1050 St. Elizabeth Drive

Tree Report

Prepared for:
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HORT SCIENCE
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Divisions of The F.A. Bartlett Tree Expert Company

Tree Report

1050 St. Elizabeth Drive
San Jose CA

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Introduction and Overview

KCR Development is planning to redevelop the property at 1050 St. Elizabeth Drive located in San Jose, CA. Current site use consists of buildings, parking, and associated landscape features. KCR Development requested that HortScience | Bartlett Consulting, divisions of The F.A. Bartlett Tree Expert Company, prepare a **Tree Report** for the site. This assessment provides the following information:

1. An assessment of trees currently growing at the two sites.
2. Evaluation of impacts from the proposed project.
3. Recommendations for tree preservation and removal.
4. Estimated tree mitigation requirements.

Assessment Methods

Trees were assessed in December 2020. Trees were evaluated through a visual assessment from the ground and consisted of the following steps:

1. Tagging each tree with an identifying number and recording its location on a map.
2. Identifying the tree as to species.
3. Measuring the trunk diameter at 54" above grade.
4. Determining if the tree requires a permit for removal in the City of San Jose (ordinance size tree).
5. Evaluating the health and structural condition using a scale of 0 – 5 where 0 = dead, 1 = poor and 5 = excellent.
6. Noting any significant structural characteristics including decay, poor crown form, dieback, and a history of failure.
7. Rating the suitability for preservation as “high”, “moderate” or “low”. Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.
8. Recording the tree’s location on a map.

Each tree is described in the attached ***Tree Assessment Form*** and its approximate location plotted in the ***Tree Assessment Plan*** located in the **Attachments**.

Trees #90 and 91 could not be tagged due to their location in interior courtyards. No tag was attached to the trunk of either tree. But both were visually assessed and approximately locations included on the map. Trees #85 – 88 were located offsite to the south but tree trunks were close to the existing fence.

Description of Trees

Sixteen (16) trees were evaluated, representing 12 species (Table 1). All trees had been planted as part of landscape treatment. Species present were typical of landscape and orchard plants used in the San Jose area. None of the species present is native to the San Jose area.

Table 1. Species present and tree condition. 1050 St. Elizabeth Drive. San Jose CA.

Common name	Scientific name	Condition				No. of Trees	
		Poor (1,2)	Fair (3)	Good (4)	Excell. (5)	Ordi-nance	Total
Lemon	*Citrus limon*	--	1	--	--	1	1
Orange	*Citrus sinensis*	--	1	--	--	--	1
Loquat	*Eriobotrya japonica*	--	1	--	--	--	1
Jacaranda	*Jacaranda mimosifolia*	--	--	--	1	--	1
Paradox walnut	*Juglans* x *paradox*	1	--	--	--	1	1
English walnut	*Juglans regia*	1	--	--	--	1	1
Glossy privet	*Ligustrum japonicum*	--	4	--	--	4	4
Tuliptree	*Liriodendron tulipifera*	--	1	--	--	1	1
Blue Colorado spruce	*Picea pungens* 'Glauca'	--	--	1	--	1	1
Monterey pine	*Pinus radiata*	1	1		--	2	2
Cherry	*Prunus avium*	--	--	1	--	--	1
Calif. pepper	*Schinus molle*	--	1	--	--	1	1
Total, all trees assessed		**3**	**10**	**2**	**1**	**12**	**16**

Glossy privets #86 – 89 were located in the southwest corner of the site (Photo 1, following page). Trees #86, 87 and 88 appeared to be off-site, located behind a wire fence. Tree #89 was on-site near St. Elizabeth Drive. Trees were mature in development with narrow crowns. Trunk diameters ranged from 15 to 18 in. All trees had multiple stems arising low on the trunk. Tree condition was fair due to overall form, history of trimming on the project side of the fence, and lack of overall vigor.

Monterey pines #76 and 78 were mature trees on the west side of the site. Tree #76 was 45 in. in diameter and in fair condition (Photo 2). The crown was rounded and somewhat rangy in form. Tree #78 was 29 in. and in poor condition. The tree leaned sharply to the south and the crown was one-sided in that direction. The lower trunk of both trees had been attacked by red turpentine beetle, a boring insect that is a serious pest of the species.

Photo 1. Looking south from building entry. Tuliptree #85 and glossy privets #86 87 and 88 (red circle) were located behind a wire fence. Glossy privet #89 (white arrow) was located onsite.

Photo 2. Looking north at Monterey pine #76. Note rounded crown.

No other species was represented by more than a single tree. Included in this group were:

- Paradox walnut #77 was a mature tree in poor condition, located near the entrance to the existing building. A large basal wound was present. The tree had been topped long ago. The west side of the crown had recently been reduced.

