One move design carlog was checked, also found within the above referenced Gravel Roads Maintenance and Design Manual, to confirm that the proposed 8-inch gravel road-to-sys is adequate. Below is a table to determine agegage has been defined set to be proposed 8-inch gravel road-to-sys in miles regular. Below is a table to determine agegage has been defined to the values shown) and it is understood that the traffic road-to-stand mumber of equivalent 18 (000 bis single as le loads. It is understood that the traffic road-to-stand proposed state it forms that the values shown) and it is understood that the traffic road-to-stand proposed state it forms that the values shown) and it is understood that the traffic road-to-stand state is the form and the standard of the standard of the standard in the values shown and it is understood that the traffic road-to-standard state is the standard and the standard of the standa

This value was confirmed within the U.S. Department of Transportation Federal Highway Administration "Grade Roads Maintenance and Design Manual." Appendix A within the manual provides various Gravel Road Thickness Design Methods. A simplified method, known as the South Dakota Catalog Design Method, is base on the below table.

Table 6: Suggested Gravel Layor Thickness for New Or Reconstructed Rural Roads.

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Thickness Design Methods is based and the Gravel Layor Thickness for High Roads and Methods.

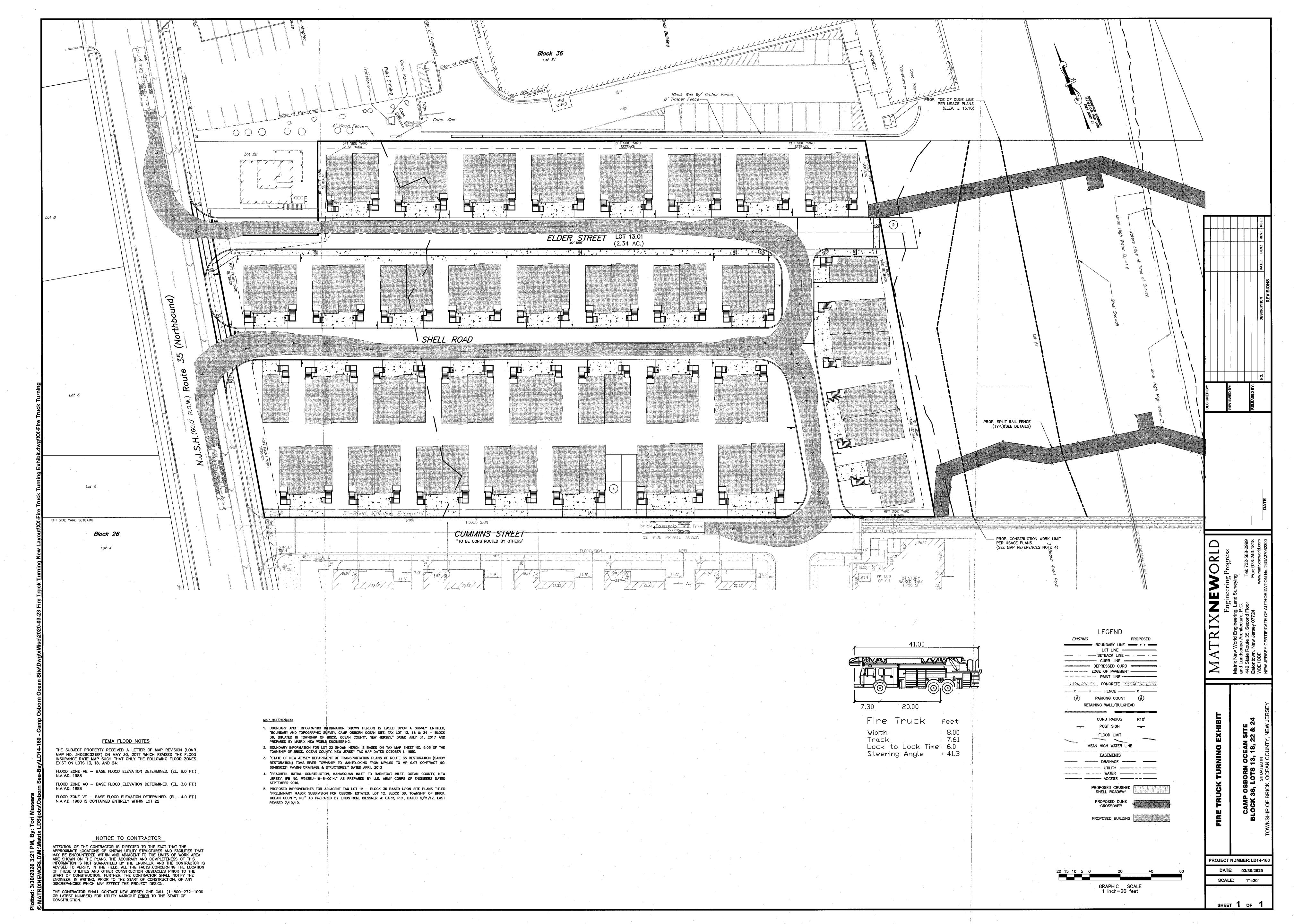
The Suggested Carvel Layor Thickness for New Or Reconstructed Broads and Layor Thickness for New Subgravel support CBR 5-3 percent.

\*\*Abelian Subgravel support CBR 5-4 percent.\*\*

\*\*Abelian Subgravel support CBR 5-4 percent.\*\*

\*\*Abelian Subgravel support CBR 9-4 percent.\*\*

\*\*Abelian Subgravel subgravel subgravel Fare Fare Fare Fare Fa



## PROPERTY OWNERS WITHIN 200'

			VITHI F TAX AS	$N_{200}$	)' AS OF 02/04/20)
		and the second s	WNSHIP		
BLOC		LOT ADDRESS	. E	BLOCK LO	
26	2.01	Franzèse, Louis R & Dianes 44 Daniel Drive Cedar Grove, ni 07009	•	96 91 C22Q1	Baldino, vimcent & Maria R 211 valley Ro Primceton, ni 08540
26	2.02	MATTHEWS, CHARLES & JANICE 15 CHURCH TOWERS #81 HOBOXEN, NJ 07030		36 31 C2202	MISAR, GLENN, & ROBERTA 44 WELOW DR CHESTER, NJ 07930
<b>2</b> 6	3.01	SANDILOO PROPERTY LIC 1521 OCEAN AVE. MANTOLOKING, NJ 08738		36 31 C2203	FEEHAN, THOMAS C & KAREN 2422 OLD STONE MILL DIE CRAMBURY, NI 08512
26	3.02	SAKDILOO PROPERTY LLC 1521 OCEAN AVE		36 71 C2204	ESG JERSEY SHORE LLC 540 VANN RD
-25 CD001	4	MONTOLOKING, NJ 08738 CAROL CASALE SIBLINGS LP 213 FARWAY AVE		86 31 C2205	TRENTON, SC 29847 HILL, FREDERICK I & EVELYN 498 ROUTE 35 NORTH
26	4	BELLEVALE, NI 07109 OSBORN VENTURES LLC			BETRO LO JORNO, LOTALAM
C0002 26	4	© CONOVER ROAD WHITEHOUSE STATION, NI 08889 EARECKSON, DAYID & JACKLYNE		\$6 31 .02205	HOROWITZ, IRWIN A. & ANTOINETTE 90 OLD CHESTER RD ESSEX FELLS, NJ 07021
C0003	•	201 OLO BRIDGE ROAD BRIELLE, NI 08730	:	36 31 C2207	Gaudino, Silvana & Perry, Chales 10 Herrman Way Towaco, Ni 67082
26 00017	4	EARECKSON, DAVID & JACKLYNE 301 OLD BRIDGE ROAD BRIELLE, AL 08730	: .	36 31 C2301	FETTERLY, ROBERT E B. WENDY 6 SUMMIT DRIVE
26 C001B	4	HOMACHETSKY, NICHOLAS 8 ECHO LANE CLINTON, NI 08809		36 31 C2302	NORTH CALDWELL, NJ 07006  CANELLA, ARCHANGELA TRUST 438 ROUTE 35 UNIT 2302
26 00019	4	HUKKANEN, PAUL & PATRICIA 10 IINCOLN PLACE		25 31	MANTOLORING, NJ 08738 SWANSON, GEORGE D & ELIZABETH ETAL
26	4	MOONACHIE, NI 07074 HUKKANEN, PAUL & PATRICIA		C2303	PO BOX 141 POMPTON PLAINS, NJ 07444
C0620	<b>s</b> ·	10 UNCOLN PLACE MODNACHIE, NI 07074 BIALASZ, EDWARD & NANCY		96 31 C2904	Marks, Jeffrey IV & Marilyn 22 Montgomery Ave Montylle, NI 07045
		BIALASZ, EDWARD & MANCY 235 & <sup>FH</sup> ST. SADDLE BROOK, NJ 07663		36 31 C2305	Pignatello, Kenneth & Bernadette 123 Hillside avenue Verona, nu 07044
26	6.01	Kane, Dàrcy 447 route 35 ND, Mantoloking, ni 08738		a6 31 C2306 .	1UXLLC 2906 ROUTE 95 N MANTALOKING, NJ 08738
26	6.02	PRESUTTI, MEGHAN & MATTHEW 443 ROUTE 35 NO MANTOLOKING, NI 08738		36 31 C3101	SMITH, ROBERT & BARBARA M 438 ROUTE 35 NO #3101
26	B	DOMARATIUS, RICHARD F & CHRISTINE 1 441 ROUTE 35 NO		36 <b>3</b> 1	MANTOLOKING, NJ 08738 GIOFFRE, JANET
26	38	MANTOLOKING, NJ 08738  SCAGLIONE, PAT & SCLAFANI, D ETAL 12 JAH 1954 ODD CADLE		C3102	249 PROSPECT AVE. UNIT 9D HACKENSACK, NI 07601.2572
28.02	9	13 WILDWOOD DRIVE NORTH CALDWELL, NJ 07005 TOWNSHIP OF BRICK		36 31 C31G3	MAZZOCCHI, GRACE 18 DENEDICT CRISCENT BASKING RIDGE, NI 07920
		40): Chambers dridge RD Brick, NJ 08723		36 31 C3104	MAZZOCCHI, GRACE 18 BENEDICT CRESCENT BASKING RIDGE, NJ 07920
36	1 .	SEAIAYKAY, U.C % CARL I. TYLKA PO BOX 115 NORMANDY BEACH, NI 08799	<i>:</i>	36 31 C3105	MANGINI, JOHN & MICHELE 5 THOMAS JEFFERSON DR.
36	2	REILLY, KEVIN P & LEONARD, C.D. 115 E KUPPER DRIVE		36 31	WARREN, NI 07059 MAZZOECHI, NICHOLAS & CAROL
36	3	MANTOLOKING, AI 08738  SEAJAYKAY, LLCSGAMES R & SUSAN DALE  1230 N WESTEND BLVO		C31D6	15 MILIER RD. NEW VERNON, NJ 97976
36	4	QUAKERTOWN, PA 06951 SPELLMAN, MICHAEL J & JESSICA		35 31 C3201	DRAGMI, NANCY 32 MARK TWAIN DR. MORRISTOWN, NJ 07960
		11) KUPPER DRIVE MANTOLOKING, NJ 08738		36 31 C3202	SORRENTINO, ANTHONY & AUSON 144 EYLANDT ST
36	5	NORMANDY PROPERTIES LLC % KAVENY 115 FOREST AVENUE GLEN RIDGE, NJ 07028		36 31	STATEN ISLAND, NY 10912 PELLEGRINO, VINCENT & BARBARA
ЗБ	. 5	KUPPER, C.I. IA. PO BOX 115 NORMANDY BEACH, NJ 08789		C32.03	102 EREEN DR. CEOAR GROVE, NJ 07009
36	7	NORMANDY BEACH, NI 08739 SIMPSON, ROBERT E PO BOX 113		36 31 C3204	TIEFENBACHER; MARY 8 16406 HILLSIDE CIRCLE BRADENTON, FL 34202,3300
36	8	PO BOX 115 NORMANDY BEACH, N108739 SEAJAYKAY, LLCYKL/PEARCE & R. WILKES		36 31 C3205	QUALITY PROSPECTS INC. PO 80X 1274 RIDGEWOOD, NI 97451
		SEAJAYRAY, LECTRIC PARCE & R. WILKES 103 KUPPER DR MANTALOKING, NJ 08738		36 <b>31</b> C3301	MC CLOSKEY, KEVIN & ARLINE 40 MANOR AVE.
3,6	9	WADE, MIKE & MARIE & PETER MERCATAINTY 4 ALPAUGH FARM RD		36 31	CRANFORD, NJ 07015  DAMIANO, THOMAS & & MARY AND/E
36	10.01	Lebanon, ni 08833 Guagenti, Russell & Vingenza	•	C3302	4 RITTENNOUSE RO. BRONOVILLE, NY 10768
36	10.02	SE CONTINENTAL RD MORRIS PLAINS, NI 07950 BIO, GIUSEPPE M & MARIA S		36 31 <b>C3</b> 363	SCHROEDER, RICHARD & CATHERINE FO BOX 829 DOVER, NJ 07802:0029
		10 ADAMS WAY TOWACO, NJ 07082		36 31 C3304	BARRETT, WALTER J. IR & DONNA M 70 RICHLAND DR. BERKELEY HEIGHTS, NI 07922
36	10:03	AMO, THEODORE R. & WENDY J. 112 LYRCHURST DR. MANTOLOKING, N. 08738		36 31 C3305	BARILLARI, ALISON J 13 WESTWEW CT.
96	. 10.04	Burgers, ronald a ir 8 denise 51 morningside crole		36 31	CEDAR GROVE, NJ 07009 SHANE, JEAN E
36	10.05	UTILE FALLS, NJ 07424 BRADY, JOHN J & BARBARA ETALS C/O		C4101	8 NORTH TAMARACK DR. BRIELLE, NJ 08730
36	20.06	302 SUNSET AD POMPTON PLANS, NI 07444		36 31 <b>C4</b> 102	RESNICK, MARTIN 46 RUSTIC TRAIL FLEMINGTON, NJ 08822
30	TOWNE	DULDNG, JAMES & SUSAN 106 LYNDHURST DR MANTOLOXING, NI 08788	•	36 31 C4103	Kish, John Trust 81 Kensington ave. Clifton, Ni 07014
36	1007	McCarthy, William & Noreen 22 Garwood dr. New Providence, N. 07974		36 91 04304	raso, mary & mat Box 1
36	10.08	MAHONEY, JEFFREY 14 VANDERVEER DRIVE			HARTSDALE, NY 10530
36	11.01	Basking Ridge, NJ 07920 Shadyvick, Susan M & Blinkley, Peter		36 91 C43Q5	Anelle, Christine 82 devon Rd. Essex Fells, NJ 07021.1713
35	11.02	14 THROGGS NECK BLVB BRONX, NY 10466 MANTA LLC		36 31 C4106	Corso, Mary 431 Jefferson Ave. Haworth, Ni D7641
		65 LARKIN CIRCLE WEST ORANGE, NI 07052		36 31 C4107	MILLER, KELLY A & KOPESKY, AMANDA B 8 ROSEWOOD LANE
36	1193	Callághan, iohn & Máryann 14 Rochambeau RD Pompton Plahis, ni 07444		36 31	DENVILLE, NJ 07834 LAGRECA, M & CORSO, M ETAL
36	1104	WENNBLATT, BRETT O & DAWN A 7 TAMARACK OR		C4108 25 31	308 MYRYLE SY HAWORYH, NI 07641.1128 BUONPASTORE, ANTHONY & CHRISTINE
36	11.05	BRANCHBURG, NJ 08855 SACCO, MARIE & ANGELO 1 111 LYMDHURST DR		C4109	140 CHEYENNE WAY WAYNE, NI 07470
		MANTOLOKING, NI 02738		36 31 C4110	FEHER, RICHARD & ROBIN 1951 LINCOLN AVE EASTMEADOW, NY 11554
36	1106	istar ilc 32 Roberts CT Township of Washington, NJ 07676		36 31 C4201	RUSSO, LUCILLE 284 SPRINGFIELD AVE
36 <b>C13</b> 01	31	Hopfer, Cheryl & Capabianca, Dean 12 Charles Pl Did Tappan, Ni 07675		36 93 C4202	RUTHERFORD, NI 07070  DELVECCHIO, RICHARD IR & DEBORAH 212 HOLLY LAME
36 C1102	91	DASZKOWSKI, DONALD 1102 ROUTE 95 NO		36 31	CEDAR GROVE, Nº 07009.3202  PAP REAL ESTATE OPERATIONS LLC
36	31	Mantoloking, 131 08738 Kostic, Virgipia p & 1867ry		C4203	99 SPRING VALLEY RD #303 MONTVALE, NJ 07645
C1.103		114 Greenrale ave Wayne, NJ 07670	•	36 33 C4204	Walsh, Kerry M 4204 route 35 no Mantoloking, Ni (1878)
36 C1164	31	SAOUD, IOAN 280 MILLER ROAD 140 HO KUS, NI 07428		36 31 C4205	MAIO, LINDA 725 BUSH AVE.
36 C1105	31	SAQUO, RAYMONO & JOAN TRUST 280 MILL RO HOHOKUS, NJ 07423		36 31 64206	PARAMUS, NJ 07652 WASILEWSKI, EUZABETH 148 BAYVILLE WAY
36 C1165	31	RIVARD, MARTIN J 40 WASHINGTON ST #218		36 31	WARETOWN, NJ 08758.2795 FORTUNATO, ROBERT & VERNA
3,6	31	DUMONT, NI 07628 LIVOLSI, TNOMAS & JAMES		C4207	456 VICTOR WAY WYCKOFF, BU 07481
C1107		351 HICKORY ST KEARNY, NJ 07032		C4509 36 37	O'MALLEY, JOHN 4208 ROUTE 35 NO MANTOLOKING, NI 06738
96 <b>C11</b> 08	31	MAZZOCCHI, CAROL 15 MILLER RD NEW VERNON, NJ 07976		36 31 CARD1	Guidicipietro, Iason & Dana
36 C1109	31	UVOLS), JAMES & BARBARA 953, MARRIȘTOWN RD		C4301	-1650 nottingham way Mountainside, ni 07092
36 C1110	<b>8</b> 1	GLEN ROCK, NJ 07452 FOX, MIA 438 ROUTE 95 NO UNIT 2210		36 31 C4302	Lagreca, James & Madeleine 458 Herkiner ave Haworth, Mi 07641
26 26	31	MANTOLOKING, NJ 08738 PLENZO, DANIEL & MARCELLA		96 91 C4303	MLBY, 10HN W & ANDREA 1 19 OX BOW LN SUMMIT, NI 07901
C1201		323 BAY LANE MANTOLOKING, NJ 08738 1103		36 31 C4304	GONDA, DEBRA & JOSEPH E 52 RAMAPO RIVER TERRACE
36 C1202	31	MAZZOCCHI, GRACE 18 BENEDICT CRESCENT BASKING RIDGE, NJ 07920	,	36 31	OAKLAND, NJ 07436 TYGAR, 5COTT A & GERALYN A
36 <b>C120</b> 3	31	PARETI, GLENN 1 8. ANN M 244 THAYER ST BUZE VALE, NI 07675		C4305 36 31	9 ROSE CT. FLANDERS, NJ 07836 BAGNATO, EUZABETH
36	91	RIVZR VALE, ALI 07675 TERMOTTO, CRAIG & KARLIE		36 31 C4305	195 WOODS END BASKING RIDGE, NJ 07920
C1204		1204 ROUTE 35 NORTH MANTOLOKING, NI 08788		36 31 C43D7	Kingsland, Russ & Audrey 65 MT Horeb Road Warren, NJ 07059
36 C1205	31	GACCIONE, ROBERT A & LOIS A 90 AFTERGLOW AVE VERONA, NJ 07044		36 31 C4308	PARISIO, JUDITH A 4308 ROUTE 35 NO
36 C1206	32	SAVIND, MICHAEL & CATHY ANK 1 MOCCASIN CT		·36 31	MANTOLOKING, NJ 08738  HILL, FRED
36	37	MAHIYAH, NJ 07480 SEHMELZ, JOHN M		C5201	5201 ROUTE 35 NO MANTOLOKING, NI 08738
C1207		73 MC ARTHUR AVENUE LODI, NJ 07644		36 31 C\$202	PETRO, DAWN 151 1 <sup>57</sup> AVE PORT READING, NI 07084
96 C1208	31	FUSILL, LOUIS & UNDA 487 CRANKSHAW PL WYCKOFF, NJ 07481	•	36 31 C5203	SHERIDAN, OWEN G H 175 HIGHWOOD AVE. LEONIA, NJ 07605
36 1209	31	POULOS, HARRY K & PATRICIA A 36 JACKSON AVE HAWORTH, NI 17641	*	36 31 C5204	TROVATO, PIBLIP A & LISA A 21 VAN DUYNE CT.
36 C1901	31	DEL VECCHIO, RICHARD & DEBORAH 212 HOLLY LANE		36 31	TOWACO, NJ 07082 CAMPISI, ROSEMARIE
36	31.	CEDAR GROVE, NJ 07009.9202 DRAGITY, RYAN & NJCOLE ETAL		C5205	438 HWY 35 NO #5205 MANTOLOKING, NJ 05738
Cx302		1902 ROUTE 95 NORTH MONTOLOWING, NJ 68738		36 31 C5206	SCHATZ, ROBERT & CARUSO, LINDA 87 GREENBRIAR RO. PARAMUS, NJ 07652
C1303 36	31	BEACH PROPERTIES LLC 18 BENEDICT CRESCENT BASKING RIDGE, NJ 07920		-36 31 C5207	981 KING AVE.
36 ··· C1304	31	TUOSTO, MICHAEL 1640 MIRIAM DR NORTH BRUNSWIKK, NJ 08902		96 31	SGOBBA, MARY NN
36 C1305	31	GOLDEN, TERRI 603 CHASE COURT		C5208	2 HOLMES LN. WAYNE, NJ 67470.8041
36	31	EDGEWATER, NJ 07020 FEYTERLY, ROBERT E JR & WENDY A		36 31 C5209	Laporte, James J. 29 Thastle Ct. Totowa, NJ 07512
C±306		6 SUMMIT DR NO CALDWELL, NJ 67006		86 31 C530),	HATLEFF, DERRICK MUR & AMY 1 5301 ROUTE 35 NORTH
36 C1307	31	Busono, Steve & Handaiany 3 Margaret Dr Somerset, Ru 06873		. 25 51	MANTOLOKING, NJ 08738 L HELD, MARK & DEBBEE
36 C1308	31	DASLER, PATRICIA 311 POST AVENUE		C\$302	438 RTE 35 NO UNIT 3302 MANTOLOKING, NI 08788
		LYNOHURST, NJ 07071		26 3: C5363	CARRARA, RICHARD & JULIA 8 31 FORESTVIEW DR. CHESTER, W 07930
36 C1305	31	CREGAN, KENNETH & PATRICIA E 334 OLD MILL RD VALLEY COTTAGE, NY 10989		36 3: C5304	L CAPONI, ANGELA 7 BRIAR LAWE
36 C1310	31.	TAYLOR, JEFFREY PO 90X 112		36 3 C5305	5TANHOPE, NI 07874  L HARRY PATRICK INC 1909 SHADOWBROOX DR.
36 C2101	31	PLUCKEMIN, NJ 07578  BASO, NAY PO BOX 1		**************************************	WALL, NJ 07719
36 C3101	! <b>31</b>	PO BOX 5 HARTSDALE, NY 10530 RASO, NAT		C53Q6	4 MULFORD AVE. EAST HANOVER, NI 07936
C2:102	2	PO BOX 1 HARTSDALE, NY 10530		36 3 C5307	1 Callaghan, Eugene & Rose 5307 Route 35 No Mantolokrig, NJ 08738
C2103	31	Hill, Frederick Jr 438 route 95 no Unit 2203 Mantolcking, NJ 08738		36 3 C5308	1 FORREST, ROBERT J & KIMBERLY PO BOX 289
. 36 CZ104	3) 1	BARRETT, WALTER & DONNA 20 RICHLAND DR.		36 .3	NESHANIC STATION, NJ 08853
36 C210!	· 31	BERKELEY HEIGHTS, NJ 07922 CANASTRA LIVING TRUST 383 CLAY 57		, C5309	22 CONCORD AVE. GLEN ROCK, NJ 07452
36	31	MILITOWN, NI 08850 PIGNATELLO, KEMNETH & BERNADETTE		. 36 3	ASSOCIATION ADVISORS
22106		PIGNATELLO, KENNETH & BERNADETTE  113 HRLISIDE AVE			19 WEST MAIN STREET

