RESOLUTION OF FINDINGS AND CONCLUSION
BOARD OF ADJUSTMENT
BOROUGH OF RUMSON
BLOCK 18, LOT 34

WHEREAS, Brendan Kennedy has applied to the Board of Adjustment of the Borough of Rumson for permission to raze the existing single family residence and construct a new single family residence and in-ground pool at the existing premises located at 16 Somerset Drive and known as Block 18, Lot 34 on the Tax Map of the Borough of Rumson, and which premises are in the R-1 Zone; and

WHEREAS, on February 15, 2022 and March 15, 2022, at a meeting of the Board, due notice having been given the adjoining property owners and published in accordance with N.J.S.A. 40:55D-12 as appears by affidavits filed with the Board, and a quorum being present, the aforementioned application was heard; and

WHEREAS, the Board, after carefully considering the evidence presented by the applicant and the public, including an engineer's Site Plan by Cranmer Engineering P.A., 5 sheets dated 12/22/21, last revised 03/03/22, architectural plans by Architect R. Adler, 6 sheets dated 12/22/21 and Administrative Officer Data Sheet has made the following factual findings:

1. The property is an existing one story single family house, located on a 1.52 acre irregularly shaped lot having approximately 339 feet frontage on Somerset Drive and irregular depth. The applicant proposes to raze and remove the existing house and construct a new two-story approximately 7557 S.F. single family house and in-ground pool, all as shown on the Plan. Variance relief is required as the property is currently nonconforming in interior lot shape (115 feet required, 67.6 feet existing). The new construction will result in a nonconformity in front yard setback (100 feet required, 64.5 feet proposed); the presently existing house has a 54.2 foot front setback.

2. At 1.52 acres the lot conforms in size and can accommodate the house and accessory structures proposed. The applicant clarified that the access driveway will be the one existing and in use at the bulb on Somerset Drive and the second depressed curb and driveway further east on Somerset is being removed. The irregular shape of the existing lot results in a front setback and lot shape variance being required; it should be noted the front setback nonconformity is being reduced. The applicant's Architect further noted that the Plans as to the rear retaining wall will be revised to conform to the 15 foot setback requirement.
3. The only concern or issue arose as to the visibility of the new two story structure from houses on Oak Lane to the rear, as due to the slope of the ground those

houses are lower in elevation. In the public portion, one neighbor on Oak Lane spoke, requesting landscaping to mitigate the view of the new house. The applicant agreed to provide additional screen plantings on a small berm along the rear property line to provide screening. That additional screen plantings and the revised retaining wall to meet the 15 foot setback will be shown on revised Plan sheet, to be reviewed at the March 15 meeting prior to Resolution Approval.

4. With that proposed revision to address the visibility concern, the Board approved the proposal subject to acceptance of the Plan revision at the March meeting. As previously noted, the proposal complies as to floor area and coverage limitations. The irregular lot shape requires variance relief as requested. The Lot size can accommodate the size of the house and accessory structures.

5. At the March 15 meeting, the Board reviewed the revised Plan as to the revised retaining wall and landscape plantings along the rear property line and finds that the proposal is a reasonable appropriate plan to address and mitigate any impacts on the neighborhood from the increased (but conforming) height of the new house. On that basis, the Board adopted this Resolution.

WHEREAS, based upon the foregoing testimony and findings of fact, the Board finds that with respect to the specific premises the purposes of the Land Use Act would be advanced by a deviation from the Zoning Ordinance and the requirements and the benefits of this deviation would substantially outweigh any detriment; and that the relief requested by applicants can be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the Zone Plan and Zoning Ordinance of the Borough of Rumson and to deny the application would result in peculiar and exceptional practical difficulties or exceptional and undue hardship upon the applicants.

NOW THEREFORE BE IT RESOLVED by the Board of Adjustment of the Borough of Rumson on this 15th day of March, 2022 that the application of Brendan Kennedy for a variance to raze the existing single family residence and construct a new single family residence and in-ground pool on the existing premises in accordance with the plans as agreed to and amended and the testimony and evidence presented at the hearing, be granted upon the following conditions:

1. All factual representations made on behalf of the applicants are incorporated herein as conditions of this variance.

2. The action of the Board of Adjustment in approving this application shall not relieve the applicants of responsibility for any damage caused by this project, nor does the Board of Adjustment or the Borough of Rumson accept or have any responsibility or liability for the structural design of the project or for any damage which may be caused by the project.

3. Prior to issuance of any Certificate of Occupancy the applicant must repair or replace any curb, sidewalk, or street pavement damaged, in the judgment of the Borough Administrative Officer, as part of or by reason of the construction of the project.

4. The following must be accomplished prior to the issuance of a development, zoning and/or building permit:

5. The following must be accomplished prior to the issuance of a development, zoning and/or building permit:

   a. Evidence must be provided by the applicant that the permits and approvals listed in subsection 22-3.4a,4 of the Development Regulations have, where applicable, been obtained.

   b. Taxes must be current.

   c. If applicable, inspection fees as required by subsection 22-3.14m and n of the Development Regulations must be paid by the applicant.

   d. Insurance certificates must be provided if construction of public improvements is involved.

   e. Any outstanding review fees or escrow deficiency must be paid.

   f. Notice must be published as required by subsection 22-3.3e,5 of the Development Regulations.

Above Resolution moved by seconded by , and on roll call the following vote was recorded:

In the Affirmative:

In the Negative:

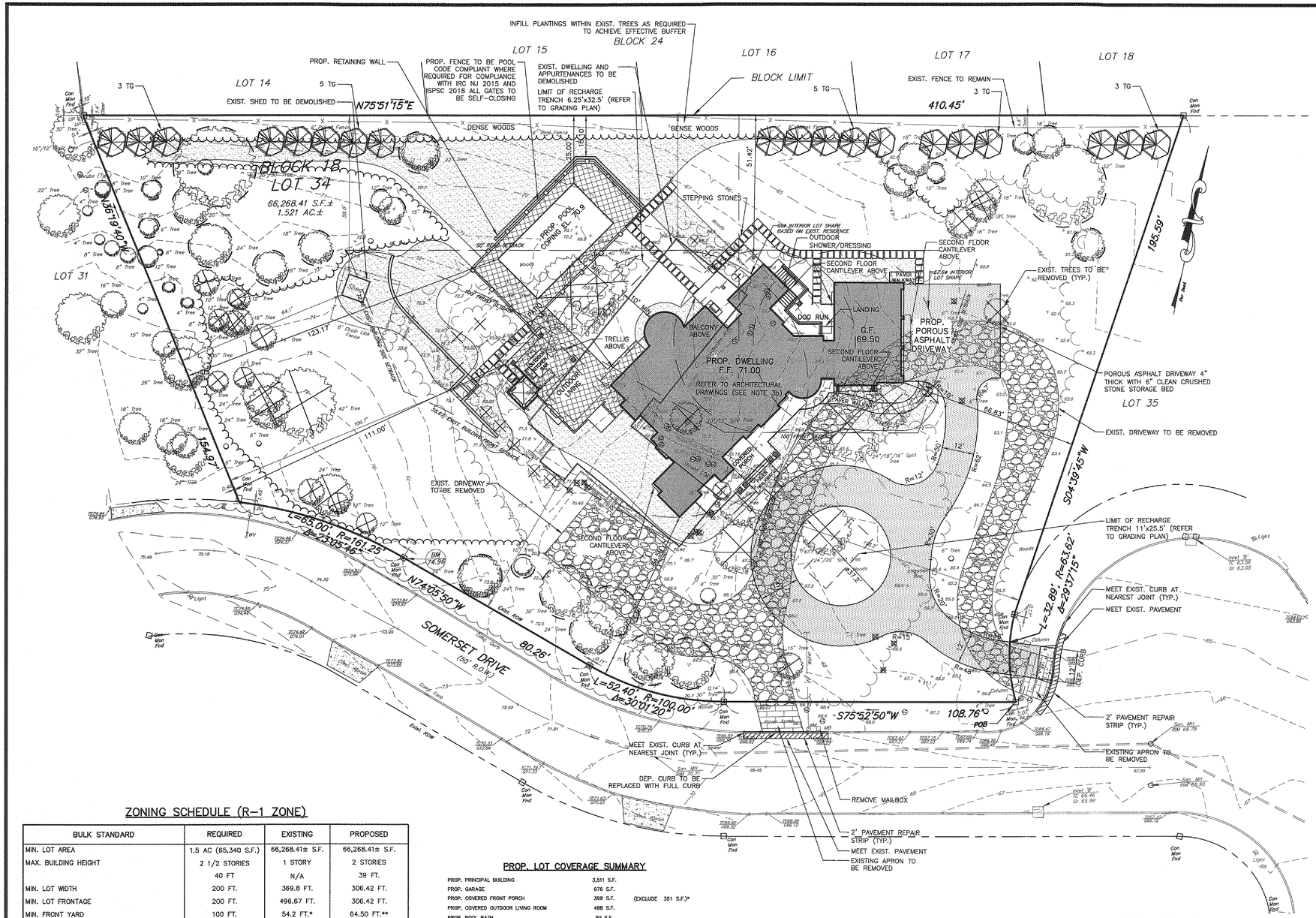
Abstain:

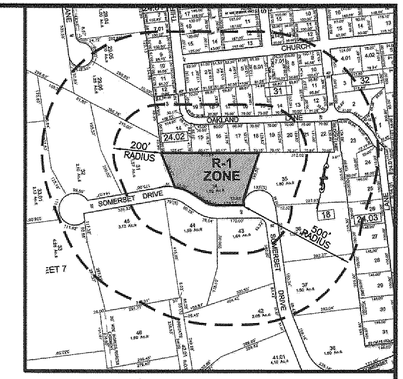
The foregoing is a true copy of a Resolution adopted by the Board of Adjustment of the Borough of Rumson at its meeting on

March 15, 2022, as copied from the Minutes of the said meeting.

DATE: March 15, 2022

_____
Secretary
Board of Adjustment





KEY MAP
SCALE:1"=300'±

GENERAL NOTES:

1. PROPERTY KNOWN AS BLOCK 18 LOT 34, BOROUGH OF RUMSON, MONMOUTH COUNTY, NEW JERSEY.
   LOT AREA: 66,268.41 S.F.± (1.521 AC.±)
2. THE PROPERTY IS LOCATED IN THE R-1 ZONE, WHERE SINGLE-FAMILY RESIDENTIAL IS A PERMITTED USE.
3. THE FOLLOWING DOCUMENTS WERE REFERENCED AND RELIED UPON AS BEING COMPLETE AND ACCURATE IN THE PREPARATION OF THIS PLAN SET:
   a. MAP ENTITLED: "SURVEY OF PROPERTY, SOMERSET DRIVE, LOT 34, BLOCK 18, TAX MAP SHEET NO. 9, BOROUGH OF RUMSON, MONMOUTH COUNTY, NEW JERSEY" PREPARED BY RALPH C. FORD , PLS, DATED SEPTEMBER 9, 2020.
   b. ARCHITECTURAL DRAWING ENTITLED: "KENNEDY RESIDENCE, PROPOSED NEW RESIDENCE, 16 SOMERSET DRIVE, RUMSON NJ, BLOCK 18, LOT 34" PREPARED BY ROBERT W. ADLER, A.I.A., DATED DECEMBER 2, 2021.
4. PROPERTY LIES WITHIN ZONE 'X', AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON FEMA MAP FLOOD INSURANCE RATE MAP (FIRM) NUMBER 34025C0182G EFFECTIVE 6/20/2018.
5. ELECTRIC, TELEPHONE, CABLE, ETC. SHALL BE INSTALLED PER UTILITY COMPANY DESIGN.
6. THE CONTRACTOR SHALL BE SOLELY OBLIGATED TO LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. SHOULD ANY KNOWN OR POTENTIAL CONFLICTS EXIST THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY EXISTING UTILITIES OR PHYSICAL FEATURES FOUND TO EXIST THAT DIFFER FROM THAT INDICATED ON THE SITE DRAWINGS SHALL REQUIRE IMMEDIATE NOTICE TO THE ENGINEER.
7. APPLICANT/OWNER: BRENDAN AND RACHEL KENNEDY
   16 SOMERSET DRIVE
   RUMSON, NJ 07760

