

# Māhguā' Archeological Site

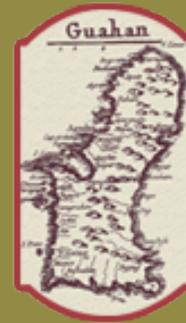
INTERPRETIVE PARK (GHPI 66-08-2303)

Prepared By:

GUMA Architects, LLC



For:



GUAM

**INANGOKKON**

**PRESERVATION**

**INADAHI GUAHAN**

**TRUST**



# Introduction

The Måhgua' Interpretive Park will showcase Guam's natural and cultural landscape. Måhgua' is heavily impacted by construction and is not accessible to the general public. This Park's main focus is to provide a meaningful interpretation of Guam's natural and cultural resources that will benefit the people and visitors of Guam.

## Project Goals

- Provide conceptual designs for on-site historical marker and off-site interpretive park located at NCTS Finegayan
- Create an off-site interpretive park with a landscape for the secure display of archaeological artifacts
- Use signage and visibility from the roadway to alert people to these interpretive areas
- Present cultural elements in a sequential, story-telling fashion
- Consider creating new cultural replicas of traditional elements to improve understanding
- Accommodate groups and educational and community events
- Foster understanding of ancient CHamoru culture by all age groups
- Create a safe park that is accessible for all
- Preserve and enhance native flora and fauna
- Allow for passive recreation
- Match design to maintenance and resources available
- Meet necessary guidelines as established by the Secretary of the Interior's Standards

