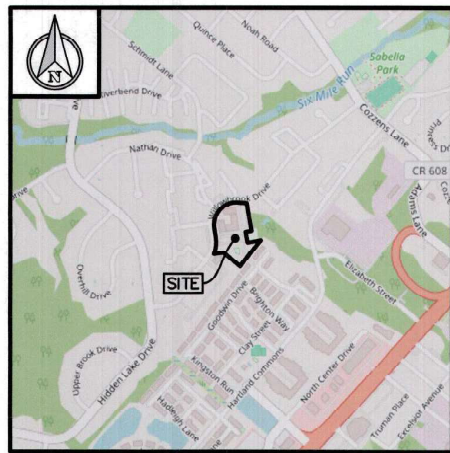
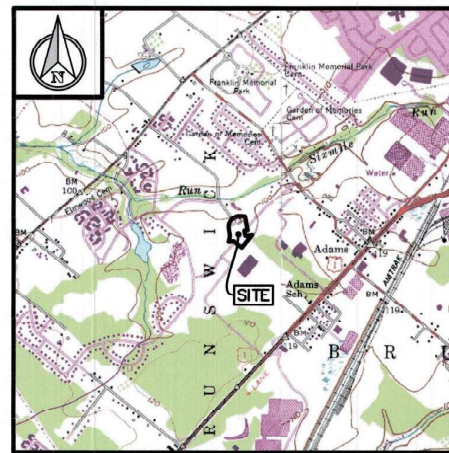


PRELIMINARY/FINAL SITE PLAN
for
HIDDEN LAKE STORAGE

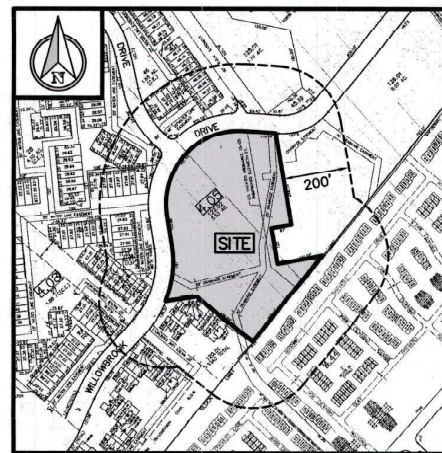
TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
BLOCK 4.05, LOT 122.05



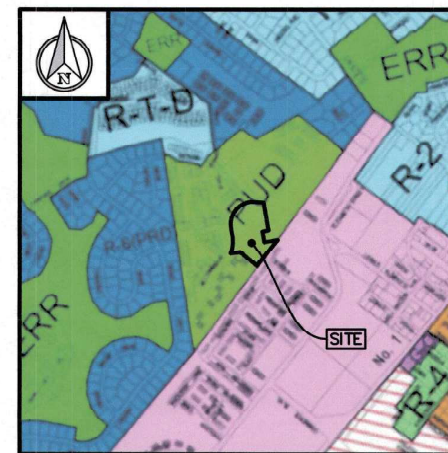
ROAD MAP
1"=1,000'



U.S.G.S. MAP
1"=2,000'



TAX MAP
1"=300'



ZONE MAP
1"=1,000'

200' OWNERS LIST

BLOCK	LOT	NAME & ADDRESS	BLOCK	LOT	NAME & ADDRESS	BLOCK	LOT	NAME & ADDRESS	BLOCK	LOT	NAME & ADDRESS
4.05	120.01	WILLOWBROOK HIDDEN LAKE CONDOS 433 RIVER ROAD HIGHLAND PARK, NJ 08904	4.08	27.18	PAGANUCCI, REGINA 415 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	28.02	VENOSA, LYNN 233 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.7902	SINGH, NISHANT & KSHATRYA, SHAKSHI 84 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.46	FELDER, JUDITH 302 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.22	MYSPACE LLC 62 LOTT DRIVE MARTINSVILLE, NJ 08836	4.08	28.03	MASSA, LINDA 231 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.7903	DEGAONKAR, JAMES E & LORRAINE 85 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.56	MATHIA, NARENDRA & CHANDRAN 286 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.23	PARTI, JAYAN & NISHITA 155 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	45.19	RIVINGTON APTS LLC & STEVE STRAUSS 433 RIVER ROAD HIGHLAND PARK, NJ 08904	4.44	2.7904	TRACH, JOHN 30 ELEANOR DRIVE KENDALL PARK, NJ 08824
4.05	120.57	ZHAO, JIAOYING & YANG, QING 3 SUMMER COTTAGE LANE FRANKLIN PARK, NJ 08803	4.08	27.24	THOMAS, GARY & ANGELINE M BISHOP 153 WILLOWBROOK ROAD NORTH BRUNSWICK, NJ 08902	4.34	46	HIDDEN LAKE PUD OWNERS ASSN INC 16 FIVE STAR SUITE 103 SOMERSET, NJ	4.44	2.7905	ULLICH, MATTHEW 87 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.58	HART, ROBERT 540 DEER CREEK COURT JACKSON, NJ 08527	4.08	27.25	SIDIN, IRFAN 1 GENTLEVIEW COURT SECHT PLAINS, NJ 07076	4.34	46.01	LAMONT, ITA R 176 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.7906	PORWAL, PRAFULLA K & PORWAL, USHA 88 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.59	1985 WILLOWBROOK DRIVE CT 282 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.26	AURELIO, MICHELE L 307 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.02	SMITH, EVELINA 174 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8001	CARRINGTON, LYNETTE 89 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.60	COBIN, PREYA 777 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.27	XIE, JING & WANG, WEIBO 363 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.03	MX ASSOCIATES C/O R. KESSLER 433 RIVER ROAD HIGHLAND PARK, NJ 08904	4.44	2.8002	SUBRAMANIAN, BALA & VIJAYA L 8 PLEASANT VALLEY WAY PRINCETON, NJ 08540
4.05	120.61	RUTSHTEYN, YEFIM & ELIZABETH 250 174TH STREET APT 1615 MIAMI BEACH, FL 33160	4.08	27.28	LIU, MAN 365 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.04	ACQUINO, JANE Y & OSUGH, JOHN 170 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8003	BUENO, LUIS & STELLA 35 RAYMOND STREET EDISON, NJ 08817
4.05	120.62	MACKEITER, JACK R 4 ARBUE COURT ROCKVILLE, MD 20854	4.08	27.29	GREENBERG, DARALYN 351 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.05	NEGRINSKY, ALEXANDER & AMYA 168 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8004	PADMANABHAN, SURESH & VENUGOPALAN A 83 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.63	COONALE, PRIYANKA & VIKRAM 778 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.30	HADEK, PRZEMYSŁAW 349 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.06	STOLYAR, LORA & PHIL 168 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8005	83 GOODWIN DRIVE LLC 1435 RED WOLF DRIVE ROCKWELL, NJ 07867
