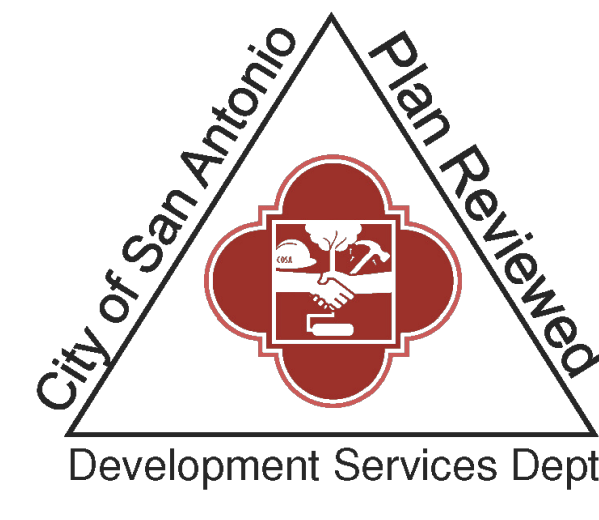


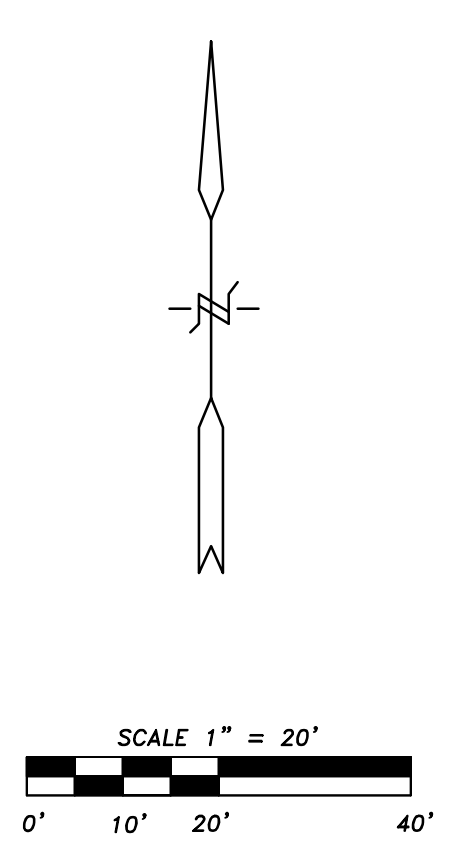
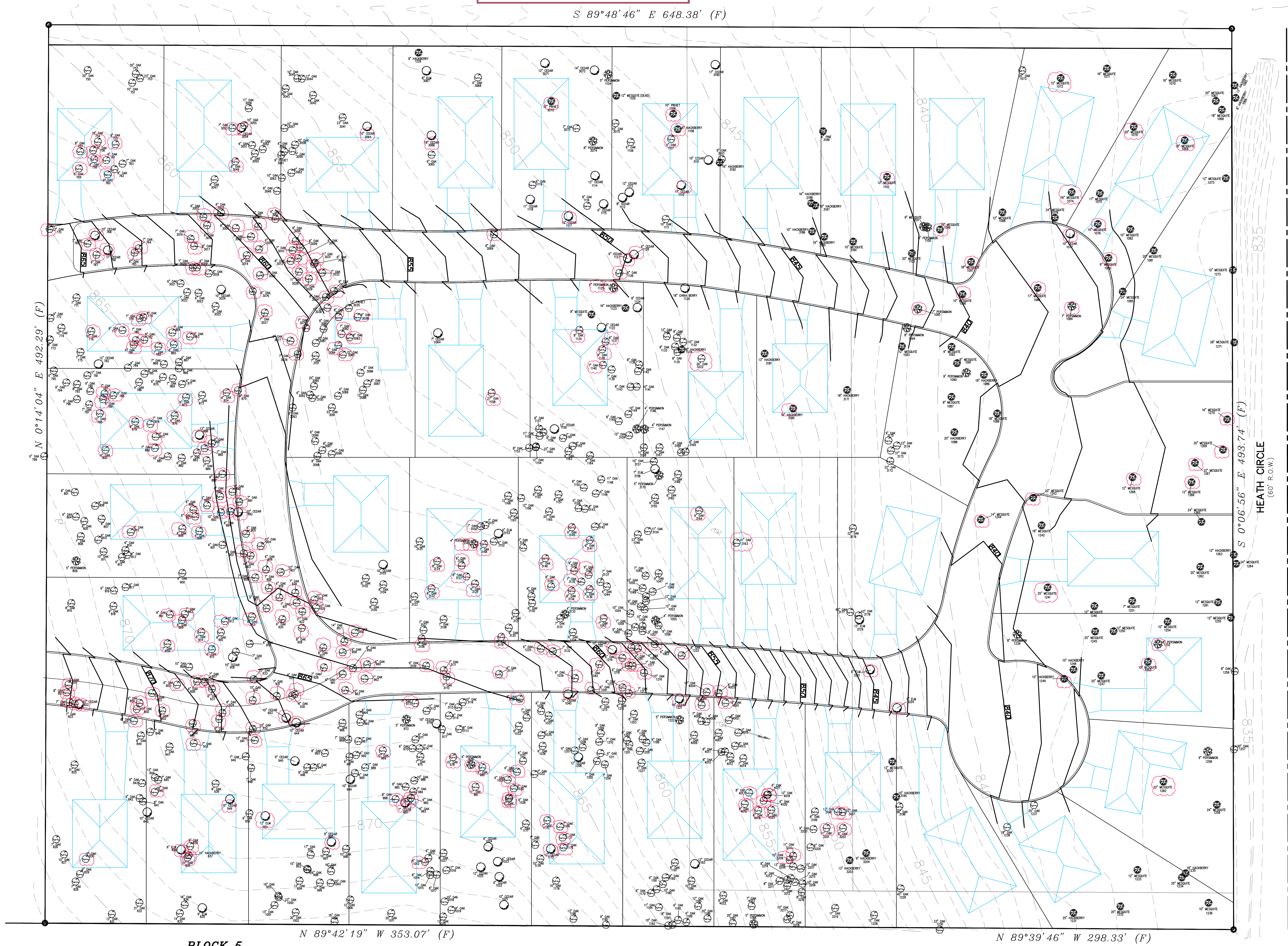