# Design Program

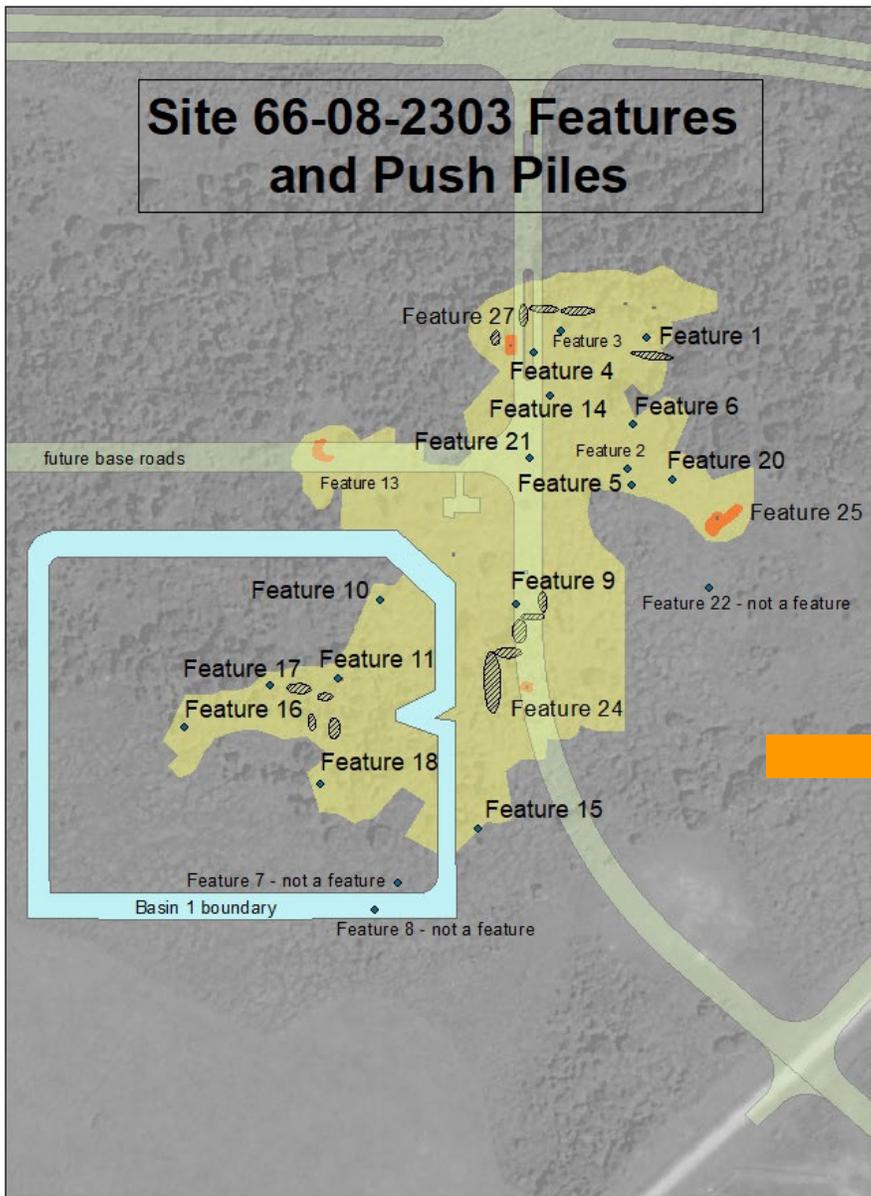


## *Additional Elements for Consideration*

- Entry signage Scale and Form
- Large & Small scale gathering spaces
- Replica display area with village house and smaller house that mimic natural materials, but are lower maintenance
- Earth Oven replica
- Demonstration agriculture field
- Demonstration medicinal plant garden
- Picnic area with shelter
- General native plant arboretum
- Public art elements
- Site perimeter walls in vernacular style



# Site 66-08-2303 Features and Push Piles



- Site 66-08-2303
- SHPO Requested Features
- Push piles



**Primary Message:**  
 The interpretive focus will be on the artifacts, their original site of discovery and how they fit into the overall story of *Guam's history*.



Figure 5.6-22. Site 66-08-2303, Feature 13, Possible Quarry Area, Facing Approximately Southwest (Taken from Welch 2010)



Figure 5.6-21. Site 66-08-2303, Feature 12, Possible *Idsa* (Taken from Welch 2010)  
 Scale (red and white bar) Increment: 20 centimeters (7.9 inches)



Figure 5.6-12. Site 66-08-2303, Feature 6, *Haligi* (Taken from Welch 2010)  
 Scale Increment: 10 centimeters (0.39 inches)

## Additional Messages:

- What was life like in the Latte period?
- How were settlements developed and laid out?
- What is unique about the northern plateau of Guam?
- What were the food sources?
- Explore flora and fauna that may be missing today.
- What were the oral histories of the time?

# Interpretive Elements

- The initial interpretive signs will be located at key nodes within the interpretive park. Panels will be linked to the experience of the visitor in that particular portion of the site.
- These sign locations encourage people to pause and immerse themselves into a unique cultural and environmental experience.



# Interpretive Themes and Content Topics

## *Culture and History*

- A historical voice tells the story of the land through the eyes of the people who inhabited it.
- A scientific point of view tells the story of the geological formation of the land to explain its limestone terrain.

## *Connections (Environment, History, Future)*

- Visuals identify ecological communities, the CHamoru community, as well as opportunities for stewardship for the various areas.

## *Interpretive Panels:*

- Provide panels with artwork and images to fill in the details of the story. Create a hierarchy of text to capture the interest of people with varying degrees of interest and time.



# Design Program



## Entry Gateway

- The entry gateway is a vehicular gate which will be open during the daytime only. Consider a gate to close at night.
- Provide entry signage in both Chamoru and English.



## Parking

- Develop parking in a loop for easy access.
- Size parking accordingly to final scale of project.
- Consider formal parking for 8-12 cars, vans, and an overflow parking for special events.



## Trailheads and Paths of Discovery

- The trailheads will include directional and interpretive signs. Trailhead consists of a parking lot, universally accessible trails leading to cultural features. Provide a gateway shade pavilion, information kiosk, picnic areas for events.

# Design Program



## Trails

- For the path of discovery, provide a flowing 6'-0" accessible concrete path with potential art elements embedded for the main loop. Provide secondary paths at a width of 4'.
- Paths will meander through the property and through different eco-zones to create a rich sense of discovery.
- Native plants will create a series of rooms for the path to move through.



## Viewpoints

- Create nodes or viewpoints for gathering, resting and storytelling.
- Informational signs for historical artifacts, native medicinal and food plants, and buildings.
- Interpretive signs for historic context, arts and crafts and community activities.



## Archaeological Artifact Display Area

- This area provides a display of items found in the exploration.
- Artifacts to be securely attached to concrete anchors, or alternate security approach.

