August 2012

Tiyan Parkway

Environmental Assessment

Guam Department of Public Works

U.S. Department of Transportation
Federal Highway Administration

Cooperating Agency: Federal Aviation Administration

Federal Highway Administration
FINDING OF NO SIGNIFICANT IMPACT
For

DPW Project No.: GU-NH-00TP(002)
Tiyan Parkway

The Federal Highway Administration (FHWA) has determined that this project will not have any significant impact on the human or natural environment. This Finding of No significant Impact is based on the attached *Revised Environmental Assessment, Tiyan Parkway – Guam*, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining than an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope and content of the attached Environmental Assessment.

8/31/12
Date

Abraham Wong
Hawaii Division Administrator
U.S. Department of Transportation
Federal Highway Administration

Environmental Assessment

For

Tiyan Parkway

Lead Agencies

Approved by: _____ Date: 8/30/12

Joanne M.S. Brown
Director
Guam Department of Public Works

Cooperating Agency

Federal Aviation Administration

This Environmental Assessment has been prepared in accordance with the provisions and requirements of 23 CFR Part 771 relating to the implementation of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(c)). This Environmental Assessment becomes a Federal Document when evaluated and signed by the responsible FHWA official.

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List of Acronyms

ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
ALP	airport layout plan
APE	Area of Potential Effects
BRAC	Base Realignment and Closure Commission
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DAWR	Division of Aquatic and Wildlife Resources
dB	decibel
DPHHS	Guam Department of Public Health and Human Services
DLM	Guam Department of Land Management
DOD	U.S. Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
GALC	Guam Ancestral Lands Commission
GIA	Guam International Airport
GIAA	Guam International Airport Authority
GTIP	Guam Transportation Improvement Plan
GTP	Guam Transportation Plan
Guam DPW	Guam Department of Public Works
ILS	instrument landing system
L_{dn}	24-hour equivalent noise level
L_{eq}	equivalent noise level
L_{max}	maximum noise level
$\mu g/m^3$	micrograms per cubic meter
mph	miles per hour
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAS	Naval Air Station

NAVFAC	Naval Facilities Engineering Command
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NO_X	nitrogen oxides
PL	public law
PM	particulate matter
ppm	parts per million
ROD	Record of Decision
RPZ	runway protection zone
RSA	runway safety area
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
Sq.m.	square meter(s)
TNM®	Traffic Noise Model
TSDM	Transportation Stormwater Drainage Manual
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service

Chapter 1
Purpose and Need

A. Introduction

The Government of Guam Department of Public Works (DPW) and the Federal Highway Administration (FHWA), in cooperation with the Federal Aviation Administration (FAA) propose to construct Tiyan Parkway. Figure 1-1 illustrates the project area. The lead local and federal agencies, DPW and FHWA, recognize a need to provide roadway capacity in the central area of Guam, linking Route 8 and Route 10A. FAA is a cooperating agency in this action. Currently, public traffic moves between these two routes on roadways that are not a part of the public right-of-way. The purpose of Tiyan Parkway is to provide a public roadway linking the two routes with traffic capacity sufficient to meet the demand in conjunction with other roadway improvements identified in the 2030 Guam Transportation Plan. The project site is located on the Tiyan plateau in the central part of Guam within and bordering the municipalities of Barrigada, Maite, and Tamuning. The Antonio B. Won Pat International Airport, also known as the Guam International Airport (GIA), occupies a large part of this plateau.

This Environmental Assessment (EA) has been prepared in accordance with the FHWA environmental guidelines contained in 23 CFR 771 *Environmental Impact and Related Procedures*, Technical Advisory TA 6640.8A *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*, and 40 CFR 1500-1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (NEPA).

This EA discloses the environmental and social impacts that could result from the project's implementation, and describes specific measures to prevent, minimize or mitigate adverse impacts to the environment. The proposed FHWA action would be to reimburse the Government of Guam for eligible costs incurred in the development and construction of Tiyan Parkway.

The FAA is assigned responsibilities pursuant to 49 United States Code (U.S.C.) § 40101 et seq., for civil aviation and regulation of air commerce in the interests of aviation safety and efficiency. The FAA is a Cooperating Agency on this EA, in accordance with 40 Code of Federal Regulations (CFR) Part 1501.6(a)(1), since it has special expertise and jurisdiction by law to approve proposed development at civilian airports.

As a Cooperating Agency on this EA, FAA will use the EA documentation to comply with its own requirements under NEPA for federal actions. The FAA will also use the EA to support subsequent decisions and federal actions including unconditional approval of the portion of the Airport Layout Plan (ALP) depicting the proposed project. The EA will include information that addresses airport issues per FAA Order 1050.1E – *Environmental Impacts: Policies and Procedures* and FAA Order 5050.4B – *National Environmental Policy Act Implementing Instructions for Airport Actions.*

The proposed FAA actions would include:

- Unconditional approval of the portion of the ALP that depicts the proposed Tiyan Parkway project to meet FAA Airport Design Standards while the project is under construction,
- Determination to approve the airport sponsor's request to release airport land for sale or lease for non-aeronautical purposes and to release the sponsor from grant obligations pertaining to the land,

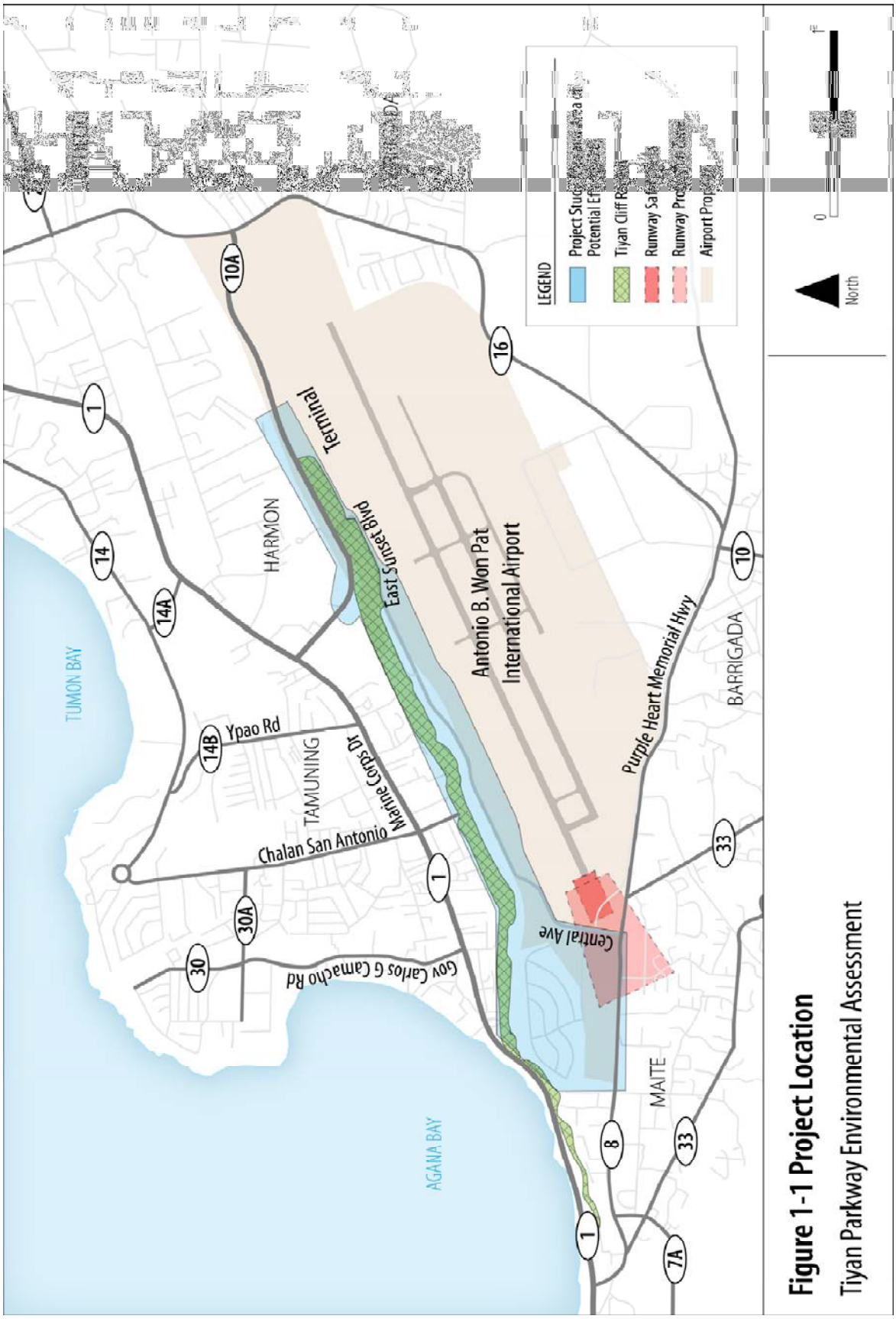


Figure 1-1 Project Location
Tiyan Parkway Environmental Assessment

- Provide close coordination with the Guam International Airport Authority (GIAA) by appropriate FAA program offices, as required, to maintain aviation and airfield safety during construction pursuant to 14 CFR Part 139 under 49 U.S.C. § 44706,
- Approve appropriate amendments to the Airport Certification Manual pursuant to 14 CFR 139, and
- Make determination of the Proposed Action's effects on the safe and efficient use of navigable airspace.

B. Background

1. Naval Air Station Agana Closure and Property Transfers

The project corridor and other adjacent properties were once part of a U.S. Navy military installation named the Naval Air Station Agana (NAS Agana). The runways of the GIA were shared with the Navy. In 1993, Congress and the President accepted the recommendation from the Department of Defense Base Realignment and Closure Commission (BRAC) to close NAS Agana, and the base was closed on March 31, 1995.

In accordance with the BRAC process, the NAS Agana Base Reuse Master Plan was developed to serve as the primary guide for activities associated with the transfer of properties to other government entities. The Master Plan underwent environmental review pursuant to NEPA, and on May 10, 2000, the U.S. Navy published its Record of Decision (ROD), completing the NEPA process (DoN 1999). The ROD specified that the former NAS Agana should be used for commercial aviation (i.e., current operations of the GIA), and the properties surrounding the GIA should be used for industrial and commercial activities, and for parks and recreational facilities. Later that year, the former NAS Agana property was turned over to the Government of Guam and other federal agencies.

The Master Plan and ROD identified right-of-way for the proposed project (Tiyan Parkway) and other roadway projects. The 66-acre right-of-way for Tiyan Parkway was transferred by FHWA to the Government of Guam on October 2, 2000.

Guam Public Law (PL) 27-113, passed in December 2004, stipulated that any properties conveyed to DPW's jurisdiction from the former NAS Agana shall be deeded to the Guam Ancestral Lands Commission (GALC) for disposal pursuant to the GALC enabling legislation. Starting in January 2005, acting through the GALC, the Government of Guam awarded quit-claim deeds for parcels to the estates of the families who owned these properties prior to World War II, including those parcels identified in the NAS Agana Base Reuse Master Plan for Tiyan Parkway.

2. Airport Expansion and Public Access

Motorists began using former base roads (East Sunset Boulevard, Central Avenue, and a portion of the former Perimeter Road) as a path between Routes 8 and 10A when NAS Agana closed (See Figure 1-1). East Sunset Boulevard and Central Avenue are also used to access parcels in the corridor, including those owned by the families awarded deeds by the Government of Guam. None of this route is on public road right-of-way. Although much of the route is within airport property, the general public has been allowed to use the route since the closure of the naval facility.

Central Ave proximity to extended runway

The Guam International Airport Authority (GIAA) is currently working to extend the airport's dual runways to accommodate larger aircraft, expand the taxiway network, and upgrade the instrument landing system (ILS) in accordance with the Guam International Airport Master Plan (Rev. May 9, 2006). Extension of Runway 6L/24R and related taxiway and ILS improvements are expected to be complete in 2013.

The extension of Runway 6L/24R requires an adjustment to the FAA-defined Runway Safety Area (RSA) and Runway Protection Zone (RPZ). Because of the encroachment of Central Avenue and nearby connector roads into these restricted-use areas, GIAA must close these roads prior to opening the extended runway in 2013 to meet FAA safety standards (See Figure 1-2). Closure of Central Avenue and portions of the connector road will effectively cut off the existing thoroughfare through Tiyan between Routes 8 and 10A.

GIAA is also working to encourage private enterprise uses on leased airport property for airport-related purposes, including air cargo facilities. Airport-related private enterprise uses of airport lands would be enhanced by a combination of airside and landside transportation links. Tiyan Parkway would provide the landside transportation link for a substantial portion of airport property.

3. Population Growth and Military Relocation

The U.S. Census Bureau estimates that more than 175,000 people currently live on Guam. Historically, Guam's population has grown at an annual rate of 1.5 percent annually. If growth were to continue at this historic rate, Guam's population is projected to reach just over 221,000 residents by 2030 (DPW 2008). However, the U.S. Department of Defense (DOD) is planning an expansion of its facilities and relocation of personnel to Guam. According to DOD estimates, the planned expansion would add a direct DOD population of 24,700 (military, dependents, and civilian employees) plus an indirect and induced population of 8,900. In addition, off-island construction workers and their dependents would temporarily increase the population by as many as 45,600 during the peak year of facilities construction (JGPO 2010).

Recent news reports have indicated that the planned expansion may be reduced in scale, in which case the previous DOD estimates may overstate the actual population growth that results from a scaled back military buildup.

C. Planning Context

In December 2008, DPW, in partnership with the FHWA and the Federal Transit Administration (FTA), issued the 2030 Guam Transportation Plan (GTP). The GTP presents a federally-approved comprehensive, long-term strategy to improve surface transportation infrastructure and operations throughout Guam. The GTP addresses multiple surface transportation modes including motor vehicles, cycling, pedestrian, and transit.

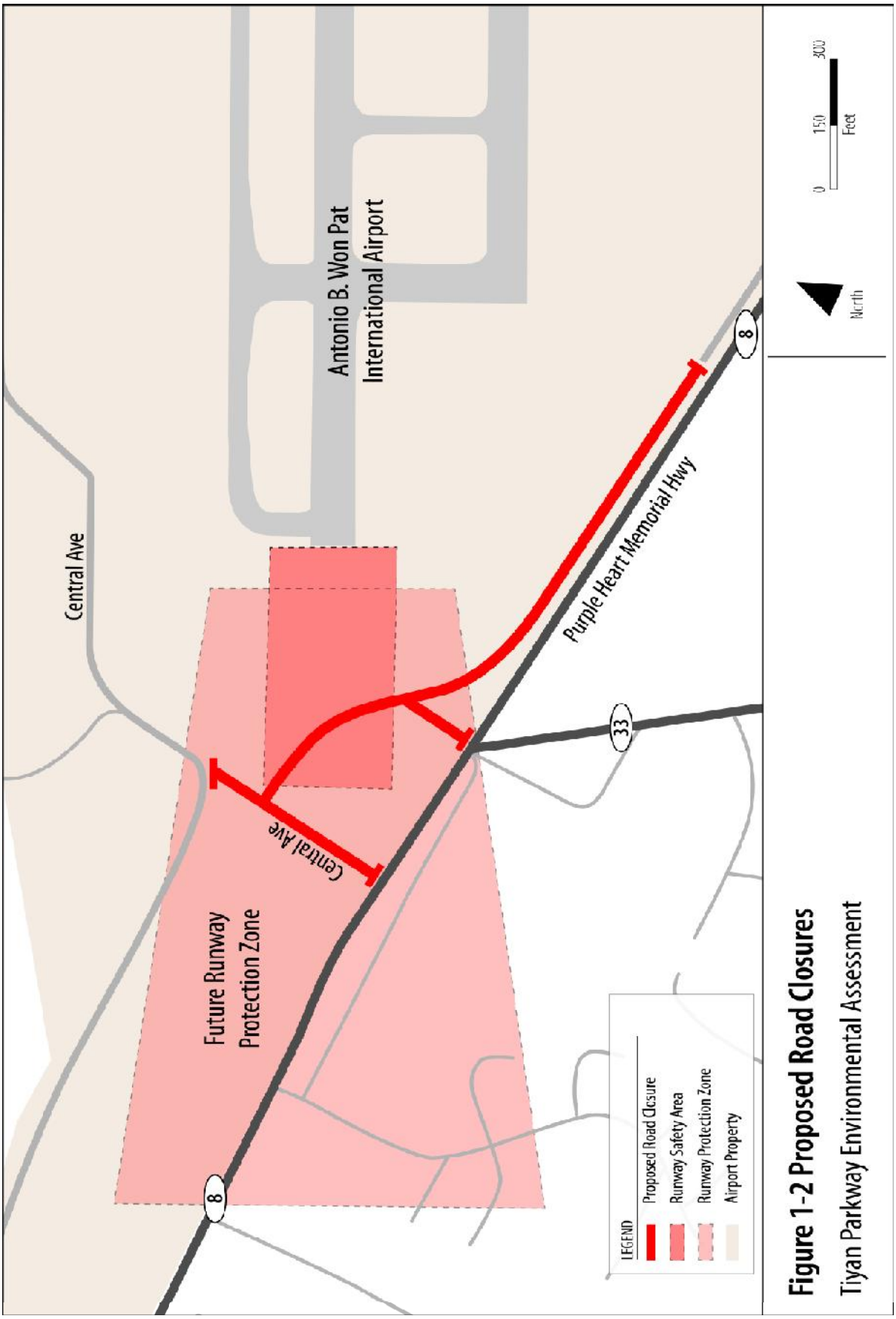


Figure 1-2 Proposed Road Closures
Tiyan Parkway Environmental Assessment

Based on forecasts of population, employment, and traffic growth through the year 2030, and an extensive community outreach effort, the GTP recommended a variety of transportation improvements to implement the vision: "provide a safe, efficient and sustainable transportation system for [Guam's] residents, visitors, and military personnel that supports economic diversification, resource conservation, and an exceptional quality of life."

In assessing Guam's transportation needs, the GTP identified the congested-related improvements required to maintain reasonable levels-of-service on the roads during peak hours and throughout the day. Tier I congestion-relief projects addressed the most severely congested roadways, with a second list of Tier II congestion-relief projects to address the remainder of the severely congested roadways and moderately congested roadways. Tiyan Parkway was identified as a Tier I project because it would address regional congestion on some of Guam's most heavily travelled roadways: Routes 1 (Marine Corps Drive), 8 (Purple Heart Highway) and 16 (Army Drive).

This EA addresses the entire Tiyan Parkway project from Route 8 to Route 10A. Because of project development time advantages and funding constraints, DPW plans to construct the project in multiple phases. The Guam Transportation Improvement Plan (GTIP) provides DPW's near-term improvement plan and priorities for the expenditure of anticipated federal funds. Design of Tiyan Parkway was listed in the Fiscal Year 2012-2015 GTIP, and right of way acquisition and construction of Phase 1 of Tiyan Parkway is listed in the Fiscal Year 2012-2015 GTIP.

D. Project Purpose and Need

1. Project Purpose

The purpose of Tiyan Parkway would be to provide a public roadway linking Route 8 and Route 10A with sufficient traffic capacity to meet projected year 2030 demand in conjunction with other roadway improvements identified in the 2030 Guam Transportation Plan. Providing an arterial roadway connection between Routes 8 and 10A would be integral to the central Guam roadway network.

Secondary project goals include addressing future traffic congestion on major roadways in central Guam in a way that supports economic development opportunities.

2. Project Needs

a. Roadway System Connectivity in Central Guam

Central Guam's roadway network is the most heavily traveled on the island due to numerous employment centers, residential developments and visitor accommodation areas in Hågatña, Tumon, and Tamuning. The roadway network in central Guam includes the major arterial roadways of Routes 1, 8, 10, 10A and 16 (See Figure 1-1).

In central Guam, the GIA separates major employment centers of Tumon and Tamuning from residential communities in Mongmong-Toto-Maite, Barrigada, and Mangilao. Traditionally, traffic between these locations has moved on circuitous routes around the airport property. A need for an additional and more direct connection was recognized in planning for closure of NAS Agana. The NAS Agana Base Reuse Master Plan established the alignment of this connection and set aside approximately 66 acres of right-of-way for Tiyan Parkway. The demand for this connection was affirmed following the base closure. When portions of the former base roads were opened to public traffic, travelers quickly made use of the route. These roads currently carry approximately 13,700 vehicles per day based on actual traffic counts in 2008,

and this volume is projected to reach 47,400 on Tiyan Parkway in 2030 based on the March 2012 *Traffic Technical Report for Tiyan Parkway* by Parsons Brinckerhoff, Inc.

Without an appropriate link between Routes 8 and 10A, trips crossing Tiyan or the GIA would be substantially longer and circuitous, involving a Route 1/Route 8 path, or a Route 1/Route 10A/Route 16 path. In addition to requiring additional travel time and increasing overcapacity conditions on other heavily traveled roads, these circuitous paths would consume more energy.

There is a need to provide a permanent transportation link between Routes 8 and 10A. The travel demand model developed for the Tiyan Parkway project accounts for the increase in population based on historical growth, both with and without the planned military expansion. This model forecasts that Tiyan Parkway would attract approximately 47,400 vehicles per day by the year 2030 with the military expansion, and 24,400 vehicles per day without the military expansion. Without Tiyan Parkway, these volumes of vehicles would need to use more circuitous routes, causing higher levels of congestion. The Tiyan Parkway link between Routes 8 and 10A would substantially improve central Guam's roadway network and would substantially reduce travel times and distances for many motorists.

b. Improve Traffic in Central Guam

Tiyan traffic backup

Growth will worsen congestion on Guam's roadways, both with or without the military expansion. Current and projected traffic volumes for key routes in central Guam are presented in Table 1-1. Increases in travel demand associated with the anticipated population growth will heavily congest the most travelled roads in central Guam.

Traffic volumes in Table 1-1 are obtained from traffic modeling performed specifically for the Tiyan Parkway project using the model that had been prepared for the 2030 Master Plan. The model for the Tiyan Parkway project was analyzed both with and without increases in population anticipated for the proposed military expansion. The model results show that some roadways in Central Guam would have heavier traffic volumes while other roadways have lower traffic volumes in year 2030 with construction of Tiyan Parkway.

Further traffic analysis was performed to predict the changes that result in delay times at various intersections in Central Guam. As expected, the delay times would be improved for most intersections for the Build scenario, but the Route 8/Route 7A intersection near Tiyan Parkway would experience greater delays following construction of Tiyan Parkway because additional traffic is attracted to that intersections by the availability of the Tiyan Parkway link (See Table 1-2).

Analysis was performed to determine the Guam-wide cost savings that result from construction of Tiyan Parkway, based on fuel savings and time savings across the entire roadway network. Based on traffic growth from existing conditions to year 2030 projections as per the military expansion EIS, the present value of time savings over 30 years to the motorists of Guam would be $42,800,000. The present value of time savings over 30 years without the military expansion would be $29,100,000.

TABLE 1-1
EXISTING AND FUTURE TRAFFIC VOLUMES IN CENTRAL GUAM

Route/Segment	Existing Volume	2030 With DOD Expansion		2030 Without DOD Expansion	
		With Tiyan Parkway	No Tiyan Parkway	With Tiyan Parkway	No Tiyan Parkway
Route 1 West of Route 14	56,100	74,200	83,500	65,600	74,500
Route 10A West of Tiyan	28,900	46,000	41,900	40,400	36,400
Route 10A East of Tiyan	26,400	48,100	41,800	38,600	36,400
Route 8 West of Tiyan	36,900	53,800	52,800	49,800	48,800
Route 8 East of Tiyan	37,700	49,700	55,300	47,100	49,200
Route 16 East of Route 10	37,300	57,100	71,900	48,300	60,600
Central Ave./Tiyan Parkway	13,700	47,400	0	24,400	0

TABLE 1-2
2030 TRAFFIC INTERSECTION DELAY IN CENTRAL GUAM

Intersection	AM Peak Delay (Seconds)			PM Peak Delay (Seconds)		
	No Tiyan Parkway	With Tiyan Parkway	Result	No Tiyan Parkway	With Tiyan Parkway	Result
Route 1& Route 8	142	119	Improved	188	167	Improved
Route 1 & Route 14	131	126	Improved	258	211	Improved
Route 1 & Route 10A	332	292	Improved	503	457	Improved
Route 8 & Route 7A	33	40	Degraded	52	55	Degraded
Route 8 & Route 33	21	19	Improved	97	77	Improved
Tri-Intersection 8/10/16	116	79	Improved	195	161	Improved
Route 10A/25 & Route 16	168	165	Improved	270	225	Improved

Based on traffic growth from existing conditions to year 2030 projections as per the military relocation EIS, the present value of fuel cost savings over 30 years to the motorists of Guam would be $58,200,000. The present value of fuel cost savings over 30 years without the military expansion would be $25,000,000.

c. Support Economic Development

The GIA is developing and positioning itself into an international and regional distribution center, with the goal of becoming the premier air transportation hub in the western Pacific. This development is expected to contribute to the overall health of the Guam economy. To accomplish its economic objectives, GIAA is developing parcels within the airport property, in particular along the north-northwest side of the airport. Current developments include a 150,000 square foot integrated air cargo facility with state-of-the-art security federal cargo inspection stations. GIAA has also entered into several public-private partnerships with freight and shipping companies, including DHL, Triple B Forwarders, CTSI Logistics (agents for FedEx) and MSA Logistics (agents for UPS Logistics), for the construction of multi-modal storage and regional distribution facilities within airport property. Because airport property is

limited, demand for commercial offices, warehousing, and aviation support businesses on property near the airport is expected to grow in the future.

According to the July 2007*Economic Contribution Study, A. B. Won Pat International Airport, Guam* prepared by Jacobs Consultancy for the GIAA, Tiyan Parkway will be a vital element in the economic development within the GIA property and other Tiyan properties. The businesses and facilities expected to be attracted to the airport and airport area would be involved in the movement of freight, and good surface transportation infrastructure is one of the most important factors to the success of these types of businesses. Tiyan Parkway would provide convenient access to Route 8 for future businesses along the north side of the airport, and to the eastern side of the island. Without Tiyan Parkway, a large percentage of surface freight movements would take a circuitous path, increasing costs.

Typical Cargo Facility

The Economic Contribution Study noted that the lack of good transportation infrastructure could potentially constrain private investment at the airport, which would cumulatively affect the Guam economy. Most likely, few freight or airport-related businesses would choose to locate along the project corridor without a high quality arterial roadway that provides direct access to Routes 8 and 10A and the GIA. The Economic Contribution Study projected that the absence of Tiyan Parkway would result in $14,000,000 less construction value for airport related improvements, and would result in 970 fewer airport related jobs valued at $59,000,000 per year. By providing key transportation logistics, Tiyan Parkway would enhance the overall attractiveness of the properties along the corridor for distribution and warehouse facilities and other airport-related businesses.

In addition to the GIA, many of the developing businesses at or near the airport will be intermodal facilities for freight and cargo that depend on good surface transportation infrastructure, just as they depend on proximity to the airport. Tiyan Parkway would provide intermodal businesses with direct access to Route 8 and the eastern side of the island, as well as an improved intersection with Route 10A and access to Route 1.

E. Benefit-Cost Analysis

The purpose of this benefit-cost analysis is to identify the economic value of the benefits that derive from construction of Tiyan Parkway and to compare the benefits to the costs that result from construction of Tiyan Parkway. A benefit-cost ratio that is greater than one indicates that the benefits are greater than the cost. The analysis described in this section is based on a 30-year useful life for Tiyan Parkway.

1. Project Costs

Life cycle costs to construct and maintain Tiyan Parkway are shown in Table 1-3. Costs are shown as the present day value for year 2012.

TABLE 1-3
PRESENT VALUE OF LIFE CYCLE COSTS FOR TIYAN PARKWAY

Project Element	Cost
Design and Engineering	$5,660,000
Land Acquisition	$10,120,000
Construction and Mitigation	$28,000,000
Routine Maintenance and Rehabilitation	$3,800,000
Total	**$47,580,000**

2. Project Benefits

Substantial benefits that result from construction of Tiyan Parkway include fuel savings, travel time savings, increased land values adjacent to the roadway, and enhanced opportunities for economic developments that derive benefit from proximity to both air and land transportation modes.

Travel time cost savings were estimated based on a current average hourly rate obtained from the Guam Department of Labor and 250 working days per year. Based on traffic projections that include the military relocation, construction of Tiyan Parkway would result in a present value of travel time cost savings over the next 30 years of $42,800,000. If the military relocation did not occur, the present value of travel time cost savings over the next 30 years resulting from construction of Tiyan Parkway would be $29,100,000.

Fuel savings were estimated based on use of MOVES2010a software from US EPA, present day fuel cost of $4.98 per gallon of gasoline, and 250 working days per year. Based on traffic projections that include the military relocation, construction of Tiyan Parkway would result in a present value of fuel cost savings over the next 30 years of $58,200,000. If the military relocation did not occur, the present value of fuel cost savings over the next 30 years resulting from construction of Tiyan Parkway would be $25,000,000.

Land values adjacent to Tiyan Parkway would increase approximately $31,600,000 due to access to both air and land transportation modes.

Development of airport related commercial operations would be supported by construction of Tiyan Parkway. In the absence of adequate surface transportation access, airport related economic development may not occur, or may occur at locations other than Guam. The July 2007*Economic Contribution Study, A. B. Won Pat International Airport, Guam* prepared by Jacobs Consultancy for the GIAA projected that the absence of Tiyan Parkway would result in $14,000,000 less construction value for airport related improvements, and would result in 970 fewer airport related jobs valued at $59,000,000 per year. The Economic Contribution Study did not include an estimated time frame for the economic growth to occur. Based on linear growth in wages from zero in the present day to $59,000,000 in 30 years time, the present value of business related construction costs and wages paid over the next 30 years that result from construction of Tiyan Parkway would be $928,500,000.

Other benefits that may result from construction of Tiyan Parkway include reduction in traffic accidents, reduction in vehicle operating costs, and reductions in noise and emissions. These benefits are conservatively omitted from this benefit-cost analysis.

3. Benefit-Cost Ratio

Benefit-Cost ratios for construction of Tiyan Parkway are substantially greater than one regardless of whether the military buildup occurs. This means that the benefits that result from construction of Tiyan Parkway far outweigh the costs. Benefit-Cost ratio derivation is shown in Table 1-4.

TABLE 1-4
BENEFIT-COST RATIO DERIVATION

Costs and Benefits		With Military Relocation	Without Military Relocation
Life Cycle Cost to Construct and Maintain		$47,580,000	$47,580,000
Benefits	Travel Time Savings	$42,800,000	$29,100,000
	Fuel Cost Savings	$58,200,000	$25,000,000
	Increase in Land Value	$31,600,000	$31,600,000
	Increase in Economic Development	$928,500,000	$928,500,000
	Total Benefit	$1,061,100,000	$1,014,200,000
Benefit-Cost Ratio		22.3	21.3

Chapter 2
Alternatives

The identification and evaluation of feasible alternatives for Tiyan Parkway has been conducted to accommodate projected traffic volumes for the 2030 design year. The development of these alternatives incorporated input from other agencies, including the GIAA, Federal Aviation Administration (FAA), Guam Department of Land Management (DLM), Guam Historic Preservation Officer (SHPO), GALC, and Guam EPA. A number of issues, concerns, and opportunities were identified during these agency discussions, including the need to meet current and future traffic needs, protection of natural and cultural resources, and potential impact on the community and adjacent properties.

A. No Build Alternative

The No Build Alternative assumes that the existing connection between Route 8 and Route 10A using former NAS Agana roadways (Central Avenue and East Sunset Boulevard) would be severed when GIAA completes work to extend the runway. Completion of runway expansion work is currently anticipated to occur during 2013. The No Build Alternative assumes that maintenance of other existing roadways in the study area would continue, and that other projects in the 2030 Guam Transportation Plan would move forward, such as intersection improvements and the widening of Route 10A. East Sunset Boulevard would remain connected to Route 10A, and provide access to properties on the north side of the GIA and the cluster of properties on the west side of the project corridor. These properties would not have access to Route 8 because the expansion of the airport's runways will close public access to Route 8.

Under the No Build Alternative, motorists currently using Central Avenue and East Sunset Boulevard to connect from Route 8 to Route 10A would need to choose an alternative route when the connection is severed. This would intensify congestion on other routes and will constrain economic development potential in the surrounding area.

B. Build Alternatives

Build alternatives would construct Tiyan Parkway as a five-lane arterial roadway that links Routes 8 and 10A along a corridor generally north and west of the GIA. The total length of the parkway would be approximately two and one quarter miles, and the parkway would include signalized intersections with Routes 8 and 10A. The parkway would also include unsignalized intersections with existing local roadways such as Punzalan Street that remain after construction of Tiyan Parkway. Traffic on the local roadways would be controlled by stop signs.

Alternative 1. This alternative is the alignment that was originally planned in the BRAC Master Plan (See Figure 2-1). Near Route 8, the Alternative 1 route would be on property that was retained by the Government of Guam for Tiyan Parkway. Near Route 10A, Alternative 1 would cross property that was never a part of NAS Agana and intersects Route 10A offset to the east from the signalized access to Home Depot. The balance of the Alternative 1 alignment would be within property that was returned beginning in 2005 to heirs of the original landowners by the Government of Guam. This alternative has a fatal flaw in that a portion of the alignment would pass through a locally important cemetery properly permitted by the Government of Guam. This encroachment would present logistical difficulties and added project expense associated with contacting descendants of interred people to obtain permission to rebury family members at another location. Because this constraint would be avoided by other alternatives, this alignment was not developed as a feasible alternative.

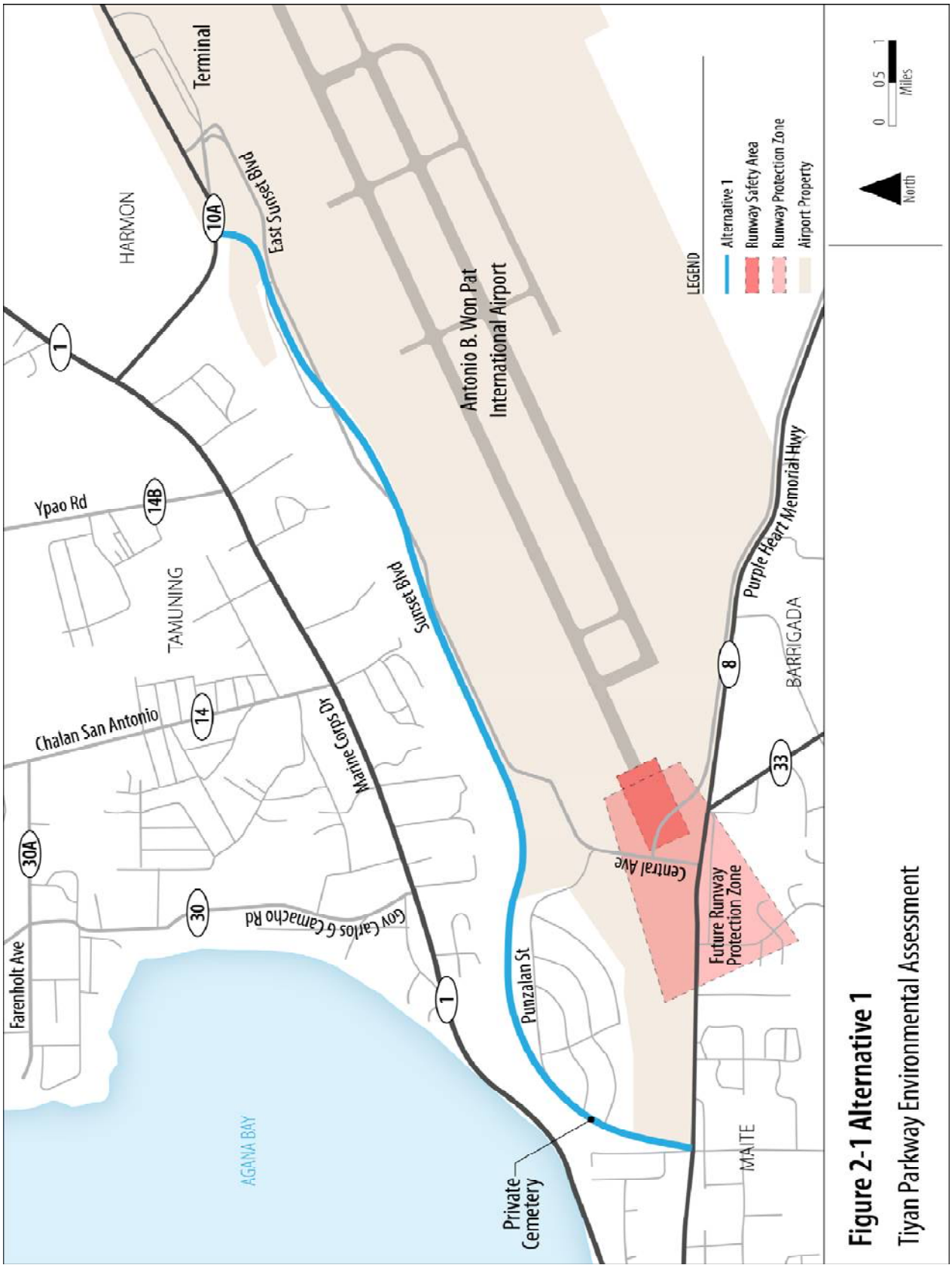


Figure 2-1 Alternative 1
Tiyan Parkway Environmental Assessment

After it was determined that Alternative 1 would not be a feasible build alternative, an extensive list of approximately 45 alternative alignments within the Tiyan Parkway corridor was developed and evaluated using engineering, environmental, and transportation planning judgment and expertise, as well as input from key stakeholders, which included the GIAA and business and property owners in the general vicinity Alternative 1 plan of the project site. The alternative alignments were re-conceptualized into the following two alternatives.

Alternative 2. This alternative would be predominantly within GIAA property, except for the eastern terminus with Route 10A that crosses a privately owned parcel and intersects with Route 10A opposite the signalized access to Home Depot (See Figure 2-2). The alignment was originally set to avoid the RPZ at the western end, but clarification of the RPZ boundary by FAA during the alternatives analysis indicated the western end of Alternative 2 would result in a new RPZ encroachment. Because FAA Airport Design Standards discourage new RPZ encroachments, this alternative was not developed as a feasible alternative because of this fatal flaw.

Alternative 3. This alternative would be similar to the Alternative 1 alignment at the western end, except that the extreme western portion is shifted to the east to avoid the cemetery that obstructed the Alternative 1 alignment (See Figure 2-3). The extreme western portion of the alignment would then pass through properties that were never intended for use as a roadway and were returned to heirs of the ancestral landowners. Alternative 3 would be similar to the Alternative 2 alignment within the central and eastern portions of the alignment. Preliminary alignment, roadway profile, and cross sections were generated to further investigate engineering requirements for Alternative 3. No fatal flaws were identified for Alternative 3, and Alternative 3 was therefore determined to be a feasible alternative. It was also determined that Alternative 3 could be constructed in phases. Phase 1 would involve construction of a two- to four-lane roadway in the western portion to connect Route 8 to existing Sunset Boulevard, and would make use of the existing two-lane East Sunset Boulevard roadway along the cliff line and through the airport area. Phase 2 would involve construction of the full four-lane roadway from Route 8 to Route 10A, including realignment at the eastern end to avoid an area identified by GIAA for future expansion of their terminal facility.

The three alternatives described above were shared with landowners at a meeting held August 27, 2009. Alternative 3 was not described as preferred, but Alternatives 1 and 2 were described as having fatal flaws. An additional alternative was suggested by a citizen at the August 27, 2009 meeting to combine the western end of Alternative 2 with the central and eastern end of alignment 3.

Alternative 4. This alternative would be similar to Alternative 2 at the western end, except that the alignment was adjusted to avoid the RPZ (See Figure 2-4). Alternative 4 would be similar to Alternative 3 within the central and eastern portions of the alignment, except that the alignment in the central portion was shifted to be entirely off airport property to address FAA concerns raised in their July 17, 2009 letter to GIAA. Preliminary alignment, roadway profile, and cross sections were generated to further investigate engineering requirements for Alternative 4. No fatal flaws were identified for Alternative 4, and Alternative 4 was therefore determined to be a feasible alternative. It was also determined that Alternative 4 could be constructed in phases. Phase 1 would involve construction of a two- to four-lane roadway in the western portion to connect Route 8 to existing Sunset Boulevard, and would make use of the existing two-lane Sunset Boulevard roadway along the cliff line and through the airport area. Phase 2 would involve construction of the full four-lane roadway from Route 8 to Route 10A, including a relocated roadway at the eastern end to avoid an area identified by GIAA for future expansion of their terminal facility.

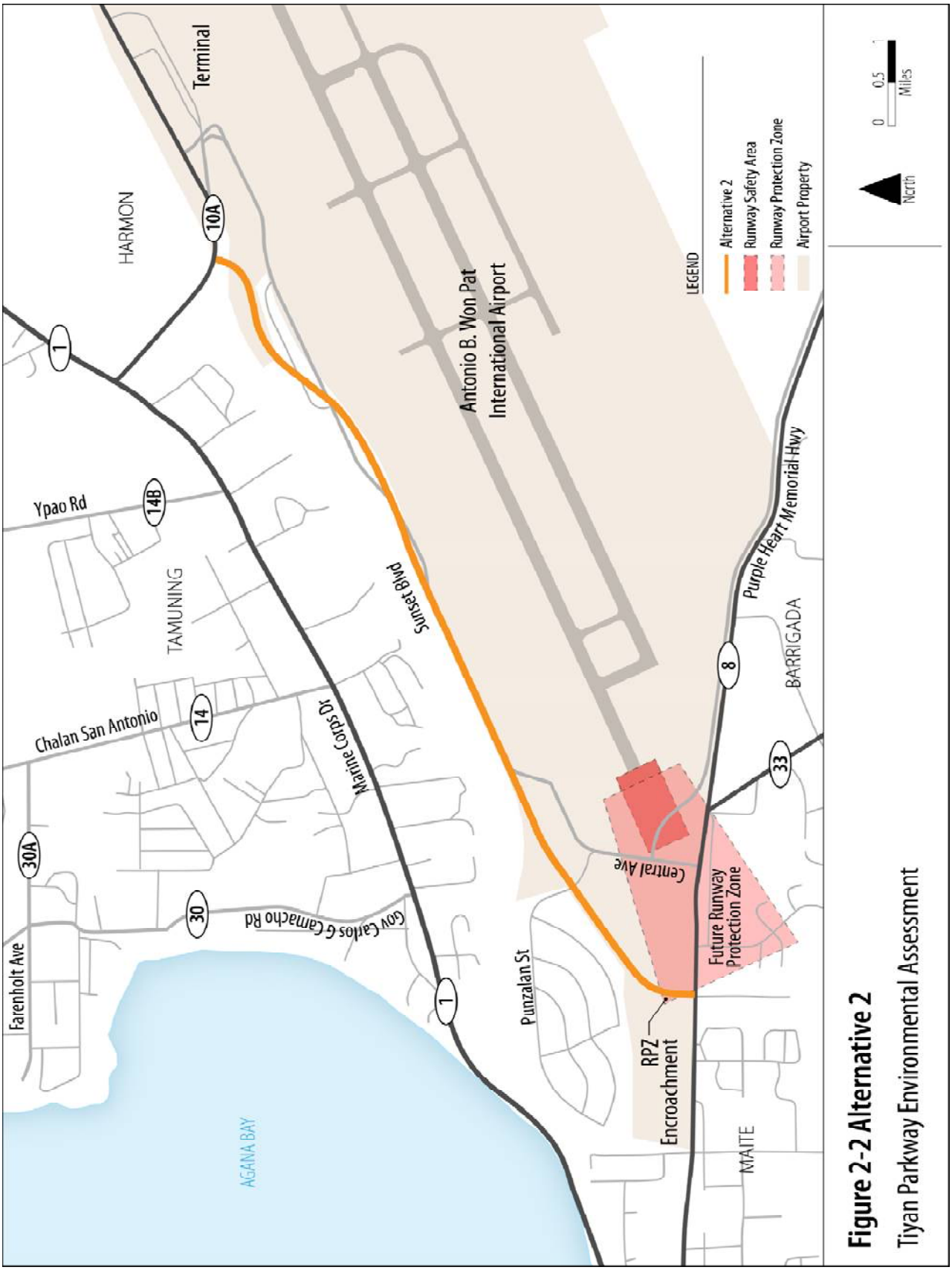


Figure 2-2 Alternative 2

Tiyan Parkway Environmental Assessment

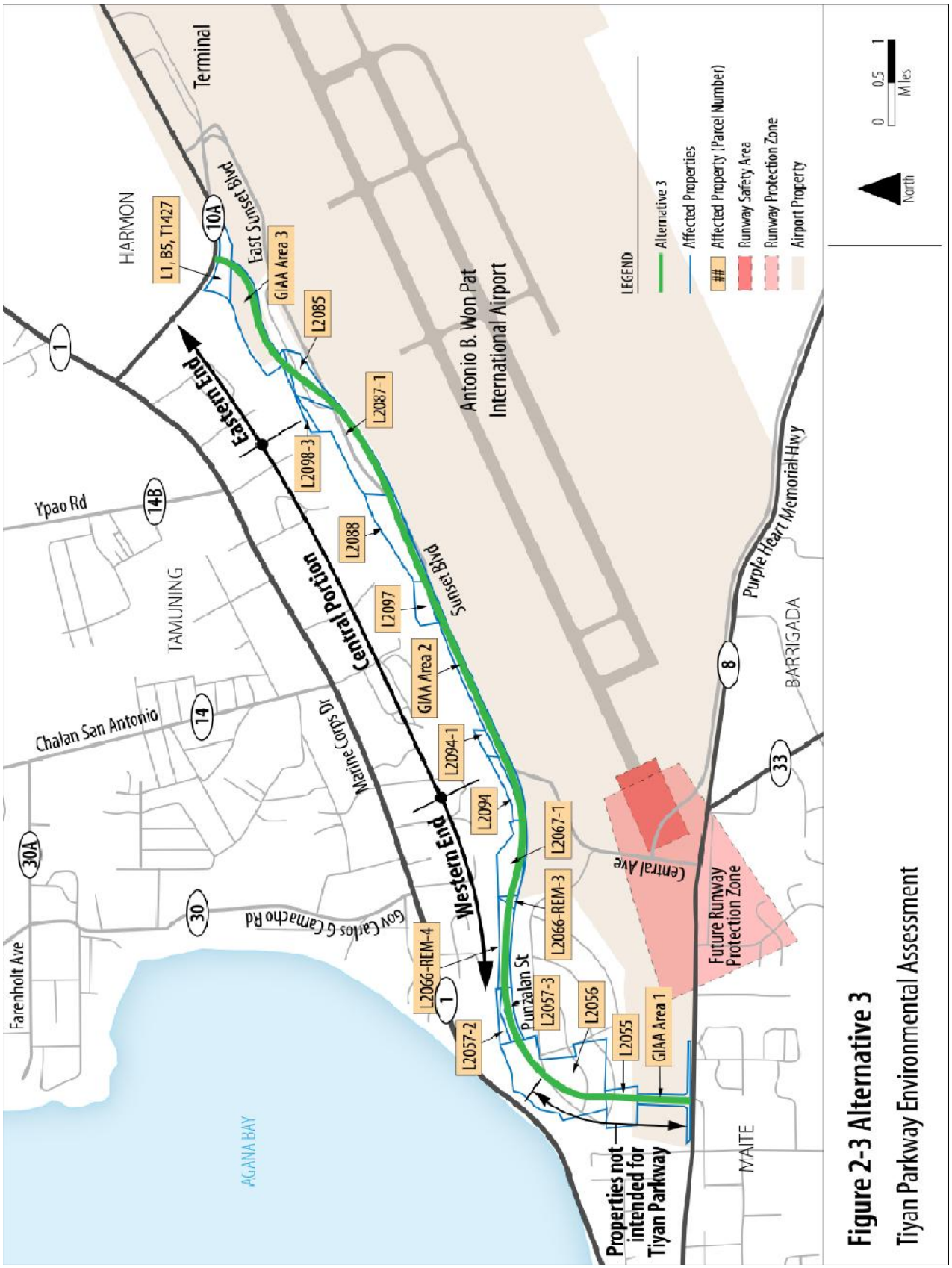


Figure 2-3 Alternative 3

Tiyan Parkway Environmental Assessment

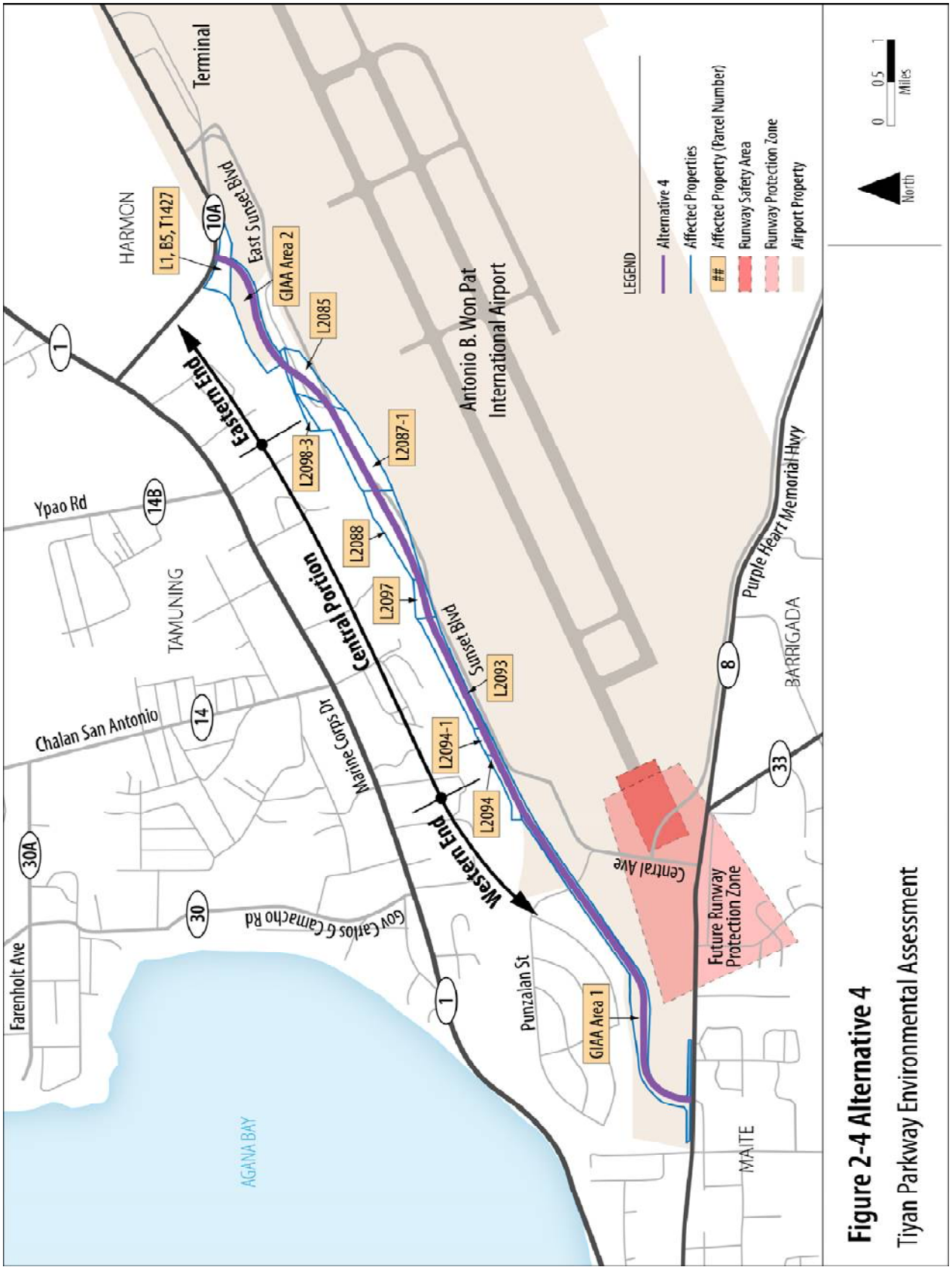


Figure 2-4 Alternative 4
Tiyan Parkway Environmental Assessment

Preliminary analysis of alternatives was performed to identify fatal flaws and to ascertain which alternatives warranted further study. Summarized results of the preliminary analysis recommending further consideration of Alternates 3 and 4 are presented in Table 2-1.

TABLE 2-1
PRELIMINARY ANALYSIS OF BUILD ALTERNATIVES

Alternatives	Engineering Issues	Easement/Right of Way	Potential Environmental Impacts
Alternatives Considered but Eliminated from Further Study			
Alternative 1 Original BRAC Alignment	Substantial retaining walls are required along the western cliff line. Relocation of approximately 20 electric transmission poles.	GovGuam must reacquire property intended for Tiyan Parkway that was deeded to heirs of ancestral landowners	Cemetery is a fatal flaw
Alternative 2 Predominantly on GIAA Property	No extraordinary engineering issues	GovGuam must acquire a portion of property intended for Tiyan Parkway that was deeded to heirs of ancestral landowners, and must acquire property from GIAA	Encroachment into GIA RPZ is a fatal flaw
Alternatives Selected for Further Study			
Alternative 3 Combination Private Property, Returned Property & GIAA Property	Requires substantial retaining walls along cliff line. Relocation of approximately 20 electric transmission poles.	GovGuam must acquire property that was never intended for Tiyan Parkway within the former officer housing area, property intended for Tiyan Parkway that was deeded to heirs of ancestral landowners, and must also acquire property from GIAA	No fatal flaws identified. Environmental impacts can be mitigated.
Alternative 4 Combination Returned Property & GIAA Property	Relocation of approximately 12 electric transmission poles	GovGuam must acquire a portion of property intended for Tiyan Parkway that was deeded to heirs of ancestral landowners, and must acquire property from GIAA	No fatal flaws identified. Environmental impacts can be mitigated.

C. Evaluation of Feasible Build Alternatives

Alternatives 3 and 4 were selected for further evaluation. The alternatives are similar in most respects, but differ substantially relative to right of way needs, visual resources, utility impacts, public acceptance and cost. As alternatives were developed and compared, it became apparent that substantial advantages to the Government of Guam could result from constructing the project in two phases, and that the advantages of phasing was also an element that varied substantially between the alternatives. The following sections describe differences between the feasible alternatives in greater detail.

Construction Phasing

It was determined that construction of Tiyan Parkway in two phases would offer substantive advantages to the project, with Phase 1 being that portion that was needed to reconnect the roadways severed by GIAA when the runway extension is completed (See Figure 2-5). Advantages of constructing the project in phases include:

- Acquisition of fewer properties that would be needed for Phase 1 could be accomplished in a shorter time than acquisition of properties within the entire corridor, which is a benefit given the anticipated severance of the existing connection between Route 8 and Route 10A in 2013,
- Monies needed to construct Phase 1 would be less than the cost for the entire corridor, allowing the funding for the project to be spread over a longer period of time, and
- Time to design and construct only Phase 1 would likely be less than the time to design and construct the entire project.

The first two advantages listed above are greater for Alternative 4 than for Alternative 3, as discussed in greater detail in the right of way and cost sections. The third advantage listed above is similar for both feasible alternatives.

