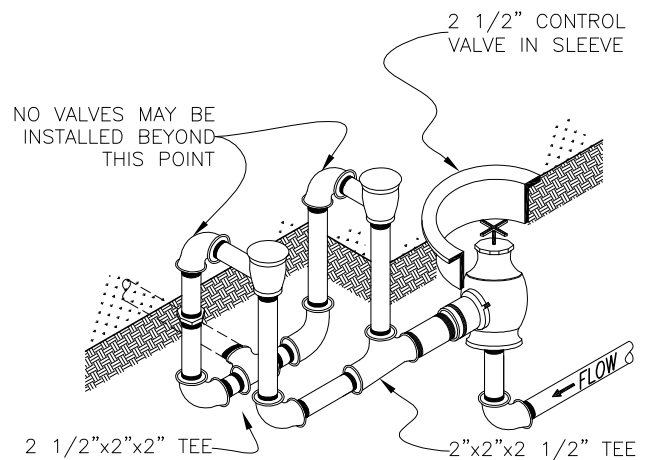


**CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS
STANDARD DRAWINGS
TABLE OF CONTENTS**

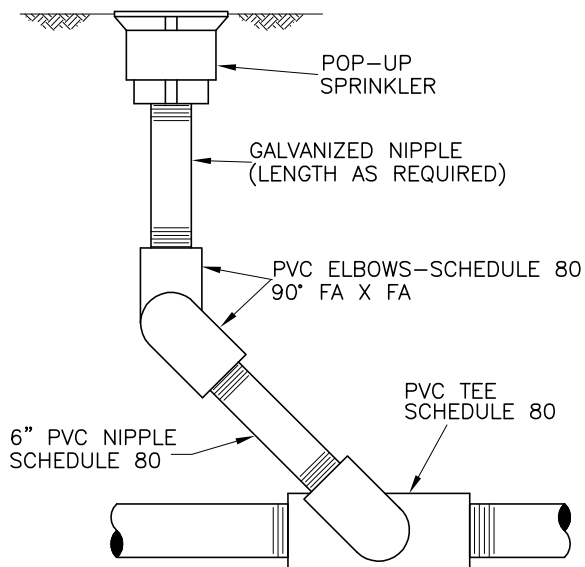
001-099	Miscellaneous
100-199	Sewers and Drains
200-299	Stormwater
300-399	Streets
400-499	Water
500-599	Structures
600-699	Earthwork
700-799	Street Lighting and Traffic Signals
800-899	Landscape and Irrigation
900-999	Erosion Control

Plan No.	Title	Date
Landscape and Irrigation		
801	Irrigation System Back Flow Protection	10-1984
802	Swing Joint Riser Assembly	09-15-1999
803	Tree-Shrub Planting Detail	05-05-2017
809	Tree and Shrub Planting Detail on Slope	05-05-2017
810	Streetscape Tree Planting Detail	01-01-2014
812	Tree Staking - Douglas Fir	05-05-2017
814	Tree Pruning Method	05-05-2017
820	Tree Protection Fencing	06-03-2016
821	Migration Measures for Work in Critical Tree Area	06-03-2016
822	Tree Protection Sign	06-03-2016

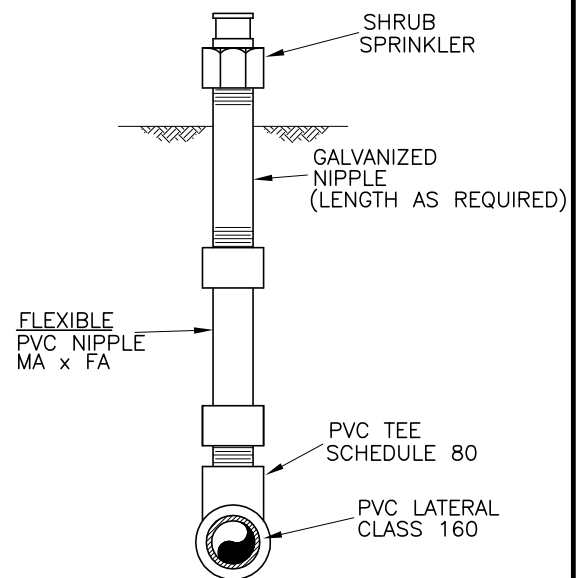
(PROTECTION ON EACH SEPARATE ZONE)