# Site Design Diagrams & Cost Estimates

- We have developed general non-site-specific conceptual designs for an on-site historical marker and an off-site public interpretive park. The on-site historical marker, located at the Måhgua' archaeological site inside NCTS, serves as an interpretive signage that complements the off-site interpretive park located in a publicly accessible area near NCTS gate. The park is designed to be welcoming to the community for maximum public benefit.
- This interpretive park is being developed to showcase the cultural resources disturbed by the construction of the Marine Corps cantonment area.
- It is assumed that the conceptual designs will be refined as designated areas are selected to achieve the preferred park program.
- The interpretive park will include native plants to create a vegetated buffer around the park site to soften the impact of surrounding land uses and to contain the interpretive park. The buffer is composed of native plants with signage to interpret traditional uses of the plant material.
- The interpretive park provides a range of development options and public benefit. The buffer will also provide enhanced wildlife habitat and an aesthetic benefit. An entry pavilion is provided to shelter visitors at the entry and to interpret the experience they are about to explore. The site will be designed as a sequential journey through time with a series of outdoor "rooms" each focusing on a part of the story and associated experience.

# On-Site Historic Marker

This is a layout incorporating sculptural / interpretive signage indicating the significance of the site.

The historic significance of the site can be represented through sculptural landscape elements, or through the display of the found artifacts from the Måhgua' Archeological site.

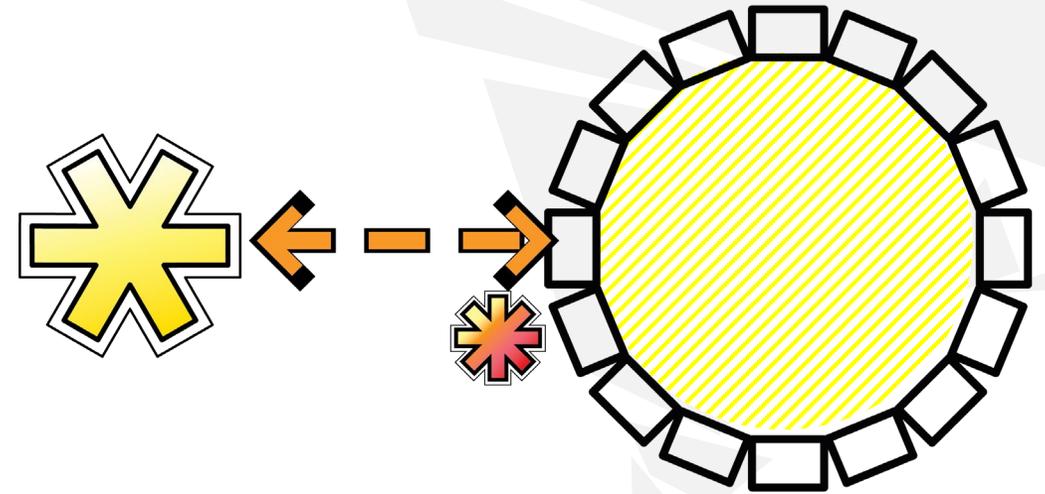
No Parking will be provided in this option as it is anticipated that visitors will park roadside.



Great Seal of Guam Park:  
Example of a Sculptural  
Signage that draws  
attention and creates a  
focal point.

## Option 1:

Central display of artifacts and / or interpretive elements marking the historic site where the artifacts were recovered. Landscape elements utilized to define display space.



## Legend:

-  Artifact / Interpretive Display
-  Agricultural Display
-  Interpretive Display
-  Info Signage
-  Site Marker

# On-Site Historic Marker

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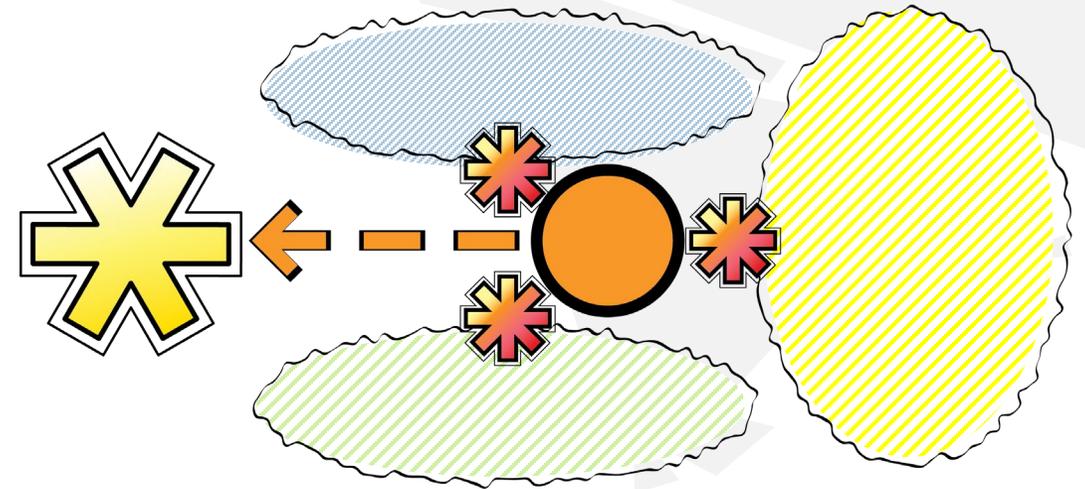
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Great Seal of Guam Park:  
Example of a Sculptural  
Signage that draws  
attention and creates a  
focal point.

