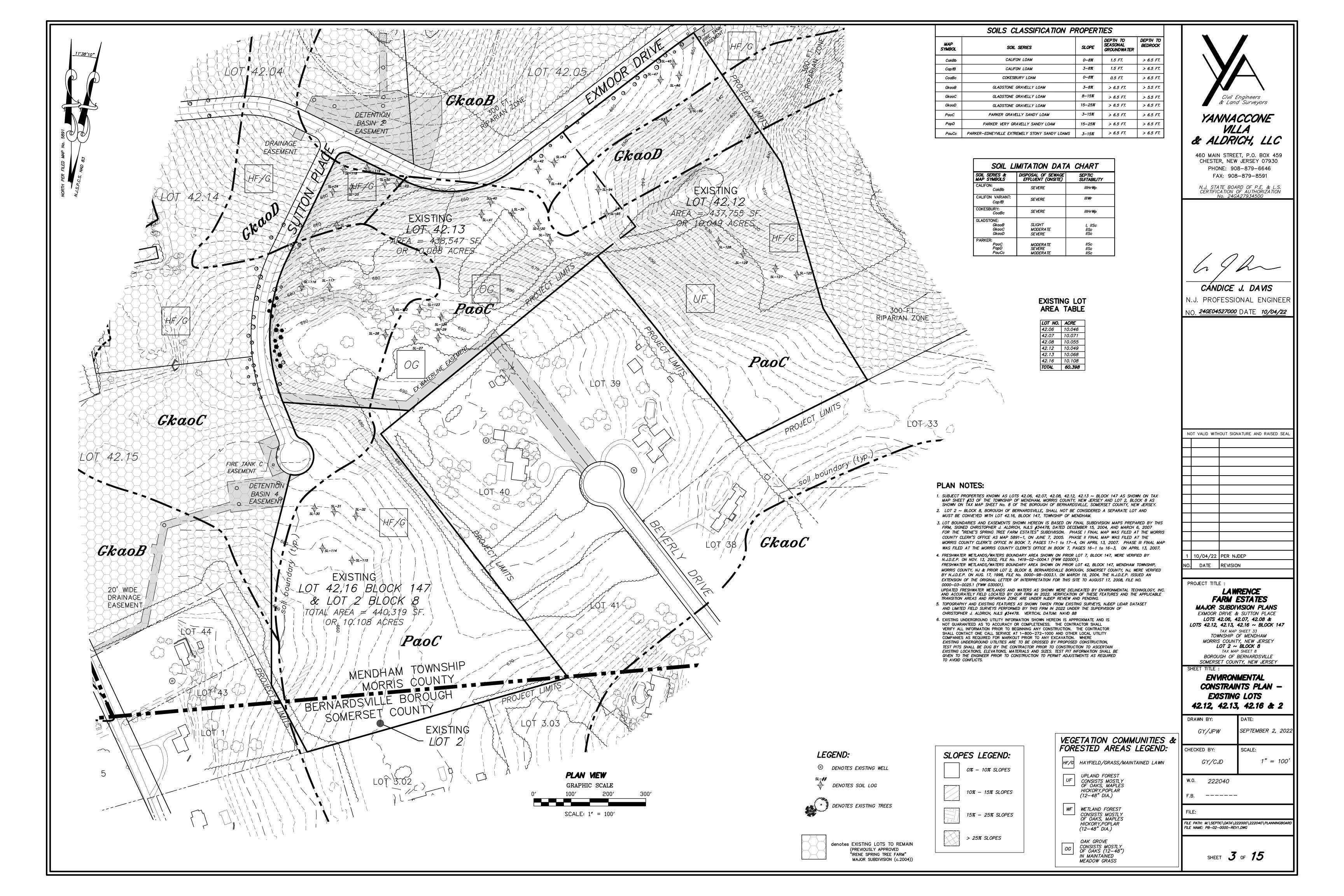
OVERALL EXISTING

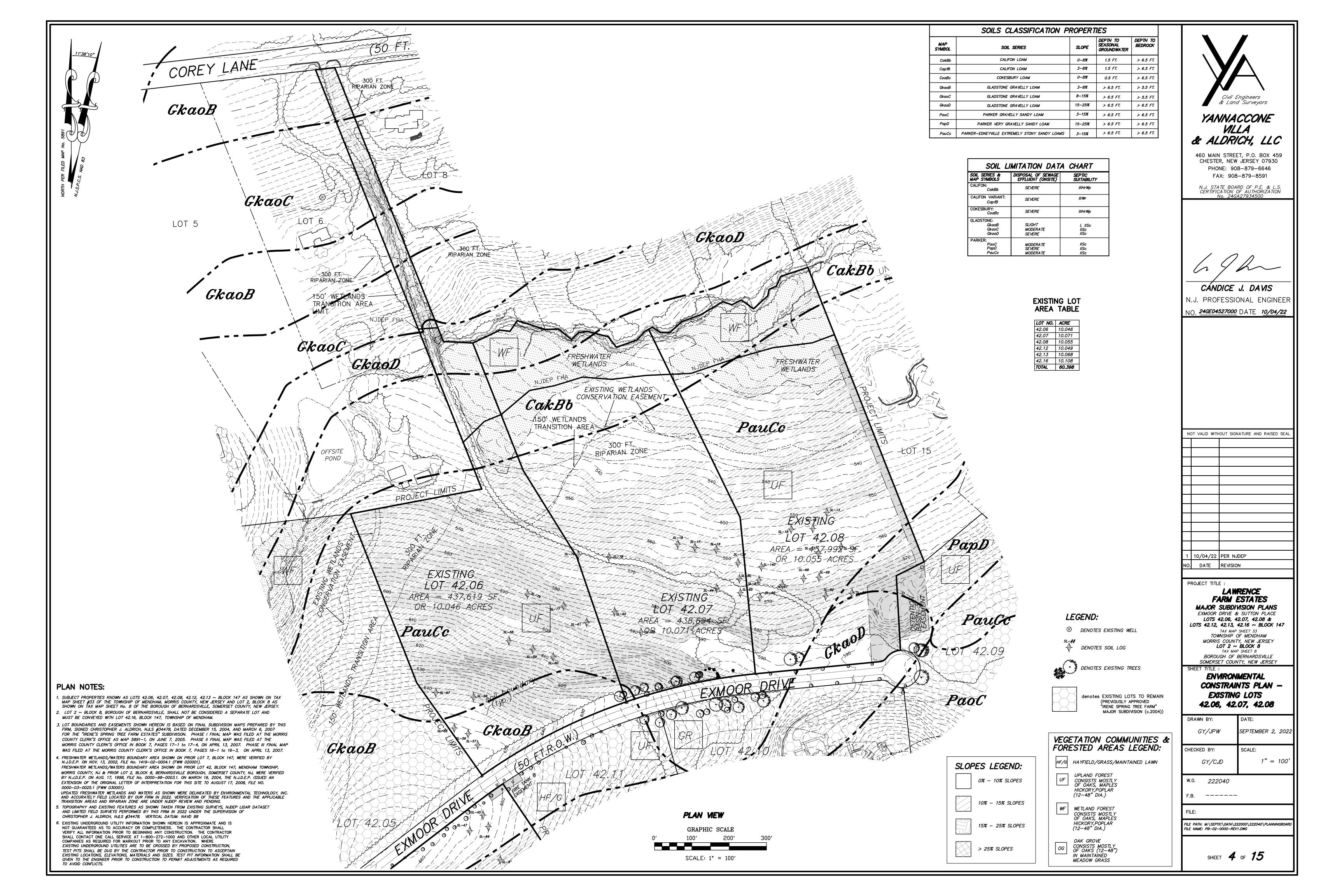
TRACT PLAN

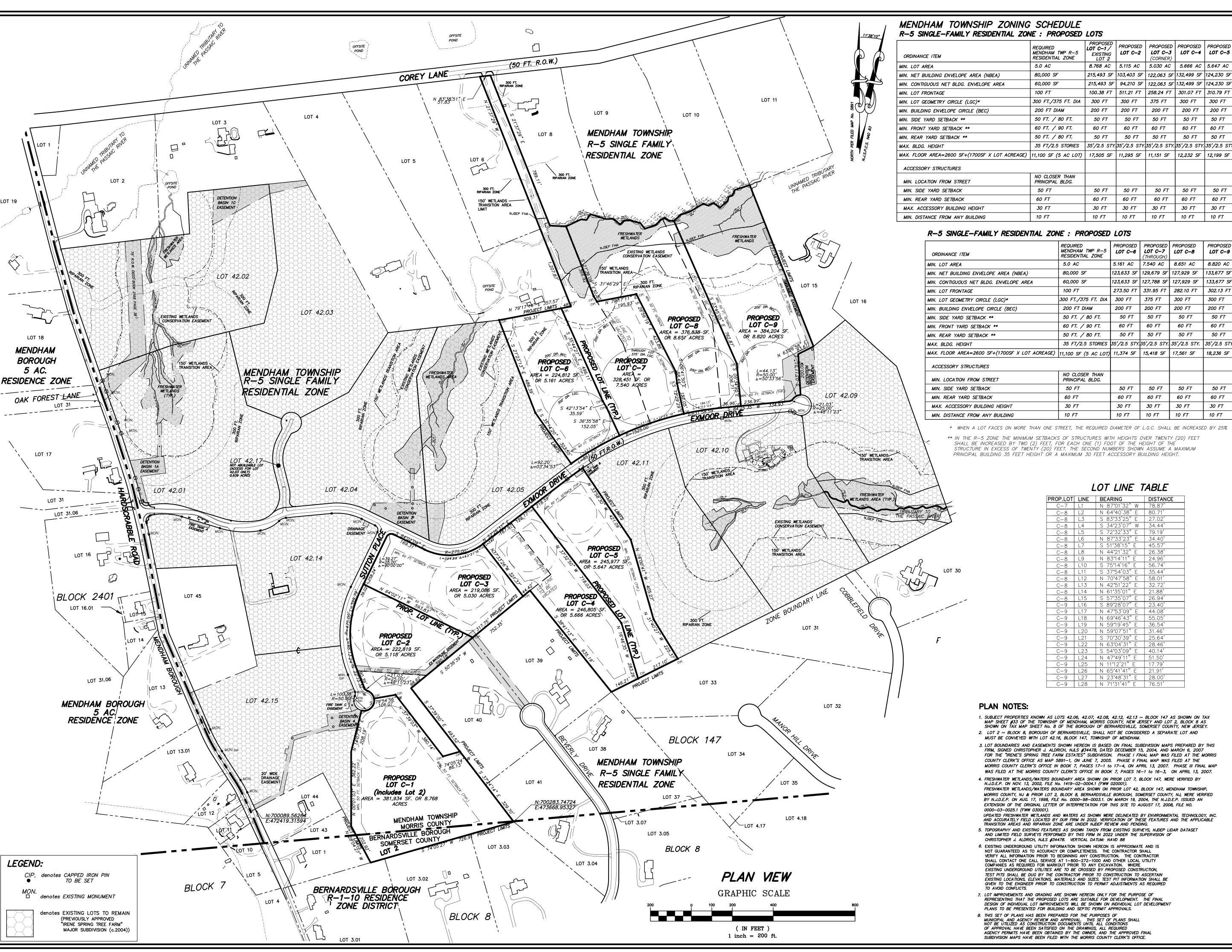
DATE: DRAWN BY: SEPTEMBER 2, 2022 GY/JPW CHECKED BY: SCALE: 1"=200' GY/CJD W.0. 222040

FILE PATH: M:\SEPTIC\DATA\222000\222040 PLANNINGBOARD\ FILE NAME: PB-02-0000-REV1.DWG

SHEET **2** OF **15**







YANNACCONE & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591

N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

CANDICE J. DAVIS

N.J. PROFESSIONAL ENGINEER

UN 24GE04527000 DATE 10/04/22

NEW JERSEY LICENSED PROFESSIONAL ENGINEE

AND LAND SURVEYOR No. 42575

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

10/04/22 REV. PER TWP.TRC. & NJDEP DATE REVISION

> PROJECT TITLE: **LAWRENCE** FARM ESTATES MAJOR SUBDIVISION PLANS

EXMOOR DRIVE & SUTTON PLACE LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147 TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY

LOT 2 ~ BLOCK 8 TAX MAP SHEET 8 BOROUGH OF BERNARDSVILLE SOMERSET COUNTY, NEW JERSEY

MAJOR SUBDIVISION PLAN

DRAWN BY:	DATE:
GY/JPW	SEPT 2, 2022
CHECKED BY:	SCALE:
GY/CJD	1"=200'
W.O. 222040	

F.B. ----

FILE PATH: M:\SEPTIC\DATA\222000\222040\PLANNINGBOARI FILE NAME: PB-02-0000-REV1.DWG

SHEET **5** OF **15**

PLAN NOTES:

- 1. SUBJECT PROPERTIES KNOWN AS LOTS 42.06, 42.07, 42.08, 42.12, 42.13 ~ BLOCK 147 AS SHOWN ON TAX MAP SHEET #33 OF THE TOWNSHIP OF MENDHAM, MORRIS COUNTY, NEW JERSEY AND LOT 2, BLOCK 8 AS SHOWN ON TAX MAP SHEET No. 8 OF THE BOROUGH OF BERNARDSVILLE, SOMERSET COUNTY, NEW JERSEY.
- 2. LOT 2 ~ BLOCK 8, BOROUGH OF BERNARDSVILLE, SHALL NOT BE CONSIDERED A SEPARATE LOT AND MUST BE CONVEYED WITH LOT 42.16, BLOCK 147, TOWNSHIP OF MENDHAM.
- 3. LOT BOUNDARIES AND EASEMENTS SHOWN HEREON IS BASED ON FINAL SUBDIVISION MAPS PREPARED BY THIS FIRM, SIGNED CHRISTOPHER J. ALDRICH, NJLS #34478, DATED DECEMBER 15, 2004, AND MARCH 6, 2007 FOR THE "IRENE'S SPRING TREE FARM ESTATES" SUBDIVIISON. PHASE I FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE AS MAP 5891-1, ON JUNE 7, 2005. PHASE II FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE IN BOOK 7, PAGES 17-1 to 17-4, ON APRIL 13, 2007. PHASE III FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE IN BOOK 7, PAGES 16-1 to 16-3, ON APRIL 13, 2007.
- 4. FRESHWATER WETLANDS/WATERS BOUNDARY AREA SHOWN ON PRIOR LOT 7, BLOCK 147, WERE VERIFIED BY N.J.D.E.P. ON NOV. 13, 2002, FILE No. 1419-02-0004.1 (FWW 020001). FRESHWATER WETLANDS/WATERS BOUNDARY AREA SHOWN ON PRIOR LOT 42, BLOCK 147, MENDHAM TOWNSHIP, MORRIS COUNTY, NJ & PRIOR LOT 2, BLOCK 8, BERNARDSVILLE BOROUGH, SOMERSET COUNTY, NJ, WERE VERIFIED BY N.J.D.E.P. ON AUG. 17, 1998, FILE No. 0000-98-0003.1. ON MARCH 19, 2004, THE N.J.D.E.P. ISSUED AN EXTENSION OF THE ORIGINAL LETTER OF INTERPRETATION FOR THIS SITE TO AUGUST 17, 2008, FILE NO. 0000-03-0025.1 (FWW 030001). UPDATED FRESHWATER WETLANDS AND WATERS AS SHOWN WERE DELINEATED BY ENVIRONMENTAL TECHNOLOGY, INC.
- AND ACCURATELY FIELD LOCATED BY OUR FIRM IN 2022. VERIFICATION OF THESE FEATURES AND THE APPLICABLE TRANSITION AREAS AND RIPARIAN ZONE ARE UNDER NJDEP REVIEW AND PENDING.
- 5. TOPOGRAPHY AND EXISTING FEATURES AS SHOWN TAKEN FROM EXISTING SURVEYS, NJDEP LIDAR DATASET AND LIMITED FIELD SURVEYS PERFORMED BY THIS FIRM IN 2022 UNDER THE SUPERVISION OF CHRISTOPHER J. ALDRICH, NJLS #34478. VERTICAL DATUM: NAVD 88
- 6. EXISTING UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ONE CALL SERVICE AT 1-800-272-1000 AND OTHER LOCAL UTILITY COMPANIES AS REQUIRED FOR MARKOUT PRIOR TO ANY EXCAVATION. WHERE EXISTING UNDERGROUND UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING LOCATIONS, ELEVATIONS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.
- 7. LOT IMPROVEMENTS AND GRADING ARE SHOWN HEREON ONLY FOR THE PURPOSE OF REPRESENTING THAT THE PROPOSED LOTS ARE SUITABLE FOR DEVELOPMENT. THE FINAL DESIGN OF INDIVIDUAL LOT IMPROVEMENTS WILL BE SHOWN ON INDIVIDUAL LOT DEVELOPMENT PLANS TO BE PRESENTED FOR BUILDING AND SEPTIC PERMIT APPROVALS.
- 8. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS, ALL REQUIRED AGENCY PERMITS HAVE BEEN OBTAINED BY THE OWNER, AND THE APPROVED FINAL SUBDIVISION MAPS HAVE BEEN FILED WITH THE MORRIS COUNTY CLERK'S OFFICE.

