

Tree				
No.	Location	Description	Comments	Treatment
1	1030 N. Chenango	26" Pecan	Good condition	Tree Protection Fence, Root prune for swale
			85% dead, Structurally compromised, Remove	
			for poor condition and proposed drainage	
2	1030 N. Chenango	25" Tallow	swale	Remove tree
			Adjacent lot, Dead, Will not be impacted by	Prune to remove dead limbs from over proposed construction area prior to start
3	Not available	23" Boxelder	proposed construction	of construction
4	1030 N. Chenango	17" Tallow	Poor condition, Remove for proposed GST	Remove tree
5	1030 N. Chenango	27" Water Oak	Good condition	Crown Cleaning Prune, Tree Protection Fence
			Trunk cavities, Structurally compromised,	
			Remove for tree condition prior to start of	
6	1030 N. Chenango	19" Tallow	construction activities on site	Remove tree
7	1030 N. Chenango	15" Pecan	Fair condition, Deadwood	Crown Cleaning Prune, Tree Protection Fence, Root prune for 12" drain line
			Adjacent lot, Covered in vines, Poor condition,	
8	Not available	14'' Tallow	Will not be impacted by proposed construction	
			Adjacent lot, Good condition, Far enough from	
9	Not available	22" Pecan	proposed construction-will not be impacted	
			Adjacent lot, 75% canopy dieback, Poor	
			condition, Will not be impacted by proposed	
10	Not available	23" Arizona Ash	construction	

	Tree Remov	al List
ree No.	Location	Description
2	1030 N. Chenango	25" Tallow
4	1030 N. Chenango	17" Tallow
6	1030 N. Chenango	19" Tallow



PROJECT FOR

CITY OF ANGLETON, TEXAS

CHENANGO GROUND STORAGE TANK REPLACEMENT

1030 N. CHENANGO ST. **ANGLETON, TEXAS 77515**



	MADIC - DATE	DECORIDE ON	
-	MARK DATE	DESCRIPTION	
	PROJECT NUMBER	10325096	
	ORIGINAL ISSUE	10020000	
	OTTONY IL HOULE		

_		
	PROJECT MANAGER	JOHN PETERSON
	PROJECT DESIGNER	VALETTA SALDANHA
	PROJECT ARCHITECT	
	LANDSCAPE ARCHITECT	
	CIVIL ENGINEER	
	STRUCTURAL ENGINEER	
	MECHANICAL ENGINEER	
	ELECTRICAL ENGINEER	
В	INTERIOR DESIGNER	
_	EQUIPMENT PLANNER	
	WAYFINDING	
	DRAWN BY	N.B.