## Option 2:

Central axis with perimeter displays. Display Areas can be organized by purpose.



## Legend:



Artifact / Interpretive Display



Info Signage



Agricultural Display



Interpretive Display



Site Marker

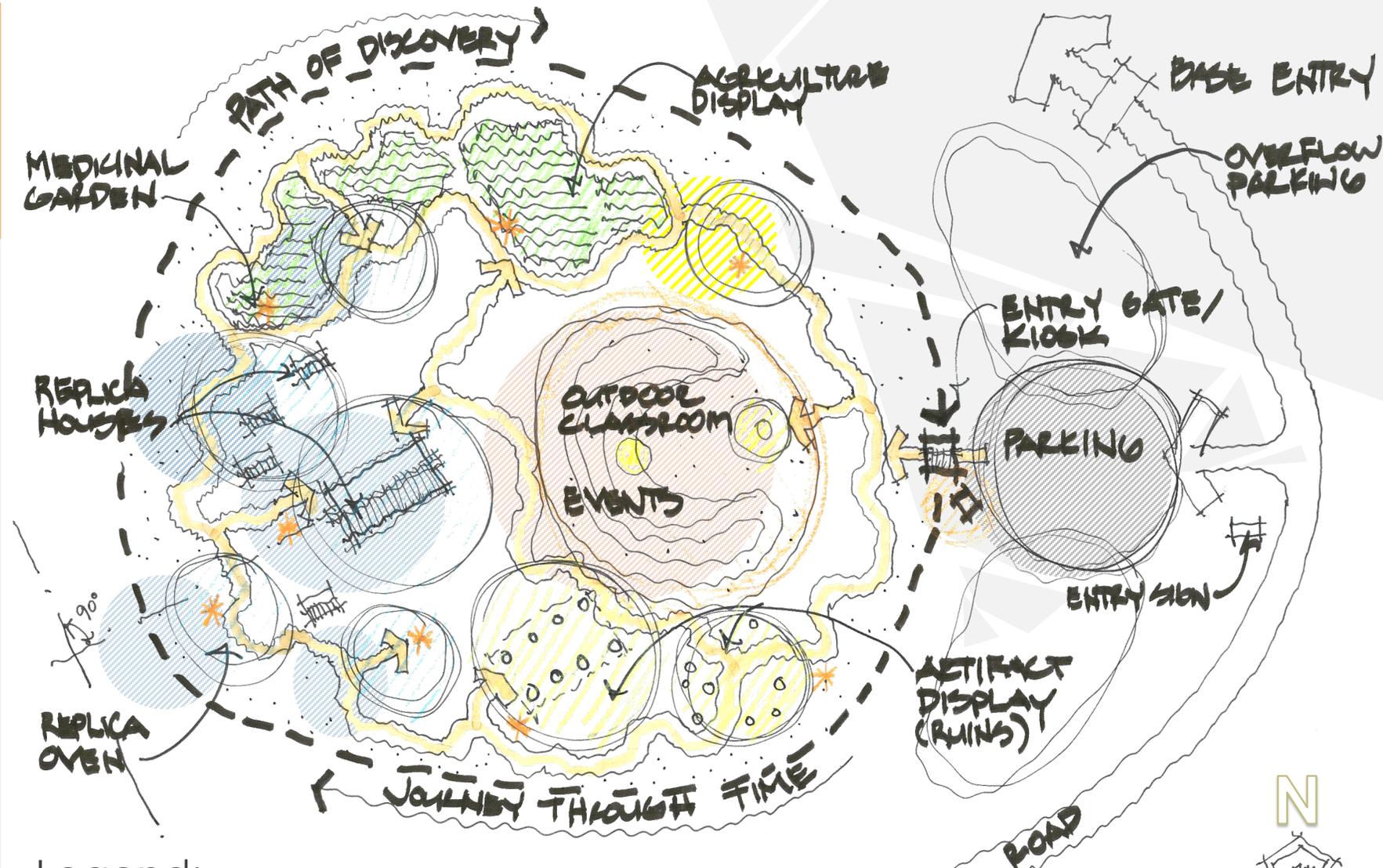
# Off-Site Public Interpretive Park

This conceptual park immerses the visitor in the ancient CHamoru lifeways. An intensive level of development includes a path of discovery that involves a journey through time featuring replicas of ancient CHamoru settlement. A sequential series of displays include replica earth ovens, replica latte houses, native plant garden, and recovered latte structures and lusong. The outdoor classroom provides a place for educational and social events.

