

Joshua Tree Survey Report, Yucca Valley Seniors Project, City of Yucca Valley

Prepared for

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A Joshua Tree Survey Data

SUMMARY

- Number of Joshua trees surveyed _____ 83
- Total number of Joshua trees impacted by proposed construction _____ 77 (+ 2 off site)
- Number of Joshua trees proposed for removal _____ 69 (+ 2 off site)
- Number of Joshua trees proposed for encroachment _____ 8
- Number of proposed removals that may be transplanted _____ 28 (+ 1 off site)
- Number of transplantable pups¹ _____ 26

INTRODUCTION

Pursuant to the Town of Yucca Valley General Plan and Town Ordinance No. 140, the Plant Protection and Management Ordinance, Chapter 1, Desert Native Plant Protection, all species of mesquite (*Prosopis* spp.), yucca (*Yucca* spp.), palo verde (*Parkinsonia* [i.e., *Cercidium*] spp.), and manzanita (*Arctostaphylos* spp.), as well as California juniper (*Juniperus californica*), desert willow (*Chilopsis linearis*), piñon pine (*Pinus monophylla*), creosote rings 10 feet or more in diameter, and all plants protected or regulated by the California Desert Native Plants Act (California Food and Agricultural Code 80001 *et. seq.*) shall not be removed except under a removal permit issued by the Community Development Director. A requirement of the removal permit is a plot plan indicating the protected plants to be removed or relocated.

Joshua trees (*Yucca brevifolia*) that are known to be at least 40 years old,² which have a canopy width of at least 15 feet,³ which are at least 15 feet in height,⁴ or which have a trunk measuring at least 12 inches in diameter⁵ shall be preserved in place unless their removal, transplantation or destruction can be shown not to be feasibly avoided. In the event that it is found to be infeasible to maintain a Joshua tree in its original place, translocation on site or off site through the Town's Adoption Program is allowable, per the following requirements set forth in the Ordinance:

- The desert native plants are to be transplanted in a manner approved by the Community Development Director or other reviewing authority.

¹ Pup: an adventitious shoot arising from the base of a Joshua tree.

² By historic record, including pictures or written description.

³ As measured from the furthest point of outstretched branches (measured parallel to the ground).

⁴ As measured from the base of the trunk to the highest point of the tree.

⁵ As measured 4 feet from the ground.