4.05	120.64	RAJ, RAVI & MAHADEVAN, MYTHILU 262 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.31	ROSEN, NEDDY 347 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.07	SURESTRA, SUJIT 184 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8006	THOMAS, ROMAN 84 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.65	HANSON, CHRISTOPHER & CORBON SALLIE 376 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.32	LACANNA, JAMES & SCHATEL, NANCY 345 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.08	RUSSO, EUGENE & MARYBETH 182 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8007	PARIKH, MAHESH P. & NEELAM 55 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.66	SHAH, APRIT 252 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.33	AMIN, JAY 343 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.09	ADIGOSHOV, VIKTOR & MELDY, PIPER 160 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.8008	KLUGHERZ, RICHARD E 86 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902
4.05	120.67	ODONNELL, GWEN 265 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.34	SOLIMAN, MONA 341 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	46.10	ALUMADI, PURITA L 150 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902			MIDDLESEX COUNTY PLANNING BOARD COUNTY ADMINISTRATION BLDG, 5711 FLOOR 25 BAYARD STREET NEW BRUNSWICK, NJ 08901
4.05	120.68	OSCUZA, SUSANNA 258 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.35	LUTAK, LAURA 330 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	125.01	SCHWARTZ, CHARLOTTE 1290 50TH STREET NORTH BRUNSWICK, NJ 08902			NORTH BRUNSWICK TOWNSHIP 710 LUTHERAN ROAD NORTH BRUNSWICK, NJ 08902
4.05	120.69	BRANDENMAN, MARK & PANTICH, RINA 19 FISHER ISLAND COURT MORRIS TWP, NJ 08851	4.08	27.36	CHOI, JONGHAN & SEOUNGHA 301 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.34	34	125.02 NORTH BRUNSWICK TOWNSHIP 710 LUTHERAN ROAD NORTH BRUNSWICK, NJ 08902			PUBLIC SERVICE ELECTRIC & GAS CO. MANAGER - CORPORATE PROPERTIES 60 PARK PLACE, 100 NEWARK, NJ 07102
4.05	120.70	PHAM, ELEANA 89 HIDDEN LAKE DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.37	BRODSKY, TATIANA TRUST 303 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2	GOVERNOR'S POINT CONDO ASSN 42 CLAY STREET NEWARK, NJ 07102			VERIZON NJ GEN. TAX ADMINISTRATION DRAGON STREET - ROOM 305 NEWARK, NJ 07102
4.05	120.71	PANELLA, MICHAEL 264 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.38	PHILLIPS, BENJAMIN 308 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.6504	NATTE, GOWTHAM RAJA 60 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			CADLEVISION OF BARSTAD VALLEY 275 CENTENNIAL AVENUE - ON 6805 POQUONAM, NJ 08850-6802 ATTN: MARGUERITE PRENDERVILLE
4.05	120.72	LISER, JOSHUA 254 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.39	MUNDY, WILLIAM & MARGARET 305 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.6505	JALE, SHRUTHI 61 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			DEPARTMENT OF TRANSPORTATION STATE OF NEW JERSEY 1035 PARKWAY TRENTON, NJ 08620
4.05	120.73	BARNI, AMOUR & NEHA 262 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	27.40	DABROWSKI, MAREK & MONIKA 300 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.6506	PUTHENVEETIL, VIJAY K & VIJAY, AMPILY 62 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			CONSTRUCTION DEPARTMENT MR. TIM ALLEN TOWNSHIP OF NEW BRUNSWICK 201 COOLIDGE STREET SOUTH PLAINFIELD, NJ 07080
4.05	126.01	BROOKDALE APTS LLC & STEVE STRAUSS 433 RIVER ROAD HIGHLAND PARK, NJ 08904	4.08	27.41	BHATTIA, AJIT & HARJEET 311 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.6507	SWAMINATHAN, R & RAJAMANI, S 83 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			30000 PIPELINE, LP RIGHT OF WAY - MONTELEONE COMPLEX 222 FRETZMAN ROAD SINKING SPRING, PA 19068
4.05	27	HIDDEN LAKE PUD OWNERS ASSOCIATION 35 CLYDE ROAD SUITE 102 SOMERSET, NJ	4.08	27.42	HIDDEN LAKES PUD OWNERS ASSOCIATION 35 CLYDE ROAD SUITE 102 SOMERSET, NJ	4.44	2.6508	KAMANDULA, AKASH PRASAD 64 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			
4.05	27.17	CASTRO FLOOZ, DIANE 117 WILLOWBROOK DRIVE NORTH BRUNSWICK, NJ 08902	4.08	28.01	BRUNYAN, NEFAUR R & TERESAUS, JANAYATE 238 NATHAN DRIVE NORTH BRUNSWICK, NJ 08902	4.44	2.7901	SELVAPRUKA, IYATHAPANA 83 GOODWIN DRIVE NORTH BRUNSWICK, NJ 08902			

