ADDENDUM No. 1

Date October 8, 2014

City of Austin

Project Name ADP-Walnut Creek WWTP Southern Security Fence

C.I.P. No. 3023.054

This Addendum forms a part of Contract and clarifies, corrects or modifies original Bid Documents, dated September 22, 2014. Acknowledge receipt of this addendum in space provided on bid form. Failure to do so may subject bidder to disqualification.

A. Project Manual Revisions:

1. Revised Table of Contents per the following (Revised TOC attached):

   Added Specifications 609S, 610S, and 648S

   Deleted Section 00830BC

   Added Section 00830HH

2. Revised Specification 001010 "Summary of Work" (Specification Attached)

   Remove paragraph 1.2 Description of Work and replace with the following:
   "The work consists of constructing approximately 2,300 linear feet of security fence (COA Specification 701S-H) along the west side of the Western Plant Road of Walnut Creek Treatment Plant. On the northern end (top of Figure 1) the fence will be located about 30 feet offset from the road and will tie into the existing fence post with a short connecting run of fence, about 30 feet long. The remainder of the fence on the west side of the road will be located 15 feet from the edge of pavement. See attached aerial photos (Figures 1 through 4) for location.

   Three double swing vehicle gates (COA Specification 701S-CD) 8 feet x 6 feet shall be installed on the site. A mow strip (COA Specification 701S-MS) shall be installed along the entire length of the security fence. A mulch sock (COA Specification 648S Mulch Sock) will be installed downstream from the construction zone and will be required along the entire length of the fence. Additionally, tree protection (COA Specification 610S) will be required for trees 37, 38, 39, 40 and 41 shown on the Expanded Site Plan View.

   Clearing and grubbing will be required as shown on the attached aerial photographs and will be a minimum of five (5) feet either side of the centerline of the fence, or as required to complete the work. One permitted tree will be removed from the site (Tree Removal Permit). The area disturbed by the work will be re-vegetated with native seeding (COA Specification 609S). All trimmings will be taken to the Hornsby Bend Biosolids management plant for disposal.

   The following information is attached:
   Aerial Photos, Figures 1 through 4
   COA Tree Removal Permit
   Expanded Site Plan View, COA

Topographic Survey, The Wallace Group, Inc.
Security Fence - Standard Civil Detail, COA"

Remove first line of legend on Figure 1 and replace with the following:
"Fence, MS and Mulch Sock"

Added Information to include:
COA Tree Removal Permit
Expanded Site Plan View, COA
Topographic Survey, The Wallace Group, Inc.
Security Fence - Standard Civil Detail, COA

3. Include Specifications 609S, 610S, and 648S (Specifications Attached)

B. Drawing Revisions:

None

C. Other

The Project Manager will be on site on Friday, October 10, 2014 from 10:00 AM to 10:30 AM to allow Bidders to access the site. No questions will be answered.

This addendum consists of 44 page(s).

Approved by OWNER

Approved by ENGINEER/ARCHITECT

STATE OF TEXAS
ROGER HICKMAN
92751
LICENSED PROFESSIONAL ENGINEER

10/31/14

END

Document Number		Title

VOLUME 1

INTRODUCTORY INFORMATION

05/06/11		Title Page
08/18/14		Table of Contents

BIDDING REQUIREMENTS, CONTRACT FORMS, & CONDITIONS OF THE CONTRACT

Pre-Bid Information

00020	04/15/14	Invitation for Bids

Instructions to Bidders

00100	03/06/14	Instructions to Bidders

Information Available to Bidders

00220	05/06/11	Geotechnical Data

Bid Forms

00300L	03/06/14	Bid Form (Lump Sum)

Supplements to Bid Forms

00400	04/22/13	Statement of Bidder's Experience
00405	09/25/05	Certificate of Non-Suspension or Debarment
00410	05/06/11	Statement of Bidder's Safety Experience
00440	05/06/11	Affidavit - Prohibited Activities
00475	05/06/11	Nonresident Bidder Provisions

Agreement Form

00500	03/12/12	Agreement

Bonds and Certificates

00610	02/23/10	Performance Bond
00620	02/23/10	Payment Bond
00630	03/06/14	Nondiscrimination Certificate
00631	03/06/14	Title VI Assurances Appendix A
00650	07/30/12	Certificate of Insurance
00670	03/20/14	Sales Tax Exemption Certificate
00680	06/05/06	Non-Use of Asbestos Affidavit (Prior to Construction)
00681	06/05/06	Non-Use of Asbestos Affidavit (After Construction)

General Conditions

00700	03/06/14	General Conditions

Supplementary Conditions

00810	04/15/14	Supplemental General Conditions
00819	06/10/05	Security Requirements
00820	03/12/12	Modifications to Bidding Requirements and Contract Forms
00830	03/12/12	Wage Rates and Payroll Reporting
00830HH	01/03/14	Wage Rates Heavy Construction

Document Number		Title
Addenda		
00900	02/23/10	Addendum

SPECIFICATIONS

Division 1 - General Requirements

01010	04/22/13	Summary of Work
01095	07/21/03	Reference Standards and Definitions
01200	08/09/12	Project Meetings
01300	04/22/13	Submittals
01352	04/22/13	Sustainable Construction Requirements
01353	08/09/12	Construction Equipment Emissions Reduction Plan
01380	08/09/12	Construction Photography & Videos
01500	08/09/12	Temporary Facilities
01505	04/22/13	Construction and Demolition Waste Management
01900	03/12/12	Prohibition of Asbestos Containing Materials
01900a	06/05/06	Statement of Non-Inclusion of Asbestos Containing Material (E/A Prior to Design)
01900b	06/05/06	Statement of Non-Inclusion of Asbestos Containing Material (E/A After Design)

City Standard Technical Specifications

1. 102S 08/20/07 Clearing and Grubbing
2. 609S 08/18/10 Native Grassland Seeding and Planting for Erosion Control
3. 610S 09/26/12 Preservation of Trees and Other Vegetation
4. 648S 08/18/10 Mulch Sock
5. 701S 09/26/12 Fencing

VOL. 2 10/09/00 **MBE/WBE Procurement Program Package**

END

Item No. 609S
Native Grassland Seeding and Planting for Erosion Control

609S.1 Description

This item shall govern the preparation of a seeding and planting area to the lines and grades indicated on the Drawings. This may include seedbed preparation, sowing of seeds, planting of rooted plants, watering, hydromulch, compost and other management practices, as indicated in the Drawings or as directed by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, inch-pound units are given preference with SI units shown within parentheses.

609S.2 Submittals

The submittal requirements for this specification item shall include:

A. Identification of the species, source, mixture and rate of application of the seeding.

B. Type of mulch or compost.

C. Watering frequency and amount.

D. Type of management practices.

609S.3. Materials

A. The seed furnished shall be of the previous season's crop and the date of analysis shown on each bag shall be within twelve months of the time of delivery to the project. Each variety of seed shall be furnished and delivered in separate bags or containers. A sample of each variety of seed shall be furnished for analysis and testing when directed by the Engineer or designated representative.

   The amount of seed planted per 1000 square feet (93 square meters) shall be of the type specified in section 609S.5.

B. Water shall be clean and free of industrial wastes and other substances harmful to the growth of grass in the area irrigated.

C. Topsoil see Standard Specification Item No. 601S.3(A)

D. A least toxic, integrated pest management (IPM) approach shall be used to control weeds. A written request for approval of weed control product(s) and/or materials shall be submitted to the City of Austin IPM program coordinator (499-2550) for approval.

ADDENDUM #1

E. Rooted plants must be healthy and free of pests. The root system should be well established and in proportion to the top growth.

609S.4 Construction Methods

A. General.

The Contractor shall limit preparation to areas that will be immediately seeded. All noxious weeds shall be eliminated by application of a herbicide and/or by physical removal (by the roots) prior to and/or during the seeding operation. The following list of plants are considered noxious weeds:

Table 1: Weed List

Weed Type	Botanical Name	Common Name
Herb	Ambrosia spp.	Ragweed
Grass	Bothriochloa ischaemum	K.R. Bluestem
Grass	Bromus unioloides	Rescue Grass
Herb	Cenchrus spp.	Sandbur
Herb	Cnidoscolus texanus	Bull Nettle
Herb	Convolvulus spp.	Bindweed
Grass	Cynodon dactylon	Bermudagrass*
Herb	Cyperus esculentus	Yellow Nutsedge (Nut-grass)
Herb	Cyperus rotundus	Purple Nutsedge (Nut-grass)
Grass	Digitaria spp.	Crab Grass
Herb	Medicago sp.	Bur-Clover
Grass	Paspalum dilatatum	Dallis Grass
Grass	Sorghum halapense	Johnson Grass
Herb	Torilis arvensis	Beggar's-tick
Vine	Toxicodendron radicans	Poison Ivy
Herb	Urtica spp.	Stinging Nettle

B. Seed Bed Preparation.

After the designated areas have been rough graded, a suitable seedbed shall be prepared. In areas where cut or fill is required, a minimum of 6 inches (150 mm) of topsoil (see Section 609S.3.C) shall be placed or existing soil (that is not infested with weeds or weed rootstock) stockpiled over the entire planting area.

In areas with no soil disturbance, the weeds shall be eliminated and a minimum of 2 inches (50 mm) of topsoil, if none currently exists, shall be placed. An even seedbed shall be prepared with limited irregularities, lumps or soil clods and the surface shall be raked to facilitate seed to soil contact.

C. Watering.

All watering shall comply with City of Austin Land Development Code requirements. Seeded areas shall immediately be watered with a minimum

ADDENDUM #1

of 5 gallons of water per square yard (22.5 liters of water per square meter) or as needed and in the manner and quantity as directed by the Engineer or designated representative.

Watering applications shall insure that the seedbed is maintained in a moist condition favorable for the growth of grass. Watering shall continue until minimum coverage is achieved and accepted by the Engineer or designated representative. Watering may be postponed immediately after a 1/2 inch (12.5 mm) or greater rainfall on the site but shall be resumed before the soil dries out.