C.	N. Ko	ehl		•
Urban I	Forestry, Inc.			اللات
21	0 Stone Bush C	't. ° Katy,	Texas 77	49:
	U Stone Bush C	- P		49

281-391-0022 ckoehl@koehlurbanforestry.com

APPROVED: Craig N. Koell 03-03-2022

SHEET NAME

TREE PROTECTION PLAN SHEET 1 OF 3

Α	SCALE
$\overline{}$	

SHEET NUMBER

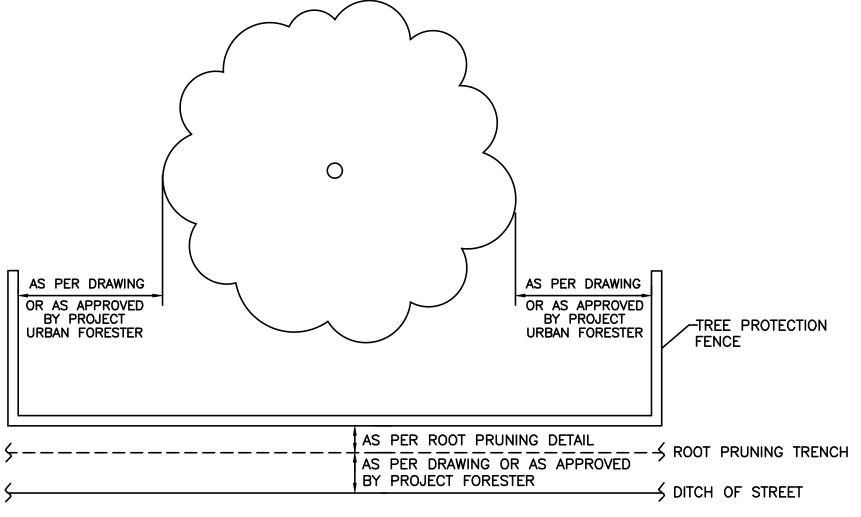
TP-1

hdr chenango tp-1.dwg

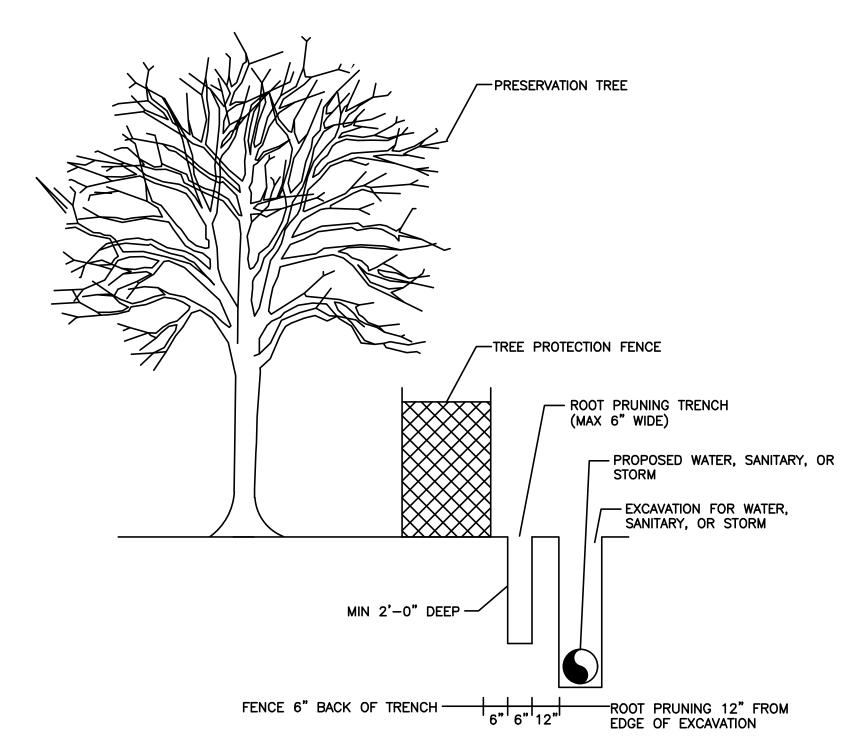
FILE NAME

PLASTIC FENCE RE: SPECS.

TREE PROTECTION FENCING DETAIL A



TREE PROTECTION FENCING DETAIL B NOT TO SCALE



ROOT PRUNE FOR WATER, SANITARY, OR STORM LINE NOT TO SCALE



PROJECT FOR

CITY OF ANGLETON, TEXAS

CHENANGO GROUND STORAGE TANK REPLACEMENT

1030 N. CHENANGO ST. **ANGLETON, TEXAS 77515**



DESCRIPTION

	PROJECT NUMBER	10325096
	ORIGINAL ISSUE	
_		
	PROJECT MANAGER	JOHN PETERSON
	PROJECT DESIGNER	VALETTA SALDANHA
	PROJECT ARCHITECT	
	LANDSCAPE ARCHITECT	
	CIVIL ENGINEER	
	STRUCTURAL ENGINEER	
	MECHANICAL ENGINEER	
	ELECTRICAL ENGINEER	
В	INTERIOR DESIGNER	
D	EQUIPMENT PLANNER	
	WAYFINDING	
	DRAWN BY	N.B.

