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Appendix E:  
Laurel Run Reforestation

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# NEW JERSEY TURNPIKE AUTHORITY

STEPHEN DILTS  
CHAIRMAN

MICHAEL R. DU PONT  
TREASURER

HAROLD L. HODES  
COMMISSIONER

DAVID G. EVANS  
COMMISSIONER

RAYMOND M. POCINO  
COMMISSIONER

CLIVE S. CUMMIS  
COMMISSIONER

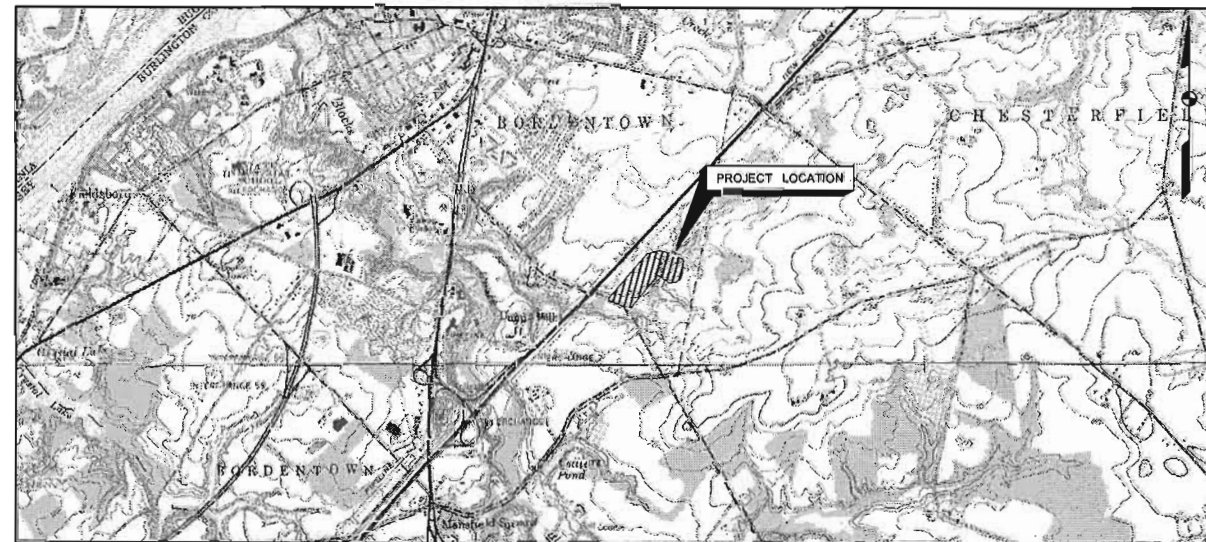
TROY SINGLETON  
COMMISSIONER

ULISES E. DIAZ  
COMMISSIONER

## NEW JERSEY TURNPIKE INTERCHANGE 6 TO 9 WIDENING PROGRAM

CONTRACT NO. T869.120.002  
LAUREL RUN REFORESTATION  
MILEPOST 54

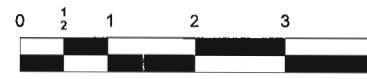
TOWNSHIP OF BORDENTOWN  
BURLINGTON COUNTY, NEW JERSEY



USGS Quadrangle Bordentown, NJ

### LOCATION PLAN

SCALE: 1" = 2000'



ORIGINAL SIZE IN INCHES

THE LOUIS BERGER GROUP, INC.  
412 MOUNT KEMBLE AVENUE, MORRISTOWN, NJ 07962

### INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
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7	PLANTING NOTES AND DETAILS - 1
8	PLANTING NOTES AND DETAILS - 2

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_

MICHAEL DUNN, PE  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04500000  
THE LOUIS BERGER GROUP, INC.

RECOMMENDED \_\_\_\_\_ DATE \_\_\_\_\_

ARTHUR A. LINFANTE, JR.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE01183400  
HNTB CORPORATION, PROGRAM MANAGER

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

RICHARD J. RACZYNSKI, CHIEF ENGINEER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04063100  
NEW JERSEY TURNPIKE AUTHORITY

ITEM

**ROADWAY**

PROPERTY BOUNDARY

NJ TURNPIKE RIGHT OF WAY BOUNDARY

**MISCELLANEOUS ITEMS**

EASMENT BOUDERY

STABILIZED CONSTRUCTION ENTRANCE

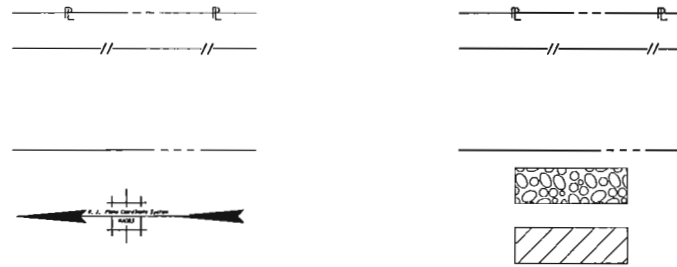
NORTH ARROW

PLANTING AREA

**LEGEND**

EXISTING

PROPOSED



**GENERAL NOTES**

1. THE HORIZONTAL COORDINATE SYSTEM IS THE NEW JERSEY STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83).
2. ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDER-GROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
4. THE TOPOGRAPHIC PLAN REPRESENTS FIELD SURVEYS PERFORMED BY KS ENGINEERS, P.C., NEWARK, NJ FROM MARCH 2009 TO JUNE 2009.
5. THE CONTRACTOR SHALL, DURING CONTRACT OPERATIONS, ADHERE TO ALL CONDITIONS SET FORTH IN THE PERMITS.
6. CONSTRUCTION VEHICLES AND STOCKPILE/STORAGE AREAS ARE NOT PERMITTED WITHIN THE EXISTING WETLAND AREAS, RIPARIAN AREAS, OR WITHIN EXISTING TREE LINES BEYOND THE LIMITS OF PROPOSED WORK.
7. THE CONTRACTOR SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCES AS DESIGNATED IN THE SOIL EROSION AND SEDIMENT CONTROL PLANS. THE USE OF OTHER ACCESS POINTS IS PROHIBITED UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER.