CONSTRUCTION NOTES:

1. ALL WORK TO CONFORM WITH THE LATEST EDITION OF THE FOLLOWING:
   NJDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   MONMOUTH COUNTY DESIGN STANDARDS
   MUNICIPAL DESIGN STANDARDS
   CURRENT MANUFACTURERS SPECIFICATIONS, STANDARDS, AND REQUIREMENTS
   CURRENT, PREVAILING UTILITY COMPANY OR AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
2. ALL BARRIER FREE CONSTRUCTION TO BE IN ACCORDANCE WITH THE NJ UNIFORM CONSTRUCTION CODE, SUBCHAPTER 7: BARRIER FREE SUBCODE AND ADA REGULATIONS WHERE REQUIRED.
3. CONTRACTOR IS RESPONSIBLE TO SECURE ALL WORKER SAFETY, TRAINING, AND SAFETY DEVICE USAGE FOR AND DURING THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THIS PLAN.
4. THE CONTRACTOR IS DESIGNATED AS RESPONSIBLE PARTY DURING CONSTRUCTION OF THE IMPROVEMENTS SHOWN HEREON. AS SUCH, CONTRACTOR WILL PROVIDE ADEQUATE SAFETY TRAINING, EQUIPMENT, AND OVERSIGHT.
5. CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND APPROVALS FOR CONSTRUCTION OF THE DEPICTED SITE IMPROVEMENTS.
6. ALL DISTURBED AREAS ON SITE TO BE STABILIZED IN ACCORDANCE WITH THE FREEHOLD SOIL CONSERVATION DISTRICT STANDARDS.
7. ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE SHALL BE SEEDED OR OTHERWISE STABILIZED IN ACCORDANCE WITH SOIL EROSION CONTROL SPECIFICATIONS.
8. THE NEW JERSEY ONE CALL SYSTEM MUST BE CONTACTED PRIOR TO EXCAVATION ON-SITE OR WITHIN R.O.W (800) 242-1000.
9. ALL UTILITY CONNECTIONS AND RELOCATIONS ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH EACH UTILITY COMPANY AND ARCHITECT TO PROVIDE THE MOST APPROPRIATE LOCATION FOR UTILITY CONNECTIONS AND/OR RELOCATIONS.
10. EXISTING SITE AND UTILITY INFORMATION SHOWN ON THIS PLAN HAS BE COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR MUST VERIFY ALL UTILITIES PRIOR TO EXCAVATION.
11. ALL TRAFFIC SIGNS AND STRIPING SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL WATER AND SEWER SERVICES SHALL BE INSTALLED WITH A HORIZONTAL SEPARATION OF 10' OR A VERTICAL SEPARATION OF 18", OR BE ENCASED IN CONCRETE, 6" THICK, 10' ON EITHER SIDE OF CROSSINGS.
13. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THIS DEVELOPMENT, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR.
14. DURING R.O.W. WORK, TRAFFIC TO BE PROTECTED AND MAINTAINED IN ACCORDANCE WITH MUTCD REQUIREMENTS.
15. CONTRACTOR TO MATCH EXISTING PAVEMENT SPECIFICATIONS FOR ALL PAVEMENT REPAIR TO EXISTING ROADWAYS.
16. CONCRETE SHALL BE NJDOT CLASS B UNLESS OTHERWISE STATED HEREIN OR WITHIN THE CONSTRUCTION DETAILS.
17. ALL IMPROVEMENTS SHOWN HEREON TO BE REMOVED SHALL BE DISPOSED OF IN A MANNER NOT CONTRARY TO LOCAL OR STATE ORDINANCES.
18. CONTRACTOR TO NOTIFY THE UNDERSIGNED PROFESSIONAL IF FIELD CONDITIONS VARY FROM THAT WHICH IS SHOWN HEREON.
19. THIS PLAN SET HAS BEEN PREPARED FOR MUNICIPAL AND AGENCY APPROVALS. THIS PLAN NOT TO BE UTILIZED FOR CONSTRUCTION UNTIL MARKED "FOR CONSTRUCTION"
20. ALL ROOF LEADER DOWNSPOUTS ARE TO BE FITTED WITH SPLASH BLOCKS AND DIRECTED TO THE GRAVEL DRIVEWAY.
21. ANY EXISTING STREET TREES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY A TREE OF SUITABLE SIZE AND SPECIES AS APPROVED BY THE BOROUGH, PLANTED BEHIND THE SIDEWALK IN THE RIGHT OF WAY.
22. MECHANICAL SWEEPING OF ALL AFFECTED ROADWAYS TO BE PERFORMED EACH DAY, OR AS NECESSARY.

ZONING SCHEDULE (R-1 ZONE)

BULK STANDARD	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	1.5 AC (65,340 S.F.)	66,268.41± S.F.	66,268.41± S.F.
MAX. BUILDING HEIGHT	2 1/2 STORIES	1 STORY	2 STORIES
	40 FT	N/A	39 FT.
MIN. LOT WIDTH	200 FT.	369.8 FT.	306.42 FT.
MIN. LOT FRONTAGE	200 FT.	496.67 FT.	306.42 FT.
MIN. FRONT YARD	100 FT.	54.2 FT.*	64.50 FT.**
MIN. REAR YARD	50 FT.	46.7 FT.*	51.42 FT.
MIN. SIDE YARD BUILDING ONE SIDE	40 FT.	106.7 FT.	66.83 FT.
BOTH SIDES	80 FT.	224.9 FT.	177.83 FT.
MIN. REAR SETBACK ACCESSORY STRUCTURE	15 FT.	59.0 FT.	N/A
MIN. SIDE SETBACK ACCESSORY STRUCTURE	15 FT.	64.1 FT.	N/A
MAX. HEIGHT ACCESSORY STRUCTURE	1.5 STORIES	1 STORY	N/A
MIN. REAR SETBACK POOL	25 FT.	N/A	25 FT.
MIN. SIDE SETBACK POOL	25 FT.	N/A	123.17 FT.
MIN. REAR SETBACK POOL EQUIPMENT	15 FT.	N/A	N/A
MIN. REAR SETBACK POOL EQUIPMENT	15 FT.	N/A	N/A
INTERIOR LOT SHAPE (DIAMETER)	115 FT.	67.6 FT.*	67.6 FT.**
MAX. FLOOR AREA	9,127 S.F.	–	7,557 S.F.
MAX. LOT COVERAGE	14,745 S.F.	10,899 S.F.	12,837.00 S.F.
MAX. BUILDING COVERAGE	5,584 S.F.	4,308 S.F.	5,474.00 S.F.

* EXIST. NON-CONFORMITY
** CREATED NON-CONFORMITY

PROP. LOT COVERAGE SUMMARY

PROP. PRINCIPAL BUILDING	3,511 S.F.	
PROP. GARAGE	976 S.F.	
PROP. COVERED FRONT PORCH	399 S.F.	(EXCLUDE 351 S.F.)*
PROP. COVERED OUTDOOR LIVING ROOM	488 S.F.	
PROP. POOL BATH	50 S.F.	
PROP. WINTER GRILL/COVERED PATIO	197 S.F.	
PROP. CELLAR STAIR/WINDOW WELL	149 S.F.	
PROP. SECOND FLOOR CANTIEVERS	204 S.F.	
PROP. TRELLIS COVERED OUTDOOR SHOWER	82 S.F.	
PROP. TRELLIS OUTDOOR KITCHEN/BAR	286 S.F.	
PROP. TRELLIS PATIO	91 S.F.	
PROP. TRELLIS AT FRONT COVERED PORCH	125 S.F.	
PROP. FRONT PORCH	62 S.F.	
PROP. POOL PATIO	1,565 S.F.	(EXCLUDE 1,053 S.F.)**
PROP. POOL	840 S.F.	
PROP. LANDINGS	10 S.F.	
PROP. RETAINING WALLS	167 S.F.	
PROP. A/C CONDENSERS/GENERATOR	N/A	
PROP. POOL EQUIPMENT	N/A	
EAVES < 12"	N/A	
PROP. POROUS ASPHALT DRIVEWAY	9,039 S.F.	
	14,241 S.F. –	1,404 S.F. EXCLUSIONS
	12,837 S.F.	COMPLIES

LOT COVERAGE EXCLUSIONS:
* OPEN SIDED FRONT PORCH EXCLUDE UP TO 10% FIRST FLOOR AREA (3,511 S.F.)
** UNROOFED PATIOS/TERRACES EXCLUDE UP TO 30% FIRST FLOOR AREA (3,511 S.F.)

PROP. BUILDING COVERAGE SUMMARY

PROP. PRINCIPAL BUILDING	3,511 S.F.	
PROP. GARAGE	976 S.F.	
PROP. COVERED FRONT PORCH	399 S.F.	(EXCLUDE 351 S.F.)*
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PROP. TRELLIS COVERED OUTDOOR SHOWER	82 S.F.	(EXCLUDE 82 S.F.)**
PROP. TRELLIS OUTDOOR KITCHEN/BAR	286 S.F.	(EXCLUDE 286 S.F.)**
PROP. TRELLIS PATIO	91 S.F.	(EXCLUDE 91 S.F.)**
PROP. TRELLIS AT FRONT COVERED PORCH	125 S.F.	(EXCLUDE 125 S.F.)**
EAVES < 12"	N/A	
	6,409 S.F. –	935 S.F. EXCLUSIONS
	5,474 S.F.	COMPLIES

LOT COVERAGE EXCLUSIONS:
* OPEN SIDED FRONT PORCH EXCLUDE UP TO 10% FIRST FLOOR AREA (3,511 S.F.)
** TRELLIS ON APPROVED PATIO, DECK, OR TERRACE EXCLUDE UP TO 30% FIRST FLOOR AREA (3,511 S.F.)

GROSS FLOOR AREA

PROP. FIRST FLOOR	3,337 S.F.
PROP. SECOND FLOOR	3295 S.F.
PROP. GARAGE	925 S.F.
	7,557 S.F.

IMPERVIOUS COVERAGE SUMMARY

EXISTING IMPERVIOUS COVERAGE	11,562 S.F. (TO BE REMOVED)
PROP. IMPERVIOUS COVERAGE	15,020 S.F.
NET INCREASE	3,458 S.F.

PLANTING SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	AVG. HT. AT MATURITY	INSTALL HEIGHT	CALIPER	ROOT	COMMENTS
EVERGREEN TREES								
TG	19	THUJA X 'GREEN GIANT'	'GREEN GIANT' ARBORVITAE	35'	6'-8'		B&B	PLANTED 10 FEET O.C.