SHEET INDEX		
SHEET #	DWG. #	TITLE
SHEET 1	CV-1	COVER SHEET
SHEET 2	OP-1	OVERALL PLAN
SHEET 3	EC-1	EXISTING CONDITIONS PLAN
SHEET 4	SP-1	ENGINEERING SITE PLAN
SHEET 5	LL-1	LANDSCAPE, LIGHTING & TREE REPLACEMENT PLAN
SHEET 6	SE-1	SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 7	SED-1	SOIL EROSION & SEDIMENT CONTROL DETAILS (1)
SHEET 8	DE-1	CONSTRUCTION DETAILS (1)
SHEET 9	DE-2	CONSTRUCTION DETAILS (2)

OWNER & APPLICANT

Hidden Lake Towne Center LLC
433 River Rd
Highland Park, NJ 08904

APPROVED BY	
CHAIRMAN	DATE
SECRETARY	DATE
ENGINEER	DATE

PROJECT NUMBER 2024.067

HIDDEN LAKE
STORAGE

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY, NEW JERSEY
BLOCK 4.05, LOT 122.05



THE STATE OF NEW JERSEY REQUIRES
NOTIFICATION BY EXCAVATORS,
DESIGNERS, OR ANY PERSON
PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN THE STATE.



261 Cleveland Avenue
Highland Park, NJ 08904

menloeng.com
732-846-8585 732-846-9439

Certificate of Authorization - 24GA77951900

HIDDEN LAKE
STORAGE

TOWNSHIP OF
NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

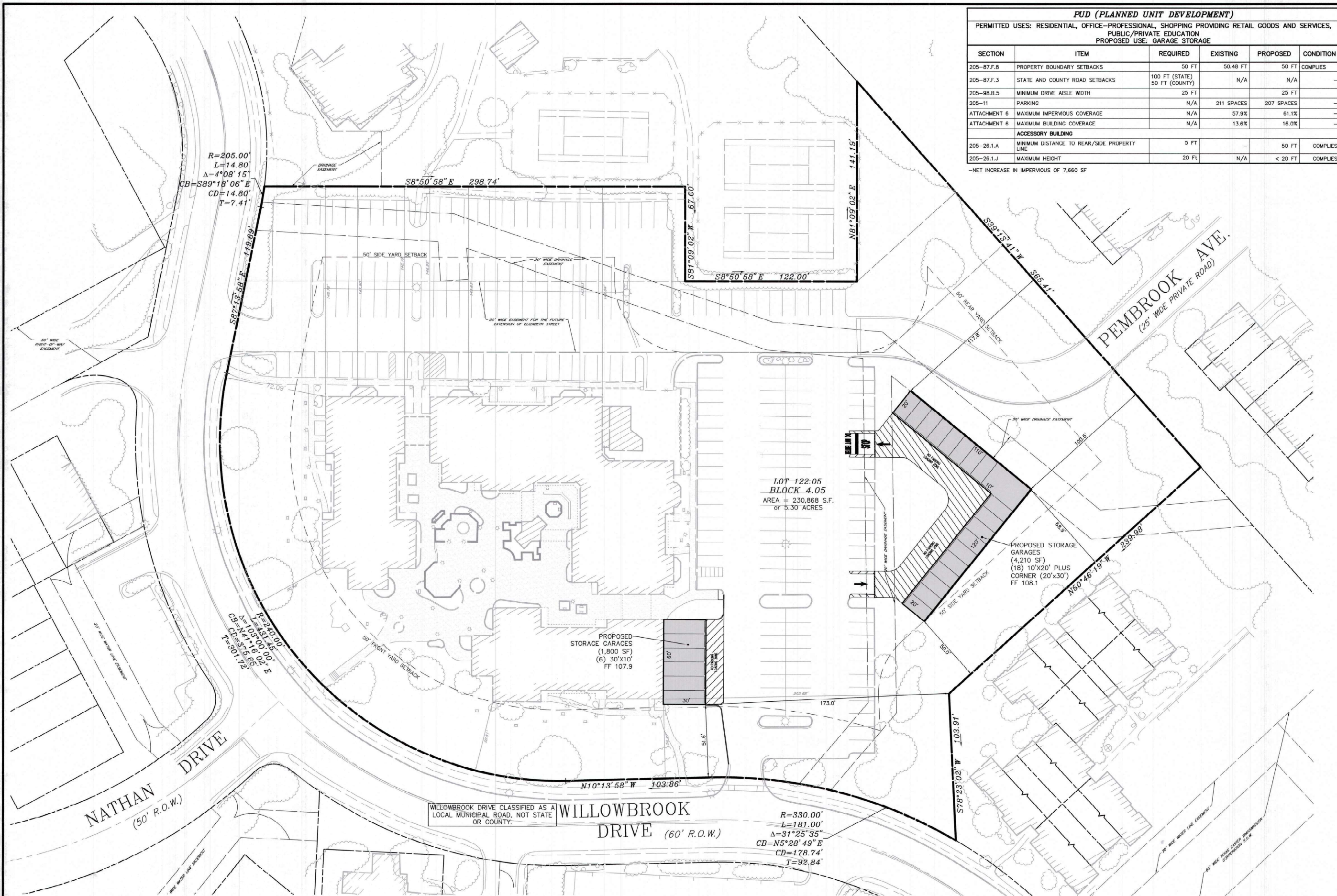
COVER SHEET

DRAWN BY PJ
DESIGNED BY GSD
APPROVED BY GSD

THIS WORK PREPARED UNDER MY
SUPERVISORY SUPERVISION...

GREGORY S. OMAN
PROFESSIONAL ENGINEER
NJ#43441

PROJECT NUMBER 2024.067 CV-1
DATE OF ISSUE JANUARY 6, 2025
REVISED THROUGH 1



PUD (PLANNED UNIT DEVELOPMENT)					
PERMITTED USES: RESIDENTIAL, OFFICE-PROFESSIONAL, SHOPPING PROVIDING RETAIL GOODS AND SERVICES, PUBLIC/PRIVATE EDUCATION					
PROPOSED USE: GARAGE STORAGE					
SECTION	ITEM	REQUIRED	EXISTING	PROPOSED	CONDITION
205-87.F.8	PROPERTY BOUNDARY SETBACKS	50 FT	50.48 FT	50 FT	COMPLIES
205-87.F.3	STATE AND COUNTY ROAD SETBACKS	100 FT (STATE) 50 FT (COUNTY)	N/A	N/A	-
205-98.B.5	MINIMUM DRIVE AISLE WIDTH	25 FT		25 FT	-
205-11	PARKING	N/A	211 SPACES	207 SPACES	-
ATTACHMENT 6	MAXIMUM IMPERVIOUS COVERAGE	N/A	57.9%	61.1%	-
ATTACHMENT 6	MAXIMUM BUILDING COVERAGE	N/A	13.6%	16.0%	-
ACCESSORY BUILDING					
205-26.1.A	MINIMUM DISTANCE TO REAR/SIDE PROPERTY LINE	5 FT		50 FT	COMPLIES
205-26.1.J	MAXIMUM HEIGHT	20 FT	N/A	< 20 FT	COMPLIES

-NET INCREASE IN IMPERVIOUS OF 7,660 SF

HORIZONTAL DATUM : NAD83

GRAPHIC SCALE

0 30 60

15 45

SCALE: 1"=30'

REVISIONS

NO.	DESCRIPTION	DATE
-----	-------------	------

THIS DRAWING IS FOR PLANNING PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

☐ CHKD BY: _____ DATE: _____

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Landscape Architects
Professional Planners

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Highland Park, NJ 08904

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Certificate of Authorization : 24CA27951900

HIDDEN LAKE STORAGE

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

OVERALL PLAN

DRAWN BY: _____ DS
DESIGNED BY: _____ MW
APPROVED BY: _____ CSO

THIS WORK PREPARED UNDER MY QUALITY CONTROL SUPERVISION

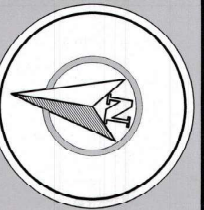
GREGORY S. OMAN
PROFESSIONAL ENGINEER
NJPE# 43441

PROJECT NUMBER	2024.067.01	00-1
DATE OF ISSUE	JANUARY 6, 2025	2
REVISION		

REFERENCES:

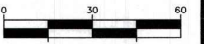
1. MAP PRODUCED FOR CHESTER, PLOUSSAS, LISOWSKY PARTNERSHIP, LLC PREPARED BY MID-ATLANTIC PHOTOGRAMMETRIC SERVICES, INC. MAPS PROJECT NO. 14-1833, DATE OF PHOTOGRAPHY: 05/26/14.

2. TOWNSHIP OF NORTH BRUNSWICK TAX MAP SHEET #10.



HORIZONTAL DATUM: NAD83

GRAPHIC SCALE



SCALE: 1"=30'

REVISIONS

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CHKD BY: DATE:



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HIDDEN LAKE
STORAGE

TOWNSHIP OF NORTH
BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

EXISTING
CONDITIONS
& DEMOLITION
PLAN

DRAWN BY: [Signature]
DESIGNED BY: [Signature]
APPROVED BY: [Signature]

THIS WORK PREPARED UNDER MY
IMMEDIATE SUPERVISION

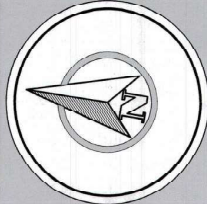
GREGORY S. OMAN
PROFESSIONAL ENGINEER
NJPE# 43441

PROJECT NUMBER: 2024.067.01
DATE OF ISSUE: JANUARY 6, 2025
REVISION: [Blank]

EC-1
3







HORIZONTAL DATUM : NAD83

GRAPHIC SCALE

0 30 60

15 45


SCALE: 1"=30'

REVISIONS


NO.	DATE	DESCRIPTION
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☐ CHKD BY: _____ DATE: _____



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Certificate of Authorization : 24CA27951900

HIDDEN LAKE STORAGE


TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

ENGINEERING SITE PLAN

DRAWN BY: _____
DESIGNED BY: _____
APPROVED BY: _____

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION


GREGORY S. OMAN
PROFESSIONAL ENGINEER
N.J.P.E.# 43441

PROJECT NUMBER	DATE OF ISSUE	REVISION	SP-1
2024.067.01	JANUARY 6, 2025	-	4



LANDSCAPE & LIGHTING PLAN

SCALE: 1" = 30'

LIGHTING SCHEDULE:

LABEL	QUANTITY	TYPE OF MOUNT	WATTAGE / COLOR / DRIVER	MOUNTING HEIGHT	DISTRIBUTION	CATALOG NUMBER
WLI	6	WALL PACK	25.4 WATTS LED / 3,000 K / 450 mA	8.75' *	TYPE T4FT W HSS	COOPER LIGHTING SOLUTIONS MCGRAW-HILL IMPACT ELITE LED 1ST-SAL-B-130-U-T4FT-BK-HSS