DESCRIPTION QUANTITY UNITS
 TOTAL LOT AREA 320,253.12 SF
 TOTAL STREET AREA (55,085.00) SF
 HOUSES & DRIVEWAYS (77,278.00) SF
 187,890.12 SF
 TREE CANOPY PRESERVATION CALCULATIONS
 TREE CANOPY REQUIREMENT IS 38% OF GROSS ACREAGE OF PLAT
 TOTAL AREA OF PLAT = 7.352 ACRES
 7.352 ACRES x 0.38 = 2.794 ACRES
 187,890.12 SF / 43,560 SF = 4.313 ACRES
 AMOUNT OF PRESERVED CANOPY IS 4.313 ACRES BEING 58.67%
 AMOUNT OF PRESERVED CANOPY IS MORE THAN REQUIRED

UDC Sec. 35-523(f)(2)(A) Table 523-A Builder in a single-family dwelling lot shall be required to plant two (2) one and one-half (1.5) inch caliper new trees, which trees shall generally be native, large canopy trees. Such trees will not exceed 25% of any specific species.



Failure to schedule a fencing inspection prior to start of work may result in a stop Work order or a Penalty of \$1,000.00 or both. UDC §35-523 (k)(2)	It shall be the responsibility of the permit holder to maintain a copy of the approved tree plans, approved tree permit and the conditions of approval readily available at all times.
DEVELOPMENT SERVICES TREE PROTECTION SECTION REVIEWED FOR COMPLIANCE	DEVELOPMENT SERVICES Tree Pre-Construction Meeting Required prior to Site Work



- LEGEND**
- TREES TO BE REMOVED
 - EXISTING MAJOR CONTOURS
 - EXISTING MINOR CONTOURS
 - PROPOSED CONTOURS

GOMEZ-GARCIA AND ASSOCIATES, INC.
 19230 Stone Oak Parkway, Suite 302, SAN ANTONIO, TEXAS 78258
 (210) 832-9608 (210) 832-9615 FAX
 TBPE FIRM REGISTRATION #5362

BLOCK 5
 N.C.B. 18957

TREE SURVEY

GENERAL NOTES

1. ALL TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS PROTECTED. THE TREE TRUNK SHALL BE PROTECTED WITH A 4" SAUCEY AND A 12" MIN. MULCH. TREES SHALL RECEIVE LEVEL 1 PROTECTION AS PER ITEM NO. 802. TREES TO RECEIVE LEVEL 2 PROTECTION AS PER ITEM NO. 801 ARE SHOWN ON TREE PROTECTION TABLE ON THIS SHEET.
2. ALL TREES SHALL REMAIN UNLESS NOTED ON THE PLANS.
3. NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
4. ALL TREES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES IN DIAMETER WHEN EXCAVATING UNDER EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR.
6. THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH EACH OF THE TREE ROOTS IS PROTECTED. FOR EXAMPLE, A 10-INCH DIAMETER TREE WOULD HAVE A 5-FOOT RADIUS ROOT PROTECTION ZONE. TREE TRUNKS SHALL BE PROTECTED WITH A 4" SAUCEY AND A 12" MIN. MULCH. LIVE OAK WOUNDS SHALL BE PAINTED OVER WITHIN 20 MINUTES TO PREVENT OAK WILT.
7. ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
8. GRADING, IF REQUIRED, SHALL BE LIMITED TO A 9 INCH CUT OR FILL WITHIN THE FENCED ROOT ZONE AREAS.
9. TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND AS DIRECTED BY THE PROJECT MANAGER OR CITY INSPECTOR.
10. TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE ENGINEER'S SATISFACTION.
11. EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR NET BURLAP.
12. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.