Phase 1 of Tiyan Parkway would be open to the public from Route 8 to existing Sunset Boulevard, and would transition from two lanes in each direction at Route 8 to one lane in each direction approaching existing Sunset Boulevard. Operation of Tiyan Parkway following Phase 1 construction for both Alternates 3 and 4 would require continued use of existing Sunset Boulevard within the central portion of the alignment and the existing Tiyan roadway within the airport terminal area that connects to Route 10A.

Construction of Phase 2 from the end of Phase 1 to Route 10A would begin when funding is available and necessary remaining right of way has been acquired for both Alternatives 3 and 4 (See Figure 2-5).

Right of Way Needs

Right of way needs and costs are developed for the two feasible alternatives (3 and 4) based on planning-level estimates. Right of way needs for feasible Alternatives 3 and 4 are presented in Table 2-2.

In the event of actual acquisition, the value of each parcel would be appraised in accordance with the Guam Department of Public Works *Right of Way Procedures Manual* that was developed in conformance with FHWA land acquisition requirements. The value of each parcel would be affected by a number of factors, including comparable sales, current land use, potential land use, topography, condition of improvements, marketability of title, etc.

Alternative 3 would require acquisition of eight parcels in order to move forward with construction of Phase 1. Funding for Phase 1 property acquisition must come from the Government of Guam because the land needed for construction of Tiyan Parkway was previously granted by the Federal Government to the

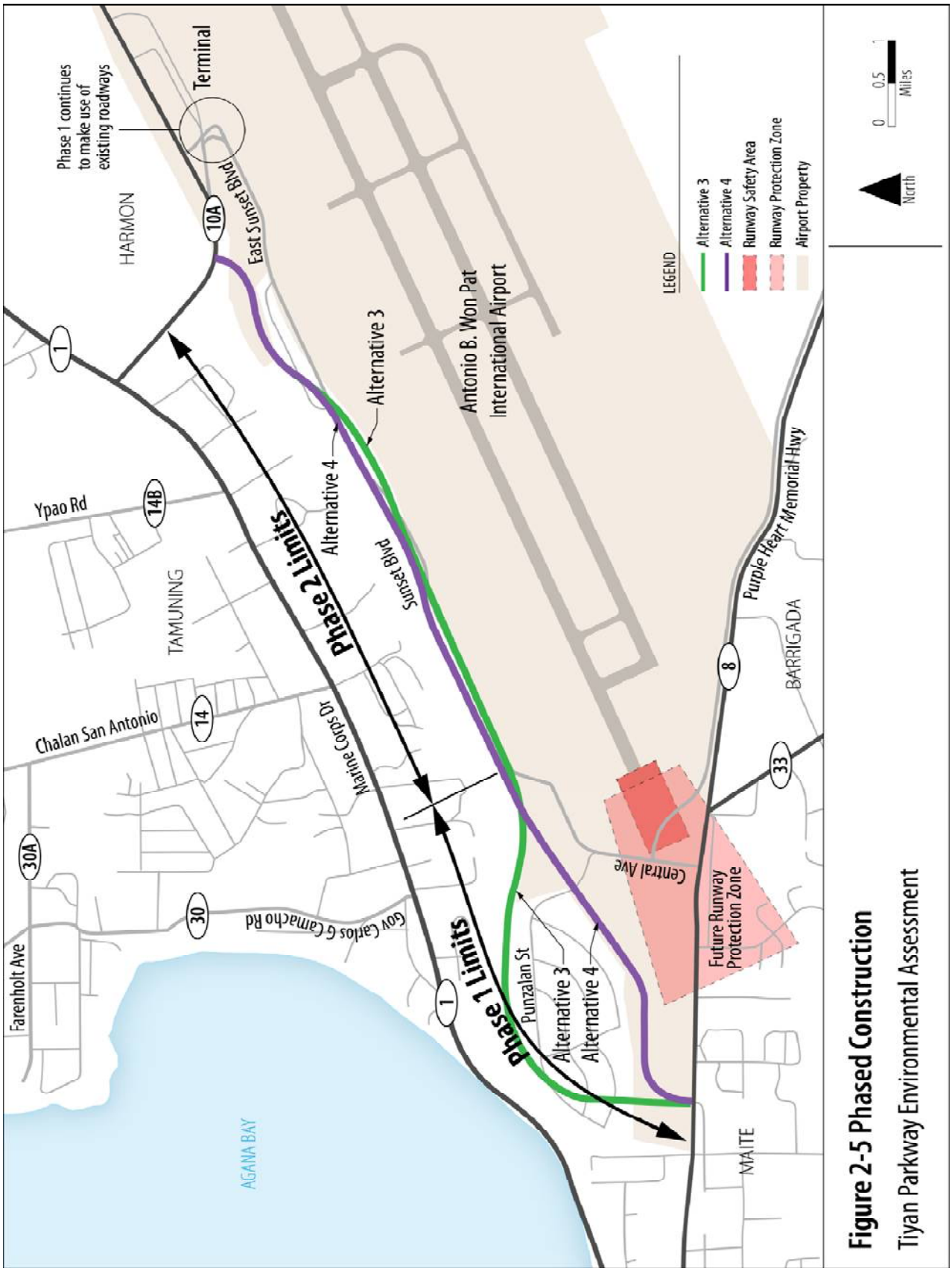


Figure 2-5 Phased Construction

Tiyan Parkway Environmental Assessment

TABLE 2-2
RIGHT OF WAY NEEDS FOR FEASIBLE ALTERNATIVES

	Lot No.	Total Lot Size Square Meter	R/W Needed Square Meter	Phase Needed	Nature of Acquisition	No. of Structures Removed	
						Uninhabitable	Habitable
Alternative 3	GIAA Area 1[1]	N/A	10,088	1	Partial	0	0
	L-2055[1]	16,011	6,933	1	Partial	1	0
	L-2056[1]	78,497	28,708	1	Partial	8	0
	L-2057-2[1]	4,089	4,089	1	Full	0	0
	L-2057-3[1]	5,273	5,273	1	Full	0	0
	L-2066-REM-3[1]	1,651	1,651	1	Full	0	0
	L-2066-REM-4[1]	14,611	14,611	1	Full	0	0
	L-2067-1[1]	20,675	20,675	1	Full	0	0
	GIAA Area 2[2]	N/A	32,590	2	Partial	0[4]	0
	L-2085[1]	17,494	17,494	2	Full	0	8
	L-2087-1[1]	39,488	39,488	2	Full	7	5
	L-2088[1]	26,621	26,621	2	Full	4	8
	L-2094/2094-1[1]	11,421	11,421	2	Full	0	0
	L-2097[1]	9,145	9,145	2	Full	0	5
	L-2098-3[1]	4,796	4,796	2	Full	0	0
	GIAA Area 3[3]	N/A	33,108	2	Partial	0	0
	L1, B5, T1427[3]	13,820	6,840	2	Partial	0	0
Total Alternative 3		N/A	272,524			20	26
Alternative 4	GIAA Area 1[2]	N/A	56,153	1	Partial	0[4]	0
	L-2085[1]	17,494	17,494	2	Full	0	8
	L-2087-1[1]	39,488	39,488	2	Full	7	5
	L-2088[1]	26,621	26,621	2	Full	4	8
	L-2093[1]	20,864	20,864	2	Full	13	0
	L-2094/2094-1[1]	11,421	11,421	2	Full	0	0
	L-2097[1]	9,145	9,145	2	Full	5	5
	L-2098-3[1]	4,796	4,796	2	Full	0	0
	GIAA Area 2[3]	N/A	33,108	2	Partial	0	0
	L1, B5, T1427[3]	13,820	6,840	2	Partial	0	0
Total Alternative 4		N/A	230,004			29	26

[1]The cost for acquisition is not eligible for Federal funding because the land needed for construction of Tiyan Parkway was previously granted by the Federal Government to the Government of Guam, and then transferred to heirs of ancestral landowners by the Government of Guam. The cost to reacquire this land must be borne by the Government of Guam.

[2]Federal reimbursement for acquisition is justified by construction and other cost savings that ensue from shifting the alignment further from the cliff line, up to the value of the cost savings. For Alternative 3 GIAA Area 2, the cost savings are $2,200,000. For Alternative 4 GIAA Area 1, the cost savings are $5,800,000

[3]Federal reimbursement is justified because the need for this property ensues from future expansion of the airport terminal.

[4]Former barrack structures that had been used for the Guam Police Department headquarters are not counted among the structures to be removed because GIAA plans to demolish those structures prior to construction of Tiyan Parkway.

Government of Guam, and then transferred to heirs of ancestral landowners by the Government of Guam. The federal government cannot reimburse the cost for the Government of Guam to repurchase land that the federal government previously gave to the Government of Guam.

Alternative 4 would require acquisition of only one parcel from GIAA in order to move forward with construction. Funding for the property acquisition is eligible for FHWA reimbursement because construction of Tiyan Parkway on the Alternative 4 alignment would save approximately $5,800,000 in construction costs versus the original BRAC alignment (Alternative 1). This offers a clear advantage to Alternative 4 because the time to acquire only one parcel would be less than the time to acquire eight parcels for Alternative 3, and the action would not need to wait until scarce local funds are made available for the acquisition.

Right of way acquisition needs for Phase 2 construction are similar for both Alternates 3 and 4, with both alternatives requiring acquisition (using local funds) of some parcels that had been returned to heirs of ancestral landowners. Acquisition of these properties can be accomplished over time while traffic is maintained on the roadway constructed in Phase 1.

Visual Resources

A very substantial difference between the alternatives is from vantage points below the cliff line. Alternative 3 would require construction of four retaining walls along the western cliff line. The largest of these is a 1,000' long by 50' high retaining wall that would exceed the height of tangan-tangan trees below the wall. The wall would dominate the view of the cliff line from vantage points in Tamuning. Alternative 4 could be constructed without the need for substantial retaining walls.

Both feasible alternatives would provide a similar appearance to motorists and residents in the project area on the Tiyan Plateau.

Utility Impacts

Existing utilities within the project area include overhead GPA electric power (transmission and distribution); GTA Teleguam, MCV Broadband, GWA (water and sewer), and NAVFAC (fuel line). Impacts to most utilities are anticipated to be similar for both feasible alternatives and are represented in project budgets as being two percent of construction cost. The alternatives would differ in regard to impacts to overhead electric transmission lines.

Phase 1 of Alternative 3 would impact the overhead electric transmission lines and would require relocation of approximately 13 of the large poles, adding $260,000 to the cost of Alternative 3 Phase 1. Phase 2 of Alternative 3 would require relocation or protection of approximately seven poles, with an associated extra cost of $140,000.

Phase 1 of Alternative 4 would not impact overhead electric transmission poles. Phase 2 of Alternative 4 would require relocation or protection of approximately 12 poles, with an associated extra cost of $240,000.

Public Acceptance

Citizen groups and a number of individual citizens have indicated their opposition to construction of Alternative 3 because of the need to acquire more property than for Alternative 4. Alternative 4 received a generally favorable response from the public.

GIAA has indicated their general favorable opinion toward acquisition of GIAA property needed to construct Phase 1 of Alternates 3 or 4, so long as the Government of Guam commits to acquisition of remaining parcels needed to construct Phase 2. GIAA has indicated their preference for Alternative 4 because it is closer to the Tiyan cliff line within the central section of the alignment.

Project Cost

Planning level project cost comparisons are listed in Table 2-3. Costs are based on a 2012 construction year. Alternative 4 costs would be less for both Phases 1 and 2, and for both Government of Guam expenditures and for expenditures that would be reimbursed by FHWA.

TABLE 2-3
ESTIMATE OF PROBABLE PROJECT COST

TASK	ALTERNATIVE 3	ALTERNATIVE 4
Phase 1		
Roadway, pavement & drainage construction	$ 8,060,000	$ 8,060,000
Earthwork	$ 2,500,000	$ 800,000
Retaining walls	$ 4,125,000	$ 0
Subtotal Construction	$14,685,000	$ 8,860,000
Preliminary Engineering	$ 930,000	$ 930,000
Right of Way Acquisition (Federal Reimbursement)	$ 0	$ 5,800,000
Right of Way Acquisition (Government of Guam)	$ 5,800,000	$ 0
Utility Relocations	$ 440,000	$ 180,000
Construction Management	$ 1,760,000	$ 1,060,000
Estimate of Phase 1 Project Cost	$23,615,000	$16,830,000
Phase 2		
Roadway, pavement & drainage construction	$17,050,000	$17,050,000
Earthwork	$ 1,200,000	$ 1,200,000
Retaining walls	$ 100,000	$ 100,000
Subtotal Construction	$18,350,000	$18,350,000
Preliminary Engineering	$ 1,470,000	$ 1,470,000
Right of Way Acquisition (Federal Reimbursement)	$ 2,970,000	$ 770,000
Right of Way Acquisition (Government of Guam)	$3,810,000	$3,550,000
Utility Relocation	$ 510,000	$ 610,000
Construction Management	$ 2,200,000	$ 2,200,000
Estimate of Phase 2 Project Cost	$29,310,000	$26,950,000
Total Estimate of Probable Project Cost	**$52,925,000**	**$43,780,000**
Portion of Total Cost Reimbursed by FHWA	$43,315,000	$40,230,000
Portion of Total Cost Borne by Government of Guam	$9,610,000	$3,550,000

An evaluation matrix that summarizes the differences between Alternatives 3 and 4 is presented in Table 2-4.

TABLE 2-4
EVALUATION MATRIX

Criterion	No-Build	Alternative 3	Alternative 4
Non-Government Property Acquisition	○ No Impact	●172,274+/- square meters of Non-Government property	⦿131,873+/- square meters of Non-Government property
Acquisition from GALC	○ No Impact	●Acquisition of approximately 25,471 square meters of GALC property	⦿Acquisition of approximately 4,796 square meters of GALC property
Acquisition from GIAA	○ No Impact	⦿75,786+/- square meters of GIAA property, of which 33,108 square meters is on sloping/cliff area	●93,335+/- square meters of GIAA property, of which approximately 33,108 square meters is on sloping/cliff area
Relocations	○ No Impact	●26+/- habitable/occupied structures	●26+/- habitable/occupied structures
Visual Resources	○ No Impact	●Retaining wall (1,000' x 50' high) visible from Tamuning	⦿Compatible with surroundings
Utility Impacts	○ No Impact	●Normal utility relocations plus relocation of approximately 20 electric transmission poles	⦿Normal utility relocations plus relocation of approximately 12 electric transmission poles
Public Opinion	●Adverse impact on large number of motorists when Central Avenue closes for the runway expansion	●Substantial public opposition from affected landowners	⦿Moderate opposition by some affected landowners. Affected landowners acknowledge that road right of way is included in their deed of conveyance
	No cost	**$52,925,000**	**$43,780,000**
Legend : ○No/Low/Positive Impact ⦿Moderate Impact ●Substantial Impact			

D. Proposed Action

Alternative 4 is the Recommended Alternative based on the following:

- Phase 1 construction could proceed much sooner for Alternative 4 because land is needed from only one governmental property owner (GIAA), and the cost of Phase 1 land acquisition is eligible for reimbursement by FHWA,
- Right of way acquisition impacts are less for Alternative 4 with 43,527 fewer square meters of land area needed, four fewer property owners affected, and an estimate property acquisition cost that is $2,460,000 less than for Alternative 3,
- Visual aesthetics of Alternative 3 would be dominated by a 1,000' long by up to 50' high retaining wall that would be visible from much of the village of Tamuning at the base of the Tiyan cliff line, while embankments for Alternative 4 can support vegetation that will blend better with existing cliff line vegetation,
- Citizen opposition to Alternative 4 is less than for Alternative 3 because Alternative 4 requires land from only seven non-government property owners whereas Alternative 3 requires land from eleven non-government property owners,

- Alternative 4 project costs that would be borne by the Government of Guam are $6,060,000 less than the costs that would be borne by the Government of Guam for Alternative 3, and
- Alternative 4 project costs that would be reimbursed by FHWA are $3,085,000 less than the costs that would be reimbursed by FHWA for Alternative 3.

Design Features

Although the parkway would be classified as an arterial roadway, it would also function as a collector road by providing driveway access to the properties and GIAA parcels that would border the parkway. The precise locations of the driveways are unknown at this time. The expectation is that the adjacent parcels may be developed into airport-related warehousing and commercial uses, which is already occurring on GIAA parcels. In addition, depending on the future roadway network in Tiyan, one or more future roadway intersections within Tiyan Parkway alignment may be built, in addition to the Routes 10A and 8 termini.

Phase 2 of Tiyan Parkway would include two 11-foot lanes in each direction, one 11-foot turn lane in the middle of the pavement, six-foot wide paved shoulders that will accommodate bicycles, and sidewalks along the edges of the right of way (See Figure 2-6).

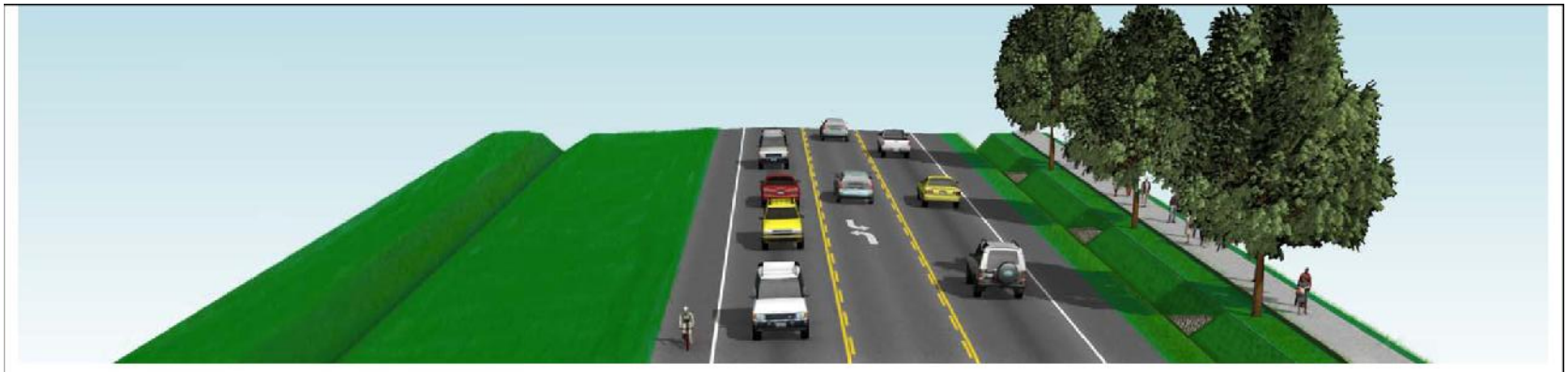
The parkway would be designed for a 35 mph posted speed limit, and would not provide on-street parking. Vertical and horizontal curvature, superelevation, and other design features would be established for a preferred design speed of 45 mph, with a minimum design speed of 35 mph. Vertical grades would be limited to a maximum of 5% down the cliff slope towards Route 10A, and would be limited to a preferred maximum of 3% for other segments of the alignment.

Landscaping, which may involve turf, trees, and shrubbery, would be provided along the corridor adjacent to the sidewalks.

Under Phase 1 where less than the full roadway width is constructed, the top of the pavement grade would be off-set from the center of the pavement in anticipation of future widening (See Figure 2-6). From this point, the pavement grade would be sloped at 0.02 percent to allow storm water to flow away from the pavement and into the drainage ditches.

At the southwest terminus, Tiyan Parkway would form an at-grade intersection with the four-lane Route 8 and a driveway opposite from the parkway leading into property used for commercial businesses (San Jose Supermarket), and would functionally operate as a full four-legged intersection (See Figure 2-7). One of the three southbound Tiyan Parkway lanes would be dedicated for right turns onto westbound Route 8, and the two remaining lanes would be for left turns for traffic proceeding eastbound on Route 8. The middle lane would provide motorists with the option of proceeding straight into the driveway. On Route 8, eastbound motorists would be provided with two dedicated left-turn lanes for northbound movements on Tiyan Parkway.

San Jose Supermarket Entrance at Tiyan



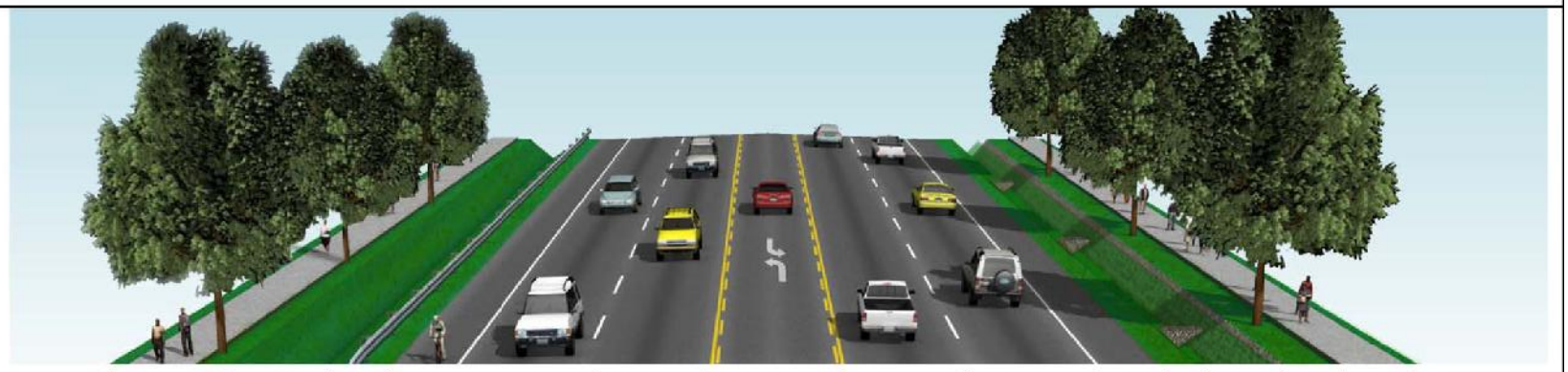


Figure 2-6 Typical Sections

Tiyan Parkway Environmental Assessment

Not to Scale

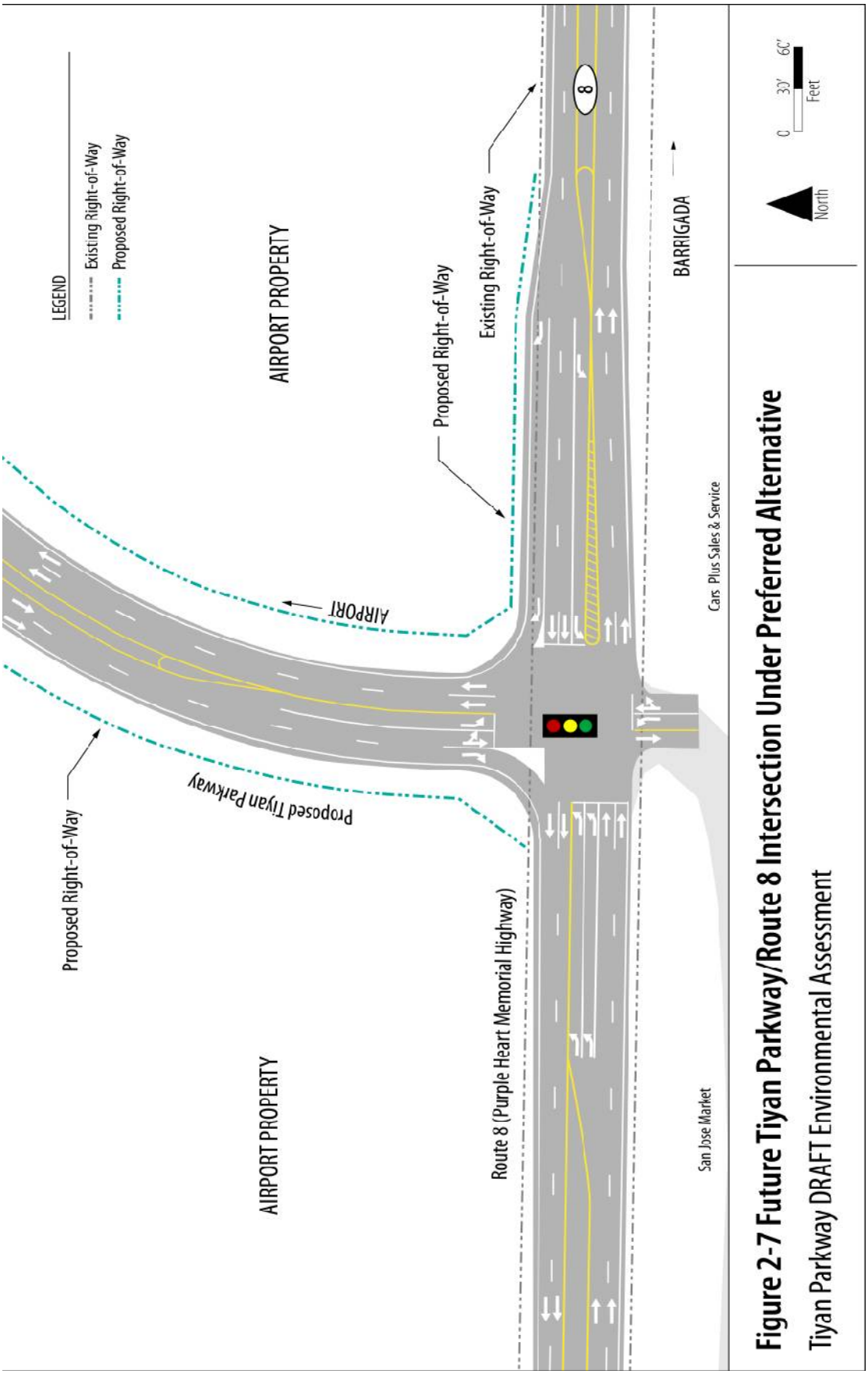


Figure 2-7 Future Tiyan Parkway/Route 8 Intersection Under Preferred Alternative

Tiyan Parkway DRAFT Environmental Assessment

Tiyan Parkway's Phase 1 connection with Route 10A would maintain the existing configuration of the roadways that currently form the Route 10A and GIAA terminal access roads (See Figure 2-8). The existing airport roadways intersection with Route 10A would not be modified by the Proposed Action. Currently, Route 10A, on the north side of the GIAA terminal, is the main access road to the GIAA and eastbound traffic on Route 10A accesses the airport via an at-grade roadway that leads directly to the terminal circulation roads. This same roadway also connects with a directional roadway providing eastbound Route 10A motorists the means to travel westbound on East Sunset Boulevard. Westbound traffic on Route 10A and eastbound traffic on East Sunset Boulevard access the terminal through the GIA's north-south internal road.

During Phase 2, the pavement would be extended towards the northern or cliff line side of the right of way, without affecting the pavement and grade on the southern side, allowing relatively normal traffic flow during the Phase 2 construction.

Phase 2 would include the installation of guardrails or barrier where the pavement is near steep embankment or the cliff line, and sidewalks are near the cliff side of the right of way border. Fences or railings would be provided along the sections of the sidewalks adjacent to areas with five feet or greater vertical drop, such as areas adjacent to retaining walls.

Figure 2-9 displays the Recommended Alternative 4 modifications to the Route 10A/Tiyan Parkway intersection in Phase 2. Regardless of whether Tiyan Parkway is constructed, Route 10A is scheduled to be widened from two lanes to four from Route 1 to the GIAA terminal, and from four lanes to six lanes from the airport terminal/Tiyan Parkway to Route 16. Under Preferred Alternative 4, the Route 10A expansion from Tiyan Parkway to the airport terminal area would be incorporated into the design of the Tiyan Parkway connection with Route 10A.

Home Depot Intersection

Existing roadways within the terminal area would not be modified by this action. The existing Sunset Boulevard/Tiyan Parkway roadway system that leads to the airport terminal area could be connected to the new Tiyan Parkway, or the existing roadway could be severed with a cul-de-sac constructed at the terminus adjacent to Tiyan Parkway. The decision on whether to connect the existing roadway to the new Tiyan Parkway would be determined by GIAA planning efforts related to future expansion of the GIAA terminal, and is not a part of this action.

Airport Layout Plan

FAA approval of sale of airport lands or easement on airport lands requires approval of a revised ALP. The airport sponsor will seek FAA approval of a release of airport land that is no longer needed for aeronautical purposes. The Recommended Alternative 4 is superimposed on a copy of the ALP in Figure 2-10.

Figure 2-8 Existing Route 10A/Tiyan/Airport Intesection

Tiyan Parkway Environmental Assessment

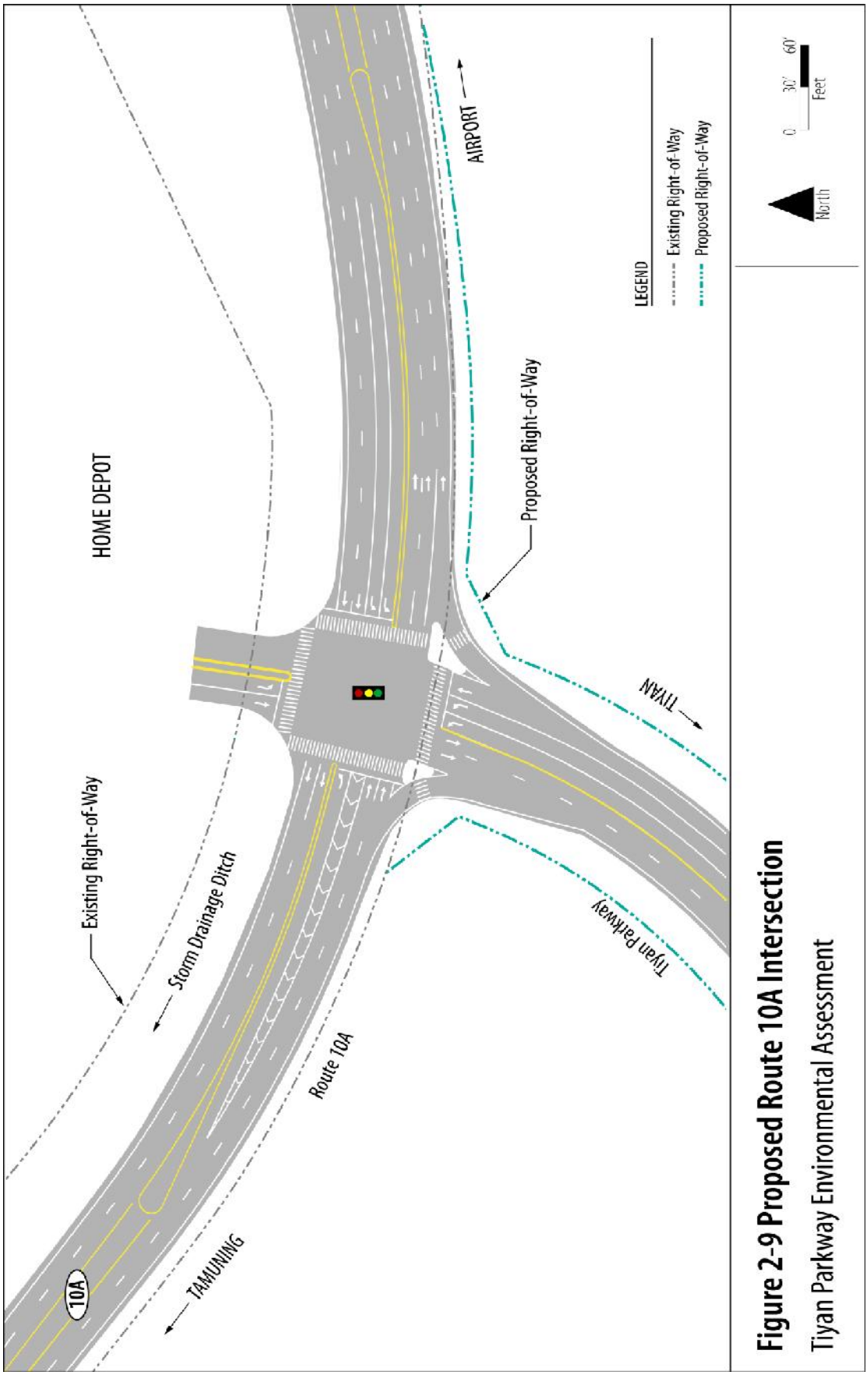


Figure 2-9 Proposed Route 10A Intersection

Tiyan Parkway Environmental Assessment

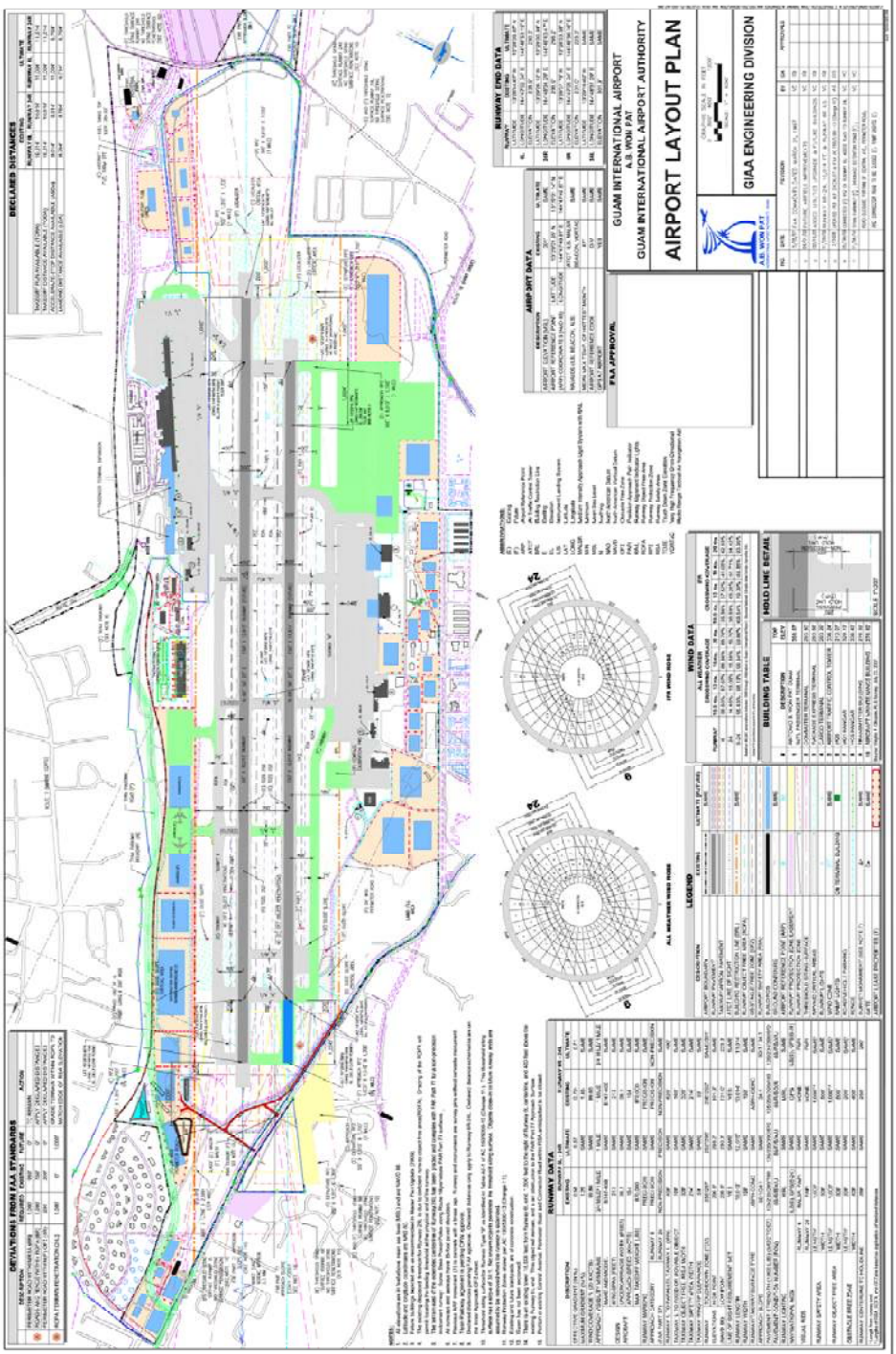


Figure 2-10 Airport Layout Plan

Tiyan Parkway Environmental Assessment

Maintenance of Traffic

Phase 1 construction would be on new alignment and could be constructed without impacts to traffic on other roadways in the area, except for minor impacts at points where proposed Phase 1 construction ties in to existing roadways:

- Intersection with Route 8
- Intersection with Punzalan Street (former officers' housing area)
- Tie-in with Sunset Boulevard

Minor impacts from temporary lane closures on Route 8 will result from construction of the Tiyan Parkway intersection with Route 8 and widening of Route 8 adjacent to the intersection in Phase 1. Traffic will be maintained on Route 8 at all times during construction.

Phase 2 construction is partially on new alignment and partially on the existing alignment of Sunset Boulevard. No impacts to current traffic movements will result for the areas where construction is on new alignment. For areas where the current roadway area is incorporated into the new alignment, traffic will be maintained on existing Sunset Boulevard while a portion of the new roadway is constructed. Traffic will then be diverted to the newly constructed portion so that construction of the remainder of the roadway cross section can be completed.

Minor impacts from temporary lane closures on Route 10A will result from construction of the Tiyan Parkway intersection with Route 10A and widening of Route 10A from Tiyan Parkway to the airport in Phase 2. Traffic will be maintained on Route 10A at all times during construction.

Access to all adjacent properties will be maintained during construction of both phases.

Cost and Schedule

The estimated cost of Phase 1 and Phase 2 of Tiyan Parkway would be approximately $16,830,000 and $26,950,000, respectively, in 2012 dollars. Recommended Alternative 4 could be paid entirely with federal funds, with the exception of the costs to acquire right of way from cliff-line property owners. The Government of Guam's cost to acquire right of way from cliff-line property owners is estimated to be $3,550,000 and this expenditure would occur prior to construction of Phase 2 of the project.

If FHWA renders a Finding of No Significant Impact in 2012, detailed design and right of way acquisition for Recommended Alternative 4 could commence in 2012, and construction of Phase 1 could be completed within 2014.

GIAA intends to close Central Avenue to through traffic sometime during 2013 to allow operation of the newly expanded runway. It is therefore anticipated that there will be some time when the existing transportation link is severed prior to replacement of the transportation link by Recommended Alternative 4.

Chapter 3
Affected Environment, Environmental Effects and Proposed Mitigation

This chapter describes the existing environmental conditions in the area potentially affected by the Recommended Alternative. The chapter also describes the potential short-term construction impacts and long-term or operational environmental impacts of the Recommended Alternative. In addition, the potential long-term impacts of the No Build Alternative are also described as a point of comparison. Finally, this chapter identifies proposed mitigation measures for impacts considered to be adverse.

A. Land Ownership, Jurisdiction, and Land Use

1. Existing Conditions

a. Land Ownership and Jurisdiction

Tiyan, the area generally encompassing the former NAS Agana, is surrounded by the villages of Tamuning and Harmon on the north side below the cliff; the villages of Dededo and Barrigada on the eastern border; the village of Barrigada on the southern border, and Maite on the western border.

The Tiyan plateau was once an important farming area for Guam, with the land privately owned by various individuals and families. Lands were taken from the private landowners and construction of a military airfield was started during the 1941-1944 Japanese occupation of Guam. The United States military expanded the airfield improvements after retaking Guam in July-August 1944. Previous landowners were compensated by the United States government for the land that was taken through condemnation proceedings following World War II. Subsequent court action found that in some cases, the original landowners were not provided fair compensation in the initial condemnation proceedings, and some of the original landowners were later awarded additional compensation.

NAS Agana remained in operation under the control of the United States Navy until it was closed in 1993. The United States government provided a quitclaim deed to the Government of Guam on November 16, 2000 for land encompassing certain property at the former Naval Air Station, including 'Lot Naval Air Station Agana-12, (Parkway)…' that was intended to be used by the Government of Guam to construct Tiyan Parkway. The Tiyan Parkway Alternative 1 alignment was established on the land that was described in the quitclaim deed. The quitclaim deed contained conditions and reservations, including:

> '*2. When transportation need for the land herein granted shall no longer exist and the area has been reasonably rehabilitated to protect the public and environment, the GRANTEE shall give notice of that fact to the Secretary of Transportation and the right, title, and interest in said property herein granted shall immediately revert to the full control of the United States of America.*
>
> *3. No part of the rights granted by this easement may be conveyed or transferred by GRANTEE without the express, written consent of the Department or its successors and assigns.'*

Guam Public Law 27-113, passed in December 2004, stipulated that any property conveyed to DPW's jurisdiction from the former NAS Agana shall be deeded to GALC for distribution to heirs of the original landowners. On January 24, 2005, the Government of Guam provided a quitclaim deed to the GALC along with the mission of identifying the ancestral landowners and returning the lands to them. Most of the property that was intended for Tiyan Parkway was subsequently conveyed by GALC to heirs of ancestral landowners. However, a few parcels remain under GALC control because GALC has not yet been able to identify those heirs of the ancestral landowners.

The quitclaim deeds provided to heirs of ancestral landowners made reference to conditions and reservations made in the original deed from the United States to the Government of Guam. Landowners whose properties are comprised of the land that was intended for construction of Tiyan Parkway are unable to obtain marketable title because the properties are clouded by the conditions and reservations contained in the original quitclaim deed.

Properties within the corridor that would be occupied by the Recommended Alternative are currently owned by GIAA, GALC, heirs of ancestral landowners to whom the land intended for Tiyan Parkway was returned by the Government of Guam, and a private landowner of a parcel fronting Route 10A that was never part of the original property of NAS Agana. The project sponsor, Guam DPW, does not currently control any of the property needed to construct the Recommended Alternative between Routes 8 and 10A.

b. Land Use

The 1,400-acre Antonio B. Won Pat International Airport (GIA) is the dominant land use in Tiyan. The airport features two 10,000-foot runways and associated taxiways. GIA's main terminal (check-in, baggage claim, etc.), which includes over 20 boarding gates, is located on the south side of Route 10A at the eastern edge of the project corridor. The airport's parking lot is located between the terminal building and Route 10A.

Within the proposed project corridor, other major land uses include low-density suburban-type residences, government offices, and light industrial facilities, such as warehouse type structures (See Figure 3-1).

Due to the Government of Guam's property conveyance to the heirs of ancestral landowners, a common land use consists of low-density suburban-type residences. The heirs of ancestral landowners and their lessees are currently occupying approximately 26 of the 55 structures remaining on the private parcels needed for the Recommended Alternative. These structures were formerly used as housing for military personnel. The original landowners are using some of these structures as residences with a few used as businesses, and many of these structures are being well-maintained, including their surrounding yards and landscaping. Conversely, many of those that are not occupied are dilapidated, have fallen in disrepair, and their surrounding landscapes and yards are overgrown with weeds. The layout of the structures is of low-density, giving the overall impression of a suburban neighborhood. The residential properties that would be required for the Recommended Alternative are located along the string of structures near the cliff line.

The light industrial land uses are located on the north side of the GIA, within airport lands planned to be developed into cargo handling and other airport related businesses and functions. An integrated air cargo facility and a private freight company recently opened facilities on GIAA property. Most of the GIAA-owned land along the south side of the project corridor is vacant.

Other land uses includes Government of Guam facilities and offices, including a Guam police station that is in the process of being abandoned for a new headquarters outside of the study area. GIAA plans to demolish the structures once the police department has vacated. The corridor does not contain farms or agricultural uses.

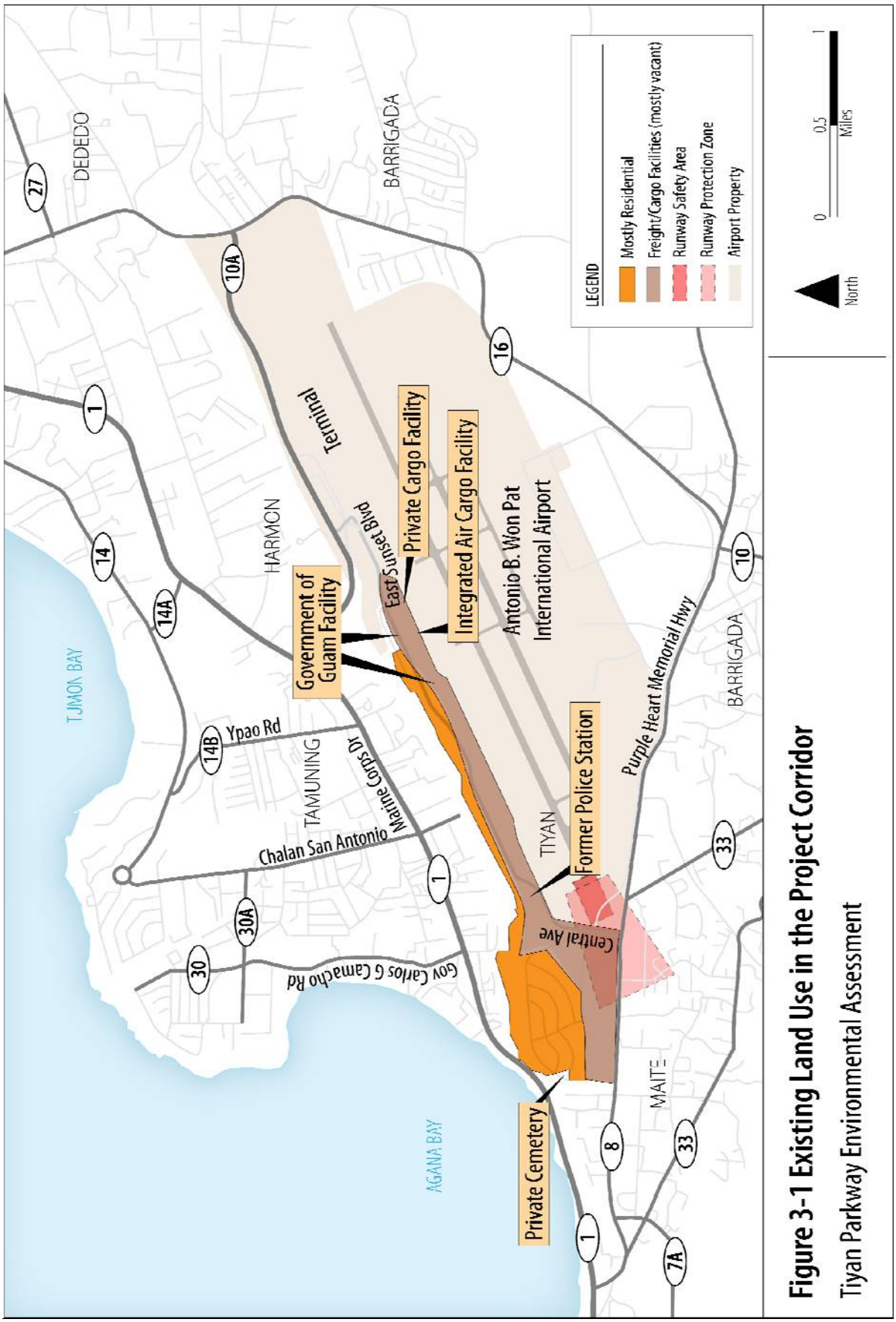


Figure 3-1 Existing Land Use in the Project Corridor

Tiyan Parkway Environmental Assessment

2. Environmental Effects

a. No Build Alternative

With or without the Recommended Alternative, the GIAA will proceed with upgrading the airport by expanding the runways and taxiways, expanding the terminal and partnering with several private companies in locating freight and cargo facilities within airport property, which has already started. The GIAA has appropriate zoning to allow cargo and freight facilities and has invested in utility relocations and upgrades to support the developments.

Under the No Build Alternative, surface transportation access needed by the cargo/freight or airport-related facilities would be provided by East Sunset Boulevard. However, these facilities would not have direct transportation access to Route 8 because Central Avenue would be closed to public access under the No Build Alternative.

Residential and small business uses of private properties along the Tiyan cliff line that are needed to construct the Recommended Alternative would likely continue under the No Build Alternative. These private property owners do not hold a marketable title to the properties because the quitclaim deed from the federal government to the Government of Guam provided for reversion of ownership to the federal government if the Government of Guam did not use the property to construct Tiyan Parkway. Owners of private property along the Tiyan cliff line that is needed for the Recommended Alternative do not have marketable title to the land. Therefore, they cannot obtain title insurance or mortgages to fund improvements; nor are they able to sell to any buyer who requires title insurance or a marketable title. It is likely that the condition of residential properties along the Tiyan cliff line would degrade over time because owners would be unable to obtain financing that is secured by the property.

b. Proposed Action

Under Recommended Alternative 4, some of the commercial and residential properties on a portion of GIAA land along the Tiyan cliff line would be acquired to accommodate construction of the roadway (See Figure 3-2). The cloud of reversion would be lifted from properties not needed for the Recommended Alternative that remain along the cliff line because construction of Tiyan Parkway negates the reversion clause.

Land use along the project corridor would transition from a mix of residential, commercial, and aviation uses to predominantly commercial and aviation uses. Commercial uses are more compatible with aviation activities.

3. Mitigation Measures

During final design, a right of way acquisition program will be implemented by the Government of Guam in accordance with the *Guam Department of Public Works Office of Right of Way – Right of Way Procedures Manual*. In accordance with applicable requirements, landowners affected by right of way acquisition will be offered fair market value for their property as determined by appraisal and households displaced by the Recommended Alternative will be provided with relocation assistance. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, will be completed prior to design completion to verify there will be no hazards to air navigation resulting from construction and operation of the Tiyan Parkway improvements.

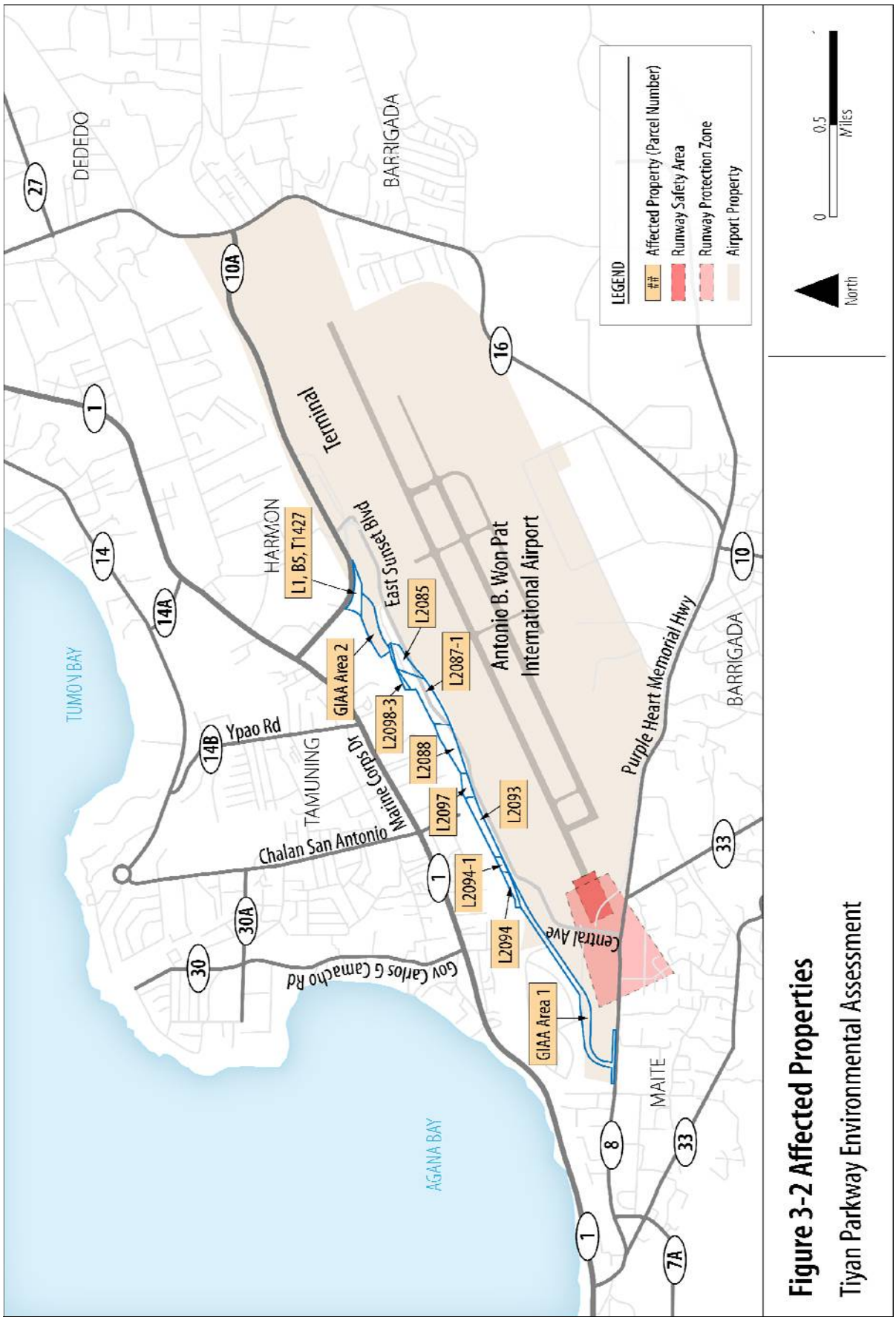


Figure 3-2 Affected Properties

Tiyan Parkway Environmental Assessment

B. Water Resources

1. Existing Conditions

The geology of the northern portion of Guam, including the Tiyan area, is dominated by shallow soils over coral limestone that formed over older volcanic deposits and was then uplifted by seismic activity. Numerous sinkholes within the coral limestone strata are found throughout the northern portion of Guam, and water tends to infiltrate into the ground near where it falls. As a result, there are no ephemeral streams in the northern portion of the island that includes the study area for Tiyan Parkway, and there are no wild and scenic rivers in the study area.

As is typical for the majority of the northern portion of Guam, the proposed project corridor is drained by infiltration into the porous coral limestone that underlies the Tiyan plateau. The proposed corridor does not contain surface water bodies, such as natural streams, floodplains, wetlands, or lakes. As depicted in Figure 3-3, the surface water bodies nearest to the project corridor include:

- One-acre freshwater marsh (wetland) located on the south side of the GIA, near Route 8, approximately 1.5 miles east of the proposed Route 8 intersection with Tiyan Parkway,
- Harmon Sink, a natural sinkhole with fluctuating water levels east of the Route 1/Route 10A intersection that drains a portion of the project area. The Harmon area is industrialized and pollutants from industrial sources have been found in the soils at the Harmon Sink,
- Agana and Tumon Bays along Guam's western coastline. Both bays are ocean or coastal water bodies, and are used for fisheries, recreational activities, and waterborne transportation.

There are no floodplains in the project area, owing to the fact that there are no streams or lakes within the corridor. Most of the precipitation collected in Tiyan on non-impervious surfaces tends to infiltrate directly into the ground. Some sheet flow could occur during extreme storm events, or along impervious surfaces, which include roads and the GIA's runways and taxiways.

The nearest 'stream' to the project area is an engineered, concrete-lined channel on the north side of Route 10A that conveys runoff to Harmon Sink. Areas drained by the concrete-lined channel include portions of the Tiyan cliff line at the eastern end of the project corridor and the northern portion of the GIA.

Storm water runoff from the former officers' housing area north and west of the project corridor discharges into Agana Bay through a storm water collection system constructed for the former naval base.

Storm water runoff from a large portion of the GIA (largely its southern end) is collected through a system of unlined surface channels, storm water basins and dry injection wells.

