



Florida Tower Partners

FL1656 - DEBARY 180' FLUSH MOUNTED MONOPOLE TREE PRESERVATION / REMOVAL PLANS



Florida Tower Partners

1001 3rd AVENUE WEST
SUITE 420
BRADENTON, FL 34205
TEL: (941) 757-5010

PLANS PREPARED BY:

Kimley»Horn

655 NORTH FRANKLIN STREET, SUITE 150
TAMPA, FL 33602
PHONE (813) 620-1460
WWW.KIMLEY-HORN.COM

REV: DATE: DESCRIPTION: BY:

REV	DATE	DESCRIPTION	BY
1	06/29/15	REVISED PER COMMENTS	MAM
0	06/26/15	ISSUED FOR REVIEW	MAM

DRAWN BY:	CHECKED BY:
MAM	AWD

KHA PROJECT NUMBER:

ENGINEER:



PROJECT INFORMATION:

DEBARY
FL1656

WEST HIGHBANKS ROAD
DEBARY, FL 32713

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T-1

SITE INFORMATION

SITE NAME: DEBARY
SITE NUMBER: FL1656
SITE ADDRESS: WEST HIGHBANKS ROAD
DEBARY, FL 32713
PROPERTY OWNER: COMMUNITY UNITED METHODIST
CHURCH OF DEBARY, INC.
APPLICANT: FLORIDA TOWER PARTNERS, LLC
PARCEL NUMBER: 31-18-30-00-0012
ALT. KEY: 6211621
ACREAGE OF PARENT PARCEL: 18.05 ACRES
ACREAGE OF PROPOSED LEASE AREA: 0.13 ACRES (5,850 SQ. FT)
PARCEL'S ZONING DISTRICT: A-2 (RURAL AGRICULTURE
DISTRICT)
PARCEL'S FUTURE LAND USE: A/R (AGRICULTURE / RURAL)
SITE TYPE: RAWLAND
COUNTY: VOLUSIA
JURISDICTION: CITY OF DEBARY
SITE COORDINATES: N28° 53' 20.99" (LAT)
W81° 20' 59.57" (LON)
STRUCTURE TYPE: FLUSH MOUNTED MONOPOLE
STRUCTURE HEIGHT: 180' AGL

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION;
THEREFORE, THERE IS NO HANDICAP ACCESS REQUIRED.

THE PROPOSED FACILITY IS NOT INTENDED FOR PERMANENT
EMPLOYEE OCCUPANCY; THEREFORE, ADDITIONAL SITE PARKING IS
NOT REQUIRED.

OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND
INSPECTION BY TECHNICIANS APPROXIMATELY ONCE A MONTH.

DOES NOT REQUIRE POTABLE WATER, SEPTIC TANKS OR SANITARY
SERVICE.

NO EXISTING FIRE HYDRANTS OR WATER LINES ARE IN THE VICINITY
OF THE PROPOSED TOWER.

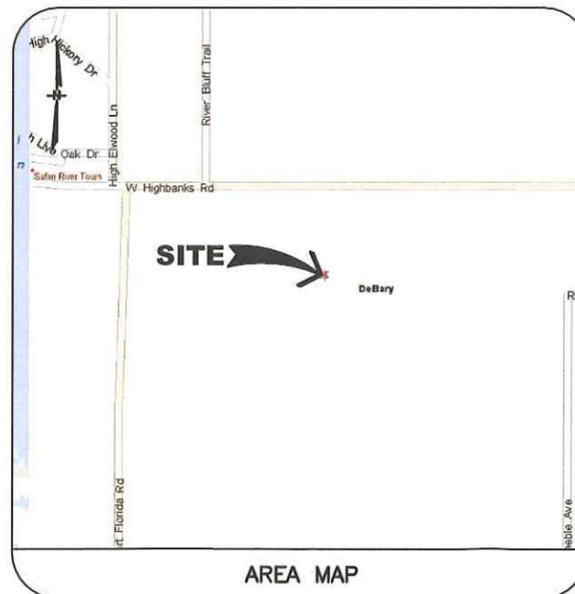
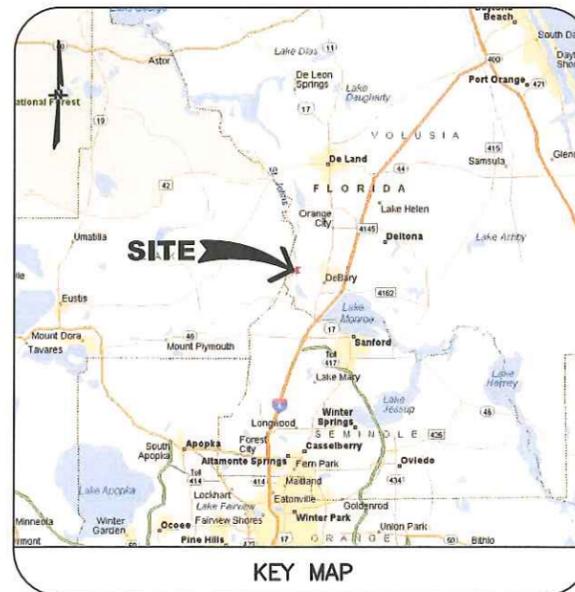
PROJECT SCOPE OF WORK:

THIS PROJECT CONSISTS OF A 180' FLUSH MOUNTED MONOPOLE WITH
FOUNDATION, FENCING, LANDSCAPING, AND FUTURE GROUND WORK.

DIRECTIONS:

DEPART FROM CITY OF DEBARY PLANNING AND ZONING DEPARTMENT
OFFICE IN DEBARY, FL AND HEAD TOWARD LAKE DRIVE. PROCEED ±132
FT. AND TURN RIGHT ONTO US-17 / US-92 / S CHARLES RICHARD
BEALL BLVD. PROCEED ±0.5 MI AND TURN LEFT ONTO W. HIGHBANKS RD.
PROCEED ±2.6 MI AND ARRIVE AT DESTINATION ON THE LEFT.

THE CONTRACTOR MUST VERIFY ALL FIELD MEASUREMENTS AND
CONDITIONS PRIOR TO BID AND TO COMMENCEMENT OF CONSTRUCTION.



SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
T-1	TITLE SHEET
TP-1	OVERALL SITE PLAN
TP-2	EXISTING LANDSCAPE PLAN
TP-3	REPLACEMENT TREE LOCATION PLAN
TP-4	TREE MITIGATION NOTES
TP-5	TREE MITIGATION NOTES

BUILDING CODES AND STANDARDS

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE
WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE
LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE
CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

FLORIDA BUILDING CODE: FBC 2014, 5th EDITION
 BUILDING/DWELLING CODE: FBC 2014, 5th EDITION
 STRUCTURAL CODE: FBC 2014, 5th EDITION
 PLUMBING CODE: FBC 2014, 5th EDITION
 MECHANICAL CODE: FBC 2014, 5th EDITION
 ELECTRIC CODE: NFPA 70
 FIRE/LIFE SAFETY CODE: FLORIDA FIRE PREVENTION CODE
 DESIGN WIND SPEED: 134 MPH
 RISK CATEGORY: II
 EXPOSURE CATEGORY: C

RISK CATEGORY DESIGN WIND SPEEDS ARE BASED ON ASCE 7-10 CRITERIA FOR
A 3-SECOND GUST. REFER TO STRUCTURAL ANALYSIS IN THE EVENT A CONFLICT
ARISES BETWEEN STANDARD REQUIREMENTS AND LISTED CODES, THE MORE
RESTRICTIVE REQUIREMENT WILL TAKE PRECEDENCE.



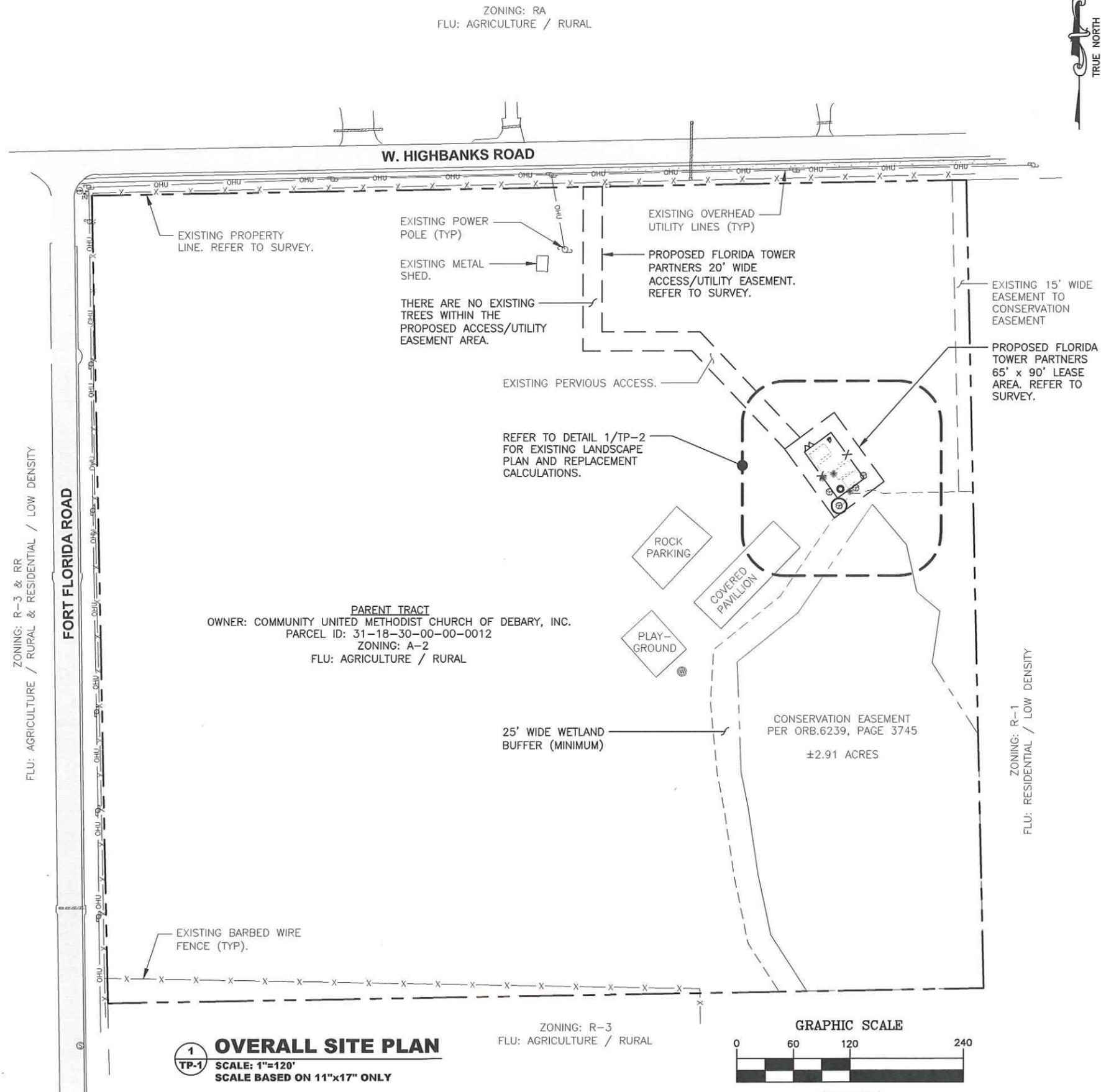
**KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG**

It's fast. It's free. It's the law.

www.cbyd.com



2 AERIAL PHOTO
 TP-1 SCALE: N.T.S.



1 OVERALL SITE PLAN
 TP-1 SCALE: 1"=120'
 SCALE BASED ON 11"x17" ONLY

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KHA PROJECT NUMBER: 14094077

ENGINEER SEAL:

NATHANIEL ROBERT LINDEN, PE
 FL PROFESSIONAL ENGINEER LIC. # 72985
 FL CERTIFICATE OF AUTHORIZATION # 00006696

PROJECT INFORMATION:

DEBARY
 FL 1656

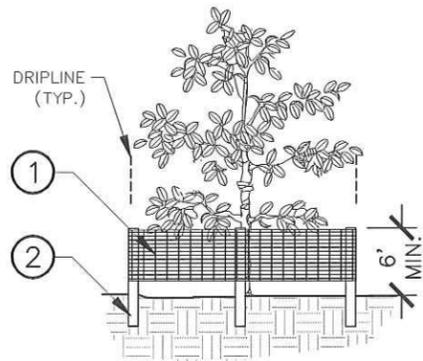
WEST HIGHBANKS ROAD
 DEBARY, FL 32713

SHEET TITLE:
OVERALL SITE PLAN

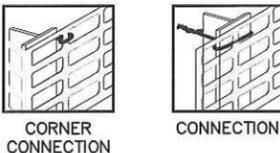
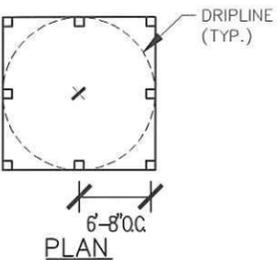
SHEET NUMBER:
TP-1

TREE MITIGATION TABLE				
TREE NO.	SPECIES	DBH	STATUS	CROSS SECTIONAL AREA (SQ. IN.)
1	PINE	6", 6"	REMOVE	56.52"
2	PINE	10"	REMOVE	78.5"
3	OAK	6", 6", 6"	REMOVE	84.78"
4	OAK	8"	REMAIN	N/A
5	PINE	8"	REMOVE	50.24"
6	OAK	4", 4", 4", 4"	REMOVE	50.24"
7	OAK	6", 6", 6", 6"	REMOVE	113.04"
TOTAL INCHES REMOVED				433.32"
REPLACEMENT INCHES REQUIRED (15%)				64.998"
# OF 3" CALIPER REPLACEMENT TREES REQUIRED				22
REPLACEMENT INCHES PROVIDED (22 TREES @ 3" EACH)				66"
REFER TO SHEET TP-3 FOR REPLACEMENT TREE PLANTING LOCATIONS.				