1.3 TREE PROTECTION TABLE

TREE SHEET #	TREE/CALIPER STATION OR NUMBER	LOCATION	ITEM NO./PROTECTION	TREE SIZE (DBH)	REMOVAL DATE (Y/M/D)	REMARKS/NOTE NO. 2
SEE TREE PRESERVATION PLAN SHEETS						

1.3 TREE PROTECTION TABLE

SHEET 23 OF 26
PREPARED BY: FERNANDEZ FRANCES WITTE & ASSOC., INC.
P. O. BOX 1000
SAN ANTONIO, TEXAS 78216

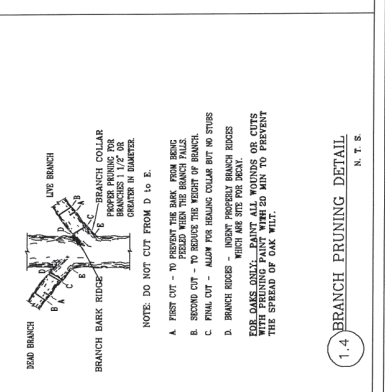
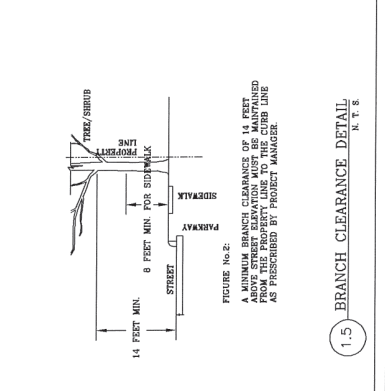
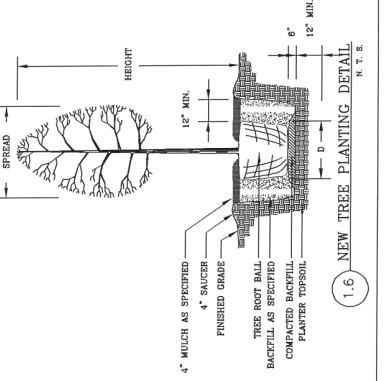
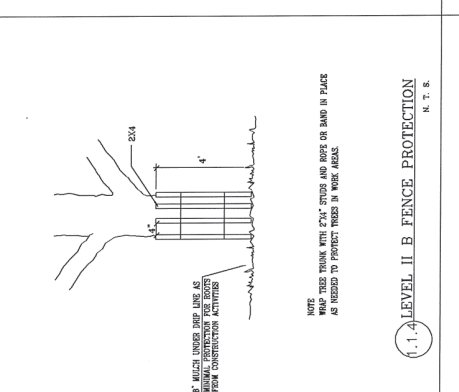
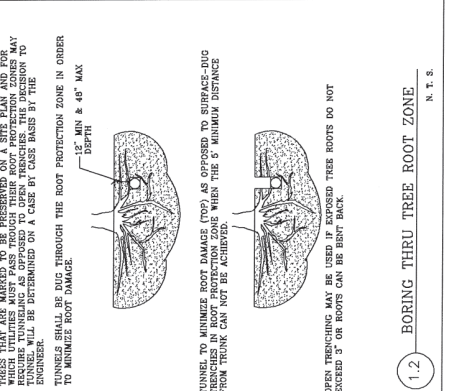
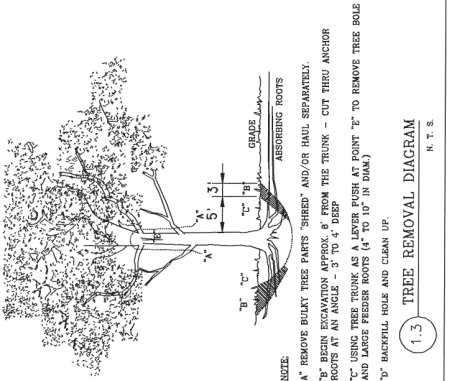
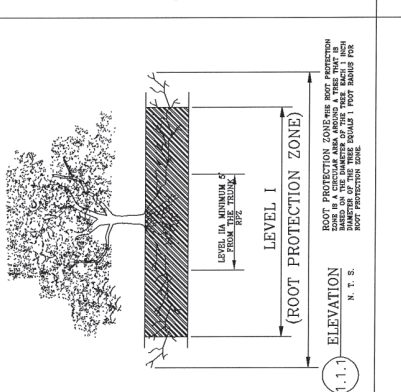
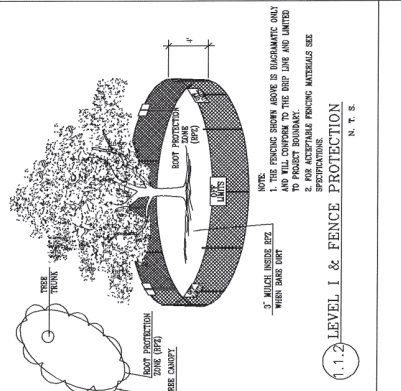
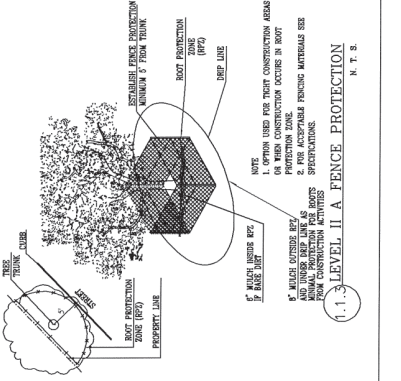
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS
TREE PROTECTION DETAILS
TREE PRESERVATION

