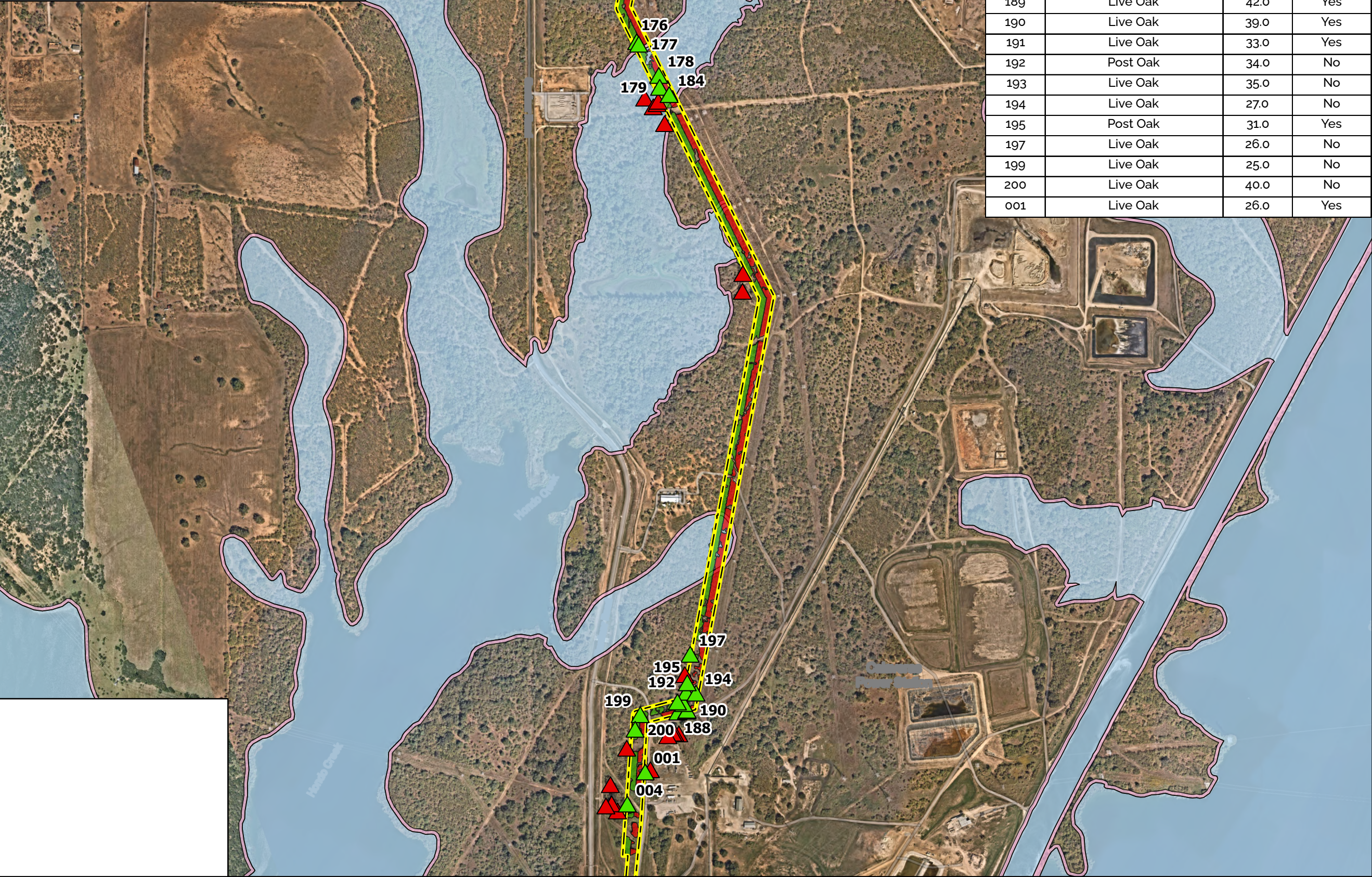


Notes: CPS Energy proposes to clear a swath of vegetation for the installation and maintenance of a new transmission line along the proposed alignment, per North American Electric Reliability Corporation (NERC) requirements, to allow for "blowout" of the installed lines. Work will be conducted as per the standard operating procedures agreed upon by the City of San Antonio and CPS Energy. Eighteen (18) heritage trees exist in the vicinity of the project alignment. Eight (8) of the heritage trees will require removal. Root or pruning cuts, when necessary, will be cut cleanly and painted as per COSA's guidelines. Floodplain and environmentally sensitive areas (ESA) are present on site.