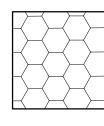
LEGEND:

denotes Existing Well

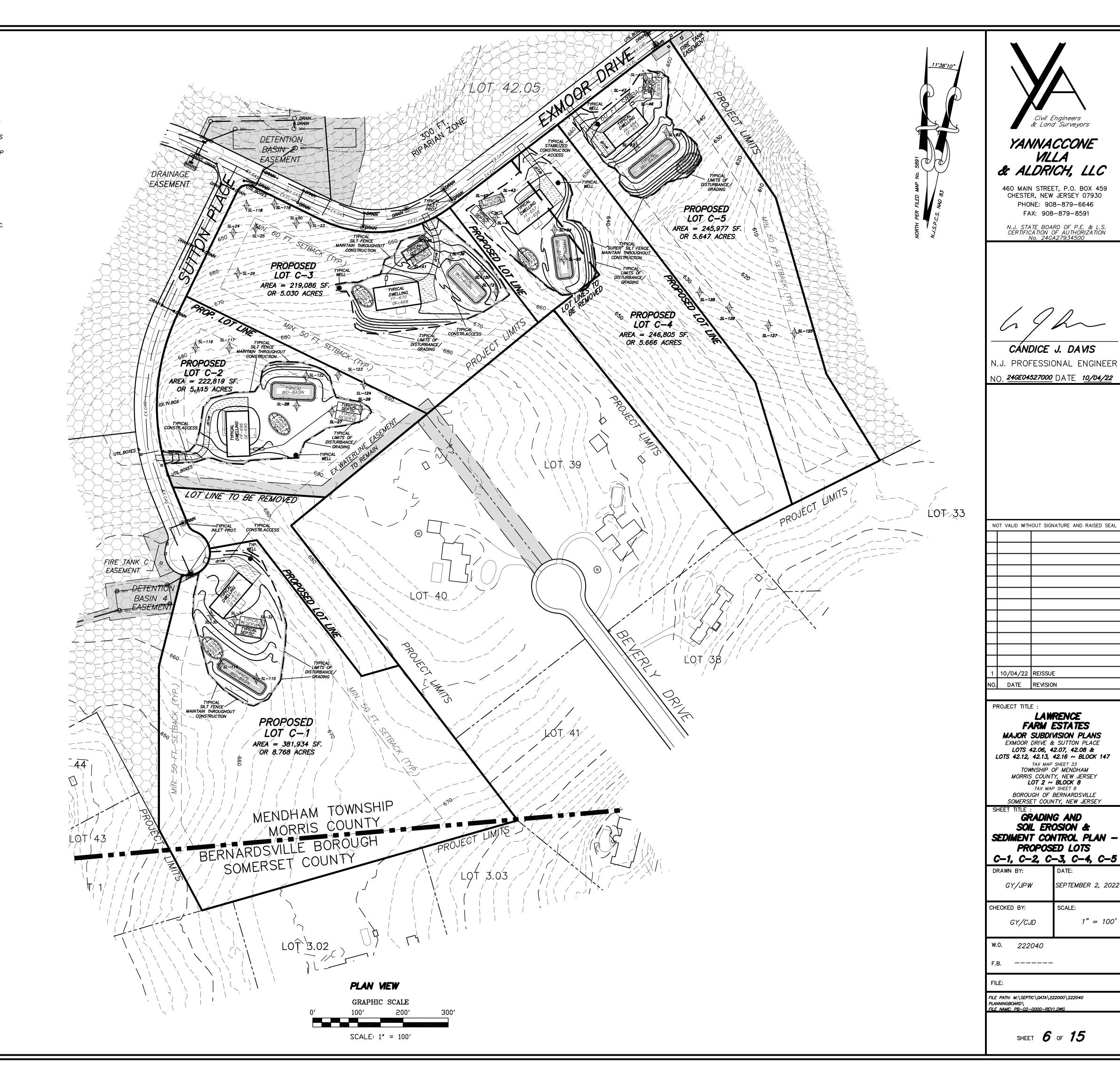
denotes Typical Well



denotes SOIL LOG



denotes EXISTING LOTS TO REMAIN (PREVIOUSLY APPROVED "IRENE SPRING TREE FARM" MAJOR SUBDIVISION (c.2004))



VILLA

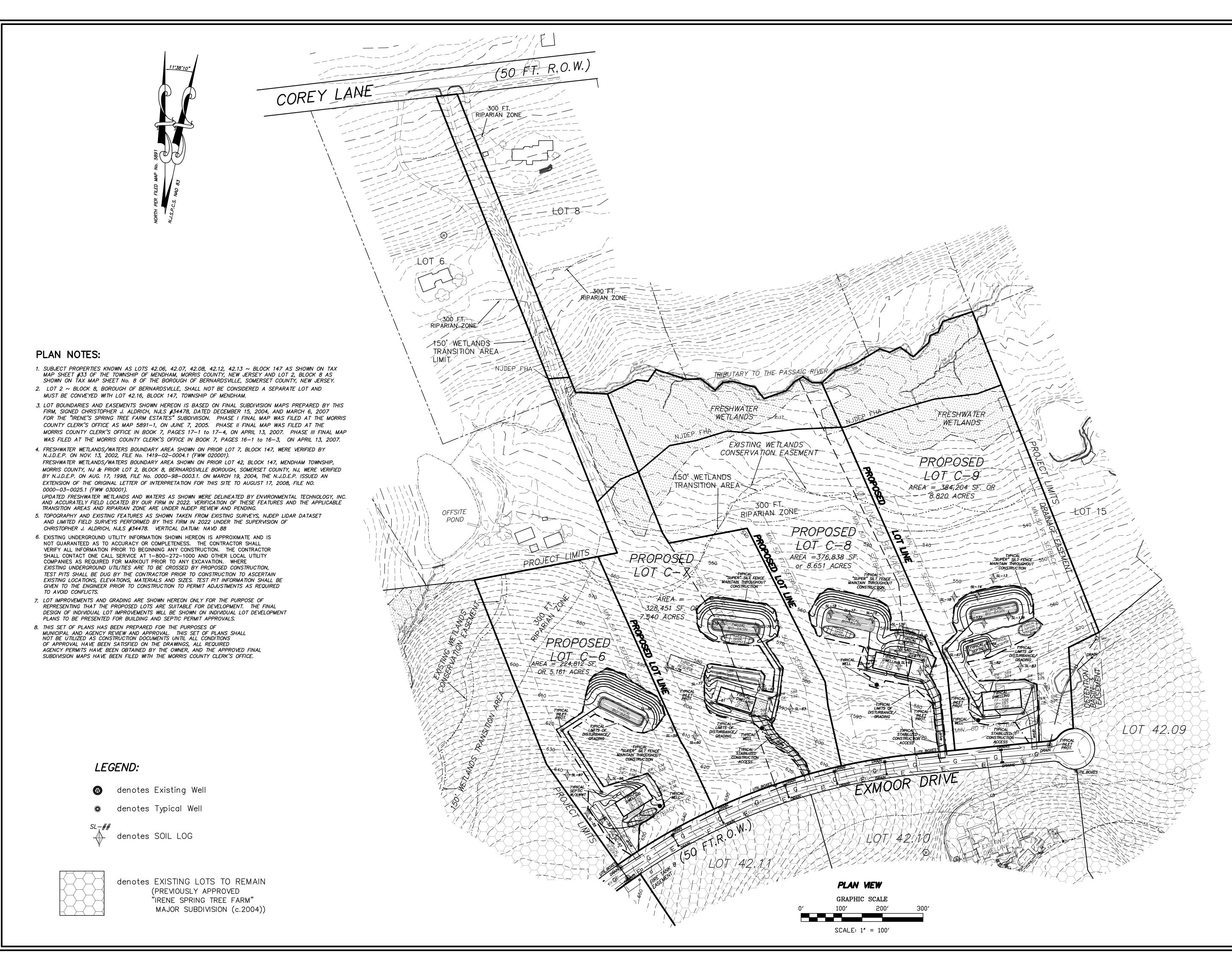
LAWRENCE

DATE:

SCALE:

SEPTEMBER 2, 2022

1" = 100'



Civil Engineers & Land Surveyors

YANNACCONE VILLA & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591

N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

hyph

CÁNDICE J. DAVIS

N.J. PROFESSIONAL ENGINEER

NO. **24GE04527000** DATE **10/04/22**

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

10/04/22 REV. PER TWP.TRC. & NJDEP
D. DATE REVISION

PROJECT TITLE :

LAWRENCE
FARM ESTATES
MAJOR SUBDIVISION PLANS
EXMOOR DRIVE & SUTTON PLACE
LOTS 42.06, 42.07, 42.08 &

LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TAX MAP SHEET 33

TOWNSHIP OF MENDHAM

MORRIS COUNTY, NEW JERSEY

LOT 2 ~ BLOCK 8

TAX MAP SHEET 8

BOROUGH OF BERNARDSVILLE

SOMERSET COUNTY, NEW JERSEY
HEET TITLE:

GRADING AND
SOIL EROSION &

SOIL EROSION & SEDIMENT CONTROL PLAN - PROPOSED LOTS C-6, C-7, C-8, C-9

DRAWN BY: DATE:

DRAWN BY: DATE: GY/JPWSEPTEMBER 2, 2022

CHECKED BY: SCALE: GY/CJD 1" = 100'

W.O. 222040

F.B. ————

FILE PATH: M:\SEPTIC\DATA\222000\222040\PLANNINGBOARD
FILE NAME: PB-02-0000-REV1.DWG

SHEET **7** OF **15**

MENDHAM TWP TYPICAL SLOPE DISTURBANCE TABULATION

	PROPOSED LOT C-1											
LAN	LAND SLOPE		PUBLIC	URBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	001415150				
SYMBO	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS				
	0-10%	375,901	0	54,358	54,358	14%	NO LIMIT	COMPLIES				
	10–15%	5,890	0	140	140	2%	25%	COMPLIES				
	15-25%	143	0	0	0	0%	15%	COMPLIES				
	>25%	0	0	0	0	0%	5%	COMPLIES				

	PROPOSED LOT C-2										
LAND	SLOPE	AREA	TYPICAL DISTU PUBLIC	HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	COMMENTS			
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS			
	0-10%	148,471	0	51,647	51,647	35%	NO LIMIT	COMPLIES			
	10–15%	57,143	0	3,521	3,521	6%	25%	COMPLIES			
	15-25%	16,261	0	416	416	3%	15%	COMPLIES			
	>25%	944	0	0	0	0%	5%	COMPLIES			

	PROPOSED LOT C-3											
LAND	SLOPE	AREA	TYPICAL DISTU	RBED AREAS HOUSE, YARD		TOTAL	MAXIMUM ALLOWABLE	001415170				
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS				
	0-10%	80,069	0	36,224	36,224	45%	NO LIMIT	COMPLIES				
	10-15%	109,790	0	17,889	17,889	16%	25%	COMPLIES				
	15-25%	27,665	0	1,510	1,510	5%	15%	COMPLIES				
	>25%	1,562	0	0	0	0%	5%	COMPLIES				

	PROPOSED LOT C-4										
LAND SLOPE		AREA	TYPICAL DISTU PUBLIC	JRBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	0014151170			
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS			
	0-10%	136,397	0	41,421	41,421	30%	NO LIMIT	COMPLIES			
	10-15%	94,871	0	7,936	7,936	8%	25%	COMPLIES			
	15-25%	15,418	0	77	77	0.5%	15%	COMPLIES			
	>25%	119	0	0	0	0%	5%	COMPLIES			

	PROPOSED LOT C-5										
LAND	SLOPE	AREA	TYPICAL DISTU	RBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	COMMENTS			
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS			
	0-10%	102,934	0	17,985	17,985	17%	NO LIMIT	COMPLIES			
	10-15%	116,356	0	21,791	21,791	19%	25%	COMPLIES			
	15-25%	25,358	0	3,601	3,601	14%	15%	COMPLIES			
	>25%	1,329	0	0	0	0%	5%	COMPLIES			

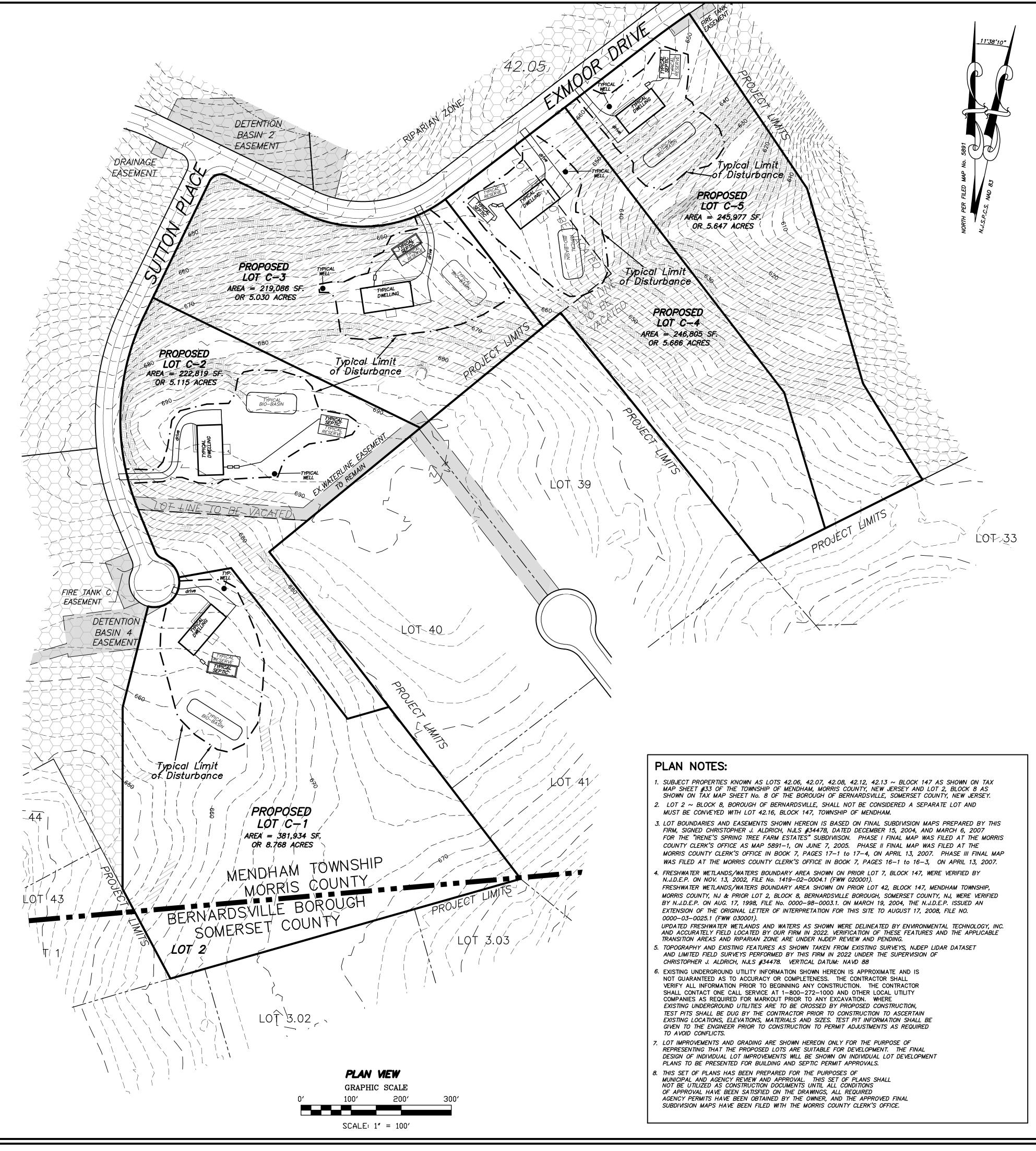
NOTE: STEEP SLOPES ANALYISIS BASED ON 2 FOOT CONTOUR INTERVALS.