**GENERAL NOTES**

BNPC	BUREAU OF NONPOINT POLLUTION CONTROL
DBH	DIAMETER AT BREAST HEIGHT
E	EAST
FT.	FEET
H	HORIZONTAL
IN	INCH
L	LENGTH
LBG	LOUIS BERGER GROUP
LBS.	POUNDS
LOD	LIMIT OF DISTURBANCE
MHP	MATERIAL HANDLING PLAN
MIN.	MINIMUM
MOD	MODIFIED
M.U.T.C.D	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NCHRP	NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM
NO.	NUMBER
NJ	NEW JERSEY
NJTA	NEW JERSEY TURNPIKE AUTHORITY
N.T.S.	NOT TO SCALE
O.C	ON CENTER
PL	PROPERTY LINE
S	SOUTH
SO.	SQUARE
TWP.	TOWNSHIP
TYP	TYPICAL
V	VERTICAL
W	WEST
YDS.	YARDS

	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	

No.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY

**NEW JERSEY TURNPIKE**

INTERCHANGE 6 TO 9 WIDENING PROGRAM

LAUREL RUN REFORESTATION

CONTRACT NO. T869.120.002

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**LEGEND AND GENERAL NOTES**

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THE LOUIS BERGER GROUP, INC.  
412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
MORRISTOWN, NJ 07962-1946  
CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

SCALE: N.T.S.  
DATE: DEC. 2009

**Michael T. Dunn**  
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE0450000

2  
8

ITEM NO.	UNIT CODE	ITEM	UNIT	CONTRACT QUANTITY	PLAN SHEET TOTAL	IF AND WHERE DIRECTED	AS BUILT QUANTITY
1	1D01LAY	CONSTRUCTION LAYOUT	L.S.	1	1		
2	1D10MOH	MOBILIZATION	L.S.	1	1		
3	1G03SCH	PROGRESS SCHEDULE	L.S.	1	1		
4	2H45TRC	CONSTRUCTION DRIVEWAY	TON	42	42		
5	7E20MUL	WOOD CHIP MULCH	S.Y	5770	5770		
6	N7E0065	PLANTING, EASTERN WHITE PINE ( <i>PINUS STROBUS</i> )	EACH	300	300		
7	N7E0077	PLANTING, DOUGLAS FIR ( <i>PSEUDOTSUGA MENZIESII</i> )	EACH	300	300		
8	N7E0078	PLANTING, NORWAY SPRUCE ( <i>PICEA ABIES</i> )	EACH	300	300		
9	N7E0043	PLANTING, RED PINE ( <i>PINUS RACEMOSA</i> )	EACH	300	300		
10	N7E0031	PLANTING, RED CEDAR ( <i>JUNIPERIS VIRGINIANA</i> )	EACH	300	300		
11	N7E0079	PLANTING, PITCH PINE ( <i>PINUS RIGIDA</i> )	EACH	410	410		
12	N7E0080	PLANTING, LOBLOLLY PINE ( <i>PINUS TAEDA</i> )	EACH	410	410		
13	N7E0081	PLANTING, SHORLEAF PINE ( <i>PINUS ECHINATA</i> )	EACH	410	410		
14	N7E0082	PLANTING, TUPLIP POPLAR ( <i>LIRIODENDRON TU'LPIFERA</i> )	EACH	140	140		
15	N7E0008	PLANTING, WINTERBERRY HOLLY ( <i>ILEX VERTICILLATA</i> )	EACH	140	140		
16	N7E0025	PLANTING, SWEETGUM ( <i>LIQUIDAMBAR STYRACIFLUA</i> )	EACH	130	130		
17	N7E0024	PLANTING, GREEN ASH ( <i>FRAXINUS PENNSYLVANICA</i> )	EACH	130	130		
18	N7E0027	PLANTING, SWAMP WHITE OAK ( <i>QUERCUS BICOLOR</i> )	EACH	160	160		
19	N7E0028	PLANTING, PIN OAK ( <i>QUERCUS PALUSTRIS</i> )	EACH	160	160		
20	N7E0029	PLANTING, AMERICAN HOLLY ( <i>ILEX OPACA</i> )	EACH	140	140		
21	N7E0030	PLANTING, MALE AMERICAN HOLLY ( <i>ILEX OPACA MALE</i> )	EACH	130	130		
22	N7E0034	PLANTING, SUGAR MAPLE ( <i>ACER SACCHARUM</i> )	EACH	130	130		
23	N7E0035	PLANTING, WHITE ASH ( <i>FRAXINUS AMERICANA</i> )	EACH	130	130		
24	N7E0036	PLANTING, BLACK CHERRY ( <i>PRUNUS SEROTINA</i> )	EACH	130	130		
25	N7E0037	PLANTING, WHITE OAK ( <i>QUERCUS ALBA</i> )	EACH	160	160		
26	N7E0042	PLANTING, RED MAPLE ( <i>ACER RUBRUM</i> )	EACH	130	130		
27	N7E0003	PLANTING, BLACK CHOKEBERRY ( <i>ARONIA MELANOCARPA</i> )	EACH	140	140		
28	N7E0044	PLANTING, SASSAFRAS ( <i>SASSAFRIS ALBIDUM</i> )	EACH	130	130		
29	N7E0067	PLANTING, HACKBERRY ( <i>CELTIS OCCIDENTALIS</i> )	EACH	130	130		
30	N7E0041	PLANTING, RED OAK ( <i>QUERCUS RUBRA</i> )	EACH	160	160		
31	N7E0021	PLANTING, SHADBLOW SERVICEBERRY ( <i>AMELANCHIER CANADENSIS</i> )	EACH	140	140		
32	N7E0022	PLANTING, GRAY BIRCH ( <i>BETULA POPULIFOLIA</i> )	EACH	130	130		
33	N7E0083	ABANDON PITS	EACH	10		10	
34	N7E0084	WATERING	M.G.	202	202		

	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	

No.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
 INTERCHANGE 6 TO 9 WIDENING PROGRAM  
 LAUREL RUN REFORESTATION  
 CONTRACT NO. T869.120.002

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**ESTIMATE OF QUANTITIES**

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THE LOUIS BERGER GROUP, INC.  
412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
 MORRISTOWN, NJ 07962-1946  
 CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