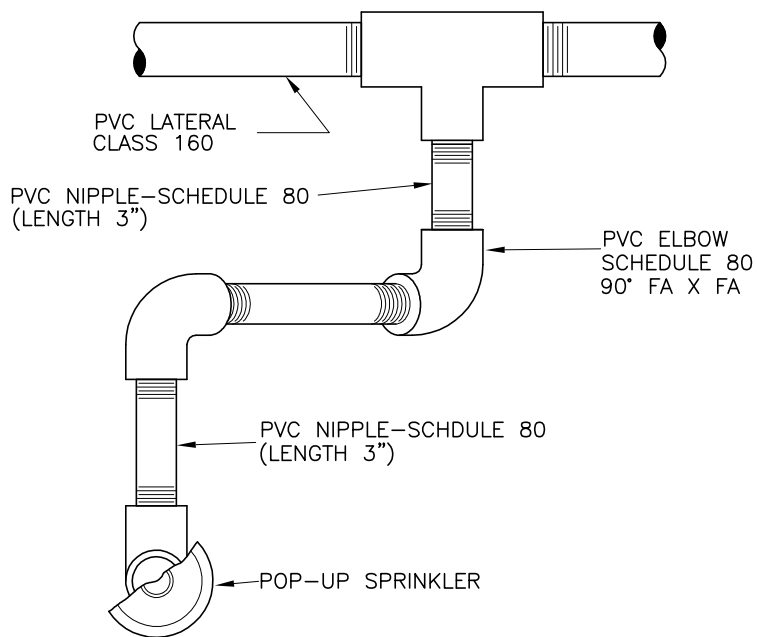
No.	Description	Date	By	Appr
REVISION				



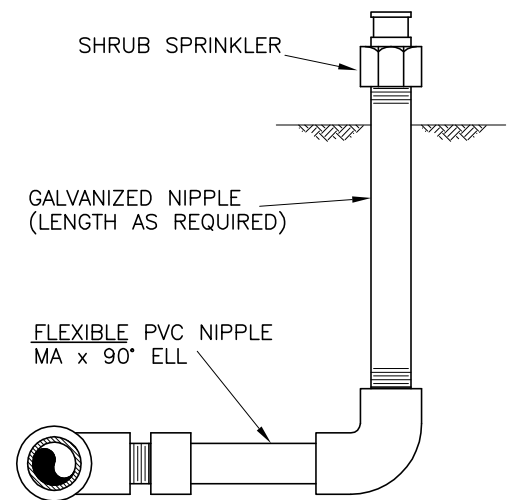
SIDE VIEW



END VIEW



TOP VIEW



END VIEW

FLEXIBLE NIPPLE ASSEMBLY

TO BE USED IN PLACE OF A SWING JOINT
ASSEMBLY WHEN SPECIFIED

NOTES:

1. ALL PVC NIPPLES SHALL BE THREADED TYPE.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.
3. ON SOME APPLICATIONS NIPPLE WITH ELBOW ARRANGEMENT MAY BE REPLACED WITH PVC ELBOW HAVING MA X FA THREADS.

Approved *Karl O. Grueter*
City Engineer

9-15-99
Date

CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN

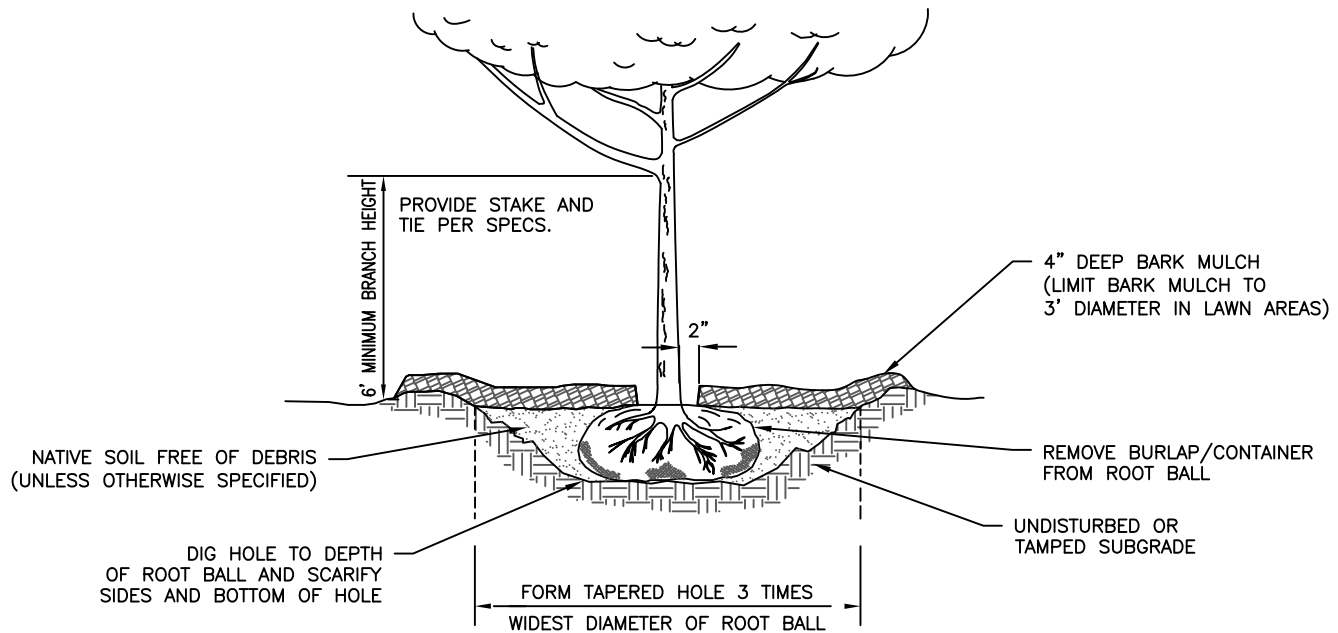
SWING JOINT RISER ASSEMBLY

DRAWN BY GS

CHECKED BY D.W.