Availability of water from the Austin Water Utility will be limited as stated under the Water Conservation Standard, City of Austin Land Development Code Chapter 6-2, Article II, "Water Use Management Plan Established".

The use of potable water will be restricted as stated in City of Austin Land Development Code Sections 6-4-73, 6-4-54, 6-4-63, 6-4-64, 6-4-65, 6-4-81, 6-4-92, 15-9-37(D) and 15-9-101(B).

609S.5 Native Grassland Seeding and Planting

All areas require both seed and rooted plants. Seeding and planting shall be performed in accordance with the requirements hereinafter described. The optimum depth for seeding shall be from 1/16 inch (1 1/2 millimeters) to 1/8 inch (3 millimeters). Seed shall be applied by a method that achieves consistent distribution and proper seed to soil contact (i.e. hand broadcasting, hydromulch, or drill method). Mulching is not required.

Species substitution, when necessary due to availability, shall be approved by the Engineer or designated representative. Only native species adapted for the designated environmental conditions shall be allowed as substitutes. Shorter growing natives such as Buffalograss should be sodded around manholes or other structures requiring higher visibility for access.

If the native grassland is being installed during the cool season (November 1 to February 15), the cool season cover crop species (as listed) shall be included in the mix.

The seed and rooted plant mixtures shall be applied in accordance with appropriate 'growing environments' (Upland Full Sun–Table 2, Upland Shade-Dappled-Table 3 and Facultative Moderate to High Moisture–Table 4).

ADDENDUM #1

Table 2. Upland Species, Full Sun Areas

Common Name	Comments	Botanical Name	Seed application rate lbs/1000 sq. ft. (kg/100 sq. m.)	Rooted Plants Size & Spacing
Buffalo Grass	grass	Buchloe dactyloides	0.3 (0.15)	1 - 16" x 24" piece of sod @ 10' (3m) ctrs.
Blue Grama	grass	Bouteloua gracilis	0.2 (0.1)	Not required
Green Srangletop	grass	Leptochloa dubia	0.4 (0.2)	
Indian Grass	grass	Sorghastrum nutans	0.2 (0.1)	1 gal @ 10 ft.' (3m) ctrs.
Little Bluestem	grass	Schizachyrium scoparium	0.2 (0.1)	
Prairie Wild Rye	grass	Elymus canadensis	0.2 (0.1)	Not required
Purple Threeawn	grass	Aristida purpurea	0.2 (0.1)	
Sideoats Grama	grass	Bouteloua curtipendula	0.3 (0.15)	
Bluebonnet	wildflower	Lupinus texensis	0.4 (0.2)	Not required
Clover (Purple Prairie)	wildflower	Petalostemum purpurea	0.1 (0.05)	Not required
Coreopsis (Plains)	wildflower	Coreopsis tinctoria	0.05 (0.025)	Not required
Goldenrod	wildflower	Solidago altissima	0.02 (0.01)	Not required
Greenthread	wildflower	Thelesperma filifolium	0.075 (0.037)	Not required
Indian Blanket	wildflower	Gaillardia pulchella	0.15 (0.075)	Not required
Lemon Mint	wildflower	Monarda citriodora	0.06 (0.03)	Not required
Mexican Hat	wildflower	Ratibida columnaris	0.05 (0.025)	Not required
Pink Evening Primrose	wildflower	Oenethera speciosa	0.02 (0.01)	Not required
Sunflower (Common)	wildflower	Helianthus annus	0.075 (0.037)	Not required
Cereal rye grain*	cool season cover crop	Elymus	0.5 (0.25)	Not required
Oats*	cool season cover crop	Avena sativa	0.2 (0.10)	Not required
Wheat*	cool season cover crop	Triticum aestivum	0.3 (0.15)	Not required
TOTAL**			Winter: 4.0 (2.0) Summer 3.0 (1.5)	Rooted species mixed equally @ 10 ft. (3 m) ctrs.

* Plant only between Oct. 1 and Jan. 31. Non-persistent winter cover crop for erosion control.

ADDENDUM #1

** Any unavailable species can be substituted with the same quantity of another species from this list or another species approved by the Engineer or designated representative.

Table 3. Upland Species, Shade-Dappled Light Areas

Common Name	Comments	Botanical Name	Seed Application Rate lbs/1000 sq. ft. (kg/100 sq. m.)	Rooted Plants Size & Spacing
Meadow Sedge*	sedge	Carex perdentata	No seed required	1 gal. @ 10' (3m) ctrs.
Inland Seaoats**	grass	Chasmanthium latifolium	0.5 (0.25)	
Prairie Wild Rye	grass	Elymus canadensis	0.75 (0.37)	Not required
Sideoats Grama	grass	Bouteloua curtipendula	0.75 (0.37)	1 gal. @ 10' (3m) ctrs.
Purple Coneflower	wildflower	Echinacea purpurea	0.1 (0.05)	Not required
Coreopsis (Lanceleaf)	wildflower	Coreopsis lanceolata	0.1 (0.05)	Not required
Sage (Scarlet)	wildflower	Salvia coccinea	0.1 (0.05)	Not required
Drummond Phlox	wildflower	Phlox Drummondii	0.1 (0.05)	Not required
Black-Eyed Susan	wildflower	Rudbeckia hirta	0.03 (0.015)	Not required
Cutleaf Daisy	wildflower	Engelmannia pinnatifida	0.2 (0.10)	Not required
Tall Aster	wildflower	Aster praealtus	0.02 (0.01)	Not required
Illinois bundleflower	wildflower	Desmanthus illinoiensis	0.15 (0.075)	Not required
Standing cypress	wildflower	Ipomopsis rubra	0.1 (0.05)	Not required
Winecup	wildflower	Callirhoe involucrata	0.1 (0.05)	Not required
Cereal rye grain***	cool season cover crop	Secale cereale	0.5 (0.25)	Not required
Oats***	cool season cover crop	Avena sativa	0.2 (0.1)	Not required
Wheat***	cool season cover crop	Triticum aestivum	0.3 (0.15)	Not required
TOTAL****			Winter: 4.0 (2.0) Summer: 3.0 (1.5)	Rooted species mixed equally @ 10' (3m) ctrs.

* If unavailable replace with other shade and drought-tolerant sedge species.

** If unavailable replace with Prairie Wild Rye.

*** Plant only between Oct. 1 and Jan. 31. Non-persistent winter cover crop for erosion control.

ADDENDUM #1

**** Any unavailable species can be substituted with the same quantity of another species from this list or another species approved by the Engineer or designated representative.

Table 4. Facultative Species, Moderate – High Moisture Areas

Common Name	Comments	Botanical Name	Seed application rate lbs/1000 sq. ft. (kg/100 sq. m.)	Rooted Plants Size & Spacing
Big Bluestem	grass	Andropogon gerardii	0.2 (0.1)	1 gal. @ 10' (3m) ctrs
Big Muhly (Lindhiemers)	grass	Muhlenbergia lindheimeri	0.2 (0.1)	
Bushy Bluestem	grass	Andropogon glomeratus	0.2 (0.1)	
Eastern Gama Grass	grass	Tripsacum dactyloides	0.3 (0.15)	
Indian Grass	grass	Sorghastrum nutans	0.2 (0.1)	
Inland Seaoats	grass	Chasmanthium latifolium	0.3 (0.15)	
Prairie Wild Rye	grass	Elymus canadensis	0.3 (0.15)	Not required
Sand Lovegrass	grass	Eragrostis trichodes	0.2 (0.1)	
Switchgrass	grass	Panicum virgatum	0.1 (0.05)	1 gal. @ 10' (3m) ctrs
Black-Eyed Susan	wildflower	Rudbeckia hirta	0.06 (0.03)	Not required
Bundleflower (Illinois)	wildflower	Desmanthus illinoiensis	0.35 (0.17)	Not required
Clover (Purple Prairie)	wildflower	Petalostemum purpurea	0.1 (0.05)	Not required
Coneflower (Clasping)	wildflower	Rudbeckia amplexicaulis	0.06 (0.03)	Not required
Coreopsis (Plains)	wildflower	Coreopsis tinctoria	0.05 (0.025)	Not required
Goldenrod	wildflower	Solidago altissima	0.03 (0.015)	Not required
Lazy Daisy	wildflower	Aphanostephus sp.	0.03 (0.015)	Not required
Lemon Mint	wildflower	Monarda citriodora	0.07 (0.035)	Not required
Sunflower (Common)	wildflower	Helianthus annuus	0.15 (0.075)	Not required
Sunflower (Maximilian)	wildflower	Helianthus maximiliani	0.1 (0.05)	Not required
Cereal rye grain*	cool season cover crop	Secale cereale	0.5 (0.25)	Not required

ADDENDUM #1

Oats*	cool season cover crop	Avena sativa	0.2 (0.10)	Not required
Wheat*	cool season cover crop	Triticum aestivum	0.3 (0.15)	
TOTAL**			winter: 4.0 (2.0) summer: 3.0 (1.5)	Rooted species mixed equally @ 10' (3m) ctrs.

* Plant only between Oct. 1 and Jan. 31. Non-persistent winter cover crop for erosion control.

** Any unavailable species can be substituted with the same quantity of another species from this list or another species approved by the Engineer or designated representative.

609S.6 Management Practices

Weeds, as defined in the Weed List (Table 1), shall be controlled in the most efficient manner possible. The timing of weed control may occur prior to soil disturbance, just before the installation of seed, and/or during the period of grassland establishment. Weed control shall be introduced at one or all of these times, so that the greatest control is achieved. The preferred method of control is to remove weeds, either by physical or mechanical means, when the site is conducive (e.g. when the ground is moist) to this approach.

