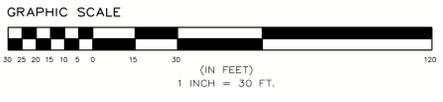


**UTILITY PLAN LEGEND:**

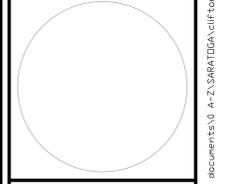
- PAVEMENT LIMITS
- PAVED OR GRASSED SWALE
- CONTOUR LINE
- WATER SERVICE LINE
- M.J. TEE WITH THRUST BLOCK AND GATE VALVE
- GATE VALVE
- M.J. BEND WITH THRUST BLOCK
- SQUARE OR ROUND CATCH BASINS
- FLARED END SECTION WITH RIP-RAP OUTLET
- RIP-RAP OVERFLOW



DRAWN BY	OV
CHECK BY	OV
EDP PROJECT NUMBER	14579

REVISION	DATE	BY

THE PREPAREDNESS OF THESE DOCUMENTS IS THE RESPONSIBILITY OF THE DESIGNER. THE DESIGNER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO HIM. THE DESIGNER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO HIM. THE DESIGNER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO HIM.



SCALE: 1" = 30'

NOT FOR CONSTRUCTION

SHEET TITLE: GRADING AND UTILITY PLAN

SHEET: 4 of 10

LANDS N/F OF SYNERGY PARK, LLC  
 INSTRUMENT No. 2018212183397  
 TAX MAP SBL No. 260.00-1-111.1

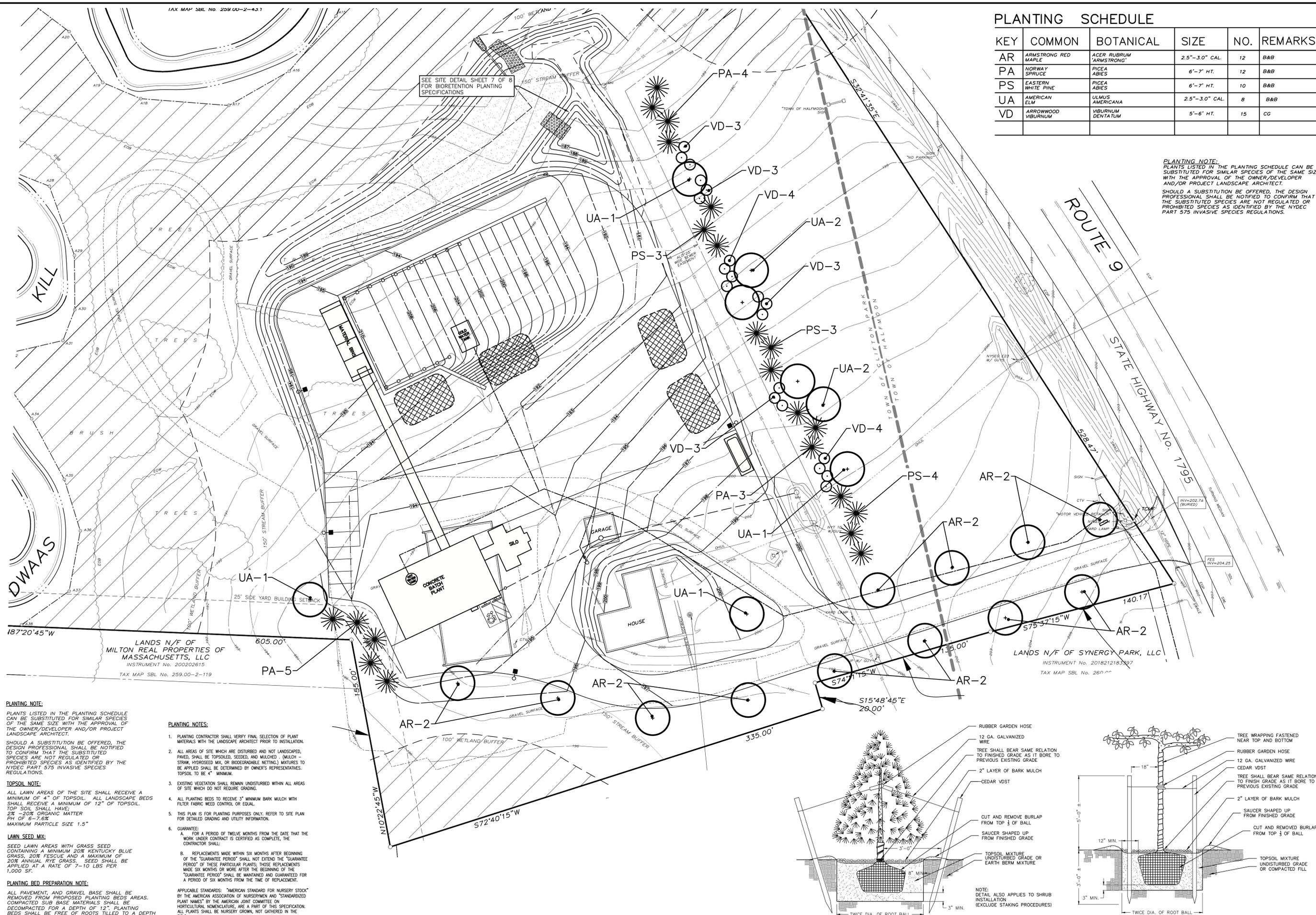
SHEET 4  
 SHEET 5



PLANTING SCHEDULE

KEY	COMMON	BOTANICAL	SIZE	NO.	REMARKS
AR	ARMSTRONG RED MAPLE	ACER RUBRUM 'ARMSTRONG'	2.5"-3.0" CAL.	12	B&B
PA	NORWAY SPRUCE	PICEA ABIES	6'-7' HT.	12	B&B
PS	EASTERN WHITE PINE	PICEA ABIES	6'-7' HT.	10	B&B
UA	AMERICAN ELM	ULMUS AMERICANA	2.5"-3.0" CAL.	8	B&B
VD	ARROWWOOD VIBURNUM	VIBURNUM DENTATUM	5'-6' HT.	15	CG

