

Water Quality Description:

TOTAL PROPOSED IMPERVIOUS AREA OF TREATED SITE = 7,932 SQUARE FEET INCLUDING EXISTING AND PROPOSED IMPERVIOUS. THE PROPOSED IMPERVIOUS TO THE SITE IS 127 SQUARE FEET. THE REQUIRED WATER QUALITY VOLUME IS FOR THE PROPOSED IMPERVIOUS= 1.2" OF 127 SQUARE FEET IS 92.4 CUBIC FEET. THE WATER QUALITY TO BE PROVIDED IN ONE UNDERGROUND STONE STORAGE TRENCH LOCATED IN THE REAR OF THE PROPERTY. THE TRENCH IS TO BE FILLED WITH #57 STONE (40% VOID RATIO). THE TOTAL REQUIRED VOLUME OF THE UNDERGROUND STONE STORAGE TRENCH (WITH THE STONE) IS 252 CUBIC FEET. THE TRENCH EXCEEDS THE REQUIRED WATER QUALITY VOLUME. THE STORAGE STRUCTURE SHOULD BE LOCATED IN A LAWN OR OTHER PERVIOUS AREAS AS SHOWN ON THIS PLAN.

THIS PRODUCT STORES THE FIRST 1.2 INCHES OF STORMWATER FROM A RAIN EVENT ONSITE AND PROMOTES GROUNDWATER RECHARGE. A SIMILAR PRODUCT THAT PROVIDES SIMILAR STORAGE IS ACCEPTABLE.

Stone Trench Installation Notes:

VEGETATION
THE LANDSCAPED AREA ABOVE THE SURFACE OF TRENCH CAN BE LANDSCAPED WITH SOD OR MAY BE COVERED WITH AN ENGINEERED SOIL MIX, AND PLANTED WITH MANAGED TURF OR OTHER HERBACEOUS VEGETATION. THE STONE STORAGE IS FOR STORAGE ONLY AND CAN BE GRADED ABOVE PER THE GRADING PLAN WITH A MINIMUM COVER OF 6".

