PLANT SYMBOL LEGEND

TREES

EXISTING TREE TO REMAIN

> TRANSPLANTED DEODOR CEDAR

LIVE OAK

RED OAK

TEXAS REDBUD

SHRUBS

INDIAN HAWTHORN

NELLIE R. STEVENS

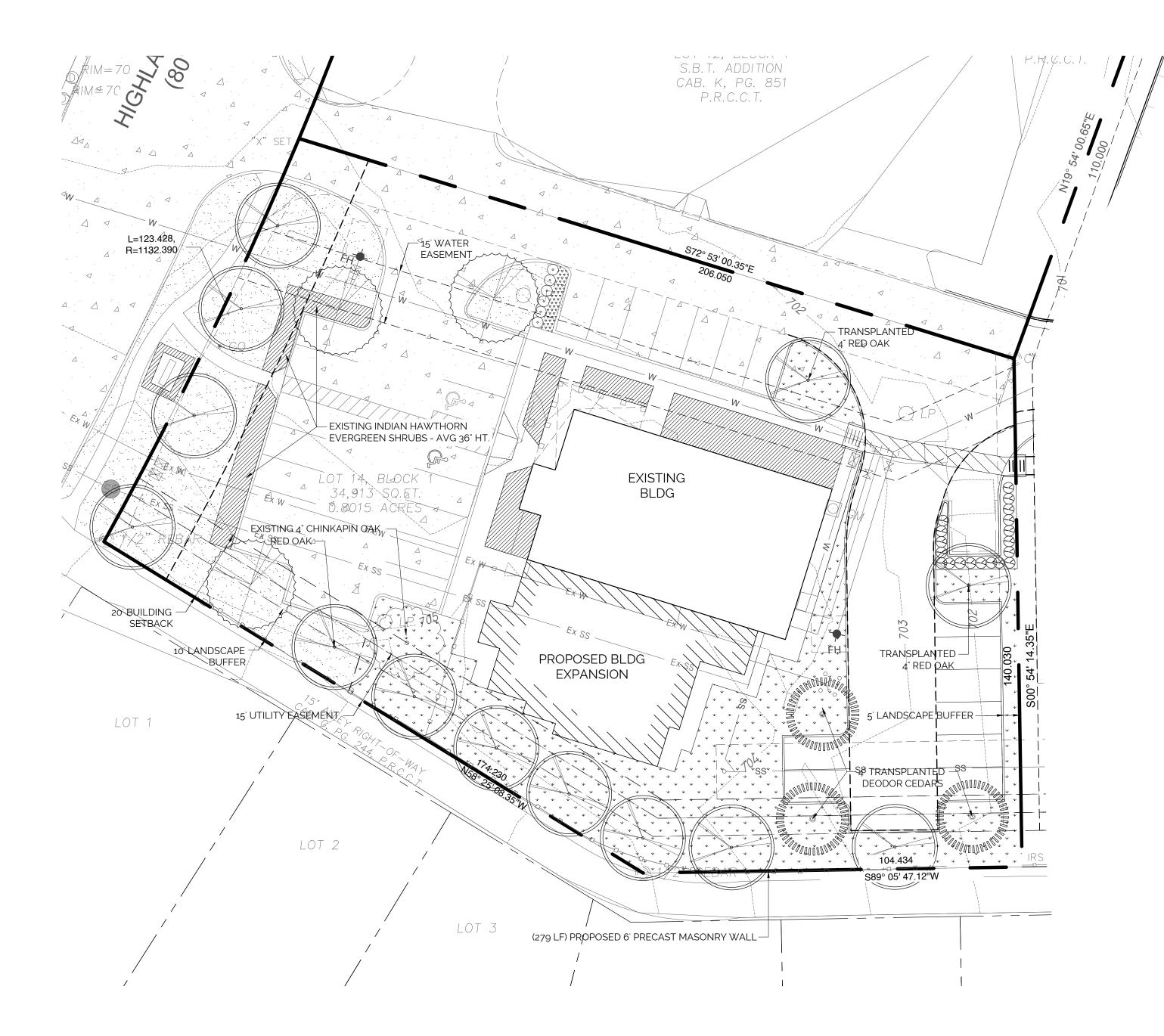
PERENNIALS & GROUNDCOVER

LIRIOPE

EXISTING LANDSCAPE

EXISTING BERMUDA GRASS

BERMUDA GRASS SOD





D E S I G N LANDSCAPE ARCHITECTS 212 S. Elm St. Denton, Texas 76201

ph: 214.783.1715

	LANDSCAPE D	ATA TABLE						
CITY OF McKINNEY LANDSCAPE REQUIREMENTS								
TYPE	REQUIREMENT	AREA / MEASUREMENT	QUANTITY REQUIRED	QUANTITY PROVIDED				
GENERAL LANDSCAPE	15% OF TOTAL LOT AREA SHALL BE LANDSCAPED	34,913 SF	5,237 SF	11,918 SF				
	15% OF THE STREET YARD SHALL BE PERMANENT LANDSCAPE AREA	13,539 SF	2,030 SF	5,095 SF				
	ONE CANOPY TREE PER 40 LF OF STREET FRONTAGE PLANTED IN STREET YARD	HIGHLAND DR = 123 LF	4 TREES	4 TREES				
PARKING LANDSCAPE	ONE TREE IN PARKING AREA FOR EVERY 10 PARKING SPACES	30 SPACES	3 TREES	9 TREES				
	75% OF PARKING LOT STREET FRONTAGE SCREENED FROM VIEW. (BERM/WALL/EVERGREEN SHRUBS - MIN 3' HT.)	110 LF	83 LF	87 LF (79%) INCLUDES EXISTING SHRUBS				
	1 CANOPY TREE PER END ISLAND AND MIN. 50% OF ISLAND TO BE COVERED WITH LIVING PLANT MATERIAL.	9 TERMINUS ISLANDS	9 TREES	9 TREES				
SCREENING	EVERGREEN SHRUBS REQUIRED AROUND DUMPSTER SCREENING WALL	REQUIRED = YES, PROVIDED = YES						
LANDSCAPE BUFFER	10' WIDTH OF LANDSCAPED AREA, WITH 1 CANOPY TREE EVERY 40 LF	278 LF = 7 TOTAL BUFFER CANOPY TREES						