Since the site will be used for events, a 12-car parking area is provided and grass overflow parking areas are provided. It is assumed a total of 60 parking spaces will be provided during larger events. More use by school groups is anticipated in this option.

## Site signage:

- 6' Tall Park/Site
- Entry gate
- Trail map
- Wayfinding/directional signs
- Exhibit signs



## Legend:

- Interpretive Display
- Agricultural Display
- Parking
- Artifact Display
- Educational / Gathering Space



# Cost Estimate

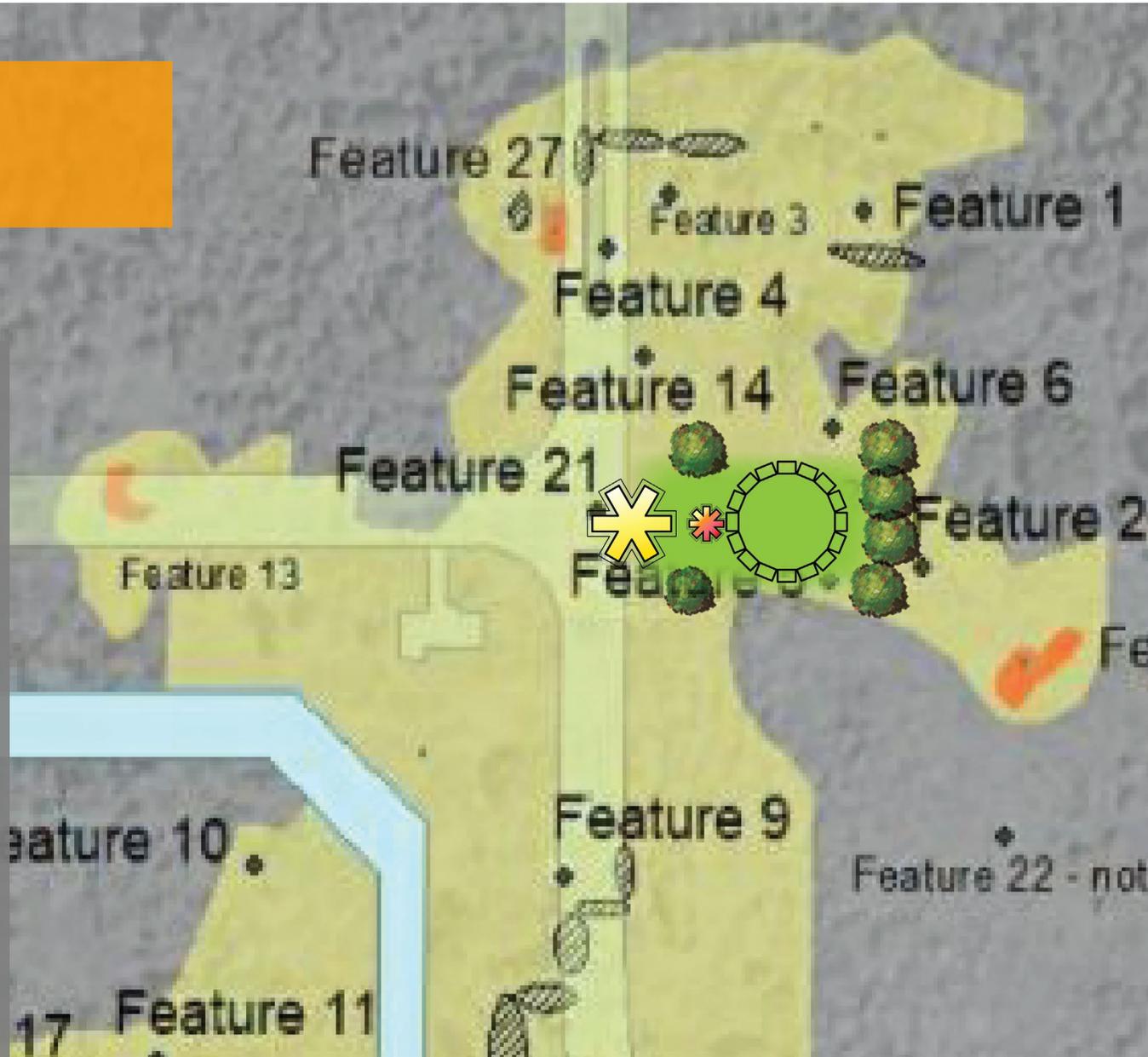
As a study to determine a cost estimate, a sample location near NCTS Finegayan was selected with an arbitrary size and scope applied.



