REVISION TO AN APPROVED PRELIMINARY/FINAL SUBDIVISION PLAN

GENERAL NOTES:

- 1. BLOCK 364.01 LOT 22 SURVEYED IN ACCORDANCE WITH AND IS SUBJECT TO TICOR TITLE INSURANCE COMMITMENT FOR TITLE # T17678 DATED 7-3-06 & T17678A DATED 7-13-06
- 2. THIS MAP REFLECTS EXISTING SITE CONDITIONS AS THE RESULT OF A FIELD SURVEY PERFORMED BY VAN CLEEF ENGINEERING ASSOCIATES IN AUGUST AND SEPTEMBER 2006.
- 3. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL (S)
- 4. UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN IF ANY. LOCATION OF ABOVE GROUND UTILITIES AS SHOWN.
- 5. NO CERTIFICATION IS MADE BY TRENTON ENGINEERING CO. INC. AS TO THE ACTUAL UNDERGROUND POSITION OF ANY UTILITIES OR TO ACCURACY OF UTILITY INFORMATION PROVIDED BY OTHERS.
- 6. IT IS IMPERATIVE THAT UTILITY COMPANIES ARE NOTIFIED PRIOR TO ANY EXCAVATION AND/OR CONSTRUCTION
- CALL 1-800-272-1000 TO ORDER UTILITY MARKOUTS.
- 7. NJSPCS NAD 1983 COORDINATE VALUES SHOWN HEREON ESTABLISHED BY ATLANTIS AERIAL COMPANY
- 8. NAVD 1988 TOPOGRAPHY SHOWN BASED ON ATLANTIS AERIAL DATED 4-16-04
- 9. ROTATION FROM NJSPCS NAD 83 BEARING FAMILY TO REFERENCE DEED FAMILY IS CCW 5°-57'-31"
- 10. A PORTION OF BLOCK 364.01, LOT 22 LIES WITHIN THE 100 YEAR FLOOD LINE ZONE-AE (PER REF.PLAN NO.4) ELEVATIONS SHOWN HEREON ARE NAVD 88, CONVERSION TO NAVD 29 ARE PLUS 1.00'±
- 11. STORM DRAINAGE ALONG LOWER FERRY ROAD CURBLINE APPEARS TO TIE INTO A DRAINAGE SYSTEM WITHIN
- THE ROADWAY. UNABLE TO PHYSICALLY LOCATE IN FIELD. 12. WETLANDS SHOWN HEREON WERE FIELD DELINEATED BY AV AGOVINO ASSOCIATES, LLC ON AUGUST 2, 2006
- AND FIELD LOCATED BY VAN CLEEF ENGINEERING ASSOC. ON AUGUST 21, 2006. 13. AS CONDITION TO FINAL APPROVAL OWNER SHALL DEED RESTRICT ALL LOTS IN WHICH ALL FUTURE HARDSCAPE
- IMPROVEMENTS SHALL BE THAT OF POROUS HARDSCAPE MATERIALS SUBJECT TO THE APPROVAL OF THE TOWNSHIP ENGINEER. 14. EXISTING TREES TO BE PRESERVED SHALL BE FLAGGED BY CONTRACTOR AND APPROVED BY TOWNSHIP ENGINEER PRIOR DISTURBANCE TO SITE
- 15. APPLICANT WILL CONTACT PSE&G COMPANY TO PROVIDE INFORMATION ON ADEQUACY OF EXISTING LIGHTING OR INFORMATION ON ADDITIONAL LIGHT FIXTURES.
- 16. TOPOGRAPHY UPDATED BY TRENTON ENGINEERING COMPANY, INC ON NOVEMBER 10, 2022.

PROPERTY OWNERS WITHIN 200 FT.:

Ewing Township

BLOCK	LOT	PARCEL/ADDRESS	OWNERS NAME	PARCEL/ADDRESS	CITY/STATE/Z
241.00	74.00	1214 Lower Ferry Road	Raichel, David E.	1214 Lower Ferry Road	Ewing, NJ 08618
364.01	22.00	1219 Lower Ferry Road	Baldwin, Eileen M.	1235 Lower Ferry Road	Ewing, NJ 08618
364.01	23.00	1227 Lower Ferry Road	Baldwin, Eileen M.	1235 Lower Ferry Road	Ewing, NJ 08618
364.01	25.00	78 Scotch Road	Ewing Cemetery Assn	78 Scotch Road	Ewing, NJ 08628
364.01	79.00	1211 Lower Ferry Road	Pyatt, Patricia A. & William J.	1211 Lower Ferry Road	Trenton, NJ 08618
364.01	80.00	4 Stowman Drive	Hunkele, Alfred & Paula	4 Stowman Drive	Ewing, NJ 08618
364.01	81.00	6 Stowman Drive	Bankers Trust Co. Calif c/o llesani	6 Stowman Drive	Ewing, NJ 08618
364.01	84.00	1235 Lower Ferry Road	Baldwin, Eileen M.	1235 Lower Ferry Road	Ewing, NJ 08618
471.00	4.00	84 Main Blvd.	Tefft, Timonthy A. & Robin M.	84 Main Blvd.	Ewing, NJ 08618
472.00	1.00	85 Main Blvd.	Gargaloni, Lydia & Lori Halcombe	85 Main Blvd.	Ewing, NJ 08618
472.00	2.00	1218 Lower Ferry Road	Mather, Jacqueline A	1218 Lower Ferry Road	Ewing, NJ 08618
492.00	7.00	1210 Lower Ferry Road	Smith, Theodore & Marcia	1210 Lower Ferry Road	Ewing, NJ 08618
492.00	8.00	1206 Lower Ferry Road	Kleinerman, Milton M.	1206 Lower Ferry Road	Ewing, NJ 08618
506.00	20.00	32 Chelmsford Court	Mantuano, Patricia	32 Chelmsford Court	Ewing, NJ 08618
506.00	21.00	34 Chelmsford Court	Cullen, Julie	34 Chelmsford Court	Ewing, NJ 08618
506.00	22.00	36 Chelmsford Court	Shekitka, John Etux	36 Chelmsford Court	Ewing, NJ 08618
506.00	46.00	27 Great Woods Drive	Foreman, Willee ux	27 Great Woods Drive	Ewing, NJ 08618
506.00	47.00	25 Great Woods Drive	Wilson, Cherlann D.	25 Great Woods Drive	Ewing, NJ 08618
506.00	48.00	23 Great Woods Drive	Esko, Helen	23 Great Woods Drive	Ewing, NJ 08618
506.00	60.00	Great Woods Drive Rear	Township of Ewing	2 Jake Garzio Drive	Ewing, NJ 08618
531.00	1.00	1 Stowman Drive	Leggett, Wugen M. ux	1 Stowman Drive	Ewing, NJ 08618
531.00	2.00	3 Stowman Drive	Lester, Jr., Robert ux	3 Stowman Drive	Ewing, NJ 08618
531.00	3.00	5 Stowman Drive	Mullen, Eric & Tonya	5 Stowman Drive	Ewing, NJ 08618

OTHER PARTIES RECEIVING NOTICE:

Sunoco Pipeline L.P. Public Service Electric and Gas Company Right of Way Dept. Manager-Corporate Properties Montello Complex 80 Park Plaza, T6B

525 Fritztown Road Sinking Spring PA 19608

INDEX SHEETS

- 1. COVER SHEET
- 2. OVERALL SITE PLAN
- 3. DEMOLITION PLAN, SITE AND LANDSCAPE PLAN

Newark, NJ 07102

- 4. GRADING AND UTILITY PLAN
- 5. CONSTRUCTION DETAILS (SITE AND STORM)
- 6. CONSTRUCTION DETAILS (SANITARY AND WATER)
- 7. SOIL EROSION AND SEDIMENT CONTROL PLAN 8. SOIL EROSION, SEDIMENT CONTROL DETAILS
- 9. SOIL EROSION, SEDIMENT CONTROL NOTES

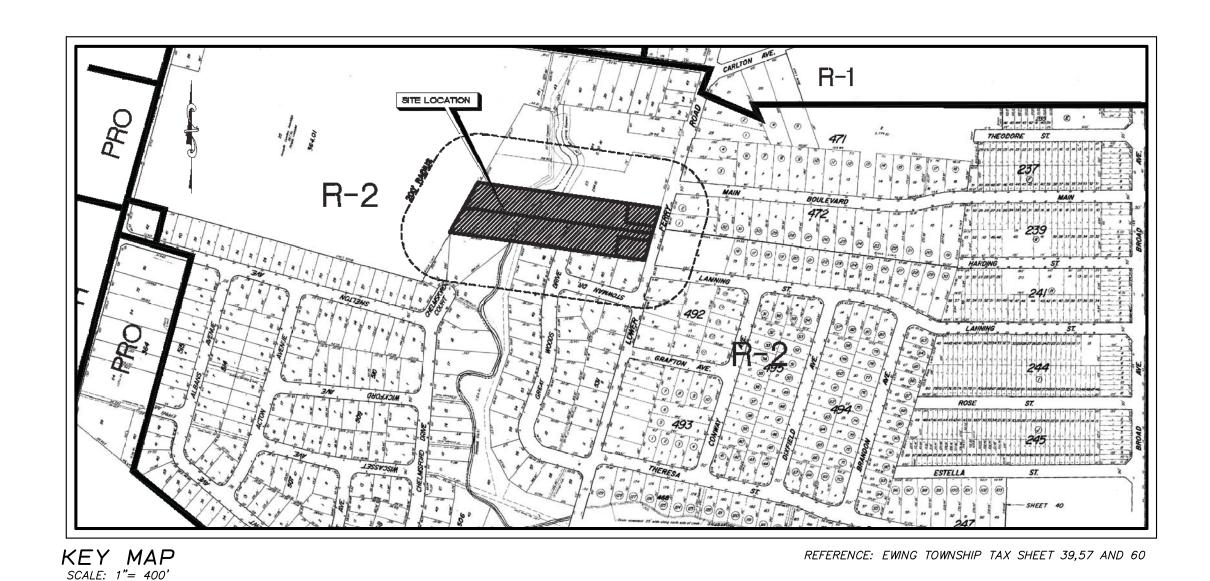
PREPARED FOR

HOMES BY TLC, INC.

BLOCK-364.01, LOTS 22.01, 22.02, 22.03 & 22.04

SITUATE IN

EWING TOWNSHIP, MERCER COUNTY **NEW JERSEY**



APPROVALS:

I HAVE REVIEWED THIS PLAN AND CERTIFY THAT IT MEETS ALL THE CODES

EWING TOWNSHIP ZONING BOARD CHAIRMAN EWING TOWNSHIP ZONING BOARD SECRETARY

APPLICANT/ OWNER UNDER CONTRACT: HOMES BY TLC, INC. CELIA BERNSTEIN

1880 PRINCETON AVENUE LAWRENCEVILLE, NJ 08648 PHONE: 609-922-1167

CELIA BERNSTEIN

ROFESSIONAL ENGINEERS, PLANNERS AND LAND SURVEYORS ESTABLISHED 1907 2193 SPRUCE STREET TRENTON , N.J. 08638 TEL. NO. 609-882-0616 FAX. NO. 609-882-6004 D.F. STRATTON, L.S. N.J.-27523 P.P.N.J.-5021 L.S. N.J.-43355 JOSEPH MESTER N.J.PROFESSIONAL ENGINEER AND PROFESSIONAL LAND SURVEYOR No. 19462 **REVISIONS**

ACREAGE SUMMARY:

TOTAL AREA OF BLOCK-364.01, LOT-22.01: 10,762 S.F. OR 0.247 ACRES TOTAL AREA OF BLOCK-364.01, LOT-22.02: 10,539 S.F. OR 0.242 ACRES TOTAL AREA OF BLOCK-364.01, LOT-22.03: 76,930 S.F. OR 1.766 ACRES TOTAL AREA OF BLOCK-364.01, LOT-22.04

TOTAL AREA OF WETLANDS ON BLOCK-364.01, LOT-22.03: 6,552.8 S.F. OR 0.150 ACRES TOTAL AREA OF WETLANDS ON BLOCK-364.01, LOT-22.04: 10,483.8 S.F. OR 0.241 ACRES

EWING TOWNSHIP TAX MAP INFORMATION

BLOCK _____ 364.01 LOTS _ _ _ _ _ _22.01, 22.02, 22.03, 23.04

DEED INFORMATION (PRE-SUBDIVISION)

LOT-22, BLOCK-364.01 DEED BOOK _ _ _ _ _ 1806 PAGE _ _ _ _ _ _ _ 831 & c.