NO.802

No.	Description	Date	By	Appr
	CONVERT TO CAD DWG.			
REVISION				

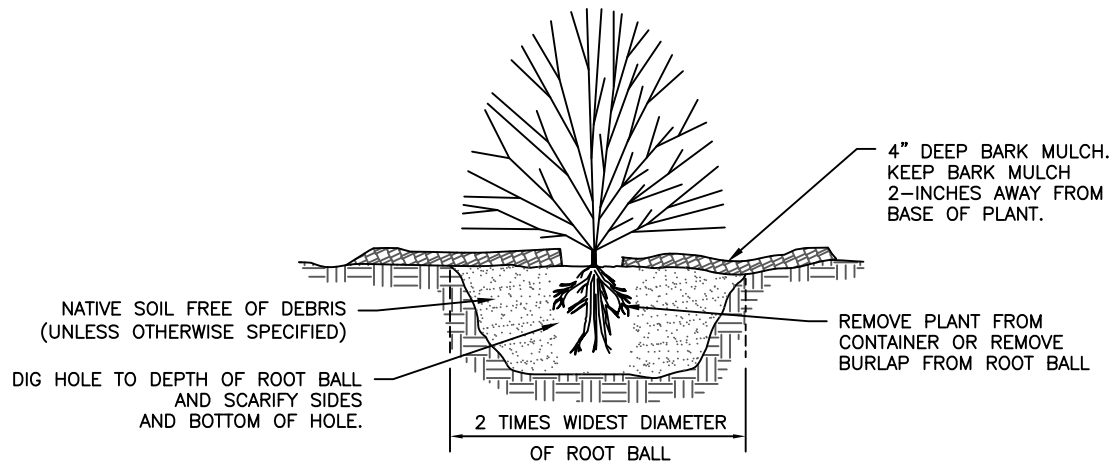


TREE PLANTING DETAIL

NOT TO SCALE

NOTE:

FORM A 3' DIAMETER SAUCER OR DEPRESSED AREA AROUND TRUNK. UNDER NO CONDITIONS SHOULD FILL OR MULCH BE PLACED IN CONTACT WITH TRUNK OR TOP OF BALL BE EXPOSED



SHRUB AND GROUND COVER PLANTING DETAIL

NOT TO SCALE

NOTE:

FORM A 3' DIAMETER SAUCER OR DEPRESSED AREA AROUND TRUNK. UNDER NO CONDITIONS SHOULD FILL OR MULCH BE PLACED IN CONTACT WITH TRUNK OR TOP OF BALL BE EXPOSED

CITY OF SALEM DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN TREE-SHRUB PLANTING DETAIL

CHANGES

CHANGED NOTE ABOUT PLANTING HOLE DIAMETER.
DELETED NOTE ABOUT POOR DRAINAGE. ADD 2" SPACE BETWEEN PLANT AND BARK MULCH.
BARK MULCH DEPTH INCREASED TO 4", CHANGE "PLANTING MIXTURE" TO "NATIVE SOIL".

