

Township of Woodbridge
Green Grounds & Maintenance Policy
Current Examples

Mission Statement

The Township of Woodbridge is dedicated to the concept of utilizing the policies of Green Grounds and Maintenance as one of its best management practices.

Goals and Responsibilities

To achieve environmentally sound and efficient results in the area of maintaining and designing municipal buildings and property.

Objectives

The Township of Woodbridge's Department of Public Works and Parks hereby formally supports the following practices to achieve the results stated in its Mission Statement.

Integrated Pest Management

- use only organic fertilizers and pesticides
- adhere to a frequent timely schedule for mowing and grounds maintenance
- adhere to a seeding and aeration program in the Spring and Fall
- provide timely collection of trash at municipal parks and buildings
- keep tree branches and shrubbery well maintained and away from buildings
- ensure roofs are repaired in a timely manner as to not attract insects to deteriorating wood

➤ *Current Examples:*

- New Garbage Can Cleaning Curbside Service – Utilizes environmentally friendly and fully self-contained practices. Carts are cleaned, disinfected & deodorized right at the curb.
- No-mow seeding and conservation restoration efforts within specific Township maintained areas where native trees, shrubs, and wildflowers have been installed promote both rain-scaping and xeriscaping mechanisms.
- Questionably unsafe tree limbs and shrubbery are maintained. A professional Forester has worked with the Township to best identify possible unsafe vegetation, which then is removed after said assessment. Re-planting in said locations is then arranged/ implemented to ensure healthy re-vegetation.

Minimize Water Consumption

- encourage collection and use of rainwater for non-potable water applications
- consider reusing stormwater or graywater for sewage conveyance or on-site wastewater treatment systems
- for interior building construction, encourage high-efficiency fixtures and dry fixtures such as reuse of toilet systems and using waterless urinals to reduce wastewater volumes
- promote options for on-site wastewater treatment such as packaged biological

nutrient removal systems, constructed wetlands and high efficiency filtration systems

- encourage “rainscaping” design to minimize surface runoff
- encourage “xeriscaping” to incorporate native and low maintenance plantings
- maintain natural aquifer conditions
- promote consideration of water issues during planning
- implement a citizen education campaign highlighting importance of water issues, using mass media, area schools, and include partnerships with groups like the Environmental Commission and Woodbridge River Watch.

Efficient Landscape Design

- minimize the use of water and pesticides
- encourage “rainscaping” design to minimize surface runoff
- encourage “xeriscaping” to incorporate native and low maintenance plantings
- ensure all municipal grounds are aesthetically pleasing
- ensure municipal parks make efficient use of all available space
- educate residents of the benefits and encourage the concept of Efficient Landscape and Design to be utilized by private citizens

➤ Current Examples:

- The Township of Woodbridge, in conjunction with the Rutgers Cooperative Extension (RCE), is formulating a potential plan to implement the first ‘*Green Street*’ in the Township on Marsh Street in Sewaren. A ‘*Green Street*’ or ‘*Complete Street*’ includes a holistic approach to design a roadway with convenient and comfortable access for all users while improving the aesthetics, ecology, safety, and stormwater management of the roadway.
- No-mow seeding and conservation restoration efforts within specific Township maintained areas where native trees, shrubs, and wildflowers have been installed promote both rain-scaping and xeriscaping mechanisms.
- Engineering plans have been completed for forested wetland installation within a vulnerable floodplain to best promote flood storage and eco-system services.
- Tremendous effort has been placed on education campaigns focusing on residential water conservation measures both outdoors and indoors.

Recycled Materials and Composting

- re-use composted and collected recycled material for municipal landscaping applications
- encourage resident recycling of “green” materials such as grass clippings and “brown” materials such as tree leaves

➤ Current Examples (some 2019 data not available as of yet due to COVID-19; however, June 2018 is within the 2.5 year look back-period for the action):

- Bulky rigid plastics- Woodbridge has a 30 yd container in the Convenience Center for collecting it. We also offer FREE curbside pick-up. 95.10 tons was recycled in 2018

- Plastic Bags/Shrink Wrap- Woodbridge has drop off containers at the Recycling Center, Town Hall, Community Center (new), Sycamore, Evergreen, & DPW building. We send bags/film to TREX and received a bench made from TREX material every year. In 2018 we collected 1.48 tons.
- Plastics #3-7- These are picked up with our curbside recycling, we take all plastics #1-#7.
- Textiles- Woodbridge has drop off clothing bins at the Recycling Center. There are also bins at the local libraries, schools, and churches. From these locations we took in 560.55 tons. This does not include clothing drives.
- Cooking Oil- Woodbridge has a container for residents to drop off their cooking oil at the Recycling Center. We also supply free containers for them to bring their cooking oil in (courtesy of Middlesex County Recycling).
- Woodbridge Township, Division of Recycling has started a monofilament (fishing line) recycling program at the Sewaren Boat Launch and the Woodbridge Township Marina. Fishermen are encouraged to put their unwanted fishing line into the labeled white pvc, monofilament recycling container. These containers will be serviced by the Division of Recycling. The monofilament line will be collected, sent to a recycler, melted down into plastic pellets, and then made into other plastic products. Fishing line that is discarded in our waterways and on land, is responsible for many wildlife deaths due to entanglement, and for fouling boat propellers. Fishing line that is thrown out in the garbage can end up in the environment; either by blowing out of garbage cans or a landfill, or by being taken out by birds or animals. Monofilament line can last hundreds of years. By using these recycling containers and collecting and recycling the fishing line, we can make sure that it is removed from the environment.
- Food waste recycling has been implemented and 75.07 tons was recycled in 2019.

Action Plan

Woodbridge Township is dedicated to its Green Grounds and Maintenance Policy. The Department of Public Works and Parks shall oversee that the policy is carried out and will promote the practices and goals set therein.

- *Current Examples:* This action plan remains in place.

Current Examples Documentation

Cart Cleaning Program



Keeping Your Trash & Recycling

Carts Clean

The township has started a curbside cart
cleaning program

* Cart cleaning system is 100%
environmentally friendly and fully
self-contained.

* Carts will be cleaned, disinfected &
deodorized right at the curb.

* Carts will be cleaned throughout the township

on a rotating basis.

*** You can also call Sanitation at 732-738-1311**

ext. 3600 to have your carts cleaned

Sum of Tonnage Row Labels	Column Labels		
	Commercial	Residential	Grand Total
Aluminum Containers (06)	144.39	123.68	268.07
Anti-freeze (12)	15.58	5.6	21.18
Automobile Scrap (14)	791.6	19.96	7931.56
Batteries (Automobile) (13)	362.15	1.18	363.33
Batteries (Dry Cell) (24)	5.4	0.54	5.94
Brush/Tree Parts (17)	1167.14	1845.03	3012.17
Concrete / Asphalt / Brick / Block (22)	151420.14	4161.84	155581.98
Consumer Electronics (21)	93.82	139.21	233.03
Corrugated (01)	15778.51	3556.71	19335.22
Fluorescent Lights (24)	2.44	0.44	2.88
Food Waste (23)	1338.19	0.38	1338.57
Glass Containers (05)	844.28	1731.58	2575.86
Heavy Iron (09)	27522.7	805.73	28328.43
Leaves (19)	313.6	2177.58	2491.18
Mixed Office Paper (02)	5681.82	1002.13	6683.95
Newspaper (03)	835.67	2968.42	3804.09
NonFerrous/Aluminum Scrap (10)	141.67	1.22	142.89
Oil Contaminated Soil (27)	28757.12		28757.12
Other Glass (25)	0.46		0.46
Other Material Not Listed (24)	1683.28	17	1700.28
Other Paper/Mag/JunkMail (04)	749.35	2492.91	3242.26
Other Plastic (26)	229.83	96.58	326.41
Paints & Stain (24)	0.23	109.78	110.01
Plastic Containers (08)	1820.5	371.05	2191.55
Steel Containers (07)	535	248.15	783.15
Stumps (20)	0.32	27.75	28.07
Textiles (29)	0.17	560.38	560.55
Tires (15)	1718.3	36.13	1754.43
Used Motor Oil (16)	834.9	32.78	867.68
White Goods & Light Iron (11)	6977.78	539.36	7517.14
Wood Scraps (30)	2966.67		2966.67
Grand Total	259853.01	23073.1	282926.11