MAZZOCCHI, MARIE & MCOLE 15 MILLER RD NEW VERNON, NJ 07976

No.	Description	Plan Date
1.	TITLE SHEET	03/31/20
2.	EXISTING CONDITIONS & DEMOLITION PLAN	03/31/20
3.	GEOMETRY PLAN	03/31/20
4.	GRADING PLAN	03/31/20
5.	GRADING PLAN	03/31/20
6.	UTILITY PLAN	03/31/20
7.	LANDSCAPE PLAN	03/31/20
8.	LIGHTING PLAN	03/31/20
9.	PROFILES	03/31/20
10.	SOIL EROSION & SEDIMENT CONTROL PLAN	03/31/20
11.	SOIL EROSION & SEDIMENT CONTROL DETAILS	03/31/20
12.	CONSTRUCTION DETAILS	03/31/20

INDEX OF SHEETS

(PER OFFICE OF TAX ASSESSOR AS OF 02/04/20) STATE OF NJ - DOT 1035 PARKWAY AVENUE TRENTON, NJ 08618 COMCAST CABLE COMMUNICATIONS INC. 751 BRICK BLVD BRICK, NJ 08723 ATTN: TERRY CLARK NEW JERSEY AMERICAN WATER 1025 LAUREL OAK ROAD VOORHEES, NJ 08043 BRICK TOWNSHIP MUNICIPAL UTILITIES AUTHORITY 1551 HIGHWAY 88 WEST BRICK TOWNSHIP, NJ 08724

N.A.V.D. 1988 IS CONTAINED ENTIRELY WITHIN LOT 22

LEGEND

THIS IS TO CERTIFY THAT THE WATER AND SEWER DESIGN CONFORMS WITH THE RULES AND REGULATIONS OF THE

BRICK TOWNSHIP MUNICIPAL UTILITIES AUTHORITY.

APPROVED BY THE

BRICK TOWNSHIP PLANNING BOARD

DATE

STEPHEN T. SPECHT, P.E. DEPUTY EXECUTIVE DIRECTOR &

BRICK UTILITIES' FILE #

CHAIRPERSON

SECRETARY

EXIST ON LOTS 13, 18, AND 24:

DIRECTOR OF ENGINEERING/OPERATIONS

PLANNING BOARD ENGINEER

FEMA FLOOD NOTES

THE SUBJECT PROPERTY RECEIVED A LETTER OF MAP REVISION (LOMR MAP NO. 34029C0218F) ON MAY 30, 2017 WHICH REVISED THE FLOOD INSURANCE RATE MAP SUCH THAT ONLY THE FOLLOWING FLOOD ZONES

FLOOD ZONE AE - BASE FLOOD ELEVATION DETERMINED. (EL. 8.0 FT.)

FLOOD ZONE AO - BASE FLOOD ELEVATION DETERMINED. (EL. 3.0 FT.)

FLOOD ZONE VE - BASE FLOOD ELEVATION DETERMINED. (EL 14.0 FT.)

ADDITIONAL/UTILITY CONTACTS

JCP&L 331 NEWMAN SPRINGS ROAD, BLDG 3, STE 325 RED BANK, NJ 07701

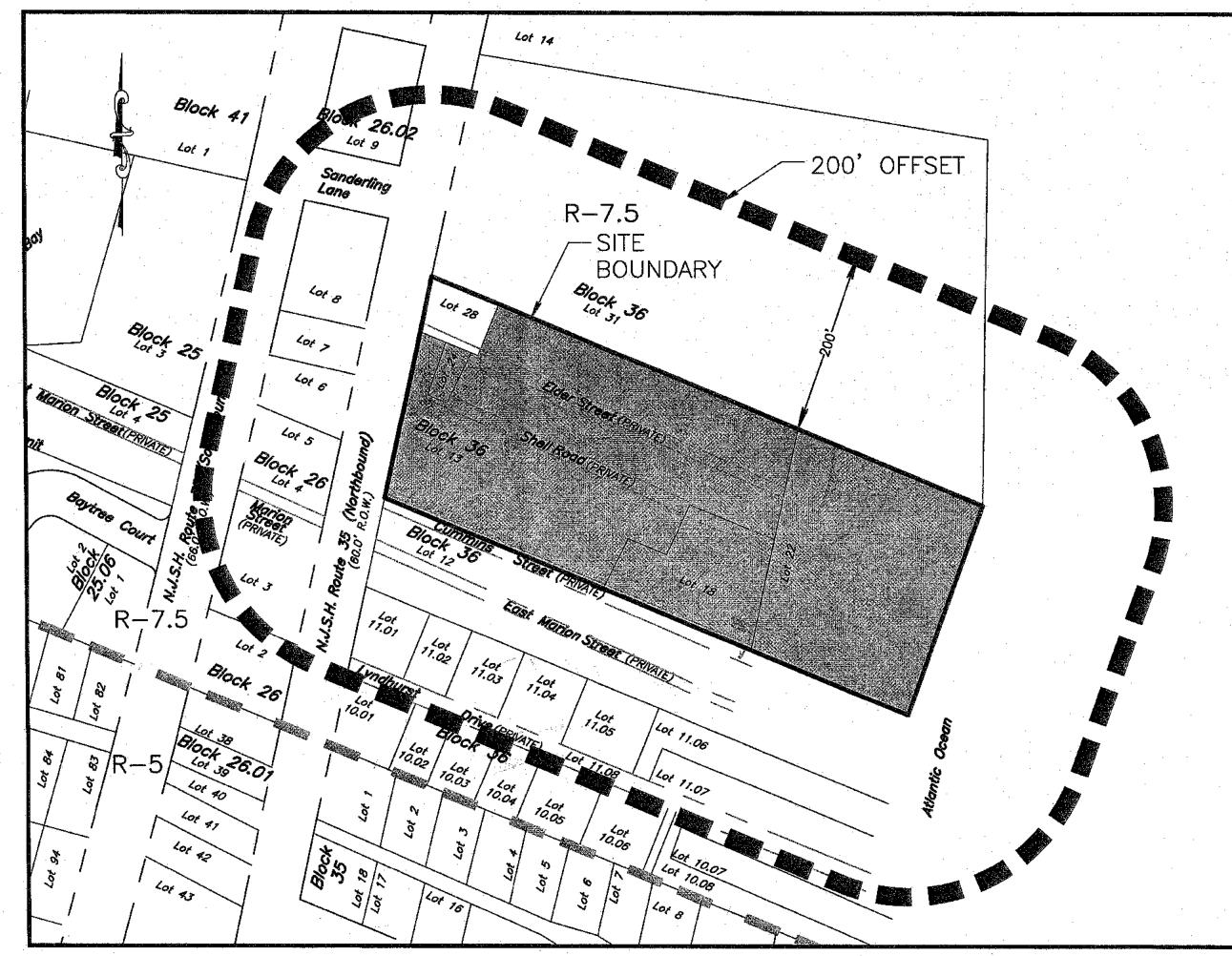
NEW JERSEY NATURAL GAS 1415 WYCKOFF ROAD WALL, NJ 07719

PROJECT LOCATION

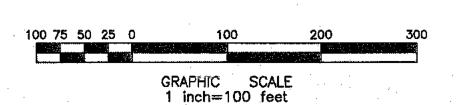
# PRELIMINARY AND FINAL MAJOR SITE PLAN CAMP OSBORN OCEAN SITE

BLOCK 36, LOTS 13, 18, 22 & 24

TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY



## **KEY MAP**



## SCHEDULE OF AREA, YARD AND BUILDING REQUIREMENTS - RESIDENTIAL ZONE DISTRICT R-7.5

REQUIREMENT CONDITIONS		PERMITTED (R-7.5)	PERMITTED (CONDITIONAL USE)	PRE-SUPER STORM SANDY CONDITIONS*	PROPOSED
MIN. LOT AREA		7,500 SF	N/A	151,936.79 SF	151,936.79 SF
MIN. LOT WIDTH		75 FT	N/A	183.65 FT	183.65 FT
MIN. LOT DEPTH		90 FT	N/A	621.75 FT	621.75 FT
MAX. LOT COVERAGE	BY BUILDING	30%	N/A	37.71% ♦	25,60%
MIN. FRONT YARD S TO ROUTE 35 - DI TO INTERIOR ROADW TO EGRESS POINT	UPLEX UNITS	N/A N/A N/A	10 FT 10 FT 3 FT	0 FT ♦ 0 FT ♦ 0 FT ♦	10.00 FT. 10.00 FT. 3.02 FT.
MIN. SIDE YARD SE SINGLE FAMILY DUPLEX UNITS	TBACK	N/A N/A	6 FT 5 FT	0.37 FT � N/A	6.00 FT 5.85 FT
MIN. REAR YARD SE	TBACK	N/A	6 FT	N/A	6.02 FT
MAX. HEIGHT OF ST TO RIDGELINE TO MEAN TO EAVES	RUCTURE**	N/A N/A N/A	38 FT 35 FT 26 FT	UNKNOWN UNKNOWN UNKNOWN	<38 FT <35 FT <26 FT
BUILDING SEPARATIO SIDE TO SIDE REAR TO REAR— DI		N/A N/A	10 FT 13 FT	N/A N/A	10.50 FT 13.89 FT
ACCESSORY BUILDIN	IG SIDE YARD	5 FT	PROHIBITED	N/A	N/A
ACCESSORY BUILDIN	NG REAR YARD	5 FT	PROHIBITED	N/A	N/A
MAX. IMPERVIOUS C	OVERAGE	N/A	N/A	50.16%	48.43%

\* PRE-SUPERSTORM SANDY CONDITIONS BASED UPON INFORMATION FROM SURVEY ENTITLED, "BOUNDARY AND TOPOGRAPHIC SURVEY, CAMP OSBORN CONDOMINIUMS, TAX MAP LOT 4, BLOCK 25, LOT 4, BLOCK 26, LOTS 12, 13, 18, 24, 28, SITUATED IN TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY" DATED JUNE 28, 2011, AND PREPARED \*\* BUILDING HEIGHT MEASURED FROM THE AVERAGE FINISHED GRADE AT A DISTANCE OF 6' FROM THE BUILDING ♦ PRE-EXISTING NONCONFORMITY

## WAIVERS REQUESTED:

- 1. SECTION 245-356(K) STREET INTERSECTION CORNERS SHALL NOT BE LESS THAN 20-FOOT RADIUS.
- 2. SECTION 245-410 IN ALL SUBDIVISIONS, STREET TREES SHALL BE INSTALLED ON BOTH SIDES OF ALL STREETS.
- 3. SECTION 245-410 IN ALL SINGLE-FAMILY RESIDENTIAL ZONES, ONE SHADE TREE IS REQUIRED PER 2,000 SF OF LOT AREA. 4. SECTION 245-39.1 - SIDEWALKS AND CURBING ARE REQUIRED AS PART OF ANY SUBDIVISION OR SITE PLAN APPLICATION.