AREA TREE PROTECTION REQUIREMENTS	
DEVELOPED AREA (COMPOUND + ACCESS DRIVE)	±7,400 SQ. FT.
AREA TREE PROTECTION REQUIRED (15% OF DEVELOPED AREA)	1,110 SQ. FT.
AREA TREE PROTECTION PROVIDED (LANDSCAPE BUFFER)	±3,540 SQ. FT.



ELEVATION



- 6 FOOT HIGH "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUIVALENT. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
- 8' TALL METAL "T" POSTS OR 2" x 2" x 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

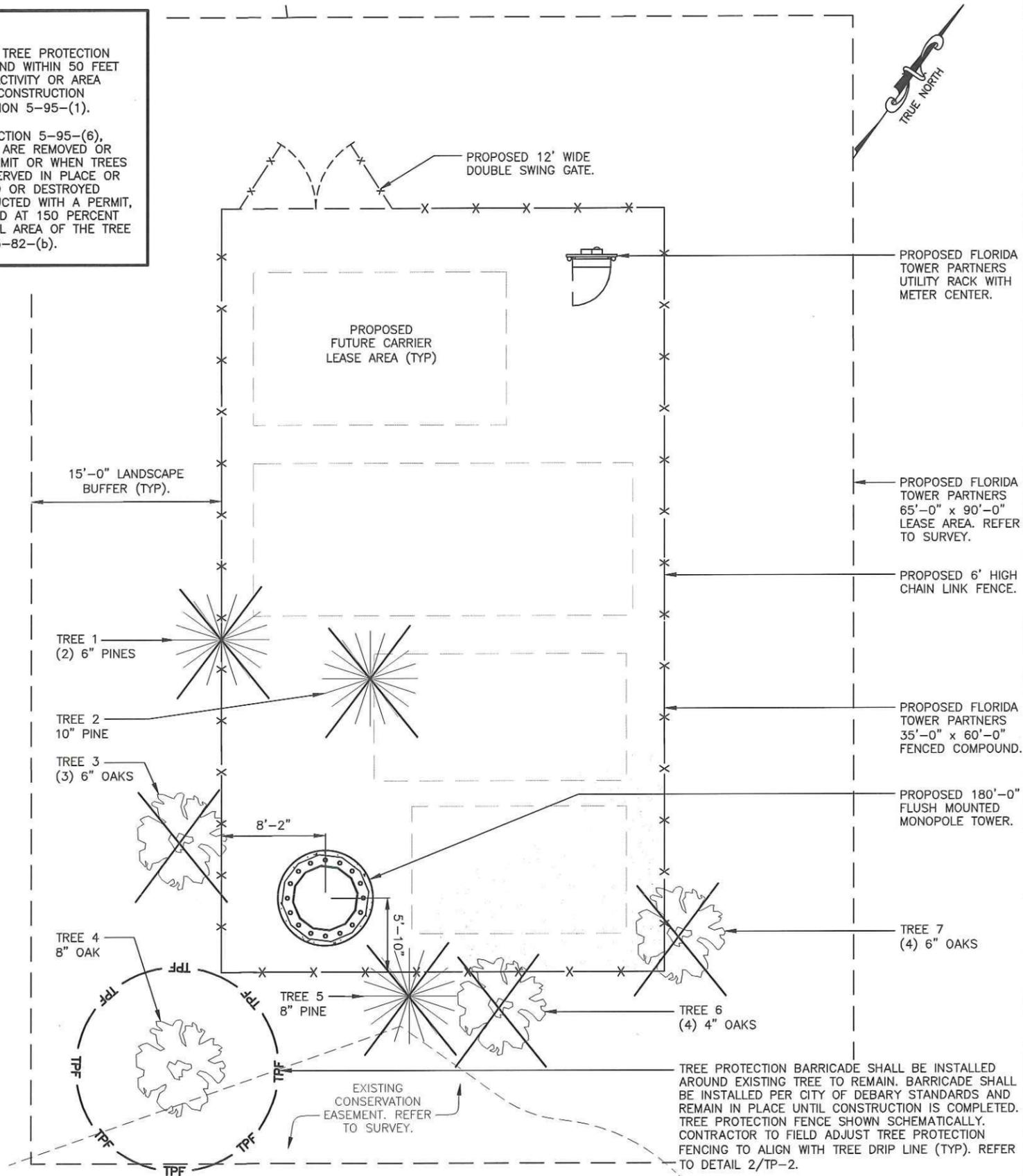
INSTALLATION NOTES:

- POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.
- POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 6' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.
- SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).
- SECURE FENCING TO POST WITH NYLON CABLE TIES. WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.
- CONTRACTOR SHALL CONTACT THE CITY OF DEBARY'S FORESTER/LANDSCAPING INSPECTOR FOR A TREE BARRICADE INSPECTION PRIOR TO COMMENCEMENT OF CONSTRUCTION PER SECTION 5-95-(1).

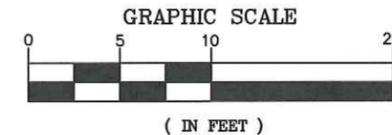
NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

NOTES:

- CONTRACTOR TO INSTALL TREE PROTECTION FENCING AS PER PLAN AND WITHIN 50 FEET OF ANY CONSTRUCTION ACTIVITY OR AREA USED FOR STORAGE OF CONSTRUCTION MATERIALS, AS PER SECTION 5-95-(1).
- IN ACCORDANCE WITH SECTION 5-95-(6), WHEN REGULATED TREES ARE REMOVED OR DAMAGED WITHOUT A PERMIT OR WHEN TREES THAT WERE TO BE PRESERVED IN PLACE OR RELOCATED ARE DAMAGED OR DESTROYED DURING ACTIVITIES CONDUCTED WITH A PERMIT, THEY SHALL BE REPLACED AT 150 PERCENT OF THE CROSS SECTIONAL AREA OF THE TREE REMOVED PER SECTION 5-82-(b).