APPROVED

James B. Spent
CITY ENGINEER

5/5/2017

DATE

DRAWN BY

CHECKED BY

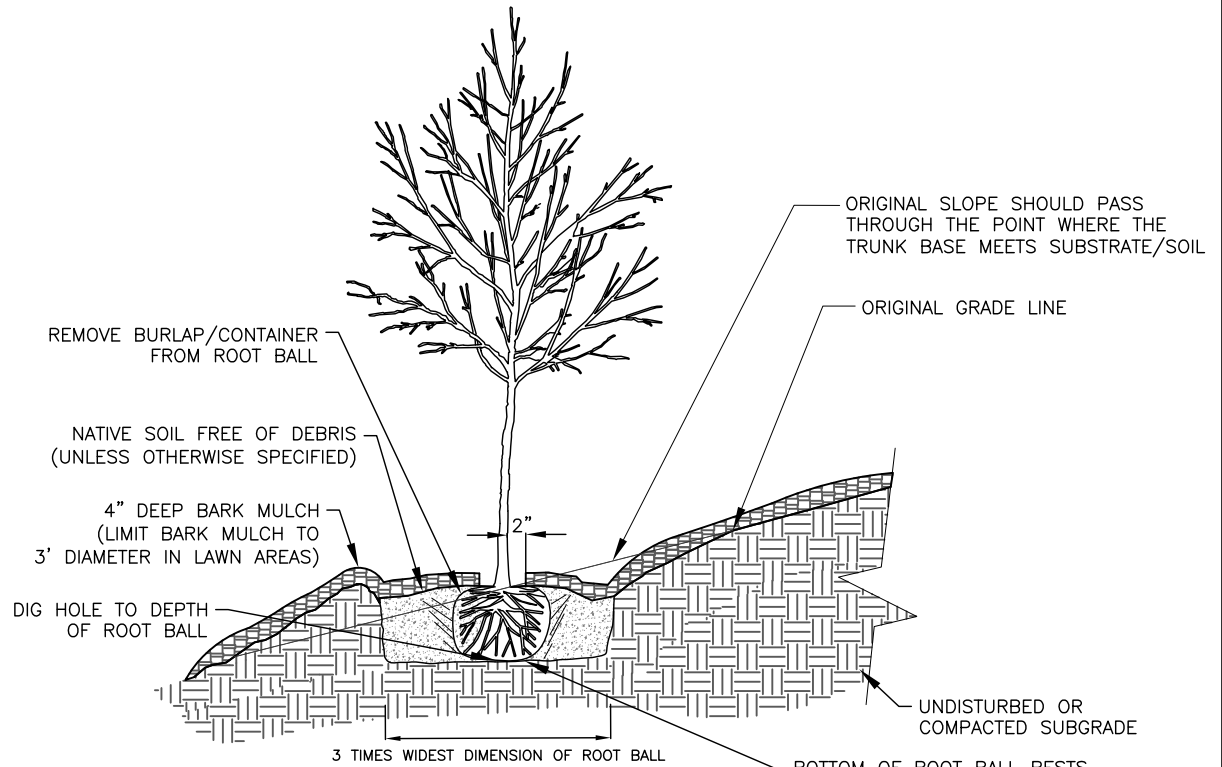
ALT

KLR

11/2016

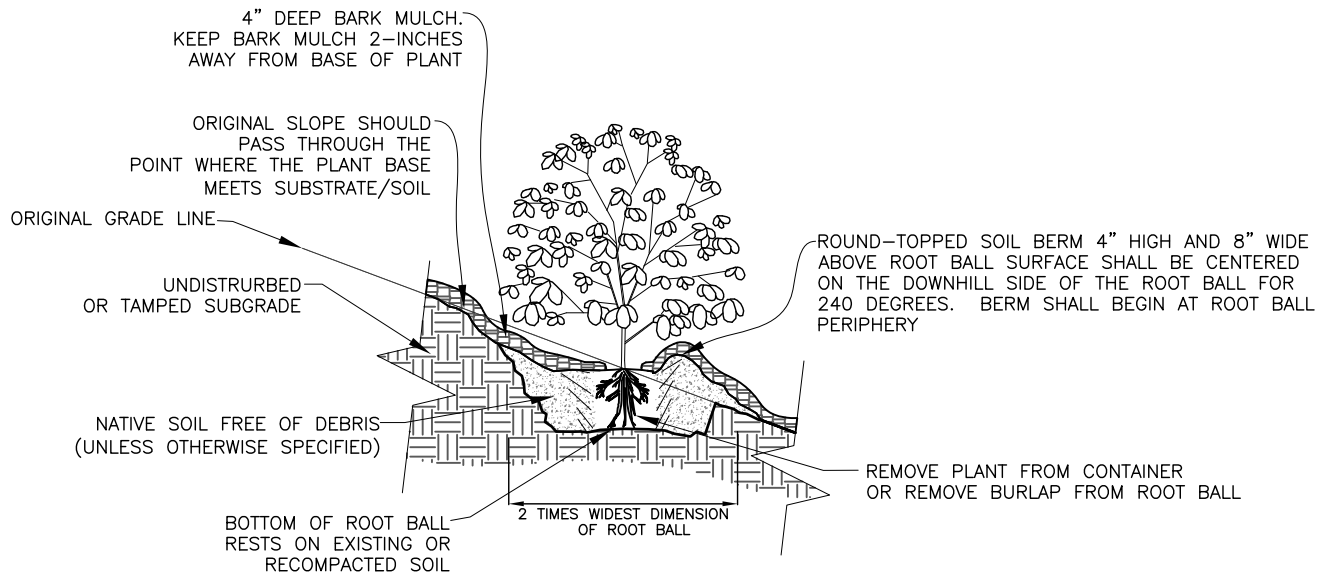
11/2016

NO.803



NOTE:
FORM A 3' DIAMETER SAUCER AROUND TRUNK. UNDER NO CONDITIONS SHOULD FILL OR MULCH BE PLACED IN CONTACT WITH TRUNK OR TOP OF BALL BE EXPOSED.

TREE SECTION VIEW
NOT TO SCALE



SHRUB AND GROUND COVER SECTION VIEW
NOT TO SCALE

- NOTES:
1. SHRUBS SHALL BE OF QUALITY AS PRESCRIBED IN THE SPECIFICATIONS.
 2. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN
TREE AND SHRUB PLANTING DETAIL ON SLOPE
5% (20:1) TO 50% (2:1)