**PLANTING NOTE:**  
 PLANTS LISTED IN THE PLANTING SCHEDULE CAN BE SUBSTITUTED FOR SIMILAR SPECIES OF THE SAME SIZE WITH THE APPROVAL OF THE OWNER/DEVELOPER AND/OR PROJECT LANDSCAPE ARCHITECT.  
 SHOULD A SUBSTITUTION BE OFFERED, THE DESIGN PROFESSIONAL SHALL BE NOTIFIED TO CONFIRM THAT THE SUBSTITUTED SPECIES ARE NOT REGULATED OR PROHIBITED SPECIES AS IDENTIFIED BY THE NYDEC PART 575 INVASIVE SPECIES REGULATIONS.



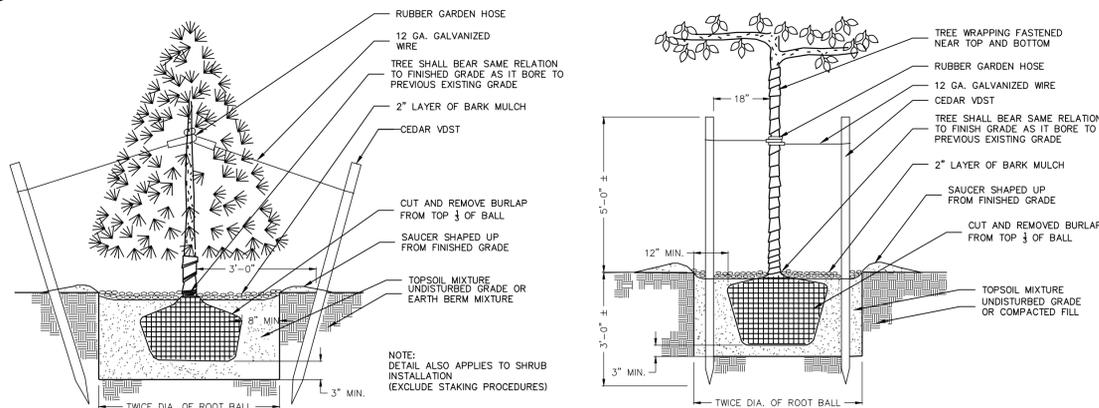
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 SHOULD A SUBSTITUTION BE OFFERED, THE DESIGN PROFESSIONAL SHALL BE NOTIFIED TO CONFIRM THAT THE SUBSTITUTED SPECIES ARE NOT REGULATED OR PROHIBITED SPECIES AS IDENTIFIED BY THE NYDEC PART 575 INVASIVE SPECIES REGULATIONS.

**TOPSOIL NOTE:**  
 ALL LAWN AREAS OF THE SITE SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL. ALL LANDSCAPE BEDS SHALL RECEIVE A MINIMUM OF 12" OF TOPSOIL. TOP SOIL SHALL HAVE:  
 2% -20% ORGANIC MATTER  
 PH OF 6-7.6%  
 MAXIMUM PARTICLE SIZE 1.5"

**LAWN SEED MIX:**  
 SEED LAWN AREAS WITH GRASS SEED CONTAINING A MINIMUM 20% KENTUCKY BLUE GRASS, 20% FESCUE AND A MAXIMUM OF 20% ANNUAL RYE GRASS. SEED SHALL BE APPLIED AT A RATE OF 7-10 LBS PER 1,000 SF.

**PLANTING BED PREPARATION NOTE:**  
 ALL PAVEMENT, AND GRAVEL BASE SHALL BE REMOVED FROM PROPOSED PLANTING BEDS AREAS. COMPACTED SUB-BASE MATERIALS SHALL BE DECOMPACTED FOR A DEPTH OF 12". PLANTING BEDS SHALL BE FREE OF ROOTS TILLED TO A DEPTH 12". INCORPORATE 2" OF COMPOST INTO SOIL AND TOP DRESS WITH 3" OF HARDWOOD MULCH.