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184	Cottonwood	29.0	Yes
188	Live Oak	50.0	Yes
189	Live Oak	42.0	Yes
190	Live Oak	39.0	Yes
191	Live Oak	33.0	Yes
192	Post Oak	34.0	No
193	Live Oak	35.0	No
194	Live Oak	27.0	No
195	Post Oak	31.0	Yes
197	Live Oak	26.0	No
199	Live Oak	25.0	No
200	Live Oak	40.0	No
001	Live Oak	26.0	Yes

T-0327 Padua BESS

December 4, 2023

Heritage Trees

Heritage Trees - OLOWZ

Study Area

Canopy to be Preserved

Canopy to be Removed

100-Year Floodplain

Environmentally Sensitive Area (ESA)

ADAMS
ENVIRONMENTAL, INC.
EST. 1996

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San Antonio, TX 78217
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FAX: (210) 587-7922
mkitchen@adamsenv.com

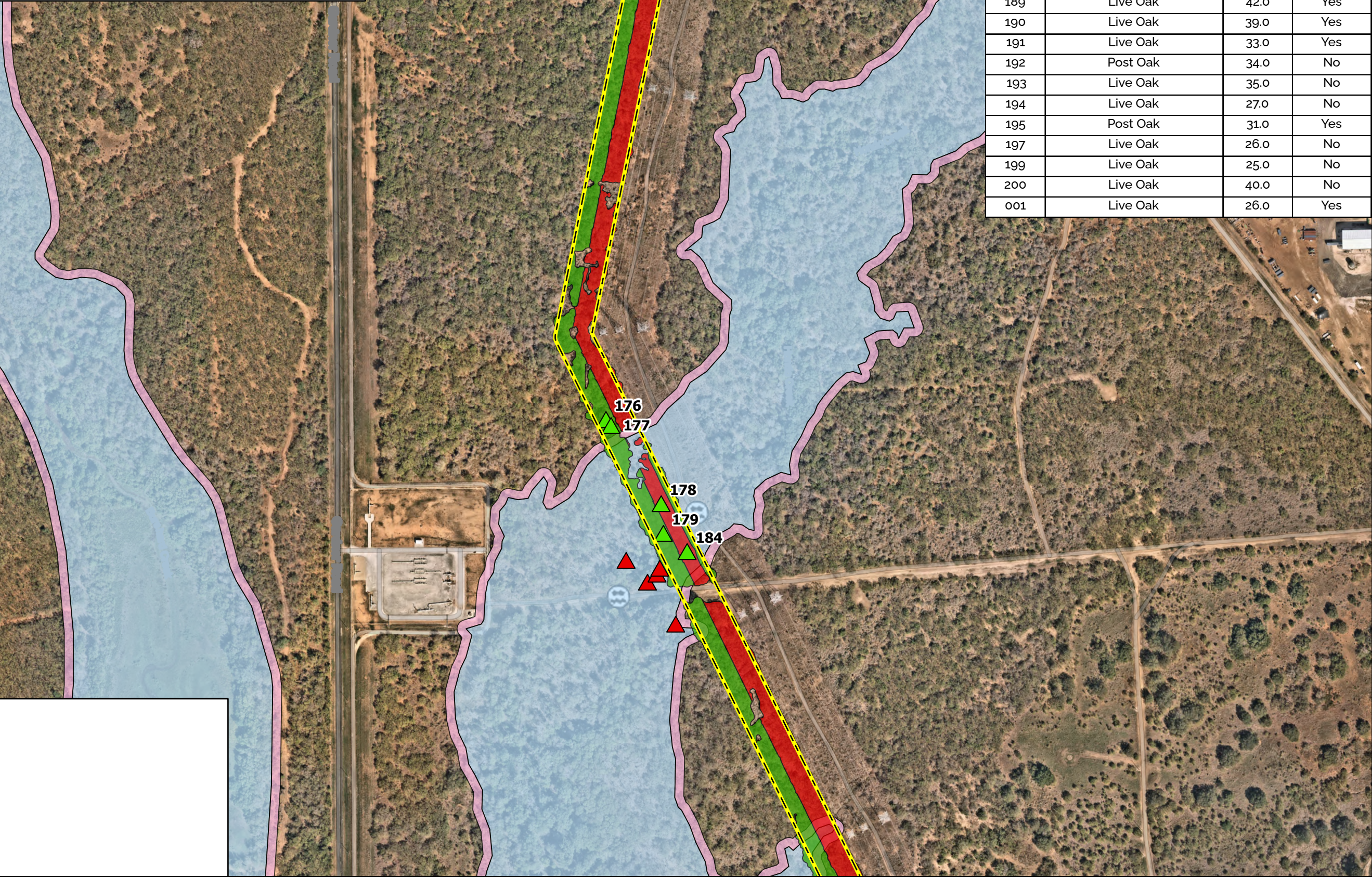
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Coordinate System: WGS 1984
UTM Zone 14N