REVISION NO.	DATE	REVISION
1	3/03/2022	REVISED FOR RESOLUTION COMPLIANCE

GRAPHIC SCALE
20 0 10 20 40 80
1 INCH = 20 FEET

DAVID A. CRANMER, PE
LICENSED PROFESSIONAL ENGINEER
STATE OF NEW JERSEY LICENSE No. 41926

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Charlotte, NC 28262
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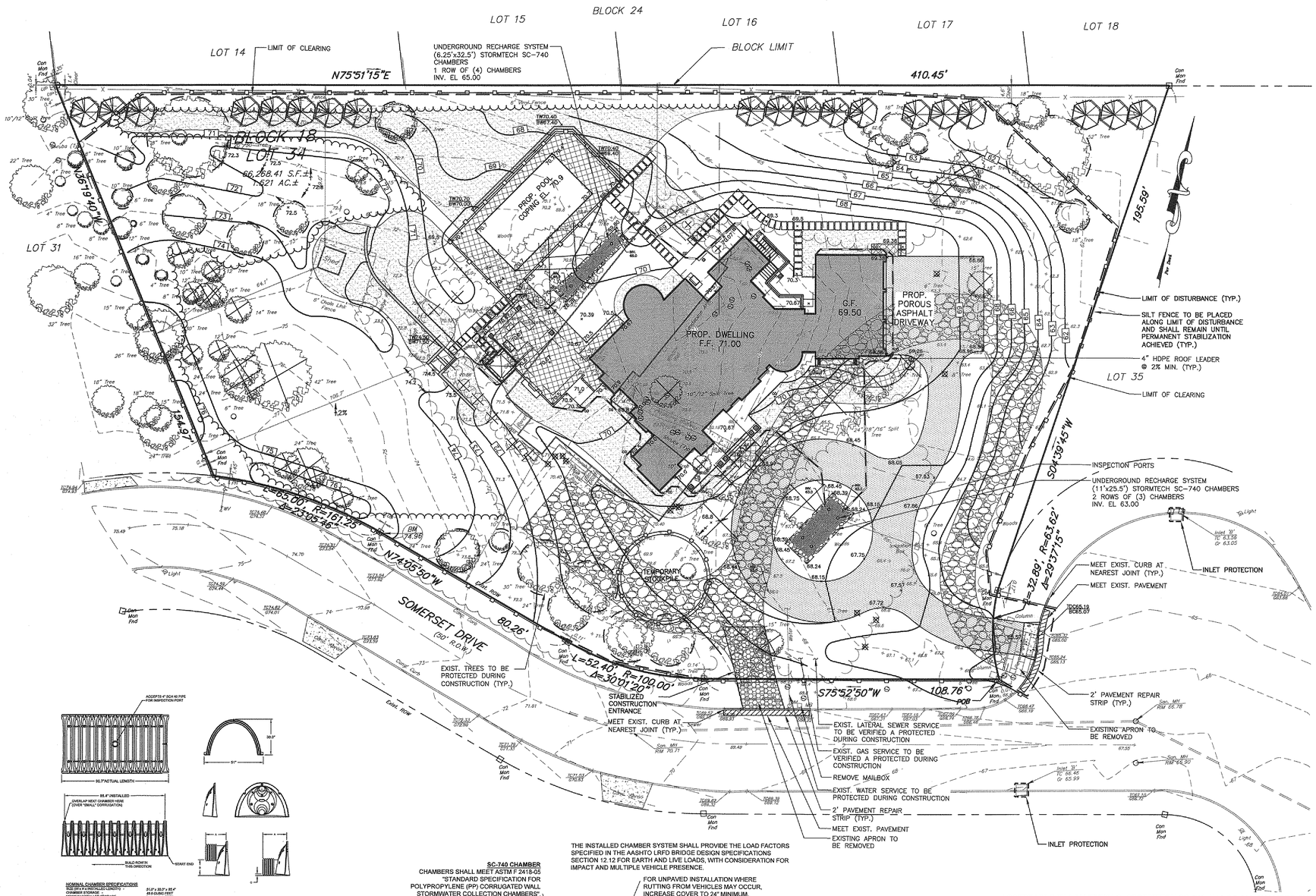
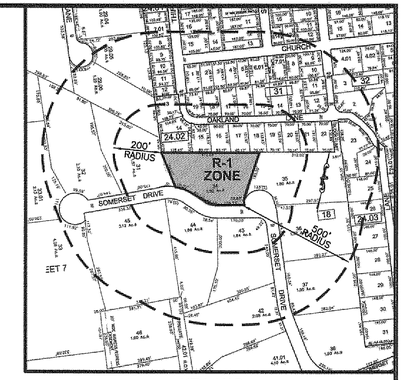
Fax (704) 909-2898
www.cranmerengineering.com
INTEGRITY I INNOVATION I EXCELLENCE

PLOT PLAN
KENNEDY
16 SOMERSET DRIVE
LOT 34, BLOCK 18
TAX MAP SHEET NO. 9
BOROUGH OF RUMSON MONMOUTH COUNTY NEW JERSEY

PROJECT No. 2021-024-103	FILE 01-03 SITE.dwg
DRAWN BY OK	DESIGNED BY DAC
SCALE 1"=20'	CHECKED BY DAC
DATE DECEMBER 21, 2021	SHEET NO. 1 of 5

J:\2021-024-103 Kennedy\DWG\01-03 SITE.dwg

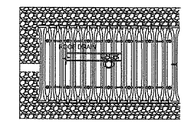




KEY MAP
SCALE: 1"=300'±

NOTES:

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH SC-740 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL
2. THE INSTALLATION OF STORMTECH SC-740 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL **1-888-892-2694** OR VISIT **WWW.STORMTECH.COM** TO RECIEVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS



TYPICAL STORMTECH CONNECTION DETAIL
N.T.S.

NOMINAL CHAMBER SPECIFICATIONS
SIZE (W x H x INSTALLED LENGTH) - 51.0" x 30.0" x 85.4"
CHAMBER STORAGE - 45.9 CUBIC FEET
MINIMUM INSTALLED STORAGE - 74.9 CUBIC FEET
WEIGHT - 75 lbs.

STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

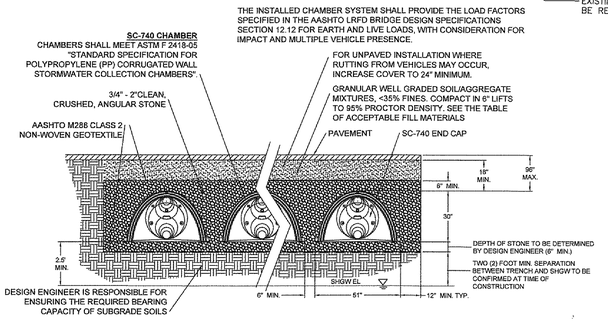
PART #	CHAMBER	PIPE SIZE	A	B	C
SC740EPD06T	SC-740	6 in	10.90 in	10.50 in	N/A
SC740EPD06B	SC-740	6 in	10.90 in	N/A	0.50 in
SC740EPD08T	SC-740	8 in	12.20 in	10.20 in	N/A
SC740EPD08B	SC-740	8 in	12.20 in	N/A	0.80 in
SC740EPD10T	SC-740	10 in	13.40 in	14.00 in	N/A
SC740EPD10B	SC-740	10 in	13.40 in	N/A	0.70 in
SC740EPD12T	SC-740	12 in	14.70 in	13.80 in	N/A
SC740EPD12B	SC-740	12 in	14.70 in	N/A	1.20 in
SC740EPD15T	SC-740	15 in	16.40 in	8.00 in	N/A
SC740EPD15B	SC-740	15 in	16.40 in	N/A	1.50 in
SC740EPD18T	SC-740	18 in	19.70 in	5.00 in	N/A
SC740EPD18B	SC-740	18 in	19.70 in	N/A	1.80 in
SC740EPD24B	SC-740	24 in	19.50 in	N/A	0.10 in

*NOTE: ALL DIMENSIONS ARE NOMINAL

ALL STUBS, EXCEPT FOR THE 6CTNEC06TS ARE PLACED FLUSH WITH THE BOTTOM OF THE END CAP. THE 6CTNEC06TS HAS THE BOTTOM OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

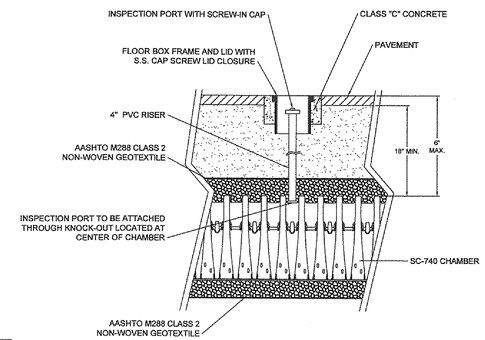
* FOR THE 6CTNEC06TS THE 24" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.25". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE 24" STUB SO THAT THE FITTING SITS LEVEL.

SC-740 TECHNICAL DETAIL
N.T.S.



THIS CROSS SECTION DETAILS THE REQUIREMENTS NECESSARY TO SATISFY THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS USING STORMTECH CHAMBERS

SC-740 TYPICAL SECTION DETAIL
N.T.S.



SC-740 TYPICAL INSPECTION PORT DETAIL
N.T.S.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 AND SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION[1]	COMPACTION/DENSITY REQUIREMENT
(D) FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THIS LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(C) FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
(B) EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH	3, 357, 4, 457, 5, 56, 57	NO COMPACTION REQUIRED.
(A) FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY*.

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".

2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.

STORMTECH ACCEPTABLE FILL MATERIALS

AREA OF DISTURBANCE 62,878 S.F. = 1.443 AC.

REVISION NO.	DATE	REVISION
1	3/03/2022	REVISED FOR RESOLUTION COMPLIANCE

GRAPHIC SCALE
20 0 10 20 40 80
1 INCH = 20 FEET

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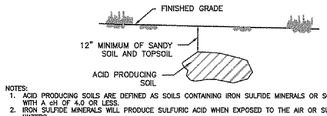
INTEGRITY I INNOVATION I EXCELLENCE

GRADING PLAN
SOIL EROSION AND SEDIMENT CONTROL PLAN
KENNEDY
16 SOMERSET DRIVE
LOT 34, BLOCK 18

TAX MAP SHEET NO. 9
BOROUGH OF RUMSON MONMOUTH COUNTY NEW JERSEY

PROJECT No. 2021-024-103	FILE 01-03 SITE.dwg
DRAWN BY OK	DESIGNED BY DAC
SCALE 1"=20'	CHECKED BY DAC
DATE DECEMBER 21, 2021	SHEET NO. 2 of 5

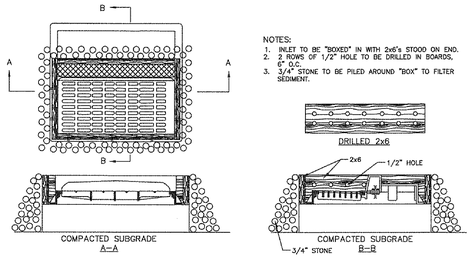
z:\2021-024-103 Kennedy\DWG\01-03 SITE.dwg



NOTES:
1. ACID PRODUCING SOILS ARE DEFINED AS SOILS CONTAINING IRON SULFIDE MINERALS OR SOILS WITH A pH OF 4.0 OR LESS.
2. IRON SULFIDE MINERALS WILL PRODUCE SULFURIC ACID WHEN EXPOSED TO THE AIR OR SURFACE WATERS.
3. SOIL USED TO COVER ACID PRODUCING SOILS SHALL HAVE A pH OF 5.0 OR MORE.

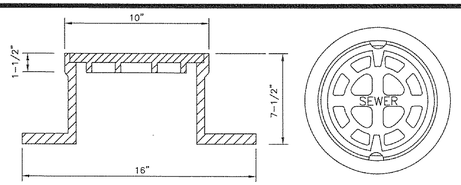
ADDITIONAL NOTES:
1. AREAS ON SLOPES SHALL BE COVERED WITH 2 FEET OF SUITABLE SOIL HAVING A pH OF 5 OR MORE. THE TOP 5 INCHES (UNSETTLED) SHALL BE TOPSOIL.
2. AREAS WHERE TREES/SHRUBS WILL BE PLANTED SHALL ALSO BE COVERED WITH A MINIMUM OF 2 FEET OF SUITABLE MATERIAL INCLUDING TOPSOIL TO A DEPTH OF 5 INCHES UNSETTLED.
3. ACID SOIL PLACEMENT SHALL AVOID, IF POSSIBLE, PLACEMENT IN AREAS PROPOSED FOR FUTURE RESIDENTIAL LOTS.

BURIAL OF ACID PRODUCING SOILS
N.T.S.



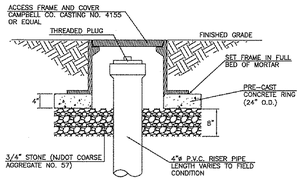
NOTES:
1. INLET TO BE "BOXED" IN WITH 2x6's STOOD ON END.
2. 2 ROWS OF 1/2" HOLE TO BE DRILLED IN BOARDS, 6" O.C.
3. 3/4" STONE TO BE PILED AROUND "BOX" TO FILTER SEDIMENT.