1 EXISTING LANDSCAPE PLAN
SCALE: 1"=10'
SCALE BASED ON 11"x17" ONLY



2 TREE PROTECTION FENCING
SCALE: N.T.S.

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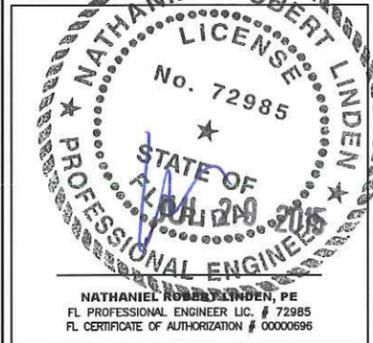
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KHA PROJECT NUMBER: 10091017



PROJECT INFORMATION:

DEBARY
FL1656
WEST Highbanks Road
DEBARY, FL 32713

EXISTING LANDSCAPE PLAN

SHEET NUMBER:
TP-2

REPLACEMENT PLANT MATERIAL LIST

SYMBOL	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS
	22 EA	SHUMARD OAK	QUERCUS SHUMARDII	MIN. 3" CAL, 6' HEIGHT, FL #1

NOTES:

- IF EXISTING TREES REMAIN, LOCATION/SPACING OF NEW REPLACEMENT TREES MAY BE MODIFIED TO AVOID CONFLICT.



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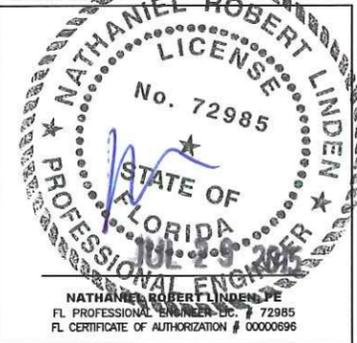
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KHA PROJECT NUMBER: 148991017

ENGINEER SEAL

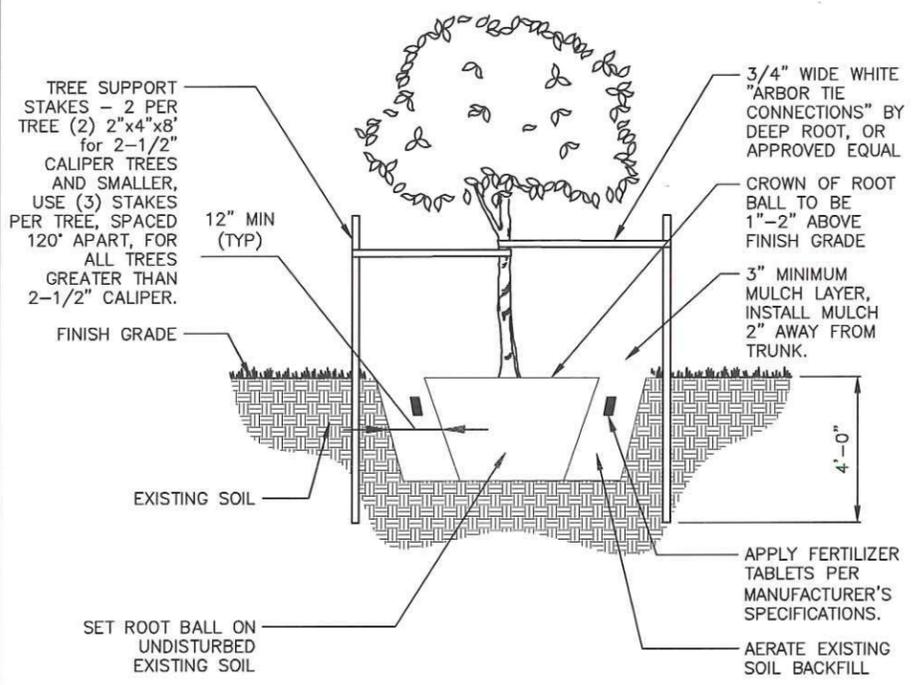


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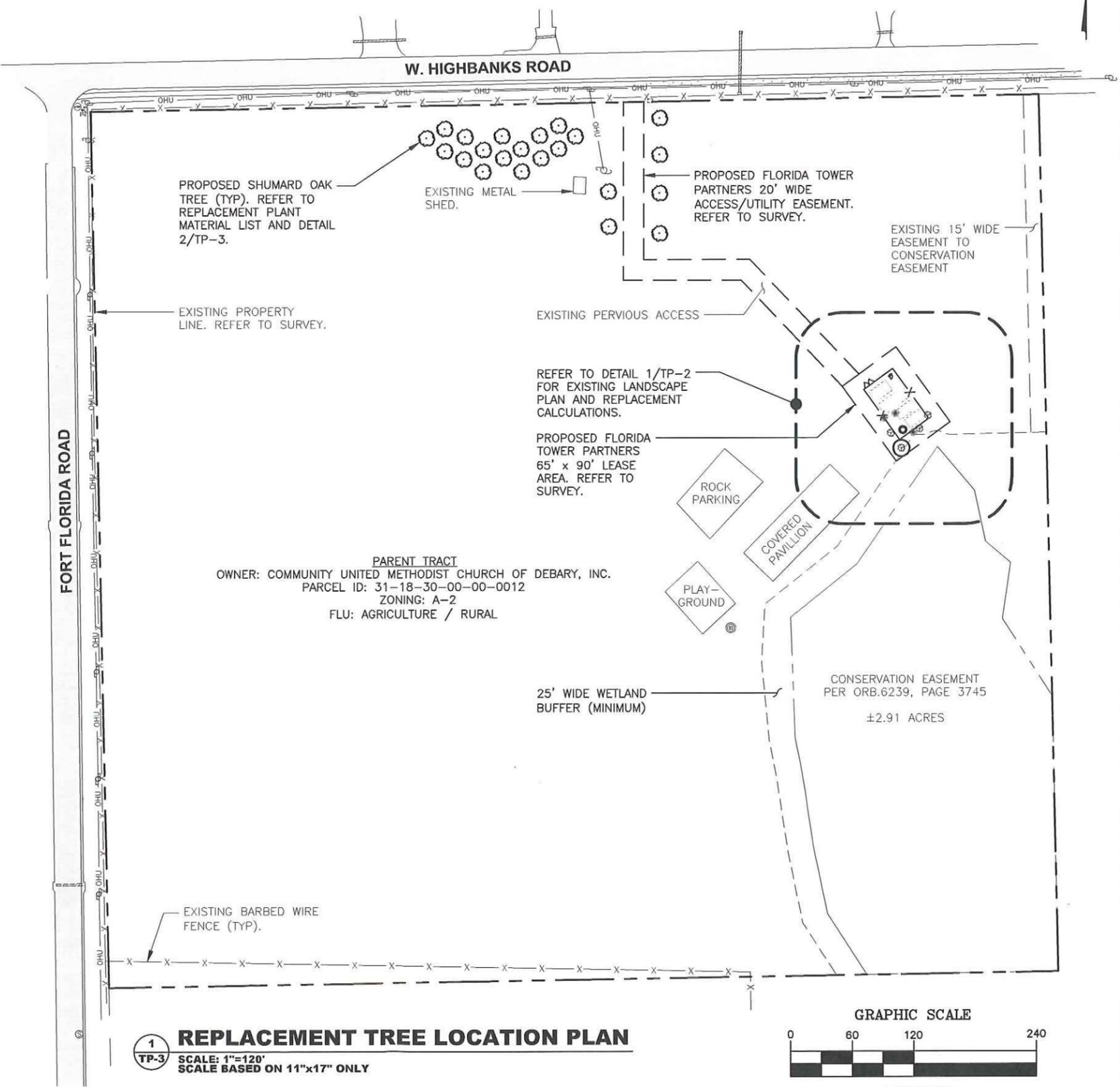
SHEET TITLE:
REPLACEMENT TREE LOCATION PLAN