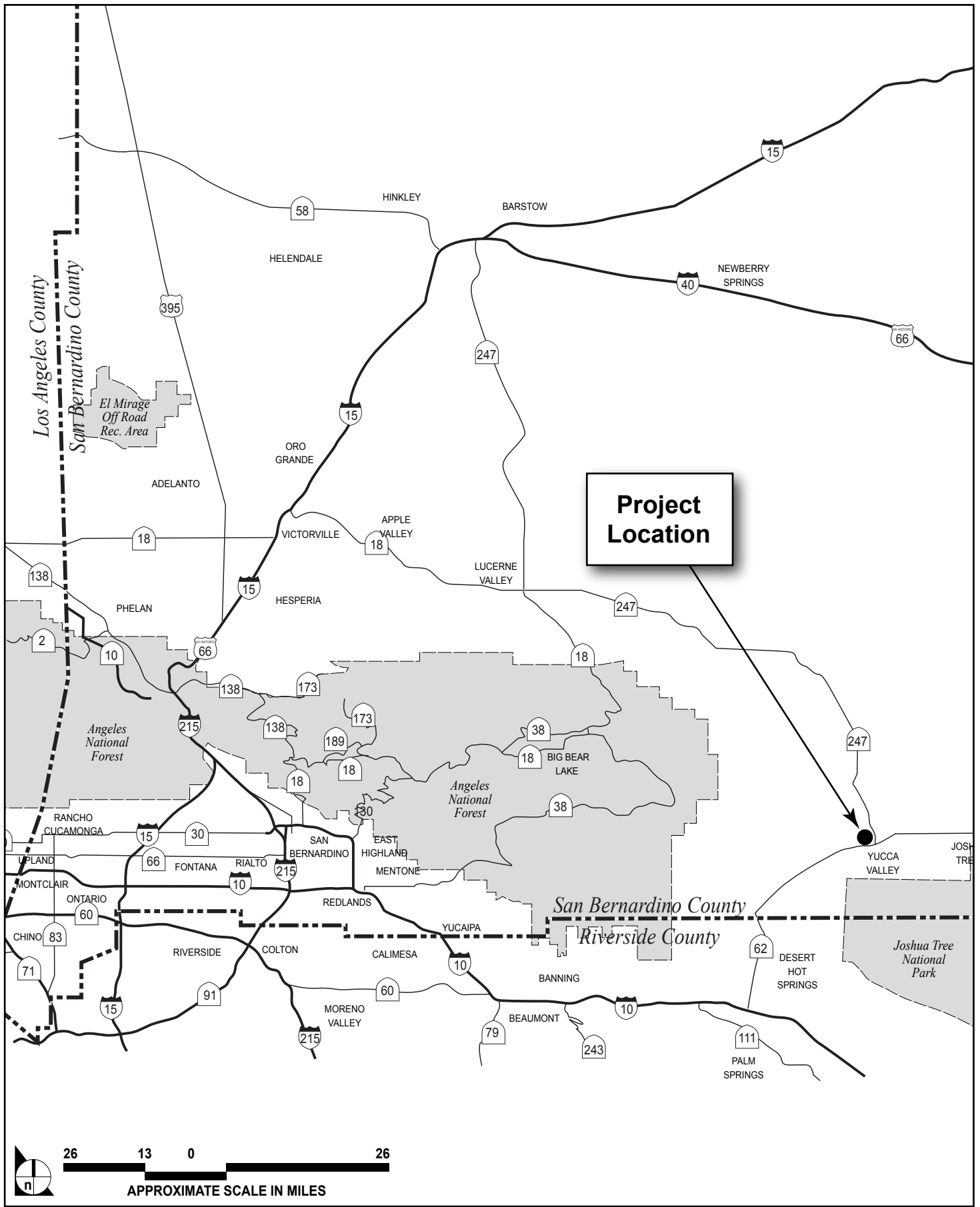
- The desert native plant is to be transplanted to another property within the same plant habitat under the supervision of a Desert Native Plant Expert and the removal of such plant will not adversely affect the desert environment on the subject site.
- Any desert native plant on the site which is determined by the Community Development Director or other reviewing authority as requiring transplanting will be transplanted or stockpiled for transplanting in accordance with methods approved by the Community Development Director. A Desert Native Plant Expert shall supervise and manage any required transplanting of desert native plants.
- In the Town's effort to retain and preserve, in place, existing Joshua trees and yuccas, the Planning Section of the Town of Yucca Valley shall establish and maintain a Joshua tree and Yucca Preservation and Adoption Program. This Program shall be a listing, available to the public, of locations where individuals have applied to disturb, move (transplant or otherwise), remove or destroy existing Joshua trees. The Program shall include the name of the property owner, the address of the property containing the Joshua trees and yuccas, a mailing address for the property owner, a daytime contact phone number, the number of trees disturbed, moved, removed or destroyed, and the approximate size, physical characteristics and physical condition of the available trees, as of the date the trees was listed on the Program. The Program shall also list a date that each individual tree was disturbed, moved, removed or destroyed.
- No Joshua trees or yuccas shall be approved for transplantation more than once in any 10-year period. Although no Joshua trees may be approved for transplantation more than once in any 10-year period, the Planning Commission may, at the time of a discretionary review, approve an interim location, for up to 1 year for storing Joshua trees and yuccas to allow for a phased development of a project or property.
- The Program shall also include, reviewed and updated annually, a list of the names, mailing addresses and daytime contact phone number of individuals who have expressed a desire to receive transplantable Joshua trees or yuccas.

Purpose

As required by the Town of Yucca Valley and pursuant Ordinance No. 140, Chapter 1, Section 89.0125, the purpose of this Joshua tree report is to provide information to the Town on Joshua trees that may be removed, damaged, or encroached by the development of the Yucca Valley Seniors project. Encroachment is here defined as grade alteration that buries any portion of a native tree, significantly undercuts the root system, or otherwise disturbs the ground within the dripline of the native tree.

Site Description

The project site (APN 0595-371-011) is located at the northwest corner of the intersection of Twentynine Palms Highway and Dumosa Avenue, within the Town of Yucca Valley, San Bernardino County (**Figure 1, Regional Location**). The project site is currently vacant and undeveloped.