Vicinity Map

Tree Preservation Calculations				
Total Canopy Within Floodplain (sq ft)		126,543		
Canopy to Remain		84,077		
Canopy to Remove		42,466		
Canopy Preserved Within Floodplain		66%		
Total Canopy Within Buffer (sq ft)		39,985		
Canopy to Remain		28,949		
Canopy to Remove		11,036		
Canopy Preserved Within Buffer		72%		
Total Significant Canopy Outside Floodplain/Buffer (sq ft)		821,492		
Canopy to Remain		372,337		
Canopy to Remove		449,155		
Canopy Preserved Outside Floodplain		45%		
Heritage Trees (inches)		(No Access Granted)		
	Floodplain	Buffer	Upland	Total
Remain	30	0	242	567
Remove	74	0	221	295
Preserved	29%	N/A	48%	66%
Total Canopy/Inches Required to Be Preserved				
Canopy Within Floodplain (80% of Total Canopy)		101,234		
Canopy Outside Floodplain (25% Required)		205,373		
Heritage (100% of Total)		862		
Total Inches to Mitigate		74		
Significant (1:1)		0		
Heritage (3:1)		222		
Heritage (1:1)		0		
TOTAL MITIGATION REQUIREMENT		222		

Notes: CPS Energy proposes to clear a swath of vegetation for the installation and maintenance of a new transmission line along the proposed alignment, per North American Electric Reliability Corporation (NERC) requirements, to allow for "blowout" of the installed lines. Work will be conducted as per the standard operating procedures agreed upon by the City of San Antonio and CPS Energy. Eighteen (18) heritage trees exist in the vicinity of the project alignment. Eight (8) of the heritage trees will require removal. Root or pruning cuts, when necessary, will be cut cleanly and painted as per COSA's guidelines. Floodplain and environmentally sensitive areas (ESA) are present on site.



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194	Live Oak	27.0	No
195	Post Oak	31.0	Yes
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199	Live Oak	25.0	No
200	Live Oak	40.0	No
001	Live Oak	26.0	Yes

T-0327 Padua BESS

December 4, 2023

Heritage Trees

Heritage Trees - OLOWZ

Canopy to be Preserved

Canopy to be Removed

100-Year Floodplain

Environmentally Sensitive Area (ESA)