The entire root system of perennial weeds shall be removed to prevent re-sprouting. Weeds may be controlled with an approved contact, systemic herbicide, provided the product is used with appropriate care and is applied in accordance with label instructions and the following guidelines:

1. Herbicide shall not be applied when the wind is greater than 8 mph (12.9 kph),
2. Herbicide shall not be applied when rainfall is expected within 24 hours,
3. Herbicide shall not contact surface water, i.e. creeks, rivers, and lakes,
4. Herbicide shall not contact desirable vegetation (a wicking method shall be used, if necessary, to accurately contact target weed only during application).

The Engineer or designated representative shall be consulted to determine appropriate weed control management when weeds are located in an environmentally sensitive location (e.g. near water or adjacent to a critical environmental feature).

609S.7 Measurement

Work and acceptable material for "Native Grasslands for Erosion Control" will be measured by the square yard (square meter: 1 square meter equals 1.196 square yards) or by the acre (hectare: 1 hectare equals 2.471 acres), complete in place, with a minimum of 95 percent coverage with no bare areas exceeding 16 square feet (1.5

ADDENDUM #1

square meters) and a 1 1/2 inch (40 millimeters) stand of grass. Bare areas shall be reprepared and reseeded as required by the Engineer or designated representative in order to develop an acceptable stand of grass.

609S.8 Payment

The work performed and materials furnished and measured will be paid for at the unit bid price for "Native Grasslands For Erosion Control" of the method specified on the Drawings.

The unit bid price shall include full compensation for furnishing all materials, including all topsoil, water, seed, or fertilizer or mulch and for performing all operations necessary to complete the work.

Payment will be made under one or more of the following pay items:

Pay Item No. 609S-A:	Topsoil and Seedbed Preparation	Per Square Yard.
Pay Item No. 609S-B:	Topsoil and Seedbed Preparation	Per Acre.
Pay Item No. 609S-C:	Native Grassland Seeding and Planting	Per Square Yard.
Pay Item No. 609S-D:	Native Grassland Seeding and Planting	Per Acre.
Pay Item No. 609S-E:	Watering	Per Square Yard
Pay Item No. 609S-F:	Watering	Per Acre
Pay Item No. 609S-G:	Management Practices	Per Square Yard
Pay Item No. 609S-H:	Management Practices	Per Acre

End

ADDENDUM 1

SPECIFIC CROSS REFERENCE MATERIALS

Specification Item 609S "Native Grassland Seeding and Planting for Erosion Control"

City of Austin Standard Specifications

Designation	Description
Item No. 130S	Borrow
Item No. 606S	Fertilizer

City of Austin Land Development Code

Designation	Description
Section 6-4-52	Water Use Management Plan Established
Section 6-4-53	Applicability
Section 6-4-54	Compliance Required
Section 6-4-63	Permanent Water Use Restrictions
Section 6-4-64	Water Conservation Stage One Regulations
Section 6-4-65	Water Conservation Stage Two Regulations
Section 6-4-81	Variance
Section 6-4-92	Penalty
Section 15-9-37(D)	Customer's Responsibilities
Section 15-9-101(B)	Basis for Termination of Service

RELATED CROSS REFERENCE MATERIALS

Specification Item 609S "Native Grassland Seeding and Planting for Erosion Control"

City of Austin Standard Specifications

Designation	Description
Item No. 601S	Salvaging and Placing Topsoil
Item No. 602S	Sodding for Erosion Control
Item No. 604S	Seeding (Non-Native) for Erosion Control
Item No. 605S	Soil Retention Blanket
Item No. 607S	Slope Stabilization
Item No. 608S	Planting

ADDENDUM 1

City of Austin Standards (Details)

Standard No.	Description
627S-1	Grass Lined Swale
62S7-2	Grass Lined Swale W/ Stone Center
633S-1	Landgrading

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

Designation	Description
Item No. 160	Furnishing and Placing Topsoil
Item No. 162	Sodding for Erosion Control
Item No. 164	Seeding for Erosion Control
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering
Item No. 169	Soil Retention Blanket
Item No. 180	Wildflower Seeding
Item No. 192	Roadside Planting and Establishment

ADDENDUM 1

Item No. 610S
Preservation of Trees and Other Vegetation

610S.1 Description and Definitions

This item shall govern the proper care, protection and treatment of trees and other vegetation in the vicinity of the permitted development activity (as defined in Land Development Code 25-1-21(27)). All work shall be performed in accordance with the City approved drawings and specifications (e.g. Standard Series 600) or as approved by the City Arborist (as defined below). Tree pruning and/or treatments shall be performed under the direct supervision of a qualified arborist (as defined below) or as allowed by the City Arborist.

Definitions

City Arborist – City official designated by the Director of the Planning and Development Review Department (Land Development Code 25-8-603) or as designated by the City Arborist.

Oak wilt - a tree disease caused by a fungus "Ceratocystis fagacearum" that infects the vascular system of Oak "genus Quercus" trees and prevents water transport through the trunk and canopy of the tree. This usually fatal tree disease can be spread by certain insects that come into contact with tree wounds or by interconnected tree roots. February through June is a high risk period due to the stage of the fungus and insect activity. See section 610S.4(H) for additional requirements for preventing Oak wilt infection.

Qualified Arborist – an individual engaged in the profession of arboriculture or closely related field who, through experience, education, and related training, possesses the competence to provide for, or supervise, the management of trees and other woody plants (as defined in the most current version of ANSI A300 (Part 1)-2001, section 4.1).

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text and accompanying tables, the inch-pound units are given preference followed by SI units shown within parentheses.

610S.2 Submittals

The following is a list of the minimum submittal requirements for this specification item shall include:

A. Identification of the location, type of protective fencing (i.e. A, B or C), materials of construction and installation details;

B. Qualified Arborist credentials (i.e. proof of certification from the International Society of Arboriculture, licenses, resume and/or references);

C. Type, location and construction details for proposed tree wells;

ADDENDUM 1

D. Location, type, materials of construction and installation details for permeable paving;

E. Proposed nutrient mix specifications and when required by the City Arborist, soil and/or foliar analysis for fertilizer applications.

610S.3 Materials

A. Protective Fencing and Signage

Protective fencing is designated as the materials used to protect the root zones of trees as illustrated in City of Austin Standard Detail 610S-1. Three basic types of protective fencing materials are allowed by the City of Austin. Type A and Type B are typical applications and shall be installed where damage potential to a tree root system is high, while Type C shall be installed where damage potential is minimal. The specific type of protective fencing for the work shall be as indicated on the drawings. Type C fence materials shall be subject to approval by the City Arborist. Type C fencing shall be replaced by Type A or Type B fencing as directed by the City Arborist if it fails to perform the necessary function.

1. Type A Chain Link fence (Typical Application-high potential damage)

Type A protective fencing shall be installed in accordance with City of Austin Standard Details 610S-2 and 610S-4 and shall consist of a minimum five-foot (1.5 meters) high chain link fencing with tubular steel support poles or "T" posts.

2. Type B Wood Fence (Typical Application-high potential damage)

Type B protective fencing shall be installed in accordance with City of Austin Standard Details 610S-3 and 610S-5 and shall consist of any vertical planking attached to 2x4-inch (50 x 100 mm) horizontal stringers which are supported by 2x4-inch (50 x 100 mm) intermediate vertical supports and a 4x4-inch (100 x 100 mm) at every fourth vertical support .

3. Type C Other Materials (Limited Application-minimal potential damage)

The following materials may be permitted as alternates for limited or temporary applications (3 days or less) where tree damage potential is minimal (as determined by the City Arborist):

(a) High visibility plastic construction fencing.

The fabric shall be 4 feet (1.2 meters) in width and made of high density polyethylene resin, extruded and stretched to provide a highly visible international orange, non-fading fence. The fabric shall remain flexible from -60oF to 200oF (-16oC to 93oC) and shall be inert to most chemicals and acid. The fabric pattern may vary from diamond to circular with a minimum unit weight of 0.4 lbs./Ft. (0.6 kilograms per meter).

The fabric shall have a 4 foot (1.2 meters) width minimum tensile yield strength (Horizontal) of 2000 psi [13.9 megaPascals], ultimate tensile

strength of 2680 psi [18.5 megaPascals] (Horizontal) and a maximum opening no greater than 2 inches (50 mm).

(b) Other approved equivalent restraining material.

The fencing materials, identified in (a) and (b) above, shall be supported by steel pipe, tee posts, U posts or 2" x 4" (50 mm x 100 mm) timber posts that are a minimum of 5-1/2 feet (1.68 meters) in height and spaced no more than 8 feet (2.44 meters) on centers. The fabric shall be secured to post by bands or wire ties.

4. Signage

A laminated sign, no smaller than 8.5 X 11 inches, shall be posted on each tree protective device, and at least every 100 linear feet on protective fencing, identifying the following information: Tree & Root Protection Zone, Per City of Austin code (Chapter 25-8, Subchapter B, Article 1) this protective device is to remain in place for the entirety of the development project and illegal removal is subject to fines and work suspensions. Additional information can be obtained at the City Arborist (512-974-1876) web site (http://www.ci.austin.tx.us/trees). Zona de Protección del Árbol y las Raíces: el dispositivo protector debe quedarse en el lugar para la totalidad del proyecto de la construcción. Para información adicional, contacta la Arborista Municipal (512) 974-1876 o http://www.ci.austin.tx.us/trees/trees_spanish.htm.

B. Trunk Protection (Limited Application)

When indicated on the drawings or directed by the City Arborist tree trunk protection shall be provided in accordance with City of Austin Standard Details 610S-4 and 610S-5. Tree trunk protection shall consist of any 2 x 4-inch (50 x 100 mm) or 2 x 6-inch (50 x 150 mm) planking or plastic strapping and shall be attached in a manner that does not damage the tree.

C. Tree Dressing

Wound treatments should not be used to cover wounds or pruning cuts, except when recommended for disease (see section 610S.4 (H)), insect, mistletoe, or sprout control (from ANSI A300 (Part 1)-2001, section 5.4.1).