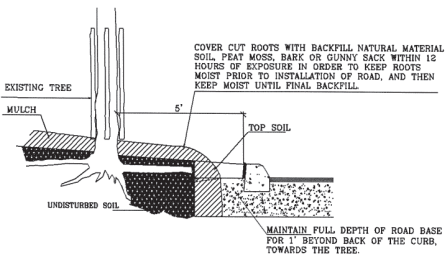
ORDER	DATE	BY	CHK. NO.

TREE INVENTORY SUMMARY:

TOTAL DIAMETER INCHES (D.B.H.)	TOTAL DIAMETER INCHES REMOVED	TOTAL DIAMETER INCHES PRESERVED	TOTAL PERCENTAGE INCHES PRESERVED	TOTAL INCHES TO BE MITIGATED
307	132	195	63.5	15.5

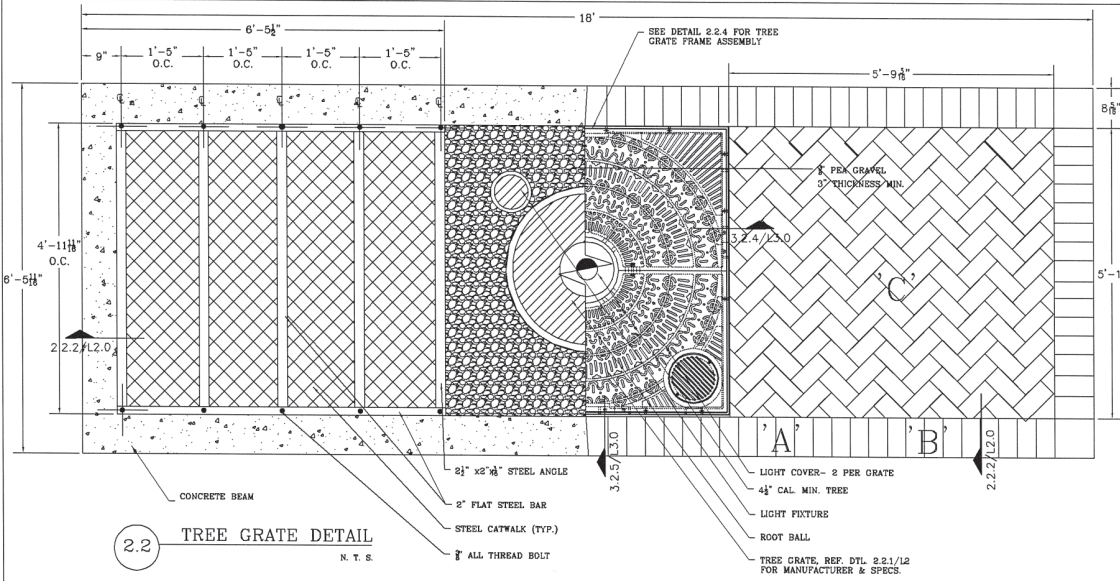
1.3 TREE INVENTORY SUMMARY





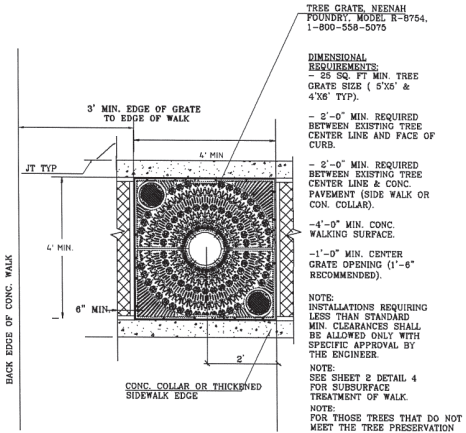
2.1 EXPOSED ROOT PROTECTION DETAIL
N. T. S.

NOTE:
FOR THOSE TREES THAT DO NOT MEET THE TREE PRESERVATION ORDINANCE REQUIREMENTS PRESERVATION SHALL BE DETERMINED ON A CASE BY CASE BASIS



2.2 TREE GRATE DETAIL
N. T. S.

- NOTES:
- PAVER 'A': 8 5/8" x 8 3/4" THICKNESS CONC. PAVER (CITY STONE II) CASTSTONE COLOR, BY PAVESTONE. 1-800-590-PAVE
 - PAVER 'B': 4 1/2" x 8 3/4" x 3/4" THICKNESS, PATTERN AS SHOWN ON PLAN, CONC. PAVER (HOLLAND STONE) CAST STONE COLOR, MANUF. BY PAVESTONE.
 - PAVER 'C': 4 1/2" x 8 3/4" x 3/4" THICKNESS, 45° HERRINGBONE PATTERN, CONC. PAVER (HOLLAND STONE), ANTIQUE COLOR, MANUF. BY PAVESTONE.