REFERENCE PLANS:

- 1. PLAN ENTITLED, "SECTION-5 SCOTCH FERRY FIELDS", PREPARED BY TRENTON ENGINEERING COMPANY DATED JULY 1956 AND FILED IN THE MERCER COUNTY CLERKS OFFICE ON MARCH 28, 1957 AS
- 2. PLAN ENTITLED, "SECTION-1 BROOKWOOD", PREPARED BY A.J. LANNING ENGINEERING CO., INC. DATED AUGUST 20 1960 AND FILED IN THE MERCER CO. CLERKS OFFICE ON OCT. 20, 1960 AS MAP NO. 1464

3. PLAN ENTITLED, "MAP OF SURVEY PREPARED FOR EILEEN M. BALDWIN",

- PREPARED BY LAND MAP, INC. DATED 12-23-05 PROJ.# 10272 4. PLAN ENTITLED, "FIRM FLOOD INSURANCE RATE MAP", PREPARED BY
- FEDERAL EMERGENCY MANAGEMENT AGENCY MAP REVISED JUNE 6, 2001 COMMUNITY-PANEL NUMBER 345294 0002 D PANEL 2 OF 4
- PLAN ENTITLED, "FIRM FLOOD INSURANCE RATE MAP", PREPARED BY FEDERAL EMERGENCY MANAGEMENT AGENCY MAP REVISED JULY 20, 2016. COMMUNITY-PANEL NUMBER 34021 C0118 F
- 5. PLAN ENTITLED, "FINAL MAP FOR ANTHONY AND LUCILLE DIPASQUALE BLOCK 364.01, LOT 22" PREPARED BY VAN CLEEF ENGINEERING ASSOCIATES DATED JANUARY 29, 2007 AND FILED IN THE MERCER COUNTY CLERKS OFFICE ON FEBURARY 25, 2008 AS MAP NO. 3998.

REFERENCE DATUM

1. ELEVATION DATUM IS NAVD 1988 IN US SURVEY FEET PROVIDED BY ATLANTIS AERIAL SURVEY CO., INC. USING BASE STATION MON. 11B1

EWING TOWNSHIP ZONING REQUIREMENTS FOR

R2 ZONE (Residential Single Family-Detached)

	REQUIRED	EXISTING	EXISTING	EXISTING	EXISTNG
Principal Building:		LOT 22.01	LOT 22.02	LOT 22.03	LOT 22.04
Minimum Lot Area — Corner Lot	12,100 sf	N/A	N/A	N/A	N/A
Minimum Lot Area — Interior Lot	10,000 sf	10,762 sf	10,539 sf	76,930 sf	72,349 sf
Minimum Lot Frontage	80 ft	91.02 ft	91.70 ft	21.71 ft *	20.23 ft *
Minimum Lot Width — Corner Lot	110 ft	N/A	N/A	N/A	N/A
Minimum Lot Width — Interior Lot	80 ft	90.00 ft	91.59 ft	110.0 ft	, 112.02 ft
Minimum Lot Depth	110 ft	112.77 ft	116.29 ft	678.85 ft	616.14 ft
Minimum Front Yard Setback	40 ft	46.0 ft	46.0 ft	N/A	N/A
Minimum Side Yard Setback (each)	10 ft	28.7 ft	30.8 ft	, 34.0 ft	, 34.0 ft
Minimum Rear Yard Setback ` ´	35 ft	30.0 ft *	29.0 ft *	569.28 ft	524.41 ft
Maximum Building Height	2 1/2 story/35 ft	2 1/2 story/35 f			
accessory Building:					
linimum Distance to Principal Buildings	20 ft	N/A	N/A	N/A	N/A
linimum Side Yard Setback	5 ft	N/A	N/A	N/A	N/A
linimum Rear Yard Setback	5 ft	N/A	N/A	N/A	N/A
laximum Building Height	1 story/15 ft	N/A	N/A	N/A	N/A
Coverage:					
Maximum Building Coverage	20%	12.6%	12.9%	1.8%	1.9%
Maximum Lot Coverage **	30%	21.8% ***	22.9% ***	6.5% ***	6.8% ***
mpervious Surface		2,345 sf	2,412 sf	5,031 sf	4,888 sf

Impervious Surface	۷,۰	J4J SI	2,412 81	٥,٠
FLOOR AREA RATIO (FAR), BASE FLOOR AREA REQUIREMENTS AND BEDROOM YIELDS	LOT 22.01	LOT 22.02	LOT 22.03	LOT 22.04
Column 1	10, 762 SF	10,539 SF	76,930 SF	72, 349 SF
Lot Size Break Points:	10,000 to 12,499	10,000 to 12,499	20,000 or greater	20,000 or greater
Column 2				
Starting Base:	10,000 SF	10,000 SF	20,000 SF	20,000 SF
Column 3	0.08	0.08	0.00	0.00
Additional Area Multiplier Starting Point minus Actual Lot Area Additional Floor Area Allowed	10, 762-10, 000=762sf (762 sf X 0.08=60.96) 60.96	10,539-10,000=539sf (539 sf X 0.08=43.12) 43.12	NO ADDITIONAL	NO ADDITIONAL
Column 4 BASE FLOOR AREA + ADDITIONAL AREA EQUALS MAX FLOOR AREA	1, 875 SF 1, 875 + 61 = 1936 1, 936 SF	1, 875 SF 1, 875 + 43 = 1918 1, 918 SF	2,450 SF	2, 450 SF
BEDROOM YIELDS: MAX FLOOR AREA DIVIDED BY 425 SF = BEDROOM YEILD	1, 936 / 425 = 4.56 4 BEDROOMS ALLOWED	1, 918 / 425 = 4.51 4 BEDROOMS ALLOWED	2, 450 / 425 = 5.76 5 BEDROOMS ALLOWED	2, 450 / 425 = 5.76 5 BEDROOMS ALLOWED
FLOOR AREA ALLOWED BEDROOMS ALLOWED	1,936 SF 4 BEDROOMS	1,918 SF 4 BEDROOMS	2,450 SF 5 BEDROOMS	2, 450 SF 5 BEDROOMS
FLOOR AREA PROVIDED BEDROOM PROVIDED	2, 720 SF 6 BEDROOMS VARIANCE REQUIRED	2, 720 SF 6 BEDROOMS VARIANCE REGUIRED	2, 720 SF 6 BEDROOMS VARIANCE REQUIRED	2, 720 SF 6 BEDROOMS VARIANCE REQUIRED

TRENTON ENGINEERING CO., INC.

Variance Required Includes Porous pavement used for proposed sidewalk & driveways. *** Lots to be deed restricted to future impervious (General Note 13)

APPROVED SUBDIVISION PLANS IMPERVIOUS SURFACE = 14,684 SF DESIGNED IMPERVIOUS SURFACE

CURRENT DESIGN = 14,644 SF

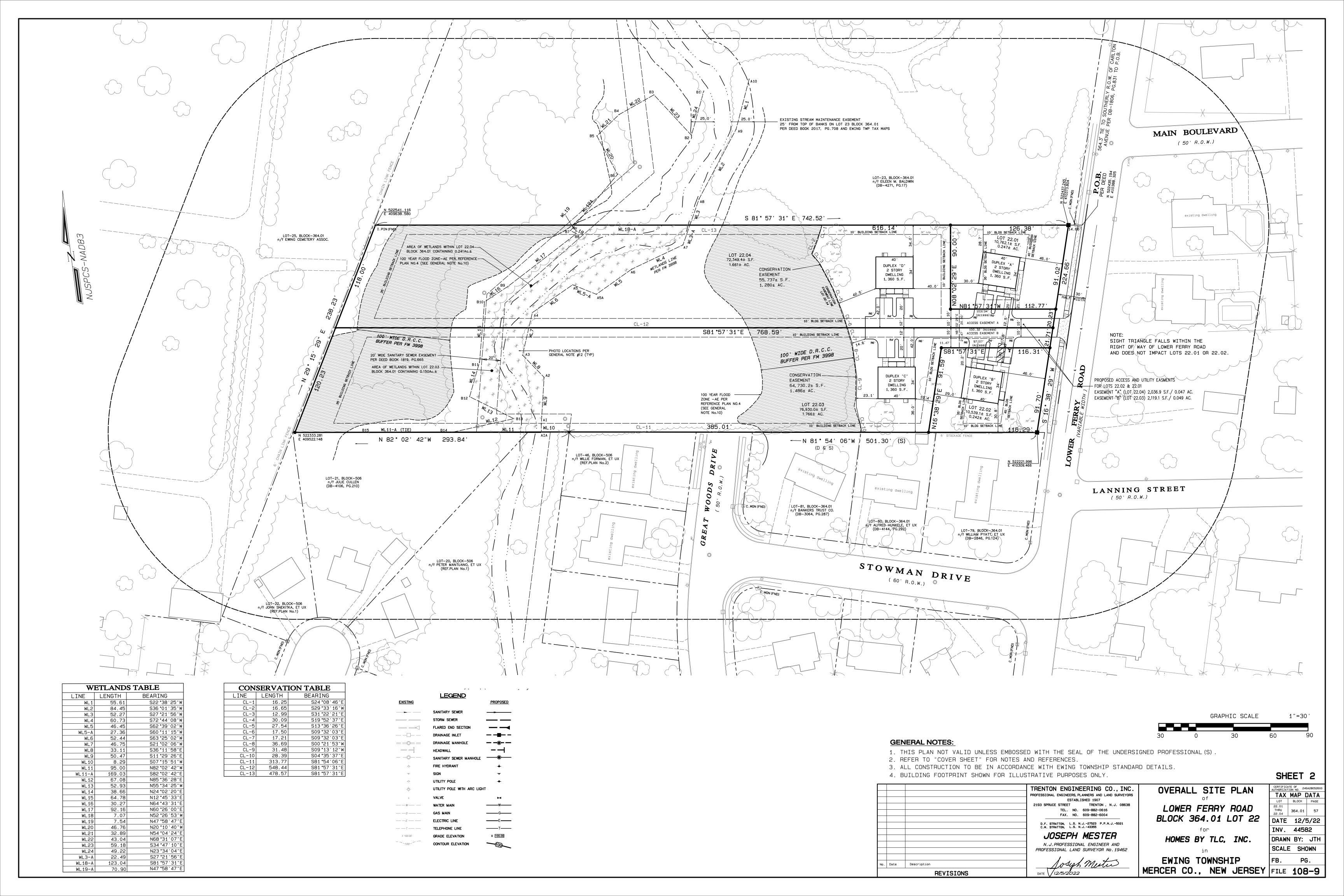
SHEET 1

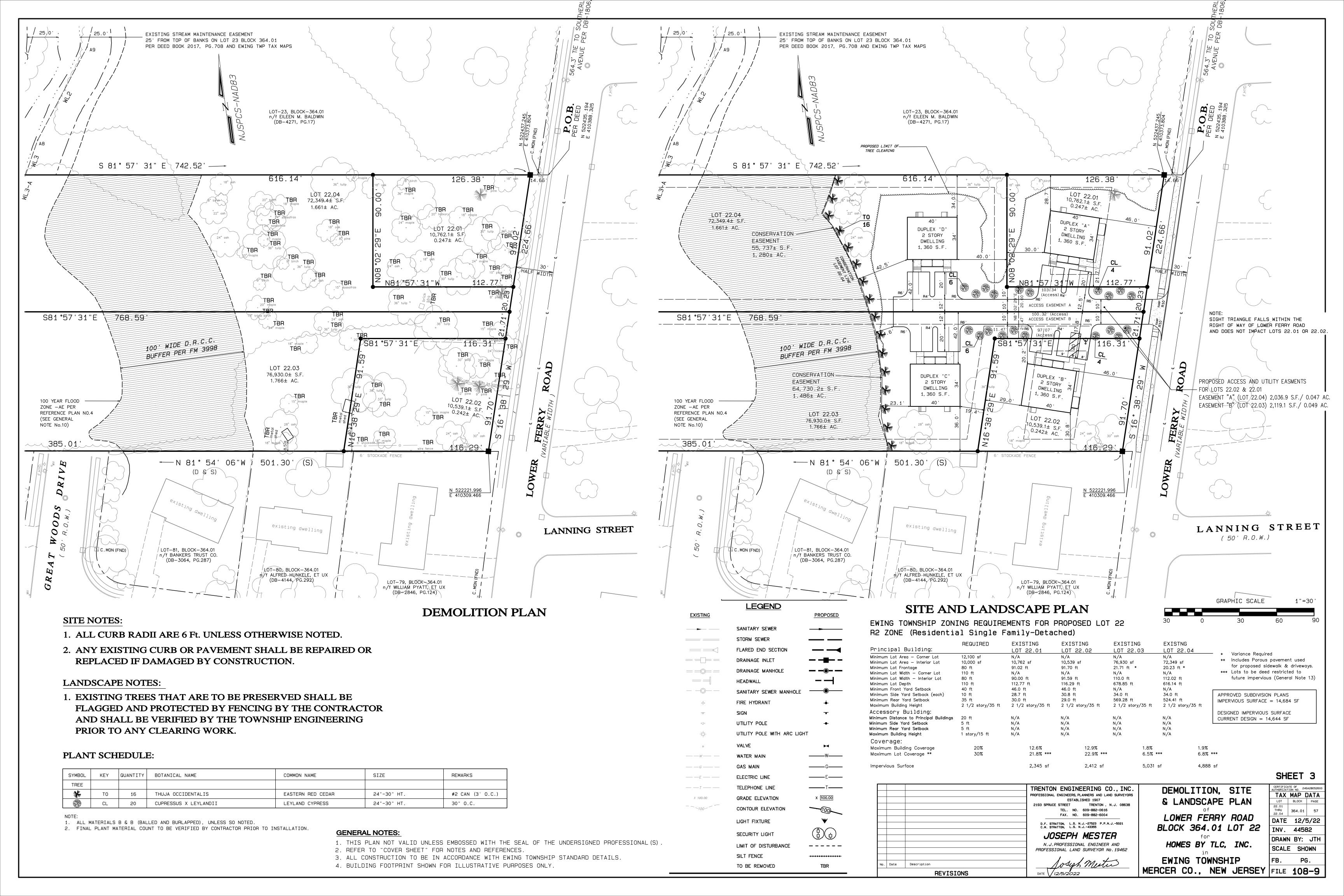
COVER SHEET TAX MAP DATA LOT BLOCK PAG LOWER FERRY ROAD BLOCK 364.01 LOT 22 DATE 12/5/22 INV. 44582 HOMES BY TLC. INC.

