

- NOTES:
1. THE CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING CURB OR PAVEMENT DAMAGED DURING CONSTRUCTION.
  2. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAININGS REQUIRED. REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) FOR MORE INFORMATION.
  3. PURSUANT TO THE ONE CALL LAW, THE CONTRACTOR SHALL CALL 1-800-272-1000 OR 811 PRIOR TO ANY EXCAVATION TO REQUEST A MARK-OUT OF UNDERGROUND UTILITIES.
  4. EXISTING STRUCTURES, PAVEMENT AND DEBRIS SHOWN TO BE REMOVED FROM THE SITE SHALL BE DISPOSED OF ACCORDING TO ALL LOCAL AND STATE REGULATIONS. NO ENVIRONMENTAL TESTING HAS BEEN PERFORMED BY THIS OFFICE.
  5. UTILITY SHUTOFF COORDINATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
  6. PRIOR TO THE DEMOLITION AND REMOVAL OF ANY STRUCTURES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE EXISTING STRUCTURES DO NOT CONTAIN TOXIC AND/OR REGULATED WASTE. ALL TOXIC AND/OR REGULATED WASTE FOUND SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES.
  7. NO DUMPING OF MANMADE OR OTHER MATERIALS, INCLUDING BUT NOT LIMITED TO LAWN CLIPPINGS, BRUSHES, ASHES AND SAWDUST.
  8. ALL EXISTING SANITARY STRUCTURES & PIPES ARE TO BE KEPT IN OPERATION UNTIL THE PROPOSED SANITARY SYSTEM IS CONSTRUCTED AND FULLY OPERATIONAL.

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REVISIONS

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION
1	11/19/2021	UPDATED BUILDING FOOTPRINT PER ARCHITECT	AUJ		
2	11/16/2022	REVISED PER FSD REVIEW LETTER DATED 10/29/2021	AUJ		

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N.J. C.O.A. #: 245A27985500

USE VARIANCE &  
PRELIMINARY AND FINAL  
MAJOR SITE PLAN  
FOR  
DCH BRUNSWICK  
TOYOTA

BLOCK 143.05,  
LOTS 18.02, 19.01 & 21.01  
TOWNSHIP OF NORTH  
BRUNSWICK  
MIDDLESEX COUNTY  
NEW JERSEY

**Colliers** RED BANK (Headquarters)  
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SCALE: AS SHOWN DATE: 8/18/21 DRAWN BY: EGH CHECKED BY: MFG  
PROJECT NUMBER: 19003878A DRAWING NAME: C-DEMO

SHEET TITLE:  
EXISTING  
CONDITIONS/DEMOLITION  
PLAN

SHEET NUMBER:  
2 of 15

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



REV	DATE	DRAWN BY	DESCRIPTION
1	11/19/2021	AJU	UPDATED BUILDING FOOTPRINT PER ARCHITECT
2	11/16/2022	AJU	REVISED PER FSD REVIEW LETTER DATED 10/29/2021

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USE VARIANCE &  
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MAJOR SITE PLAN  
FOR  
DCH BRUNSWICK  
TOYOTA

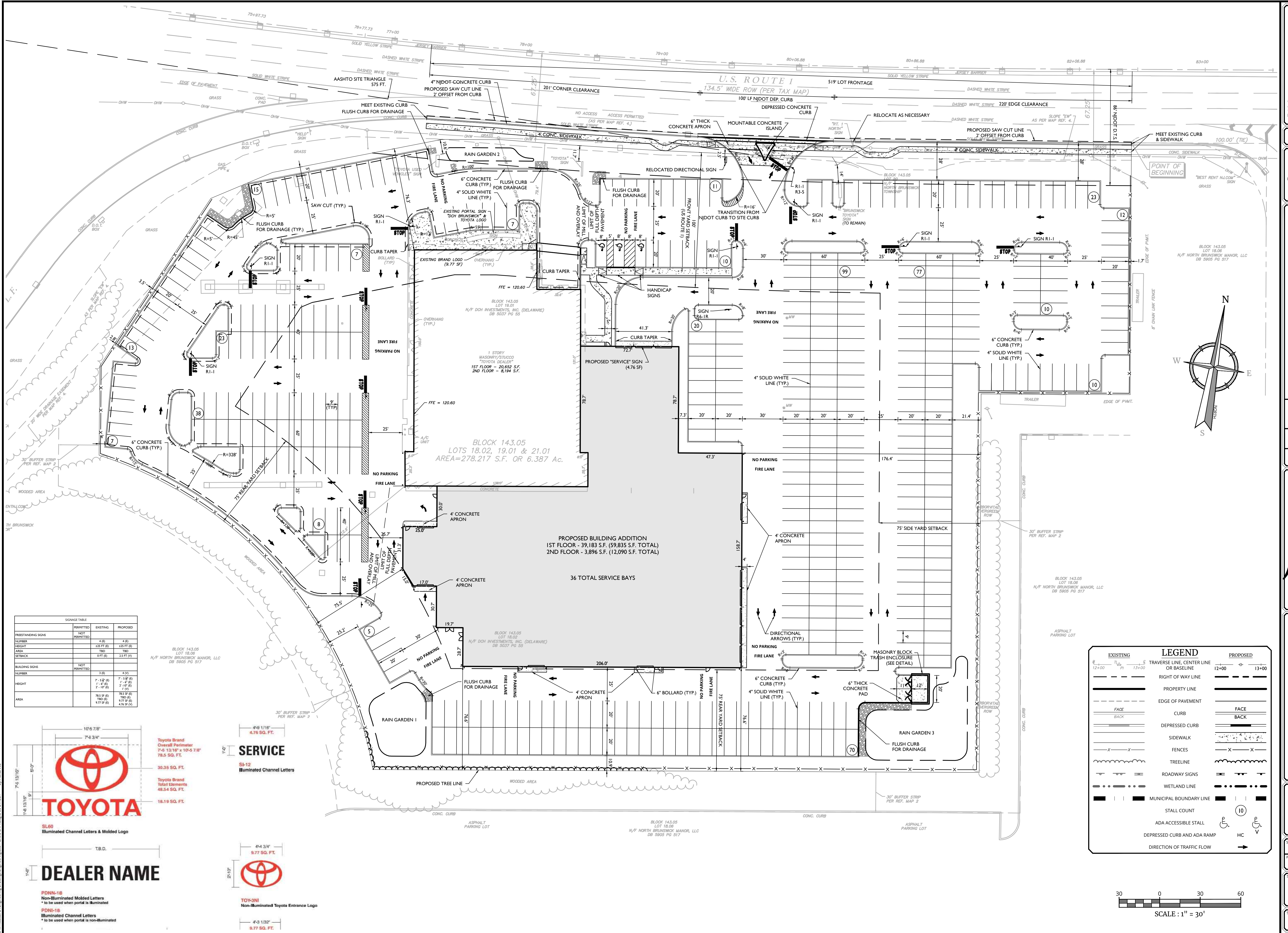
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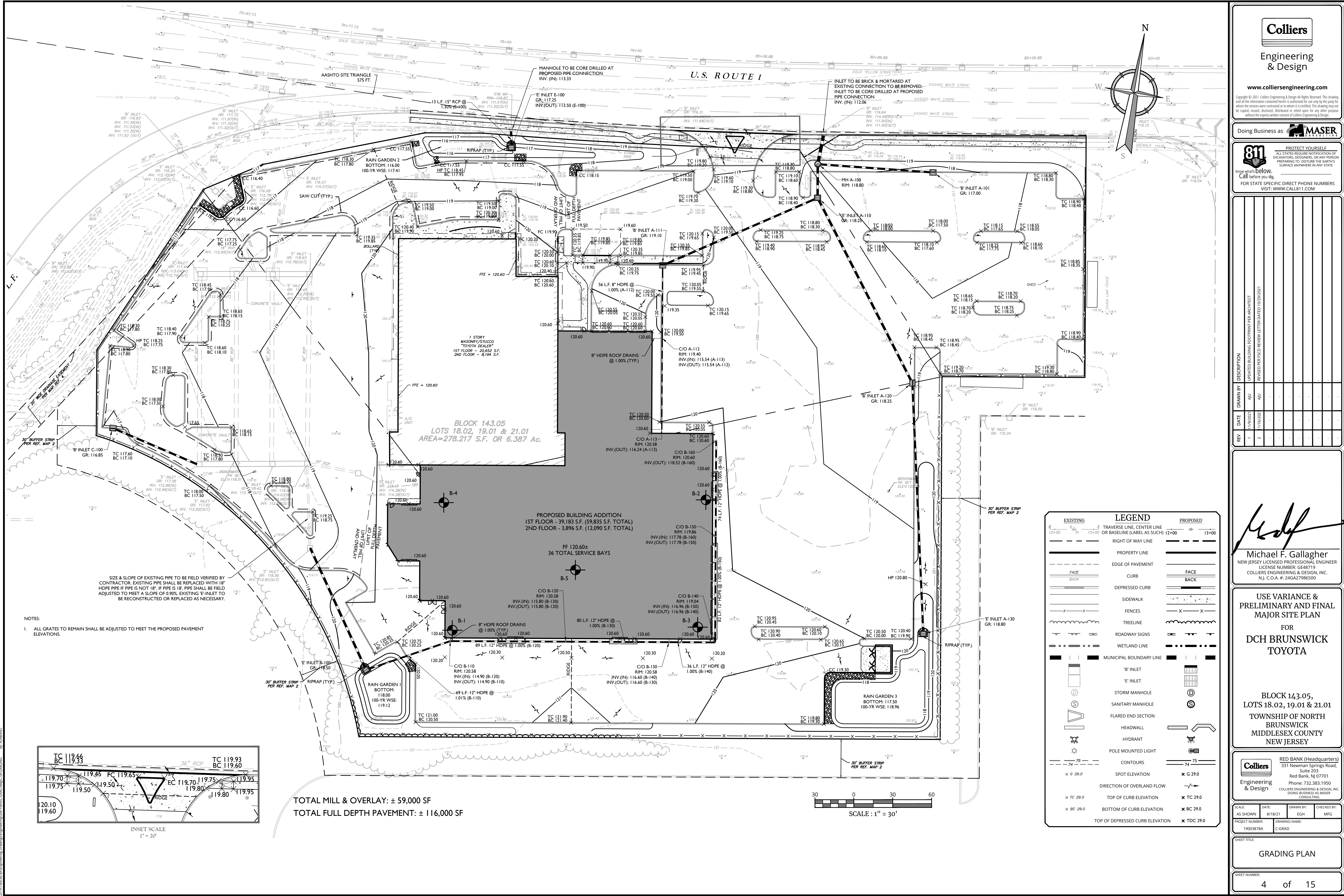
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	8/18/21	EGH	MFG
PROJECT NUMBER:	DRAWING NAME:		
19003878A	C-LAY1		

SHEET TITLE:  
**DIMENSION PLAN**

SHEET NUMBER:  
**3 of 15**







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REV	DATE	DRAWN BY	DESCRIPTION
1	1/19/2021	AJU	UPDATED BUILDING FOOTPRINT PER ARCHITECT
2	1/16/2022	AJU	REVISED PER FSD REVIEW LETTER DATED 10/29/2021

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USE VARIANCE & PRELIMINARY AND FINAL MAJOR SITE PLAN FOR DCH BRUNSWICK TOYOTA

BLOCK 143.05, LOTS 18.02, 19.01 & 21.01  
TOWNSHIP OF NORTH BRUNSWICK  
MIDDLESEX COUNTY  
NEW JERSEY

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SCALE: AS SHOWN DATE: 8/18/21 DRAWN BY: EGH CHECKED BY: MFG  
PROJECT NUMBER: 19003878A DRAWING NAME: C-GRAD