- PLANTING NOTES:**
- PLANTING CONTRACTOR SHALL VERIFY FINAL SELECTION OF PLANT MATERIALS WITH THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
  - ALL AREAS OF SITE WHICH ARE DISTURBED AND NOT LANDSCAPED, SHALL BE TOPSOILED, SEEDED AND MULCHED (MULCH STRAW, HYDROSEED MIX, OR BIODEGRADABLE NETTING). MIXTURES TO BE APPLIED SHALL BE DETERMINED BY OWNER'S REPRESENTATIVES. TOPSOIL TO BE 4" MINIMUM.
  - EXISTING VEGETATION SHALL REMAIN UNDISTURBED WITHIN ALL AREAS OF SITE WHICH DO NOT REQUIRE GRADING.
  - ALL PLANTING BEDS TO RECEIVE 3" MINIMUM BARK MULCH WITH FILTER FABRIC WEED CONTROL, OR EQUAL.
  - THIS PLAN IS FOR PLANTING PURPOSES ONLY. REFER TO SITE PLAN FOR DETAILED GRADING AND UTILITY INFORMATION.
  - GUARANTEE:
    - FOR A PERIOD OF TWELVE MONTHS FROM THE DATE THAT THE WORK UNDER CONTRACT IS CERTIFIED AS COMPLETE, THE CONTRACTOR SHALL:
    - REPLACEMENTS MADE WITHIN SIX MONTHS AFTER BEGINNING OF THE "GUARANTEE PERIOD" SHALL NOT EXTEND THE "GUARANTEE PERIOD" OF THESE PARTICULAR PLANTS. THOSE REPLACEMENTS MADE SIX MONTHS OR MORE AFTER THE BEGINNING OF THE "GUARANTEE PERIOD" SHALL BE MAINTAINED AND GUARANTEED FOR A PERIOD OF SIX MONTHS FROM THE TIME OF REPLACEMENT.
- APPLICABLE STANDARDS:** "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND "STANDARDIZED PLANT NAMES" BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE, ARE A PART OF THIS SPECIFICATION. ALL PLANTS SHALL BE NURSERY GROWN, NOT GATHERED IN THE FIELD.



**CONIFEROUS TREE** NOT TO SCALE  
**DECIDUOUS TREE** NOT TO SCALE

**LIGHT INDUSTRIAL DEVELOPMENT BATCH CONCRETE PLANT**  
 APPLICANT: 1910 ROUTE 9 CLIFTON PARK LLC  
 1910 ROUTE 9  
 TOWN OF CLIFTON PARK AND HALFMOON  
 SARATOGA COUNTY, NEW YORK  
 TAX MAP ID: CLIFTON PARK NO. 259.0-2-44  
 HALFMOON NO. 260.0-1-28  
 DECEMBER 19, 2025

REVISION	DATE	BY

LANDS N/F OF MILTON REAL PROPERTIES OF MASSACHUSETTS, LLC  
 INSTRUMENT No. 200202615  
 TAX MAP SBL No. 259.00-2-119

LANDS N/F OF SYNERGY PARK, LLC  
 INSTRUMENT No. 2018212183397  
 TAX MAP SBL No. 260.00



**GENERAL NOTES:**

THE ENVIRONMENTAL DESIGN PARTNERSHIP IS NOT RESPONSIBLE FOR ANY CONSTRUCTION WORK PERFORMED PRIOR TO FINAL APPROVAL OF ALL PLANS AND SECURING OF ALL PERMITS AND FILING OF ALL MAPS.

CONTRACTOR TO ARRANGE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL DESIGN PARTNERSHIP AND MUNICIPALITY PRIOR TO CONSTRUCTION.

FIELD ADJUSTMENTS MUST BE APPROVED BY THE ENVIRONMENTAL DESIGN PARTNERSHIP AND THE MUNICIPALITY'S ENGINEER PRIOR TO CONSTRUCTION.

CONTRACTOR IS TO VERIFY THAT ALL NECESSARY WORK PERMITS AND EASEMENTS ARE IN PLACE PRIOR TO COMMENCEMENT OF WORK.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AND TAKE ALL SPECIAL TEMPORARY AND PERMANENT PRECAUTIONS NECESSARY TO ENSURE A STABLE AND SECURE JOB.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY MUNICIPALITY, COUNTY OR STATE HIGHWAY CUT PERMITS.

THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND EASEMENTS PRIOR TO CONSTRUCTION AND BECOME FAMILIAR WITH THE CONDITIONS OF EACH PERMIT.

THE CONTRACTOR SHALL PROTECT AND SUSTAIN IN NORMAL SERVICE ALL EXISTING UTILITIES, STRUCTURES, EQUIPMENT, ROADWAYS, AND DRIVEWAYS.

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND RIGHT-OF-WAY PROPERTY LINES PRIOR TO CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES SUCH AS GAS, POWER, TELEPHONE, CABLE TV, WATER, SEWER, ETC. PRIOR TO COMMENCEMENT OF CONSTRUCTION.

AS PER NYS INDUSTRIAL CODE 53: CONTRACTOR TO CALL DIG SAFELY NEW YORK, INC. AT 1-800-962-7962 TO LOCATE BURIED CABLES OR OTHER UNDERGROUND UTILITIES NO LESS THAN TWO OR MORE THAN TEN WORKING DAYS PRIOR TO DIGGING, DRILLING, EXCAVATING, DRIVING POSTS, ETC.

CONTRACTOR MUST VERIFY THE ACCEPTABILITY OF ALL CONSTRUCTION MATERIALS WITH MUNICIPALITY'S ENGINEER PRIOR TO ORDERING.

INSTALLATION AND MATERIAL SPECIFICATIONS FOR STORM SEWER, SANITARY SEWER, WATER SERVICE CONNECTIONS SHALL CONFORM TO THE MUNICIPALITY'S STANDARD DETAILS AND REQUIREMENTS. INSTALLATION PROCEDURES AND MATERIALS MUST BE VERIFIED WITH MUNICIPALITY PRIOR TO CONSTRUCTION.