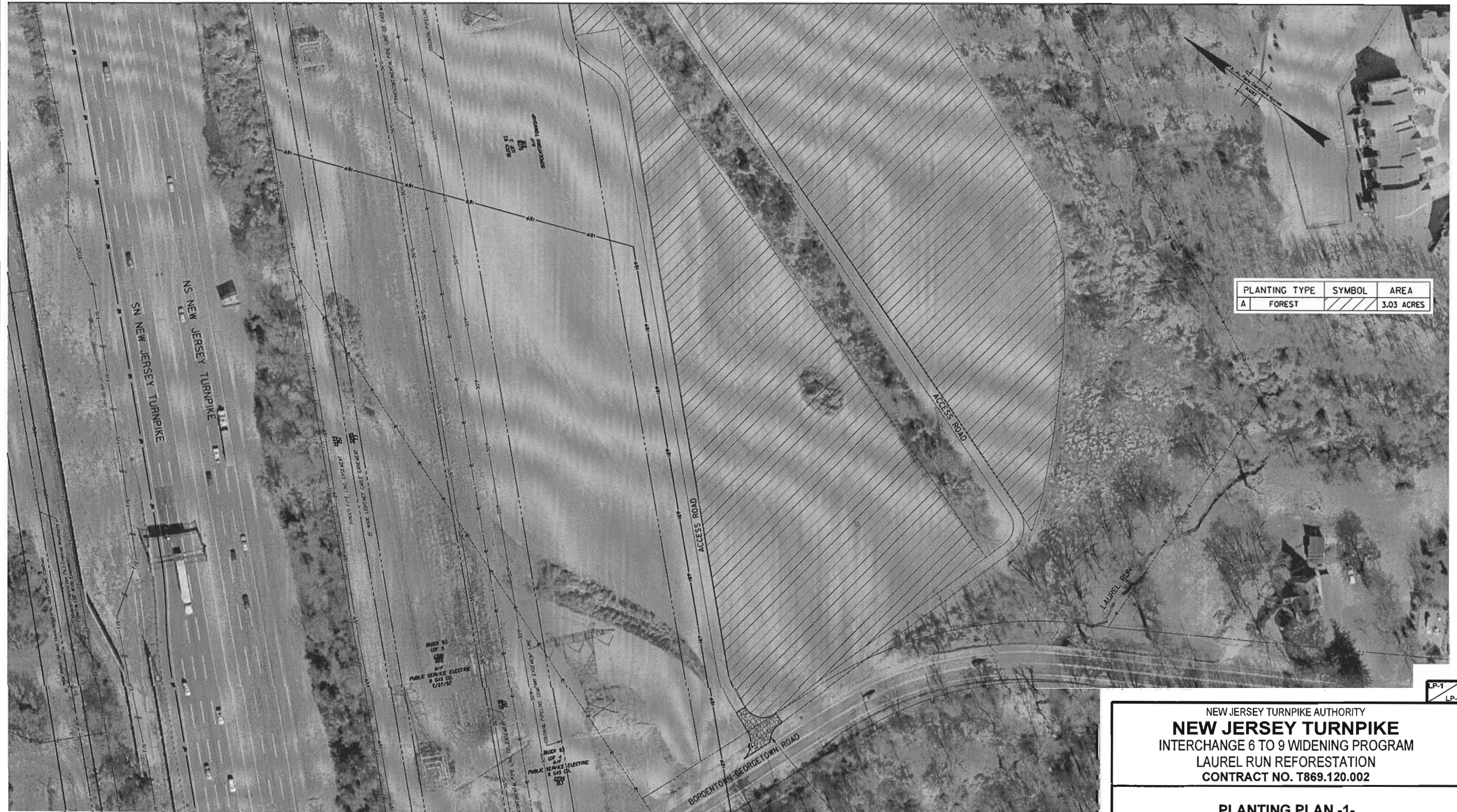
SCALE: NONE  
 DATE: DEC. 2009

**Michael T. Dunn**  
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE0450000

EQ-1  
EQ-1

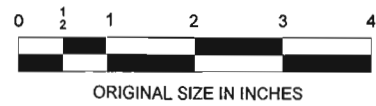
3  
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PLANTING TYPE	SYMBOL	AREA
A	FOREST	3.03 ACRES

	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTD	07-09
SUPERVISED	M.T. DUNN	



No.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
 INTERCHANGE 6 TO 9 WIDENING PROGRAM  
 LAUREL RUN REFORESTATION  
 CONTRACT NO. T869.120.002

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**PLANTING PLAN -1-**

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THE LOUIS BERGER GROUP, INC.  
 412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
 MORRISTOWN, NJ 07962-1946  
 CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

SCALE: 1"=50'  
 DATE: DEC. 2009

**Michael T. Dunn**  
 NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE0450000

4  
8





PLANTING TYPE	SYMBOL	AREA
A	FOREST	4.73 ACRES

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
 INTERCHANGE 6 TO 9 WIDENING PROGRAM  
 LAUREL RUN REFORESTATION  
 CONTRACT NO. T869.120.002

**PLANTING PLAN -2-**

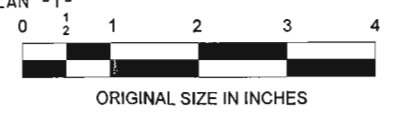
THE LOUIS BERGER GROUP, INC.  
 412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
 MORRISTOWN, NJ 07962-1946  
 CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

SCALE: 1"=50'  
 DATE: DEC. 2009

**Michael T. Dunn**  
 NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE450000

5  
8

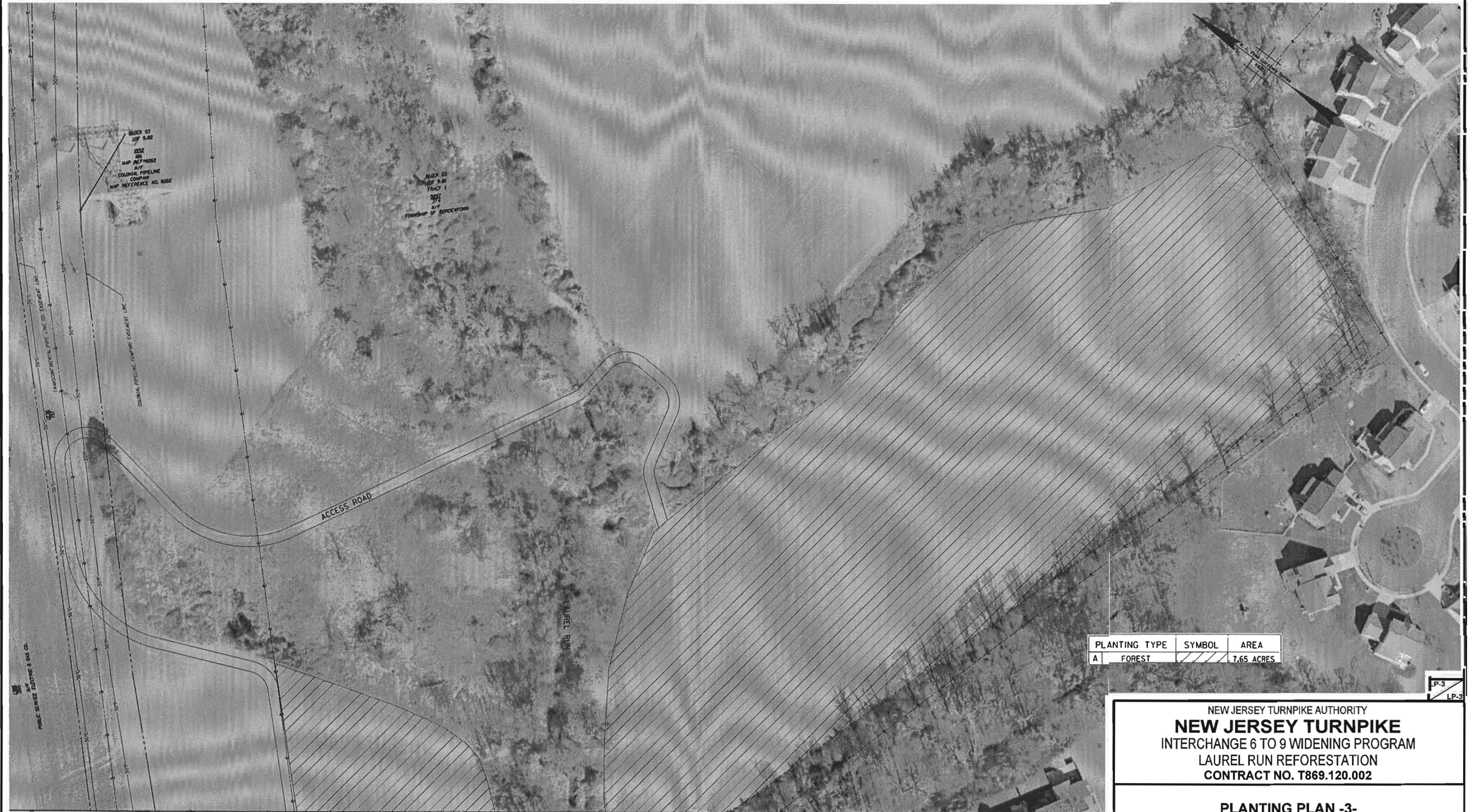
	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	