SHEET NUMBER:
 TP-3

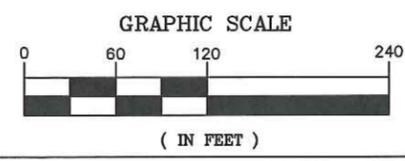


- NOTES:
- 4" SAUCER RIM WITH 3" MULCH ON TOP (WHEN NECESSARY). SAUCER SHALL BE UNIFORM AND NEATLY CONSTRUCTED.
 - CONTRACTOR SHALL REMOVE STAKING AND GUYING MATERIALS AFTER ONE GROWING SEASON.

2 TREE PLANTING DETAIL
 TP-3 SCALE: N.T.S.



1 REPLACEMENT TREE LOCATION PLAN
 TP-3 SCALE: 1"=120'
 SCALE BASED ON 11"x17" ONLY



TREE MITIGATION SPECIFICATIONS

A. GENERAL:

1. CONTRACTOR SHALL ADHERE TO ALL TREE PROTECTION REQUIREMENTS LISTED IN THESE SPECIFICATIONS AND/OR THOSE LISTED IN THE CITY OR COUNTY ZONING CODE, TREE PROTECTION (LATEST EDITION). WHICHEVER IS MORE STRINGENT SHALL APPLY.
2. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION PROCEDURES WITH THE PROJECT ARBORIST/FORESTER PRIOR TO BEGINNING WORK.
3. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATION MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE.
4. NO SIGNS, BUILDING PERMITS, WIRES OR OTHER ATTACHMENTS OF ANY KIND SHALL BE ATTACHED TO ANY TREE OR PALM. GUY WIRES DESIGNED TO PROTECT TREES ARE EXCLUDED FROM THIS PROHIBITION.
5. EXISTING TREE LOCATIONS AND SIZES ARE BASED ON A SURVEY PROVIDED BY THE OWNER SELECTED SURVEYOR.
6. CONTRACTOR SHALL COORDINATE TREE REMOVAL WITH PERMITTING AGENCY AND PROJECT ARBORIST PRIOR TO CONSTRUCTION. NO PERSON MAY REMOVE OR CAUSE TO BE REMOVED ANY PROTECTED TREE OR PALM WITHOUT FIRST HAVING PROCURED A PERMIT AS PROVIDED BY THE APPROPRIATE PERMITTING AGENCY.
7. CONTRACTOR IS RESPONSIBLE FOR POSSESSING ALL REQUIRED APPLICATOR LICENSES, BUSINESS REGISTRATIONS AND INSURANCE, PESTICIDE LABELS, AND MATERIAL DATA SAFETY SHEETS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR HAVING ALL SPILL CONTAINMENT MATERIALS AND REQUIRED PERSONAL PROTECTIVE EQUIPMENT FOR PESTICIDE APPLICATIONS AND ACCIDENTAL SPILLS ON SITE AT ALL TIMES. THE OWNER RESERVES THE RIGHT TO INSPECT EACH APPLICATOR AND HAVE THESE MATERIALS PRESENTED BEFORE AND DURING ANY PESTICIDE TREATMENT.
8. WHERE TRAFFIC AREAS ARE PROPOSED WITHIN THE DRIP LINE OF PROTECTED TREES AND LESS THAN FOUR (4) INCHES OF GRADE CHANGE ARE PROPOSED, PERMEABLE SURFACES THAT ALLOW AIR AND WATER INTO THE SOIL SHOULD BE USED IN LIEU OF ASPHALT OR OTHER SUCH IMPERVIOUS SURFACES.
9. TREE WELLS OF AN APPROVED DESIGN SHALL BE CONSTRUCTED AROUND ALL TREES TO BE PRESERVED WHEN MORE THAN FOUR (4) INCHES OF FILL IS TO BE DEPOSITED WITHIN THE DRIP LINE AREA OF THOSE TREES. COORDINATE WITH PROJECT ARBORIST.
10. THE SEQUENCE OF TREE MITIGATION AND PRESERVATION MEASURES IS IMPERATIVE TO THE HEALTH AND SURVIVABILITY OF THE SUBJECT TREES AND SHALL BE COORDINATED WITH THE OWNER SELECTED PROJECT ARBORIST. THE DESIRED SEQUENCE IS OUTLINED BELOW:
 - a. TREE PROTECTION FENCING.
 - b. ROOT PRUNING AND ROOT BARRIERS.
 - c. CLEARING.
 - d. TREE CANOPY PRUNING.
 - e. FERTILIZATION.
 - f. INSECTICIDE.
 - g. IRRIGATION.

B. TREE PROTECTION FENCING:

1. PRIOR TO THE ERECTION OF ANY TREE PROTECTION FENCING, ALL FOREIGN SURFACE MATERIAL, TRASH OR DEBRIS SHALL BE REMOVED FROM THE AREA TO BE ENCLOSED BY THE FENCING. AFTER ERECTION OF THE FENCING NO SUCH MATERIAL OR LITTER SHALL BE PERMITTED TO REMAIN WITHIN THE PROTECTED AREA.
2. TREE PROTECTION FENCING SHALL BE PLACED AROUND ALL PROTECTED TREES TO CREATE A PROTECTIVE ROOT ZONE AND SHALL REMAIN IN PLACE UNTIL SITE CLEARING, LAND ALTERATION, AND CONSTRUCTION ACTIVITIES ARE COMPLETE.
3. NATIVE GROUND COVER AND UNDERSTORY VEGETATION EXISTING WITHIN THE PROTECTED AREA SHALL REMAIN THROUGHOUT CONSTRUCTION. OTHER DESIGNATED VEGETATION AND INVASIVE PLANT SPECIES SHALL BE REMOVED ONLY BY MANUAL LABOR UTILIZING HAND TOOLS, OR BY OTHER METHODS APPROVED BY THE PROJECT ARBORIST.
4. TREE PROTECTION FENCING TYPES AND LOCATIONS SHALL BE ERECTED AS SHOWN ON THE TREE MITIGATION PLANS AND DETAILS, OR AS REQUESTED BY LOCAL AGENCY.
5. FINAL LOCATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE PROJECT ARBORIST/FORESTER.
6. NO MATERIALS, EQUIPMENT, SPOIL, WASTE OR WASHOUT WATER MAY BE DEPOSITED, STORED, OR PARKED WITHIN 20 FEET OF THE TREE PROTECTION ZONE.