Study Area

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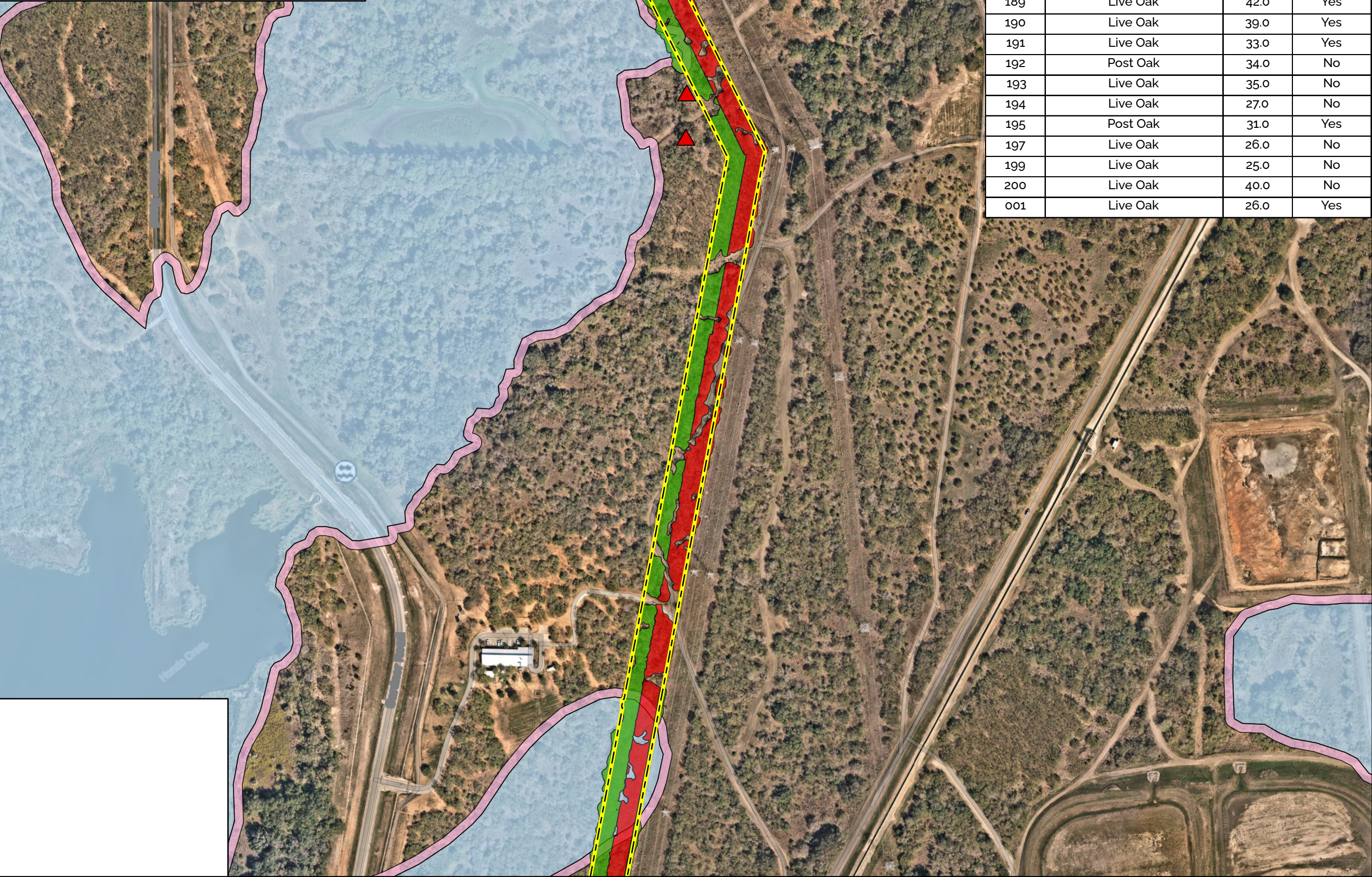
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1:4,000

Coordinate System: WGS 1984
UTM Zone 14N

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T-0327 Padua BESS

December 4, 2023

Heritage Trees

Heritage Trees - OLOWZ

Canopy to be Preserved

Canopy to be Removed

100-Year Floodplain

Environmentally Sensitive Area (ESA)