SOURCE: Impact Sciences, Inc. – April 2003

FIGURE 1

Regional Location

The project site appears to have been brushed and is in a disturbed condition. Appreciable vegetative cover is lacking, other than that provided by Joshua trees. Remnant vegetation present on site includes native and non-native, ruderal annual and short-lived perennial species such as Russian-thistle (*Salsola tragus*), rancher's fireweed (*Amsinckia menziesii*), Sahara mustard (*Brassica tournefortii*), red-stem filaree (*Erodium cicutarium*), California evening-primrose (*Oenothera californica*), red brome (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), and Arabian splitgrass (*Schismus arabicus*).

Because conditions for observing wildlife were poor on the day of the survey (April 7, 2011), with winds in excess of 50 mph, and temperatures in the 50s degrees F, very few wildlife species were observed. Nevertheless, the Joshua trees on site provide nesting habitat for a variety of common bird species. It was noted during the course of the survey, that the site provides pedestrian access between Twentynine Palms Highway and the Town Hall to the north, and it is therefore expected that frequent human use of the site would be a disincentive for ground nesting birds to utilize the site.

The western boundary of the property supports a small number of catclaw acacia (*Acacia greggii*). These are all small saplings and persist on stormwater runoff originating from the property to the west. This runoff flows to a drainage feature on the project site that may fall under the jurisdiction of U.S. Army Corps of Engineers or the California Department of Fish and Game. Flows within this drainage feature are conveyed to Dumosa Avenue, where they enter the local storm drain system. There is no developed riparian vegetation associated with this drainage.

Project Description

The proposed project includes 75 affordable senior housing units, pool, courtyards, paseos, landscaped open areas, recreation room, and parking at a ratio of 1 space per unit, on approximately 2.5 acres. The 75 units are located within two and three story structures, occupying 26 percent of the project site. Access to the site is from the proposed realignment of Dumosa Avenue.

METHODS

Impact Sciences, Inc. conducted a survey and evaluation of on-site Joshua trees on April 7, 2011. The entire project site was traversed on foot. Joshua tree locations were mapped using a sub-meter Geographical Positioning System (GPS). Attribute data were also collected during this survey, and included tree height, fork height,⁶ trunk diameter, number of branches, canopy dimensions (N, E, S, and W), branch spread relative to 45°, deviation of the main trunk from vertical, and number of transplantable pups.

⁶ As used in this report, the term "fork" refers to the point of divergence of major branches from the tree trunk.

A determination of suitability for transplantation was determined for each Joshua tree based on the data collected in the field. A positive determination of suitability was made for a tree if it met all of the following criteria:

- the tree's height was 18 feet or less,
- the tree had fewer than 6 branches,
- the tree's canopy was less than 10 feet along the N/S and E/W axes,
- the angle of branching at the fork was equal to or less than 45°, and
- the tree was not leaning more than 45° from vertical.

These data are presented in **Appendix A, Joshua Tree Survey Data**.

RESULTS

A total of 91 Joshua trees were surveyed. This number included 83 on-site trees and 8 off-site trees that were not recognized as not requiring surveying during the course of fieldwork. On-site trees range from 5 to 31 feet in height and 57 to 367 years in estimated age; canopy width along the N/S or E/W axis ranged from 0 to 20 ft;⁷ and trunk diameter ranged from 4 to 18 inches. Twenty-eight of the surveyed trees within the proposed impact area were determined to be viable candidates for transplantation, and 26 transplantable pups were located within the project site boundaries.

Subsequent to the survey, two additional off-site trees were identified within the project impact area, east of Dumosa Avenue. Based on an aerial photographs of the site, these trees are estimated to be approximately 15 to 20 feet tall, with moderate to large-sized canopies. One of these trees appears to be transplantable, and the other does not appear to be a good candidate for transplantation. A summary of project-related impacts is given in the summary section at the beginning of this document; **Table 1, Impact Inventory**, details the on-site tree characteristics and proposed impacts.

No species protected by the Plant Protection and Management Ordinance other than Joshua tree is present on the project site. Joshua tree locations relative to proposed construction on the project site are displayed on the project engineering plans in **Figure 2, Joshua tree location map**.

⁷ A canopy width of 0 ft. is possible for trees with no branches along a particular axis.