The proposed project corridor overlies the Northern Guam Sole Source Aquifer, which encompasses the northern half of the island. This groundwater aquifer was designated a "sole source" by the USEPA in accordance with Section 1424(e) of the Safe Drinking Water Act because it is the principal source of potable water on the island. The aquifer is recharged from rainfall that percolates through surface soils and the underlying cavernous limestone. The maximum elevation of the aquifer lens is approximately 6.5 feet above sea level. The elevation of the Tiyan Parkway roadway would vary from approximately 165 feet above sea level at Route 8 to the high point on the Tiyan plateau of approximately 235 feet above sea level and then to approximately 157 feet above sea level at the bottom of the cliff line where Tiyan Parkway would intersect Route 10A.

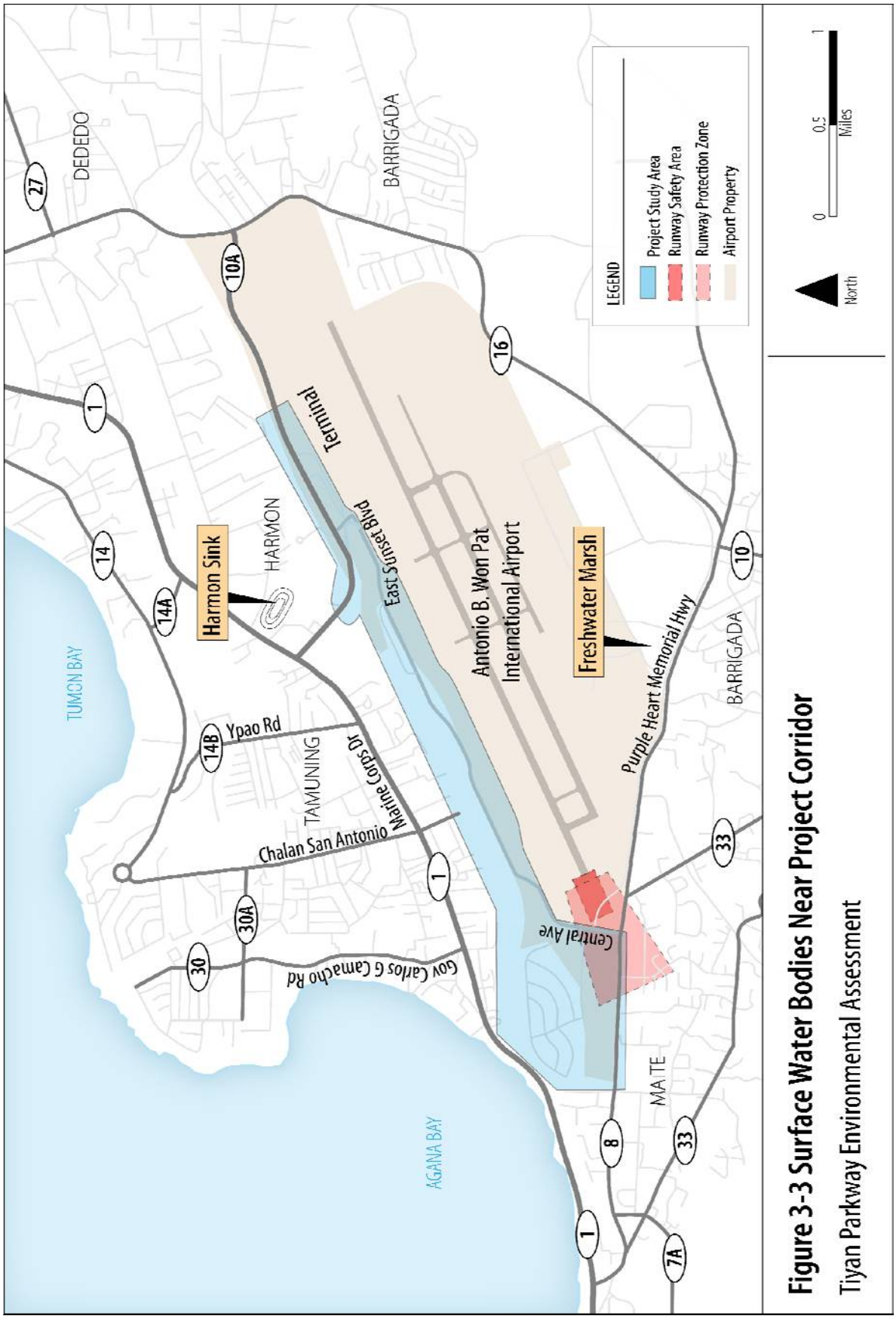


Figure 3-3 Surface Water Bodies Near Project Corridor
Tiyan Parkway Environmental Assessment

The Guam Coastal Zone Management (CZM) program is administered by the Guam Bureau of Statistics and Plans (BOP). The Guam CZM program is responsible for guiding the use, protection, and development of land and ocean resources within Guam's coastal zone area, which is defined as all non-federal property within the territory, including off-shore islands and the submerged lands and waters extending seaward to a distance of three nautical miles. The project corridor is therefore within the coastal zone, and any federally assisted activity (e.g., federal action, federal assistance to the local government, or required federal license or permit) within Guam's coastal zone must be consistent with the Guam CZM program's objectives and policies.

Pertinent regulations regarding storm water runoff during construction include Section 402 of the federal Clean Water Act. The threshold triggering the need for a National Pollutant Discharge Elimination System (NPDES) permit for storm water associated with construction activities is one acre.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would have no impact on water resources.

b. Proposed Action

Construction would require earthwork that would expose unvegetated soil to the elements (wind and rain). The primary concern during construction would be the potential for erosion and sedimentation due to storm water passing through unvegetated areas or construction areas with exposed soils, which could result in degradation of water quality along coastal waters.

The size of the construction site is more than the one-acre threshold for requirement for an NPDES permit from the Guam EPA. The Recommended Alternative will qualify for a General NPDES permit, in which case a Notice of Intent (NOI) will be prepared and submitted to Guam EPA.

As a five-lane roadway, the proposed Tiyan Parkway would increase the amount of impervious surfaces, specifically from roadways. It would essentially replace two-lane roadways (East Sunset Boulevard and Central Avenue) that form the public transportation route between Routes 8 and 10A on the north and west sides of the GIA. As a result, the parkway would increase the volume of storm water runoff. The soil and underlying bedrock are relatively porous. To address storm water runoff, the parkway would include a storm water drainage system consisting of swales and retention basins or structures, designed to remove standing water from the parkway and to treat the storm water through contact with vegetation as the water flows within the swales positioned between the roadway and sidewalks. Stormwater for the majority of the project area on the Tiyan plateau would be infiltrated into underlying strata using a combination of infiltration ponds, infiltration vaults, or dry wells. Stormwater for the lower section of Tiyan Parkway approaching Route 10A would be discharged into an existing engineered channel that leads to Harmon Sink following treatment by contact with vegetation in the roadside swales.

Potential for adverse impacts to Guam's sole-source aquifers would be mitigated by stormwater quality treatment such as contact with vegetation in roadside swales and other elements that would be developed for inclusion with the construction plans in cooperation with the Guam EPA during final design.

Tiyan Parkway's storm water system could be separate from, or could be combined with the existing and any future GIA drainage system. Drainage details would be resolved through coordination between DPW and GIAA during final design.

3. Mitigation Measures

Final design will be developed in accordance with design criteria contained in the Guam DPW's Transportation Stormwater Drainage Manual (TSDM). The TSDM provides guidance regarding stormwater treatment and disposal of water into Guam's sole-source aquifer. Plans for collection, treatment, and disposal of stormwater will be developed in cooperation with the Guam EPA during final design. Final design will also be developed to avoid creation of wildlife attractants hazardous to airport operations in accordance with FAA Advisory Circular 150/5200-33B.

During final design, permits required under the Clean Water Act will be acquired by the DPW. The plans will incorporate best management practices and appropriate erosion control measures, and the construction special provisions will address applicable permit terms and conditions to protect water quality. In the event that storm water drainage plans include groundwater injection wells, an Underground Injection Control permit will be obtained from Guam EPA.

A NOI filed with the Guam EPA for the General NPDES permit will include erosion control measures or a construction best management practices (BMP) plan, or will direct the contractor to prepare the plans for review and approval by the Guam EPA. Generally accepted construction BMPs applicable to this project include:

- Silt fence, sandbags, and filters to keep sediment from leaving the construction site,
- Minimizing areas of disturbance,
- Covering stockpiles and wetting unvegetated areas to minimize fugitive dust,
- Prompt planting of vegetation and/or mulching on highly erodible or critical areas.

C. Biological Resources

1. Existing Conditions

a. Description of Ecosystem or Biological Community

According to the Final Environmental Impact Statement (EIS) for the Disposal and Reuse of Naval Air Station Agana, Guam (NAS Agana EIS), the project corridor consists of the following two types of vegetative communities, which also extend into the GIA property:

- Developed areas that contain runways, taxiways, roads and buildings. They usually do not contain ample vegetation because they are paved or otherwise covered. Any vegetation found would likely be weedy or ornamental.
- Sections along roads and buildings that contain lawns, landscaping or regularly maintained areas, described in the NAS Agana EIS as ruderal habitat. Ruderal habitat is typically used to describe where natural vegetation has been removed or severely degraded by past human activity. This vegetation can be highly variable and can include weeds and nonnative grasses. Maintained lawns and landscaping normally do not fit this definition, but this term may apply for some of the abandoned properties in the project corridor.

Human activities since the closure of the naval base have not changed these vegetative communities. The runways were converted to civilian use, warehouse development is occurring on GIA property, and parcels along the project corridor were transferred to the original landowners who are using these properties largely as residences, similar to how they were used when under military control. Within the former housing area, some properties have been well maintained by the original landowners. In some

areas within the corridor where the buildings are unoccupied, the landscaping is overgrown and dominated by weedy species.

The introduced brown tree snake decimated the populations of native land birds on Guam, causing the extinction of some species. The NAS Agana EIS noted that previous biological reconnaissance surveys of the former base conducted in 1987 and 1994 observed relatively few birds. The 1994 survey observed a family of the indigenous Mariana common moorhen (*Gallinula chloropus guami*); a species designated "endangered" by the U.S. Fish and Wildlife Service (USFWS), using a freshwater marsh in the general project area. The 1994 survey also observed the Pacific golden plover (*Pluvialis fulva*) at ten sites. The Pacific golden plover is a migratory shorebird that breeds in Alaska and winters on Guam. As a migratory species, it is protected under the federal Migratory Bird Treaty Act. Typical habitat includes short grasslands, airfields, urban grasslands, and freshwater pools where available. Other bird species observed in the 1994 survey included yellow bittern (*Lxbrychus sinensis*), and three introduced species that included the Eurasian tree sparrow (*Passer montquanus*), Philippine turtledove (*Streptopelia bitorquata*) and black drongo (*Disurus macro cercus*).

The only mammal species potentially inhabiting the project corridor are rats, feral cats, and dogs. Small mammals are scarce on Guam due to brown tree snake predation. The 1994 survey recorded the presence of toads, frogs, skinks, and geckos at various sites in Tiyan. While the brown tree snake was not observed in the 1994 survey referenced in the NAS Agana EIS, it is known to be present throughout Guam, including Tiyan.

b. Threatened/Endangered Species

In a letter dated September 11, 2009 to the DPW, the USFWS stated the project corridor does not contain federally listed species or designated critical habitat. In a letter dated October 13, 2009, the FHWA rendered a "no effect" determination in accordance with Section 7 of the Endangered Species Act. In an e-mail response to the FHWA dated October 19, 2009, the USFWS referenced its September 11, 2009 letter to the DPW. In addition, a site visit with Guam Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) on September 17, 2009 elicited no concerns.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would have no impact on biological resources.

b. Proposed Action

There would be no impacts to threatened or endangered species because there are none found within the project area.

Under the Recommended Alternative, Tiyan Parkway would replace a substantial amount of ruderal (disturbed ground) habitat areas with roadway infrastructure. The parkway would, however, provide vegetative landscaping. The roadway pavement would occupy less than 60 percent of the Tiyan Parkway's right of way. The remaining areas within the right of way would consist of vegetated swales, sidewalks and narrow strips where trees could be planted.

3. Mitigation Measures

No mitigation measures are necessary for biological resources.

D. Visual Resources & Light Emissions

1. Existing Conditions

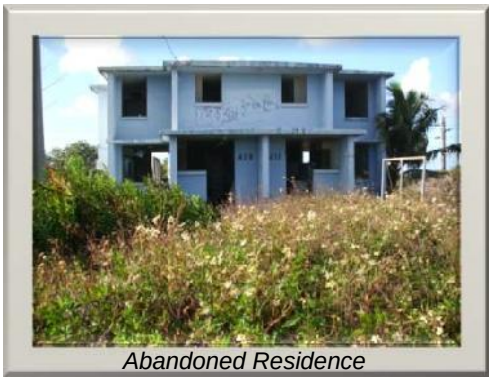
The existing visual and aesthetic environment of the project corridor is enhanced by its proximity along the Tiyan cliff line that offers many vantage points, including areas upland from the cliff line. Panoramic views are available of the Pacific Ocean and Agana and Tumon Bays, including their coastlines and their urban land uses. Overhead power lines on steel poles along the cliff line somewhat tarnish these panoramic views. Also, the panoramic views are not available at some locations within the eastern portion of the project corridor due to thick vegetation along the cliff line. In addition to views of the coastline, distant views of Guam's southern mountainous area are also available for those traveling or looking westbound through the corridor.


Tiyan Viewscape


Well Kept Residence

Within the proposed project corridor along the portion between the GIA and the cliff line, the visual environment presents a dichotomy of stimuli: low-density suburban residential on one side and light industrial (warehousing) on the other.


Overgrown Residence


Abandoned Residence

Some of the aesthetics on the cliff side of the corridor is typical to that of a low-density suburban residential neighborhood, consisting of grassy lawns and detached single-family and duplex houses. The houses that were once used as military family quarters are now occupied by other residents and small businesses. Architecturally, the residences are of simple one- and two-story masonry block-like structures that were built for navy personnel starting in the 1950s. However, many of the buildings are not being used, and have therefore become dilapidated and surrounded by overgrown and weedy vegetation, a stark departure from the occupied buildings and surroundings. What is described here as the "low-density suburban residential" visual environment, with some dilapidation, extends into the western-most section of the project corridor in an area containing a large cluster of former officers' dwellings.

The aesthetics on the GIA side of the corridor is one that is transitioning into that of a typical light industrial park. The GIAA recently completed its integrated air cargo facility within a parcel on the east end of the project corridor, and a private freight company opened a facility in the same area. Visually, these land uses appear as large warehouses, with asphalt parking lots, driveways, security chain link fences, and traffic consisting of large trucks and tractor-trailers with the shipping containers. These types of land uses would be extended westward on the north side of the airport.

Notable viewsheds from outside the corridor are of the Tiyan cliff, which appears as a steep slope covered with thick vegetation from ground level vantage points within Tamuning and Agana, such as along the Route 1 corridor. Some of the residential structures, especially those near the cliff line, are visible from these vantage points, as well as the power lines described above.

Some streetlights are present within the roadway corridor, but the level of nighttime street lighting is not consistent. Existing airfield lighting is present on airport property. Transient light sources include automobile and truck headlights, and lights on aircraft that arrive and depart from the airport.

2. Environmental Effects

a. No Build Alternative

The No-Build Alternative would not result in any change to the visual character or quality of the area and would result in no impact to visual aesthetics or light emissions.

b. Proposed Action

Within the eastern and central sections of the project corridor, the Recommended Alternative would substantially change the visual environment as Tiyan Parkway replaces the two-lane East Sunset Boulevard. With five lanes, drainage swales, landscaping and sidewalks within a 120-foot wide right of way, transportation infrastructure would encompass a larger share of the visual environment within the corridor. With or without the Recommended Alternative, the overall visual environment may begin to be dominated by light industrial land uses as the GIAA continues to develop freight and cargo facilities on its property. Because Tiyan Parkway would include vegetated bio-swales and opportunities for trees to be planted along the roadway, it would be visually compatible with the existing residences in the former officers' housing area and the light industrial and aviation-related businesses expected to be developed within the corridor. If the project corridor develops into an airport-related commercial-industrial park, Tiyan Parkway would soften the image of the corridor.

Tiyan Parkway would not affect the scenic vistas offered from Tiyan of the Pacific Ocean and Agana and Tumon Bays. The horizontal profile of the parkway would be level with the surrounding parcels to help facilitate their development into land uses supportive of the airport. The profile of the parkway would not rise to such a level in which it would block existing vistas. In addition, because certain sections of the parkway would be very near the cliff line, the parkway would provide motorists, cyclists and pedestrians using the parkway with scenic vistas.

The only elements of the parkway visible from below the cliff line, such as from Tamuning, would be embankment slopes constructed at the edge of the cliff line. Vegetation on the embankment slopes would serve to mask the appearance of the roadway from below. Over time, tangan-tangan trees that currently dominate the vegetation on the steep slope would take root in the Tiyan Parkway embankment and make the embankment slope facing the cliff line indiscernible from the existing cliff line when viewed from below.

The Recommended Alternative would not result in an increase or decrease to either airfield lighting or aircraft lighting. It has not yet been determined whether the parkway would require street lighting. A lighting plan would be developed during final design, and any lighting configuration may be constrained by the parkway's proximity to the GIA and would need to be developed in accordance with applicable FAA requirements. Where the parkway is near the cliff line, the parkway street lamps would be visible, if erected, similar to the power poles near the cliff line. Light emissions from automobiles and trucks would not adversely impact adjacent residential properties or airport operations.

3. Mitigation Measures

Vegetation outside of the specified clearing limits will be preserved and protected. The contractor will remove trees only when specifically authorized to do so by the DPW.

Disturbed soils that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the project vicinity.

E. Air Quality Analysis

This section summarizes the results of an air quality study conducted for the Recommended Alternative. "Air quality" is a term used to describe the amount of air pollution exposure to the public. Air pollution is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere by reducing visibility, damaging property, reducing the productivity or vigor of crops or natural vegetation, and/or reducing human or animal health. Air pollution comes from many different sources: stationary sources such as factories and power plants; mobile sources such as cars, buses, planes, and trucks; and naturally occurring sources such as windblown dust. The Clean Air Act (CAA) Amendments of 1990 and the Final Conformity Rule (40 CFR Parts 51 and 93) affect transportation projects by stating that, "no federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program, or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this act" (CAA Amendments, Title I, Section 101, Paragraph F). Conformity to an SIP means that such activities will not:

- Cause or contribute to any new violation of any National Ambient Air Quality Standards (NAAQS) (See Table 3-1);
- Increase the frequency or severity of any existing violation of any NAAQS in any area; or
- Delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area.

The Government of Guam has adopted the NAAQS as its own standards. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare. As required by the CAA, NAAQS have been established for six major air pollutants: carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide, and lead. Some of these pollutants are not associated with the operation of automobiles. For example, lead levels have substantially decreased from past years due primarily to the federally mandated switch to lead-free gasoline.

According to Section 107 of the CAA 1977 Amendments, the USEPA is required to identify all geographic areas in compliance with the NAAQS, as well as those not attaining the NAAQS, on a pollutant-by-pollutant basis. Areas not in compliance with NAAQS are deemed non-attainment areas. Areas which have insufficient data to make a determination are deemed unclassified, and are treated as

being attainment areas until proven otherwise. Areas that were once classified as non-attainment but have since demonstrated attainment are classified as maintenance areas.

In addition to the NAAQS, the USEPA also regulates air toxics with the passage of the CAA 1990 Amendments. Air toxics are air pollutants known or suspected to cause cancer or other serious health effects. The USEPA has assessed an expansive list of air toxics, seven of which from mobile sources are among the national and regional-scale cancer risk drivers. These Mobile Source Air Toxics (MSAT) are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future USEPA rules. A 2007 USEPA rule requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines.

TABLE 3-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant and Averaging Time	Primary Standard[1]	Secondary Standard[1]
Carbon Monoxide		
8-Hour Maximum	9 ppm[3]	9 ppm
1-Hour Maximum	35 ppm[3]	35 ppm
Nitrogen Dioxide		
Annual Arithmetic Mean	100[2]	100
Ozone		
8-Hour Average	0.075 ppm[4]	0.075 ppm
Particulate Matter[8]		
PM_{10}		
24-Hour Average	150[5]	150
$PM_{2.5}$		
Annual Arithmetic Mean	15[2]	15
24-Hour Average	35[6]	65
Lead		
Quarterly Arithmetic Mean	1.5[7]	1.5
Sulfur Dioxide		
Annual Arithmetic Mean	80[2]	---
24-Hour Maximum	365[3]	---
3-Hour Maximum	---	1300[3]

Notes: [1]All concentrations in micrograms per cubic meter of air ($\mu g/m^3$) or, except where noted, in parts per million (ppm).
[2]Not to be exceeded during any calendar year.
[3]Not to be exceeded more than once a year.
[4]Standard attained when 3-year average of annual 4th-highest daily maximum 8-hour concentration is below 0.08 ppm.
[5]Standard attained when annual highest 99th percentile of 24-hour concentrations over 3 years is below 150 $\mu g/m^3$.
[6]Standard attained when the annual highest 98th percentile of 24-hour concentration over 3 years is below 35 $\mu g/m^3$.
[7]The quarterly lead standard is not to be exceeded during any calendar quarter.
[8]PM_{10} - particulate matter diameter of 10 microns or less; $PM_{2.5}$ - particulate matter diameter of 2.5 microns or less.

Sources: 40 CFR 50 and Guam Air Pollution Control Standards and Regulations.

1. Existing Conditions

Guam is currently designated as an attainment area for all six NAAQS pollutants, with the exception for two relatively small areas associated with the Piti (Cabras) and Tanguisson electric power generating stations, which are designated nonattainment for sulfur dioxide (SO_2). The Piti generating station is located approximately 9.4 kilometers (5.8 miles) west-southwest of the project area. The Tanguisson generating station is located approximately 5.6 kilometers (3.5 miles) north-northeast of the project area. Both nonattainment areas have radii of 3.5 kilometers (approximately 2.2 miles) from the plants, and the non-attainment areas are, therefore, outside of the project area. Based on the data collected by the Guam Power Authority in 1999-2000, the Government of Guam believes that these areas should now be attainment areas.

Existing conditions for carbon monoxide concentrations in the project corridor are listed in Table 3-2.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would result in an increase in congestion and travel delay time for motorists that must find alternative routes around the airport area. Increased travel length and increased travel delay would result in higher emission levels than exist today, but these emission levels are predicted to comply with NAAQS (Refer to Table 3-2).

b. Proposed Action

Construction

Air quality impacts during construction would generally consist of fugitive dust and mobile source emissions from construction equipment.

Fugitive dust, which refers to airborne particulate matter of larger particle sizes, would occur during construction, especially activities and situations that include construction vehicles operating around the construction site, demolition of existing structures or buildings, excavation activities, material blown from uncovered haul trucks, stockpiles, and exposed areas. The rate of dust emissions from excavation activities varies greatly depending upon the type of soil, the amount and type of earthmoving activity, the moisture content of exposed soil, and wind speed. Most fugitive dust, however, is made up of relatively large particles, which tend to settle within 20 to 30 feet of their source.

Construction vehicles and heavy equipment, such as backhoes and dozers, emit engine exhaust. These types of equipment are usually diesel-powered. Diesel combustion tends to emit relatively high levels of nitrogen oxides (NO_X) in comparison to gasoline-powered equipment. However, compliance with the national standards for NO_X pollutants is determined on an annual basis and therefore, the limits would not likely be exceeded by short-term construction equipment emissions.

Post Construction

The analysis of air quality impacts focused on quantitative microscale (i.e., street level) impacts of carbon monoxide (CO) from automobiles and other vehicles at selected locations. In addition to the microscale analysis, a qualitative assessment was made regarding future levels of MSAT emissions under the Recommended Alternative.

Microscale CO levels were determined using the most recent version of the USEPA mobile source emission factor model (MOBILE6.2) and the CAL3QHC (Version 2.0) air quality dispersion model. MOBILE 6.2 is a program that provides current and future estimates of emissions from highway motor vehicles. CAL3QHC is used to estimate CO concentrations expected under given traffic, roadway geometry, and meteorological conditions. Microscale analysis focuses on intersections because they are the locations where vehicles queue, which typically affect CO concentrations near these areas to be the highest for any given roadway. The Tiyan Parkway termini (the intersections with Routes 8 and 10A) were selected for the microscale analysis after a screening process that involved all the intersections evaluated in the traffic impact analysis. The screening considered predicted future traffic conditions and the level in which traffic would worsen due to the Recommended Alternative. Both intersections represent the worst-case combination of high volumes, congestion and delay, and therefore, their predicted CO levels would represent the worst-case microscale CO impacts expected from the Recommended Alternative.

The values provided in Table 3-2 represent the background CO concentration combined with the modeled results from the CAL3QHC microscale dispersion model using worst-case meteorological parameters, along with morning and afternoon peak hour traffic data. A background value must be added into the results of the dispersion analysis to account for others sources of CO that are not accounted for in the CAL3QHC modeling. Despite these parameters, no violations of the applicable NAAQS are predicted. The highest 1-hour CO concentration was 6.0 ppm at the Tiyan Parkway / Route 10A intersection under the Recommended Alternative, well below the NAAQS of 35 ppm. The highest 8-hour CO concentration was 4.2 ppm at the Tiyan Parkway / Route 10A intersection under the Recommended Alternative, which is below the NAAQS of 9 ppm.

TABLE 3-2
PREDICTED WORST CASE CARBON MONOXIDE (CO) CONCENTRATIONS AT TERMINI INTERSECTIONS

Analysis Site	1-Hour						8-Hour		
	Existing		No Build		Proposed Action		Existing	No Build	Proposed Action
	AM	PM	AM	PM	AM	PM			
Tiyan Parkway/ Route 10A	5.3	5.6	5.4	5.9	5.7	6.0	3.9	4.1	4.2
Tiyan Parkway/ Route 8	4.0	4.3	4.3	4.9	4.8	5.5	3.0	3.4	3.9

Notes: 1-hour CO NAAQS = 35 ppm
8-hour CO NAAQS = 9 ppm
1-hour values include a background concentration of 2 ppm
8-hour values include a background concentration of 1.4 ppm

Source: Parsons Brinckerhoff, Inc., November 2009

The qualitative assessment of MSAT emissions under the Recommended Alternative is derived in part from a study conducted by the FHWA titled, *A Methodology for Evaluating Mobile Source Air Toxic Emissions among Transportation Project Alternatives* (2006). FHWA's Interim Guidance groups projects into the following tiers for purposes of evaluating potential MSAT effects:

1. Exempt projects and projects with no meaningful potential MSAT effects;
2. Projects with low potential MSAT effects; and
3. Projects with higher potential MSAT effects.

The Recommended Alternative would fall under Tier 2. Projects with a low potential for MSAT effects include minor widening projects and new interchanges, but also projects resulting in an average annual daily traffic (AADT) level in the design year of less than 140,000 to 150,000. Tiyan Parkway is projected to have an AADT of 47,400 in 2030, the design year. Also, the busiest roadway in central Guam is Marine Corps Drive, which is predicted to have an AADT of 74,200 under the Recommended Alternative, which is actually less than what is predicted under the No Build Alternative (83,500). Both locations would meet the Tier 2 criteria. Nevertheless, on a regional basis, the USEPA's vehicle and fuel regulations would over time cause substantial reductions in MSAT levels in comparison to current conditions regardless of whether or not the Recommended Alternative is implemented.

3. Mitigation Measures

To prevent fugitive dust from excavation activities and demolition from affecting areas beyond the construction site, DPW will direct contractors to use demolition methods that minimize dust emissions; to phase land disturbance, including grassing over newly exposed areas; and to use other methods to suppress dust emissions, such as watering during dry conditions. To prevent haul trucks from tracking dirt onto paved streets, stabilized construction entrances will be required.

No post-construction air quality mitigation measures are necessary.

F. Noise Analysis

Several characteristics of sound affect its impact, which include sound level (loudness), frequencies, periods of exposure to the noise, and changes or fluctuations in the noise levels during exposure. Loudness is measured in decibels (dB). Since the human ear does not perceive all pitches or frequencies equally, noise levels are adjusted, or weighted, to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since dBA describes a noise level at just one moment, and very few noises are constant, ways of describing noise over extended periods are needed. One way is describing fluctuating noise heard over a period as if it were a steady, unchanging sound. This type of an average is called the equivalent sound level, L_{eq}. L_{eq} is the constant sound level that, for a given situation and time period (e.g., 1-hour, $L_{eq}(1)$; hourly, $L_{eq}(h)$; or 24 hours, $L_{eq}(24)$), conveys the same sound energy as the actual time varying sound.

The FHWA has developed Noise Abatement Criteria (NAC), which were adopted by the DPW (See Table 3-3). The specific NAC would depend on the type of land use affected by traffic noise, as indicated by Activity Categories A through E. According to the *Guam Department of Public Works Traffic Noise Abatement Policy* (March 18, 2009) (Noise Policy), a noise impact would occur when predicted traffic noise levels approach or exceed the NAC, or when predicted traffic noise levels substantially exceed the existing noise levels. "Approach" means 1 dBA less than the NAC. "Substantially exceed" means a future increase of 15 dBA or more above existing noise levels.

1. Existing Conditions

Ambient noise levels were measured at three locations within the proposed project corridor on August 21 and 22, 2009, using industry-accepted noise meters. The measurements, each taken for a 15-minute period, represent the existing ambient noise conditions of large clusters of noise-sensitive receptors. Noise sensitive receptors are defined as outdoor areas of frequent human use (i.e. residences, schools, etc.). Using the measurements taken at the three noise meter locations, 39 noise sensitive receptor sites were identified, and their ambient conditions were modeled using FHWA's Traffic Noise Model (TNM®) Version 2.5. The 39 sites represent over 65 residences and 10 commercial or airport related facilities.

Land uses are largely residential and cargo handling facilities related to the airport. Other land uses include a few small businesses and government offices, including a police station.

TABLE 3-3
FHWA NOISE ABATEMENT CRITERIA (NAC)

Activity Category	L_{eq}(h) for Noisiest Traffic Hour	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B.
D	----	Undeveloped lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: Federal Aid Highway Program Manual (FHPM), 23 CFR Part 772 "Procedures for Abatement of Highway Traffic Noise," 1982.

The ambient noise conditions are mainly affected by aviation activities of the GIA. Therefore, the modeled noise levels considered the effects of aviation noise by using noise contours developed by the GIAA for the FAA. The FAA uses L_{dn}, or Day-Night Equivalent Sound Level, as the metric to determine aviation related noise impacts. L_{dn} is a 24-hour equivalent sound level with a 10 dB penalty assessed to noise events occurring at night (10:00 p.m. to 7:00 a.m.).

The TNM® modeled noise levels at the 42 sensitive receptor sites (three measured sites and 39 additional sites) are provided on Table 3-4. Site locations are shown on Figure 3-4. These sites represent land uses that fall under NAC Activity Categories B and C. The majority of the sites are category B because they represent residential land uses. Two sets of noise levels are provided in Table 3-5: one from traffic noise and the other from aviation activities of the GIA. The modeled traffic noise levels represent worst case conditions when traffic volumes are high but speeds are largely not affected by the high volumes. The effects from traffic noise at the receptors considered the amount of physical shielding provided by buildings, topography, and the presence of non-traffic-related noise, in particular the aviation related noise. The aviation related noise levels provided on Table 3-4 were taken from GIAA's "Noise Compatibility Program and Noise Exposure Maps" (aviation noise contours). The noise levels were extrapolated for sites located outside the GIA contours. As indicated on Table 3-4, traffic noise from roadways in and around the project corridor, such as East Sunset Boulevard and Central Avenue, cause noise levels at the noise sensitive sites to be in the range from 44 to 57 dBA L_{eq}. However, at all 42 sites, noise levels due to aviation activities exceeded the noise levels caused by traffic, which means that aviation related noise is the dominant noise source in the project corridor. Eight of these sites, which represent 12 residences, may also approach or exceed the NAC because of the aviation noise.

2. Environmental Effects

The TNM® was used to predict future (year 2030) worst case traffic noise at the sensitive receptor sites for both Recommended Alternative 4 and the No Build Alternative. The predicted noise levels for both scenarios were compared against the low end of the FAA approved GIA noise contour at each site. For

example, if a site is located in the 65-70 dBA L_{dn} noise contour, the comparison was made against the lower noise value or the 65 dBA L_{dn}. A "noise impact," in accordance with the DPW Noise Policy, would occur if the predicted noise level approaches or exceeds the NAC or substantially exceeds existing noise levels.

TABLE 3-4
EXISTING NOISE CONDITIONS ALONG PROJECT CORRIDOR

Site Number	NAC Activity Category	Existing Modeled Noise Levels (dBA)		Approach or Exceed NAC
		Traffic, $L_{eq}(h)$	Aviation, L_{dn}	
1	B	45	55-60	No
2	B	56	65-70	Yes
3	B	44	55-60	No
4	B	51	50-55	No
5	B	50	50-55	No
6	B	48	50-55	No
7	B	47	50-55	No
8	B	47	50-55	No
9	B	47	50-55	No
10	B	48	50-55	No
11	B	47	50-55	No
12	B	49	50-55	No
13	B	47	55-60	No
14	B	47	55-60	No
15	B	46	50-55	No
16	B	47	50-55	No
17	B	45	55-60	No
18	B	46	55-60	No
19	B	45	55-60	No
20	B	45	55-60	No
21	B	45	55-60	No
22	B	45	55-60	No
23	B	45	55-60	No
24	B	47	55-60	No
25	B	45	55-60	No
26	C	48	55-60	No
27	C	47	55-60	No
28	C	54	60-65	No
29	B	54	65-70	Yes
30	B	54	65-70	Yes
31	B	55	65-70	Yes
32	B	55	65-70	Yes
33	B	55	65-70	Yes
34	B	55	60-65	No
35	B	54	65-70	Yes
36	B	55	65-70	Yes
37	B	54	60-65	No
38	B	55	60-65	No
39	B	53	60-65	No
40	B	53	60-65	No
41	C	55	60-65	No
42	C	55	60-65	No
43	C	57	65-70	No

Note: See Figure 3-4 for site locations.

Source: Parsons Brinckerhoff, 2012 and Guam International Airport Authority, Noise Compatibility Program and Noise Exposure Maps for 2003 and 2008; FAR Part 150 Noise Exposure and Land Use Compatibility Study, Project No. GIAA-FY99-03-2; AIP No. 3-66-0001-23, March 2003

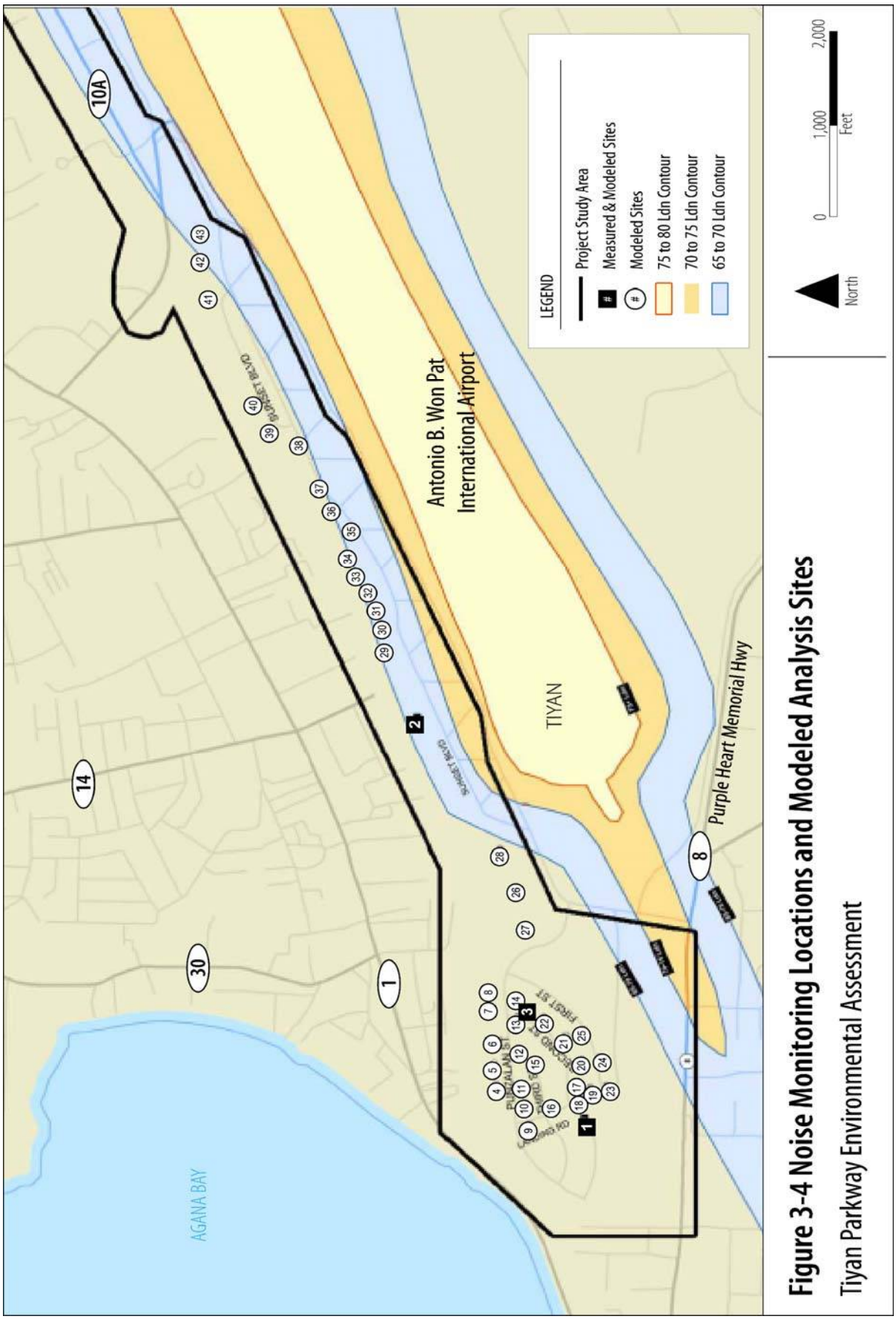


Figure 3-4 Noise Monitoring Locations and Modeled Analysis Sites

Tiyan Parkway Environmental Assessment

a. No Build Alternative

Under the No Build Alternative, the roadway network would not include Tiyan Parkway. Noise levels for each receptor would be dependent upon distance from and shielding conditions present between the roadway and the receiver. Under the No-Build Alternative, Sunset Boulevard would end near its current connection to Central Avenue. Central Avenue would be closed under the No-Build Alternative, and Sunset Boulevard would no longer have a direct connection to Route 8. Traffic noise levels for the No-Build future condition at the 43 receptors would be predicted to range from 44 to 57 dBA $L_{eq.}$ Traffic noise levels would be expected to rise by one or two decibels over the existing traffic noise levels at a few locations, but would be predicted to decrease at most locations and remain well below the noise generated by aviation activities from GIAA (See Table 3-6).

b. Proposed Action

Construction

Construction activities would involve the use of heavy machinery and vehicles that produce high noise levels, which could disturb the residents living within the proposed project corridor. Table 3-5 presents maximum noise levels (L_{max}) of selected construction equipment and activities measured at a distance of 50 feet from the noise source. The actual noise levels from construction would vary due to the particular equipment used or activity conducted, phase of construction, location of the activity and the influence of the person using the equipment or conducting the activity.

Construction activities in residential areas would occur during daylight hours when loud noises are more tolerable. Construction in residential areas would not be conducted at night when people are generally more sensitive to noise, except as required for special activities such as water outages. In addition, the proximity of GIA to the proposed project corridor would help to mask some of the construction noise. Aviation related noise (i.e., planes taking off and landing) is the dominant noise source in the project corridor. Depending on the location of the receptor vis-à-vis the construction site or the construction noise producing activity, the aviation noise could be louder.

Post-Construction

For Recommended Alternative 4, traffic noise levels at noise sensitive receptor sites that would be in proximity to Tiyan Parkway would be predicted to increase by 1 to 7 dBA L_{eq}, resulting in traffic noise becoming the dominant noise source for some of these sites (See Table 3-6). For Alternative 3, receptors sites 4 to 12, 26, 28, 34, 38, 40 and 41 would be predicted to have traffic noise levels higher than the lower value aviation noise levels. Most of these sites would have traffic noise levels within the same range as the aviation noise contours, and some would be predicted to be within 3 dBA of the lower value aviation noise levels. Humans are incapable of perceiving noise level differences of 3 dBA or less.

The exceptions for Alternative 3 would be sites 4 through 8, which would be predicted to have traffic noise levels 7 to 13 dBA higher than the lower value aviation noise levels (see Table 3-6). These sites are located within the cluster of structures on the west end of the project corridor, near the cliff line.

Alternative 4 is similar to Alternative 3 at the central and eastern end of the corridor, but differs from Alternative 3 at the western end of the corridor. The Alternative 3 alignment passes through the former officers' housing area, while the Alternative 4 alignment skirts around the former officers' housing area to the south and east. Noise resulting from traffic on the Alternative 4 alignment would, therefore, not result in an increase greater than 3 dBA for sites 4 through 8 that was predicted for Alternative 3.

TABLE 3-5
NOISE LEVELS OF SELECTED CONSTRUCTION EQUIPMENT AND ACTIVITIES

Equipment Description	Ground Impact	Acoustic Usage Factor (%)	L_{max}(dBA)at 50 ft (dBA, Slow)	
			Specified Limit	Actual Measured
Auger Drill Rig	No	20	85	84
Backhoe	No	40	80	78
Boring Jack Power Unit	No	50	80	83
Chain Saw	No	50	85	84
Compactor (ground)	No	20	80	83
Compressor (air)	No	40	80	78
Concrete Mixer Truck	No	40	85	79
Concrete Pump Truck	No	20	82	81
Concrete Saw	No	20	90	90
Crane	No	16	85	81
Dozer	No	40	85	82
Dump Truck	No	40	84	76
Excavator	No	40	85	81
Front End Loader	No	40	80	79
Generator	No	50	82	81
Grader	No	40	85	83
Grapple (on backhoe)	No	40	85	87
Horizontal Boring Hydraulic Jack	No	25	80	82
Impact Pile Driver	Yes	20	95	101
Jackhammer	Yes	20	85	89
Mounted Impact Hammer	Yes	20	90	90
Pavement Scarifier	No	20	85	90
Paver	No	50	85	77
Pneumatic Tools	No	50	85	85
Pumps	No	50	77	81
Rivet Buster/Chipping Gun	Yes	20	85	79
Rock Drill	No	20	85	81
Roller	No	20	85	80
Scraper	No	40	85	84
Shears (on Backhoe)	No	40	85	96
Tractor	No	40	84	N/A
Vibrating Hopper	No	50	85	79
Vibratory Concrete Mixer	No	20	80	80
Vibratory Pile Driver	No	20	95	101
Warning Horn	No	5	85	83
Welder/Torch	No	40	73	74

Source: FHWA Highway Construction Noise Handbook and Roadway Construction Noise Model (RCNM, ver. 1.0), 2006

TABLE 3-6
FUTURE PREDICTED TRAFFIC NOISE LEVELS AT REMAINING NOISE SENSITIVE RECEPTOR SITES

Site Number	Existing Noise Levels from Aviation Activities, L_{dn} (dBA)	No Build Traffic Noise, Year 2030 (dBA)		Proposed Action Traffic Noise, Year 2030 (dBA)	
		Predicted, $L_{eq}(h)$	Difference from Existing	Predicted, $L_{eq}(h)$	Difference from Existing
1	55-60	47	-8	52	-3
2	65-70	49	-16	*	*
3	55-60	45	-10	48	-7
4	50-55	52	+2	52	+2
5	50-55	51	+1	51	+1
6	50-55	50	0	50	0
7	50-55	48	-2	49	-1
8	50-55	48	-2	49	-1
9	50-55	48	-2	50	0
10	50-55	49	-1	50	0
11	50-55	48	-2	49	-1
12	50-55	50	0	51	+1
13	55-60	48	-7	50	-5
14	55-60	48	-7	50	-5
15	50-55	47	-3	49	-1
16	50-55	48	-2	49	-1
17	55-60	47	-8	52	-3
18	55-60	48	-7	52	-3
19	55-60	47	-8	54	-1
20	55-60	47	-8	54	-1
21	55-60	47	-8	55	0
22	55-60	46	-9	52	-3
23	55-60	47	-8	58	+3
24	55-60	50	-5	59	+4
25	55-60	47	-8	60	+5
26	55-60	45	-10	*	*
27	55-60	46	-9	*	*
28	60-65	48	-12	*	*
29	65-70	48	-17	*	*
30	65-70	48	-17	*	*
31	65-70	49	-16	*	*
32	65-70	48	-17	*	*
33	65-70	48	-17	*	*
34	60-65	49	-11	*	*
35	65-70	47	-18	*	*
36	65-70	48	-17	*	*
37	60-65	48	-12	*	*
38	60-65	52	-8	*	*
39	60-65	54	-6	*	*
40	60-65	54	-6	*	*
41	60-65	56	-4	62	+2
42	60-65	57	-3	68	+3
43	65-70	58	-7	59	-6

Notes: See Figure 3-4 for site locations
*Data is not listed for sites at locations that would be acquired and demolished with construction of Recommended Alternative 4

Source: Parsons Brinckerhoff, 2012

Receptor sites not located near the parkway are predicted to experience a decrease in traffic noise levels of 1 to 7 dBA L_{eq}, partially due to the shift in through traffic from the existing route (East Sunset Boulevard and Central Avenue) to the parkway. At these sites, aviation-related noise would continue to be the dominant noise source (See Table 3-6).

The land uses representing 16 of the sensitive receptor sites (Sites 2 and 26 through 40) would be displaced by the Recommended Alternative. Predicted traffic noise levels for these sites are, therefore, not presented in Table 3-6 for Recommended Alternative 4. Land uses on parcels adjacent to Tiyan Parkway are anticipated to change from residential to industrial-commercial due to their proximity to the GIA and the expected market demand for aviation related businesses. This type of land use conversion would change the NAC Activity Category from B to C, and the NAC would change from 67 to 72 dBA L_{eq}. Regardless, even if the NAC remains at 67 dBA L_{eq} for most of the receptor sites, the traffic noise levels under the Recommended Alternative at the remaining sensitive receptor sites are not predicted to approach or exceed the NAC and are not predicted to substantially exceed (15 dBA or greater) the existing noise levels. No "noise impacts", as defined by the DPW's Noise Policy, would occur as a result of the Recommended Alternative.

3. Mitigation Measures

The following abatement methods would be incorporated into construction contracts or be provided as standard noise control specifications that would help to limit construction noise impacts:

- All equipment will be required to have sound control devices no less effective than those provided on the original equipment and muffled exhaust, as appropriate;
- All equipment will be required to comply with the pertinent equipment noise standards found in the FHWA Roadway Construction Noise Model; and
- Rock crushing or screening operations within 2,000 feet of any occupied dwelling will be required to include the strategic placement of material stockpiles between the operation and the affected dwelling or by other means to block noise if approved by DPW.

If a specific noise complaint is made during construction, one or more of the following noise abatement measures may be required at the Contractor's expense:

- If the complaint is about noise from stationary equipment, the equipment will be placed as far from the complainant's property or residence as possible;
- Shut off idling equipment;
- Use alternative methods or equipment that produce less noise;
- Reschedule construction operations to avoid periods of noise annoyance identified by the complainant;
- Notify nearby residences whenever extremely noisy work will occur;
- Install temporary or portable acoustic barriers around stationary construction noise sources; and
- Operate electric-powered equipment using line voltage power instead of on-site generators.

No post-construction mitigation measures are required as a result of the Recommended Alternative.

G. Hazardous Materials

1. Existing Conditions

The Tiyan Parkway corridor is within the former NAS Agana that was used for military housing, military aviation, and commercial aviation purposes from the 1940's to the present day.

Pertinent information on hazardous materials within the Tiyan Parkway project area was referenced from the NAS Agana EIS:

- Approximately 474 facilities were sampled for asbestos in support of the NAS Agana. The EIS does not provide detailed information on which specific structures were investigated, or which structures had findings. Friable asbestos was detected in 28 of the facilities. Damaged, friable asbestos was abated by the United States Navy. Non-friable asbestos was detected in 366 of the facilities, and no further action to mitigate these structures was done by the Navy.
- Approximately 484 facilities were surveyed for lead-based paint. Of these, 169 were determined to contain lead-based paint (paint containing greater than 2,000 parts per million of lead, as defined by Housing and Urban Development guidelines). In addition to lead-based paint being found on the walls and fixtures, lead-based paint residue was found in the surface soils in the enlisted family housing area (Tiyan cliff line).
- Pesticides have been used on the property. Records of use, documented in the NAS Agana Environmental Baseline Survey for the period of 1990 to 1992, indicate pesticides were applied on base for ants, cockroaches, fleas, mosquitoes, mixed grasses, rodents, and ticks.
- Radon is a naturally occurring radioactive gas. The underlying geologic formation (coral limestone) is known to contribute to elevated radon levels. In 1993, the Navy conducted a radon survey over approximately 40 percent of the station's facilities. Approximately 64 samples were collected in areas where radon would be expected to accumulate: in basements, underground pits, vaults, and other storage areas. Of these 64 samples, 10 contained radon in concentrations greater than 4.0 picocuries per liter, the EPA's health-based action level. One site is within the project area near Punzalan Street.

GIAA previously removed some of the former military residences that are on airport property. GIAA representatives report that each of the residences was found to contain asbestos tiles and lead based paint.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would have no impact on hazardous materials in the study area.

b. Proposed Action

The Recommended Alternative would require the demolition of residential structures that likely contain asbestos and lead-based paint. The GIAA has demolished similar structures within its property and found asbestos and lead-based paint in those structures. It is therefore anticipated that the structures that would be demolished to construct the Recommended Alternative would also contain lead-based paint and asbestos.

The Recommended Alternative would require earthwork actions including grubbing, excavation, and embankment construction involving soils that may contain lead-based paint residue and pesticides. The Naval Facilities Engineering Command (NAVFAC) Marianas confirmed (August 13, 2012) that these soils do contain lead-based paint residue and that land use controls have been established in these areas to

protect human health and the environment, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

3. Mitigation Measures

Asbestos and lead paint investigations of structures to be demolished for construction of the Recommended Alternative will be conducted by qualified personnel. In the likely event that asbestos and/or lead paint is found to be within the structures, the demolition contractor will be required to follow USEPA procedures for removal of asbestos and lead-based paint prior to demolition of the structures.

During final design, Guam DPW will consult with the Guam EPA and NAVFAC to ensure the final plans and specifications include provisions regarding the handling of lead based paint. To comply with CERCLA, the contractor will conduct soil excavation and other activities in a manner consistent with the land use control elements established for the project area.

H. Cultural Resources and Historic Properties

Cultural resources are properties that reflect the heritage of local communities, states, and nations. Properties judged to be significant and to retain sufficient integrity to convey that significance are termed "historic properties" and are afforded certain protections in accordance with Guam and federal legislation. The National Historic Preservation Act of 1996 (NHPA) defines historic properties as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" (NRHP; 36 CFR 800), as well as the artifacts, records, and remains related to such properties. Historic properties may be eligible for nomination to the NRHP if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the following criteria:

- Criterion A – be associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B – be associated with the lives of persons significant in our past
- Criterion C – embody the distinctive characteristics of a type, period, or method of construction; or possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D – have yielded, or may be likely to yield, information important in prehistory or history

An eligible property may include contributing and non-contributing elements. In accordance with Section 106 of the NHPA, federal agencies are responsible for making eligibility determinations—in this case, FHWA assisted by the Guam DPW. These agencies must, in turn, consult with the SHPO and request concurrence with their effect determinations.

The FHWA and the DPW, in consultation with the Guam State Historic Preservation Officer (SHPO), are responsible for determining eligibility for listing in the NRHP and for findings of effect. The Advisory Council on Historic Preservation (ACHP) is given the opportunity to comment on the project and its effects on cultural resources and to participate in development of the Memorandum of Agreement to mitigate any adverse effects.

Guam law also offers protection to archaeological and historic resources. 21 GCA Chapter 76 and other laws establish the Guam Register of Historic Places (GRHP), and provide for protection and preservation of cultural materials on the GRHP.

1. Existing Conditions

The NAS Agana Base Reuse Master Plan that was prepared as part of the base closure action underwent Section 106 review in 1999. The Area of Potential Effects (APE) of NAS Agana Base Reuse Master Plan encompassed a large area, including the entirety of the APE for the Recommended Alternative. The former naval base did not contain sites on the National Register.

Only one site (an archaeological site) was determined to be eligible for the National Register under Criterion D. It was identified as Site 1562-T18 (T18), an early *latte* site thought to be a temporary occupation site. *Latte* refers to the period from approximately AD 1000 to the first European contact in 1521, evidenced by the presence of latte stone structures and changes in ceramics. According to the Record of Decision for the Disposal and Reuse of NAS Agana, Guam (May 23, 2000), T18 is located on the south side of the airport, and therefore, would not be within the APE of the Recommended Alternative. According to a study conducted by Ogden Environmental and Energy Services Co., Inc. for the U.S. Navy in August 1993, other *latte* sites may have been present along the cliff line based on a 1930s archaeological map. However, the study could find no evidence of these *latte* sites, and speculated that they might have been destroyed during construction of the base.

Specific to this project, FHWA and DPW completed a review of architectural properties that have become in period (older than 50 years) since the BRAC process. The intent of the review was to identify which, if any, structures may be eligible for nomination to the NRHP. FHWA and DPW completed an inventory and eligibility determination of standing structures within the APE. The evaluation found that the current and recently demolished structures would best be considered as a single district. The evaluation further recommended the name "NAS Agana East Sunset Boulevard Housing District."

The NAS Agana East Sunset Boulevard Housing District is associated with post-World War II, Cold War-era military housing. Most military housing constructed between 1946 and 1964 was part of the Wherry or Capehart programs, both of which had a significant impact on housing patterns at numerous U.S. military bases throughout the world. The residences along East Sunset Boulevard appear to have been funded directly by the DOD and do not reflect the influence of Wherry or Capehart communities.

The district was evaluated against each NRHP eligibility criterion (36 CFR 60.4). It has been determined not eligible under any criteria. Thus, none of the structures are considered historic properties, under ACHP regulations (36 CFR 800).

No archaeological properties are known within the project APE. Sites are documented south of the airport, but the APE has been heavily disturbed in the past, by residential construction and the airport. Prior survey of the entire installation documented no archaeological properties within this project's APE (Yoklavich and Craib 1997). Soils throughout the APE are very shallow (USDA 1988), making it unlikely that significant and intact subsurface deposits are contained within this horizon above bedrock. These three aspects make it very unlikely that any undocumented, National Register-eligible sites are present within the APE.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would have no effect on cultural resources in the project area.

c. Proposed Action

No archaeological resources are known to be present within the APE. No historic properties, as defined in 36 CFR 800.16, are present within the APE. FHWA made a finding that no historic properties would be affected pursuant to 36 CFR 800.4(d)(1). Concurrence with the FHWA finding was provided by SHPO on April 26, 2012. The Recommended Alternative will, therefore, not affect archaeological or historic cultural resources in the project area.