INLET PROTECTION
N.T.S.



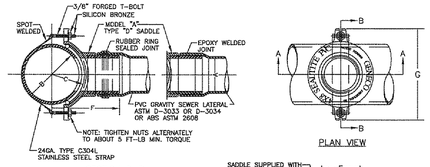
PATTERN CAMPBEL NUMBER 4153

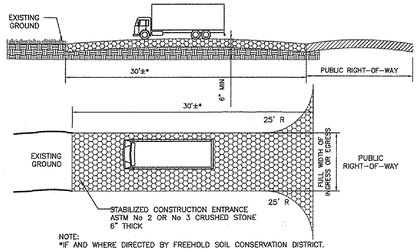
CLEANOUT BOX & COVER FOR 4" DIA. AND 6" DIA. CLEANOUTS LOCATED IN SIDEWALK AREAS.
N.T.S.



SANITARY HOUSE LATERAL CLEAN-OUT FRAME AND COVER
N.T.S.

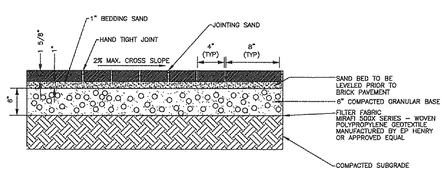
NOTE: USE WHERE CLEANOUT IS LOCATED IN PAVED AREA OR WHERE INDICATED ON PLANS



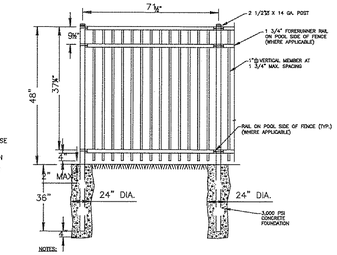


NOTE:
*IF AND WHERE DIRECTED BY FREEHOLD SOIL CONSERVATION DISTRICT.

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

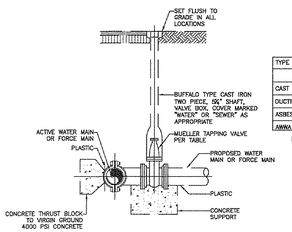


DRY LAID BRICK WALKWAY
N.T.S.



NOTES:
1. 4' HIGH 3-RAIL DECORATIVE FENCE TO BE ECHELON II MAJESTIC SERIES ALUMINUM FENCE, BLACK IN COLOR, MANUFACTURED BY AMERISTAR, INC. OR APPROVED EQUAL.
2. FENCE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, EXCEPT AS NOTED ABOVE.
3. FENCE TO BE IN CONFORMANCE WITH IRC 2015 (CHAPTER 42) & ISPSC 2015 (SECTION 305) ALL POOL CODE REQUIREMENTS AND MUST COMPLY WITH ALL APPLICABLE STATE AND MUNICIPAL CODES WHERE USED TO SURROUND POOLS.

POOL FENCE
N.T.S.



TYPE OF PIPE	MODEL NUMBERS			SIZE RANGE
	SLEEVE	CROSS	VALVE	
CAST IRON	H-615	H-715	T-2360-16	2" – 12"
DUCTILE IRON	H-615	H-715	T-2360-16	2" – 12"
ASBESTOS CEMENT	H-619	H-719	T-2360-16	2" – 12"
AWWA C900 PVC	H-615	H-715	T-2360-16	2" – 12"

NOTES:
1. ALL PART NUMBERS REFER TO PRODUCTS OF THE MUELLER COMPANY, DECATUR, IL. OR APPROVED EQUAL.
2. ALL FLANGE DIMENSIONS AND DRILLING COMPLY WITH ANSI B16.1, CLASS 125 AND WITH MSS SP-60. MECHANICAL JOINTS COMPLY WITH ANSI/AWWA C111.
3. PROVIDE THRUST BLOCKS AND VISQUENCE WRAPPING IN CONFORMANCE WITH STANDARD DETAILS.
4. ALL VALVES SHALL OPEN IN THE COUNTERCLOCKWISE DIRECTION.
5. ALL TAPPING EQUIPMENT MUST BE DISINFECTED (CHLORINE MAY BE SWABBED ON INTERIOR OF ALL FITTINGS).
6. LINE MUST BE SUBSEQUENTLY BLOWN OFF.

WET TAP CONNECTION WITH TAPPING SLEEVES, CROSSES & VALVES
N.T.S.

SYMBOL PVC TYPE "D"SADDLE
USE FOR PLASTIC
SDR-35 OR 41
ASTM D-3033 OR D-3034

SIZE	A	B	C	D	E	F	G
4x6	4"	6"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x8	4"	8"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x10	4"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x12	4"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x8	6"	8"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x10	6"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x12	6"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
8x10	8"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
8x12	8"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"

SYMBOL CI OR DI TYPE "D"SADDLE
USE FOR
XH CAST IRON
OR ALL CLASSES A-C

SIZE	A	B	C	D	E	F	G
4x6	4"	6"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x8	4"	8"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x10	4"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
4x12	4"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x8	6"	8"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x10	6"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
6x12	6"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
8x10	8"	10"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"
8x12	8"	12"	8 1/2"	2 7/8"	4.65	3 1/2"	2 7/8"

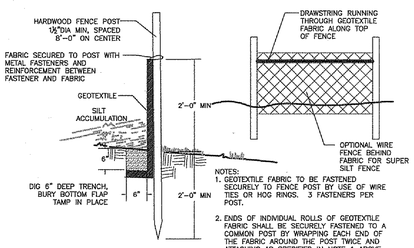
SYMBOL CON. TYPE "D"SADDLE
USE FOR
C-14 CONCRETE

SIZE	A	B	C	D	E	F	G
4x6	4"	6"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x8	4"	8"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x10	4"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x12	4"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x8	6"	8"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x10	6"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x12	6"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
8x10	8"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
8x12	8"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"

SYMBOL CLAY TYPE "D"SADDLE
USE FOR
C-200 CLAY

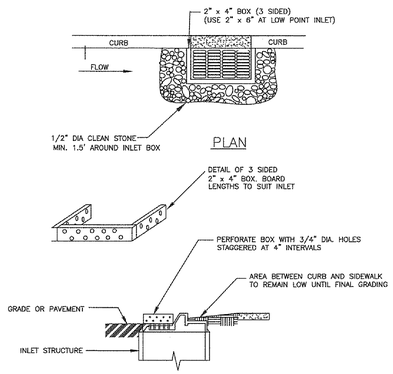
SIZE	A	B	C	D	E	F	G
4x6	4"	6"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x8	4"	8"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x10	4"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
4x12	4"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x8	6"	8"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x10	6"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
6x12	6"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
8x10	8"	10"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"
8x12	8"	12"	8 1/2"	2 7/8"	4.25	3 1/2"	2 7/8"

SANITARY SEWER CONNECTION DETAIL
N.T.S.
(IF REQUIRED)



NOTES:
1. GEOTEXTILE FABRIC TO BE FASTENED SECURELY TO FENCE POST BY USE OF WIRE TIES OR HOG RINGS. 3 FASTENERS PER POST.
2. ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE FABRIC SHALL BE SECURELY FASTENED TO A COMMON POST BY WRAPPING EACH END OF THE FABRIC AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.

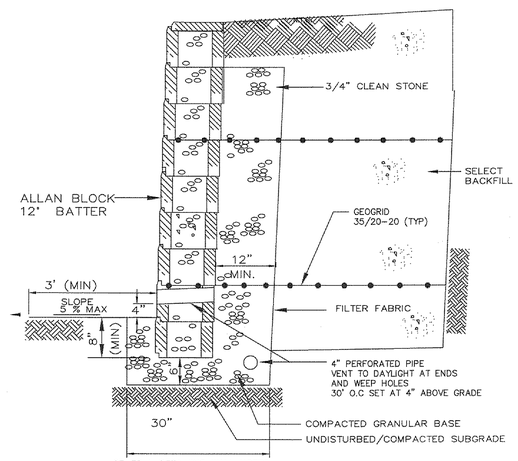
SILT FENCE
N.T.S.



CONSTRUCTION NOTES:
1. PERIODIC CHECKS MUST BE MADE AFTER EACH RAINFALL TO EXCAVATE AND REMOVE EXCESS SEDIMENT FROM AROUND INLETS.

CURB TYPE INLET

INLET PROTECTION
N.T.S.

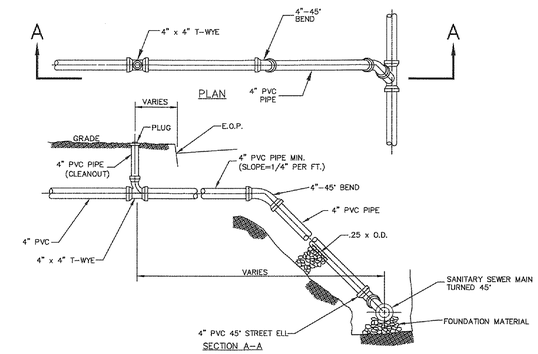


GENERAL RETAINING WALL NOTES:

1) ALL RETAINING WALLS OVER 3' HIGH SHALL REQUIRE STRUCTURAL SHOP DRAWINGS AND CALCULATIONS PREPARED BY A QUALIFIED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. UPON COMPLETION OF INSTALLATION, THE DEVELOPER'S ENGINEER SHALL BE REQUIRED TO SUBMIT A CERTIFICATION AS TO PROPER CONSTRUCTION OF SAID RETAINING WALLS.

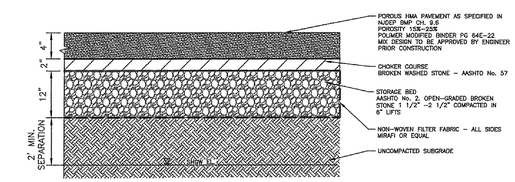
2) ALL RETAINING WALLS, WHERE SO NOTED ON THE SITE PLANS, SHALL BE PROVIDED WITH A 4' HIGH FENCE ON THE HIGH SIDE OF THE RETAINING WALL IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS

MASONRY BLOCK WALL DETAIL
N.T.S.



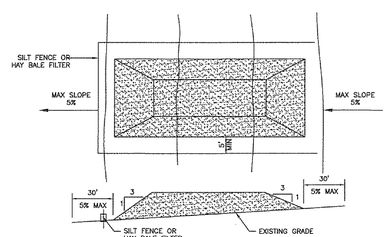
NOTES:
1. ALL COUPLINGS, PLUGS, SOIL PIPES & CAPS TO BE STANDARD FOR TYPE OF PIPE USED, INSTALLATION TO BE WATERTIGHT.
2. CLEANOUTS & INSPECTION TEES VARIES FROM E.O.P.
3. WHERE CURBS DO NOT EXIST PLACE CLEANOUT 1 FOOT OUTSIDE OF STREET R.O.W.
4. CLEANOUTS AS SHOWN ARE REQUIRED.
5. HOUSE CONNECTIONS ARE TO BE 4" P.V.C.
6. ALL PLUG THREADS SHALL BE GREASED AT TIME OF INSTALLATION.
7. MINIMUM DEPTH OF COVER ON SANITARY SEWER MAINS SHALL BE 4 FEET.
8. POLYVINYL CHLORIDE PIPE AND FITTINGS FOR HOUSE LATERALS SHALL CONFORM TO A.S.T.M. D-3034.