- 1. THE SUBJECT SITE IS KNOWN AND DESIGNATED AS LOTS 13, 18, 22 & 24 IN BLOCK 36 AS SHOWN ON SHEET 9.03 OF THE TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY TAX MAP DATED OCTOBER 1, 1950.

- BOUNDARY INFORMATION FOR LOT 22 SHOWN HERON IS BASED ON TAX MAP SHEET NO. 9.03 (
- BRICK, OCEAN COUNTY, NEW JERSEY TAX MAP DATED OCTOBER 1, 1950.
- 10. CENTER OF SITE COORDINATES 427990 N 615815 E
- 11. Individual pages from this plan set shall not be utilized for construction on their own as notes and INFORMATION PROVIDED ON OTHER SHEETS MAY IMPACT WORK REQUIREMENTS. THE CONTRACTOR SHALL REVIEW AND UTILIZE THE ENTIRE PLAN SET FOR CONSTRUCTION.
- 12. PLANS ARE NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE SIGNED PROFESSIONAL.
- 13. THESE PLANS HAVE BEEN PREPARED FOR MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THE PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL APPROVALS HAVE BEEN OBTAINED AND ALL CONDITIONS OF THE

OSBORN SEA-BAY CONDO ASSOCIATION P.O. BOX 927 BLOCK 36 LOT 18 & 24: CAMP OSBORN CONDOMINIUM ASSOCIATION

41 HILL STREET RANDOLPH, NJ 07869 PORTION OF PROPOSED ELDER STREET TO BE LOCATED WITHIN EXISTING EASEMENT LOCATED ON:

SIDEWALK COVERAGE

# IMPERVIOUS COVERAGE CALCULATIONS (LOTS 13, 18, 22 & 24) PRE-SUPERSTORM SANDY POST-DEVELOPMENT

LETTER OF MAP REVISION (LOMR MAP No. 34029C0218F)

1,622 SF (0.04 AC)

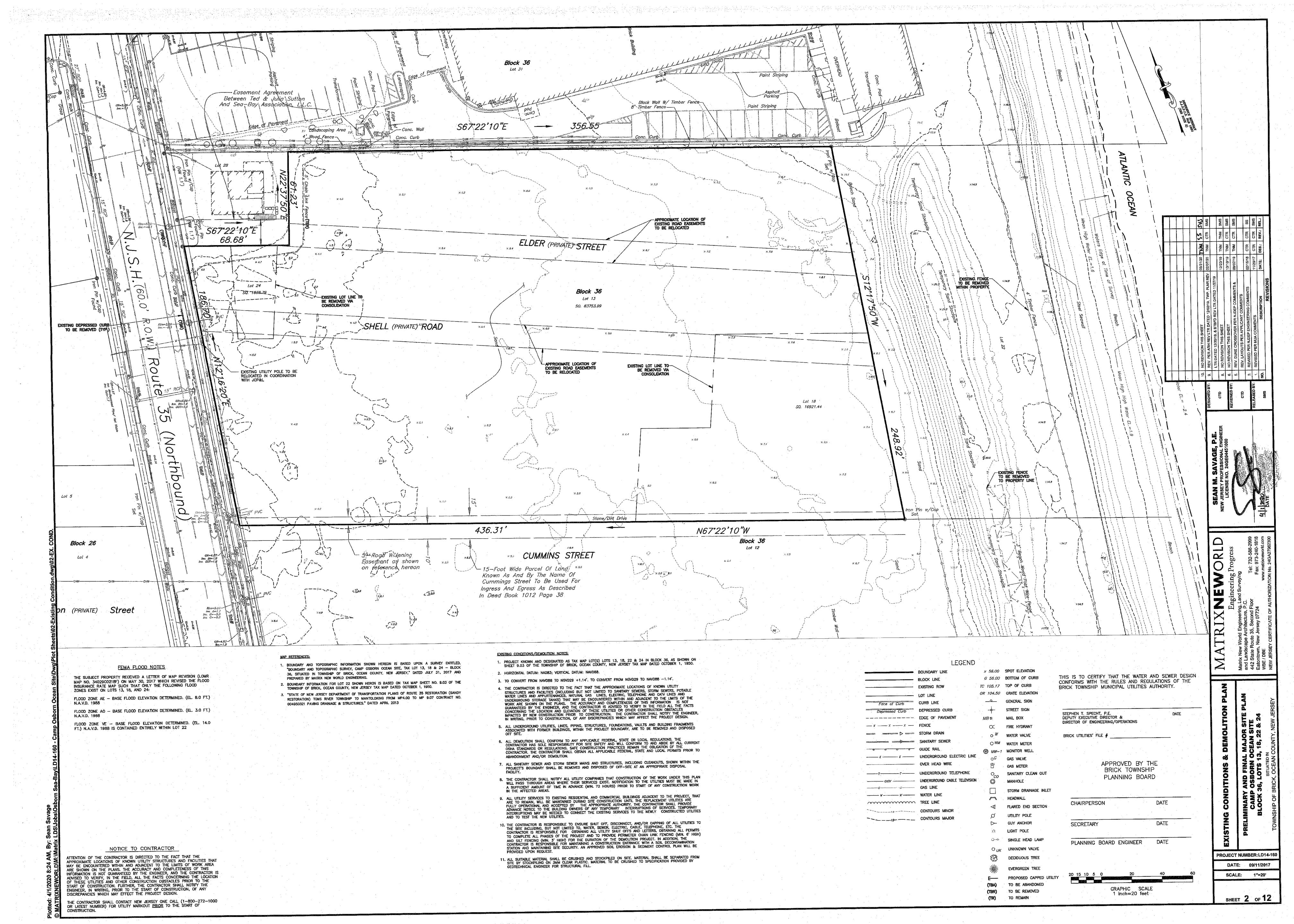
4,792 SF (0.11 AC)

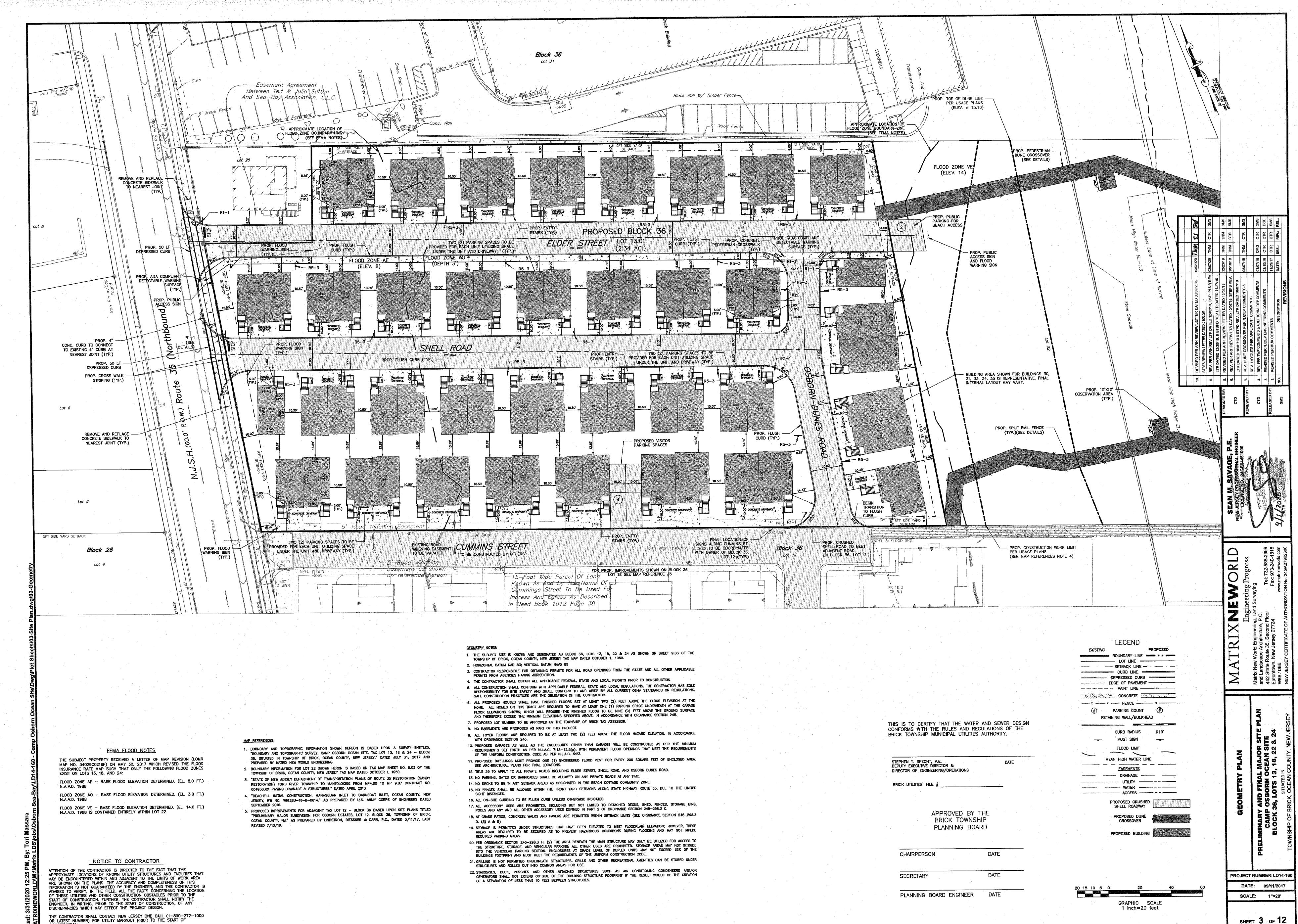
73,582 SF (1.69 AC)

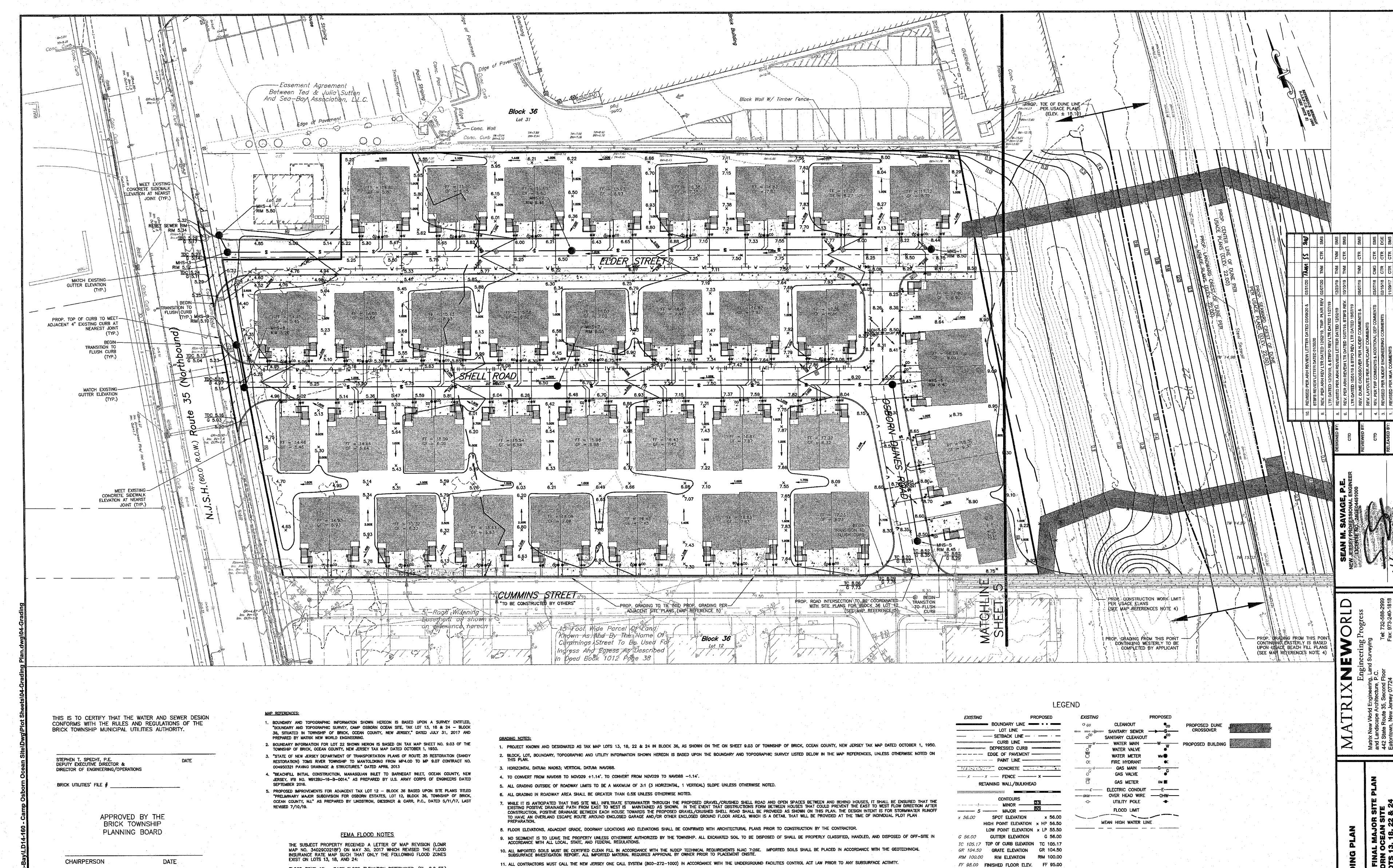


**PROJECT NUMBER: LD14-160** 

DATE: 9/11/2017 SCALE: AS SHOWN







NOTICE TO CONTRACTOR

PLANNING BOARD ENGINEER

SECRETARY

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY, IN THE FIELD, ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

DATE

DATE

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT <u>PRIOR</u> TO THE START OF

FLOOD ZONE AE - BASE FLOOD ELEVATION DETERMINED. (EL. 8.0 FT.) N.A.V.D. 1988

FLOOD ZONE AO - BASE FLOOD ELEVATION DETERMINED. (EL 3.0 FT.)