SOURCE: Impact Sciences, Inc. – April 2011

FIGURE 2

Joshua tree location map

Table 1
Impact Inventory

Tree #	Height (feet)	Trunk diameter (inches)	N/S canopy width (feet)	E/W canopy width (feet)	Estimated age* (years)	Impact**	Transplantable?***	Number of transplantable pups	Comments
1	19.60	14	9	8	232	N	N/A		
2	10.27	8	4	2.5	120	N	N/A		
3	14.93	9	6	5	176	E	N/A		
4	9.33	6	2	3	109	E	N/A		
5	12.13	8	2	2	143	E	N/A		
6	25.20	13	6.5	7	299	R	N		
7	15.87	9	5	6	187	R	Y		
8	22.40	12	7.5	8	266	N	N/A		
9	23.33	15	11	10	277	R	N	5	Pups 8, 4, 8, 6, and 2 feet in height
10	16.80	9	5	6	199	R	Y		
11	23.33	13	8	9	277	R	N		
13	20.53	11	8	8	243	R	N		
14	20.53	14	10	9	243	R	N		
15	22.40	14	8	8	266	R	N		
16	18.67	11	0	5	221	R	N		Crown leaning past 45 degrees; half shed
17	19.60	10	12	10	232	R	N		
18	16.80	9	7	5	199	R	N		
19	8.40	8	2.5	2	98	R	N		Fork cut at collar
20	11.20	9	3	3	131	R	N		
21	17.73	15	17	16	210	E	N/A		
22	17.73	7	4	5	210	E	N/A		
23	13.07	7	5	6	154	E	N/A		
24	22.40	12	13	11	266	R	N		
25	15.87	14	7	8	187	E	N/A		
26	14.93	10	9	9	176	E	N/A		

Tree #	Height (feet)	Trunk diameter (inches)	N/S canopy width (feet)	E/W canopy width (feet)	Estimate d age* (years)	Impact**	Transplantable?***	Number of transplantable pups	Comments
27	11.20	8	1	8	131	R	N		
28	25.20	14	11	7	299	R	N		
29	26.13	10	15	20	311	R	N		
30	24.27	11	8	7	288	N	N/A	2	Pups 6 and 12 feet in height
31	22.40	15	12	12	266	N	N/A		
32	18.67	11	7	7	221	R	N	3	Pups 1, 1, and 8 feet in height
33	18.67	11	7	8	221	R	N		
34	23.33	12	15	11	277	R	N		
35	19.60	13	8	10	232	R	N		
36	17.73	15	8	6	210	R	Y		
37	26.13	12	0	0	311	N	N/A		
38	12.13	13	6	5	143	R	Y	5	Pups 5, 1, 1, 2, and 6 feet in height
39	5.00	4	0	0	57	R	Y	3	Pups <1, <1, and 1 foot in height
40	22.40	13	10	10	266	R	N		
41	13.07	9	3	6	154	R	Y		
42	22.40	14	11	10	266	R	N		
43	14.93	6	2	1	176	R	N		
44	15.87	8	5	6	187	R	Y		
45	17.73	11	8	7	210	R	Y		
46	14.00	8	4	5	165	R	Y		
47	14.93	6	2	3	176	R	Y		
48	20.53	13	14	7	243	R	N		
49	16.80	9	3	4	199	R	Y		
50	18.67	15	12	12	221	R	N		
51	16.80	10	9	8	199	R	Y		
52	14.93	8	6	3	176	R	Y		
53	17.73	9	6	3	210	R	Y		
54	18.67	13	7	10	221	R	N		
55	16.80	11	7	7	199	R	Y		
56	24.27	16	10	12	288	R	N		