3. Mitigation Measures

No mitigation of cultural resources will be required because no historic properties or archaeological sites are located within the APE of the Recommended Alternative. In the event of unanticipated discovery, work in the area of the discovery will cease, and the Guam SHPO will be consulted.

I. Socioeconomic, Environmental Justice Issues, and Children's Environmental Health & Safety Risks

The Presidential Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires federal agencies to take appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal programs, policies, and activities on minority and low-income populations' (EJ populations) health or environment.

For purposes of EO 12898 compliance, FHWA defines minority as:

- Black Americans, which includes persons having origins in any of the black racial groups of Africa;
- Hispanic Americans, which include persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian Americans, which include persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; and
- American Indians and Alaskan Natives, which include persons having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition.

Low-income means a household income at or below the U.S. Department of Public Health and Human Services (DPHHS) poverty guidelines.

Pursuant to EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 CFR 19883, April 23, 1997), the FAA is encouraged to identify and assess environmental health risks and safety risks that the agency has reason to believe could disproportionately affect children. Environmental health risks and safety risks include risks to health or to safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or be exposed to. There are no known health risks or safety risks associated with Tiyan Parkway that could disproportionately affect children.

1. Existing Conditions

According to the U.S. Census 2000, "Native Hawaiian and Other Pacific Islander" refers to any of the original peoples of Guam, Hawaii, Samoa, or other Pacific Islands. This category includes people who indicated their race or races as Native Hawaiian, Chamorro, Samoan, Carolinian, Chuukese, Tahitian, Mariana Islander, Kosraean, Marshallese, Palauan, Pohnpeian, Yapese, or Other Pacific Islander (Grieco and Cassidy 2001; U.S. Department of Commerce 2004). The island of Guam is divided into 19 villages.

In general, the various racial and ethnic minority populations are evenly distributed within each of the villages on the island, as are people with lower incomes and children under age 18.

Guam's location between Hawaii and Asia and its political status as a U.S. territory has created a favorable environment for business investment. The island's economy has experienced rapid growth and development, particular in its three major industries: tourism, construction and federal expenditures. The GIAA is taking steps to develop the airport into a major transportation and freight hub of the southwestern Pacific region. GIAA is expanding the capabilities of the airport, has recently completed an integrated air cargo facility and has allowed a private freight company to open a facility on airport property. Other freight and cargo companies may be partnering with the GIAA to develop facilities on airport property, which would border or are located within the southern part of the project corridor.

Other land uses in the project corridor consist of land uses of low-density suburban-type residences. The residential structures on properties required for the Recommended Alternative are former military housing units, and approximately 26 are now occupied by heirs of original landowners or their lessees.

Demographic information about the residents in the project corridor is unavailable because they would not have been counted during the last U.S. Census for which data is available in 2000. However, based on information obtained during public involvement activities conducted for the Recommended Alternative, most families living in the project area are of Chamorro descent. It is unknown whether any of the affected households would be classified as low-income.

2. Environmental Effects

a. No Build Alternative

Property within the proposed project corridor and adjacent to East Sunset Boulevard would likely be developed into intermodal cargo and freight facilities, even without construction of Tiyan Parkway. However, the viability and value of those economic development projects will be constrained by poor levels of service on East Sunset Boulevard and by the lack of transportation access to Route 8.

No environmental justice effects are anticipated for the No Build Alternative. Residential structures will likely remain in private ownership of the heirs of ancestral landowners because private sales of the properties will be constrained by the lack of marketable title.

b. Proposed Action

The Recommended Alternative would displace approximately 26 occupied structures, of which 24 are used as residences. The displaced households would be provided with relocation assistance. The remaining residences that are not acquired for construction of Tiyan Parkway would be provided with access to Tiyan Parkway via Punzalan Street. Any social or community activities associated with the remaining residences that rely on surface transportation would be unaffected by the Recommended Alternative. Tiyan Parkway would be visually compatible with the existing residences because it would provide ample landscaping. Under the Recommended Alternative, the private parcels are expected to be developed into aviation-related businesses due to higher property values and improvements to transportation infrastructure, largely provided by Tiyan Parkway. The development of aviation-related businesses would make the project corridor an important economic zone for the entire island, providing employment and business opportunities to all of Guam's residents. Residences remaining in the project corridor would increasingly find a social environment (suburban low-density residential) that is incompatible with aviation noise and the new businesses and facilities, many of which would involve large warehouses and high amounts of truck traffic.

Federal regulations regarding land acquisition mitigate for the economic impacts experienced by occupants due to land acquisition. Because all of Guam is considered a racial and ethnic minority population, minorities would not experience disproportionately high and adverse effects due to land acquisition. Because federal regulations regarding land acquisition would ensure that significant economic impacts to occupants do not occur, low-income populations would not experience disproportionately high and adverse effects due to land acquisition. Land acquisition would not result in health and safety risks that would disproportionately impact children. Therefore, the Recommended Alternative would not result in disproportionate land use or socioeconomic impacts to minority and low-income populations or children as a result of land acquisition.

The Recommended Alternative does not provide for a school, daycare center or other facility that would be used predominantly by children. The nearest school is more than a mile from Tiyan Parkway. The analysis contained throughout this EA indicates that the Recommended Alternative would not cause children to come in contact with or ingest products or substances that would pose a risk to their health or safety.

3. Mitigation Measures

Mitigation of socio-economic and environmental justice impacts will not be required for the Recommended Alternative.

I. Section 4(f) of the Transportation Act

Section 4(f) of the Department of Transportation Act (49 U.S.C. 303 and 23 U.S.C.) permits the use of land for a transportation project from a significant publicly-owned public park, recreation area, wildlife and waterfowl refuge, or a historic site (Section 4(f) resources) only when the FHWA has determined that there is no feasible and prudent alternative to such use, and the project includes all possible planning to minimize harm to the property resulting from such use.

1. Existing Conditions

The areas within or in the vicinity of proposed right of way for the Recommended Alternative do not contain any of the types of Section 4(f) resources described above. Although the NAS Agana Base Reuse Master Plan stated that portions of the former naval installation should include "parks and recreational areas," no future park or recreational facility has been planned or identified at or near the proposed project corridor.

2. Environmental Effects

a. No Build Alternative

No impacts to Section 4(f) properties will occur with the No Build Alternative.

b. Proposed Action

No impacts to Section 4(f) properties will occur with the Recommended Alternative.

3. Mitigation Measures

No mitigation measures are required for Section 4(f) properties.

J. Utilities

1. Existing Conditions

Existing utilities within the Tiyan Parkway corridor include telephone, water, sanitary sewer, electric power (transmission and distribution), cable television, and fuel. A summary of existing utilities and owners within the study area is provided in Table 3-7.

TABLE 3-7
EXISTING UTILITIES IN STUDY AREA

Utility Owner	Utility Type	Location
Guam Power Authority (GPA)	Overhead electric transmission	Tiyan cliff line
	Overhead electric distribution	Residential and commercial areas
Guam Water Authority (GWA)*	Underground water distribution	Residential and commercial areas
	Underground sanitary sewer	Residential and commercial areas
GTA Teleguam	Underground telephone	Residential and commercial areas
US Navy	Underground fuel line	North side of Route 8
MCV Broadband	Overhead cable TV	GPA electric distribution poles

***** GWA provides water to private properties in the former NAS Agana based on fixed billing (not metered) and responds to sewer overflows. Ownership of the utility infrastructure is not clear, and most of the infrastructure encroaches on private property

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would have no impact on existing utilities.

c. Proposed Action


Transmission Poles at Tiyan

The Recommended Alternative would impact utilities within the corridor as follows:

- The proposed Tiyan Parkway alignment would cross the overhead GPA electric transmission lines alignment near the east end of the corridor as the alignment traverses down the slope toward Route 10A. Approximately 12 poles would be relocated or protected in place.
- Overhead GPA distribution lines that provide service to existing residential and commercial customers within the project area would need to be removed or relocated in order to demolish structures that are in conflict with the alignment, to allow construction of Tiyan Parkway, and to retain continuity of electrical services to customers within and beyond the project corridor.
- Underground GWA water and sewer lines that provide service to existing residential and commercial customers within the project area would need to be removed, abandoned in place, or relocated in order to demolish structures that are in conflict with the alignment, to allow

construction of Tiyan Parkway, and to retain continuity of water and sanitary sewer services to customers within and beyond the project corridor.

- Underground telephone lines that provide service to existing residential and commercial customers within the project area would need to be removed or relocated in order to demolish structures that are in conflict with the alignment, to allow construction of Tiyan Parkway, and to retain continuity of telephone services to customers within and beyond the project corridor.
- An underground fuel line owned by the federal government that crosses proposed Tiyan Parkway near Punzalan Street would need to be relocated or protected in place.
- Overhead cable television lines that provide service to existing residential and commercial customers within the project area would need to be removed or relocated in order to demolish structures that are in conflict with the alignment, to allow construction of Tiyan Parkway, and to retain continuity of cable television services to customers within and beyond the project corridor.

3. Mitigation Measures

Utility agreements will be developed during final design to address the scope, schedule, and payments for utility relocations and protections that are required to accommodate construction of Tiyan Parkway, in accordance with existing utility easements.

K. Material Sources and Waste Materials

1. Existing Conditions

The Tiyan plateau is on an uplifted coralline limestone formation that is overlaid by shallow soils. According to the Soil Survey of the Territory of Guam prepared by the U.S. Department of Agriculture, Soil Conservation Service (now the Natural Resources Conservation Service) in May 1988, the predominant soil across the project corridor and surrounding area is Guam-Urban Land Complex with 0 to 3 percent slopes. The soil is very shallow (typically less than 10 inches) with moderately rapid permeability.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would not require materials, nor would it require the disposal of waste materials because Tiyan Parkway would not be constructed. Although changes to future land uses under the No Build Alternative are likely, the original landowners are unlikely to substantially change the topography of their properties.

b. Proposed Action

The Recommended Alternative would change the existing topography largely because of the need to maintain a horizontal profile of the parkway that would be level with or at the same elevation as the surrounding parcels that may be developed into commercial-industrial land uses.

The section of the parkway near Route 8, which is aligned in a north-south orientation, generally follows the existing contours of the corridor, which also slopes gently downward from north to south. Therefore, relatively little earthwork is needed for the parkway in that area, and the topography would remain largely the same within the southwest portion of the corridor. Phase 1 of the Recommended Alternative would require approximately 37,000 cubic yards of excavation and approximately 13,000 cubic yards of

embankment construction. Materials for embankment construction can be obtained from the site, leaving an excess of approximately 24,000 cubic yards of waste material that would be removed from the site. The waste material would likely be comprised of topsoil and coralline limestone that would have economic value for another construction site.

As Tiyan Parkway transitions to or is aligned in an east-west orientation, along areas near and parallel to the cliff line, substantial earthwork would be needed, which would noticeably change the topography of the corridor. As Tiyan Parkway traverses down the slope toward the intersection with Route 10A, construction would involve substantial excavation and a lesser amount of embankment construction. The height and width of the embankments and excavated slopes would depend on the depth and steepness of the slope where the parkway would be located, and on the quality of the underlying material as determined by geotechnical engineering analysis. Phase 2 of the Recommended Alternative would require approximately 224,000 cubic yards of excavation and approximately 53,000 cubic yards of embankment construction. Materials for embankment construction can be obtained from the site, leaving an excess of approximately 171,000 cubic yards of waste material that would be removed from the site. The waste material would likely be comprised of topsoil and coralline limestone that would have economic value for another construction site.

3. Mitigation Measures

Geotechnical investigations and analyses will be conducted to determine the appropriate slopes for the embankments and excavated slopes of the parkway. In the event that embankment materials are imported to the project site, the materials will be required to meet FP-03 specifications. Disposal of excess material excavated from the project site will be accomplished in accordance with FP-03 specification requirements.

L. Energy Supply and Natural Resources

1. Existing Conditions

Guam currently imports all carbon-based energy supplies from off-island sources, including fuel for transportation uses. Guam does not produce natural resources other than aggregates used in construction.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would result in an increase to fuel consumption because motorists would be required to use alternative routes once Central Avenue is closed to allow use of the extended runway.

b. Proposed Action

The Recommended Alternative would result in a net decrease in fuel consumption because motorists would be able to use Tiyan Parkway to connect between Routes 8 and 10A. Projected fuel savings over 30 years would be 8.3 million gallons of gasoline.

3. Mitigation Measures

No mitigation measures are required for energy supply and natural resources.

M. Construction Impacts

1. Existing Conditions

There are currently no construction projects underway involving Tiyan Parkway/Central Avenue/Sunset Boulevard. Other construction projects unrelated to the Recommended Alternative are underway, including improvements to GIA and improvements to the roadway network.

2. Environmental Effects

a. No Build Alternative

The No Build Alternative would not result in impacts resulting from construction.

b. Proposed Action

Construction activities associated with the Recommended Alternative will result in temporary adverse impacts in terms of noise, water quality, and air quality. These impacts are addressed in greater detail in Sections B (Water Resources), E (Air Quality), and F (Noise) in this chapter.

3. Mitigation Measures

Mitigation of construction impacts are presented in Sections B (Water Resources), E (Air Quality), and F (Noise) in this chapter. The Guam DPW will file FAA Form 7460-1, Notice of Proposed Construction or Alteration, before starting construction on or near GIA so FAA can evaluate whether any construction equipment or staging will constitute a hazard to air navigation.

N. Secondary Impacts

Secondary impacts are broadly defined in the Council on Environmental Quality Guidelines as those impacts that are caused by an action and occur later in time or are further removed in distance but are still reasonably foreseeable after the action has been completed (CFR, Title 40, Part 1508.8). Secondary impacts comprise a wide variety of effects, such as changes in land use, economic vitality, and population density.

1. Existing Conditions

The majority of land in the study area is vacant, used for airport-related commercial activities, or used as residences.

2. Environmental Effects

a. No Build Alternative

Secondary effects that result from the No Build Alternative would likely include:

- Constraint on the development of vacant parcels owned by GIAA to provide airport related commercial activities, because access for a particular parcel would only be available to either Route 8 or Route 10A, but not to both.
- Continued degradation of the quality of residential structures along the cliff line, because the current title conditions for these landowners result in their inability to obtain mortgage financing to fund improvements, and the title conditions would also make it impossible for the owners to sell the property to a buyer that requires title insurance.

b. Proposed Action

Secondary effects that result from the Recommended Alternative will likely include:

- Commercial development of parcels adjacent to Tiyan Parkway, especially parcels with access both the Parkway and to the airport.
- Release of reversion conditions on property included in the original BRAC alignment for Tiyan Parkway (Alternative 1).

3. Mitigation Measures

No mitigation of secondary impacts will be required for the Recommended Alternative.

O. Cumulative Impacts

Cumulative impacts are defined in 40 CFR 1508.7, as:

> ". . . an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

A summary of potential cumulative impacts as they relate to major environmental resources is provided in Table 3-8. The resources that are most impacted by cumulative effects are land use, socioeconomics, and potentially environmental justice.

Land use for private properties adjacent to the airport would be expected to change from residential to commercial, as landowners seek to benefit from the highest and best use of their land. Land use changes would be expected, regardless of whether or not Tiyan Parkway is constructed, because of the anticipated development at GIA, but parkway construction would be expected to lead to an acceleration of land use changes. In some ways, this could be considered as a beneficial change because commercial land uses are more compatible with aviation noise.

Socioeconomic resources are related to land use cumulative effects, as land use within the corridor changes to commercial use that could result in greater financial reward for land owners.

TABLE 3-8
CUMULATIVE IMPACTS SUMMARY

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Impact
Land Use	Construction of NAS Agana converted farm lands to aviation & residential uses	GIAA is seeking to develop unused lands for airport-related commercial uses	Proposed Action would not adversely impact future land use and would be consistent with current land use	Continued development adjacent to the Tiyan Parkway corridor	Over long term, most residential properties would likely be replaced by commercial uses that are impacted less by aviation noise
Recreational Resources	Navy barracks likely provided recreational resources	No recreational resources are within the corridor	No recreational resources are affected by Proposed Action	Future recreational resources are not affected	No cumulative impact to recreational resources
Water Resources	Construction of impervious surfaces including pavement and rooftops	Existing roadways present impervious surfaces that increase runoff	Proposed roadways would increase runoff but mitigation is provided for stormwater quantity & quality	Future development in the corridor would increase impervious areas	Decreased water quality, but impact is minor because future develop-ments would be required to mitigate for stormwater quantity & quality
Biological Resources	Conversion of farms to paved areas and urban landscaping	Some residential lawns have become overgrown	Displace urban landscaping with parkway landscaping	Urban landscaping of adjacent parcels may be converted to commercial	Urban landscaping would decrease with minor cumulative effect mitigated by cliff line and Tiyan Parkway vegetation
Visual Resources & Light Emission	Conversion of farm lands to aviation & residential	Many residential properties are in disrepair because of clouded title	Proposed Action would clear clouded titles& remove impediment to improvement of private properties	Likely that residential properties would be redeveloped for airport-related commercial uses	Cumulative impacts are due mostly to airport related developments
Air Quality	Two areas near electric power plants were not in attainment for SO_2	GPA measurements show all of Guam is now in attainment	MSAT would increase slightly near new Tiyan Parkway and decrease elsewhere	Future vehicle emission rules plus fleet turnover would reduce overall MSAT	MSAT levels would continue to improve with or without the Proposed Action
Noise	Conversion of farms to aviation uses	Operation of aircraft results in substantial noise levels	Additional traffic volume results in minor increase to noise levels	Continued growth of traffic would result in minor increase to noise levels	Conversion of residential use to commercial use would lessen impact of additional noise
Hazardous Materials	Construction of structures with asbestos & lead-based paint	GIAA acquiring, mitigating, and demolishing some structures	Additional structures would be acquired, mitigated, and demolished	Development of more residential properties to aviation-related commercial uses	Reduction in structures that contain hazardous materials
Cultural Resources	Development contributed to loss of cultural resources in the study area and region as a whole	Ongoing development has negligible impact on additional loss of cultural resources	Proposed Action would have negligible impact on loss of cultural resources	Projected development would have negligible impact on loss of cultural resources	Cumulative future impact to cultural resources is minor
Socio-economic, Environmental Justice & Children's Health Issues	Replacement of farm-based economy by aviation related activities. Lands forcibly taken from Chamorro property owners followed by later compensation.	GIAA is seeking tenants for aviation related commercial operations. Lands intended for Tiyan Parkway currently owned by heirs of ancestral landowners.	Proposed Action would enhance opportunities for airport related commercial operations. Some returned property would be acquired from heirs of ancestral landowners.	Commercial development of the corridor would continue. Adjacent properties that remain owned by heirs of ancestral landowners would gain marketable title.	Residential land uses may be converted over time to commercial land uses as heirs of ancestral landowners choose to sell or use their land for a higher and more economically rewarding use.
Section 4(f)	No impacts	No impacts	No impacts	No impacts	No impacts
Utilities	Construction of utilities	Limited maintenance due to clouded titles	Relocation and protection of impacted utilities	No substantial future utility actions	No substantial cumulative impacts
Material Sources and Waste Materials	Construction of roads & structures	GIAA is extending existing runways	Excavation and embankment construction to grade for Tiyan Parkway	Additional land grading activities for commercial development	Impacts would be mitigated by import & export of materials as required by local laws and specifications.
Energy Supply and Natural Resources	Economy was developed based on use of imported fossil fuels	Closure of Central Avenue will result in increased gasoline usage of 8.3 million gallons over 30 years	Construction of Tiyan Parkway will result in reduction of gasoline consumption of 8.3 million gallons over 30 years	Continued improvements in fleet fuel economy and alternative fuel vehicles will further reduce fuel consumption	Cumulative impact is positive

Chapter 4
Public and Agency Consultation and Coordination

A. Introduction

This chapter describes coordination efforts with the general public and appropriate public agencies during the Environmental Assessment process. Public and agency consultation helped determine the scope of environmental documentation, alternatives to evaluate, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for the project were accomplished using a variety of methods including correspondence, public meetings and one-on-one meetings. This chapter summarizes the results of these efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

The Guam DPW and FHWA are joint lead agencies for this project. As part of the NEPA process that began in early 2009, scoping meetings were held, environmental field work was conducted, and alternatives were developed.

The public as well as federal, state, and local agencies have been and will continue to be invited to participate in the project environmental review process to ensure that a full range of alternatives are considered and that all pertinent environmental issues and resources are evaluated. The participation process affords opportunities to provide comments on the purpose and need for the project, potential alternatives, and social, economic, and environmental issues of concern.

B. Agency Coordination

As lead agencies, DPW and FHWA are responsible for supervising the preparation of the EA in accordance with NEPA. In addition, SAFETEA-LU Guidance also specifies that lead agencies must:

- provide increased oversight in managing the process and resolving issues;
- identify and involve participating agencies;
- develop coordination plans;
- provide opportunities for public and participating agency involvement in defining the purpose and need and determining the range of alternatives; and
- collaborate with participating agencies in determining methodologies and the level of detail for the analysis of alternatives.

A cooperating agency is any federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. Under some conditions, a state or local agency may, by agreement with the lead agencies, also become a cooperating agency. Cooperating agencies share responsibility for developing information and environmental analyses related to their respective areas of expertise. Cooperating agencies are, by definition, also participating agencies. As such, cooperating agencies share the responsibilities of SAFETEA-LU participating agencies, including responsibility to participate in the NEPA process at the earliest possible time and to participate in the scoping process.

Agency scoping letters were sent August 25, 2009. Agencies were invited to provide comments concerning the project. The following agencies were invited to participate in scoping:

- B. Won Pat Guam International Airport Authority
- Guam Historic Resources Division, State Historic Preservation Office
- Guam Bureau of Statistics and Plans, Guam Coastal Management Program
- Guam Department of Agriculture, Division of Aquatic and Wildlife Resources
- Guam Department of Land Management
- Guam Environmental Protection Agency
- Guam Ancestral Lands Commission
- Guam Economic Development Authority
- Guam Department of Parks and Recreation
- Guam Fire Department
- Guam Police Department
- Federal Aviation Administration
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency

Written responses were received from the FAA and U. S. Fish and Wildlife Service.

C. Public Consultation and Coordination

A meeting for Tiyan landowners in the project area was held on August 27, 2009. The purpose of the meeting was to provide general information about the project and provide a forum for landowners to have their questions answered. The meeting was attended by 33 citizens representing 17 properties in the project area, including all six privately owned parcels along the Tiyan cliff line that would be acquired for the Preferred Alternative. The DPW Director presented general information on the need for the parkway, work performed to date, to develop and evaluate Alternatives 1, 2, 3, and next steps. Questions and comments raised in the meeting led to development of Alternative 4.

Individual meetings with landowner families that were willing and able to meet with DPW representatives were held in October and November 2009. No meeting was held with the family that owns Lot 2093 in Tiyan. No meeting was held with the owner of Lot L1, B5, T1427 that is outside of the Tiyan area, at the bottom of the slope across from the entrance to Home Depot.

A roundtable meeting between GIAA and FAA on January 15, 2010 was attended by DPW.

An update on Central Avenue closure was provided by GIAA to the Guam Legislative Transportation Committee in January 2011. An update on Tiyan Parkway progress was provided by DPW to the Guam Legislature Transportation Committee on January 27, 2011. A similar update was provided by DPW to the Guam Governor's Chief of Staff on February 9, 2011.

The EA was distributed for comment on July 11, 2012. Comments were received from the FAA, the U.S Department of the Navy, and three citizens. The agency comments advised the project team about compliance with specific regulatory requirements, which have been addressed in Chapter 3. One citizen expressed support for the project, another citizen did not, and the third one supported accommodations for pedestrians, bicyclists, and public transit. A public meeting was held on July 26, 2012 at the Tamuning Community Center in order to receive agency and public comments on the project following distribution of the EA. Prior to the meeting, the EA was available for public inspection at the Nieves M. Flores Memorial Library and on the project website: www.guamtransportationprogram.com. The meeting was attended by 25 citizens from the project area. No additional public comments were received at or subsequent to the meeting. Responses to the comments received are provided in Appendix B.

Chapter 5
List of Preparers

Listed below are employees of FHWA and Guam DPW who are responsible for the preparation of the EA. Responsibility for this document is with the FHWA and DPW. The FAA is also partly responsible for preparation of the document in the capacity of a cooperating agency through its Airports Division Office in Honolulu, Hawaii, and its Western-Pacific Region Office in Los Angeles, California. Included below are the identities and backgrounds of the principal preparers.

As with many significant transportation improvement projects, substantial assistance and data analysis were provided by DPW and its consultants. The prime consultant was Parsons Brinckerhoff, Inc.

In accordance with Sections 1502.6 of CEQ regulations, the efforts of an interdisciplinary team consisting of technicians and experts in various fields were required to accomplish this study. Specialists involved in the EA included those in such fields as civil engineering, noise assessment and abatement, land use planning, air pollution, biology, cultural resources, and other disciplines. It should be noted that while an interdisciplinary approach has been used, all decisions made with regard to the content and scope of this EA are those of FHWA and Guam DPW.

Agency	Name	Years of Experience	Specialty	EA Role
FHWA	Richelle M. Takara, PE	20	Transportation Engineering	Responsible for FHWA contributions to all parts of the EA
Guam DPW	Joaquin Blaz	5	Highway Administration	Oversight of DPW contributions to all parts of the EA
FAA	Gordon Wong	28	Lead Program Manager, FAA Honolulu Airports District Office	Responsible for FAA contributions to all parts of the EA
Parsons Brinckerhoff, Inc.	Paul C. Wolf, PE	42	Project Management	Management, QA/QC
	James E. Mischler, PE	34	Highway and bridge design	Alternatives analysis
	David Atkin, Ph.D.	34	Environmental planning and energy	QA/QC
	Kathie Haire	25	Traffic Engineering	Intersection Level of Service
	Christi Willison	13	Travel Demand Forecasting	Selected Link Volumes
	Jason Bright	19	Archaeology, Section 106, Section 4(f)	Section 106, Section 4(f), Document Management
	Nora M. Camacho	7	Planning	Section 106, QA/QC
	Edward Tadross	15	Air Quality, Greenhouse Gas and Energy Analyses	Air Quality, Greenhouse Gas and Energy Analyses
	Alice Lovegrove	24	Air Quality, Greenhouse Gas and Energy Analyses	Air Quality, Greenhouse Gas and Energy Analyses
	Jason Yazawa, AICP	19	Environmental Planning	Land Use and Socio-economic
	Kara Swanson, AICP	11	Environmental Planning	Purpose and Need, Document Management, QA/QC
	Hillary Seminick	7	Environmental Science, Biological Resources	Hazardous Materials, Visual, Biological Resources
	Brianne Emery (Formerly PB)	7	Environmental Planning	Community Facilities and Demographics
	Patrick Romero	15	Environmental Planning and Noise Analysis	Noise Analysis

Chapter 6
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Transportation Research Board, Highway Capacity Manual, 2000

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U.S. Department of the Interior, Fish and Wildlife Service website, <www.fws.gov>

U.S. Environmental Protection Agency website, <www.epa.gov>

Appendix A

Agency Consultation

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Carlos Salas
Executive Manager
A.B. Won Pat Guam International Airport Authority
P.O. Box 8770
Tamuning, Guam 96931

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Salas:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Please send your comments to Mr. Kin Blaz of my staff. If you have any questions, please contact Mr. Blaz at (671) 649-3128 or e-mail at joaquin.blaz@dpw.guam.gov.

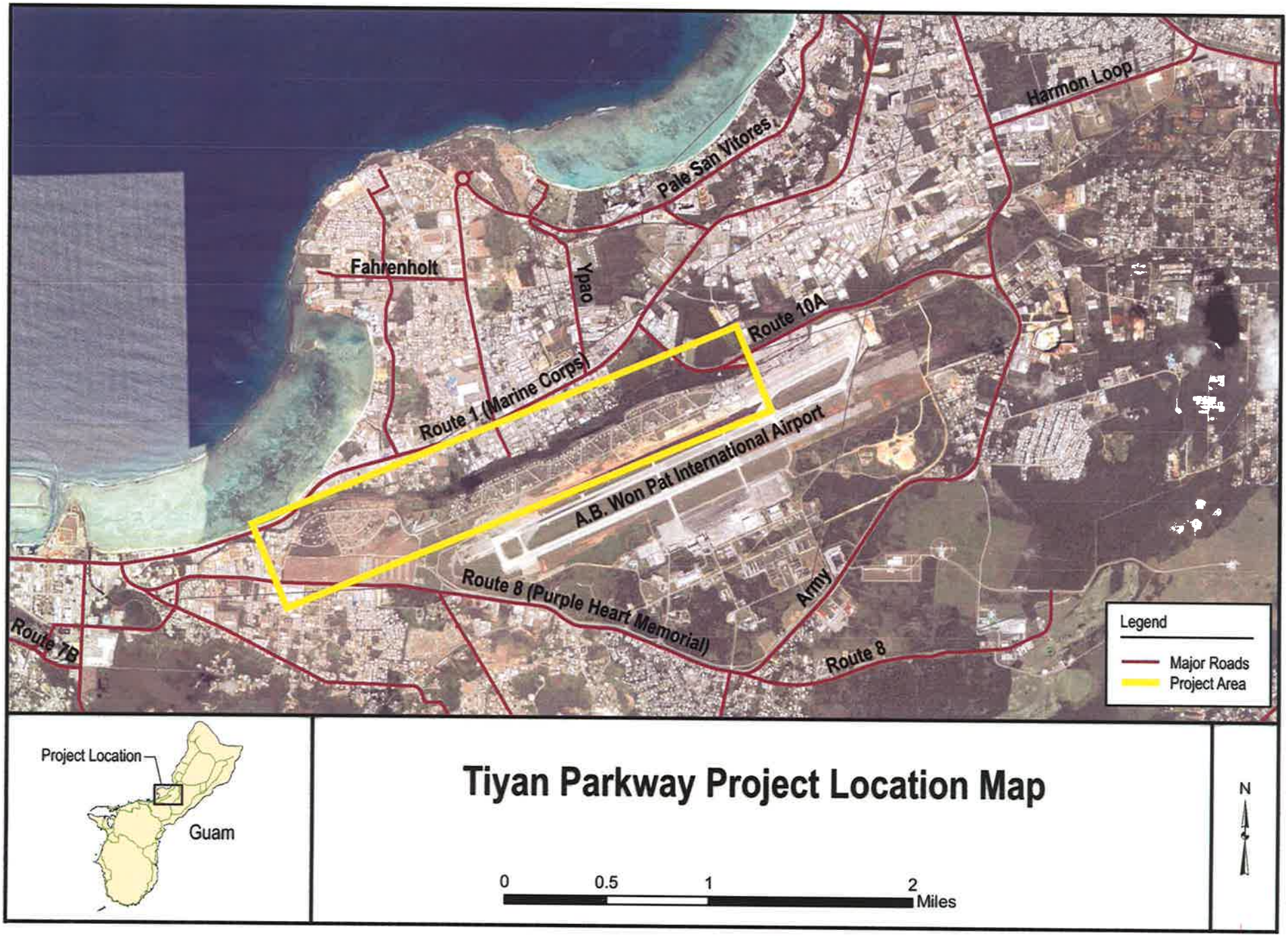
Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration


Harmon Loop
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Fahrenholt
Ypao
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Route 1 (Marine Corps)
A.B. Won Pat International Airport
Route 8 (Purple Heart Memorial)
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Legend
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Guam
Tiyan Parkway Project Location Map
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The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Joseph W. Duenas
Director
Guam Historic Resources Division
State Historic Preservation Office
490 Chalan Palasyo
Agana Heights, Guam 96910

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Duenas:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 ● Tel (671) 646-3131 / 3259 ● Fax (671) 649-6178

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Alberto Lamorena
Acting Director
Guam Bureau of Statistics and Plans
Guam Coastal Management Program
PO Box 2950
Hagatna, Guam 96932

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Lamorena:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 ● Tel (671) 646-3131 / 3259 ● Fax (671) 649-6178

The Honorable
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Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Tino Aguon
Acting Chief
Department of Agriculture
Division of Aquatic and Wildlife Resources
163 Dairy Road
Mangilao, Guam 96913

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Aguon:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Christopher M. Duenas
Director
Guam Department of Land Management
ITC Building
590 N. Marine Corps Drive, Route 1
Tamuning, Guam 96913

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Duneas:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Ms. Lorilee T. Crisostomo
Administrator
Guam Environmental Protection Agency
Environmental Planning and Review Division
PO Box 22439 Guam Main Facility
Barrigada, Guam 96921

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Ms. Crisostomo:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Eddie L.G. Benavente
Executive Director
Guam Ancestral Lands Commission
588 W. Marine Corps Drive Ste. 101
Anigua, Guam 96910

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Benavente:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Anthony C. Blaz
Administrator
Guam Economic Development Authority
590 s. Marine Corps Drive
GITC Building, Suite 511

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Blaz:

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Joseph W. Duenas
Director
Guam Historic Resources Division
State Historic Preservation Office
490 Chalan Palasyo
Agana Heights, Guam 96910

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Duenas:

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 • Tel (671) 646-3131 / 3259 • Fax (671) 649-6178

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. David Q. Peredo
Fire Chief
Guam Fire Department
PO Box 2950
Hagatna, Guam 96932

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Peredo:

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 ● Tel (671) 646-3131 / 3259 ● Fax (671) 649-6178

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Paul R. Suba
Chief of Police
Guam Police Department
Building 233 Central Avenue
Tiyan B, Guam 96913

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Suba:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. William C. Withycombe
Regional Administrator
Federal Aviation Administration
Western-Pacific Region
Office of the Regional Administrator
P.O. Box 92007
Los Angeles, California 90009-2007

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Withycombe:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

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Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

2/

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. George P. Young, Chief
U.S. Department of the Army
Army Corps of Engineers, Honolulu District
Regulatory Branch
Building 230
Fort Shafter, Hawaii 96858-5440

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Young:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

We will be preparing an EA for the proposed project in accordance with the National Environmental Policy Act (NEPA). This letter is intended to inform you of the environmental planning and compliance process is about to begin, and to solicit your comments concerning the project. For instance, you or your staff may have knowledge of an environmental issue associated with the project or project site. Any information you provide will be considered in preparing the EA and becomes part of the project's administrative record.

We would appreciate receiving any response you may have by September 30, 2009. If no response is received, we will assume you are not aware of any environmental issue associated with the project in your particular area of responsibility or interest, at this time. Regardless of whether you respond, you will receive a copy of the EA when it is publicly released. At that time, you will be asked to provide comments within 30 days, in accordance with NEPA. During the EA comment period, we will hold a public information meeting to solicit comments on the project and EA.

Please send your comments to Mr. Kin Blaz of my staff. If you have any questions, please contact Mr. Blaz at (671) 649-3128 or e-mail at joaquin.blaz@dpw.guam.gov.

Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 ● Tel (671) 646-3131 / 3259 ● Fax (671) 649-6178

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Patrick Leonard
Field Supervisor
U.S. Department of the Interior
Fish and Wildlife Service
Box 50088
Honolulu, Hawaii 96850

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr.Leonard:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

We will be preparing an EA for the proposed project in accordance with the National Environmental Policy Act (NEPA). This letter is intended to inform you of the environmental planning and compliance process is about to begin, and to solicit your comments concerning the project. For instance, you or your staff may have knowledge of an environmental issue associated with the project or project site. Any information you provide will be considered in preparing the EA and becomes part of the project's administrative record.

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Please send your comments to Mr. Kin Blaz of my staff. If you have any questions, please contact Mr. Blaz at (671) 649-3128 or e-mail at joaquin.blaz@dpw.guam.gov.

Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

542 North Marine Corps Drive, Tamuning Guam 96913 ● Tel (671) 646-3131 / 3259 ● Fax (671) 649-6178

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Lawrence P. Perez
Director
Andrew S. Leon Guerrero
Deputy Director

Mr. Dean Higuchi
U.S. Environmental Protection Agency, Region 9
Pacific Island Contact Office
P.O. Box 50003
Honolulu, HI 96850

Subject: Proposed Tiyan Parkway
Notice of Preparation of an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA)

Dear Mr. Higuchi:

The Guam Department of Public Works, in association with the Federal Highway Administration, is proposing to construct a new four-lane, limited access roadway that would link Route 10A and Route 8. The proposed Parkway would be aligned along the north and west sides of the Antonio B. Won Pat International Airport. A project location map is enclosed.

We will be preparing an EA for the proposed project in accordance with the National Environmental Policy Act (NEPA). This letter is intended to inform you of the environmental planning and compliance process is about to begin, and to solicit your comments concerning the project. For instance, you or your staff may have knowledge of an environmental issue associated with the project or project site. Any information you provide will be considered in preparing the EA and becomes part of the project's administrative record.

We would appreciate receiving any response you may have by September 30, 2009. If no response is received, we will assume you are not aware of any environmental issue associated with the project in your particular area of responsibility or interest, at this time. Regardless of whether you respond, you will receive a copy of the EA when it is publicly released. At that time, you will be asked to provide comments within 30 days, in accordance with NEPA. During the EA comment period, we will hold a public information meeting to solicit comments on the project and EA.

Please send your comments to Mr. Kin Blaz of my staff. If you have any questions, please contact Mr. Blaz at (671) 649-3128 or e-mail at joaquin.blaz@dpw.guam.gov.

Sincerely yours,

8/25/09

Lawrence P. Perez
Director

Enclosure: Project Location Map

Cc. Richelle Takara, Federal Highway Administration

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of the Regional Administrator

P.O. Box 92007
Los Angeles, CA 90009-2007

JUL 17 2009

Mr. Carlos Salas, Executive Manager
A. B. Won Pat Guam International Airport Authority
P. O. Box 8770
Tamuning, Guam 96931

Dear Mr. Salas:

I received your letter dated June 29, 2009, which describes the background and issues discussed during our meeting. In your letter, you requested our consideration to permit the Guam International Airport Authority (GIAA) to construct a public roadway to provide public access through airport property. I appreciated the opportunity to meet with you and your legal representative, Mr. David Mair, in my office on June 1, 2009, to discuss issues regarding the development of Guam International Airport and access through Tiyan land. After careful consideration of your request and review of documentation provided, I am unable to approve your request to construct a Tiyan Bypass Road on airport property because it would constitute use of airport property for a non-airport purpose.

Land Transfer Obligations

In your letter, you acknowledge the specific purposes and restrictions of the land transfers from United States ownership. The Department of Navy (DON) transferred portions of the former Naval Air Station Agana (Tiyan property) to GIAA for "public airport purposes." Subsequently, the U.S. Government transferred land "reasonable and necessary for use as a highway in the Territory of Guam" to the Government of Guam. This land is to be used for the construction of the Laderan Tiyan Parkway, a "public roadway" adjacent to airport property.

The Tiyan property transferred to GIAA is restricted for airport purposes only. Airport compliance requirements define airport purposes as "uses of the property directly related to the actual operation of the airport, the foreseeable development of the airport, or for producing revenue for the airport." As such, the Airport Tiyan property cannot be used to provide public roadway access through the airport.

In your letter, you also acknowledged GIAA is not permitted to use the Tiyan property for other than airport purposes without written consent from the FAA. The FAA cannot grant the release of obligated land that serves an airport purpose. If the property is producing revenue for the airport, or has the potential for future revenue production, then it serves an airport purpose; i.e., to make the airport as self-sustaining as possible.

When property is no longer needed to directly support an airport purpose or activity, the FAA may grant a formal land release. Per FAA Order 5190.A, when a land release request has

been received and is properly supported by appropriate documentation, the FAA will evaluate the total effect of the airport sponsor's proposal. The evaluation will include consideration of pertinent factors such as the past and present sponsor's compliance record under all its airport and grant agreements and its actions to make available a safe and usable airport for maximum aeronautical use, and evidence that the sponsor has taken or agreed to take all actions possible to correct noncompliance situations at the airport. FAA compliance policy dictates that land releases should not be granted when compliance problems exist. See FAA Order 5190.A, for additional information.

No land releases will be considered until all outstanding noncompliance issues are resolved by GIAA. The following noncompliance concerns may include:

1. Noncompliance with airport revenue use policy by allowing the Guam Police Department to occupy office space on the airport (Tiyan property) and not remitting rental payments based on fair market value. This appears to be a revenue diversion violation of grant obligations. Full payment of back rent and a relocation plan are needed for resolution.

2. Noncompliance based on the inappropriate use of Airport Improvement Program (AIP) funds being applied to ineligible work associated with water system upgrade projects in the Tiyan area that provide water service connection to adjacent communities. This also appears to be a violation of grant obligations. AIP funds can not be expended to provide water service or utilities to non-airport entities. Repayment of AIP funds expended on ineligible work is required for resolution.

AIP Grants and Grant Assurances

GIAA has accepted over $200 million in AIP grants through the Airport and Airways Improvement Act of 1982 (AAIA), as amended [recodified by the FAA Reauthorization Act of 1994 into Title 49 United States Code Subtitle VII, "Aviation Programs," Chapter 471, "Airport Development"]. As a statutory condition precedent to providing airport development assistance, the FAA must receive certain assurances, pursuant to 49 U.S.C. §47107 *et seq.*, from airport sponsors. Upon acceptance of an AIP grant, the assurances become a binding obligation between the airport sponsor and the U.S. government. These commitments are set forth in the sponsor's grant assurances; i.e., a list of applicable laws, regulations, executive orders, statute-based assurances, and other requirements of the United States that bind the sponsor upon acceptance of U.S. government assistance. The FAA has a statutory mandate under 49 U.S.C. §47122 to ensure that airport owners comply with these assurances.

As a general rule, we note that the FAA Compliance Program is designed to achieve voluntary compliance with obligations to the United States under the AIP program. In addressing allegations of non-compliance, the FAA will make a determination as to whether an airport sponsor is currently in compliance with the applicable grant obligations. FAA has to make a judgment of whether the sponsor is reasonably meeting its grant obligations. See FAA Order 5190.6A, for additional information. FAA can also take into consideration any action or program the sponsor has taken or implemented or proposed action or program the

sponsor intends to take, which in FAA's judgment, is adequate to reasonably carry out the obligations under the grant assurances. [See FAA Order 5190.6A, Secs. 5-6.]

We also note, and you are already aware, that Federal law, 49 U.S.C. §47107(b)(1) and Grant Assurance 25 requires that:

> All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by the airport for the capital or operating costs of the airport, the local airport system, other local facilities which are owned or operated by the owner or operator of the airport and directly and substantially related to the actual air transportation of passengers or property, or for noise mitigation purposes on or off the airport.

Grant Compliance Obligations

Your letter makes reference to the Memorandum of Understanding (MOU) dated April 19, 2007, between GIAA and the Government of Guam, Department of Public Works (DPW). In the MOU, GIAA agreed to modify its airport perimeter road into a temporary by-pass road that was to connect Route 8 with East Sunset Boulevard. Given the following grant compliance concerns, we strongly advise GIAA to reconsider the ramifications of constructing the temporary by-pass road:

1. AIP funds cannot be used to construct a roadway for unrestricted public access through airport property. Airport access is not eligible unless it exclusively serves the airport, or its use is restricted to only authorized airport tenants, employees and service providers.

2. Airport revenues cannot be used to construct a roadway for unrestricted public access through airport property. Such action may be considered revenue diversion and a violation of the airport revenue use policy as published in the Federal Register 64 FR 7696 on February 16, 1999.

3. Airport property cannot be used to construct a roadway for unrestricted public access through airport property without written consent from the FAA in a formal land release, and compensation provided to the airport at fair market value.

4. The roadway alignment (Alternate 2) as shown in the exhibit to your letter penetrates the Runway Protection Zone (RPZ) and limits the full utility of Runway 6L. This condition may violate the conditions of the AIP grants that funded the runway extension and create a liability for GIAA by allowing a major intersection within the RPZ. The Runway 6L RPZ is correctly shown on the enclosed exhibit.

GIAA has no federal obligation to provide access through airport property to Route 8 nor is access necessary for airport operations. The U.S. government provided land to the DPW, to construct the Laderan Tiyan Parkway for the specific purpose of providing access from the airport to Route 8.

To comply with grant agreement obligations, GIAA must close the existing Central Avenue connection to Route 8 when the Runway 6L extension project is completed, if not sooner. To ensure safety, security and efficient use of the airport, and for the full utility of Runway 6L improvements, access through the Runway 6L runway protection zone will not be permitted.

FAA is concerned with GIAA's compliance with grant agreement conditions and obligations. Should GIAA take any actions that result in a finding of noncompliance, it will jeopardize eligibility for AIP discretionary funds (including Military Airport Program and Noise Compatibility Program funds) and the authority to collect Passenger Facility Charge funds.

Be aware that should the matters of apparent noncompliance not be resolved promptly, the FAA will have to investigate those issues as provided for in Title 14 Code of Federal Regulation Part 16. A determination of noncompliance could result in the issuance of an order to GIAA terminating eligibility for grants pursuant to 49 U.S.C. §§47106(e) and 47111(d), an order suspending the payment of grant funds, an order withholding approval of any new application to impose a passenger facility charge, a cease and desist order, an order directing the refund of fees unlawfully collected, or any other compliance order deemed necessary by the FAA Administrator to carry out the provisions of the Acts. [See Title 14 C.F.R. §16.109].

On April 8, 2009, you facilitated a meeting for the Honorable Felix Camacho, Governor of Guam, Mr. George Bamba, Chief of Staff, and Mr. Martin Gerber, GIAA Board Chairman, to meet with representatives of the FAA Honolulu Airports District Office at the U.S. Department of Interior, Pacific Island Business Opportunities Conference in Honolulu, Hawaii. During that meeting, the MOU dated April 19, 2007, was discussed. Governor Camacho agreed that the Laderan Tiyan Parkway should not be built on airport property but constructed on the land that was initially set aside and transferred to the Guam government for the roadway. The Governor acknowledged that it would be a challenging task and stated his commitment to take the actions needed and work with his cabinet members, the Department of Public Works and Ancestral Land Commission, to secure the land to construct the roadway as initially planned.

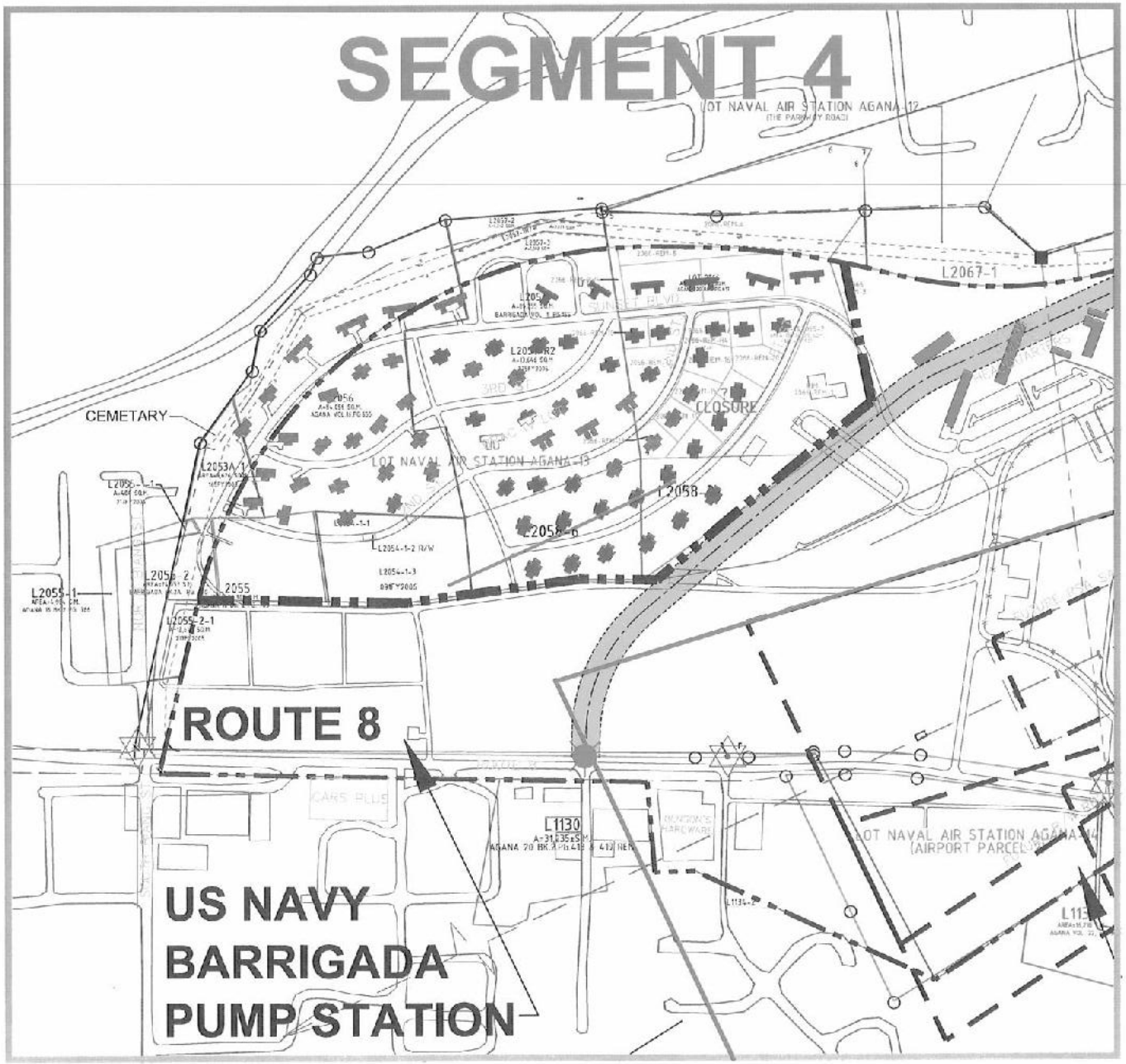
We appreciate GIAA's interest to seek a resolution to this matter. However, the property transfer deeds and grant compliance obligations preclude GIAA from resolving this with either airport land or resources. Our Honolulu Airports District Office (ADO) will continue to work with you in addressing land use issues at Guam International Airport. Please contact Ron Simpson, Honolulu ADO Manager, at (808) 541-1232 for further assistance.

Sincerely,

William C. Withycombe

William C. Withycombe
Regional Administrator

Enclosure


SEGMENT 4
LOT NAVAL AIR STATION AGANA 12
(THE PARKWAY ROAD)
L2067-1
CEMETARY
L2053A-1
L2056
CLOSURE
LOT NAVAL AIR STATION AGANA 13
L2058
L2058-6
L2054-1-2 R/W
L2055-1
L2055-2-1
L2055
ROUTE 8
CARS PLUS
L1130
LOT NAVAL AIR STATION AGANA
(AIRPORT PARCEL
US NAVY
BARRIGADA
PUMP STATION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850

TAKE PRIDE IN AMERICA

In Reply Refer To:
2009-TA-0398

SEP 1 1 2009

Mr. Lawrence P. Perez
Guam Department of Public Works
542 North Marine Corps Drive
Tamuning, Guam 96913

Subject: Technical Assistance Request for the Proposed Tiyan Parkway, Guam

Dear Mr. Perez:

Thank you for your August 25, 2009, letter requesting technical assistance for the proposed Tiyan Parkway. We received your letter on August 28, 2009. The proposed project involves constructing a new four-lane, limited access roadway that would link Route 10A and Route 8 and be aligned along the north and west sides of the Antonio B. Won Pat International Airport. To the best of our knowledge, no federally listed species or designated critical habitats occur within the proposed project footprint. We recommend you coordinate with the Guam Division of Aquatic and Wildlife Resources to determine if there are any other rare species or habitats within the project vicinity. If you have questions regarding this letter, please contact Holly Herod, Fish and Wildlife Biologist at (808)792-9400.

Sincerely,

for Loyal Mehrhoff
Field Supervisor

cc:
Richelle Takara, Federal Highway Administration
Celestino F. Aguon, Guam Division of Aquatic and Wildlife Resources

Mischler, James

From: Atkin, David
Sent: Wednesday, September 16, 2009 1:19 PM
To: Yazawa, Jason A.
Cc: Atkin, David; Fields, Reshawn
Subject: FW: Notice of Preparation of EA for Tiyan Parkway POH-2009-265
Attachments: culvert plan.gif; culvert pro_1.gif; stream cross plan.gif; stream cross pro.gif; wet fill road plan.gif; wet fill road pro.gif; Sect 404 Clean Water Act Drawing Recommendations.pdf; Sect 10 Rivers and Harbors Act Drawing Recommendations.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Jason,

email below and attachments are the second "scoping letter" we've received on Tiyan... Please upload to PS2 and track for "comments and coordination" section...

David Atkin
Parsons Brinckerhoff
1001 Bishop Street, Suite 2400
Honolulu, Hawaii 96813
USA
atkin@pbworld.com
808-566-2205

Please consider the environment before you print this email or any attachments

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From: Joaquin R. Blaz [mailto:joaquin.blaz@dpw.guam.gov]
Sent: Wednesday, September 09, 2009 6:13 PM
To: Takara, Richelle; Atkin, David; Clifford Guzman; Wolf, Paul C.
Subject: Fwd: Notice of Preparation of EA for Tiyan Parkway POH-2009-265

FYI and action

---------- Forwarded message ----------
From: **Klein, Amy S POH** <Amy.S.Klein@usace.army.mil>
Date: Thu, Sep 10, 2009 at 11:04 AM
Subject: Notice of Preparation of EA for Tiyan Parkway POH-2009-265
To: joaquin.blaz@dpw.guam.gov

Dear Mr. Blaz~

The Corps has received your request for comments regarding the Notice of Preparation of an EA for the proposed new four-lane roadway linking Route 10A and Route 8 in Guam. The project has been assigned

reference number: POH-2009-265. Please include this number in any future correspondence regarding this project. Based on the information you provided, we do not have any location-specific comments but would like to take this opportunity to outline the rules and regulations as they pertain to the Corps of Engineers Regulatory Program and as they may apply to this project.

Section 10 of the Rivers and Harbors Act (Section 10) of 1899 requires that a Department of the Army (DA) permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging, and other activities occurring in, over, or under navigable waters of the United States (U.S.) (e.g., the Pacific Ocean). Section 404 of the Clean Water Act (Section 404) of 1972 (33 U.S.C. 1344) requires that a DA permit be obtained for the discharge (placement) of dredge and/ or fill material into waters of the U.S. Fill material may include, but is not limited to: sand (and sandbags), gravel, dirt, rock, concrete, grading, etc., either temporarily or permanently. The Corps can provide additional guidance on what constitutes fill. For instance, if a material has the effect of fill, i.e. changes the bottom elevation of the waterbody/wetland, then it is usually regulated under Section 404.

Navigable waters, as regulated under Section 10, that may apply to this project are those waterbodies subject to the ebb and flow of the tide. Waters of the U.S. as regulated under Section 404 that may apply to this project are navigable waters, streams, wetlands, drainage ditches/canals, etc. If there are waterbodies or wetlands proposed for impact, we recommend you delineate those aquatic resources and submit a request for a jurisdictional determination. Additional details can be found at our website at: http://www.poh.usace.army.mil/EC-R/EC-R.htm.