ANY EXISTING STORM SEWERS AND UNDERGROUND UTILITIES ARE SHOWN IN THEIR RELATIVE POSITION AND FOR INFORMATION ONLY. THE CONTRACTOR SHALL HAVE THEIR EXACT LOCATION CHECKED AT THE SITE BEFORE CONSTRUCTION BEGINS.

CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING PIPE INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES WHICH RESULT MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, GRADES, PIPE INVERTS AND ELEVATIONS AND REVIEW WITH CONSULTANT BEFORE CONSTRUCTION.

ALL EXCAVATION TO MEET OSHA AND NYS DOT SAFETY REGULATIONS AND STANDARDS.

THE CONTRACTOR SHALL FILL IN, AND RE-EXCAVATE, AS NECESSARY TO RESUME WORK, ANY EXCAVATIONS OR TRENCHES AT LOCATIONS AND AS OFTEN AS MAY BE REQUIRED TO ENSURE PROTECTION OF THE WORK, ANY ADJACENT EXISTING FACILITIES, OR THE PUBLIC.

THE CONTRACTOR SHALL CLEAN UP THE JOB SITE DAILY BEFORE LEAVING THE JOB SITE. ALL BRANCHES AND JOINTS AND CONSTRUCTION EQUIPMENT MUST BE PROPERLY TAKEN CARE OF AND STORED AT THE END OF THE DAY.

CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SAFETY DURING CONSTRUCTION.

THE CONTRACTOR SHALL FURNISH ALL FLAG PERSONS AND SIGNS, DELINEATORS, BARRIERS, AND DEVICES NECESSARY FOR TRAFFIC CONTROL DURING ANY EARTH-MOVING OPERATION OR OTHER CONSTRUCTION ACTIVITY WHICH INVOLVES PUBLIC HIGHWAYS.

ALL TRAFFIC SIGNS, CONTROL DEVICES AND INFORMATIONAL ITEMS, IF DISTURBED DURING CONSTRUCTION WITHIN CONTRACT LIMIT LINES, SHALL BE RELOCATED AS PER APPROVAL OF MUNICIPALITY.

RESTORATION OF PAVEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL RESTORE AND REPAIR PAVEMENT WITH MATERIAL TO A CONDITION EQUAL TO OR BETTER THAN PRECONSTRUCTION CONDITIONS. ALL PAVEMENT AND RIGHT-OF-WAY RESTORATION WORK TO BE DONE TO THE SATISFACTION OF THE STATE, COUNTY OR LOCAL MUNICIPAL HIGHWAY DEPARTMENT.

CONTRACTOR SHALL RESTORE ALL LAWNS, DRIVEWAYS, WALKS, CURBS, FENCES, ETC. TO A CONDITIONS AT LEAST AS GOOD AS THEY WERE BEFORE BEING DISTURBED.

BOX ALL TREES AND HOUSE ALL SHRUBS AND HEDGES BEFORE PLACING EARTH AGAINST OR NEAR THEM. SHRUBS AND HEDGES THAT MUST BE REMOVED DURING CONSTRUCTION SHALL BE HEALED OR REPLANTED IN AS GOOD A CONDITION AS THEY WERE BEFORE THEIR REMOVAL. ANY DAMAGED ITEMS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

POSTS, MAILBOXES, ETC. SHALL BE PROTECTED, OR REMOVED AND REPLACED EXACTLY AS THEY WERE BEFORE BEING DISTURBED. DAMAGED ITEMS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

IT MAY BE NECESSARY TO THE OR HOLD BACK UTILITY POLES DURING CONSTRUCTION. THIS SHOULD BE ACCOMPLISHED IN COOPERATION WITH UTILITY COMPANIES.

NO WORK, STORAGE OR TRESPASS SHALL BE PERMITTED BEYOND THE BOUNDARIES OF ANY EASEMENTS OR R.O.W. AS SHOWN.

CONTRACTOR TO COMPLY WITH ALL OSHA AND OTHER STATE AND LOCAL SAFETY REQUIREMENTS DURING CONSTRUCTION (PROPER SHORING, ETC.).

SIDE SLOPES GREATER THAN 1:3 WILL REQUIRE GUIDE RAILS (1-FOOT VERTICAL, 3-FOOT HORIZONTAL).

ALL SITE WORK SHALL BE SMOOTHLY AND EVENLY BLENDED INTO EXISTING CONDITIONS. WHERE ACCESS OR WORK OUTSIDE OF PROPERTY BOUNDARY IS NECESSARY, THE PERMISSION OF ADJACENT PROPERTY OWNER MUST FIRST BE OBTAINED.

SITE SURVEYOR TO VERIFY ELEVATIONS OF EXISTING ROAD CENTERLINE AND SHOULDER PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR IS TO CONFIRM THIS WITH SITE SURVEYOR.

WHERE APPROPRIATE, SITE LAYOUT AND GRADING WORK SHALL BE COMPLETED BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR. LANDSCAPE ARCHITECT SHALL APPROVE ALL LAYOUT WORK PRIOR TO CONSTRUCTION.

CONTRACTOR TO NOTIFY ENGINEER AFTER ROUGH GRADING IS COMPLETED. FINISH GRADES TO BE ADJUSTED IN THE FIELD AFTER FINAL GRADING IS COMPLETED. ALL CHANGES IN PROPOSED GRADES TO BE APPROVED BY OWNER AND ENGINEER.