QUANTITY	COMMON NAME	PLANT MAT BOTANICAL NAME	CAL.	HT.	SPREAD		REMARKS
SHADE TR		DO 17 WHO TE TWIME			OI TIETIE	001111	TIENWI II CO
3	DEODAR CEDAR (TANSPLANT)	CEDRUS DEODARA	-	-	-	-	**TRANSPLANT
3	LIVE OAK	QUERCUS VIRGINIANA	4"	13'	8'	B&B	FULL & MATCHED, STRAIGHT TRUNK
11	RED OAK	QUERCUS SHUMARDII	4"	13'	8'	B&B	FULL & MATCHED, STRAIGHT TRUNK
2	RED OAK (TRANSPLANT)	QUERCUS SHUMARDII	4"	-	-	-	**TRANSPLANT
ORNAMEN	TAL TREES						
1	TEXAS REDBUD	CERCIS CANADENSIS VAR. TEXENSIS	2"	8' MIN.	6'-8'	B&B	FULL & MATCHED, STRAIGHT TRUNK
SHRUBS			-		'		
6	INDIAN HAWTHORN 'CLARA'	ABELIA X GRANDIFLORA	-	36" MIN	36" MIN	5 GAL.	36" O.C. TRIANGULAR SPACING, OR AS INDICATED ON PLANS
19	NELLIE R. STEVENS HOLLY	ILEX X NELLIE R. STEVENS	-	42" MIN	36" MIN	7 GAL.	36" O.C. TRIANGULAR SPACING, OR AS INDICATED ON PLANS
PERENNIA	LS & GROUNDCOVER						
55 SF	LIRIOPE	LIRIOPE MUSCARI	-	8""	8"	1 GAL.	15" O.C. TRIANGULAR SPACING,
TURF GRA	SS			•			
6,291 SF	BERMUDA GRASS SOD	CYNODON DACTYLON		HAND-LAID SOD PANELS			
OTHER			'				
252 LF	BED EDGING	STEEL					INSTALL 1" ABOVE ADJACENT GRADE WITH STAKES

* EXISTING LANDSCAPE/SHRUBS CONSIST OF: TEXAS SAGE, INDIAN HAWTHORN, JAPANESE BARBERRY, DWARF YOUPON HOLLY, NANDINA, & LIRIOPE

** EXISTING RED OAK & DEODAR CEDARS TO BE REMOVED AND PLACED IN A TEMPORARY NURSERY ON SITE FOR FUTURE TRANSPLANT.

LANDSCAPE PLAN

NORTH

SCALE: 1" = 20'-0"



4821 Merlot Avenue, Suite 210 Grapevine, Texas 76051 Phone: 817-488-4960

DEVELOPER/OWNER

VICTORY GROUP Victory Real Estate Group



JOB NUMBER:XSC17006_McKinneyOrtho DESIGNED BY:AC DRAWN BY: AC CHECKED BY: JB ISSUE DATE: 3-12-2018 REV: 4th SUBMITTAL

INTERIM REVIEW DOCUMENTS NOT INTENDED FOR BIDDING OR CONSTRUCTION PURPOSES ANDREW COUSINS TX RLA NO.2704

3/12/2018

MCKINNEY ORTHO **EXPANSION**

> MCKINNEY, **TEXAS**

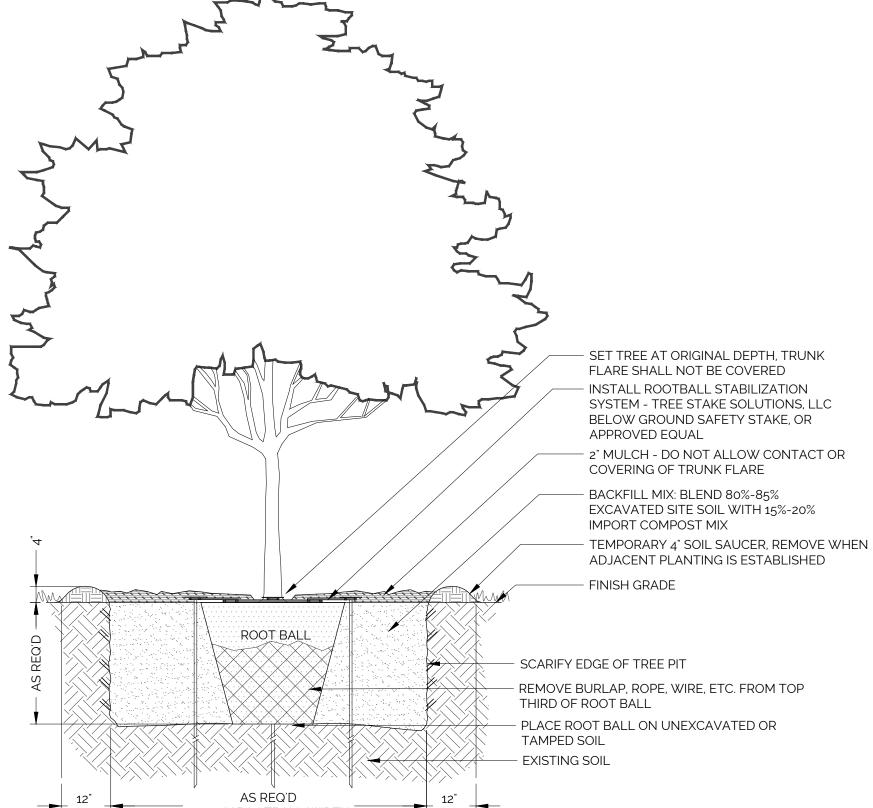
LANDSCAPE PLAN

SHEET:

LP1.0

LANDSCAPE GENERAL NOTES

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THE DRAWINGS.
- 2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO
- 3. LANDSCAPE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES. THE LANDSCAPE CONTRACTOR SHALL PROTECT ALL EXISTING AND INSTALLED LANDSCAPE MATERIALS FROM DAMAGE. DAMAGED PLANT MATERIAL SHALL BE REPLACED WITH SIMILAR VARIETIES AND SIZES IF DAMAGED, DESTROYED, OR LOST.
- 4. WORK ASSOCIATED WITH OTHER APPROPRIATE TRADES AS WELL AS PROPOSED HARDSCAPE SHALL BE INSTALLED PRIOR TO PLANTING INSTALLATION.
- 5. ALL BED AREAS SHALL BE PREPARED BY ADDING A 2" LAYER OF COMPOST OVER THE ENTIRE BED AREA AND TILLING THE BED AREA TO A DEPTH OF 8". AFTER TILLING ALL BED AREAS SHALL BE FURTHER PREPARED BY REMOVING ALL STONES, STICKS
- 6. ALL SHRUB, GROUNDCOVER, PERENNIAL & SEASONAL BEDS SHALL HAVE A 3" THICK SHREDDED HARDWOOD MULCH LAYER, UNLESS OTHERWISE NOTED.FINISHED LEVEL OF MULCH TO SIT 1" BELOW ADJOINING FINISHED HARDSCAPE AND LAWN
- 7. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION, AND MUST BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE IF UNHEALTHY, DAMAGED, DESTROYED, OR OTHERWISE REMOVED. ALL PLANT MATERIAL SHALL BE REASONABLY FREE OF WEEDS AND OTHER NOXIOUS MATERIAL
- 8. PLANTS SHALL BE NURSERY-GROWN AND ADAPTED TO THE LOCAL AREA.
- 9. LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS AT ALL TIMES DURING CONSTRUCTION.
- 10. PLANT SPACING SHOULD BE INSTALLED AS INDICATED ON THE 'PLANT SCHEDULE' UNLESS OTHERWISE NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED IN THE PLANT SCHEDULE REMARKS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SIZES AND QUANTITIES OF PLANT MATERIALS SHOWN.
- 11. REFER TO PLANTING SCHEDULES FOR ALL PLANTING TYPES, SIZES, SPACING AND NOTES SPECIFIC TO EACH PLANT MATERIAL.
- 12. ALL TREES SHALL BE SECURED WITH TREE STAKES PER TREE PLANTING DETAILS THIS SHEET.
- 13. ALL TURF AREAS SHALL BE FINE GRADED PRIOR TO PLANTING, AND ALL STONE AND DEBRIS LARGER THAN 3/4" DIAMETER SHALL BE REMOVED FROM THE SITE.
- 14. ALL BED AREAS ADJACENT TO TURF SHALL BE EDGED WITH A 4" DEEP STEEL EDGING AS SHOWN.
- 15. ALL TREES PLANTED NEAR CURBS SHALL BE PLACED AT LEAST 6' CLEAR FROM THE CURB FACE UNLESS OTHERWISE NOTED. REFERENCE CITY LANDSCAPE NOTES FOR OTHER REQUIREMENTS.
- 16. CONTRACTOR IS RESPONSIBLE FOR KEEPING CONSTRUCTION ACTIVITY WITHIN THE PROJECT LIMITS. ANY DAMAGE TO EXISTING VEGETATION OUTSIDE THE CONSTRUCTION LIMITS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 16. AN AUTOMATIC IRRIGATION SYSTEM CONSISTENT WITH THE CODES AS REQUIRED BY THE CITY OF MCKINNEY SHALL BE PROVIDED TO IRRIGATE ALL TURF AND LANDSCAPE BED AREAS AND SHALL BE OPERATIONAL AT THE TIME OF PLANT MATERIAL INSTALLATION. OVERSPRAY ON STREETS AND SIDEWALKS IS PROHIBITED. ALL WORK ON THE IRRIGATION SYSTEM, INCLUSIVE OF HYDROSTATIC COVERAGE AND OPERATIONAL TESTS SHALL BE COMPLETED PRIOR TO PLANTING INSTALLATION.
- 17. THE PROPOSED IRRIGATION SYSTEM MUST BE COMPLETELY OPERATIONAL BEFORE GRASSING OPERATIONS MAY BEGIN.
- 18. THE CONTRACTOR SHALL VERIFY WATER RESTRICTIONS WITHIN THE CITY OF MCKINNEY AT TIME OF PLANTING. SHOULD WATER RESTRICTIONS NOT ALLOW HYDRO-MULCH, HYDRO-SEEDING OR SPRIGGING (STAGE 3/4) AN APPROVED ALTERNATIVE FOR GRASSING SHALL BE INSTALLED.
- 19. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.







D E S I G N LANDSCAPE ARCHITECTS 212 S. Elm St. Denton, Texas 76201 ph: 214.783.1715

- CENTER OF PLANT MASS

- ON CENTER PLANT SPACING,

- SET TOP OF POT AT FINISH GRADE

- PREPARED SOIL MIX, REF. SPECS.

— HARDWOOD MULCH

- SUB-GRADE

CONTAINER PLANT- SHRUB. PERENNIAL OR ORNAMENTAL

HARDWOOD MULCH LAYER,

DEPTH PER SPECS, OR 3" TYP. 8" PREPARED PLANTING

REMOVE 2" EXISTING SOIL AND REPLACE WITH 2" COMPOST &

MOW CURB, SIDEWALK OR

UNDISTURBED / LOOSE SOIL

TILL TO 8" DEPTH

OTHER HARD EDGE

GROUNDCOVER ROOTS

PER PLANT SCHEDULE

/ ROOT BALL (TYP.)