SANITARY CONNECTION DETAIL
N.T.S.
(IF REQUIRED)



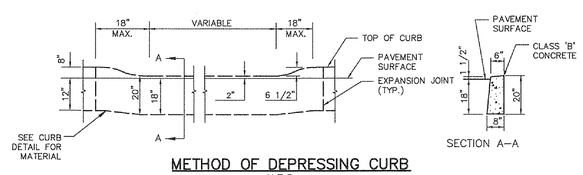
NOTES:
1. SEALANT, PRIME COAT AND OTHER TREATMENTS THAT COULD REDUCE THE RATE OF INFILTRATION MAY NOT BE APPLIED TO THE SURFACE COURSE. THE MAXIMUM SURFACE COURSE SLOPE IS 5%.
2. AFTER INSTALLATION, MEASURES MUST BE TAKEN TO ENSURE THE SURFACE COURSE DOES NOT BECOME CLOGGED UNTIL ALL ASPECTS OF THE PROJECT ARE COMPLETED.
3. THE CHOKER COURSE MUST CONSIST OF CLEAN, WASHED AASHTO No. 57 BROKEN STONE.
4. STORAGE BED AGGREGATE MUST BE CLEAN, OPEN-GRADED BROKEN STONE WITH A SIZE DESIGNATION OF 1 ½" – 2 ½". THE STONE MUST BE WASHED, PRIOR TO PLACEMENT, TO MINIMIZE THE AMOUNT OF STONE DUST AND OTHER FINE PARTICLES.
5. STORAGE BED AGGREGATE MUST BE PLACED IN LIFTS AND COMPACTED USING PLATE COMPACTORS. THE MAXIMUM RECOMMENDED LOOSE LIFT THICKNESS IS 6 INCHES.
6. THE POROSITY OF THE PERMEABLE ASPHALT SURFACE MUST BE 15% – 25%.
7. THE BINDER USED IN THE SURFACE COURSE MUST BE PERFORMANCE GRADED FOR TYPE OF USE; THEREFORE, THE ASPHALT PLANT MUST ALSO BE ADVISED OF THE TYPE OF SURFACE COURSE SPECIFIED IN ORDER TO USE THE CORRECT BINDER FOR THE INSTALLATION. THE PARKING LOTS, POLYMER MODIFIED BINDER PG 64E-22 MUST BE SPECIFIED AS IT HAS BEEN SHOWN TO MINIMIZE SCUFFING CAUSED BY AUTOMOBILES WITH POWER STEERING.
8. MINIMUM AIR TEMPERATURE FOR PAVING: 50°F.
9. INSTALLATION OF PERMEABLE ASPHALT REQUIRES DIFFERENT TEMPERATURE GUIDELINES, AS FOLLOWS, THAN THAT THOSE OF THE IMPERVIOUS ASPHALT:
   ASPHALT BASE COURSE 200–240°F,
   FINISH ROLLING BASE COURSE: 140–150°F,
   ASPHALT SURFACE COURSE: 200–220°F AND
   FINISH ROLLING SURFACE COURSE: 110–140°F.
10. VEHICULAR USE IS PROHIBITED FOR AT LEAST 48 HOURS ONCE THE PAVEMENT INSTALLATION IS COMPLETE.
11. STORAGE BED AGGREGATE MUST BE CLEAN, WASHED AND OPEN-GRADED AASHTO No. 2 BROKEN STONE.
12. POST-CONSTRUCTION TESTING OF THE PERMEABLE ASPHALT SURFACE COURSE IS REQUIRED AND MUST CONFORM TO THE METHODS OF EITHER ASTM C1701: STANDARD TEST METHOD FOR FILTRATION RATE OF IN-PLACE PERVIOUS CONCRETE OR ASTM C1781: STANDARD TEST METHOD FOR SURFACE INFILTRATION RATE OF PERMEABLE UNIT PAVEMENT SYSTEMS. AT LEAST THREE LOCATIONS MUST BE USED FOR THE TEST, AND THEY SHOULD BE SPACED EVENLY ACROSS THE PERVIOUS PAVING SYSTEM. FAILURE TO ACHIEVE THE MINIMUM DESIGN INFILTRATION RATE OF THE SURFACE COURSE AT ONE OR MORE LOCATION INDICATES THE SYSTEM CANNOT BE PUT IN SERVICE UNTIL THE SYSTEM IS CORRECTED TO YIELD ALL PASSING VALUES. UNLIKE THE TEST METHODOLOGY OUTLINED IN THE ASTM STANDARDS, THE TEST RESULTS MUST NOT BE AVERAGED.
13. THE DESIGN ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION OF STORAGE BED TO PERFORM FIELD CONFIRMATION OF SOIL AND GROUNDWATER CONDITIONS.

POROUS PAVEMENT AND STORAGE BED
N.T.S.

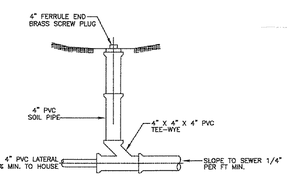


NOTES:
1. ALL SIDE SLOPES SHALL BE 3 TO 1 OR LESS.
2. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQUIREMENTS.
3. SILT FENCE OR HAY BALE FILTER SHALL BE INSTALLED AS DETAILED HEREON.
4. HEIGHT SHALL NOT BE GREATER THAN 20'.

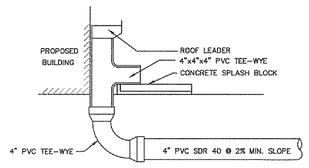
TEMPORARY SOIL STOCKPILE
N.T.S.



METHOD OF DEPRESSING CURB
N.T.S.



TYPICAL CLEANOUT RISER
N.T.S.



ROOF LEADER CONNECTION W/SPLASH OUTFLOW
N.T.S.

REVISION NO.	DATE	REVISION
1	3/03/2022	REVISED FOR RESOLUTION COMPLIANCE

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STATE OF NEW JERSEY LICENSE No. 41926

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PROJECT No 2021-024-103	FILE 01-03 SITE.dwg
DRAWN BY OK	DESIGNED BY DAC
SCALE N.T.S.	CHECKED BY DAC
DATE DECEMBER 21, 2021	SHEET NO. 3 of 5

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STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION:

ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE

TO TEMPORARILY STABILIZE THE SOIL AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACCOMPLISHED.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVER LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

1. SITE PREPARATION
   - 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.
   - C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES 9 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 SAMPLE 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 OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT A RATE ESTABLISHED BY 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.
   - B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH 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.
   - 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 SULFIDE OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS.
3. SEEDING
   - A. SELECT SEED FROM RECOMMENDATIONS AS SPECIFIED IN STANDARDS FOR SOILS EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
   - B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDING'S, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF ¼ TO ½ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE ¼ INCH DEEPER ON COARSE TEXTURED SOIL.
   - 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 APPLIED WITH HYDROSEEDER FOLLOWING SEEDING. 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 SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDCING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STOMPS. ETC.
   - D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
4. MULCHING

   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 COMPLIANCE WITH THIS MULCHING REQUIREMENT.

   - A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A 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 AT LEAST 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 90 POUNDS WITHIN EACH SECTION.

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

     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 IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
     2. MULCH NETTINGS– 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 RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
     4. LIQUID MULCH-BINDERS– MAY BE USED TO ANCHOR SALT, HAY, OR STRAW MULCH.
        - a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
        - b. USE ONE OF THE FOLLOWING:
          - (1) ORGANIC AND VEGETABLE BASED BINDERS– NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS SITE.
          - (2) SYNTHETIC BINDERS– HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

          NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.
   - B. WOOD-FIBER OR PAPER-FIBER MULCH– SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   - 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 MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

     APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.
3. SEEDING
   - A. SELECT SEED FROM RECOMMENDATIONS IN TABLE (SEE THIS SHEET).

SEQUENCE OF CONSTRUCTION

ACTIVITY	DURATION
INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL MEASURES	3 DAYS
STRIPPING OF TOPSOIL CLEARING, GRUBBING	5 DAYS
ROUGH GRADING AND TEMPORARY STABILIZATION	2 WEEKS
DWELLING CONSTRUCTION	ONGOING
FINAL GRADING AND PERMANENT STABILIZATION	2 WEEKS
SOIL DE-COMPACTION TESTING	1 DAY
FINAL CLEANUP AND REMOVAL OF SOIL EROSION MEASURES	2 WEEKS

STANDARD FOR STABILIZATION FOR MULCH ONLY

DEFINITION:

STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS FOR PERIODS LONGER THAN 14 DAYS

PURPOSE

TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY MECHANICAL PROTECTION AGAINST WIND OR RAINFALL INDUCED SOIL EROSION UNTIL PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED.

WHERE APPLICABLE

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.

METHODS AND MATERIALS

1. SITE PREPARATION
   - 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 1,000 SQUARE FEET AND ANCHORED WITH MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN 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 THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY) MAY BE APPLIED BY A HYDRO SEEDER.
   - D. 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 WASH THEM INTO AN INLET AND PLUG IT.
   - F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.
3. MULCH ANCHORING– SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH 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 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 IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
   - 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.
   - D. LIQUID MULCH– BINDERS

1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
2. USE ONE OF THE FOLLOWING:
   - a. ORGANIC AND VEGETABLE BASED BINDERS– NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURF GRADE. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.
   - 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.

STANDARD FOR TOPSOILING

DEFINITION:

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

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

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

WHERE APPLICABLE

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

METHODS AND MATERIALS

1. MATERIALS
   - 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 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 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 RAISED 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. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS, AND PH LEVEL.
2. STRIPPING AND STOCKPILING
   - A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
   - B. STRIPPING 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.
   - D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
   - E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED 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 SOIL EROSION AND SEDIMENT CONTROL PLAN IN NEW JERSEY. 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 VEGETATIVE 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 SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR SOIL EROSION AND SEDIMENT CONTROL PLAN IN NEW JERSEY.
   - C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL PH OF APPROXIMATELY 6.5 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 PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).**
   - E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL PLAN IN NEW JERSEY.
4. APPLYING TOPSOIL
   - A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY SEE STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY.
   - B. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS RECOMMENDED. SOILS WITH A PH OF 4.0 OR LESS OR CONTAIN 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.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION:

ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG-TERM PROTECTION.

PURPOSE

TO PERMANENTLY STABILIZE THE SOIL, ENSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT

WATER QUALITY ENHANCEMENT

SLOWS THE OVER-LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

1. SITE PREPARATION
   - 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. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
   - C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE 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.
2. SEEDBED PREPARATION
   - A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 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.
   - B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   - C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.
3. SEEDING
   - A. SELECT A MIXTURE FROM TABLE 4-3 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.
     1. 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 COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.
     2. WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85° F AND ABOVE. SEE TABLE 4-3 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
     3. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 65°F. SEE TABLE 4-3, MIXTURES 8-20. 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 SEEDING UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDING'S, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF ¼ TO ½ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE ¼ INCH DEEPER ON COARSE-TEXTURED SOIL.
   - C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
   - D. **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 THE SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING.(SEE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY). 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 SOIL TACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.
4. MULCHING

   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 COMPLIANCE WITH THIS MULCHING REQUIREMENT.

   - A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A 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 AT LEAST 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 90 POUNDS WITHIN EACH SECTION.

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

     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 IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
     2. MULCH NETTINGS– 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 RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
     4. LIQUID MULCH-BINDERS– MAY BE USED TO ANCHOR SALT, HAY, OR STRAW MULCH.
        - a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
        - b. USE ONE OF THE FOLLOWING:
          - (1) ORGANIC AND VEGETABLE BASED BINDERS– NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS SITE.
          - (2) SYNTHETIC BINDERS– HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

          NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.
   - B. WOOD-FIBER OR PAPER-FIBER MULCH– SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. **MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED.** USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   - 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 MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.
5. IRRIGATION (WHERE FEASIBLE)

   IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF ¼ INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDING'S MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.
6. TOPDRESSING

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

   THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 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.

STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS

DEFINITION

HIGH ACID-PRODUCING SOILS ARE SOILS WITH A PH OF 4.0 OR LESS OR CONTAIN IRON SULFIDE.