ALL AREAS OF THE SITE WHICH ARE DISTURBED AND NOT PAVED SHALL BE TOPSOILED AND SEEDDED.

ALL PHYSICAL FEATURES INCLUDING SIDEWALKS, CURBING, DECKS, LAMPS, STAIRS, ETC. WITHIN FIVE FEET OF EXTERIOR BUILDING WALLS AND CANOPY OVERHANGS ARE TO BE CONSTRUCTED PER ARCHITECTURAL PLANS. IT IS NOT THE INTENT OF THESE DOCUMENTS TO ADDRESS SUCH DETAILS, WHICH ARE SHOWN ONLY FOR THE PURPOSE OF CONTINUITY BETWEEN THE SITE PLAN AND THE ARCHITECTURAL PLANS.

PROVISIONS FOR STORMWATER COLLECTION AND DRAINAGE PERTAINING TO THE ROOF AND TO THE PERIMETER WITHIN FIVE FEET OF EXTERIOR BUILDING WALLS AND CANOPY OVERHANGS ARE THE RESPONSIBILITY OF THE ARCHITECT.

ALL VERTICAL GRADE CHANGES GREATER THAN 30 INCHES SHALL BE PROVIDED WITH SAFETY BARRIERS AS PER NYS BUILDING CODE (FENCES, RAILINGS, ETC. PER OWNER).

PRELIMINARY PAVEMENT AND SIDEWALK DESIGN SPECIFICATIONS ASSUME EXISTING SUBGRADE CONSISTS OF CLEAN, GRANULAR MATERIAL (SAND & GRAVEL) AND THAT THERE IS NO WATER TABLE INTERFERENCE. PRIOR TO CONSTRUCTION, THE PROJECT OWNER SHALL HAVE THE EXISTING SUBGRADE CONDITIONS EVALUATED BY A GEOTECHNICAL ENGINEER, WHO SHALL DETERMINE FINAL PAVEMENT AND SIDEWALK DESIGN SPECIFICATIONS. THE OWNER ASSUMES ALL RESPONSIBILITY FOR PAVEMENTS AND SIDEWALKS CONSTRUCTED WITHOUT A FINAL DESIGN, SHOULD HE CHOOSE NOT TO HIRE A GEOTECHNICAL ENGINEER.

ROADWAYS AND UNDERGROUND UTILITY FILL AREAS SHALL BE CONTROLLED FILLS PREPARED IN GENERAL ACCORDANCE WITH NYS DOT STANDARD SPECIFICATIONS 203, EXCAVATION AND EMBANKMENT.

FILL AREAS SHALL BE STRIPPED OF SOD, TOPSOIL AND UNSUITABLE MATERIAL AND BE MECHANICALLY COMPACTED TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH NYS DOT 203-3.03.A.

FILLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NYS DOT 230-3.03.B, EMBANKMENTS. COMPACTION AND LIFT THICKNESS SHALL BE IN ACCORDANCE WITH NYS DOT 230-3.03.C.

UNDERWATER AREAS SHALL BE FILLED WITH SELECT GRANULAR FILL.

CONTROLLED FILL SHALL BE WITH SELECT GRANULAR MATERIAL WITH GRADATION: 100% PASSING #4" SIEVE, 0-70% PASSING #40 AND 0-12% PASSING #200 AND MEET NYS DOT STD SPEC 733-11. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 12" LOOSE THICKNESS AND SHALL BE MECHANICALLY COMPACTED TO 95% MINIMUM OF THE MAXIMUM ASTM SPECIFICATION D1557 DENSITY (MODIFIED PROCTOR). ALL CONTROLLED FILL SHALL BE FREE OF ORGANIC, CLODS AND/OR FROZEN MATERIALS.

EMBANKMENT SUBGRADE AREA (TWO FEET BELOW SUBGRADE ELEVATION) SHALL BE CONSTRUCTED IN ACCORDANCE WITH NYS DOT 230-2.02.B, SELECT BORROW AND SELECT FILL, COMPACTED PER 203-3.03.C.

MATERIAL WITHIN TWO FEET OF SUBGRADE AREA SHALL MEET GRADATION: 100% PASSING #6" SIEVE, 30-100% PASSING #40, 0-10% PASSING #200 PER NYS DOT STD. SPEC 203-2.12, MEET 733-13.3.B.2 AND BE COMPACTED PER 203-2.12.

ALL AREAS OF THE SUBGRADE SURFACE WITHIN THE ROADWAY OR OTHER PAVEMENT AREA LIMITS SHALL BE PROOF-ROLLED, WITH UNSUITABLE AREAS CORRECTED TO THE SATISFACTION OF THE ENGINEER. PRIOR TO PLACING ANY SUBGRADE MATERIALS, BOTH EMBANKMENT AND CUT AREAS, IN ACCORDANCE WITH NYS DOT 203-3.03.D & 203-3.02.C.

FILL SPECIFICATIONS ARE CONSIDERED MINIMAL AND ARE SUBJECT TO CHANGE UPON DISCOVERY OF UNFAVORABLE SITE SOIL CONDITIONS AND/OR BY A GEOTECHNICAL ENGINEER RETAINED BY THE OWNER/ DEVELOPER.