→ SPACING →

12" FOR #GAL. CONTAINER PLANTS

PLANT SPACING DIAGRAM

PAVEMENT OR CURB EDGE - 6" FOR GROUNDCOVER

REF PLAN SCHEDULE

FOR SPACING

GROUNDCOVER PLANTING

CONTAINER PLANTING



Grapevine, Texas 76051 Phone: 817-488-4960

DEVELOPER/OWNER

VICTORY GROU Victory Real Estate Group



JOB NUMBER:XSC17006_McKinneyOrth DESIGNED BY:

DRAWN BY: CHECKED BY: ISSUE DATE: 3-12-2018 **REV: 4th SUBMITTAL**

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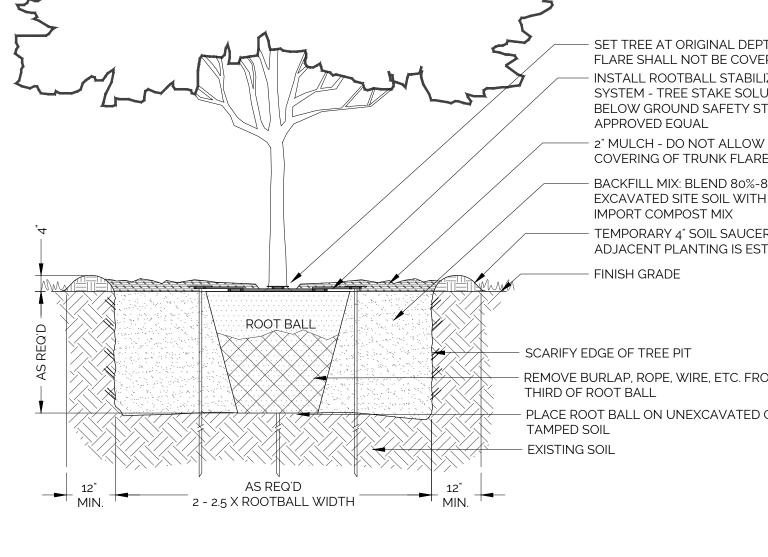
MCKINNEY ORTHO **EXPANSION**

> MCKINNEY, **TEXAS**

LANDSCAPE PLAN

LP2.0

SHEET:







DESIGN

LANDSCAPE ARCHITECTS
212 S. Elm St.
Denton, Texas 76201

ph: 214.783.1715

4821 Merlot Avenue, Suite 210 Grapevine, Texas 76051 Phone: 817-488-4960

DEVELOPER/OWNER





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3/12/2018

MCKINNEY ORTHO EXPANSION

> MCKINNEY, TEXAS

LANDSCAPE

LP2.

SHEET:

PLANTING SPECIFICATIONS

TREE PLANTING

- 1. COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND
- 2. PROVIDE QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY OF THE SCHEDULED TREES THAT COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK".
- 3. TREES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE PLANTING. THE CONTRACTOR SHALL REMOVE REJECTED TREES IMMEDIATELY FROM THE PROJECT SITE AND REPLACE THE REJECTED TREES WITH ACCEPTABLE TREES AT NO COST TO THE OWNER.
- 4. DO NOT PRUNE TREES PRIOR TO DELIVERY UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE. PROVIDE ADEQUATE PROTECTION OF THE ROOT SYSTEMS AND FOLIAGE FROM DRYING WIND AND SUN.
- 5. DO NOT BEND OR BIND TREES IN SUCH A MANNER THAT WOULD DAMAGE THE BARK, BREAK BRANCHES OR DESTROY THE TREES NATURAL SHAPE. PROVIDE PROTECTIVE COVERINGS DURING DELIVERY. ANY TREE IN FULL LEAF WILL BE SPRAYED WITH AN ANTI-DESICCANT PRIOR TO DELIVERY.
- 6. DO NOT REMOVE TREES FROM THEIR CONTAINERS UNTIL THEY ARE READY TO BE PLANTED.
- 7. WHILE WAITING TO BE PLANTED TREES SHALL NOT BE STORED ON PAVEMENT OR ANY SURFACES WHICH REFLECT A LARGE AMOUNT OF HEAT DURING STORAGE.
- 8. ALL TREES SHALL BE HANDLED CAREFULLY SO THAT THE ROOTS ARE ADEQUATELY PROTECTED FROM DRYING OUT AND FROM INJURY. THE BALLS OF BALLED AND BURLAPPED TREES WHICH CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY SHALL BE "HEELED IN" FOR PROTECTION WITH SOIL, MULCH OR OTHER ACCEPTABLE MATERIAL.
- 9. TREE PLANTING SHALL NOT TAKE PLACE BETWEEN THE MONTHS OF JUNE THROUGH AUGUST UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
- 10. FERTILIZER SHALL BE A SLOW RELEASE GRANULATED ORGANIC FERTILIZER. ACCEPTABLE PRODUCTS INCLUDE GARDEN-VILLE SOIL FOOD SELECT CONTAINING A 6-2-2 (N-P-K) RATIO OF NUTRIENTS, SUSTANE CONTAINING A 5-2-4 (N-P-K) RATIO OF NUTRIENTS OR APPROVED EQUAL.
- 11. ROOT STIMULATOR SHALL BE MAXICROP OR GARDEN VILLE BRAND LIQUEFIED SEAWEED OR APPROVED EQUAL.
- 12. MULCH SHALL BE SHREDDED HARDWOOD MULCH FREE OF STONES, CLAY OR OTHER FOREIGN MATERIALS.
- 13. WATER SHALL BE AVAILABLE VIA THE IRRIGATION SYSTEM. WATER REQUIRED IN CONNECTION WITH TREE PLANTING WILL BE FURNISHED AND PAID FOR BY THE OWNER PROVIDED IT IS NOT USED IN A WASTEFUL MANNER. ANY HOSE OR WATER EQUIPMENT NECESSARY FOR TREE WATERING MUST BE SUPPLIED BY THE CONTRACTOR.
- 14. TREES SHALL BE STABILIZED WITH TREE STAKES AS SHOWN ON THE TREE PLANTING DETAIL ON THE DRAWINGS OR APPROVED EQUAL.
- 15. PROVIDE TREES GROWN IN A RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE ONLY HEALTHY STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE AND DEFECTS SUCH AS SUN SCALD, KNOTS, INJURIES, ABRASIONS OR DISFIGUREMENTS. TREE TRUNKS WILL BE CENTERED IN THE ROOT BALL. PRUNING CUTS LARGER THAN THREE-QUARTER (3/4") INCHES WILL BE
- 16. LABEL ALL TREES WITH A SECURELY ATTACHED WATERPROOF TAG BEARING THE BOTANICAL AND COMMON NAME.
- 17. THE OWNER MUST APPROVE ALL TREES PRIOR TO PLANTING.
- 18. PROVIDE HEALTHY, VIGOROUS, WELL ROOTED TREES ESTABLISHED IN THE CONTAINERS IN WHICH THEY ARE SOLD.
- 19. BALLED AND BURLAPPED STOCK IS REQUIRED WHEN THE TREES EXCEED THE MAXIMUM SIZE RECOMMENDATIONS PER ANSI Z60.1 FOR CONTAINER GROWN STOCK.
- 20. ESTABLISHED CONTAINER STOCK IS DEFINED AS A TREE GROWN IN OR TRANSPLANTED AND GROWN IN A CONTAINER FOR A MINIMUM OF SIX (6) MONTHS SO THAT TREE CAN DEVELOP A NEW FIBROUS ROOT SYSTEM AND POSSES A CRITICAL ROOT MASS
- THAT WILL RETAIN ITS SHAPE AND WILL HOLD TOGETHER WHEN THE CONTAINER IS REMOVED.