denotes EXISTING LOTS TO REMAIN

(PREVIOUSLY APPROVED

"IRENE SPRING TREE FARM"

MAJOR SUBDIVISION (c.2004))



Civil Engineers & Land Surveyors

YANNACCONE VILLA & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591

N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

h Jha

CÁNDICE J. DAVIS

N.J. PROFESSIONAL ENGINEER

NO. **24GE04527000** DATE **10/04/22**

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

1 10/04/22 REISSUE

DATE REVISION

OJECT TITLE :

LAWRENCE
FARM ESTATES

MAJOR SUBDIVISION PLANS

EXMOOR DRIVE & SUTTON PLACE

LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TAX MAP SHEET 33

TOWNSHIP OF MENDHAM

MORRIS COUNTY, NEW JERSEY

LOT 2 ~ BLOCK 8

TAX MAP SHEET 8
BOROUGH OF BERNARDSVILLE
SOMERSET COUNTY, NEW JERSEY
ET TITLE:

SLOPE ANALYSIS
PLAN PROPOSED LOTS
C-1, C-2, C-3, C-4, C-5

DRAWN BY: DATE: $GY/JPW \qquad SEPTEMBER \ 2, \ 2022$ CHECKED BY: SCALE: $GY/CJD \qquad 1" = 100'$

W.O. 222040

FILE NAME: PB-02-0000-REV1.DWG

FILE:

FILE PATH: M:\SEPTIC\DATA\222000\222040\PLANNINGBOARL

SHEET **8** OF **15**

MENDHAM TWP TYPICAL SLOPE DISTURBANCE TABULATION

	PROPOSED LOT C-6										
LAND SLOPE		AREA	TYPICAL DISTU	JRBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	COMMENTS			
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS			
	0-10%	23,547	0	14,433	14,433	61%	NO LIMIT	COMPLIES			
	10-15%	95,427	0	21,859	21,859	23%	25%	COMPLIES			
	15-25%	98,961	0	12,263	12,263	12%	15%	COMPLIES			
	>25%	6,877	0	100	100	1%	5%	COMPLIES			

	PROPOSED LOT C-7										
LAND SLOPE		AREA	TYPICAL DISTU	TYPICAL DISTURBED AREAS PUBLIC HOUSE, YARD		TOTAL	MAXIMUM ALLOWABLE	0014151170			
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	DISTURBED (percent)	COMMENTS			
	0-10%	67,382	0	4,135	4,135	6%	NO LIMIT	COMPLIES			
	10-15%	149,742	0	30,439	30,439	20%	25%	COMPLIES			
	15-25%	96,457	0	12,469	12,469	13%	15%	COMPLIES			
	>25%	14,870	0	557	557	4%	5%	COMPLIES			

			PROP	OSED LOT (C-8			
LAND	SLOPE	AREA	TYPICAL DISTU PUBLIC	JRBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	COMMENTS
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)	DISTURBED (percent)	I	COMINENTS
	0-10%	235,805	0	17,514	17,514	7%	NO LIMIT	COMPLIES
	10-15%	114,454	0	26,747	26,747	23%	25%	COMPLIES
	15-25%	22,616	0	2,183	2,183	10%	15%	COMPLIES
	>25%	3,963	0	0	0	0%	5%	COMPLIES

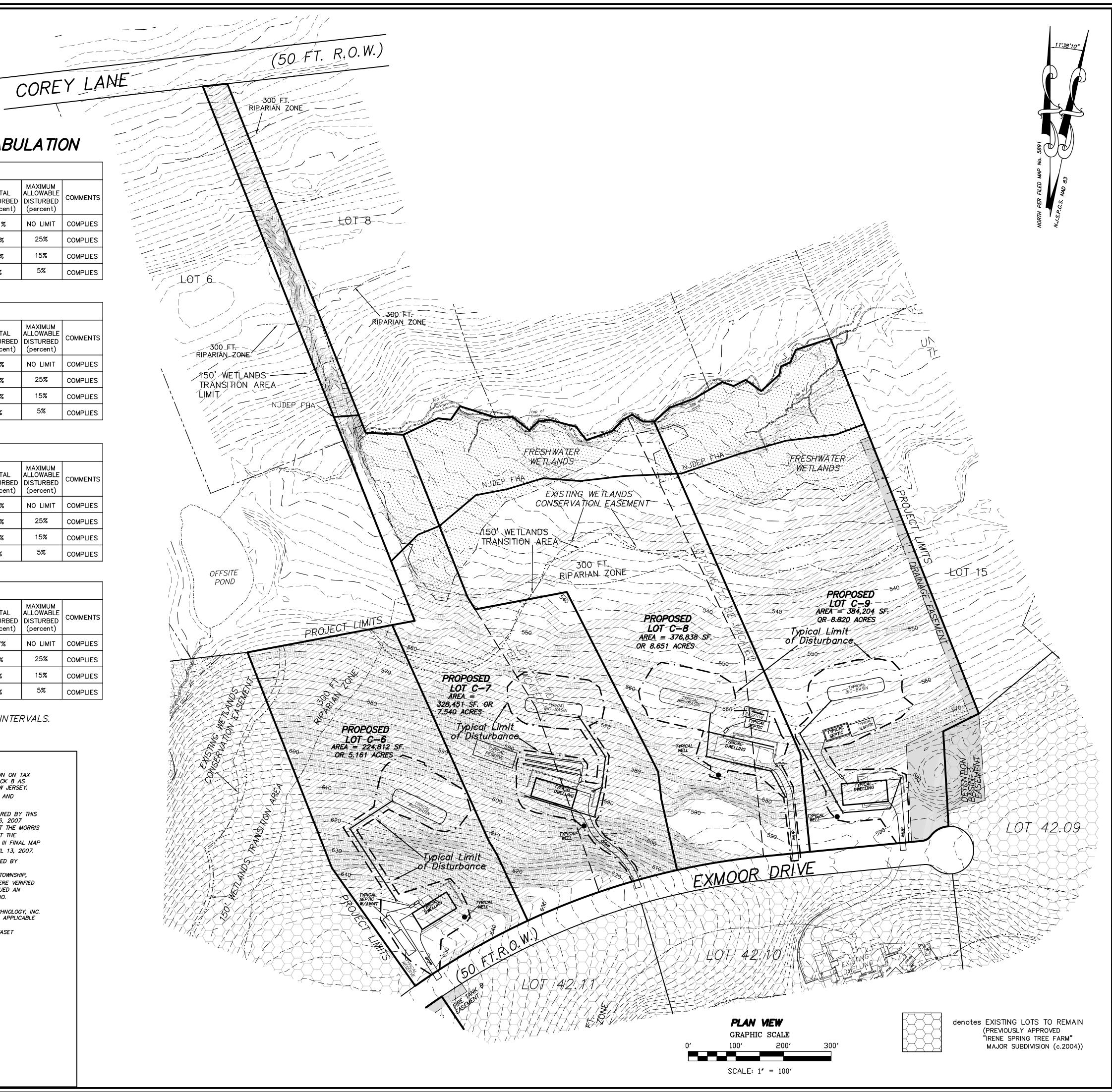
	PROPOSED LOT C-9							
LAND	SLOPE	AREA	TYPICAL DISTU	JRBED AREAS HOUSE, YARD	TYPICAL TOTAL AREA	TOTAL	MAXIMUM ALLOWABLE	0014145145
SYMBOL	CATEGORY	(sq.ft)	IMPROVEMENTS (sq.ft.)	SEPTIC & DRIVE (sq.ft.)	DISTURBED (sq.ft.)		DISTURBED (percent)	COMMENTS
	0-10%	210,039	0	36,649	36,649	17%	NO LIMIT	COMPLIES
	10-15%	143,835	0	15,882	15,882	11%	25%	COMPLIES
	15-25%	26,790	0	2,074	2,074	8%	15%	COMPLIES
	>25%	3,540	0	0	0	0%	5%	COMPLIES

NOTE: STEEP SLOPES ANALYISIS BASED ON 2 FOOT CONTOUR INTERVALS.

PLAN NOTES:

- SUBJECT PROPERTIES KNOWN AS LOTS 42.06, 42.07, 42.08, 42.12, 42.13 ~ BLOCK 147 AS SHOWN ON TAX MAP SHEET #33 OF THE TOWNSHIP OF MENDHAM, MORRIS COUNTY, NEW JERSEY AND LOT 2, BLOCK 8 AS SHOWN ON TAX MAP SHEET No. 8 OF THE BOROUGH OF BERNARDSVILLE, SOMERSET COUNTY, NEW JERSEY.
 LOT 2 ~ BLOCK 8, BOROUGH OF BERNARDSVILLE, SHALL NOT BE CONSIDERED A SEPARATE LOT AND
- MUST BE CONVEYED WITH LOT 42.16, BLOCK 147, TOWNSHIP OF MENDHAM.

 3. LOT BOUNDARIES AND EASEMENTS SHOWN HEREON IS BASED ON FINAL SUBDIVISION MAPS PREPARED BY THIS FIRM, SIGNED CHRISTOPHER J. ALDRICH, NJLS #34478, DATED DECEMBER 15, 2004, AND MARCH 6, 2007 FOR THE "IRENE'S SPRING TREE FARM ESTATES" SUBDIVISON. PHASE I FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE AS MAP 5891-1, ON JUNE 7, 2005. PHASE II FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE IN BOOK 7, PAGES 17-1 to 17-4, ON APRIL 13, 2007. PHASE III FINAL MAP WAS FILED AT THE MORRIS COUNTY CLERK'S OFFICE IN BOOK 7, PAGES 16-1 to 16-3, ON APRIL 13, 2007.
- 4. FRESHWATER WETLANDS/WATERS BOUNDARY AREA SHOWN ON PRIOR LOT 7, BLOCK 147, WERE VERIFIED BY N.J.D.E.P. ON NOV. 13, 2002, FILE No. 1419-02-0004.1 (FWW 020001).
 FRESHWATER WETLANDS/WATERS BOUNDARY AREA SHOWN ON PRIOR LOT 42, BLOCK 147, MENDHAM TOWNSHIP, MORRIS COUNTY, NJ & PRIOR LOT 2, BLOCK 8, BERNARDSVILLE BOROUGH, SOMERSET COUNTY, NJ, WERE VERIFIED BY N.J.D.E.P. ON AUG. 17, 1998, FILE No. 0000-98-0003.1. ON MARCH 19, 2004, THE N.J.D.E.P. ISSUED AN EXTENSION OF THE ORIGINAL LETTER OF INTERPRETATION FOR THIS SITE TO AUGUST 17, 2008, FILE NO. 0000-03-0025.1 (FWW 030001).
- UPDATED FRESHWATER WETLANDS AND WATERS AS SHOWN WERE DELINEATED BY ENVIRONMENTAL TECHNOLOGY, INC. AND ACCURATELY FIELD LOCATED BY OUR FIRM IN 2022. VERIFICATION OF THESE FEATURES AND THE APPLICABLE TRANSITION AREAS AND RIPARIAN ZONE ARE UNDER NJDEP REVIEW AND PENDING.
- 5. TOPOGRAPHY AND EXISTING FEATURES AS SHOWN TAKEN FROM EXISTING SURVEYS, NJDEP LIDAR DATASET AND LIMITED FIELD SURVEYS PERFORMED BY THIS FIRM IN 2022 UNDER THE SUPERVISION OF CHRISTOPHER J. ALDRICH, NJLS #34478. VERTICAL DATUM: NAVD 88
- 6. EXISTING UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ONE CALL SERVICE AT 1-800-272-1000 AND OTHER LOCAL UTILITY COMPANIES AS REQUIRED FOR MARKOUT PRIOR TO ANY EXCAVATION. WHERE EXISTING UNDERGROUND UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING LOCATIONS, ELEVATIONS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.
- 7. LOT IMPROVEMENTS AND GRADING ARE SHOWN HEREON ONLY FOR THE PURPOSE OF REPRESENTING THAT THE PROPOSED LOTS ARE SUITABLE FOR DEVELOPMENT. THE FINAL DESIGN OF INDIVIDUAL LOT IMPROVEMENTS WILL BE SHOWN ON INDIVIDUAL LOT DEVELOPMENT PLANS TO BE PRESENTED FOR BUILDING AND SEPTIC PERMIT APPROVALS.
- 8. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS, ALL REQUIRED AGENCY PERMITS HAVE BEEN OBTAINED BY THE OWNER, AND THE APPROVED FINAL SUBDIVISION MAPS HAVE BEEN FILED WITH THE MORRIS COUNTY CLERK'S OFFICE.





YANNACCONE VILLA & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591

N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500

h Jh

CÁNDICE J. DAVIS

N.J. PROFESSIONAL ENGINEER NO. **24GE04527000** DATE **10/04/22**

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

PROJECT TITLE :

DATE REVISION

LAWRENCE
FARM ESTATES
MAJOR SUBDIVISION PLANS
EXMOOR DRIVE & SUTTON PLACE

10/04/22 REV. PER TWP.TRC. & NJDEP

LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TAX MAP SHEET 33

TOWNSHIP OF MENDHAM

MORRIS COUNTY, NEW JERSEY

LOT 2 ~ BLOCK 8

TAX MAP SHEET 8

LOTS 42.06, 42.07, 42.08 &

SOMERSET COUNTY, NEW JERSEY
ET TITLE:

SLOPE ANALYSIS
PLAN —

BOROUGH OF BERNARDSVILLE

 PROPOSED LOTS

 C-6, C-7, C-8, C-9

 DRAWN BY:
 DATE:

 GY/JPW
 SEPTEMBER 2, 2022

SCALE:

1" = 100'