* ABOVE FINISHED FLOOR
(CONTACT MANUFACTURER FOR EXACT LIGHT FIXTURE AND POLE SPECIFICATIONS)

Calculation Summary	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Label	Illuminance	Fc	1.63	3.5	0.3	5.43	11.67
LOADING ZONE							

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HEIGHT	GALIPER	PLANTING HT.	TYPE	REMARK
DECIDUOUS TREES									
SLTS*	1	SLIDITIS TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER THORNLESS LOCUST	40'	50'	2.5-3" CAL.	12-14'	D4D	STRAIGHT
EVERGREEN TREES									
THFC	45	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	15'	30'		6-7'	B4B	STRAIGHT
SHRUBS									
RHAR	31	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	8'	8'	18-24"		#5 CAN	DENSE W/ BRANCHES

* TREE PROVIDED FOR TREE REPLACEMENT



LIGHTING NOTES:

- A CONCRETE FOOTING BELOW FINISHED GRADE SHALL BE INSTALLED FOR EACH FIXTURE. SIZE AND DEPTH TO BE DESIGNED BY STRUCTURAL ENGINEER.
- LIGHT FIXTURES AND POLES TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
- PARKING AREA LIGHTING CONTROLS SHALL BE PHOTOCELL ACTIVATED AND TURN DEACTIVATED DURING HOURS OF OPERATION.
- ALL CIRCUIT DIAGRAMS AND ELECTRICAL PLANS FOR EXTERIOR LIGHTING TO SERVICE PANEL SHALL BE DESIGNED BY INTERIOR LIGHTING CONTRACTOR/ENGINEER.
- INSTALLATION OF ALL SITE LIGHTING ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES, AND LAWS.
- THIS PLAN HAS PRODUCED USING LIGHTING ANALYSIS AND PROGRAM WITH THE APPROPRIATE PHOTO-METRIC FILES SUPPLIED BY COOPER LIGHTING SOLUTIONS.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING OVERHEAD WIRES FOR CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT/ENGINEER FOR ANY CONFLICTS PRIOR TO ORDERING LIGHTING EQUIPMENT.
- THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION (1-800-275-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE.
- ANY LIGHT FIXTURE SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE ACCOMPANIED BY A POINT BY POINT CALCULATION VERIFYING THE SUBSTITUTED FIXTURES PERFORMANCE AND DEMONSTRATING THAT THE REVISED LIGHT LEVELS MEET THE APPROVED PLAN. FIELD ENGINEERS WILL NOT PERFORM REVISED LIGHTING CALCULATIONS UNLESS AUTHORIZED BY THE OWNER. THE REVISED LIGHT LEVELS MUST BE SUBMITTED TO THE MUNICIPAL REVIEWING ENGINEER FOR APPROVAL.
- THIS PLAN IS TO BE UTILIZED FOR LIGHTING PURPOSES ONLY. REFER TO BUILDING MEP OR ELECTRICAL CONTRACTOR AND PLANS TO DETERMINE REQUIRED VOLTAGES AND REQUIRED SPECIFICATIONS FOR ALL SITE LIGHTING.

GENERAL LANDSCAPE NOTES:

- NO SUBSTITUTIONS IN THE PLANT LIST IS TO BE MADE UNLESS AUTHORIZED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE OWNER AND THE TOWNSHIP.
- ALL DISTURBED AND PERMANENT TURF AREAS SHALL BE SEEDING WITH A GENERAL PURPOSE MIXTURE SIMILAR TO THE FOLLOWING: 50% SEED MIX #4 (TALL TURF FESCUE, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS) OR APPROVED EQUAL. SEE SCS DETAIL SHEETS FOR SEEDING SPECIFICATIONS.
- ALL PLANTING BEDS TO BE MULCHED WITH (8) INCH MINIMUM MULCH (SEE PLANTING NOTE #20). MULCH VOLCANOES (MOUNDS) AROUND TREES ARE PROHIBITED.
- TOPSOIL PROTECTION: NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS FILL. ALL TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGRADED SURFACES SO AS TO PROVIDE AN EVEN COVER AND SHALL BE STABILIZED BY SEEDING OR PLANTING. ALL REGRADED SURFACES SHALL BE COVERED BY A SIX (6) INCH MINIMUM THICKNESS OF TOPSOIL. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE, TOPSOIL, MEETING OR EXCEEDING THE MINIMUM REQUIRED SPECIFICATIONS, SHALL BE PROVIDED TO RESULT IN A SIX (6) INCH MINIMUM THICKNESS. ANY IMPORTED TOPSOIL OR SUBSOIL SHALL BE PROPERLY IDENTIFIED PRIOR TO ANY TONING OR HANDLING. CHEMICALS.
- LAWN AREAS SHALL MAINTAIN A MINIMUM SLOPE OF 2% AND A MAXIMUM OF (3) FEET HORIZONTAL TO (1) FOOT VERTICAL. AND CONTRACTED AREAS SHALL BE TILLED TO A DEPTH OF EIGHTEEN (18) INCHES.
- WASCTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CRACKED LEADERS, DEFORMED GROWTH HABIT, AGING OF THE BARK, SAGGING, WINDBURN, DISFORMING KNOTS, OR FRESH CUTS OF LIMBS OVER 3/4 IN. WHICH HAVE NOT COMPLETELY CALLEDUS WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED.
- SHRUB PLANTING ISLANDS, PARKING AREA ISLANDS AND FOUNDATION PLANTING BEDS SHALL RECEIVE A MINIMUM OF (2) FEET OF TOPSOIL. MATERIALS WHICH HAVE DAMAGED OR CRACKED LEADERS, DEFORMED GROWTH HABIT, AGING OF THE BARK, SAGGING, WINDBURN, DISFORMING KNOTS, OR FRESH CUTS OF LIMBS OVER 3/4 IN. WHICH HAVE NOT COMPLETELY CALLEDUS WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED.
- ALL PLANT MATERIALS LOCATED WITHIN TRIANGLES AND PARKING LOT ISLANDS SHALL BE MAINTAINED NOT TO EXCEED A MAXIMUM OF (30) INCHES ABOVE PAVEMENT AND TREES SHALL BE LINED TO MAINTAIN A MINIMUM CLEARANCE OF (10) FEET ABOVE THE TOP OF CURB OR SIDEWALK FOR SIGHT VISIBILITY.
- THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION (1-800-275-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE SUPPORTED UNTIL BACKFILL IS IN PLACE.
- IRRIGATION SHALL BE PROVIDED FOR PLANT MATERIAL. IF INDICATED ON THE PLAN OR AT THE OWNER'S DISCRETION, DESIGN TO BE PROVIDED BY IRRIGATION PROFESSIONAL. ALL LANDSCAPE AREAS PROVIDED WITH AUTOMATIC IRRIGATION SYSTEMS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER TO ALL PLANTING AND LAWN AREAS UNTIL FINAL ACCEPTANCE.
- SEE DETAIL SHEETS FOR ADDITIONAL PLANTING NOTES AND DETAILS.
- ALL SHADE TREES, EVERGREENS, AND FLOWERING TREES SHALL BE PROVIDED WITH TREESATOR ORIGINAL OR JIL PRO™ TM PATENTING BAGS, RINGS OR APPROVED EQUAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING WATER TO ALL PLANTING AND LAWN AREAS UNTIL FINAL ACCEPTANCE.
- PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL, SEEDING OR SOODING OF LAWN AREAS, THE CONTRACTOR SHALL OBTAIN PHYSICAL, CHEMICAL AND SOIL FERTILITY TESTING AT AN APPROVED LAB TO DETERMINE SOIL COMPOSITION AND SUITABILITY FOR THE PLANTING OF LAWN OR TURF. THE TEST RESULTS SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW.
- ALL PLANTED MATERIAL SHALL BE REQUIRED TO BE LABELED AND TANKED AT THE TIME OF PLANTING. THE PLANT TAGS SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION OF PLANTING AND AS-BUILT IS SUBMITTED FOR APPROVAL.
- AREAS INDICATED TO BE PROVIDED WITH RIVER STONE SHALL BE A 4 INCH DEPTH OF 1 TO 3 INCH DIAMETER RIVER STONE OVER REED BARRIER FABRIC.
- AREAS INDICATED TO BE PLANTED WITH FOUNDATION PLANTING ARE TO BE COORDINATED WITH FINAL ARCHITECTURAL DRAWINGS.
- SEASONAL COLOR WHEN INDICATED ON THE PLAN VIEW SHALL INCLUDE SPRING BULBS (TULIPS OR DAPPODOLIS), SUMMER ANNUALS AND FALL COLORING. WHEN INDICATED ON THE PLAN VIEW, THE LANDSCAPE CONTRACTOR SHALL INCLUDE THE PLANTING UNTIL FINAL ACCEPTANCE (UNLESS SPECIFICALLY RELIEVED OF THE PLANTING IN THE CONTRACT).

