

Trunk Formula Method SUMMARY

Project #	42348007	Property	AutoZone 6365
Date	4/28/2017		

Field Observations

Site Rating	85%
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Species	Species Rating*	Replacement Size		Replacement Cost
<i>Quercus virginiana</i>	90%	3	in.	\$250.00
<i>Lagerstroemia indica</i>	80%	2.5	in.	\$125.00
<i>Ficus aurea</i>	70%	3	in.	\$250.00

*Species ratings derived from "Tree Species Ratings for Florida", revised: January 2016. Provided by Florida Chapter International Society of Arboriculture.

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Trunk Formula Method Worksheet

Project #	42348007	Property	AutoZone 6365
Date	4/28/2017	Tree #	1

Field Observations

1. **Species** Quercus virginiana
2. **Condition** 85%
3. **Trunk Circumference** 25 in. **Diameter** 8 in.
4. **Location %** = [**Site** 85% + **Contribution** 75% + **Placement** 50%] ÷ 3 = 70%

Regional Plant Appraisal Committee and/or Appraiser-Developed or -Modified Information

5. **Species rating** 90%
6. **Replacement Tree Size** (diameter) 3 in.
(Trunk Area) 7.07 in² TA_R
7. **Replacement Tree Cost** \$ 250.00
(see Regional Information to use **Cost** selected)
8. **Installation Cost** \$ 500.00
9. **Installed Tree Cost** (#7 + #8) \$ 750.00
10. **Unit Tree Cost** \$ 35.39 per in²
(see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

11. **Appraised Trunk Area:**
(TA_A or ATA_A; use Tables 4.4-4.7)

$$\begin{aligned} \text{or } c^2 (\#3) \times 0.08 &= \frac{50}{(TA_A)} \\ \text{or } d^2 (\#3) \times 0.785 &= \frac{50}{(TA_A)} \\ \text{or } -.335 d^2 + 69.3d - 1087 &= \frac{(554)}{(ATA_A)} \end{aligned} \quad = \underline{50}$$
12. **Appraised Tree Trunk Increase** (TA_{INCR}) =

$$TA_A \text{ or } ATA_A \underline{50} \text{ in}^2 (\#11) - TA_R \underline{7.07} \text{ in}^2 (\#6) = \underline{43.18} \text{ in}^2$$
13. **Basic Tree Cost** = TA_{INCR} (#12) 43.18 in² × **Unit Tree Cost** (#10) \$ 35.39 per in²
+ **Installed Tree Cost** (#9) \$ 750.00 = \$ 2,277.78
14. **Appraised Value** = **Basic Tree Cost** (#13) \$ 2,277.78 × **Species rating** 90%
× **Condition** (#2) 85% × **Location** (#4) 70% = \$ 1,219.75
15. If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
16. **Appraised Value** = (#14) \$1,220.00

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Trunk Formula Method Worksheet

Project # 42348007 Property AutoZone 6365
 Date 4/28/2017 Tree # 2

Field Observations

1. **Species** Lagerstroemia indica
2. **Condition** 80%
3. **Trunk Circumference** 19 in. **Diameter** 6 in.
4. **Location %** = [**Site** 85% + **Contribution** 60% + **Placement** 70%] ÷ 3 = 72%

Regional Plant Appraisal Committee and/or Appraiser-Developed or -Modified Information

5. **Species rating** 80%
6. **Replacement Tree Size** (diameter) 2.5 in.
(Trunk Area) 4.91 in² TA_R
7. **Replacement Tree Cost** \$ 125.00
(see Regional Information to use **Cost** selected)
8. **Installation Cost** \$ 250.00
9. **Installed Tree Cost** (#7 + #8) \$ 375.00
10. **Unit Tree Cost** \$ 25.48 per in²
(see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