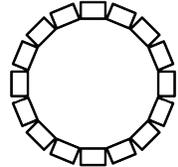
## On-Site Historic Marker

### Site Features:

- ¼ Acre
- Axial Layout with central display area
- Located within base. No fence required.
- Site defined by trees and plantings
- \$20K to 50K Estimated



### Legend:

-  Interpretive / Artifact Display
-  Sculptural / Feature Sign
-  Info Signage

PRELIMINARY BUDGET ESTIMATE

PLANNING LEVEL

Date: 11-Jan-2019

						<u>Cost &amp; Quantity Notes</u>
Item	Description	Quantity	Unit	Unit Costs	Subtotal	Total
01 00	MOBILIZATION					
	Mobilization	10.0%	%	29,366	2,936.55	2,936.55
02 41	PARK IMPROVEMENTS					
	Demolition (incl. cistern)	0	LS	14,000.00	0.00	WAG
	Clear, Grub, Haul, & Dump	0.25	AC	6,750.00	1,687.50	clear & grub trees and stumps - Means budgetary estimate
	Temporary Sedimentation & Erosion Control	0.25	LS	10,000.00	2,500.00	JB estimate
	Site Prep	0.25	LS	10,000.00	2,500.00	budgetary estimate
	Temporary Facilities	0	LS	10,000.00	0.00	half of clear, haul, & dump area (4.5 acres at .5" depth)
	Grading (Cut+Fill)	0	LS	15,000.00	0.00	entiat + \$1/SF (10 car lot. 60x50'=3000')
	Asphalt parking lot	0	SF	3.50	0.00	\$1,200 for 10 stalls - Woburn
	Striping	0	EA	120.00	0.00	From RCO estimate (Stickney)
	Concrete Wheelstops	0	EA	150.00	0.00	wood bollards (2x street ends bollards-purchase + install)
	Removable Bollards	0	EA	1,600.00	0.00	JB estimate
	Agricultural Planting	0	LS	5,000.00	0.00	JB estimate
	Medicinal Planting	0	LS	5,000.00	0.00	JB estimate
	Water distribution w/hose bibs (2)	1	LS	1,000.00	1,000.00	JB estimate
	Artifact display	1	LS	5,000.00	5,000.00	JB estimate
	Art/focal point	1	EA	5,000.00	5,000.00	JB estimate
	Outdoor Classroom	0	LS	20,000.00	0.00	JB estimate
	Historic Structures Replicas	0	LS	80,000.00	0.00	JB estimate
	Accent planting	1	LS	5,000.00	5,000.00	JB estimate
	Perimeter security fence	0	SF	25.00	0.00	JB estimate
	Reforestation/buffer Planting	0	SF	1.60	0.00	\$1.60/SF moderate tree & shrub planting - small containers, soil prep & mulch & Seed(modified Entiat + inflation).
	Meadow planting possibility	10890	SF	0.20	2,178.00	Esperance Park
	Single Vault Toilet (CXT Single Cascadian or similar)	0	EA	23,000.00	0.00	State of WA Contract Price
	Entry Gate & Kiosk with Map and Interpretive Displays	0	EA	20,000.00	0.00	Beebe phase 5
	Vehicular Park Entry Sign	0	EA	5,000.00	0.00	Tukwila-park entry sign \$3850 + 3 yrs infl (9%) = \$4,197
	Directional Signs	0	LS	2000.00	0.00	JB estimate
	Accessible Path (asphalt)	0	LF	18.00	0.00	Kayak 2018 Asphalt path
	Interpretive Sign	1	EA	4,500.00	4,500.00	Izone sign + std stand + 1900 interpretive design
	Picnic Shelter	0	EA	60,000.00	0.00	JB estimate
	Estimate Subtotal				29,365.50	
	Inflation (3% per year for 2 years)	3%	%	32,302.05	1,938.12	32,302.05
	General Contractor Overhead and Profit	12%	%	34,240.17	4,108.82	
	Sales Tax (Guam)	0%	%	38,348.99	0.00	
	Design Contingency	20%	%	38,348.99	7,669.80	
	Location Adjustment (Guam)	0.0%	%	46,018.79	0.00	
	GRAND TOTAL					46,018.79