Note:

Other Plastic is both rigid and plastic bags

Plastic Bays/Film Tonnage is 1.48 ton

Bulky Rigid is 95.10 ton

Food Waste is from the Cooking Oil Program

In 2019 Food Waste collected from Township Schools was

This will be on the 2019 Recycling Tonnage which has not

WATSON-CRAMPTON FORESTED WETLAND RESTORATION

TOWNSHIP OF WOODBRIDGE MIDDLESEX COUNTY, NEW JERSEY

BLOCK 563.16, LOT 121,124,127,129,131,143,145
BLOCK 563.17, LOT 157,179,181,183,185,187
BLOCK 563.18, LOT 194,198,201,203,206,209
BLOCK 563.33, LOT 1

PROJECT DESCRIPTION:

THIS PROJECT PROPOSES CONSTRUCTION OF A WETLAND DESIGNED TO CONVEY STORM WATER FROM ADJACENT DEVELOPED AREA TO THE WOODBRIDGE RIVER. THE WETLAND DESIGN REDIRECTS FLOW FROM THREE EXISTING SWALES THROUGH A SERIES OF VEGETATED DEPRESSIONS AND OPEN POOLS, WHERE WATER WILL BE TEMPORARILY STORED AND FILTERED. THE DESIGN INCREASES THE FLOOD STORAGE POTENTIAL OF THE EXISTING LANDSCAPE USING NATURAL ECOLOGICAL FEATURES AND REESTABLISHES NATIVE WETLAND VEGETATION APPROPRIATE TO THE REGION AND THE EXPECTED SITE CONDITIONS.

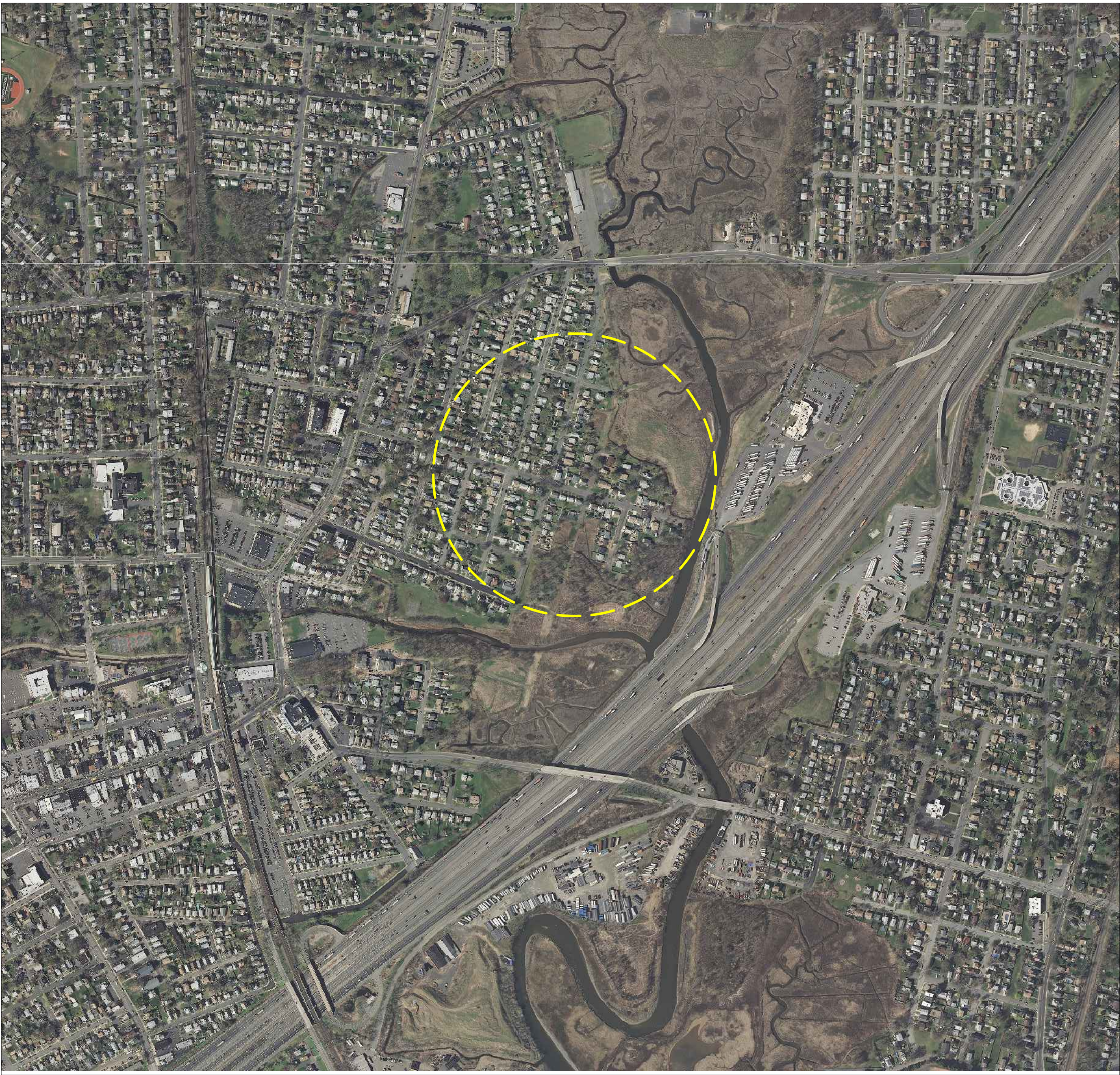
LIST OF DRAWINGS:

SHEET NAME	TITLE
COVER	COVER SHEET
P-1	EXISTING CONDITIONS AND DEMOLITION PLAN
P-2	PROPOSED SITE PLAN
P-3	WETLAND ZONE DIAGRAM
P-4	PLANTING PLAN
DT-1	PLANTING DETAILS

GENERAL NOTES:

1.
- SURVEY CONDUCTED BY RUTGERS COOPERATIVE EXTENSION WATER RESOURCES PROGRAM. SURVEY ELEVATIONS WERE ADJUSTED TO NAVD88.