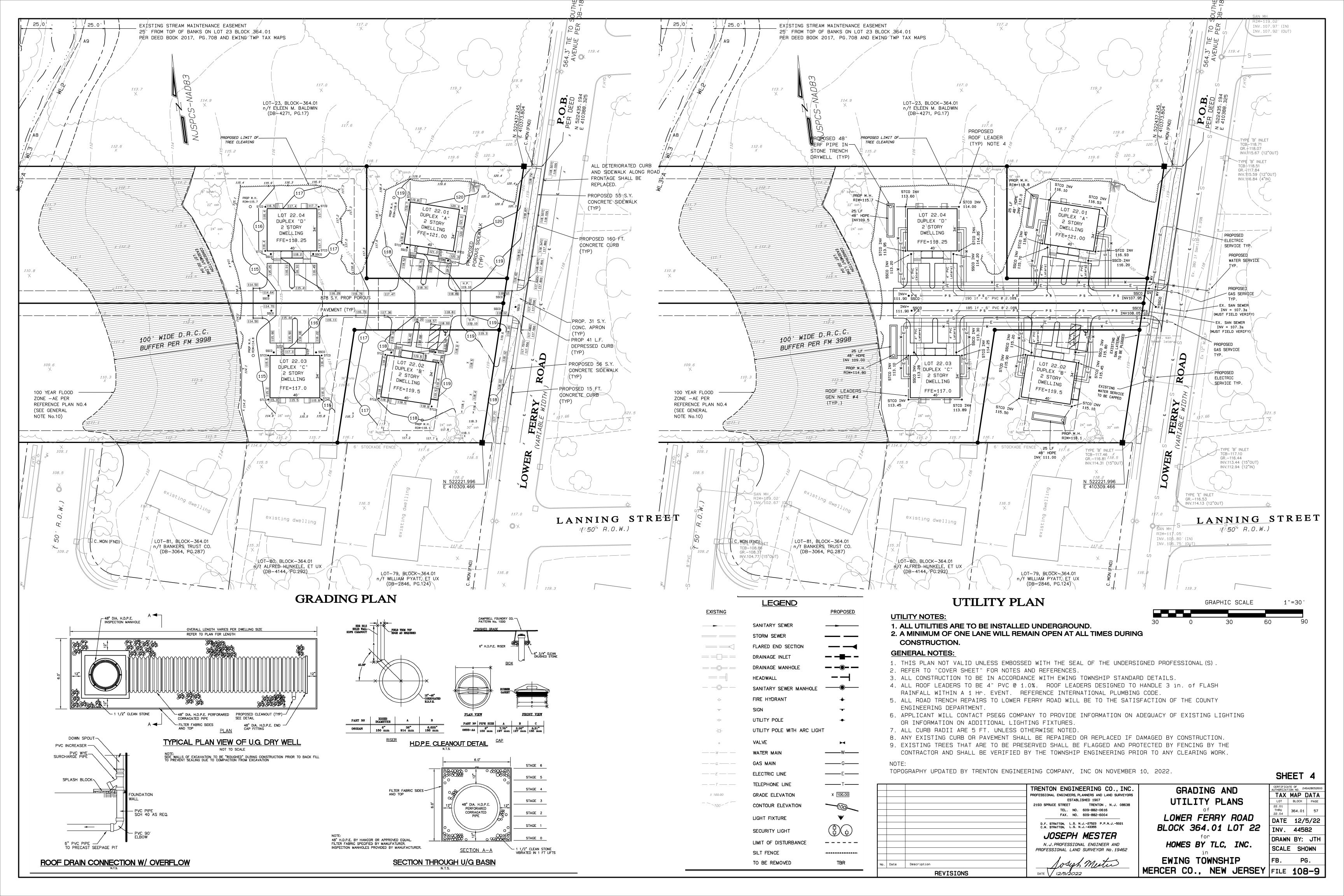
EWING TOWNSHIP

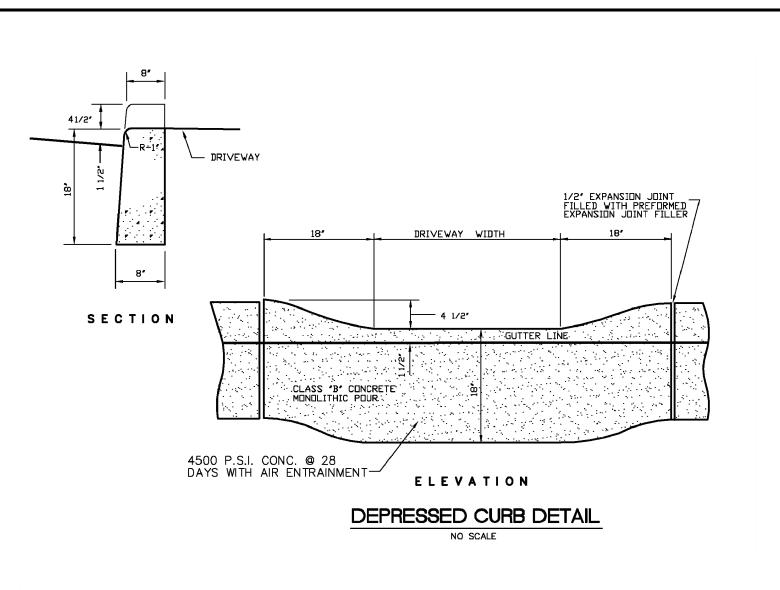
DRAWN BY: JTH SCALE SHOWN

MERCER CO., NEW JERSEY | FILE 108-9









1 1/2" COMP. BIT. CONC. SURF. COURSE MIX I—5 SEAL JOINT TACK EDGES -\ 6" COMP. DENSE GRADED AGGREGATE TACK OIL 6" COMP. DENSE GRADED AGGREGATE — 4500 P.S.I. CONC. @ 28 DAYS WITH AIR ENTRAINMENT COMP. APPROVED SUBGRADE SUBGRADE UNEXCAVATED VIRGIN MATERIAL (SEE NOTE 1)

1.) ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEERING PRIOR

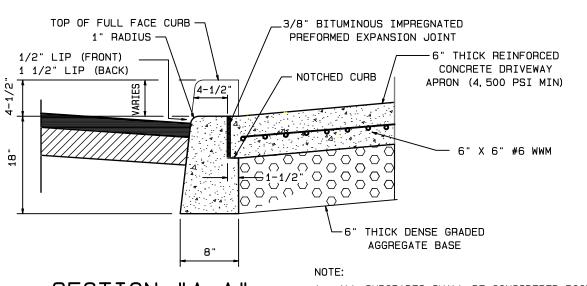
NOTES:

- 2.) EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AND AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREMOLDED EXPANSION JOINT FILLER, 1/2" THICK, CONFORMING TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONTRACTION JOINTS SHALL BE PROVIDED EVERY 10'. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB
- 3.) CURB SHALL BE TEMPORARILY BACKFILLED TO FINISHED GRADE WITH SOIL BEHIND AND STONE ON THE ROAD SIDE AS SOON AS IT HAS ATTAINED SUFFICENT SUPPORTING STRENGTH OR WITHIN 24 HOURS OF POURING (WHICH EVER IS LESS).
- 4.) WHEN NEW CURB IS INSTALLED ALONG AN EXISTING PAVED AREA, THE EXISTING PAVEMENT SHALL BE CUT 2 FEET IN FRONT OF THE NEW CURB FACE IN A STRAIGHT LINE WITH A CUTTING WHEEL OR PNEUMATION HAMMER. THE NEW PAVEMENT SHALL BE TACKED AND BUTTED TO THE EXISTING PAVEMENT.

CONCRETE CURB

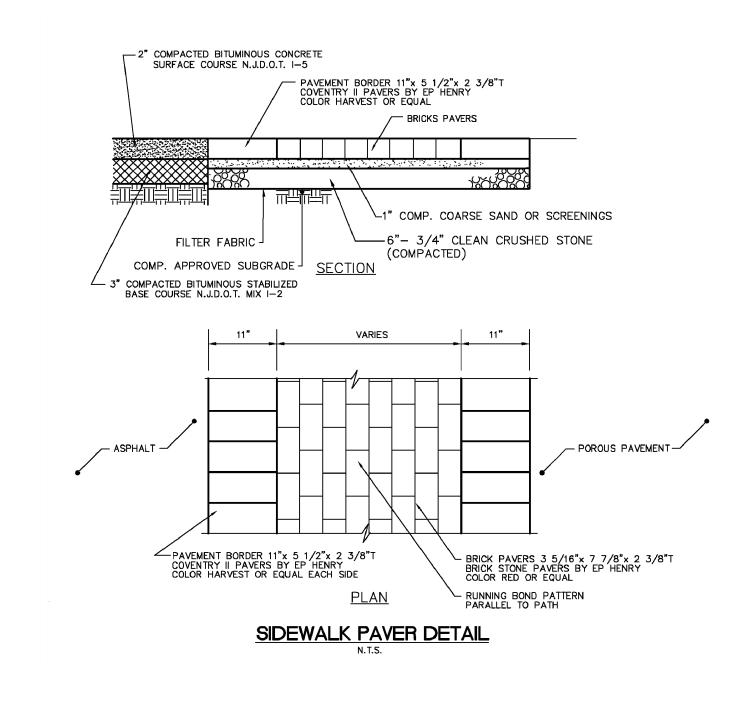
2' MIN. MILLING TACK OIL -FINISHED GRADE EXISTING PAVEMENT PROPOSED PAVEMENT EXISTING BIT. STAB. BASE TACK OIL-" COMP. BIT. CONC.-SURF. COURSE MIX I-5

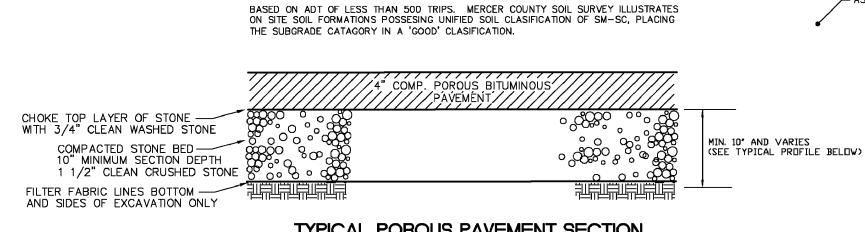
MILLED PAVEMENT JOINT DETAIL



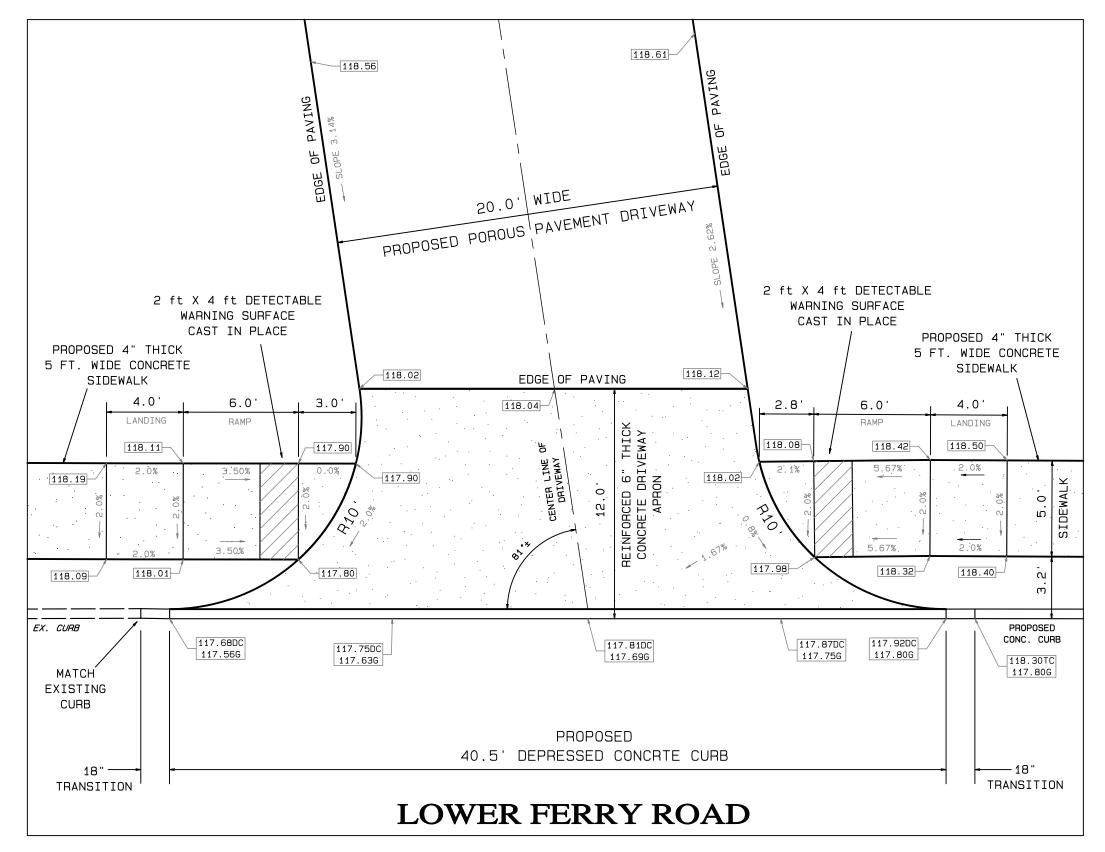
SECTION "A-A" TYPICAL CURB NOTCH DRIVEWAY APRONS N.T.S.