TREE #	DIM (INCHES)	SPECIES	CONDITION	STATUS
#1	12"	PEAR	FAIR	TO BE REMOVED
#2	11"	PEAR	FAIR	TO BE REMOVED
#3	10"	PINE	FAIR	TO BE REMOVED
#4	6"	JANITOR	FAIR	TO BE REMOVED
#5	6"	JANITOR	FAIR	TO BE REMOVED
#6	10"	PINE	FAIR	TO BE REMOVED
#7	14"	CHERRY	FAIR	TO BE REMOVED

KEY:	
	EXISTING TREE TO BE REMOVED
	EXISTING TREE TO REMAIN
# 17	TREE NUMBER

- NOTES:
- NO SPECIFIC TREES PROPOSED TO BE REMOVED.
 - TREES UNDER 6" TO BE REMOVED NOT COUNTED FOR TREE REPLACEMENT.

TREE REMOVAL & REPLACEMENT CALCULATIONS:

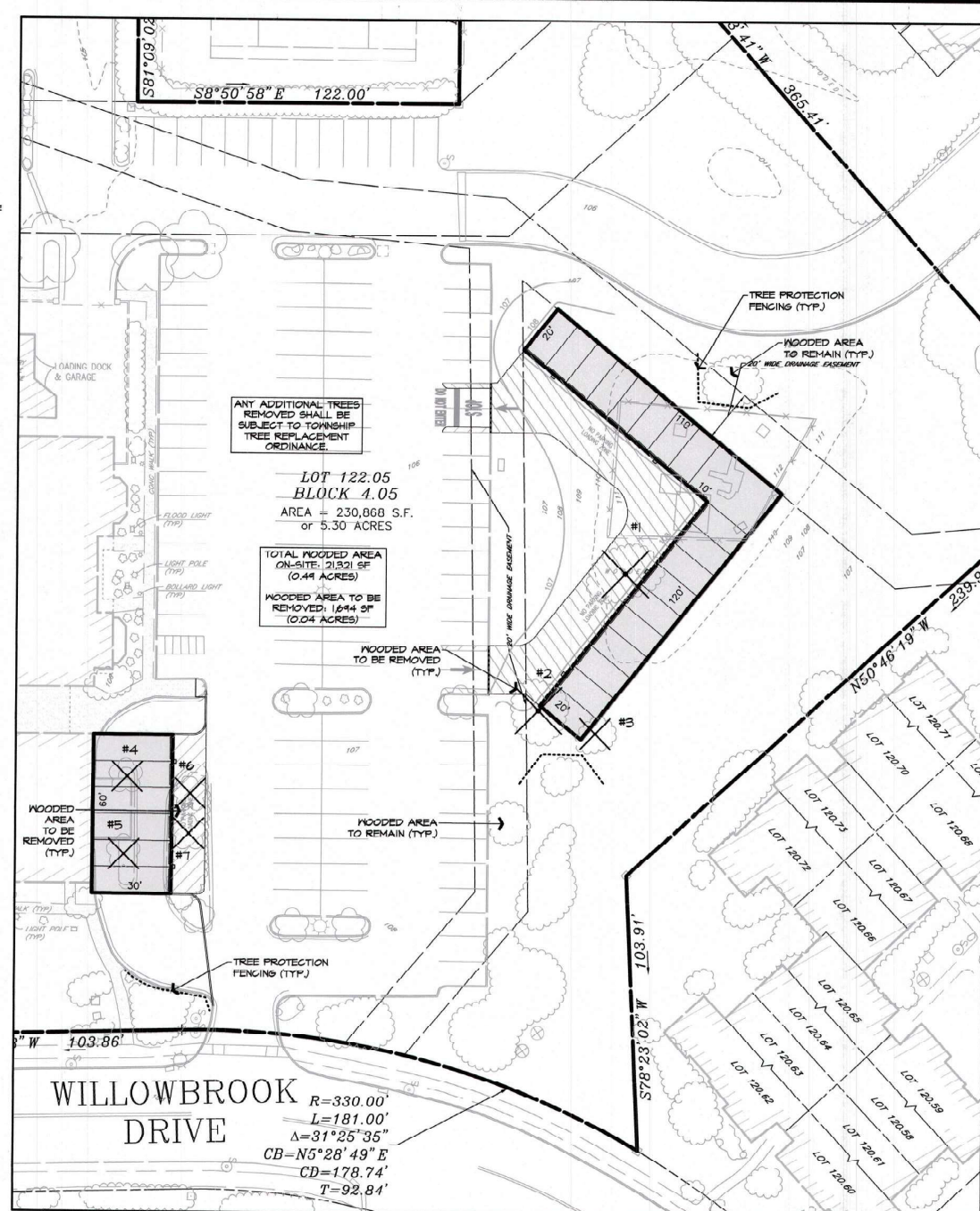
TOWNSHIP ORDINANCE SECTION 200-10.6.2 TABLE D.I. REQUIRES THE FOLLOWING REPLACEMENT FOR TREES 6"-29" TO BE REMOVED:

TOTAL WOODED AREA ON-SITE: 21,321 SF (0.44 ACRES)
WOODED AREA TO BE REMOVED: 1,694 SF (0.04 ACRES) OR 1/4 % OF TOTAL WOODED AREA
NO SPECIFIC TREES TO BE REMOVED FROM ON-SITE

LESS THAN 20% OF TREE REMOVAL REQUIRES 10% REPLACEMENT OF REMOVED TREES.