LOCATION MAP:



LEGEND:

-----	EXISTING DRAINAGE AREA
————	EDGE OF PAVEMENT
⚡-----	EXISTING CENTERLINE
—+—+—+—	EXISTING FENCE
~~~~~	EXISTING TREELINE
○	EXISTING TREE
▨	EXISTING BUILDING
⊕	EXISTING UTILITY POLE
▤	EXISTING CATCH BASIN
---	EXISTING CONTOURS
---	PROPERTY LINES
-.-.-	LIMIT OF WORK
▨	AREA TO BE DEPAVED
————	PROPOSED CONTOURS

JEREMIAH BERGSTROM, LLA  
LICENSED LANDSCAPE ARCHITECT  
NJ LICENSE # 21A500090700

DRAWN  
ML

CHECKED  
JB

APPROVED  
BM


DATE  
01/17/2020

REVISIONS

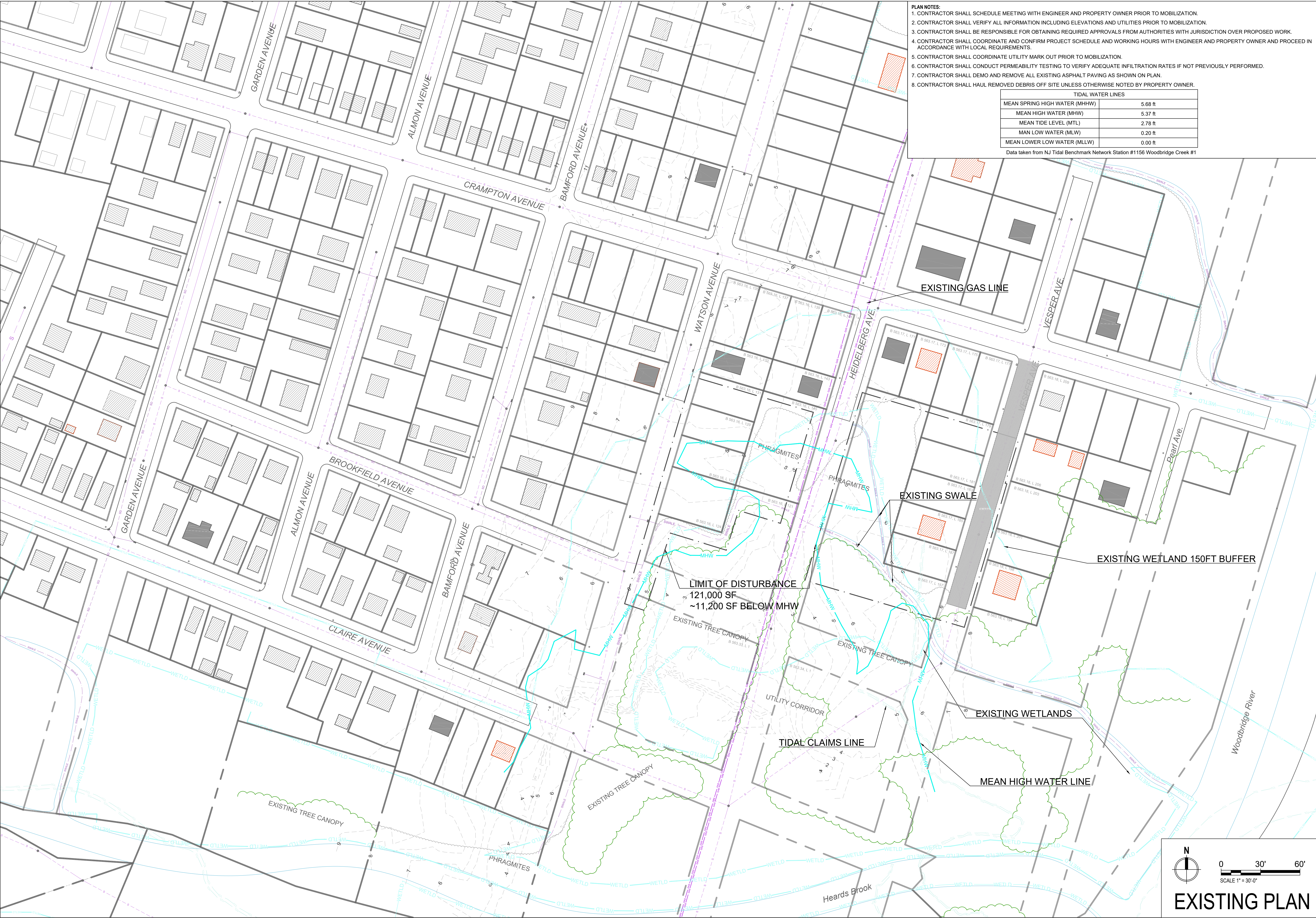
No.	DATE	DESCRIPTION

WATSON-CRAMPTON  
FORESTED WETLAND RESTORATION  
TOWNSHIP OF WOODBRIDGE  
MIDDLESEX COUNTY, NJ

COVER SHEET



SHEET NAME  
COVER



- PLAN NOTES:
1. CONTRACTOR SHALL SCHEDULE MEETING WITH ENGINEER AND PROPERTY OWNER PRIOR TO MOBILIZATION.
  2. CONTRACTOR SHALL VERIFY ALL INFORMATION INCLUDING ELEVATIONS AND UTILITIES PRIOR TO MOBILIZATION.
  3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED APPROVALS FROM AUTHORITIES WITH JURISDICTION OVER PROPOSED WORK.
  4. CONTRACTOR SHALL COORDINATE AND CONFIRM PROJECT SCHEDULE AND WORKING HOURS WITH ENGINEER AND PROPERTY OWNER AND PROCEED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
  5. CONTRACTOR SHALL COORDINATE UTILITY MARK OUT PRIOR TO MOBILIZATION.
  6. CONTRACTOR SHALL CONDUCT PERMEABILITY TESTING TO VERIFY ADEQUATE INFILTRATION RATES IF NOT PREVIOUSLY PERFORMED.
  7. CONTRACTOR SHALL DEMO AND REMOVE ALL EXISTING ASPHALT PAVING AS SHOWN ON PLAN.
  8. CONTRACTOR SHALL HAUL REMOVED DEBRIS OFF SITE UNLESS OTHERWISE NOTED BY PROPERTY OWNER.

TIDAL WATER LINES	
MEAN SPRING HIGH WATER (MHHW)	5.68 ft
MEAN HIGH WATER (MHW)	5.37 ft
MEAN TIDE LEVEL (MTL)	2.78 ft
MAN LOW WATER (MLW)	0.20 ft
MEAN LOWER LOW WATER (MLLW)	0.00 ft

Data taken from NJ Tidal Benchmark Network Station #1156 Woodbridge Creek #1

JEREMIAH BERGSTROM, LLA  
LICENSED LANDSCAPE ARCHITECT  
NJ LICENSE # 21A500090700

DRAWN  
ML

CHECKED  
JB

APPROVED  
BM

DATE  
01.17.2020

REVISIONS	
No.	DESCRIPTION

WATSON-CRAMPTON  
FORESTED WETLAND RESTORATION  
TOWNSHIP OF WOODBRIDGE  
MIDDLESEX COUNTY, NJ

EXISTING CONDITIONS AND DEMOLITION PLAN

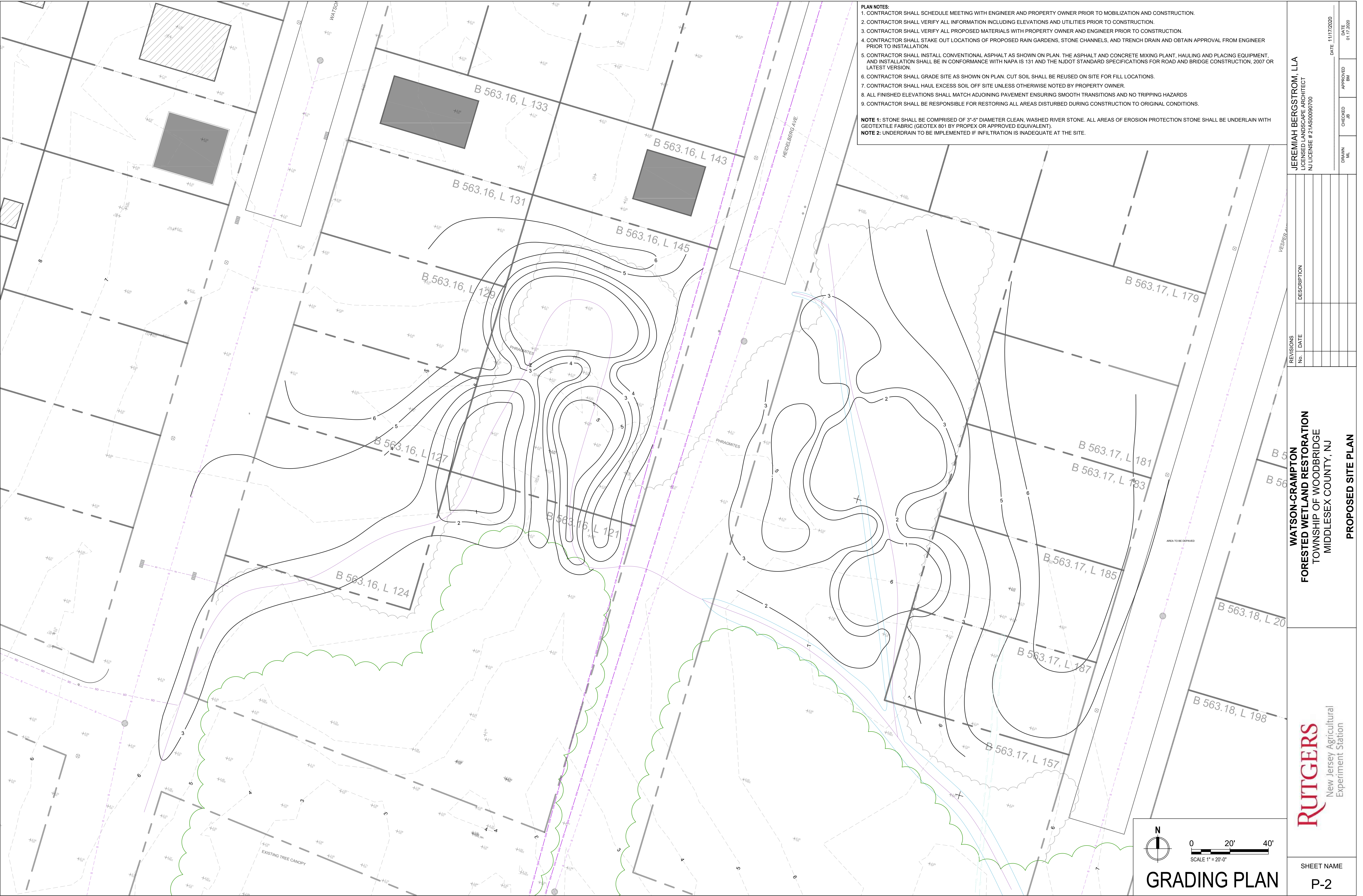
RUTGERS  
New Jersey Agricultural  
Experiment Station

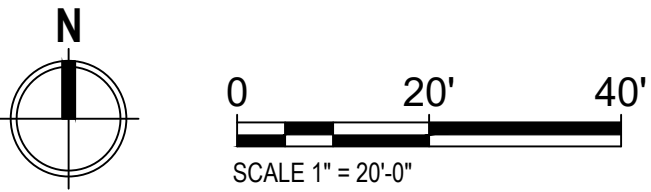
SHEET NAME  
P-1

N

0 30' 60'  
SCALE 1" = 30'-0"

EXISTING PLAN





ZONE DIAGRAM

**RUTGERS**  
New Jersey Agricultural  
Experiment Station

**WATSON-CRAMPTON**  
**FORESTED WETLAND RESTORATION**  
TOWNSHIP OF WOODBRIDGE  
MIDDLESEX COUNTY, NJ

**JEREMIAH BERGSTROM, LLA**  
LICENSED LANDSCAPE ARCHITECT  
NJ LICENSE # 21A500090700

REVISIONS	No.	DATE	DESCRIPTION

DRAWN	CHECKED	APPROVED	DATE
ML	JB	BM	11/17/2020

SHEET NAME

**P-3**

**PLANTING PLAN**



REVISIONS

No.	DATE	DESCRIPTION

WATSON-CRAMPTON

FORESTED WETLAND RESTORATION

TOWNSHIP OF WOODBRIDGE

MIDDLESEX COUNTY, NJ

JEREMIAH BERGSTROM, LLA