SPECIFICATIONS FOR STREET/ SITE LIGHTING ARE PER MUNICIPALITY REQUIREMENTS/QUALIFIED PHOTOMETRIC ENGINEER RETAINED BY OWNER.

PRIOR TO COMMENCEMENT OF STORM AND/OR SANITARY SEWER CONSTRUCTION, CONTRACTOR IS TO VERIFY BOTH HORIZONTAL AND VERTICAL POSITION OF EXISTING SEWER AT THE CONNECTION POINT. CONTRACTOR IS TO CONSTRUCT GRAVITY LINES PROGRESSIVELY FROM DOWNSTREAM TO UPSTREAM. ANY EXCEPTIONS TO THIS MUST BE APPROVED BY THE ENGINEER. ANY GRADE DISCREPANCIES MUST BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

WATER AND SEWER SEPARATION REQUIREMENTS:  
MINIMUM 18 INCHES VERTICAL SEPARATION IS REQUIRED BETWEEN WATER MAINS AND ANY EXISTING OR PROPOSED SANITARY AND STORM SEWER AT ALL CROSSINGS, MEASURED OUTSIDE TO OUTSIDE OF PIPES, WITH JOINTS CONSTANT FROM CROSSING POINT. PER NY STATE HEALTH DEPARTMENT REQUIREMENTS. PARALLEL LINES MUST BE SEPARATED A MIN. OF 10 FEET.

- WHERE MINIMUM SEPARATIONS CANNOT BE MET, WITH CASE-BY-CASE-APPROVAL FROM NYS DOH:
- NEW SEWERS SHALL BE CONSTRUCTED OF MIN. PR 150 PSI AWWA WATER GRADE MATERIALS AND SHALL BE LOCATED TO ENSURE WATER TIGHTNESS.
- LESS THAN 10 FT. SEPARATION ONLY IF WATER MAIN IS LAD IN A SEPARATION TRENCH OR ON AN EARTH SHELF PRESSURE ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18" ABOVE THE TOP OF THE GRAVITY SEWER.
- WHERE FORCE AND GRAVITY SEWERS PRE-EXIST, THE WATER MAIN SHALL BE INSTALLED WITHIN A PROTECTIVE CASING PIPE, CONSTRUCTED OF MIN. PR 150 PSI AWWA WATER GRADE MATERIALS, AND EXTEND 10 FT. MIN. ON BOTH SIDE OF THE SEWER BEING CROSSED OR, WHERE PARALLEL, TO A POINT WHERE THE LINES ARE SEPARATED BY 10 FT.
- WHERE A WATER MAIN AND/OR WATER WELLS PRE-EXIST AND A FORCE MAIN IS BEING CONSTRUCTED: THE FORCE MAIN SHALL BE INSTALLED WITHIN A PROTECTIVE CASING PIPE, CONSTRUCTED OF MIN. PR 150 PSI AWWA WATER GRADE MATERIALS, AND EXTEND 10 FT. MIN. ON BOTH SIDES OF THE WATER MAIN BEING CROSSED; WHERE PARALLEL, TO A POINT WHERE THE LINES ARE SEPARATED BY 10 FT.; OR TO A POINT WHERE THE ENDS OF THE CASING PIPE ARE 150 FT. MIN. FROM ANY WATER WELL.

CONTRACTOR TO VERIFY THE ELEVATION OF THE EXISTING WATER MAIN, TO AVOID CONFLICTS, PRIOR TO CONSTRUCTING OTHER UTILITIES.

ALL NEW WATER MAIN WORKS ARE TO BE HYDROSTATICALLY TESTED AT 150 PSIG MIN. (AS MEASURED AT THE LOWEST POINT) IN ACCORDANCE WITH AWWA STANDARDS: C600-17 FOR DUCTILE IRON PIPE, MANUAL M23 FOR PVC, AND MANUAL M55 FOR PE. RESULTS TO BE SUBMITTED TO MUNICIPAL ENGINEER. MODIFICATIONS TO EXISTING WORKS SHALL BE VISUALLY TESTED FOR LEAKS UNDER NORMAL WORKING PRESSURE PRIOR TO BACKFILL.

ALL WATER MAIN WORKS SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH AWWA STANDARD C651-14 (SEE DISINFECTION PROCEDURE ON WATER DETAIL SHEET). RESULTS TO BE SUBMITTED TO THE MUNICIPAL ENGINEER.

POTABLE WATER MAIN PIPE TO BE:

- DUCTILE IRON PIPE, CLASS 52 OR 50;
- BLUE-COLORED PVC DR-18 AWWA C-900;
- WHITE OR BLUE-COLORED PVC OR PUVC SDR-21;
- PE 4710 IPS OR DIPS, DR-11 (PR 200 PSI) BLUESTRIPE AWWA C-906

POTABLE WATER SERVICE TUBING TO BE:

- TYPE K COPPER
- PE 4710 BLUE WATER SERVICE TUBING (CTS) ASTM D2737 SODR-9
- COMMERCIAL SERVICE ≥ 3" DIA.