 21. USE RIGID CONTAINERS WHICH WILL HOLD THE BALL SHAPE AND WILL PROTECT THE ROOT BALL DURING SHIPPING.
- 22. TREES DESIGNATED AS B&B ON THE PLANS SHALL BE BALLED AND BURLAPPED. TREES SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE TREE. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIALS AND BOUND WITH TWINE, CORD OR WIRE MESH. WHERE NECESSARY, TO PREVENT BREAKING OR CRACKING OF THE BALL DURING THE
- DELIVERY AND PLANTING PROCESS, THE BALL MAY BE SECURED TO A PLATFORM.

 23. STAKE INDIVIDUAL TREE LOCATIONS AND SECURE THE OWNER'S REPRESENTATIVES ACCEPTANCE BEFORE START OF TREE
- 24. PRIOR TO PLANTING ERADICATE ALL WEEDS AND PLANT MATERIAL WITH ROUND-UP PER THE MANUFACTURER'S RECOMMENDATIONS.
- 25. EXCAVATE TREE PITS WITH ROUGHENED SIDES OF THE TREE PIT. LEAVE THE SOIL IN THE BOTTOM OF THE TREE PIT UNDISTURBED.
- 26. SAVE EXCAVATED SOIL TO BE USED FOR BACKFILLING THE TREE PIT.

INSTALLATION.

- 27. IF ROCK, UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS ARE ENCOUNTERED WHILE EXCAVATING TREE PITS NOTIFY THE OWNER'S REPRESENTATIVE TO DETERMINE WHETHER THE OBSTRUCTION WILL BE REMOVED OR THE TREE LOCATION WILL BE
- 28. BEFORE BACKFILLING CLEAN THE EXCAVATED SOIL OF ROOTS, PLANTS, STONES, CLAY LUMPS OR OTHER EXTRANEOUS MATERIAL THAT WOULD BE HARMFUL OR TOXIC FOR TREE GROWTH.
- 29. SET TREES ON UNDISTURBED SOIL IN A PLUMB POSITION AND CENTERED IN THE TREE PIT. TREES SHALL BE FACED TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT PLANTS AND STRUCTURES. THE TOP OF THE ROOT BALL SHALL BE ONE AND ONE-HALF (1 ½") TO TWO (2") INCHES ABOVE THE FINISH GRADE. REMOVE BURLAP FROM THE TOP OF THE ROOT BALL BUT DO NOT REMOVE THE SIDES OR BOTTOM. REMOVE ANY WIRE OR TWINE THAT IS SECURING THE ROOT BALL.
- 30. REMOVE AND REPLACE ANY TREES WHERE THE BALL IS BROKEN OR CRACKED DURING PLANTING OPERATIONS.
- 31. AFTER PLANTING APPLY THE SPECIFIED ROOT STIMULATOR AND FERTILIZER AT THE APPLICATION RATES RECOMMENDED BY THE MANUFACTURER.
- 32. IMMEDIATELY AFTER PLANTING INSTALL THE "TREE STAPLES" AS SHOWN ON THE PLANS.
- 33. CREATE A SHALLOW SAUCER OF EXCAVATED SOIL AROUND THE TREE PIT.
- 34. AFTER PLANTING, APPLY A TWO INCH (2") LAYER OF HARDWOOD BARK MULCH PAYING SPECIAL ATTENTION NOT COVER THE TREES ROOT FLARE.
- 35. IF A TREE SETTLES THE TREE SHALL BE REMOVED, RE-SET, RE-STAKED AND THE MULCH REDISTRIBUTED.