2.2.1 TREE GRATE PLAN VIEW
N. T. S.

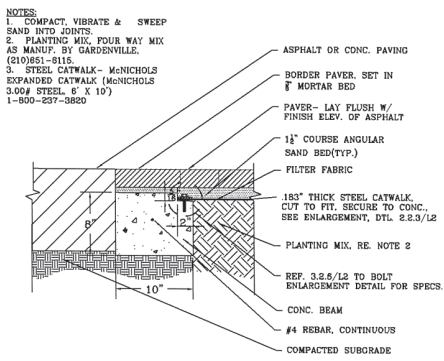
TREE GRATE: NEENAH FOUNDRY, MODEL R-8754, 1-800-558-5075

DIMENSIONAL REQUIREMENTS:
- 25 SQ. FT. MIN. TREE GRATE SIZE (5'x5' & 4'x6' TYP.)
- 2'-0" MIN. REQUIRED BETWEEN EXISTING TREE CENTER LINE AND FACE OF CURB.
- 2'-0" MIN. REQUIRED BETWEEN EXISTING TREE CENTER LINE & CONC. PAVEMENT (SIDE WALK OR CONC. COLLAR).
- 4'-0" MIN. CONC. WALKING SURFACE.
- 1'-0" MIN. CENTER GRATE OPENING (1'-6" RECOMMENDED).

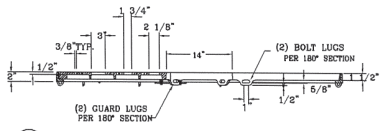
NOTE:
INSTALLATIONS REQUIRING LESS THAN STANDARD MIN. CLEARANCES SHALL BE ALLOWED ONLY WITH SPECIFIC APPROVAL BY THE ENGINEER.

NOTE:
SEE SHEET 2 DETAIL 4 FOR SUBSURFACE TREATMENT OF WALK.

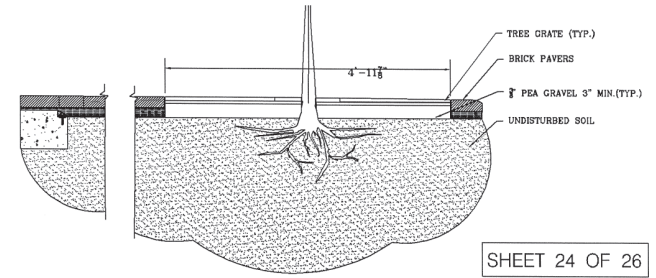
NOTE:
FOR THOSE TREES THAT DO NOT MEET THE TREE PRESERVATION ORDINANCE REQUIREMENTS PRESERVATION SHALL BE DETERMINED ON A CASE BY CASE BASIS



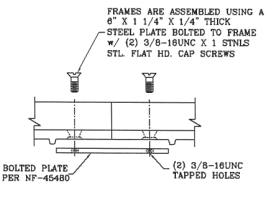
2.2.2 SECTION: PAVER @ ASPHALT
N. T. S.



2.2.3 SECTION: TREE GRATE FRAME
N. T. S.



2.2.4 TREE WELL SECTION
N. T. S.



2.2.5 SECTION: GRATE FRAME ASSEMBLY
N. T. S.

SHEET 24 OF 26

PREPARED BY: FERNANDEZ FRAZER WHITE & ASSOC. INC.
& C. F. ZAVALA GROUP

CITY OF SAN ANTONIO

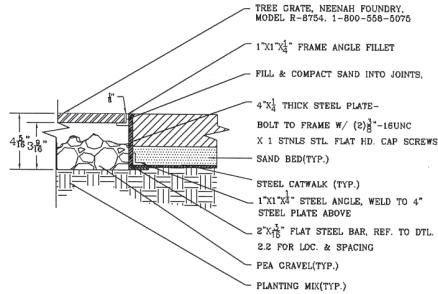


DEPARTMENT OF PUBLIC WORKS

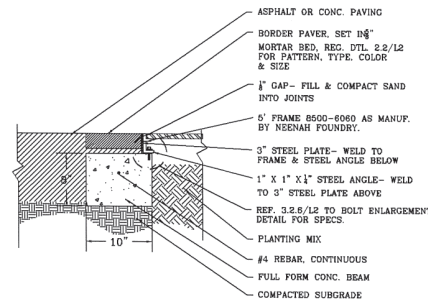
CITY OF SAN ANTONIO
TREE PROTECTION DETAILS
TREE PRESERVATION

ISSUED:	REV. NO.	DATE	SHT. NO.
	01	TEXAS	2 OF 4
DRAWN:	DATE:	COUNTY:	CONTROL NO.:
CHECKED:	DESIGN NO.:	NO.:	SECTION NO.:
			JOB NO.:
			HIGHWAY NO.:

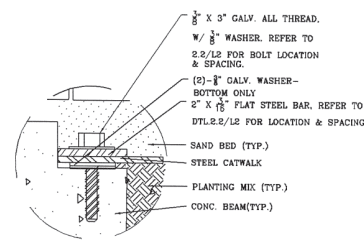
- NOTES:
- 6" FRAME 8500-8060 AS MANUFACTURED BY NEEHAH FOUNDRY.
 - REMOVE CROSSBAR FROM FRAME BEFORE INSTALLATION.