LICENSED LANDSCAPE ARCHITECT

NJ LICENSE # 21A500090700

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CHECKED

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APPROVED

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DATE

01.17.2020

PLANTING PLAN

P-4

SHEET NAME

P-4

0

20'

40'

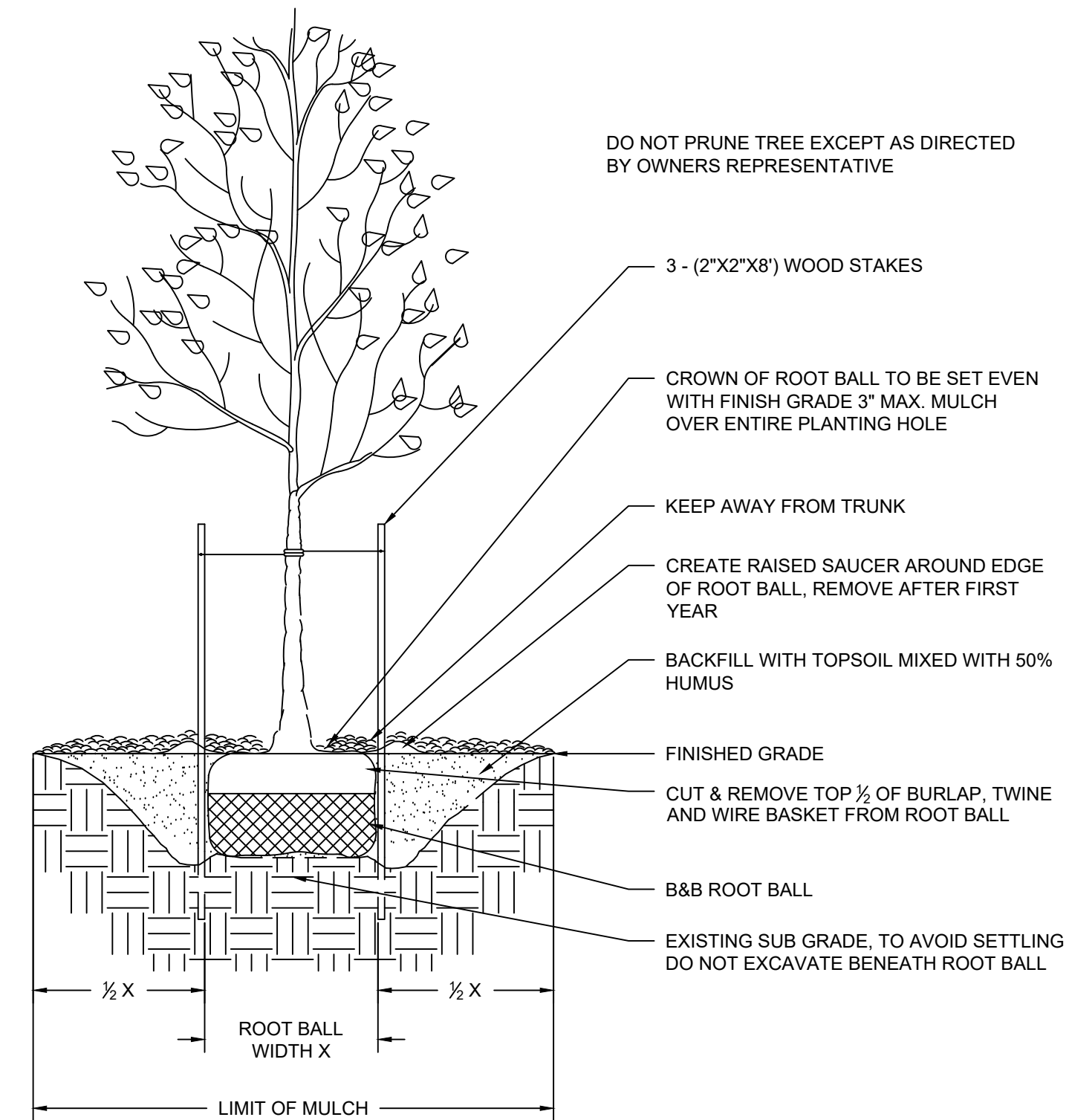
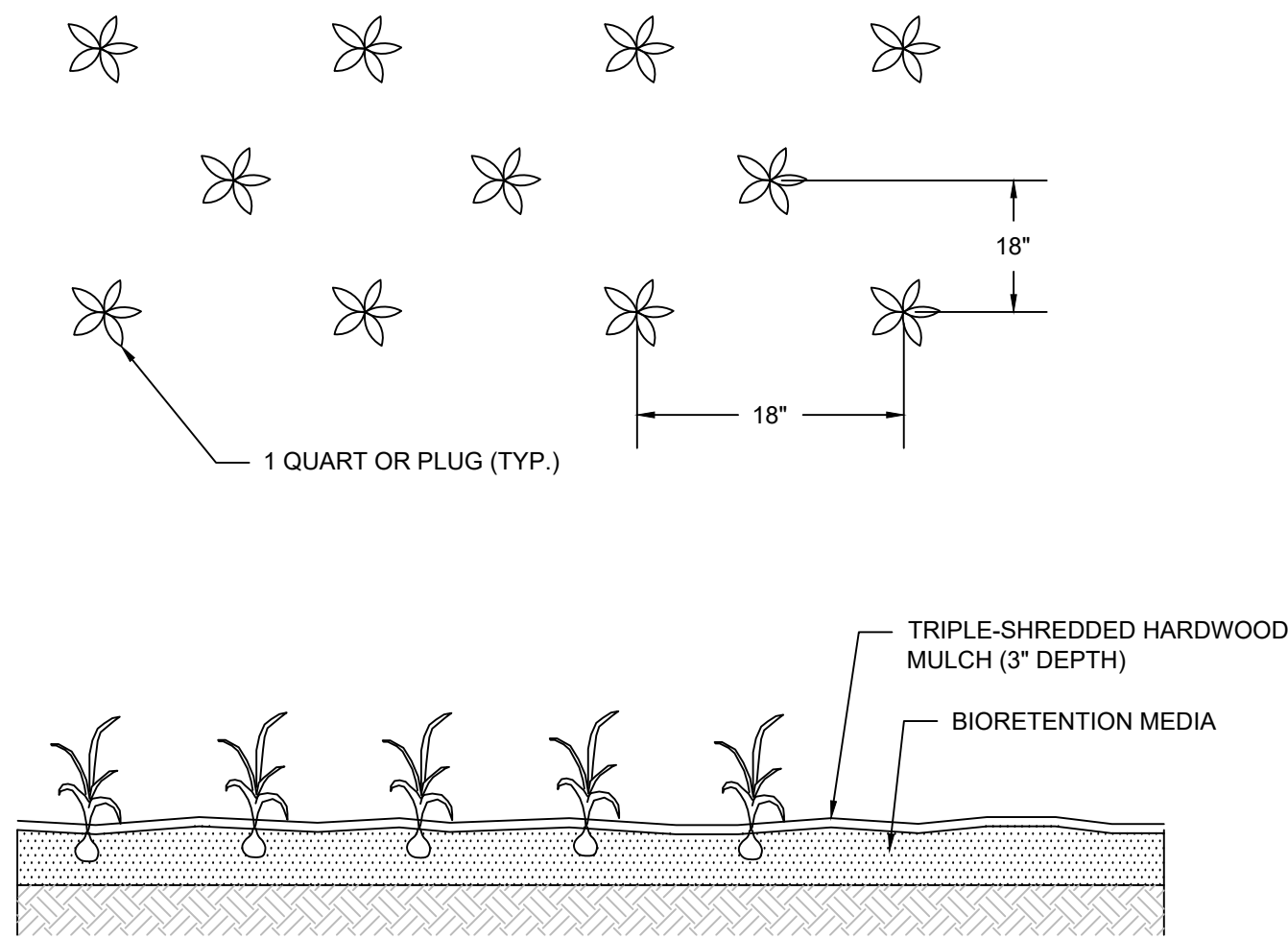
SCALE 1" = 20'-0"

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PLANTING PLAN

1  
DT-1

HERBACEOUS PLUG PLANTING DETAIL  
N.T.S.



- NOTES:
1. DO NOT DAMAGE MAIN ROOTS OR ROOT BALL WHEN INSTALLING TREE STAKE.
  2. WATER THOROUGHLY AFTER INSTALLATION.
  3. REMOVE SAUCER AND STAKES TWO YEARS OR LESS AFTER INSTALLATION.
  4. CONTRACTOR IS NOT TO USE TREE WRAP.

2  
DT-1

TREE PLANTING DETAIL  
N.T.S.

OPEN LAWN AND TURF AREAS

1. SEED ALL REMAINING PARK AREAS WITH TURF TYPE FALL FESCUE AND PERENNIAL RYEGRASS BLEND (LOFTS - SUMMER STRESS MIX II OR APPROVED EQUIVALENT). INSTALL AT A RATE OF 350 LBS. PER ACRE PER MANUFACTURERS SPECIFICATIONS.

TOPSOILING, SEEDING AND MULCHING NOTES

1. ANY UNDISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 10 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE REQUIRED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR SHALL BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING MIXTURE AND MULCH. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE SEEDED AND MULCHED WITH A PERMANENT SEED MIXTURE AND MULCH.
2. DIVERSIONS, CHANNELS, SEDIMENTATION BASINS, SEDIMENT TRAPS, AND STOCKPILES MUST BE SEEDED AND MULCHED IMMEDIATELY.
3. GRADED AREAS SHALL BE TEMPORARILY SEEDED AND MULCHED IMMEDIATELY FOLLOWING EARTH MOVING PROCEDURES. TEMPORARY SEED SHALL BE ANNUAL RYE GRASS APPLIED AT A RATE OF 3 LBS. PER 1000 SQ. FT.
4. AFTER SEEDING, HAY OR STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3.0 TONS PER ACRE. MULCH SHALL BE ANCHORED BY EITHER CRIMPING WITH A COULTER IMPLEMENT, OR BY STAPLING BIODEGRADABLE NETTING TO THE SURFACE.
5. SITE PREPARATION TO UPLAND AREAS: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS 10-20-10 FERTILIZER AT THE RATE OF 500 LB. PER ACRE. WORK IN WHERE POSSIBLE. SEEDING OF DISTURBED UPLAND AREAS (BEYOND LIMITS OF RIPARIAN ENHANCEMENT AREA) TO BE DONE USING MIX OF FINE FESCUE AT 35 LBS/ACRE (PURE LIVE SEED) PLUS PERENNIAL RYEGRASS AT 15 LBS/ACRE (PURE LIVE SEED).
6. TOPSOIL SHALL BE A CLEAN FRIABLE LOAM WITH SUFFICIENT ORGANIC CONTENT (2.75%) TO PROMOTE PLANT VIGOR. AMENDMENTS SHALL BE ADDED AS NEEDED TO IMPROVE DEFICIENT SOILS. TOPSOIL SHALL BE RETURNED AT A LOOSE DEPTH OF FIVE INCHES TO ALLOW FOR SETTLEMENT.
7. ESTABLISH PERMANENT SEEDING AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETE. UNLESS OTHERWISE INDICATED, PERMANENT SEEDING SHALL BE SEED MIXTURE SPECIFIED IN TABLE.
8. SEE TABLES FOR SEED SPECIES MIXTURE AND APPLICATION RATES.