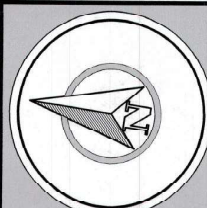
TOTAL TREES REMOVED: (1) TREES BETWEEN 6"-29" DBH TO BE REMOVED
REPLACEMENT TREES REQUIRED: 10% X (1) TREES = (1) REPLACEMENT TREE REQUIRED

- NOTES:
- DBH = DIAMETER AT POINT OF MEASURE (REPLACEMENT TREES OF 4" CALIPER OR LESS TO BE MEASURED 4" ABOVE THE ROOT BALL).
 - REPLACEMENT TREES REQUIRED TO BE 2" DBH.
 - SEE LANDSCAPE & LIGHTING PLAN FOR PROPOSED REPLACEMENT TREE LOCATIONS.
 - TOWNSHIP ORDINANCE SECTION 200-10.6.2.A REQUIRES A TREE REMOVAL PERMIT SHALL BE OBTAINED PRIOR TO ANY SITE DISTURBANCE.
 - TREES SHOWN TO BE REMOVED, ANY TOPPING AND/OR FLAING SHALL BE DISPOSED OF IN ACCORDANCE WITH THE LAW.
 - TREE PROTECTION FENCING SHALL BE CONSTRUCTED AROUND THE LIMIT OF DISTURBANCE AS SHOWN ON THE PLANS AND/OR AS FIELD CONDITIONS WARRANT. TREES TO BE PRESERVED ARE TO BE FLAGGED PRIOR TO CLEANING AND PROTECTED WITH TREE PROTECTION FENCING DURING CONSTRUCTION (SEE DETAILS).



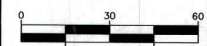
TREE REPLACEMENT PLAN

SCALE: 1" = 30'



HORIZONTAL DATUM: NAD83

GRAPHIC SCALE



SCALE: 1" = 30'

REVISIONS

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CHKD BY: DATE:

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THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

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HIDDEN LAKE STORAGE

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

LANDSCAPE, LIGHTING & TREE REPLACEMENT PLAN

DRAWN BY: JT

DESIGNED BY: JT

APPROVED BY: KRG

THIS WORK PREPARED UNDER MY 7 YEARLY SURVEILLANCE.

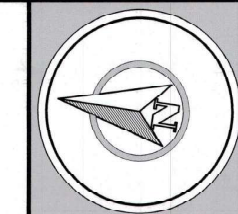
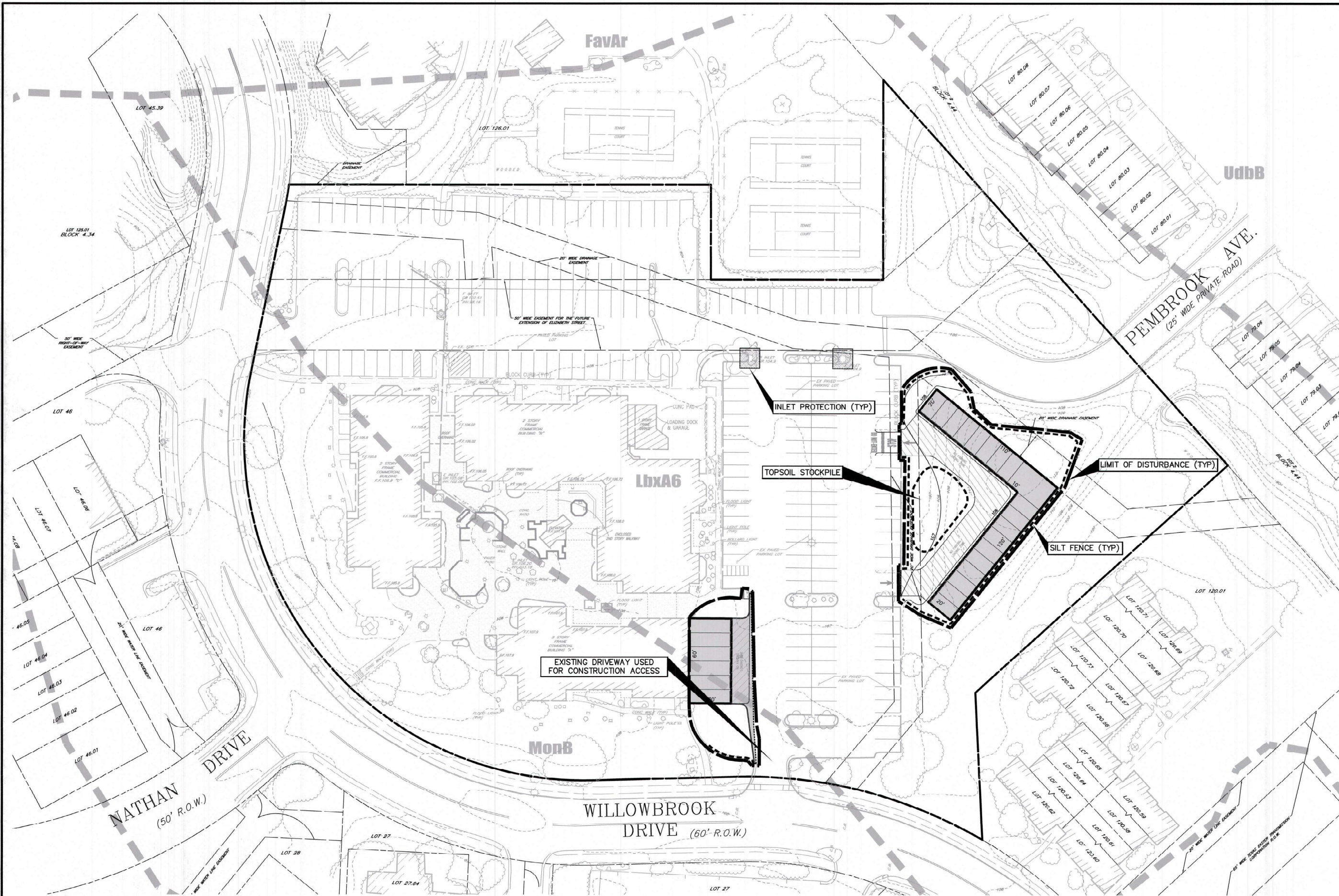
KENNETH R. GRISEWOOD
LANDSCAPE ARCHITECT NJ
LICENSE #A5000071

PROJECT NUMBER: 2024.067

DATE OF ISSUE: JANUARY 6, 2025

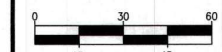
REVISION: LL-1

5



HORIZONTAL DATUM: NAD83

GRAPHIC SCALE



SCALE: 1"=30'

REVISIONS

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Certificate of Authorization: 240A27951900

HIDDEN LAKE STORAGE

TOWNSHIP OF NORTH BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

BLOCK 4.05, LOT 122.02
TAX MAP SHEET 10
5.30 ACRES

SOIL EROSION
& SEDIMENT
CONTROL PLAN

DRAWN BY: DESIGNED BY: APPROVED BY:

GREGORY S. OMAN
PROFESSIONAL ENGINEER
N.J.P.E.# 43441

PROJECT NUMBER: 2024.067.01 SE-1
DATE OF ISSUE: JANUARY 6, 2025
REVISION: 6

IMPERVIOUS COVERAGE

SITE IMPROVEMENTS DO NOT CREATE AN ADDITIONAL 0.25 ACRE OF IMPERVIOUS COVERAGE AND DO NOT DISTURB MORE THAN 1.0 ACRE OF LAND. THEREFORE, IT IS NOT CONSIDERED A MAJOR DEVELOPMENT FOR PURPOSE OF APPLICATION OF N.J.A.C. 7.8. THE NJ STORMWATER MANAGEMENT RULE IMPROVEMENTS CREATE AN INSIGNIFICANT INCREASE OF ON-SITE IMPERVIOUS COVERAGE AND WILL HAVE A NEGLIGIBLE IMPACT ON THE STORMWATER MANAGEMENT SYSTEM.