11. Appraised Trunk Area:

(TA_A or ATA_A; use Tables 4.4-4.7)

$$\begin{array}{lcl}
 \text{or } c^2 (\#3) \times 0.08 & = & \frac{28}{1} (TA_A) \\
 \text{or } d^2 (\#3) \times 0.785 & = & \frac{28}{1} (TA_A) \\
 \text{or } -.335 d^2 + 69.3d - 1087 & = & \frac{(683)}{1} (ATA_A)
 \end{array}
 \quad \boxed{\quad} = \underline{28}$$

12. Appraised Tree Trunk Increase (TA_{INCR}) =

$$TA_A \text{ or } ATA_A \quad \underline{28} \text{ in}^2 (\#11) - TA_R \quad \underline{4.91} \text{ in}^2 (\#6) = \underline{23.35} \text{ in}^2$$

13. Basic Tree Cost = TA_{INCR} (#12) 23.35 in² × **Unit Tree Cost** (#10) \$ 25.48 per in²

$$+ \text{Installed Tree Cost} (\#9) \quad \$ \underline{375.00} = \$ \underline{970.00}$$

14. Appraised Value = **Basic Tree Cost** (#13) \$ 970.00 × **Species rating** 80% × **Condition** (#2) 80% × **Location** (#4) 72% = \$ 444.91

15. If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.

16. Appraised Value = (#14) \$440.00

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Trunk Formula Method Worksheet

Project # 42348007 Property AutoZone 6365
 Date 4/28/2017 Tree # 3

Field Observations

1. **Species** Lagerstroemia indica
2. **Condition** 80%
3. **Trunk Circumference** 19 in. **Diameter** 6 in.
4. **Location %** = [**Site** 85% + **Contribution** 60% + **Placement** 70%] ÷ 3 = 72%

Regional Plant Appraisal Committee and/or Appraiser-Developed or -Modified Information

5. **Species rating** 80%
6. **Replacement Tree Size** (diameter) 2.5 in.
(Trunk Area) 4.91 in² TA_R
7. **Replacement Tree Cost** \$ 125.00
(see Regional Information to use **Cost** selected)
8. **Installation Cost** \$ 250.00
9. **Installed Tree Cost** (#7 + #8) \$ 375.00
10. **Unit Tree Cost** \$ 25.48 per in²
(see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

11. Appraised Trunk Area:

(TA_A or ATA_A; use Tables 4.4-4.7)

$$\begin{aligned} \text{or } c^2 (\#3) \times 0.08 &= \frac{28}{28} (TA_A) \\ \text{or } d^2 (\#3) \times 0.785 &= \frac{28}{28} (TA_A) \\ \text{or } -.335 d^2 + 69.3d - 1087 &= \frac{(683)}{(683)} (ATA_A) \end{aligned} \quad \boxed{\quad} = \underline{28}$$

12. Appraised Tree Trunk Increase (TA_{INCR}) =

$$TA_A \text{ or } ATA_A \underline{28} \text{ in}^2 (\#11) - TA_R \underline{4.91} \text{ in}^2 (\#6) = \underline{23.35} \text{ in}^2$$

13. Basic Tree Cost = TA_{INCR} (#12) 23.35 in² × **Unit Tree Cost** (#10) \$ 25.48 per in²

$$+ \text{Installed Tree Cost} (\#9) \underline{\$ 375.00} = \underline{\$ 970.00}$$

14. Appraised Value = **Basic Tree Cost** (#13) \$ 970.00 × **Species rating** 80% × **Condition** (#2) 80% × **Location** (#4) 72% = \$ 444.91

15. If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.

16. Appraised Value = (#14) \$440.00

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Trunk Formula Method Worksheet

Project #	42348007	Property	AutoZone 6365
Date	4/28/2017	Tree #	4

Field Observations

- Species** Quercus virginiana
- Condition** 80%
- Trunk Circumference** 35 in. **Diameter** 11 in.
- Location %** = [**Site** 85% + **Contribution** 70% + **Placement** 70%] ÷ 3 = 75%

Regional Plant Appraisal Committee and/or Appraiser-Developed or -Modified Information