SHRUB, AND GROUND COVER PLANTING

- 1. COMPOST: COMPOST SHALL BE A FULLY COMPOSTED COTTON BURR BASED ORGANIC MATERIAL ACIDIFIED WITH SULFUR. THIS MATERIAL SHALL HAVE BEEN COMPOSTED FOR AT LEAST FOUR (4) MONTHS AT TEMPERATURES EXCEEDING ONE HUNDRED FIFTY (150) DEGREES. COMPOST SHALL BE COARSELY SCREENED AND FREE OF FUNGUS, GRASS OR WEEK SEED, DEBRIS OR ANY TOXIC SUBSTANCE. COMPOST SUPPLIERS MUST BE A MEMBER OF THE UNITED STATES COMPOSTING COUNCIL.
- 2. MULCH SHALL BE SHREDDED HARDWOOD MULCH FREE OF STONES, CLAY OR OTHER FOREIGN DEBRIS.
- 3. FERTILIZER SHALL BE A NATURALLY OCCURRING ORGANIC GLAUCONITE WITH AN N-P-K RATION OF 0-2-5.
- 4. USE TEXAS GREENSAND AVAILABLE FROM SOIL BUILDING SYSTEMS, DALLAS, TX, 972.831.8181, OR LIVING EARTH TECHNOLOGIES, INC. DALLAS, TX, 972.869.4332, OR GARDEN VILLE, AUSTIN, TX 888.655.6115 OR AN APPROVED EQUAL.
- 5. WATER SHALL BE AVAILABLE AT THE SITE VIA THE IRRIGATION SYSTEM. WATER REQUIRED IN CONNECTION WITH PLANTING WILL BE FURNISHED BY THE OWNER PROVIDED IT IS NOT USED IN A WASTEFUL MANNER. ANY HOSE OR OTHER WATERING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR.
- 6. THE NAMES AND LOCATIONS OF ALL PLANTS ARE NOTED ON THE DRAWINGS. THE NOMENCLATURE OF ALL PLANT MATERIAL IS PER HORTUS THIRD BY L.H. BAILEY. PLANT MATERIALS NOT CONFORMING TO THIS REFERENCE WILL BE REJECTED.
- 7. ALL PLANT MATERIALS SHALL BE FIRST CLASS REPRESENTATIVES OF THEIR NORMAL SPECIES OR VARIETY UNLESS OTHERWISE SPECIFIED. PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THEIR SPECIES AND SHALL BE HEALTHY, SHAPELY, WELL ROOTED AND VIGOROUS. ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS, PESTS, PLANT DISEASES AND INJURIES. THE CONTAINERS OF ALL PLANTS DELIVERED TO THE SITE SHALL BE FREE FROM WEEDS OR GRASSES WHICH COULD BE CONSIDERED NOXIOUS OR OBJECTIONABLE. ALL PLANT MATERIAL SHALL BE EQUAL TO OR EXCEED THE SIZE REQUIREMENTS SPECIFIED ON THE PLANS. PLANTS SHALL BE MEASURED AFTER PRUNING WITH BRANCHES IN THEIR NORMAL POSITION. THE REQUIREMENT FOR MEASUREMENT, BRANCHING, GRADING AND QUALITY OF PLANTS GENERALLY FOLLOWS THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, IN THE AMERICAN STANDARD FOR NURSERY STOCK.
- 8. THE OWNER MUST APPROVE ALL PLANT MATERIAL PRIOR TO PLANTING.
- 9. THE ROOTBALLS OF PLANTS NOT PLANTED IMMEDIATELY UPON DELIVERY, SHALL BE COVERED WITH MOIST SOIL OR MULCH OR OTHERWISE PROTECTED FROM DRYING WINDS AND THE SUN.
- 10. ALL PLANTS SHALL BE WATERED AS NECESSARY UNTIL PLANTING.
- 11. ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE INCLUDED IN THE DRAWINGS. THE SPECIFIED SIZES SHALL BE THE MINIMUM SIZE ACCEPTABLE FOR EACH PLANT VARIETY.
- 12. ALL PLANTS SHALL BE NURSERY GROWN. NURSERY GROWN PLANTS SHALL BE DEFINED AS PLANTS WHICH ARE HEALTHY, VIGOROUS PLANTS LINED OUT IN ROWS AT A NURSERY AND WHICH ARE ANNUALLY CULTIVATED, SPRAYED, PRUNED AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES.
- 13. PLANTS DESIGNATED AS B&B ON THE PLANS SHALL BE BALLED AND BURLAPPED. PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIALS AND BOUND WITH TWINE, CORD OR WIRE MESH. WHERE NECESSARY, TO PREVENT BREAKING OR CRACKING OF THE BALL DURING THE DELIVERY AND PLANTING PROCESS, THE BALL MAY BE SECURED TO A PLATFORM.
- 14. SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS APPROVED BY THE OWNER. THE CONTRACTOR MUST MAKE EVERY EFFORT TO LOCATE AND ACQUIRE THE SPECIFIED PLANTS IN A TIMELY MANNER.
- 15. ALL PLANTS SHALL BE HANDLED SO THAT ROOTS ARE ADEQUATELY PROTECTED AT ALL TIMES FROM DRYING OUT AND FROM INJURY.
- 16. LOCATION AND SPACING FOR PLANTS AND OUTLINE OF AREAS TO BE PLANTED SHALL BE AS DENOTED BY STEM LOCATION OR BY NOTATIONS ON THE PLANS.
- 17. PRIOR TO BED PREPARATION THE CONTRACTOR SHALL APPLY ROUND-UP HERBICIDE TO ALL BED AREAS. FOLLOW MANUFACTURER'S RECOMMENDATIONS AS TO THE TIMING REQUIREMENTS FOR EFFECTIVE WEED CONTROL.
- 18. PLANTING AREAS SHALL BE DUG AND SOIL FULLY PREPARED, GRADED AND MADE READY TO RECEIVE THE PLANT MATERIAL BEFORE DELIVERY OF PLANT MATERIAL. AFTER PLANTING, ALL BEDS SHALL BE FINISHED GRADED ONE (1") INCH ABOVE THE
- ADJACENT GRADE TO ALLOW FOR SETTLING.

 19. PLANT BEDS SHALL BE EXCAVATED TO A DEPTH OF TWO (2") INCHES TO ACCOMMODATE THREE (3") INCHES OF COMPOST. AFTER THE COMPOST IS SPREAD THE BEDS SHALL BE TILLED TO A DEPTH OF EIGHT (8") INCHES.
- 20. TEXAS GREEN SAND SHALL BE TILLED INTO THE PREPARED SOIL MIX AT A RATE OF EIGHTY (80) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.
- 21. ALL PLANTS SHALL BE PLANTED IN PITS OR BEDS AS SHOWN ON THE PLANS, CENTERED AND SET TO TOUCH SUCH DEPTH THAT THE TOP OF THE ROOT BALL WILL BE ONE (1") TO TWO (2") INCHES ABOVE FINISHED GRADE. ROOT FLARE MUST BE VISIBLE AFTER PLANTING. EACH PLANT SHALL BE PLANTED PLUMB AND FACED TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT PLANTS OR STRUCTURES. TWINE OR WIRE SHALL BE CUT SO THAT THE BURLAP COVERING THE TOP OF THE B&B ROOT BALLS CAN BE PULLED BACK. BURLAP SHALL NOT BE PULLED OUT FROM UNDER ROOT BALLS. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY.
- 22. AFTER FINE GRADING ALL BED AREAS WILL BE COVERED WITH TWO (2") INCHES OF MULCH COMPLETELY COVERING THE ENTIRE BED AREA. ROOT FLARES MUST BE VISIBLE AFTER MULCHING.
- 23. THE CONTRACTOR IS RESPONSIBLE FOR WATERING, WEED CONTROL AND OTHER NECESSARY MAINTENANCE UNTIL FINAL ACCEPTANCE OF ALL WORK.