SHEET TITLE: GRADING PLAN

SHEET NUMBER: 4 of 15

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USE VARIANCE &  
PRELIMINARY AND FINAL  
MAJOR SITE PLAN  
FOR  
DCH BRUNSWICK  
TOYOTA

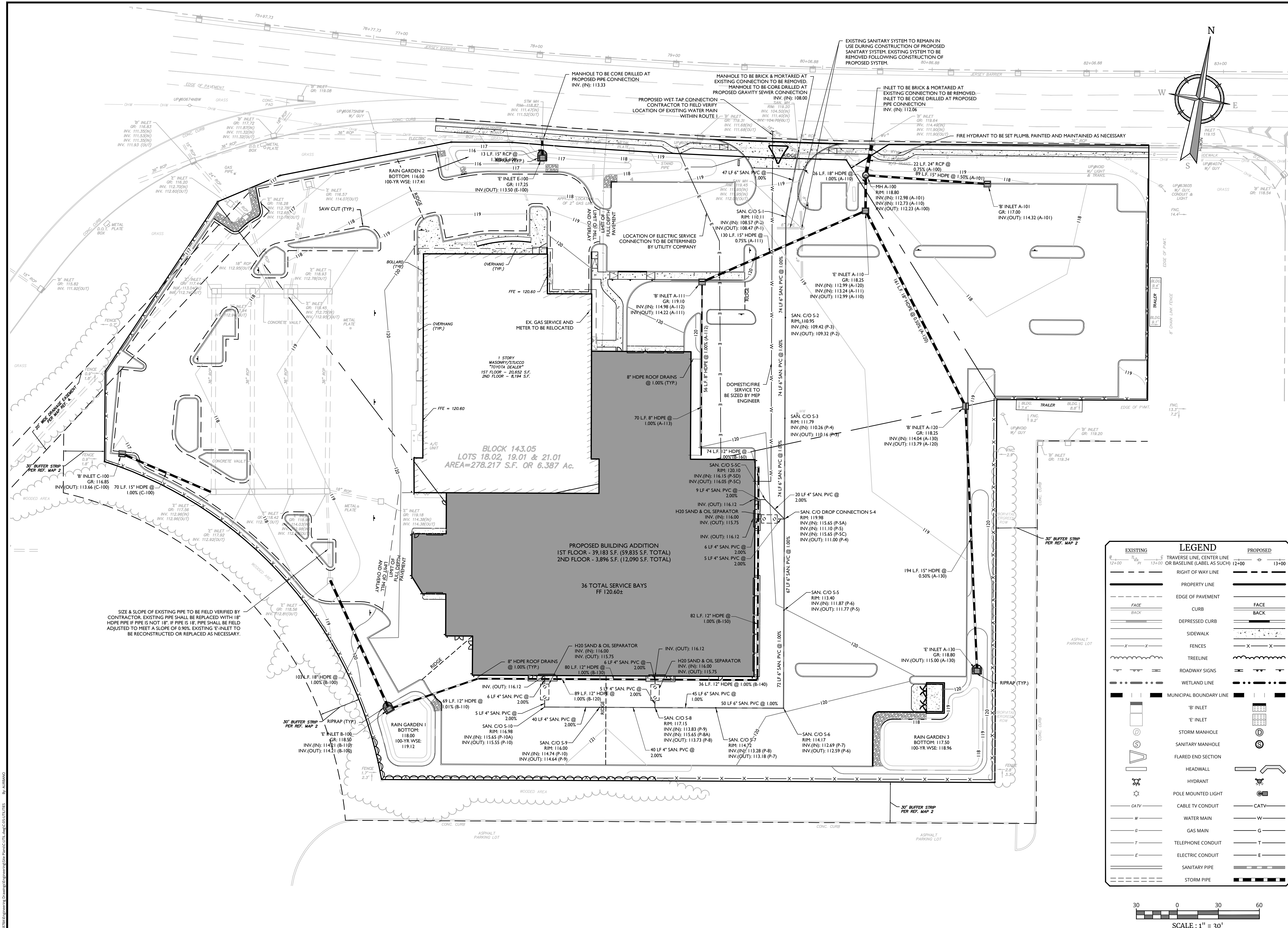
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BRUNSWICK  
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NEW JERSEY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	8/18/21	EGH	MFG
PROJECT NUMBER:		DRAWING NAME:	

SHEET TITLE:

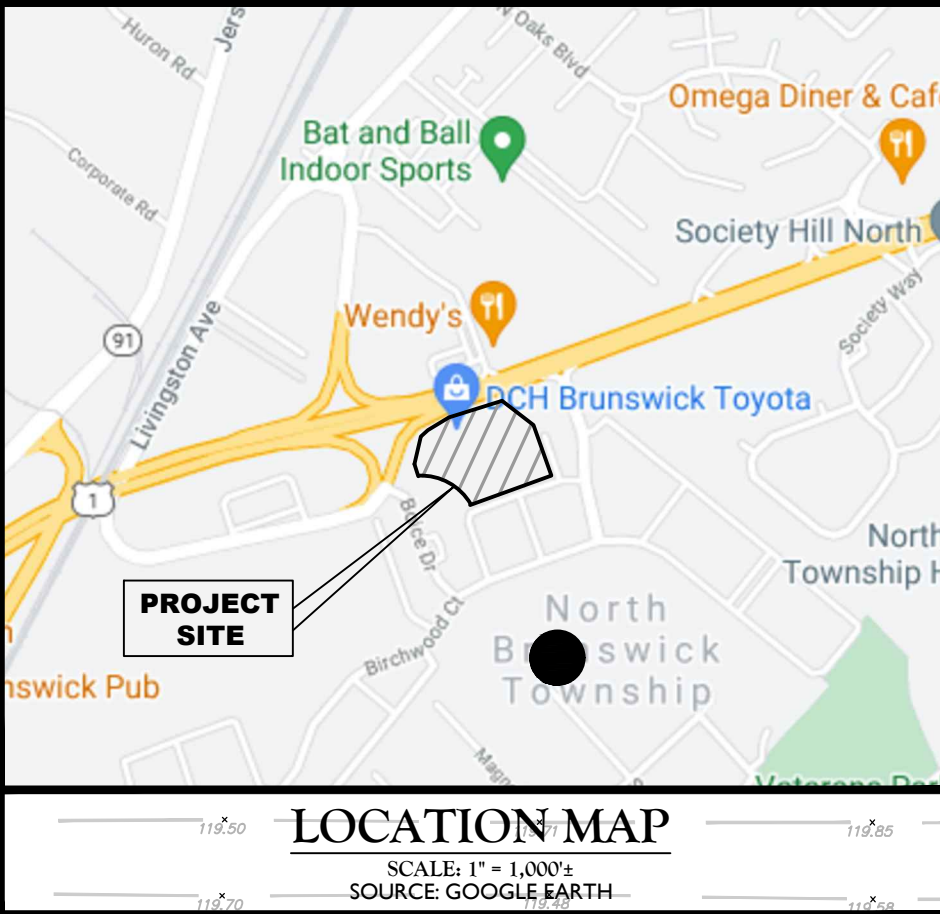
UTILITIES PLAN

SHEET NUMBER: 5 of 15



NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION





### SCALE DRAWINGS FOR CONSTRUCTION

SCALE: 1" = 30'



FREEHOLD SOIL CONSERVATION DISTRICT NOTES	
MCNJ-SOIL-NOTE-1005	05/01/17
<p>1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.</p> <p>2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.</p> <p>3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.</p> <p>4. N.J.S.A. 42:4-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE STANDARDS OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL. HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.</p> <p>5. ANY STOCKPILE OR DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN <b>FOURTEEN (14) DAYS</b>, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.</p> <p>6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.</p> <p>7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.</p> <p>8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.</p> <p>9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.</p> <p>10. PERMANENT VEGETATION IS TO BE SEED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.</p> <p>11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.</p> <p>12. IN ACCORDANCE WITH THE STANDARD FOR HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.</p> <p>13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.</p> <p>14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.</p> <p>15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.</p> <p>16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.</p> <p>17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.</p> <p>18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.</p> <p>FREEHOLD SOIL CONSERVATION DISTRICT 4000 KOZLOSKI ROAD, FREEHOLD, NJ 07728-5033, PHONE: (732) 683-8500, FAX: (732) 683-9140, EMAIL: INFO@FREEHOLDSCD.ORG.</p>	

SEQUENCE OF COMMERCIAL CONSTRUCTION	
MCNJ-SOIL-NOTE-1500	05/01/18
<p>1. CLEARING OF ENTRANCE AND LIMIT OF DISTURBANCE FOR INSTALLATION OF SILT FENCE AND CONSTRUCTION ENTRANCE PAD (1 WEEK).</p> <p>2. CLEARING AND ROUGH GRADING (2 WEEKS).</p> <p>3. INSTALL STORM DRAINAGE SYSTEM, CONDUIT OUTLET PROTECTION AND ALL OTHER UTILITIES. INSTALL INLET PROTECTION (3 WEEKS).</p> <p>4. CONSTRUCT CURBS AND PLACE ROAD SUBBASE (2 WEEKS).</p> <p>5. CLEAR AND GRADE BUILDING AREAS AND CONSTRUCT BUILDINGS. ALL DISTURBED AREAS SHALL BE STABILIZED AS DEFINED IN SOIL EROSION AND SEDIMENT CONTROL NOTES. (ONGOING FROM COMMENCEMENT OF PROJECT).</p> <p>6. ESTABLISH FINISH GRADES. CONDUCT SOIL COMPACTION TESTING AS REQUIRED, OR SCARIFY/TILL 6" MINIMUM DEPTH OF SUBSOIL IN THE LANDSCAPED AND LAWN AREA. (2 WEEKS).</p> <p>7. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED 5" OF TOPSOIL, FIRM IN PLACE, PRIOR TO SEEDING, SODDING OR PLANTING. PLACE PERMANENT VEGETATION COVER. (1 WEEK).</p> <p>8. PAVE ROADS AND COMPLETE FINAL LANDSCAPING (1 MONTH).</p> <p>9. REMOVE TEMPORARY ACCESS PROTECTION, SILT FENCE, AND INLET PROTECTION AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED.</p>	

STANDARD FOR VEGETATIVE COVER	
MCNJ-SOIL-NOTE-1100	05/01/17
<p>1. SITE PREPARATION</p> <p>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 STANDARD FOR LAND GRADING.</p> <p>B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.</p> <p>C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE, SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING ETC. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.</p> <p>D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.</p> <p>2. SEEDBED PREPARATION</p> <p>A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).</p> <p>a. FOR TEMPORARY SEEDING: FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. LIMING RATE SHALL BE ESTABLISHED PER SOIL TESTING.</p> <p>b. FOR PERMANENT SEEDING: FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.</p> <p>B. MULCHING</p> <p>MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEMPED COMPLYMENT WITH THIS MULCHING REQUIREMENT.</p> <p>C. HIGH ACID PRODUCING SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPAIRATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.</p> <p>D. 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.). SEE "SOIL DECOMPACTION AND TESTING REQUIREMENTS".</p> <p>E. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION AND OTHER DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.</p> <p>3. SEEDING</p> <p>A. TEMPORARY SEEDING SPECIFICATIONS - TEMPORARY VEGETATIVE COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1.0 POUNDS PER 1,000 SQ.FT. (100 LBS/ACRE), OR A MIXTURE FROM TABLE 7-2 OF THE STANDARDS APPROVED BY THE SOIL CONSERVATION DISTRICT.</p> <p>B. PERMANENT SEEDING SPECIFICATIONS - SELECT AN APPROVED MIXTURE FROM THOSE LISTED BELOW, AN APPROVED MIXTURE FROM TABLE 4-3 OF THE STANDARDS, OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED. SEED SHALL BE APPLIED AS NOTED BELOW WITHIN THE DATES SPECIFIED IN THE STANDARDS:</p> <p>I. LAWN AREAS:</p> <p>MIX #16 (POORLY DRAINED SOIL) ROUGH BLUEGRASS 90 LBS/ACRE STRONGS CREEPING RED FESCUE 130 LBS/ACRE</p> <p>OPTIMUM SEEDING DATES: 8/15 - 10/15 (ZONE 6b)</p>	

DUST CONTROL

MCNJ-SOIL-NOTE-1400

05/01/17

DUST CONTROL METHODS:

1.