D. Tree Wells for Raised Grades

When existing grades are raised by more than 4 inches (10.16 cm), the tree root system shall be protected by the installation of tree wells in accordance with City of Austin Standard Detail 610S-6. Native stone or non-toxic timber shall be used for the separator wall of the well and PVC conforming to ASTM D-2729, SDR-35 shall be used for the aeration systems in fill areas.

E. Permeable Paving (Environmental Criteria Manual Section 3.5.A.1)

Permeable segmented pavers in conjunction with PVC pipe aeration system or concrete on gravel base with cored holes shall be used to protect existing tree root zones when indicated on the drawings or directed by the City Arborist.

F. Fertilizer

ADDENDUM 1

Humate/nutrient solutions with mycorrhizae components or soil injection at recommended rates are to be used when appropriate. Construction which will be completed in less than 90 days may use materials at half the recommended rates. Alternative organic fertilizer materials are acceptable when approved by the City Arborist.

610S.4 Construction Methods

A. Protective Fencing

All trees and shrubs in the proximity of the construction site shall be carefully checked for damage prior to initiation of the permitted development activity.

All individual or groups of trees, shrubs, and natural areas shown to be protected on the drawings or identified to be protected by the City Arborist, shall be protected during construction with temporary fencing as indicated on the drawings or as directed by the City Arborist.

Protective fences (section 610S.4.A) shall be installed prior to the start of any site preparation work (clearing, grubbing, or grading), and shall be maintained in functioning condition throughout all phases of the construction project.

Protective fence locations in close proximity to intersecting streets or drives shall adhere to the sight distance (Section 1.3.1.C.6) and desirable sight triangle (Figure 1-6 criteria found in the City of Austin Transportation Criteria Manual).

1. Protective fences shall be constructed at the locations (typically the outer limits of the critical root zone) and with materials indicated on the drawings to prevent the following (Environment Criteria Manual, Appendix P-2, Note 6):

   (a) Soil compaction in the root zone area resulting from vehicular traffic or storage of equipment or materials.

   (b) Critical root zone disturbances due to grade changes [greater than 4" (10.16 cm) cut or fill] or trenching not reviewed and authorized by the City Arborist.

   (c) Damage to exposed roots, trunks or limbs by mechanical equipment.

   (d) Other activities detrimental to trees such as chemical storage, concrete truck cleaning, and fires.

2. Exceptions to the installation of protective fences at the tree drip lines may be permitted in the following cases:

   (a) Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development, the fence shall be erected no more than 2 feet (0.6 meters) beyond the area of disturbance unless approved by the City Arborist;

   (b) When permeable paving is to be installed within a tree's critical root zone, the fence shall be erected at the outer limits of the permeable paving area (prior to any site grading so that this enclosed area is graded separately to minimize root damage);

(c) When trees are located close to a proposed building or other construction activity (Environment Criteria Manual, Appendix P-2, Note 6.c), the fence shall be erected up to 10 feet (3 meters) to allow work space between the fence and the structure. Apply organic mulch to a depth of 8 inches [30.48 cm] in the unprotected root zone area;

(d) When there are street-side pedestrian walkways, fences shall be constructed in a manner that does not obstruct safe passage;

(e) When there are severe space constraints due to tract size or other special requirements, the Contractor shall contact the City Arborist to discuss alternatives.

When any of the exceptions listed above will result in a fence being located closer than five (5) feet (1.5 meters) to a tree trunk, the Contractor shall also protect the trunk with strapped-on planking to a height of 8 feet [2.4 meters] (or to the limits of lower branching) in addition to the fencing requirement (City of Austin Standard Details 610S-4 and 610S-5).

B. Pruning and Repair of Damage

Tree pruning, to provide clearance for the work and/or to remove hazards, shall be performed under the direct supervision of a qualified arborist and shall follow standards identified in ANSI A300 (Part 1), "Pruning". A minimum clearance height of eight (8) feet (2.4 meters) above the street level must be provided and maintained for all existing trees if adjacent to a sidewalk. However, if the limbs of trees overhang the curb line or edge of travel lane of any street, a minimum clearance height of fourteen (14) feet (4.2 meters) is required (Transportation Criteria manual section 6.2.3,A, 4, "Clearance Height"). Pruning shall provide the minimum clearance needed to perform the work or remove a hazard unless otherwise directed by the City Arborist to comply with transportation criteria or to mitigate for damage.

If tree damage compromises a tree's structural integrity then the area shall be adequately secured until a qualified arborist makes an assessment of the tree and corrective actions are completed with approval from the City Arborist. Damage to oak trees shall be treated immediately, with consideration for site safety, to reduce the risk of Oak Wilt infection (See 610S.4.H, "Oak Wilt Prevention"). Tree root wounds shall be treated to remove loose, damaged tissue from in and around the wound or if necessary the root shall be cut cleanly and covered with topsoil, or other material approved by the City Arborist, to prevent drying of root tissue and to create a favorable environment for root sprouting. Trunk wounds shall also be treated to remove loose, damaged tissue around the wound. Tree canopy repairs shall be performed in accordance with the most current version of ANSI A300 (Part 1), "Pruning", to prevent further damage to the tree and to promote recovery of the tree to sound condition. The ANSI standard describes proper pruning methods for limb removal and for making finish pruning cuts.

Trees damaged or removed without prior approval or where minimum design criteria is exceeded due to failure to maintain approved tree protection shall be mitigated (Environmental Criteria Manual section 3.5.4, "Mitigation Measures") in accordance with Land Development Code Chapter 25-8, Subchapter B, Article 1.

All trees damaged during construction shall receive an application of fertilizer within the drip line conforming to Standard Specification Item No. 606S, "Fertilizer" at the rate of 4 pounds per caliper inch (.07 kilograms per caliper mm).

C. Cutting and Filling Around Trees

When the depth of an excavation or embankment exceeds 4 inches (10.16 cm) within the critical root zone of any tree with a trunk diameter greater than 8 inches (200 mm), the City Arborist may require a tree well to be constructed per the City of Austin approved specifications and details (Section 610S.3.D and City of Austin Standard Detail 610S-6).

D. Paving Around Trees

Where new paving within the ½ critical root zone of any tree greater than a 8 inches (10.16 cm) diameter is approved, a permeable pavement and aeration system may be required by the City Arborist per the City of Austin Standard Detail (Section 610S.3.E, Environmental Criteria Manual Section 3.5.3.A.1 and Figure 3-8) must be installed as indicated on the Drawings, except for street construction.

E. Tree Removal

Tree removal shall comply with Land Development Code Chapter 25-8, Subchapter B, Article 1. An approved permit, or an approved site plan is required for removal of trees 8" and larger (see Environmental Criteria manual section 3.3.2.A.2 and figure 3-1 for measurement standards) with additional requirements for City Parkland properties and for Hill Country Roadway Corridor sites. Trees 19 inches in diameter and greater are defined as protected trees and require specific review from the City Arborist to approve a permit or site plan for removal. In addition heritage trees require a more extensive evaluation by the City Arborist and may require rulings from boards and commissions.

All trees to be removed shall be performed in a manner that does not damage the canopies, trunks or root systems of remaining trees and that protects all existing facilities, improvements and vegetation. Removal of oak trees shall follow the Oak Wilt Prevention procedures per the City of Austin Standards (Section 610S.4,(H)). All tree material shall be removed from the site unless authorized by the City Arborist or if it will be used as wood chips or mulch.

When a tree or shrub is scheduled for removal, it shall be cut to a maximum depth of 12 inches (30.5 cm) below the surrounding grade (the tree(s) should be removed at grade, and with hand saws, in situations where other tree root systems are present which are to be preserved). When applicable, after tree removal, soil shall be placed in the hole to a depth matching the existing grade.

All damage resulting from tree removal or pruning shall be repaired at the Contractor's own expense and shall follow guidelines in this specification.

F. Final Cleanup

All temporary tree and shrub preservation and protection measures shall be removed when the construction has been completed and any mulch applications shall be removed or reduced to no more than 3 inches (7.62 cm) depth.

G. Root Zone Aeration and Fertilization

As a component of an effective remedial tree care program per Environmental Criteria Manual section 3.5.4, preserved trees within the limits of construction may require soil aeration and supplemental nutrients. Soil and/or foliar analysis should be used to determine the need for supplemental nutrients. The City Arborist may require these analyses as part of a comprehensive tree care plan. Soil pH shall be considered when determining the fertilization composition as soil pH influences the tree's ability to uptake nutrients from the soil. If analyses indicate the need for supplemental nutrients, then humate/nutrient solutions with mycorrhizae components are highly recommended. In addition, soil analysis may be needed to determine if organic material or beneficial microorganisms are needed to improve soil health. Materials and methods are to be approved by the City Arborist (512-974-1876) prior to application. The owner or general contractor shall select a fertilization contractor and ensure coordination with the City Arborist.

Pre-construction treatment should be applied in the appropriate season; ideally the season preceding the proposed construction. Minimally, areas to be treated include the entire critical root zone of trees as depicted on the City approved plans. Treatment should include, but not limited to, fertilization, soil treatment, mulching, and proper pruning.

Post-construction treatment should occur during final revegetation or as determined by a qualified arborist after construction. Construction activities often result in a reduction in soil macro and micro pores and an increase in soil bulk density. To ameliorate the degraded soil conditions, aeration via water and/or air injected into the soil is needed or by other methods as approved by the City Arborist. The proposed nutrient mix specifications and soil and/or foliar analysis results need to be provided to and approved by the City Arborist prior to application (Fax # 512-974-3010). Construction which will be completed in less than 90 days may use materials at ½ recommended rates. Alternative organic fertilizer materials are acceptable when approved by the City Arborist. Within 7 days after fertilization is performed, the contractor shall provide documentation of the work performed to the City Arborist, Planning and Development Review Department. P.O. Box 1088, Austin, TX 78767. This note should be referenced as item #1 in the Sequence of Construction.