3.2.4 TREE GRATE/FRA @ TREE GRA N.T.S.



3.2.5 SECTION: PAVER @ TREE GRA N.T.S.



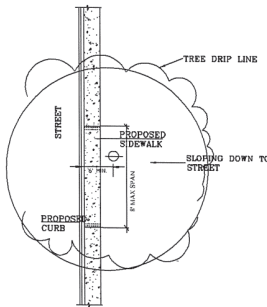
3.2.6 DETAIL: BOLT/CONC. CONNECTION N.T.S.

ADDITIONAL GENERAL NOTES

- NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED. A PRE-CONSTRUCTION CONFERENCE WITH THE CITY ARBORIST TO REVIEW PROCEDURES FOR PROTECTION AND MANAGEMENT OF ALL SIGNIFICANT, HERITAGE OR MITIGATION TREES IS REQUIRED.
- TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY ON SITE, AT LEAST A 3-INCH LAYER OF COURSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE-INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATIONS IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE WORK DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- NO EQUIPMENT, VEHICLES OR MATERIALS SHALL BE OPERATED OR STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. THE ROOT PROTECTION ZONE SHALL BE AN AREA DEFINED BY AN AVERAGE RADII EXTENDING OUTWARD FROM THE TRUNK OF THE TREE A DISTANCE OF ONE (1) LINEAR FOOT FOR EACH INCH DIAMETER INCH BREST HEIGHT (4.5') OF THE TREE. A 10-INCH DIAMETER TREE WILL HAVE A 10 FOOT RADII ROOT PROTECTION ZONE.
- ALL BROKEN BRANCHES AND EXPOSED ROOTS TWO (2) INCHES IN DIAMETER OR GREATER OF SIGNIFICANT, HERITAGE OR MITIGATION TREES SHALL BE CUT CLEANLY AND IN ACCORDANCE WITH ANSI-A309 STANDARDS. IN THE CASE OF OAK SPECIES, IN ORDER TO PREVENT INFECTION BY OAK WILT SPORES, WOUNDS MUST BE PAINTED WITH AN ACCEPTABLE WOUND DRESSING WITHIN THIRTY (30) MINUTES.
- ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST (207.853).
- TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.

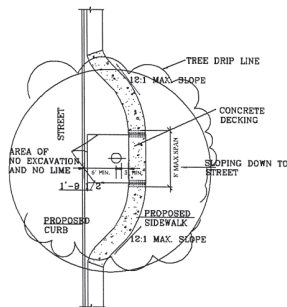
Trees shall be maintained in a healthy condition for the duration of the contract for this project. Maintenance shall include but is not limited to: irrigating, fertilizing, pruning and other maintenance as needed. Pruning shall be done by a Certified Arborist with a city issued Tree Maintenance License under direction of the City Arborist. Irrigation may be provided by temporary measures such as de-contaminated 50 gallon drums (5-9) placed within the drip line of each tree and filled twice a week.

AREA BENEATH PROPOSED SIDEWALKS IN THE DRIP LINE OF AN EXISTING TREE SHALL RECEIVE TREE VENTING AS PER OPTIONS ON THESE SHEETS.



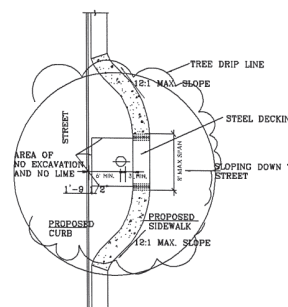
3.3.1 ELEVATED WALKWAY N.T.S.

AREA BENEATH PROPOSED SIDEWALKS IN THE DRIP LINE OF AN EXISTING TREE SHALL RECEIVE TREE VENTING AS PER OPTIONS ON THESE SHEETS.



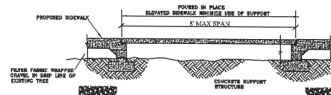
3.3.2 ELEVATED WALKWAY / CONCRETE DECKING N.T.S.

AREA BENEATH PROPOSED SIDEWALKS IN THE DRIP LINE OF AN EXISTING TREE SHALL RECEIVE TREE VENTING AS PER OPTIONS ON THESE SHEETS.



3.3.3 ELEVATED WALKWAY / STEEL DECKING N.T.S.

NOTE:
DESIGN STEEL PLATE SUPPORT
ACCORDING TO SPECIFIED WIDTH AND
LENGTH.