9. SEED MIXES ARE AVAILABLE AT ERNST CONSERVATION SEEDS IN MEADVILLE, PA. WEBSITE: WWW.ERNSTSEED.COM OR PHONE: 1-800-873-3321.
10. NATIVE SHRUBS AND HERBACEOUS PLUGS ARE AVAILABLE AT PINELANDS NURSERY AND SUPPLY, COLUMBUS NJ. WEBSITE: WWW.PINELANDSNURSERY.COM OR PHONE 1-800-667-2729

GENERAL LANDSCAPING NOTES

1. ALL PLANT MATERIALS SHALL CONFIRM TO THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION)
2. INSPECTION OF PLANTING BEDS - THE LANDSCAPE ARCHITECT SHALL INSPECT ALL PLANTING AREAS BEFORE ANY TOPSOILING OR PLANTING IS BEGUN TO INSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE LANDSCAPED SHOW EVIDENCE OF POOR DRAINAGE, THE LANDSCAPE ARCHITECT SHALL NOTIFY THE OWNER IMMEDIATELY FOR CORRECTIVE ACTION
3. THE LANDSCAPE ARCHITECT SHALL APPROVE ALL PLANT MATERIAL AND STAKED PLANT LOCATIONS PRIOR TO INSTALLATION. ALL HERBACEOUS PLUG PLANTINGS SHALL BE A MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 1 FOOT O.C. AS INDICATED ON PLAN.
4. ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE PLACED IN CONTINUOUS MULCHED BEDS 4" IN DEPTH. MUCH SHALL BE TRIPLE SHREDDED HARDWOOD.
5. ALL TREES, SHRUBS, AND GROUNDCOVER SHALL BE AS SPECIFIED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND COMMENTS NOTED ON THE DRAWINGS.
6. TOPSOIL SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR FOR PLANTING ACCORDING TO THE PLANS AND DETAILS.
7. PREPARED TOPSOIL FOR BACKFILLING AROUND TREE BALLS SHALL BE A MIXTURE OF VOLUME OF THE FOLLOWING MATERIALS IN QUANTITIES SPECIFIED: ½ COMPOST, ¼ TOPSOIL
8. ALL HERBACEOUS PLUG PLANTINGS SHALL BE MINIMUM 3 INCH DEPTH. PLUGS SHALL BE PLANTED 1 FOOT O.C. AS INDICATED ON PLAN.

SHRUB SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

THIN BRANCHES AND FOLIAGE (NOT ALL END TIPS) BY ½ RETAINING NORMAL PLANT SHAPE.

CUT & REMOVE BURLAP FROM TOP ½ OF BALL AS SHOWN

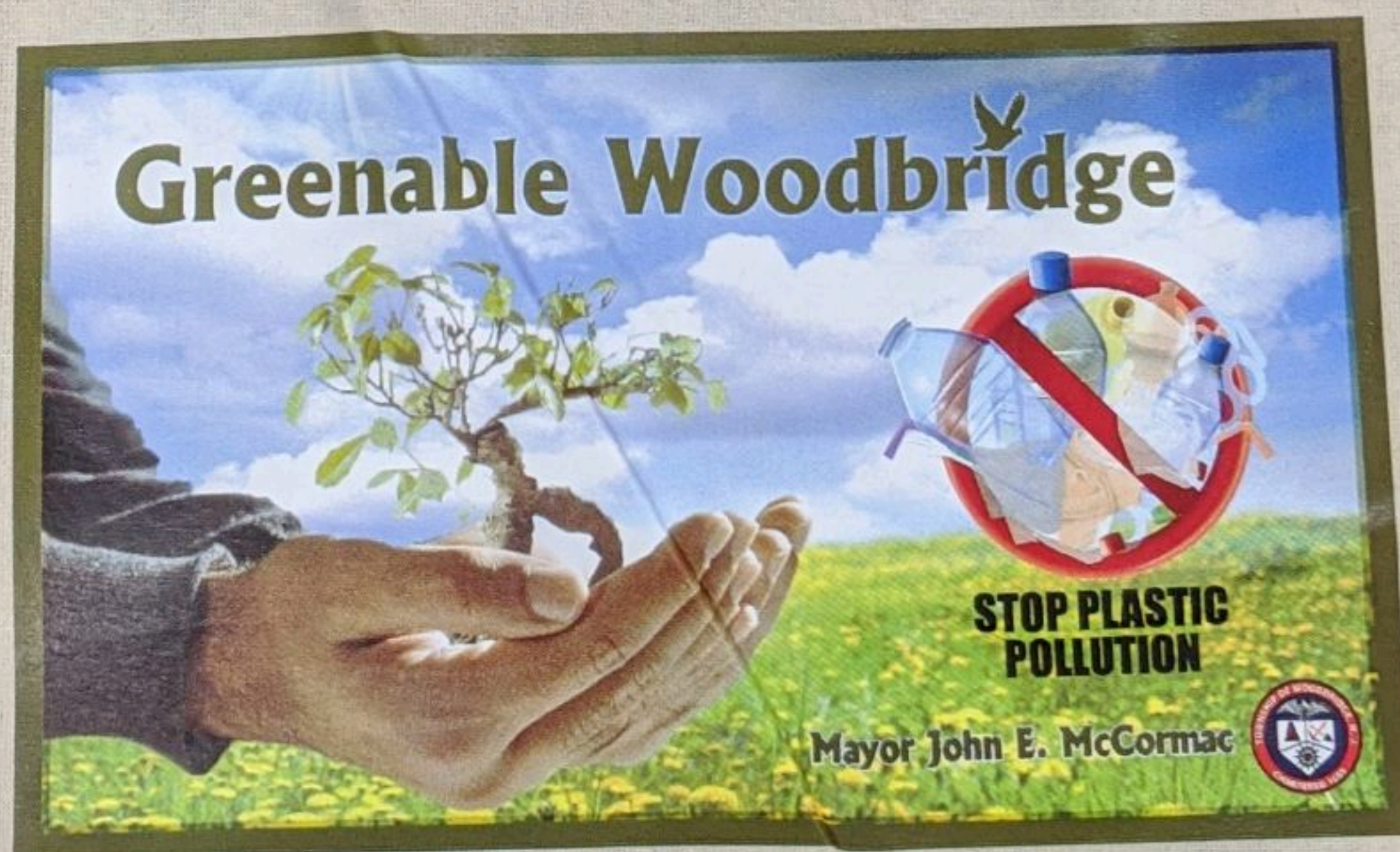
- NOTES:
1. DEER PROTECTION REQUIRED AROUND SHRUB PLANTINGS.

3  
DT-1

SHRUB PLANTING DETAIL  
N.T.S.

PROJECT PLANT LIST

Zone	Latin Name	Common Name	%	Growth Habit	Wetland Status
Emergent Marsh Zone 1 (OBL)	<i>Juncus roemerianus</i>	needlegrass rush	30%	grass-like	OBL
	<i>Peltandra virginica</i>	arrow arum	10%	herb	OBL
	<i>Pontederia cordata</i>	pickerelweed	10%	herb	OBL
	<i>Schoenoplectus pungens</i>	common threesquare blurush	25%	grass-like	OBL
	<i>Schoenoplectus robustus/Bolboschoenus robustus</i>	saltmarsh bulrush	25%	grass-like	OBL
Emergent Marsh Zone 2 (OBL)	<i>Juncus roemerianus</i>	needlegrass rush	30%	grass-like	OBL
	<i>Peltandra virginica</i>	arrow arum	10%	herb	OBL
	<i>Schoenoplectus acutus</i>	hard-stem bulrush	30%	grass-like	OBL
	<i>Schoenoplectus robustus/Bolboschoenus robustus</i>	saltmarsh bulrush	30%	grass-like	OBL
Emergent Marsh Zone 3 (OBL/FACW)	<i>Distichlis spicata</i>	spike grass	20%	grass-like	FACW
	<i>Hibiscus moscheutos</i>	swamp rose-mallow	15%	forb/herb	OBL
	<i>Iris prismatica</i>	slender blueflag iris	15%	herb	OBL