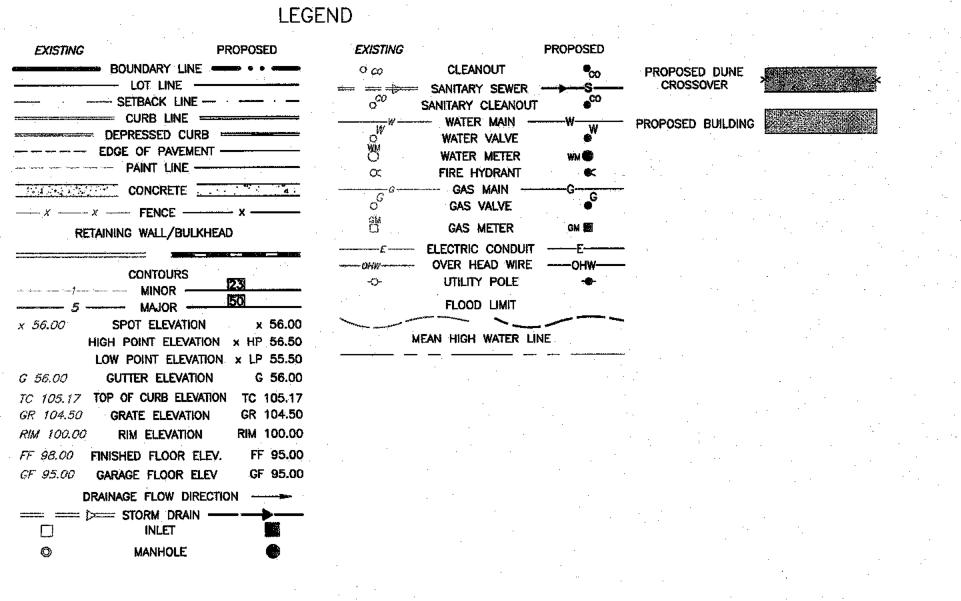
FLOOD ZONE VE - BASE FLOOD ELEVATION DETERMINED. (EL. 14.0 FT.)

N.A.V.D. 1988 N.A.V.D. 1988 IS CONTAINED ENTIRELY WITHIN LOT 22

- 13. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND SHALL CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES ARE THE OBLIGATION OF THE CONTRACTOR.
- 14. ALL PROPOSED HOUSES SHALL HAVE FINISHED FLOORS SET AT LEAST TWO (2) FEET ABOVE THE FLOOD ELEVATION AT THE HOME. ALL HOMES ON THIS TRACT ARE REQUIRED TO HAVE AT LEAST ONE (1) PARKING SPACE UNDERNEATH AT THE GARAGE FLOOR ELEVATIONS SHOWN, WHICH WILL REQUIRE THE FINISHED FLOOR TO BE NINE (9) FEET ABOVE THE GROUND AND THEREFORE EXCEED THE MINIMUM ELEVATIONS SPECIFIED ABOVE. IN ACCORDANCE WITH ORDINANCE SECTION 245.
- 15. NO BASEMENTS ARE PROPOSED AS PART OF THIS PROJECT.
- 16. ALL FOYER FLOORS ARE REQUIRED TO BE AT LEAST TWO (2) FEET ABOVE THE FLOOD HAZARD ELEVATION, IN ACCORDANCE WITH ORDINANCE SECTION 245. 17. PROPOSED GARAGES AS WELL AS THE ENCLOSURES OTHER THAN GARAGES WILL BE CONSTRUCTED AS PER THE MINIMUM REQUIREMENTS SET FORTH AS PER N.J.A.C. 7:13-12.5(p), WITH PERMANENT FLOOD OPENINGS
  THAT MEET THE REQUIREMENTS OF THE UNIFORM CONSTRUCTION CODE AS PER N.J.A.C. 5:23.
- 18. PROPOSED DWELLINGS MUST PROVIDE ONE (1) ENGINEERED FLOOD VENT FOR EVERY 200 SQUARE FEET OF ENCLOSED AREA. SEE ARCHITECTURAL PLANS FOR FINAL LOCATION.
- 19. ALL WALKWAYS TO HAVE MAXIMUM CROSS SLOPES OF 2% AND RUNNING SLOPE OF 5% UNLESS OTHERWISE NOTED.

12. CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.

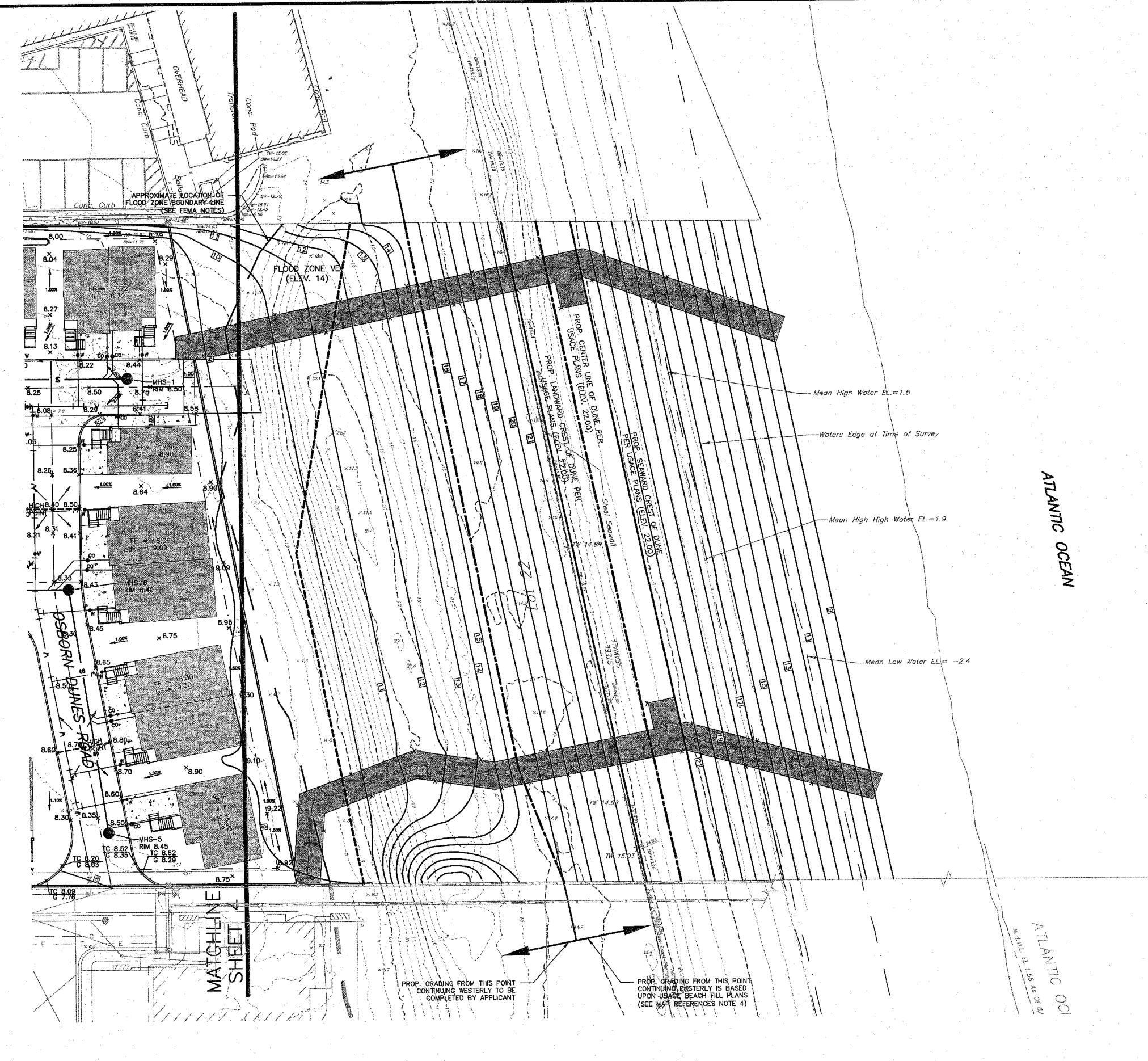
20, ALL ON-SITE CURBING TO BE FLUSH CURB UNLESS OTHERWISE INDICATED.



**PROJECT NUMBER: LD14-16** DATE: 09/11/2017 SCALE: 1"=20"

1 inch=20 feet

SHEET 4 OF 12



FEMA FLOOD NOTES

THE SUBJECT PROPERTY RECEIVED A LETTER OF MAP REVISION (LOMR MAP NO. 34029C0218F) ON MAY 30, 2017 WHICH REVISED THE FLOOD INSURANCE RATE MAP SUCH THAT ONLY THE FOLLOWING FLOOD ZONES EXIST ON LOTS 13, 18, AND 24: FLOOD ZONE AE - BASE FLOOD ELEVATION DETERMINED. (EL 8.0 FT.) FLOOD ZONE AO - BASE FLOOD ELEVATION DETERMINED. (EL. 3.0 FT.) FLOOD ZONE VE - BASE FLOOD ELEVATION DETERMINED. (EL. 14.0 FT.) N.A.V.D. 1988 IS CONTAINED ENTIRELY WITHIN LOT 22

. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON A SURVEY ENTITLED, "BOUNDARY AND TOPOGRAPHIC SURVEY, CAMP OSBORN OCEAN SITE, TAX LOT 13, 18 & 24 - BLOCK 36, SITUATED IN TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY," DATED JULY 31, 2017 AND PREPARED BY MATRIX NEW WORLD ENGINEERING.

2. BOUNDARY INFORMATION FOR LOT 22 SHOWN HERON IS BASED ON TAX MAP SHEET NO. 9.03 OF THE TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY TAX MAP DATED OCTOBER 1, 1950. 3. "STATE OF NEW JERSEY DEPARTMENT OF TRANSPORTATION PLANS OF ROUTE 35 RESTORATION (SANDY RESTORATION) TOMS RIVER TOWNSHIP TO MANTOLOKING FROM MP4.00 TO MP 9.07 CONTRACT NO.

004950321 PAVING DRAINAGE & STRUCTURES." DATED APRIL 2013 4. "BEACHFILL INITIAL CONSTRUCTION, MANASQUAN INLET TO BARNEGAT INLET, OCEAN COUNTY, NEW JERSEY, IFB NO. W912BU-16-B-0014." AS PREPARED BY U.S. ARMY CORPS OF ENGINEERS DATED

5. PROPOSED IMPROVEMENTS FOR ADJACENT TAX LOT 12 - BLOCK 36 BASED UPON SITE PLANS TITLED "PRELIMINARY MAJOR SUBDIVISION FOR OSBORN ESTATES, LOT 12, BLOCK 36, TOWNSHIP OF BRICK, OCEAN COUNTY, NJ." AS PREPARED BY LINDSTROM, DIESSNER & CARR, P.C., DATED 5/11/17, LAST

GRADING NOTES: 1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOTS 13, 18, 22 & 24 IN BLOCK 36, AS SHOWN ON THE ON SHEET 9.03 OF TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY TAX MAP DATED OCTOBER 1, 1950. 2. BLOCK, LOT, BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE BOUNDARY AND TOPOGRAPHIC SURVEY LISTED BELOW IN THE MAP REFERENCES, UNLESS OTHERWISE NOTED ON THIS PLAN.

3. HORIZONTAL DATUM: NADB3; VERTICAL DATUM: NAVD88.

12. CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.

4. TO CONVERT FROM NAVD88 TO NGVD29 +1.14'. TO CONVERT FROM NGVD29 TO NAVD88 -1.14'.

5. ALL GRADING OUTSIDE OF ROADWAY LIMITS TO BE A MAXIMUM OF 3:1 (3 HORIZONTAL, 1 VERTICAL) SLOPE UNLESS OTHERWISE NOTED. 6. ALL GRADING IN ROADWAY AREA SHALL BE GREATER THAN 0.5% UNLESS OTHERWISE NOTED.

7. WHILE IT IS ANTICIPATED THAT THIS SITE WILL INFILTRATE STORMWATER THROUGH THE PROPOSED GRAVEL/CRUSHED SHELL ROAD AND OPEN SPACES BETWEEN AND BEHIND HOUSES, IT SHALL BE ENSURED THAT THE EXISTING POSITIVE DRAINAGE PATH FROM EAST TO WEST IS MAINTAINED AS SHOWN. IN THE EVENT THAT OBSTRUCTIONS FORM BETWEEN HOUSES THAT COULD PREVENT THE EAST TO WEST FLOW DIRECTION AFTER CONSTRUCTION, POSITIVE DRAINAGE BETWEEN EACH HOUSE TOWARDS THE PROPOSED GRAVEL/CRUSHED SHELL ROAD SHALL BE PROVIDED AS SHOWN ON THIS PLAN. THE DESIGN INTENT IS FOR STORMWATER RUNOFF TO HAVE AN OVERLAND ESCAPE ROUTE AROUND ENCLOSED GARAGE AND/OR OTHER ENCLOSED GROUND FLOOR AREAS, WHICH IS A DETAIL THAT WILL BE PROVIDED AT THE TIME OF INDIVIDUAL PLOT PLAN PREPARATION.

8. FLOOR ELEVATIONS, ADJACENT GRADE, DOORWAY LOCATIONS AND ELEVATIONS SHALL BE CONFIRMED WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION BY THE CONTRACTOR,

9. NO SEDIMENT IS TO LEAVE THE PROPERTY UNLESS OTHERWISE AUTHORIZED BY THE TOWNSHIP, ALL EXCAVATED SOIL TO BE DISPOSED OF SHALL BE PROPERLY CLASSIFIED, HANDLED, AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

10. ALL IMPORTED SOILS MUST BE CERTIFIED CLEAN FILL IN ACCORDANCE WITH THE NJDEP TECHNICAL REQUIREMENTS NJAC 7:26E. IMPORTED SOILS SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT. ALL IMPORTED MATERIAL REQUIRES APPROVAL BY OWNER PRIOR TO PLACEMENT ONSITE.

11. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (800-272-1000) IN ACCORDANCE WITH THE UNDERGROUND FACILITIES CONTROL ACT LAW PRIOR TO ANY SUBSURFACE ACTIVITY.

13. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND SHALL CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES ARE THE OBLIGATION OF THE CONTRACTOR.

14. ALL PROPOSED HOUSES SHALL HAVE FINISHED FLOORS SET AT LEAST TWO (2) FEET ABOVE THE FLOOD ELEVATION AT THE HOME. ALL HOMES ON THIS TRACT ARE REQUIRED TO HAVE AT LEAST ONE (1) PARKING SPACE UNDERNEATH AT THE GARAGE FLOOR ELEVATIONS SHOWN, WHICH WILL REQUIRE THE FINISHED FLOOR TO BE NINE (9) FEET ABOVE THE GROUND AND THEREFORE EXCEED THE MINIMUM ELEVATIONS SPECIFIED ABOVE. IN ACCORDANCE WITH ORDINANCE SECTION 245.

16. ALL FOYER FLOORS ARE REQUIRED TO BE AT LEAST TWO (2) FEET ABOVE THE FLOOD HAZARD ELEVATION, IN ACCORDANCE WITH ORDINANCE SECTION 245.

17. PROPOSED GARAGES AS WELL AS THE ENCLOSURES OTHER THAN GARAGES WILL BE CONSTRUCTED AS PER THE MINIMUM REQUIREMENTS SET FORTH AS PER N.J.A.C. 7:13-12.5(p), WITH PERMANENT FLOOD OPENINGS THAT MEET THE REQUIREMENTS OF THE UNIFORM CONSTRUCTION CODE AS PER N.J.A.C. 5:23.

18. PROPOSED DWELLINGS MUST PROVIDE ONE (1) ENGINEERED FLOOD VENT FOR EVERY 200 SQUARE FEET OF ENCLOSED AREA, SEE ARCHITECTURAL PLANS FOR FINAL LOCATION.