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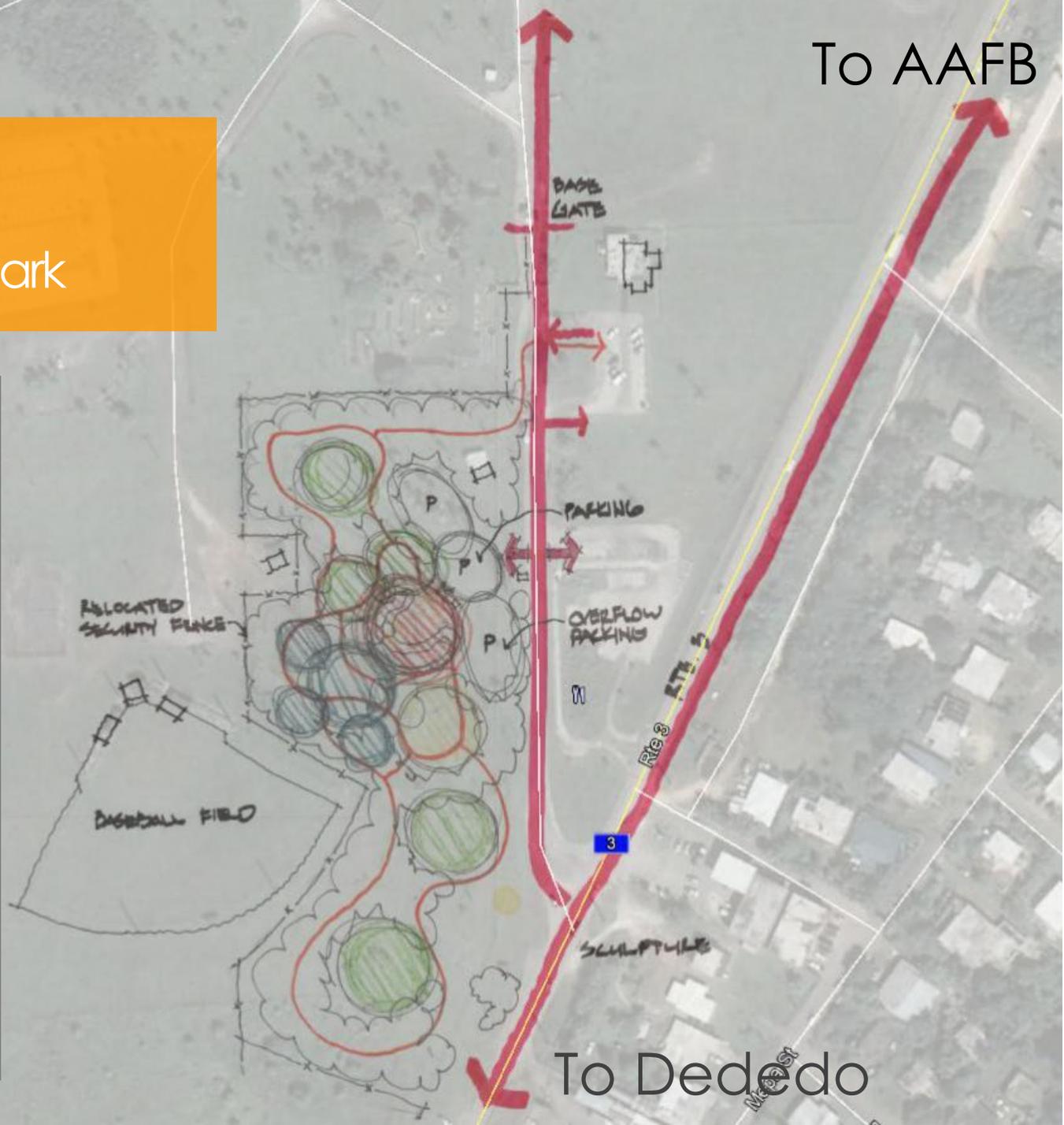


ASSUMPTIONS: Costs are preliminary. Cost in 2019 U.S. Dollars.