7. EROSION CONTROL DEVICES SUCH AS SILT FENCING, DEBRIS BASINS, AND WATER DIVERSION STRUCTURES SHALL BE INSTALLED TO PREVENT SILTATION AND/OR EROSION WITHIN THE TREE PROTECTION ZONE.
8. CONSTRUCTION ACTIVITY SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
9. DO NOT INSTALL CONDUIT, DRAIN OR IRRIGATION LINES, OR ANY UTILITY LINE WITHIN THE TREE PROTECTION ZONE WITHOUT THE APPROVAL OF THE PROJECT ARBORIST. IF LINES MUST TRAVERSE THE PROTECTION AREA, THEY SHALL BE TUNNELED OR BORED UNDER THE TREE.
10. CONTRACTOR'S ACCESS TO FENCED TREE PROTECTION AREAS WILL BE PERMITTED ONLY WITH APPROVAL OF THE PROJECT ARBORIST.
11. EXCAVATION OR GRADING REQUIRED WITHIN THE PROTECTED AREA SHALL BE LIMITED TO THREE (3) INCHES OF CUT OR FILL. COORDINATE WITH PROJECT ARBORIST.
12. STRUCTURES AND UNDERGROUND FEATURES TO BE REMOVED WITHIN THE TREE PROTECTION ZONE SHALL BE COORDINATED WITH THE PROJECT ARBORIST.
13. TREE PROTECTION FENCING AROUND TREES TO BE RELOCATED SHALL BE ERECTED UNTIL THE TREE IS READY TO BE RELOCATED AND NEW FENCING SHALL BE ERECTED AT THE TREES NEW LOCATION AND WILL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE.
14. IF ANY DAMAGE TO TREE PROTECTION FENCING SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE REPAIRS.
15. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER THE PROTECTED AREA OF TREES TO BE PRESERVED, A ROAD BED OF SIX (6) INCHES OF MULCH OR GRAVEL SHALL BE CREATED TO PROTECT THE SOIL. THE ROAD BED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A SIX (6) INCH ROAD BED AT ALL TIMES. CONTRACTOR SHALL REMOVE ALL SUCH MATERIALS FROM THE SITE AS SOON AS TEMPORARY ACCESS IS NO LONGER NECESSARY.
16. CONTRACTOR SHALL COORDINATE WITH THE PROJECT ARBORIST PRIOR TO THE REMOVAL OF ALL TREE PROTECTION FENCING.

C. ROOT PRUNING/TRENCHING:

1. TRENCHING LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE PROJECT ARBORIST.
2. TRENCHING EQUIPMENT THAT WILL TURN AT HIGH RPM'S IS PREFERRED, AND SHALL BE APPROVED BY THE PROJECT ARBORIST. APPROVED EQUIPMENT WILL BE USED TO PERFORM ALL ROOT PRUNING OPERATIONS. A MINIMUM DEPTH OF THREE (3) FEET IS REQUIRED.
3. INSTALL ROOT BARRIER WHERE DESIGNATED. SEE TREE MITIGATION PLAN AND DETAIL SHEETS.
4. THE TRENCH SHALL BE BACKFILLED WITH PREVIOUSLY EXCAVATED SOIL AND COMPACTED IMMEDIATELY.
5. TREES TO BE RELOCATED SHALL BE ROOT PRUNED A MINIMUM OF TWELVE (12) WEEKS PRIOR TO TREE RELOCATION.
6. WHEN THE TREE ROOT ZONE WILL BE DISTURBED, AFFECTED ROOTS MUST BE SEVERED BY CLEAN PRUNING CUTS AT THE POINT WHERE CONSTRUCTION IMPACTS THE ROOTS.

D. CLEARING:

1. ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE ACCOMPLISHED WITH HAND-OPERATED EQUIPMENT.
2. CONTRACTOR SHALL CLEAR ALL TREE PROTECTION AREAS OF VINES, SHRUBS, GROUND COVERS, WEEDS, SAPLINGS, AND INVASIVES LISTED ON THE LATEST EDITION OF THE FLORIDA EXOTIC PEST PLANT COUNCIL'S LIST OF INVASIVE SPECIES.
3. PROJECT ARBORIST MUST APPROVE METHODS OTHER THAN HAND CLEARING.
4. A TWO (2) INCH LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES DURING THE SITE CLEARING PHASE.

E. TREE CANOPY PRUNING:

TREE PRUNING SPECIFICATIONS SHALL BE DEFINED BASED ON SPECIFIC RECOMMENDATIONS OF THE PROJECT ARBORIST. INFORMATION PRESENTED BELOW SHOULD BE USED AS A GUIDELINE.

1. CONTRACTOR SHALL VISIT THE SITE WITH THE PROJECT ARBORIST TO VERIFY THE EXTENT OF REQUIRED PRUNING.
2. ALL PRUNING SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST OR AN AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA) REGISTERED CONSULTING ARBORIST (RCA).