3.3.4 ELEVATED WALKWAY SECTION N.T.S.

NOTE:
FOR THOSE TREES THAT DO NOT
MEET THE TREE PRESERVATION
ORDINANCE REQUIREMENTS
PRESERVATION SHALL BE DETERMINED
ON A CASE BY CASE BASIS

NOTE: FOR TREE ABRATION SYSTEMS LOCATED UNDER A PRIVATE OR PUBLIC ROADWAY - THE PROJECT ENGINEER SHALL SUBMIT FOR APPROVAL A PAVEMENT DESIGN SUPPORTED BY A GEOTECHNICAL REPORT THAT MEETS THE REQD. STRUCTURAL NUMBERS AND COMPACTION OF THE SUBGRADE. ABOVE THE PROPOSED SYSTEM OF TREE ABRATION, IN ACCORDANCE WITH UDC 35-508(F) PAVEMENT STANDARDS, AND CITY OF SAN ANTONIO'S STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION.

SHEET 25 OF 26

PREPARED BY: FERNANDEZ PEABLER WHITE & ASSOC., INC.
R. C. P. ZAVALA GROUP

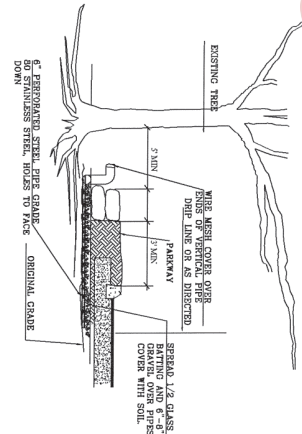
CITY OF SAN ANTONIO



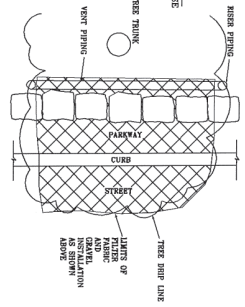
DEPARTMENT OF PUBLIC WORKS

CITY OF SAN ANTONIO
TREE PROTECTION

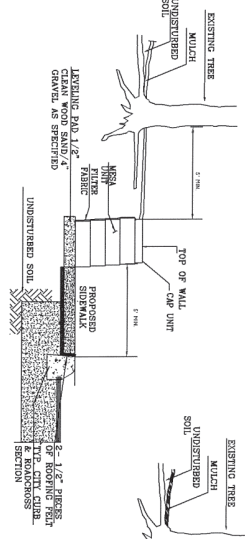
DESIGNED: AB/PJ	REV. NO.	DATE	SHT. NO.			
CHECKED: AB/PJ <td>1 <td>TEAMS</td> <td>3 OF 4</td> </td>	1 <td>TEAMS</td> <td>3 OF 4</td>	TEAMS	3 OF 4			
DRAWN: AB/PJ	STATE	COUNTY	CONTROL	SECT.	JOB	HWY
CHECKER:	DECAT	NO.	NO.	NO.	NO.	NO.



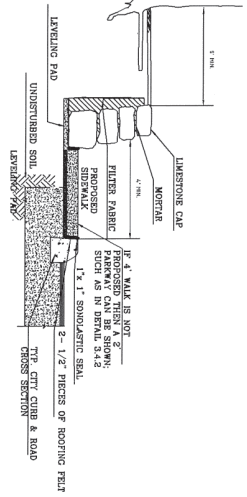
4.2 TREE AERATION DETAIL B
N. T. S.



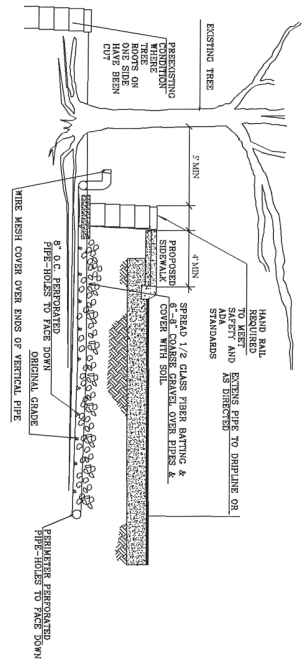
4.2.2 PLAN VIEW B
N. T. S.



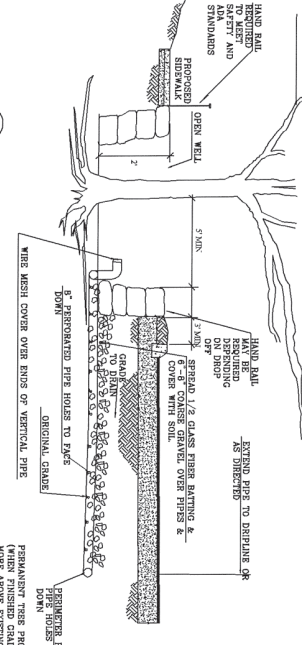
4.3 SEGMENTAL GRAVITY WALL
N. T. S.
NOTE: THIS TYPE OF WALL CAN BE USED ON OTHER APPLICATIONS ADJACENT TO CURB. THESE CANNOT BE PRESERVED IF THEY ARE CLOSER THAN 5 FEET TO THE WALL.