AREA OF DISTURBANCE:
20,420 SF (0.47 AC)

STANDARD FOR PERMANENT VEGETATIVE COVER

1. SITE PREPARATION

- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
- IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
- TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 3 INCHES (UNSETTLED) ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
- INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDING

- UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAPS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 30% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
- WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
- HIGH ACID PRODUCING SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC RECOMMENDATIONS.

3. SEEDING

- SELECT A MIXTURE FROM TABLE 4-2 OR USE A MIXTURE RECOMMENDED BY RUTGERS CO-OPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS TESTED.
- SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDING AREA AND MOWED ONCE.
- WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-2 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
- COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 60°F. SEE TABLE 4-2 MIXTURES 8 TO 20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL-SEASON GRASSES.
- CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTPACKER SEEDER EXCEPT FOR DRILLED, HYDROSEEDED OR CULTPACKED SEEDINGS. SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDER PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, RY HARKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.
- AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD, WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
- HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER. HYDROSEEDING IS LIMITED TO AREAS TRANSFERABLE BY A TRACTOR. HYDROSEEDING IS NOT A RETIRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH PROTECTS AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

- STRAW OR HAY, UNROOTED SMALL GRASS STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF A LIQUID MULCH-SPRINKLER (LOADING OR APPLYING MULCH), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FIRE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 80% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE EACH AREA INTO APPROXIMATELY 500 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS:

- PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STRIKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
- CRUMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRANSFERABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
- LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

(a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINING OF THE AREA SHOULD BE UNIFORM IN APPLICATION.

(b) USE ONE OF THE FOLLOWING:

- ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL, AND WHEN APPLIED TO MULCH UNDER SATISFACTORY DRYING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE OIL SHALL BE PHYTOTOXICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDER GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
- SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

- WOOD FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

- PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDING AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS. SEEDING AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE, APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

5. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDLING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A - SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEEDING RATES TABLE 4-2 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDING SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

STANDARD FOR TOPSOILING

DEFINITION

TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

GROWTH AND ESTABLISHMENT OF A VIGOROUS VEGETATIVE COVER IS FACILITATED BY TOPSOIL. PREVENTING SOIL LOSS BY WIND AND RAIN OFFSITE AND INTO STREAMS AND OTHER STORMWATER CONVEYANCES.

WIDE APPLICABLE

TOPSOIL SHALL BE USED WHERE SOILS ARE TO BE DISTURBED AND WILL BE REVEGETATED.

METHODS AND MATERIALS

1. MATERIALS

- TOPSOIL SHOULD BE FRIABLE¹, LOAMY², FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE. (CONDUCTIVITY LESS THAN 0.5 MILLIMHOUS PER CENTIMETER. MORE THAN 0.5 MILLIMHOUS MAY DESICcate SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.
- (TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

2. STRIPPING AND STOCKPILING

- FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
- STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
- WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.
- A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
- STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
- STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG. 7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

3. SITE PREPARATION

- GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE.
- GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR MULCH-SPRINKLING, MULCH APPLICATION, AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.
- AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT, LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
- PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.
- EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

4. APPLYING TOPSOIL

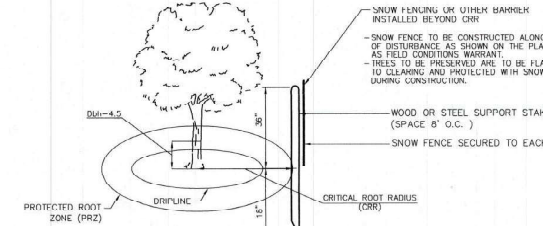
- TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).
- A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1).
- PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER RECOMPS ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM PERCENTAGE COEFFICIENT EXTENSION WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE-APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

- FRIABLE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOILS TEXTS.
- LOAMY MEANS TEXTURE GROUPS CONSISTING OF COARSE LOAMY SANDS, SANDY LOAM, FINE AND VERY FINE SANDY LOAM, LOAM, SILT LOAM, CLAY LOAM, SANDY CLAY LOAM AND SILTY CLAY LOAM TEXTURES AND HAVING LESS THAN 35% COARSE FRAGMENTS (PARTICLES LESS THAN 2MM IN SIZE) AS DEFINED IN THE GLOSSARY OF SOIL SCIENCE TERMS, 1996, SOIL SCIENCE SOCIETY OF AMERICA.

CRITERIA FOR PROTECTING REMAINING TREES:

- GENERAL MECHANICAL DAMAGE - SEE BELOW FOR CORRECT ROOT ZONE CALCULATION AND PLACEMENT OF TREE PROTECTION.
- BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRITICAL ROOT RADIUS. TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE.
- BOARDS WILL NOT BE NEEDED TO PROTECT TREES DURING BUILDING OPERATIONS.
- FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ).
- DAMAGED TRUNKS OR EXPOSED ROOTS SHALL BE IMMEDIATELY BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR LICENSED TREE EXPERT.

NOTE: FOR MORE SPECIFIC TREE CHARACTERISTICS AND TREE LIMB REMOVAL, SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, IN NEW JERSEY, PUBLISHED BY THE NEW JERSEY DEPARTMENT OF AGRICULTURE-STATE SOIL CONSERVATION COMMITTEE, OR CONSULT WITH A LICENSED PROFESSIONAL TREE EXPERT, SOIL CONSERVATION DISTRICT OR RUTGERS CO-OPERATIVE EXTENSION.



- MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHELI SIDE OF TREE) IN INCHES.
- MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

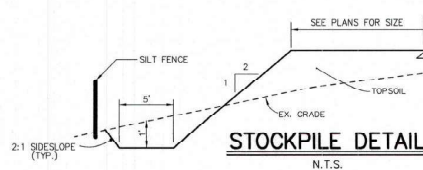
DBH x 1.2: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.

DBH x 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES.

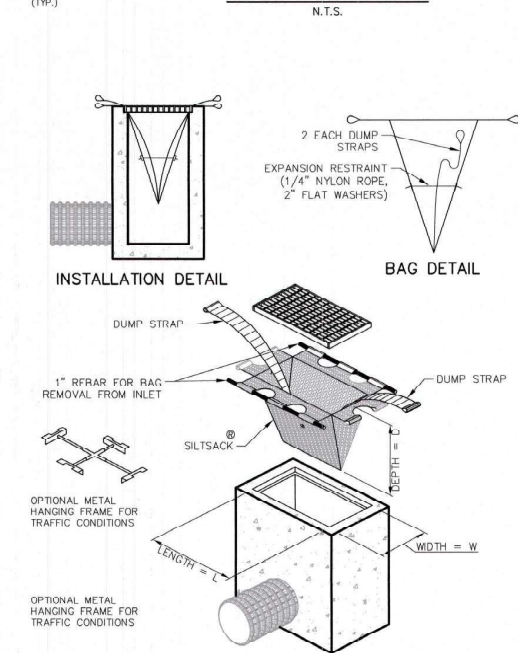
TREE PROTECTION

SOIL EROSION AND SEDIMENT CONTROL NOTES

- THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE ESTABLISHED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS INSTALLED.
- ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
- N.J.A.C. 4-24.10-7 F.S.D. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
- THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"-2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
- ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
- PERMANENT VEGETATION IS TO BE SEED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
- AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE.
- IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- UNFILTERED DRAINAGE IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DRAINAGE OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DRAINAGE METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DRAINAGE.
- SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
- STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE. ACCORDING TO THE CERTIFIED PLAN, STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
- ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL, NOTE #8.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