APPLY MULCHES OR VEGETATIVE COVER AS PER NJ SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

2.

TILL AND 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.

3.

SPRINKLE THE SITE UNTIL THE SURFACE IS WET.

4.

ERECT BARRIERS SUCH AS SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL TO CONTROL AIR CURRENTS AND SOIL BLOWING.

5.

APPLY CALCIUM CHLORIDE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FLOOD THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. NOT SUITABLE ON STEEPER SLOPES NEAR THE STREAMS OR POTENTIALLY ACCUMULATE AROUND PLANTS.

6.

COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

7.

USE SPRAY-ON ADHESIVE ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. MATERIALS AS FOLLOWS:

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. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD, P. 26-1		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

MITIGATION NOTES FOR ACIDIC SOIL	
MCNJ-SOIL-NOTE-1700	05/01/17
<p>1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH-ACID PRODUCING SOILS ARE ENCOUNTERED.</p> <p>2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.</p> <p>3. STOCKPILES OF HIGH-ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.</p> <p>4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILE MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.</p> <p>5. HIGH ACID PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:</p> <p>A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OF 5.0 OR MORE.</p> <p>B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.</p> <p>6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.</p> <p>7. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.</p> <p>8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING). MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.</p>	

STANDARD FOR VEGETATIVE COVER	
MCNJ-SOIL-NOTE-1100	05/01/17
<p>ACCEPTABLE SEEDING DATES: 3/1 - 4/30 (ZONE 6b)</p> <p>SUMMER SEEDING DATES *: 5/1 - 8/14 (ZONE 6b, 7a, 7b)</p> <p>* NOTE: SUMMER SEEDING SHOULD ONLY BE CONDUCTED WHEN THE SITE IS IRRIGATED, MIXES INCLUDING WHITE CLOVER REQUIRE THAT AT LEAST SIX WEEKS OF GROWING SEASON REMAIN AFTER SEEDING TO ENDURE ESTABLISHMENT BEFORE FREEZING CONDITIONS.</p> <p>C. 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 ON COARSE-TEXTURED SOIL.</p> <p>D. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.</p> <p>E. 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. (ALSO SEE SECTION 4 - MULCHING) ONE-HALF THE RATE DESCRIBED ABOVE IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.</p> <p>APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH. DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE TWO TO 90 POUNDS WITHIN EACH SECTION.</p> <p>ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.</p> <p>1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER MULCH IS APPLIED. 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.</p> <p>2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOVED.</p> <p>3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.</p> <p>4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.</p> <p>a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.</p> <p>b. USE ONE OF THE FOLLOWING:</p> <p>I) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, POLYMER-BASED, OR EMULSION-BASED. THEY 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 PHYTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.</p> <p>2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCLBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.</p> <p>NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.</p> <p>B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLUMB 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.</p> <p>C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS, THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED - SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.</p> <p>5. IRRIGATION (WHERE FEASIBLE): IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDLING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.</p> <p>6. TOPDRESSING: NO FOLLOW-UP TOPDRESSING IS MANDATORY UNLESS WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 LB PER ACRE OR 7 LB PER 1,000 SF EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.</p> <p>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.</p> <p><b>ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER OF THE SEED SPECIES AND MOVED ONCE.</b> NOTE THIS DESIGNATION OF MOVED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.</p>	

STANDARD FOR STABILIZATION WITH SOD	
MCNJ-SOIL-NOTE-1300	09/01/17
<p>1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.</p> <p>2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.</p> <p>3. SOD SHOULD BE UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING (EXCLUDES TOP GROWTH).</p> <p>4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.</p> <p>5. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO ACCEPTABLE FOR DROUGHTY SITES.</p> <p>6. ONLY MOST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER MONTHS.</p> <p>I. SITE PREPARATION</p> <p>A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, INCORPORATING ORGANIC MATTER, AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.</p> <p>B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO DEPTH OF 1 INCHES (UNSETTLED) IS REQUIRED. ON ALL SITES, SEE STANDARD FOR TOPSOILING FOR TOPSOIL AMENDMENT REQUIREMENTS.</p> <p>C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.</p> <p>II. SOIL PREPARATION</p> <p>A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY 1/2 THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER 1/2 RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING 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. UNIFORMLY APPLY GROUND LIMESTONE TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).</p> <p>B. WORK LINE AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.</p> <p>C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO SOIL CONTACT AND REMOVE ALL OTHER DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.</p> <p>D. INSPECT SITE JUST BEFORE SODDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILED AND FIRMED IN ACCORDANCE WITH THE ABOVE.</p> <p>III. SOD PLACEMENT</p> <p>A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOD IMMEDIATELY PRIOR TO LAYING THE SOD.</p> <p>B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.</p> <p>C. LIGHTLY ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS AND INVASION OF WEEDS.</p> <p>D. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES BIODEGRADABLE PLASTIC SPIKES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 1/2 INCH WIDE).</p> <p>E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE. BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.</p> <p>F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 1 INCH. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.</p> <p>IV. TOP DRESSING</p> <p>SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER SOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2 IN THIS STANDARD, A FOLLOW-UP TOP DRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. TOP DRESSING SHALL THEN BE APPLIED. TOP DRESS WITH 10-10-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IS THE TURF IS AMELIORATED.</p> <p>1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.</p> <p>2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.</p> <p>3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 YARDS AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.</p> <p>4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.</p> <p>5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.</p> <p>6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.</p> <p>7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.</p> <p>8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.</p> <p>9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.</p> <p>10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.</p> <p>11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.</p> <p>12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:</p> <p>A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.</p> <p>B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS, WITH 10 MIL PLASTIC LINING.</p>	

CONCRETE WASHOUT NOTES	
MCNJ-SOIL-EROS-2300	05/01/17

STANDARD FOR STABILIZATION WITH SOD	
MCNJ-SOIL-NOTE-1300	02/01/17
1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.	
2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.	
3. SOD SHOULD BE UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTOFF (EXCLUDES TOP GROWTH).	
4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN EDGES WILL NOT BE ACCEPTABLE.	
5. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO ACCEPTABLE FOR DROUGHTY SITES.	
6. ONLY MOST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER MONTHS.	
I. SITE PREPARATION	
A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, INCORPORATING ORGANIC MATTER, AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.	
B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. SEE STANDARD FOR TOPSOILING FOR TOPSOIL AMENDMENT REQUIREMENTS.	
C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASIN, AND WATERWAYS.	
II. SOIL PREPARATION	
A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET. USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY 1/2 THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER 1/2 RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.	
B. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING 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. UNIFORMLY APPLY GROUND LIMESTONE TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).	
C. WORK LIME AND FERTILIZER INTO THE TOPSOIL, 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 REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.	
D. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT AND DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLUMPS, LOGS, OR OTHER UNSUITABLE MATERIAL.	
E. INSPECT SITE JUST BEFORE SODDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILED AND FIRMED IN ACCORDANCE WITH THE ABOVE.	
III. SOD PLACEMENT	
A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR. NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.	
B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.	
C. LIGHTLY ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS AND INVASION OF WEEDS.	
D. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES BIODEGRADABLE PLASTIC SPIKES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG) BY 1/2 INCH WIDE).	
E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE. BUT A CARPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.	
F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 1 INCH. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.	
IV. TOP DRESSING	
SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER SOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2 IN THIS STANDARD, A FOLLOW-UP TOP DRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. TOP DRESSING SHALL THEN BE APPLIED. TOP DRESS WITH 10-10-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IS THE TURF IS AMELIORATED.	





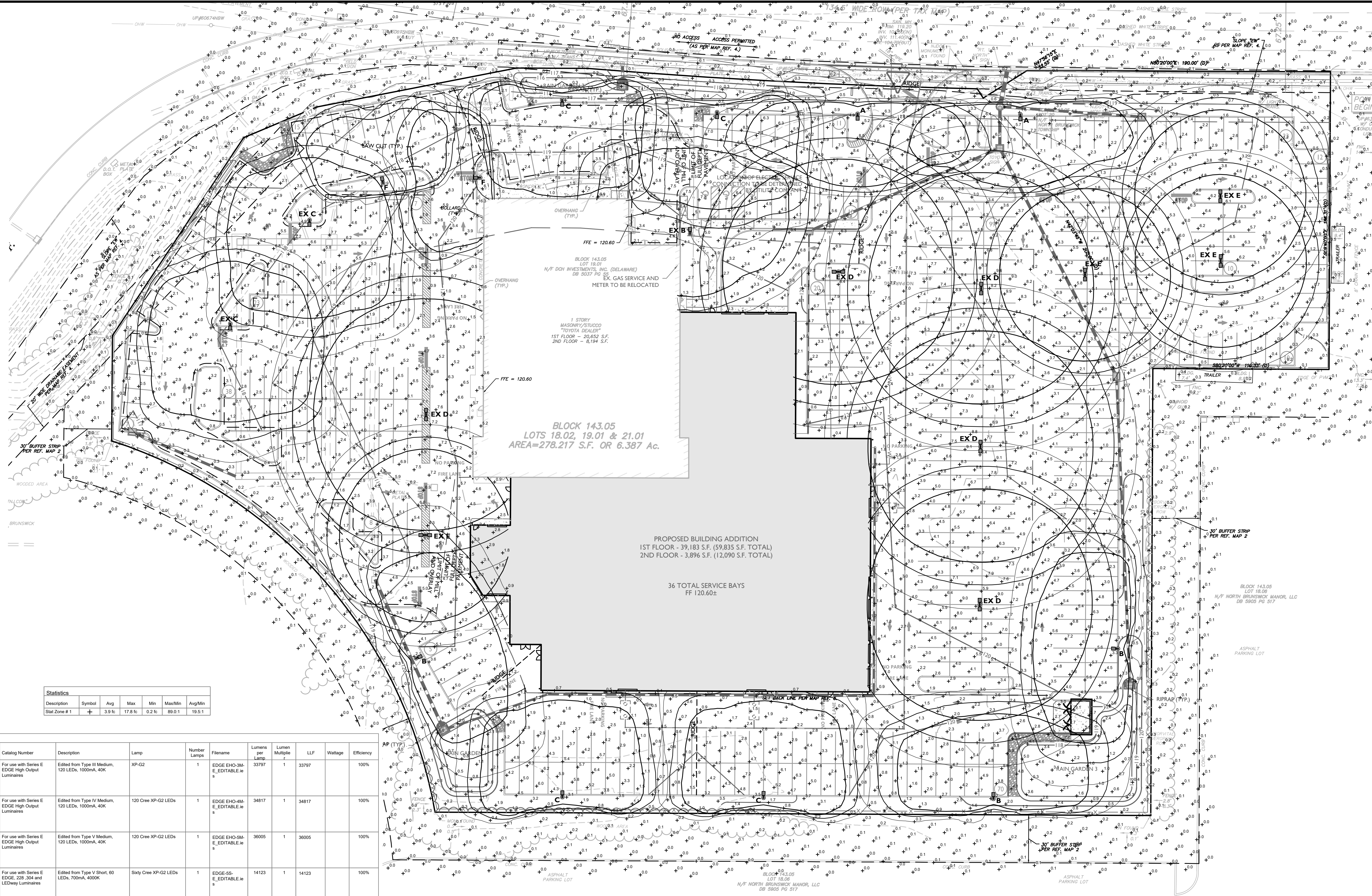
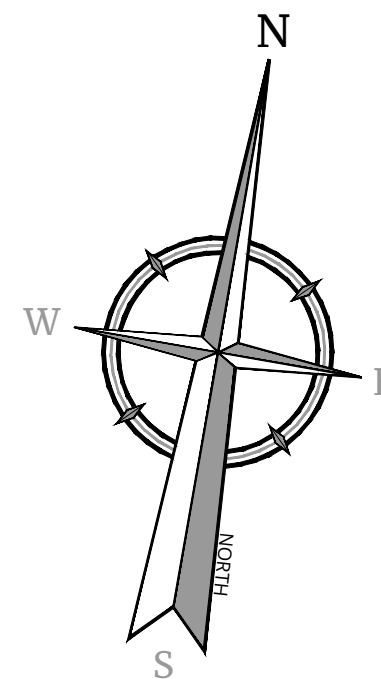












Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 1	+	3.9 fc	17.8 fc	0.2 fc	89.0:1	19.5:1

Schedule										
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens per Lamp	LLF
	EX B	1	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type III Medium, 120 LEDs, 1000mA, 40K	XP-G2	1	EDGE-EHO-3M-E_EDITABLE.lis	33797	1
	EX-C	2	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type IV Medium, 120 LEDs, 1000mA, 40K	120 Cree XP-G2 LEDs	1	EDGE-EHO-4M-E_EDITABLE.lis	34817	1
	EX-D	5	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type V Medium, 120 LEDs, 1000mA, 40K	120 Cree XP-G2 LEDs	1	EDGE-EHO-5M-E_EDITABLE.lis	36005	1
	EX-E	4	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type V Short, 60 LEDs, 700mA, 4000K	Sixty Cree XP-G2 LEDs	1	EDGE-SS-E_EDITABLE.lis	14123	1
	A	2	Cree	For use with Series E Edge High Output Luminaire	Edited from Type II Medium w- Full BLS, 120 LEDs, 1000MA, 4000K, Addition of Backlight Control Shield XA-30BL-S-4	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.	120	EDGE-EHO-2MB-E_EDITABLE.lis	24579	1
	B	3	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type III Medium w- Full BLS, 120 LEDs, 1000MA, 4000K, Addition of Backlight Control Shield XA-30BL-S-4	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.	120	EDGE-EHO-3MB-E_EDITABLE.lis	23622	1
	C	4	Cree Lighting	For use with Series E Edge High Output Luminaire	Edited from Type IV Medium w- Full BLS, 120 LEDs, 1000MA, 4000K, Addition of Backlight Control Shield XA-30BL-S-4	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDs), VERTICAL BASE-UP POSITION.	120	EDGE-EHO-4MB-E_EDITABLE.lis	25113	1
	F	2	Cree Inc	ARE-EHO-AF-xx-12-E-UL-1000 w/ XA-30BL-S OR XA-30BL-S-12-E-UL w/ XA-30BL-S	Gray metal housing with two metal end caps. Rotatable mounting arm. Four frosted metal heat sink each with one PCB. Each PCB contains 30 LEDs and one gray metal trim plate. One clear plastic optical lens below each LED. One set of backlight shield attached to each heat sink. Addition of Backlight Control Shield XA-30BL-S-4	120 Cree XP-G2	1	AFB 0.729313-E.lis	26233	1

EXISTING LIGHTS THAT HAVE BEEN REMOVED:  
1 EX B (EDGE-EHO-3M-E)  
2 EX D (EDGE-EHO-5M-E)  
3 EX F (EDGE-EHO-AF-E)

EXISTING LIGHTS THAT HAVE BACKLIGHT CONTROL SHIELDS ADDED:  
A (EDGE-EHO-2MB-E)  
B (EDGE-EHO-3MB-E)  
C (EDGE-EHO-4MB-E)  
F (EDGE-AFB-E)

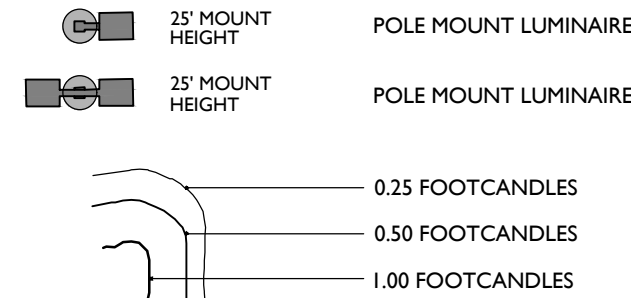
#### GENERAL NOTES

- THIS SHEET IS TO BE USED FOR LIGHTING PURPOSES ONLY.
- REFER TO SHEET 1 FOR GENERAL NOTES.

#### LIGHTING PLAN NOTES

- REFER TO SHEET 12 FOR LIGHTING DETAILS AND ORDERING INFORMATION.
- LIGHT LEVELS ON PLAN REPRESENT AVERAGE MAINTAINED FOOTCANDLE LEVELS AT FINISHED EXTERIOR GRADE.
- ALL MOUNTING HEIGHTS ARE MEASURED FROM FINISHED EXTERIOR GRADE TO LIGHT SOURCE.
- POLE LOCATIONS MAY VARY DUE TO SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY POLE LOCATIONS PRIOR TO INSTALLATION TO ACCOMMODATE UTILITIES, PAVEMENTS, FENCES, ETC.
- UNDERGROUND CONDUIT LOCATIONS SHALL BE COORDINATED WITH THE PROPOSED TREE LOCATIONS.
- CONCRETE FOOTING FOR POLE MOUNTED LIGHTS TO BE DESIGNED BY OTHERS. FOOTING DETAIL TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
- ELECTRICAL WIRING DESIGN FOR SITE LIGHTING TO BE DESIGNED BY OTHERS.
- SITE LIGHTING SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS SUBSTITUTIONS ARE SUBMITTED AND APPROVED.
- LUMINAIRES TO BE MANUFACTURED BY CREE LIGHTING OR APPROVED EQUAL.
- LUMINAIRES AND POLE FINISHES TO BE SILVER.
- SOME EXISTING LIGHTING TO REQUIRE BACKLIGHT CONTROL SHIELD XA-30BL-S-4 TO BE ORDERED AND ADDED, SEE LIGHTING DETAILS.

#### LIGHTING LEGEND



SCALE: 1" = 30'

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REV	DATE	DRAWN BY	DESCRIPTION
1	1/19/2021	AJU	UPDATED BUILDING FOOTPRINT PER ARCHITECT
2	1/16/2022	AJU	REVISED PER FSCD REVIEW LETTER DATED 10/29/2021

Michael F. Gallagher  
NEW JERSEY LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: G648719  
COLLIERS ENGINEERING & DESIGN, INC.  
N.J. C.O.A. #: 246A2798590

USE VARIANCE & PRELIMINARY AND FINAL MAJOR SITE PLAN FOR DCH BRUNSWICK TOYOTA

BLOCK 143.05, LOTS 18.02, 19.01 & 21.01  
TOWNSHIP OF NORTH BRUNSWICK  
MIDDLESEX COUNTY  
NEW JERSEY

RED BANK (Headquarters)  
331 Newman Springs Road,  
Suite 203  
Red Bank, NJ 07701  
Phone: 732.383.1950  
COLLIERS ENGINEERING & DESIGN, INC.  
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SCALE: AS SHOWN DATE: 8/18/21 DRAWN BY: PC CHECKED BY: MFG  
PROJECT NUMBER: 19003878A DRAWING NAME: CL-LIGHT

LIGHTING PLAN

11 of 15

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.