No.	DATE	REVISION

MATCH LINE SEE LANDSCAPING PLAN -1-





PLANTING TYPE	SYMBOL	AREA
A	FOREST	7.65 ACRES

MATCH LINE SEE LANDSCAPING PLAN -2-

	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	



No.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
 INTERCHANGE 6 TO 9 WIDENING PROGRAM  
 LAUREL RUN REFORESTATION  
 CONTRACT NO. T869.120.002

**PLANTING PLAN -3-**

THE LOUIS BERGER GROUP, INC.  
 412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
 MORRISTOWN, NJ 07962-1946  
 CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

SCALE: 1"=50'  
 DATE: DEC. 2009

**Michael T. Dunn**  
 NEW JERSEY PROFESSIONAL ENGINEER NO. 24QE0450000

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**PLANTING NOTES**

1. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGES TO PROPERTY CAUSED BY HIS OPERATIONS AND IN THE EVENT OF DAMAGES, SHALL AT HIS OWN EXPENSE RESTORE ALL DISTURBED OR DAMAGED AREAS TO THEIR ORIGINAL CONDITION, ALL MATERIALS, EQUIPMENT AND PERSONNEL SHALL BE LIMITED TO THE WORK AREA DEFINED ON THE PLANS.
2. NO SUBSTITUTION OF PLANT MATERIAL IS ALLOWED UNLESS WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER PRIOR TO THE DELIVERY DATE OF THE MATERIAL.
3. WORK WILL INCLUDE BUT IS NOT LIMITED TO THE PREPARATION OF AREAS FOR PLANTING; THE FURNISHING, PLANTING AND WATERING OF SPECIFIED TREES; THE MAINTENANCE OF PLANTINGS UNTIL ACCEPTANCE BY THE ENGINEER; AND THE CLEAN UP AND RESTORATION OF ANY DISTURBED AREAS TO THE CONDITION PRIOR TO THE CONTRACTOR'S OPERATIONS.
4. THE CONTRACTOR SHALL SUBMIT A WRITTEN PROPOSED WORK SCHEDULE TO THE ENGINEER FOR APPROVAL AT LEAST SEVEN (7) BUSINESS DAYS PRIOR TO BEGINNING OPERATIONS. AFTER THE SCHEDULE IS ACCEPTED, NO MODIFICATIONS WILL BE PERMITTED WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
5. THE CONTRACTOR SHALL ARRANGE TO CONFINE HIS OPERATIONS TO NORMAL WORKING HOURS FOR THE INDUSTRY AND NO WORK WILL BE PERMITTED ON SUNDAYS OR HOLIDAYS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE ENGINEER.
6. ALL PERSONNEL WILL BE PROPERLY SUPERVISED IN A MANNER THAT ASSURES THAT THE PROPERTY IS PROTECTED FROM DAMAGE, THAT THE SAFETY OF ALL PERSONNEL AND THE PUBLIC IS PROTECTED AND THAT ALL CONTRACT WORK IS DONE IN A PROFESSIONAL MANNER AND ACCORDING TO ACCEPTED HORTICULTURAL STANDARDS.
7. THE CONTRACTOR SHALL SUBMIT COPIES OF THE PLANT MATERIAL ORDERS AT LEAST TWO WEEKS PRIOR TO THE PROPOSED PLANTING DATE TO ATTN: ENGINEER, NJ TURNPIKE AUTHORITY.
8. ALL PROPOSED CHANGES TO THE PLANTING PLAN SHALL BE MADE IN WRITING TO ATTN: ENGINEER, NJ TURNPIKE AUTHORITY, AT LEAST TWO (2) WEEKS PRIOR TO PLANTING. ALL PROPOSED CHANGES MUST BE APPROVED IN WRITING. A COPY SHALL ALSO BE PROVIDED TO THE ENGINEER.
9. PRIOR TO ANY EXCAVATION OR THE DRIVING OF STAKES INTO THE GROUND, THE CONTRACTOR SHALL ASCERTAIN AND HAVE MARKED OUT THE LOCATION OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS NOT TO DISTURB OR DAMAGE ANY SUB-SURFACE UTILITIES. THE CONTRACTOR SHALL MAKE A "ONE-CALL" TO HAVE THE UTILITIES IDENTIFIED AT THE SITE.
10. IN THE EVENT THAT ANY SUB-SURFACE UTILITIES ARE UNCOVERED OR DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONTRACT WORK MAY BE RELOCATED OR STOPPED UNTIL THE DAMAGE CAN BE REPAIRED. THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND STRUCTURES AND SHALL PROPERLY MAINTAIN THE PROTECTION OF SAME.
11. ALL TREES AND SHRUBS SHALL BE LOCATED AS SHOWN ON THE PLANS DETAILS. SHOULD THE CONTRACTOR ENCOUNTER OBSTRUCTIONS OF ANY NATURE, HE SHALL NOTIFY THE ENGINEER WHO WILL ARRANGE ADJUSTMENTS. ALL ADJUSTMENTS TO THE PLAN MUST BE AUTHORIZED IN WRITING.
12. ALL PLANTING SHALL BE PERFORMED IN A NATURALIZED PATTERN. PLANTINGS SHALL RESULT IN A RELATIVELY EVEN DISTRIBUTION OF EACH SPECIES ACROSS THE PLANTING AREA AT THE SPECIFIED DENSITY. PLANTINGS IN UNEVEN DISTRIBUTIONS OF SPECIES OR MONOCULTURES SHALL NOT BE ACCEPTED, AS SOLELY DETERMINED BY THE ENGINEER.
13. THE CONTRACTOR SHALL PROVIDE A PLANT GUARANTEE FOR SHRUBS AND TREES.
14. NO PLANTING HOLES SHALL BE EXCAVATED IN ADVANCE OF PLANTING OPERATIONS. THE PLANTING HOLES MUST BE APPROVED BY THE ENGINEER PRIOR TO THE START OF THE PLANTING OPERATION. EACH PLANT SHALL BE PLANTED IN AN INDIVIDUAL HOLE AS SPECIFIED. ALL PLANTS SHALL BE SET TO ULTIMATE FINISHED GRADE SO THAT THEY WILL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO THE NATURAL GRADE BEFORE TRANSPLANTING.
15. PLANT SPECIES SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS, PLANT LIST, AND THE PUBLICATION HORTUS THIRD.
16. ALL LANDSCAPE NURSERY STOCK SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE AMERICAN STANDARD FOR NURSERY STOCK SPONSORED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, INC.
17. ALL PLANTS SHALL BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THE JOB SITE FOR A PERIOD OF NOT LESS THAN TWO (2) YEARS IMMEDIATELY PRIOR TO THIS PROJECT.
18. NO SUBSTITUTIONS SHALL BE PERMITTED IN EITHER KIND OR GRADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
19. PLANTS SHALL HAVE THE HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES OR CULTIVAR AND SHALL BE SOUND, HEALTHY, VIGOROUS, FREE FROM INSECTS, PLANT DISEASES AND INJURIES OR DAMAGE OF ANY NATURE. ALL PLANTS SHALL BE OF THE GRADES SPECIFIED, NEITHER LARGER NOR SMALLER, WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER. ALL PLANTS SHALL HAVE THEIR BRANCHING STARTING BETWEEN SIX AND SEVEN FEET IN HEIGHT. TREE CROWNS SHALL BE BALANCED AND SCAFFOLDING BRANCHES SHALL BE ADEQUATELY SPACED AND DEVELOPED IN PROPORTION TO EACH OTHER. NO PLANTS SHALL BE PRUNED, CLIPPED OR TRIMMED PRIOR TO DELIVERY WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER. ALL LANDSCAPE STOCK MUST BE NURSERY GROWN.
20. ALL PLANTS SHALL HAVE BEEN ROOT PRUNED AT THE NURSERY AT LEAST ONCE DURING THE THREE YEAR PERIOD IMMEDIATELY PRECEDING TRANSPLANTING AND AT LEAST ONE YEAR PRIOR TO TRANSPLANTING.
21. NO PLANTS SHALL BE PLANTED UNTIL THEY HAVE BEEN INSPECTED AND APPROVED ON THE SITE BY THE ENGINEER.
22. LEGIBLE TAGS SHALL BE ATTACHED TO EACH TREE. TREES THAT FAIL TO MEET REQUIREMENTS WILL BE REJECTED. REJECTED PLANTS SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND APPROVED REPLACEMENT STOCK THAT MEETS REQUIREMENTS WILL BE PLANTED IN THE PRESCRIBED MANNER BY THE CONTRACTOR AT HIS EXPENSE. FINAL WRITTEN ACCEPTANCE OF THE PLANTS WILL BE GIVEN ONLY AFTER THEY HAVE BEEN PLANTED AND AFTER THE REQUIREMENTS ESTABLISHED IN THE SPECIFICATIONS ARE MET.
23. PRIOR TO COMMENCEMENT OF PLANTING, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO ESTABLISH A SCHEDULE OF PLANTING DATES. TREES WILL BE PLANTED FROM MARCH 15 THROUGH JUNE 1.
24. ACCESS ROAD ADJACENT TO PROPOSED PIPELINE RELOCATION MAY NOT BE AVAILABLE FOR USE DURING THE TWO (2) YEAR MAINTENANCE PERIOD. CONTRACTOR SHALL USE ALTERNATE ACCESS ROAD CLOSEST TO LAUREL RUN DURING PIPELINE RELOCATION WORK BY OTHERS.