Tree #	Height (feet)	Trunk diameter (inches)	N/S canopy width (feet)	E/W canopy width (feet)	Estimate d age* (years)	Impact**	Transplantable?***	Number of transplantable pups	Comments
57	8.00	12	3	11	93	R	N		
58	19.60	18	10	11	232	R	N		
59	19.60	7	5	4	232	R	N		Large branch bent beyond horizontal
60	23.33	11	15	16	277	R	N		
61	18.67	11	8	7	221	R	N		
62	21.47	11	13	6	255	R	N		Entire tree bent past 90 degrees; true fork 14 ft from base
63	13.07	4	1	2	154	R	Y		Broken at crown
64	18.00	14	10	14	213	R	N	6	Partially fallen; leaning on ground; tree height measured along lean
65	14.93	10	8	5	176	R	Y		
66	21.47	11	12	12	255	R	N		
67	15.87	11	7	6	187	R	Y		Several broken branches including fork
68	17.73	16	10	11	210	R	N	1	Incipient pup; 0 ft tall
69	30.80	15	18	14	367	R	N		
70	22.40	11	12	14	266	R	N		Pup of 69
71	24.27	11	11	7	288	R	N		
72	17.73	10	11	8	210	R	N		Over parking lot
73	10.00	8	5	3	117	R	Y	1	2 branches cut at fork; pup <1 ft tall
74	23.33	11	8	12	277	R	N		
75	15.87	9	14	11	187	R	N		
76	16.80	8	6	7	199	R	Y		
77	7.47	4	0	0	87	R	Y		
78	13.07	6	2	5	154	R	Y		
79	13.07	8	2	3	154	R	Y		
80	12.13	7	1	2	143	R	Y		Broken at fork
81	13.07	8	3	4	154	R	Y		
82	15.87	6	2	3	187	R	Y		
89	17.73	6	9	6	210	R	Y		
90	16.80	10	8	7	199	R	Y		

Tree #	Height (feet)	Trunk diameter (inches)	N/S canopy width (feet)	E/W canopy width (feet)	Estimated age* (years)	Impact**	Transplantable?***	Number of transplantable pups	Comments
Off-site tree north	~15	Unknown	~8	~8	Unknown	R	Potential	Unknown	Assessed based on aerial photography
Off-site tree south	~20	Unknown	~12	~12	Unknown	R	Unlikely	Unknown	Assessed based on aerial photography

*: Age estimate based on an assumption of 4 inches of growth through the first year, followed by 1 inch of growth per year thereafter.

** : Impact abbreviations: R = removal; E = encroachment; N = no impact

***: An assessment of transplantability was not made for trees not proposed for removal.

RECOMMENDATIONS

The following recommendations are modified from the Joshua Tree Salvage Plan for the Home Depot Center in the Town of Yucca Valley, California, prepared by Michael Brandman Associates.⁸

1. Transplantation should be conducted during late fall or winter, when weather is moderately cool and soils are moist.
2. Joshua trees and pups should be marked systematically (such as on the north side of the trunk) so that they may be transplanted in the same orientation that they were growing in prior to removal. Prior to removal, all transplantable trees within the project impact area should be thus marked.
3. Prior to the initiation of Joshua tree and pup salvage, the Project Biologist should coordinate a meeting with all contractors involved in the salvage project. The Project Biologist should provide the contractor(s) with a copy of the Salvage Plan and should review all relevant components of the program.
4. Trees that have been marked should be removed utilizing a tree spade or backhoe and personnel with shovels. Care should be taken to remove the entire root ball intact, to minimize exposure of the root ball to air, and to maintain a moist environment around the roots at all times. Root balls should be treated with a mixture of water and rooting hormone immediately upon removal from the ground, and the salvaged trees should be immediately transported to the storage area or transplantation site.
5. Unless immediately transplanted to their final locations, a storage area for the salvaged trees and pups should be prepared ahead of time. The trees should be stored by planting in their native orientations within a temporary trench, or trenches, approximately 1 foot wider than the root ball of the trees and long enough to accommodate all the trees to be salvaged. Trees can be planted as close as possible while still allowing any necessary room for the installation of equipment. The Project Biologist should coordinate with the contractors to determine the length and width of the trench required.
6. Receiving holes for salvaged trees and pups within the final transplantation area should be approximately 1 foot larger than the root balls they receive.
7. A water and rooting hormone (vitamin B-1) mix should be prepared prior to final translocation of trees and pups. Added minerals or chelating agents, common additives in commercially available rooting hormone mixes, are acceptable. The rooting hormone should be mixed per the manufacturer's direction, typically 1:250 (B 1: water). The receiving hole should be filled with a mixture of water and rooting hormone, and allowed to drain before placing the tree in the hole. Once the plant is set in the hole in the proper orientation, the hole should be backfilled and the tree watered once again. Air pockets should be eliminated from around the root ball by tamping or standing on the root ball while the soil around the plant is still wet. A basin should be left around the plant to hold water. The trees should be watered again after 10 days by soaking with a mixture of Vitamin B1 and water.