Trees #79 – 84 were located on the east side of the site.

- Lemon #79 was a mature shrub in fair condition. Multiple branches arose low on the trunk.
- Cherry #80 was 6 in. diameter and in good condition.
- English walnut #81 had stems of 9, 8 and 7 in., all of which leaned to the south. Overall condition was poor.
- Loquat #82 was a large shrub with a diameter of 4 in. Condition was fair.
- Orange #83 was mature shrub in fair condition. Multiple branches arose low on the trunk.

- Calif. pepper #84 was a mature tree with trunks of 28 and 19 in. (Photo 3). Overall condition was fair. The crown was wide, extending over the adjacent building, and hung to the ground.

Photo 2. Looking north at Calif. pepper #83. Note wide crown with branches hanging to the ground.

- Tuliptree #85 was located off-site to the south (see Photo 1). This mature tree was approximately 21" in diameter and in fair condition.

- Blue Colorado spruce #90 was located in an interior courtyard. I estimated the trunk diameter to be 15 in. Overall condition was good.

- Jacaranda #91 was located in an interior courtyard. I estimated the trunk diameter to be 6 in. Overall condition appeared to be excellent.

The City of San Jose defines Ordinance Sized Tree " *any live or dead woody perennial plant…having a main stem or trunk 38 inches or more in circumference (12 inches diameter) at a height measured 54 inches above natural grade slope"* (SJMC 13.32.20.I. Updated February 2018). Twelve of the 16 trees met this criterion. Ordinance Sized Trees are identified on the ***Tree Assessment Form.***

The City of San Jose has also designated a number of Heritage Trees. No Heritage trees were present at this site.

Suitability for Preservation

Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. For example, Monterey pine, tuliptree, and walnuts are intolerant of construction impacts while Calif. pepper is more tolerant.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

- **Species invasiveness**
  Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (www.cal-ipc.org) lists species identified as having being invasive. San Jose is part of the Central West Floristic Province. Glossy privet and Calif. pepper are listed as being invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (Table 2).

Table 2. Tree suitability for preservation. 1050 St. Elizabeth Drive. San Jose CA.

High	Trees with good health and structural stability that have the potential for longevity at the site. Jacaranda #91 was rated as having good suitability for preservation.
Moderate	Trees in fair health and/or possessing structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the “high” category. Blue Colorado spruce #90 and cherry #80 were rated as having moderate suitability for preservation.
Low	Trees in poor health or possessing significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Thirteen (13) trees were rated as having poor suitability for preservation: glossy privet #86 - 89; Monterey pine #76, 78; paradox walnut #77, lemon #79, English walnut #81, loquat #82; orange #83, Cailf. pepper #84, and tuliptree #85.

We consider trees with high suitability for preservation to be the best candidates for preservation. We do not normally recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Evaluation of Impacts and Recommendations for Action

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The tree assessment was the reference points for tree condition and quality.

The proposed project would convert the existing adult care facility to high-density residential. Impacts from the proposed project were assessed using the Landscape Plans prepared by Jett Landscape Architecture & Design. Sheet 10.1 depicted the layout of the new structure and related improvements.

The plans depicted a complete re-development of the site. The existing facility and parking areas would be demolished. The site will be re-graded and new improvements installed. The most significant impacts to trees would be associated with 1) site demolition and clearing, and 2) grading and related construction.

Based on my evaluation of the plans, I recommend preservation of the four off-site trees (#85 – 88) and removal of the 12 on-site trees. The 12 on-site trees are located within the proposed development area.

Tree Mitigation

The City of San Jose requires mitigation of trees removed on development sites. The species and exact number of trees to be planted on the site will be determined in consultation with the City Arborist and the Department of Planning, Building, and Code Enforcement.

The City of San Jose mitigation requirements are:

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
12 inches or greater	5:1	4:1	3:1	24-inch box
6 to 12 inches	3:1	2:1	none	24-inch box
less than 6 inches	1:1	1:1	none	24-inch box
x:x = tree replacement to tree loss ratio **Note:** Trees greater than 12 inches diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.				

Where trees have more than one trunk, the diameters of individual trunks are added together to establish the diameter class for mitigation purposes.

Table 3. Estimated tree mitigation. 1050 St. Elizabeth Drive. San Jose CA.