GY/CJD w.o. *222040*

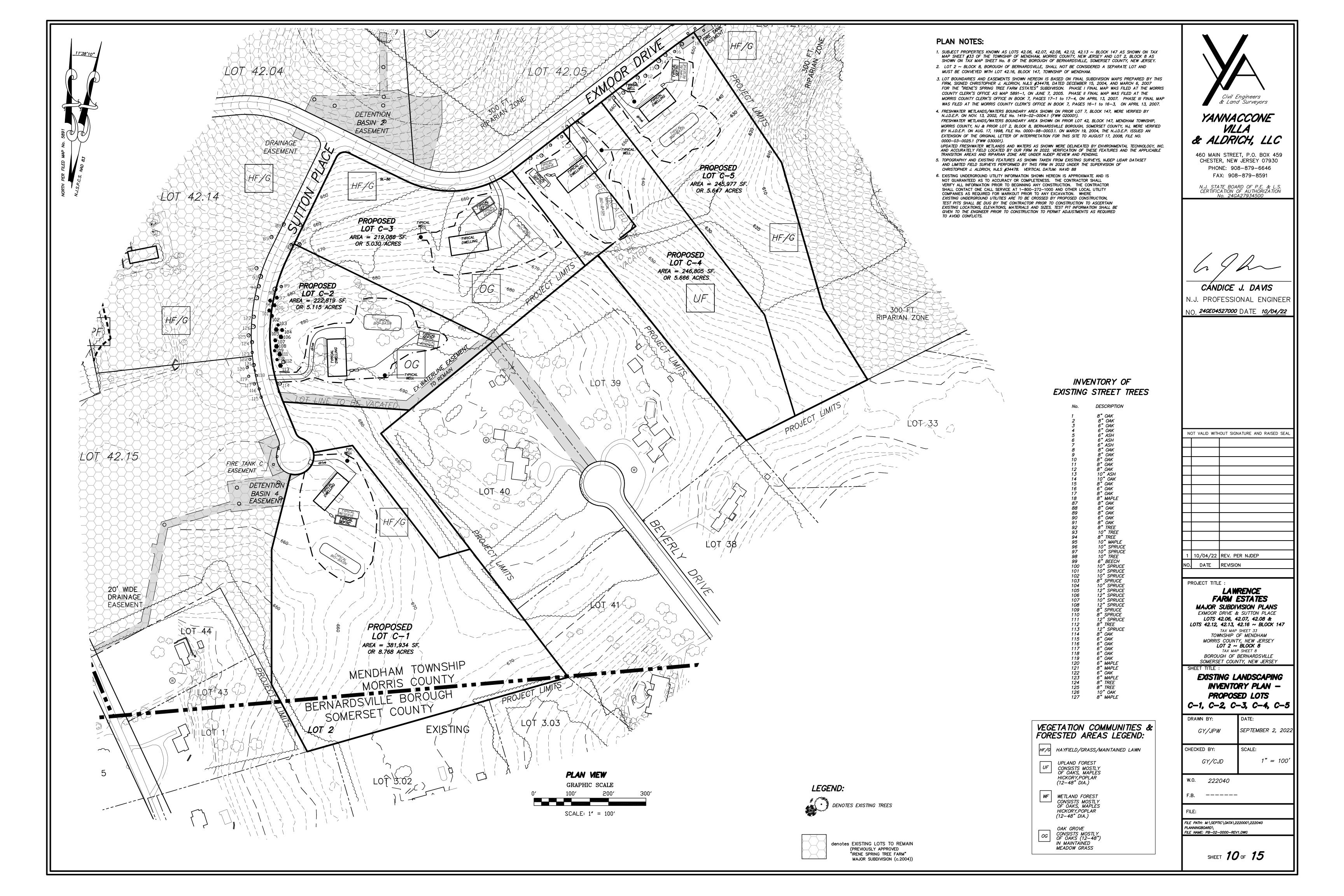
F.B. -----

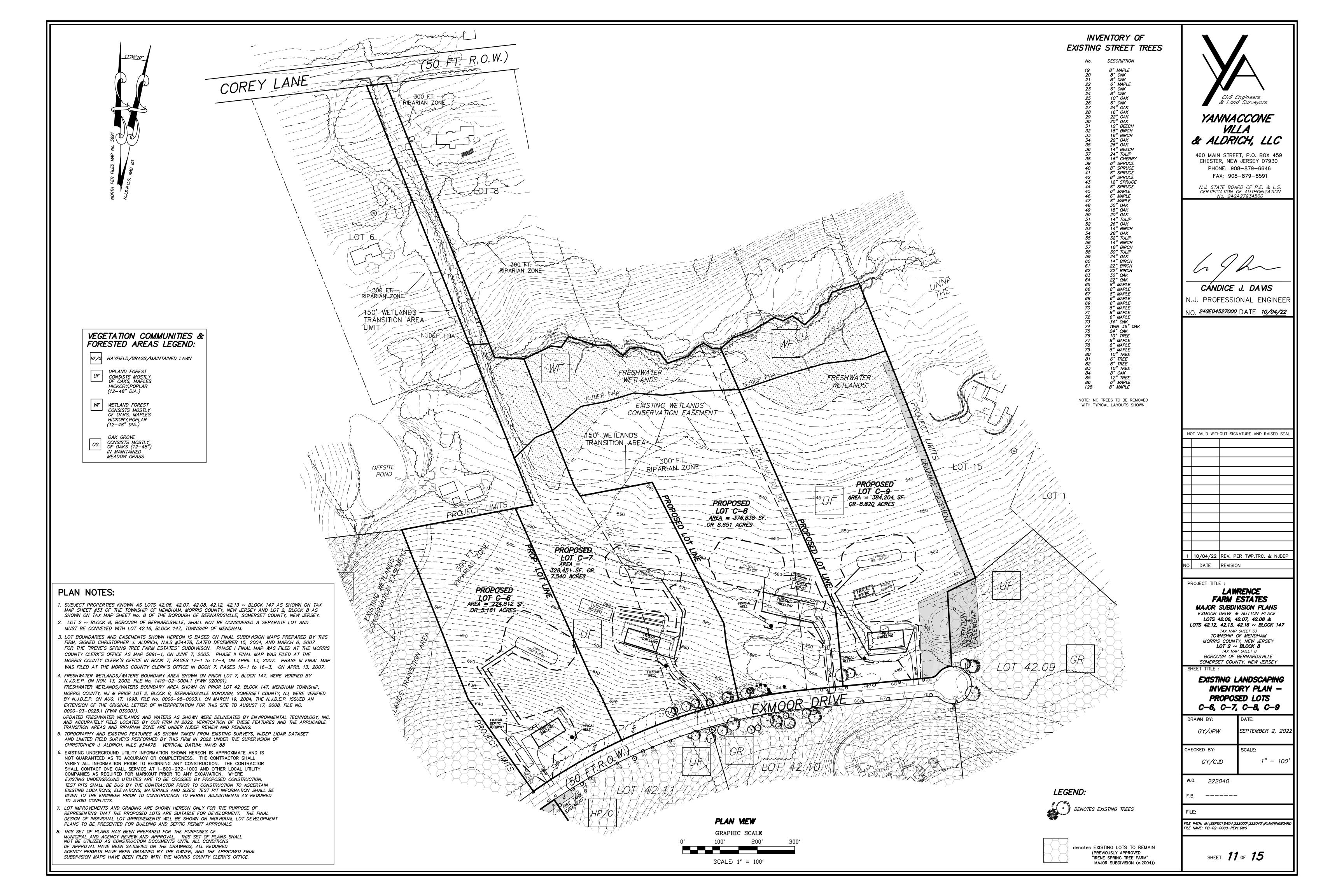
CHECKED BY:

ILE:

FILE PATH: M:\SEPTIC\DATA\222000\222040\PLANNINGBOAI FILE NAME: PB-02-0000-REV1.DWG

SHEET $m{g}$ of $m{15}$





SOIL LOG #13 0"-8" TOPSOIL (MEADOW GRASS COVER) 8"-30" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL, 10% COBBLES 30"-72" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL, 10% COBBLES, 5% STONES 72"-138" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE SANDY LOAM, 5% GRAVEL, 10% COBBLES & 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #14 0"-4" TOPSOIL (WOODLAND COVER) 4"-48" YELLOWISH BROWN (10YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 10% COBBLES, 5% STONES 48"-120" BROWNISH YELLOW (10YR 6/8) LOOSE, SINGLE GRAIN SANDY LOAM, 5% GRAVEL, 20% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL PERMEABILITY CLASS RATING TESTS 14A & 14B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #15 0"-5" TOPSOIL (WOODLAND COVER) 5"-40" YELLOW(SH BROWN (10YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 10% COBBLES, 5% STONES 40"-114" BROWNISH YELLOW (10YR 6/8) LOOSE, SINGLE GRAIN, SANDY LOAM, 114" MACHINE REFUSAL NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL LOG #16 0"-5" TOPSOIL (WOODLAND COVER) 5"-48" YELLOWISH BROWN (10YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 5% COBBLES, 5% STONES 48"-132" BROWNISH YELLOW (10YR 6/8) LOOSE, SINGLE GRAIN SANDY LOAM, NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL LOG #17 0"-5" TOPSOIL (WOODLAND COVER) 5"-36" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 5% COBBLES 36"-96" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 5% COBBLES, 10% STONES 96"-132" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE SANDY LOAM, 10% GRAVEL, 20% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL PERMEABILITY CLASS RATING TESTS 17A & 17B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #18 0"-4" TOPSOIL (WOODLAND COVER) 4"-30" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 5% COBBLES 30"-96" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE LOAMY SAND, 5% GRAVEL, 5% COBBLES, 5% STONES 96"-126" YELLOWISH RED (5YR 4/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 5% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL PERMEABILITY CLASS RATING TESTS 18A & 18B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K4 TOPSOIL (MEADOW GRASS COVER) 6"-24" REDDISH YELLOW (7.5YR 4/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL

24"-48" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE SANDY LOAM, 10% GRAVEL, 10% COBBLES

48"-82" STRONG BROWN (7.5YR 4/6), FRIABLE SUBANGULAR BLOCKY, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 20% STONES 82"-84" FRACTURED ROCK 84" MACHINE REFUSAL NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #24 0"-8" TOPSOIL (MEADOW GRASS COVER) 8"-28" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL 28"-96" YELLOWSH RED (5YR 5/8), SUBANGULAR BLOCKY, FRIABLE SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 96"-126" REDDISH BROWN (5YR 4/4), LOOSE, SINGLE GRAIN, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #25 0"-6" TOPSOIL (MEADOW GRASS COVER) 6"-24" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL 24"-96" YELLOWISH RED (5YR 5/8), SUBANGULAR BLOCKY, FRIABLE SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 96"-109" REDDISH BROWN (5YR 4/4), LOOSE, SINGLE GRAIN, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 25A & 25B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #26 0"-8" TOPSOIL (MEADOW GRASS COVER) 8"-30" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 2" YELLOWISH RED (5YR 5/8), SUBANGULAR BLOCKY, FRIABLE SANDY LO 10% GRAVEL, 10% COBBLES, 10% STONES 82"-140" STRONG BROWN (7.5YR 5/8), LOOSE, SINGLE GRAIN, LOAMY SAND, 10% GRAVEL, 10% COBBLES
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 26A & 26B DEPTH OF SAMPLE=96"
SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #27 0"-4" TOPSOIL (MEADOW GRASS COVER) 4"-26" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAM, 10% GRAVEL, 10% COBBLES 26"-90" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 90"-110" STRONG BROWN (7.5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND. 20% GRAVEL, 20% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 27A & 27B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #28 0"-3" TOPSOIL (MEADOW GRASS COVER) 3"-24" YELLOWINSH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAM, 10% GRAVEL, 10% COBBLES 24"-84" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 84"-109" STRONG BROWN (7.5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND. 20% GRAVEL, 20% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #29 0"-4" TOPSOIL (MEADOW GRASS COVER) 4"-24" YELLOWSH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAM, 24"-90" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 10% STONES 90"-126" YELLOWISH RED (5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 29A & 29B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #30 0"-8" TOPSOIL (MEADOW GRASS COVER) 8"-36" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL 36"-132" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES ONE POCKET OF VERY SLIGHT, SLOW SEEPAGE @ 48".

NO ACCUMULATION IN BOTTOM OF SOIL LOG AFTER 24 HOURS. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #31 0"-8" TOPSOIL (MEADOW GRASS COVER) 8"-54" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL 54"-132" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES TWO POCKETS OF VERY SLIGHT, SLOW SEEPAGE @ 42".
NO ACCUMULATION IN BOTTOM OF SOIL LOG AFTER 24 HOURS.
NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 31A & 31B
DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #32 0"-10" TOPSOIL (MEADOW GRASS COVER) 10"-42" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL 42°-132° STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES TWO POCKETS OF VERY SLIGHT, SLOW SEEPAGE @ 36". ACCUMULATION IN BOTTOM OF SOIL LOG AFTER 24 HOURS = 128".

MOTTLES (FEW, FINE & FAINT) 36"- 42".

NO OBVIOUS ROOTS. SOIL LOG #39
0"-24" TOPSOIL (MEADOW GRASS COVER)
24"-60" BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM,5% GRAVEL
60"-80" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL,
10% COBBLES, 5% STONES 80"-132" REDDISH YELLOW (7.5YR 6/8), LOOSE, SINGLE GRAIN, LOAMY SAND, 5% GRAVEL, 20% COBBLES, 10% STONES
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #40 0"-30" TOPSOIL (MEADOW GRASS COVER) 30"-72" BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL 72"-84" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 5% GRAVEL, 10% COBBLES, 5% STONES

84"-138" REDDISH YELLOW (7.5YR 6/8), LOOSE, SINGLE GRAIN, LOAMY SAND, 5% GRAVEL, 20% COBBLES, 10% STONES
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS.

SOIL PERMEABILITY CLASS RATING TESTS 40A & 40B DEPTH OF SAMPLE=96"
SOIL PERMEABILITY CLASS RATING= K5

SOIL LOG #41 0"-30" CLEAN FILL, BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 20% GRAVEL, 10% COBBLES 30"-36" TOPSOIL 36"-72" STRONG BROWN (7.5YR 5/8), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 2"-148" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% COBBLES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 41A & 41B DEPTH OF SAMPLE=96" SOIL PERMEABILITY CLASS RATING= K4 10% GRAVEL, 10% COBBLES, 20% STONES 36"-132" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND. 132"–156" REDDISH YELLOW (5YR 7/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL,10% COBBLES
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 42A & 42B DEPTH OF SAMPLE=96"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #43 0"-24" CLEAN FILL, BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL, 10% COBBLES, 20% STONES 24"-36" TOPSOIL 36"-72" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 72"-138" REDDISH YELLOW (5YR 7/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 40% FRACTURED ROCK
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 43A & 43B DEPTH OF SAMPLE=96" SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #44 0"-16" CLEAN FILL, BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SILT LOAM, 10% GRAVEL, 10% COBBLES, 20% STONES 16"-30" TOPSOIL
30"-72" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES 72"-136" REDDISH YELLOW (5YR 7/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL,10% COBBLES
NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. 12"-132" REDDISH YELLOW (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 5% GRAVEL, 20% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 45A & 45B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #46 0"-12" TOPSOIL (LAWN) 2"-109" REDDISH YELLOW (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 5% GRAVEL, 20% COBBLES, 20% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #47 0"-12" TOPSOIL (LAWN) 12"-132" REDDISH YELLOW (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 5% GRAVEL, 10% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL LOG #54
0"-12" TOPSOIL (MEADOW GRASS COVER)
12"-42" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAM,10% GRAVEL, 10% COBBLES 42"-144" REDDISH YELLOW (7.5YR 6/8), LOOSE, SINGLE GRAIN, SAND, 10% GRAVEL 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 84". SOIL PERMEABILITY CLASS RATING TESTS 54A & 54B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #55 0"-12" TOPSOIL (WOODS) 12"-36" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES 36"-132" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 20% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". 12"-46" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM. 46"-126" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 20% COBBLES, 10% STONES
NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL PERMEABILITY CLASS RATING TESTS 56A & 56B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #57 0"-9" TOPSOIL (WOODS) 9"-40" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, NGH YFILOW (5YR 6/6). SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, NO GROUNDWATER, NO MOTTLES, ROOTS TO 24". SOIL LOG #58 0"-5" TOPSOIL (WOODS) 5"-60" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES 60"-120" REDDISH YELLOW (5YR 6/6), ANGULAR BLOCKY, LOOSE, LOAMY SAND, 15% GRAVEL, 10% COBBLES NO GROUNDWATER. NO MOTTLES. ROOTS TO 18". SOIL LOG #59
0"-4" TOPSOIL (WOODS)
4"-48" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 48"-144" LIGHT REDDISH BROWN (5YR 6/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 10% COBBLES
SEEPAGE @ 142", MEDIUM FLOW, 2 HOUR READING @ 128". SOIL PERMEABILITY CLASS RATING TESTS 59A & 59B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #60 0"-4" TOPSOIL (WOODS) 4"-46" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES 46"-132" LIGHT REDDISH BROWN (5YR 6/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 10% COBBLES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". SOIL LOG #61 0"-6" TOPSOIL (WOODS) 6"-40" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM. 40"-132" REDDISH BROWN (5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, NO GROUNDWATER. NO MOTTLES. ROOTS TO 18". SOIL LOG #62 0"-5" TOPSOIL (WOODS) 5"-66" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 36"-132" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND. NO GROUNDWATER. NO MOTTLES. ROOTS TO 18". SOIL PERMEABILITY CLASS RATING TESTS 62A & 62B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #63 0"-4" TOPSOIL (WOODS) 4"-58" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES 58"-124" REDDISH YELLOW (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, NO GROUNDWATER. NO MOTTLES. ROOTS TO 18". 0"-4" TOPSOIL (WOODS) 4"-66" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 66"-140" REDDISH YELLOW (7.5YR 6/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL
NO GROUNDWATER. NO MOTTLES. ROOTS TO 16". SOIL LOG #65 0"-4" TOPSOIL (WOODS) 4"-36" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 36"-60" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 60"-132" REDDISH YELLOW (7.5YR 7/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL NO GROUNDWATER. NO MOTTLES. ROOTS TO 18". SOIL PERMEABILITY CLASS RATING TESTS 65A & 65B DEPTH OF SAMPLE=84"
SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #66 0"-5" TOPSOIL (WOODS) 5"-30" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES

30"-56" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 56"-132" REDDISH YELLOW (7.5YR 7/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL GROUNDWATER @ 120" AFTER 4 HOURS. NO MOTTLES. ROOTS TO 14".

SOIL LOG #67 0"-3" TOPSOIL (WOODS)

3"-36" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND,

SEEPAGE @ 85", HEAVY. FOUR-HOUR WATER LEVEL = 80". 24-HOUR READING=76".