H. Oak Wilt Prevention Policy

1. Purpose and Scope

The purpose of this Oak Wilt Prevention Policy is to identify measures that city staff and city-hired contractors and their sub-contractors, who perform the services of removing or trimming trees, will take to prevent the spread of oak wilt.

2. Definitions

Oak Wilt Disease: A tree disease caused by the fungus, Ceratocystis fagacearum. The fungus infects the vascular system of a tree. The vascular system contains vessels which transport moisture throughout the tree. The vessels of an infected tree effectively become blocked by the infection of the fungus, and cannot transport adequate moisture to sustain a healthy or living tree. In most cases, the end result is tree mortality.

3 Prevention Policy

ADDENDUM 1

(a) Prior to beginning field work, all city staff associated with projects involving potential contact with oak trees shall be made aware of the city's official Oak Wilt Policy by receiving and reading a written copy of this policy. Staff receiving a written copy of the policy shall include, but not limited to, project managers, equipment operators responsible for removing or trimming trees, or operators using heavy equipment which could cause wounding of susceptible oaks in the use of the equipment. In addition, individual city departments will provide a written copy of the Oak Wilt Policy to contractors participating in city projects in areas where oak trees are present before initiating field work.

(b) When possible, city staff and contractors should avoid trimming, pruning, or wounding Live Oaks and Red Oaks (Spanish, Shumard, Texas Red, and Blackjack oaks) from February through June.

(c) At all times and irrespective of limb size, all cuts and wounds to oak trees shall be dressed immediately using a non-phytotoxic tree wound dressing. Stump cuts and damaged roots (both above and below ground) shall also be dressed.

(d) Disinfection of pruning tools, saws, and related equipment is mandatory during the trimming or pruning of oak trees. Disinfection of tree removal and trimming equipment shall occur before work begins in a project area, between work in individual oak trees, and again prior to leaving a project area. Acceptable disinfectants include either aerosol disinfectant or a 10 percent bleach-water solution.

*NOTE: Although this policy would require the disinfection of pruning equipment before and between oak trees as a precaution, research does not substantiate disinfection as a means of preventing the transmission of the oak wilt disease.

4. Disposal Policy

(a) Chipping or shredding the wood from infected trees to use as mulch is an acceptable means of recycling the wood. Chipping or shredding allows the wood to dry out quickly, thereby killing the fungus.

(b) Burning diseased wood is an acceptable means of disposal. Burning diseased logs will kill the fungus, and the fungus will not spread with the smoke.

(c) Logs from diseased Red Oaks, that are not chipped, shredded, or burned shall be disposed of at a landfill.

(d) Firewood from diseased Red Oak trees shall not be stored near healthy trees where fungal spores or insects that carry the spores have the potential to spread the fungus to healthy trees. It is recommended to store oak firewood under a sheet of clear plastic, tightly sealing the edges of plastic with soil or bricks. Doing so will prevent any spore carrying beetles from escaping and will solarize and heat the stored firewood to speed the drying process. It is also recommended to use

clear plastic, as black plastic will reveal any escape holes to the beetles.

(e) In situations where diseased Red Oak trees are identified and are not accessible for chipping, shredding, or removal, the trunk of the diseased tree should be girdled, and the stem treated with an appropriate herbicide to deaden the tree and hasten the desiccation and drying of the wood below the minimum moisture content that could support the development of fungal spores.

610S.5 Measurement

Tree and shrub pruning, fencing, drains, fertilization, etc. will not be measured for payment unless included as a contract pay item. Tree wells for tree protection will be measured by the units, complete in place, conforming to the Drawings and City of Austin Standard Detail 610S-6, "Tree Protection, Tree Wells".

Removal of existing trees will be measured per each tree.

610S.6 Payment

The work and materials prescribed herein with the exception of the Protective Fencing and Tree Well (Tree Protection) will not be paid for directly but shall be included in the unit price bid for the item of construction in which this activity is used, unless a payment item is included as a contract pay item.

Payment will be made under:

Pay Item 610S-A:	Protective Fencing Type A Chain Link fence (Typical Application-high damage potential)	Per Lineal Foot
Pay Item 610S-B:	Protective Fencing Type B Wood Fence (Typical Application-high damage potential)	Per Lineal Foot
Pay Item 610S-C:	Protective Fencing Type C Other Materials (Limited Application-minimal damage potential)	Per Lineal Foot
Pay Item 610S-D:	Tree Well (Tree Protection)	Per Each
Pay Item 610S-E:	Tree Trunk Protection, Wood Planking	Per Each
Pay Item 610S-R:	Removal of Existing Trees	Per Each

End

ADDENDUM 1

SPECIFIC CROSS REFERENCE MATERIALS
Specification Item 610S, "Preservation of Trees and Other Vegetation"

City of Austin Standard Specification Items

Designation	Description
Item No. 606S	Fertilizer

City of Austin Standard Details

Designation	Description
Item No. 610S-1	Tree Protection Fence Locations
Item No. 610S-2	Tree Protection Fence, Type A, Chainlink
Item No. 610S-3	Tree Protection Fence, Type B, Wood
Item No. 610S-4	Tree Protection Fence, Modified Type A, Chainlink
Item No. 610S-5	Tree Protection Fence, Modified Type B, Wood
Item No. 610S-6	Tree Protection, Tree Wells

City of Austin Transportation Criteria Manual

Designation	Description
Section 1.3.1.C.6	Sight Distance
Section 6.2.3.A.4	Clearance Height
Figure 1-6	Desirable Sight Triangle

City of Austin Environmental Criteria Manual

Designation	Description
Appendix P-2, Note 6	Exceptions to Installing Fences
Appendix P-2, Note 6c	Trees close to proposed buildings-----
Appendix P-6	Remedial Tree Care Notes
Section 3.3.2.A.2	Diameter of trees------
Section 3.5.0	Design Criteria
Section 3.5.3.A.1	Permeable Paving
Figure 3-8	Example of Minimum Design Criteria Applied to Permeable Parking

ADDENDUM 1

City of Austin Land Development Code

Designation	Description
Section 25-8-603	Tree Protection Administration
Section 25-8-623	Inspection by City Arborist

ASTM, American Society for Testing and Materials

Designation	Description
D-2729	Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

***RELATED* CROSS REFERENCE MATERIALS**
Specification 610S, "Preservation of Trees and Other Vegetation"

City of Austin Standard Specification Items

Designation	Description
Item No. 101S	Preparing Right of Way
Item No. 102S	Clearing and Grubbing
Item No. 111S	Excavation
Item No. 120S	Channel Excavation
Item No. 132S	Embankment
Item No. 608S	Planting

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

Designation	Description
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 132	Embankment
Item No. 158	Specialized Excavation Work
Item No. 160	Furnishing and Placing Topsoil
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering

ADDENDUM 1

THIS PAGE LEFT BLANK INTENTIONALLY

ITEM NO. 648S
MULCH SOCK

648S.1 Description

A Mulch sock consists of material encased in a tube of mesh. It is used to intercept, settle, and filter sheet flow and pond runoff. Mulch socks provide an environmentally sensitive and cost-effective alternative to sediment fences.

648S.2 Submittals

The submittal requirements for this specification item shall include the following:

A. Mulch Material

1. A small sample of mulch material proposed to be used on the site will be provided to the engineer.
2. Provide a designated project stockpile of mulch for sampling and testing at the producer's site.
3. A copy of the lab analysis, performed by an STA-certified lab, verifying that the mulch material meets the requirements of Table 1.

Table 1

Item	Requirement	Reference Specification
Particle Size	3" minus screening process	Equivalent to TXDOT item 161, Compost, Section 1.6.2.B, Wood Chip requirements
pH	5.5 – 8.5	TMECC 04. 11-A, "1.5 Slurry pH"
Organic Matter Content	25%, dry weight basis	TMECC 05.07-A, "Loss-On-Ignition Organic Matter Method"

B. Tube Material

The CONTRACTOR shall submit a sample of the material that the CONTRACTOR proposes to use on the project. A sample of the material should be accompanied by material data sheet identifying composition, ability of the material to biodegrade, and size of openings in tube at a minimum.

ADDENDUM 1

648S.3 Materials

A. Mulching material can be manufactured on or off the project site and may consist of:

1. Shredded bark
2. Stump grindings
3. Composted bark

B. The mulch shall have the following composition:

1. Wood chips shall be produced from a 3-inch minus screening process (equivalent to TxDOT item 161, Compost, Section 1.6.2.B Wood Chip Requirements).
2. Large portions of silts, clays, or fine sands are not acceptable.
3. The pH of the mulch shall be between 5.5 and 8.5.
4. The organic matter content shall be greater than or equal to 25% on a dry weight basis.

C. Mulch material must be free of refuse, physical contaminants, and material toxic to plant growth. It is not acceptable for the mulch material to contain ground construction debris, biosolids, manure, or recyclable material.

D. Prior to placement, a representative sample of the mulching material must be tested and certified by the project engineer or his/her designee and accepted by the city inspector.

E. "Sock" material will be 100% biodegradable, photodegradable, or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or any other acceptable material. The material mesh opening should be equal to or less than 3/8 inch (10 mm) and the material tensile strength should be equal to or greater than 44 psi (3.09 kg/cm2).

648S.4 Installation

A. Use 12 or 18 inch diameter mulch socks for all sediment control applications. This diameter of mulch sock material has proven to be the most consistent for all sediment control applications (TxDOT, April 2006).

B. Install mulch socks per Figure 1.4.5.F in the City of Austin Environmental Criteria Manual.

ADDENDUM 1

C. Mulch socks should be used at the base of slopes no steeper than 2:1 and should not exceed the maximum spacing criteria provided in the following table.