25. TREE TRUNKS SHALL NOT BE WRAPPED.

26. PRIOR TO BACKFILLING, BALLED AND BURLAPPED TREES SHALL HAVE BURLAP AND TWINE REMOVED FROM AROUND THE TRUNKS, STEMS AND TOPS OF THE BALLS. THE BURLAP SHALL BE PEELED BACK OFF THE TOP OF THE BALL, OR IF BULKY, CUT AWAY AND REMOVED FROM THE UPPER THREE-QUARTERS OF THE SOIL BALL. NO BURLAP SHALL BE PULLED OUT FROM UNDERNEATH THE BALL.

27. AT LEAST THE UPPER TWO-THIRDS OF THE WIRE BASKET SHALL BE REMOVED FROM THE ROOT BALLS AFTER THE TREES ARE SET IN THE PLANTING PIT BY CUTTING WITH ANY TOOL THAT DOES NOT DESTROY THE INTEGRITY OF THE ROOT BALL OR INJURE THE TREE ROOTS. THE REMAINING LOWER SECTION OF THE WIRE BASKET SHALL BE FLATTENED AS MUCH AS POSSIBLE IN THE PLANTING HOLE.

28. ONLY THE PRESCRIBED APPROVED TOPSOIL MAY BE USED TO BACKFILL THE HOLES DURING PLANTING OPERATIONS. UNSUITABLE EXCAVATED MATERIAL, AS DESIGNATED BY THE ENGINEER, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS EXPENSE.

29. SHREDDED HARDWOOD MULCH SUPPLIED BY THE CONTRACTOR SHALL BE FREE OF DEBRIS AND SHALL BE PLACED BY THE CONTRACTOR AROUND ALL PLANTINGS AT THE TIME OF PLANTING TO A DEPTH OF THREE (3) INCHES AS SHOWN IN THE PLANTING DETAIL. CARE SHALL BE EXERCISED TO KEEP MULCH TWO (2) INCHES AWAY FROM THE BASES OF ALL PLANTINGS. AFTER THE MULCHING OPERATION HAS BEEN APPROVED BY THE ENGINEER, THE MULCH SHALL BE THOROUGHLY WATERED.

30. DURING THE COURSE OF OPERATIONS, THE CONTRACTOR SHALL REMOVE FROM THE PROPERTY AND LEGALLY DISPOSE OF ALL EXCESS AND WASTE MATERIALS AT HIS EXPENSE.

31. ANY DAMAGED LAWN AREAS OR PLANTING AREAS WILL BE IMMEDIATELY RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT HIS EXPENSE. IF SUCH DAMAGE IS THE RESULT OF THE CONTRACTOR'S OPERATIONS, ANY EROSION CAUSED BY THE CONTRACTOR'S TRUCKS OR EQUIPMENTS SHALL BE CORRECTED AT CONTRACTOR EXPENSE.

32. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN PLANTING IS COMPLETED AND SHALL REQUEST AN INSPECTION IN ORDER TO DETERMINE WHETHER OR NOT THE PROJECT MEETS THE SPECIFICATIONS CONTAINED HEREIN. IF THE WORK IS ACCEPTABLE, A WRITTEN NOTICE SHALL BE PROVIDED STATING SO. IF DEFICIENCIES ARE FOUND IN THE WORK, A LIST OF ITEMS REQUIRING ATTENTION SHALL BE FURNISHED TO THE CONTRACTOR BY THE ENGINEER. THE CONTRACTOR SHALL CORRECT THE DEFICIENCIES WITHIN TEN (10) DAYS AND A RE-INSPECTION SHALL BE MADE. THIS PROCEDURE WILL CONTINUE UNTIL THE WORK IS FOUND ACCEPTABLE.

33. AFTER INSPECTION, THE CONTRACTOR WILL BE NOTIFIED IN WRITING BY THE ENGINEER OF THE ACCEPTANCE OF ALL WORK. IF TREES DO NOT SURVIVE FOR TWO YEARS, THE CONTRACTOR WILL BE NOTIFIED AND HE WILL REPLACE THE TREES AT HIS EXPENSE.

**PLANTING TABLE**

TYPE	PLANT NAME	ROOT	CALIPER & HEIGHT	QUANTITY PER ACRE	SIZE (ACRE)	TOTAL QUANTITY
UPLAND	ACER RUBRUM (RED MAPLE)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	ACER SACCHARUM (SUGAR MAPLE)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	AMELANCHIER CANADENSIS (SHADBLOW SERV)	BALL/BURLAP	CLUMP FORM, 2 OR MORE STEMS, 2-3 FT.	9	15.8	140
	ARONIA MELANOCARPA (BLACK CHOKEBERRY)	BALL/BURLAP	3 FT. SHRUBS SHOULD NOT HAVE LESS THAN 4 CANES, 3 FT. AND	9	15.8	140
	BETULA POPULIFOLIA (GRAY BIRCH)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	CELTIS OCCIDENTALIS (HACKBERRY)	BALL/BURLAP	1 1/16 IN. CAL., 5 FT., SIX OR MORE BRANCHES	8	15.8	130
	FRAXINUS AMERICANA (WHITE ASH)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	FRAXINUS PENNSYLVANICA (GREEN ASH)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	ILEX OPACA (AMERICAN HOLLY)	BALL/BURLAP	3-4 FT., 24-28 IN. SPREAD	9	15.8	140
	ILEX OPACA 'MALE' (MALE AMERICAN HOLLY)	BALL/BURLAP	4-5 FT., 24-28 IN. SPREAD	8	15.8	130
	ILEX VERTICILLATA (WINTERBERRY HOLLY)	BALL/BURLAP	4-5 FT., 24-28 IN. SPREAD	9	15.8	140
	JUNIPERIS VIRGINIANA (RED CEDAR)	BALL/BURLAP	3-4 FT., 9-15 IN. SPREAD	24	15.8	380
	LIRIODENDRON TULIPIFERA (TULIP POPLAR)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	9	15.8	140
	LIQUIDAMBAR STYRACIFLUA (SWEETGUM)	BALL/BURLAP	2-2.5 IN. CAL., 8-14 FT	8	15.8	130
	PICEA ABIES (NORWAY SPRUCE)	BALL/BURLAP	2-3 FT., 18-24 IN. SPREAD	24	15.8	380
	PINUS ECHINATA (SHORTLEAF PINE)	BALL/BURLAP	2-3 FT., 15-30 IN. SPREAD	26	15.8	410
	PINUS TAEDA (LOBLOLLY PINE)	BALL/BURLAP	2-3 FT., 15-30 IN. SPREAD	26	15.8	410
	PINUS RACEMOSA (RED PINE)	BALL/BURLAP	2-3 FT., 15-30 IN. SPREAD	24	15.8	380
	PINUS RIGIDA (PITCH PINE)	BALL/BURLAP	2-3 FT., 15-30 IN. SPREAD	26	15.8	410
	PINUS STROBUS (WHITE PINE)	BALL/BURLAP	2-3 FT., 15-30 IN. SPREAD	24	15.8	380
	PRUNUS SEROTINA (BLACK CHERRY)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130
	PSEUDOTSUGA MENZIESII (DOUGLAS FIR)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	24	15.8	380
	QUERCUS ALBA (WHITE OAK)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	10	15.8	160
	QUERCUS BICOLOR (WHITE OAK)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	10	15.8	160
	QUERCUS PALUSTRIS (PIN OAK)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	10	15.8	160
	QUERCUS RUBRA (RED OAK)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	10	15.8	160
	SASSAFRAS ALBIDUM (SASSAFRAS)	BALL/BURLAP	2-2.5 IN. CAL., 12-14 FT.,	8	15.8	130

NOTE: TREE SPACING SHALL BE 11 FEET ON CENTER.

**CONSTRUCTION SEQUENCE**

1. MOBILIZATION.
2. INSTALL STABILIZED GRAVEL CONSTRUCTION ENTRANCE.
3. STAKE OUT PLANTING AREAS.
4. DELIVER, INSPECT, INSTALL TREES.
5. WATERING AND MAINTENANCE.
6. DEMOBILIZATION.

	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	

No.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
 INTERCHANGE 6 TO 9 WIDENING PROGRAM  
 LAUREL RUN REFORESTATION  
 CONTRACT NO. T869.120.002

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**PLANTING NOTES AND DETAILS - 1**

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THE LOUIS BERGER GROUP, INC.  
 412 MOUNT KEMBLE AVENUE, P.O. Box 1948  
 MORRISTOWN, NJ 07962-1948  
 CERTIFICATE OF AUTHORIZATION NO. 24GA27933700

SCALE: NONE  
 DATE: DEC. 2009

**Michael T. Dunn**  
 NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE0450000

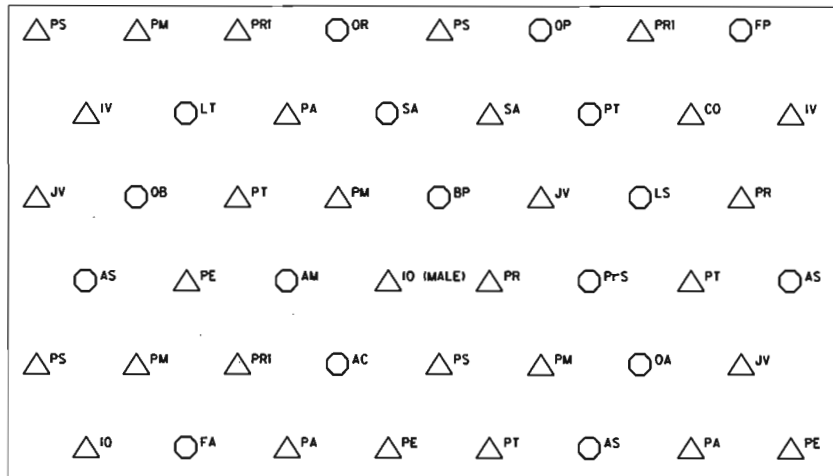
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**TREE MAINTENANCE NOTES**