36"-132" REDDISH YELLOW (7.5YR 7/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL

SOIL LOG #68 0"-4" TOPSOIL (WOODS) 4"-36" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 36"-126" REDDISH YELLOW (7.5YR 7/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL SEEPAGE @ 72", HEAVY. FOUR-HOUR WATER LEVEL = 75". 24-HOUR READING=68". SOIL PERMEABILITY CLASS RATING TESTS 68A & 68B DEPTH OF SAMPLE=78" SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #69 0"-6" TOPSOIL (WOODS) 6"-42" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 42"-132" REDDISH YELLOW (7.5YR 7/6), LOOSE, SINGLE GRAIN, LOAMY SAND, 15% GRAVEL SEEPAGE @ 60", HEAVY. FOUR-HOUR WATER LEVEL = 66". 24-HOUR READING=58". SOIL LOG #76 0"-6" TOPSOIL 6"-48" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES
48"-196" REDDISH BROWN (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, NO GROUNDWATER. NO MOTTLES. ROOTS TO 48". PERCOLATION TEST 76A BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 2.0 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2.0 = 11.0 IN/HR4"-58" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES 58"-202" REDDISH BROWN (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 52". PERCOLATION TEST 77A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PARAMETER 'A' = 22 PERCOLATION RATE (PM) = 1.75 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /1.75 = 12.6 IN/HR SOIL LOG #78 0"-8" TOPSOIL 8"-60" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 60"-204" REDDISH BROWN (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 48". PERCOLATION TEST 78A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PARAMETER 'A' = 22 PERCOLATION RATE (PM) = 1.5 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 1.5 = 14.7 IN/HRSOIL PERMEABILITY CLASS RATING TESTS 78A & 78B DEPTH OF SAMPLE=96" SOIL PERMEABILITY CLASS RATING= K SOIL LOG #79 0"-3" TOPSOIL 3"-60" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES 60"-196" REDDISH BROWN (5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 42". PERCOLATION TEST 79A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 1.66 MIN/INCH PERMEABILITY RATE $\dot{K} = A / PM = 22 /1.66 = 13.3 IN/HR$ SOIL PERMEABILITY CLASS RATING TESTS 79A & 79B DEPTH OF SAMPLE=96" SOIL PERMEABILITY CLASS RATING= K5 10"-36" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES 10% GRAVEL, 5% COBBLES 36"-72" YELLOWSH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 5% STONES 72"-192" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES SEEPAGE @ 138", MEDIUM FLOW. FOUR-HOUR WATER LEVEL = 123". PERCOLATION TEST 80A DEPTH OF TEST = 96" BOTTOM WIDTH = 8' PARAMETER A' = 22PERMEABILITY RATE $\dot{K} = A / PM = 22 /1.83 = 12.0 IN/HR$ 3"-36" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM 36"-132" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 10% STONES SEEPAGE @ 108", MEDIUM FLOW. FOUR-HOUR WATER LEVEL = 114". NO MOTTLES, ROOTS TO 52". PERCOLATION TEST 82A DEPTH OF TEST = 78" BOTTOM WIDTH = 8" PARAMETER 'A' = 22 PERCOLATION RATE (PM) = 3.0 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 3.0 = 7.33 IN/HRSOIL LOG #83 0"-4" TOPSOIL 4"-38" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM 38"-132" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 10% STONES
SEEPAGE @ 120", MEDIUM FLOW. FOUR-HOUR WATER LEVEL = 135". PERCOLATION TEST 83A DEPTH OF TEST = 78" BOTTOM WIDTH = 8" PERCOLATION RATE (PM) = 2.75 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2.75 = 8.0 IN/HRSOIL PERMEABILITY CLASS RATING TESTS 83A & 83B DEPTH OF SAMPLE=78" SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #92 0"-20" TOPSOIL 20"-66" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 10% COBBLES, 5% STONES 66"-192" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". PERCOLATION TEST 92A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER 'A' = 22 PERCOLATION RATE (PM) = 2.0 MIN/INCH PERMEABILITY RATE $\dot{K} = A$ / PM = 22 /2.0 = 11.0 IN/HR 12"-60" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 10% COBBLES, 5% STONES 60"-194" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 14". PERCOLATION TEST 93A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER 'A' = 22PERCOLATION RATE (PM) = 1.75 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /1.75 = 12.6 IN/HRSOIL LOG #94
0"-8" TOPSOIL
8"-50" BROWN (7.5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM,
10% GRAVEL, 5% COBBLES, 10% STONES
50"-198" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND,
15% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 12". SOIL PERMEABILILITY CLASS RATING TEST 94A.94B DEPTH OF SAMPLE = 84" SOIL PERMEABILITY CLASS RATING = K5 SOIL LOG #95 0"-14" TOPSOIL 14"-62" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 5% COBBLES, 5% STONES
62"-192" REDDISH YELLOW (7.5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SAND, 15% GRAVEL, 10% COBBLES, 10% STONES
NO GROUNDWATER. NO MOTTLES. ROOTS TO 24". PERCOLATION TEST 95A DEPTH OF TEST = 96" ROTTOM WIDTH = 8"

PARAMETER'A' = 22

PERCOLATION RATE (PM) = 1.5 MIN/INCH

PERMEABILITY RATE K = A / PM = 22 /1.5 = 14.7 IN/HR

SOIL LOG #96 0"-4" TOPSOIL 4"-48" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 48"-108" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL 15% COBBLES, 15% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 84". PERCOLATION TEST 96A DEPTH OF TEST = 60" BOTTOM WIDTH = 8" PERCOLATION RATE (PM) = 2.5 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2.5 = 8.8 IN/HRSOIL LOG #97 0"-4" TOPSOIL 4"-52" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 52"-120" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 15% COBBLES, 15% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 82". PERCOLATION TEST 97A DEPTH OF TEST = 60" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 3.0 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 3.0 = 7.33 IN/HRSOIL LOG #114 0"-24" TOPSOIL 24"-72" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, SANDY CLAY LOAM, 15% GRAVEL, 10% COBBLES 72"-206" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. MOTTLES, COMMON, COARSE, DISTINCT, 168"-206". ROOTS TO 10". PERCOLATION TEST 114A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 3.25 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /3.25 = 6.77 IN/HR18"-76" YELLOWISH RED (5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, SANDY CLAY LOAM, 15% GRAVEL, 10% COBBLES 76"-208" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. MOTTLES, COMMON, COARSE, DISTINCT, 162"-208". ROOTS TO 14". PERCOLATION TEST 115A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 3.33 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /3.33 = 6.61 IN/HRSOIL LOG #116 0"-18" TOPSOIL 18"-84" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 15% GRAVEL, 10% COBBLES

84"-192" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 48". PERCOLATION TEST 116A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PERCOLATION RATE (PM) = 2.25 MIN/INCH PERMEABILITY RATE \dot{K} = A / PM = 22 /2.25 = 9.78 IN/HR 20"-76" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 15% GRAVEL, 10% COBBLES 76"-196" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 60". PERCOLATION TEST 117A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 2.16 MIN/INCH PERMEABILITY RATE $\dot{K} = A$ / PM = 22 /2.16 = 10.2 IN/HR SOIL LOG #118 0"-18" TOPSOIL 18"-60" STRONG BROWN (7.5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES 60"-196" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES NO GROUNDWATER. NO MOTTLES. ROOTS TO 12". PERCOLATION TEST 1184 BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 2.0 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2.0 = 11.0 IN/HRSOIL LOG #119 0"-16" TOPSOIL 16"-58" STRONG BROWN (7.5YR 4/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES 58"-194" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES NO GROUNDWATER. NO MOTTLES. ROOTS TO 12". PERCOLATION TEST 119A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 1.83 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /1.83 = 12.0 IN/HRSOIL LOG #120 0"-10" TOPSOIL 10"-48" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 15% GRAVEL 10% COBBLES 5% STONES 48"-146" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 15% COBBLES, 10% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 10". PERCOLATION TEST 120A DEPTH OF TEST = 60" BOTTOM WIDTH = 8" PERCOLATION RATE (PM) = 3.25 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 3.25 = 6.77 IN/HR12"-56" REDDISH BROWN (5YR 4/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 15% GRAVEL, 10% COBBLES, 5% STONES 56"-144" YELLOWSH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 15% GRAVEL, 15% COBBLES, 10% STONES NO GROUNDWATER, NO MOTTLES, ROOTS TO 12" PERCOLATION TEST 121A DEPTH OF TEST = 60" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 2.75 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2.75 = 8.00 IN/HR SOIL LOG #122 0"-6" TOPSOIL (MEADOW GRASS COVER) 6"-30" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 0"-96" REDDISH YELLOW(5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM. 10% GRAVEL, 10% COBBLES, 10% STONES 96"-120" STRONG BROWN (7.5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND 20% GRAVEL, 20% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 122A & 122B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K5 SOIL LOG #123 0"-6" TOPSOIL (MEADOW GRASS COVER) 6"-36" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL, 10% COBBLES 36"-104" REDDISH YELLOW(5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 104"-126" STRONG BROWN (7.5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND 20% GRAVEL, 20% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS. SOIL PERMEABILITY CLASS RATING TESTS 123A & 123B DEPTH OF SAMPLE=84" SOIL PERMEABILITY CLASS RATING= K4 SOIL LOG #124 0"-6" TOPSOIL (MEADOW GRASS COVER) 6"-36" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE LOAM, 10% GRAVEL, 10% COBBLES 3"-96" REDDISH YELLOW(5YR 6/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 10% COBBLES, 10% STONES 96"-124" STRONG BROWN (7.5YR 5/6), LOOSE, SINGLE GRAIN, LOAMY SAND 20% GRAVEL, 20% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. NO OBVIOUS ROOTS.

SOIL LOG #128 0"-10" TOPSOIL 10% GRAVEL, 5% COBBLES, 5% STONES 10% GRAVEL, 5% COBBLES, 5% STONES PERCOLATION TEST 128A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PERCOLATION TEST 129A DEPTH OF TEST = 96" BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 2.25 MIN/INCH SOIL LOG #136 0"-8" TOPSOIL 15% GRAVEL, 5% COBBLES NO GROUNDWATER. NO MOTTLES. ROOTS TO 42". PERCOLATION TEST 136A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PERCOLATION RATE (PM) = 2.5 MIN/INCH PERCOLATION TEST 137A DEPTH OF TEST = 78" BOTTOM WIDTH = 8"PERCOLATION RATE (PM) = 1.66 MIN/INCH 2 HOUR WATER READING AT 88" PERCOLATION TEST 138A DEPTH OF TEST = 78" BOTTOM WIDTH = 8"PARAMETER A' = 22PERCOLATION RATE (PM) = 1.5 MIN/INCH 10% GRAVEL, 5% COBBLES 10% GRAVEL, 5% COBBLES PERCOLATION TEST 139A DEPTH OF TEST = 78" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 1.5 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /1.5 = 14.7 IN/HR6"-60" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES 60"-152" REDDISH BROWN (5YR 5/4), SINGLE GRAIN, LOOSE, SAND, 10% GRAVEL, 5% COBBLES NO GROUND WATER. MOTTLES COMMON, COARSE, DISTINCT 100"-152". ROOTS TO 48". PERCOLATION TEST 140A DEPTH OF TEST = 96" BOTTOM WIDTH = 8" PARAMETER A' = 22PERCOLATION RATE (PM) = 1.66 MIN/INCH PERMEABILITY RATE K = A / PM = 22 /1.66 = 13.3 IN/HRDATES OF TESTING: APRIL 19, 2022 to APRIL 30, 2022

14"-60" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 14 - 60 STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 5% STONES 60"-124" STRONG BROWN (7.5YR 5/8), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 10% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 20" (MEADOW). 16"-64" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 5% STONES
64"-132" STRONG BROWN (7.5YR 5/8), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND,
10% GRAVEL, 5% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 16" (MEADOW). 10"-36" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES 36"-62" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 62"-198" STRONG BROWN (7.5YR 5/8), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, NO GROUNDWATER. NO MOTTLES. ROOTS TO 12" (MEADOW). PERCOLATION RATE (PM) = 2 MIN/INCH PERMEABILITY RATE K = A / PM = 22 / 2 = 11 IN/HR 12"-34" BROWN (7.5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 10% STONES 34"-60" STRONG BROWN (7.5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 5% STONES 60"-200" STRONG BROWN (7.5YR 5/8), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND, 10% GRAVEL, 5% COBBLES, 5% STONES NO GROUNDWATER. NO MOTTLES. ROOTS TO 12" (MEADOW). PERMEABILITY RATE K = A / PM = 22 / 2.25 = 9.8 IN/HR 8"-68" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 13% GRAVEL, 5% COBBLES
68"-200" REDDISH BROWN (5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, LOAMY SAND,
15% GRAVEL. 5% COBBLES. 5% STONES PERMEABILITY RATE K = A / PM = 22 / 2.5 = 8.8 IN/HRSOIL LOG #137 0"-6" TOPSOIL 6"-60" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY CLAY LOAM, 60"-124" REDDISH BROWN (5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 5% STONES HOLE COLLAPSING AT 124". SEEPAGE AT 102". NO MOTTLES. ROOTS TO 96". 2 HOUR WATER READING AT 92". PERMEABILITY RATE K = A / PM = $\frac{22}{1.66}$ = $\frac{13.3}{10.00}$ IN/HR 8"-52" YELLOWSH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY CLAY LOAM, 52"-120" REDDISH BROWN (5YR 5/4), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM, 10% GRAVEL, 5% COBBLES, 5% STONES HOLE COLLAPSING AT 120". SEEPAGE AT 96". NO MOTTLES. ROOTS TO 86". PERMEABILITY RATE K = A / PM = $\frac{22}{1.5}$ = 14.7 IN/HR 8"-54" YELLOWISH RED (5YR 5/6), SUBANGULAR BLOCKY, FRIABLE, SANDY LOAM. 54"-148" REDDISH BROWN (5YR 5/4), SINGLE GRAIN, LOOSE, SAND, NO GROUND WATER. MOTTLES COMMON, COARSE, DISTINCT 96"-148". ROOTS TO 36".

YANNACCONE & ALDRICH, LLC 460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591 N.J. STATE BOARD OF P.E. & L.S. CERTIFICATION OF AUTHORIZATION No. 24GA27934500 CANDICE J. DAVIS N.J. PROFESSIONAL ENGINEER NO. **24GE04527000** DATE **10/04/22** NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

> DATE REVISION PROJECT TITLE **LAWRENCE** FARM ESTATES MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147 TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY LOT 2 ~ BLOCK 8

10/04/22 REISSUE

TAX MAP SHEET 8

BOROUGH OF BERNARDSVILLE

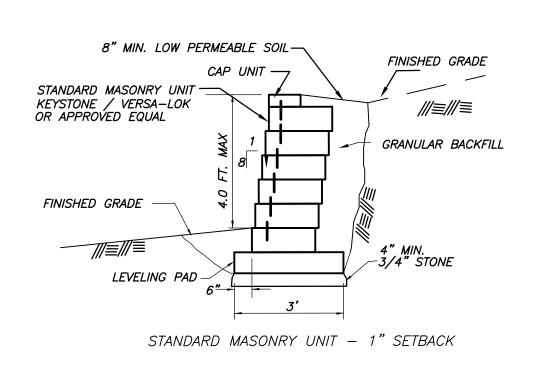
SOMERSET COUNTY, NEW JERSEY

SOIL LOG DATA SHEET

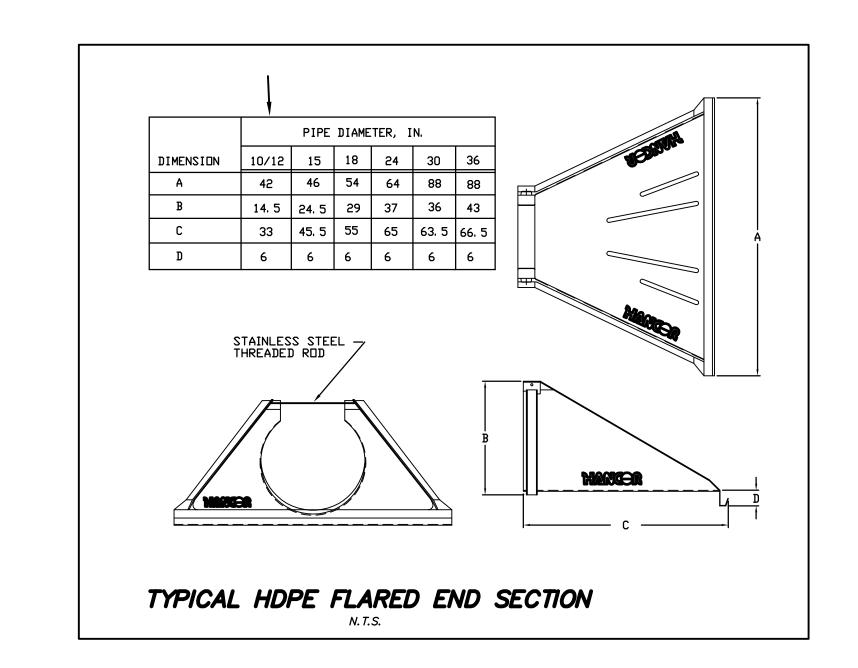
DRAWN BY:	DATE:
GY/JPW	SEPTEMBER 2, 2022
CHECKED BY:	SCALE:
GY/CJD	AS SHOWN
W.O. 222040	
F.B	
FILE:	