TURFGRASS PLANTING

- 1. ALL DELIVERY RECEIPTS AND COPIES OF INVOICES FOR MATERIALS USED FOR THIS WORK SHALL BE SUBJECT TO CHECKING BY THE OWNER'S REPRESENTATIVE.
- 2. VARIOUS SAMPLES, CERTIFICATES AND SPECIFICATIONS FOR SEED, FERTILIZER AND OTHER MATERIALS SHALL BE SUBMITTED FOR APPROVAL BY THE OWNER AS REQUIRED BY SUBSEQUENT SECTIONS OF THIS SPECIFICATION.
- 3. BERMUDA GRASS SOD: TURFGRASS SOD SHALL BE "CYNODON DACTYLON" COMMON BERMUDA GRASS. SOD SHALL CONSIST OF STOLONS, LEAF BLADES, RHIZOMES AND ROOTS WITH HEALTHY, VIRILE SYSTEM OF DENSE, THICKLY MATTED ROOTS THROUGHOUT THE SOIL OF THE SOD. THE SOD PAD SHALL BE NOT LESS THAN THREE QUARTER (3/4) INCHES THICK. SOD SHALL BE ALIVE, HEALTHY, VIGOROUS, FREE OF INSECTS, DISEASE, STONES AND UNDESIRABLE FOREIGN MATERIALS AND GRASSES. THE GRASS SHALL HAVE BEEN MOWED PRIOR TO SOD CUTTING SO THAT THE HEIGHT OF THE GRASS SHALL NOT EXCEED TWO (2) INCHES. SOD SHALL NOT BE HARVESTED OR PLANTED WHEN THE MOISTURE CONDITION OF THE SOD IS SO EXCESSIVELY WET OR DRY THAT ITS SURVIVAL WILL BE AFFECTED. ALL SOD SHALL BE HARVESTED, DELIVERED AND PLANTED WITHIN A THIRTY-SIX (36) HOUR PERIOD. SOD SHALL BE PROTECTED FROM EXPOSURE TO WIND, SUN AND FREEZING. IF SOD IS STACKED, IT SHALL BE KEPT MOIST AND SHALL BE STACKED ROOTS-TO-ROOTS AND GRASS-TO-GRASS.
- 4. ALL SOD SHALL BE THE SAME THICKNESS. SOD SECTIONS SHALL BE RECTANGULAR AND MAY VARY IN LENGTH BUT THE WIDTH OF ALL SOD SECTIONS MUST BE EQUAL. BROKEN OR TORN SOD PADS WILL BE UNACCEPTABLE.
- 5. BERMUDA GRASS SEED: TURFGRASS SEED SHALL BE"CYNODON DACTYLON" COMMON BERMUDA GRASS. THE SEED SHALL BE HARVESTED NO MORE THAN ONE (1) YEAR PRIOR TO PLANTING AND SHALL BE FREE OF WEED SEED TO THE LIMITS ALLOWABLE UNDER THE FEDERAL SEED ACT AND APPLICABLE SEED LAWS. THE SEED SHALL NOT BE A MIXTURE. THE SEED SHALL BE HULLED, EXTRA FANCY GRADE, TREATED WITH FUNGICIDE AND MUST HAVE A PURITY THAT WILL PRODUCE, AFTER ALLOWANCES FOR FEDERAL SEED ACT TOLERANCES, A LIVE SEED CONTENT OF NOT LESS THAN 85%. SEED SHALL BE LABELED IN ACCORDANCE WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS.
- 6. PRIOR TO PLANTING, PROVIDE THE OWNER'S REPRESENTATIVE WITH THE STATE CERTIFICATE STATING THE ANALYSIS OF PURITY AND SEED GERMINATION.
- 7. FERTILIZER SHALL BE A COMMERCIAL PRODUCT, UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR APPLICATION WITH APPROVED EQUIPMENT.
- 8. FERTILIZER FOR THE INITIAL PLANTING APPLICATION SHALL HAVE AN N-P-K RATIO OF 4-5-1 (19-26-5).
- 9. FERTILIZER FOR THE POST PLANTING APPLICATION WILL BE A COMPLETE FERTILIZER OF A CHEMICAL BASE CONTAINING BY WEIGHT THE FOLLOWING PERCENTAGES OF NUTRIENTS: 27-3-4 +2% FE (N-P-K) FROM A METHYLENE UREA OR THE NITROGEN EQUIVALENT OF
- 10. ALL MULCH WILL BE MANUFACTURED FROM HARDWOODS AND WILL BE REFINED SPECIFICALLY FOR TURF HYDROMULCH APPLICATIONS. THREE (3) APPROVED MULCH MANUFACTURERS ARE CONWED FIBERS, WEYERHAEUSER AND FILTREXX.
- 11. ALL TURF PLANTING SHALL BE EXECUTED ACROSS THE SLOPE PARALLEL TO THE FINISH GRADE CONTOURS.
- 12. SOD AREAS NOT ESTABLISHED BY SEPTEMBER 15 SHALL BE PLANTED WITH BERMUDA SOD THAT HAS BEEN OVER SEEDED RYE GRASS AT THE TURF FARM PRIOR TO DELIVERY TO THE SITE. THE CONTRACTOR WILL STILL BE RESPONSIBLE FOR PRODUCING AN ACCEPTABLE COVERAGE OF BERMUDA GRASS AS SPECIFIED.
- 13. GRASS AND SEED PLANTING CAN ONLY PROCEED UPON APPROVAL OF THE FINE GRADING BY THE OWNER'S REPRESENTATIVE.
- 14. SOIL SHALL BE TILLED TO LOOSEN THE SOIL, DESTROY ANY EXISTING VEGETATION AND TO PREPARE AN ACCEPTABLE PLANTING BED. ALL TURF AREAS SHALL BE TILLED TO A DEPTH OF FIVE (§) INCHES.
- 15. SOIL SHALL BE CLEANED OF ALL DEBRIS, BUILDING MATERIALS, RUBBISH, WEEDS AND STONES LARGER THAN THREE- QUARTER (3/4) INCHES IN DIAMETER. ALL COLLECTED MATERIALS SHALL BE REMOVED OFF-SITE.
- 16. THE INITIAL PLANTING FERTILIZER APPLICATION SHALL BE APPLIED AT A RATE OF NINE (9) POUNDS PER ONE THOUSAND (1000) SQUARE
- FEET OR FOUR HUNDRED (400) POUNDS PER ACRE.