3. AT LEAST ONE MEMBER OF THE PRUNING CREW SHALL BE AN ISA CERTIFIED ARBORIST.
4. WHILE IN THE TREE, THE ARBORIST SHALL PERFORM AN AERIAL INSPECTION TO IDENTIFY DEFECTS THAT REQUIRE TREATMENT. ANY ADDITIONAL WORK NEEDED SHALL BE REPORTED TO THE OWNER.
5. PRUNING CUTS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE ANSI A300 PRUNING STANDARD (AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS) AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI Z133.1 SAFETY STANDARD. PRUNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ISA'S "BEST MANAGEMENT PRACTICES: TREE PRUNING".
6. WHERE TEMPORARY CLEARANCE IS NEEDED FOR ACCESS, BRANCHES SHALL BE TIED BACK TO HOLD THEM OUT OF THE CLEARANCE ZONE.
7. NO MORE THAN 20 PERCENT OF LIVE FOLIAGE SHALL BE REMOVED WITHIN ANY TREE.
8. ALL TREES WITHIN THE PROJECT AREA SHALL BE PRUNED AS FOLLOWS:
 - a. LIVE BRANCH PRUNING SHOULD BE PERFORMED ONLY WHEN THE DANGER OF INSECT OR DISEASE INFESTATION IS NOT PRESENT.
 - b. REMOVE STUBS, CUTTING OUTSIDE THE WOUND WOOD TISSUE THAT HAS FORMED AROUND THE BRANCH.
 - c. CLEANING, FOR THE SELECTIVE REMOVAL OF DEAD, DISEASED, BROKEN, OR CROSSING BRANCHES DOWN TO ONE (1) INCH IN DIAMETER OR AS DIRECTED BY THE PROJECT ARBORIST.
 - d. PRUNING CUTS LARGER THAN (4) INCHES IN DIAMETER, EXCEPT FOR DEAD WOOD, SHALL BE AVOIDED.
 - e. PRUNING CUTS THAT EXPOSE HEARTWOOD SHALL BE AVOIDED WHENEVER POSSIBLE.
 - f. ALL TREES WITH CROWNS THAT PROJECT INTO PARKING LOT/ROADWAY AREAS SHALL BE RAISED TO 14 FEET ABOVE FINISHED GRADE.
 - g. ALL TREES WITH CROWNS THAT PROJECT INTO SIDEWALK AREAS SHALL BE RAISED TO A HEIGHT OF 8 FEET ABOVE FINISHED GRADE.
9. TREES, WHO'S ROOT SYSTEMS WILL BE IMPACTED SHALL RECEIVE THE FOLLOWING PRUNING TO COMPENSATE FOR ROOT LOSS:
 - a. THE LOCATION AND SIZE OF BRANCHES FOR REDUCTION SHALL BE DEFINED BY THE PROJECT ARBORIST.
 - b. REDUCTION, OR THE SELECTIVE PRUNING TO REDUCE TREE HEIGHT OR SPREAD.
 - c. REDUCE END WEIGHT ON HEAVY, HORIZONTAL BRANCHES BY SELECTIVELY REMOVING SMALL DIAMETER BRANCHES, NO GREATER THAN 2 TO 3 INCHES, NEAR THE ENDS OF SCAFFOLD BRANCHES.
 - d. RAISING SHALL CONSIST OF SELECTIVE PRUNING TO PROVIDE VERTICAL CLEARANCE.
10. PROPOSED/REPLACEMENT TREES
 - a. PRUNING SHALL BE LIMITED TO CLEANING.
11. BRUSH SHALL BE CHIPPED AND SPREAD (ONLY WHEN DISEASE OR INSECT INFESTATION IS NOT PRESENT) UNDERNEATH TREES WITHIN THE TREE PROTECTION ZONE TO A MAXIMUM DEPTH OF THREE (3) INCHES, LEAVING THE TRUNK CLEAR OF MULCH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXCESS DEBRIS ON A DAILY BASIS.



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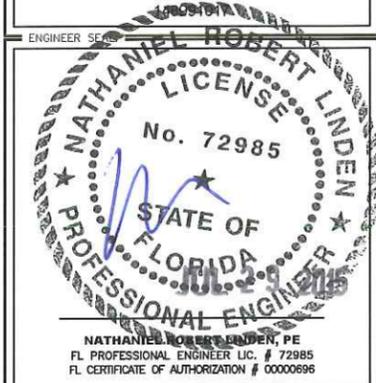
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MAM AWD

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ENGINEER SEAL:



PROJECT INFORMATION:

DEBARY
FL1656

WEST HIGHBANKS ROAD
DEBARY, FL 32713

SHEET TITLE:

TREE MITIGATION NOTES

SHEET NUMBER:

TP-4

TREE MITIGATION SPECIFICATIONS

F. FERTILIZATION:

1. CONTRACTOR SHALL COORDINATE FERTILIZATION PLAN, FOLLOWING BEST MANAGEMENT PRACTICES WITH THE PROJECT ARBORIST PRIOR TO COMMENCEMENT OF WORK.
2. EVERY EFFORT SHALL BE MADE TO UTILIZE CHEMICALS OF AN ORGANIC OR BIODEGRADABLE NATURE IN ORDER TO OFFER THE LEAST IMPACT TO THE NATURAL ENVIRONMENT. CONTRACTOR IS RESPONSIBLE FOR MIXING, APPLYING, AND DISPOSAL OF ALL CHEMICALS IN ACCORDANCE WITH STRICT ADHERENCE TO MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH PROJECT ARBORIST FOR FURTHER INSTRUCTION.
3. ONLY TREES AFFECTED BY CONSTRUCTION OR AS SHOWN ON THE TREE MITIGATION PLAN AND TREE INVENTORY SCHEDULE SHALL BE TREATED.
4. TREES SPECIFIED TO RECEIVE FERTILIZER SHALL BE TREATED AS FOLLOWS.
 - a. MIX FERTILIZER ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO A TANK WITH AGITATION CAPABILITY.
 - b. MIX WETTING AGENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO SAME TANK WITH FERTILIZER. AGITATE MIX.
 - c. INJECT THE MIXTURE WITH A HYDRAULIC INJECTION SYSTEM INTO THE UPPER 6-12 INCHES OF SOIL WITH A SOIL PROBE. INJECT AT THE RATE OF ONE THIRD (1/3) GALLON AT EACH INJECTION SITE.
 - d. THE CRITICAL ROOT ZONE AREA PLUS 2' BEYOND THE CRITICAL ROOT ZONE SHALL BE INJECTED, BUT NOT BEYOND ROOT PRUNING LOCATIONS.
 - e. FERTILIZER SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ANY AERATION SYSTEMS.
 - f. EMPTY PRODUCT CONTAINERS SHALL BE STOCKPILED FOR INSPECTION BY THE PROJECT ARBORIST PRIOR TO DISPOSAL.
5. TRANSPLANT INOCULANT & BIOSTIMULANT
 - a. CONTRACTOR SHALL PROVIDE MYCORRHIZAL TRANSPLANT INOCULANT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND AS RECOMMENDED BY THE PROJECT ARBORIST. MIX INOCULANT IN 10" WIDE TOPSOIL RING AROUND THE ROOT BALL.
 - b. CONTRACTOR SHALL PROVIDE INJECTABLE MYCORRHIZAL INOCULANT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND AS RECOMMENDED BY THE PROJECT ARBORIST. AGITATE FOR 10 MINUTES.
 - c. INJECT THE MIXTURE WITH A HYDRAULIC INJECTION SYSTEM INTO THE UPPER 6-12 INCHES OF SOIL WITH A SOIL PROBE. INJECT AT THE RATE OF ONE THIRD (1/3) GALLON AT EACH INJECTION SITE.
 - d. EMPTY PRODUCT CONTAINERS SHALL BE STOCKPILED FOR INSPECTION BY PROJECT ARBORIST PRIOR TO DISPOSAL.
7. TRANSPLANT MAINTENANCE
 - a. APPROXIMATELY ONE YEAR AFTER PLANTING, THE CONTRACTOR SHALL REFERTILIZE ALL TRANSPLANTS UTILIZING THE SAME PROCEDURES ABOVE.