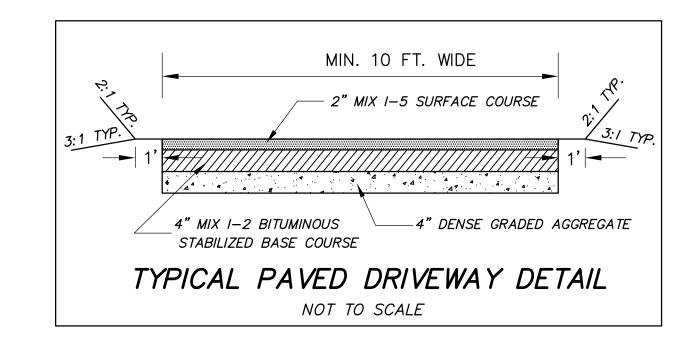
FILE PATH: M:\SEPTIC\DATA\222000\222040 PLANNINGBOARD\ FILE NAME: PB-02-0000-REV1.D

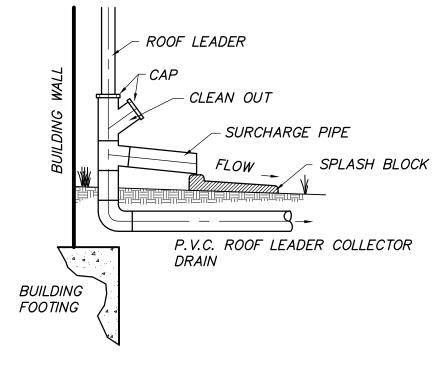
SHEET **12** OF **15**



TYPICAL MASONRY RETAINING WALL (OR APPROVED EQUAL) NOT TO SCALE







ROOF LEADER OVERFLOW & CLEANOUT DETAIL NOT TO SCALE

INSTALL HANDLE TO WITHIN 6—12 INCHES OF LID
TO FACILITATE FUTURE MAINTENANCE



460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591 N.J. STATE BOARD FOR P.E. & P.L.S. CERTIFICATE
OF AUTHORIZATION No. 24GA27934500

CANDICE J. DAVIS N.J. PROFESSIONAL ENGINEER

NO. 24GE04527000 DATE 10/04/22

NOT VALID WITHOUT SIGNATURE AND RAISED SEA

REISSUE

REVISION

LAWRENCE FARM ESTATES

MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE

LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY

LOT 2 ~ BLOCK 8

TAX MAP SHEET 8

BOROUGH OF BERNARDSVILLE

SOMERSET COUNTY, NEW JERSEY

CONSTRUCTION

DETAIL SHEET

DATE:

SCALE:

COMP FILE: M:SEPTIC/.../222040/PLANNINGBOARD/

SHEET **13** OF **15**

PB-details-rev1.dwg

SEPTEMBER 2, 2022

AS SHOWN

10/04/22

DATE

PROJECT TITLE :

SHEET TITLE :

DRAWN BY:

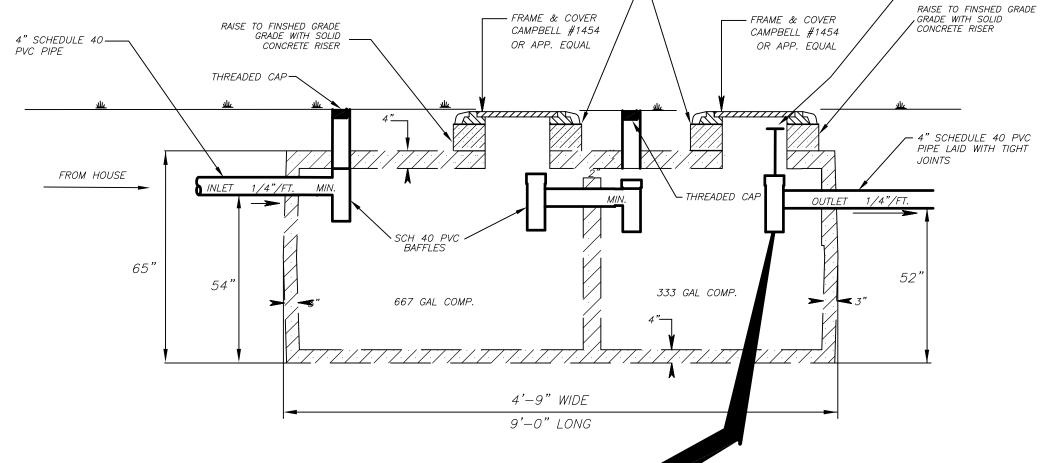
CHECKED BY:

W.O. 222040

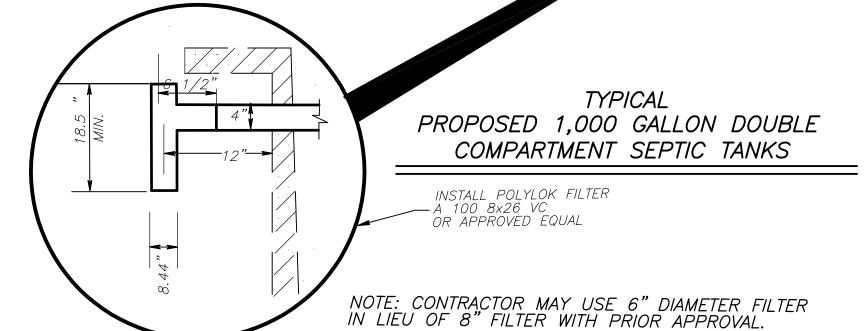
F.B. ----

CJD

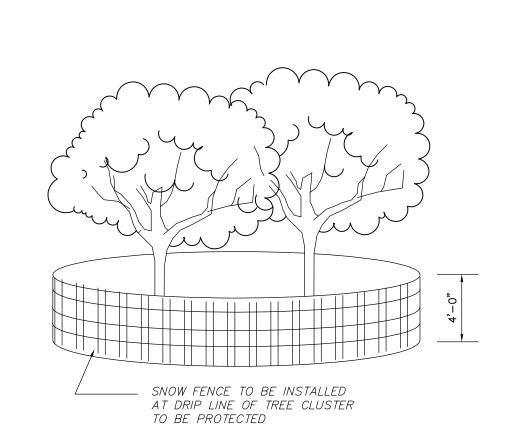
GY/CJD



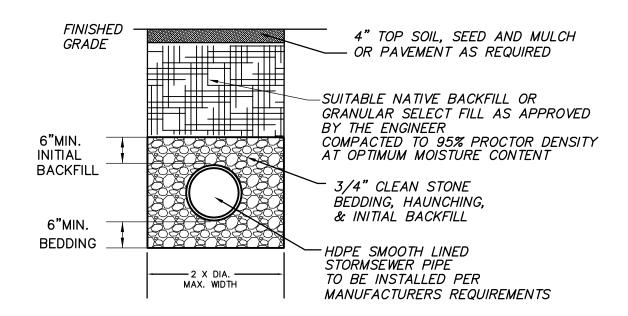
BUTYL TAPE GASKET REQUIRED UNDER MANHOLE -



TANKS SHOWN ARE FROM PEERLESS PRECAST CONCRETE (973.838.3060) USE THESE TANKS OR APPROVED EQUAL

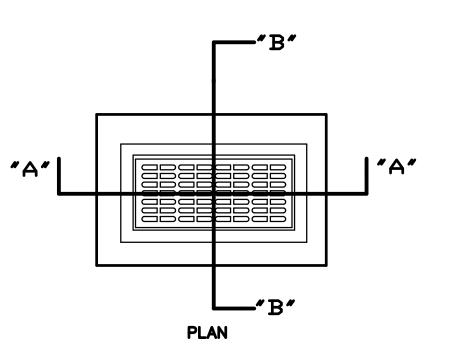


TREE PROTECTION DETAIL



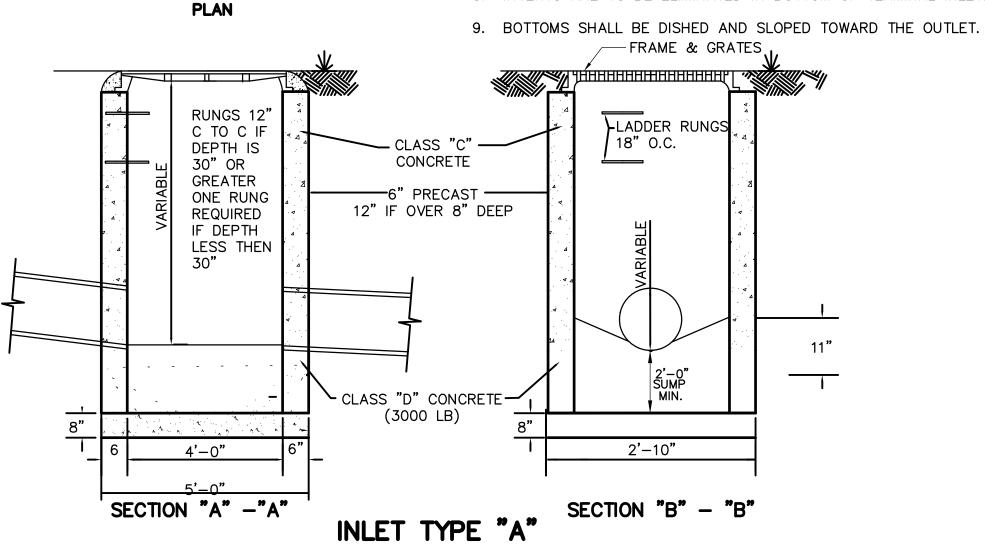
NOTE: ALL HDPE STORMSEWER PIPE SHALL HAVE SMOOTH INTERIOR LINING.

HDPE STORMWATER PIPE TRENCH DETAIL NOT TO SCALE

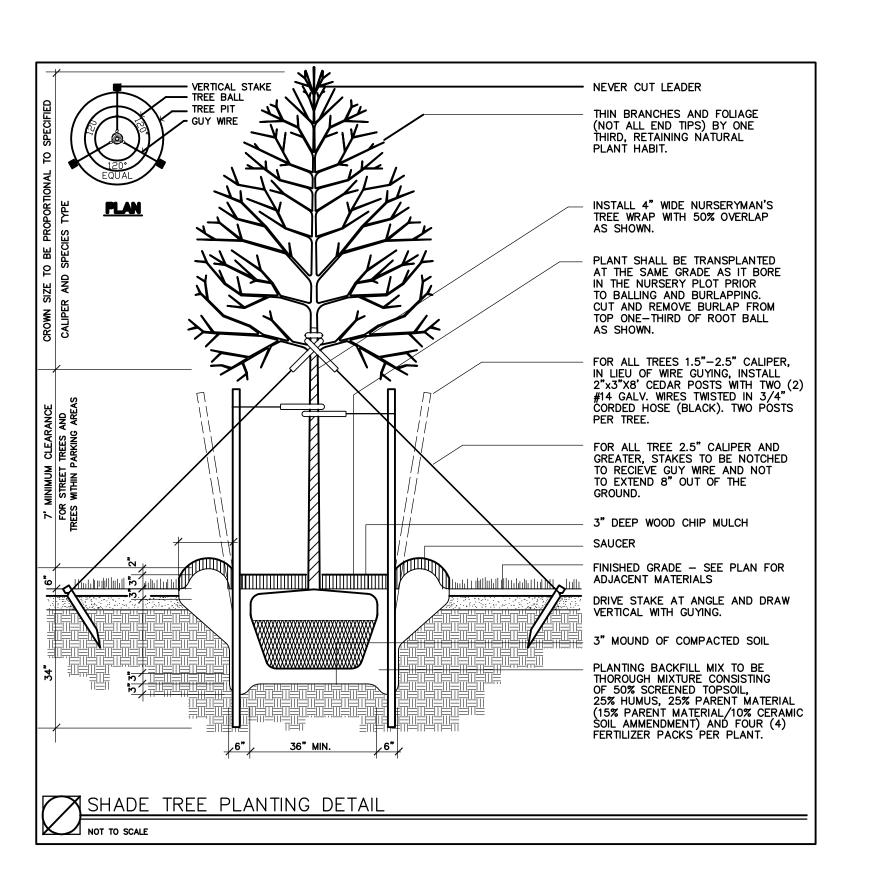


NOTE:

- 1. UNIT SHALL BE CONSTRUCTED OF PRECAST CONCRETE
- 2. CHANNELS TO BE CLASS "C" CONCRETE.
- 3. FRAME AND GRATE TO BE No. 3405 AS MANUFACTURED BY
- CAMPBELL FOUNDRY OR APPROVED EQUAL. 4. PROVIDE 3/4" DIA. ALUMINUM LADDER RUNGS 12" O.C.
- 5. PRECAST UNIT SHALL BE DESIGNED TO AASHTO H-20 LOADINGS.
- 6. WALLS OVER 8 FT. DEEP SHALL BE 12" THICK.
- 7. ALL PIPES TO BE CUT FLUSH WITH BASIN WALL.
- 8. INVERTS ARE TO BE ELIMINATED IN BOTTOM OF TERMINAL INLET.



NOT TO SCALE



SECOND CUT

TREE LIMB REMOVAL

BRANCH COLLAR

BRANCH BARK RIDGE -

SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, AND WILL BE PLACE PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- 2. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN THIRTY DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREA WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND BOUND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (ie. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER.)
- 3. PERMANENT VEGETATION IS TO BE ESTABLISHED ON EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH IS TO BE USED FOR PROTECTION UNTIL VEGETATION IS ESTABLISHED.
- 4. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING. ALL CRITICAL AREAS (STEEP SLOPES, SANDY SOILS, WET CONDITIONS) SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN ACCORDANCE WITH NOTE 21 BELOW.
- 5. TEMPORARY DIVERSION BERMS ARE TO BE INSTALLED ON ALL CLEARED ROADWAYS AND EASEMENT AREAS. SEE THE SE&SC STANDARDS.
- 6. PERMANENT SEEDING AND STABILIZATION TO BE IN ACCORDANCE WITH THE "STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION COVER". SPECIFIED RATES AND LOCATIONS SHALL BE ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
- 7. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SO THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- 8. ALL SEDIMENTATION STRUCTURES (SILT FENCE, INLET FILTERS, AND SEDIMENT BASINS) WILL BE INSPECTED AND MAINTAINED DAILY.
- 9. STOCKPILES SHALL NOT BE LOCATED WITHIN 50' OF A FLOODPLAIN, SLOPE, DRAINAGE FACILITY, OR ROADWAY. ALL STOCKPILE BASES SHALL HAVE A SILT FENCE PROPERLY ENTRENCHED AT THE TOE
- 10. A STABILIZED CONSTRUCTION ACCESS WILL BE INSTALLED, WHENEVER AN EARTHEN ROAD INTERSECTS WITH A PAVED ROAD. SEE THE STABILIZED CONSTRUCTION ACCESS DETAIL AND CHART FOR DIMENSIONS.
- 11. ALL NEW ROADWAYS WILL BE TREATED WITH SUITABLE SUBBASE UPON ESTABLISHMENT OF FINAL GRADE ELEVATIONS.
- 12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- 13. BEFORE DISCHARGE POINTS BECOME OPERATIONAL, ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AS REQUIRED.
- 14. ALL DEWATERING OPERATIONS MUST DISCHARGED DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A FABRIC OR APPROVED MATERIAL. SEE THE SE&SC STANDARDS.
- 15. ALL SEDIMENT BASINS WILL BE CLEANED WHEN THE CAPACITY HAS BEEN REDUCED BY 50%. A CLEAN-OUT ELEVATION WILL BE IDENTIFIED ON THE PLAN AND A MARKER INSTALLED ON THE SITE.
- 16. DURING AND AFTER CONSTRUCTION, THE APPLICANT WILL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE DRAINAGE STRUCTURES, VEGETATIVE COVER, AND ANY OTHER MEASURES DEEMED APPROPRIATE BY THE DISTRICT. SAID RESPONSIBILITY WILL PRECLUDE WHEN COMPLETED WORK IS APPROVED BY THE TOWNSHIP ENGINEER.
- 17. ALL TREES OUTSIDE THE DISTURBANCE LIMIT INDICATED ON THE SUBJECT PLAN OR THOSE TREES WITHIN THE DISTURBANCE AREA WHICH ARE DESIGNATED TO REMAIN AFTER CONSTRUCTION ARE TO BE PROTECTED WITH TREE PROTECTION DEVICES. SEE THE TREE PROTECTION DETAIL.
- 18. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE ON SITE OR OFF SITE EROSION PROBLEMS DURING CONSTRUCTION.
- 19. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED, IN WRITING, AT LEAST 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
- 20. TOPSOIL STOCKPILE PROTECTION
 - a. APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SF. b. APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS/1000 S.F.
- APPLY PERENNIAL RYEGRASS AT A RATE OF 1 LB/1000 S.F. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 S.F.
- d. MULCH STOCKPILE WITH STRAW OR HAY AT AT RATE OF 90 LBS./1000 S.F. e. APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
- PROPERLY ENTRENCH A SILT FENCE AT THE BOTTOM OF THE STOCKPILE.
- TEMPORARY STABILIZATION SPECIFICATIONS
- a. APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SF. b. APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS/1000 S.F.
- c. APPLY PERENNIAL RYEGRASS AT A RATE OF 1 LB/1000 S.F. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 S.F. d. MULCH STOCKPILE WITH STRAW OR HAY AT AT RATE OF 90 LBS. /1000 S.F.
- e. APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
- PERMANENT STABILIZATION SPECIFICATIONS
 - APPLY TOPSOIL TO A DEPTH OF 5 INCHES (UNSETTLED)
 - APPLY GROUND LIMESTONE AT A RATE OF 90 LBS. PER 1000 SF.
 - AND WORK FOUR INCHES INTO SOIL.

 APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS/1000 S.F.
 - APPLY HARD FESCUE SEED AT 2.7 LBS./1000 S.F. AND CREEPING RED FESCUE SEED AT 0.7 LBS./1000 S.F. AND PERENNIAL RYEGRASS SEED AT 0.25 LBS./1000 S.F.
 - MULCH STOCKPILE WITH STRAW OR HAY AT AT RATE OF 90 LBS./1000 S.F. APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

DUST CONTROL NOTES

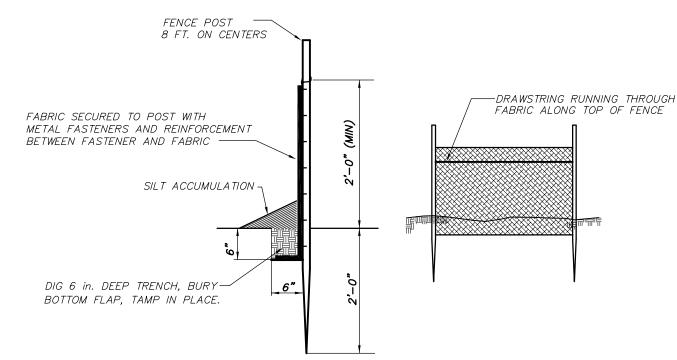
- THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:
- 1. MULCH SEE STANDARD OF STABILIZATION WITH MULCHES ONLY (SE&SC IN NJ, #5, JULY 1999)
- VEGETATIVE COVER SEE STANDARD FOR : TEMPORARY VEGETATIVE COVER (SE&SC IN NJ, #7, JULY 1999), AND PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (SE&SC IN NJ, #4, JULY 1999) AND PERMANENT STABILIZATION WITH SOD (SE&SC IN NJ, #6, JULY 1999).
- SPRAY-ON ADHESIVES ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. SEE SE&SC IN NJ, #16, JULY 1999, FOR DUST CONTROL ADHESIVES.
- TILLAGE TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON WINDWARD SIDE OF SITE BEFORE SOIL BLOWING STARTS. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING—TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- SPRINKLING SITE IS SPRINKLED UNTIL THE SURFACE IS WET.
- BARRIERS SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
- 7. CALCIUM CHLORIDE SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS, OR ACCUMULATION AROUND PLANTS.

TYPICAL SEQUENCE OF CONSTRUCTION: INDIVIDUAL LOTS

- NOTIFY MUNICIPAL ENGINEER, MORRIS COUNTY SOIL CONSERVATION DISTRICT AND HEALTH DEPARTMENT IN WRITING 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- AS INDICATED.
- ..1 week TREE REMOVAL, CLEARING AND STRIPPING OF DISTURBED AREAS. STOCKPILE TOPSOIL. ROUGH GRADE SITE.
- 4. CONSTRUCTION OF DWELLING w/ UTILITY CONNECTIONS. ..6 months
- 5. INSTALL STORMWATER MANAGEMENT BASIN & SEPTIC SYSTEMS. INSTALL SESC MEASURES.
- 6. FINE GRADING. SCARIFY SUBGRADE SOILS TO A DEPTH OF 6" 1 week PRIOR TO THE APPLICATION OF TOPSOIL. SOIL DE-COMPACTION MEASURES, IF NECESSARY. ADD TOPSOIL, MULCH & SEED.

..2 days

- 7. INSTALL FINAL PAVEMENT COURSE. ····
- 8. REMOVE SILT FENCE & SESC MEASURES WHEN PERMANENT VEGETATIVE COVER IS ESTABLISHED.

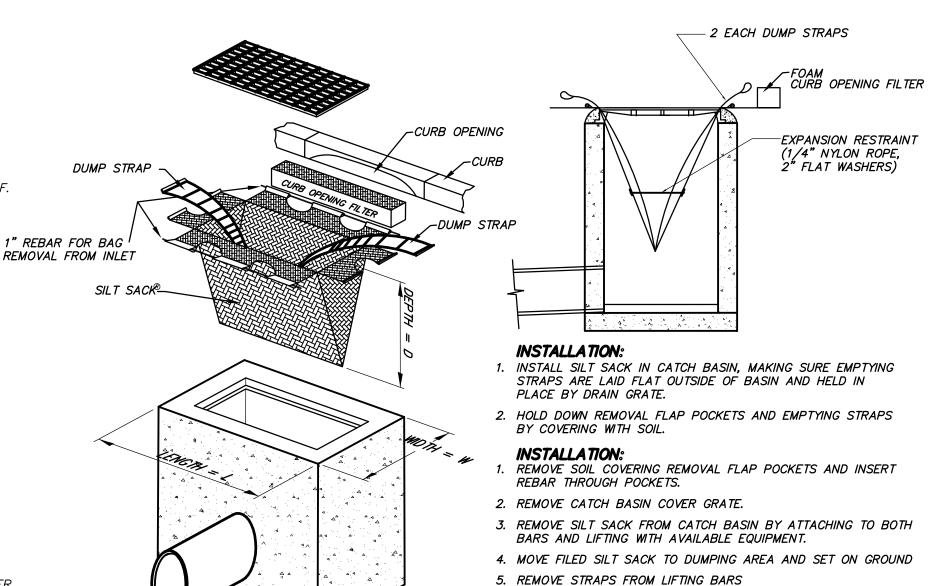


REF.: STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL

REQUIREMENTS FOR SILT FENCE:

- (1.) FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1-1/2 INCHES.
- (2.) A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED. IT MUST BE FASTENED TO THE FENCE POSTS TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
- (3.) A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS, ETC.). PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP

SILT FENCE DETAIL

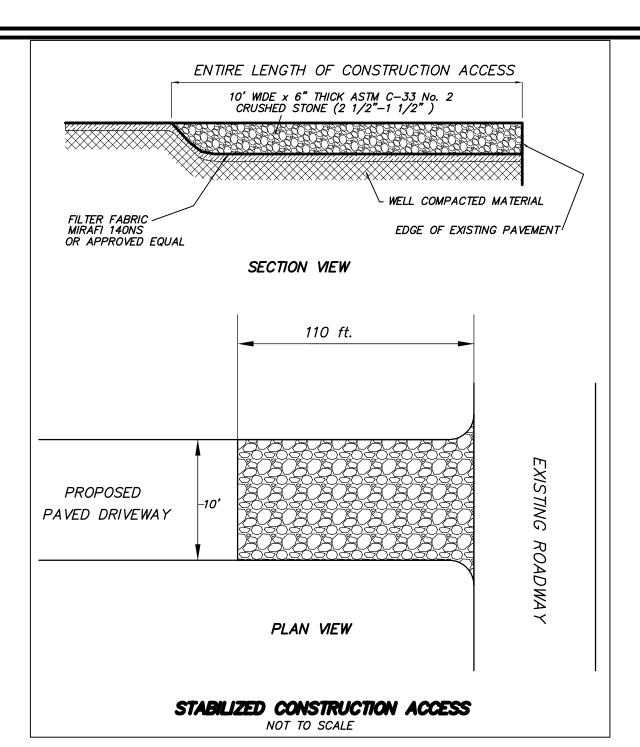


CATALOG NUMBER - SILTO2X04 ACF ENVIRONMENTAL-2831 CARDWELL ROAD-RICHMOND, VIRGINIA 23234-(800) 448-3636

6. INSERT A LIFTING BAR THROUGH BOTH EMPTYING STRAPS

7. LIFT WITH AVAILABLE EQUIPMENT WITH EMPTYING STRAPS

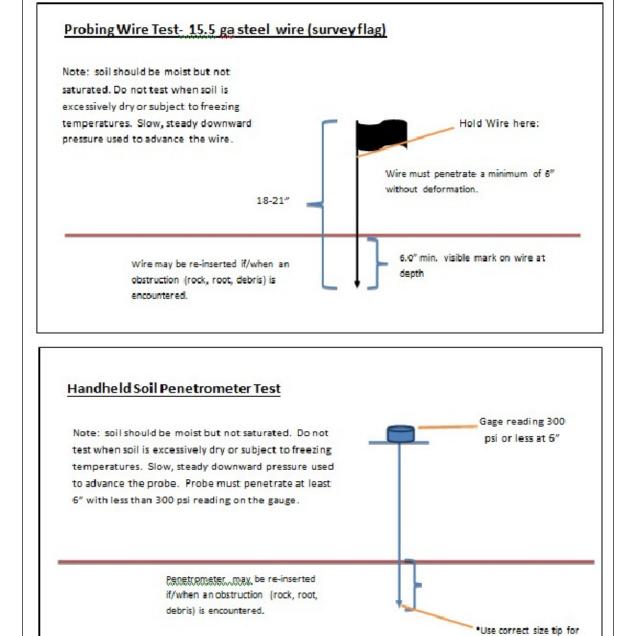
INLET PROTECTION SILT FILTERING SYSTEM



LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED			
	COARSE GRAINED SOILS	FINE GRAINED SOILS		
0 TO 2%	50 FT.	100 FT.		
2 TO 5%	100 FT.	200 FT.		
>5%	ENTIRE SURFACE STABILIZ	ZED WITH FABC BASE COARSE		

Simplified Testing Methods



Procedures for Soil De-Compaction

Procedures shall be used to mitigate excessive soil compaction prior to the placement of topsoil and the establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer may be substituted with any required testing subject to District Approval.

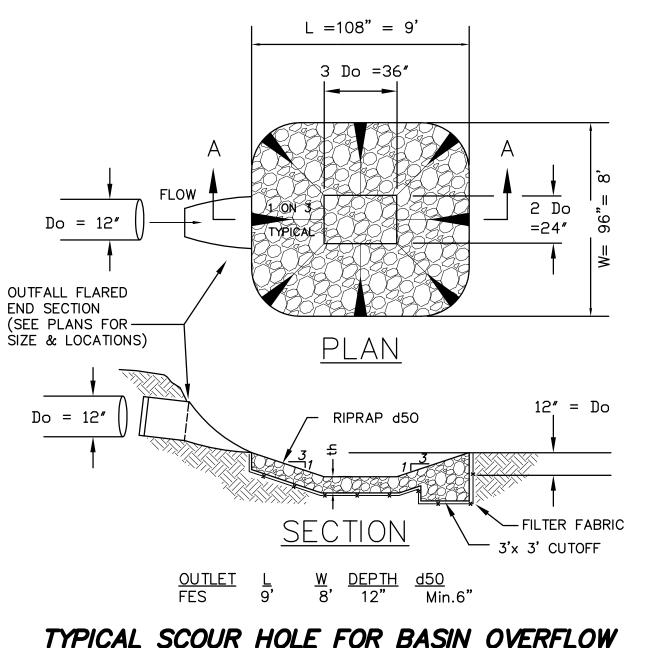
LEGEND

F F F SOIL COMPACTION RESTORATION/

> RECOMMENDED SOIL TEST (APPROX. 1 PER/.5 AC.)

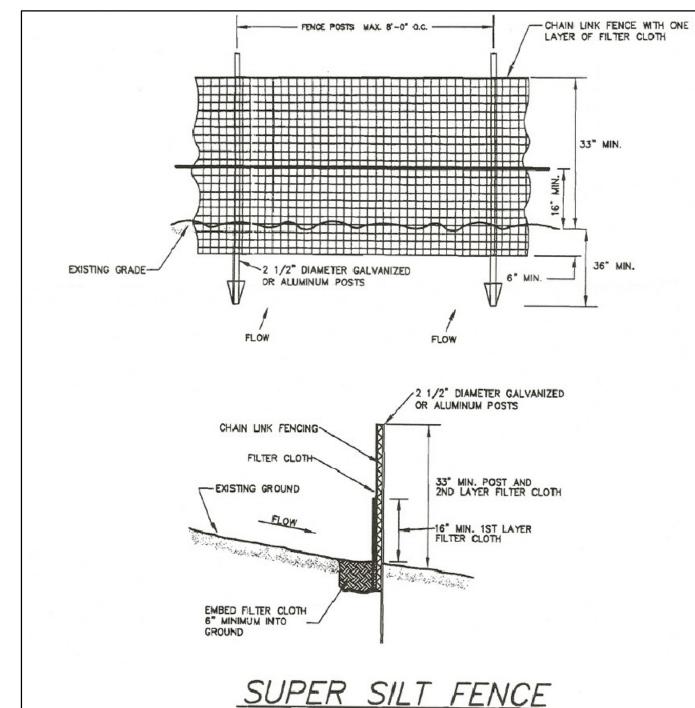
Testing not required within 20 ft. Area around Foundation w/ Basement or 12 ft. Area around Foundation w/ Crawl space or Slab.

soil type



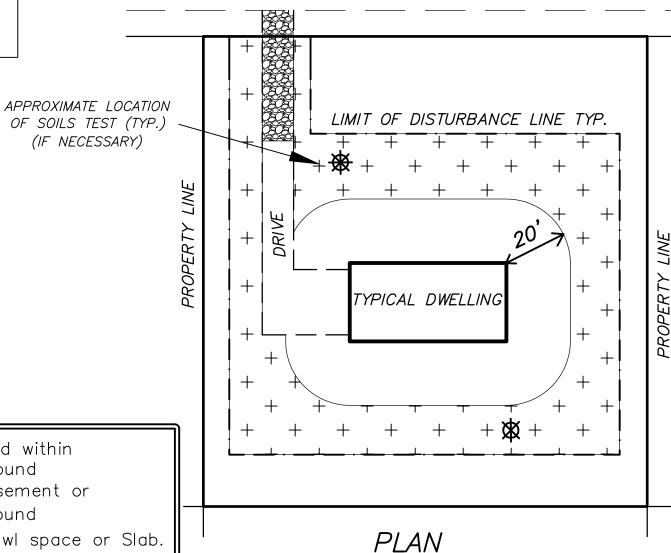
TYPICAL SCOUR HOLE FOR BASIN OVERFLOW

NOTE: RIPRAP & FILTER FABRIC SHALL CONFORM TO THE STANDARD FOR RIPRAP IN THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY"



TYPICAL SOIL DE-COMPACTION METHOD

NOT TO SCALE



not to scale



YANNACCONE & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591 N.J. STATE BOARD FOR P.E. & P.L.S. CERTIFICATE OF AUTHORIZATION No. 24GA27934500



NO. 24GE04527000 DATE 10/04/22

CANDICE J. DAVIS N.J. PROFESSIONAL ENGINEER

NOT VALID WITHOUT SIGNATURE AND RAISED SEA

10/04/22 REISSUE DATE REVISION PROJECT TITLE :