⁸ Michael Brandman Associates. 2005. Joshua Tree Salvage Plan for the Home Depot Center in the Town of Yucca Valley, California. Prepared for the Town of Yucca Valley.

8. The trees should be watered periodically through the establishment period based upon their appearance. The Project Biologist (or designee) should monitor the plants for signs of stress and desiccation and notify maintenance personnel when the plants must be watered. For each watering, the basin should be filled and then allowed to drain (and the soil to dry) before watering again. Watering should be conducted as needed to support the initial translocation; however, the goal is to establish the plants without need for supplemental watering. The transplants should be monitored weekly for three months and then monthly until the Project Biologist has determined that they are established.

CONCLUSION

As indicated above, 71 Joshua trees may be removed, inclusive of 69 on-site trees and 2 off-site trees, and 8 may be encroached upon as a result of the proposed development of the site. Twenty-eight of the on-site trees and one of the off-site trees have characteristics that make them viable candidates for transplantation. Additionally, throughout the project site, there are 26 transplantable pups which may serve as replacement mitigation for trees that would be removed as a result of proposed project development. Joshua tree is the only species on the project site that is protected by the Plant Protection and Management Ordinance.

APPENDIX A

Joshua Tree Survey Data

Tree #	Tree height (ft)	Trunk diameter (in)	Fork height (ft)	Branches	N/S canopy (ft)	E/W canopy (ft)	branch spread (</> 45°)	Lean (degrees)	Impact	Transplantable?	Pups
1	19.60	14	9.33	3	9	8	<	5	N	N/A	
2	10.27	8	7.47	2	4	2.5	>	30	N	N/A	
3	14.93	9	4.67	2	6	5	<	45	E	N/A	
4	9.33	6	7.47	2	2	3	<	5	E	N/A	
5	12.13	8	8.40	1	2	2	<	10	E	N/A	
6	25.20	13	12.13	2	6.5	7	<	5	R	N	
7	15.87	9	5.60	2	5	6	<	5	R	Y	
8	22.40	12	14.00	2	7.5	8	<	20	N	N/A	
9	23.33	15	7.47	2	11	10	<	10	R	N	5
10	16.80	9	7.47	2	5	6	=	5	R	Y	
11	23.33	13	11.20	4	8	9	<	0	R	N	
12*	24.27	13	8.40	2	11	10	<	0	N	N/A	N/A
13	20.53	11	8.40	4	8	8	=	0	R	N	
14	20.53	14	9.33	4	10	9	>	5	R	N	
15	22.40	14	9.33	2	8	8	>	5	R	N	
16	18.67	11	12.13	2	0	5	>	10	R	N	
17	19.60	10	9.33	2	12	10	>	5	R	N	
18	16.80	9	7.47	2	7	5	>	5	R	N	
19	8.40	8	3.00	1	2.5	2		45	R	N	
20	11.20	9	5.60	3	3	3	>	0	R	N	
21	17.73	15	6.53	5	17	16	>	0	E	N/A	
22	17.73	7	7.47	2	4	5	>	5	E	N/A	
23	13.07	7	8.40	3	5	6	>	10	E	N/A	
24	22.40	12	11.20	2	13	11	<	15	R	N	
25	15.87	14	9.33	3	7	8	>	5	E	N/A	
26	14.93	10	8.40	2	9	9	=	10	E	N/A	
27	11.20	8	5.60	2	1	8	>	20	R	N	
28	25.20	14	14.93	3	11	7	=	0	R	N	
29	26.13	10	14.93	3	15	20		90	R	N	
30	24.27	11	12.13	3	8	7	<	15	N	N/A	2
31	22.40	15	11.20	2	12	12	<	0	N	N/A	
32	18.67	11	9.33	3	7	7	=	5	R	N	3
33	18.67	11	7.47	3	7	8	<	0	R	N	