CHANGES

NEW DRAWING

APPROVED

James L. Spent
CITY ENGINEER

5/5/2017

DATE

DRAWN BY

ALT

11/2016

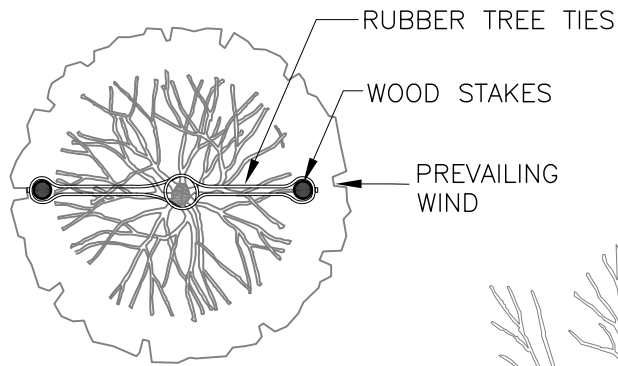
CHECKED BY

KLR

11/2016

NO.809

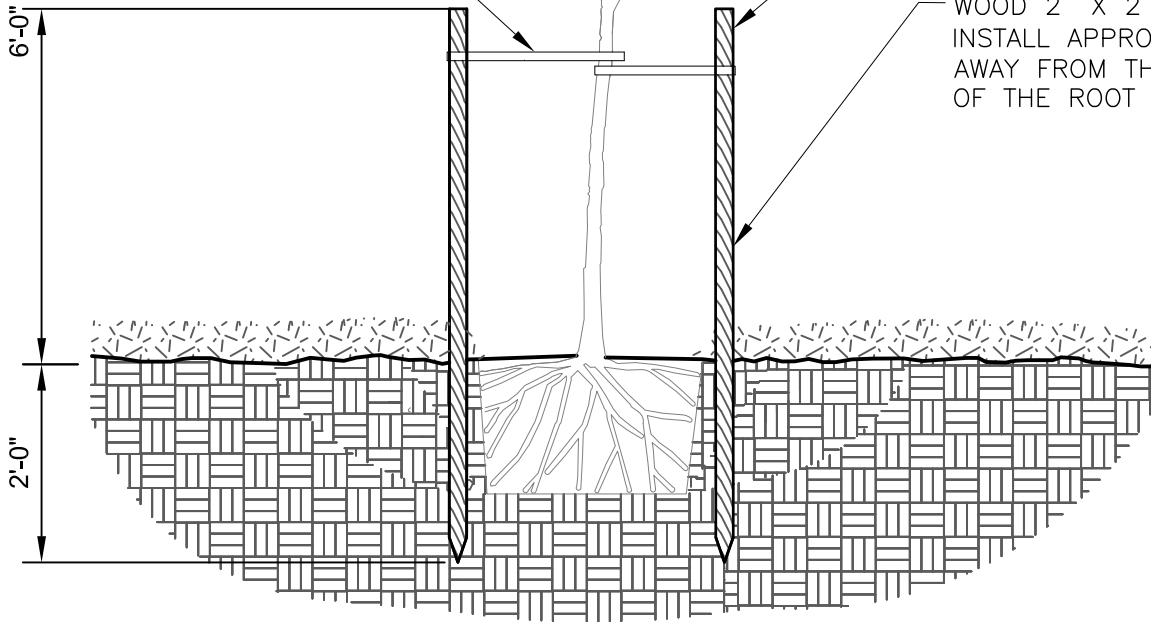
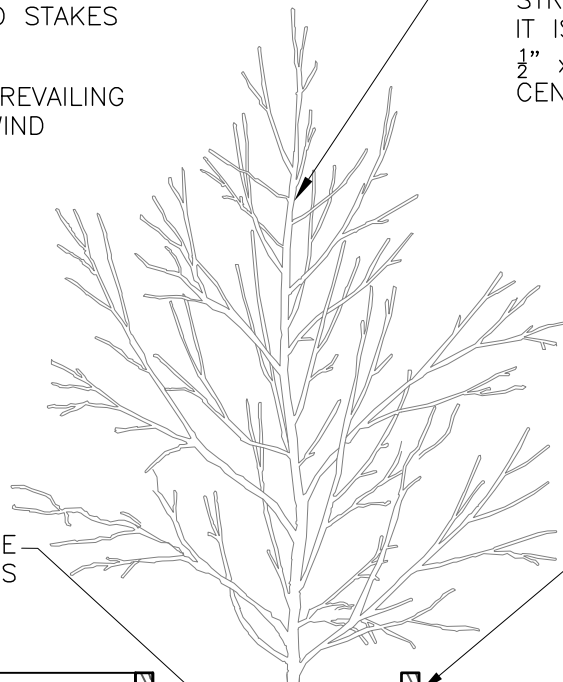
<p align="center">CITY OF SALEM DEPARTMENT OF PUBLIC WORKS</p>			
<p align="center">STANDARD PLAN STREETSCAPE TREE PLANTING DETAILS</p>			
DRAWN BY	ALT	08/2013	<p align="center">NO. 810</p>
CHECKED BY	CJS	08/2013	



PLAN VIEW
TWO STAKES
NOT TO SCALE

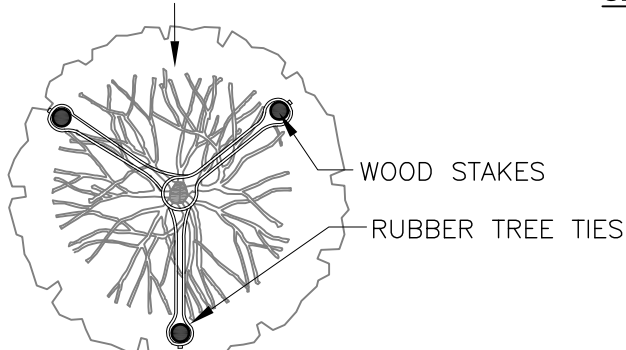
REMOVE NURSERY STAKE. IF CENTRAL LEADER NEEDS TO BE STRAIGHTENED OR HELD ERECT, IT IS ACCEPTABLE TO ATTACH A $\frac{1}{2}$ " x 8' BAMBOO POLE TO THE CENTRAL LEADER AND TRUNK.