	<i>Juncus effusus</i>	soft rush	10%	grass-like	OBL
	<i>Juncus gerardii</i>	black needle rush	20%	grass-like	OBL
	<i>Spartina patens</i>	saltmeadow cordgrass	20%	grass	FACW
Transition Zone 1 (FACW/FAC)	<i>Asclepias incarnata</i>	swamp milkweed	6%	herb	OBL
	<i>Distichlis spicata</i>	spike grass	15%	grass-like	FACW
	<i>Eupatorium fistulosum</i>	Tall Joe Pye Weed	8%	herb	FACW
	<i>Iva frutescens</i>	marsh elder	15%	shrub	FACW
	<i>Juncus gerardii</i>	black needle rush	15%	grass-like	FACW
	<i>Solidago sempervirens</i>	seaside goldenrod	6%	herb	FACW
	<i>Spartina patens</i>	saltmeadow cordgrass	15%	grass	FACW
	<i>Symphytotrichum novi-belgii/Aster novi-belgii</i>	New York aster	6%	forb/herb	FACW
	<i>Teucrium canadense</i>	Canada germander	6%	forb/herb	FACW
	<i>Verbena hastata</i>	blue vervain	8%	herb	FACW
Transition Zone 2 (FACW/FAC)	<i>Amsonia tabernaemontana</i>	common bluestar	5%	herb	FAC
	<i>Andropogon virginicus</i>	broomsedge	12%	grass-like	FACU
	<i>Asclepias incarnata</i>	swamp milkweed	5%	herb	OBL
	<i>Asclepias tuberosa</i>	butterfly milkweed	5%	herb	UPL
	<i>Baccharis halimifolia</i>	groundsel bush	12%	shrub	FACW
	<i>Heliopsis helianthoides</i>	ox eye sunflower	5%	herb	FACU
	<i>Iva frutescens</i>	marsh elder	12%	shrub	FACW
	<i>Liatris spicata</i>	blazing star	5%	herb	FAC
	<i>Muhlenbergia capillaris</i>	pink hair grass	5%	grass-like	FACU
	<i>Panicum virgatum</i>	switchgrass	12%	grass-like	FAC
	<i>Penstemon digitalis</i>	foxglove beardtongue	5%	herb	FAC
	<i>Rudbeckia hirta</i>	black-eyed susan	5%	herb	FACU
	<i>Schizachyrium scaparium</i>	little bluestem	12%	grass-like	FACU
Maritime Forest (Mix)	<i>Amelanchier canadensis</i>	serviceberry	10%	shrub	FAC
	<i>Clethra alnifolia</i>	sweet pepperbush	10%	shrub	FAC
	<i>Ilex opaca</i>	American holly	10%	tree	FACU
	<i>Juniperus virginiana</i>	eastern redcedar	15%	tree	FACU
	<i>Liquidambar styraciflua</i>	sweetgum	10%	tree	FAC
	<i>Prunus serotina</i>	black cherry	15%	tree	FACU
	<i>Rhododendron viscosom</i>	swamp azalea	10%	shrub	FACW
	<i>Sassafras albidum</i>	sassafras	10%	tree	FACU
	<i>Viburnum dentatum</i>	arrowwood	10%	shrub	FAC
Upland Woodland (Mix)	<i>Acer rubrum</i>	red maple	5%	tree	FAC
	<i>Acer saccharinum</i>	silver maple	5%	tree	FACW
	<i>Aronia melanocarpa</i>	black chokeberry	5%	shrub	FAC
	<i>Carya ovata</i>	shagbark hickory	5%	tree	FACU
	<i>Celtis occidentalis</i>	hackberry	5%	tree	FACU
	<i>Cornus amomum</i>	silky dogwood	5%	tree	FACU
	<i>Comus florida</i>	flowering dogwood	5%	tree	FACW
	<i>Juglans nigra</i>	black walnut	5%	tree	FACU
	<i>Juniperus virginiana</i>	eastern red cedar	5%	tree	FACU
	<i>Lindera benzoin</i>	spicebush	5%	shrub	FAC
	<i>Liquidambar styraciflua</i>	sweetgum	5%	tree	FAC
	<i>Nyssa sylvatica</i>	blackgum	5%	tree	FAC
	<i>Platanus occidentalis</i>	American sycamore	5%	tree	FACW
	<i>Prunus serotina</i>	black cherry	5%	tree	FACU
	<i>Quercus bicolor</i>	swamp white oak	5%	tree	FACW