Study Area

ADAMS

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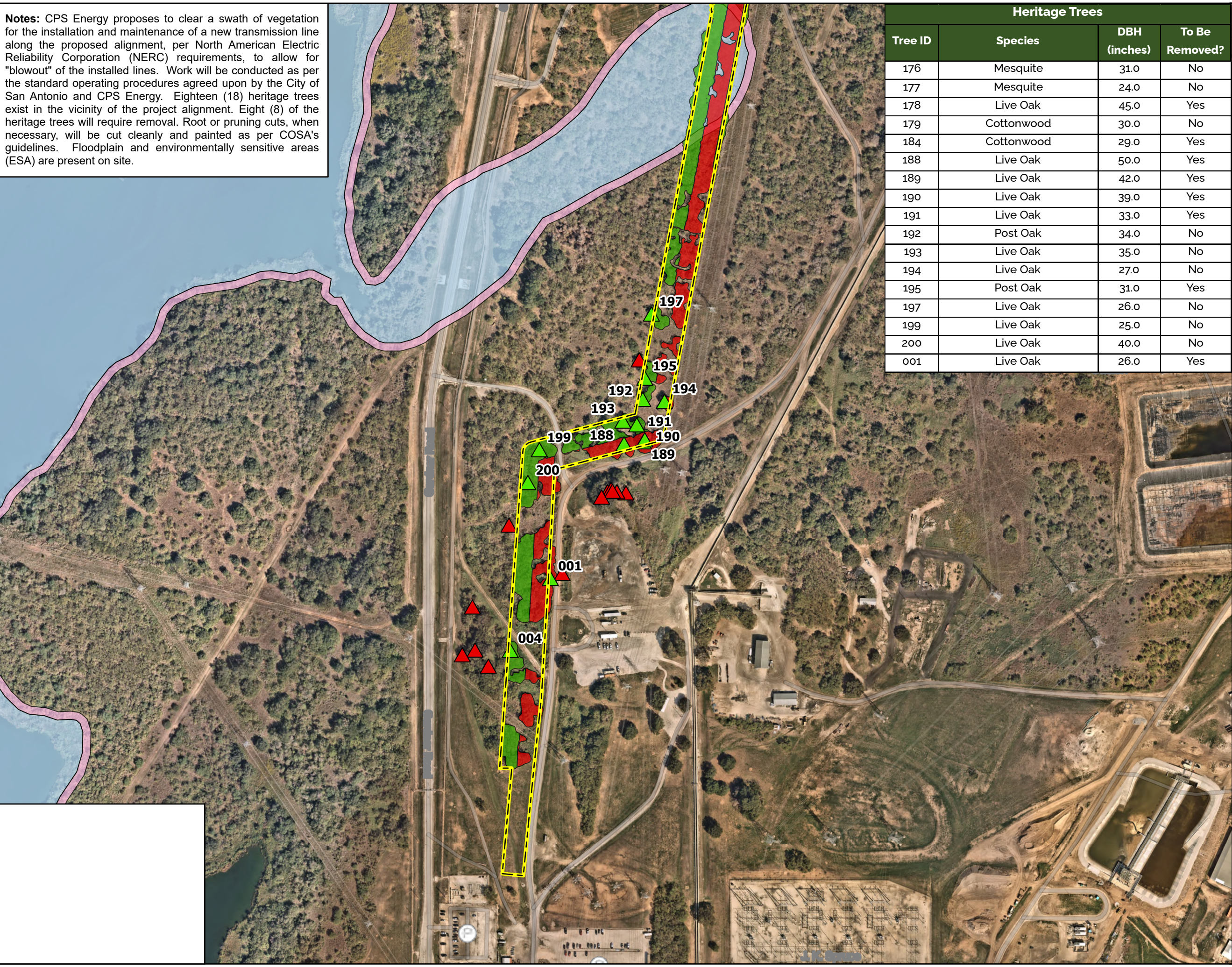
Coordinate System: WGS 1984