Diameter of tree to be removed	Number of Trees to be Removed			Replacement Tree Req'd
	Native	Non-Native	Orchard	24" Box
12 inches or greater	0	6	2	30
6 to 12 inches	0	1	2	2
less than 6 inches	0	0	1	0
Total	**0**	**7**	**5**	**32**

Alternative Mitigation Measures
In the event the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures may be implemented, to the satisfaction of the City's Environmental Principal Planner, at the development permit stage:

- The size of a 15-gallon replacement tree can be increased to 24-inch box and count as two replacement trees.
- An alternative site(s) will be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening
- A donation of $755 per mitigation tree to Our City Forest or San Jose Beautiful for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

Tree Preservation Guidelines
The following are recommendations for design and construction phases that will assist in successful tree preservation.

Design recommendations
1. Establish the horizontal and vertical elevation of the 16 trees included in this assessment. Include trunk locations and tag numbers on all plans. Verify that trees #85 – 88 are located off-site.
2. Allow the Consulting Arborist to review all future project submittals including grading, utility, drainage, irrigation, and landscape plans.
3. Establish a **TREE PROTECTION ZONE** around trees to be preserved. As a general guideline, the **TREE PROTECTION ZONE** shall be the property line.
4. Route underground services including utilities, sub-drains, water or sewer around the **TREE PROTECTION ZONE**. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.
5. Use only herbicides safe for use around trees and labeled for that use, even below pavement.

6. Design irrigation systems so that no trenching will occur within the **TREE PROTECTION ZONE**.

Pre-construction and demolition treatments and recommendations

1. Install protection at the **TREE PROTECTION ZONE** prior to demolition, grubbing, or grading.

2. No entry is permitted into a **TREE PROTECTION ZONE** without permission of the project superintendent.

3. Trees to be preserved may require pruning to clean the crown and to provide clearance. All pruning shall be completed by an ISA Certified Arborist or Tree Worker and adhere to the latest editions of the American National Standards for tree work (Z133 and A300) and International Society of Arboriculture Best Management Practices, Pruning.

Tree protection during construction

1. Any grading, construction, demolition or other work that is expected to encounter roots of trees to be preserved should be monitored by the Consulting Arborist.

2. If injury occurs to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

3. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the project superintendent.

4. Construction trailers, traffic and storage areas must remain outside fenced areas at all times.

5. No materials, equipment, soil, waste or wash-out water may be deposited, stored, or parked within the **TREE PROTECTION ZONE** (fenced area).

6. Any additional tree pruning needed for clearance during construction must be performed by a qualified arborist and not by construction personnel.

7. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.

Summary

Sixteen (16) trees were assessed at 1050 St. Elizabeth Drive. Twelve species were present, 10 of which were represented by one tree. Four trees were located off-site to the south. Ten of 16 trees were in fair condition. Tree condition varied by species and location.

Among the 16 trees were 12 that met the City of San Jose's criteria as ordinance size.

Given the proposed plan, I recommend removal of the 12 on-site trees and preservation of trees 85 – 88 which are located off-site. The City of San Jose requires mitigation for trees to be removed during development. I estimate the mitigation to be 32 24 in. box trees.