C.N. Ko	oehl
Urban Forestry, Inc.	
210 Stone Bush	Ct. · Katy, Texas 77493
281-391-0022 ckoehl@koehlu	rbanforestry.com

APPROVED: Crais N. Koell 03-03-2022

SHEET NAME

TREE PROTECTION PLAN SHEET 2 OF 3

SCALE

SHEET NUMBER

TP-2

FILE NAME

hdr chenango tp-1.dwg

TREE AND PLANT PROTECTION

PART 1 - GENERAL

- 1.01 SECTION INCLUDES
 - A. TREE AND PLANT PROTECTION
 - B. MINIMUM QUALIFICATIONS OF ARBORIST.
- 1.02 MEASUREMENT AND PAYMENT
 - A. PAYMENT FOR TREE REMOVAL SHALL BE PAID PER EACH TREE REMOVED.
 - B. PAYMENT FOR PRUNING SHALL BE PAID FOR EACH TREE PRUNED.
 - C. PAYMENT FOR TREE PROTECTION FENCE SHALL BE PAID ON A PER LINEAR FOOT INSTALLED BASIS.
 - D. PAYMENT FOR ROOT PRUNING TRENCH SHALL BE PAID ON A PER LINEAR FOOT INSTALLED BASIS.

1.03 PROJECT CONDITIONS

- A. PRESERVE AND PROTECT EXISTING TREES AND PLANTS TO REMAIN FROM FOLIAGE, BRANCH, TRUNK, OR ROOT DAMAGE THAT COULD RESULT FROM CONSTRUCTION OPERATIONS.
- B. PREVENT FOLLOWING TYPES OF DAMAGE:
 - 1. COMPACTION OF ROOT ZONE BY FOOT OR VEHICULAR TRAFFIC, OR MATERIAL STORAGE.
- 2. TRUNK DAMAGE FROM EQUIPMENT OPERATIONS, MATERIAL STORAGE, OR FROM NAILING OR BOLTING.
- 3. TRUNK AND BRANCH DAMAGE CAUSED BY ROPES OR GUY WIRES.
- 4. ROOT OR SOIL CONTAMINATION FROM SPILLED SOLVENTS, GASOLINE, PAINT, LIME SLURRY, AND OTHER NOXIOUS MATERIALS.
- 5. BRANCH DAMAGE DUE TO IMPROPER PRUNING OR TRIMMING.
- 6. DAMAGE FROM LACK OF WATER DUE TO:
 - a. CUTTING OR ALTERING NATURAL WATER MIGRATION PATTERNS NEAR ROOT ZONES.
 - b. FAILURE TO PROVIDE ADEQUATE WATERING.
- 7. DAMAGE FROM ALTERATION OF SOIL PH CAUSED BY DEPOSITING LIME, CONCRETE, PLASTER, OR OTHER BASE MATERIALS NEAR ROOT ZONES.
- 8. CUTTING OF ROOTS LARGER THAN ONE INCH IN DIAMETER IN AREAS NOT CALLED OUT FOR ROOT PRUNING TRENCH.

1.04 DAMAGE ASSESSMENT

A. WHEN TREES OTHER THAN THOSE DESIGNATED FOR REMOVAL ARE DESTROYED OR DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS, REMOVE AND REPLACE WITH SAME SIZE, SPECIES, AND VARIETY UP TO AND INCLUDING 8 INCHES IN TRUNK DIAMETER. TREES LARGER THAN 8 INCHES IN DIAMETER SHALL BE REPLACED WITH AN 8-INCH DIAMETER TREE OF THE SAME SPECIES AND VARIETY AND TOTAL CONTRACT AMOUNT WILL BE REDUCED BY AN AMOUNT DETERMINED FROM THE FOLLOWING FORMULA: 0.7854 X D² X \$125.00 WHERE D IS DIAMETER IN INCHES OF TREE OR SHRUB TRUNK MEASURED 12 INCHES ABOVE GRADE FOR THAT PORTION OF THE TREE WHICH IS GREATER THAN 8 INCHES IN DIAMETER. REMOVAL MUST BE APPLIED FOR AND APPROVED BY THE CITY OF ANGLETON PRIOR TO REMOVAL OF ANY TREE NOT SCHEDULED FOR REMOVAL IN THE TREE TREATMENT SCHEDULE.