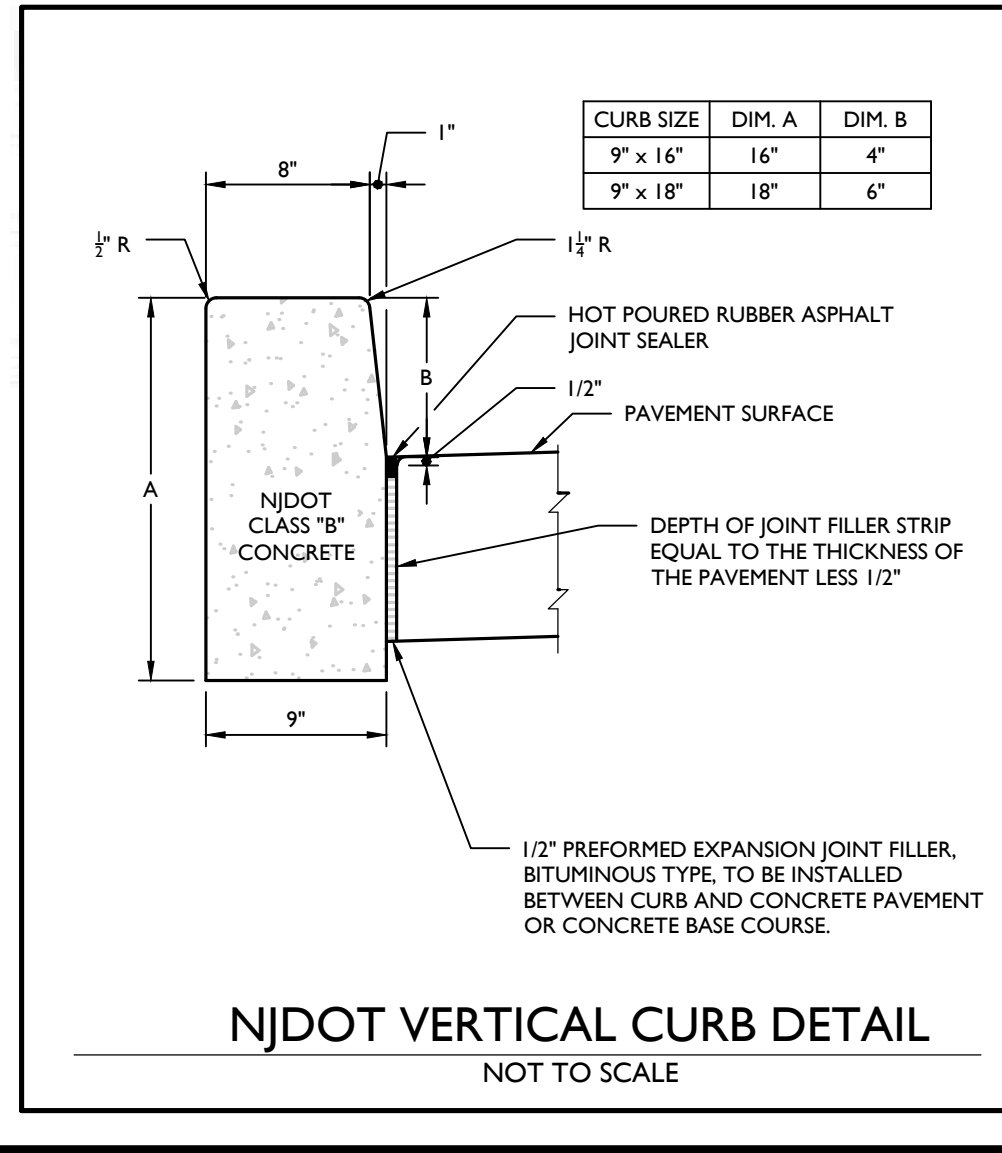
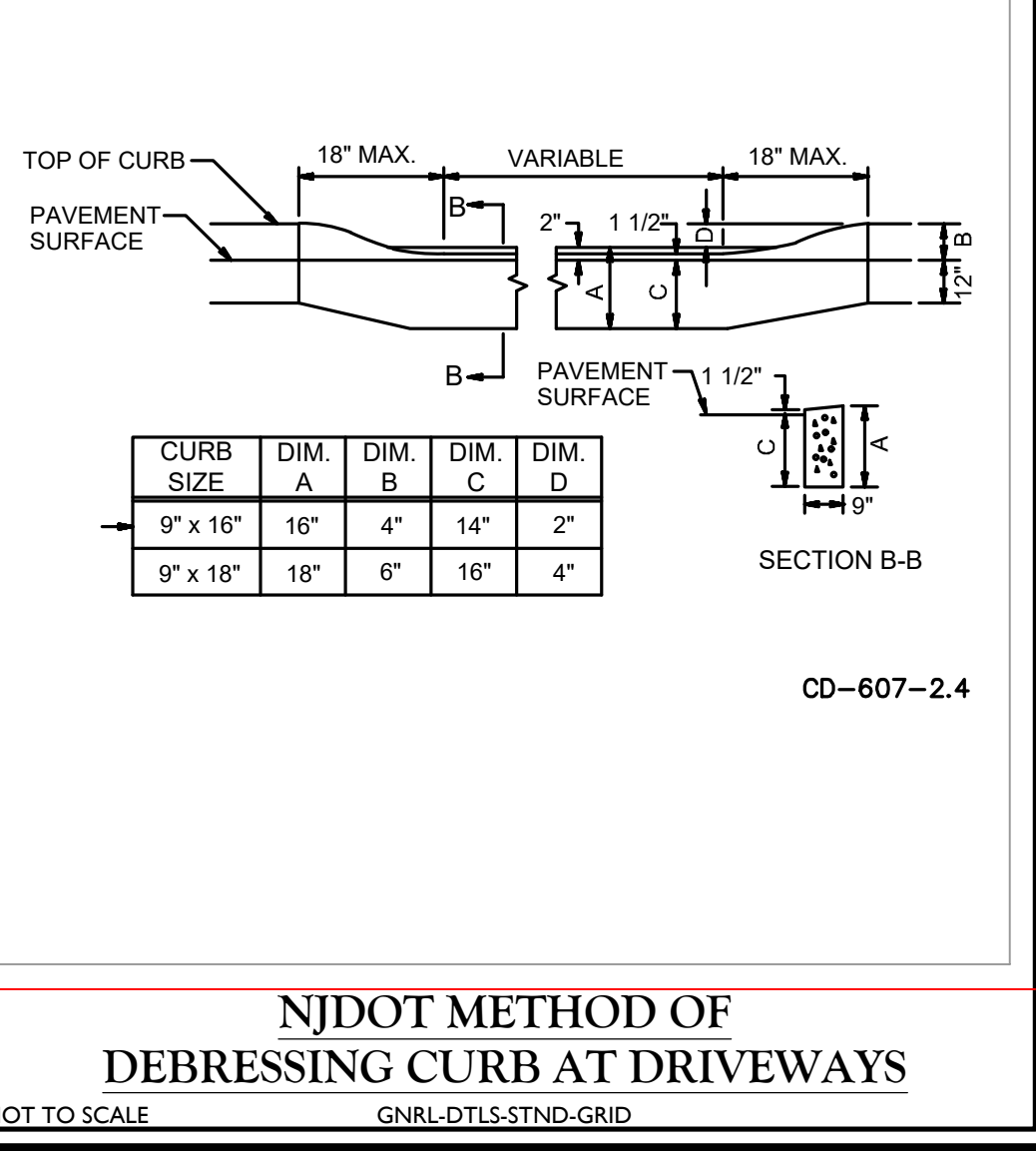
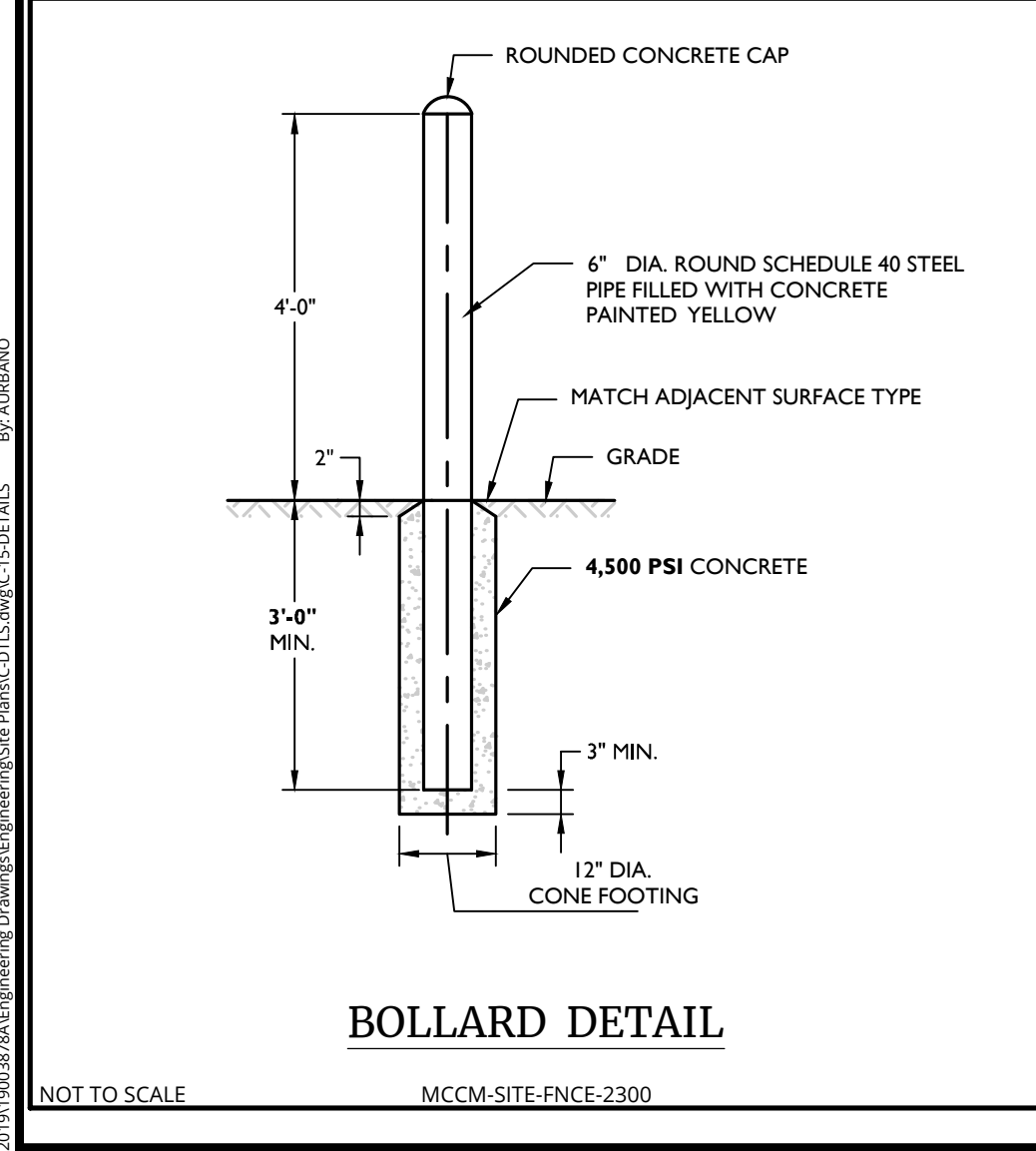
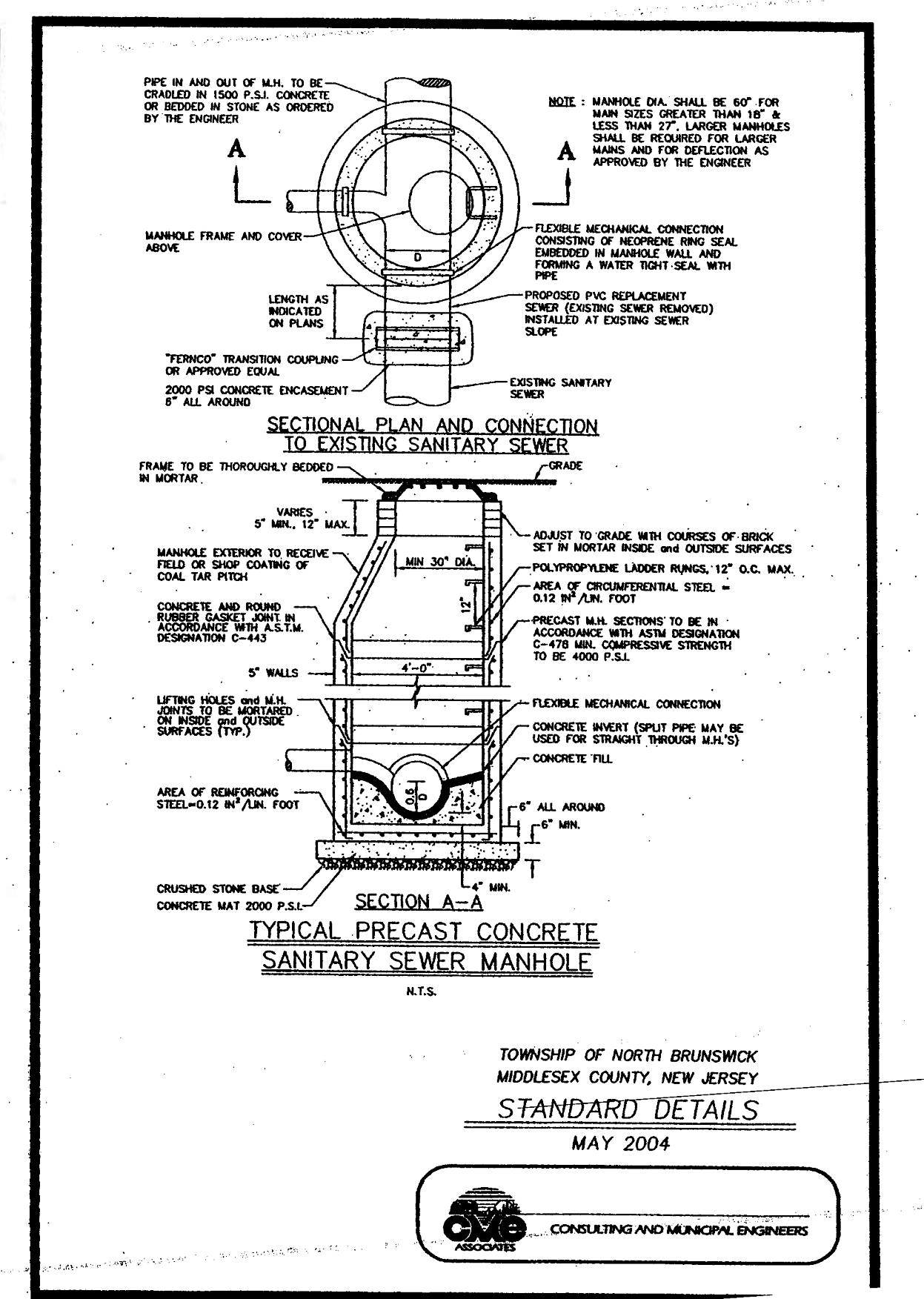
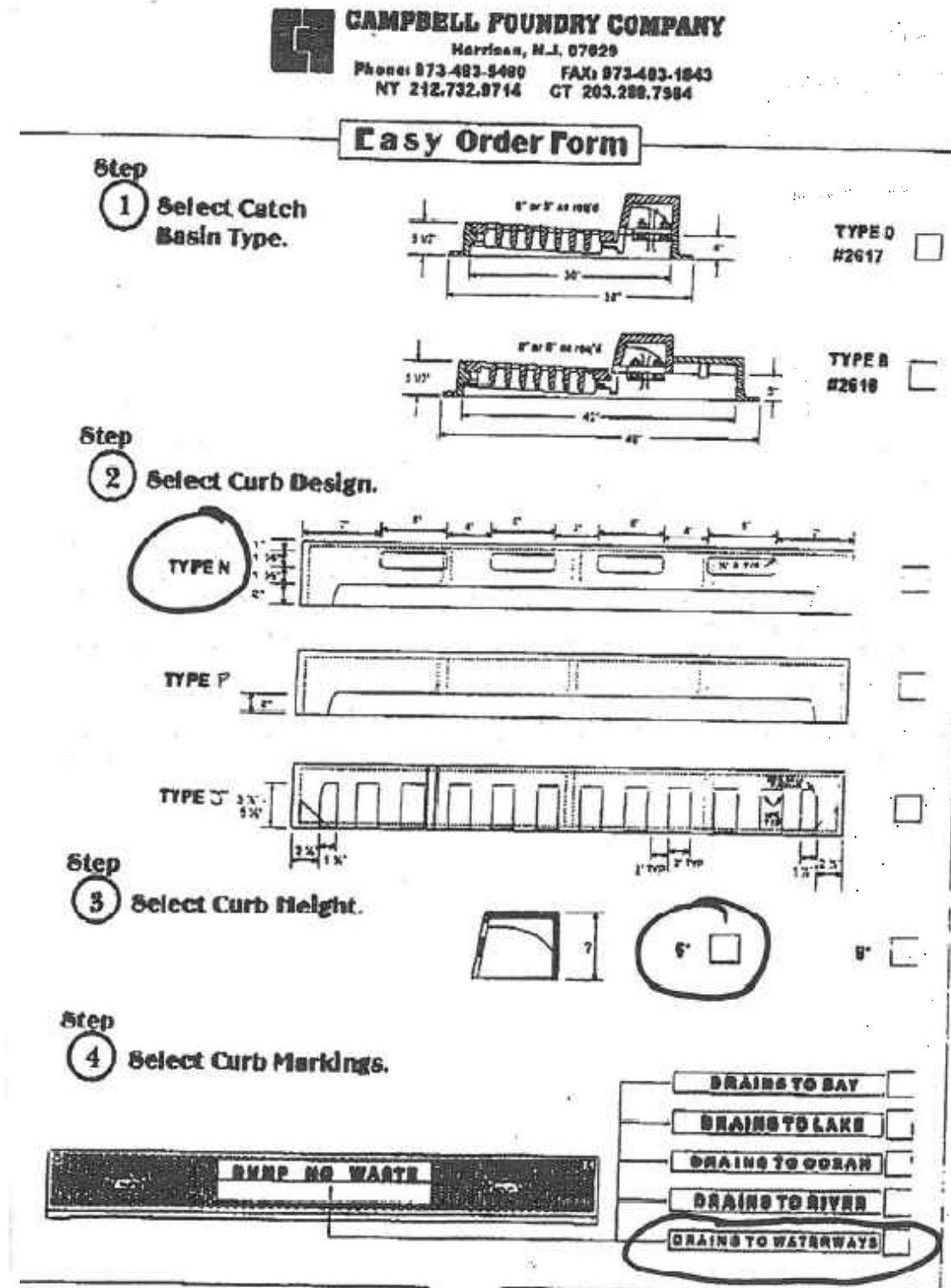