UTM Zone 14N

Vicinity Map

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T-0327 Padua BESS

December 4, 2023

▲ Heritage Trees

▲ Heritage Trees - OLOWZ

■ Canopy to be Preserved

■ Canopy to be Removed

■ 100-Year Floodplain

■ Environmentally Sensitive Area (ESA)

■ Study Area

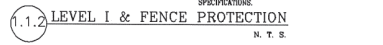
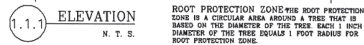
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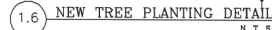
- ### 1.3 GENERAL NOTES



1.2 BORING THRU TREE ROOT ZONE



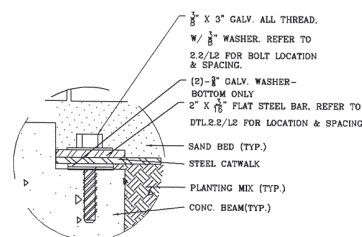
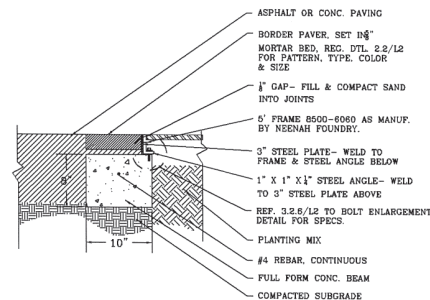
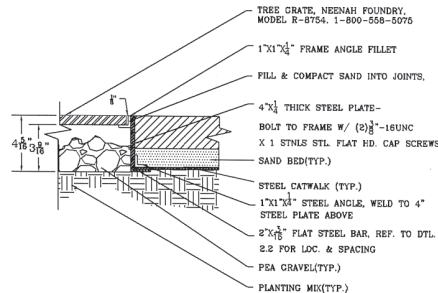
13 TREE PROTECTION TABLE



1.3 TREE INVENTORY SUMMARY

DESIGNED:	FED. RD. DIST. NO.	STATE					SHT.
CHECKED:		TEAMS					2 OF
DRAWN:	STATE DIST. NO.	COUNTY	CONTROL NO.	SECT. NO.	JOB NO.	HIGHWAY NO.	
CHECKED:		BEAR					

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



3.2.4 TREE GRATE/FRA @ PAVERS

3.2.4 SECTION: PAVER @ TREE GRA

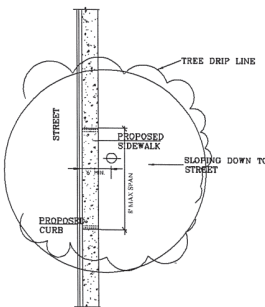
3.2.6 DETAIL: BOLT/CONC. CONNECTION

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 COARSE 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 RADIUS 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 RADIUS 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-A300 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.

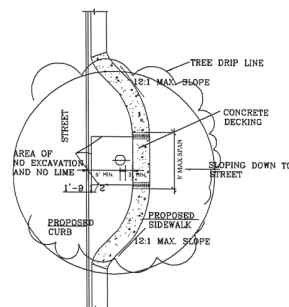
Trees shall be maintained in a healthy condition for the duration of the contract for this project. Maintenance shall include but is not limited to: irrigating, fertilizing, pruning and other maintenance as needed. Pruning shall be done by a Certified Arborist with a city issued Tree Maintenance License 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.



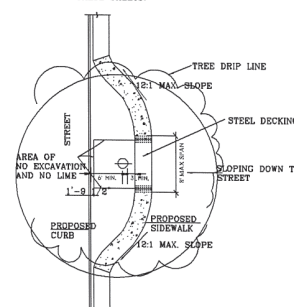
3.3 ELEVATED WALKWAY

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



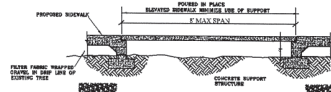
3.3 ELEVATED WALKWAY / CONCRETE DECKING

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



3.3 ELEVATED WALKWAY / STEEL DECKING

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



3.3.4 ELEVATED WALKWAY SECTION

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 COMFACTION OF THE SUBGRADE. ABOVE THE PROPOSED SYSTEM OF TREE ABRATION, IN ACCORDANCE WITH UDC 35-500(P) PAVEMENT STANDARDS, AND CITY OF SAN ANTONIO'S STANDARD SPECS. FOR PUBLIC WORKS CONSTRUCTION.