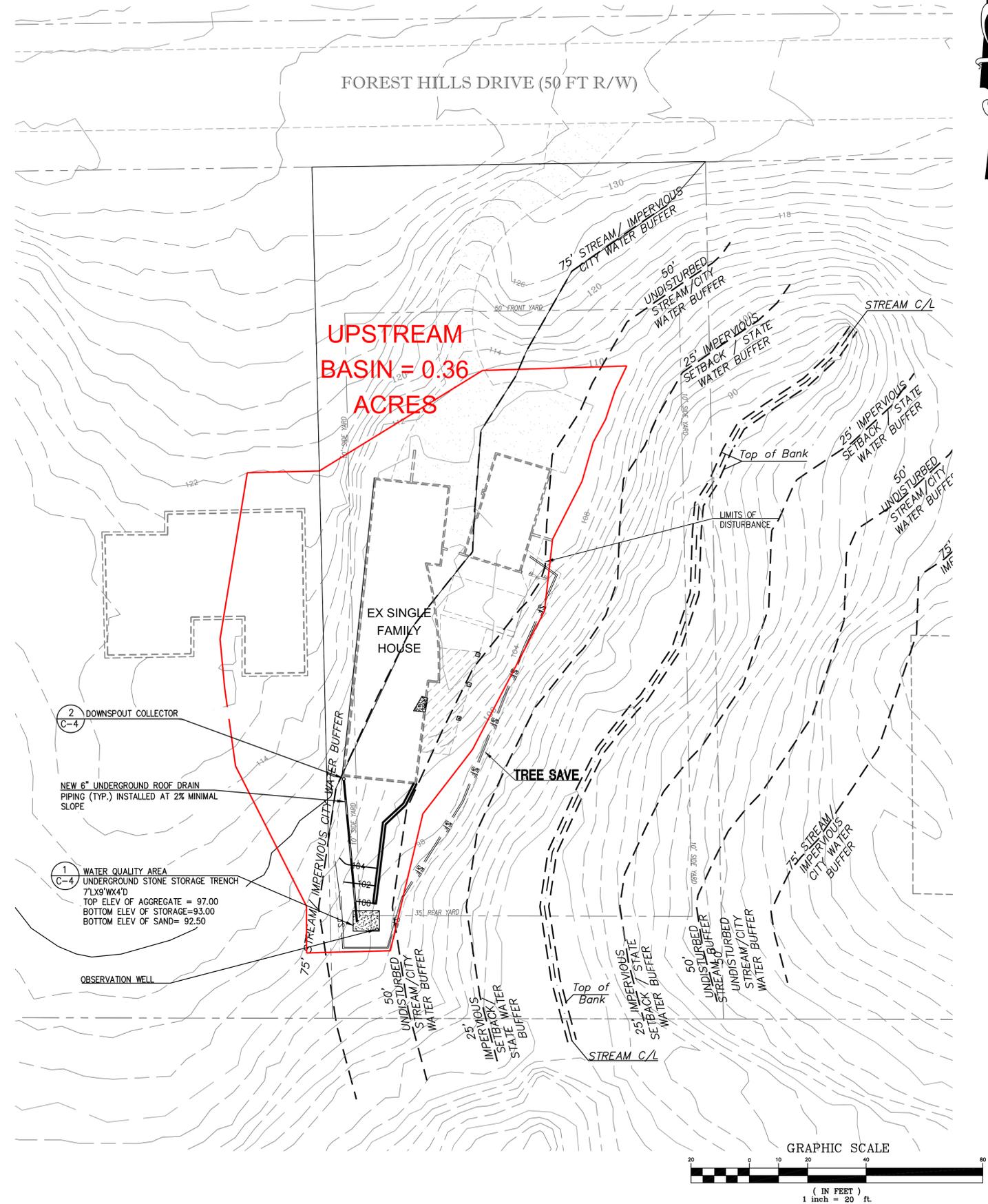
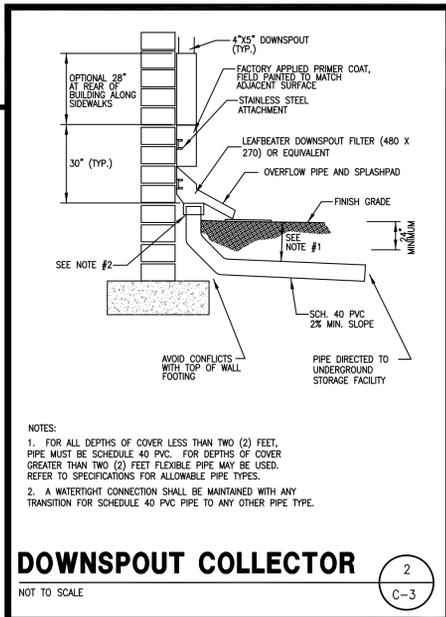
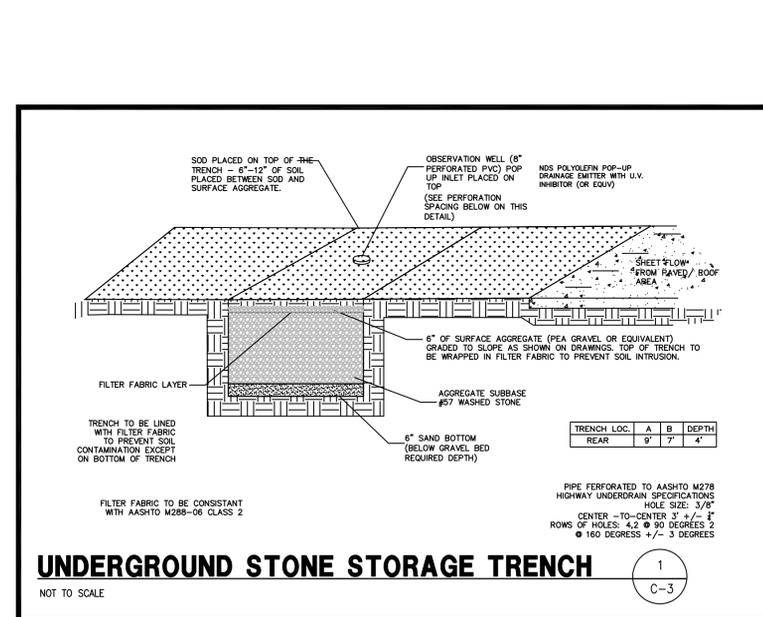
CONTRACTOR TO PROVIDE PHOTOS OF STONE STORAGE TRENCH DURING CONSTRUCTION WITH ENOUGH MEASUREMENTS (LxWxH BEFORE GRAVEL BACKFILLING) TO VERIFY THAT THE TRENCH WAS INSTALLED PER THE PROPOSED PLANS.