G. INSECTICIDE:

1. NOTIFY PROJECT ARBORIST IF ANY INFESTATION IS NOTICED.
2. FOLLOW PROJECT ARBORIST'S RECOMMENDED PROCEDURES.
3. FOLLOW ALL MANUFACTURERS' RECOMMENDATIONS CONCERNING APPLICATION. READ ALL WARNING LABELS.
4. ANY PETS, AS WELL AS, THE PETS FOOD AND WATER BOWLS SHOULD BE REMOVED FROM THE AREA AND ANY SWIMMING POOLS SHOULD BE COVERED. COORDINATE WITH PROJECT ARBORIST FOR FURTHER INSTRUCTION.
5. ENSURE COMPLETE COVERAGE AND REAPPLY 2-3 MONTHS AFTER INITIAL APPLICATION UTILIZING SAME PROCEDURE.

H. IRRIGATION:

1. EVERY EFFORT SHALL BE MADE TO WATER THE PRESERVED TREES AND TRANSPLANTS. CONTRACTOR SHALL IRRIGATE BY HAND OR BY TEMPORARY IRRIGATION.
2. IRRIGATE AS REQUIRED BY PROJECT ARBORIST UNTIL PERMANENT IRRIGATION IS INSTALLED AND OPERATING.
3. UNDERGROUND IRRIGATION SHALL NOT BE INSTALLED WITHIN THE DRIP LINES OF EXISTING TREES UNLESS ROOT PROTECTION MEASURES ARE PROVIDED AND APPROVED BY PROJECT ARBORIST.

I. TREE REMOVALS:

1. PRIOR TO AND DURING LAND CLEARING, INCLUDING GRUBBING, ALL TREES TO BE REMOVED SHALL BE CLEARLY MARKED BY PROJECT ARBORIST WITH RED SURVEY RIBBONS AT 36 INCHES MINIMUM ABOVE GRADE.
2. CONTRACTOR SHALL REMOVE ALL TREES AS SHOWN ON THE TREE MITIGATION PLANS AFTER THE TREE PROTECTION FENCING IS INSTALLED.
3. ALL TREES SHOWN TO BE REMOVED SHALL BE FELLED WITH A CHAIN SAW AND STUMP GROUND 6" BELOW SURFACE. ANY TREE SHOWN TO BE REMOVED THAT IS IN AN AREA WHERE COMPACTION IS CRITICAL SHALL BE FELLED WITH A CHAIN SAW AND STUMP REMOVED BY CONTRACTOR.
4. ALL WOOD AND STUMPS FROM REMOVALS SHALL BE HAULED FROM THE SITE THE SAME DAY, EXCEPT FOR TOPS. ALL TOPS ARE TO BE MULCHED AND STOCKPILED OR HAULED DIRECTLY TO MULCHED AREAS FOR RELOCATED TREES IF SCHEDULING PERMITS. TOPS SHALL BE CHIPPED AND PLACED IN THE TREE PROTECTION ZONE TO A DEPTH OF THREE (3) INCHES. ALL EXCESS WOOD CHIPS SHOULD BE HAULED OFF SITE AFTER TRANSPLANTING IS COMPLETE.
5. ALL BURN PITS IF APPLICABLE MUST BE APPROVED BY THE PROJECT ARBORIST AND OWNER.
6. TREES TO BE REMOVED THAT HAVE BRANCHES EXTENDING INTO THE CANOPY OF TREES TO REMAIN MUST BE REMOVED BY A QUALIFIED ISA CERTIFIED ARBORIST AND NOT BY DEMOLITION OR CONSTRUCTION CONTRACTORS. THE QUALIFIED ARBORIST SHALL REMOVE THE TREE IN A MANNER THAT CAUSES NO DAMAGE TO THE TREES AND UNDERSTORY VEGETATION TO REMAIN.
7. TREES TO BE REMOVED LOCATED WITHIN THE TREE PROTECTION ZONE SHALL BE REMOVED BY A QUALIFIED ISA CERTIFIED ARBORIST. THE TREES SHALL BE CUT NEAR GROUND LEVEL AND THE STUMP GROUND OUT.

J. TOPSOIL:

1. CONTRACTOR SHALL COORDINATE ALL EARTHWORK OPERATIONS WITHIN TREE PROTECTION AREAS WITH THE PROJECT ARBORIST PRIOR TO BEGINNING WORK.
2. ALL TOPSOIL SHALL BE NATURAL, FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VICINITY THAT PRODUCES HEAVY GROWTH.
3. TOPSOIL, PH RANGE OF 5.5 TO 7.0, 3-5 PERCENT ORGANIC MATERIAL MINIMUM, FREE FROM SUBSOIL, OBJECTIONABLE WEEDS, LITTER, SODS, STIFF CLAY, STONES LARGER THAN ONE (1) INCH IN DIAMETER, STUMPS, ROOTS, TRASH, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH.
4. VERIFY AMOUNT STOCKPILED IF ANY, AND SUPPLY ADDITIONAL AS NEEDED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST FOUR (4) INCHES DEEP. DO NOT OBTAIN TOPSOIL FROM BOGS OR MARSHES.
5. PROJECT ARBORIST SHALL APPROVE ALL TOPSOIL PRIOR TO PLACEMENT.

K. REPAIR OF DAMAGED TREES:

1. IF DAMAGE TO ANY TREE SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE DURING THE CONSTRUCTION PERIOD, THE PROJECT ARBORIST SHALL APPRAISE THE DAMAGE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPAIR BY THE CONTRACTOR.
2. IF ANY TREE DESIGNATED TO BE SAVED IS REMOVED FROM THE SITE WITHOUT PERMISSION OF THE OWNER'S REPRESENTATIVE, THE PROJECT ARBORIST SHALL APPRAISE THE TREE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPLACEMENT BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF THE TREE AND ANY FEES THAT MAY BE ASSESSED TO THE OWNER BY THE GOVERNING AGENCY.



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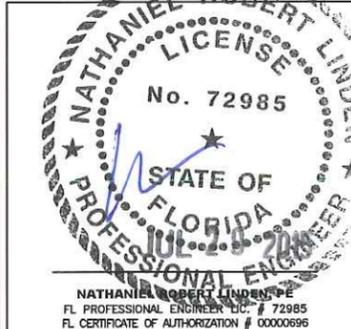
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