Tree #	Tree height (ft)	Trunk diameter (in)	Fork height (ft)	Branches	N/S canopy (ft)	E/W canopy (ft)	branch spread (</=> 45°)	Lean (degrees)	Impact	Transplantable?	Pups
34	23.33	12	10.27	2	15	11	<	5	R	N	
35	19.60	13	7.47	4	8	10	>	10	R	N	
36	17.73	15	6.53	3	8	6	=	5	R	Y	
37	26.13	12	16.80	3	0	0	<	90	N	N/A	
38	12.13	13	3.73	2	6	5	=	30	R	Y	5
39	5.00	4	0.00	0	0	0		0	R	Y	3
40	22.40	13	9.33	3	10	10	>	5	R	N	
41	13.07	9	6.53	3	3	6	=	30	R	Y	
42	22.40	14	10.27	2	11	10	90	10	R	N	
43	14.93	6	10.27	0	2	1	90	5	R	N	
44	15.87	8	7.47	2	5	6	<	5	R	Y	
45	17.73	11	8.40	3	8	7	=	5	R	Y	
46	14.00	8	8.40	4	4	5	<	5	R	Y	
47	14.93	6	6.53	3	2	3	<	5	R	Y	
48	20.53	13	6.53	2	14	7	<	10	R	N	
49	16.80	9	10.27	2	3	4	=	10	R	Y	
50	18.67	15	9.33	3	12	12	<	5	R	N	
51	16.80	10	7.47	3	9	8	<	35	R	Y	
52	14.93	8	8.40	3	6	3	<	20	R	Y	
53	17.73	9	9.33	2	6	3	=	20	R	Y	
54	18.67	13	9.33	3	7	10	<	5	R	N	
55	16.80	11	8.40	2	7	7	<	5	R	Y	
56	24.27	16	8.40	2	10	12	<	10	R	N	
57	8.00	12	2.50	0	3	11	=	10	R	N	
58	19.60	18	9.33	5	10	11	<	5	R	N	
59	19.60	7	11.20	2	5	4	>90	10	R	N	
60	23.33	11	7.47	3	15	16	<	10	R	N	
61	18.67	11	9.33	4	8	7	<	0	R	N	
62	21.47	11	7.47	6	13	6		45	R	N	
63	13.07	4	7.47	1	1	2		5	R	Y	
64	18.00	14	3.00	5	10	14	>	0	R	N	6
65	14.93	10	8.40	2	8	5	<	10	R	Y	
66	21.47	11	7.47	5	12	12	<	5	R	N	
67	15.87	11	7.47	4	7	6	=	5	R	Y	

Tree #	Tree height (ft)	Trunk diameter (in)	Fork height (ft)	Branches	N/S canopy (ft)	E/W canopy (ft)	branch spread (</=> 45°)	Lean (degrees)	Impact	Transplantable?	Pups
68	17.73	16	8.40	5	10	11	>	0	R	N	1
69	30.80	15	11.20	2	18	14	<	0	R	N	
70	22.40	11	11.20	2	12	14	<	30	R	N	
71	24.27	11	11.20	2	11	7	<	5	R	N	
72	17.73	10	9.33	3	11	8	<	0	R	N	
73	10.00	8	3.25	3	5	3	<	20	R	Y	1
74	23.33	11	8.40	3	8	12	<	0	R	N	
75	15.87	9	9.33	4	14	11	>	45	R	N	
76	16.80	8	9.33	3	6	7	=	5	R	Y	
77	7.47	4	0.00	0	0	0		10	R	Y	
78	13.07	6	7.47	2	2	5	<	0	R	Y	
79	13.07	8	6.53	3	2	3	<	5	R	Y	
80	12.13	7	8.40	2	1	2	<	15	R	Y	
81	13.07	8	4.67	2	3	4	<	15	R	Y	
82	15.87	6	9.33	3	2	3	<	20	R	Y	
83*	15.87	6	7.47	2	2	6	<	10	N	N/A	N/A
84*	16.00	6	0.00	3	6	11	<	>90	N	N/A	N/A
85*	16.80	5	13.07	2	1	4	>	5	N	N/A	N/A
86*	21.47	11	6.53	2	8	2	<	0	N	N/A	N/A
87*	14.93	8	7.47	2	4	6	<	10	N	N/A	N/A
88*	16.80	7	9.33	2	5	7	<	5	N	N/A	N/A
89	17.73	6	10.00	2	9	6	<	10	R	Y	
90	16.80	10	8.40	3	8	7	<	0	R	Y	
91*	15.87	7	7.47	2	8	2	<	0	N	N/A	N/A
TOTALS									R: 69 (+ 2 off site)	28 (+ 1 off site)	26
									E: 8		
									N: 6		

Criteria values that are favorable for transplantation are highlighted in grey.
 Impact abbreviations: R = removal; E = encroached by project, possible save; N = no impact
 *: off-site tree, not counted in totals