HortScience | Bartlett Consulting

James R. Clark, Ph.D.
Certified Arborist WE-0846A

Attachments

Tree Assessment Form

Tree Inventory Plan

Tree Assessment

1050 St. Elizabeth Drive
San Jose CA
December 2020

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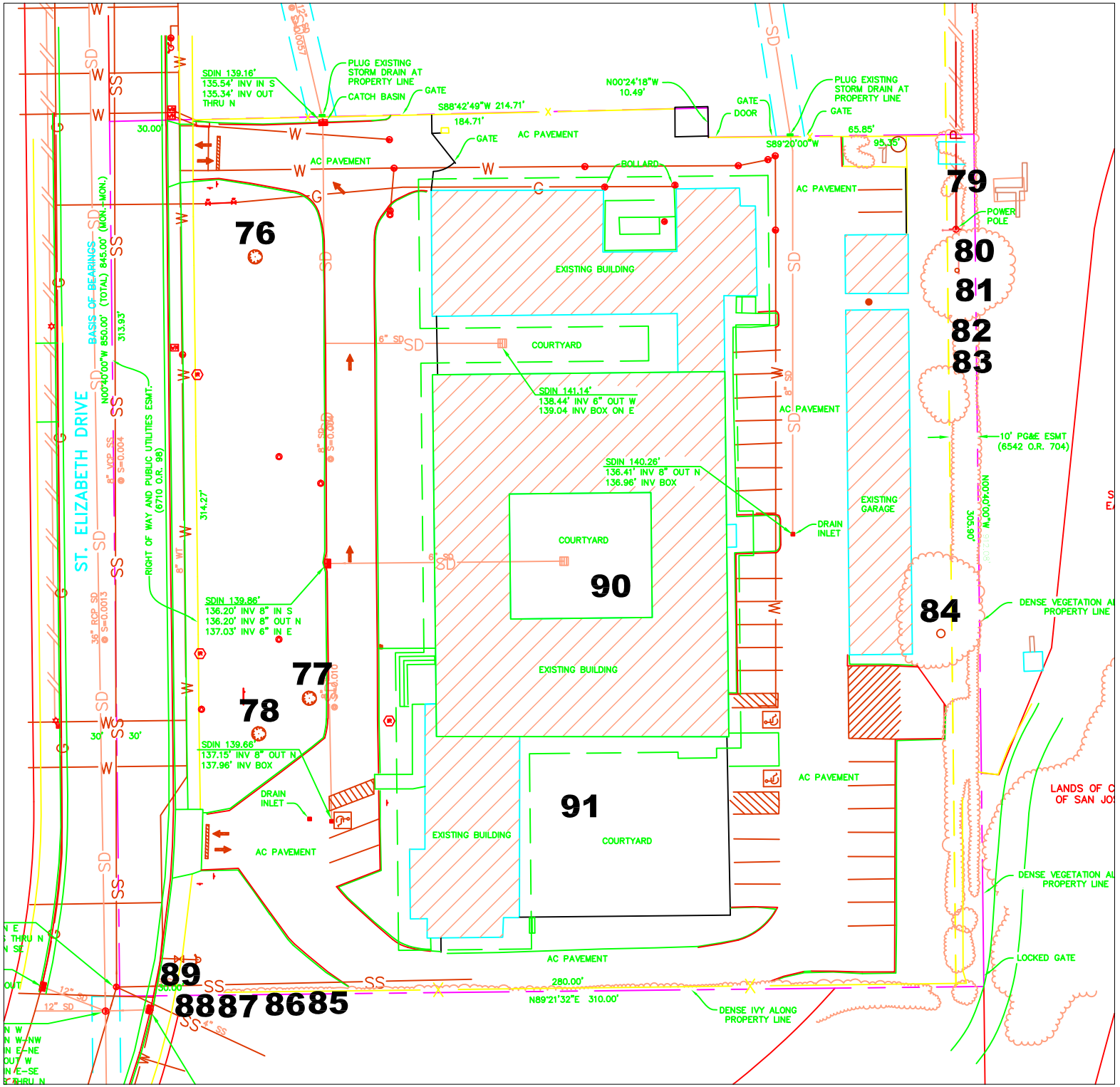
TREE No.	SPECIES	TRUNK DIAMETER (in.)	ORDINANCE SIZE?	CONDITION (0=dead) (5=excell.)	SUITABILITY for PRESERVATION	COMMENTS
76	Monterey pine	45	Yes	3	Low	Okay form; red turpentine beetle; open canopy.
77	Paradox walnut	30	Yes	2	Low	Large basal wound on E.; poor form & structure; topped, resprouted, then reduced on W.
78	Monterey pine	29	Yes	2	Low	Leaning & one-sided to S.; red turpentine beetle.
79	Lemon	4,3,3,2,2,2	Yes	3	Low	Large low-branched shrub.
80	Cherry	6	No	4	Moderate	Crowded but okay.
81	English walnut	9,8,7	Yes	2	Low	Multiple attachments @ base; lean S.; dying.
82	Loquat	4	No	3	Low	Big shrub; high crown.
83	Orange	3,2,2,2	No	3	Low	Flat-topped shrub.
84	Calif. pepper	28,19	Yes	3	Low	Codominant trunks @ base; 28" stem leans N., codominant again @ 6'; 19" stem leans S. & is suppressed; canopy hangs to ground & extends over bldg.
85	Tuliptree	21	Yes	3	Low	**Off-site**; high crown; lacks vigor.
86	Glossy privet	15,11,10,9,8	Yes	3	Low	**Off-site;** multiple attachments @ 5' & below; upright.
87	Glossy privet	16,8	Yes	3	Low	**Off-site**; codominant trunks @ base; lacks vigor.
88	Glossy privet	18	Yes	3	Low	**Off-site**; multiple attachments high in crown; lacks vigor.
89	Glossy privet	15,7	Yes	3	Low	Codominant trunks @ 3'; one-sided to W.; lacks vigor.
90	Blue Colorado spruce	15	Yes	4	Moderate	**No tag**; interior courtyard; good form & vigor.
91	Jacaranda	6	No	5	High	**No tag**; interior courtyard; good young tree.



Tree Assessment Plan

1050 St. Elizabeth Street
San Jose, CA

Prepared for:
KCR Development
Cupertino, CA

November 2020

N

No Scale

Notes:
Base map provided by:
N | V | 5
Engineering
San Jose, CA

Numbered tree locations with no survey point were approximately located in the field.

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