19. ALL WALKWAYS TO HAVE MAXIMUM CROSS SLOPES OF 2% AND RUNNING SLOPE OF 5% UNLESS OTHERWISE NOTED.

20. ALL ON-SITE CURBING TO BE FLUSH CURB UNLESS OTHERWISE INDICATED.

15. NO BASEMENTS ARE PROPOSED AS PART OF THIS PROJECT.

	LEGI	END		
LOT	PROPOSED ARY LINE	EXISTING	SANITARY CLEANOUT	PROPOSED
· · ·	CK LINE	₩ ©	WATER MAIN — WATER VALVE	-W
EDGE OF	PAVEMENT T LINE	<b>₩</b> α	WATER METER FIRE HYDRANT GAS MAIN	WHA (DEC
	CRETE	6 '	GAS VALVE GAS VALVE RESET GAS METER	Ğ ⊕ G GM <b>E</b>
•	E RAIL  ALL/BULKHEAD		ELECTRIC CONDUIT OVER HEAD WIRE UTILITY POLE	——E—— ——OHW——
TRE	E LINE THE		FLOOD LIMIT	
	ITOURS INOR		MEAN HIGH WATER LI	NE

SPOT ELEVATION × 56.00 HIGH POINT ELEVATION × HP 56.50 LOW POINT ELEVATION x LP 55.50 G 56.00 GUTTER ELEVATION G 56.00 TC 105.17 TOP OF CURB ELEVATION TC 105.17

FF 98.00 FINISHED FLOOR ELEV. FF 95.00 GF 95.00 GARAGE FLOOR ELEV GF 95.00 DRAINAGE FLOW DIRECTION ----== STORM DRAIN ---RESET MANHOLE CLEANOUT DOWNSPOUT

GR 104.50 GRATE ELEVATION GR 104.50 RIM 100.00 RIM ELEVATION RIM 100.00

TW 100.00 TOP OF WALL TW 100.00 BW 98.00 BOTTOM OF WALL BW 98.00

O CO

GRAPHIC SCALE 1 inch=20 feet

PROPOSED BUILDING

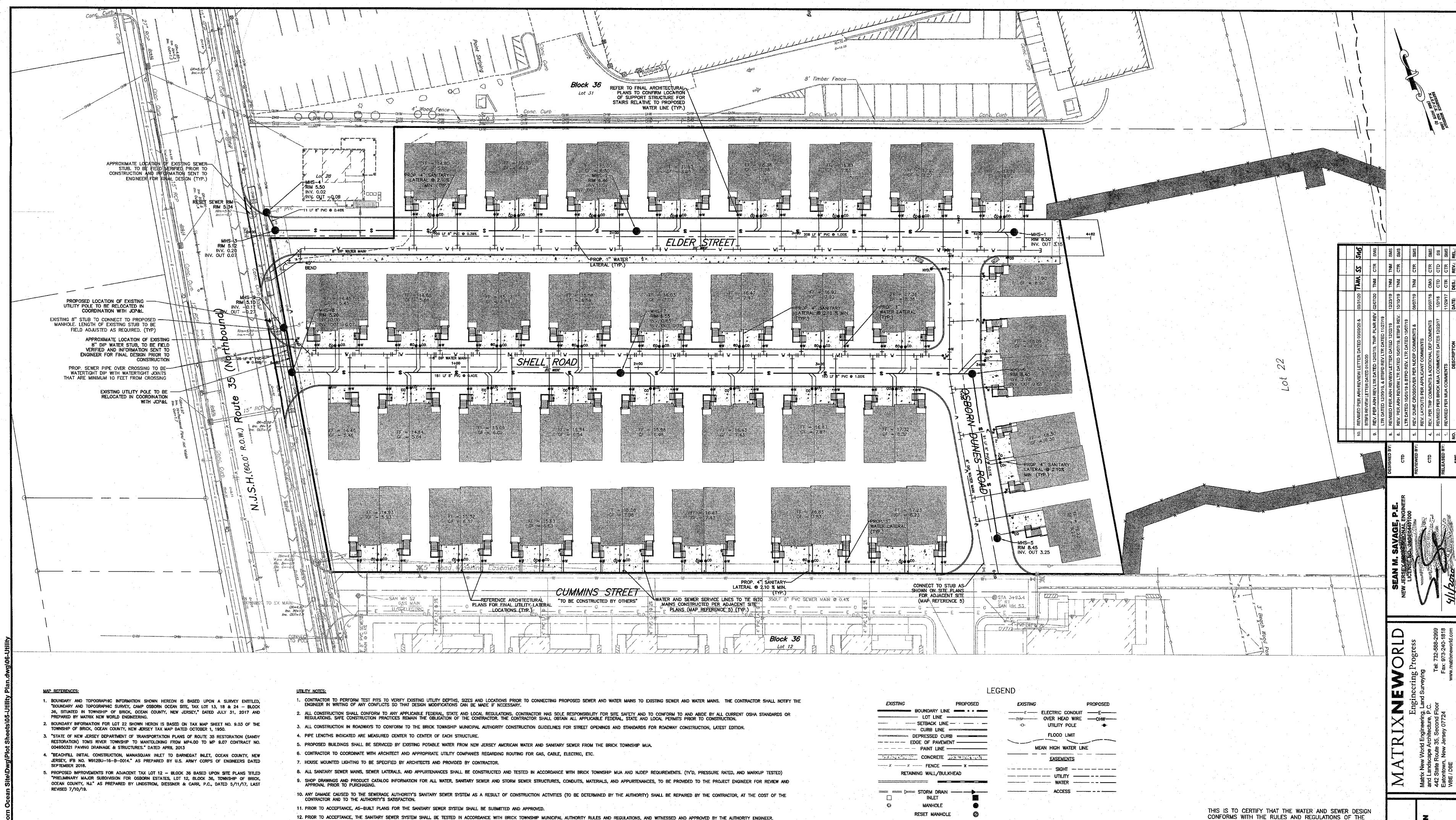
**PROJECT NUMBER: LD14-160** DATE: 09/11/2017 SCALE: 1"=20'

SHEET 5 OF 12

NOTICE TO CONTRACTOR ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY, IN THE FIELD, ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF

CONSTRUCTION.



12. PRIOR TO ACCEPTANCE, THE SANITARY SEWER SYSTEM SHALL BE TESTED IN ACCORDANCE WITH BRICK TOWNSHIP MUNICIPAL AUTHORITY RULES AND REGULATIONS, AND WITNESSED AND APPROVED BY THE AUTHORITY ENGINEER.

13. GREASE TRAPS MUST BE CONSTRUCTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE NATIONAL STANDARD PLUMBING CODE AND THE BRICK TOWNSHIP MUNICIPAL AUTHORITY BUILDING DEPT., IF APPLICABLE. 14. CIRCULAR HOLE SAWS WHICH ARE APPROPRIATELY SIZED OR HAND DRILLS MUST BE USED TO MAKE OPENINGS IN EXISTING SEWERS TO RECEIVE LATERALS, JACKHAMMERS, SLEDGEHAMMERS AND OTHER UNSUITABLE TOOLS OR MACHINERY WHICH MAY DAMAGE THE SEWER MAIN ARE NOT ALLOWED TO BE USED TO MAKE LATERAL OPENINGS. ALL DEBRIS MUST BE REMOVED AND NOT ALLOWED TO FALL INTO THE PIPE.

15. REFER TO TECHNICAL SPECIFICATIONS FOR WATER AND SANITARY SEWER FOR MATERIAL, INSTALLATION SPECIFICATIONS AND TESTING REQUIREMENTS.

16. ALL WATER MAINS, WATER SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED, TESTED AND DISINFECTED IN ACCORDANCE WITH NEW JERSEY AMERICAN WATER AND NUDEP REQUIREMENTS.

17. ALL WATER SERVICES TO BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF THE PLUMBING SUBCODE PROMULGATED BY THE NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS PURSUANT TO THE STATE UNIFORM CONSTRUCTION CODE ACT (NJAC 5:23-3.15).

18. ALL NEW WATER MAINS SHALL BE LAID WITH A MINIMUM OF 4 FEET OF COVER OVER THE PIPE TO PREVENT FREEZING.

19. SPACING AND LOCATIONS OF HYDRANTS SHALL COMPLY WITH THE FIRE PREVENTION STANDARDS OF THE WATER PURVEYOR AND FIRE OFFICIAL. 20. IN ACCORDANCE WITH N.J.A.C. 7:10-11.10(E)5, ALL WATER MAINS AND SANITARY SEWER LINES SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 10 FEET. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN OR WITH SUCH OTHER SEPARATION EXPRESSLY APPROVED BY THE NJDEP. AT CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER LINE SHALL BE OF WATERTIGHT CONSTRUCTION (DUCTILE IRON), WITH WATERTIGHT JOINTS THAT ARE A MINIMUM OF 10 FEET FROM THE WATER MAIN.

21. UNLESS OTHERWISE INDICATED: A. DIP WATER MAIN SHALL BE CLASS PSI350 CEMENT LINED DUCTILE IRON PIPE. (POLYETHYLENE ENCASEMENT)
B. SANITARY SEWER MAINS SHALL BE PVC SDR-35

22. A MARKER STAKE PROTRUDING A MINIMUM OF FOUR FEET ABOVE THE GROUND SURFACE SHALL BE PLACED TO INDICATE THE END OF THE CONSTRUCTION STUBS FOR BUILDING CONNECTIONS, OR STUBS SHALL BE TURNED AND EXTENDED ABOVE GRADE BY FOUR FEET AND CAPPED.

23. ALL SANITARY SEWER MANHOLE COVERS SHALL BE WATERTIGHT.

24. ALL ON-SITE UTILITIES TO BE UNDERGROUND

•		L	EGEND		
EXISTING	PR	OPOSED	EXISTIN	IG	PROPOSED
	BOUNDARY LINE CONTROL LINE CURB LINE CURB LINE CURB CURB CURB CURB CURB CURB CURB CURB		E	- ELECTRIC CONDUIT - OVER HEAD WIRE UTILITY POLE FLOOD LIMIT	—Е— —онw—
	EDGE OF PAVEMENT — PAINT LINE ———		The state of the s	MEAN HIGH WATER LIN	NE
x	CONCRETE	- x		EASEMENTS  SIGHT — — UTILITY — WATER —	
= = > [] []	STORM DRAIN —— INLET MANHOLE		10011 <del>0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-</del>	ACCESS	<del></del>
© <i>co</i>	RESET MANHOLE  CLEANOUT  DOWNSPOUT	<b>©</b>			
	- ROOF DOWNSPOUT - = SANITARY SEWER - SANITARY CLEANOUT	DS			
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	WATER MAIN WATER VALVE WATER VALVE RESET WATER METER	• W • W • W			
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FIRE HYDRANT  GAS MAIN  GAS VALVE	-c <u>-</u> G			

GAS VALVE RESET

GAS METER

BRICK TOWNSHIP MUNICIPAL UTILITIES AUTHORITY.

STEPHEN T. SPECHT, P.E. DEPUTY EXECUTIVE DIRECTOR & DIRECTOR OF ENGINEERING/OPERATIONS

BRICK UTILITIES' FILE #

APPROVED BY THE BRICK TOWNSHIP PLANNING BOARD

CHAIRPERSON DATE

DATE

PLANNING BOARD ENGINEER

SECRETARY

MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY, IN THE FIELD, ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

NOTICE TO CONTRACTOR

APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE

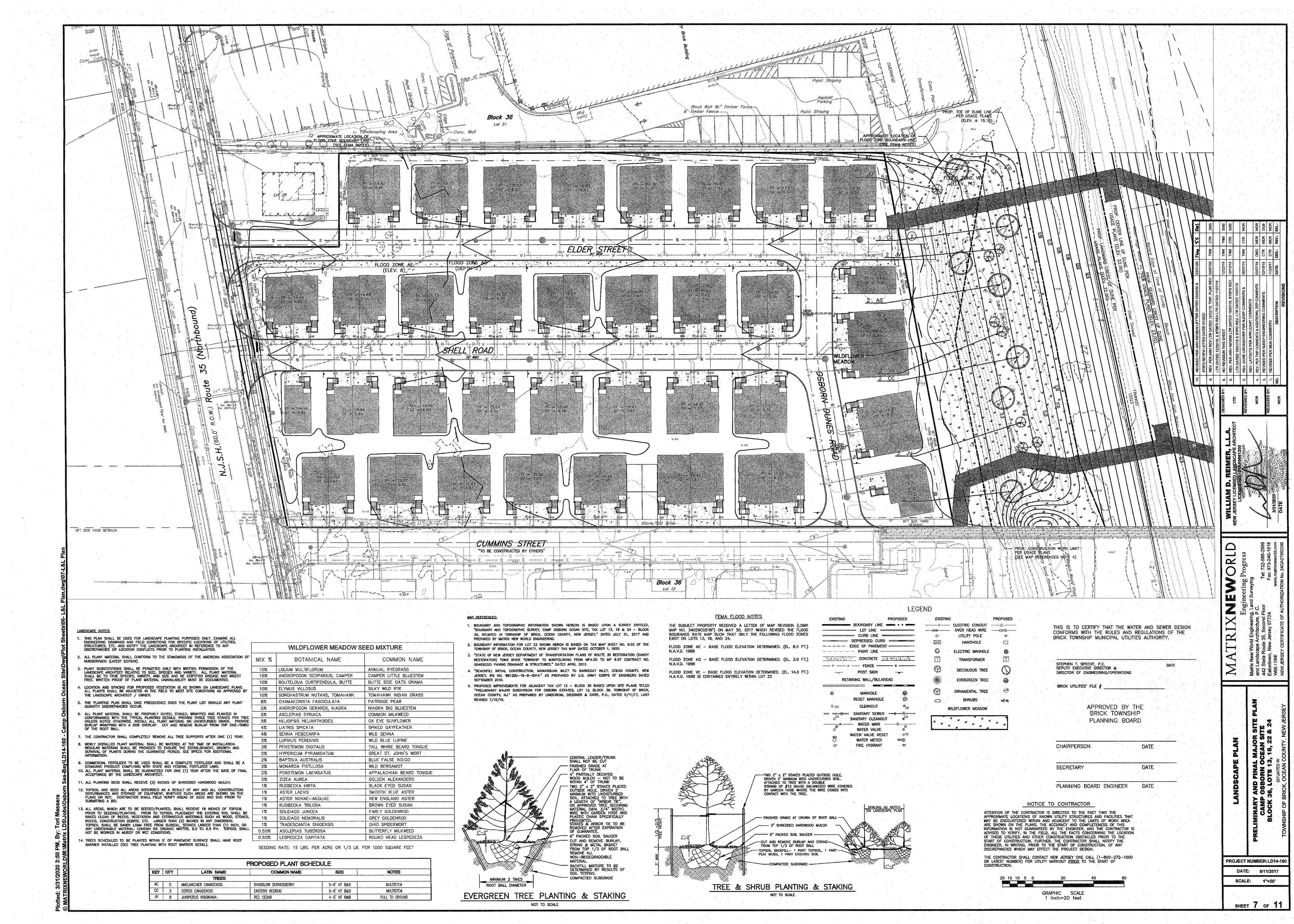
GRAPHIC SCALE
1 inch=20 feet

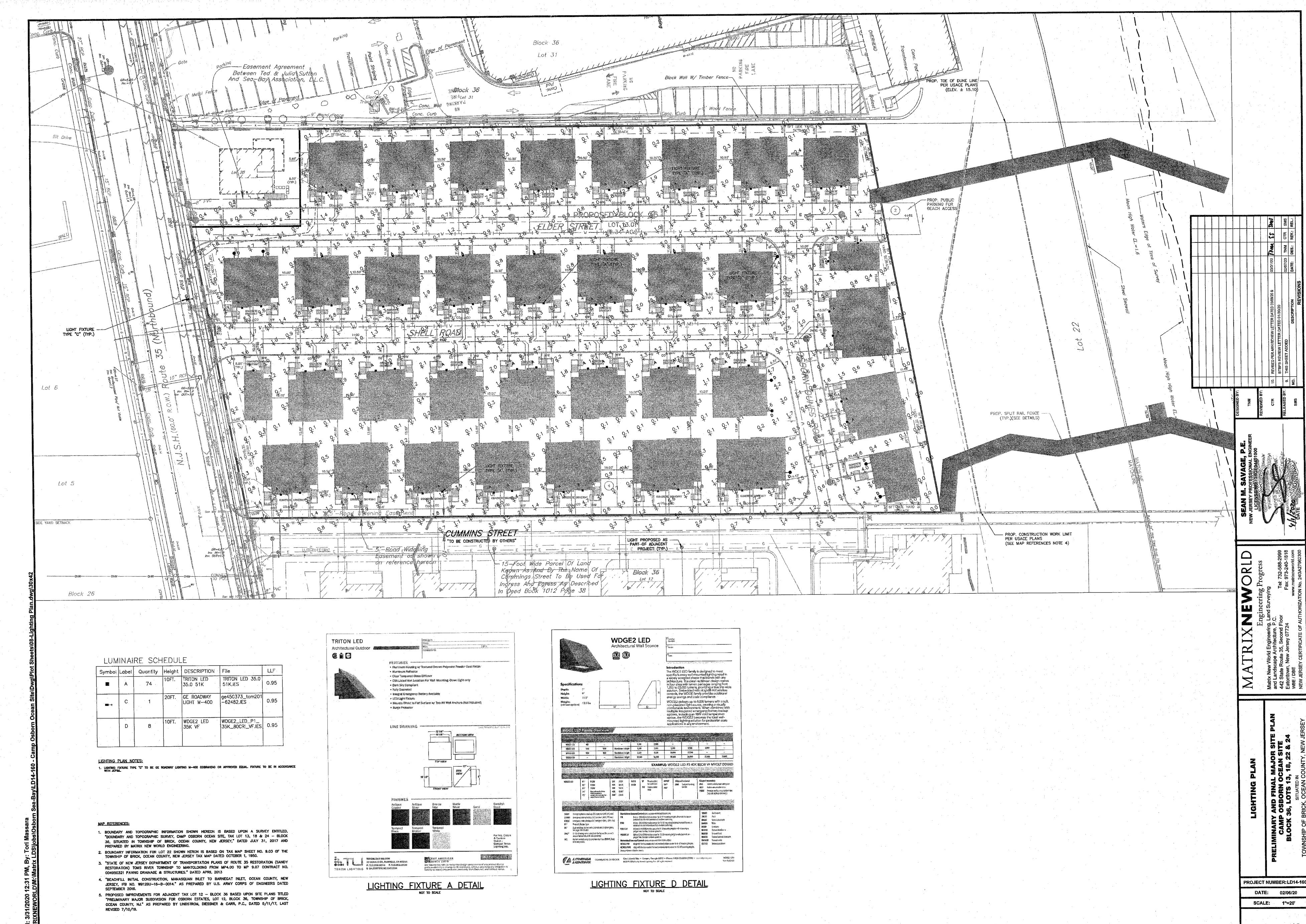
DATE: 9/11/2017 SCALE: 1"=20"

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT <u>PRIOR</u> TO THE START OF CONSTRUCTION.