MINIMUM $\frac{1}{2}$ " CHAIN LINK TYPE PLASTIC TREE TIES



SECTION VIEW
NOT TO SCALE

PREVAILING WIND



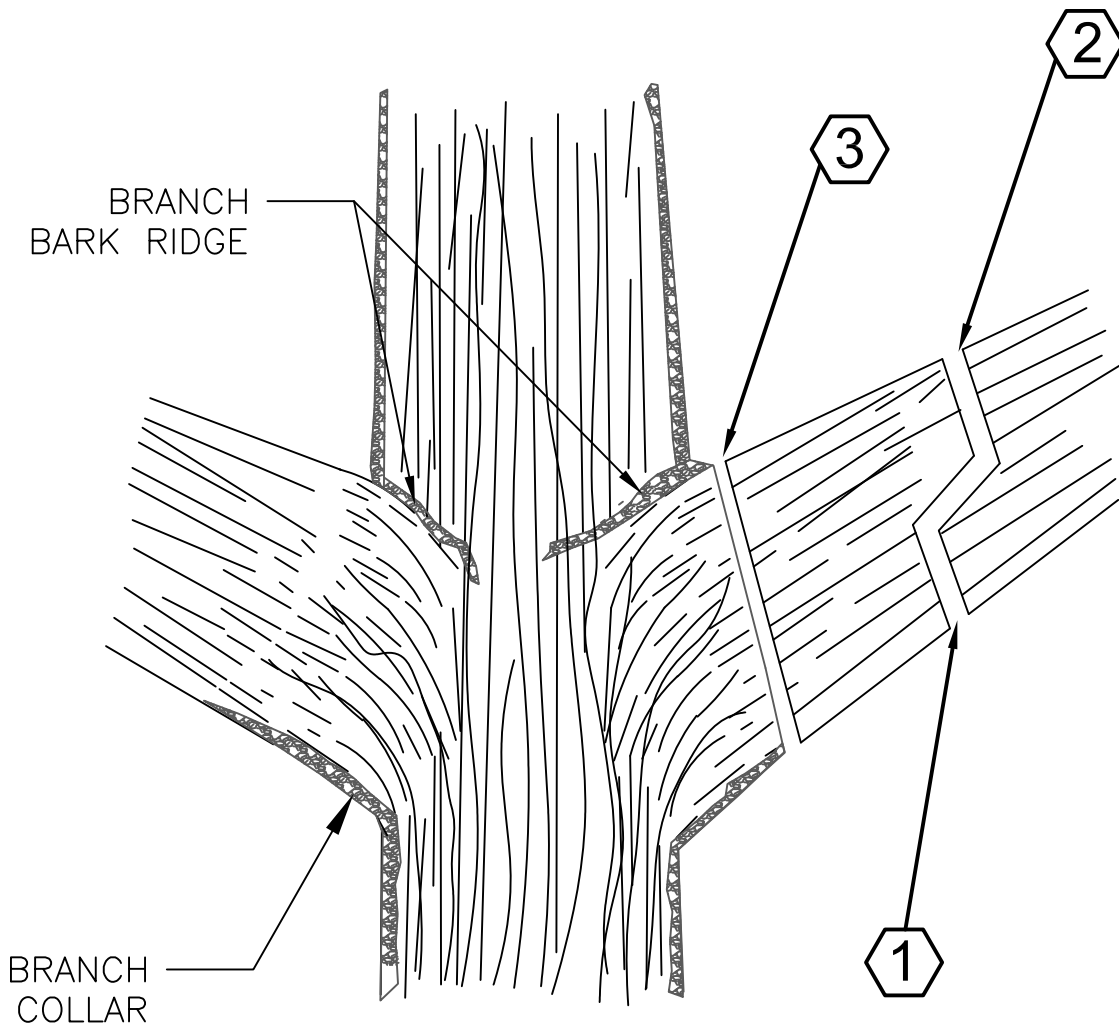
PLAN VIEW
THREE STAKES
NOT TO SCALE

CHANGES	
	NEW DRAWING

CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN
TREE STAKING - DOUGLAS FIR
TWO STAKES AND THREE STAKES

APPROVED		5/5/2017	DRAWN BY	ALT	10/2016	NO.812
	CITY ENGINEER	DATE	CHECKED BY	KLR	10/2016	



NOTES:

1. MAKE A PARTIAL CUT FROM BENEATH, AT A POINT SEVERAL INCHES AWAY FROM THE TRUNK.
2. MAKE A SECOND CUT FROM ABOVE SEVERAL INCHES OUT FROM THE FIRST CUT, TO ALLOW THE LIMB TO FALL SAFELY.
3. COMPLETE THE JOB WITH A FINAL CUT JUST OUTSIDE THE BRANCH COLLAR, THE RAISED AREA THAT SURROUNDS THE BRANCH WHERE IT JOINS THE TRUNK.
4. CLIMBING AND PRUNING PRACTICES SHALL NOT INJURE THE TREE EXCEPT FOR THE PRUNING CUTS. EQUIPMENT THAT WILL DAMAGE THE BARK AND CAMBRIUM LAYER SHALL NOT BE USED ON OR IN ANY TREE.
5. SPIKES OR CLIMBING SPURS SHALL NOT BE USED FOR CLIMBING TREES DURING PRUNING OPERATIONS.