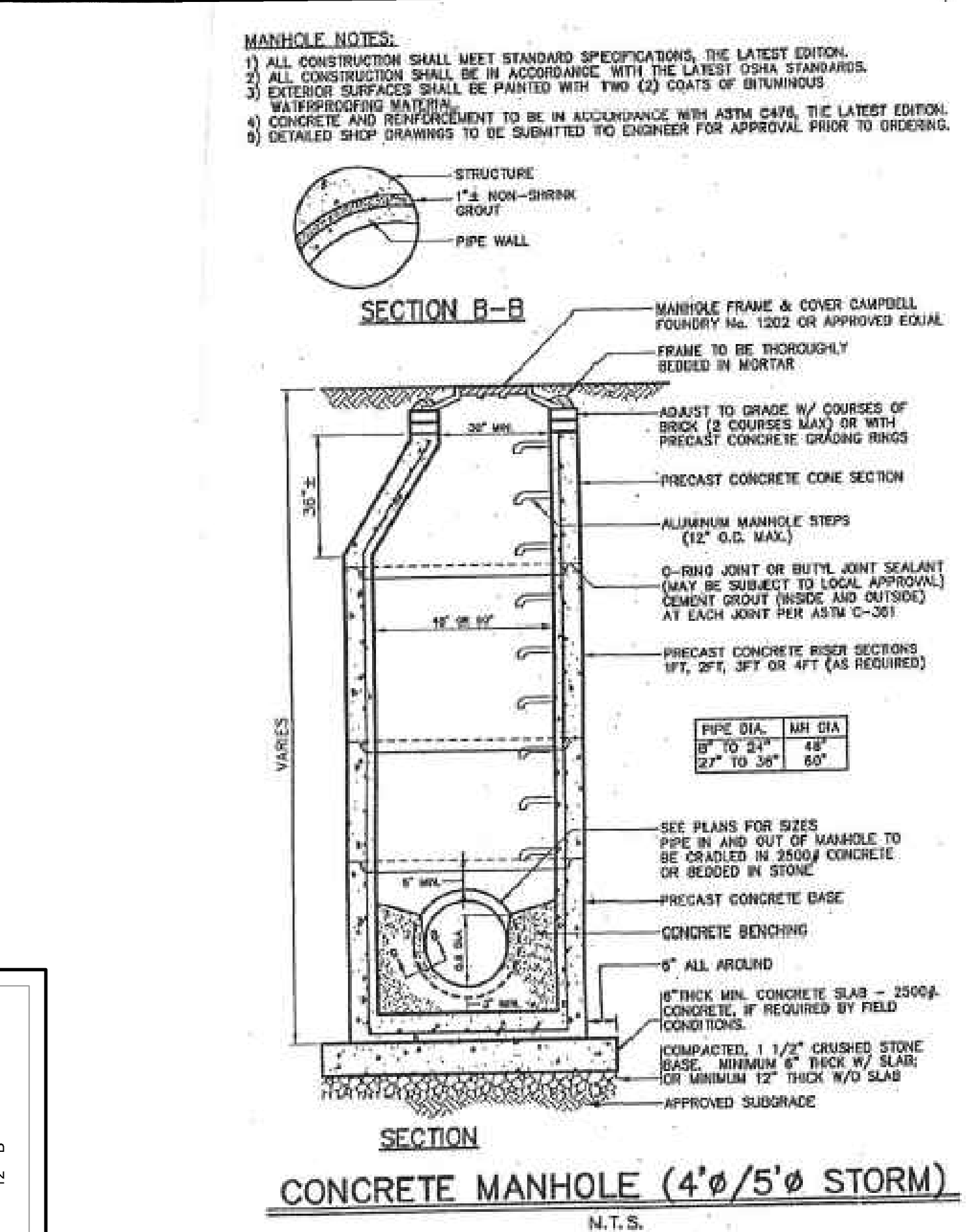
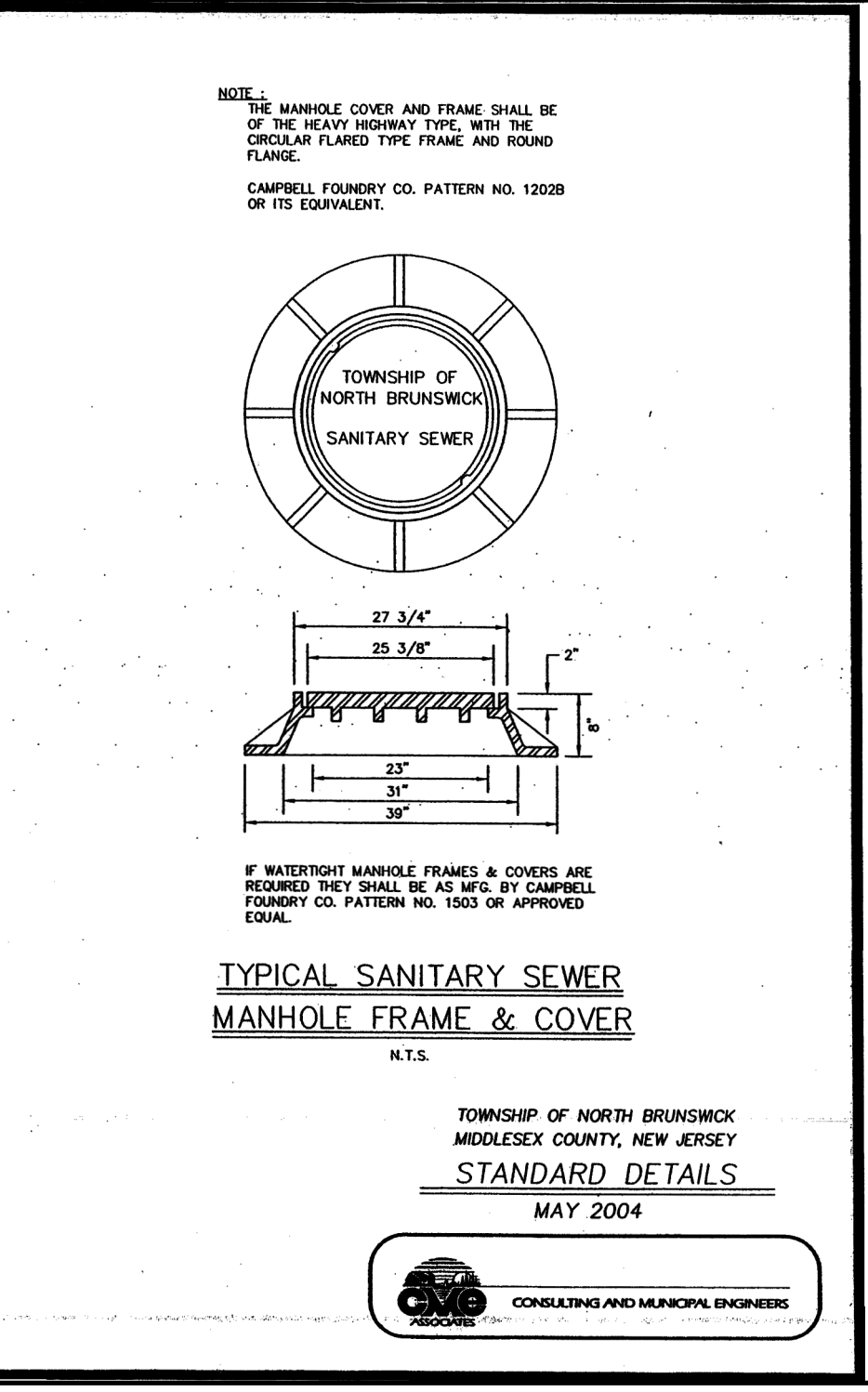
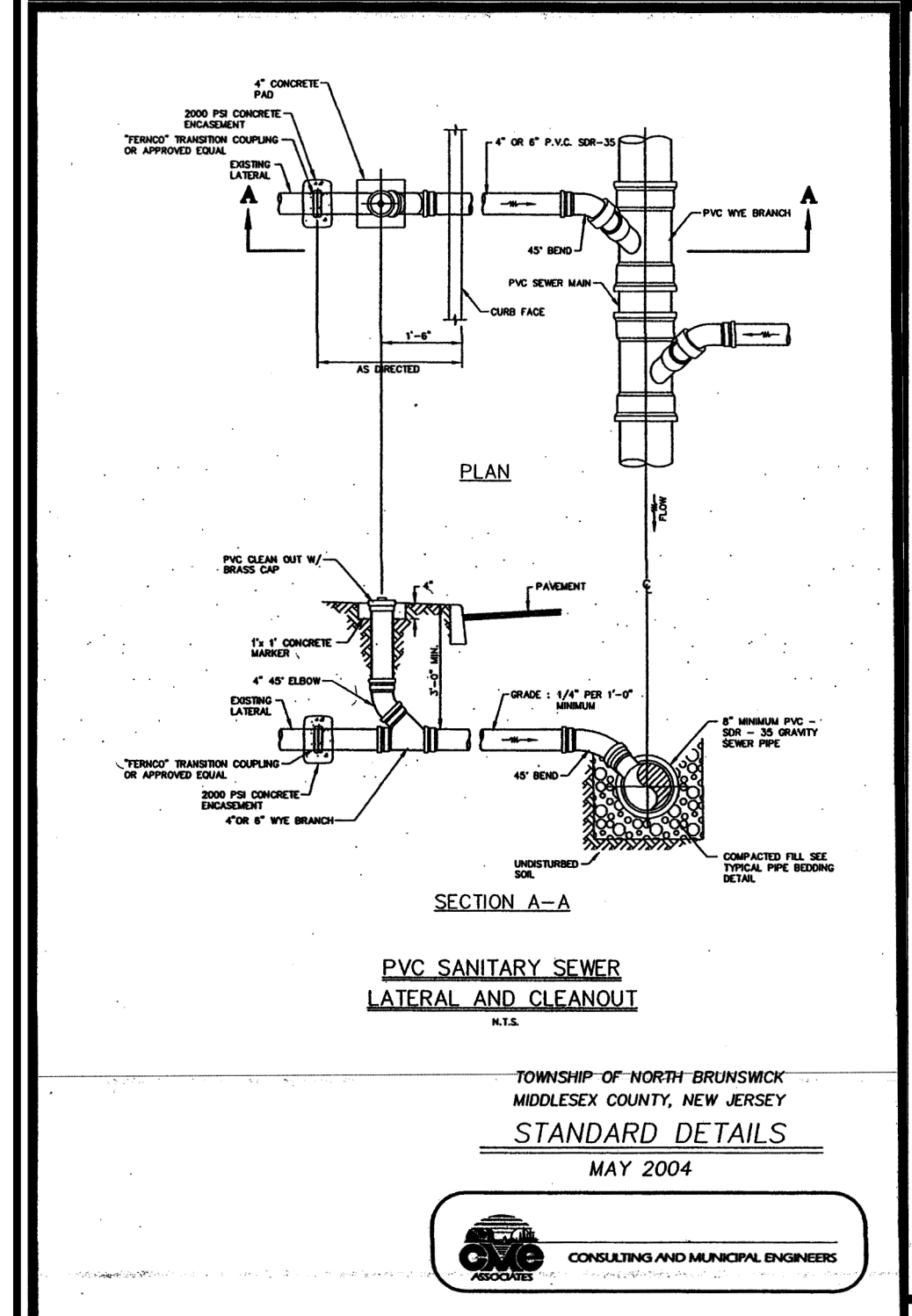
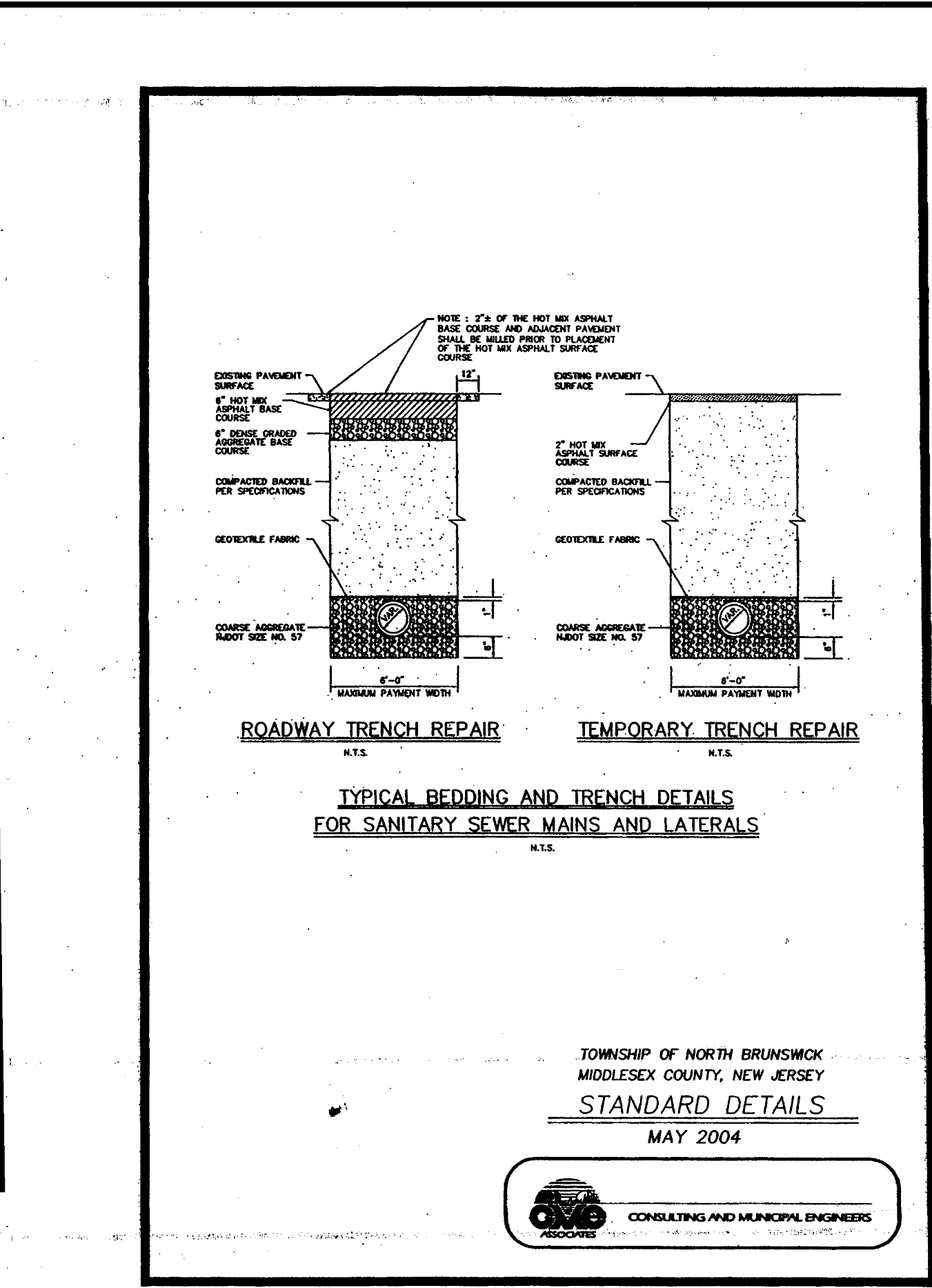