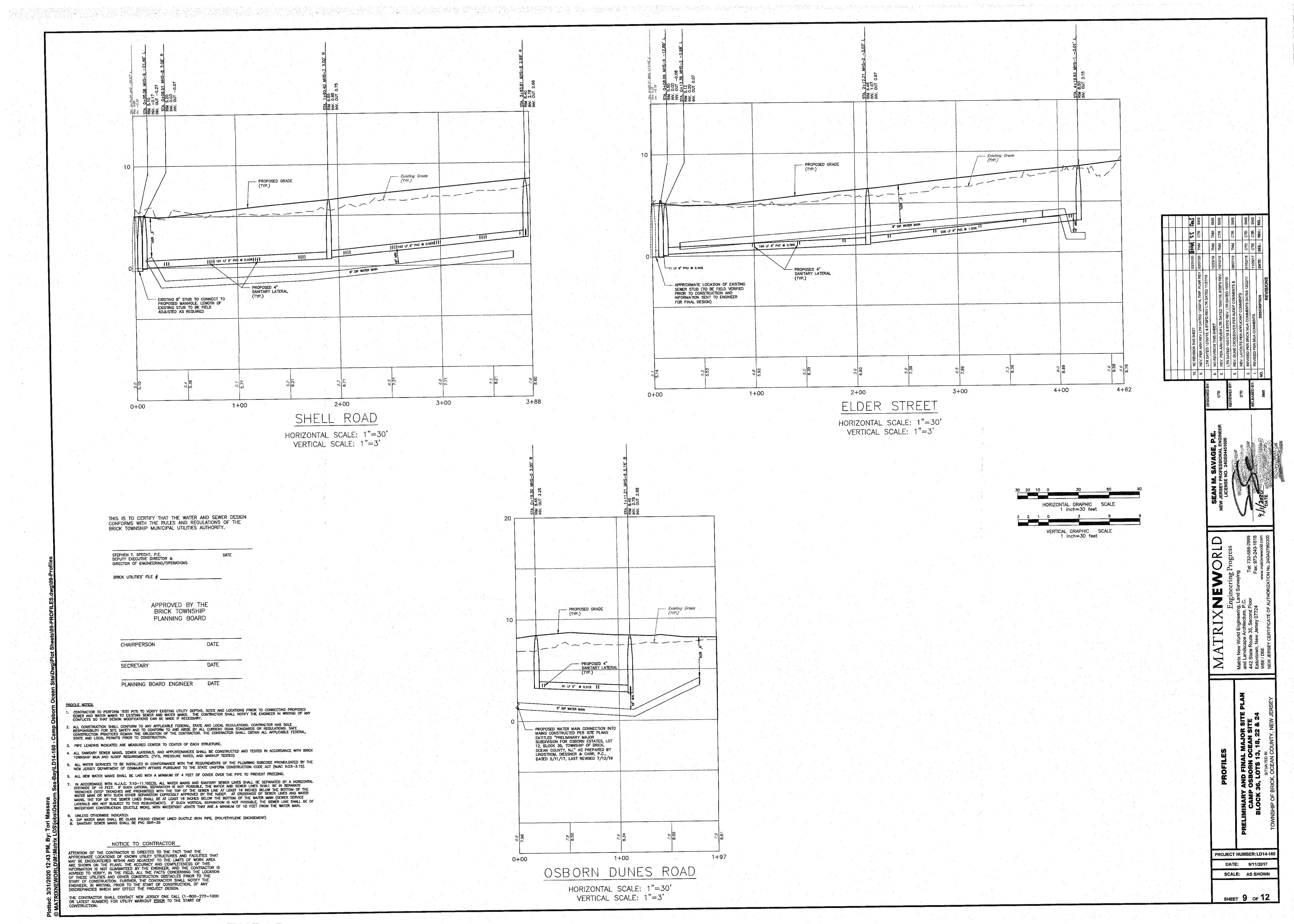
PROJECT NUMBER: LD14-160

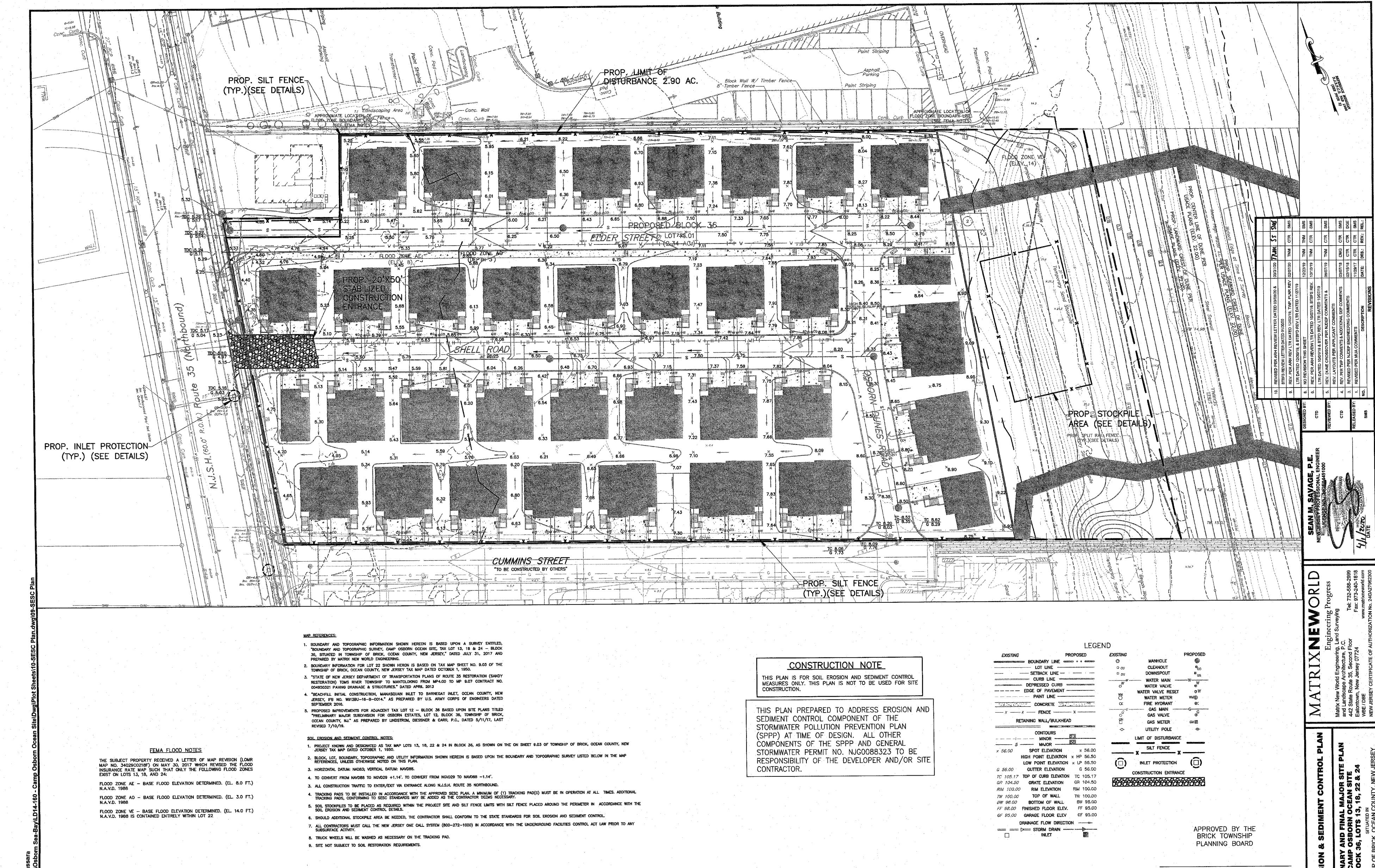
SHEET 6 OF 12





SHEET 8 OF 12





NOTICE TO CONTRACTOR ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY, IN THE FIELD, ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTRUCTION TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF

DATE CHAIRPERSON DATE SECRETARY

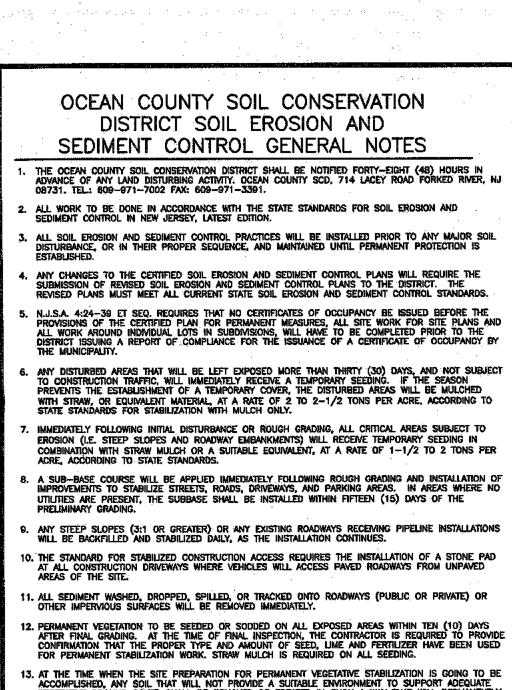
PLANNING BOARD ENGINEER

GRAPHIC SCALE

1 inch=20 feet

**PROJECT NUMBER: LD14-160** DATE: 09/11/17 SCALE: 1"=20'

SHEET 10 OF 12



12. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. AT THE TIME OF FINAL INSPECTION, THE CONTRACTOR IS REQUIRED TO PROVIDE CONFIRMATION THAT THE PROPER TYPE AND AMOUNT OF SEED, LIME AND FERTILIZER HAVE BEEN USED FOR PERMANENT STABILIZATION WORK, STRAW MULCH IS REQUIRED ON ALL SEEDING. 13. AT THE TIME WHEN THE 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 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 TO BE EMPLOYED. 14. 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 COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL 5. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED, MUST BE IN ACCORDANCE WITH STATE STANDARDS FOR DEWATERING. 7. 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 IN ACCORDANCE WITH STATE STANDARDS FOR DUST CONTROL B. STOCKPILE AND STAGING LOCATIONS DETERMINED 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. THE DISTRICT RESERVES THE RIGHT TO DETERMINE WHEN CERTIFICATION OF A NEW AND SEPARATE SOIL EROSION AND SEDIMENT CONTROL PLAN WILL BE REQUIRED FOR THESE ACTIVITIES

20. 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. STANDARD FOR STORM SEWER INLET PROTECTION A TEMPORARY BARRIER AND SETTLING FACILITY INSTALLED AT A STORM SEWER INLET. THE PURPOSE OF STORM SEWER INLET PROTECTION IS TO INTERCEPT. AND RETAIN SEDIMENT, THUS PREVENTING THE ENTRANCE OF SEDIMENT INTO THE STORM SEWER SYSTEM. CONDITIONS WHERE PRACTICE APPLIES

> 3. TRAFFIC WILL NOT DESTROY OR CAUSE CONSTANT MAINTENANCE OF THE STORM SEWER INLET PROTECTION 4. A TRAFFIC HAZARD WILL NOT BE CREATED.

WATER QUALITY ENHANCEMENT

THE FOLLOWING APPLIES TO ALL METHODS OF STORM SEWER INLET PROTECTION:

 IN ALL CASES, THE INLET PROTECTION SHOULD NOT COMPLETELY CLOS OFF THE INLET. PROVISION MUST BE MADE TO ALLOW STORMWATER TO OVERFLOW OR BYPASS FILTER 3. 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. INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY. AS NEEDED, THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

STANDARD FOR DUST CONTROL CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON—SITE AND OFF—SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES AND RESTRICTIONS

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST: <u>VEGETATIVE COVER</u> — SEE STANDARD FOR: TEMPORARY VEGETATIVE COVER SHOWN HEREON, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION SHOWN HEREON, AND PERMANENT STABILIZATION WITH SOD PER CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, CURRENT EDITION. <u>SPRAY-ON ADHESIVES</u> - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS) KEEP TRAFFIC OFF THESE AREAS.

WATER TYPE OF APPLY DILUTION NOZZLE GAL/ACRE ACTION ASPHALT EMELSION 7:1 CDARSE SPRAY 12:00

LATEX EMILSION 12:51 FINE SPRAY 23:5

RESIN IN VATER 4:1 FINE SPRAY 3:00

PILYACRYLANIDE (PAN) - SPRAY ON PILYACRYLANIDE (PAN) - DRY SPREAD CONTROL BY SPREAD CONT

LIAGE — TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL—TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING—TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. CALCHIM 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 EROSION OR PLANT DAMAGE, IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SPPP REQUIRED INSPECTIONS AND REPORTS

A THE PERMITTEE SHALL CONDUCT AND DOCUMENT ROUTINE INSPECTIONS OF THE FACILITY TO IDENTIFY AREAS CONTRIBUTING TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT AND EVALUATE WHETHER THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) IDENTIFIED UNDER 6.1 OF THE 5G3—CONSTRUCTION ACTIVITY STORMWATER (GP) PART 1 NARRATIVE REQUIREMENTS, INCLUDING THIS SOIL EROSION AND SEDIMENT CONTROL PLAN IS BEING PROPERLY IMPLEMENTED AND MAINTAINED, OR WHETHER ADDITIONAL MEASURES ARE NEEDED TO IMPLEMENT THE SPPP. (ROUTINE INSPECTIONS MINIMUM WEEKLY). HIGH ACID PRODUCING SOILS WITH A pM OF 4 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A RATE OF 6 TONS PER ACRE (OR 275 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pM OF 5 OR MORE EXCEPT AS FOLLOWS:

THE CONTRACTOR SHALL KEEP THE FOLLOWING RECORDS RELATED TO CONSTRUCTION
ACTIVITIES AT THE SITE:

- DATES WHEN MAJOR GRADING ACTIVITIES OCCUR AND THE AREAS WHICH WERE GRADED
- DATES AND DETAILS CONCERNING THE INSTALLATION OF STRUCTURAL CONTROLS
- DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA
- DATES WHEN AN AREA IS STABILIZED, EITHER TEMPORARILY OR PERMANENTLY
- DATES OF RAINFALL AND THE AMOUNT OF RAINFALL
- DATES AND DESCRIPTIONS OF THE CHARACTER AND AMOUNT OF ANY SPILLS OF
HAZAROOUS MATERIALS
- RECORDS OF REPORTS FILED WITH REGULATORY AGENCIES IF REPORTABLE QUANTITIES
OF HAZARDOUS MATERIALS SPILLED
- A VISIBLE SIGN SHALL BE POSTED ON THE SITE TO IDENTIFY THE LOCATION OF SPPP

NNUAL REPORTS AND CERTIFICATIONS. A. THE PERMITTEE SHALL PREPARE AN ANNUAL REPORT SUMMARIZING EACH INSPECTION PERFORMED UNDER 1.A., ABOVE. THIS REPORT SHALL BE ACCOMPANIED BY AN ANNUAL CERTIFICATION, ON A FORM PROVIDED BY THE NIDEP THAT THE FACILITY IS IN COMPLIANCE WITH ITS SPPP AND THIS PERMIT, EXCEPT THAT IF THERE ARE ANY INCIDENTS OF NONCOMPLIANCE, THOSE INCIDENTS SHALL BE IDENTIFIED IN THE CERTIFICATION. IF THERE ARE INCIDENTS OF NONCOMPLIANCE, THE REPORT SHALL IDENTIFY THE STEPS BEING TAKEN TO REMEDY THE NONCOMPLIANCE AND TO PREVENT SUCH INCIDENTS FROM RECURRING. THE REPORT AND CERTIFICATION SHALL BE SIGNED AND DATED BY THE PERMITTEE IN ACCORDANCE WITH NIJA.C, 7:14A-4.9. AND SHALL BE MAINTAINED FOR A PERIOD OF AT LEAST FIVE YEARS ALONG WITH COPIES OF ALL INSPECTION REPORTS AND RECORD KEEPING. THIS PERIOD MAY BE EXTENDED BY WRITTEN REQUEST FROM THE DEPARTMENT AT ANY TIME (SEE N.J.A.C. 7:14A-6.8)

REPORTS OF NONCOMPLIANCE N. ALL INSTANCES OF NONCOMPLIANCE NOT REPORTED UNDER N.J.A.C. 7:140A-6.10 SHALL BE REPORTED TO THE DEPARTMENT ANNUALLY. THE SOIL CONSERVATION DISTRICT WILL PROVIDE THE DEPARTMENT A COPY OF THE REPORT OF COMPLIANCE ISSUED UNDER N.J.A.C. 2:90—1 FOR COMPLETED CONSTRUCTION ACTIVITIES, EXCEPT SINGLE FAMILY HOME CONSTRUCTION UNDER B. BELOW. THE REPORT OF COMPLIANCE SHALL SERVE AS THE NOTIFICATION OF COMPLETION.