1. ALL SUBGRADES SHALL BE CONSIDERED POOR UNLESS THE APPLICANT PROVES OTHERWISE THROUGH CBR TESTING OR FIELD EVALUATION OF SOIL CLASSIFICATION. TEST RESULTS AND SUBGRADE COMPACTION SHALL BE APPROVED BY THE TOWNSHIP ENGINEER.



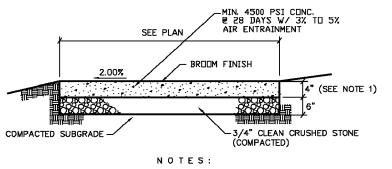


TYPICAL POROUS PAVEMENT SECTION



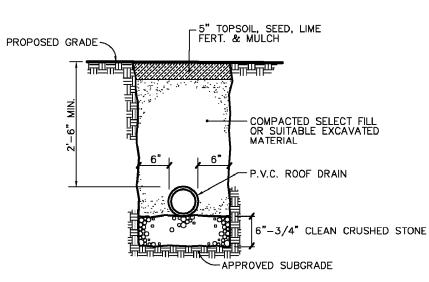
PROPOSED DRIVEWAY DETAIL

SCALE: 1" = 10"

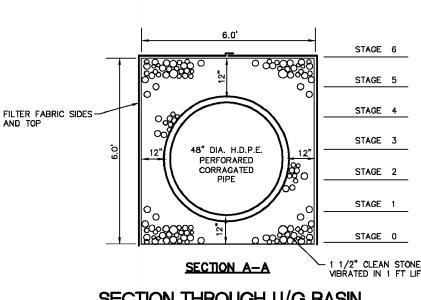


- AT DRIVEWAY CROSSINGS, SIDEWALK SHALL BE 6" THK. AND SHALL CONTAIN No. 10 6" X 6" WIRE MESH 2" UP FROM THE BOTTOM OF THE SIDEWALK.
- 3.) EXPANSION JOINTS SHALL BE PROVIDED AT 20' (MAX.) INTERVALS JOINTS SHALL BE FILLED WITH 1/2" BIT. EXPANSION JOINT FILLER.
- 4.) ALL SIDEWALK THAT IS BROKEN, CRACKED OR OUT OF ALIGNMENT SHALL BE REPLACED PRIOR TO ACCEPTANCE.
- 5.) PROVIDE HALF DEPTH CONTRACTION JOINTS EVERY 4 FEET. 6.) ALL EXPOSED CONC. SURFACES TO BE TREATED WITH LUMISEAL PLUS CURE AND SEAL COMPOUND OR EQUAL PER MANUFACTURER'S INSTRUCTIONS.

CONCRETE SIDEWALK NO SCALE

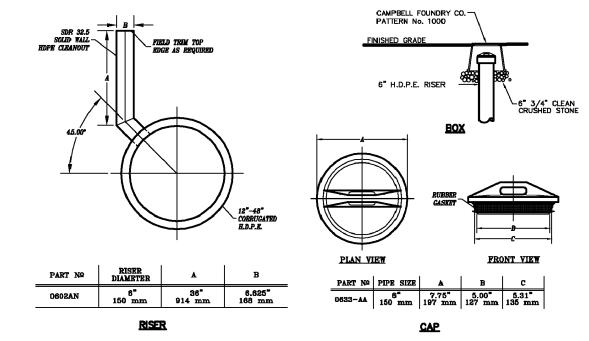


ROOF DRAIN/ ROOF DRAIN COLLECTOR

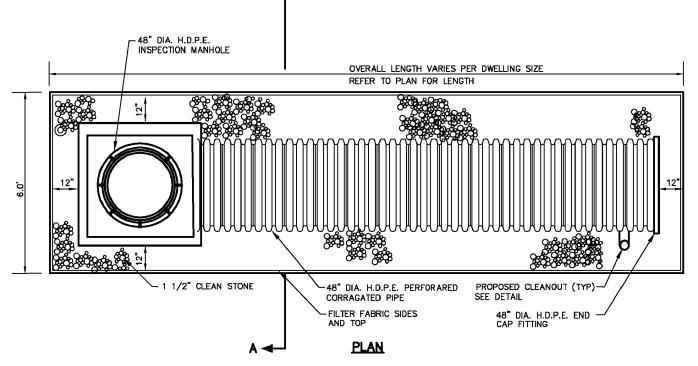


SECTION THROUGH U/G BASIN

48" H.D.P.E. BY HANCOR OR APPROVED EQUAL. FILTER FABRIC SPECIFIED BY MANUFATURER.



H.D.P.E. CLEANOUT DETAIL

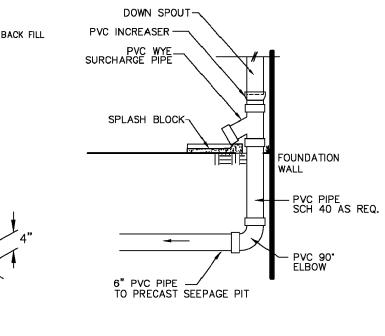


TYPICAL PLAN VIEW OF U.G. DRY WELL

CONCRETE

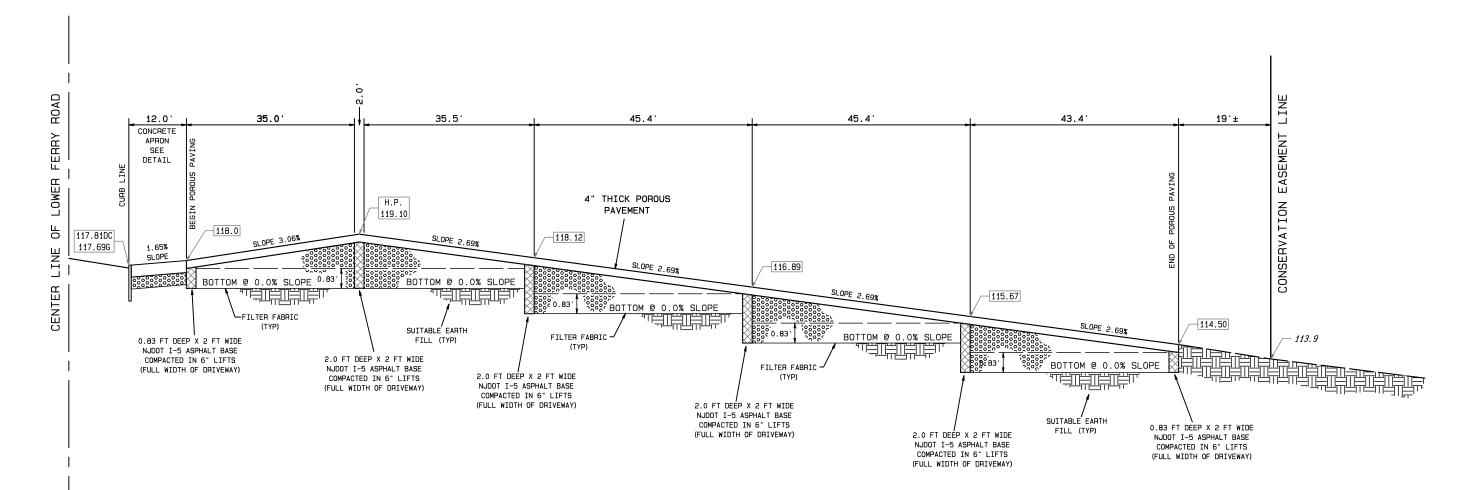
SPLASH BLOCK

NOTE: SIDE WALLS OF EXCAVATION TO BE "ROUGHED" DURING CONSTRUCTION PRIOR TO BACK FILL TO PREVENT SEALING DUE TO COMPACTION FROM EXCAVATION



SPLASH BLOCK DETAIL

ROOF DRAIN CONNECTION W/ OVERFLOW



POROUS PAVEMENT PROFILE - CENTER LINE OF DRIVEWAY NOT TO SCALE

GENERAL NOTES:

- 1. THIS PLAN NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL (S)
- 2. REFER TO "ANTHONY AND LUCILLE DIPASQUALE" FOR DIMENSIONS, DETAILS, NOTES AND REFERENCES.
- 3. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH EWING TOWNSHIP STANDARD DETAILS.

TRENTON ENGINEERING CO., INC. PROFESSIONAL ENGINEERS, PLANNERS AND LAND SURVEYORS ESTABLISHED 1907 2193 SPRUCE STREET TRENTON , N.J. 08638 TEL. NO. 609-882-0616 FAX. NO. 609-882-6004 D.F. STRATTON, L.S. N.J.-27523 P.P.N.J.-5021 C.W. STRATTON, L.S. N.J.-43355 JOSEPH MESTER N.J.PROFESSIONAL ENGINEER AND PROFESSIONAL LAND SURVEYOR No. 19462 Joseph Meeter

REVISIONS

CONSTRUCTION DETAILS LOWER FERRY ROAD

BLOCK 364.01 LOT 22 HOMES BY TLC, INC.

EWING TOWNSHIP MERCER CO., NEW JERSEY FILE 108-9

SCALE SHOWN

SHEET 5

TAX MAP DATA

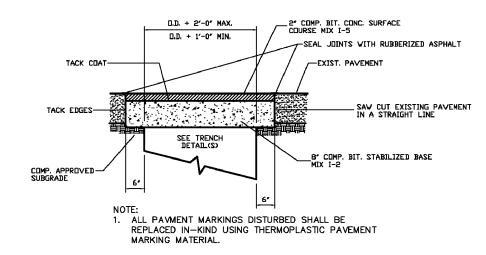
LOT BLOCK PAGE

THRU 364.01 57

DATE 12/5/22

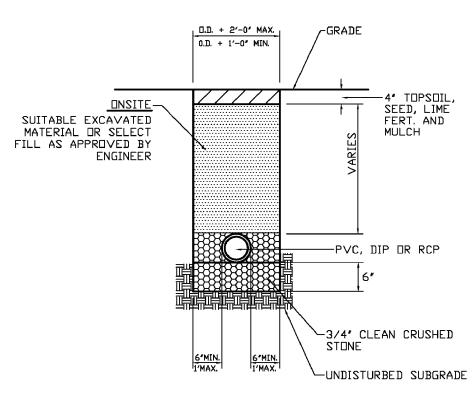
DRAWN BY: JTH

INV. 44582

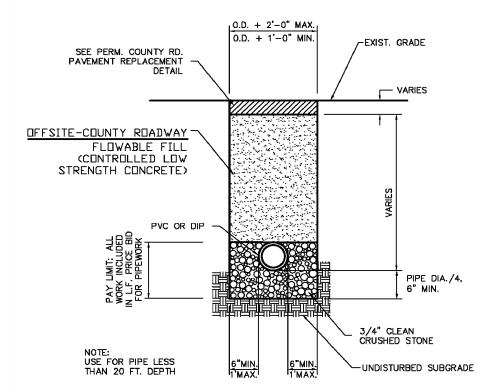


PERMANENT PAVEMENT REPLACEMENT MERCER CO. ROADWAY

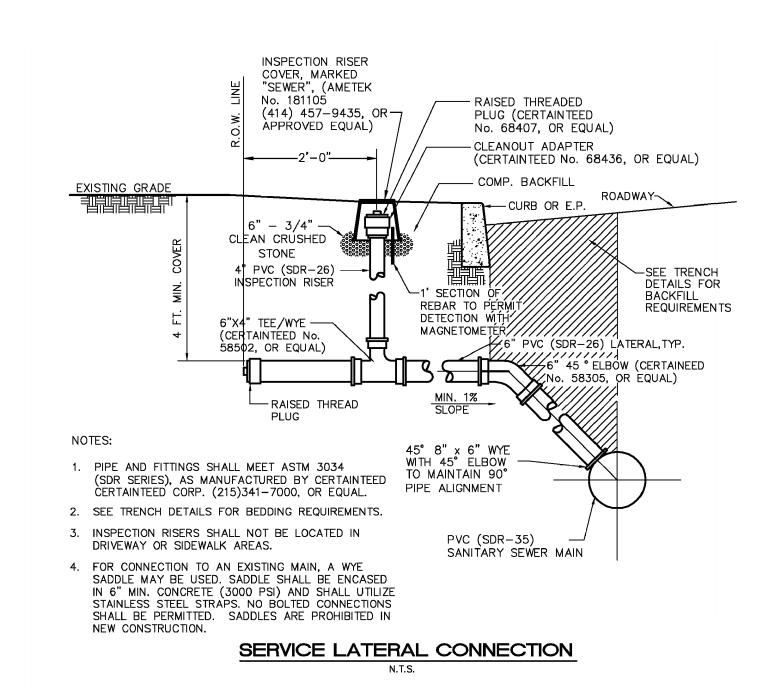
ALL ROAD TRENCH REPAIRS TO LOWER FERRRY ROAD WILL BE TO THE SATISFACTION OF THE COUNTY ENGINEERING DEPARTMENT.