MAINTENANCE

- MONTHLY**
- ENSURE THAT CONTRIBUTING AREA, FACILITY AND INLETS ARE CLEAR OF DEBRIS.
 - ENSURE THAT THE CONTRIBUTING AREA IS STABILIZED.
 - REMOVE SEDIMENT AND OIL/GREASE FROM PRETREATMENT DEVICES, AS WELL AS OVERFLOW STRUCTURES.
 - MOW GRASS FILTER STRIPS SHOULD BE MOWED AS NECESSARY. REMOVE GRASS CLIPPINGS.
- SEMIANNUAL INSPECTION**
- CHECK OBSERVATION WELLS FOLLOWING 3 DAYS OF DRY WEATHER. FAILURE TO PERCOLATE WITHIN THIS TIME PERIOD INDICATES CLOGGING.
 - INSPECT PRETREATMENT DEVICES AND DIVERSION STRUCTURES FOR SEDIMENT BUILD-UP AND STRUCTURAL DAMAGE.
 - REMOVE TREES THAT START TO GROW IN THE VICINITY OF THE TRENCH. REPLACE PEA GRAVEL/TOPSOIL/GRASSING AND TOP SURFACE FILTER FABRIC (WHEN CLOGGED).
- AS NEEDED**
- PERFORM TOTAL REHABILITATION OF THE TRENCH TO MAINTAIN DESIGN STORAGE CAPACITY.
 - EXCAVATE TRENCH WALLS TO EXPOSE CLEAN SOIL UPON FAILURE.

Basin Water Quality Calculations Per GSWMM			
Water Quality Volume			
Drainage Basin =	0.36	Acres	
Impervious Area =	0.003	Acres	87+40=127 sf of Impervious
I = % impervious =	1.00	%	
$R_v = 0.05 + I*(0.009)$			
Rv =	0.059		
$WQ_v = 1.2 * R_v * (DA * 43560) / 12$			
WQv =	92.4	cu. ft.	

Stone Storage Infiltration Trench Calculations	
Required Water Quality Volume =	92.4 CF
All WQ Volume to be provided in Infiltration Trench	
Infiltration Trench w/ 40% void Ratio	
Required WQ Volume / 0.40 =	231.1 CF
Infiltration Trench Calculations	
Length =	9.0 FT
Width =	7.0 FT
Height =	4.0 FT
Required Volume =	231.1 CF
Provided Volume =	252.0 CF
Provided Volume is Greater than Required Volume	



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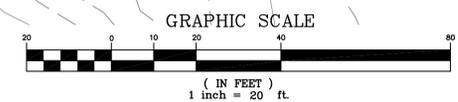
Stormwater Plan			
DATE	8-16-16	REVISIONS	9-14-2016
SCALE	AS SHOWN	CITY COMMENTS	10-3-2016
DRAWN	EZ	CITY COMMENTS	
CHECKED	GHB		



Construction Plans for
535 Forrest Hills Drive
Land Lot 67, 17th District
City of Sandy Springs, Fulton County, Georgia