B. THE BUILDER OF A SINGLE FAMILY HOME THAT IS AUTHORIZED UNDER THIS PERMIT, BUT NOT WITHIN THE DEFINITION OF "PROJECT" AT N.J.S.A. 4:24-41G, SHALL SEND A COPY OF THE FINAL CERTIFICATE OF OCCUPANCY TO THE SOIL CONSERVATION DISTRICT. THE SOIL CONSERVATION DISTRICT WILL PROVIDE A COPY OF THE FINAL CERTIFICATION OF OCCUPANCY TO THE DEPARTMENT, WHICH WILL SERVE AS NOTIFICATION OF COMPLETION. THE DOT SHALL PROVIDE WRITTEN NOTIFICATION TO THE DEPARTMENT WHEN DOT CERTIFIED PROJECTS ARE COMPLETED.

MITIGATION NOTES FOR ACIDIC SOI

2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS. STOCKPILES OF HIGH ACID PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.

4. TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOIL MATERIAL TO BE EXPOSED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO MICHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID PRODUCING SOIL.

IRON SULFIDE, (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT)
SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A
PLATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1.000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5.0 OR MORE EXCEPT AS FOLLOWS:

A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A pH OF 5 OR MORE. B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES AND OTHERS TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES

EQUIPMENT USED FOR MOVEMENT OF HIGH ACID PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID PRODUCING SOILS FROM, AROUND OR OFF THE SITE.

8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE, (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING) MONITORING SHOULD CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

STANDARD FOR TOPSOILING topsoiling entails the distribution of suitable quality soil on areas to be vegetated.

WATER QUALITY ENHANCEMENT

Opsoil shall be used where soils are to be disturbed and will be revegetated.

A. TOPSOIL SHOULD BE FRIABLE, LOAMY, 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 O.S MILLIMHOS PER CENTIMETER, MORE THAN O.S MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). TOPSOIL HAULED IN FROM OFFSITE SHOULD HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT, ORGANIC MATTER CONTENT MAY BE RASED BY ADDITIVES. B. 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, SOR TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLIBLE SALTS AND PH LEVEL.

A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

B. STRPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.

C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5. IN LIEU OF SOIL TESTS, SEE LIME RATE GUIDE IN SEEDBED PREPARATION FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1.

D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

E. STOCKPILES OF TOPSOIL SHOULD BE STILLATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

F. 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 A. 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 VIGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE.

B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDIBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.

PAR SEEDISED PREPARATION, SEEDING, MOLEN APPLICATION AND ANCHORING, AND MAINTENANCE.

SEE THE STANDARD FOR LAND GRADING, PG. 19-1.

C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SKOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 8.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.

D. IMMEDIATELY PRIOR TO TOPSOILING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS WILL HELP INSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL THIS PRACTICE IS PERMESSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMASING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).

9. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (MINIMUM 47), FIRMED IN PLACE IS REQUIRED, 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 (FG. 1-1).

C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL 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 MES SHALL BE BASED ON SOIL TEST SUCH AS THOSE REQUIRED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

- SILT FENCE

AROUND PERIMETER

CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP)

THE CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE SPPP CONSISTS OF THE REQUIREMENT IN 2., 3., AND 4. BELOW. THESE REQUIREMENTS BECOME OPERATIVE ON MARCH 3, 2004 AND APPLY TO CONSTRUCTION ACTIVITIES THAT COMMENCE ON OR AFTER MARCH 3, 2014. ANY NEW CONSTRUCTION ACTIVITY FOR WHICH AN REA IS SUBMITTED ON OR AFTER MARCH 3, 2004 OR WHICH WILL RECEIVE AUTOMATIC RENEWAL OR AUTHORIZATION UNDER THIS PERMIT AFTER MARCH 3, 2004 ALSO SHALL COMPLY WITH THESE REQUIREMENTS. MATERIAL MANAGEMENT TO PREVENT OR REDUCE WASTE — ANY PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI-FREEZE, PAINTS AND PAINT THINNERS, CLEANING SOLVENTS AND ACIDS, DETERGENTS, CHEMICAL ADDITIVES, AND CONCRETE CURING COMPOUNDS SHALL BE STORED IN CONTAINERS IN A DRY COVERED AREA. MANUFACTURERS' RECOMMENDED APPLICATION RATES, USES, AND METHODS SHALL BE STRICTLY FOLLOWED TO THE EXTENT NECESSARY TO PREVENT OR MINIMIZE THE PRESENCE OF WASTE FROM SUCH MATERIALS IN THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT (THE PRECEDING SENTENCE DOES NOT APPLY TO ANY MANUFACTURERS' RECOMMENDATIONS ABOUT FERTILIZER OR OTHER MATERIAL THAT CONFLICT WITH THE EROSION AND SEDIMENT CONTROL COMPONENT OF THE FACILITY'S SPPP.)

WASTE HANDLING — THE FOLLOWING REQUIREMENTS APPLY ONLY TO CONSTRUCTION SITE WASTE THAT HAS THE POTENTIAL TO BE TRANSPORTED BY THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT. THE HANDLING AT THE CONSTRUCTION SITE OF WASTE BUILDING MATERIAL AND RUBBLE AND OTHER CONSTRUCTION SITE WASTES, INCLUDING LITTER AND HAZARDOUS AND SANITARY WASTES, SHALL CONFORM WITH THE STATE SOLID WASTE MANAGEMENT ACT, N.J.S.A. 13:1E—ET SEQ., AND TS IMPLEMENTING RULES AT N.J.A.C. 7:26, 7:26A, AND 7:26G, THE NEW JERSEY PESTICIDE CONTROL CODE AT N.J.A.C. 7:30, THE STATE LITTER STATUTE N.J.S.A. 13:16—99.3); AND OSHA REQUIREMENTS FOR SANITATION AT 29 C.F.R., 1926 (EXCEPT WHERE SUCH CONFORMANCE IS NOT RELEVANT TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT). CONSTRUCTION SITES SHALL HAVE ONE OR MORE DESIGNATED WASTE COLLECTION AREAS ONSITE OR ADJACENT TO THE SITE, AND AN ADEQUATE NUMBER OF CONTAINERS (WITH LIDS OR COVERS) FOR WASTE, WASTE SHALL BE COLLECTED FROM SUCH CONTAINERS BEFORE THEY OVERFLOW, AND SPILLS AT SUCH CONTAINERS SHALL BE CLEANED UP IMMEDIATELY.

"CONSTRUCTION AND DEMOLITION WASTE", AS DEFINED IN N.J.A.C. 7:7:26-1.4 AS FOLLOWS:
"WASTE BUILDING MATERIAL AND RUBBLE RESULTING FROM CONSTRUCTION, REMODELING,
REPAIR, AND DEMOLITION OPERATIONS ON HOUSES, COMMERCIAL BUILDINGS, PAVEMENTS AND
OTHER STRUCTURES. THE FOLLOWING MATERIALS MAY BE FOUND IN CONSTRUCTION AND
DEMOLITION WASTE: TREATED AND UNTREATED WOOD SCRAP; TIREE PARTS, TREE STUMPS
AND BRUSH; CONCRETE, ASPHALT, BRICKS, BLOCKS AND OTHER MASONRY; PLASTER AND
WALLBOARD; ROOFING MATERIALS; CORRUGATED CARDBOARD AND MISCELLANEOUS PAPER;
FERROUS AND NON-FERROUS METAL; NON-ASBESTOS BUILDING INSULATION; PLASTIC SCRAP;
DIRT; CARPETS AND PADDING, GLASS (WINDOW AND DOOR); AND OTHER MISCELLANEOUS
MATERIALS; BUT SHALL NOT INCLUDE OTHER SOLID WASTE TYPES." DISCARDED (INCLUDING SPILLED) PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI-FREEZE, PAINTS AND PAINT THINNERS, PAINT CHIPS AND SANDBLASTING GRITS, CLEANING SOLVENTS, ACIDS FOR CLEANING MASONRY SURFACES, DETERGENTS, CHEMICAL ADDITIVES USED FOR SOIL STABILIZATION (E.G. CALCIUM CHLORIDE), AND CONCRETE CURING COMPOUNDS.

OTHER "LITTER" AS DEFINED AT N.J.S.A. 13:1E-215:D AS FOLLOWS: "ANY USED OR UNCONSUMED SUBSTANCE OR WASTE MATERIAL WHICH HAS BEEN DISCARDED WHETHER MADE OF ALUMINUM, GLASS, PLASTIC, RUBBER, PAPER, OR OTHER NATURAL OR SYNTHETIC MATERIAL, OR ANY COMBINATION THEREOF, INCLUDING, BUT NOT LIMITED TO, ANY BOTTLE, JAR OR CAN, OR ANY TOP, CAP OR DETACHABLE TAB OF ANY BOTTLE, JAR OR CAN, ANY UNLIGHTED CIGARETTE, CIGAR, MATCH OR ANY FLAMING OR GLOWING MATERIAL OR ANY GARBAGE, TRASH, REFUSE, DEBRIS, RUBBISH, GRASS CLIPPINGS OR OTHER LAWN OR GARDEN WASTE, NEWSPAPERS, MAGAZINES, CLASS, METAL, PLASTIC OR PAPER CONTAINERS OR OTHER PACKAGING OR CONSTRUCTION MATERIAL, BUT DOES NOT INCLUDE THE WASTE OF THE PRIMARY PROCESSES OF MINOR OR OTHER EXTRACTION PROCESSES, LOGGING, SAWMILLING, FARMING OR MANUFACTURING."

CONCRETE TRUCK WASHOUT — CONCRETE TRUCK WASHOUT ONSITE IS PROHIBITED OUTSIDE DESIGNATED AREAS. DESIGNATED WASHOUT AREAS SHALL BE LINED AND BERMED TO PREVENT DISCHARGES TO SURFACE AND GROUND WATER. HARDENED CONCRETE FROM CONCRETE TRUCK WASHOUT SHALL BE REMOVED AND PROPERLY DISPOSED OF. 4. SPILLS: DISCHARGE OF HAZARDOUS SUBSTANCES,

A. SPILL KITS SHALL BE AVAILABLE ONSITE OR ADJACENT TO THE SITE FOR ANY MATERIALS THAT ARE LISTED IN 2 ABOVE AND USED OR APPLIED ONSITE. ALL SPILLS OF SUCH MATERIAL SHALL BE CONTAINED AND CLEANED UP IMMEDIATELY. CLEANED UP MATERIALS SHALL BE PROPERLY DISPOSED OF. B. DISCHARGES OF HAZARDOUS SUBSTANCES (AS DEFINED IN N.J.A..C. 7:1E-1.8) IN CONSTRUCTION SITE WASTES ARE SUBJECT TO THE PROVISIONS OF THE SPILL COMPENSATION AND CONTROL ACT, NJAC 58:10-23.11 ET SEQ., AND OF DEPARTMENT RULES FOR DISCHARGE OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES AT NJAC 7:1E. NO DISCHARGE OF HAZARDOUS SUBSTANCES RESULTING FROM AN ONSITE SPILL SHALL BE DEEMED TO BE "PURSUANT TO AND IN COMPLIANCE WITH (THIS) PERMIT" WITHEN THE MEANS OF THE SPILL COMPENSATION AND CONTROL ACT AT NJSA 58:10-2311C.

C. RELEASES IN EXCESS OF REPORTABLE QUANTITIES (RO) ESTABLISHED UNDER 40 C.F.R. 110, 117 AND 302 THAT OCCUR WITHIN A 24-HOUR PERIOD MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800-424-8802) RIPRAP SPECIFICATIONS

THE RIPRAP SHALL BE COMPOSED OF WELL—GRADED MIXTURE SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE 450 SIZE AS DETERMINED FROM THE DESIGN PROCEDURE. A WELL—GRADED MIXTURE AS USED HEREIN IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES, THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE THE DESIGNER, AFTER DETERMINING THE RIPRAP SIZE THAT WILL BE STABLE UNDER THE FLOW CONDITION, SHALL CONSIDER THAT SIZE TO BE A MINIMUM SIZE AND THEN, BASED ON RIPRAP GRADATIONS ACTUALLY AVAILABLE IN THE AREA SELECT THE SIZE OR SIZES THAT EQUAL OR EXCEED THE MINIMUM SIZE. THE POSSIBILITY OF VANDALISM SHALL BE CONSIDERED BY THE DESIGNER IN SELECTING

GEOTEXTILE FABRIC SHALL MEET THE U.S. ARMY CORPS OF ENGINEERS GUIDE SPECS, CW02215-86, FOR STRENGTH. RIPRAP THAT IS 12" AND LARGER SHALL NOT BE DUMPED DIRECTLY ONTO SYNTHETIC FILTER CLOTH UNLESS THE MANUFACTURER RECOMMENDS SUCH USE OF THE CLOTH. OTHERWISE, A 4" MINIMUM THICKNESS BLANKET OF GRAVEL SHALL BE PLACED DIRECTLY ON THE FILTER CLOTH BY HAND OR BY THE BUCKET OF THE EQUIPMENT.

STONE FOR RIPRAP SHALL CONSIST OF FELD STONE OR QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE STONE SHALL BE HARD AND ANGULAR AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING. THE SPECIFIC GRAVITY ON THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5. RUBBLE CONCRETE MAY BE USED, PROVIDED IT HAS A DENSITY OF AT LEAST 150 POUNDS PER CUBIC FOOT, AND OTHERWISE MEETS THE REQUIREMENTS OF THIS STANDARD.

- EXISTING GROUND

PERCENT SLOPE OF ROADWAY

0 TO 2%

2 TO 5%

50' OR GREATER AS REQUIRED

1"-2 1/2" CLEAN CRUSHED ANGULAR STONE SHALL BE USED

COARSE GRAINED SOILS

STABILIZED CONSTRUCTION ENTRANCE

STOCKPILE TOP & SIDES TO BE

- STOCKPILED TOPSOIL

IMMEDIATELY STABILIZED WITH

TEMPORARY SEED FERTILIZER AND LIME ETC. AS SPECIFIED

HERE ON.

STOCKPILE AREA

NOT TO SCALE

ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX I-2

100 00 00 OC

50' OR GREATER AS REQUIRED \_\_\_\_\_ PUBLIC R.O.W. \_\_\_\_

CONSTRUCTION

R.O.W.

FINE GRAINED SOILS

100 FT.

ENTRANCE AND PUBLIC

Y PUBLIC

STANDARD FOR STABILIZATION WITH MULCH ONLY STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS.

PURPOSE TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE. CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION—RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

A. 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 STANDARDS FOR LAND GRADING. B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

2. PROTECTIVE MATERIALS A. UNROTTED SMALL—GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS OR NETTING TE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE INSPECTOR CANNOT SEE THE GROUND BELOW THE MULCH.

B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER. C. WOOD—FIBER OR PAPER—FIBER MULCH AT A RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER OR HYDROMULCHING. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON OR PLASTIC, MAY BE USED.

E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WAS THEM INTO AN INLET AND PLUG IT. F. GRAVEL, CRUSHED STONE OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.

MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES. A. PEG AND TWINE - DRIVE B TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES 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.