SHEET 25 OF 26

PREPARED BY: FERNANDEZ PRATER WHITE & ASSOC., INC.
B. C. P. TAVALLA CHIEF

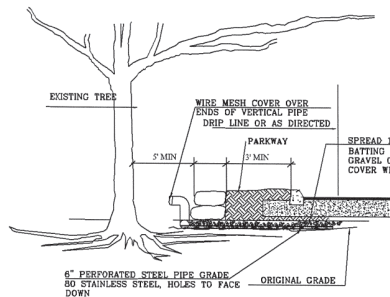
CITY OF SAN ANTONIO



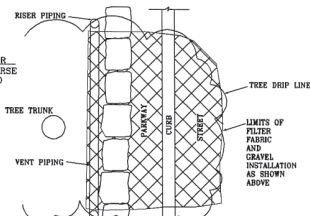
DEPARTMENT OF PUBLIC WORKS

CITY OF SAN ANTONIO
TREE PROTECTION

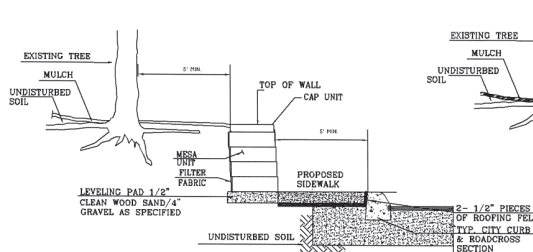
DESIGNED: ABJR	REV. NO.	DATE		SHT. NO.
CHECKED: ABJR	STATE	REVISION		3 OF 4
DESIGNED: ABJR	STATE	COUNTY	CONTROL	JOB
CHECKED:	DATE	NO.	NO.	NO.



4.2 TREE AERATION DETAIL B
N. T. S.

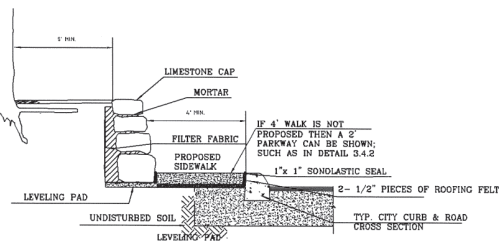


4.2.2 PLAN VIEW B
N. T. S.



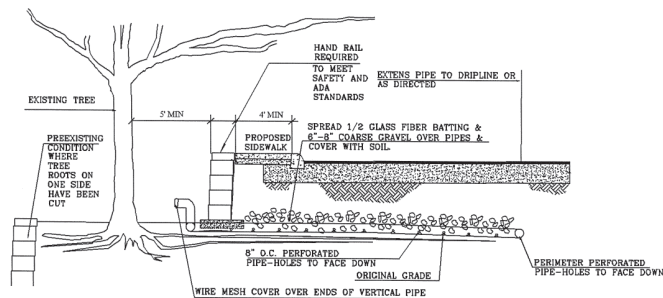
4.3 SEGMENTAL GRAVITY WALL
N. T. S.

NOTE:
THIS TYPE OF WALL CAN BE USED ON OTHER APPLICATIONS
TREES CANNOT BE PRESERVED IF THEY ARE CLOSER THAN 5 FEET TO
THE WALL.