 17. FOR SEED AREAS THE INITIAL FERTILIZER APPLICATION SHALL BE APPLIED AFTER SOIL PREPARATION OPERATIONS ARE COMPLETE BUT
- NOT MORE THAN TWO (2) DAYS PRIOR TO PLANTING.

 18. FERTILIZER SHALL BE APPLIED OVER SODDED AREAS AFTER PLANTING, BUT NOT MORE THAN TWO (2) DAYS LATER.
- 19. THE POST PLANTING FERTILIZER APPLICATION SHALL BE APPLIED THIRTY (30) DAYS AFTER PLANTING AND SHALL BE APPLIED AT A RATE OF ONE (1) POUND OF NITROGEN PER ONE THOUSAND (1000) SQUARE FEET OR FORTY FOUR (44) POUNDS PER ACRE.
- 20. PRIOR TO LAYING THE SOD, THE PLANTING BED SHALL BE RAKED SMOOTH AND MOISTENED TO A DEPTH OF FOUR (2) INCHES, BUT NOT TO THE EXTENT OF CAUSING PUDDLING.
- 21. SOD SHALL BE LAID SMOOTHLY AND BUTTED END TO END WITH STAGGERED JOINTS.
- 22. THE SOD SHALL BE PRESSED FIRMLY INTO CONTACT WITH THE SUBGRADE BY ROLLING IN ORDER TO ELIMINATE ALL AIR POCKETS, TO PROVIDE A TRUE AND EVEN SURFACE AND TO ENSURE ROOTING WITHOUT DISPLACEMENT OF THE SOD OR DEFORMATION OF THE SURFACES OF THE SODDED AREA.
- 23. FOLLOWING ROLLING, FINE SCREENED SOIL OF GOOD QUALITY SHALL BE USED TO FILL ANY CRACKS BETWEEN SOD SECTIONS. EXCESS SOIL SHALL BE WORKED INTO THE GRASS WITH SUITABLE EQUIPMENT AND SHALL BE WELL WATERED. THE TEXTURE OF THE FILL SOIL SHALL BE SUCH THAT IT WILL NOT SMOTHER THE GRASS.
- 24. WITHIN TWO (2) DAYS OF SOIL PREPARATION AND FERTILIZATION GRASS AND NATIVE SEED MIX SHALL BE DRILL SEEDED WITH A BRILLION SEEDER-CULTIPACKER AT THE FOLLOWING RATES
- 25. BERMUDA GRASS AT A RATE OF THREE (3) POUNDS PER ONE THOUSAND (1000) SQUARE FEET / ONE HUNDRED THIRTY (130) POUNDS PER ACRE.
- 26. RYE GRASS AT A RATE OF EIGHT (8) POUNDS PER ONE THOUSAND (1000) SQUARE FEET / THREEHUNDRED AND FIFTY (350) POUNDS PER ACRE.
- 27. IMMEDIATELY FOLLOWING SEEDING OPERATIONS ALL SEEDED AREAS AREA TO BE CAPPED WITH WOOD FIBER MULCH USING CONVENTIONAL HYDRO-MULCH EQUIPMENT. THE HYDRO MULCH CAP SHALL BE APPLIED AT A RATE OF FORTY-SIX (46) POUNDS PER ONE THOUSAND (1000) SQUARE FEET / TWO THOUSAND (2000) PONDS PER ACRE AND WATER AT A RATE OF TWENTY THREE (23) GALLONS PER ONE THOUSAND (1000) SQUARE FEET / ONE THOUSAND (1000) GALLONS PER ACRE.
- 28. NO HEAVY EQUIPMENT SHALL BE MOVED OVER THE PLANTED TURF/SEED AREAS. ANY AREAS DISTURBED PRIOR TO TURFGRASS ACCEPTANCE SHALL BE TILLED, REGRADED, LEVELED AND REPLANTED.
 29. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL IRRIGATION EQUIPMENT DURING GRASSING
- OPERATIONS.

 30. THE PROPOSED IRRIGATION SYSTEM MUST BE COMPLETELY OPERATIONAL BEFORE GRASSING OPERATIONS MAY BEGIN. AFTER PLANTING, ANY BREAKDOWNS OR MALFUNCTIONS OF THE IRRIGATION SYSTEM MUST BE IMMEDIATELY REPAIRED BY THE
- CONTRACTOR. OTHERWISE, THE COST OF REPLACING LOST TURF DUE TO THE CONTRACTOR'S FAILURE TO PROMPTLY REPAIR THE IRRIGATION SYSTEM WILL BE BORNE BY THE CONTRACTOR.

 31. AREAS NOT COVERED BY THE PROPOSED IRRIGATION SYSTEM SHALL BE WATERED WITH A TEMPORARY IRRIGATION SYSTEM. TEMPORARY IRRIGATION MUST BE APPROVED BY THE OWNER PRIOR TO INSTALLATION. ONCE THE NON-IRRIGATED VEGETATION HAS

ACHIEVED AN ACCEPTABLE STAND OF GRASS THE TEMPORARY IRRIGATION SYSTEM MUST BE REMOVED.

32. APPLY AT LEAST ONE-HALF (1/2") INCH OF WATER OVER THE ENTIRE PLANTED AREA EVERY THREE (3) DAYS UNTIL GRASS/NATIVE GRASS IS ESTABLISHED. CONTRACTOR SHALL WATER THOROUGHLY AND INFREQUENTLY ONCE GRASS/NATIVE GRASS IS ESTABLISHED TO ENCOURAGE DEEP ROOT GROWTH. WATER WILL BE PAID FOR BY THE OWNER AS LONG AS IT IS NOT USED IN A WASTEFUL MANNER.