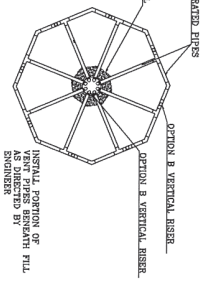
4.3.2 LIMESTONE BOULDER GRAVITY WALL
N. T. S.
NOTE: THIS TYPE OF WALL CAN BE USED ON OTHER APPLICATIONS ADJACENT TO CURB. THESE CANNOT BE PRESERVED IF THEY ARE CLOSER THAN 5 FEET TO THE WALL.



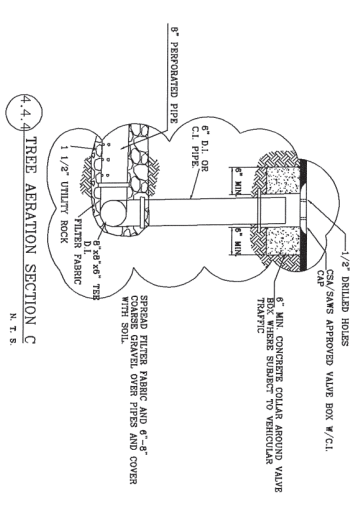
4.4 TREE AERATION DETAIL C
N. T. S.



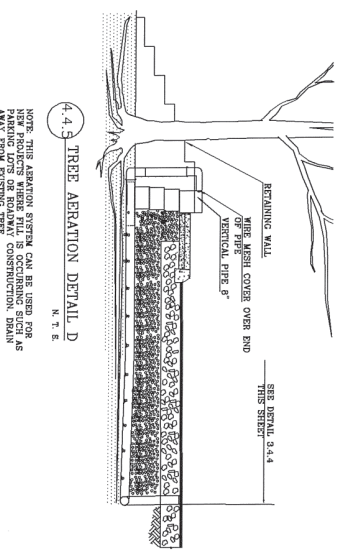
4.4.2 TREE AERATION DETAIL C
N. T. S.



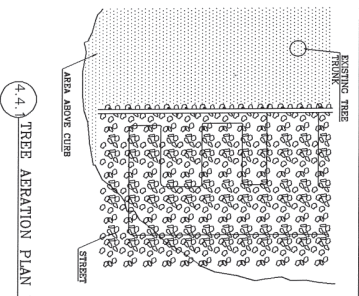
4.4.3 PLAN VIEW C
N. T. S.



4.4.4 TREE AERATION SECTION C
N. T. S.



4.4.5 TREE AERATION DETAIL D
N. T. S.



4.4 TREE AERATION PLAN VIEW D
N. T. S.

SHEET 26 OF 26

PREPARED BY: FERRANDO RUIZ, WINTER & ASSOC., INC.
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

CITY OF SAN ANTONIO
TREE PROTECTION DETAILS
TREE PRESERVATION

DATE	BY	CHKD BY	DATE	BY	CHKD BY



3206	OAK				10							
3207	OAK				15							
3208	OAK				13							
3209	OAK				10							
3210	OAK				11							
3211	OAK				8							
3212	OAK				11							
3213	OAK				9							
3214	OAK				9							
3215	OAK				7							
3216	OAK				8							
3217	OAK				10							
3218	OAK				8							
3219	OAK				11							
3220	MESQUITE							12				
3221	ELM			6								
3222	OAK										34	
4001	OAK				10							
4002	OAK				8							
4003	OAK			8								
4004	OAK			10								
4005	OAK				10							
4006	OAK				9							
4007	OAK				9							
4008	OAK				7							
4009	OAK				7							
4010	OAK				8							
4011	OAK				8							
4012	OAK				7							
4013	OAK				8							
4014	OAK				7							
4015	OAK				7							
4016	OAK				8							
4017	OAK			8								
4018	OAK			12								
4019	OAK			6								
4020	OAK			6								
4021	OAK			6								
4022	OAK				8							
4023	OAK				7							
4024	ELM			9								
4025	OAK			9								
Sub. Tot. Inches=		35	95	2011	3483	247	693	0	0	24	908	0
			130		5494		940		0		932	
Total inches by category=												
Preservation percentage=		73%		Significant Preservation		65%		Heritage Preservation		97%		0
Mitigation required (Commercial) =		-43		Commercial (inches)		-1602.4						
Mitigation required (Residential) =		-49.5		Residential (inches)		-1924.1		Heritage Mitigation (inches)		24		

No category to fall below 10% preservation;
 Preserved- Tree to remain that meets root protection zone requirements described in section 35-523 of the UDC.
 Mitigation 1:1 for significant trees below minimum preservation requirements; 3:1 for heritage trees below 100% preservation
 * Small species: Condalia, Redbud, Tx. Mountain Laurel, Tx. Persimmon, Hawthorn, Possumhaw - these are mitigated at 1:1 for Heritage Trees
 ** Ashe Juniper, Huisache, Mesquite, Arizona Ash, Hackberry protected at 10" dbh and mitigated at 1:1 for heritage trees
 *** Mitigation Trees: Unprotected-sized trees to be used for mitigation calculations; subtract inches from mitigation owed