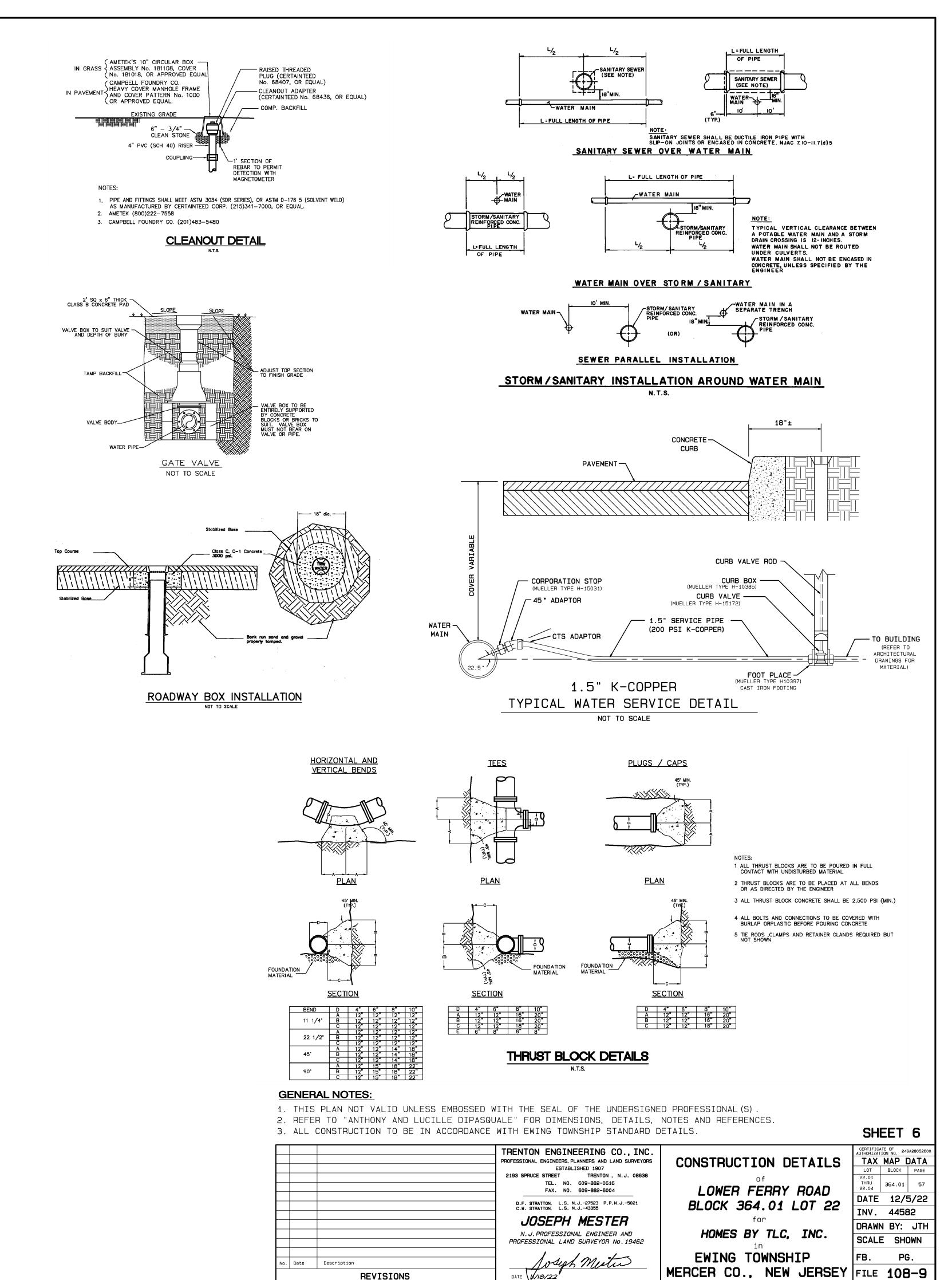


TYPICAL TRENCH OFF-ROAD AREA

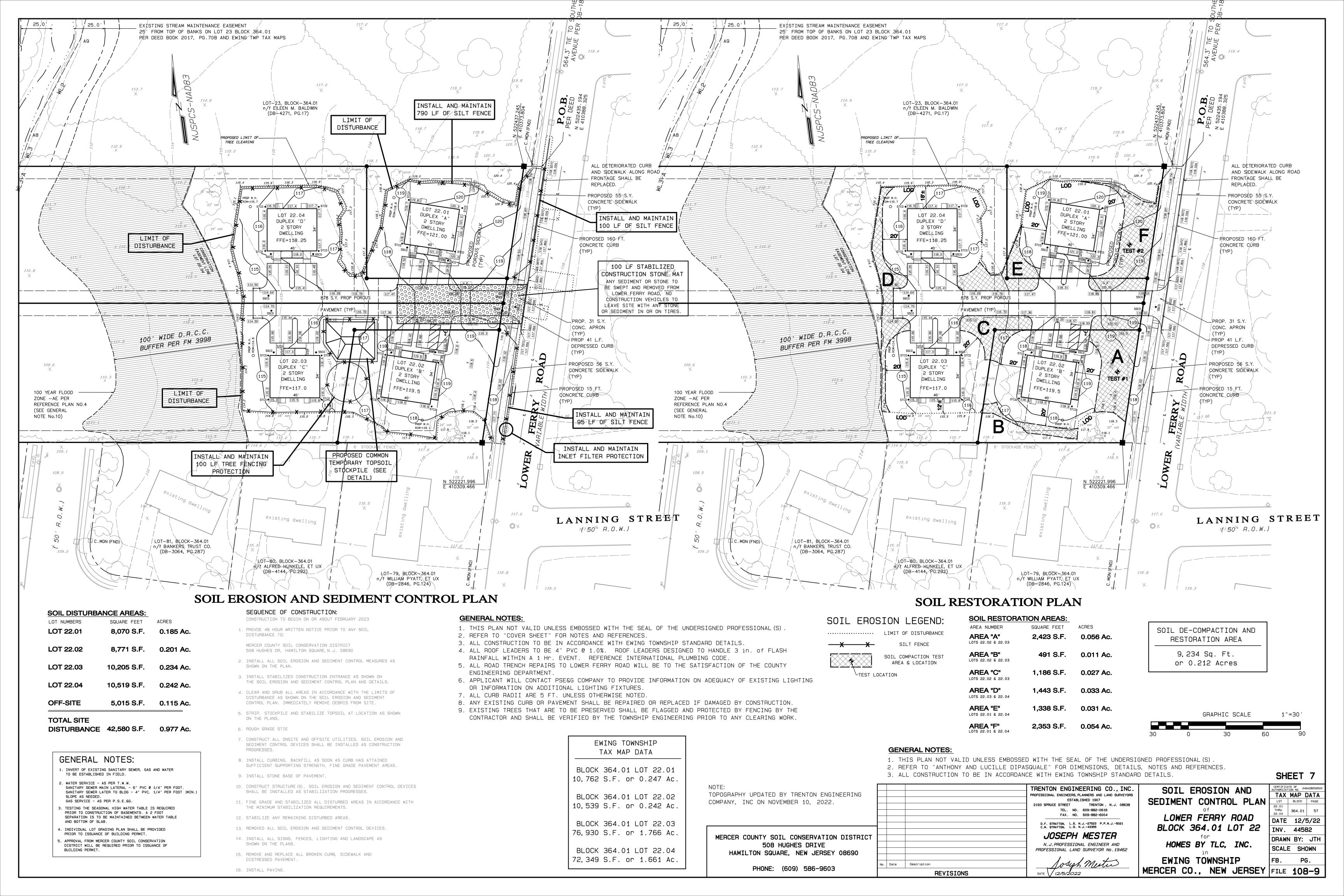


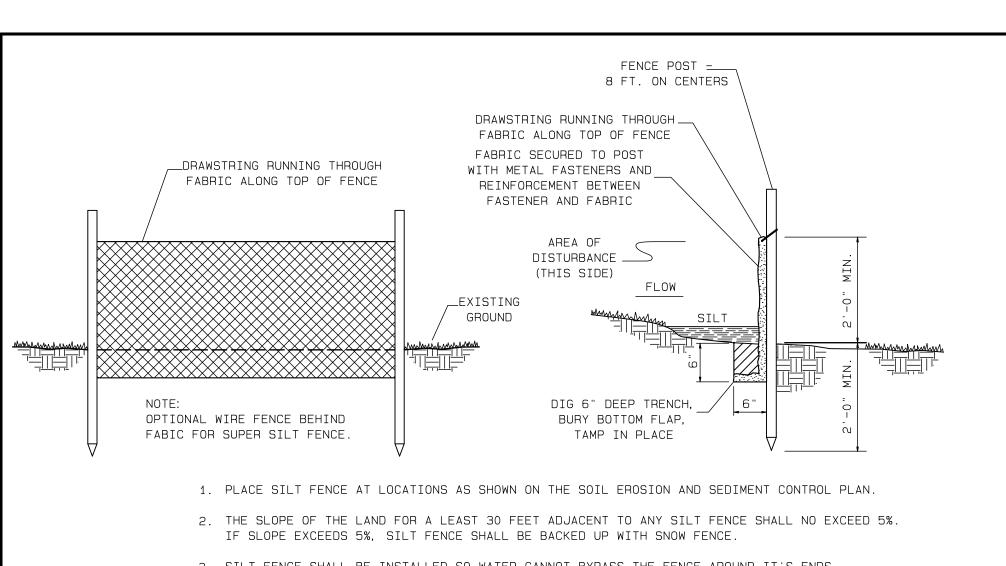
COUNTY ROAD (LOWER FERRY ROAD)





REVISIONS





- 3. SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE AROUND IT'S ENDS.
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
- 5. SILT FENCE SHALL BE REMOVED WHEN CONTRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED

SILT FENCE CONSTRUCTION AND INSTALLATION DETAIL

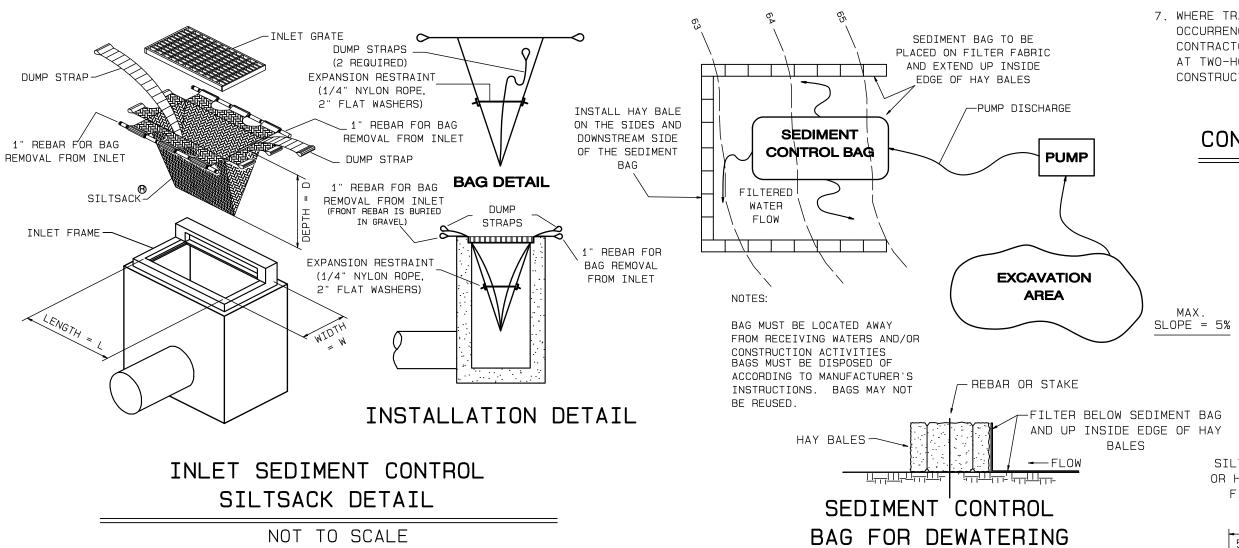


FIGURE 14-4

2

EXISTING TREE

TO BE

PROTECTED

4' HIGH SNOWFENCE

PLACED AT THE DRIP

LINE OF TREE TO BE

PROTECTED.