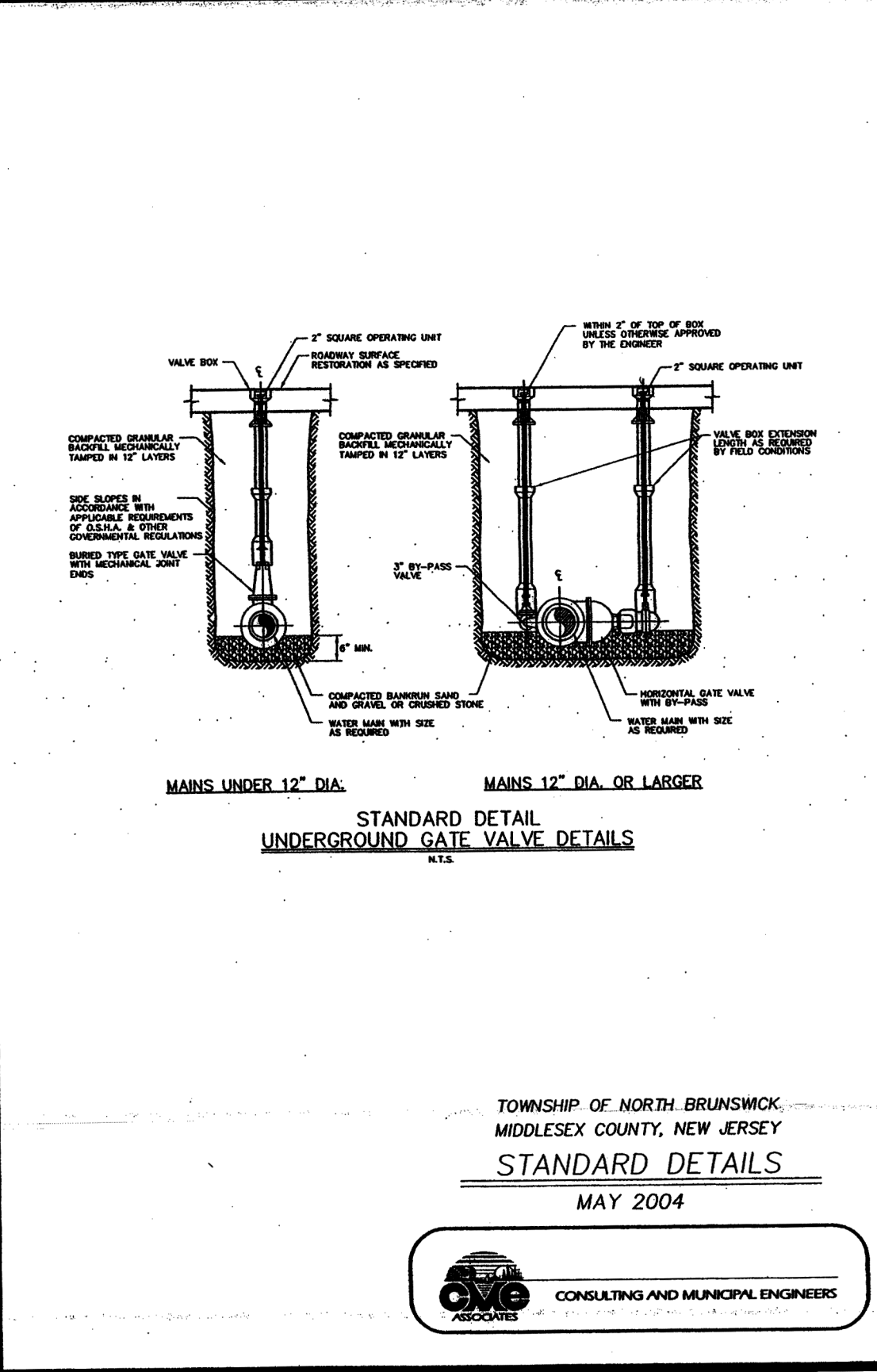
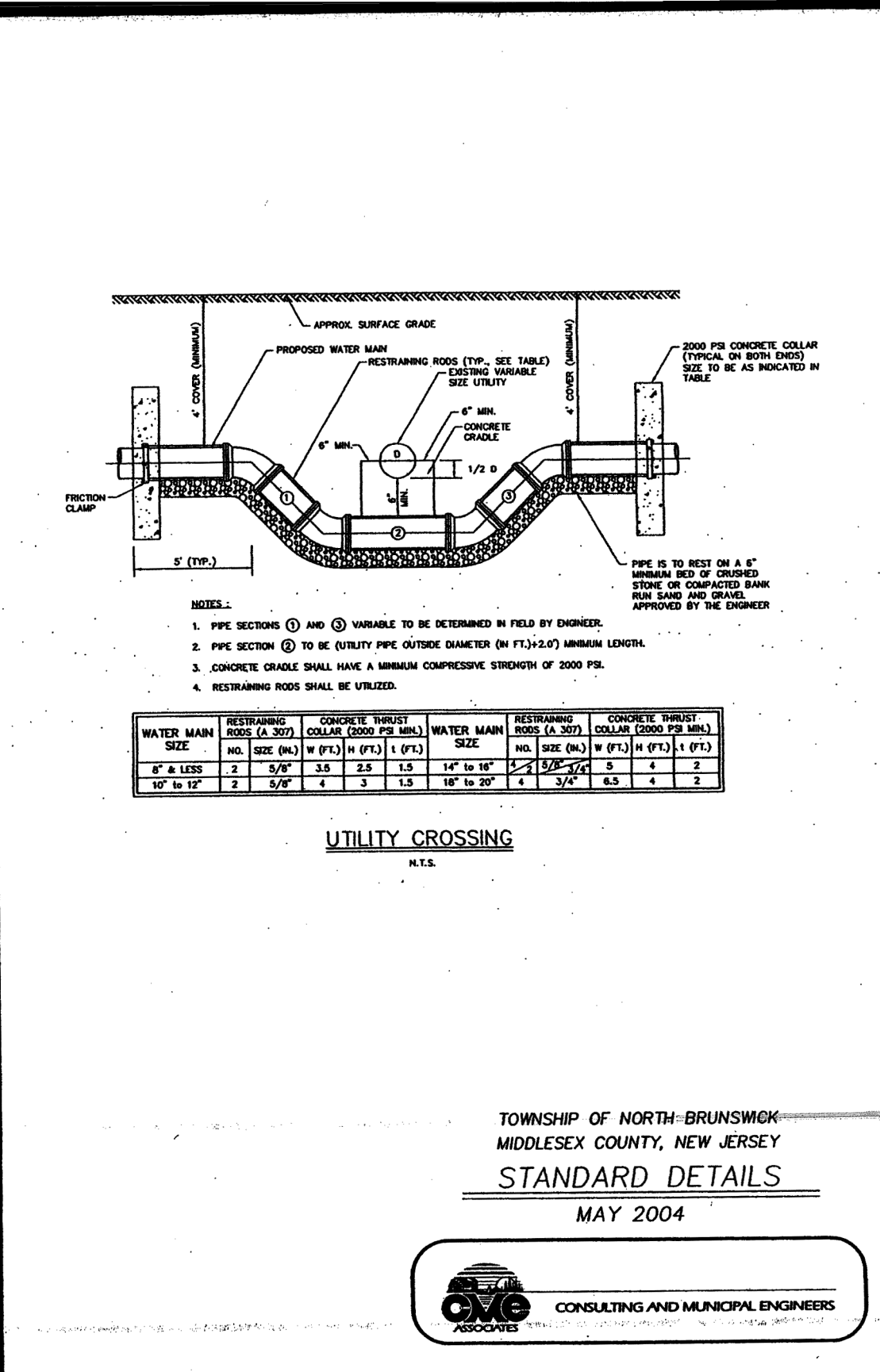
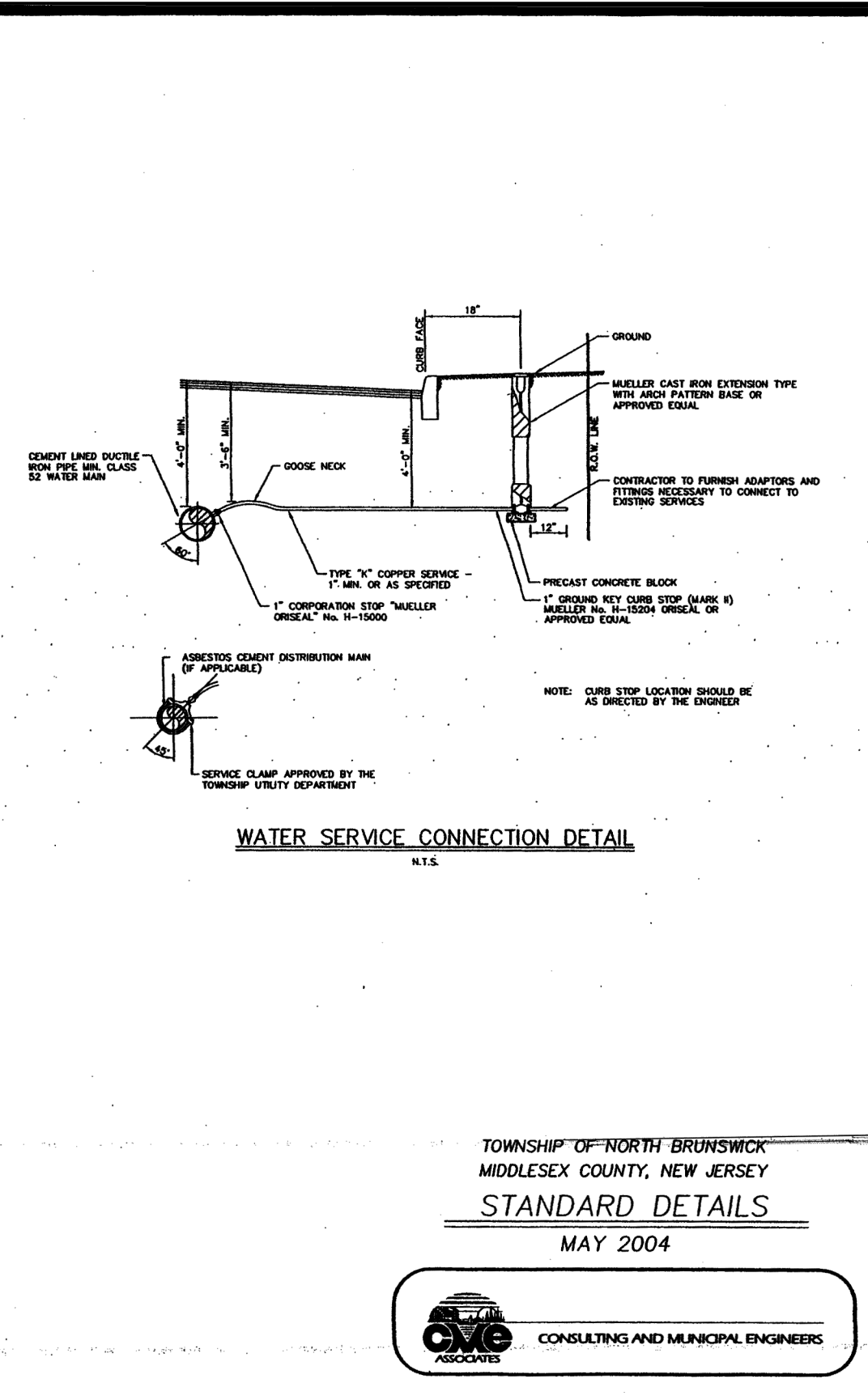
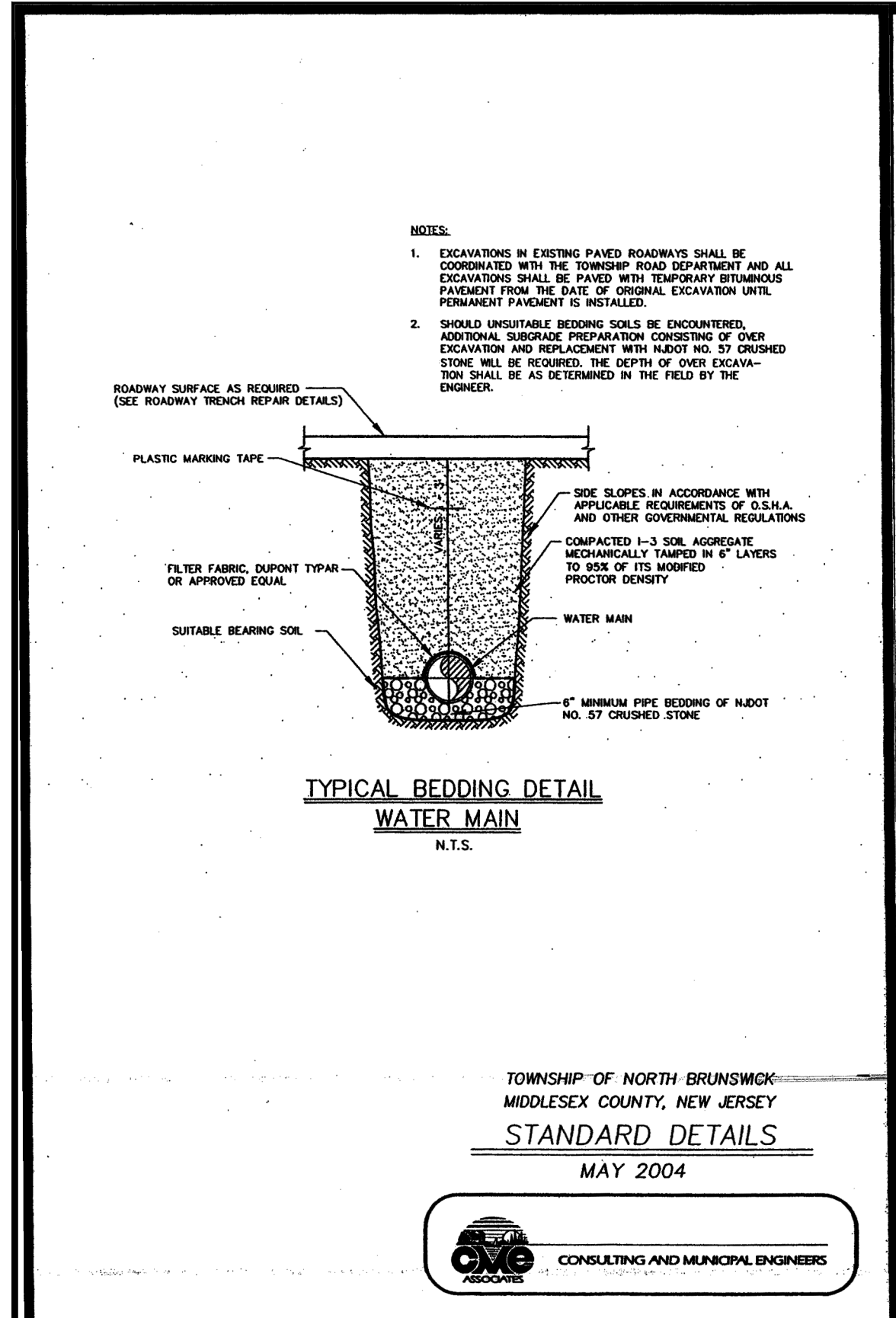












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PROJECT NUMBER: 19003878A DRAWING NAME: C-DTSL  
SHEET TITLE: CONSTRUCTION DETAILS  
SHEET NUMBER: 15 of 15

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