# Sample Site for Estimate Off-Site Public Interpretive Park

## Site Features:

- 7 Acres
- Deep Exploration Layout
- Accessible to Public
- Located near Base Entry for efficient management & maintenance
- \$1.5M Estimated



## Legend:

- Interpretive Display
- Artifact Display
- Agricultural Display
- Educational / Gathering Space
- Parking

PRELIMINARY BUDGET ESTIMATE

PLANNING LEVEL

Date: 04-Jan-2019

Cost & Quantity Notes

Item	Description	Quantity	Unit	Unit Costs	Subtotal	Total	
01 00	MOBILIZATION						
	Mobilization	10.0%	%	\$ 712,540.00	\$ 71,254.00	\$ 71,254.00	
02 41	PARK IMPROVEMENTS						
	Demolition (incl. cistern)	1	LS	14,000.00	14,000.00		WAG
	Clear, Grub, Haul, & Dump	2	AC	6,750.00	13,500.00		clear & grub tress and stumps - Means
	Temporary Sedimentation & Erosion Control	1	LS	10,000.00	10,000.00		budgetary estimate
	Site Prep	1	LS	10,000.00	10,000.00		JB estimate
	Temporary Facilities	1	LS	10,000.00	10,000.00		budgetary estimate
	Grading (Cut+Fill)	1	LS	15,000.00	15,000.00		half of clear, haul, & dump area (4.5 acres at .5" depth)
	Asphalt parking lot	6000	SF	3.50	21,000.00		entiat + \$1/SF (10 car lot. 60x50'=3000'
	Striping	12	EA	120.00	1,440.00		\$1,200 for 10 stalls - Woburn
	Concrete Wheelstops	12	EA	150.00	1,800.00		From RCO estimate (Stickney)
	Removable Bollards	3	EA	1,600.00	4,800.00		wood bollards (2x street ends bollards-purchase + install)
	Agricultural Planting	1	LS	15,000.00	15,000.00		JB estimate
	Medicinal Planting	1	LS	20,000.00	20,000.00		JB estimate
	Water distribution w/hose bibs (2)	1	LS	5,000.00	5,000.00		JB estimate
	Artifact display	1	LS	15,000.00	15,000.00		JB estimate
	Art/focal point	3	EA	15,000.00	45,000.00		JB estimate
	Outdoor Classroom	1	LS	20,000.00	20,000.00		JB estimate
	Historic Structures Replicas	1	LS	80,000.00	80,000.00		JB estimate
	Accent planting	1	LS	40,000.00	40,000.00		JB estimate
	Perimeter security fence	1250	LF	25.00	31,250.00		JB estimate
	Reforestation/buffer Planting	52100	SF	1.60	83,360.00		\$1.60/SF moderate tree & shrub planting - small containers, soil prep & mulch & Seed(modified Entiat + inflation).
	Meadow planting possibility	103650	SF	0.20	20,730.00		Esperance Park
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	Directional Signs	1	LS	2,000.00	2,000.00		JB estimate
	Accessible Path (asphalt)	2,870	LF	18.00	51,660.00		Kayak 2018 Asphalt path
	Interpretive Sign	12	EA	4,500.00	54,000.00		Izone sign + std stand + 1900 interpretive design
	Picnic Shelter	1	EA	80,000.00	80,000.00		JB estimate
						\$ 712,540.00	
	Estimate Subtotal					\$ 783,794.00	
	Inflation (3% per year for 2 years)	3%	%	783,794.00	47,027.64		
	General Contractor Overhead and Profit	15%	%	830,821.64	124,623.25		
	Sales Tax (Guam)	0%	%	955,444.89	0.00		
	Contingency	25%	%	955,444.89	238,861.22		
	Location Adjustment (Guam)	10.0%	%	1,194,306.11	119,430.61		
	GRAND TOTAL					\$ 1,313,736.72	

ASSUMPTIONS: Costs are preliminary. Cost in 2019 U.S. Dollars.

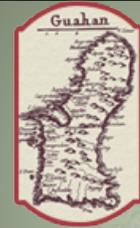


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# Si Yu'os Ma'ase



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