CVE PI # 16-255

Sheet No.
C-3



DATE	8-16-16	REVISIONS	9-14-2016
SCALE	AS SHOWN	CITY COMMENTS	10-3-2016
DRAWN	EZ	CITY COMMENTS	
CHECKED	GHB		



APPLICATION OF MULCH

DRY STRAW OR HAY APPLIED TO DEPTH OF 2 - 4 INCHES
WOOD CHIPS, BARK, SANDUST APPLIED TO DEPTH OF 2 - 3 INCHES

Ds1

SPECIES	BROADCAST RATES 2/-PLS 3/ PER ACRE SQ. FT.	PLANTING DATES BY RESOURCE AREA		REMARKS	SPECIES	BROADCAST RATES 2/-PLS 3/ PER ACRE SQ. FT.	PLANTING DATES BY RESOURCE AREA		REMARKS
		RESOURCE AREA 4/ (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES)	PLANTING DATES				RESOURCE AREA 4/ (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES)	PLANTING DATES	
BARLEY (HORDEUM VULGARE)		M-L	J F J A M J J A S O N D	14,000 SEED PER POUND. WINTERHARDY. USE ON PRODUCTIVE SOILS.	MILLET, PEARL (PENNISETUM GLAUCUM)		J F J A M J J A S O N D	88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.	
ALONE	3 bu. 3.3 lb. (144 lb.)				ALONE	50 lbs. 1.1 lb.			
IN MIXTURES	1/2 bu. 0.6 lb. (24 lbs.)								
LESPEDEZA ANNUAL (LESPEDEZA STRATA)		M-L	J F J A M J J A S O N D	200,000 SEED PER POUND. MAY VOLUNTEER FOR SEVERAL YEARS. USE INOCULANT EL.	GRASS (Avena SATIVA)		J F J A M J J A S O N D	13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTERHARDY AS RYE OR BARLEY.	
ALONE	40 lbs. 0.9 lb.				ALONE	4 bu. 2.9 lb. (128 lb.)			
IN MIXTURES	10 lbs. 0.2 lb.				IN MIXTURES	1 bu. 0.7 lb. (32 lbs.)			
LONGGRASS, WEEPING (ERAGROSTIS CURVULA)		M-L	J F J A M J J A S O N D	1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICEA LESPEDEZA	RYE (SECALE CEREALE)		J F J A M J J A S O N D	18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERHARDY.	
ALONE	4 lbs. 0.1 lb.				ALONE	3 bu. 3.9 lb. (168 lb.)			
IN MIXTURES	2 lbs. 0.05 lb.				IN MIXTURES	1/2 bu. 0.6 lb. (28 lbs.)			
MILLET, BROWNTOP (Panicum fasciculatum)		M-L	J F J A M J J A S O N D	137,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDS AT HIGH RATES.	RYEGRASS, ANNUAL (Lolium temulentum)		J F J A M J J A S O N D	227,000 SEED PER POUND. DENSE COVER. VARY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.	
ALONE	40 lbs. 0.9 lb.				ALONE	40 lbs. 0.9 lb.			
IN MIXTURES	10 lbs. 0.2 lb.				IN MIXTURES	60 lbs. 1.4 lb.			

TEMPORARY GRASSING

NOT TO SCALE

Ds2

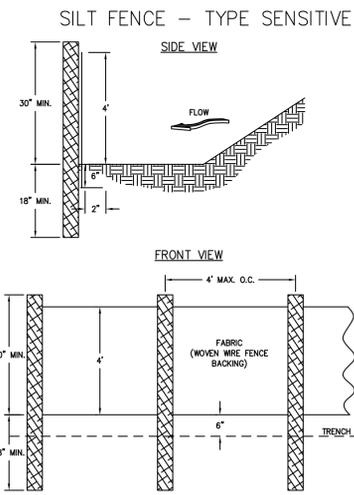
TOP OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N DRESSINGS RATE
1. COOL SEASON GRASSES	FIRST MAINTENANCE	6-12-12	1500 lbs./ac.	10-100 lbs./ac. 1/2
	SECOND MAINTENANCE	6-12-12	1000 lbs./ac.	30
	THIRD MAINTENANCE	10-10-10	400 lbs./ac.	
2. COOL SEASON GRASSES AND LEGUMES	FIRST MAINTENANCE	6-12-12	1500 lbs./ac.	0-50 lbs./ac. 1/
	SECOND MAINTENANCE	6-12-12	1000 lbs./ac.	
	THIRD MAINTENANCE	10-10-10	400 lbs./ac.	
3. WARM SEASON GRASSES	FIRST MAINTENANCE	10-10-10	1300 lbs./ac. 3/	
	SECOND MAINTENANCE	10-10-10	1300 lbs./ac. 3/	
	THIRD MAINTENANCE	10-10-10	1100 lbs./ac.	
4. FINE SEEDING	FIRST MAINTENANCE	20-10-5	ONE 21-GRAM PELLET PER SEEDING POUND IN THE CLOSING HOLE	
5. SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10	700 lbs./ac. 4/	
	SECOND MAINTENANCE	0-10-10	700 lbs./ac. 4/	
6. TEMPORARY COVER CROPS SEEDS ALONE	FIRST MAINTENANCE	10-10-10	500 lbs./ac.	30 lbs./ac. 5/
7. WARM SEASON GRASSES	FIRST MAINTENANCE	6-12-12	1500 lbs./ac.	50-100 lbs./ac. 2/6/
	SECOND MAINTENANCE	6-12-12	800 lbs./ac.	50-100 lbs./ac. 2/
	THIRD MAINTENANCE	10-10-10	400 lbs./ac.	30 lbs./ac.
8. WARM SEASON GRASSES AND LEGUMES	FIRST MAINTENANCE	6-12-12	1500 lbs./ac.	50 lbs./ac. 6/
	SECOND MAINTENANCE	6-12-12	1000 lbs./ac.	
	THIRD MAINTENANCE	10-10-10	400 lbs./ac.	