Slope	Max. Slope Length Between *18 in. Dia. Sock* (ft)	Max. Drainage Area (sf) per 100ft of Sock
100:1 - 50:1	100	10,000
50:1 - 30:1	75	7,500
30:1 - 25:1	65	6,500
25:1 - 20:1	50	4,800
20:1 - 10:1	25	2,600
10:1 - 5:1	15	1,300
5:1 - 2:1	10	1,000

Slope	Max. Slope Length Between *12 in. Dia. Sock* (ft)	Max. Drainage Area (sf) per 100ft of Sock
100:1 - 50:1	100	6,000
50:1 - 30:1	40	4,000
30:1 - 25:1	30	3,000
25:1 - 20:1	25	2,600
20:1 - 10:1	15	1,300
10:1 - 5:1	10	1,000
5:1 - 2:1	5	500

D. Place mulch socks at a 5 ft or greater distance away from the toe of the slopes to maximize space available for sediment deposition.

E. When placed on level contours, sheet flow of water should be perpendicular to the mulch sock at impact and unconcentrated.

F. Install mulch socks using rebar (#5 minimum with safety caps) a minimum of 48 inches in length placed on 2-ft centers. In order to prevent the movement or floating of the mulch sock during rain events or construction operations, install steel posts on alternating sides of the sock. Drive the posts into the ground to a minimum depth of 24 inches, leaving less than 12 inches of post above the exposed mulch sock.

G. In order to prevent water flowing around the ends of the mulch socks, point the ends of the socks up slope.

H. In order to prevent water from flowing between the gaps at adjacent ends of mulch socks, overlap the ends of adjacent mulch socks a minimum of 12 inches. Never stack mulch socks on top of one another.

I. Mulch Socks should be placed using 'smiles' and 'j-hooks'. See ECM Section 1.4.5 G (Silt Fence)

J. For steeper slopes, an additional mulch sock can be constructed on the top of the slope and within the slope area as determined by specific field conditions. Multiple mulch socks are recommended on steeper slopes.

ADDENDUM 1

K. Do not use mulch socks in areas of concentrated flow as they are intended to control sheet flow only.

648S.5 Inspection and Maintenance

A. Inspect mulch socks after installation for gaps under the mulch socks and for gaps between the joints of adjacent ends of mulch socks. Contractor shall repair gaps such that no water flows under or around sock.

B. Inspect every seven days and within 24 hours of a rainfall event of 0.5 inches or greater. Replace and repair mulch socks as necessary.

C. Sediment retained by the mulch socks shall be removed when it has reached one third of the exposed height of the mulch socks.

D. Mulch socks can be vegetated or un-vegetated. Vegetated mulch socks can be left in place. The vegetation will grow in the slope, further anchoring the sock.

648S.6 Payment

The work performed and the materials furnished as prescribed by this item shall be paid for by the linear foot of mulch sock installed.

Payment will be made under:

Pay Item No. 648S:	Mulch Sock	Per Lineal Foot.

END

ADDENDUM 1

***SPECIFIC* CROSS REFERENCE MATERIALS**
Specification Item No. 648S, "Mulch Sock"

City of Austin Environmental Criteria Manual

Designation	Description
1.4.5.F	Mulch Sock
1.4.5.G	Silt Fence

City of Austin Standard Details

Designation	Description
648S-1	Mulch Sock

ADDENDUM 1

THIS PAGE LEFT BLANK INTENTIONALLY

PREVAILING WAGE RATE DETERMINATION

HEAVY AND HIGHWAY CONSTRUCTION

COUNTY NAME: TRAVIS

Wages based on DOL General Decision:TX140016 01/03/2014 TX16

Classification	Wage Rate	Classification	Wage Rate
Agricultural Tractor Operator	$ 12.69	Laborer, Utility	$ 12.27
Asphalt Distributor Operator	$ 15.55	Loader/Backhoe Operator	$ 14.12
Asphalt Paving Machine Operator	$ 14.36	Mechanic	$ 17.10
Asphalt Raker	$ 12.12	Milling Machine	$ 14.18
Boom Truck Operator	$ 18.36	Motor Grader Operator - Fine Grade	$ 18.51
Broom or Sweeper Operator	$ 11.04	Motor Grader Operator - Rough	$ 14.63
Cement Mason/Concrete Finisher	$ 12.56	Painter - Structures	$ 18.34
Concrete Pavement Finishing Machine		Pavement Marking Machine Operator	$ 19.17
Operator	$ 15.48	Pipelayer	$ 12.79
Crane, Hydraulic 80 tons or less	$ 18.36	Reclaimer/Pulverizer	$ 12.88
Crane, Lattice Boom, 80 tons or less	$ 15.87	Reinforcing Steel Setter	$ 14.00
Crane, Lattice Boom, over 80 tons	$ 19.38	Roller Operator, Asphalt	$ 12.78
Crawler Tractor	$ 15.67	Roller Operator, Other	$ 10.50
Directional Drilling Locator	$ 11.67	Scraper Operator	$ 12.27
Directional Drilling Operator	$ 17.24	Servicer	$ 14.51
Electrician	$ 26.35	Spreader Box Operator	$ 14.04
Excavator, 50,000 lbs. or less	$ 12.88	Structural Steel Worker	$ 19.29
Excavator, over 50,000 lbs.	$ 17.71	Traffic Signal Installer/Light Pole Worker	$ 16.00
Flagger	$ 9.45	Trenching Machine Operator, Heavy	$ 18.48
Form Builder/ Setter, Structures	$ 12.87	Truck Driver Tandem Axle Semi-Trailer	$ 12.81
Form Setter - Paving & Curb	$ 12.94	Truck Driver, Lowboy-Float	$ 15.66
Foundation Drill Operator,		Truck Driver, Single Axle	$ 11.79
Truck Mounted	$ 16.93	Truck Driver, Off Road Hauler	$ 11.88
Front End Loader Operator, 3CY or less	$ 13.04	Truck Driver, Single or Tandem Axle Dump Truck	$ 11.68
Front End Loader Operator, over 3 CY	$ 13.21	Welder	$ 15.97
Laborer, Common	$ 10.50	Work Zone Barricade Servicer	$ 11.85

http://www.wdol.gov/wdol/scafiles/davisbacon/tx.html

The Wage Compliance information detailed below was excerpted from General Decision TX20070043 or other DOL sources.

1. **Additional Trade information:**
   Unlisted classifications needed for work not listed within the scope of the classifications listed may be added upon the advance approval of Contract Procurement. CONTRACTOR shall submit to City of Austin Contract Procurement the following: classification, a bona fide definition of work to be performed and a proposed wage with sample payrolls conforming to area practice **prior** to the start of the job for that type of work. Proposed trade may not be performed by any trade already listed.

2. **Wages**
   For overtime, the basic hourly rate listed in the contract wage determination must be used in computing pay obligations.

ADDENDUM 1

3. **Proper Designation of Trade**
A work classification from the Prevailing Wage Poster for each worker must be made based on the actual type of work he/she performed on the job. In summary the work performed, not the "title" determines the correct worker classification and wage. Each worker must be paid no less than the wage rate on the wage decision for that classification **regardless** of his/her level of skill (exclusive of a bona fide apprentice currently registered in a DOL approved apprentice program - proof of individual registration must be supplied in advance to the City of Austin).

4. **Split Classification**
If a firm has employees that perform work in more than one classification, it can pay the wage rates specified for each classification ONLY if it maintains accurate time records showing the amount of time spent in each classification. If accurate time records are not maintained, these employees must be paid the highest wage rate of all the classifications of work performed by each worker. Accurate time records tracking how many hours a worker performed the work of one trade and then switched to another trade must be accounted for on a daily basis and reflected on Employer Certified Payroll accordingly.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

ADDENDUM 1

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

ADDENDUM 1

THIS PAGE LEFT BLANK INTENTIONALLY

PART 1 - GENERAL

1.1 Related Documents:

Drawings and general provisions of Contract, including General Conditions, Section 00700, and Supplemental General Conditions, Section 00810, and Division 1 requirements.

1.2 DESCRIPTION OF WORK:

The work consists of constructing approximately 2,300 linear feet of security fence (COA Specification 701S-H) along the west side of the Western Plant Road of Walnut Creek Treatment Plant. On the northern end (top of Figure 1) the fence will be located about 30 feet offset from the road and will tie into the existing fence post with a short connecting run of fence about 30 feet long. The remainder of the fence on the west side of the road will be located 15 feet from the edge of pavement. See attached aerial photos (Figures 1 through 4) for location.

Three double swing vehicle gates (COA Specification 701S-CD) 8 feet x 6 feet shall be installed on the site. A mow strip (COA Specification 701S-MS) shall be installed along the entire length of the security fence. A mulch sock (COA Specification 648S Mulch Sock) will be installed downstream from the construction zone and will be required along the entire length of the fence. Additionally, tree protection (COA Specification 610S) will be required for trees 37, 38, 39, 40 and 41 shown on the Expanded Site Plan View.

Clearing and grubbing will be required as shown on the attached aerial photographs and will be a minimum of five (5) feet either side of the centerline of the fence, or as required to complete the work. One permitted tree will be removed from the site (Tree Removal Permit). The area disturbed by the work will be re-vegetated with native seeding (COA Specification 609S). All trimmings will be taken to the Hornsby Bend Biosolids management plant for disposal.

The following information is attached:
- Aerial Photos, Figures 1 through 4
- COA Tree Removal Permit
- Expanded Site Plan View, COA
- Topographic Survey, The Wallace Group, Inc.
- Security Fence - Standard Civil Detail, COA

1.3 SUBMITTALS

Provide shop drawings and other information as required by Section 01300 for coordination of the work.

1.4 CONTRACTOR'S USE OF CONSTRUCTION SITE

The construction site will be in use by public throughout the duration of contract. The CONTRACTOR shall refer to Section 01040, Project Coordination for coordination required to minimize disturbance and hazards to pedestrian as well as automobile traffic. CONTRACTOR shall not unreasonably encumber the construction site with materials or equipment. CONTRACTOR shall assume reasonable responsibility for protection of construction site. CONTRACTOR will be provided a 20-ft x 20-ft site for storage of materials. If additional storage area is required, the CONTRACTOR will need to provide this area offsite at his expense.