PURPOSE

TO PREVENT OR LIMIT EXPOSURE AREA, TIME, AND SPREADING BY EQUIPMENT OR RAINFALL ON– AND OFF-SITE AND TO MINIMIZE EROSION, SEDIMENTATION AND ACID LEACHATE-RELATED DAMAGES. HIGH ACID-PRODUCING SOIL MAY BE EXPOSED DURING EXCAVATION AND LAND GRADING ACTIVITIES, OR MAY BE INTRODUCED IN DREDGED SEDIMENT. SOILS AND SEDIMENT CONTAINING IRON SULFIDE, CHARACTERIZED BY PYRITE OR MARCASITE NUGGETS OR GREENSANDS, ARE CHEMICALLY OXIDIZED WHEN EXPOSED TO AIR, PRODUCING SULFURIC ACID AND RESULT IN SOIL PH LEVELS FALLING TO PH 4.0 OR LOWER. MOST VEGETATION IS INCAPABLE OF GROWTH AT THIS pH LEVEL. ADJACENT LAND AND RECEIVING WATERS WILL BE NEGATIVELY IMPACTED BY THE ACID LEACHATE. CALCIUM-CONTAING MATERIALS SUCH AS SIDEWALKS, CULVERTS AND OTHER STRUCTURES AND SOME METALLIC MATERIALS ARE ALSO SUSCEPTIBLE TO DEGRADATION. AGRICULTURAL LIMESTONE MATERIALS APPLIED AT RATES OF 8 TONS PER ACRE HAVE RESULTED IN ONLY A TEMPORARY BUFFERING EFFECT, AND "LIMING-ONLY" IS THEREFORE NOT CONSIDERED AN ACCEPTABLE MITIGATION PRACTICE.

WATER QUALITY ENHANCEMENT

PROTECTS ONSITE SOILS AND OFFSITE STREAMS AND LAKES FROM SULFURIC ACID LEACHATE THAT CREATES SOIL PH CONDITIONS UNSUITABLE FOR GROWTH OF VEGETATION.

WHERE APPLICABLE

THIS PRACTICE IS APPLICABLE TO ANY HIGH ACID-PRODUCING SOIL MATERIALS. SUCH MATERIALS HAVE BEEN FOUND IN THE COASTAL PLAIN AREAS OF BURLINGTON, CAMDEN, CUMBERLAND, GLOUCESTER, MERCER, MIDDLESEX, MONMOUTH, OCEAN, SALEM AND SOMERSET COUNTIES.

PLANNING CRITERIA

EARLY RECOGNITION AND BURIAL, REMOVAL OR DISPOSAL OF HIGH ACID-PRODUCING SOILS IS ESSENTIAL FOR LIMITING THE AMOUNT OF ACIDIC MATERIAL PRODUCED.

CONTACT THE LOCAL SOIL CONSERVATION DISTRICT TO DETERMINE THE HISTORICAL PRESENCE OF HIGH ACID-PRODUCING SOILS IN THE VICINITY OF THE PROPOSED DEVELOPMENT SITE.

HIGH ACID-PRODUCING SOILS MAY BE PRESENT IN UNDISTURBED SOILS AT VARYING DEPTHS, INCLUDING NEAR THE SOIL SURFACE TO EXCAVATIONS OR DEEP DISTURBANCES. ITS PRESENCE ON A SITE MAY BE SIGNIFICANT OR LIMITED IN THE SOIL PROFILE. HIGH ACID-PRODUCING SOILS ARE COMMONLY BLACK, DARK BROWN, GRAY OR GREENISH WITH SILVERY PYRITE OR MARCASITE NUGGERS OR FLAKES. ALTERNATIVELY, SANDY SOILS OR REDDISH, YELLOWISH, OR LIGHT TO MEDIUM BROWN SOIL MATERIALS ARE USUALLY FREE OF HIGH ACID-PRODUCING DEPOSITS.

METHODS AND MATERIALS

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID-PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOILS.
3. 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. TEMPORARY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED 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 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE 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.
5. HIGH ACID-PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE 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 PD 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.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID– PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. 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 MUST CONTINUE FOR A MINIMUM OF 6 MONTHS** TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

SEED SELECTION	SEEDING RATE[1] (pounds)		OPTIMUM SEEDING RATE[2] Based on Plant Hardiness Zone[3]			OPTIMUM SEED DEPTH[4] (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring Oats	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

1 Seeding rate for warm season grass, selections 5 – 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by germination test result. No adjustment is required for cool season grasses.

2 May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.

3 Plant Hardiness Zone (see figure 7-1, pg. 7-4.)

SEEDING SPECIFICATION

TOPSOIL:	TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS TO A MINIMUM DEPTH OF 6" WHEN COMPACTED (SEE SPECIFICATIONS)
FERTILIZATION LIMING:	SHALL BE APPLIED AT SUCH RATES DETERMINED NECESSARY FOR GOOD PLANT GROWTH, PER SOIL TEST FINDINGS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE OF AN ORGANIC ORIGIN.
SEEDING:	AREAS TO BE SEEDED SHALL BE SEEDED WITH SELECT HIGH-QUALITY SEED. SEEDING MIXTURE AND SEEDING RATES, SHALL BE AS SPECIFIED BELOW. TO ENSURE AN EVEN UNIFORM COVERAGE, SEED SHALL BE APPLIED IN TWO SUCCESSIVE SOWINGS WITH THE SECOND SOWING PERPENDICULAR TO THE FIRST. THE RATE OF EACH SOWING SHALL BE ½ THE TOTAL SEEDING RATE SPECIFIED BELOW. TO ENSURE GOOD GERMINATION, THE SEED SHALL BE RAKED INTO THE SOIL TO A DEPTH OF ½".
MULCHING:	ALL SEEDED AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEEDING. MULCH MAY BE EITHER DRY STRAW OR HAY, FREE OF WEED SEEDS. APPLY AT A RATE OF 100 LBS/1000 SQ FT. ON SLOPES GREATER THAN 3:1.
WATERING:	SEEDED AREAS SHALL BE WATERED DAILY TO INSURE GOOD GERMINATION. ONCE SEEDS HAVE GERMINATED, IRRIGATION MAY BE DECREASED BUT THE SEEDLINGS MUST NEVER BE ALLOWED TO DRY OUT COMPLETELY. FREQUENT WATERING SHOULD BE CONTINUED FOR APPROXIMATELY THREE (3) WEEKS AFTER GERMINATION OR UNTIL GRASS HAS BECOME SUFFICIENTLY ESTABLISHED TO WARRANT WATERING ON AN "AS NEEDED" BASIS.
PLANTING DATES:	ACCEPTABLE: MAY 1 TO AUG 14 OPTIMAL: MAR 1 THRU APR 30 AND AUG 15 TO OCTOBER 15.
LAWN SEED MIXTURE:	SEE STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION NOTE 3A (THIS SHEET) AND STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION LAWN AREA SEEDING SPECIFICATION TABLE (SEE SOIL EROSION AND SEDIMENT CONTROL PLAN).

J:\2021-024-103 Kennedy\DWG\04-05 SESC.dwg

REVISION NO.	DATE	REVISION
1	3/03/2022	REVISED FOR RESOLUTION COMPLIANCE

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SOIL EROSION & SEDIMENT CONTROL NOTES

KENNEDY
16 SOMERSET DRIVE
LOT 34, BLOCK 18
TAX MAP SHEET NO. 9
BOROUGH OF RUMSON MONMOUTH COUNTY NEW JERSEY

PROJECT No 2021-024-103	FILE 04-05 SESC.dwg
DRAWN BY OK	DESIGNED BY DAC
SCALE N/A	CHECKED BY DAC
DATE DECEMBER 21, 2021	SHEET NO. 4 of 5

SOIL MANAGEMENT AND PREPARATION

SUBGRADE SOILS 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 INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

1. WITHIN 20 FEET OF BUILDING FOUNDATIONS WITH BASEMENTS, 12 FEET FROM SLAB OR CRAWL SPACE CONSTRUCTION.
2. 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)
3. AIRPORTS, RAILWAYS OR OTHER TRANSPORTATION FACILITIES
4. AREAS REQUIRING INDUSTRY OR GOVERNMENT SPECIFIED SOIL DESIGNS, INCLUDING GOLF COURSES, LANDFILLS, WETLAND RESTORATION, SEPTIC DISPOSAL FIELDS, WET/LINED PONDS, ETC.
5. AREAS GOVERNED OR REGULATED BY OTHER LOCAL, STATE OR FEDERAL REGULATIONS WHICH DICTATE SOIL CONDITIONS.
6. BROWNFIELDS (CAPPED USES), URBAN REDEVELOPMENT AREAS, IN-FILL AREAS, RECYCLING YARDS, JUNK YARDS, QUARRIES AND
7. SLOPES DETERMINED TO BE INAPPROPRIATE FOR SAFE OPERATION OF EQUIPMENT
8. PORTIONS OF A SITE WHERE NO HEAVY EQUIPMENT TRAVEL OR OTHER DISTURBANCE HAS TAKEN PLACE
9. AREAS RECEIVING TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARD
10. WHERE THE AREA AVAILABLE FOR REMEDIATION PRACTICES IS 500 SQUARE FEET OR LESS IN SIZE
11. LOCATIONS CONTAINING SHALLOW (CLOSE TO THE SURFACE) BEDROCK CONDITIONS

AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION SHALL BE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.

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 OWNER'S 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 THERSHOLDS INDICATED FOR THE TESTING METHOD, THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM COMPACTION MITIGATION OVER THE ENTIRE DISTURBED AREA (EXCLUDING EXEMPT AREAS) OR TO PERFORM ADDITIONAL TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE(6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

SOIL TEST METHOD OPTIONS

1. PROBING WIRE TEST METHOD
   THIS TEST SHALL BE CONDUCTED WITH A FIRM WIRE (15-1/2 GAUGE STEEL WIRE-E.G.SURVEY MARKER FLAG, STRAIGHT WIRE STOCK, ETC), 18 TO 21 INCHES IN LENGTH, WITH 6" INCHES FROM ONE END VISIBLY MARKED ON THE WIRE. CONDUCT WIRE FLAG TEST BY HOLDING THE WIRE FLAG NEAR THE FLAG END AND PUSH IT VERTICALLY INTO THE SOIL AT SEVERAL DIFFERENT LOCATIONS IN THE FIELD TO LESSER OF A 8 INCH DEPTH OR THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. RECORD THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. THE WIRE SHOULD PENETRATE WITHOUT BENDING OR DEFORMING AT LEAST 6" INTO THE GROUND BY HAND, WITHOUT THE USE OF TOOLS. IF PENETRATION FAILS AND AN OBSTRUCTION IS SUSPECTED (ROCKS, ROOT, DEBRIS, ETC.) THE TEST CAN BE REPEATED IN THE SAME GENERAL AREA. IF THE TEST IS SUCCESSFUL THE SOIL IS NOT EXCESSIVELY COMPACTED. IF THE WIRE IS DIFFICULT TO INSECT (WIRE BENDS OR DEFORMS PRIOR TO REACHING 6 INCHES IN DEPTH) 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/OWNER'S DISCRETION.
2. HANDHELD SOIL PENETROMETER TEST METHOD
   THIS TEST SHALL BE CONDUCTED BASED ON THE STANDARD OPERATION PROCEDURE (SOP) #RCE2010-001, PREPARED BY THE RUTGERS COOPERATIVE EXTENSION, IMPLEMENTED JUNE 1, 2010, LAST REVISED FEBRUARY 28, 2011. A RESULT OF LESS 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/OWNER'S DISCRETION.
3. TUBE BULK DENSITY TEST METHOD
   THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER UTILIZING ONLY UNDISTURBED SAMPLES (RECONSTRUCTION OF THE SAMPLE NOT PERMITTED) COLLECTED UTILIZING THE PROCEDURE FOR SOIL BULK DENSITY TESTS AS DESCRIBED IN THE USDA NRCS 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 TAKING OF UNDISTURBED 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 FOLLOWING DEFECTS:

   i. CRACKS, WORM CHANNELS, LARGE ROOT CHANNELS OR POOR SOIL TUBE CONTACT WITHIN THE SAMPLES;
   ii. LARGE PIECES OF GRAVEL, ROOTS OR OTHER FOREIGN OBJECTS
   iii. SMEARING OR COMPACTION OF THE UPPER OR LOWER SURFACE OF THE SAMPLES

   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 VOLUME) RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19-1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE 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.
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 ASTM D938. THE BULK DENSITY MEASUREMENT RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19-1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE 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.