If jurisdictional waters are proposed for impact the Corps will require drawings that clearly show the work as it relates to waters of the U.S. We recommend that drawings in the EA include our lines of jurisdiction. Attached are drawing recommendations and sample drawings as they may apply to this project. They provide a good reference regarding the level of detail needed to ensure a timely review. Note that drawings for our review should be on 8.5x11, include plan and cross-section views, and also include our lines of jurisdiction. See attachments for additional considerations.

<<Sect 404 Clean Water Act Drawing Recommendations.pdf>> <<Sect 10 Rivers and Harbors Act Drawing Recommendations.pdf>> <<culvert plan.gif>> <<culvert pro_1.gif>> <<stream cross plan.gif>> <<stream cross pro.gif>> <<wet fill road plan.gif>> <<wet fill road pro.gif>>

If impacts are minor, the Corps may be able to authorize them under the Nationwide Permit program. For instance, NWP #14 for Linear Transportation projects can be used if aquatic impacts are less than 1/10 acre and 200 linear feet. Note other National and Regional Conditions apply. See our website for details: http://www.poh.usace.army.mil/PA/PublicNotices/PN20070831-351.pdf.

If impacts do not qualify for a Nationwide Permit, they will need to be reviewed under the Individual Permit process. This will require a 30-day public comment period. Any public comments will need to be addressed.

We will also review the project for avoidance and minimization in accordance with the Clean Water Act's 404(b)(1) Guidelines (if the project impacts are proposing fill in waters of the U.S.). A link to the Guidelines is attached: http://www.usace.army.mil/CECW/Documents/cecwo/reg/materials/40cfr230.pdf.

In general, the Corps discourages the use of riprap and concrete structures in waters of the U.S. If your project proposes those, we will likely ask for an assessment of potential alternatives to reduce hardening - such as bioengineering as appropriate. Further, any unavoidable impacts will require mitigation in accordance with the Mitigation Rule found at: http://www.usace.army.mil/CECW/Documents/cecwo/reg/materials/33cfr332.pdf.

Finally, because Federal Highways is the lead Federal Agency, they will need to provide documentation to the Corps demonstrating compliance with Section 7 of the Endangered Species Act, the Magnuson-Stevens Act (EFH), and Section 106 of the National Historic Preservation Act. This can include "No Effect" documentation or consultation requests and resource agency concurrence letters as appropriate. The Corps will also need to receive Water Quality Certification and Coastal Zone Management Consistency Determination prior to issuing a permit decision.

We hope you find this information useful for development of the EA. It is really "Regulatory in a Nutshell" so please do not hesitate to call or e-mail us should you have any questions.

Thank you for this opportunity to comment. We look forward to working with you on this project.
Best Regards,
Amy
Amy Klein
Project Manager
U.S. Army Corps of Engineers - Honolulu District
Regulatory Program, Building 230
Fort Shafter, Hawaii 96858
p: (808) 438-7023
f: (808) 438-4060

--
Joaquin Blaz
Department of Public Works
-Highways (Horizontal) Engineering and Maintenance Division
-Federal Highway Section
-Highway Maintenance

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western Pacific Region
Office of the Regional Administrator

P. O. Box 92007
Los Angeles, CA 90009-2007

SEP 21 2009

Mr. Lawrence P. Perez
Director, Guam Department of Public Works
542 North Marine Corps Drive
Tamuning, Guam 96913

Dear Mr. Perez:

This letter is in response to your letter dated August 25, 2009, regarding the new four-lane, proposed Tiyan Parkway at Antonio B. Won Pat International Airport. Your letter indicates the proposed new roadway would be aligned along the north and west sides of the airport.

In a letter dated July 17, 2009, addressed to Mr. Carlos Salas, the Executive Manager of the Guam International Airport Authority (GIAA), the FAA went on record as objecting to the construction of this public roadway through airport property. In this letter, I also requested that GIAA work with the Honolulu Airports District Office, the Guam Department of Public Works (DPW) and the Federal Highway Administration (FHWA) to address and resolve land issues at the airport.

While we do not support the construction of the roadway on airport property, we believe that construction of the roadway is essential to improve surface transportation and access at the airport. The Honolulu Airports District Office is working with representatives of the GIAA, Guam DPW and FHWA in developing a mutually agreeable alignment for the roadway for analysis in the Environmental Assessment (EA).

Please provide the following offices with further EA updates to ensure that we can review and comment on any further activities required under the National Environmental Policy Act:

Ms. Mia Ratcliff	Mr. Ron Simpson
Manager, Planning & Programming	Manager, Honolulu Airports District Office
FAA, Western-Pacific Region	FAA, Airports Division, HNL-600
Airports Division, AWP-610	P. O. Box 50244
P. O. Box 92007	Honolulu, HI 96850
Los Angeles, CA 90009-2007	

Thank you for the opportunity to comment. If you have any questions regarding proposals for alignment of the roadway, you may contact our Honolulu Airports District Office Manager, Mr. Ron Simpson at (808) 541-1232.

Sincerely,

William C. Withycombe

William C. Withycombe
Regional Administrator

U.S. Department of Transportation
Federal Highway Administration

Hawaii Federal-Aid Division

300 Ala Moana Blvd., Rm 3-306
Box 50206
Honolulu, HI 96850
Phone: (808) 541-2700
Fax: (808) 541-2704
http://www.fhwa.dot.gov/hidiv/

October 13, 2009

In Reply Refer To:
HDA-HI

Mr. Loyal Mehrhoff
Field Supervisor
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Room 3-122
Honolulu, Hawaii 96850

Dear Mr. Mehrhoff:

The purpose of this letter is to initiate Section 7 Consultation in accordance with the Endangered Species Act for the proposed Laderan Tiyan Parkway, Tiyan, Guam, project number GU-NH-00TP(002). The Federal Highway Administration (FHWA) is partnering with the Guam Department of Public Works to construct a four-lane arterial roadway that would connect Route 10A and Route 8 within a corridor that wraps around the north and west sides of the Antonio B. Won Pat International Airport (see enclosed map).

The project site was once part of the Naval Air Station (NAS) Agana, which was closed in 1995 as part of the Defense Base Realignment and Closure Commission (BRAC) process. The U.S. Department of the Navy (Navy) identified Tiyan Parkway in its NAS Agana Base Reuse Master Plan, which was subject to a National Environmental Policy Act (NEPA) process. The Navy entered into Informal Section 7 Consultation with the U.S. Fish and Wildlife Service (Service) in 1999, which involved only the Mariana common moorhen (*Gallinula chloropus guami*) that were known to use a 1-acre marsh on the south end of NAS Agana near Route 8 (now the south side of the airport). In a letter dated November 8, 1999, the Service concurred with the Navy's finding that the disposal and reuse of NAS Agana would not likely adversely affect the Mariana common moorhen, provided the Navy include restrictive covenants regarding this marsh in the property transfer (those restrictive covenants were identified in a Navy letter to the Service dated November 1, 1999). The marsh is approximately a mile and a half from the proposed intersection of Tiyan Parkway and Route 8, and would not be affected by this proposed roadway project (see enclosed map).

To comply with the Endangered Species Act, FHWA requests a list of Federal Trust species that could potentially be affected by the proposed Tiyan Parkway. If no such species are identified, based on the Informal ESA Section 7 consultation conducted by the Navy (described above), and corridor reconnaissance conducted on September 17, 2009 by Fred Otte, Environmental Manager for Parsons Brinckerhoff on Guam, and Jeffrey S. Quitugua, a Wildlife Biologist with the Guam Department of Agriculture, Division of Aquatic and Wildlife Resources--Endangered

Species Recovery Program, FHWA expects to determine that the proposed roadway project will have "no effect" on federal endangered or threatened species. If you have any questions, please contact me at (866)233-8177 extension 2311.

Sincerely yours,

Richelle M. Takara, P.E.
Transportation Engineer

Enclosure: Project Location Map

Cc. Lawrence Perez, Guam Department of Public Works
Kin Blaz, Guam Department of Public Works
Paul Wolf, PB Americas, Inc.

Takara, Richelle <FHWA>

From: Holly_Herod@fws.gov
Sent: Monday, October 19, 2009 6:59 AM
To: Takara, Richelle <FHWA>
Cc: Patrice_Ashfield@fws.gov
Subject: HDA-HI Tiyan Parkway, Guam 2010-SL-0031
Attachments: 2009-TA-0398 Tiyan Parkway Guam.pdf

Richelle,

We are in receipt of your letter dated October 13, 2009, requesting a species list for highway improvements between Route 10A and Route 8 of Tiyan Parkway, Guam. We received your letter on October 14, 2009. Earlier this year (September 11, 2009), we responded to a similar request made by Mr. Lawrence P. Perez. Based on our knowledge the two species list requests are for the same project. I have attached a copy of the letter responding to Mr. Perez. We request that you accept this electronic mail and the attached letter in lieu of an additional response on letterhead. Please let me know if this is an acceptable alternative to providing you with separate species list letter. I look forward to hearing from you. If you have any additional questions, please let me know.

Holly Herod
Senior Fish & Wildlife Biologist
US Fish and Wildlife Service
300 Ala Moana Boulevard, Box 5008
Honolulu, Hawaii 96850-5000
Ph: 808-792-9400
Fax:808-792-9580

U.S. Department of Transportation
Federal Highway Administration

Hawaii Federal-Aid Division

300 Ala Moana Blvd, Rm 3-306
Box 50206
Honolulu, Hawaii 96850
Phone: (808) 541-2700
Fax: (808) 541-2704

March 30, 2012

In Reply Refer To:
HDA-HI

Ron V. Simpson
Federal Aviation Administration
Honolulu Airports District Office
300 Ala Moana Blvd. Room 7-128
Honolulu, HI 96813

Subject: Laderan Tiyan Parkway Environmental Assessment – Cooperating Agency

Dear Mr. Simpson:

In accordance with the National Environmental Policy Act (NEPA), the Federal Highway Administration (FHWA) is initiating the preparation of an Environmental Assessment (EA) to support decisions by the FHWA. The FHWA and Guam Department of Public Works (DPW) are proposing to construct the Laderan Tiyan Parkway. In order to adequately evaluate the potential environmental effects of the Proposed Action, the FHWA and FAA need to work together. To assist in this effort and in accordance with 40 CFR Part 1501 and the Council on Environmental Quality Cooperating Agency guidance (January 30, 2002), the FHWA requests the FAA serve as a cooperating agency for the development of the EA.

The purpose of the proposed action is to provide a public roadway linking the Route 8 and Route 10A with traffic capacity sufficient to meet the demand in conjunction with other roadway improvements identified in the 2030 Guam Transportation Plan. The project site is located on the Tiyan plateau in the central part of Guam within the municipalities of Barrigada and Mongmong-Toto-Maite. The Antonio B. Won Pat International Airport, also known as the Guam International Airport (GIA), occupies a large part of this plateau.

As the federal lead agency, the FHWA will be responsible for overseeing preparation of the EA. Those responsibilities include, but are not limited to:

- Gathering all necessary background information and preparing the EA.
- Determine the scope of the EA, including the alternatives evaluated.
- Circulating the EA to the general public and any other interested parties.
- Scheduling and supervising meetings held in support of the NEPA process, including compiling any comments.
- Maintaining the administrative record and responding to any Freedom of Information Act requests relating to the EA.

As a cooperating agency, the FHWA requests that FAA support FHWA in the following manner:

- Partner with the FHWA in the participation of studies, review, and planning during the EA process.
- Maintain open lines of communication and engagement through completion of the project.
- Provide comments on working draft of the EA within 14 calendar days.
- Adherence to the overall schedule as set for by the FHWA.
- A formal, written response to this request.

If you have any comments or questions, please contact me at (808)541-2311or via email at richelle.takara@dot.gov.

Sincerely Yours,

Richelle M. Takara, P.E.
Transportation Engineer

cc: Joanne Brown, DPW
Joaquin Blaz, DPW
Sandra Miller, Guam AG
Paul Wolf, PB
Nora Camacho, PB

U.S Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Airports Division

Honolulu Airports District Office
Box 50244
Honolulu, HI 96850-0001
TEL: 808-541-1232
FAX: 808-541-3566

April 11, 2012

Ms. Richelle M. Takara, P.E.
Transportation Engineer
Federal Highways Administration
300 Ala Moana Blvd., Rm 3-306
Honolulu, HI 96850

Dear Ms. Takara:

Guam International Airport
Laderan Tiyan Parkway Environmental Assessment
Cooperating Agency

This letter is in response to your letters dated March 30, 2012, inviting the Federal Aviation Administration (FAA) to be a Cooperating Agency in the preparation of the Environmental Assessment (EA) for the proposed project to construct the Laderan Tiyan Parkway linking the Route 8 and Route 10A. The proposed project site is located on the Tiyan plateau in the central part of Guam within the municipalities of Barrigada and Mongmong-Toto-Maite and will traverse through A.B. Won Pat Guam International Airport (GUM). The proposed project may have the potential to affect GUM.

Per CEQ regulation 40 CFR 1508.5, a cooperating agency means any federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project. The FAA accepts your invitation to be a Cooperating Agency for preparation of this EA.

As a Cooperating Agency on this EA, FAA will use the EA documentation to comply with its own requirements under the National Environmental Policy Act for any required federal actions at GUM. The FAA will also use the EA to support any subsequent decision(s) and federal actions including approval of the Airport Layout Plan depicting proposed changes at GUM that may result from the project.

If you have any questions about this matter or need more information, please contact Gordon Wong, with the FAA Honolulu Airports District Office at (808) 541-3565 or via e-mail at gordon.wong@faa.gov.

Sincerely,

Ron V. Simpson
Manager, Honolulu Airports District Office

Smith, Donald

From: Mischler, James
Sent: Monday, August 27, 2012 12:03 PM
To: Smith, Donald
Subject: FW: FHWA Guam Tiyan Parkway Draft EA Comments - FHWA responses to FAA comments
Attachments: Disposition of FAA comments received 8-21-12.docx

-----Original Message-----
From: Gordon.Wong@faa.gov [mailto:Gordon.Wong@faa.gov]
Sent: Wednesday, August 22, 2012 5:38 AM
To: Richelle.TAKARA@dot.gov
Cc: Camacho, Nora; joaquin.blaz@dpw.guam.gov; Mischler, James
Subject: RE: FHWA Guam Tiyan Parkway Draft EA Comments - FHWA responses to FAA comments

I concur with the disposition.

Gordon Wong
FAA Honolulu Airports District Office
T: 808-541-3565
F: 808-541-3566
E: gordon.wong@faa.gov

From: <Richelle.TAKARA@dot.gov>
AWP-HNL-ADO, Honolulu, HI
To: Gordon Wong/AWP/FAA@FAA,
Cc: <joaquin.blaz@dpw.guam.gov>, <Mischler@pbworld.com>,
<CamachoN@pbworld.com>
Date: 08/21/2012 08:57 AM
Subject: RE: FHWA Guam Tiyan Parkway Draft EA Comments - FHWA responses to FAA comments

Gordon:

Please see attached document showing the disposition of your comments sent to us yesterday. Please let me know if you disagree with any of the dispositions.

Thank you!!!

Richelle M. Takara, P.E.
Federal Highway Administration
300 Ala Moana Blvd. Rm 3-306
Honolulu, HI 96850

TIYAN PARKWAY
DISPOSITION OF FAA COMMENTS RECEIVED 8/21/12

- Cover page shows an aircraft landing on a runway. This makes it look like an airport project. Since this is a roadway project, a more appropriate cover page to represent the project should be used. The FAA is listed on the second title page as being a cooperating agency. We should also be listed as a cooperating agency on the cover page.
Response: The photo shows an airplane landing over a vehicle on Central Avenue to provide visual justification for the airports need to close the road before commencing operations on the extended runway. The EA has been widely distributed and the requested change in cover art will not be made. We will add FAA as a cooperating agency at the bottom of the page.

- Page 1-1, FAA Federal actions, the second item indicates that FAA will make a determination regarding eligibility for Airport Improvement Program funding. It appears that FAA is not funding the project, so this item should not be included. An additional FAA Federal action item to add to this list is: "Determination to approve airport sponsor's request to release airport land for sale or lease for non-aeronautical purposes and to release sponsor from grant obligations pertaining to the land."
Response: The second item was included based on an earlier FAA review comment, but will now be removed. We will replace it by the new proposed action.

- Page 1-5, Suggest changing the title for Figure 1-2 from "Proposed Road Closures" to "Road Closures Required to Meet Airport Safety Standards."
Response: The text on Page 1-4 that refers to Figure 1-2 makes clear that the reason for the road closures is to meet FAA safety standards. The title will not be changed.

- Page 2-1, the discussion for Alternative 1 states that a cemetery was placed on land after it was transferred to the heirs of the ancestral owners and that this is now a fatal flaw to implement this alternative. A discussion as to why this would be a fatal flaw should be further explained as it appears the cemetery was only recently built and possibly meant to stop the road project.
Response: The text will be revised to remove the inference of the cemetery's road-stopping purpose and to provide more explanation of the fatal flaw.

- Page 2-3 states that Alternative 2 was removed since the proposed roadway alignment would encroach within the RPZ for the airport's runway. Since the RPZ already encroaches within the existing Purple Heart Memorial Highway, there should be further information regarding the definition of the RPZ and that FAA Airport Design standards discourage any development that contributes to new encroachment within the RPZ.
Response: We will add clarification to the Alternative 2 description on Page 2-3

- Page 2-11, further explanation regarding the Federal reimbursement for footnoted items 2 and 3 needs to be provided. The cost savings would appear to be to the Government of Guam, so its unclear why a Federal reimbursement is justified. Also there is no indication which federal agency would be reimbursing the cost of the acquisition?
Response: All costs are payable by the Government of Guam. Some costs are eligible for reimbursement from FHWA. The savings are to the Government of Guam for costs that are reimbursable, therefore, the savings accrue to FHWA and FHWA funds can therefore be used for the right of way acquisition in lieu of higher construction costs. The text makes clear that the federal agency that will be making the reimbursement is FHWA, therefore, no changes will be made to the footnotes for this table.

- Page 2-12, Table 2-3, shows the Alternative 3 and 4 breakdown of costs and then on the bottom shows the portion paid for by the Government of Guam and what is reimbursed by FHWA. It's unclear who is bearing the Phase 1 and Phase 2 Right of Way Acquisition (Federal Reimbursement) costs and how they are factored into the FHWA and Government of Guam portion of the cost at the bottom of the table.
Response: The table is self explanatory regarding costs that are borne by GovGuam and the costs that are eligible for reimbursement by the federal government. The text on page 2-10 clearly states that FHWA is the federal agency that will be making the reimbursement; therefore, no changes to the table or footnotes are needed.

- Page 2-17, under the discussion of the ALP, there also needs to be an explanation stating that the airport sponsor needs to seek a release of airport land that is no longer needed for aeronautical purposes and which requires FAA approval.
Response: The requested change will be made.

- Figure 2-10 - Airport Layout Plan is not readable. Suggest a larger page insert, so the information can be read.
Response: It would require a page much larger than is practical to be able to make the ALP readable, on the order of 24" x 36". DPW could provide an electronic (CAD) version back to GIAA so that it can be printed at a larger size, manipulated, and used for airport purposes, if desired. No change will be made to the document.

- Page 3-2, under Land Use, there should be discussion of the project airspace determination conducted under a FAA Form 7460-1, Notice of proposed Construction or Alteration, used to determine that there are no hazards to air navigation from implementation of the proposed project.
Response: Text will be added on Page 3-4 under "Proposed Action" to note the need for a FAA Form 7460-1 project airspace determination for proposed permanent features.

- Page 3-33, for Construction Impacts, there needs to be text to indicate that the Guam Department of Public Works will file a FAA Form 7460-1, Notice of proposed Construction or Alteration, before the start of any construction on or near the airport, so that the FAA can evaluate whether any construction equipment or staging would constitute a hazard to air navigation.
Response: Text will be added on Page 3-34 under "Proposed Action" to note the need for a FAA Form 7460-1 project airspace determination for temporary construction activities.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND MARIANAS
PSC 455, BOX 195
FPO AP 96540-2937

5090
Ser 00/201
August 13, 2012

Tiyan Parkway EA
c/o Parsons Brinckerhoff
590 South Marine Corps Drive
Suite 808
Tamuning GU 96913

Dear Sir or Madam:

SUBJECT: TIYAN PARKWAY ENVIRONMENTAL ASSESSMENT (EA)

This letter provides the Naval Facilities Engineering Command (NAVFAC) Marianas comment on the Tiyan Parkway Environmental Assessment (EA). As noted in the EA, a portion of the proposed alignment of the Tiyan Parkway is sited on Former Naval Air Station Agana officer housing parcels. Due to the presence of lead based paint residue in the soil in these parcels, land use controls to protect human health and the environment have been established for that area.

As required under Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the land use controls were established in the Decision Document, 11 Land Use Control Sites, Operable Unit 2 and Installation Restoration Program Site 2 Former Naval Air Station Agana, Tiyan, Guam of Mar 2009 and detailed in the Land Use Control Work Plan, 11 Land Use Control Sites, Operable Unit 2 and Installation Restoration Program Site 2, Former Naval Air Station Agana, Tiyan, Guam of Mar 2009. Copies of these documents are available for review at the Nieves M. Flores Memorial Library or may be obtained from Guam Environmental Protection Agency (EPA) or NAVFAC Marianas upon request.

To comply with CERCLA requirements, soil excavation and other activities within the land use control area must be conducted in a manner consistent with the requirements of the documents listed above. This requirement should be discussed in the EA. Under CERCLA, Guam EPA is responsible for implementing regulatory enforcement action and the Navy has certain responsibilities as well. Both agencies should be consulted during the planning and design of the Tiyan Parkway project.

For any questions you may have on these issues, my point of contract is Richard Gray at (671) 349-1185 or email: Richard.gray@fe.navy.mil.

Sincerely,

J. V. HECKMANN
Captain, Civil Engineer Corps, U.S. Navy
Commanding Officer

The Honorable
Eddie Baza Calvo
Governor

The Honorable
Ray Tenorio
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Joanne M.S. Brown
Director
Carl V. Dominguez
Deputy Director

August 28, 2012

J. V. Heckmann
Captain, Civil Engineer Corps
Department of the Navy
Naval Facilities Engineering Command Marianas
PSC 455, Box 195
FPO AP 96540-2937

Subject: Tiyan Parkway Environmental Assessment

Dear Captain Heckmann:

Thank you for your August 13, 2012 letter in which you provided comments on the Tiyan Parkway Environmental Assessment (EA) that was jointly prepared by the Department of Public Works (DPW) and the Federal Highway Administration.

Our project team has reviewed your comments concerning lead-based paint residue in the soils on the former Naval Air Station Agana, a portion of which will be incorporated into the parkway footprint. Based on that review, modifications have been made in the Hazardous Materials section of EA Chapter 3, as follows.

1. The description of the proposed action includes the following statement. "The Naval Facilities Engineering Command (NAVFAC) Marianas confirmed (August 13, 2012) that these soils do contain lead-based paint residue and that land use controls have been established in these areas to protect human health and the environment, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)."
2. The mitigation discussion has been revised by including the following commitments. "During final design, Guam DPW will consult with the Guam EPA and NAVFAC to ensure the final plans and specifications include provisions regarding the handling of lead based paint. To comply with CERCLA, the contractor will conduct soil excavation and other activities in a manner consistent with the land use control elements established for the project area."

If you find that these revisions adequately address your comments, please indicate your concurrence by signing below and return a copy of this letter to the address provided.

Sincerely,

CARL V. DOMINDUEZ
Director, Acting

_____ _____

Concur Date
J. V. Heckmann
Captain, Civil Engineer Corps

Appendix B

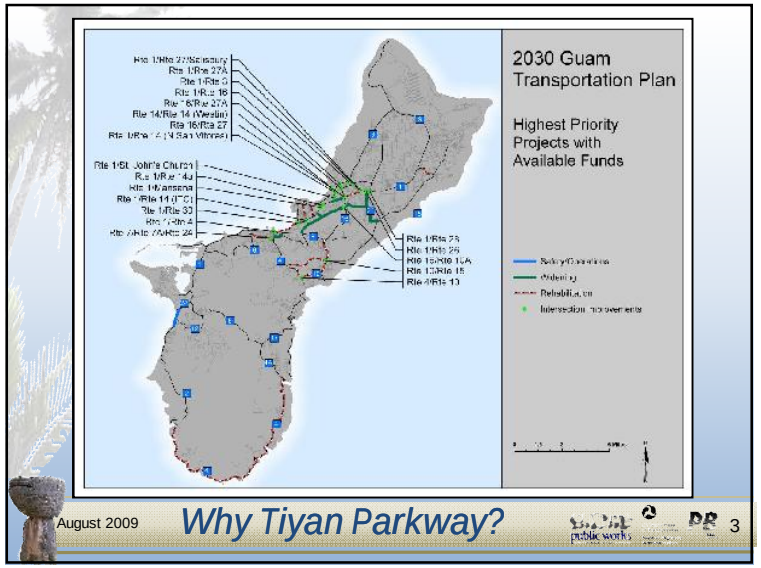
Public Involvement

Tiyan Parkway Landowner's Meeting

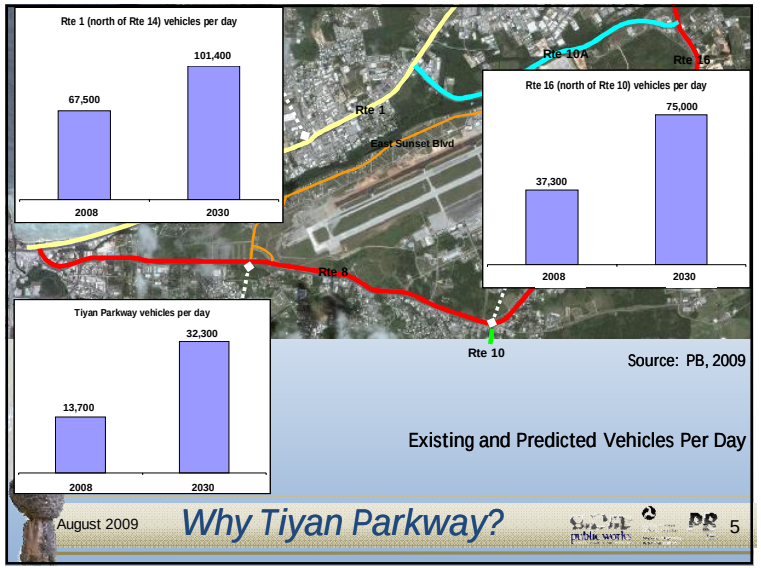
August 27, 2009

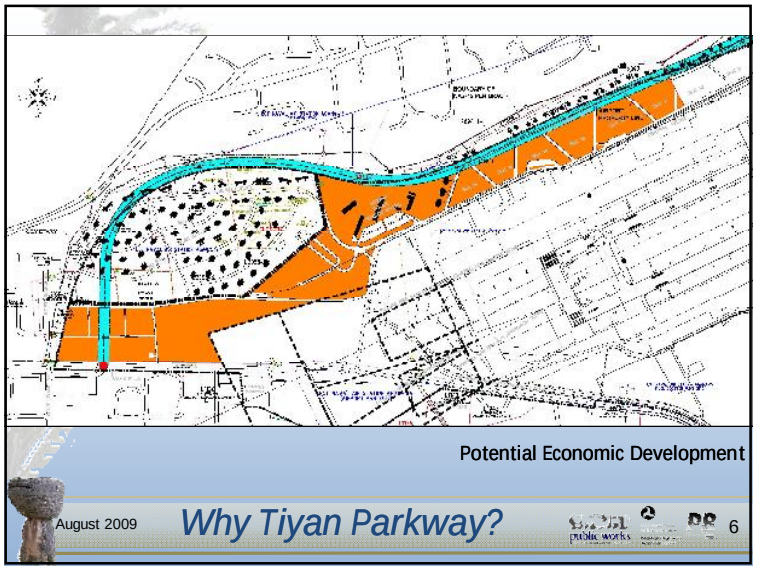
Overview

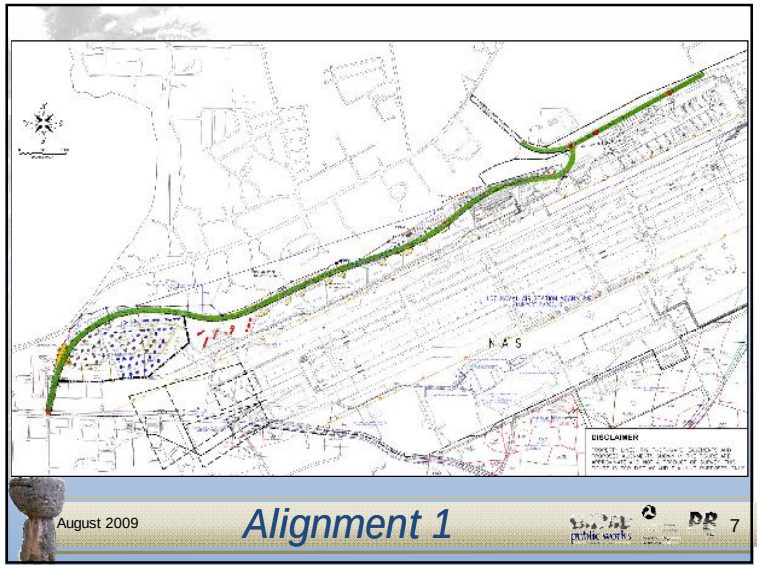
- Provide Accurate Project Information
- Clear Up Misconceptions
- Begin Discussion of Way Forward

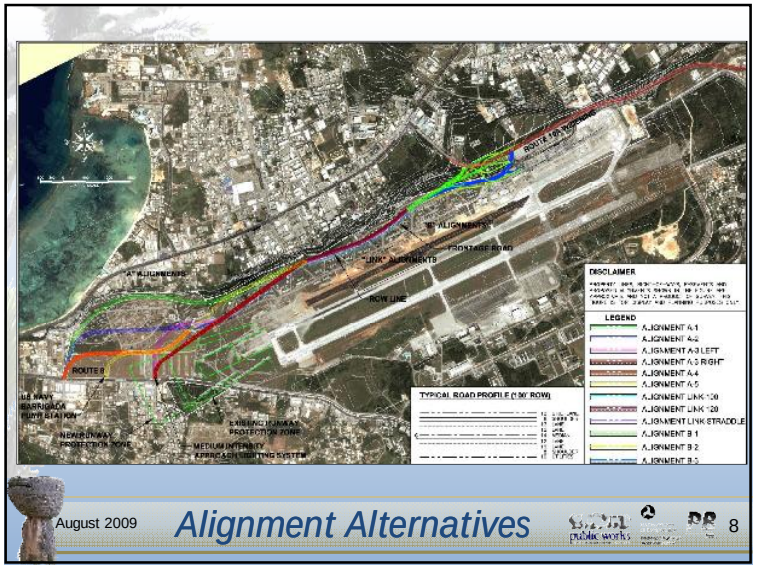


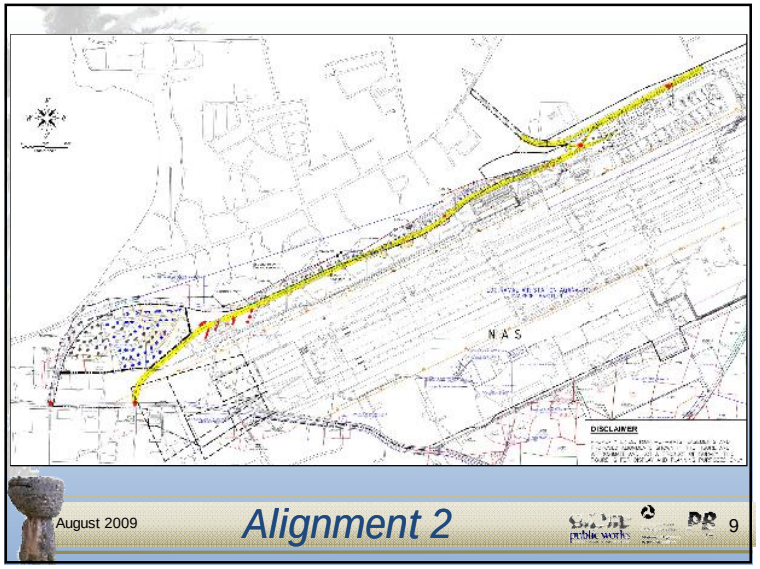
Existing Roadway Network

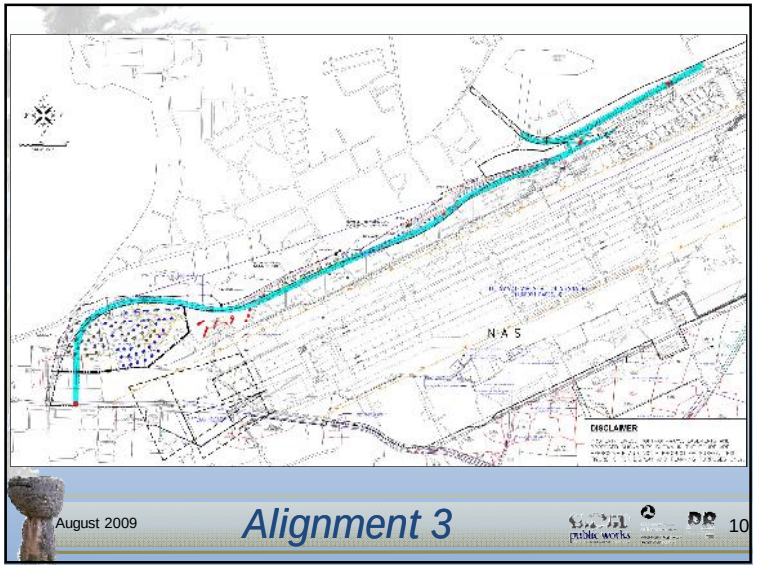

Rte 1 (north of Rte 14) vehicles per day
67,500
101,400
2008
2030
Rte 10A
Rte 16
Rte 1
East Sunset Blvd
Rte 16 (north of Rte 10) vehicles per day
37,300
75,000
2008
2030
Rte 8
Tiyan Parkway vehicles per day
13,700
32,300
2008
2030
Rte 10
Source: PB, 2009
Existing and Predicted Vehicles Per Day


Potential Economic Development

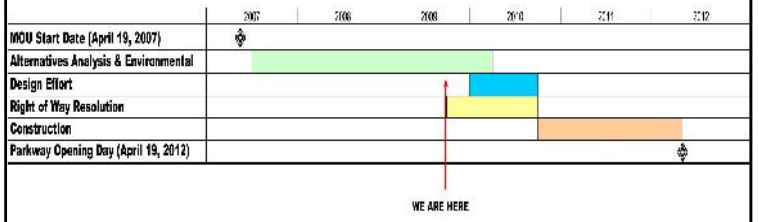

DISCLAIMER


DISCLAIMER
LEGEND
TYPICAL ROAD PROFILE (150' ROW)





Project Schedule



What's Next?

Evaluation

	Status Quo	With Tiyan Parkway
Land Title	Clouded, for some	Clear, marketable
Utility Easement Reversionary clause	Unknown, for some	Defined
Access	Uncertain, for some	Defined
Land Value	Variable, for some	Increased
Zoning	None	Established

Accomplished to date
Open Discussion

Get Involved

- Project Team Contact: Monica Guzman at 929-8825
- Website: www.guamtransportationprogram.com
  - Password: PARKWAY671
- Tiyan Email: helpdesk@guamtransportationprogram.com
- Future Individual Meetings accomplished
- Biweekly meetings with agencies
- Roundtable discussions with policymakers
- Future Public Meeting for Environmental Assessment

Thank You and
Si Yu'us Ma'ase!!

Tiyan Parkway Partnering Session with Landowners

Marriott Hotel

August 27, 2009 - 6:30 pm

Summary of Discussions

Note: The following represents a summary of the presentation and discussions that occurred between a majority of the Tiyan Landowners and claimants with representatives from the Department of Public Works (DPW), its consultants (PB Americas/Galaide Group), and the Federal Highway Administration (FHWA). *This summary is only intended to portray the basic concepts and discussion points that occurred during this very important meeting. Extemporaneous comments and/or discussions were edited down to main points for brevity.*

The meeting was held at the Marriott Hotel Chamorro Ballroom and was well attended by over eighty (80) landowners, claimants and owner's representatives. The doors opened at 6:30 PM with refreshments and a light dinner. The discussions began at 7:20 PM with a presentation by the DPW and its consultants on the conceptual work that has been accomplished to date.

Speakers in order of appearance:

Cliff Guzman (CG) – Facilitator (Galaide Group)
Larry Perez (LP) - Director (Department of Public Works)
Tom Ada (TA) – Senator & Chairman, (Committee on Transportation, Utilities and Veterans Affairs)
Kevin French (KC) – Traffic Engineer (PB Americas)
Paul Wolf (PW) – Program Director (PB Americas)

Other Attendees:

Richelle Takara – Federal Highways Administration
Joaquin Blaz – Administrator, DPW Division of Highways
Monica Guzman – Galaide Group
David Atkin – PB Americas
Reshawn Fields – PB Americas
Miguel Ortero-Jimenez – PB Americas
Jim Michler – PB Americas

Meeting Opening Comments & Presentations

CG: Opened by giving thanks to all who were in attendance. Stated the purpose of meeting was to provide update of ideas regarding Tiyan Parkway. CG further explained that this was also to hear feedback and begin discussion, exchange ideas, lay out options and see what can be done as a team to try to sort possible issues or concerns and how to get through them. CG informed everyone of a website set up specifically for Tiyan landowners and all who are affected. Website also has a helpdesk email address for anyone with questions, concerns or would just like to leave a comment. CG also indicated that there were a few landowners who were not represented and the website would help extend the information to them. CG introduced the team including Larry Perez, Director of the Department of Public Works (DPW); Richelle Takara, Federal Highway Administration (FHWA); Monica Guzman, Galaide Group; Kevin French, traffic engineer; Miguel Ortega-Jimenez, Jim Mishner, Reshawn Field and David Atkin all from Parsons Brinkerhoff (PB).

LP: Gave thanks to all in attendance for the opportunity to meet. Explained that tonight's meeting was the first of additional meetings designed to iron out respective solutions. LP discussed the planned agenda and shared the goal of the meeting which as to meet with the landowners and explore how collectively we can make this a winning situation. LP gave recognition to the following people present at the meeting: Al Dungca, former mayor; Frank Castro, Land Surveyor extraordinaire; John Unpingco, honorable judge. LP called upon Senator Tom Ada to say a few words.

TA: Gave thanks to LP, explained that his presence was to hear the reactions and sentiments that are being expressed and he was present in his capacity as Chairman for the legislative committee that has oversight on transportation and public works.

LP: Described to all present that the information to be shared in this meeting was relative to what is presently known and gave an overview of the situation outlining the various deeds and documents relative to the DPW building a road in Tiyan. Because of the many misconceptions and misinformation circulating, the DPW and FHWA thought it prudent to bring all the landowners together, to discuss all the options, issues and concerns of everyone in order to move forward in a collaborative effort.

LP gave assurance that no decisions have been made. The 2030 Guam Transportation Plan (GTP) was developed as a planning tool to guide the DPW in all road issues and upgrades relative to Guam's transportation needs and the pending military buildup. He indicated that the evening's focus was on the Tiyan Parkway and the reasons why it is a component of the 2030 GTP. He further indicated that the DPW was at that juncture in the planning and the team was there to present the technical analysis of the parkway. LP explained that Kevin French, traffic Engineer, would speak on the traffic analysis he has been tasked with for the 2030 GTP and the

importance of the Tiyan Parkway. LP also indicated that Mr. Paul Wolf would talk about the design analysis and alternatives and share a schedule of next steps and to help discuss some of the issues and situations.

KF: KF introduced himself as Guam's Traffic Engineer and indicated that he has spent time studying the island's traffic from the operations side, identifying existing problems and solutions. He stated that the team has taken a hard look at the 2030 planning horizon and has developed a transportation plan that will handle the traffic reliability and needs for the future of Guam. The team looked at several facets including a transit component, a bicycle and pedestrian component and the final component which is the roadway. They have studied traffic patterns and improvements island wide to minimize travel ways and move traffic more efficiently.

KF pointed out that the Tiyan Parkway project is basically right in the middle of the island and helps distribute traffic from Routes 1, 10A, 16 and 8. Traffic on Route 1 is likely to increase and is limited to the amount of traffic it can carry. Route 16 will also see an increase in traffic. KF pointed out the estimated number of vehicles per day in 2008 and compared it the anticipated number of vehicles per day in 2030 along Routes 1, Route 16 and the Tiyan Roadway (slide 5 in the Power Point Presentation). The Tiyan Parkway continues to be a good route and serves as a good connector between Route 10A and Route 8. KF turned to Paul Wolf to explain some of the design alternatives that would improve traffic flow through Tiyan.

PW: Gave an engineering overview related to alternatives for location and routing of the Tiyan Parkway. There were many alternatives studied and they were guided by practical engineering principles such as the curvature of a road to handle traffic safely. Road steepness was also considered as an alternative in raising the road, but there are limitations for safe operations of vehicles. The focus in developing the alignments was to work through the various concepts to maximize or optimize those which would reduce the use of surrounding land.

PW introduced several alignments. Alignment 1 (Slide 7): Was conceived in the master plan developed by the Navy when Naval Air Station was closed. Since then, the government has enacted some laws that make this alignment near impossible. Alignment 2 (Slide 9): This alignment cuts into the Runway Protection Zone (RPZ) which will probably not receive clearance from the FAA. Alignment 3 (Slide 10) steers clear of the RPZ. PW described the alignments and alternatives. PW also talked about discussions relative to the cliff line and the airport property lines and the possibility to straddle the (airport) property line.

Questions/ Comments during Paul Wolf's Presentation

Why couldn't you take an entry on alignment three, and integrate it with the pathway on alignment two? Runaway protection zone ….

PW This is a possibility - one of the issues to make it work is to wiggle around the alignment which is not optimizing use of land on airport side. They will look in to that.

All plans are caused due to the military buildup. If that does not happen, and we go into a peace zone for a long period of time, what happens to this idea about a road?

PW Bottom line is a lot of traffic on Route 1 today, even with background growth, participating growth with tourism and other businesses on Guam, there will be an increase in traffic not necessarily related to the buildup. We will have to go back to see impacts on the Tiyan Parkway … Can't answer specifically at this time.

Are you also looking at expanding the cargo area?

PW Yes, this is a key component. With the airport (expansion) plan, they are in favor of Tiyan parkway.

Is this a six lane highway?

PW No, two lanes in each direction.

Your comment that Tiyan Parkway will benefit others, I see on the cliff line behind ITC building basically the slopes, obviously you will take property that has already gone back to these families.

PW This is not a foregone conclusion. The purpose of tonight's meeting is to share with you what is being studied.

When you basically take property or scrap property not even in compliance with zoning areas then you leave the steep slopes on the bottom in other words it is almost useless taking for the families how do you plan to take these properties and transition them back in to the parkway? Some may have just a little sliver of property and we need to transition on the steep slope back in the parkway. This is a concern however the alignment is going to be.

PW Please save this question for later.

You mentioned that the airport is giving up some property also, how much of their property are the willing to give up?

PW Have not pinned down the fine details, if there is a possibility to straddle the (airport property) line. This is a concept we talked about. In a few areas they are crossing the line on the airport side and some others not so much on the airport side, but getting most of what is available. If you examine closely, we straddle the line in the middle. Nothing is set in stone or finalized with the airport.

Is that fence line that runs along the current road which the airport used to have a set in stone boundary?

PW No. The fence along the road runs inside the airport property and other areas.

I would like to address everyone in this room that is trying to make this plan work for everybody. When you start going back to your desk and bring out the map and you start wondering, if you take a

piece of property put yourself in our place whether that is going to be your land and you would feel if somebody drives right through your property. Whether you have the option to sell it or not, that is where the heart is and it something you're going to take away from the people in this room. Think of it as your own and that is where you raised your children - that is where you watch your children grow. Take this into consideration. To all the people in this room what is going to happen when you drive right by these people's properties.

PW: Concluded his presentation explaining that all the potential alignments have been covered with this overview. He also indicated his hopes to come to conclusion with the property owner's issues and looks forward to moving forward with design and construction.

LP: Welcomed all dialogue and addressed the audience by explaining that since the beginning of time the properties have gone back and forth from owner to military to government then back. He indicated that he shared their passion and wanted to inform them that all (DPW representatives) present at the meeting who have the capacities to make the Tiyan Parkway happen must first look at what kind of dilemmas the parkway will cause for landholders. LP stated that he is not sure if everyone has full knowledge of what is really owned and have read the fine print of their deeds and the BRAC realignment. It appears that so much (confusion) has been created with these lands from the beginning and all those who are not primarily involved are trying to bridge conflicts, find solutions and take away what works for all.

The next step would be to sit with each of the landowners individually and talk about issues regarding utilities, zoning, ownership and access. They (the DPW team) want to be able to understand and help clear up the issues to the best of their ability as solving them would be for the greater good of the community.

LP then spoke to the Evaluation Chart slide. He indicated there are a number of issues with Tiyan properties. Land titles, utility easements, access, land value and zoning. The Evaluation Chart outlined these issues relative to Status Quo vs. With the Tiyan Parkway. Because it is the mission of the department of transport to build a road that works for the island, by sitting down with the landowners individually, they (DPW)can try to remedy some of these issues. They have looked at exchange of property and other options. By having dialogue with each family, they can work to identifying each unique issue and explore possible "deal-makers" or "deal-breakers" working to make it a win/win situation. LP then opened the floor to discussion.

Floor Discussion

The whole issue is military. One good thing they did is perfect their claims on these properties. They resold land and made profit. As far as the titles, they are not clouded. You can still take old documents and reconstruct a new survey. Promise of Chamorro land trust, land locked properties are still happening today. The promise of access to properties is a zoning issue which should reside with the land commission and the legislature. Landowner then gave his historical perspective of the issues having been the 1st Chairman of the Ancestral Lands Commission. He highlighted PL25-45 and PL26-100, the EDZ, utilities easements, access, land taking and land values. He explicitly stated that with regard to zoning, that is not a function of the DPW.

LP Clarified that they are not offering or promising. They will provide assistance by meeting with the families and exploring individual dialogues.

The airport is hiding behind FAA and it's bond covenants. There is no dialogue. Sunset Blvd. serves no purpose for the airport.

LP There are numerous dialogue sessions with the airport and there is a calculated figure of how much of the airport property will be used. We still continue to dialogue.

A lot of development is for the airport. Most of the traffic is going toward new warehouses. It makes sense to use airport land. Do not tell the people it is going to help them. You can't put a highway through a neighborhood. The airport should give up some of their land if they are putting the highway up there.

When it rains it floods down my property area. If you want to see a big waterfall, come down to my property. If they can fix this problem, there are no problems with us.

LP We are aware of the issue and there is discussion with airport regarding an improved drainage system.

How long is the drainage going to be shut down on Sunset Blvd? When it rains, there is flooding. I am afraid someone will get in an accident in front of my home.

LP Guam EPA is working on this. If it is okay we will get back to you once we get more information from them.

Is it really set in stone? Sometimes it seems that it is up to us, then at times it seems you have already made decisions and this will go through regardless of our decisions. Can we decide on no parkway?

LP There is no definitive decision. We are working on the environmental assessment activity. There are no design plans yet. There is no definitive answer. This is the first meeting.

Looking at the dotted lines with FAA and clearance, when the plans begin and construction takes place, it will be you who will make changes. You stated that there will be no changes but in the end because FAA regulations have to be followed. You will be forced make changes eventually or could lose federal grants.

LP There is so much conflict and questions that still have to be answered. There are a lot of federal and local laws. We are reading them and trying to find out how we can best implement a road. How we can best litigate to keep it open - what is the fix? Our job is to make sure that all transportation regulations and requirements are met. There are conflicts. So many things have been enacted in to law that we do not have a definitive answer at this time.

Our property sits on Sunset Blvd. From what I see, this will take half. The airport still has property belonging to my grandfather. There is no exchange by the airport as said during the meeting at the governor's office. This is the case with other land owners. If we decide to take land in exchange for our property, would it be of the same value? I had my property appraised. Would the airport or whomever pay the price I am asking for?

LP We are referring to Tiyan Parkway. Property located within the airport boundary is being addressed by a different activity. Our interest is outside the airport property which it the remaining sliver designated for the Tiyan Parkway. We can only speak of those properties. The appraisal process is a different mechanism which, in the future, will be going through public hearings regarding the "rights of way manual". This outlines what is done when government takes land.

Will you have other government agencies present at our next meeting, namely the GIAA and CLTC?

LP They want to streamline a lot of the processes so they have studied each of the parcels and have met. There is no proposal for another roundtable discussion at this time. By meeting individually with the families, it would give the opportunity for them to address specific concerns because not everyone has the same situation.

Is there consideration to move Route 8 in one of your alignments as it sits in the Runway Protection Zone?

LP This question has just surfaced. There is no other plan between the Government and the Airport.

With the military buildup, there was discussion on a billion dollar road. Is Tiyan Parkway part of that road?

LP The Naval Magazine Road project has been put aside for now. The Tiyan Parkway Road is to prepare for Guam's immediate and future needs. The big Naval Magazine project if it happens will take to take place several years from now and will have to go through an extensive environmental impact process.

In the current activity, the roadway users are primarily airport customers. Can you place a temporary bypass to coincide with Alignment 2 as a two-laner?

LP There is a memo regarding the construction of a temporary bypass which addresses FAA and the airport.

What is the width of a 4-lane road?

KF 80 feet to include the shoulders.

The Naval office area was taken and the State property is ours. How can folks continue their lives and still say it is our properties yet you're drawing lines through it?

LP Law 26-100 requires the master plan to benefit the Tiyan community. The Government is to establish a plan showing utilities. This is why the engineering team has come up with alternatives.

Meeting Close-Out

CG: Concluded that the plan is to try and schedule individual meetings with families within 30-45 days. CG stated that there will be a project team who will contact the families to schedule these meetings. He also informed everyone that when they visit the website: www.guam transportationprogram.com, there is a specific area for Tiyan landowners to view. The site provides specific information and can only be accessed with a password. The password is parkway671. He also suggested that questions, comments and concerns could be sent to helpdesk@guamtransportation.com and participants should get responses back within 24 hours. CG gave thanks to all in attendance for their patience and encouraged that communication will be on going.

LP: Also gave thanks and conveyed that they are still in the early planning stage. There is still a lot of discussions with the Airport, Senators, Land Commission, Landowners and many others, concluding that there was still a lot of work ahead.

Additional Closing Comments from the Participants:

If we (the landowners) decide not to go with this plan, then what happens? Regardless of how you look at it this is going to happen. Now you're deciding which properties to cut.

LP: There is no decision. We are in discussions. We are now at a juncture to say where it is going to be built. The research has just started.

One way or another you say it is up to us, but it seems you have already started. The reason I ask is because I wish my mother was here and I know she would be here to ask these questions. I am the 4th generation of my family and we just took back ownership of our property. The land commission was supposed to open a trust for my family and it has never been done, so how can we trust in what you say is going to happen?

LP: Gave his apology and said that he is not asking for their trust. He is asking to talk with the families so they can first understand what kind of conditions need to be addressed. LP explained that BRAC does not give land back to the original landowners. The land is given back to the Government. It is up to the Government to do what is right and the law was passed to give the land the original landowners. Unfortunately, there are stipulations that came with the transfer.

CG: Issued thanks to everyone once again and concluded the meeting.

The meeting ended at 9:06 with individual discussions lasting until 9:40 PM.

LOTS 2053 AND 2055

Date of Meeting	10/08/09	Location	Galaide Group Office	
Recorded By	DQ - Dondi Quintans	Family	Calvo	

INDIVIDUALS INVOLVED

Leonard Calvo	687-2072; 472-6852		
138 Martyr St. Hagatna, GU 96910			
Eduardo T. Calvo (dec)	687-2072; 472-6852		
138 Martyr St. Hagatna, GU 96910			
Veronica McDonald Calvo (dec)			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began		
If No, what barriers are you being faced with in the process?					
Surveyed?	YES		Subdivided?	NO	
Recorded?	YES		Plans to Subdivide?	YES	
Attempt to record with DLM?			When do you plan on subdividing it?		

UTILITIES

Water	YES	Electricity	YES	Drainage Issues	
Phone	YES	Cable	NO		
Drainage Problems					
Utility Agency Problems		If Yes, which agencies?			
What issues?					

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	
Our father was buried there so nothing major will be build on or around. Maybe a small home, but it will be a common area. And because of the easements for the power lines and highways, there is nothing developable.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Decrease. The other Tiyan owners will be screwed because the real will be across or over their properties.	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	
As a connector, it is important.	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	

LOTS 2053 AND 2055

It would benefit. It will decrease the residential property value.		
No. Homes Occupied	None	

COMMENTS
Our father was buried there so nothing major will be built on or around. Maybe a small home, but it will be a common area. And because of the easements for the powerlines and highways, there is nothing developable.
Referring to the airport. It's pretty low impact to their property. In their no-fly zone.
Leonard Calvo is the representative and admistrator for Lot 2053 and Lot 2055 (Veronica McDonald Calvo & Eduardo T. Calvo)
(Underground route 8) that's very unrealistic . The parkway would be the main thorough way to get to Dededo.
This is a community (Calvo property & other Ryan lots). There's not a lot of sympathy because they got their land back, not paid for, not homeowners. A lot of these people got their land back to live there. This neighborhood can make it miserable for the airport. In some countries where neighborhoods are close to airports, the airports must be shut down after certain times for sound and traffic reasons. There are all these issues that no one is considering. DPW should respect the neighborhood.
Leonard Calvo is the representative and administrator for Lot 2053 and Lot 2055 (Veronica McDonald Calvo & Eduardo T. Calvo).
Logical termini should be rerouted to Alternative 1.

LOT 2054

Date of Meeting	10/06/09	Location	PB Conference Room	
Recorded By	DQ - Dondi Quintans	Family	Gozum	

INDIVIDUALS INVOLVED			
Alfredo C. Dungca	477-4675; 788-9971		
P.O. Box 9374 Tamuning, Gu 96931			
Vicky Dungca	477-4675; 788-9971		
P.O. Box 9374 Tamuning, Gu 96931			
Joe Ulloa	646-1704; 482-1230		
P.o. Box 10085 Tamuning, Gu 96931			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY						
Probated?	YES		Probation Process Began			
If No, what barriers are you being faced with in the process?						
Surveyed?	YES		Subdivided?	NO		
Recorded?	YES		Plans to Subdivide?	YES		
Attempt to record with DLM?	YES		When do you plan on subdividing it?		Not Known	

UTILITIES						
Water	NO	Electricity	NO	Drainage issues?	NO	
Phone	NO	Cable	NO			
Drainage Problems						
Utility Agency Problems		If Yes, which agencies?				
What issues?						

MISCELLANEOUS	
Is there a general concensus among your family members as to what to do with the property?	YES
Once permitted, to subdivide into the different families.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Increase	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	
Yes. It is an excellent project but they must consider first the people that are living there today.	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	

No. Homes Occupied	None	

LOT 2054

COMMENTS
Alfredo Dungca (AD): Let the government try and take everything! I will fight for it!
The transfer was one of the stipulations when they returned the properties. In the event your property might be affected. And as soon as they survey, you must sign this waiver that you cannot fight it.
The property is actually an L-shape. Part of it is the airport.