PART 2 - PRODUCTS

- 2.01 MATERIALS
- A. PRUNING PAINT: BLACK LATEX, WATER BASED PAINT, FREE OF ALL PETROLEUM PRODUCTS.
- B. FERTILIZER/ROOT STIMULANT: ROOT STIMULANT SHALL BE A ROOT STIMULANT THAT CONTAINS AT A MINIMUM THE FOLLOWING INGREDIENTS: ECTOMYCORRHIZAL FUNGI, VA MYCORRHIZAL (VAM) FUNGI, *RHIZOSPHERE BACILLUS SPP.*, KELP MEAL, HUMIC ACID, AND SOLUBLE YUCCA. FERTILIZER SHALL BE DAVEY ARBORGREEN.
- C. TREE PROTECTION FENCING: ORANGE, PLASTIC MESH FENCING, 4 FEET IN HEIGHT WITH 6 FEET HIGH "T" POSTS INSTALLED 10 FEET ON CENTERS AS PER DRAWINGS.
- D. PLASTIC ROOT/SOIL PROTECTION: CLEAR POLYETHYLENE SHEETING, MINIMUM 6 MIL. THICKNESS. **PART 3 EXECUTION**
- 3.01 PROTECTION OF EXISTING TREES AND SHRUBS
 - A. SITE PREPARATION WORK AND/OR CONSTRUCTION WORK SHALL NOT BEGIN IN ANY AREA WHERE TREE PRESERVATION MEASURES HAVE NOT BEEN COMPLETED AND APPROVED BY CITY OF ANGLETON.
 - B. PROTECT EXPOSED ROOTS AND ROOT ZONE AREAS FROM CONTAMINATION FROM STABILIZATION MATERIALS AND CONCRETE USING PLASTIC ROOT/SOIL PROTECTION (POLYETHYLENE).
 - C. COVER EXPOSED ROOTS WITHIN 4 HOURS TO REDUCE DAMAGE CAUSED BY DESICCATION. ROOTS MAY BE COVERED WITH SOIL, MULCH, POLYETHYLENE, OR WET BURLAP TO HELP PROTECT THEM FROM DRYING.
 - D. DESIGNATE LIMITED AREAS AS CONCRETE WASHOUT AREAS. LOCATE CONCRETE WASHOUT AREAS AWAY FROM ROOT ZONES.
 - E. INSTALL TREE PROTECTION FENCING AROUND EACH TREE TO BE PRESERVED AS INDICATED IN THE TREE TREATMENT SCHEDULE AND ON THE TREE PROTECTION PLAN.