End

ADDENDUM 1

Figure 1: Aerial view of fence including approximate gate locations and areas for clearing and grubbing

ADDENDUM 1

Figure 4

ADDENDUM 1

ROW I.D. 10974186

Mapsco Pg 58216

Tree Ordinance Review Application

Planning and Development Review Department
One Texas Center, 505 Barton Springs Road, 4th floor, Austin, TX 78704
Phone: (512) 974-1876 Fax: (512) 974-3010
Email: cityarborist@austintexas.gov Website: www.austintexas.gov/department/city-arborist

Application request* (specify all that apply):

- ☑ Tree removal (LDC 25-8-602[3])
- ☐ Critical Root Zone impacts (ECM 3.5.2 A)
- ☐ Live canopy impacts of more than 25% (ECM 3.5.2 B)

* Refer to Land Development Code (LDC) 25-8 (B)(1) and Environmental Criteria Manual (ECM) (Section 3 & App. F). Applicant understands that all impacts may threaten the health of the tree and that approval of this application does not guarantee favorable tree results.

Address and zip code of property: 7113 FM 969 Austin, TX 78724

Name of owner or authorized agent: Lauren Tracey

Building permit number (if applicable): _____

Telephone #: 512-972-0230 Fax #: 512-972-0228 E-mail: _____

Tree Species: Hackberry Tree location on lot: southern boundary

Trunk size (in inches) at 4 ½ feet above ground: circumference (around) _____ or diameter (across) 13

General tree condition: ☑ Good / ☐ Fair / ☐ Poor / ☐ Dead

Reason for request: ☑ Development ☐ Tree condition ☐ Other: _____

Lauren Tracey 7/1/2013

Owner/ Authorized Agent Signature Date

- Proposed development projects are to include a plan view drawing that depicts the location of the tree and the planned improvements (e.g. structure, driveway, utility and irrigation lines).
- This permit application only reviews for compliance with tree regulations.
- The application fee must be paid prior to permit issuance. No fee is required for dead or diseased trees.

Application Determination – To be completed by City Arborist Program Personnel

☒ Approved ☐ *Approved With Conditions ☐ Statutory Denial (more information required) ☐ Denied

Comments _____

☐ Heritage Tree(s) ☐ A heritage tree variance is required: ☐ Administrative / ☐ Land Use Commission

Conditions of Approval: ☒ None *or* ☐ As described within Arborist Comments (see above); and

☐ Applicant agrees to plant ____ caliper inches of central Texas native trees (see ECM Appendix F) on the lot prior to obtaining a final inspection (if applicable). Trees are to have a minimum 2-inch trunk diameter. Examples include Oaks, Cedar Elm, Bald Cypress, Desert Willow, Mountain Laurel, Texas Persimmon, Mexican Plum, etc.

☐ Prior to development, applicant agrees to supply a root zone mulch layer and maintain tree protection fencing (chain-link, five-foot in height) throughout the project duration.

☐ No additional impacts are permitted within the ½ Critical Root Zone, including utility trenching.

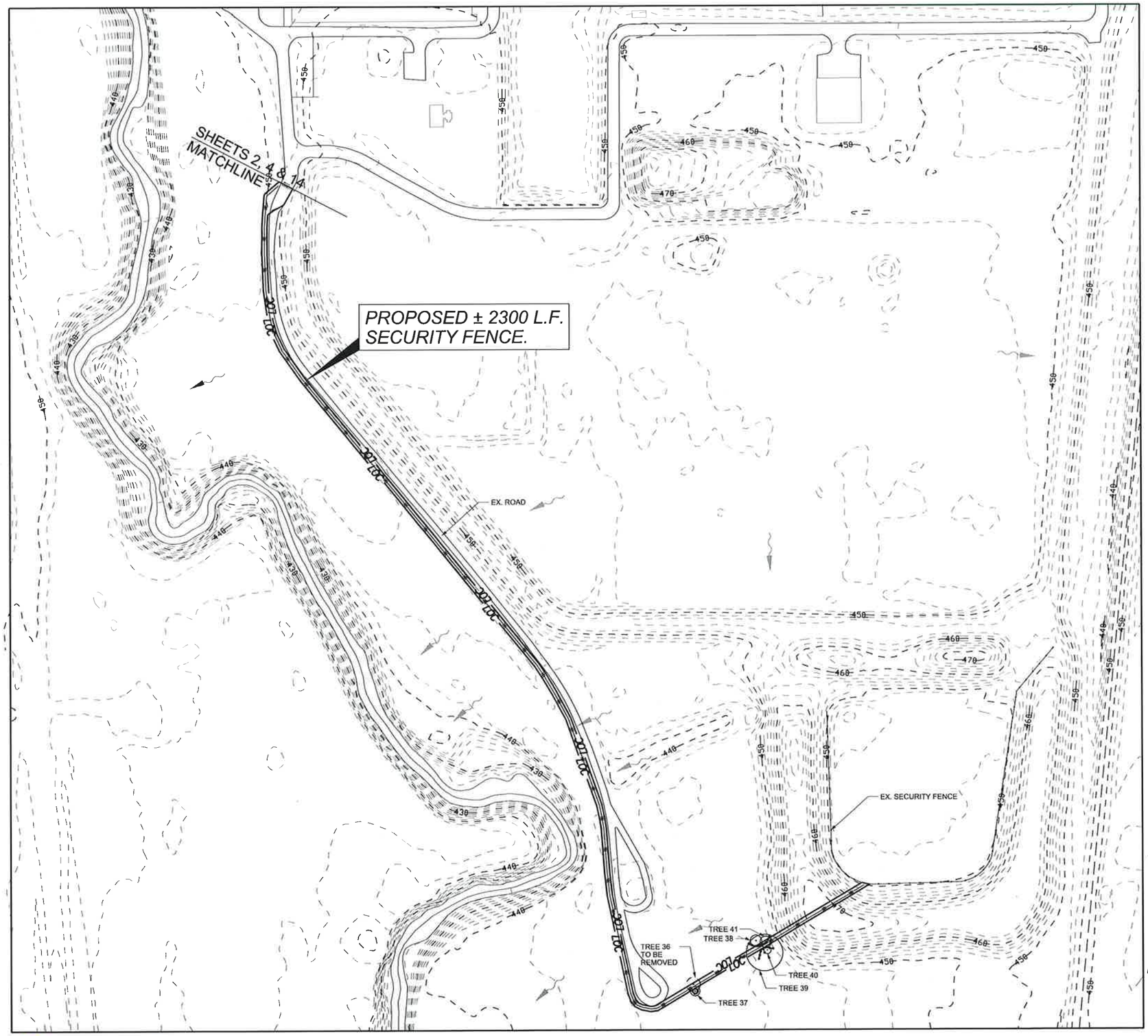
☐ Provide a receipt from a certified arborist for: ☐ remedial root care ☐ any required pruning

Applicant Signature Date City Arborist Signature 2 JULY 13 Date

Post this document on site while any proposed work is in progress.
Conditions for approval of this application must be met within 1 year of the effective date.

v 7/2012

ADDENDUM 1



ADDENDUM 1

TREE SURVEY:

TREE 36 -13" HACKBERRY TO BE REMOVED
TREE 37 - 9" HACKBERRY
TREE 38 - 10" HACKBERRY
TREE 39 - 34"M CHINABERRY 12", 12",12",10", 9"
TREE 40 - 8" ELM
TREE 41 - 10" ELM

NOTE: THERE ARE NO TREES WITH A DIAM. G.T. 8" LOCATED IN THE L.O.C. EXCEPT AS NOTED.

THIS SHEET ADDED TO EXISTING PLAN SET

REV NO.	BY	DATE	REVISION DESCRIPTION

STATE OF TEXAS
ROGER HICKMAN, P.E.
92751
PROFESSIONAL ENGINEER
10/2/14

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROGER E.HICKMAN.P.E. LIC.# 92751