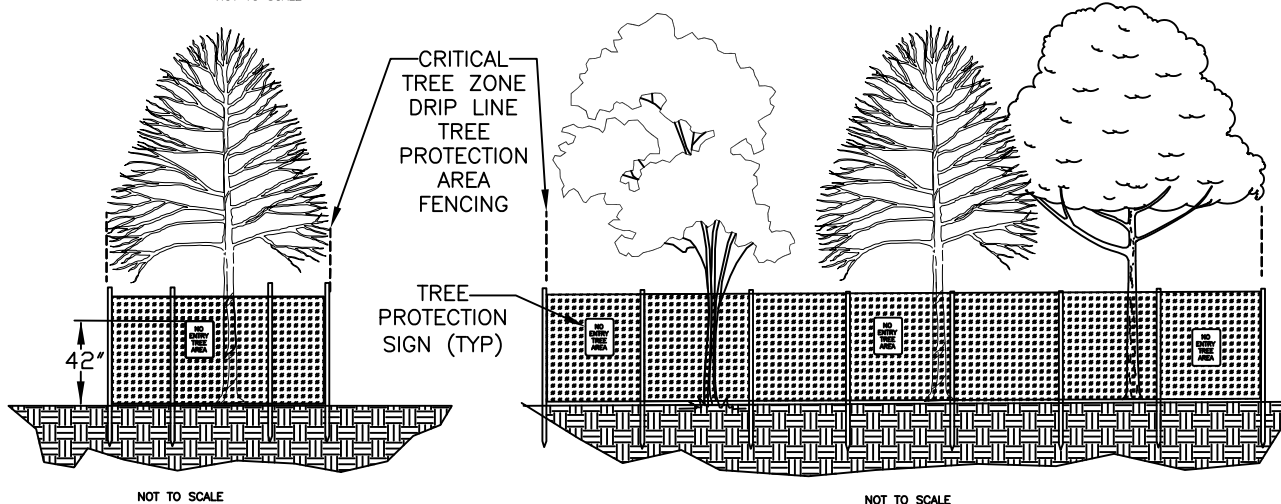
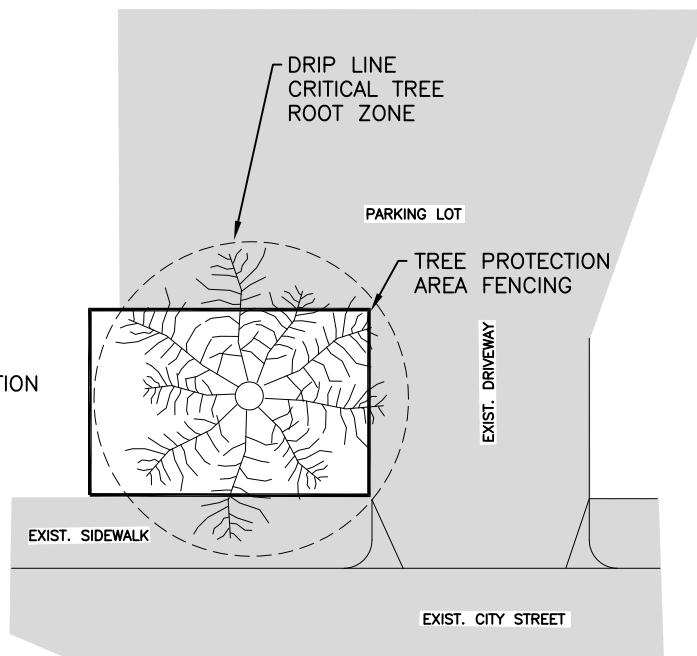
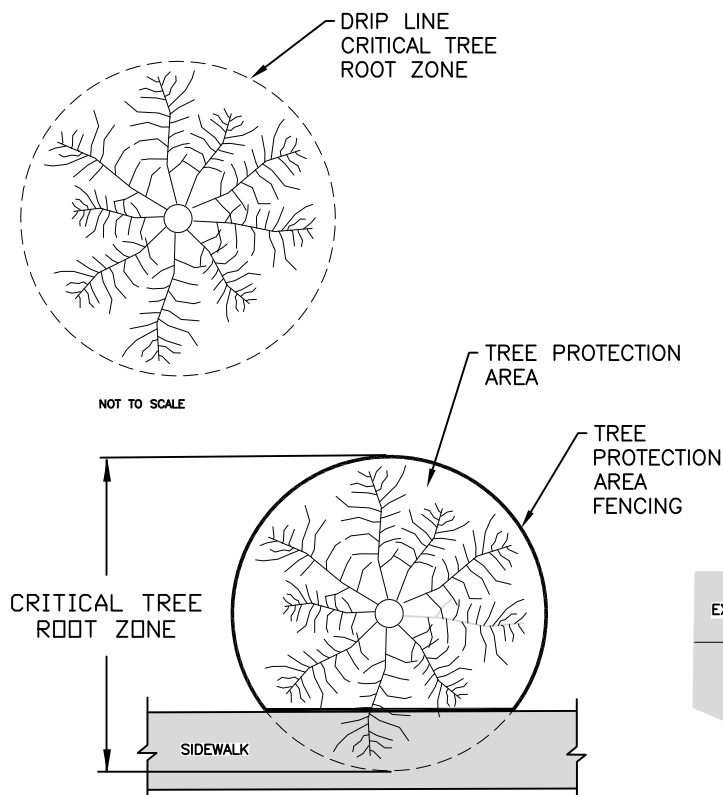
CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN
TREE PRUNING METHOD

CHANGES

NEW DRAWING

APPROVED		5/5/2017	DRAWN BY	ALT	10/2016	NO.814
		DATE	CHECKED BY	KLR	10/2016	
CITY ENGINEER						

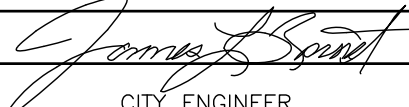


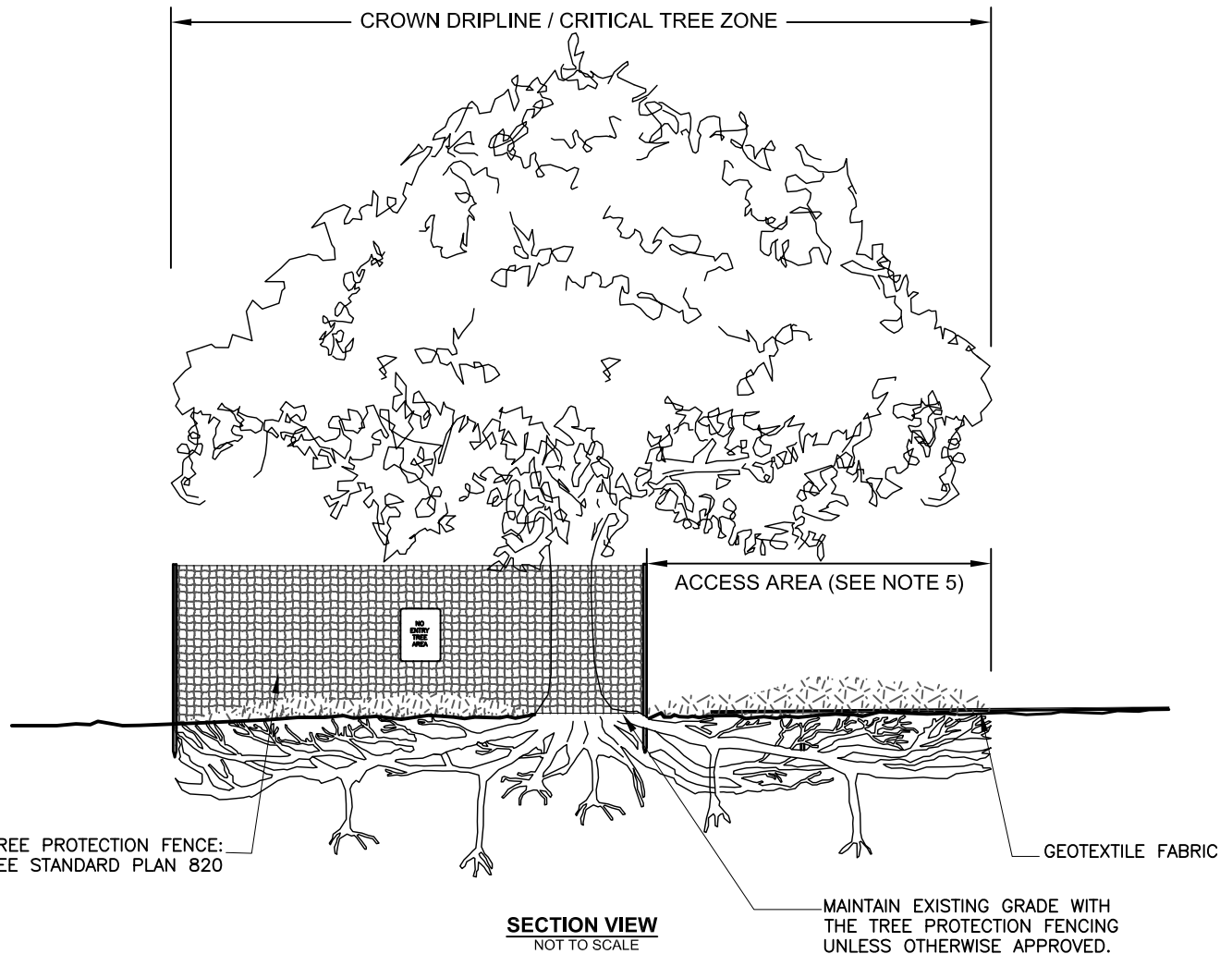
NOTES:

- FENCE SHALL BE 4 TO 6 FT. IN HEIGHT AND SET AT TREE DRIP LINE, OR EDGE OF HARDSCAPE AS INDICATED ABOVE, OR AS DIRECTED BY CITY'S URBAN FORESTER.
- FENCE MATERIALS SHALL CONSIST OF A 4 FT. HIGH, HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS ORANGE COLOR, AND 1.25" X 6" "T" POSTS, OR APPROVED EQUAL.
- POSTS SHALL BE SPACED 8 FEET APART AND SHALL BE DRIVEN TO SUCH A DEPTH TO SECURELY ANCHOR THE POSTS, TYPICALLY 18" DEEP.
- FENCE SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ADJACENT CONSTRUCTION ACTIVITIES. MOVEMENT OR REMOVAL OF FENCE REQUIRES APPROVAL BY CITY'S AUTHORIZED REPRESENTATIVE.
- NO EQUIPMENT SHALL OPERATE INSIDE THE TREE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL UNLESS APPROVED BY THE URBAN FORESTER.
- PLACE TREE PROTECTION SIGNS (STANDARD PLAN 822) SECURELY ON TREE PROTECTION FENCING WITH WIRE TIES OR PLASTIC "ZIP" TIES. SIGN SHALL BE PLACED 42 INCHES ABOVE GROUND ON 50 FT. SPACING, O.C. AND MUST BE CLEARLY VISIBLE TO CONTRACTORS AND PUBLIC.

CITY OF SALEM DEPARTMENT OF PUBLIC WORKS

STANDARD PLAN TREE PROTECTION FENCING

APPROVED		6/03/16	DRAWN BY	ALT	6/2016	NO.820
			CITY ENGINEER	CHECKED BY	KLR 6/2016	



NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. TREE PRUNING SHALL BE PREPARED BY A CERTIFIED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE TREE PROTECTION FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL, UNLESS OTHERWISE APPROVED BY THE URBAN FORESTER.
5. FOR ACCESS WITHIN THE CRITICAL TREE ZONE WHERE MATERIALS WILL BE STORED TEMPORARILY OR WHERE OPERATING OR MOVING EQUIPMENT IS PERMITTED, PLACE GEOTEXTILE FABRIC ON GROUND SURFACE WHERE THE ACCESS AREA IS LOCATED WITHIN THE CRITICAL TREE ZONE. PROVIDE ONE OF THE SURFACE PROTECTION MEASURES LISTED BELOW OVER THE GEOTEXTILE FABRIC:

- A. APPLY 6-INCHES TO 12-INCHES OF WOOD MULCH.
- B. PLACE 3/4-INCH PLYWOOD OR 4" x 4" WOODEN BEAMS OVER A MINIMUM 4-INCHES OF WOOD CHIP MULCH.
- C. APPLICATION OF 4-INCHES TO 6-INCHES OF 3" OPEN GRADED ROCK.
- D. PLACEMENT OF STEEL PLATES ON TOP OF A MINIMUM 4-INCH LAYER OF WOOD MULCH.
- E. PLACEMENT OF COMMERCIAL OR LOGGING ROAD MATS ON TOP OF A MINIMUM 4-INCH LAYER OF WOOD CHIP MULCH.

**CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS**

**STANDARD PLAN
MITIGATION MEASURES FOR WORK
IN CRITICAL TREE AREA**

APPROVED		6/03/16	DRAWN BY	ALT	12/2015
			CHECKED BY	KLR	12/2015
	CITY ENGINEER	DATE			

NO.821

NO UNAUTHORIZED ENTRY

TREE PROTECTION ZONE


**PROHIBIDO
ENTRAR
SIN AUTORIZACIÓN**
ZONA DE PROTECTION DEL ARBOL

NOTES:

1. SIGN SHALL BE A MIN. OF 8 1/2" X 11" IN SIZE.
2. SIGN MAY BE LAMINATED IN PLASTIC OR PLACED ON ALUMINUM SHEETING (80 GAUGE).

**CITY OF SALEM
DEPARTMENT OF PUBLIC WORKS**

STANDARD PLAN
TREE PROTECTION SIGN

APPROVED		6/03/16	DRAWN BY	ALT	4/2016	NO.822
		DATE	CHECKED BY	KLR	4/2016	
CITY ENGINEER						