- EACH TREE TO BE PRESERVED SHALL BE PROTECTED WITH A TREE PROTECTION FENCE. THE FENCING SHALL BE CONTINUOUS BETWEEN POSTS, SHALL BE PULLED TAUT PRIOR TO SECURING TO POSTS, AND SHALL BE FIRMLY ATTACHED TO THE POSTS WITH A MINIMUM OF 4 WIRE TIES.
- 2. ALL TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO SITE WORK OR CONSTRUCTION ACTIVITY. THE FENCE SHALL BE PLACED IN A CONTINUOUS ALIGNMENT AS SHOWN ON THE TREE PROTECTION PLAN. FENCES SHOWN ON TREE PROTECTION PLAN ARE DRAWN TO SCALE AND SHALL BE INSTALLED AS DRAWN, IN THE FIELD.
- 3. STORAGE OF EQUIPMENT OR MATERIALS WILL NOT BE ALLOWED INSIDE A FENCE. ENTRYWAYS AND ACCESS INTO A PROTECTED AREA SHALL NOT BE PROVIDED UNLESS APPROVED BY THE CITY OF ANGLETON.
- 4. DAMAGE TO TREE FENCES OCCURRING DURING THE PROGRESS OF THE WORK SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST TO OWNER. WORKMEN SHALL BE CLEARLY INSTRUCTED TO EXERCISE CAUTION IN PERFORMANCE OF WORK NEAR TREES BEING PRESERVED.
- 5. TREE PROTECTION FENCING SHALL BE REMOVED BY CONTRACTOR, AT NO ADDITIONAL COSTS, UPON COMPLETION OF ALL CONSTRUCTION ACTIVITY IN EACH WORK ZONE AREA.
- F. INSTALL ROOT PRUNING TRENCHING WHERE DESIGNATED IN TREE TREATMENT SCHEDULE AND SHOWN ON THE TREE PROTECTION DRAWINGS. TREES SCHEDULED FOR ROOT PRUNING ARE CALLED OUT SPECIFICALLY IN THE TREATMENT SCHEDULE. TRENCH SHALL BE LOCATED 2 FT. FROM THE EDGE OF PROPOSED DRAIN LINE. TRENCH LOCATIONS SHOWN ON TREE PRESERVATION PLAN ARE DRAWN TO SCALE AND SHOULD BE LOCATED IN FIELD AS DRAWN ON PLAN. EXACT LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER AND/OR CITY OF ANGLETON PRIOR TO INSTALLATION. TRENCHING DEPTH SHALL BE A MINIMUM OF 24 INCHES DEEP. ALL ROOTS SHALL BE CUT BY TRENCHER, CHAINSAW, OR HANDSAW TO THE SPECIFIED DEPTH. ROOTS SHALL BE CUT CLEANLY, AND NOT RIPPED, TORN, OR CHOPPED. TRENCH SHALL BE BACKFILLED AND COMPACTED IMMEDIATELY AFTER TRENCHING. TRENCH SHALL BE INSTALLED PRIOR TO ANY CLEARING AND GRUBBING, EXCAVATION FOR BASE MATERIAL, OR ANY OTHER SITE WORK.

G. PRUNING OF TREES

- 1. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE AMERICAN NATIONAL STANDARD FOR TREE PRUNING, ANSI A300 (PART 1) 2017 PRUNING REVISION OF ANSI A300-2008 TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE STANDARD PRACTICES. PRUNING SHALL BE COMPLETED BY PROFESSIONAL ARBORISTS WHO HAS RECEIVED TRAINING IN PROPER PRUNING TECHNIQUES.
- 2. ALL CUTS SHOULD BE MADE SUFFICIENTLY CLOSE TO THE PARENT LIMB OR TRUNK WITHOUT CUTTING INTO THE BRANCH COLLAR OR LEAVING A PROTRUDING STUB, SO THAT CLOSURE CAN READILY START UNDER NORMAL CONDITIONS. ALL LATERAL CUTS SHALL BE MADE BACK TO A LATERAL THAT IS AT LEAST 1/3 THE DIAMETER OF THE PARENT LIMB. CLEAN CUTS SHALL BE MADE AT ALL TIMES.
- 3. TREES SHALL BE PRUNED IN A MANNER THAT WILL NOT DESTROY OR ALTER THE NATURAL SHAPE AND CHARACTER OF THE TREE. APPLY BLACK LATEX PAINT TO ALL FRESH WOUNDS ON OAK (QUERCUS) SPECIES IMMEDIATELY AFTER EACH CUT IS MADE.