	<i>Quercus coccinea</i>	scarlet oak	5%	tree	UPL
	<i>Quercus palustris</i>	pin oak	5%	tree	FACW
	<i>Quercus phellos</i>	willow oak	5%	tree	FAC
	<i>Sambucus canadensis</i>	elderberry	5%	shrub	FACW
	<i>Viburnum dentatum</i>	arrowwood	5%	shrub	FAC



## WATER-SAVING DEVICE



**DESIGNATE ONE GLASS FOR YOUR DRINKING WATER EACH DAY, OR REFILL A WATER BOTTLE. THIS WILL CUT DOWN ON THE NUMBER OF GLASSES TO WASH.**

There are a number of ways to save water, and they all start with you. To learn more visit [wateruseitwisely.com](http://wateruseitwisely.com)



WATER-SAVING DEVICE

#35

**PLUG THE SINK  
INSTEAD OF RUNNING  
THE WATER TO RINSE  
YOUR RAZOR AND  
SAVE UP TO 300  
GALLONS A MONTH.**

There are a number of ways to  
save water, and they all start  
with you. To learn more visit  
[wateruseitwisely.com](http://wateruseitwisely.com)



WATER-SAVING DEVICE

#24

SHORTEN YOUR  
SHOWER BY A MINUTE  
OR TWO AND YOU'LL  
SAVE UP TO 150  
GALLONS PER MONTH.

There are a number of ways to  
save water, and they all start  
with you. To learn more visit  
[wateruseitwisely.com](http://wateruseitwisely.com)



## WATER-SAVING DEVICE

# #11



**KEEP A PITCHER OF DRINKING WATER IN THE REFRIGERATOR INSTEAD OF RUNNING THE TAP. THIS WAY, EVERY DROP GOES DOWN YOU AND NOT THE DRAIN.**

There are a number of ways to save water, and they all start with you. To learn more visit [wateruseitwisely.com](http://wateruseitwisely.com)



WATER-SAVING DEVICE

#02

**WHEN WASHING DISHES BY HAND,  
DON'T LET THE WATER RUN. FILL  
ONE BASIN WITH WASH WATER AND  
THE OTHER WITH RINSE WATER.**

There are a number of ways to  
save water, and they all start  
with you. To learn more visit  
[wateruseitwisely.com](http://wateruseitwisely.com)





**Woodbridge Township**



## **Plan for Ecological Restoration & Stormwater Management Blue Acres Area**

Port Reading, Woodbridge Township, Middlesex County

### **Public Information Meeting March 26, 2019 ~ 5:00 – 7:00 PM**

**Overview:** The Township of Woodbridge, in conjunction with the Rutgers Cooperative Extension (RCE), is formulating a plan to implement ecological restoration and stormwater management improvement(s) in the Port Reading section of Woodbridge Township.

The project area is located at the intersection of Fourth Street and East Tappan Street within the New Jersey Blue Acres zone and contains six former residential lots. Proposed improvements include the construction of three rain gardens (totaling 3,060 sq. ft.); native tree and shrub planting(s); and the establishment of 0.3 acres of meadow.

The objective of the restoration plan is to increase both the aesthetic and conservation value of the newly acquired open space and to manage stormwater runoff from an approximately 0.3 +/- acre drainage area.