LOT 2056

Date of Meeting	10/09/09	Location	PB Conference Room	
Recorded By	NU - N. Ungacta	Family	V. Calvo	

INDIVIDUALS INVOLVED

Rick Duenas	689-8233	Vicente Calvo (dec)	
P.O. Box 203 Hagatna, Guam 96932			
Chris Duenas	689-4383		
P.O. Box 203 Hagatna, Guam 96932			
Juanita Duenas Calvo	472-6066		
P.O. Box 203 Hagatna, Guam 96932			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began		
If No, what barriers are you being faced with in the process?					
Surveyed?	YES		Subdivided?	NO	
Recorded?	NO		Plans to Subdivide?	YES	
Attempt to record with			When do you plan on subdividing it?		Depends

UTILITIES

Water	NO	Electricity	NO	Drainage issues	NO	
Phone	NO	Cable	NO			
Drainage Problems						
Utility Agency Problems	NO	If Yes, which agencies?				
What issues?						

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	YES
Develop the property for commercial and residential use. The property has been surveyed and has an official map. However, DLM will not record the property.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Depends on the outcome of the Tiyan Parkway. If the road runs through the property then a definite decrease. Also, how the remaining property will be zoned.	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	YES
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	

Depends on the outcome of the Tiyan Parkway. If the road runs through the property then a definite decrease. Also, how the remaining property will be zoned.		
No. Homes Occupied	None	

COMMENTS

Vicente Calvo read through the deed and took note of the parkway's provision. This is why the family has not made any immediate plans for the property.

As part of the EA process there will be at least two public meetings. Thereafter there will be a 30 day period where the decisions will be made. If the road plan does go through, the legislature will then step in because there may be a land exchange, purchases or acquisitions. There are properties that will increase in value and other properties will decrease.

The property has no official zoning but the Department of Revenue and Taxation has issued a tax value on the property.

LOT 2057

Date of Meeting		Location	Email	
Recorded By	DQ - D Quintans	Family	Guzman	

INDIVIDUALS INVOLVED

Ann Guzman Waki	619-508-0040	guzmanestates2009@gmail.com	
4606 Acacia Ave La Mesa, Ca 91941			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began	YES	
If No, what barriers are you being faced with in the process?					
Surveyed?	YES		Subdivided?		
Recorded?	YES		Plans to Subdivide?		
Attempt to record with DLM?	YES		When do you plan on subdividing it?		

UTILITIES

Water	YES	Electricity	YES	Drainage issues	YES	
Phone	YES	Cable	YES			
Drainage Problems						
Utility Agency Problems	YES	If Yes, which agencies?				
What issues?	Although there have been ongoing issues about water usage since the water meter for the property. Eventually each house will have to install a meter. Another issue involves the Guam Airport Authority that owns the main water lines to these properties.					

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	NO
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
It would decrease the value in residential areas however increase the value if the property were to be	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	
Obviously that would depend on who you ask and what the property was used for. At this point in time, the funding is in place and enough people "in the know" were involved in making the decision, hopefully in the best interest of the people of Guam.	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	
I don't feel this highway is absolutely worth all the trouble being made over it.	

No. Homes Occupied	7	

COMMENTS
I live in California and communiting just to work is more miles, one way, than it takes to drive the length of Guam. While I lived in Guam, I never felt the drive to "anywhere" was long, so forgive me of I don't feel this highway is absolutely worth all the trouble being made over it.
Probate #PR0101-88. Probate final decree was issued in March 30, 2009.

LOT 2058

Date of Meeting	10/17/09	Location	Torres Residence (Tiyan)	
Recorded By	CGZ - C Guzman	Family	Torres	

INDIVIDUALS INVOLVED

Mariano Taitague Torres (dec)			
Lou Torres Sanchez	645-8772 / 483-8772		
sancheztwo@teleguam.net			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began	NO	
If No, what barriers are you being faced with in the process?					
Surveyed?	YES		Subdivided?	NO	
Recorded?	YES		Plans to Subdivide?	YES	
Attempt to record with DLM?	NO		When do you plan on subdividing it?		

dividing - We are still waiting for the surveyors to subdivide into two. Pending time is November 2009 through the end of the y

UTILITIES

Water	YES	Electricity	YES	Drainage issues		
Phone	YES	Cable	YES			
Drainage Problems						
Utility Agency Problems		If Yes, which agencies?				
What issues?						

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	YES
To be distributed, subdivided and to live in the property.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Unsure, depending on how and where the access will be done. It can go either way.	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	YES
Yes. There needs to be a different access to take away from Marine Corps Drive. Something has to be done.	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	

No. Homes Occupied	4 of 5	

COMMENTS
Land swap/exchage with the FAA: Family still has acres of land that have yet to be returned. What will happen then? Will we get affected?
Air quality, traffic, drainage are concerns at Tiyan. Will they be addressed for the parkway?
5 lanes - width of the road and drainage. That seems too large for that area. How will it affect the quality of life there? It will look like Marine Corps Drive.
Will the main focus of the Parkway remain the same with a new administration?
If it decided (zoning) that the area because industrial instead of residential, where do we go?

LOT 2066

Date of Meeting	10/13/09	Location	PB Conference Room	
Recorded By	CG / DQ	Family	Punzalan & Pacific Island Movers	

INDIVIDUALS INVOLVED

Sylvia Punzalan	472-8749	Roy Adkerson	646-5865 / 727-3788
201 W Sunset Blvd Barrigada, Gu 96913		100 W. Sunset Blvd Barrigada, Gu 96913	
Merilyn Punzalan	645-8708	James F. Coleman	334-983-6500
204 W. Sunset Blvd Barrigada, GU 96913		#1 Covan Drive P.O. Box 960, Midland City, AL 36350	
Patti Perez	637-0770 / 648-8615	Catherine McCollum	649-5008 / 488-6662
P.O. Box 1254 Hagatna, Guam 96932		115 Punzalan Street, Tamuning, Guam 96913	
Juan & Juanita Cruz	477-5296 / 688-5530	Bobbie Taitano	472-5161 / 645-8122
118 First Street Tiyan, Guam 969131		202 West Sunset Blvd, Barrigada, Gu 96913	
Lourdes Flores	646-8514 / 688-5530	Angella M.A. Lujan	
129 Punzalan St, Tamuning, Guam 96911		487 Ch Canton Tutujun St, Sinajana, GU 96910	

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began	NO	
If No, what barriers are you being faced with in the process?					
Surveyed?	YES		Subdivided?	YES	
Recorded?	YES		Plans to Subdivide?	NO	
Attempt to record with DLM?	YES		When do you plan on subdividing it?		

UTILITIES

Water	YES	Electricity	YES	Drainage issues	YES	
Phone	YES	Cable	YES			
Drainage Problems						

Not within the upper Tiyan property;
But the Flores property extends to the bottom of the hill -- every time it rains, the water from Tiyan streams down and through her property; Sewer issue for Pacific Island Movers -- 18" sewer line runs through property

Utility Agency Problems	YES	If Yes, which agencies?	GWA
What issues?	No Meter		

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	
Each family/heir has a plan. PIM has buildings in property and pending projects, depending on the outcome of the parkway.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	NO
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	

It will decrease because you are taking away from us. We thought the parkway issue was thrown out once the property was	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	NO
CM: No. We have enough damaged roads as it is, which destroys our vehicles. There seems to be all this money for the	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	NO
No. Homes Occupied	All

COMMENTS

Catherine McCollum (CM): When Dr. Brady was building his clinic, the backhoe hit the cliff (behind Lourdes Flores' house) and the cliff started crumbling down.

CM: Are you presenting us with a picture from the past? When I was in the commission, I saw the same image (alternate route design) before the properties were returned. I feel like they're not straying away from the idea of the parkway.

CM: We need more information on the properties being affected by the parkway -- how much property is needed, the remainder, etc.

Roy Adkerson (RA): When we were purchasing the properties, we had the title insurance study all the documents from the very beginning. They were unable to find anything about the roadway. We were told by PB that yes, this has been reserved but I'd question why we have title for the properties.

RA: Our initial interest was to purchase the property, which we did, to build a warehouse. There's a huge 18" sewer line across the property that was not included in the current plans -- only in the old Navy plan. It runs across underneath West Sunset aiming towards the police station, which I believe serves the housing. We were told not to build over, just around it. We'd like to use the property for commercial warehouse/moving business company.

Lourdes Perez (LP): The drainage was originally from the Navy. But the outfall was not as dark (and as much) as before the airport construction.

James Coleman (JC): There was no provision for easement on the property. Where is the provision/stipulation in the deed regarding the parkway?

Administrator for Pacific Island Movers: James Coleman (or Roy Adkerson, GM Pacific Island Movers)

All other individuals are administrators for their properties.

LOT 2085

Date of Meeting	10/08/09	Location	PB	
Recorded By	DQ	Family	BLAS	

INDIVIDUALS INVOLVED

Romana B. Villagomez	632-5768; 632-5436	Thomas Blas Perez	734-2979; 688-2293
P.O. Box 7020 Tamuning, Guam 96931		P.O. Box 2433 Hagatna, Guam 96932	
Rosa V. Leorzel	632-5436; 637-8669	Teresita B. Cruz	734-2311
P.O. Box 7020 Tamuning, Guam 96931		P.O. Box 20913 GMF Barrigada, Guam 96932	
Rosa Blas Ruply	734-4567	Jonna Quintanilla	688-8776
P.O. Box 20051 GMF Barrigada, Guam 96921		P.O. Box 11066 Yigo, Guam 96929	
Amparo Cruz	787-8503; 734-4567	Jesusa Blas Perez (dec)	
P.O. Box 20051 GMF Barrigada, Guam 96921			
Jonna Rose Quintanilla	653-1505	Jose S. Blas (dec)	
P.O. Box 11066 Yigo, Guam 96929			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	NO		Probation Process Began	NO	

If No, what barriers are you being faced with in the process?

[illegible] for two years stating that we will lose the property. We can't lose it because it has not been identified. Rev & Tax assessed for two years.

Surveyed?	NO	Subdivided?	NO	
Recorded?	NO	Plans to Subdivide?	YES	
Attempt to record with DLM?	YES	When?	When we are permitted to do so	

UTILITIES

Water	YES	Electricity	YES	Drainage issues	YES	
Phone	YES	Cable	NO			
Drainage Problems	Main lines come out of GIAA. Intermittent shut offs, low water pressure for lower properties.					
We have had drainage problems since the airport started its expansion. But we still have access to our property						
Utility Agency Problems	NO	If Yes, which agencies?				
What issues?						

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	YES
Family is renting out all properties within the lot. Once able, we'd like the properties subdivided.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	NO
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Possibly increase -- but we do not have a general concesus.	

Do you believe that the Tiyan Parkway is a good project for the people of Guam?	n/a
No concesus	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	NO
No. Homes Occupied	8

COMMENTS

Rosa Leorzel (RL): When we received the deed, we were told that there were certain things we could not do. But we were not told what we could not do. We were not told of the Parkway.

RL: If this parkway goes through, the area wouldn't be residential anymore. It would have to be commercial property. Then we wouldn't be restricted by the zoning.

RL: The shaded area on the map - if this goes through, they abut right through the properties. So if you're going to condemn it, what would be the point of hassling for the utilities?

Tom Perez (TP): Why don't we put the road on the GIAA side? Why are we hurting the little people? Someone is not thinking.

RL: If the plan was formulated way back in 1993, why in the hell did you turn it over in the first place? It should've been condemned then rather than have these people go in there to live, renovate and go to the attorneys, which is not cheap (to start the probate process)? If you knew the easements were going to be there then why did you turn it over in the first place? What we're saying is once this road is in place, there is almost no land that is usable. And what do we do? We pay for property tax that is useless/ it makes no sense.

RL: What is the process of condemnation? Miguez Jimenez (MJ): It is not condemnation. It is acquisition. That means an appraisal by an independent appraisal company, fair market evaluation and payment with fair market value for present market. The appraisal is good for six months. If we set an appraisal and not able to close within that six months, thern it is no longer valid. We'll need to do it again.

Clifford Guzman (CG): If we're doing to process of appraisal, is the property being appraised with the road?
MJ: No. The appraisal is done with the value as it is today, current. The fair market value as it is right now. If there is a road or a home, it will be taken into account. If the acquisition will require a structure or part of it, the remainder will be taken into account. If you take half the house, you bought the whole house. Depending on the footprint, how much is taken, how much is left – that is where appraisal takes into account. We will look at the value of the property as it is right now, the whole property. Then we will look at the piece that is needed, the remainder. And based on that is what will be offered for payment. If what is left is not developable, that is called an uneconomical remnant. If that's the case, we'll give two offers: to purchase the whole lot for x-amount of dollars and the other is to purchase roadway and you can keep the remainder. This is all found in the Rights of Way Manual.

Administrator: Tom Perez - (being appointed as administrator but have been unable to finalize due to conflicts with Land Management and clouded title)

LOT 2087

Date of Meeting	10/20/09	Location	Tiyan Home	
Recorded By	Natasha Ungata	Family	Guerrero	

INDIVIDUALS INVOLVED

Anita Atalig	411-2001		
1002 E Sunset Blvd. Barrigada, Guam 96913			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	NO		Probation Process Began	YES	
If No, what barriers are you being faced with in the process?					
Surveyed?	YES	Subdivided?	NO		
Recorded?	NO	Plans to Subdivide?	NO		
Attempt to record with	YES	When?			

UTILITIES

Water	YES	Electricity	YES	Drainage	YES	
Phone	YES	Cable	NO			
Drainage Problems	The drainage shuts off from airport construction.					
Utility Agency Problems	NO	If Yes, which agencies?				
What issues?						

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	
Yes. Family corporation for trust account.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	NO
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	N/A
Don't know	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	N/A
Don't know	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	NO
No because my family is in the mainland, but if paid, it will benefit us.	

No. Homes Occupied	5 of 12	

QUESTIONS, COMMENTS & NOTES
Is land exchange officially part of the deal?
The airport fails to tell the Tiyan residents of reasons why they are expanding and why there is construction.
It is nice that you are taking the time make the landowners understand what is going on. The partnership meeting and this meeting really helps.
How come we're not entitled to the noise pollution zone?
The family will not sell their property.
Will the Bug Out house (business) be taken down? It was not released by ancestral lands and the backyard and the kitchen portion of this house part of 2087.

LOT 2088

Date of Meeting	10/24/09	Location	PB	
Recorded By	Natasha Ungata	Family	Leon Guerrero	

INDIVIDUALS INVOLVED

Joaquin B. Santos	653-8023	Joanna Ninete Flores	
P.O. Box 6905 Tamuning, Guam 96931			
Ann Marie Manibusan	472-5067; 632-5176	Delores Diaz	
P.O. Box 21528 GMF Barrigada, Guam 96921			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	NO		Probation Process Began	NO	
If No, what barriers are you being faced with in the process?					
Department of Land Management will not allow.					
Surveyed?	YES	Subdivided?	YES		
Recorded?	NO	Plans to Subdivide?	YES		
Attempt to record with	YES	When?	After the probate process		

UTILITIES

Water	YES	Electricity	YES	Drainage issues		
Phone	YES	Cable	NO			
Drainage Problems						
Utility Agency Problems	YES	If Yes, which agencies?	GPA & GWA			
What issues?						

There is an open manhole on the property. The property owner also had the power connected. She had the proper documentation and was given an account. At one point the power was disconnected and when she went to have the power reconnected, she was denied. They finally reconnected and said that no power will be connected for anyone else on the property. She did not know why this happened when she had the same documentation as before.

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	YES
Family residences.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	YES
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	NO
No, relative to present quality of life. But it will increase if owners are residing.	

Do you believe that the Tiyan Parkway is a good project for the people of Guam?	YES
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	NO
No. Homes Occupied	8 of 12

QUESTIONS, COMMENTS & NOTES

Can we have someone come out and physically walk us through the new potential roadway?
It was only after attempting to go through the probate process did we learn of the provision. The attorney interpreted the deed. The owners should've been told up front.
Joaquin Santos and Anne Marie Manibusan are administrators. Maria LG Cruz is co-administrator.

LOT 2094

Date of Meeting	11/03/09	Location	PB	
Recorded By	Natasha Ungata	Family	SANTOS	

INDIVIDUALS INVOLVED

Frank Santos (Representative)	688-5456	Francisco M. Santos	688-5456
128 Chalan Canton Tutujan, Sinajana, Guam 96910		128 Chalan Canton Tutujan, Sinajana, GU 96910	

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	YES		Probation Process Began	NO	
If No, what barriers are you being faced with in the process?					
The family is in the process of updating the heirs list because some original heirs have passed on.					
Surveyed?	YES	Subdivided?	NO		
Recorded?	YES	Plans to Subdivide?			
Attempt to record with	YES	When?	Depends on the map		

UTILITIES

Water	NO	Electricity	NO	Drainage	NO	
Phone	NO	Cable	NO			
Drainage Problems						
Utility Agency Problems		If Yes, which agencies?				
What issues?						

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	
At this time, no.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	
Yes, but it is arguable because the Tiyan Parkway was designed when Naval Air Station was occupying the property.	
Are you aware that there are no utility easements on your property?	YES
Yes, there are utility easements. There are telephones, electricity easements.	
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
It will decrease because more property will be taken away. The family will lose almost all of it.	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	NO
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	NO

No. Homes Occupied	0	

QUESTIONS, COMMENTS & NOTES

The property has been probated however, the family is in the process of updating the heir list because some family members have passed on.

The family has attempted to record the property with Department of Land Management but are unable to get a copy of the map.
The family is aware that the transfer deed included a provision for the Tiyan Parkway. However, it is arguable because the Tiyan Parkway was designed when the Naval Air Station was occupying the property.
There are utility easements in the property. There are telephone and electicity easements.
The family believes that since the government wants to build a road, the airport took most of the property. They should have used their property and not pick on private landowners. The airport is going to benefit from this road because of their growth; the traffic will be going through this new road.
The property belongs to our family. We have intentions of keeping a portion of the land in honor of their parents.

LOT 2097

Date of Meeting	10/22/09	Location	Galaide	
Recorded By	Natasha Ungata	Family	Perez	

INDIVIDUALS INVOLVED

Rosita Abuan	734-3895; 688-1373	Roberta Quichocho	734-5877; 482-0801; 482-
P.O. Box 21012 GMF Barrigada, Guam 96921		23 Chin Tun R. Baza Gardens, Yona GU	
Delfina Sta. Romana	646-9681; 635-1418		
P.O. Box 21012 GMF Barrigada, Guam 96921			

PROBATION, SURVEYING, AND RECORDING OF PROPERTY

Probated?	NO		Probation Process Began	YES	
If No, what barriers are you being faced with in the process?					
Paperwork is till with the attorney.					
Surveyed?	YES	Subdivided?	NO		
Recorded?	NO	Plans to Subdivide?	YES		
Attempt to record with [illegible]	YES	When?	Not sure. Subdividing will be an added cost to the surveyor.		
			Family members refuse to pay the costs.		

UTILITIES

Water	YES	Electricity	YES	Drainage	YES	
Phone	YES	Cable	NO			
Drainage Problems	NO					
Utility Agency Problems	YES	If Yes, which agencies?	GWA			
What issues?	Open manhole					

MISCELLANEOUS

Is there a general concensus among your family members as to what to do with the property?	YES
Some want to sell the land but some heirs do not agree. Two heirs are off island.	
Are you aware that the transfer deed for your property included a provision for the Tiyan Parkway?	YES
Are you aware that there are no utility easements on your property?	NO
Are you aware that there is no official zoning for your property?	YES
Do you believe that the Tiyan Parkway will increase or decrease your property values?	
Not sure	
Do you believe that the Tiyan Parkway is a good project for the people of Guam?	
Not sure	
Do you believe that your family will benefit from the Tiyan Parkway? Why or Why not?	
No because no family members are living on the property.	

No. Homes Occupied	5	

QUESTIONS, COMMENTS & NOTES

How much and how far exactly does the parkway affect the property?
What is meant by the question of utility easements? Currently there are concrete power poles running electricity to their homes.

Paul H
Abe AW
Rochelle

Abraham Wong
Division Administrator
US Department of Transportation
Federal Highway Administration
Hawaii Division
Box 50206
300 Ala Moana Boulevard, Room 3-306
Honolulu, HI 96850

12/18/09

Dear Mr. Wong,

I'm a private citizen, a retired military officer, a resident of Guam for more than thirty years, and not affiliated with or employed by the Government of Guam or any other agency.

I've followed for several years the progress of the control and ownership controversy over certain parts of the former Guam Naval Air Station, now known as Tiyan. As you are well aware, there have been egregious breaches of trust and law on the part of Government of Guam agencies and instrumentalities regarding illegal onward transfer of conferred and/or quit-claimed by the federal government to the government of Guam.

Four years ago, on 16 November 2005, I filed a formal complaint with the US Department of Transportation Inspector General. My complaint dealt primarily with civil rights violations and attendant violations of federal law in several respects, all concerning the onward transfer of returned/quit-claimed Tiyan properties to so-called 'original landowners'. The transfers were to members of a specific ethnic group to the exclusion of all others at no cost.

I followed up my original complaint several times over the years, and several times was assured that the issue was 'still under investigation'. Several months ago I received a final notice that the case was closed, as the government of Guam was now in compliance with law and agreements, or words to that effect.

The purpose of this letter is to advise you that the onward transfer of Tiyan properties by the Guam Ancestral Lands Commission continues. Further, East Sunset Boulevard, now used as a public route across Tiyan to facilitate traffic flow between the airport area and Route 8, is posted as 'private property' by the occupants of the former Naval housing units on the returned lands.

The posting of that public highway as private property is offensive and contradictory to Governor Camacho's assurances in his 3 March 2006 letter to you, subject: Quitclaim Deed between the US Department of Transportation and the Government of Guam, that East Sunset Boulevard is a public road owned by the government of Guam.

In a telephone interview approximately two weeks ago Mr. Lawrence Perez, GovGuam Director of Public Works, took the position that East Sunset Boulevard is in fact private property, by virtue of its transfer by the Ancestral Lands Commission to 'original landowners'.

The Marianas Variety newspaper earlier this week carried an article detailing demands by 'original landowners' that the airport general manager resign, as he has failed to support their demands regarding the Tiyan properties, and instead proceeded to honor agreements with the FAA and DOT.

You'll find enclosed a copy of a recent public notice of 'Deed Signing', which may involve some of the property at issue. You'll also find a photo of one of the 'private property' signs posted along East Sunset.

With all due respect, it must be nearly time to exercise some federal legal muscle to bring the government of Guam into line with its responsibilities and obligations.

Thanks for your time and attention.

Sincerely,

Arnold Davis, Major, USAF (Ret)
P.O. Box 4261, AAFB Br.
Yigo, Guam 96929
(671) 653-2970
adavis@guam.net

NOTICE OF DEED SIGNING, TITLE HEARING AND PUBLIC MEETING

The **GUAM ANCESTRAL LANDS COMMISSION (GALC)** will hold a **Deed Signing, Title Hearing and Public Meeting on Thursday, December 17, 2009, 9:00a.m.** at the GALC Office, Anigua. For special accommodations, please call 473-5263 or 67.

DEED SIGNING

Lot No	Municipality	Released Parcel	Awardee (s) / Grantee (s)
5176	Barrigada	Lot Naval Air Station Agana-12 (Parkway)	Francisco San Nicolas and Joaquina Iglesias San Nicolas

TITLE HEARING

Lot No	Municipality	Released Parcel	Ostensible landowner at Time of Taking
180-2	Piti	Apra Harbor Reservation B-2	Leon Cruz Ignacic

PUBLIC MEETING AGENDA

Copies of the Complete Agenda are available at the GALC Office, Ste.103, Anigua Commercial Bldg., Mon-Fri, between the hours of 9:00am-12noon and 1:00pm – 4:00pm

Eddie L.G. Benavente, Executive Director

This ad is paid for with Government of Guam funds.

TIYAN
EAST SUNSET BLVD

Mischler, James

From: Atkin, David
Sent: Saturday, January 09, 2010 9:58 AM
To: Yazawa, Jason A.
Cc: Fields, Reshawn; Atkin, David
Subject: FW: Tiyan Parkway Original Alignment

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Jason,
Please upload to administrative record, this is a public comment that's been received...

David Atkin
PB-Honolulu
atkin@pbworld.com
808-566-2205
1001 Bishop Street, #2400
Honolulu, Hawaii 96813

-----Original Message-----
From: John P. Duenas [mailto:jpduenas@dcaguam.com]
Sent: Thursday, January 07, 2010 1:49 PM
To: Mischler, James; Richelle.TAKARA@dot.gov; Ron.V.Simpson@faa.gov; carissa.unpingco@faa.gov; gordon.wong@faa.gov; zerepyrral@yahoo.com; joaquin.blaz@dpw.guam.gov; carloss@guamairport.net; eching@calvoclark.com; franks@guamairport.net; victorc@guamairport.net; rayt@guamairport.net; cguzman@galaidegroup.com; Wolf, Paul C.; Yazawa, Jason A.; Atkin, David; Roland, Jimmy; dkuchenbecker@guamattorneygeneral.com; 'Sandra Miller'; 'Joseph C. Manibusan'; monicaguzman@galaidegroup.com
Cc: Otero-Jimenez, Miguel A; French, Kevin; 'Paul Baron'; Fields, Reshawn; 'Ed Salanatin'
Subject: RE: Tiyan Parkway Original Alignment

Alternative 3 looks like a plan put together by a political committee. I suggest that the original proposal to have the Tiyan Parkway cross over Route 10A be reconsidered especially if the Alternative 3 alignment is emerging as the preferred alternative.

JOHN DUENAS

-----Original Message-----
From: Mischler, James [mailto:Mischler@pbworld.com]
Sent: Friday, January 08, 2010 6:25 AM
To: Richelle.TAKARA@dot.gov; Ron.V.Simpson@faa.gov; carissa.unpingco@faa.gov; gordon.wong@faa.gov; zerepyrral@yahoo.com; joaquin.blaz@dpw.guam.gov; carloss@guamairport.net; eching@calvoclark.com; franks@guamairport.net; victorc@guamairport.net; rayt@guamairport.net; cguzman@galaidegroup.com; Wolf, Paul C.; Yazawa, Jason A.; Atkin, David; Roland, Jimmy; dkuchenbecker@guamattorneygeneral.com; Sandra Miller; Joseph C. Manibusan; monicaguzman@galaidegroup.com
Cc: Otero-Jimenez, Miguel A; French, Kevin; jpduenas@dcaguam.com; Paul Baron; Fields, Reshawn
Subject: Tiyan Parkway Original Alignment

An action item from the 12/10/09 meeting between DPW, GIAA, FHWA, FAA, and PB was to determine the impact of following the originally proposed alignment for Tiyan Parkway along the cliff line and down the slope to Route 10A. The Alternative 3 alignment through the 'Donut Hole' was retained so that the cemetery could be avoided.

Please use the link below to download plan, profile, and cross sections for an alignment that follows the originally proposed alignment along the cliff line and down the slope to Route 10A.

The alignment has numerous deficiencies, including:
1. No access is available from airport property to Tiyan Parkway from Station 218+00 to the Route 10A intersection because of significant grade differential between airport property and the proposed roadway profile 2. A significant retaining wall is needed from Station 218+50 to Station 227+00 in order to avoid significant impacts to airport property. The wall is up to 55' high in cut. Economical MSE walls such as those proposed along a portion of the 'Donut Hole' are not feasible at this location because MSE walls are not a viable solution in large cut areas. Retaining wall alternatives would likely involve tied back soldier pile, soil nails and/or rock bolts, depending on specific site geotechnical characteristics.
3. This alignment introduces an additional signalized intersection with Route 10A in close proximity to existing signalized intersections for Home Depot and the airport. This will degrade level of service for Route 10A and for Tiyan Parkway

Thank you,
Jim Mischler
PB Americas, Inc.
671-646-6872

Subject: PB FTP Site File Download Notification
Importance: High

Parsons Brinckerhoff File Download Instructions:

A file that is too large to transmit via email has been made available to you for download. Please follow the link below to download the file in zipped format.

https://ftp.pbworld.com/GetFile.aspx?fn=402878522.zip

_____

NOTICE: This communication and any attachments ("this message") may contain confidential information for the sole use of the intended recipient(s). Any unauthorized use, disclosure, viewing, copying, alteration, dissemination or distribution of, or reliance on this message is strictly prohibited. If you have received this message in error, or you are not an authorized recipient, please notify the sender immediately by replying to this message, delete this message and all copies from your e-mail system and destroy any printed copies.

_____

A. B. Won Pat International Airport

Roundtable with FAA Officials

January 15, 2010
10:30 a.m.-1:30 p.m.
Hyatt Regency Hotel

1/15/2010

From air terminal to an International Airport 1967-2008

3,969 arrivals in 1967 to 1,179,246 in 2008

1/15/2010

Guam USA at a Glance

1967

- Guam's civilian and military population was about 70,000
- Visitors arrivals in May 1967 were 3,969
- Japanese arrivals in May 1967 were 1,845
- Pan Am offers 30-day excursion package GUM- MNL-HGK-TKO-GUM $378
- Cliff Hotel offers air conditioned rooms for $12 single and $16 double. Breakfast $1.50

2006

- Guam had a civilian and military population of 172,000 with 79,178 additional by 2014
- 2008 brought 1,179,246 visitors to the island
- Japanese arrivals in 2008 were 884,907
- There were 7,543 hotel rooms in 2008 for the 20 members of the Guam Hotel & Restaurant Association
- The average hotel room rate in 2008 was $116 with a high rate of $191 and a low rate of $103

1/15/2010

Economic Contributions

Source	Contribution	Elements
Core Tourism (2006)	$539 Million	Direct, Indirect, Induced
Airport(2006)	$1.7 Billion	Direct, Indirect, Induced

1/15/2010

Military Build Up Impact

- Population projected to increase by 79,178 in 2014
- Visitor arrivals to increase with market accesses to China and Russia (new markets)
- Greater investment in facilities infrastructure by public and private sector alike

1/15/2010

Guam Visitors Bureau 2008-2011 Goals *

*Dependent on air service development and infrastructure including Compliance with federal requirements on airport.

- Increase Visitor Arrivals
  - Nominal 1,450,000 (3%)
  - Moderate 1,530,000 (5%)
  - Aggressive 1,680,000 (7%)

1/15/2010

GIAA Airport Economic Indicators

- Influence business location decisions
- Attract new investments from U.S. and Overseas
- Retain and secure new business expansions
- Promote the export success of local businesses
- Attract high technology businesses
- Become regional centers of employment and training
- Partner regional businesses with global enterprises

1/15/2010

Guam Airport Authority Goals

(by number of companies)

Goal	Low	Moderate	High
Influence business location decisions	2	5	8
Attract new investments from U.S. and Overseas	3	4	6
Retain and securing new business expansions	6	8	10
Promote the export success of local businesses	2	4	6
Attract high technology businesses	3	5	7
Become regional centers of employment and training	2	10	18
Partner regional businesses with global enterprises	4	6	8

1/15/2010

Historical Overview of the Transfer of Lot Naval Air Station Agana to Government of Guam

Summary of Important Dates and Documents

September 29, 2000	Navy quitclaimed Parcels 1,2,3,4,5 and Fuel Booster Pump to GIAA
November 16, 2000	Federal Highway Administration quitclaimed Parkway, Corsair Ave., Mariner Ave. to gov Guam
April 25, 2001	Navy quitclaimed Donut Hole to GEDA
June 6, 2001	GEDA quitclaimed Donut Hole to GALC
June 6, 2002	PL 26-100 passed - Law deemed properties that do not associate with GIAA operations as "excess" and excess properties must be conveyed to GALC
June 21, 2002	GALC quitclaimed properties w/in Donut Hole to land claimants
December 2, 2004	PL 27-113 passed- Law transferred Tiyan properties under jurisdiction of DPW to jurisdiction of GALC
January 24, 2005	gov Guam quitclaimed Parkway properties to GALC
June 2, 2005	GALC quitclaimed Parkway properties to land claimants
April 19, 2007	GIAA and DPW entered into MOU

1/15/2010

Airport GUAM

1/15/2010

Extenuating Impacts to Airport

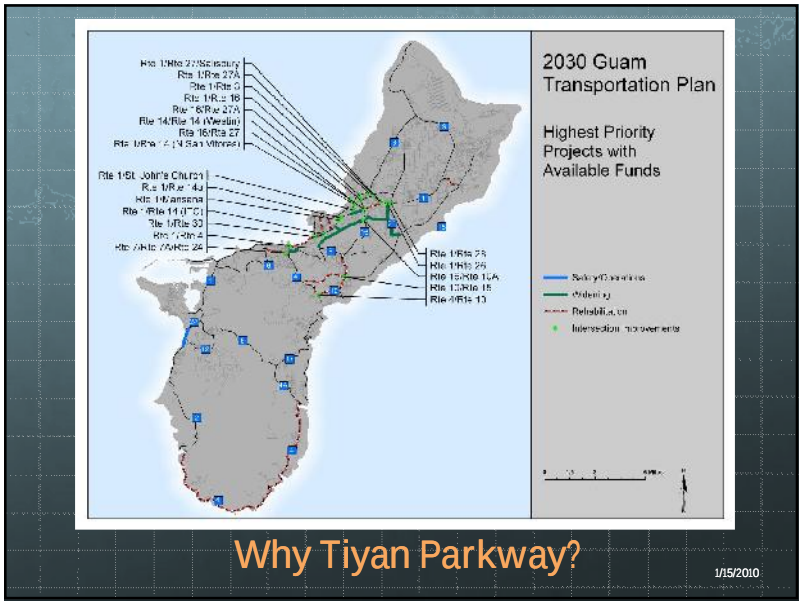
- Federal lands were released specifically for airport developments
- Local Government incorrectly transfers ownership to 14 original landowners' estates
- Agreement for airport land use with federal partners prior to execution of decisions
- Development projects' progress may be obstructed by either land reversion or loss of funding support

1/15/2010

Negative Ramifications - Airport Land Use

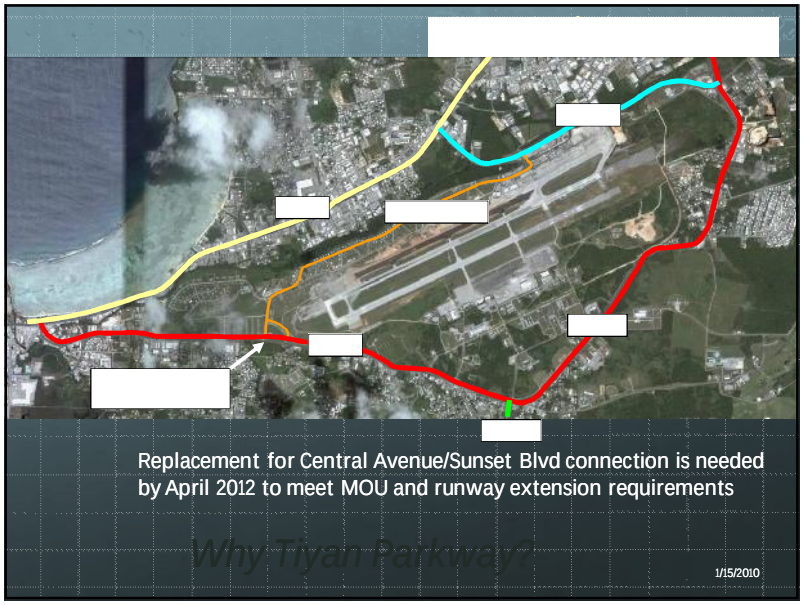
- Possible incompatible land uses in the Airport vicinity
- Conflict between proposed infrastructure improvements and airport development
- Contributions to all airport programs must be based on compliance with agreements

1/15/2010



Why Tiyan Parkway?

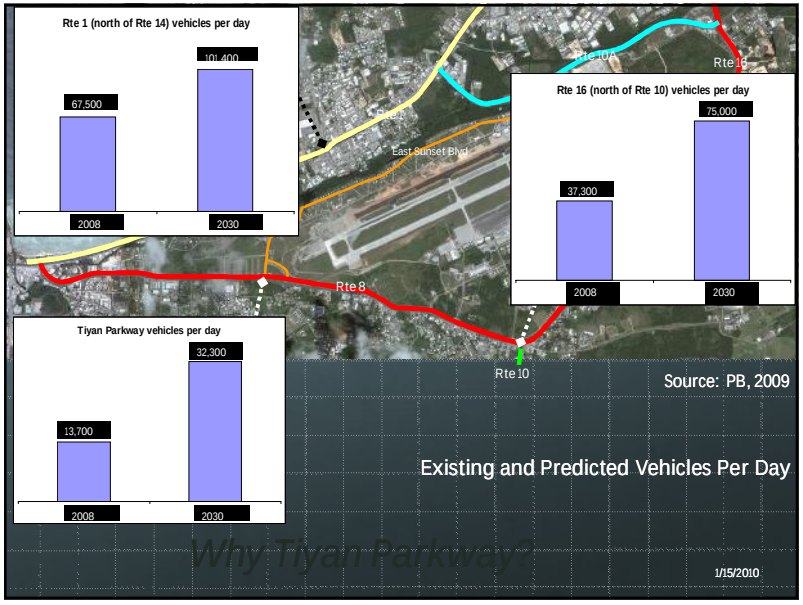
1/15/2010



Replacement for Central Avenue/Sunset Blvd connection is needed by April 2012 to meet MOU and runway extension requirements

Why Tiyan Parkway?

1/15/2010

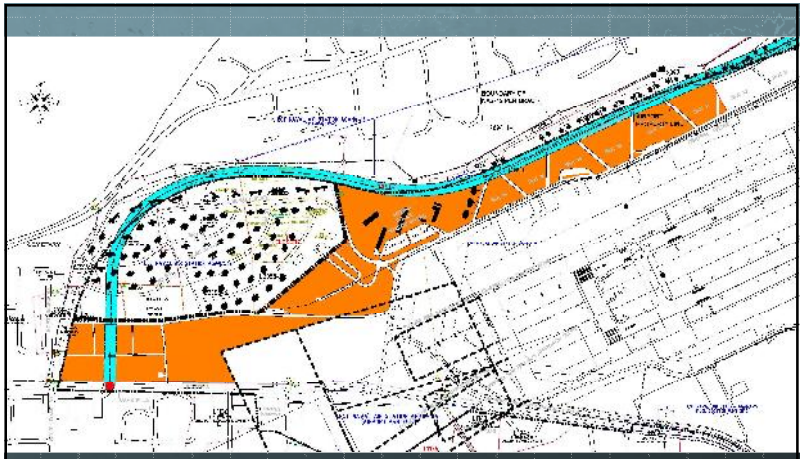


Source: PB, 2009

Existing and Predicted Vehicles Per Day

Why Tiyan Parkway?

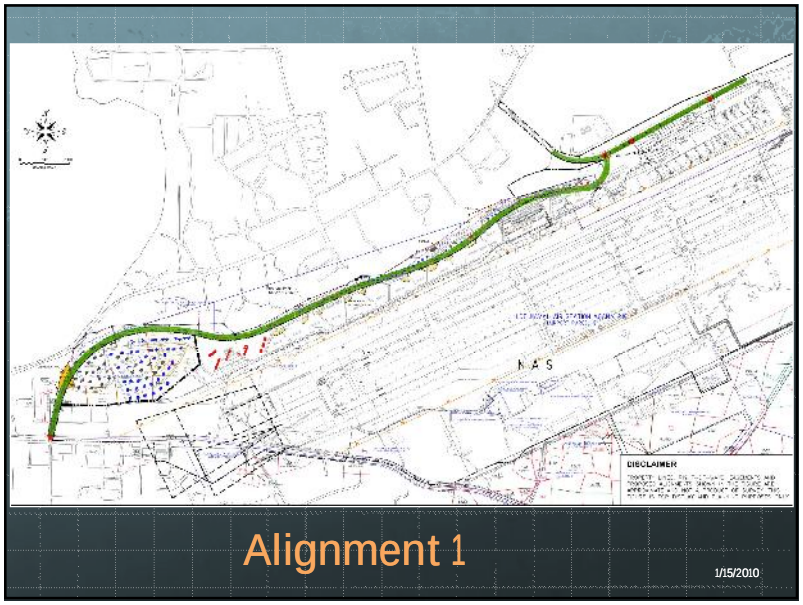
1/15/2010



Potential Economic Development

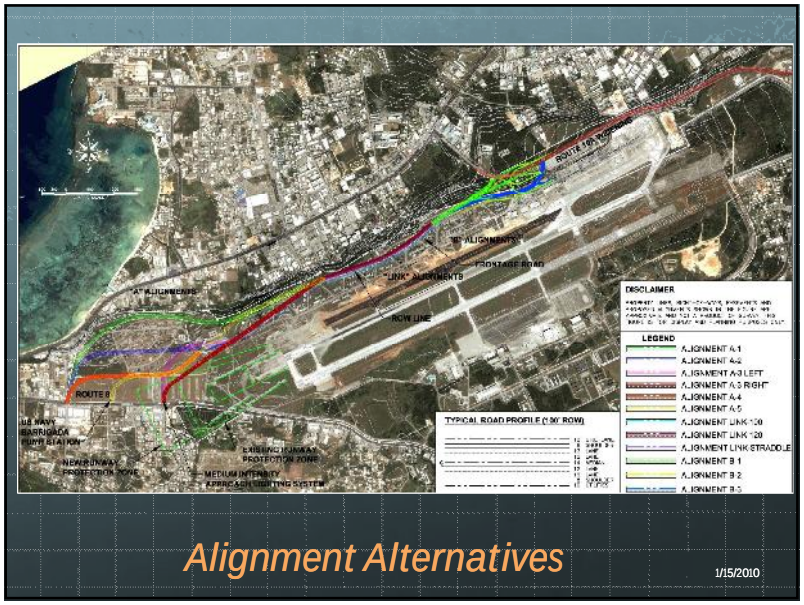
Why Tiyan Parkway?

1/15/2010



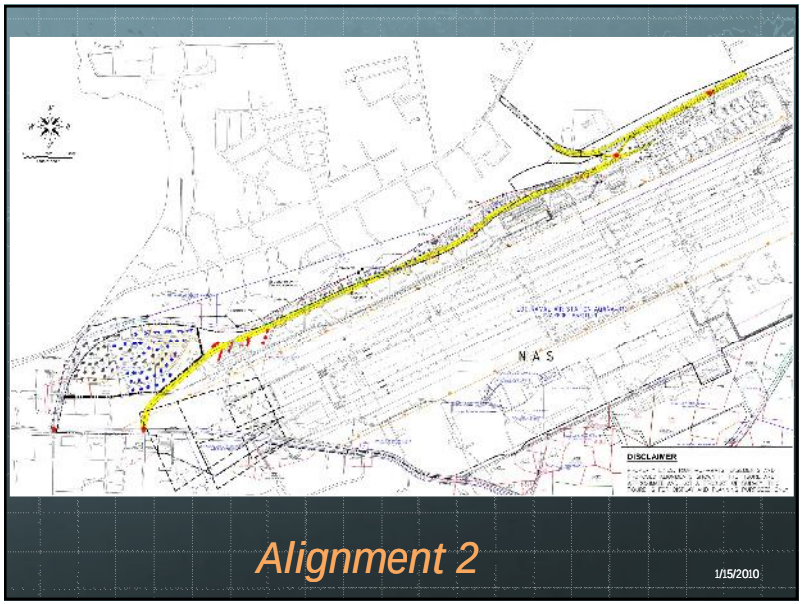
Alignment 1

1/15/2010



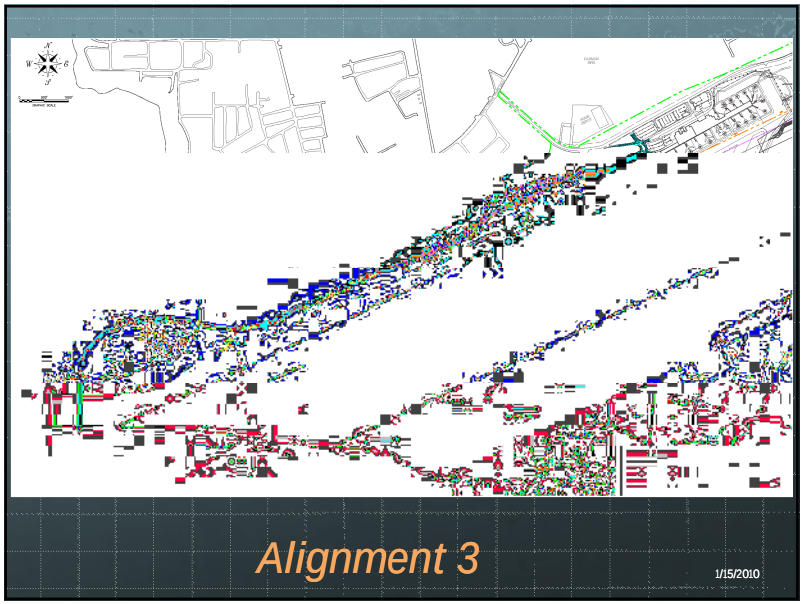
Alignment Alternatives

1/15/2010



Alignment 2

1/15/2010



Alignment 3

1/15/2010

Tiyan Landowner Issues

	Status Quo	With Tiyan Parkway
Land Title	Clouded, for some	Clear, marketable
Utility Easement	Unknown, for some	Defined
Reversionary clause	May be invoked	Removed on remnant parcels
Access	Uncertain, for some	Defined
Land Value	Variable, for some	Increased
Zoning	None	Established

Outreach Efforts to Date

- Group meeting with landowners/claimants was held in late August to present the concept, purpose and need of the Tiyan Parkway and to solicit general perspectives.
- A micro site was developed on the GTP website specifically for the group which included the proposed parkway, deeds of conveyance, etc.
- Subsequent individual meetings with landowners/claimants were conducted during October to establish a matrix of issues

Individual Meetings

- 13 families were interviewed for area known as NAS 12 and 5 families for NAS 13
- Meetings were digitally recorded and transcribed for the various landowners and claimants
- Information was gathered relative to:
  - Utilities (Water, power, sewer, communications)
  - Titles/Ownerships/Probates/Recordation Issues
  - Knowledge of transfer deed conditions
  - Perspectives and knowledge on the need and effects of the parkway on their land or claims

Results

- Landowners/claimants were generally all aware of the transfer deed conditions related to the parkway
- All agreed with the need for the Parkway but are dubious as to the benefits for their families pending final design
- All are enjoying utility services and are aware of the issues related to easements and GWA waterline
- 3 out of 13 claimants are experiencing minor drainage issues
- NAS 12 claimants are having issues with recording subdivision plans and clearing titles

Next Steps

- DPW/FHWA is presently setting up meetings with agencies to identify and solve potential barriers/issues:
  - Utilities (GPA/GWA)
  - Zoning and title clearances (BSP/DLM)
- Identification of potential displacement issues/considerations for EA (NAS 12)
- Identification of potential land acquisition requirements for NAS 13 (pending final alignment)
- Identification of net property sizes after parkway and property access has been calculated.

Obstacles to Continued Development

- A significant loss of revenues will occur as a result of further delays in resolving the Tiyan Parkway
- Interruptions or loss of revenues will significantly impair progress of airport business development projects
- The airport must be prepared for anticipated population and economic growth

Extenuating Impacts on Airport Developments

- Unfunded Airport Capital Improvement Program
- Cost of enplanement from $13 to over $40 per passenger.
- Non-compliance equates risking Guam's sole commercial airport license from the federal government
- CIP Funded with Government of Guam revenues will be an estimated $4.3 billion by 2023

Airport Business Development Losses

- A.B. Won Pat Airport needed its hub activities, i.e. passenger hub and air cargo hubs, is needed to supplemented development of Air Cargo Business
- There will be a loss of 1,100 airport jobs and $8 million in payroll earnings
- Potential off-Airport business development will be discouraged by the lack of transportation access
- An estimated $67 million in transportation contributions may be lost because of restricted access
- Projected economic contributions expected to be reduced by $276 rather than $291 million

Food for Thought (s)

- Land owners create a business case or offer
- Maintain status quo and stagnation- back to 1967 plus reversion of land to the federal government or loss of funding for both airport and highway developments
- Regression of A.B. Won Pat Airport to 1967 local air terminal

1/15/2010

Do We Want Progression or Regression?

1/15/2010

Si Yu'uos Ma'ase'
Thank You

Your presence was most appreciated
Guam International Airport Authority

1/15/2010

The Honorable
Felix P. Camacho
Governor

The Honorable
Michael W. Cruz, M.D.
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUPBLEKO
Andrew S. Leon Guerrero
Acting Director

Honorable Madeleine Z. Bordallo, Member of Congress
427 Cannon House Office Building
Washington DC 20515-5301

Re: Guam Laderan Tiyan Parkway

Dear Congresswoman Bordallo,

Buenas yan Hafa A'dai! The Department of Public Works (DPW) has been working with our partners at the Federal Highway Administration (FHWA), the Guam International Airport Authority (GIAA), the Federal Aviation Administration (FAA), and other stakeholders to move forward on plans for development and construction of a new roadway connecting Routes 8 and 10A along the western and northern sides of the A B Won Pat International Airport property. The roadway will be known as Laderan Tiyan Parkway and the facility will carry traffic that is currently using former Naval Air Station roadways known as Central Avenue and Sunset Boulevard. Central Avenue is within the airport's runway protection zone and must be closed to traffic before the airport can begin to use their runway extension that is currently under construction.

We appreciate your interest and assistance in this important project. A large number of potential alternative routes for this roadway were considered, and the early list was narrowed down to three alternatives. Alternative 2 was initially preferred by DPW and FHWA, but it was determined that a portion of the Alternative 2 alignment impermissibly crossed the newly enlarged runway protection zone that will result from the runway extension.

Alternative 3 is supported by GIAA, but significant public opposition to that alternative caused the DPW team to conclude that pursuit of Alternative 3 would require a more involved project development process with an Environmental Impact Statement instead of a more streamlined Environmental Assessment. If we move forward soon, construction of Phase 1 could be completed prior to the need to close Central Avenue for the new runway extension in 2012. Adverse public comment, legal challenges, and right-of-way acquisitions through condemnation which will result from pursuit of Alternative 3 will add several years and significant cost to the project development process.

DPW recently developed a modification to Alternative 2 (designated Alternative 4) to address the runway protection zone encroachment issue. Similar to Alternative 2, a substantial amount of the proposed roadway will be constructed on airport property. Significant construction cost savings result from implementation of Alternative 4 because it avoids the need for significant retaining walls along the Tiyan cliff line. The construction cost savings allow FHWA to fund acquisition of land needed from the airport property for this project. The new alternative offers a win-win for DPW, GIAA, and the citizens of Guam such as:

- DPW/FHWA has offered fair market compensation to purchase the easement needed to construct Tiyan Parkway on portions of airport property;
- The net present value that accrues to GIAA by DPW's construction and maintenance of Tiyan Parkway on portions of airport property can be shown to be as much as $31,600,000;
- GIAA/FAA approval of Alternative 4 will allow the project to move forward under the more streamlined EA process, thus minimizing the time impacts and making it possible to complete construction of Phase 1 prior to the airport's need to close Central Avenue.

We have attached routing plans, an alternative evaluation matrix, and estimated project costs for your information. If you have any questions, please feel free to contact me. ***Un Dankulu na Si Yu'us Ma'ase.***

Sincerely,

3/10/10

Andrew S. Leon Guerrero
Acting Director

Attachments

cc: The Honorable Felix Camacho, Governor of Guam
Richelle Takara, Territorial Representative, FHWA

MADELEINE Z. BORDALLO
GUAM

427 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-5301
(202) 225-1188
FAX: (202) 226-0341

DISTRICT OFFICE:
120 FATHER DUENAS AVENUE
SUITE 107
HAGÅTÑA, GUAM 96910
(671) 477-4272
FAX: (671) 477-2587

http://www.house.gov/bordallo

Congress of the United States
House of Representatives

NATURAL RESOURCES COMMITTEE
CHAIRWOMAN, SUBCOMMITTEE ON INSULAR AFFAIRS, OCEANS AND WILDLIFE
SUBCOMMITTEE ON NATIONAL PARKS, FORESTS AND PUBLIC LANDS

ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS
SUBCOMMITTEE ON MILITARY PERSONNEL

March 2, 2010

Mr. Andrew S. Leon Guerrero
Acting Director
Guam Department of Public Works
542 North Marine Corps Drive
Tamuning, Guam 96913

Dear Mr. Leon Guerrero,

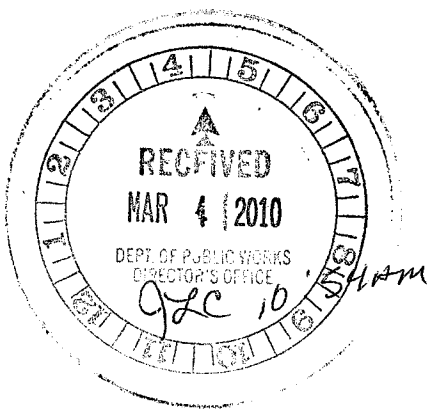
I write to respectfully request your assistance in providing my office with additional information on a proposed road alignment called "Alternate 2" Laderan Tiyan Parkway adjacent to the Guam International Airport and the modification to Alternate 2 that would address airport safety concerns. I am informed that the Guam International Airport Authority (GIAA), the Federal Aviation Administration (FAA), and the Guam Department of Public Works (DPW) have been working with various stakeholders on a proposal that will meet the goals of improving access to the Guam International Airport and alleviating congestion on Guam's north-south corridors. I am informed that a proposed alternative alignment to the current Alternate 2 routing option in Maite was developed to satisfy FAA's concerns regarding encroachment of the runway approach safety zone and that this alignment may meet many concerns of stakeholders.

The development of a detailed routing plan and associated costs will assist in identifying ways to bring resolution to this matter and begin construction on an important route that can alleviate traffic congestion on Guam. If you have any questions regarding this request, please contact my Legislative Director, Mr. Matthew Herrmann at (202) 225-1188 or by e-mail at matthew.herrmann@mail.house.gov. Thank you for your assistance with this request.