LAWRENCE FARM ESTATES MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147

TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY LOT 2 ~ BLOCK 8 TAX MAP SHEET 8 BOROUGH OF BERNARDSVILLE SOMERSET COUNTY, NEW JERSEY

TYPICAL SOIL EROSION & SEDIMENT CONTROL DETAIL SHEET

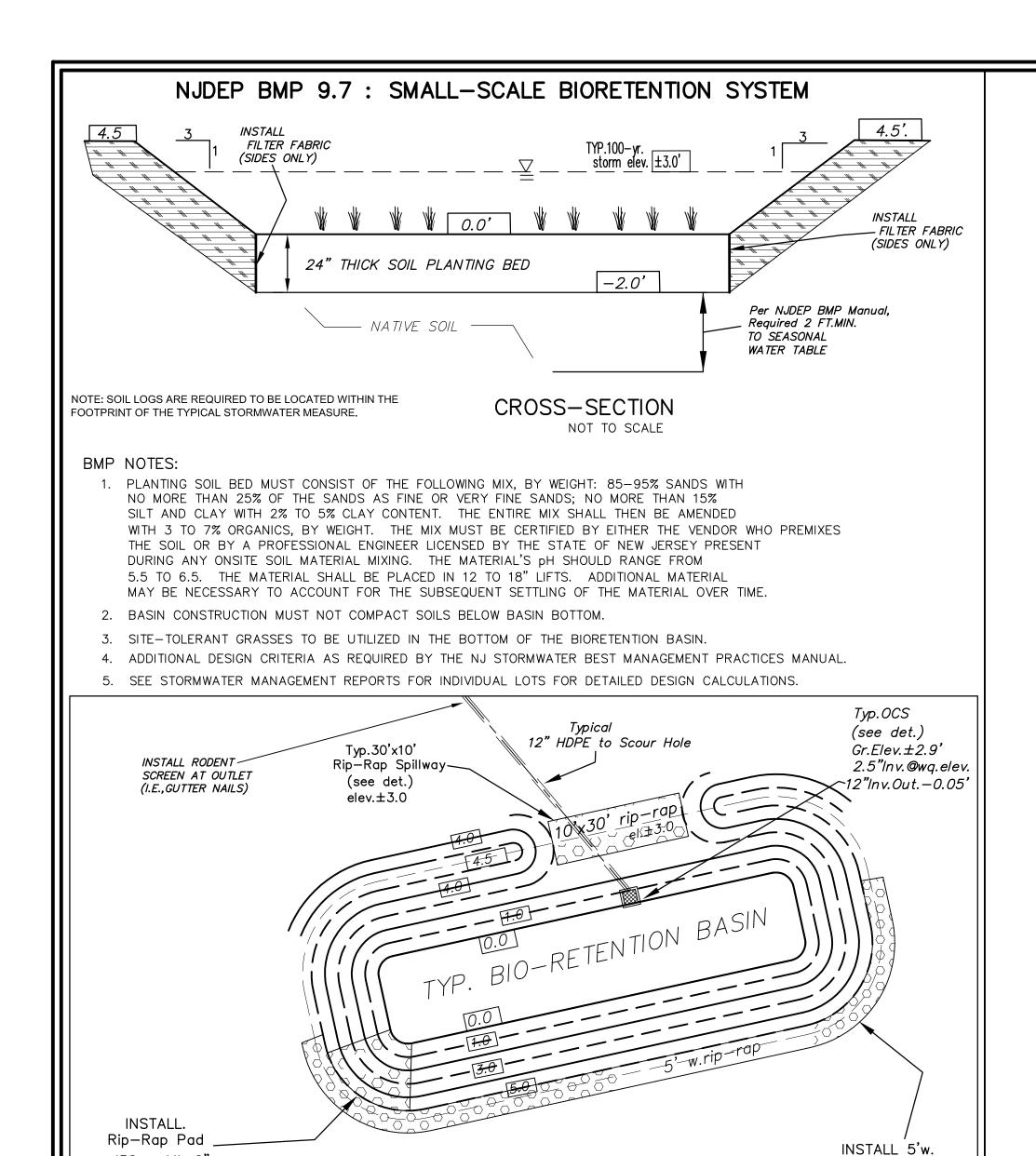
DRAWN BY: CJDSEPTEMBER 2, 2022 CHECKED BY: SCALE: AS SHOWN GY/CJD

W.O. 222040

F.B. ----

COMP FILE: M:SEPTIC/.../222040/PLANNINGBOARD/ PB-details-rev1.dwg

SHEET 14 OF 15



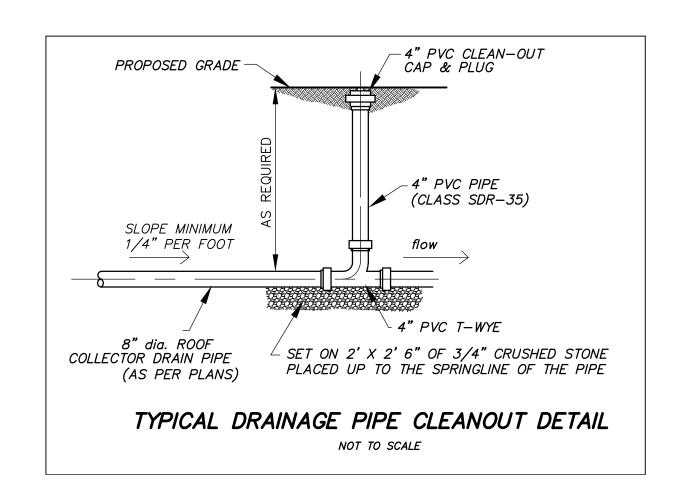
NJDEP BMP 9.7: TYPICAL

SMALL-SCALE BIORETENTION SYSTEM

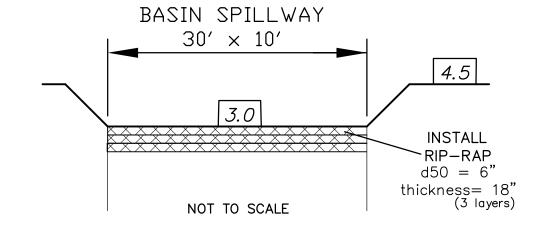
d50 = Min.6"

(3 layers)

thickness=3 x d50

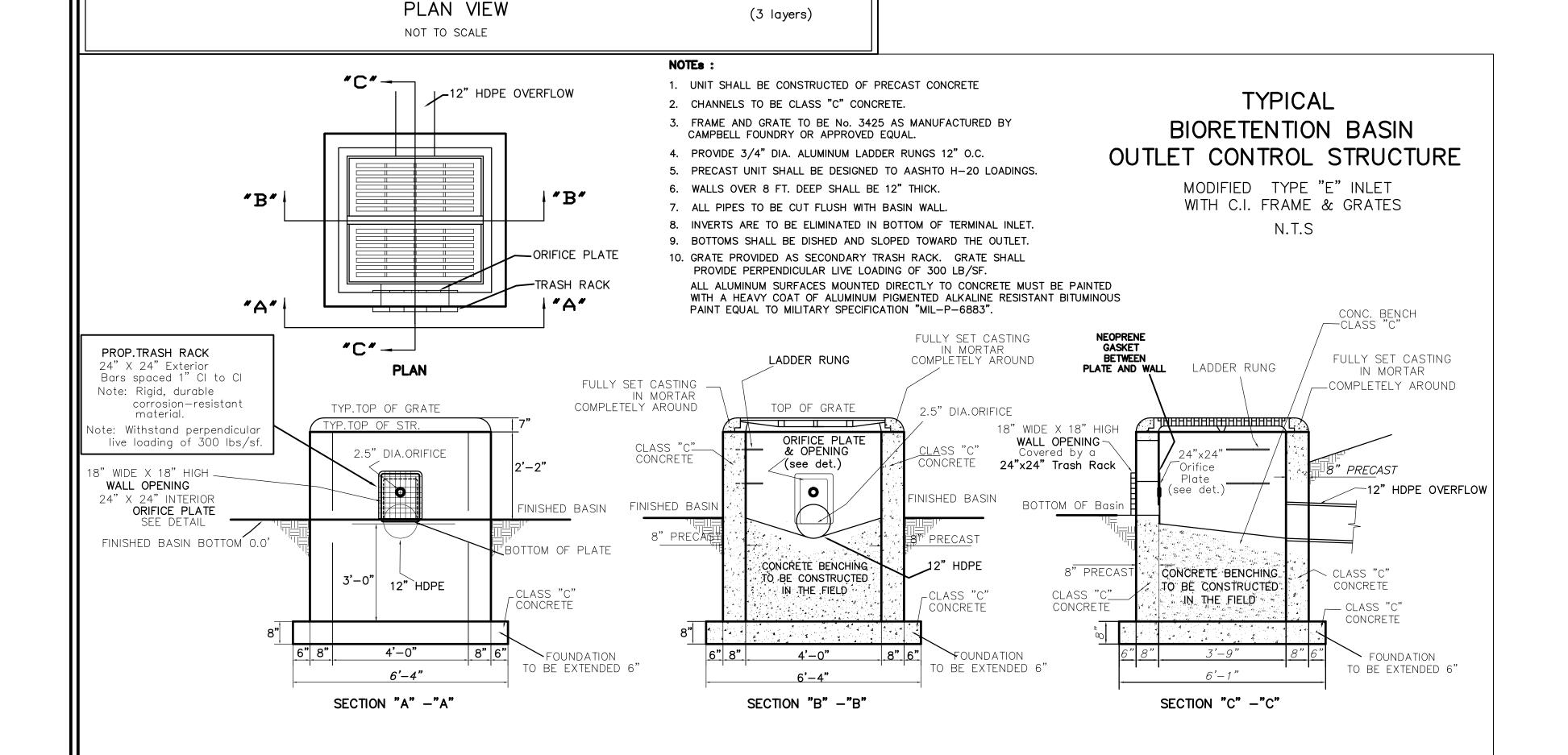


TYPICAL BASIN SPILLWAY CROSS-SECTION



NOTE: SEE STORMWATER MANAGEMENT REPORT FOR TYPICAL DESIGN CALCULATIONS RELATED TYPICAL LOT DEVELOPMENTS PRESENTED BY THESE PLANS.

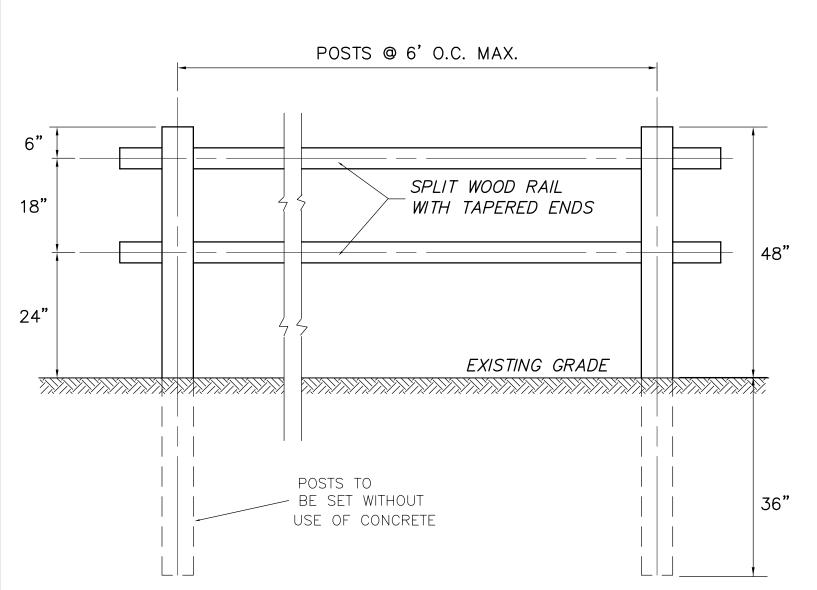
NOTE: DETAILED STORMWATER DESIGN & ENGINEERING CALCULATIONS RELATED TO INDIVIDUAL LOT DEVELOPMENTS SHALL BE SUBMITTED TO MENDHAM TOWNSHIP FOR REVIEW AND APPROVAL PRIOR TO THE START OF ANY CONSTRUCTION.



BMP Pretreatment

RIP-RAP

d50 = Min.6" thickness=3 x d50

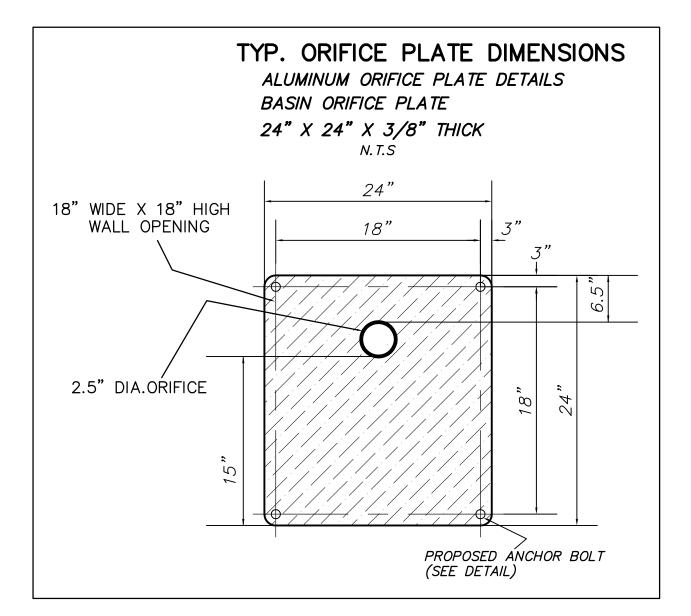


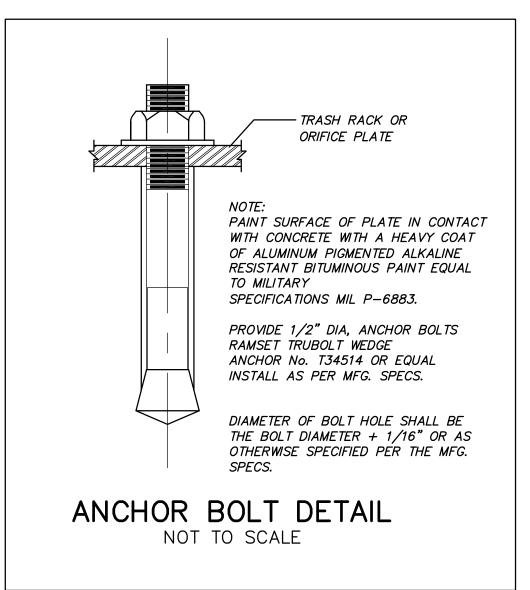
TYPICAL POST AND RAIL FENCE DETAIL

(SPLIT RAIL FENCE Surrounding Basin or Approved equal)

NOTES:

- POST AND RAILS TO BE UNTREATED CEDAR OR PRESSURE TREATED PINE OR EQUIVALENT.
- 2) BACKFILL TO BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95 % OPTIMUM DENSITY.







YANNACCONE VILLA & ALDRICH, LLC

460 MAIN STREET, P.O. BOX 459 CHESTER, NEW JERSEY 07930 PHONE: 908-879-6646 FAX: 908-879-8591 N.J. STATE BOARD FOR P.E. & P.L.S. CERTIFICATE
OF AUTHORIZATION No. 24GA27934500

CANDICE J. DAVIS N.J. PROFESSIONAL ENGINEER

NO. 24GE04527000 DATE 10/04/22

NOT VALID WITHOUT SIGNATURE AND RAISED SEA 10/04/22 REISSUE REVISION DATE PROJECT TITLE

LAWRENCE FARM ESTATES MAJOR SUBDIVISION PLANS EXMOOR DRIVE & SUTTON PLACE LOTS 42.06, 42.07, 42.08 & LOTS 42.12, 42.13, 42.16 ~ BLOCK 147 TAX MAP SHEET 33 TOWNSHIP OF MENDHAM MORRIS COUNTY, NEW JERSEY LOT 2 ~ BLOCK 8

SHEET TITLE **TYPICAL** STORMWATER MANAGEMENT DETAIL SHEET

TAX MAP SHEET 8

BOROUGH OF BERNARDSVILLE

SOMERSET COUNTY, NEW JERSEY

DRAWN BY: CJD SEPTEMBER 2, 2022 CHECKED BY: SCALE: AS SHOWN GY/CJD W.O. 222040

F.B. ----

COMP FILE: M:SEPTIC/.../222040/PLANNINGBOARD/ PB-details-rev1.dwg

SHEET **15** OF **15**