Rutgers Cooperative Extension (RCE) will be conducting turf management activities within Blue Acres zones on Fourth Street and East Tappan Street to prepare the grounds for subsequent ecological restoration. Treatments will occur on three separate occasions between May and September, 2019.

Neighbors can expect to see RCE and/or Woodbridge Township personnel on-site applying a commonly used broad-spectrum herbicide. Signs will be erected in treated

area(s) indicating the date and time when it is safe for people and pets to re-enter (approximately two hours after application). Treated areas will be replanted with native warm-season grasses and wildflowers in the Fall 2019. The ecological restoration and stormwater management improvement is scheduled to be completed by June 2019.

**Public Information Meeting:** Area residents are invited to attend a Public Information Meeting at the Cypress Recreation Center, 881 West Avenue, Port Reading, on **Wed., March 26, 2019 from 5:00 - 7:00 PM.**

**For Further Information Contact:**

Thomas C. Flynn, M.P.A., CFM  
Floodplain Manager  
Division of Engineering  
Township of Woodbridge  
1 Main Street, Woodbridge  
732.602.6057

[Thomas.Flynn@twp.woodbridge.nj.us](mailto:Thomas.Flynn@twp.woodbridge.nj.us)

Sincerely,

A handwritten signature in blue ink, appearing to read 'John E. McCormac'.

John E. McCormac  
Mayor  
Woodbridge Township



Example of a Rain Garden: A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns.

# COLONIA

## OPEN SPACE AND FLOODPLAIN RESTORATION PLAN

### WOODBIDGE TOWNSHIP

### MIDDLESEX COUNTY, NEW JERSEY

PROJECT DESCRIPTION:

PROPOSED NATIVE TREE AND SHRUB PLANTINGS IN COLONIA, WOODBRIDGE TOWNSHIP, NEW JERSEY AS PART OF THE OPEN SPACE AND FLOODPLAIN RESTORATION PLAN

LIST OF DRAWINGS:

SHEET NAME	TITLE
COVER	COVER SHEET
P-1	SITE PLAN 1
P-2	SITE PLAN 2
DT-1	DETAILS

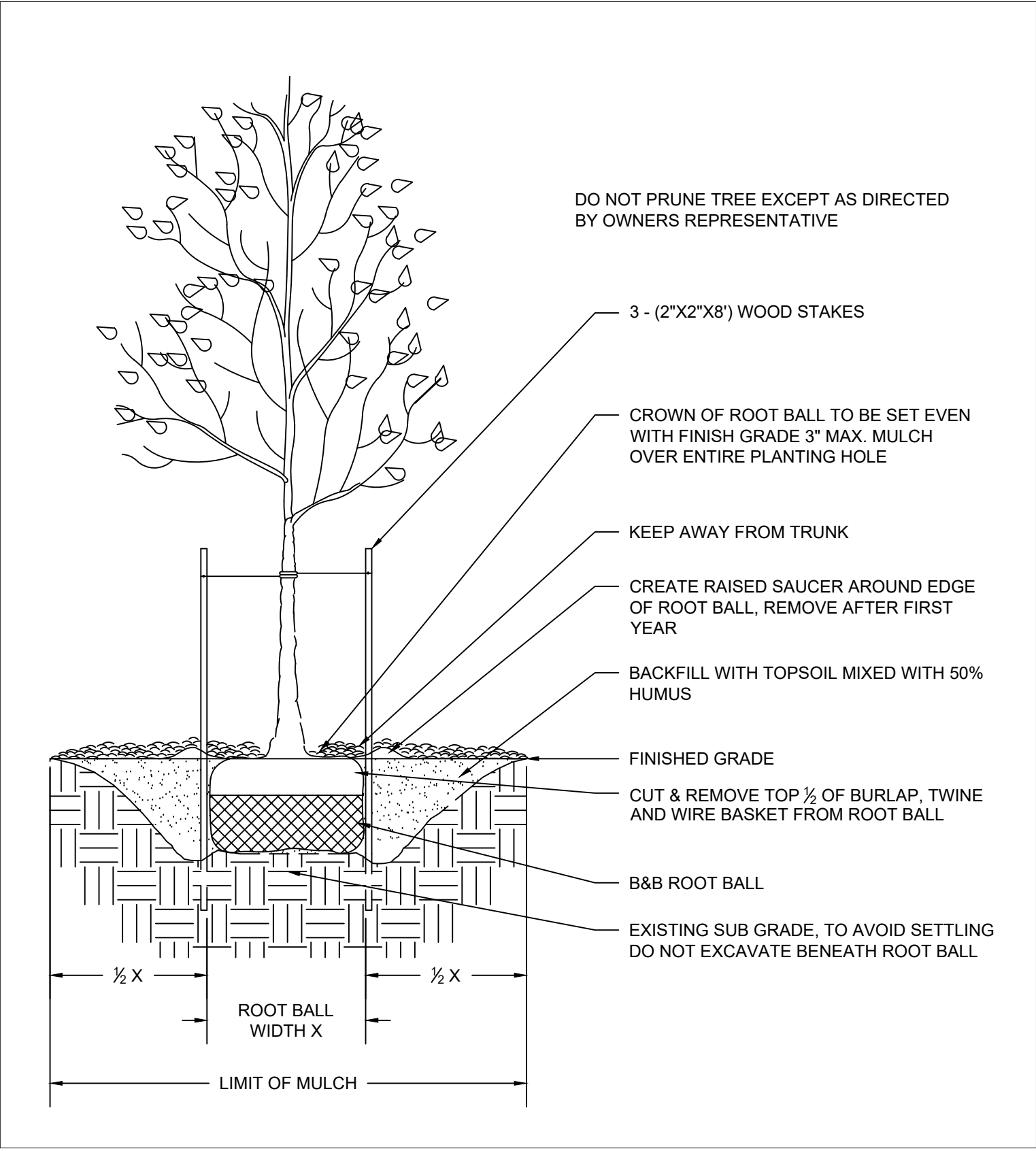
GENERAL NOTES:

1. SURVEY CONDUCTED BY RUTGERS COOPERATIVE EXTENSION WATER RESOURCES PROGRAM. (OR ELEVATION DATA OBTAINED FROM  INSERT DATA SOURCE HERE, TYP NOAA DIGITAL COASTAL LIDAR )
2. ANY OVERHEAD AND UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATIONS AND ARE NOT A COMPLETE REPRESENTATION. A UTILITY MARKOUT NEEDS TO BE CONDUCTED PRIOR TO MOBILIZATION. NJ ONE CALL: 811 OR 800-272-1000

LOCATION MAP:



DETAILS:



- NOTES:
1. DO NOT DAMAGE MAIN ROOTS OR ROOT BALL WHEN INSTALLING TREE STAKE.
2. WATER THOROUGHLY AFTER INSTALLATION.
3. REMOVE SAUCER AND STAKES TWO YEARS OR LESS AFTER INSTALLATION.
4. CONTRACTOR IS NOT TO USE TREE WRAP.
5. VACANT LOTS TO BE SEEDED WITH LOFT/PENNINGTON "SUMMER STRESS MIX 2"
6. SEED AT 100-200 LBS. PER ACRE.

JEREMIAH BERGSTROM, LLA LICENSED LANDSCAPE ARCHITECT NJ LICENSE # 21A500090700	DRAWN MH	CHECKED JB	APPROVED BM	DATE 07/25/2018

REVISIONS	DESCRIPTION	
	No.	DATE

COLONIA  
OPEN SPACE AND FLOODPLAIN RESTORATION PLAN  
WOODBIDGETOWNSHIP  
MIDDLESEX COUNTY, NJ  
COVER SHEET



SHEET NAME  
COVER