Sincerely,

Madeleine Z. Bordallo

MADELEINE Z. BORDALLO
Member of Congress



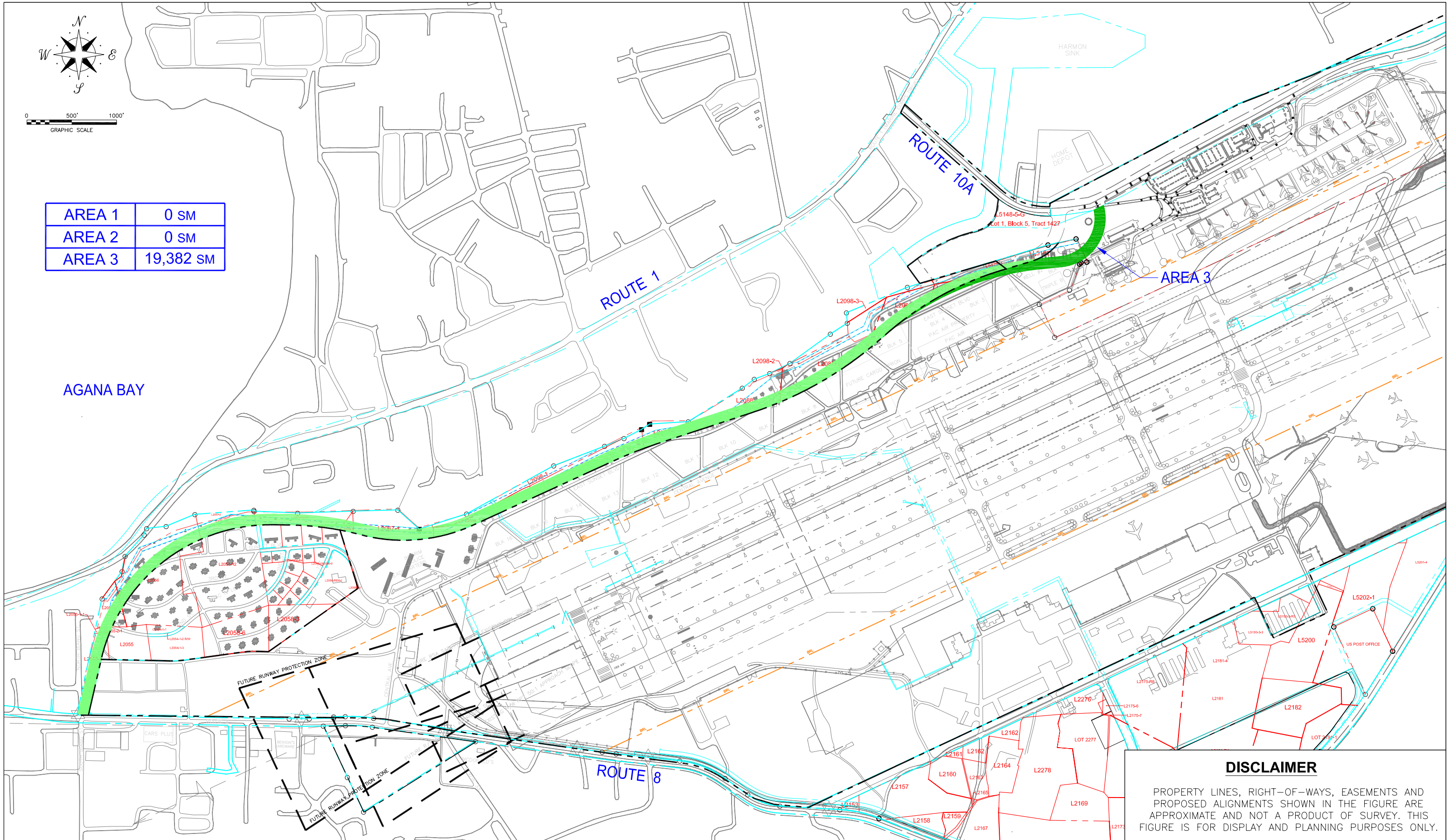
LADERAN TIYAN PARKWAY – PHASE 1[(1)]
ESTIMATED PROJECT COSTS FOR FEASIBLE ALTERNATIVES

TASK	ALTERNATIVE 3	ALTERNATIVE 4
Roadway, pavement, & drainage construction	$6,450,000	$6,450,000
Earthwork	$2,000,000	$640,000
Retaining walls	$3,300,000	-
Subtotal Construction	$11,750,000	$7,090,000
Contingency @ 25%	$2,940,000	$1,770,000
Environmental Clearance & Preliminary engineering	$1,480,000	$930,000
Construction engineering	$1,760,000	$1,060,000
Right of Way acquisition	-	$4,640,000[(2)]
Total Estimated Phase 1 Project Cost	**$17,930,000**	**$15,490,000**

[(1)]Phase 1 involves construction of a new two to five lane roadway from Route 8 to existing Sunset Boulevard, and makes use of existing Sunset Boulevard to carry traffic until increased traffic volumes warrant widening of the roadway to five lanes for the entire project length.

[(2)]Right of way acquisition costs includes property needed for Phase 2 that will save an additional $2,200,000 in Phase 2 costs by elimination of the need for three retaining walls in the Phase 2 project area.

LADERAN TIYAN PARKWAY – EVALUATION MATRIX					
CRITERION	NO ACTION	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4
Value of GIAA revenue producing property	N/A	Alternative is not feasible because of cultural resource impacts. If it was feasible, the net present value increase for airport property would be $21,500,000	Alternative is not feasible because of runway protection zone impacts. If it was feasible, the net present value increase for airport property would be $31,600,000	Minimal direct access to public highway system and utility corridor at NAS-13 area Net present value increase for GIAA property is $24,600,000	Direct access to public highway system and utility corridor for entire length of Parkway Net present value increase for GIAA property is $31,600,000
DPW/FHWA pays for right of way acquisition costs	N/A	No – Not a feasible alternative	No – Not a feasible alternative	Partial – Compensation to GIAA is justified in Area 2 by construction cost savings over the originally planned alignment (Alternative 1)	Yes – Compensation to GIAA is justified in Areas 1 & 2 by construction cost savings for Alternative 4 over the originally planned alignment (Alternative 1)
DPW/FHWA pays for planning design & construction costs	No – GIAA pays for design and construction of an internal roadway network to allow development of airport property without FHWA participation	No – Not a feasible alternative	No – Not a feasible alternative	Yes	Yes
Construction schedule	N/A	Not feasible – N/A	Not feasible – N/A	Earliest construction completion is 2015 based on Record of Decision on EIS in 2012. Possibly as late as 2020	Earliest construction completion is 2012 based on Finding of No Significant Impact from EA in 2010
Impact to Runway Extension opening	Use of runway extension delayed until GIAA conducts a traffic impact analysis for closure of Central Avenue to identify impacts and provide mitigation.	Not feasible – N/A	Not feasible – N/A	Use of runway extension delayed to accommodate the Parkway completion date or GIAA provides mitigation such as a temporary bypass road.	Completion date of Parkway is compatible with opening date of runway extension
Access to Route 8 from airport	No access to public or to GIAA	Not feasible – N/A	Not feasible – N/A	Access to everyone	Access to everyone
Access to NAS-13 Area	GIAA must provide and maintain access	Not feasible – N/A	Not feasible – N/A	DPW provides and maintains public access	DPW provides and maintains public access
Public Acceptance	Citizens will oppose closure of Central Avenue	Opposed by landowners of Area NAS-13 Landowners of Area NAS-12 acknowledge that road right of way is included in their deed of conveyance	Accepted by landowners of Area NAS-13 Landowners of Area NAS-12 acknowledge that road right of way is included in their deed of conveyance	Opposed by landowners of Area NAS-13 Landowners of Area NAS-12 acknowledge that road right of way is included in their deed of conveyance	Accepted by landowners of Area NAS-13 Landowners of Area NAS-12 acknowledge that road right of way is included in their deed of conveyance
Support from elected leadership	Unknown	Not feasible – N/A	Not feasible – N/A	Questioned by Aviation Oversight Committee Vice Chairman	Likely to be favored by elected leadership



DISCLAIMER

PROPERTY LINES, RIGHT-OF-WAYS, EASEMENTS AND PROPOSED ALIGNMENTS SHOWN IN THE FIGURE ARE APPROXIMATE AND NOT A PRODUCT OF SURVEY. THIS FIGURE IS FOR DISPLAY AND PLANNING PURPOSES ONLY.

PREPARED BY:

PB 100 YEARS

Guam International Trade Center
590 South Marine Corps Dr. Suite 808
Tamuning, Guam 96913
(671) 646-6872 Tel
(671) 646-6873 Fax

WINZLER & KELLY
CONSULTING ENGINEERS
194 HERNAN CORTEZ AVENUE
SUITE 213, HAGATNA, GUAM 96910
PH (671) 472-6792
FAX (671) 477-6229

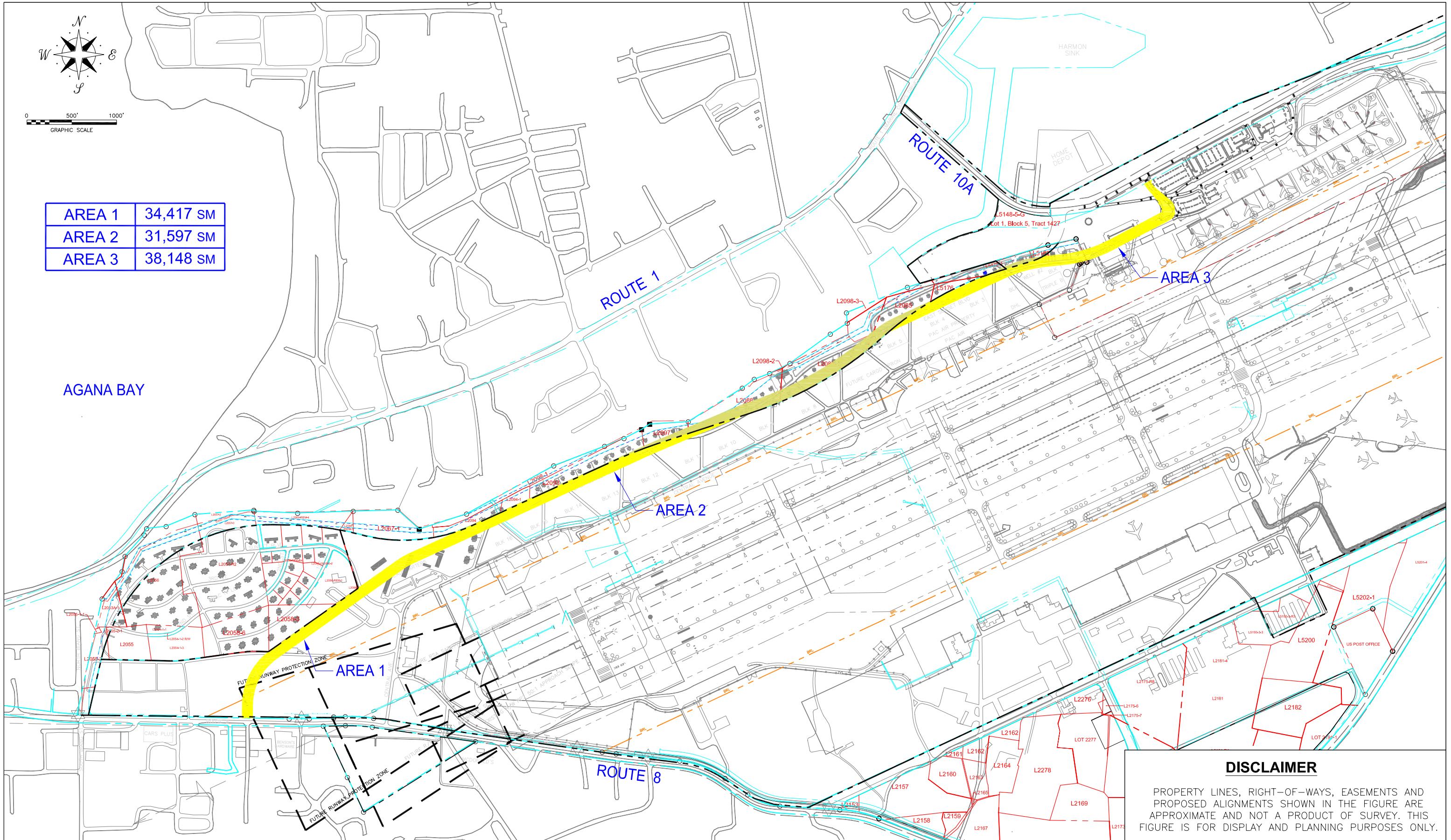
PREPARED FOR:

public works

THE GOVERNMENT OF GUAM
DEPARTMENT OF PUBLIC WORKS

TIYAN PARKWAY ALTERNATES

ALTERNATE 1



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SUITE 213, HAGATNA, GUAM 96910
PH (671) 472-6792
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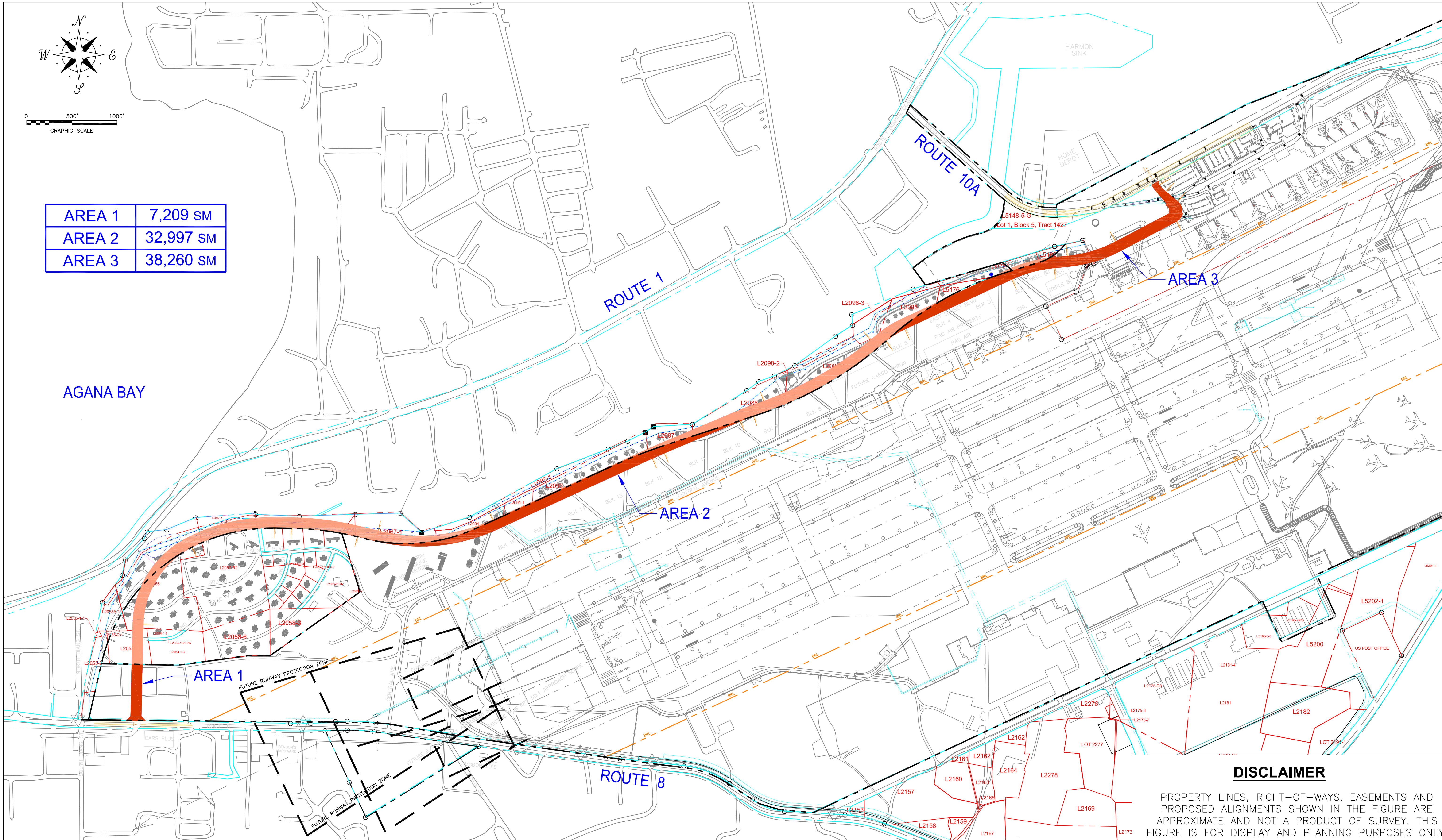
TIYAN PARKWAY ALTERNATES

ALTERNATE 2



AREA 1	7,209 SM
AREA 2	32,997 SM
AREA 3	38,260 SM

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590 South Marine Corps Dr. Suite 808
Tamuning, Guam 96913
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CONSULTING ENGINEERS
194 HERNAN CORTEZ AVENUE
SUITE 213, HAGATNA, GUAM 96910
PH (671) 472-6792
FAX (671) 477-6229

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TIYAN PARKWAY ALTERNATES

ALTERNATE 3

AREA 1	45,353 SM
AREA 2	20,930 SM
AREA 3	38,148 SM

0 500' 1000'
GRAPHIC SCALE

AGANA BAY

ROUTE 1

ROUTE 10A

ROUTE 8

AREA 1

AREA 2

AREA 3

FUTURE RUNWAY PROTECTION ZONE

FUTURE RUNWAY PROTECTION ZONE

HARMON SINK

HOME DEPOT

US POST OFFICE

L5148-5-C
Lot 1, Block 5, Tract 1427

L5200

L5202-1

L2276

LOT 2277

L2278

L2182

L2181

L2162

L2161

L2160

L2164

L2157

L2169

L2158

L2159

L2167

L2153

L2055

L2058-6

L2058-5

L2098-1

L2098-2

L2098-3

L2067-1

L5176

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PB 100 YEARS
Guam International Trade Center
590 South Marine Corps Dr. Suite 808
Tamuning, Guam 96913
(671) 646-6872 Tel
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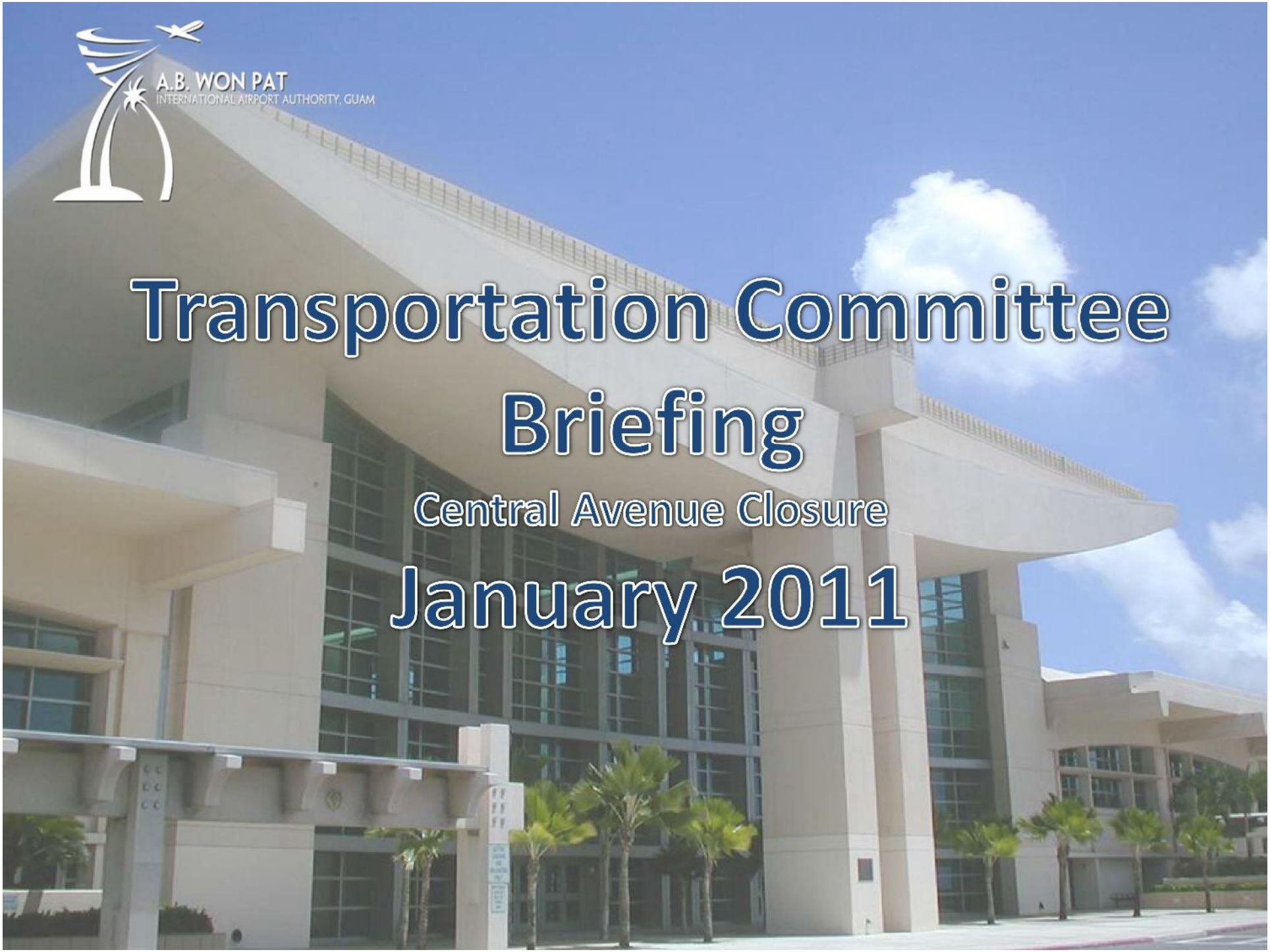
TIYAN PARKWAY ALTERNATES

ALTERNATE 4


A.B. WON PAT
INTERNATIONAL AIRPORT AUTHORITY, GUAM
Transportation Committee
Briefing
Central Avenue Closure
January 2011

Project: Airport Guam

Sets the “Standard in Excellence” as a world-class airport and premier aviation hub in the region

Development Milestones

2011

2007-2010
$57M in private enterprise develops cargo and express package facilities

2006 Airport granted DOT Authority to engage in cargo operations in Asia

Circa 1982

2000 US Navy Transfers 1,417 acres to GIAA through Public Benefit Transfer

1974 – 1995 Airport Operates under a Joint Use Agreement with the US Navy

Post WWII

1995 Base Closure
Airport Acquires Operating Certificate

1998 Completion of $242M Terminal Expansion

Circa 1967

A.B. WON PAT
INTERNATIONAL AIRPORT AUTHORITY, GUAM

Airport Operating Certification

FAA Issuing Authority

- To airports serving passenger-carrying operations of certain air carriers
- Establishes minimum safety standards
- Subject to FAR Part 139of Title14, Code of Federal Regulations (14 CFR Part 139).

Documentation and Organization

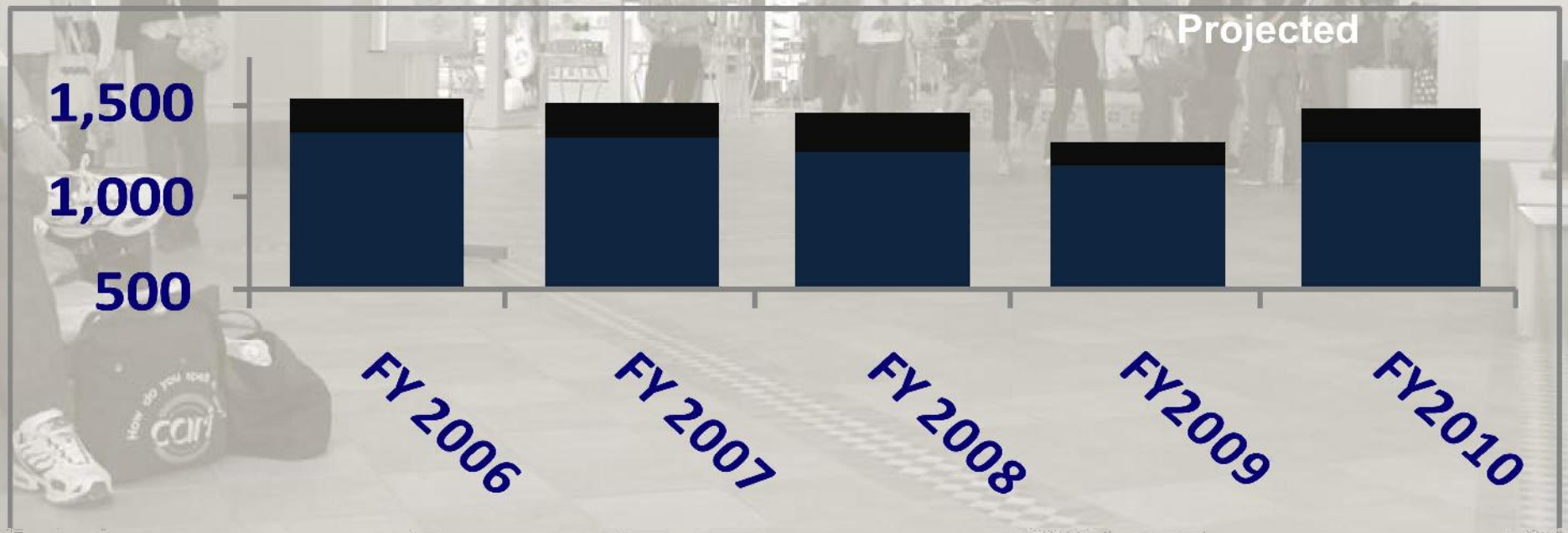
- FAA Approved Airport Certification Manual
- FAA Approved Emergency Response Manual
- FAA Approved Master Plan
- On Airport ARFF or Firefighting Unit Response

Inspections/Drills

- Runway, AOA Inspections
- Annual Table Top Exercise , Firefighting Response Drills
- Full Scale Exercises, Capital Improvement Program Inspections

Small Hub Airport Activity (FY '10)

- 2.9 million passengers
- 88,852 aircraft movements
- 11.6% increase in enplanements



Property Development

DHL Express Package Facility
- $1.3M
- 7,751k sq ft
- Operation 10/05

PacAir Properties Integrated Air Cargo Fac
- $27.5m
- 160k sq ft
- Operation 9/09

Triple B Multi-modal Warehouse
- $2.5m
- 22k sq ft
- DBO 8/2009

Property Development

MSA Intermodal Warehouse
- $1.5 m
- 22k sq ft
- DBO 09/2010

CTSI Logistics Air Cargo Warehouse
- $4.5m
- 35k sq ft
- DBO 12/2010

Airport Flight Kitchen
- $5m
  -$450K awarded by EDA for A&E
- 41k sq ft
- ETC 2012

$18.08M in Grant Funding for 2010

FAA
- Electrical upgrades (MAP
- Master Plan Update
- RWY 6L/24R Extension – Phase V
- Noise Mitigation

TIGER Funding under the ARRA
- RWY 6L/24R Rehabilitation

USEPA
- **Cleanup & Mitigation**

FHWA
- **DUI Enforcement**
- **Traffic Enforcement**

Economic Contribution

$1.7B P/A	-$ 291M Direct -$1.1B Indirect -$326M Induced
20,440 Employment	-2,490 on Airport -17,950 Support Industry
$628M Payroll	- $150M On Airport Payroll - $478M Support Industry - DSC Requirement: 1.25

Source: Jacobs Consultancy, May 2007

Capital Improvement Program

1 RWY Ext

Ext/Reh
ETC /10

2 Parallel Taxiway

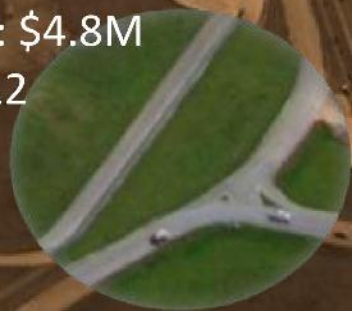
Phase II: $10.4m
100% Complete

3 RWY 24R Extension

Phase II: $15.9m
ETC 3/12

4 6L ILS Installation

Phase II: $4.8M
ETC 6/12



Infrastructure Improvement Projects

RWY 6L/24R Extension

- **Central Avenue & Connector Roads Encroachment**
  - Runway Safety Area (RSA)
  - Runway Protection Zone (RPZ)
  - Runway object free area (ROFA)
- **June 2012 Closure**
  - Grant Conditions: Full Federal Compliance
  - RWY Extension Completion Oct. 2012
  - RSA/RPZ/ROFA to be cleared/ graded 90 days prior

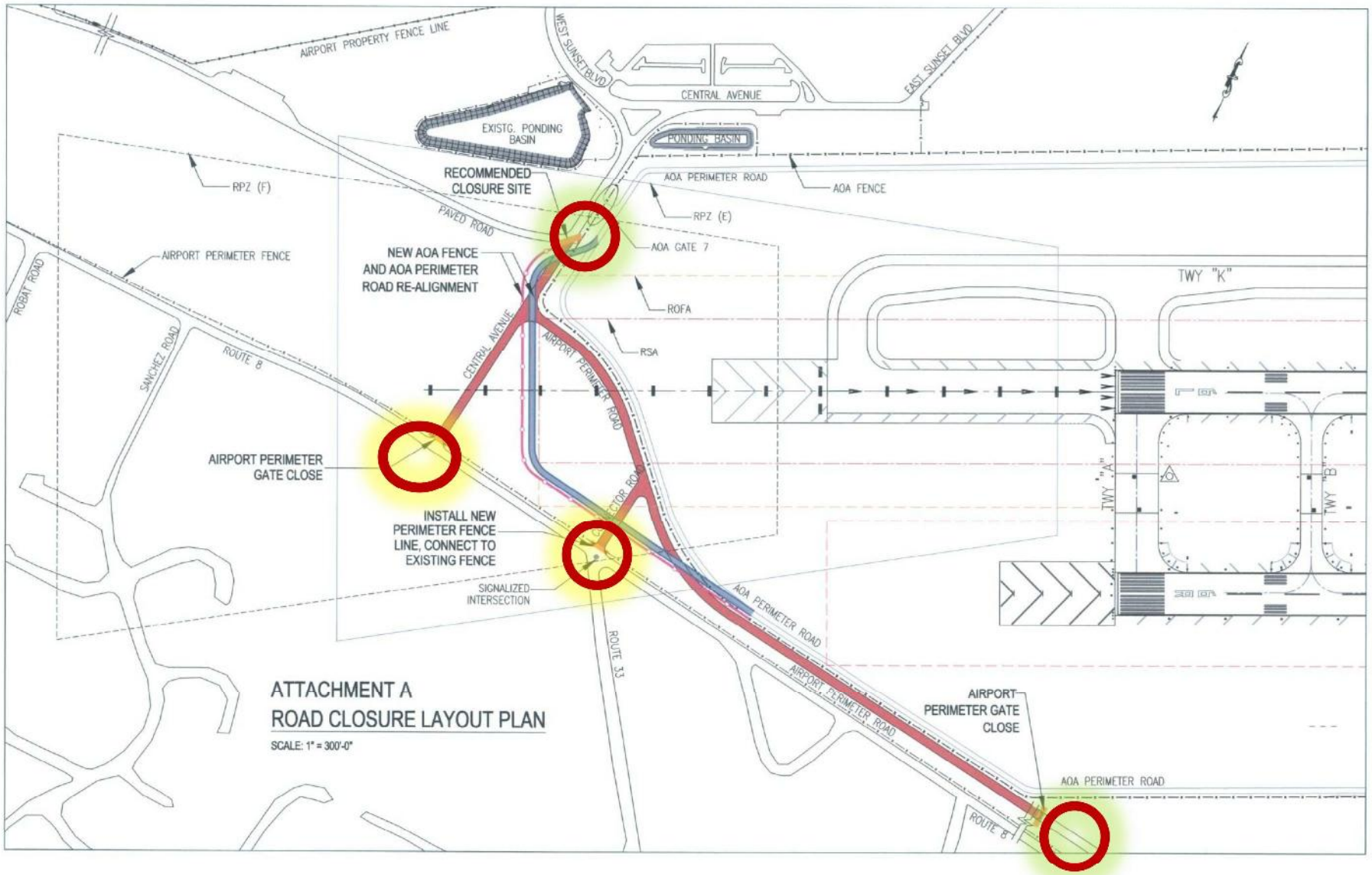
RSA/RPZ/ROFA Encroachment – Aerial Perspective

Resulting Scenario

Central Avenue Closure

- Ability to utilize the extended runway
- Secures Millions of Future Federal Funding
- Increases Capacity of Airfield
- Expands Air Service Operations
- Capitalizes on DOT Exemptions
- Supports DOT Application
- Supports Regional Distribution Model

Road Closure Points



Impact

Restricted Commute

From Route 8 to Terminal, Air Cargo and private residences

No Connection to Route 10 A to Route 1 & 16

Restriction on Public Traffic

13,700 Vehicles

Longer Drive time

Not Environmentally Friendly

No Access

Airport Business Impact

Restricted Access to Cargo Facilities

Flight Delays/Missed Flights

Reduces airport operations

Diminished Marketabiity

Added Congestion

Route 1 (Marine Drive)

Route 16 (Army Drive)

Route 8 (Purple Heart Highway)

Questions?

Thank You!

Member

News tip hot line:
Call 475-NEWS
e-mail: news@guampdn.com

LOCAL

Assignment Editor
Gaynor Dumat-ol Daleno, 479-0407
gdumat-ol@guampdn.com
Assistant Local News Editor
Amritha Alladi, 479-0440
aalladi@guampdn.com

Rate your level of support for the military buildup.

Very supportive	61.0%
Supportive	22.5%
Somewhat supportive	5.9%
Not supportive	10.6%

Total Votes: 725
As of 7:25 p.m., Jan. 22

Local News

Vice speaker wants funding clarification

The Legislature's vice speaker wants the Defense Department to clarify a statement made by the Navy's second-highest ranking official, that a billion dollars in projects hinge on the signing of the programmatic agreement. In a letter to both Navy Undersecretary Robert Work and Assistant Secretary Jackalyne Pfannenstiel sent yesterday, Vice Speaker Benjamin Cruz asked for clarification on the sums of money to be committed to support Marine relocation to Guam. "Only $567 million has been authorized for Guam construction projects" in the fiscal

New Tiyan road planned

Three options for how parkway will be constructed

By Steve Limtiaco
Pacific Sunday News
slimtiaco@guampdn.com

The Department of Public Works on Friday announced plans to start building a new, federally funded road into Tiyan.

It would replace the existing road, which passes near the end of the airport's recently lengthened runway.

The new road — which is being called the "Tiyan Parkway" — will enter Tiyan at Route 8, across from the Cars Plus automobile dealership, and connect to Sunset Boulevard, Public Works' documents state. Sunset Boulevard is the road closest to the cliffline, with returned ancestral land on one side and fenced airport property on the other side.

Documents state the airport also plans to demolish the buildings currently occupied by the Guam Police Department. The timing of that demolition is dependent on road construction.

Public Works on Friday announced it will accept requests for proposals for engineering services to design phase one of the four-lane road project, which will include a traffic light at the intersection of the parkway and Route 8. Outer lanes will be wider to accommodate bicycles, documents state.

The new road will replace the existing Central Avenue, which will be closed to accommodate airport runway improvements, documents state.

The winning contractor could be called upon to design the next phase of the parkway, connecting Sunset Boulevard to Route 10A, Public Works documents state, but there's no mention of the proposed path for that connection to what is commonly known as "Airport Road."

In Your Voice
Post your comment on
www.guampdn.com

Controversy

The Tiyan Parkway proposal sparked controversy among ancestral landowners several years ago because of concerns the government might need to condemn some of their recently returned property to build the new road.

Before the Tiyan cliffline — formerly the Naval Air Station Agana — was handed over to the local government and some of the property returned to ancestral owners, the Guam 2030 Highway Master Plan included a plan for the Tiyan Parkway to ease congestion along Routes 1, 8 and 16.

Former Public Works Director Larry Perez two years ago told the newspaper the project would cost between $10 million and $54 million, depending on which of three alternative paths is chosen through Tiyan.

The least expensive path would be a new road mostly on airport property, Perez said at the time. Another possible, and costlier, path would involve a combination of airport property and some of the property held by ancestral landowners.

The most expensive option, Perez said at the time, would be to expand the existing roadway, because it would mean reinforcing the cliffline.

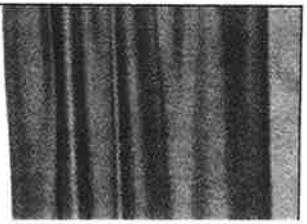
The first phase of the parkway will be built on airport property, documents state.

Interested contractors have until Feb. 15 to submit proposals.

'Empathy, not sympathy' sought

By Laura Matthews
Pacific Sunday News
llmatthews@guampdn.com

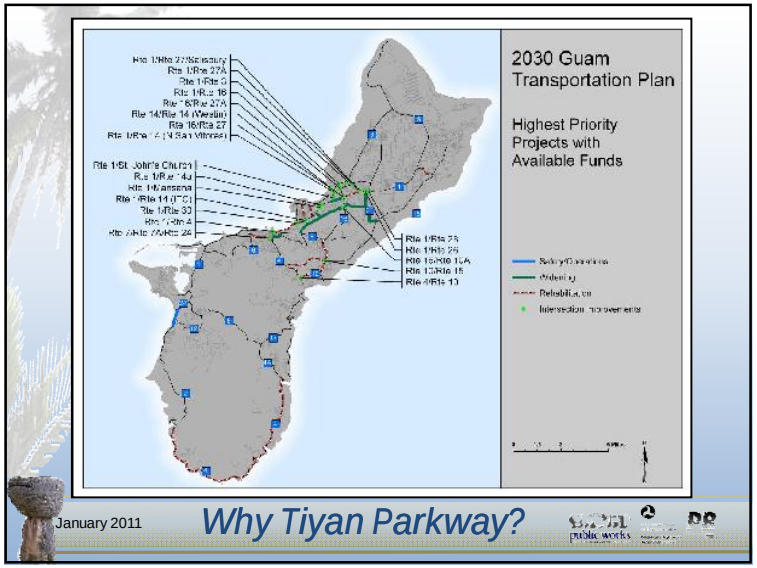
Dededo resident Lynn Tydingco and her brother, Andrew, were born with weak eye muscles. They've learned to cope over the years, and lead normal lives



Transportation Committee Briefing

Tiyan Parkway Development

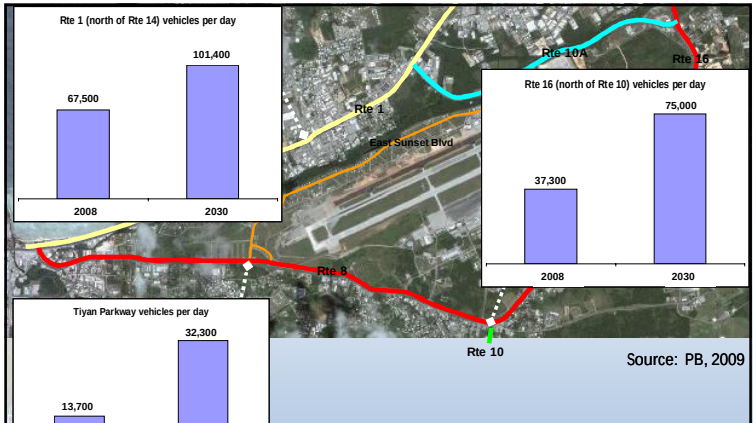
January 2011



January 2011 *Why Tiyan Parkway?*

Existing Roadway Network

January 2011 *Why Tiyan Parkway?*

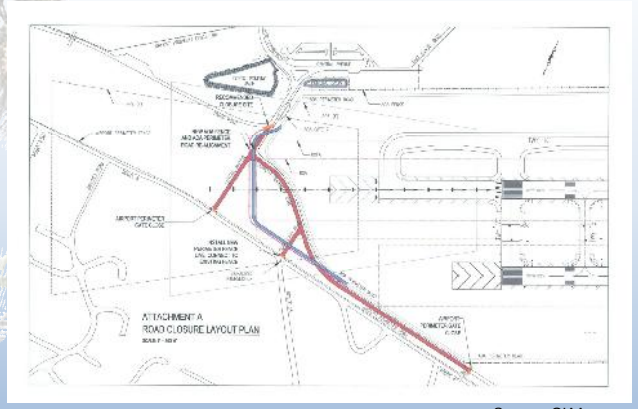


Source: PB, 2009

Existing and Predicted Vehicles Per Day

January 2011 *Why Tiyan Parkway?*

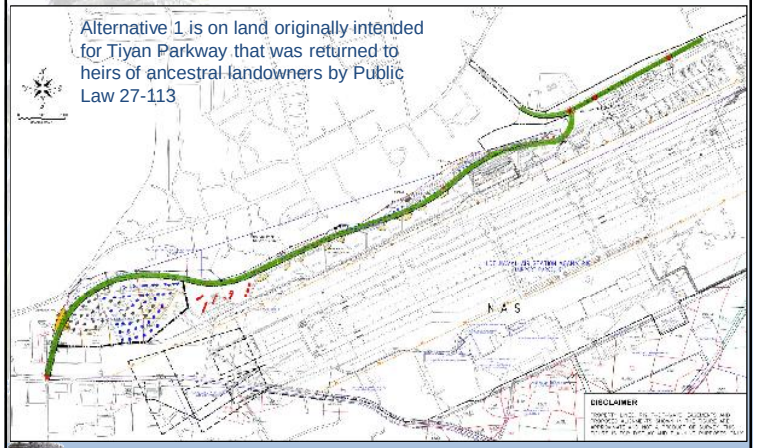
GIAA Road Closure Points

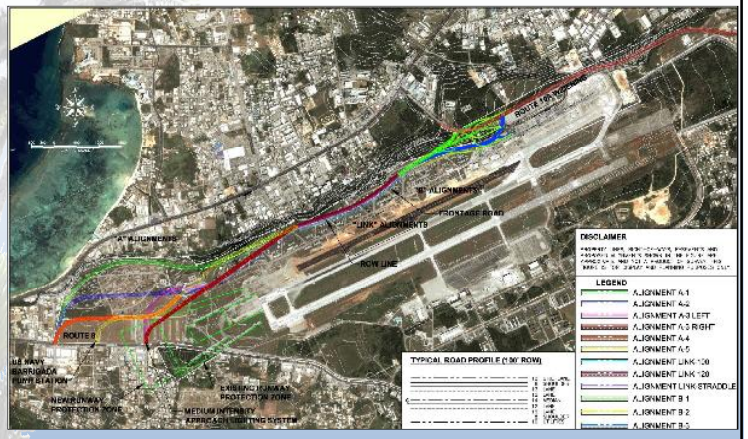


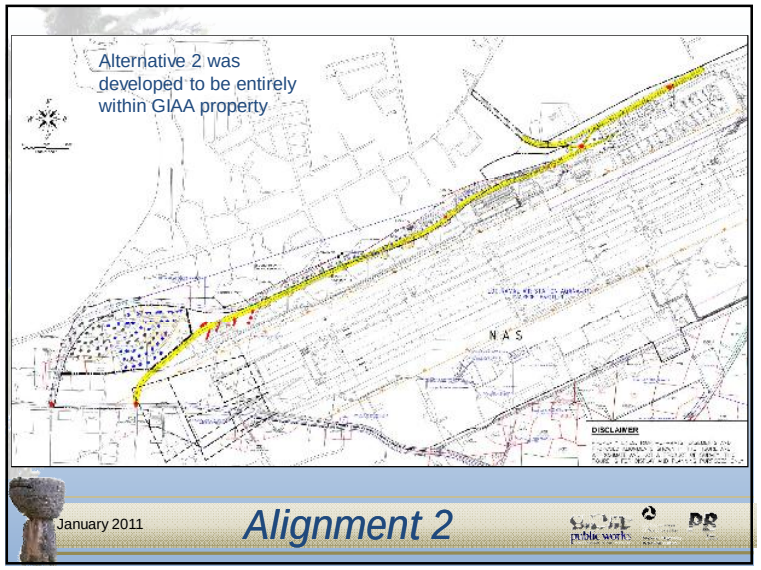
Source: GIAA

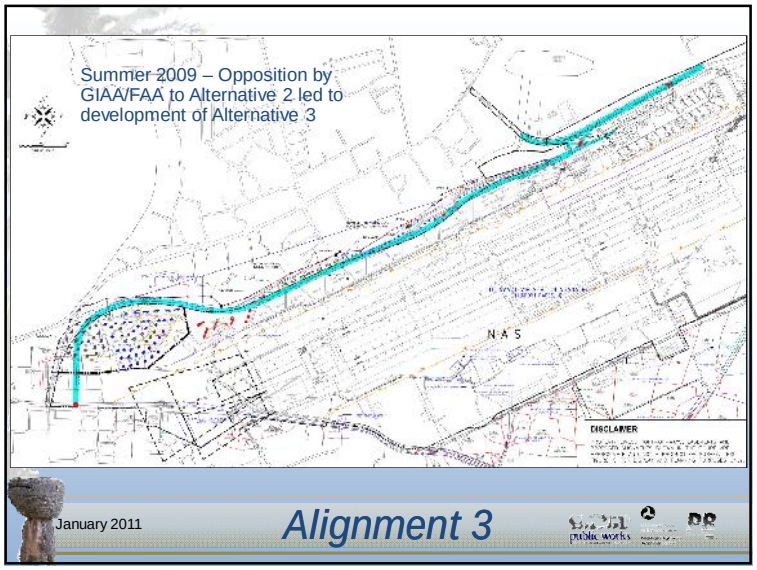
Need for Acquisition of Land for Construction of Tiyan Parkway

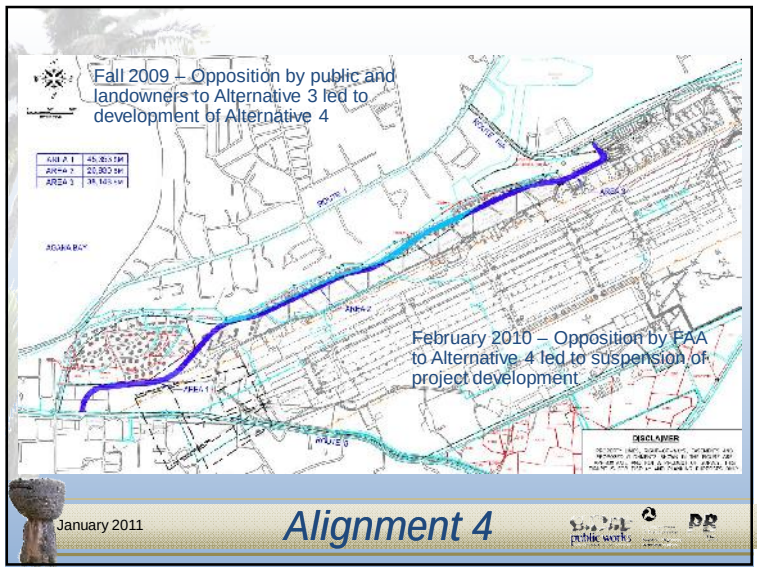
- December 2000 – Federal Government deeds lands to GovGuam for Tiyan Parkway
- January 2005 – GovGuam deeds lands intended for Tiyan Parkway to Guam Ancestral Landowners Commission for distribution to heirs
- DPW controls no land on which to construct a roadway to replace Central Avenue

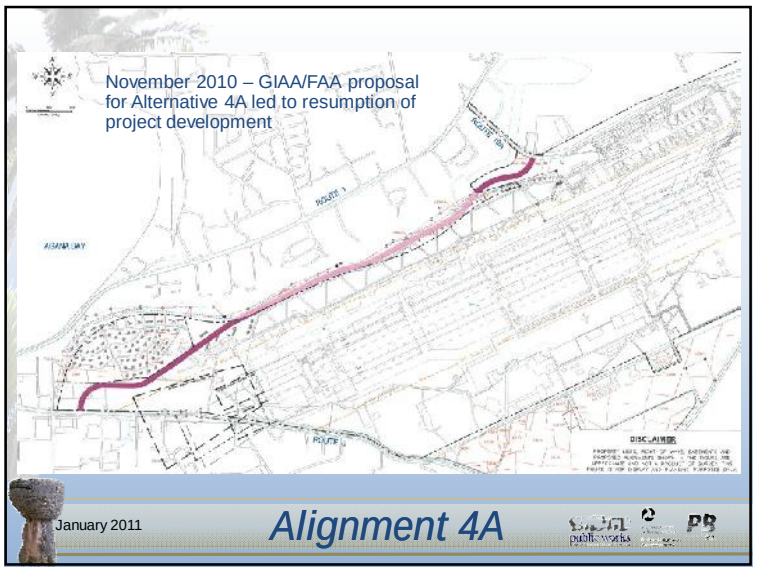




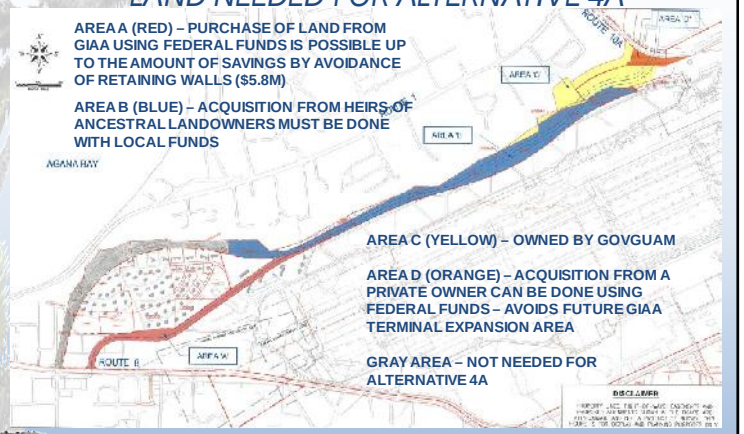

Alternative 2 was developed to be entirely within GIAA property
N A S
DISCLAIMER
January 2011
Alignment 2


Summer 2009 – Opposition by GIAA/FAA to Alternative 2 led to development of Alternative 3
N A S
DISCLAIMER
January 2011
Alignment 3


Fall 2009 – Opposition by public and landowners to Alternative 3 led to development of Alternative 4
February 2010 – Opposition by FAA to Alternative 4 led to suspension of project development
DISCLAIMER
January 2011
Alignment 4


November 2010 – GIAA/FAA proposal for Alternative 4A led to resumption of project development
DISCLAIMER
January 2011
Alignment 4A

LAND NEEDED FOR ALTERNATIVE 4A



Alternative 4A

Available Cliff-Line Acquisition Options

GIAA offered to sell an easement on property needed to construct Phase 1 from Route 8 to Sunset Boulevard contingent on DPW moving forward on acquisition of cliff line properties and making the remnant parcels available to GIAA. Options for acquisition of cliff line properties for Tiyan Parkway include:

1. *GovGuam take back the land by exercising deed restrictions*
2. *GovGuam take back the land but compensate cliff line property owners for relocation expenses*
3. *GovGuam trade other lands for the cliff line properties*
4. *GovGuam purchase cliff line properties at fair market value using local funds*

DPW requests input and guidance from GovGuam leadership:

Is construction of Tiyan Parkway supported by GovGuam Leaders?

Is acquisition of private land for construction of Tiyan Parkway supported by GovGuam Leaders?

Are GovGuam Leaders willing to appropriate necessary funding and/or land for exchange to facilitate acquisition of private property for construction of Tiyan Parkway?

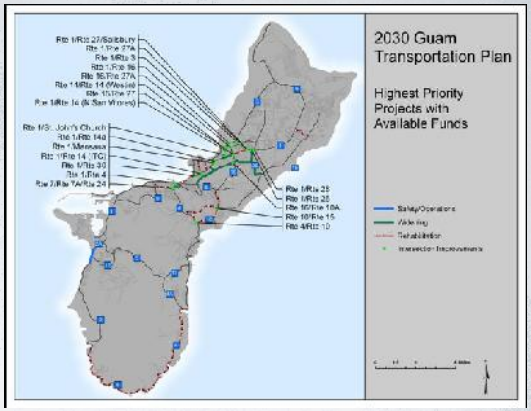
Thank You and
Si Yu'us Ma'ase!!

Tiyan Parkway Update

Joanne M.S. Brown
Acting Director

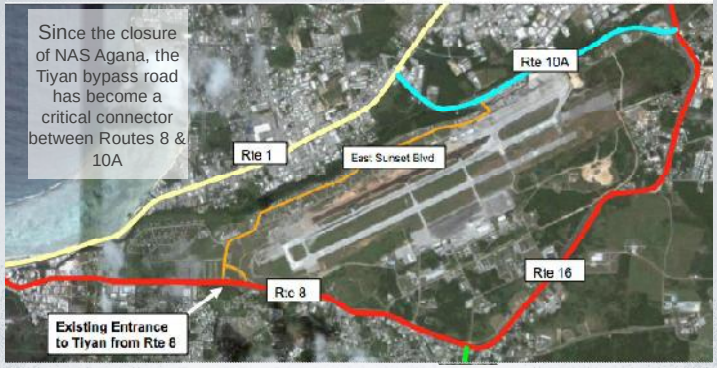
Joaquin Blaz
Acting Highway Administrator

2030 Guam Transportation Plan identified the need for Tiyan Parkway as a connector and reliever for arterial Routes 1, 8 & 16

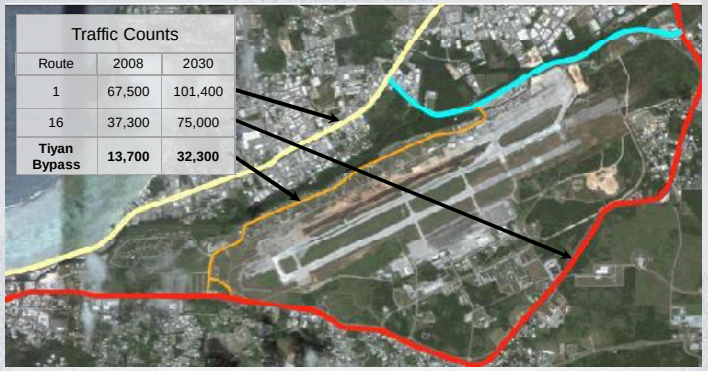


Why Tiyan Parkway?