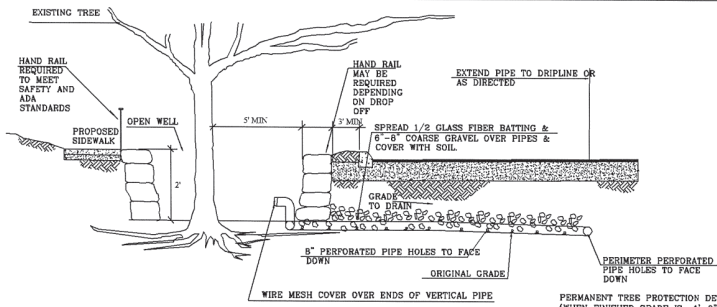


4.3.2 LIMESTONE BOULDER GRAVITY WALL
N. T. S.

NOTE:
THIS TYPE OF WALL CAN BE USED ON OTHER APPLICATIONS
TREES CANNOT BE PRESERVED IF THEY ARE CLOSER THAN 5 FEET TO
THE WALL.

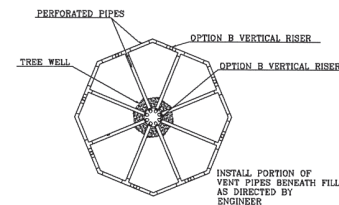


4.4 TREE AERATION DETAIL C
N. T. S.



4.4.2 TREE AERATION DETAIL C
N. T. S.

NOTE: THIS AERATION SYSTEM CAN BE USED FOR
NEW PROJECTS WHERE FILL IS OCCURRING SUCH AS
PARKING LOTS OR ROADWAY CONSTRUCTION. DRAIN AWAY FROM
EXISTING TREE.

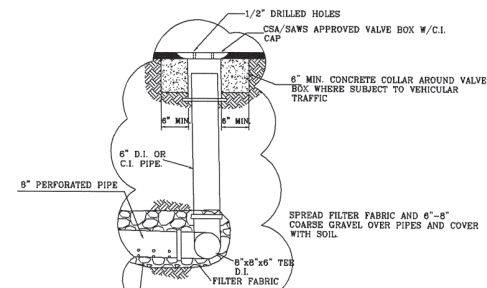


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N. T. S.

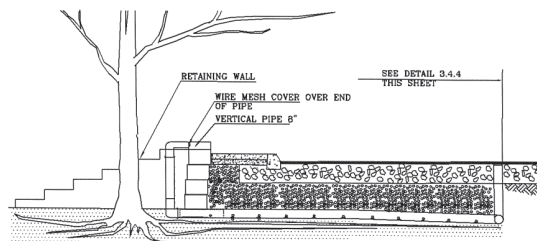
PERMANENT TREE PROTECTION DETAIL
(WHEN FINISHED GRADE IS 1'-0\"/>

NOTE:

WELL TO BE CONSTRUCTED OF STONE,
BLOCK OR BRICK. IF BRICK IS USED,
VERTICAL JOINTS LEFT OPEN FOR
DRAINAGE 1/2\"/>

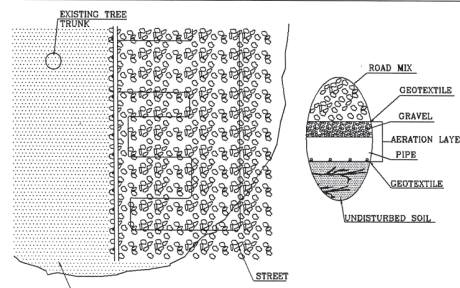


4.4.4 TREE AERATION SECTION C
N. T. S.



4.4.5 TREE AERATION DETAIL D
N. T. S.

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PARKING LOTS OR ROADWAY CONSTRUCTION. DRAIN
AWAY FROM EXISTING TREE.



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

SHEET 26 OF 26

PREPARED BY: FERNANDEZ FRANCES WHITE & ASSOC. INC.
R. C. F. TAYLOR GROUP

CITY OF SAN ANTONIO



DEPARTMENT OF PUBLIC WORKS

CITY OF SAN ANTONIO
TREE PROTECTION DETAILS
TREE PRESERVATION

DESIGNED: ANJR	FILE NO. DW. NO.	DATE	SHEET NO.
CHECKED:	DATE	REVISIONS	4 OF 4
DRAWN:	DATE	COUNTY	CONTROL
CHECKED:	DATE	NO.	NO.