H. TREE REMOVAL

- 1. TREES SCHEDULED FOR REMOVAL SHALL BE SAWED DOWN AND DEBRIS HAULED FROM THE SITE THE SAME DAY. THE STUMP SHALL BE GROUND TO 6" BELOW GRADE AND EXCESS GRINDINGS SHALL BE HAULED FROM THE SITE THE SAME DAY, SO THAT A PILE OF GRINDINGS IS NOT LEFT WHERE THE STUMP WAS GROUND. ENOUGH GRINDINGS SHOULD BE LEFT SO THAT AN OPEN HOLE DOES NOT REMAIN
- 2. ONLY THOSE TREES CALLED OUT FOR REMOVAL IN THE TREE TREATMENT SCHEDULE SHALL BE REMOVED, OR OTHERWISE DAMAGED. SHOULD IT BE DETERMINED THAT ANY ADDITIONAL TREES MUST BE REMOVED, REQUEST MUST BE APPLIED FOR AND APPROVED FROM THE CITY OF ANGLETON PRIOR TO REMOVAL.
- REGULARLY WATER TREES WHICH HAVE RECEIVED ROOT DAMAGE, TO ELIMINATE ADDITIONAL STRESS CAUSED BY LACK OF MOISTURE. WATER DURING PERIODS WITHOUT ADEQUATE RAINFALL. FOR EXAMPLE, SHOULD 1.0" OF RAIN NOT BE RECEIVED WITHIN A WEEK PERIOD, THE TREES SHOULD BE THOROUGHLY WATERED. MARCH THROUGH SEPTEMBER, WATER ONCE EVERY TWO WEEKS. OCTOBER THROUGH FEBRUARY, WATER EVERY THREE WEEKS. WATER THOROUGHLY TO SATURATE THE ENTIRE ROOT ZONE AREA.
- J. CHEMICALLY TREAT TREE TRUNKS WITH EVIDENCE OF BORER ACTIVITY WITH THE APPROPRIATE APPROVED INSECTICIDE MIXED AND APPLIED PER THE MANUFACTURER'S PRODUCT APPLICATION RECOMMENDATIONS. TREES SHALL BE SPRAYED WITHIN 24 HOURS AFTER OBSERVANCE OF BORER ACTIVITY.
- K. GRADING AND FILLING AROUND TREES.
- 1. MAINTAIN EXISTING GRADE WITHIN THE DRIPLINE OF TREES, UNLESS OTHERWISE INDICATED.
- 2. WHERE EXISTING GRADE AROUND TREES IS ABOVE NEW FINISH GRADE, UNDER SUPERVISION OF PROJECT ARBORIST AND CITY OF ANGLETON, CAREFULLY HAND EXCAVATE WITHIN THE DRIPLINE TO MAKE TRANSITION TO NEW FINISH GRADE.
- 3. WHERE EXISTING GRADE IS BELOW NEW FINISH GRADE, PLACE SANDY LOAM SOIL IN A SINGLE LAYER TO MAKE THE TRANSITION TO NEW GRADE. DO NOT COMPACT; HAND GRADE TO REQUIRED ELEVATION.

L. ARBORIST QUALIFICATIONS

1. ARBORIST - EMPLOY QUALIFIED ARBORIST ACCEPTABLE TO CITY TO COMPLETE ALL TREE TREATMENTS. ARBORIST SHALL BE NORMALLY ENGAGED IN THE FIELD AND HAVE A MINIMUM OF 5 YEARS' EXPERIENCE. QUALIFICATIONS OF THE SELECTED ARBORIST SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER AND CITY OF ANGLETON.



D

PROJECT FOR

CITY OF ANGLETON, TEXAS

CHENANGO
GROUND STORAGE TANK
REPLACEMENT

1030 N. CHENANGO ST. ANGLETON, TEXAS 77515

	THE HEART OF BRAZORIA COUNTY NGLETON
C	

MARK DATE DESCRIPTION

	PROJECT NUMBER	10325096
	ORIGINAL ISSUE	
_		
	PROJECT MANAGER	JOHN PETERSON
	PROJECT DESIGNER	VALETTA SALDANHA
	PROJECT ARCHITECT	
	LANDSCAPE ARCHITECT	
	CIVIL ENGINEER	
	STRUCTURAL ENGINEER	
	MECHANICAL ENGINEER	
	ELECTRICAL ENGINEER	
В	INTERIOR DESIGNER	
_	EQUIPMENT PLANNER	
	WAYFINDING	
	DRAWN BY	N.B.

C.N. Koehl
Urban Forestry, Inc.
 210 Stone Bush Ct. • Katy, Texas 7749. 281-391-0022 ckoehl@koehlurbanforestry.com

APPROVED: Crais N. Koell 03-03-2022

SHEET NAME

TREE PROTECTION PLAN
SHEET 3 OF 3

\ SCALE

SHEET NUMBER

TP-3

FILE NAME

hdr chenango tp-1.dwg