RELEASED FOR PERMITTING PURPOSES ONLY

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING SERVICES DIVISION

WALNUT CREEK WASTE WATER TREATMENT PLANT
75 MGD UPGRADE

EXPANDED SITE PLAN VIEW

CITY OF AUSTIN FOUNDED 1839

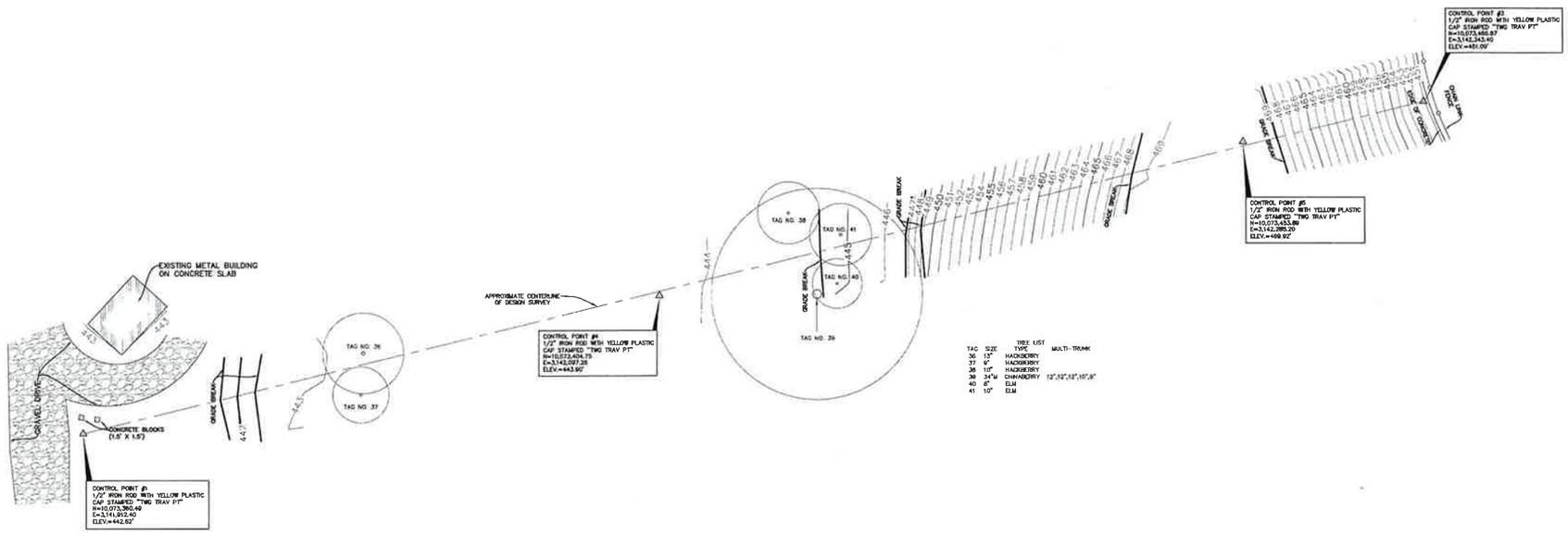
ESD
ENGINEERING SERVICES DIVISION

0 100 200
HORIZONTAL SCALE IN FEET

SHEET NUMBER 22 OF 22

N:\Team1\AWU Walnut Creek Security Fence\DGN\Fence add to site plan.dgn

02-OCT-2014



TREE LIST

TAG	SIZE	TYPE	MULTI-TRUNK
36	13"	HACKBERRY	
37	9"	HACKBERRY	
38	10"	HACKBERRY	
39	34"M	CHINABERRY	12",12",12",10",9"
40	6"	ELM	
41	10"	ELM	

SCALE: 1" = 20'

ADDENDUM 1

NOTE:

COORDINATES SHOWN HEREON ARE TEXAS STATE PLANE GRID COORDINATES REFERENCED TO NAD83 TEXAS CENTRAL ZONE WHICH IS BASED ON LEICA'S CENTRAL TEXAS GPS COOPERATIVE CORS RTK NETWORK. ELEVATIONS SHOWN HEREON ARE NAVD88 (GEOID 09).

SURVEYORS CERTIFICATE:

THIS IS TO CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY DIRECT SUPERVISION AND THAT THIS DRAWING REPRESENTS THE FACTS FOUND AT THE TIME OF THE SURVEY. THE FIELD WORK WAS COMPLETED ON FEBRUARY 28, 2013.

STATE OF TEXAS
DANIEL M FLAHERTY
5004
REGISTERED PROFESSIONAL LAND SURVEYOR

DANIEL M. FLAHERTY
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5004
THE WALLACE GROUP, INC.
OLD TOWN SQUARE
ONE CHISHOLM TRAIL, SUITE 130
ROUND ROCK, TEXAS 78681
PHONE: (512) 248-0065
FAX: (512) 246-0359
WORK ORDER NO. 22882

03-14-2013
DATE

TOPOGRAPHIC SURVEY
FOR NEW SOUTHERN FENCE ROUTE AT WALNUT CREEK WASTEWATER TREATMENT PLANT, CITY OF AUSTIN, TEXAS

PREPARED FOR:
CITY OF AUSTIN, TEXAS

The Wallace Group, Inc.
One Chisholm Trail, Suite 130, Round Rock, Texas 78681 (512) 248-0065
Engineers ■ Architects ■ Planners ■ Surveyors
Waco * Killeen * Dallas * Round Rock
TBPE F-54

SCALE	JOB NO.	FIELDBOOK NO.	SURVEY DATE	FILE NAME	DRAWN BY	DRAFT DATE	CHECKED BY	PLAT #
0 20 40	22882	173/45	02-28-2013	22882R-SURVEY	TAB	03-14-2013	DMF	N/A

© 2013 ALL RIGHTS RESERVED

REVISIONS

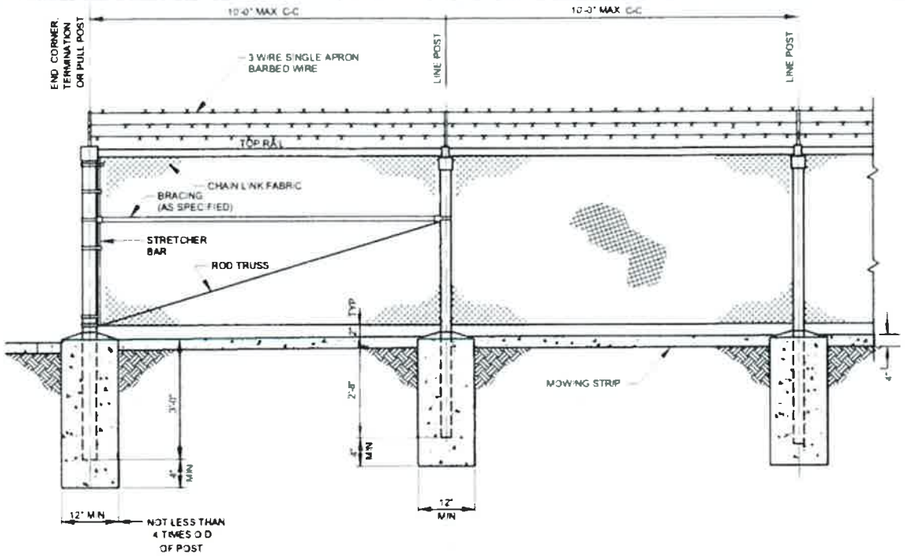
NO.	DATE	REMARKS	BY

REVISIONS

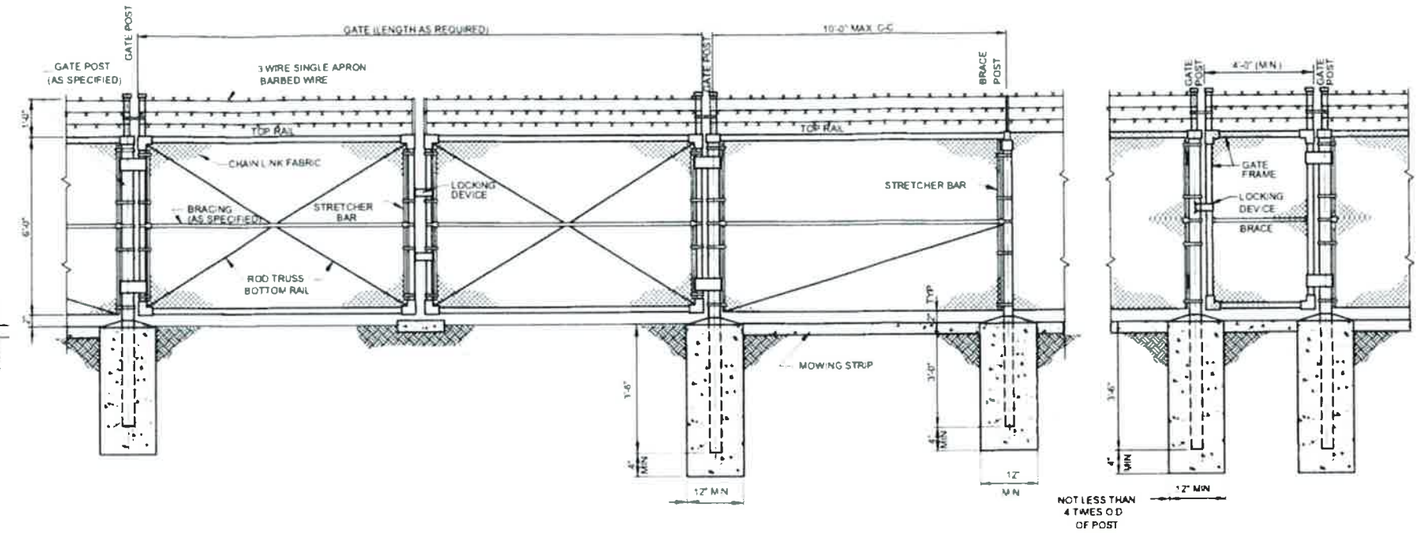
NO.	DATE	REMARKS	BY

TAB - LAYOUT1

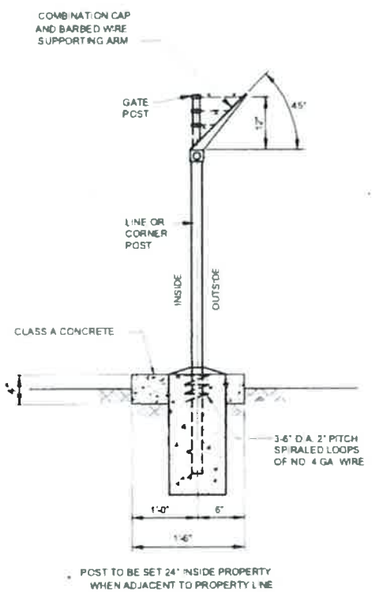
XREF = N/A



1 CHAIN LINK FENCE DETAIL
SCALE NTS



2 WALK-THRU GATE DETAIL
SCALE NTS



3 FENCE POST DETAIL w/MOWING STRIP
SCALE = NTS

REV	DATE	DESCRIPTION	APPROVED

CITY OF AUSTIN

WALNUT CREEK WASTEWATER TREATMENT PLANT
SOUTHERN BOUNDARY SECURITY FENCE
CIP NO. 3023.054
STANDARD CIVIL DETAILS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF THIS BAR DOES NOT MEASURE ONE INCH DWG IS NOT TO SCALE

DESIGNED	
DRAWN	
CHECKED	
APPROVED	
SCALE	
DATE	

DRAWING No 1
SHEET No
OF

ADDENDUM 1