Since the closure of NAS Agana, the Tiyan bypass road has become a critical connector between Routes 8 & 10A



Existing Roadway Network



Traffic Counts

Route	2008	2030
1	67,500	101,400
16	37,300	75,000
Tiyan Bypass	**13,700**	**32,300**

Current & Projected Traffic Counts

(Source: 2030 Guam Transportation Plan)

Tiyan Parkway Design Alternatives

- 2030 Guam Transportation Plan identified the Tiyan Parkway as a critical component for traffic flow along Guam's central roadways
- Planning for the proposed Parkway began in early 2008:
  - 45 variations of alternative routings for the parkway were explored
  - In late 2009 alternatives were narrowed down to four and discussions began in earnest with DPW and GIAA
  - However, there were a number of barriers that were discovered

Primary Parkway Barriers

- Airport Runway Protection Zone & Runway Safety Zone limits alternatives
- FAA opposes use of any airport property for non-airport uses
- P.L. 27-113 Returns the land intended for Tiyan Parkway to ancestral land owners
- DPW has no control of any property required for the various alternatives

Parkway Challenges

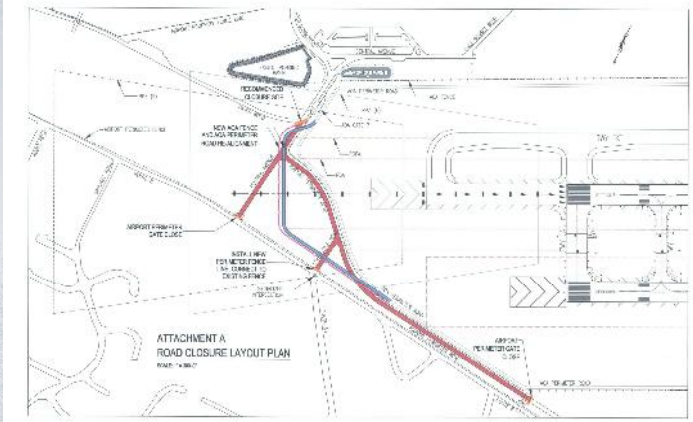
- GIAA/FAA has targeted June 2012 for closure of Central Avenue and October 2012 for opening of new runway.
- Due to delays on the preferred alternative and other considerations, Phase I of the Tiyan Parkway would not be completed until Summer of 2013 under any scenario.
- Design of any alternative cannot be completed until an Environmental Assessment has been completed.
- Environmental Assessment includes most viable alternatives, a "no-build" alternative and a "preferred" alternative

Environmental Assessment (EA)

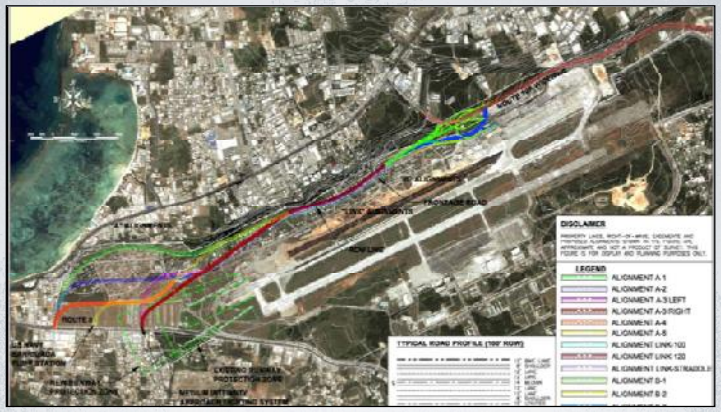
- An EA is a concise public document for which a Federal Agency is responsible that serves to:
  - Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding Of No Significant Impact (FONSI).
  - Aid an agency's compliance with the National Environmental Protection Act (NEPA) when no environmental impact statement is necessary or to facilitate preparation of an EIS when one is necessary.
  - Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

The Environmental Assessment Process

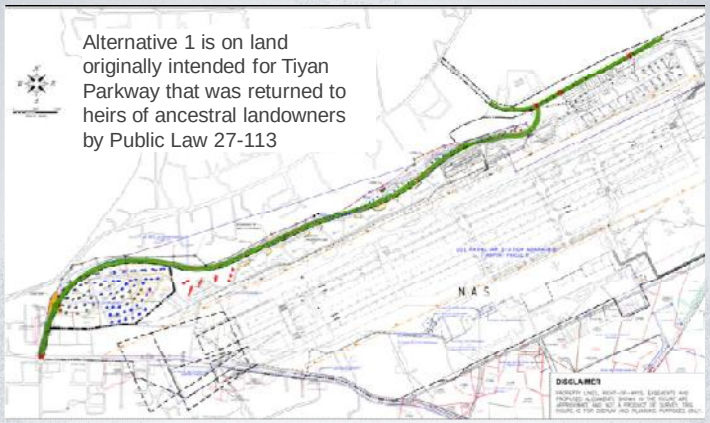
- Establish Purpose & Need
- Identify Alternatives
- We are here → Evaluate Alternatives
- 60 days → Publish Draft Environmental Assessment
- 30 days → Public Review & Comment Period
- 60 days → Final Environmental Assessment Document



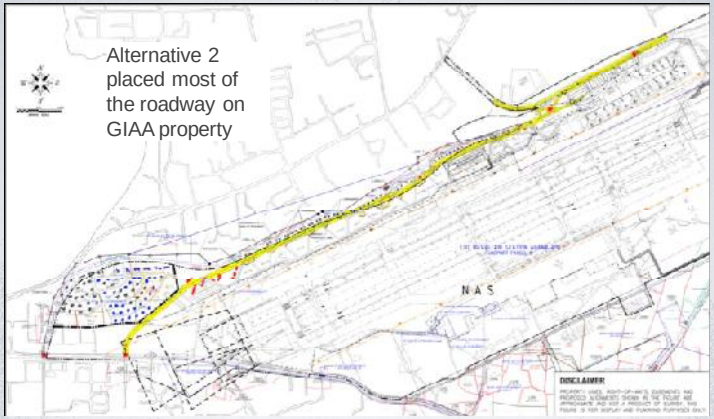
No-Build Alternative



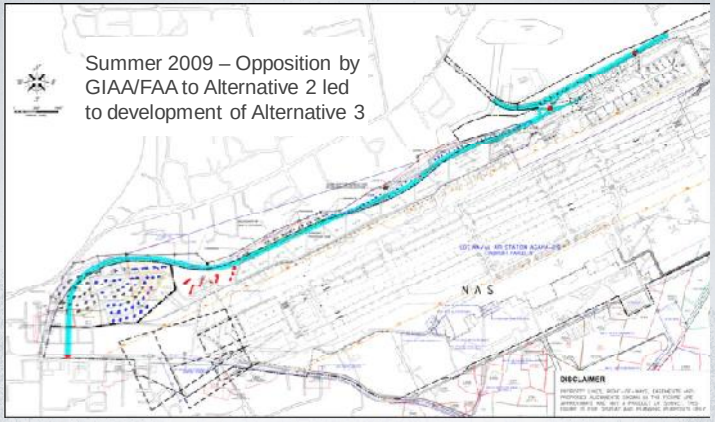
Alignment Alternatives



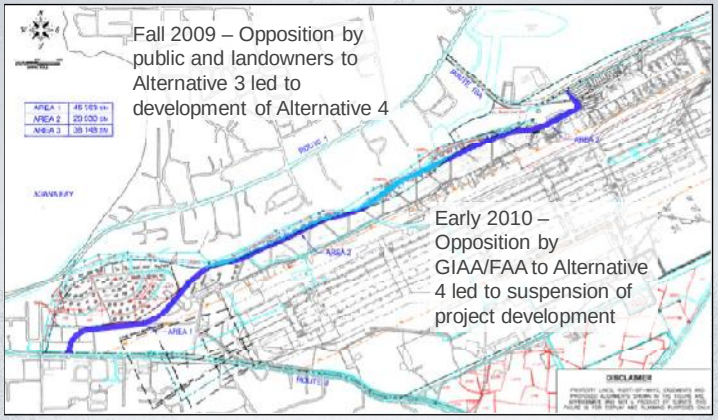
Alternative 1



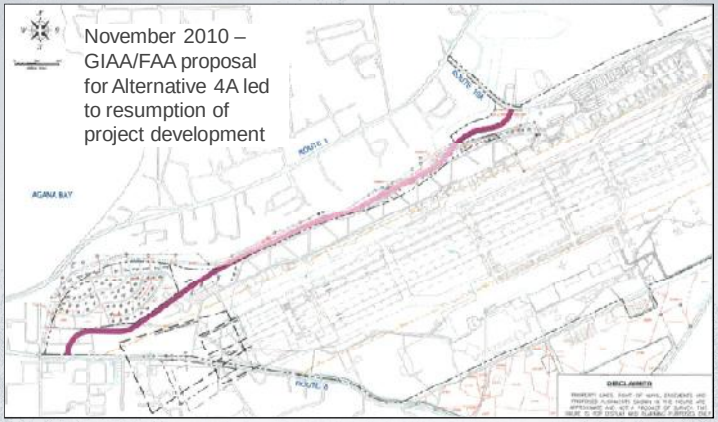
Alternative 2



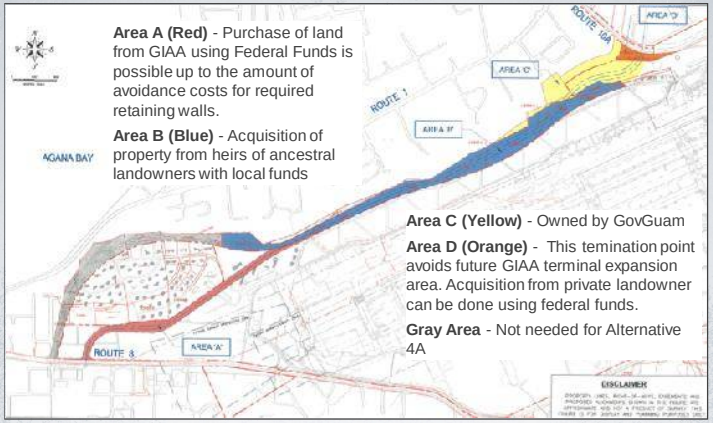
Alternative 3



Alternative 4



Alternative 4A



Land Requirements for Alternative 4A

Parkway Land acquisition options

- GIAA/FAA conditions for Alternative 4A
  - Purchase of easement from GIAA at fair market value
  - Acquisition of cliff line properties by DPW with remnant parcels provided to GIAA *(DPW counter proposed that GIAA purchase such properties with proceeds from the sale of GIAA property)*
- Land acquisition options for Phase 2 (along Sunset Blvd):
  - GovGuam takes back properties by exercising deed restrictions
  - GovGuam takes back properties but compensates affected landowners for relocation costs
  - GovGuam trades other real estate for required cliff line properties
  - GovGuam purchases cliff line properties at fair market value using local funds

Parkway Land Acquisition Options

- Time is of the essence - GIAA closure of Central Avenue is slated for 2012
  - Closure will force diversion of significant additional traffic onto Routes 1, 8, 10A and 16
  - Public will be adversely affected relative to travel time, congestion, fuel consumption and convenience
- Project Timeline and Budgetary considerations
  - 2012 deadline is challenged by lengthy EA process, design and construction requirements
  - Funding for Phase 1 may be through a GARVEE Bond issuance
  - Legislative & Executive Branch support is needed to realize land acquisition and funding requirements

Comments or Questions?

AGO gets revised GMH CEO contract

By Joy White
joy@mvguam.com
Variety News Staff

THE Attorney General's Office has announced that it has received the revised contract for the new Guam Memorial Hospital administrator's contract. The contract was received last week Thursday.

Earlier, the AGO returned the contract to GMH in mid-June for revisions. Revisions must be made before the new GMH administrator, Joseph Verga, can take charge of the position. Verga was supposed to begin on July 1.

Variety file photo

The new Guam Memorial Hospital administrator, Joseph Verga, was supposed to start work on July 1.

At this time, it is unclear when Verga will start. The contract must be reviewed then signed by Attorney General Lenny Rapadas before being sent off to the Governor's Office.

According to GMH board of trustees president Lee Webber, the new administrator cannot take office until the contract is approved because part of the contract was to provide temporary lodging allowance.

The original contract last May provided for an annual salary of $200,000 and a lodging allowance of $229 per day for up to 30 days.

More kids in custody for burglary of IMS

By Zita Y. Taitano
zita@mvguam.com
Variety News Staff

THREE more boys were taken into custody for the break-in at Inarajan Middle School about a week ago.

A 14-year-old boy was charged with eight counts burglary; eight counts conspiracy to commit burglary; eight counts criminal mischief; eight counts beyond control; and eight counts crimes against the community.

A 15-year-old boy was charged with burglary; guilt established by complicity; conspiracy to commit burglary; criminal facilitation; and crimes against the community.

The third teenager, also 15, was charged with burglary, conspiracy to commit burglary, and crimes against the community.

They are confined at the Department of Youth Affairs.

GPA announces lane closure

By Louella Losinio
louella@mvguam.com
Variety News Staff

THE Guam Power Authority has announced that the Route 15 entrance of Taitano Road toward the entrance of Mount Santa Rosa area, Yigo will be closed today from 9 a.m. to 3 p.m.

GPA line crews will be conducting hot line work on power lines and replacing wooden poles to concrete.

Meanwhile, there will be a scheduled power outage along Windward Hills Golf Course Club House in Talofofo on Wednesday, July 25 from 9 a.m. to 3 p.m.

GPA crews will be changing wooden poles to concrete poles as well as upgrading line hardware and conductors to improve service quality in the area.

According to GPA, the outage and lane closures are necessary as a safety precaution while crews are working to improve power service to customers.

National disaster workshop today

By Zita Y. Taitano
zita@mvguam.com
Variety News Staff

THE Federal Emergency Management Agency and the Guam Homeland Security/Office of Civil Defense are hosting a National Disaster Recovery Framework Rollout and Workshop today.

The workshop is from 9 a.m. to 3:30 p.m. at the Sheraton Laguna.

NOTICE OF PUBLIC MEETING

The Department of Public Works is soliciting public comments on the recently completed **Tiyan Parkway Environmental Assessment**. The Environmental Assessment presents information on the purpose and need for an arterial roadway connecting Route 8 to Route 10A along the western and northern side of the A.B. Won Pat International Airport, along with a presentation of alternatives, recommendations for a preferred alternative and environmental effects that would result from construction of the Tiyan Parkway.

THURSDAY, JULY 26, 2012
6 P.M. - 8 P.M.
TAMUNING COMMUNITY CENTER

Comments may be submitted by mail to Tiyan Parkway EA c/o Parsons Brinckerhoff, 590 South Marine Corps Drive, Suite 806 Tamuning, Guam 96913 or by email at helpdesk@guamtransportationprogram.com ATTN: Tiyan Parkway EA. Comments are due no later than 5 p.m. on August 13, 2012.

A copy of the Environmental Assessment is available for review at the Nieves M. Flores Memorial Library in Hagåtña or can be downloaded at www.guamtransportationprogram.com.

For more information contact
Guam Transportation Information Center
Telephone: 646-3452 Fax: 646-3449
Email: helpdesk@guamtransportationprogram.com and highways@dpw.guam.gov · Website: www.guamtransportationprogram.com

Eddie Baza Calvo
Raymond S. Tenorio
public works

GUAM EDUCATION BOARD

P.O. Box DE
Hagåtña, Guam 96932
Telephone Numbers: (671) 300-1627/1629
Facsimile Number: (671) 472-5001
Website address: www.gdoe.net/geb

FRANCES E. SANTOS, Chairman

PUBLIC NOTICE
Guam Education Board
REGULAR MEETING
Tuesday, July 31, 2012 • 6:30 PM
B.P. Carbullido Elementary School Cafeteria, Barrigada

AGENDA

I. **Meeting Call to Order**

II. **Roll Call of Members**

III. **Public Participation (BP 125.6)** - time limit 5 minutes

IV. **Approval of Minutes**
1) Minutes of June 20, 2012 Regular Meeting

V. **Receipt of Communications and Reports**
1) Superintendents's Report and Communication
2) Head Start Program Director's Report

VI. **Unfinished Business**
1) High School Instructional Schedule for SY2012-2013 (AG's Opinion)
2) Union Decertification; Update

VII. **New Business**
1) Honors Band Course, Request for District Implementation
2) Okkodo Expansion Project
3) DOE Calendar for School Year 2012-2013, Proposed Revisions
4) Proposed Double Session, George Washington High School
5) Proposed Resolution, Education Financial Supervisory Commission

VIII. **Announcements and Adjournment**

Individuals requiring special accommodations, auxiliary aids or services may contact Joyce Kaneshiro, Admin. Officer at 300-1627.

This advertisement was paid by GDOE local funds.

Marianas Variety-Guam Edition is circulated by home and office delivery, consignments, and vending machines throughout Guam, as mail delivery to the Federated States of Micronesia, the Marshall Islands, South Pacific, Hawaii, Japan and the continental U.S. Daily coverage can also be read from our website **www.mvguam.com.**

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Hafa Adai!

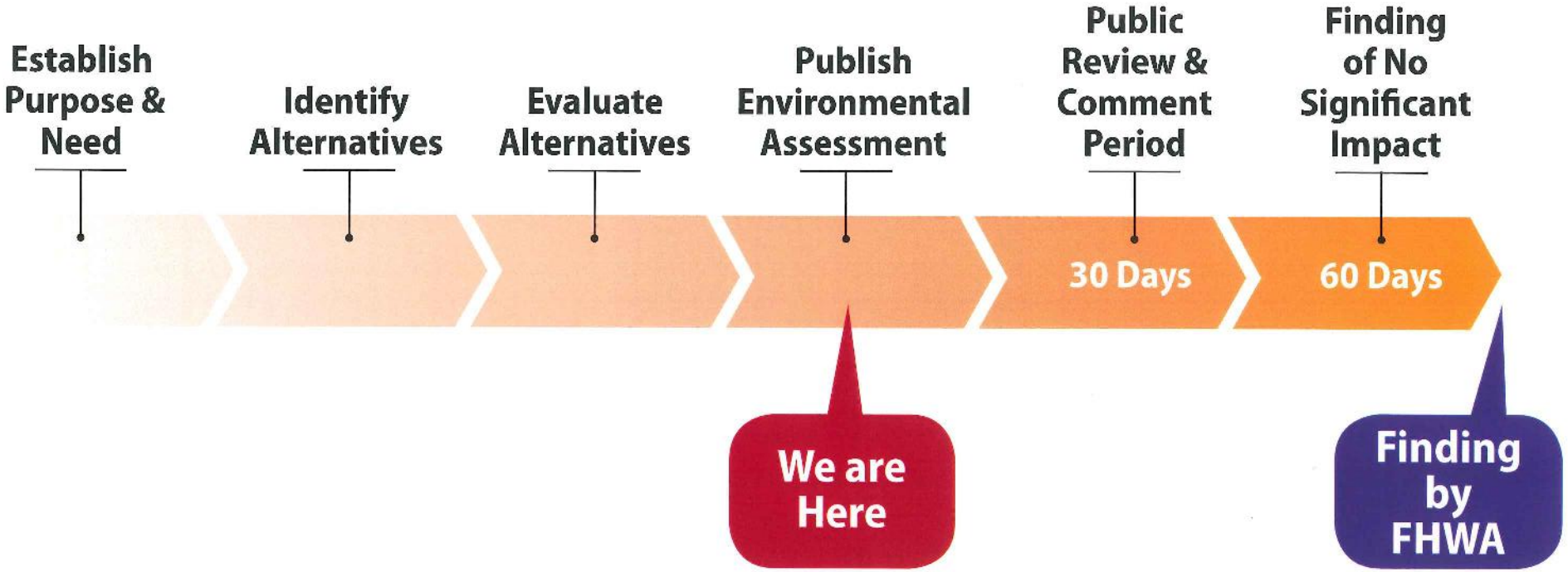
Welcome to the

TIYAN PARKWAY

Public Information Meeting

public works
DIPATTAMENTON CHE'CHO PUPBLEKO

Environmental Analysis Process



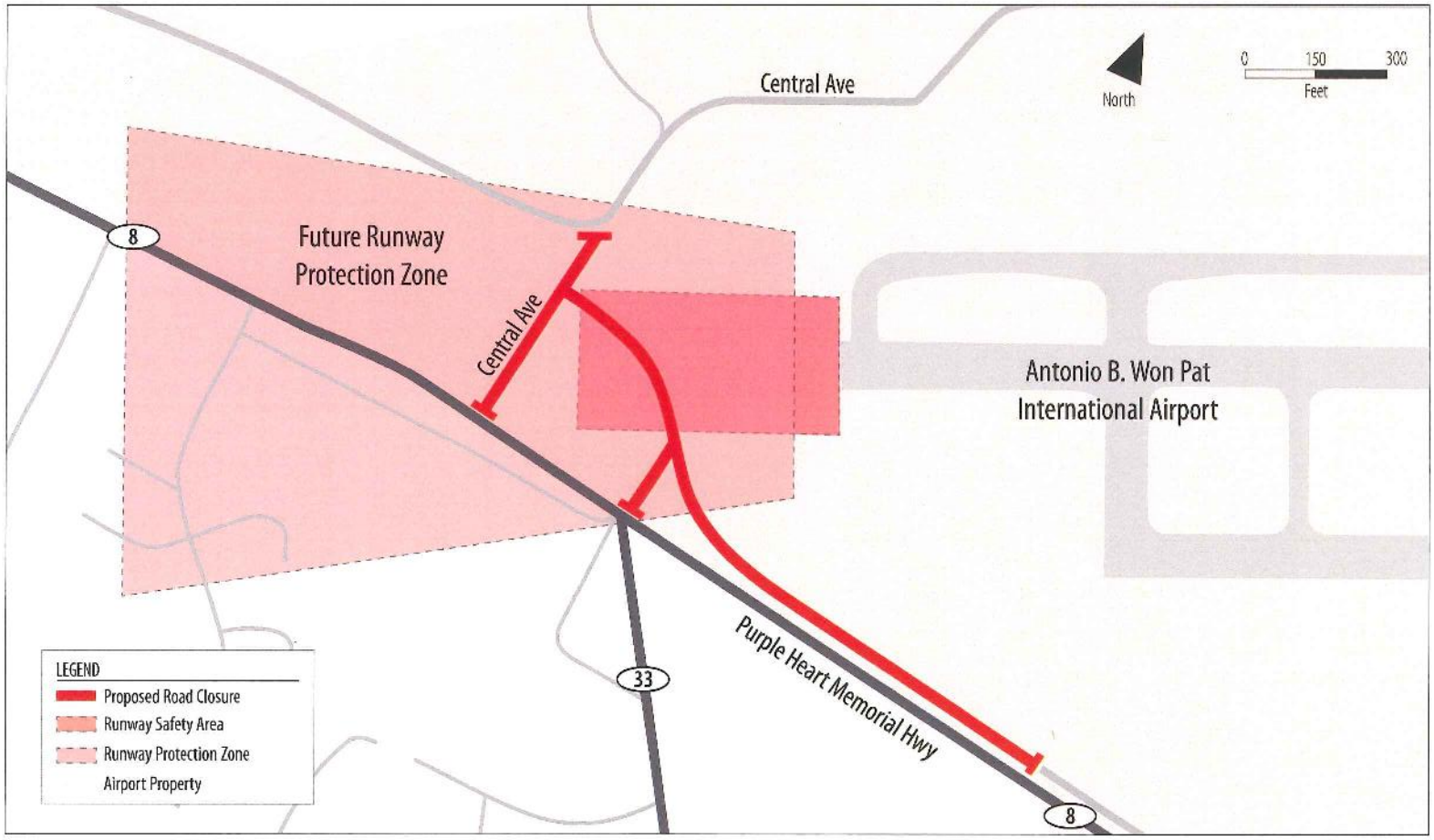
Purpose and Need

The Guam 2030 Plan identified a need for an improved four-lane roadway connection between Routes 8 and 10A

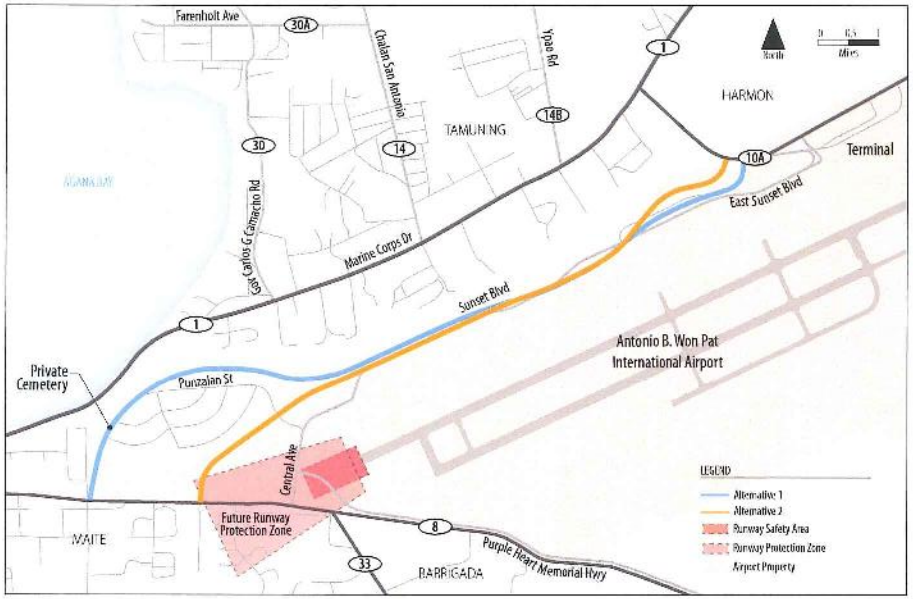
Monetary savings to Guam motorists in reduced travel time and reduced fuel consumption with Tiyan Parkway is $2,770,000 per year

Airport-related commercial development along the Tiyan Parkway corridor is projected to add up to $59,000,000 per year to the economy of Guam

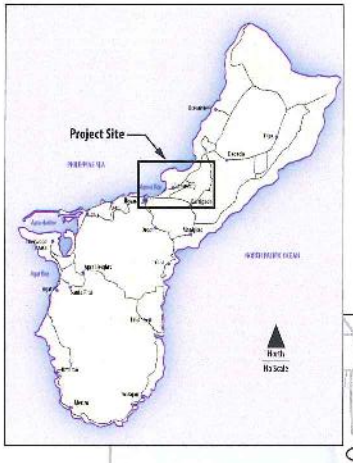
Road Closures

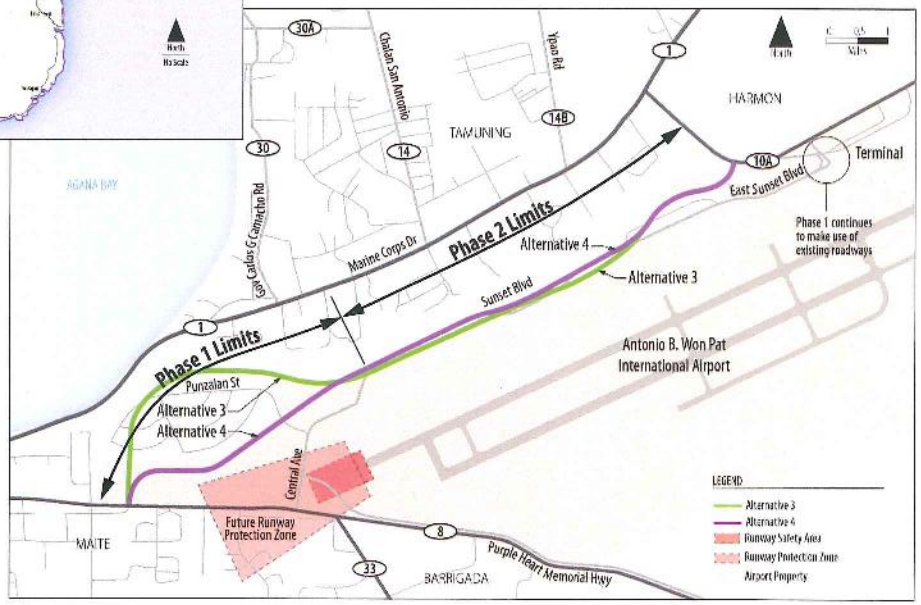


Alternatives



Alternatives 1 & 2

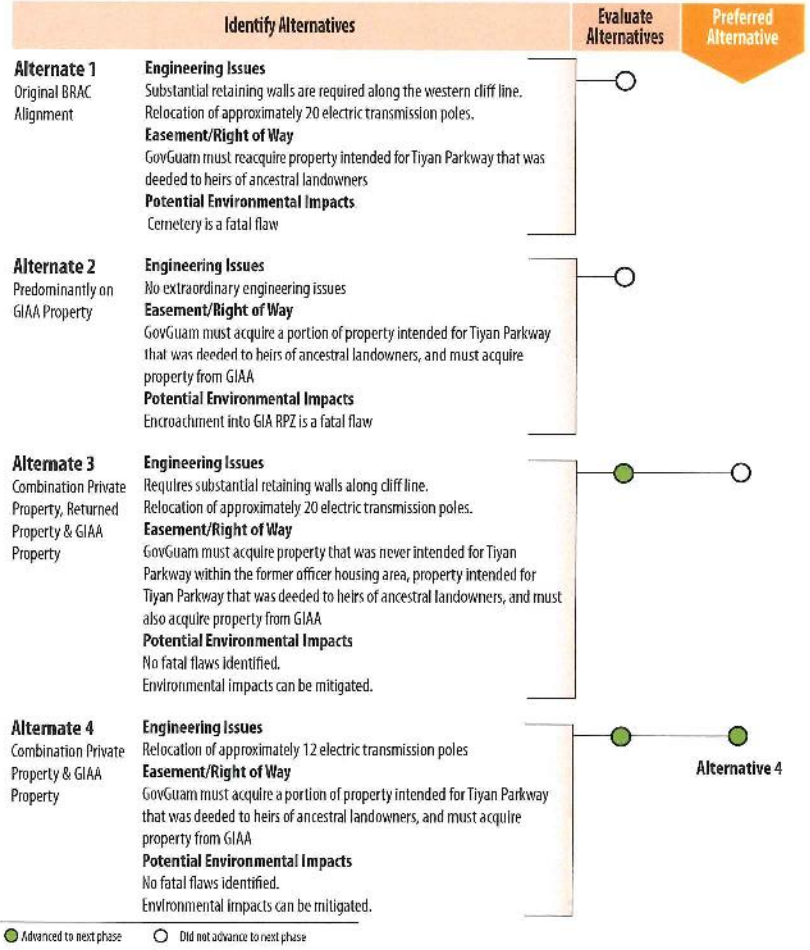




Alternatives 3 & 4

Alternatives Analysis

Preliminary Analysis of Alternatives

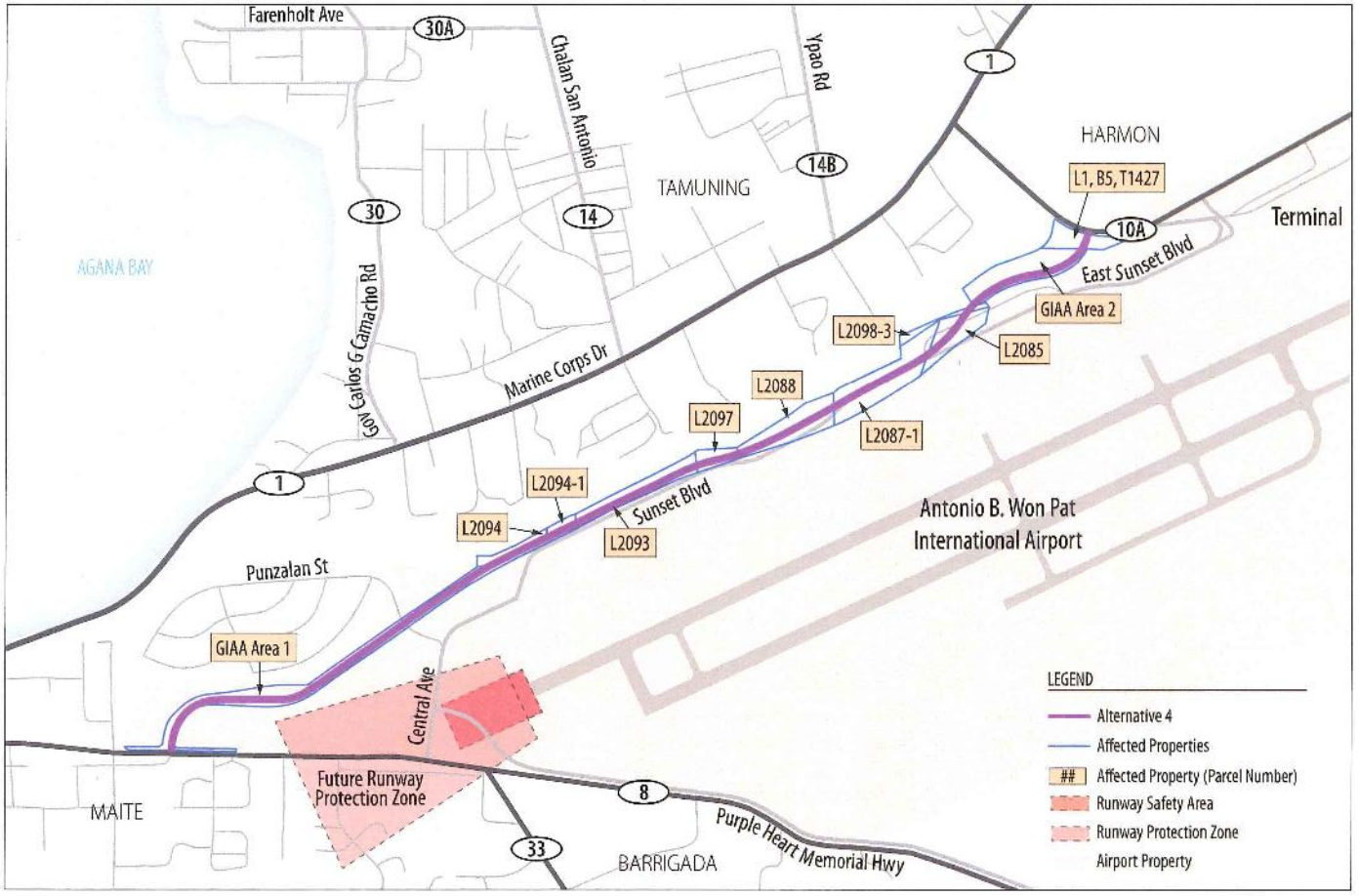


Evaluation Matrix

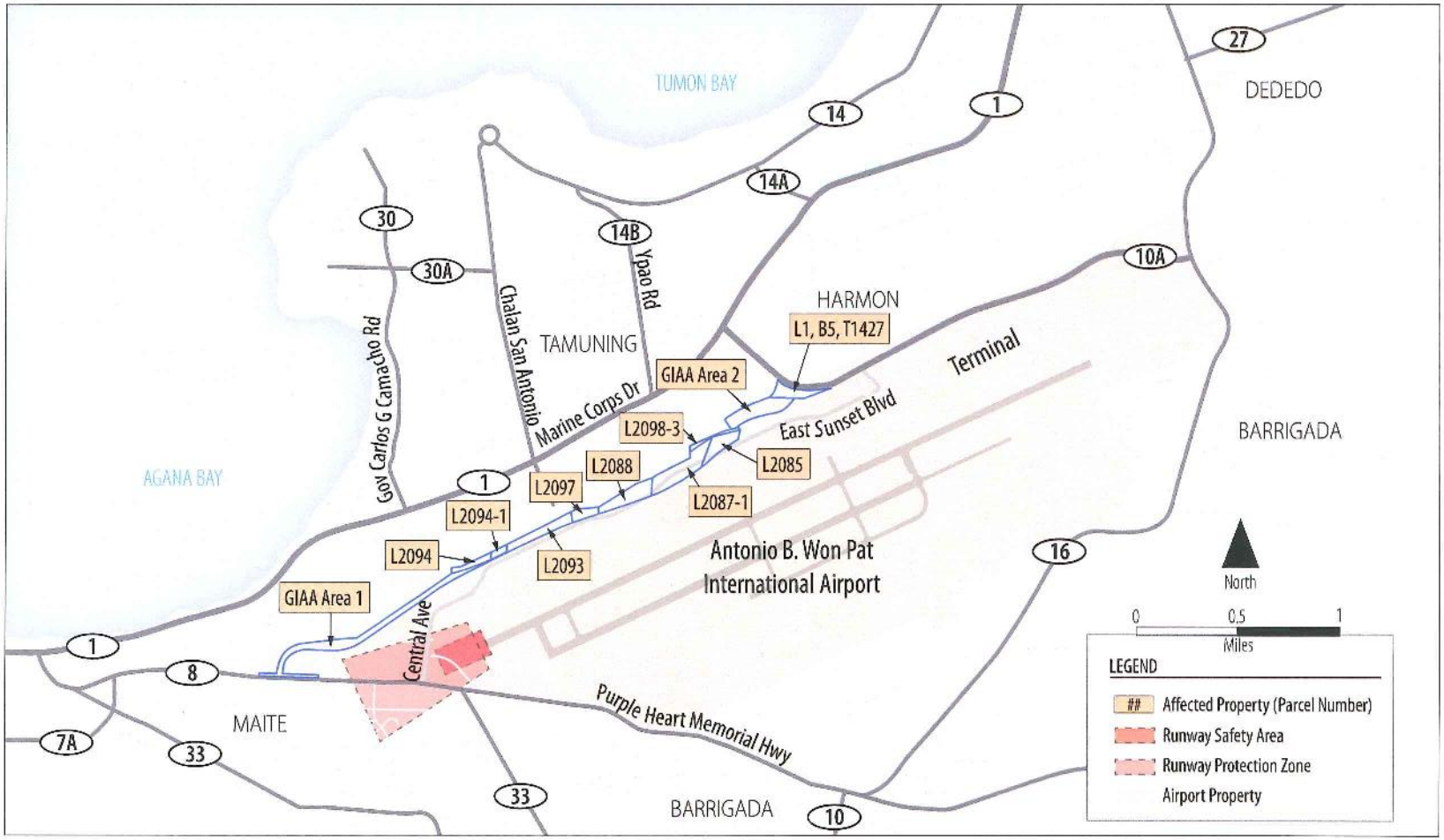
Criterion	No-Build	Alternate 3	Alternate 4
Non-Government Property Acquisition	○ No Impact	● 172,274± square meters of Non-Government property	◎ 131,873± square meters of Non-Government property
Acquisition from GALC	○ No Impact	● Acquisition of approximately 25,471 square meters of GALC property	◎ Acquisition of approximately 4,796 square meters of GALC property
Acquisition from GIAA	○ No Impact	◎ 75,786± square meters of GIAA property, of which 33,108 square meters is on sloping/cliff area	● 93,335± square meters of GIAA property, of which approximately 33,108 square meters is on sloping/cliff area
Relocations	○ No Impact	● 26± habitable/occupied structures	● 26± habitable/occupied structures
Visual Resources	○ No Impact	● Retaining wall (1,000' x 50' high) visible from Tamuning	◎ Compatible with surroundings
Utility Impacts	○ No Impact	● Normal utility relocations plus relocation of approximately 20 electric transmission poles	◎ Normal utility relocations plus relocation of approximately 12 electric transmission poles
Public Opinion	● Adverse impact on large number of motorists when Central Avenue closes for the runway expansion	● Substantial public opposition from affected landowners	◎ Moderate opposition by some affected landowners. Affected landowners acknowledge that road right of way is included in their deed of conveyance
Project Cost	**No cost**	**$52,925,000**	**$43,780,000**

○ No/Low/Positive Impact ◎ Moderate Impact ● Substantial Impact

Preferred Alternative 4



Affected Properties



Cumulative Impacts

Resource	Past Actions	Present Actions	Proposed Actions	Future Actions	Cumulative Impact
Land Use	Construction of NAS Agana converted farm lands to aviation and residential uses	GIAA is seeking to develop unused lands for airport-related commercial uses	Proposed Action would not adversely impact future land use and would be consistent with current land use	Continued development adjacent to the Tiyan Parkway corridor	Over long term, most residential properties would likely be replaced by commercial uses that are impacted less by aviation noise
Recreational Resources	Navy barracks likely provided recreational resources	No recreational resources are within the corridor	No recreational resources are affected by Proposed Action	Future recreational resources are not affected	No cumulative impact to recreational resources
Water Resources	Construction of impervious surfaces including pavement and rooftops	Existing roadways present impervious surfaces that increase runoff	Proposed roadways would increase runoff but mitigation is provided for stormwater quantity and quality	Future development in the corridor would increase impervious areas	Decreased water quality, but impact is minor because future developments would be required to mitigate for stormwater quantity & quality
Biological Resources	Conversion of farms to paved areas and urban landscaping	Some residential lawns have become overgrown	Displace urban landscaping with parkway landscaping	Urban landscaping of adjacent parcels may be converted to commercial	Urban landscaping would decrease with minor cumulative effect mitigated by cliff line and Tiyan Parkway vegetation
Visual Resources and Light Emission	Conversion of farm lands to aviation & residential	Many residential properties are in disrepair because of clouded title	Proposed Action would clear clouded titles and remove impediment to improvement of private properties	Likely that residential properties would be redeveloped for airport-related commercial uses	Cumulative impacts are due mostly to airport related developments
Air Quality	Two areas near electric power plants were not in attainment for SO_2	GPA measurements show all of Guam is now in attainment	MSAT would increase slightly near new Tiyan Parkway and decrease elsewhere	Future vehicle emission rules plus fleet turnover would reduce overall MSAT	MSAT levels would continue to improve with or without the Proposed Action
Noise	Conversion of farms to aviation uses	Operation of aircraft results in substantial noise levels	Additional traffic volume results in minor increase to noise levels	Continued growth of traffic would result in minor increase to noise levels	Conversion of residential use to commercial use would lessen impact of additional noise
Hazardous Materials	Construction of structures with asbestos and lead-based paint	GIAA acquiring, mitigating, and demolishing some structures	Additional structures would be acquired, mitigated, and demolished	Development of more residential properties to aviation-related commercial uses	Reduction in structures that contain hazardous materials
Cultural Resources	Development contributed to loss of cultural resources in the study area and region as a whole	Ongoing development has negligible impact on additional loss of cultural resources	Proposed Action would have negligible impact on loss of cultural resources	Projected development would have negligible impact on loss of cultural resources	Cumulative future impact to cultural resources is minor
Socioeconomic, Environmental Justice, and Childrens' Health Issues	Replacement of farm-based economy by aviation related activities. Lands forcibly taken from Chamorro property owners followed by later compensation.	GIAA is seeking tenants for aviation related commercial operations. Lands intended for Tiyan Parkway currently owned by heirs of ancestral landowners.	Proposed Action would enhance opportunities for airport related commercial operations. Some returned property would be acquired from heirs of ancestral landowners.	Commercial development of the corridor would continue. Adjacent properties that remain owned by heirs of ancestral landowners would gain marketable title.	Residential land uses may be converted over time to commercial land uses as heirs of ancestral landowners choose to sell or use their land for a higher and more economically rewarding use.
Section 4(f)	No impacts	No impacts	No impacts	No impacts	No impacts
Utilities	Construction of utilities	Limited maintenance due to clouded titles	Relocation and protection of impacted utilities	No substantial future utility actions	No substantial cumulative impacts
Material Sources and Waste Materials	Construction of roads & structures	GIAA is extending existing runways	Excavation and embankment construction to grade for Tiyan Parkway	Additional land grading activities for commercial development	Impacts would be mitigated by import and export of materials as required by local laws and specifications.
Energy Supply and Natural Resources	Economy was developed based on use of imported fossil fuels	Closure of Central Avenue will result in increased gasoline usage of 8.3 million gallons over 30 years	Construction of Tiyan Parkway will result in reduction of gasoline consumption of 8.3 million gallons over 30 years	Continued improvements in fleet fuel economy and alternative fuel vehicles will further reduce fuel consumption	Cumulative impact is positive

Next Steps

- DPW will complete the EA in Summer 2012
- DPW will design Phase I of the Tiyan Parkway in 2012-2013
- GovGuam will acquire Phase 1 land from GIAA in 2013
- GIAA/FAA plans to close Central Avenue to allow use of the newly extended runway in 2013
- DPW will complete construction of Tiyan Parkway Phase 1 by late 2014 at the earliest
- GovGuam will acquire Phase 2 land from current landowners
- Phase 2 will be completed in the future following acquisition of cliff line properties

Thank You

Review the Tiyan Parkway EA

Public Library in Hagatna
www.guamtransportationprogram.com

YOUR COMMENTS ARE IMPORTANT

Fill out a comment card and leave it in the box on the sign-in table

E-mail comments:
helpdesk@guamtransportationprogram.com

Mail comments:
Tiyan Parkway EA
c/o Parsons Brinckerhoff
590 South Marine Corps Drive, Suite 808
Tamuning GU 96913

All comments on the Environmental Assessment must be received by

Monday August 13, 2012

Mischler, James

From: Guam Transportation Program [helpdesk@guamtransportationprogram.com]
Sent: Wednesday, August 29, 2012 9:02 AM
To: Smith, Donald; Mischler, James; Camacho, Nora; monicaguzman@galaidegroup.com; cguzman@galaidegroup.com
Cc: dondi@galaidegroup.com
Subject: Fwd: Re: Lot 1, Block 5 Tract 1427 (Original Land Owners) Tiyan Parkway

For your records. Please see the forwarded reply to Mr. John Mendiola regarding the Tiyan Parkway EA.

----- Forwarded message from helpdesk@guamtransportationprogram.com -----
Date: Mon, 27 Aug 2012 14:08:20 +1000
From: Guam Transportation Program <helpdesk@guamtransportationprogram.com>
Subject: Re: Lot 1, Block 5 Tract 1427 (Original Land Owners) Tiyan Parkway
To: John Mendiola <mendiola_jrhino@hotmail.com>

Hafa Adai Mr. Mendiola,

Thank you for your message regarding Lot 1, Block 5, Tract 1427 and the proposed Tiyan Parkway.

For questions of land ownership, we wish to refer you to Mr. Monte Mafnas, Director of the Department of Land Management (DLM). DLM can be contacted at 649-5263, or at PO Box 2950, Hagatna GU 96932.

In the course of developing the Tiyan Parkway Environmental Assessment (EA), land research conducted by the engineering team identified that the lot is owned by Josephina C. Mendiola. Detailed information on lot ownership was not presented in the published EA, and this lot was simply indicated in the EA as being privately owned. We are unclear about your statement that the EA needs to be corrected, and would appreciate additional information on what information that was published in the EA you have identified to be inaccurate.

We understand that you are not in favor of this land being acquired for the proposed Tiyan Parkway. Acquisition of private property for public improvements is not done lightly. Other alternative locations for an intersection with Route 10A were considered and the other alternatives were found to be much less desirable from a traffic operation standpoint.

Senseramente,

Guam Transportation Program
Telephone: (671) 646-3452
Fax: (671) 646-3449
Email: helpdesk@guamtransportationprogram.com or highways@dpw.guam.gov
Website: www.guamtransportationprogram.com

Quoting John Mendiola <mendiola_jrhino@hotmail.com>:

> Director Brown/Deputy Director Dominguez:

>
> To whom it may concern,
>
> In reference to the Tiyan ParkWay, Specifically the lot mention
> above, Please direct me to whom I can talk to regarding ownership of said lot.
> This lot belongs to my father’s estate Fernando R. Mendiola. Said lot
> was deeded back to my family by the GIAA.
> Please have your researchers correct their documents because they are
> inaccurate.
>
> I am totally against the parkway going through our property and
> suggest you find a different alternative for the exit.
> But first lets correct the above.
>
> Please call me should you like to discuss further or direct me to the
> people I can correct this problem with.
> My number is 888-6487.
>
> Thank you for your assistance.
> Best regards,
>
> John F, Mendiola
> Son of Fernando R. Mendiola and Family

Senseramente,

Guam Transportation Program
Telephone: (671) 646-3452
Fax: (671) 646-3449
Email: helpdesk@guamtransportationprogram.com or highways@dpw.guam.gov
Website: www.guamtransportationprogram.com

----- End forwarded message -----

Senseramente,

Guam Transportation Program
Telephone: (671) 646-3452
Fax: (671) 646-3449
Email: helpdesk@guamtransportationprogram.com or highways@dpw.guam.gov
Website: www.guamtransportationprogram.com

Mischler, James

From: Guam Transportation Program [helpdesk@guamtransportationprogram.com]
Sent: Wednesday, August 29, 2012 9:03 AM
To: Smith, Donald; Mischler, James; Camacho, Nora; monicaguzman@galaidegroup.com; cguzman@galaidegroup.com
Cc: dondi@galaidegroup.com
Subject: Fwd: Re: Tiyan EA

For your records. Please see the forwarded reply to Mr. John Camacho regarding the Tiyan Parkway EA.

----- Forwarded message from helpdesk@guamtransportationprogram.com -----
Date: Mon, 27 Aug 2012 13:59:06 +1000
From: Guam Transportation Program <helpdesk@guamtransportationprogram.com>
Subject: Re: Tiyan EA
To: John Camacho <johnmcamacho@yahoo.com>

Hafa Adai Mr. Camacho,

Thank you for your message regarding budget estimates for property acquisition that were included in the Tiyan Parkway Environmental Assessment (EA).

While every reasonable effort is made to develop accurate information that is published in an EA, it should be recognized that the estimates of probable right of way acquisition costs are made without benefit of complete, detailed construction plans, nor is the actual timeframe for acquisition of property known with certainty at this time. Appraisals for use in guiding negotiations for acquisition of property for a transportation project are typically performed no earlier than three
months prior to starting negotiations for acquisition of a property.
Any number of criteria can affect the appraised value of a particular property, including location, topography, market conditions, and marketability of title, to name just a few.

Thank you for your comments regarding the open-house format of the public information meeting. DPW has used several different formats for past projects including the public hearing format, and the open house format was chosen for this project to allow a wider time frame for interested citizens to come and go as their individual schedules allowed.

Senseramente,

Guam Transportation Program
Telephone: (671) 646-3452
Fax: (671) 646-3449
Email: helpdesk@guamtransportationprogram.com or highways@dpw.guam.gov
Website: www.guamtransportationprogram.com

Quoting John Camacho <johnmcamacho@yahoo.com>:

> I agree that Alternative 4, phases 1&2 is the right choice amongst the
> four(4) choices. I like the complete takings of the seven(7) private
> properties. In this way, there will be no substandard, nonconforming
> remainders left after the taking.
> There are no Crown Lands being held by GALC involved in the takings.
> All lots held by GALC have previous owners and will eventually be
> returned according to law.
> Therefore, there are 136,669sm of private property needed for the
> Tiyan Parkway.
> The estimated cost of taking 136,669sm is $3,500,000. This breaks
> down to $25.98/sm. See Table 2-3. The same estimates GIAA
> property at $6,570,000. Table 2-4 lists GIAA property at 93,335sm.
> On the other hand, Table 2-2 lists only 89,261sm. This is a difference
> of 4074sm.
> At any rate, the valuation of $6,570,000 by 93,335sm is $70.39/sm.
> At 89,261sm, it is $73.60/sm.
> The difference between GIAA at $70.49 and private at $25.98 was
> explained to me by Mr. Jim Mischler at the Thurs night meeting. He
> asked a few realtors about the values in the area.
> This EA is supposed to be a very accurate document prepared with
> precise methodology. Yet, the most important aspect which is to give
> an accurate budget and arrive at a logical conclusion is completely
> wrong!
> All assumptions now are infected.
> Land valuations should have at least been opined by a licensed
> appraiser. The opinions of a few realtors does not hold water. No one
> can be able to defend these numbers.
> Mr. Mischler also attempted to differentiate land features and
> locations as the reasons for the disparities in values. He has no
> appraisal basis to do so. He readily admitted that he was an engineer
> and not an appraiser.
> Even I as a licensed real estate broker can inject a value of
> $100/sm. I'll value private property at $13,669,000.
> I don't know for a fact that GIAA and FAA will require that phase 2
> be budgeted before a commitment to phase 1 is made. I surely would
> require this if I were in their shoes.
> Lastly, please conduct these meetings as true public hearings. Let
> the public have the floor with time limits of course. Do not treat
> this like the failed JGPO dog and pony shows!
>
> Sent from my iPhone

Senseramente,

Guam Transportation Program
Telephone: (671) 646-3452
Fax: (671) 646-3449
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----- End forwarded message -----

Senseramente,

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Website: www.guamtransportationprogram.com

PETER C. MAYER, Ph.D.
P. O. BOX 25921
GMF, GUAM 96921-5921

PHONE NUMBER: 1 (671) 734-7537
E-MAIL ADDRESS: pcmayer@guam.net

Testimony
Hearing about Tiyan Parkway
July 26, 2012

USE OF THE TIYAN PARKWAY RIGHT-OF-WAY FOR PRIVATE MOTOR VEHICLES IS A TRAVISTY

Private motor vehicles should be strictly forbidden on the right-of-way for the Tiyan Parkway and on any and all other new transportation rights-of-way. The use of new transportation rights-of-way should be restricted to emergency vehicles, public transportation, bicycles and pedestrians. Two points:

- It is a myth and contrary to all experience that adding highway capacity relieves rush hour traffic; and
- An important factor in the viability of public transportation is reducing the time costs of taking public transportation relative to the alternatives.

There are many benefits for returning Guam to being livable for pedestrian and bicycles and for encouraging public transportation. Restricting the use of the Tiyan Parkway right-of-way is a step in this transformation.

More Highway Capacity Does Not Relieve Traffic

I would like to appeal to the recollection of anyone who has passed their thirtieth birthday and certainly of those who have passed their thirty-fifth birthday. You cannot name a case where widening a road or providing new roads on Guam or any other urban area has relieved rush-hour traffic congestion for more than three years. The

relief is for a much shorter time unless economic hardship reduces population with out-migration. Guam has about tripled road capacity since 1971 and the rush-hour traffic congestion is the same or worse. On Oahu, the Interstates H1, H2, H3, and H4 have traffic jams. The highway planners in the Department of Public Works are surely aware of Downs' Law, rush hour traffic increases to fill the road capacity. (Building of housing and businesses to take advantage of the new transportation facility is a reason for the traffic to increase.)

Public Transportation Viability and Time Costs

Many people will use public transportation if it takes less time to commute by public transportation than by private car. An important factor for having adequate demand for public transportation for it to be economically viable is to decrease the time to use it relative to using a private car. Having rights-of-way where public transportation is permitted but not private vehicles will lower the time required for public transportation use and, thus, the economic viability of Public Transportation.

Pressure to Transform the Island

Providing a thoroughfare for bicyclists and pedestrians provides impetus and pressure to transform the rest of the island to be livable for bicycles and pedestrians. Having some public transportation routes viable will increase the viability of other routes and will lead to a wider public transportation system.

Benefit of Island Transformation

Transforming the island to be livable for pedestrians would allow for evening family walks to an ice cream parlor or other after dinner pleasures, including simply walking.

Providing for pedestrians would allow many children to walk to school, having a positive impact on pupil and student health and reducing the need for school buses. With reasonable facilities for pedestrians, the poorest of the poor without any other form of transportation can walk to a job within a mile and a half from where they live.

With the island livable for bicycles, many students and others will commute by bicycles, relieving traffic congestion and improving health. A person, who can afford a basic bicycle but not more, can commute to a job within five miles of where he lives.

Public transportation allowed my highschool to have a more flexible schedule than possible for Guam high schools. Juan Flores, former Superintendent of Education, commented that a good public transportation system would allow each Guam highschool to be a magnet school. Good public transportation would eliminate restrictions on those without an automobile or those unable to drive an automobile on where they can work.

Conclusion

The previous administration commissioned, paid for, sought and received extensive public input for, and ignored a transportation plan that included bicycles, pedestrians and public transportation. Let's start to follow the spirit of this plan by restricting the Tiyan Parkway right-of-way to pedestrians, bicycles, public transportation and emergency vehicles. Then let's follow the plan, or outdo the plan, for subsequent transportation development.

The Honorable
Eddie Baza Calvo
Governor

The Honorable
Ray Tenorio
Lieutenant Governor

public works
DIPATTAMENTON CHE'CHO' PUBLEKO
Joanne M.S. Brown
Director
Carl V. Dominguez
Deputy Director

August 22, 2012

Peter C. Mayer, Ph.D.
P.O. Box 25921
Barrigada, GU 96921

Re: Tiyan Parkway Environmental Assessment

Hafa Adai Mr. Mayer:

Thank you for your comments and testimony regarding the Tiyan Parkway Environmental Assessment (EA).

While we agree that transportation facilities should accommodate public transportation, pedestrians, and bicycles, Guam law does not support your request that private motor vehicles should be forbidden on the right of way for Tiyan Parkway or other new transportation facilities.

The proposed Tiyan Parkway would be constructed in accordance with applicable laws regarding accommodations for pedestrians, bicycles, and persons with disabilities. The proposed configuration of Tiyan Parkway would accommodate pedestrians on five-foot wide sidewalks set apart from the roadway using a landscaped green-space buffer. Bicycles would be accommodated on shoulders adjacent to the traveled way.

We concur that public transportation is an important contributor to improving livable communities and reducing congestion. We refer you to the Guam Regional Transit Authority for information on their initiatives to improve mass transit on Guam. Tiyan Parkway and other public roadways would be available for inclusion on proposed public transportation routes.

Sincerely,

BY **JOANNE M.S. BROWN**