- 1) APPLY IN SPRING FOLLOWING SEEDING.
- 2) APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
- 3) APPLY IN 3 SPLIT APPLICATIONS.
- 4) APPLY WHEN PLANTS ARE PRUNED.
- 5) APPLY TO GRASS SPECIES ONLY.
- 6) APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

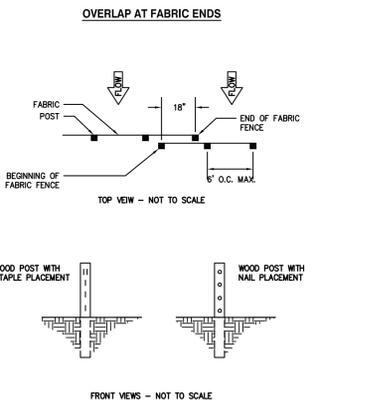
LIME APPLICATION REQUIREMENT = 2 TONS/ACRE
 50% PASS THROUGH 10 - MESH SIEVE
 50% PASS THROUGH 50 - MESH SIEVE
 25% PASS THROUGH 25 - MESH SIEVE

FERTILIZERS

NOT TO SCALE



FASTENERS FOR SILT FENCES



- NOTES:
 1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

Sd1-S

DUST CONTROL ON DISTURBED AREAS

SITE MUST BE CONTROLLED TO PREVENT SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION AREAS. CONTRACTOR SHALL UTILIZE ADDITIONAL MEASURES TO CONTROL DUST AS REQUIRED.
 TEMPORARY METHODS: D1-MULCHING, D2-TACKIFIERS AND BINDERS, D3-TEMPORARY SEEDING, SPRAY ON ADHESIVES, IRRIGATION
 PERMANENT METHODS: D4-PERMANENT VEGETATION, D5-SODDING

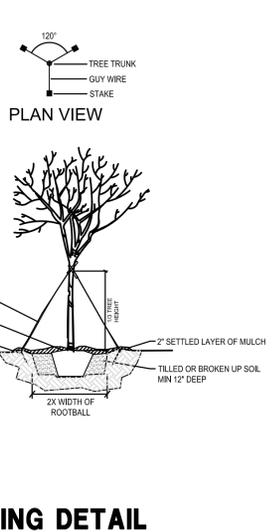
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SPECIES	BROADCAST RATES 1/-PLS 2/ PER ACRE SQ. FT.	PLANTING DATES BY RESOURCE AREA		REMARKS	SPECIES	BROADCAST RATES 1/-PLS 2/ PER ACRE SQ. FT.	PLANTING DATES BY RESOURCE AREA		REMARKS
		RESOURCE AREA 3/ (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES)	PLANTING DATES				RESOURCE AREA 3/ (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES)	PLANTING DATES	
BAHA, PENSACOLA (Paspalum notatum)		P	J F J A M J J A S O N D	166,000 SEED PER POUND. LOW GROWING SOO FORMING. SLOW TO ESTABLISH. PLANT W/ A COMPANION CROP WILL SPREAD INTO BERMUDA PASTURES & LAWNS. MODERATELY DROUGHT TOLERANT.	BERMUDA SPRIGS (Cynodon dactylon)		J F J A M J J A S O N D	A CUBIC FOOT CONTAINS APPROXIMATELY 650 SPRIGS. A BUSHEL CONTAINS 1.25 CUBIC FEET OR APPROXIMATELY 800 SPRIGS.	
ALONE OR WITH TEMPORARY COVER	60 lbs. 1.4 lb.				ALONE OR WITH TEMPORARY COVER	40 cu.ft. 0.9 cu.ft. 800 PLUS 3'x3'			
W/ OTHER PERENNIALS	30 lbs. 0.7 lb.				W/ OTHER PERENNIALS	30 lbs. 0.7 lb.			
BAHA, WILMINGTON (Paspalum notatum)		M-L	J F J A M J J A S O N D	SAME AS ABOVE.	SENTIPEDA (ERAGROSTIS OPHUROIDES)		J F J A M J J A S O N D	BROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE ADJUNCT TO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PASTURES. WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA.	
ALONE OR WITH TEMPORARY COVER	60 lbs. 1.4 lb.				ALONE OR WITH TEMPORARY COVER	60 lbs. 1.4 lb.			
W/ OTHER PERENNIALS	30 lbs. 0.7 lb.				W/ OTHER PERENNIALS	30 lbs. 0.7 lb.			
BERMUDA, COMMON (Cynodon dactylon)		P	J F J A M J J A S O N D	1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING & SOO FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.	FESCUE, TALL (Festuca arundinacea)		J F J A M J J A S O N D	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZA OR CROWNVEICH. APPLY IMPRESSING IS SPRING FOLLOWING FALL PLANTING. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.	
WITH TEMPORARY COVER	10 lbs. 0.2 lb.				WITH TEMPORARY COVER	6 lbs. 0.1 lb.			
WITH OTHER PERENNIALS	6 lbs. 0.1 lb.				WITH OTHER PERENNIALS	6 lbs. 0.1 lb.			
BERMUDA, COMMON (Cynodon dactylon)		P	J F J A M J J A S O N D	PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.	ALONE	50 lbs. 1.1 lb.			
ALONE	10 lbs. 0.2 lb.				ALONE	30 lbs. 0.7 lb.			
WITH OTHER PERENNIALS	6 lbs. 0.1 lb.				WITH OTHER PERENNIALS	6 lbs. 0.1 lb.			