1. MAINTENANCE PROCEDURES WILL BE CARRIED OUT TO PROMOTE THE ESTABLISHMENT OF THE TREES AND ENSURE THAT THEY ARE IN A HEALTHY AND VIABLE CONDITION TWO (2) YEARS AFTER PLANTING AT SITE.
2. INSPECTIONS SHALL CONSIST OF REGULAR VISITS TO THE PLANTING SITES BY THE CONTRACTOR TO DETERMINE THE HEALTH AND NEEDS OF THE TREES. INSPECTION TIMES AND DATES ARE THE RESPONSIBILITY OF THE CONTRACTOR BUT A MINIMUM OF FOUR (4) INSPECTIONS SHALL BE DONE DURING THE YEAR, WITH ONE SCHEDULED DURING EACH OF THE MONTHS OF APRIL, MAY, JUNE AND NOVEMBER.
3. THE MULCH RINGS OF CALIPER SIZE TREES SHALL BE KEPT FREE OF WEEDS BY USING EITHER CHEMICAL CONTROLS AND/OR HAND WEEDING. ANY PREEMERGENT OR POST EMERGENT WEED CONTROL APPLICATIONS SHALL BE APPLIED IN A MANNER CONSISTENT WITH THE LABEL AND ONLY TARGET THE UNDESIRABLE PLANTS.
4. TREE STAKES AND SUPPORTING MATERIALS SHALL BE MAINTAINED ACCORDING TO THE PLANTING SPECIFICATIONS AND/OR REPLACED AS NECESSARY DURING THE FIRST MAINTENANCE YEAR. FOR DETAILS ON PROPER STAKING, SEE THE PLANTING DETAIL. ALL STAKING MATERIALS AND GUYS SHALL BE REMOVED AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT THE END OF THE FIRST YEAR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. ANY TREE THAT DEVIATES FROM A VERTICAL POSITION SHALL BE ADJUSTED SO THAT THE MAIN TRUNK IS PLUMB IN TWO DIRECTIONS THAT ARE NINETY DEGREES (90°) FROM EACH OTHER. ALL CARE SHALL BE TAKEN NOT TO HARM THE ROOT BALL OR ROOT SYSTEM OF THE TREE DURING RESETTING OPERATIONS.
6. TREES SHALL BE KEPT FREE OF INSECT OR DISEASE INFESTATIONS THAT CAN AFFECT THEIR HEALTH OR ESTABLISHMENT. INTEGRATED PEST MANAGEMENT TECHNIQUES SHALL BE EMPLOYED BY THE CONTRACTOR TO MINIMIZE OR ALLEVIATE THE UNDESIRABLE CONDITION. IF THE TIMING IS INCORRECT TO ADMINISTER A CONTROL, CONTRACTOR SHALL MONITOR THE INSECT OR DISEASE UNTIL THE NEXT SEASON AND APPLY THE APPROPRIATE CONTROLS AT THAT TIME, IF NECESSARY. ALL INSECT OR DISEASE PROBLEMS ARE TO BE DIAGNOSED AND TREATED INDIVIDUALLY. NO BROADCAST SPRAYING OF PESTICIDES SHALL BE DONE.
7. A BALANCED, SLOW RELEASE FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATE AT THE END OF THE FIRST GROWING SEASON IN LATE FALL. THE FERTILIZER SHALL BE FORMULATED FOR TREES AND APPROVED BY THE ENGINEER PRIOR TO APPLICATION. THE APPLICATION MAY BE MADE BY EITHER SOIL INJECTION ALONG THE OUTSIDE OF THE MULCH RING OR BY APPLYING A GRANULAR FORM TO THE MULCH RING AREA.
8. PRUNING SHALL BE DONE ONLY TO DEAD, BROKEN, DISEASED OR INFESTED BRANCHES DURING THE MAINTENANCE PERIOD AND ACCORDING TO THE NEW JERSEY BOARD OF TREE EXPERTS' PRUNING STANDARDS FOR SHADE TREES.