- Species rating** 90%
- Replacement Tree Size** (diameter) 3 in.
(Trunk Area) 7.07 in² TA_R
- Replacement Tree Cost** \$ 250.00
(see Regional Information to use **Cost** selected)
- Installation Cost** \$ 500.00
- Installed Tree Cost** (#7 + #8) \$ 750.00
- Unit Tree Cost** \$ 35.39 per in²
(see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

- Appraised Trunk Area:**
(TA_A or ATA_A; use Tables 4.4-4.7)

$$\begin{aligned} \text{or } c^2 (\#3) \times 0.08 &= \frac{95}{95} (TA_A) \\ \text{or } d^2 (\#3) \times 0.785 &= \frac{95}{(365)} (ATA_A) \end{aligned}$$
- Appraised Tree Trunk Increase** (TA_{INCR}) =

$$TA_A \text{ or } ATA_A \frac{95}{95} \text{ in}^2 (\#11) - TA_R \frac{7.07}{87.92} \text{ in}^2 (\#6) = \frac{87.92}{87.92} \text{ in}^2$$
- Basic Tree Cost** = TA_{INCR} (#12) $\frac{87.92}{87.92} \text{ in}^2 \times \text{Unit Tree Cost} (\#10) \frac{\$ 35.39}{\$ 3,861.11} \text{ per in}^2$
+ **Installed Tree Cost** (#9) $\frac{\$ 750.00}{\$ 3,861.11} = \frac{\$ 3,861.11}{\$ 3,861.11}$
- Appraised Value** = **Basic Tree Cost** (#13) $\frac{\$ 3,861.11}{\$ 3,861.11} \times \text{Species rating } 90\%$
× **Condition** (#2) $\frac{80\%}{80\%} \times \text{Location} (\#4) \frac{75\%}{75\%} = \frac{\$ 2,085.00}{\$ 2,085.00}$
- If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it is less, round to the nearest \$10.
- Appraised Value** = (#14) \$2,090.00

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Trunk Formula Method Worksheet

Project # 42348007 Property AutoZone 6365
 Date 4/28/2017 Tree # 6

Field Observations

1. **Species** Ficus aurea
 2. **Condition** 50%
 3. **Trunk Circumference** 151 in. **Diameter** 48 in.
 4. **Location %** = [Site 85% + **Contribution** 60% + **Placement** 70%] ÷ 3 = 72%

Regional Plant Appraisal Committee and/or Appraiser-Developed or -Modified Information

5. **Species rating** 70%
 6. **Replacement Tree Size** (diameter) 3 in.
 (Trunk Area) 7.07 in² TA_R
 7. **Replacement Tree Cost** \$ 250.00
 (see Regional Information to use **Cost** selected)
 8. **Installation Cost** \$ 500.00
 9. **Installed Tree Cost** (#7 + #8) \$ 750.00
 10. **Unit Tree Cost** \$ 35.39 per in²
 (see Regional Information to use **Cost** selected)

Calculations by Appraiser using Field and Regional Information

11. **Appraised Trunk Area:**
 (TA_A or ATA_A; use Tables 4.4-4.7)
 or c² (#3) x 0.08 = 1,817 (TA_A)
 or d² (#3) x 0.785 = 1,809 (TA_A)
 or -.335 d² + 69.3d - 1087 = 1,468 (ATA_A)
 12. **Appraised Tree Trunk Increase** (TA_{INCR}) =
 TA_A or ATA_A 1,468 in² (#11) - TA_R 7.07 in² (#6) = 1,460.50 in²
 13. **Basic Tree Cost** = TA_{INCR} (#12) 1,460.50 in² × **Unit Tree Cost** (#10) \$ 35.39 per in²
 + **Installed Tree Cost** (#9) \$ 750.00 = \$ 52,430.64
 14. **Appraised Value** = **Basic Tree Cost** (#13) \$ 52,430.64 × **Species rating** 70%
 × **Condition** (#2) 50% × **Location** (#4) 72% = \$ 13,151.35
 15. If the **Appraised Value** is \$5,000 or more, round it to the nearest \$100; if it
 is less, round to the nearest \$10.
 16. **Appraised Value** = (#14) \$13,200.00

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