PERMANENT GRASSING

NOT TO SCALE

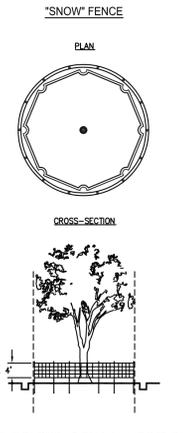
Ds3



- NOTES: TREE PLANTING (2" CAL.)
1. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z601-2004). PLANT ACCORDING TO ANSI A300 PART 6.
 2. DIG THE PLANTING HOLE A MINIMUM OF 2x WIDTH OF ROOTBALL FOR AT LEAST THE FIRST 12 INCHES OF DEPTH. BELOW 12 INCHES, DIG HOLE WIDE ENOUGH TO PERMIT ADJUSTING. DO NOT DIG THE HOLE DEEPER THAN ROOT BALL DEPTH.
 3. SCARIFY THE SUBGRADE AND SIDES OF THE PLANTING HOLE WHEN PLANTING IN CLAY SOILS (MORE THAN 15% CLAY).
 4. LIFT AND SET THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
 5. SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER IF THE SOIL IS PRONE TO SETTLING.
 6. AFTER THE TREE IS SET IN PLACE, REMOVE BURLAP, WIRE AND STRAPS FROM AT LEAST THE UPPER 1/3 OF THE ROOTBALL.
 7. BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP. DO NOT ADD AMENDMENTS TO THE BACKFILL SOIL. AMEND THE SURFACE WITH MULCH.
 8. USE THREE 2" x 2" WOOD STAKES DRIVEN INTO UNDISTURBED SOIL A MINIMUM OF 16 INCHES. SPACE STAKES EQUALLY AROUND THE TREE.
 9. ATTACH 3/4" NYLON WEBBING TO CONNECT THE TREE TO STAKES. ATTACH WEBBING AT 1/3 THE TREE HEIGHT.
 10. APPLY A 2-3" (SETTLED) DEPTH OF PINE STRAW OR BARK MULCH TO THE PLANTING SURFACE. LEAVE A 2" SPACE AROUND THE TRUNK FOR AIR CIRCULATION.
 11. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI A300 SPECIFICATIONS.
 12. REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.

TREE PLANTING DETAIL

TREE PROTECTION



- NOTES:
 1. USE TRENCHER (I.E. DITCH WHICH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
 2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REAR IS NOT TO BE USED FOR STAKES).
 3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
 4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
 5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4" HIGH MINIMUM.