ALL PLASTIC WATER MAIN AND WATER SERVICE TUBING SHALL BE BURIED WITH TRACER WIRE SURED TO THE TOP OF PARKING PAVEMENT. TRACER WIRE SHALL BE #10 AWG SINGLE CONDUCTOR 49 (7x7) STRANDED HIGH-FLEX ANNEALED TYPE 304 ALLOY STAINLESS STEEL WITH HMWPE BLUE-COLORED INSULATION SUCH AS MANUFACTURED BY KRIS-TECH WIRE CO. MAIN BRANCHES AND SERVICE CONNECTIONS SHALL BE MADE WITHOUT CUTTING THE MAIN WIRE. USING 3-WAY DIRECT-BURY LUGS WITH SILICONE GEL ENCAPSULATOR. SPLICES AT ROLL ENDS SHALL BE MECHANICALLY AND ELECTRICALLY FASTENED BY TYING WIRE IN A KNOT AND CONNECTING EXPOSED CONDUCTORS IN SILICONE GEL ENCAPSULATORS. DIRECT-BURY TRACER WIRE BURIAL CONNECTORS SUCH AS DRYCONN CONNECTORS BY COPPERHEAD INDUSTRIES, LLC. TRACER WIRE SHALL BE BROUGHT UP 12" MIN. ABOVE GRADE ON THE OUTSIDE OF ALL HYDRANTS, GATE & CURB BOXES.

ALL WATER PIPE SHALL HAVE 6-INCH WIDE, BLUE-COLORED PLASTIC WATER UTILITY I.D. MARKING TAPE BURIED ON TOP OF THE COMPACTED INITIAL PIPE BACKFILL, 12" MIN. ABOVE THE PIPE.

THRUST BLOCKING TO COMPLY WITH THE MUNICIPAL STANDARDS. THRUST BLOCKS TO BE CAST-IN-PLACE CONCRETE MIN. 3,000 PSI (SEE DETAIL).

ALL STORM SEWER PIPE TO BE DUAL WALL HIGH-DENSITY POLYETHYLENE MEETING ASTM D3530 (EXCEPT CARBON BLACK MAX. 4%), HAVE A SMOOTH INTERIOR, ANNULAR EXTERIOR CORRUGATIONS AND INTEGRAL SOIL-TIGHT BELL & SPIGOT JOINTS WITH GASKETS MEETING ASTM F477. ALL PIPE FOR USE IN TOWN, COUNTY & STATE R.O.W'S AND SUBDIVISION ROADS TO BE DEDICATED SHALL MEET ASHLEI SPECIFICATION. PIPE FOR USE ON PRIVATELY OWNED SITES MAY BE EITHER ASHLEI OR ASTM F2648 SPECIFICATION. PARTIAL PIPE LENGTHS SHALL BE JOINED WITH EITHER SILT-TIGHT PREMIUM BAND COUPLERS WITH RUBBER GASKETS OR STANDARD BAND COUPLERS WRAPPED WITH NON-WOVEN GEOTEXTILE FABRIC. 4-FOOT WIDE OVERLAP AT EACH END. WATER-TIGHT JOINTS ARE REQUIRED WHERE PE PIPE IS SPECIFIED FOR SMA BASIN INLET PIPE AND FITTINGS.

THE INFORMATION REPRESENTED WITHIN THESE DOCUMENTS DOES NOT IMPLY ANY CONTRACT WITH OR OBLIGATION FOR, PERFORMING ANY OR ALL MUNICIPALITY, COUNTY, OR STATE REQUIRED INSPECTIONS DURING THE COURSE OF CONSTRUCTION OR PURSUANT TO OBTAINING CERTIFICATE OF OCCUPANCY. SUCH INSPECTION SERVICES, IF PERFORMED BY THIS OFFICE, SHALL BE ESTABLISHED BY SEPARATE CONTRACT.

IN THE EVENT THAT THE CONSTRUCTION TAKEOUT AND INSPECTION OF THE WORK IS NOT PERFORMED BY THE ENVIRONMENTAL DESIGN PARTNERSHIP (EDP), EDP WILL NOT BE HELD RESPONSIBLE FOR ANY ERRORS, OMISSIONS, COSTS, EXPENSES OR LIABILITY OF WHATEVER KIND AND NATURE RESULTING FROM FIELD CHANGES AND/OR ERRORS WHICH WOULD OTHERWISE HAVE HAD AN OPPORTUNITY TO CHECK AND CORRECT WERE THEY IN A POSITION TO CONTROL THE PROJECT THROUGH TAKEOUT AND INSPECTION.

CLAIMS MADE AGAINST CONSULTANT FOR SURVEY TAKEOUT WORK WILL BE HONORED ONLY IF CONSULTANT IS NOTIFIED FOR VERIFICATION OF THE ERROR IMMEDIATELY UPON DISCOVERY AND BEFORE ANY CONTROL STAKES ARE DISTURBED. IF, AFTER VERIFICATION, IT IS DETERMINED THAT NO TAKEOUT ERROR OCCURRED, THE CLIENT SHALL REIMBURSE THE CONSULTANT FOR ADDITIONAL EXPENSES INCURRED FOR SUCH VERIFICATION.

ALL ERRORS, OMISSIONS AND DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENVIRONMENTAL DESIGN PARTNERSHIP IMMEDIATELY UPON DISCOVERY, OTHERWISE, THE ENVIRONMENTAL DESIGN PARTNERSHIP WILL ACCEPT NO RESPONSIBILITY.