TABLE 19-1 MAXIMUM DRY BULK DENSITIES (GRAMS/CUBIC CENTIMETER) BY SOIL TYPE

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	1.75
LOAM, SANDY CLAY LOAM	1.70
CLAY LOAM	1.65
SANDY CLAY	1.60
SILT, SILT LOAM	1.55
SILTY CLAY LOAM	1.50
SILTY CLAY	1.45
CLAY	1.40

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

5. ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND PECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

PROCEDURES 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 SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) OR IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

INSTALLATION REQUIREMENTS

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

TOPSOIL IS TO BE STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE TO FINISH GRADING OF ALL EXPOSED AREAS REQUIRING TOPSOIL.

FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN THE 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.

TREES TO BE RETAINED SHALL BE PROTECTED IF NECESSARY IN ACCORDANCE WITH THE STANDARD FOR TREE PROTECTION DURING CONSTRUCTION.

STANDARD FOR LAND GRADING

DEFINITION

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

PURPOSE

THE PRACTICE IS FOR ONE OR MORE OF THE FOLLOWING: PROVIDE MORE SUITABLE SITES FOR LAND DEVELOPMENT; IMPROVE SURFACE DRAINAGE AND CONTROL EROSION.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE WHERE GRADING TO PLANNED ELEVATIONS IS PRACTICAL AND IT IS DETERMIND THAT GRADING IS NEEDED. GRADING THAT INVOLVES THE DISTURBANCE OF VEGETATION OVER LARGE AREAS SHALL BE AVOIDED. IT MAY BE NECESSARY TO PROVIDE FOR TEMPORARY STABILIZATION OF LARGE AREAS.

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 STORM WATER RUNOFF ALL OF WHICH WILL REDUCE OFFSITE DISCHARGE OF POLLUTANTS.

PLANNING CRITERIA

THE GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE TOPOGRAPHIC SURVEYS AND INVESTIGATIONS. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILLS AND FINISH ELEVATION OF THE SURFACES TO BE GRADED. THE PLAN SHOULD ALSO INCLUDE AUXILIARY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOP 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 ESTABLISHMENT OF THE PLAN SHALL INCLUDE THE FOLLOWING:

1. THE CUT FACE OF EARTH EXCAVATIONS AND FILLS SHALL BE STEEPER THAN THE SAFE ANGLE OF REPOSE FOR THE MATERIALS ENCOUNTERED AND FLAT ENOUGH FOR PROPER MAINTENANCE.
2. THE PERMANENTLY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR OTHERWISE PROTECTED FROM EROSION.
3. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
4. SUBSURFACE DRAINAGE IS TO BE PROVIDED IN AREAS HAVING A HIGH WATER TABLE, TO INTERCEPT SEEPAGE THAT WOULD ADVERSELY AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS OR CREATE UNDESIRABLE WETNESS. SEE STANDARD FOR SUBSURFACE DRAINAGE, PG. 32-1.
5. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
6. FILL SHALL NOT BE PLACED ADJACENT TO THE BANK OF A STREAM OR CHANNEL, UNLESS PROVISIONS ARE MADE TO PROTECT THE HYDRAULIC, BIOLOGICAL, AESTHETIC AND OTHER ENVIRONMENTAL FUNCTIONS OF THE STREAM.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THAT INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING) STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT "-2 'OF ONE INCH TO TWO INCH (1 ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, 90R 450LBS/1,000 SQ FT OF SURFACE AREA) AND WHERE TREES OR ' OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24 'COVERED WITH A MINIMUM OF 12 SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. 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 THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET ARE DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #8.
18. THIS PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM WATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

FREEHOLD SOIL CONSERVATION DISTRICT
4000 KOZLOSKI ROAD
FREEHOLD, NJ 07728
TEL 732.683.8500, FAX 732.683.9140

LAWN AREA SEEDING SPECIFICATION

SEED	APPLICATION RATE
TALL FESCUE	265 LBS./ACRE
KENTUCKY BLUEGRASS (BLEND)	20 LBS./ACRE
PERENNIAL RYEGRASS (BLEND)	20 LBS./ACRE

STANDARD FOR STABILIZED CONSTRUCTION ACCESS

DEFINITION

A STABILIZED PAD OF CLEAN CRUSHED STONE LOCATED AT POINTS WHERE TRAFFIC WILL BE ACCESSING A CONSTRUCTION SITE.

PURPOSE

THE PURPOSE OF A STABILIZED CONSTRUCTION ACCESS IS TO REDUCE THE TRACKING OF FLOWING OF SEDIMENT ONTO PAVED ROADWAYS (OR OTHER IMPERVIOUS SURFACES).

CONDITIONS WHERE PRACTICE APPLIES

A STABILIZED CONSTRUCTION EXIT APPLIES TO POINTS OF CONSTRUCTION INGRESS AND EGRESS WHERE SEDIMENT MAY BE TRACKED, OR FLOW OFF, THE CONSTRUCTION SITE.

WATER QUALITY ENHANCEMENT

IN ADDITION TO MINIMIZING SEDIMENTS WHICH CAN BE TRACKED DIRECTLY ONTO PAVEMENT DURING CONSTRUCTION, OILS, GREASES, AND DIESEL FUELS WHICH BECOME MIXED WITH SEDIMENT DURING CONSTRUCTION MAY ALSO MIGRATE INTO THE OFFSITE DRAINAGE SYSTEM WHERE THEY MAY ENTER DIRECTLY INTO A WATERWAY. BY PREVENTING OR MINIMIZING THE TRACKING OF SEDIMENTS ONTO PAVED AREAS, A SIGNIFICANT REDUCTION IN CONSTRUCTION RELATED HYDROCARBON POLLUTION WILL ALSO BE CONTROLLED.

DESIGN CRITERIA

STONE SIZE- USE ASTM C-33, SIZE NO. 2 (2 ½ TO 1 ½ IN) OR 3 (2 TO 1 IN). USE CLEAN CRUSHED ANGULAR STONE; CRUSHED CONCRETE OF SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.

THICKNESS- NOT LESS THAN SIX (6) INCHES.

WIDTH- NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS.

LENGTH- 50 FEET MINIMUM WHERE THE SOILS ARE COURSE GRAINED (SANDS OR GRAVELS) OR 100 FEET MINIMUM WHERE SOILS ARE FINE GRAINED (CLAYS OR SILTS), EXCEPT WHERE THE TRAVELED LENGTH IS LESS THAN 50 OR 100 FEET RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE. STORM WATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD (SEE STANDARD FOR DIVERSIONS, PG. 15-1). WHERE DIVERSION IS NOT POSSIBLE, THE LENGTH OF THE STABILIZED PAD SHALL BE AS SHOWN IN TABLE 27-1. WHERE THE SLOPE OF THE ACCESS ROAD EXCEEDS 5%, A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE, MIX I-2 SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF A DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING THE STABILIZED CONSTRUCTION ENTRANCE.

TABLE 27-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
>5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX I-2[1]	

1. AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

WHERE A STABILIZED CONSTRUCTION EXIT TRAVERSES BETWEEN TWO BUILDINGS, IT SHALL BE STONED THE ENTIRE LENGTH OF THE RIGHT-OF-WAY. MOUNTABLE STONE BERMS PLACED ACROSS THE WIDTH OF THE EXIT MAY ALSO BE REQUIRED AT THE TRANSITION POINT BETWEEN PAVED AND NON-PAVED AREAS TO TRAP SEDIMENTS WHICH ARE CARRIED BY STORM WATER FLOWING ALONG THE CURB LINE.

INDIVIDUAL LOT ENTRANCE AND EGRESS- AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOT INGRESS/EGRESS POINTS MAY REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF NO. 3 STONE (1" TO 2") TO PREVENT OR MINIMIZE TRACKING OF SEDIMENTS. WIDTH OF THE STONE INGRESS/EGRESS SHALL BE EQUAL TO LOT ENTRANCE WIDTH AND SHALL BE A MINIMUM OF TEN FEET IN LENGTH.

TIRE WASHING- IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WASH WATER WILL NOT FLOW ONTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.

WHEN THE CONSTRUCTION ACCESS EXITS ONTO A MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE MAJOR ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONES FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.

MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.

WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUATE CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OF.

REVISION NO.	DATE	REVISION
1	3/03/2022	REVISED FOR RESOLUTION COMPLIANCE

DAVID A. CRANMER, PE
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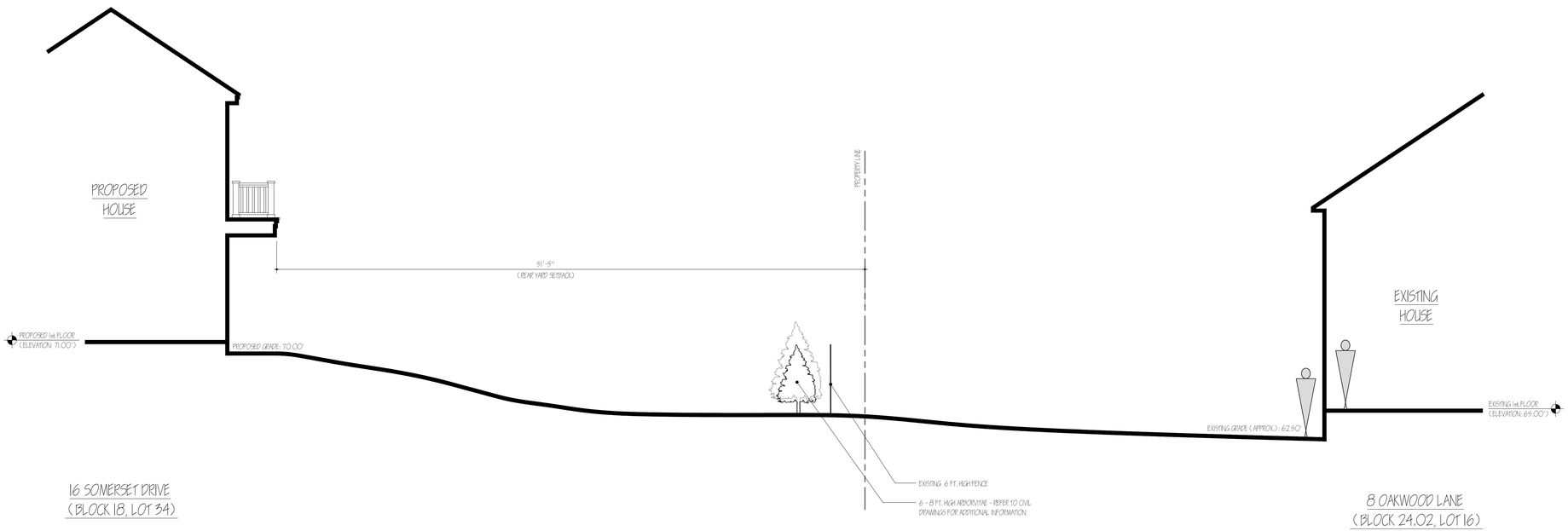
SOIL EROSION & SEDIMENT CONTROL NOTES

KENNEDY
16 SOMERSET DRIVE
LOT 34, BLOCK 18
TAX MAP SHEET NO. 9
BOROUGH OF RUMSON MONMOUTH COUNTY NEW JERSEY

PROJECT No 2021-024-103	FILE 04-05 SESC.dwg
DRAWN BY OK	DESIGNED BY DAC
SCALE N/A	CHECKED BY DAC
DATE DECEMBER 21, 2021	SHEET NO. 5 of 5

J:\2021-024-103 Kennedy\DWG\04-05 SESC.dwg



SITE SECTION
SCALE: 1/4" = 1'-0"

PROPOSED NEW RESIDENCE FOR
KENNEDY
16 SOMERSET DRIVE
RUMSON, NEW JERSEY

DRAWING:
SITE SECTION

DATE:
MARCH 5, 2022

REVISED:

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PA RA-012365-R
FL AR-100674

RESOLUTION OF FINDINGS AND CONCLUSION
BOARD OF ADJUSTMENT
BOROUGH OF RUMSON
BLOCK 70, LOT 48

WHEREAS, Todd and Lanae Herman have applied to the Board of Adjustment of the Borough of Rumson for permission to construct and add a covered rear patio, outside hot tub/spa, and spiral staircase to second floor at the existing premises located at 17 Holly Tree Lane and known as Block 70, Lot 48 on the Tax Map of the Borough of Rumson, and which premises are in the R-1 Zone; and

WHEREAS, on February 15 and March 15, 2022, at a meeting of the Board, due notice having been given the adjoining property owners and published in accordance with N.J.S.A. 40:55D-12 as appears by affidavits filed with the Board, and a quorum being present, the aforementioned application was heard; and

WHEREAS, the Board, after carefully considering the evidence presented by the applicant and the public, including Architectural/Site Plan by M. Cronin A.I.A. 2 Sheets dated 11/1/21, last revised 03/07/22 and Administrative Officer Data Sheet, and Survey by C. Bell Associates dated 6/24/2015 has made the following factual findings:

1. The property is an existing two story single family house, located on an almost rectangular 1.0 acre lot having approximately 194 feet frontage on Holly Tree Lane and depth of approximately 224 - 232 feet. The existing two story house is approximately centered in the lot, with only an existing minor front setback nonconformity (75 feet required, 73.1 feet existing). The applicant/owner's proposal is to construct and add on the rear/west side of the house a covered/roofed open patio, an outside hot tub/spa, and an outside spiral staircase to the second floor, all as shown on initial plans (dated last revised 1/27/22). As noted, there is an existing minor front setback nonconformity that is not being affected by the proposal. The proposal would create a new nonconformity in maximum building coverage (4175 S.F. permitted, 3897 S.F. existing, 4491 S.F. initially proposed).

2. The applicant presented testimony that the existing outside open rear patio was small and uncovered, and due to its exposure became too sunny and hot to utilize effectively on many occasions. Due to family circumstances, the applicant indicated that adding the proposed roofed open patio, hot tub/spa, and outside spiral staircase would allow more

effective and comfortable use of the available outside area, without overcrowding or overburdening the property or impacting adversely the neighboring properties. The new roofed patio would not be enclosed. Have no walls (only a roof), would have no plumbing. No neighbors or objectors appeared.

3. After some review, the Board expressed some concern that given the lot being regularly shaped and at the approximate minimum lot size (1 acre) for the R-2 Zone, no basis sounding in proper planning reasons had been presented for such a substantial exceedance of the maximum permitted building coverage (4175 S.F.) under the Development Regulations. The applicant had not presented any planning testimony that met the Land Use Law requirements for reasons supporting approval of such a substantial deviation from the coverage limitations. After some discussion, the applicant indicated that the application should be continued to the March 15, 2022 hearing in order for the applicant to reduce the size of the proposed covered patio; the discussion centered around a reduction to about 4380 S.F. from the now proposed 4491 S.F. At that request, the application was continued.

4. At the continued hearing on March 15, 2022, the applicant presented a revised Plan for the improvements with a revised building overage of ____ S.F. While still over the coverage limitation, the patio area and improvements are screened from adjacent properties and will not result in adverse impact to those properties. The Board concluded the property is of sufficient size to accommodate the open patio and related improvements and, as revised, could be properly approved under the N.J.S.A. 4055D-70(C)(2) criteria as it presents an improvement that will enhance the use of the property without unduly exceeding the permitted coverage.

WHEREAS, based upon the foregoing testimony and findings of fact, the Board finds that with respect to the specific premises the purposes of the Land Use Act would be advanced by a deviation from the Zoning Ordinance and the requirements and the benefits of this deviation would substantially outweigh any detriment; and that the relief requested by applicants can be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the Zone Plan and Zoning Ordinance of the Borough of Rumson and to deny the application would result in peculiar and exceptional practical difficulties or exceptional and undue hardship upon the

applicants.

NOW THEREFORE BE IT RESOLVED by the Board of Adjustment of the Borough of Rumson on this 15th day of March, 2022 that the application of Todd and Lanae Herman for a variance to construct and add a covered rear patio, outside hot tub/spa, and spiral staircase to second floor on the existing premises in accordance with the plans as agreed to and amended and the testimony and evidence presented at the hearing, be granted upon the following conditions:

1. That this variance will be deemed to be void by abandonment if a building permit is not issued within one year from the date hereof.

2. All factual representations made on behalf of the applicants are incorporated herein as conditions of this variance.

3. The action of the Board of Adjustment in approving this application shall not relieve the applicants of responsibility for any damage caused by this project, nor does the Board of Adjustment or the Borough of Rumson accept or have any responsibility or liability for the structural design of the project or for any damage which may be caused by the project.

4. Prior to issuance of any Certificate of Occupancy the applicant must repair or replace any curb, sidewalk, or street pavement damaged, in the judgment of the Borough Administrative Officer, as part of or by reason of the construction of the project.

5. The following must be accomplished prior to the issuance of a development, zoning and/or building permit:

    a. Evidence must be provided by the applicant that the permits and approvals listed in subsection 22-3.4a,4 of the Development Regulations have, where applicable, been obtained.

    b. Taxes must be current.

    c. If applicable, inspection fees as required by subsection 22-3.14m and n of the Development Regulations must be paid by the applicant.

    d. Any outstanding review fees or escrow deficiency must be paid.

    e. Notice must be published as required by subsection

22-3.3e,5 of the Development Regulations.

Above Resolution moved by
seconded by , and on roll call the following vote was recorded:

In the Affirmative:

In the Negative:

Abstain:

The foregoing is a true copy of a Resolution adopted by the Board of Adjustment of the Borough of Rumson at its meeting on March 15, 2022, as copied from the Minutes of the said meeting.

DATE: March 15, 2022

_____
Secretary
Board of Adjustment

RESOLUTION OF FINDINGS AND CONCLUSION
BOARD OF ADJUSTMENT
BOROUGH OF RUMSON
BLOCK 97, LOT 30

WHEREAS, JOHN AND KRISTEN OSTROW have applied to the Board of Adjustment of the Borough of Rumson for permission to construct a first floor kitchen addition, second floor additions, and a two story rear addition at the existing premises located at 4 Clover Lane and known as Block 97, Lot 30 on the Tax Map of the Borough of Rumson, and which premises are in the R-4 Zone; and

WHEREAS, on February 15, 2022, at a meeting of the Board, due notice having been given the adjoining property owners and published in accordance with N.J.S.A. 40:55D-12 as appears by affidavits filed with the Board, and a quorum being present, the aforementioned application was heard; and

WHEREAS, the Board, after carefully considering the evidence presented by the applicant and the public, including a Survey by C. Surmonte, L.S. dated 10/18/21; Site/Architectural Plans by A. Condouris, Sheets V1, V2, V3, V4, all dated 12/8/21, a prior Resolution dated 3/16/1999, and the Administrative Officer Data Sheet has made the following factual findings:

1. The property is a single family residence, located on an almost rectangular lot having about 159 feet frontage on Clover Lane and depth of about 164 feet. The lot is in the R-4 Zone, requiring a 10,000 S.F. minimum lot size; the lot at 26,146 S.F. is substantially larger than the R-4 minimum. The applicant's proposal is to construct and add to the existing house a first floor kitchen addition, second floor additions, and a two story rear addition, all as shown on the Plans. The proposal would expand the floor area from the existing 3739 S.F., (3500 S.F. cap in the R-4 Zone) to the proposed 4583 S.F., and a floor area cap variance is requested. The property also has an existing nonconformity for maximum lot coverage (7061 S.F. permitted, 9368 S.F. Existing), and the proposal will reduce lot coverage to 9002 S.F. which still is a variance required.

2. The applicant's presentation was by their testimony and Architect Condouris. The presentation was primarily that the lot is substantially large (at 26,146 S.F.) for the Zone and can accommodate the proposed house and its being over the 3500 S.F. cap. The house had been expanded to its present size by Resolution approved on March 16, 1999. On the other side of Clover Lane is the R-2 Zone, with larger houses on

larger lots that are compatible with the proposed house and its size.

3. As noted, the property is significantly oversized for the R-4 Zone. In such situations, the Board has usually granted limited variance relief to grant relief from the 3500 S.F. floor area cap as such oversized lots can usually accommodate some floor area increase; the issue here was the reasonable size of the proposed relief. There also arose the issue and potential impact of the expansion on a large specimen Red Oak tree that is in close proximity to the existing house. The property owner indicated that the tree appears to be in good condition and tree experts have opined that the tree would likely not be impacted by the work proposed if a proper Tree Protection plan and fencing are required during construction. As the tree is a specimen tree by the Borough Ordinance, any removal would require an application and approval by Permit. The Borough Arborist also testified, indicating that in his opinion any work/approval should include a condition requiring compliance with a Tree Protection plan/fencing to be approved by the Borough Arborist. No neighbors or objectors appeared.

4. The Board concluded that the application as proposed could be approved. Although the exceedance in floor area over the 3500 S.F. is substantial, the large size of the lot indicates the lot can accommodate the proposal. In addition, this property's proximity to larger houses on larger lots in the R-2 Zone on the opposite side of Clover Lane makes this into a transition property and supports the floor area requested in this particular situation. The Board concludes the lot size can reasonably accommodate the proposal, and it will not adversely impact the neighborhood and Zone Plan.

WHEREAS, based upon the foregoing testimony and findings of fact, the Board finds that with respect to the specific premises the purposes of the Land Use Act would be advanced by a deviation from the Zoning Ordinance and the requirements and the benefits of this deviation would substantially outweigh any detriment; and that the relief requested by applicants can be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the Zone Plan and Zoning Ordinance of the Borough of Rumson and to deny the application would result in peculiar and exceptional practical difficulties or exceptional and undue hardship upon the applicants.

NOW THEREFORE BE IT RESOLVED by the Board of Adjustment of the Borough of Rumson on this 15th day of March, 2022 that the application of JOHN AND KRISTEN OSTROW for a variance to construct a first floor kitchen addition, second floor additions, and a two story rear addition at the existing premises in accordance with the plans as agreed to and amended and the testimony and evidence presented at the hearing, be granted upon the following conditions:

1. That this variance will be deemed to be void by abandonment if a building permit is not issued within one year from the date hereof.

2. All factual representations made on behalf of the applicants are incorporated herein as conditions of this variance.

3. The action of the Board of Adjustment in approving this application shall not relieve the applicants of responsibility for any damage caused by this project, nor does the Board of Adjustment or the Borough of Rumson accept or have any responsibility or liability for the structural design of the project or for any damage which may be caused by the project.

4. Prior to issuance of any Certificate of Occupancy the applicant must repair or replace any curb, sidewalk, or street pavement damaged, in the judgment of the Borough Administrative Officer, as part of or by reason of the construction of the project.

5. The following must be accomplished prior to the issuance of a development, zoning and/or building permit:

    a. Evidence must be provided by the applicant that the permits and approvals listed in subsection 22-3.4a,4 of the Development Regulations have, where applicable, been obtained.

    b. Taxes must be current.

    c. If applicable, inspection fees as required by subsection 22-3.14m and n of the Development Regulations must be paid by the applicant.

    d. Any outstanding review fees or escrow deficiency must be paid.

    e. Notice must be published as required by subsection 22-3.3e,5 of the Development Regulations.

f. Compliance with a Tree Protection Plan and fencing plan to be obtained from a licensed Arborist/tree expert and approved by the Borough Arborist, during any construction and/or foundation/excavation under this approval.

Above Resolution moved by seconded by , and on roll call the following vote was recorded:

In the Affirmative:

In the Negative:

Abstain:

The foregoing is a true copy of a Resolution adopted by the Board of Adjustment of the Borough of Rumson at its meeting on March 15, 2022, as copied from the Minutes of the said meeting.

DATE: March 15, 2022

_____
Secretary
Board of Adjustment