**TYPICAL PLANTING LAYOUT**

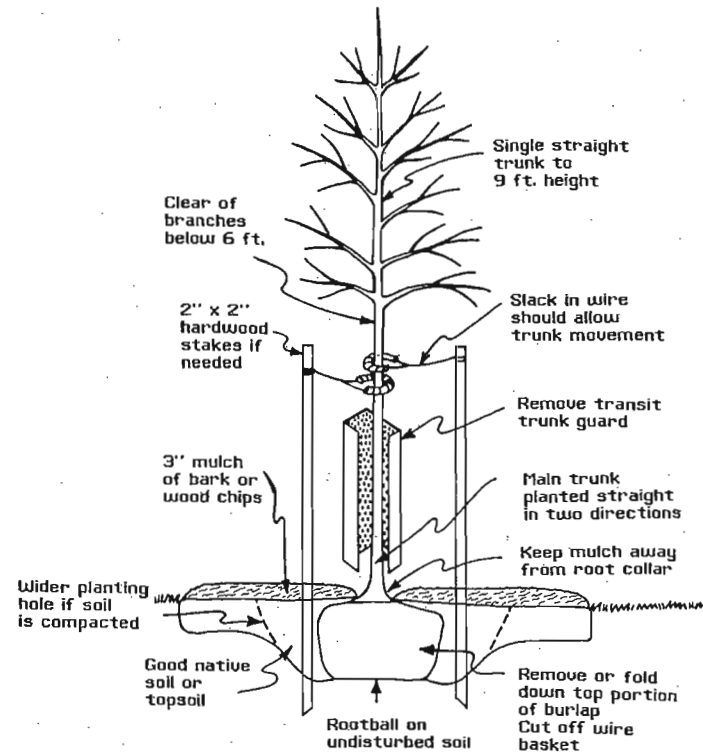


△ = EVERGREEN SPECIES      ○ = DECIDUOUS SPECIES

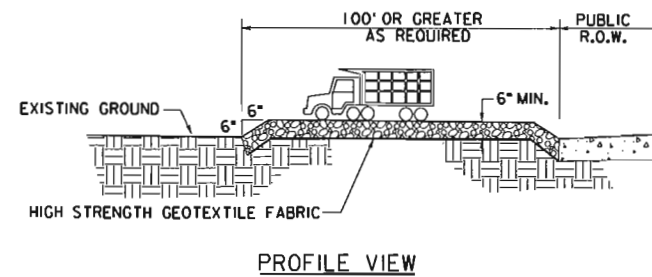
**TREE SPECIES**

- AR = ACER RUBRUM (RED MAPLE)
- AS = ACER SACCHARUM (SUGAR MAPLE)
- AC = AMELANCHIER CANADENSIS (SHADBLOW SERVICEBERRY)
- AM = ARONIA MELANOCARPA (BLACK CHOKEBERRY)
- BP = BETULA POPULIFOLIA (GRAY BIRCH)
- CO = CELTIS OCCIDENTALIS (HACKBERRY)
- FA = FRAXINUS AMERICANA (WHITE ASH)
- FP = FRAXINUS PENNSYLVANICA (GREEN ASH)
- IO = ILEX OPACA (AMERICAN HOLLY)
- IO (MALE) = ILEX OPACA 'MALE' (MALE AMERICAN HOLLY)
- IV = ILEX VERTICILLATA (WINTERBERRY HOLLY)
- JV = JUNIPERUS VIRGINIANA (RED CEDAR)
- LT = LIRIODENDRON TULIPIFERA (TULIP POPLAR)
- PA = PICEA ABIES (NORWAY SPRUCE)
- PE = PINUS ECHINATA (SHORTLEAF PINE)
- PT = PINUS TAEDA (LOBLOLLY PINE)
- PR = PINUS RACEMOSA (RED PINE)
- PRI = PINUS RIGIDA (PITCH PINE)
- PS = PINUS STROBU (WHITE PINE)
- Pr-S = PRUNUS SEROTINA (BLACK CHERRY)
- PM = PSEUDOTSUGA MENZIESII (DOUGLAS FIR)
- OA = QUERCUS ALBA (WHITE OAK)
- OB = QUERCUS BICOLOR (WHITE OAK)
- OP = QUERCUS PALUSTRIS (PIN OAK)
- OR = QUERCUS RUBRA (RED OAK)
- SA = SASSAFRAS ALBIDUM (SASSAFRAS)
- LS = LIQUIDAMBAR STYRACIFLUA (SWEETGUM)

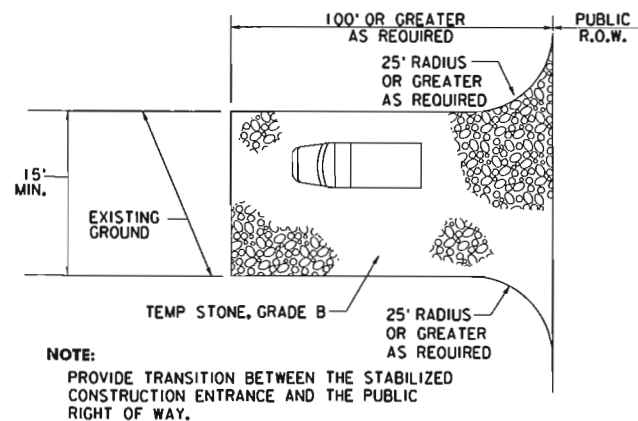
	BY	DATE
MADE	MTM	07-09
TRACED	BB	07-09
CHECKED	MTM	07-09
SUPERVISED	M.T. DUNN	



**TREE PLANTING DETAIL**  
NOT TO SCALE



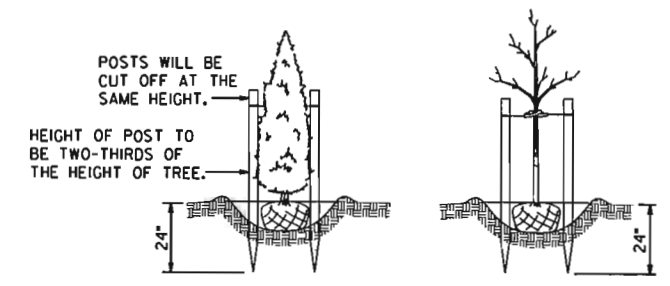
**PROFILE VIEW**



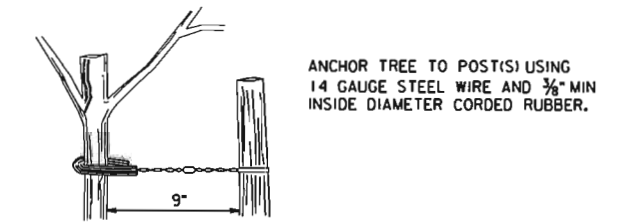
**NOTE:**  
PROVIDE TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ENTRANCE AND THE PUBLIC RIGHT OF WAY.

**PLAN VIEW**  
**CONSTRUCTION DRIVEWAY DETAIL**

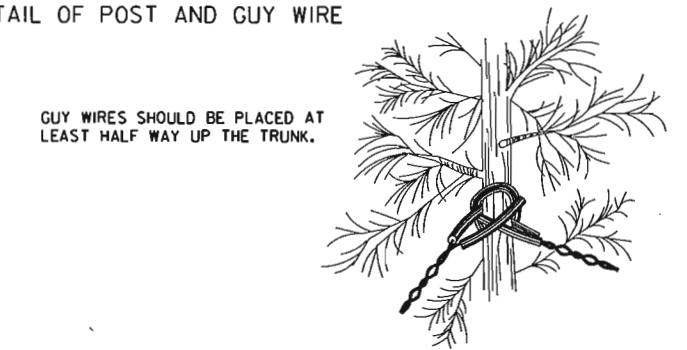
No.	DATE	REVISION



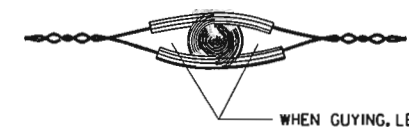
**TREES REQUIRING TWO STAKES**  
**STAKING DETAILS**  
NOT TO SCALE



**DETAIL OF POST AND GUY WIRE**



**DETAIL OF GUY WIRES AROUND TRUNK**



**FASTENING DETAIL**  
WHEN GUYING, LEAVE ROOM FOR GROWTH OF TREE

**GUYING DETAILS**  
NOT TO SCALE

NEW JERSEY TURNPIKE AUTHORITY  
**NEW JERSEY TURNPIKE**  
INTERCHANGE 6 TO 9 WIDENING PROGRAM  
LAUREL RUN REFORESTATION  
CONTRACT NO. T869.120.002

**PLANTING NOTES AND DETAILS - 2**

THE LOUIS BERGER GROUP, INC.  
412 MOUNT KEMBLE AVENUE, P.O. Box 1946  
MORRISTOWN, NJ 07962-1946  
CERTIFICATE OF AUTHORIZATION NO. 24GA27833700

SCALE: N.T.S.  
DATE: DEC. 2009

**Michael T. Dunn**  
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE0450000