[OR 4' MIN.

4' HIGH SNOWFENCE

PLACED AT THE DRIP

LINE OF TREE TO BE

STEEL SNOWFENCE

1. TREE PROTECTION SHALL BE PROVIDED FOR ANY AND ALL TREES TO BE

3. BOARDS SHALL NOT BE NAILED TO TREES DURING CONSTRUCTION.

4. ROOTS SHALL NOT BE CUT IN AN AREA INSIDE THE DRIP LINE OF

5. DAMAGED TRUNKS OR ROOTS WILL BE PAINTED IMMEDIATELY WITH A

6. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE DONE FLUSH WITH

TRUNK OR MAIN LIMB, PAINTED IMMEDIATELY WITH A GOOD GRADE

TREE PROTECTION DETAIL

PRESERVED DURING AND AFTER CONSTRUCTION

TREE AND ENCIRCLE THE ENTIRE TREE.

POSTS 2' 0.C

EXISTING_

GROUND

PLAN VIEW

THE TREE BRANCHES.

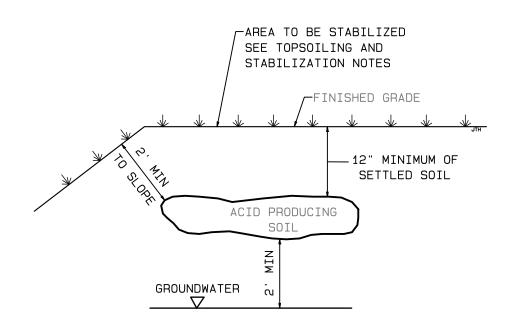
GOOD GRADE OF TREE PAINT.

OF A LICENCED NURSERYMAN

PROTECTED.

_DRIP LINE

OR 4' MIN.



- 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 MINERIALS WILL PRODUCE SULFURIC ACID WHEN EXPOSED TO THE AIR OR SURFACE WATERS.
- 3. SOIL USED TO COVER ACID PRODUCING SOIL SHALL HAVE A PH OF 5.0 OR
- 4. AREAS ON SLOPES SHALL BE COVERED WITH 2 FEET OF SUITABLE SOIL HAVING A PH OF 5.0 OR MORE. THE TOP 5 INCHES (UNSETTLED) SHALL BE TOPSOILED.
- 5. AREAS WHERE TREES AND/OR SHRUBS WILL BE PLANTED SHALL ALSO BE COVERED
- WITHA MINIMUM OF 3 FEET OF SETTLED SOIL WITH A PH OF 5.0 OR MORE.
- 6. ACID SOIL PLACEMENT SHALL AVOID IF POSSIBLE PLACEMENT IN AREAS PROPOSED FOR FUTURE RESIDENTIAL LOTS.
- 7. TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOIL MATERIAL TO BE EXPOSED FOR MORE THAN 30 DAYS SHALL BE COVERED WITH HEAVY GRADE SHEETS OF POLYETHYLENE OR 3" TO 6" OF WOOD CHIPS
- 8. PRIOR TO BURIAL OF ACID PRODUCING SOIL, THE SOIL SHALL BE TREATED WITH LIMESTONE APPLIED AT A RATE OF 6 TONS PER ACRE (275 LBS PER 1000 S.F.)

MANAGEMENT OF HIGH ACID SOILS

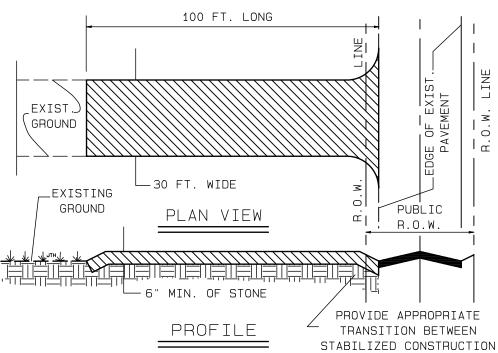
GENERAL NOTES:

N.T.S.

1. THIS PLAN NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL (S)

2. REFER TO "ANTHONY AND LUCILLE DIPASQUALE" FOR DIMENSIONS, DETAILS, NOTES AND REFERENCES.

3. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH EWING TOWNSHIP STANDARD DETAILS



- ENTRANCE AND R.O.W. *NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE
- 1. PLACED STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- 2. STONE SIZE SHALL BE 1 1/2" CLEAN CRUSHED STONE.

ONLY (TYP.)

- 3. THE THICKNESS OF THE STAB. CONST. ENT. SHALL NOT BE LESS THAN 6" THICK.
- 4. THE WIDTH AT THE EXISTING PAVING SHALL NOT BE LESS THAN THE FULL WIDTH OF POINT OF INGRESS AND EGRESS.
- 5. THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W./PAVEMENT THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP
- 6. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
- 7. WHERE TRACKING OF SOIL ONTO ROADWAYS IS A CONTINUAL OCCURRENCE. ALL CONTRACTORS, BOTH SITE AND DWELLING CONTRACTORS, SHALL BE REQUIRED TO BROOMSWEEP THE ROADWAY AT TWO-HOUR INTERVALS MINIMUM AND PRIOR TO LEAVING THE CONSTRUCTION SITE AT THE DAY END.

STABILIZED CONSTRUCTION ACCESS DETAIL

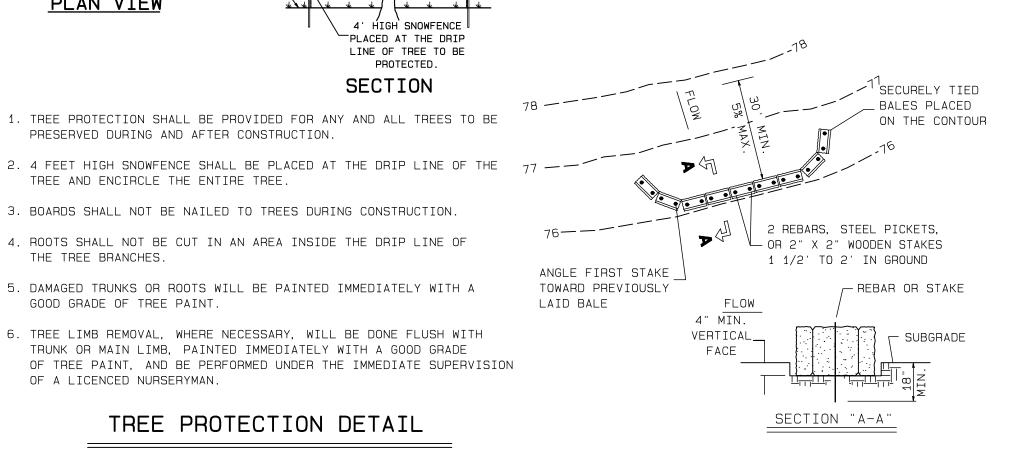
N.T.S.

SLOPE = 5%SILT FENCE OR HAY BALE FILTER 5% MAX. 5% MAX.

- SILT FENCE OR HAY BALE FILTER
- PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- 2. ALL SIDE SLOPES SHALL BE 3 TO 1 OR FLATTER.
- 3. STOCKPILE SHALL RECIEVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQ.
- 4. SILT FENCE OR HAY BALE FILTER SHALL BE INSTALLED AS DETAILED HEREON.

TOPSOIL STOCKPILE DETAIL

NOT TO SCALE



BALE SEDIMENT BARRIERS PLACEMENT AND ANCHORING DETAIL

FIGURE 23-1

MERCER COUNTY SCD SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING LAND DISTURBANCE ACTIVITY NOTICE MAY BE MAILED, FAXED OR EMAILED TO:
- MCSCD, 590 HUGHES DRIVE, HAMILTON SQUARE, NJ 08690
- PHONE: (609) 586-9603 FAX: (609) 586-1117

EMAIL: Pauls1mercer@aol.com

SEDIMENT CONTROL PLAN

- 2. IF APPLICABLE TO THIS PROJECT, THE OWER SHOULD BE AWARE OF HIS OR HER OBLIGATION TO FILE FOR A NJPDES CONSTRUCTION ACTIVITY STORMWATER 5G3 PERMIT (NJG0088323) VIA THE NJDEP ONLINE PERMITTING SYSTEM (www.nj.gov/dep/online) AND TO MAINTAIN THE ASSOCIATED BEST MANAGEMENT PRACTICES AND STORMWATER POLLUTION PREVENTION PLAN SELF-INSPECTION LOGBOOK ONSITE AT ALL TIMES. THIS PERMIT MUST BE FILED PRIOR TO THE START OF SOIL DISTURBANCE. THE ONLINE APPLICATION PROCESS WILL REQUIRE ENTRY OF AN SCD CERTIFICATION CODE, WHICH IS PROVIDED BY THE SOIL CONSERVATION DISTRICT UPON CERTIFICATION OF THE SOIL EROSION AND
- 3. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP 4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTRUBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL
- CURRENT STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS. 5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES. 6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AS

OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL

EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISED. 7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NJ. IF LANGUAGE CONTAINED WITHIN ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTORY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR

ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE

- MORE RESTRICTIVE PERMIT REQUIREMENTS SHALL BE FOLLOWED. 8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 1 1/2" TO 2 1/2" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE WIDTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE, DEPENDING ON SITE CONDITIONS AND AS REQUIRED BY THE STANDARD. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF EGRESS IS TO A COUNTY ROAD. THEN A 20 FT LONG PAVED
- THE STONE ACCESS PAD. 9. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS BELATED TO DETENTION BASINS. SWALES AND SEQUENCE OF CONSTRUCTION HAVE BEEN MET

TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND

- 10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER, OR IF THE AREA IS NOT TOPSOILED, THEN THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE. ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H: 1V SHALL BE PROVIDED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (i.e. STEEP SLOPES, ROADWAY EMBANKMENTS, ENVIRONMENTALLY SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING
- 11. ANY STEEP SLOPES (i.e. SLOPES GREATER THAN 3:1) RECEIVING PIPLETNE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.
- 12. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS ADN ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDED AREAS. SAVE ALL TAGS AND/OR BAGS USED FOR SEED. LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT MIXTURES AND RATES MEET THE
- STANDARDS. 13. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED. ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER. SHALL BE REMOVED OR TREATED IN SUCH A WAY TAHT 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, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED
- 14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL BOUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING. COMPACTED SURFACES SHALL BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE 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.) 15. PRIOR TO SEEDING. TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED
- STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION 16. 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 BURTED WITH LIMESTONE IN ACCORDANCE WITH THE
- STANDARD AND BE COVERED WITH A MINIMUM OF 12" OF SOIL HAVING A pH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS. OR IS LOCATED ON A SLOPE. THEN THE AREA SHALL BE COVERED WITH A MINIMUM OF 24" OF SOIL HAVING A DH OF 5 OR MORE. 7. MULCHING TO THE STANDARDS IS REQUIRED FOR ORTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROC'S ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE
- COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL BOC. OR THE COMPLETION OF WORK IN A GIVEN AREA. 18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER. LIME ETC.. ALONG WITH MINIMAL AMOUTS OF MULCH TO PROMOT CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF THE SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A MINIMUM RATE OF 1500 LBS PER ACRE IN SECOND STEP. THE USE OF A HYDRO-MULCH. AS OPPOSED TO STRAW. IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARD. THE USE OF HYDRO-MULCH. AS OPPOSED TO STRAW. IS LIMITED TO OPTIMUM SEEDING

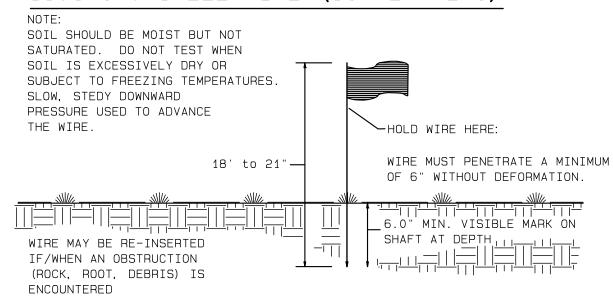
DATES AS LISTED IN THE STANDARDS. THE USE OF HYDRO-MULCH ON SLOPED