INSPECTION SERVICES BY THE ENVIRONMENTAL DESIGN PARTNERSHIP ARE NOT SUPERVISORY. ACCORDINGLY, THE ENVIRONMENTAL DESIGN PARTNERSHIP CAN NEITHER GUARANTEE THE PERFORMANCE OF THE CONSTRUCTION CONTRACTS NOR ASSUME RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO FURNISH AND PERFORM WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

EXISTING UNDERGROUND UTILITY INFORMATION SHOWN ON THE CONSTRUCTION PLANS & PROFILES ARE FOR GENERAL INFORMATIONAL PURPOSES AND SHALL NOT BE REFERENCED IN LIEU OF DIG SAFELY NEW YORK UTILITY IDENTIFICATION & LOCATION MARKING SERVICES FOR PURPOSES OF CONSTRUCTION.

NOTES:

- BIORETENTION FACILITIES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH VOLUME 5 - LOW IMPACT DEVELOPMENT STORMWATER MANAGEMENT MANUAL AS PREPARED BY THE METROPOLITAN GOVERNMENT NASHVILLE AND DAVIDSON COUNTY (MNS).
- DRAINAGE AREA TRIBUTARY TO THE BIORETENTION MUST BE FULLY STABILIZED, PRIOR TO CONSTRUCTION OF BIORETENTION AREAS.
- BACK FILLING OF BIORETENTION FACILITY SHALL BE PLACED IN 12" LIFTS.
- PLANTING SOIL MATERIAL SHALL BE USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM, CONTAINING 60% SAND, LESS THAN 30% SILT, 5 TO 10% ORGANIC MATTER AND LESS THAN 10% CLAY. FINAL MATERIAL SHALL BE APPROVED BY THE ENGINEER AND SHALL MEET THE FOLLOWING CRITERIA:

PH RANGE: 5.2-7.0  
ORGANIC MATTER: 2-3%  
MAGNESIUM: 35 LB/AC  
PHOSPHOROUS P<sub>2</sub>O<sub>5</sub>: 75LB/AC  
POTASSIUM K<sub>2</sub>O: 85LB/AC  
SOLUBLE SALTS: NOT TO EXCEED 500PPM  
CEC: > 10 meq/100 ml

5.1. UNACCEPTABLE MATERIALS: CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, BUILDING DEBRIS, ASPHALT, BRICKS, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAT, ROOFING COMPOUND, ACID, SOLID WASTE, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.

5.2. UNSUITABLE MATERIALS: STONES, ROOTS, PLANTS, SOD, CLAY LUMPS, AND POCKETS OF COARSE SAND THAT EXCEED A COMBINED MAXIMUM OF 5 PERCENT BY DRY WEIGHT OF THE MANUFACTURED SOIL.

5.3. LARGE MATERIALS: STONES, CLODS, ROOTS, CLAY LUMPS, AND POCKETS OF COARSE SAND EXCEEDING 0.187" (7.76 mm) IN ANY DIMENSION.

5.4. HARDWOOD MULCH SHALL BE INSTALLED FOR A MINIMUM OF 6 MONTHS, PRIOR TO ASG.

5.5. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

5.6. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

5.7. TREE DENSITY SHOULD BE LIMITED TO 1 TREE PER 100 SQUARE FEET (10 FEET ON CENTER)

5.8. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

5.9. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

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5.11. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

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5.17. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

5.18. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

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5.20. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

5.21. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

5.22. TREE DENSITY SHOULD BE LIMITED TO 1 TREE PER 100 SQUARE FEET (10 FEET ON CENTER)

5.23. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

5.24. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

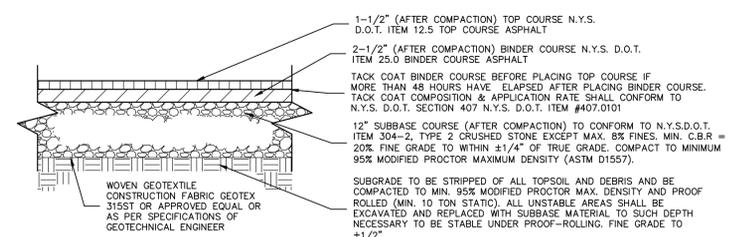
5.25. TREE DENSITY SHOULD BE LIMITED TO 1 TREE PER 100 SQUARE FEET (10 FEET ON CENTER)

5.26. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.

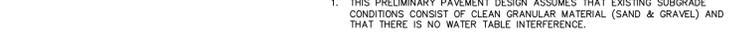
5.27. NON-WOVEN GEOTEXTILE SHALL HAVE FLOW RATE > 100 GAL./MIN./FT SQUARE

5.28. TREE DENSITY SHOULD BE LIMITED TO 1 TREE PER 100 SQUARE FEET (10 FEET ON CENTER)

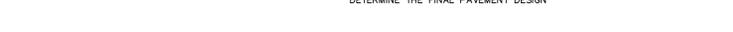
5.29. ROTOTILL 2"-3" OF SAND BASE INTO THE BASE OF THE BIORETENTION FACILITY.



NOTES:  
1. THIS PRELIMINARY PAVEMENT DESIGN ASSUMES THAT EXISTING SUBGRADE CONDITIONS CONSIST OF CLEAN GRANULAR MATERIAL (SAND & GRAVEL) AND THAT THERE IS NO WATER TABLE INTERFERENCE.  
2. PRIOR TO CONSTRUCTION, THE OWNER SHALL VERIFY THE EXISTING SUBGRADE CONDITIONS USING A GEOTECHNICAL ENGINEERING CONSULTANT, TO DETERMINE THE FINAL PAVEMENT DESIGN.



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