B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS. TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG. C. CRIMPER MULCH ANCHORING COULTER TOOL — A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE, THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

APPLICATIONS SHOULD BE HEAVER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

A. ORGANIC AND VEGETABLE BASED BINDERS — NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY DURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS, THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE B. SYNTHETIC BINDERS — HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

CONSTRUCTION SEQUENCE

TEMPORARY SOIL EROSION FACILITIES
CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE
INSTALL SILT FENCE
INSTALL SILT FENCE
INSTALL SILT FENCE
SHOULD GRADING
SHOULD GRADING
SHOULD GRADING
SHOULD GRADING
SHOULD GRADING
PUBLIC UTILITY INSTALLATION
ROADWAY SUB-BASE
MAINTENANCE OF TEMPORARY EROSION CONTROL MEASURES
CONSTRUCTION OF THE BUILDINGS
CONSTRUCTION OF THE BUILDINGS

\*TEMPORARY SEEDING SHALL ALSO BE PERFORMED WHEN NECESSARY IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

- DRAWSTRING RUNNING THROUGH

FABRIC ALONG TOP OF FENCE

1" REBAR FOR BAG TREMOVAL FROM INLET

SILTSACK-

8' MINIMUM

SILT FENCE

NOT TO SCALE

FENCE POST - 8 ft ON CENTERS -

GEO-TEXTILE FABRIC -

SECURED TO POST WITH METAL FASTENERS AND REINFORCEMENT MATERIAL BETWEEN FASTENER AND

GEO-TEXTILE FABRIC TO BE BURIED AT LEAST 6" DEEP IN THE GROUND

SILT ACCUMULATION:

RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER, THIS 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.

C. 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 SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 POUNDS PER 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 LAWNS OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MUCH IS DESIRED OR ON SITE WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

SILTSACK INLET PROTECTION DETAIL

NOT TO SCALE

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION MATERIALS AND METHODS

A. 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 THE CURRENT STANDARDS FOR LAND GRADING, PG 19—1. B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE WOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTIONS. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). 2. SEEDBED PREPARATION

A APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST
RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL
SAMPLER MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE
EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS
PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-20-10 OR
EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES
OTHERWISE. LIMING RATES SHALL BE ESTABLISHED VIA SOIL TESTING.. CALCIUM
CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF
LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND
MAGNESIUM TO GRASSES AND LEGUMES.

8. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH MARROW, 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. C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARDS FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG, 1-1. A. SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2.

TABLE 7-2: TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH OPTIMUM SEEDING DEPTI (INCHES) SEED SEEDING
SELECTION RATE (POUNDS) OPTIMUM SEEDING DATE COOL SEASON GRASS PERENNIAL 100 1.0 2/15-5/1 8/15-10/15 NARM SEASON GRASS 5/1-9/1 PEARL MILLET NOTE: REFER TO CHAPTER 7-1 OF THE 2014 NJ SE&SC STANDARDS FOR TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL)
SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED,
HYDROSEEDED OR CULTIPACKED SEEDLINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF \$\frac{1}{2}\$ TO \$\frac{1}{2}\$ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE \$\frac{1}{4}\$ INCH DEEPER ON COURSE TEXTURED SOILS. C. 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 APPLED WITH A HYDROSEEDER FOLLOWING SEEDING, (ALSO SEE STABILIZATION WITH MULCH ONLY SHOWN HEREON) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO BE SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH, HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOD OBSTRUCTED WITH ROCKS, STUMPS, ETC.

AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE FOOD SEED—TO—SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSSON WILL BE MINIMIZED AND WATER CONSERVATION ON THE STIE WILL BE

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE 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 IN COMPLIANCE WITH THIS MULCHING REQUIREMENT. THE RATE OF 1-1/2 TO 2 TONS PER ACRE. (70 TO 90 POUNDS PER 1,000 SQUARE FEET). EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FIND TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS PER SECTION. 1. 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. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH, SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS N A CROS-CROSS AND A SQUARE PATTERN, SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTING, STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING 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

STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES, STRAW MULCH MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

LIQUID MULCH BINDERS - MAY BE USED TO ANCHOR HAY OR STRAW MULCH. d. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

(1) ORGANIC AND VEGETABLE BASED BINDERS — NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. (2) SYNTHETIC BINDERS — HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL CERMINATION OF SALES NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL

MATERIALS AND METHODS I. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING. TOPSON, SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE, A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES, TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE—STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUIGERS COOPERATIVE EXTENSION, SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUIGERS COOPERATIVE EXTENSION OFFICES (http://njoes.rutgers.edu/county). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 OR EQUIVALENT WITH 50% 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 soil 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 SOIL. SOILS HAVING A PH OF 4 OR LEES OR CONTAINING IRON SULFIDES 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 REQUIREMENTS. .

. SELECT A MIXTURE FROM TABLE 4-2 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE 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 RETESTED. NJDOT TYPE B SEED MIXTURE SEED MIX SHALL BE

 ixture Dwn at rati	E OF 100 LBS/	ACRE
SEED TYPE	TOTAL WEIGHT OF MIXTURE (%)	
REDTOP	15	
RED FESCUES (CREEPING	40	
OR CHEWING) BLACKWELLS	15	
SWITCHGRASS WEEPING LOVE GRASS	10	
PERENNIAL RYEGRASS	5	
KENTUCKY .31	15	

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 SEEDED AREA AND MOMED ONCE VEGETATIVE COVER WITH THE SPECIFIED SEED MINITURE FOR THE SECRET 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 1-7. 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', MANY GRASSES BECOME ACTIVE AT 65' F. SEE TABLE 4-2, MIXTURES B-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL—SEASON GRASSES. B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDLINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION, TO A DEPTH OF \$ TO \$ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE \$ INCH DEEPER ON COURSE TEXTURED SOILS.

. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE FOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN ACTIATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDISED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE STABILIZATION WITH MULCH ONLY SHOWN HEREON) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO BE SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

MULCHING IS REQUIRED ON ALL SEEDING, MULCH WILL PROTECT 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 IN COMPLIANCE WITH THIS MULCHING REQUIREMENT. A. STRAW OR HAY. UNROTTED SMALL-GRAIN STRAW, HAY FREE OF SEEDS, 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 CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED. APPLICATION — SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE IS COVERED, FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 80 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.

1. 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. STAKES MAY BE DRIVEN
BEFORE OR AFTER APPLYING MULCH, SECURE MULCH TO SOIL SURFACE BY STRETCHING
TWINE BETWEEN PEGS N A CROS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND
EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTING - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE
SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
3. CRIMPER (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
TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES, STRAW
MULCH MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

 a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH LINDER SATISFACTORY CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS, THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TUREGRASS, 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 AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

IRRIGATION (WHERE FEASIBLE)
IF SOIL MOISTURE IS DEFICIENT TO SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM

OF 1 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

TOPORESSING 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 JOD 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.

5. ESTABLISHING PERMANENT VEGETATIVE STABBLIZATION
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 SEED APPLICATION RATES IN 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 SEEDED 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.

SIDE VIEW INSTALLED

INSTALLATION DETAIL

SUBGRADE SOLLS PRIOR TO THE APPLICATION OF TOPSOIL SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

THIS SECTION OF THIS STANDARD ADDRESSES THE POTENTIAL FOR EXCESSIVE SOIL COMPACTION IN LIGHT OF THE INTENDED LAND USE, TESTING FOR EXCESSIVE SOIL, COMPACTION WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED AND MITIGATION OF EXCESSIVE SOIL COMPACTION WHEN APPROPRIATE.

DUE TO USE OR SETTING, CERTAIN DISTURBED AREAS WILL NOT REQUIRE COMPACTION REMEDIATION INCLIDING, BUT NOT LIMITED TO THE FOLLOWING: 1. WITHIN 20 FEET OF BUILDING FOUNDATIONS WITH BASEMENTS, 12 FEET FROM SLAB OR CRAWL SPACE CONSTRUCTION. WHERE SOILS OR GRAVEL SURFACES WILL BE REQUIRED TO SUPPORT POST-CONSTRUCTION VEHICULAR TRAFFIC LOADS SUCH AS ROADS, PARKING LOTS AND DRIVEWAYS (INCLUDING GRAVEL SURFACES), BICYCLE PATHS OR PEDESTRIAN WALKWAYS (SIDEWALKS ETC) AREAS REQUIRING INDUSTRY OR GOVERNMENT SPECIFIED SOIL DESIGNS, INCLUDING GOLF COURSES, LANDFILLS, WETLAND RESTORATION, SEPTIC DISPOSAL FIELDS, WET/LINED PONDS, ETC. AREAS GOVERNED OR REGULATED BY OTHER LOCAL, STATE OR FEDERAL REGULATIONS WHICH DICTATE SOIL CONDITIONS. BROWNFIELDS (CAPPED USES), URBAN REDEVELOPMENT AREAS, IN-FILL AREAS, RECYCLING YARDS, JUNK YARDS, AND QUARRIES 7. SLOPES DETERMINED TO BE INAPPROPRIATE FOR SAFE OPERATION OF EQUIPMENT

STANDARD FOR LAND GRADING

RESHAPING THE GROUND SURFACE BY GRADING TO PLANNED ELEVATIONS WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.

CONDITIONS WHERE PRACTICE APPLIES

WATER QUALITY ENHANCEMENT

PROPER GRADING OF DISTURBED SITES WILL PROTECT AGAINST SOIL LOSS FROM EROSION, ENHANCE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER AND HELP TO PROPERLY MANAGE STORMWATER RUNOFF ALL OF WHICH WILL REDUCE OFF SITE DISCHARGE OF POLLUTANTS.

THE GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE TOPOGRAPHIC SURVEYS AND INVESTIGATIONS. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILL AND FINISH ELEVATION OF THE SURFACES TO BE GRADED. THE PLAN SHOULD ALSO INCLUDE AUXILIATY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOPE STABILIZATION, EROSION CONTROL AND DRAINAGE FACILITIES SUCH AS WATERWAYS, DITCHES, DIVERSIONS, GRADE STABILIZATION STRUCTURES, RETAINING WALLS AND SUBSURFACE DRAINS SHOULD BE INCLUDED WHERE NECESSARY. EROSION CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARD CONTAINED HEREIN.

THE DEVELOPMENT AND ESTABILISHMENT OF THE PLAN SHALL INCLUDE THE FOLLOWING:

2. THE PERMANENTLY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR OTHERWISE PROTECTED FROM EROSION.

PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING OUT FACES AN FILL SLOPES.

4. SUBSURFACE DRAINAGE IS TO BE PROMOED IN AREAS NAVING A HIGH WATER TABLE, TO INTERCEPT SEEPAGE THAT WOULD ADVERSELY AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS OR CREATE UNDESTRABLE WETNESS. SEE STANDARD FOR SUBSURFACE DRAINAGE,

5. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS

SOIL MANAGEMENT AND PREPARATION

8. PORTIONS OF A SITE WHERE NO HEAVY EQUIPMENT TRAVEL OR OTHER DISTURBANCE HAS TAKEN PLACE 8. AREAS RECEIVING TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARD 11. LOCATIONS CONTAINING SHALLOW (CLOSE TO THE SURFACE) BEDROCK CONDITIONS.

SOIL COMPACTION REMEDIATION OR TESTING TO PROVE REMEDIATION IS NOT NECESSARY WILL BE REQUIRED IN AREAS WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED THAT ARE NOT OTHERWISE EXEMPTED ABOVE. TESTING METHOD SHALL BE SELECTED, AND SOIL COMPACTION TESTING SHALL BE PERFORMED BY, THE CONTRACTOR OR OTHER PROJECT OWNERS REPRESENTATIVE (E.G. ENGINEER). A MINIMUM OF TWO (2) TESTS SHALL BE PERFORMED FOR PROJECTS WITH AN OVERALL LIMIT OF DISTURBANCE OF UP TO ONE (1) ACRE AND AT A RATE OF TWO (2) TESTS PER ACRE OF THE OVERALL LIMIT OF DISTURBANCE FOR LARGER AREAS WHICH SHALL BE EVENLY DISTRIBUTED OVER THE AREA OF DISTURBANCE SUBJECT TO TESTING. TESTS SHALL BE PERFORMED IN AREAS REPRESENTATIVE OF THE CONSTRUCTION ACTIVITY PREVAILING IN THE AREA. IN THE EVENT THIS TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM.

INTEGRATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNERS DISCRETION.

2. HANDHELD SOIL PENETROMETER TEST METHOD THIS TEST SHALL BE CONDUCTED BASED ON THE STANDARD OPERATION PROCEDURE (SOP) PROFESSING, IF THE RESULT IS GREATER THAN OR EQUAL TO 300 PSI SHALL BE CONSIDERED PASSING, IF THE RESULT IS GREATER THAN 300 PSI THE SOIL MAY BE EXCESSIVELY COMPACTED AND COMPACTION MITIGATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNERS DISCRETION.

3. TUBE BULK DENSITY TEST METHOD THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER UTILIZING ONLY UNDISTURBED SAMPLES (RECONSTITUTION OF THE SAMPLE NOT PERMITTED) COLLECTED UTILIZING THE PROCEDURE FOR SOIL BULK DENSITY TESTS AS DESCRIBED IN THE USDA ARCS SOIL QUALITY TEST KIT GUIDE, SECTION 1—4, JULY 2001, WHEN THE TEXTURE OF THE SOIL TO BE TESTED IS A SAND OR LOAMY SAND AND LACK OF SOIL COHESION OR THE PRESENCE OF LARGE AMOUNTS OF COARSE FRAGMENTS, ROOTS OR WORM CHANNELS PREVENT THE TAMING OF UNITSTURBED SAMPLES, THIS TEST SHALL NOT BE USED. WHERE THE RESULTS OF REPLICATE TESTS DIFFER BY MORE THAN TEN PERCENT (10%), THE SAMPLES SHALL BE EXAMINED FOR THE FOLDOWING DEFECTS:

1. CRACKS, WORM CHANNELS, LARGE ROOT CHANNELS OR POOR SOIL TUBE CONTACT WITHIN THE SAMPLES:

11. LARGE PIECES OF GRAVEL, ROOTS DR OTHER FOREIGN OBJECTS

IF ANY OF THE DEFECTS DESCRIBED IN 3 (I-III) ABOVE ARE FOUND, THE DEFECTIVE CORE(S) SHALL BE DISCARDED AND THE TEST REPEATED USING A NEW REPLICATE SAMPLE FOR EACH DEFECTIVE REPLICATE SAMPLE. THE BULK DENSITY (DEFINED AS THE WEIGHT OF DRY SOIL PER VOLLIME) RESULTS SHALL BE COMPARED WITH THE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION INTEGATION IS REQUIRED.

4. NUCLEAR DENSITY TEST METHOD
THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER AND CONDUCTED BY A NUCLEAR GAUGE CERTIFIED INSPECTOR PURSUANT TO ASTIM DROSS. THE BULK DENSITY
MESULTAR SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITY SHALL BE CONSIDERED ASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION MITIGATION IS REQUIRED.

SOIL TYPE /TEXTURE	BULK DENSITY (g/cc)
COARSE, MEDIUM AND FINE SANDS AND LOAMY SANDS	1.80
VERY FINE SAND AND LOAMY VERY FINE SAND	1.77
SANDY LOAM	.75
LOAM, SANDY CLAY LOAM	1.70
CLAY 10AM	1.65
SANDY CLAY	1.60
SILT, SILT LOAM	1,55
SILTY CLAY LOAM	1.50
SELTY CLAY	1.45
PLAY	1.40

SOURCE: USDA NATURAL RESOURCE CONSERVATION SERVICE, SOIL QUALITY INFORMATION SHEET, SOIL QUALITY RESOURCE CONCERNS: COMPACTION, APRIL 1996

PROCEDURE FOR SOIL COMPACTION MITIGATION IF SUBGRADE SOILS ARE DETERMINED TO BE EXCESSIVELY COMPACTED BY TESTING, AS IDENTIFIED ABOVE, PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARFICATION/ILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) OR IN ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBJECT TO DISTRICT. SOIL COMPACTION TESTING IS NOT REQUIRED IF/ WHEN SUBSOIL COMPACTION REMEDIATION (SCARFICATION/TILLAGE 6" MINIMUM DEPTH) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE PLAN. THE PLAN.

TOPSOL IS TO BE STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISH GRADING OF ALL EXPOSED AREAS REQUIRING TOPSOIL SEE STANDARD FOR TOPSOILING, PG. 8-1.

FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.

ALL STRUCTURAL FILLS SHALL BE COMPACTED AS DETERMINED BY STRUCTURAL ENGINEERING REQUIREMENTS FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESSIVE SATURATION.

ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION, SEE STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1. rees to be retained shall be protected if necessary in accordance with the standaro fo free protection during Construction, Pg. 9—1.

> APPROVED BY THE **BRICK TOWNSHIP** PLANNING BOARD

CHAIRPERSON DATE DATE **SECRETARY** PLANNING BOARD ENGINEER

PROJECT NUMBER: LD14-160 DATE: 09/11/2017 SCALE: AS SHOWN

OR

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DETAIL

CONTROL

SHEET 11 OF 12