- AREAS IS DISCOURAGED 19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED TRACKED. OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED 20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION. AND FOR EMPLOYING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION DISTRICT
- 21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL 22. ALL DETENTION/RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUSIVE OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SURFACES PERMANENT STABILIZATION INCLUDES. BUT MAY NOT BE LIMITED TO: TOPSOIL SEED. STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING. ALL AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW
- CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION 23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITHIN PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.
- 24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATION, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERTATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE
- 25. ALL SWALES OR CHANNELS THAT WILL RECEIVE BUNGEF FROM PAVED SUBFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.
- 26. NJSA 4: 24-39 et. seq. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE. ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVISUAL LOTS IN SUBDIVISION MUST BE COMPLETE BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

HANDHELD SOIL PENETROMETER TEST

GAGE READING 300 PSI OR LESS SOIL SHOULD BE MOIST BUT NOT SATURATED. AT 6" DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEDY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. PROBE MUST PENETRATE AT LEAST 6" WITH LESS THAN 300 PSI READING ON THE GAUGE. 6.0" MIN. VISIBLE MARK ON SHAFT AT DEPTH. PENETROMETER MAY BE RE-INSERTED IF/WHEN AN OBSTRUCTION (ROCK, ROOT, DEBRIS) IS ENCOUNTERED SOIL TYPE

PROBING WIRE TEST 15.5 GA. STEEL WIRE (SURVEY FLAG)



SOIL DE-COMPACTION AND TESTING REQUIREMENTS

SOIL COMPACTION TESTING REQUIREMENTS

- 1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENCHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
- 2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
- 3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALLBE USED TO MARK LOCATIONS OF TESTS. AND ATTACHED TO THE COMPACTION MITIGATION VERIFICATION FORM. AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- 4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWER SHALL HVE THE OPTION TO PERFORM FITHER (1) COMPACTION MITIGATION OVER THE ENTIRE AFRA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS) OR (2) PERFORM ADDITIONAL MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

SOIL COMPACTION TESTING REQUIREMENTS:

- A. PROBING WIRE TEST (SEE DETAIL)
- B. HAND-HELD PENETROMETER TEST (SEE DETAIL) C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED) D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
- ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT, MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

PROCEDURES FOR SOIL COMPACTION MITIGATION

PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

5. IRRIGATION (WHERE FEASIBLE)

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

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" (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOI
- D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURE, CHANNEL STABILIZATION MEASURES. SEDIMENT BASIN, AND WATERWAYS. SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING. 2. <u>SEEDBED PREPARATION</u> A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH
- HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TESTRECOMMENDATIONS SUCH AS THOSE OFFERED BY BUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (http://njaes.rutgers.edu/county/). FERTILIZEF 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 OF SEEDING.
- 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 DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED. NOTE: REMOVE FROM THE SURFACE ALL STONES 2" OR LARGER IN ANY DIMENSION. REMOVE ALL CONSTRUCTION MATERIAL
- AND OTHER DEBRIS. 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 PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

A. SELECT A MIXTURE FROM TABLE 4-2 BELOW OR USE 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 MFANS 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 4-2 PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES CHART MIXTURES 1 TO 7 PLANTING RATES FOR WARM SEASON GRASSES SHALL BE THE
- AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION 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 4-2 PERMANENT VEGETATIVE MIXTURES PLANTING RATES AND PLANTING DATES MIXTURES 8 TO 20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PURE LIVE SEED IS NOT REQUIRED FOR COOL SEASON GRASSES
- B CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDING. SEED SHALL BE INCORPORATED INTO THE SOI WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 TNCH. BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MA BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLE 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 SEED. SHORT FIBERED MULCH MAY B APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION IV MULCHING BELOW) HYDROSEEDING IS NOT A PERFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED IN THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH

- MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABILISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS
- 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 (TACKIFYIN OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH S NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.
- APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALL SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS 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 SLOPE AND COSTS. 1. <u>PEG AND TWINE</u> - 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. 2. <u>MULCH NETTING</u>S - STAPLE PAPER. JUTE, COTTON OR PLASTIC NETTING TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
- 3. <u>CRIMPER (MUL</u>CH ANCHORING TOOL) A TRACTOR DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC-HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER JLCH 3 TO 4 INCHES INTO 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 TON PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED
- 4. <u>LIQUID MULCH-</u>BINDERS MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH. A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CREST OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN

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 TUREGRASS USE AT RATES AND WEATHER CONDITIONS AS RECCOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE. SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
- 2. SYNTHETIC BINDERS A HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED, 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. ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF THE OTHER PRODUCTS
- 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 PROJUCT, 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 APPLLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM

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.

PROVIDE SOIL COVERAGE

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

- IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABILISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES. 6. TOPDRESSING
 - SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A - SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE TOPDRESS WITH 10-10-10 OR EQUILVALENT AT 300 LBS PER ACRE OR 7 LBS 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 4-2 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED
 - THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS

BE NEGLECTED OR OTHERWISE MISMANAGED.

SPECIES) AND MOWED ONCE.

PERMANENT SEEDING MIXTURES:

70% TURF TYPE TALL FESCUE 20% PERENNIAL RYE GRASS 10% KENTUCKY BLUE GRASS

APPLY AT A RATE OF 200# PER ACRE

SHEET 8

TAX MAP DATA

BLOCK PAG

TRENTON ENGINEERING CO., INC. PROFESSIONAL ENGINEERS, PLANNERS AND LAND SURVEYOR ESTABLISHED 1907 2193 SPRUCE STREET TRENTON , N.J. 08638 TEL. NO. 609-882-0616 FAX. NO. 609-882-6004 D.F. STRATTON, L.S. N.J.-27523 P.P.N.J.-5021 C.W. STRATTON, L.S. N.J.-43355 JOSEPH MESTER N.J.PROFESSIONAL ENGINEER AND PROFESSIONAL LAND SURVEYOR No. 19462

SOIL EROSION AND SEDIMENT CONTROL DETAILS LOWER FERRY ROAD BLOCK 364.01 LOT 22

> HOMES BY TLC, INC. EWING TOWNSHIP MERCER CO., NEW JERSEY | FILE 108-9

THRU 364.01 5 DATE 12/5/22 INV. 44582 DRAWN BY: JTI SCALE SHOWN

508 HUGHES DRIVE HAMILTON SQUARE, NEW JERSEY 08690

PHONE: (609) 586-9603

MERCER COUNTY SOIL CONSERVATION DISTRICT

REVISIONS

TREE PROTECTION DURING CONSTRUCTION

Methods and Materials

See Tree Protection Detail for correct placement of tree protection.

Box trees within 25 feet of a building site to prevent mechanical injury. Fencing, or other barrier should be installed at the drip line of the tree branches or beyond. Tree root systems commonly extend well beyond the drip line.

Boards will not be nailed to trees during building operations.

Feeder roots should not be cut in an area inside the drip line of the tree branches.

Damaged trunks or exposed roots should have damaged bark removed immediately and no paint shall be applied. Exposed roots should be covered with topsoil immediately after excavation is complete. Roots shall be pruned to give a clean, sharp surface amenable to healing. Roots exposed during hot weather should be irrigated to prevent permanent tree injury. Care for serious injury should be prescribed by a professional forester or certified tree expert.

Tree limb removal., where necessary, will be done as natural target pruning to remove the desired branch as close as possible to the branch collar. There should be NO flush cuts. Flush cuts destroy a major defense system of the tree. See Tree Pruning Details. No tree paint shall be applied. All cuts shall be made at the outside edge of the branch collar. Cuts made too far beyond the branch collar may lead to excess sprouting, cracks and rot. Removal of a "V" crotch should be considered for free standing specimen trees to avoid future splitting damage.

<u>TOPSOILING</u>

<u>Materials</u>

Topsoil should be friable1, loamy2, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 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.

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.

1 Friable means easily crumbles in the fingers, as defined in most soils texts.

2 Loamy means texture groups consisting of coarse loamy sands, sandy loam, fine and very fine sandy loam, loam, silt loam, clay loam, sandy clay loam and silty clay loam textures and having less than \$35 coarse fragments (particles less than 2mm in size as defined in the Glossary of Soil Science Terms, 1996, Soil Science Society of America.

Stripping and Stockpiling

Field exploration should be made to determine whether quantity and or quality of surface soil justifies

Stripping should be confined to the immediate construction area.

Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5. In lieu of soil tests, see lime rate guide in seedbed preparation for Permanent Vegetative Cover for Soil Stabilization.

A 4-6 inch stripping depth is common, but may vary depending on the particular soil.

Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental

Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent or Temporary Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on

Site Preparation

Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified

Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.

As quidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a

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.).

<u>Applying Topsoil</u>

Topsoil should be handled only when it is dry enough to work without damaging soil structure.

A uniform application to a depth of 5 inches (unsettled) is recommended. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 24 inches of soil having a pH of 5.0

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Where Applicable On exposed soils that have the potential for causing off—site environmental damage.

Methods and Materials

Site Preparation

Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring.

Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways.

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 (cables, irrigation systems, etc.).

Seedbed Preparation

Apply limestone in accordance with soil type (Clay, clay loam, and high organic soil -3 Tons/Acre, Sandy loam, loam, silt loam -2 Tons/Acres, Loamy sand, sand -1 Ton/Acre) and the results of soil testing. 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 est indicates otherwise. 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. . Pulverized dolomitic limestone is preferred — for most soils South of the New

Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be

retilled in accordance with the above Soils high in sulfides or having a pH of 4 or less refer to Management of High Acid Producing

Use the following seed mixture(s) and rates based on time of year:

placement may be 1/4 inch deeper on coarse textured soil.

Early Spring/Late Summer to Early Fall 100% Perennial Ryegrass

100% Cereal Rye

Rate = 100 LBS/Acre

Rate = 112 LBS/Acre

Mid-Summer

40% Pearl Millet

Rate = 100 LBS/Acre

40% Millet (German or Hungarian) 20% Weeping Lovegrass

Conventional Seeding — Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed

Hydroseeding - Hysroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder 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. Hydroseeding may be used for areas too steep for conventional equipment to traverse or oo obstructed with rocks, stumps, etc.

Mulching

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

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

Straw or Hay — Unnrotted small grain straw, hay free of seeds, or salt hay 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 approximately 85% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchorina shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a cris—cross and a square pattern. Secure twine around each peg with two or more round turns.

Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

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.

Liquid Mulch—Binders — May be used to anchor salt hay, hay or straw mulch. 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. Use one of the following:

Emulsified asphalt - (SS- 1, CSS- 1, CMS-2, MS-2, RS- 1, RS-2, CRS- 1, and CRS-2). Apply 0.04 gal./sq./yd. or 194 gal./acre on flat areas and on slopes less than 8 feet or more high, use 0.075 gal./sq. yd. or 363 gal./acre. These materials may be difficult to apply uniformly and will discolor surfaces.

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 turfgrass. 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

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 r water. It shall be applied at rates recommended by the manufacturer and remain tacky until

Note: All names given above are registered trade names. This does not constitute a

recommendation of these products to the exclusion of other products.

Wood-fiber or paper-fiber mulch - Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum

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, forma mulch mat. Pelletized mulch shall be applied in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 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.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

seeding periods in spring and fall.

Site Preparation

Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring

Immediately prior to seeding and topsoil application, 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 (cables, irrigation systems, etc.).

Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways,

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 in accordance with soil type (Clay, clay loam, and high organic soil— 3 Tons/Acre, Sandy loam, loam, silt loam—2 Tons/Acres, Loamy sand, sand—1 Ton/Acre) and the results of 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. Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick-Trenton line.

Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

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 (cables, irrigation systems, etc.).

High acid producing soil

inches of soil having a pH of 5 or more before initiating seedbed preparation. See Management of High Acid Producing Soils. Seeding

Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12

Permanent seeding shall only take place between March 1 to April 30 and August 15 to November 15. Seeding during all other times of the year shall be temporary seeding (See notes

Use the following seed mixture(s) based on land use and conditions:

Lawns — Quality Sun and Shade 45% Perennial Kyegrass* 20% Chewing Fescue

Rate = 200 LBS/Acre

20% Creeping Red Fescue 15% Kentucky Bluegrass (* Include at least two different varieties in mix) Rate = 200 LBS/Acre

Lawns — Low Maintenance, Droughty and Heavy Traffic Areas 80% Tall Fescue Turf Type (Low Grow Variety)*# 10% Perennial Ryegrass (Low Grow Variety) 10% Kentucky Bluegrass (* Include three different varieties in mix) (# Fxclude K-31)

Detention Basins 70% Tall Turf Type Fescue*# 20% Kentucky Bluegrass 10% Perennial Ryegrass * Include at least two different varieties in mix) (# Exclude K-31)

Rate = 200 LBS/Acre Waterways and Wet Detention Basins* 40% Switcharass 30% Canada Bluegrass or Smooth Bluegrass

15% Rough Bluegrass(Shade) or Tall Fescue(Sun) 10% Alsike Clover or Ladino White Clover 10% Birdsfoot Trefoil or Creeping Foxtail 4% Japanese Millet (* Should not be moved less than 6") Rate = 100 LBS/Acre

Wildflower Meadow 72% Hard or Sheeps Fescue 22% Northeast/Mid-Atlantic Wildflower Mixture 6" Birdsfoot Trefoil Rate = 50 LBS/Acre

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

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.

Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper

Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder 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. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

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

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

Straw or Hay — Unrotted small grain straw, hay free of seeds, or salt hay 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. Spread mulch uniformly by hand or mechanically so that approximately 85% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds 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,

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 peas in a cris—cross and a square pattern. Secure twine around each peg with two or more round turns.

Mulch Nettings — Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

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.

Liquid Mulch—Binders — May be used to anchor salt hay, hay or straw mulch. 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. Use one of the following: Emulsified asphalt - (SS- 1, CSS- 1, CMS-2, MS-2, RS- 1, RS-2, CRS- 1, and CRS-2). Apply 0.04 gal./sq./yd. or 194 gal./acre on flat areas and on slopes less than 8 feet or more high. use 0.075 gal./sq. yd. or 363 gal./acre. These materials may be difficult to apply uniformly and will discolor surfaces. 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 turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1.500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

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, forma mulch mat. Pelletized mulch shall be applied in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 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.

<u>Irrigation</u>

If soil moisture is deficient, and mulch is not used, supply new seedings with adequate water (a minimum of 1/4 inch twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

Since slow release nitrogen fertilizer (water insoluble) is prescribed in Section IL A. Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists to the extent that turf failure may develop. In that instance, topdress with 10—10—10 or equivalent at 400 pounds per acre or 10 pounds per 1,000

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 see application rates specified above 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.

STPARBINGESATION WITH MULCH ONLY

Where Applicable

Site Preparation

This practice is applicable to greas 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.

<u>Methods and Materials</u>

Grade as needed and feasible to permit the use of conventional equipment for seed bed preparation, seeding, mulch application, and mulch anchoring.

Install needed erosion control practices or facilities such as diversions, grade stabilization

structures, channel stabilization measures, sediment basins, and waterways. **Protective Materials**

recommended by the manufacturer.

Unrotted small-grain straw, or salt hay 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 a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation

Asphalt emulsion is recommended at the rate of 600 to 1,200 gallons per acre. This is suitable for a limited period of time where travel by people, animals, or machines is not a problem. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as

Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.

minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.

Mulch netting, such as paper jute, excelsior, cotton, or plastic, maybe used. 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.

Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a





<u>Anchoring</u>

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.

Peg and Twine —Drive 8 to 10 inch woodenpeastowithin 2 to 3 inches of the soil surface every4 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 cris—cross and a square pattern. Secure twine around each peg with two or more round turns.

Mulch Nettings — Staple paper, cotton, or plastic nettings over mulch. Use a degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long. 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

Liquid Mulch-Binders - 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. Use one of

be about 3 to 4 inches. On sloping land, the operation should be on the contour

Emulsified asphalt - (SS- 1, CSS- 1, CMS-2, MS-2, RS- 1, RS-2, CRS- 1, and CRS-2). Apply 0.04 gal./sq./yd. or 194 gal./acre on flat areas and on slopes less than 8 feet or more high, use 0.075 gal./sq. yd. or 363 gal./acre. These materials may be difficult to apply uniformly and will

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 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. Vegetable based gels shall be applied at rates and weather conditions recommended by the

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.

MANAGEMENT OF HIGH ACID PRODUCING SOILS

especially when this material has a high clay content

This practice is applicable to any high acid producing soil materials. Such materials have been found in the Coastal Plain areas of Burlington, Camden, Gloucester, Mercer, Middlesex, Monmouth, Ocean and Salem Counties.

Methods and Materials

Limit the excavation area and exposure time when high acid producing soils are encountered.

Topsoil stripped from the site shall be stored separately from temporarily stockpiled high acid producing Stockpiles of high acid producing soil should be located on level land to minimize its movement,

Temporarily stockpiled high acid producing soil. Material to be exposed more than 30 days 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 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.

High acid producing soils with a pH of 4 or less, or containing iron sulfide, (including borrow from cuts) shall be ultimately placed or buried (See Detail) with limestone applied at the rate of 6 tons per acre (or 275 pounds per 1,000 square feet of surface area, and covered with a minimum of 24 inches of settled soil with a pH of 5 or more. 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 leachina

Equipment used for movement of high acid producing soils should be cleaned at the end of each day to prevent spreading of high acid soil materials to other parts of the site, into streams or stormwater conveyances and to protect against accelerated rusting.

dams, silt fence, wood chips) should be installed to limit the movement of high acid producing soils from, ground or off the site. Following burial or removal of high acid producing soil, topsoiling and seeding of the site, monitoring

should continue for approximately 6 to 12 months to assure there is adequate stabilization and that no

at least 2 years or longer if problems occur, to assure there is no migration of potential acid leachate.

high acid soil problems emerge. If problems still exist the affected area must be treated as indicated

Non vegetative erosion control practices (stone tracking pads, strategically placed limestone check

above to correct the problem. Monitoring of areas where high acid producing soil has been placed or buried should be performed for

MAINTAINING VEGETATION

<u>Methods and Materials</u>

A preventive maintenance program anticipates requirements and accomplishes work when it can

be done with least effort and expense to insure adequate vegetative cover. Maintenance should occur on a regular basis, consistent with favorable plant growth, soil, and climatic conditions. This involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire control, weed and pest control, reseeding, and timely repairs.

The degree of preventive maintenance needed depends upon the type of vegetation and its proposed function or use.

Mowing is a recurring practice and its intensity depends upon the function of the ground cover.

On high to moderate maintenance areas, such as lawns, certain recreation fields, and picnic areas, mowing will be frequent (2 to 7 day intervals). Low maintenance areas may be left Fertilizer and lime should be applied as needed to maintain a dense stand of desirable species.

Frequently moved greas and those on sandy soils will require more fertilization.

Lime requirement should be determined by soil testing every 2 or 3 years. Fertilization increases the need for liming. Weed invasion may result from abusive mowing and from inadequate fertilizing and liming. Brush invasion is a common consequence of lack of mowing. The amount of weeds or brush that can be tolerated in any vegetated area depends upon the intended use of the land. Drainage ways are subject to rapid infestation by weed and woody plants. These should be controlled,

since they often reduce drainage way efficiency. Control of weeds or brush is accomplished by

Pest and disease controls are more necessary on high maintenance areas than for low maintenance areas. Recommendations for resolving fertilizer, lime, pest and other maintenance

problems may be obtained from Rutgers Cooperative Extension. Fire hazard is greater where dry vegetation has accumulated. The taller the vegetation, the

Prune trees and shrubs to remove dead or damaged branches. Remove undesirable or invasive plants to maintain integrity of the landscape and enhance quality of permanent vegetative cover.

REFERENCE

using herbicides or mechanical methods.

areater the hazard

"STANDARD FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ADOPTED JULY 1999 BY THE NEW JERSEY STATE SOIL CONSERVATION COMMITEE.

GENERAL NOTES :

1. THIS PLAN NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S). 2. REFER TO "ANTHONY AND LUCILLE DIPASQUALE" FOR DIMENSIONS, DETAILS, NOTES AND REFERENCES 3. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH EWING TOWNSHIP STANDARD DETAILS.

Date Description

REVISIONS

MERCER COUNTY SCD

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is

2. Any disturbed areas that will be left exposed more than 30 days and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to State STANDARDS.

3. Permanent Vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading. Mulch will be used for protection until seeding is established.

4. All work shall be done in accordance with the State STANDARDS for Soil Erosion and Sediment Control in New Jersey.

5. A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days of preliminary grading.

*6. Immediately following initial disturbance or rough grading all critical areas subject to erosion

(ie: steep slopes, roadway embankments) will receive a temporary seeding in combination with

straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to State

*7. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (ie: slopes greater than 3: 1).

8. Traffic control STANDARDS require the installation of a 50' x 30' x 1' pad of 1 1/2" to 2" stone, at all construction driveways, immediately after initial site disturbance.

9. In accordance with the STANDARDS for Permanent Vegetative Cover for soil stabilization, any soil having a pH of 4 or less or containing iron sulfides shall be covered with a minimum of 12" of soil having a pH of 5 or more prior to seedbed preparation.

10. The Mercer County Soil Conservation District shall be notified 48 hours in advance of any

11. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground

12. In that NJSA 4:24-39 et seq., requires that no Certificate of Occupancy be issued before the provisions of the Certified Plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in

subdivisions, will have to be completed prior to the District issuing a Report of Compliance for the issuance of a Certificate of Occupancy by the Municipality.

13. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system

14. 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 & Sediment Control STANDARDS. 15. The Mercer County Soil Conservation District shall be notified of any changes in ownership.

16. Mulching to the STANDARDS is required for obtaining a Conditional Report of compliance. Conditionals are only issued when the season prohibits seeding. 17. Contractor is responsible for keeping all adjacent roads clean during life of construction

18. The developer shall be responsible for remediating any erosion or sediment problems that

arise as a result of ongoing construction at the request of the Mercer County Soil Conservation 19. Hydroseeding is a two step process. The first step includes seed, fertilizer, lime etc. along with minimal amounts of mulch to promote consistency, good seed to soil contact, and give a visual indication of coverage. Upon completion of seeding operation, hydro-mulch should be

applied at a rate of 1500 lbs. per acre in a second step. The use of hydro-mulch, as opposed to

straw, is limited to optimum seeding dates as listed in the STANDARDS. *Where Applicable MERCER COUNTY SOIL CONSERVATION DISTRICT 508 HUGHES DRIVE

HAMILTON SQUARE, N.J. 08690

(609) 586-9603

becoming operational.

DUST CONTROL Where Applicable

This practice is applicable to areas subject to dust blowing and movement where on—site and off—site damage is likely without treatment. Consult with local municipal ordinances on any restrictions.

Methods and Materials

The following methods should be considered for controlling dust:

See Standard of Stabilization with Mulches Only. Vegetative Cover See Standard for: Temporary Vegetative Cover, Permanent Vegetative Cover for Soil Stabilization,

and Permanent Stabilization with Sod. Spray-On Adhesives

On mineral soils (not effective on muck soils). Keep traffic off these areas. <u>Table 16—1: Dust Control Materials</u>

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
Anionic asphalt emulsion	7: 1	Coarse Spray	1200
Latex emulsion	12.5:1	Fine Spray	235
Resin in water	4: 1	Fine Spray	300
Polyacrylamide (PAM)— spray on Polyacrylamide (PAM)— dry spread	Apply according to manufacturer's instructions. Mo also be used as an additive to sediment basins to flocculate and precipitate suspended colloids. See Sediment Basin standard.		
Acidulated Soy Bean Soap Stick	None	Coarse Spray	1200

<u>Tillage</u> To roughen surface and bring clods to the surface. This is a temporary emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, and spring-toothed harrows are examples of equipment

which may produce the desired effect. <u>Sprinkling</u>

Site is sprinkled until the surface is wet.

Solid board fences, snow fences, burlap fences, crate walls, bales of hay, and similar material can be used to control air currents and soil blowing.

Shall be in the form of loose, dry granules or flakes fine enough to feed through commonly used

spreaders at a rate that will keep surface moist but not cause pollution or plant damage. If

used on steeper slopes, then use other practices to prevent washing into streams, or accumulation around plants.

Cover surface with crushed stone or coarse gravel.

SHEET 9

TAX MAP DATA SEDIMENT CONTROL NOTES LOT BLOCK PAG THRU 364.01 57 LOWER FERRY ROAD DATE 12/5/22 BLOCK 364.01 LOT 22 INV. 44582 DRAWN BY: JTI HOMES BY TLC, INC. EWING TOWNSHIP

SOIL EROSION AND

MERCER CO., NEW JERSEY | FILE 108-9

SCALE SHOWN

FAX. NO. 609-882-6004 D.F. STRATTON, L.S. N.J.-27523 P.P.N.J.-5021 C.W. STRATTON, L.S. N.J.-43355 JOSEPH MESTER N.J.PROFESSIONAL ENGINEER AND PROFESSIONAL LAND SURVEYOR No. 19462 Joseph Meeter

TRENTON ENGINEERING CO.. INC.

PROFESSIONAL ENGINEERS, PLANNERS AND LAND SURVEYORS

ESTABLISHED 1907

TEL. NO. 609-882-0616

2193 SPRUCE STREET TRENTON , N.J. 08638