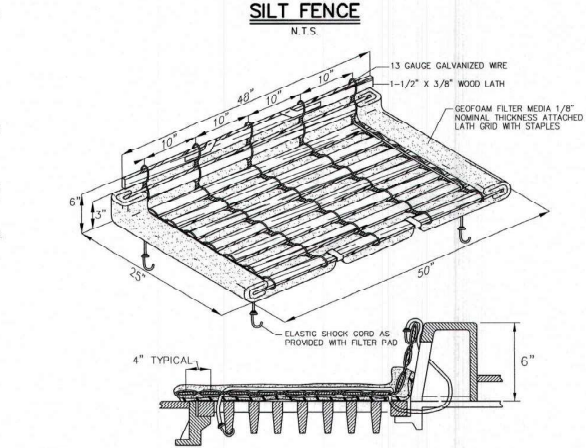
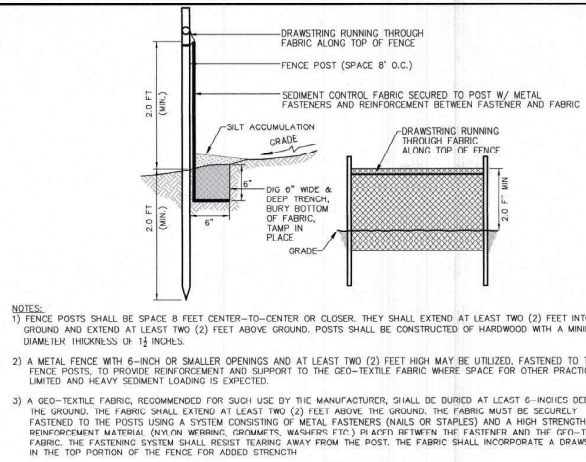


STOCKPILE DETAIL



INLET PROTECTION

N.T.S.



- TURNISH AND INSTALL INLET FILTER PADS AS MANUFACTURED BY B.R.S. ENTERPRISES, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PAD SHALL CONSIST OF 3/8\"/>
- THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

INLET PROTECTION DETAIL

N.T.S.

SEEDING RATES

SEEDBED PREPARATION: FERTILIZER (10-10-10) 300 LB/AC
LIMESTONE 6,000 LB/AC

TEMPORARY SEEDING (NOT FOR ADOIC SOILS HAVING A PH OF 4 OR LESS)
SEED MIX: PERENNIAL RYEGRASS 200 LB/AC

PERMANENT SEEDING (NOT FOR ADOIC SOILS HAVING A PH OF 4 OR LESS)
SEEDING DATES:
(OPTIMAL) 70% 50-50 (8/1-10/1); 70% 70 (8/15-10/15); 70% 70 (8/15-10/30)
(SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

SCS SEED MIX #16	TURF-TYPE TALL FESCUE (3 CULTIVAR BLEND)	KENTUCKY BLUEGRASS (B.FND)	PERENNIAL RYEGRASS (BLEND)
	300 LB/AC	30 LB/AC	30 LB/AC

MULCHING:
UNROOTED SALT HAY OR APPROVED EQUAL 1 1/2 TO 2 TONS/AC

MULCH ANCHORING:
HYDROMULCH OR APPROVED EQUAL (USE RATES AS RECOMMENDED BY MANUFACTURER)

- FOR ADDITIONAL REQUIREMENTS REFER TO THE SCS STANDARD FOR PERMANENT VEGETATIVE COVER.
- THE FERTILIZER AND LIMESTONE RATES REPRESENT THE UNTESTED SCS REQUIRED RATES. FINAL RATES SUBJECT TO SOIL FERTILITY, PH ANALYSIS AND SOIL RECOMMENDATIONS.

CONDITION OF ACCEPTANCE:
1) NO EROSION SHALL EXIST.
2) BARE OR THIN SPOTS IN EXCESS OF 5 PERCENT OF ANY AREA WILL NOT BE ACCEPTABLE.
3) ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATED COVER (OF THE SEEDING SPECIES) AND MOWED ONCE.

CONSTRUCTION SEQUENCE

CONSTRUCTION COMMENCEMENT DATE: SPRING 2025

- INSTALLATION OF SILT FENCE ALONG LIMIT OF DISTURBANCE LINE AT SECTION DELINEATED ON "SOIL EROSION CONTROL PLANS" - 1 DAY
- CLEARING - 2 DAY(S)
- ROUGH GRADING AND TEMPORARY SEEDING - 2 DAY(S)
- CURBING - 2 DAY(S)
- PAVEMENT SUB-BASE - 1 DAY
- FINISHED GRADING AND LIGHTING - 1 WEEK
- FINAL PAVEMENT - 2 DAY
- LANDSCAPING WITH PERMANENT SEEDING - 3 DAY(S)

NOTE: AS C.O.'S FOR INDIVIDUAL BUILDING ARE APPLIED FOR, ALL SITE WORK AROUND THE BUILDING TO BE COMPLETED (No. 10 SUBJECT TO WEATHER CONDITIONS AND 10 BE COMPLETED WITHIN 6 MONTHS).

THE ABOVE SCHEDULE SUBJECT TO WEATHER CONDITIONS AND MATERIAL AVAILABILITY.

CONSTRUCTION DETAIL NOTES

- ALL TRAFFIC SIGNS AND PAYMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL CONSTRUCTION DETAILS SHALL BE SUPERSEDED BY APPLICABLE MUNICIPAL, LOCAL, OR STATE DETAILS UNLESS OTHERWISE NOTED.
- STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWN ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
- SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
- DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
- RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
- ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DESCRIPTION
1	REVISION
2	REVISION
3	REVISION
4	REVISION
5	REVISION
6	REVISION
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9	REVISION
10	REVISION

THIS DRAWING IS FOR PERMIT PURPOSES ONLY.
NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

OK'D BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

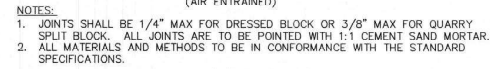


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Highland Park, NJ 08904

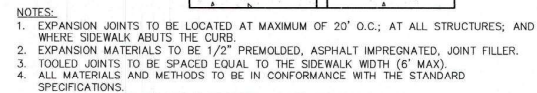
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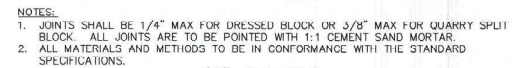
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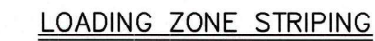


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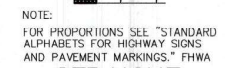


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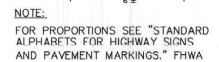
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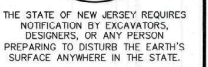


N.T.S.




N. I. S.

1. ALL TRAFFIC SIGNS AND PAYMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM CONTROLLED DEVICES (MUCD).
2. ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE REQUIREMENTS, IF OTHERS ARE NOTED.
3. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE DESIGNER SHALL REFER TO THE TOWNSHIP ENGINEER FOR ALL STRUCTURAL CONSTRUCTION ELEMENTS PRIOR TO CONSTRUCTION.
4. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL STRUCTURAL STEELWORK TO THE ORDERING OF MATERIALS.
5. THE DESIGNER SHALL PROVIDE SOIL BEARING CAPACITY AND COMPOSITION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY A GEOTECHNICAL ENGINEER.
6. RESIDENTIAL DEVELOPMENTS SHALL PROVIDE DETAILS TO MEET THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
7. ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

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TOWNSHIP OF NORTH
BRUNSWICK
MIDDLESEX COUNTY
NEW JERSEY

CONSTRUCTION DETAILS (1)

THIS WORK PREPARED UNDER MY
IMMEDIATE SUPERVISION...

PROJECT NUMBER	2024.067.01	DE-1
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