CI-2
Community and Infrastructure
Additional Transportation Information

APPENDIX CI-2 ADDITIONAL TECHNICAL INFORMATION

Elmendorf AFB

Transportation

Oil Well Road and Davis Highway Intersection

Calculated LOS values reveal that the intersection operates at LOS F during the evening peak hour on the westbound Oil Well Road approach. When the Community Center opens, the westbound movement will operate at LOS F during each peak hour. The overall intersection will function at LOS at D and F. If a traffic signal is installed in conjunction with geometric improvements, the LOS improves to C. To improve the intersection to LOS C, a southbound left-turn lane on Davis Highway and dual westbound left-turn lanes are required on Oil Well Road. A northbound Davis Highway right-turn lane is very beneficial at Oil Well Road. The right-turn lane can be accommodated without widening, but by re-marking the existing pavement. The traffic volumes satisfy the Peak Hour Volume Warrant for traffic signals during the morning, noon, and evening peak hours in accordance with the Manual on Uniform Traffic Control Devices. Table CI-2-1 provides information on LOS at priority interactions in the region.

Boniface Gate

Boniface Gate is Elmendorf s highest-volume gate. A planned traffic signal at the Davis Highway and Oil Well Road intersection will cause accidents, congestion, and queues through Boniface Gate. Calculated LOS values revealed that the Davis Highway and Oil Well Road intersection operates at LOS C following the installation of a planned traffic signal and the construction of intersection turn lanes, as noted earlier. However, Oil Well Road is about 300 feet from the guardhouse, and the planned improvements up-stream can cause a serious queuing problem at the gate. The plan is to control vehicle queues from the intersection by installing approach queue loop detectors that automatically preempt the northbound green phase for a predetermined but adjustable green time. This would occur to clear the queue once a vehicle is on the loop for more than 5 seconds (time also adjustable). A backup panel can also be provided in the guardhouse to control the northbound green duration and other limited signal controller functions.

Joint Mobility Center

Existing access to the Joint Mobility Center (JMC) runs in a southerly direction from Bums Road just east of Hangar 12, crosses the southwest comer of hardstand A-18 and taxiway "J," before connecting to an existing road west of hard stand A-19. At that point it turns east, passing in front of Buildings 43-551 and 43-024 to an existing road, before turning south to the JMC. There is a need for an access road for JMC deployments that minimize conflict with airfield taxiway activities and hard stand operations. Joint Mobility exercises occur several times per year and generate numerous vehicle-trips. Vehicles must travel to the JMC on a route that is not well defined and pass through a

Table CI-2-1. Level of Service at Priority Intersections

	Intersection	*Approach Traffic Movement*	*Level of Service*							
			Existing [1]			*Projected* [2]			*Recommended* [3]	
			AM	*Noon*	*PM*	*AM*	*Noon*	*PM*	*Noon*	*PM*
1.	Davis Hwy and Oil Well Rd (Recommended with Traffic Signal)	EB WB NB SB **Overall**	C C B	C A A	F(66.0) A C	F(89.4) A D(25.7)	F(85.3) A D(26.2)	F* A *	C C B C	C C B C
2.	Davis Hwy and 2nd St (Recommended with Traffic Signal)	EB WB NB SB **Overall**	A F(138.7) A F(109.6)	A B A A	A C A A	A F(165.9) A F(132.0)	A C A B	A * A F*	A D(28.1) D(32.0) C	A C C B
3.	Davis Hwy and Spur Rd	EB WB NB SB **Overall**	A A B A A(2.8)	A A A A A(1.3)	A A B B A(0.9)	A A B B A(2.9)	A A A A A(1.6)	A A B B A(1.0)		
4.	Oil Well Rd and Community Center East (Recommended with Traffic Signal)	EB WB NB SB **Overall**				A B A	A F(166.1) F(37.2)	A F(283.2) F(70.1)	C C B C	C C B C
5.	Oil Well Rd and Community Center West	EB WB NB SB **Overall**				A B A(0.04)	A C A(0.5)	A C A(0.6)	A C A(0.5)	A C A(0.5)
6.	Plum St and Acacia Dr (Traffic Signal)	EB WB NB SB **Overall**	B B B B B(9.6)	B B B B B(9.5)	B B B B B(9.3)					
7.	Plum St and Acacia Dr (2-way Stop Control)	EB WB NB SB **Overall**	B B A A A(3.2)	A A B B A(4.0)	A A B B A(3.8)					
8.	Plum St and Acacia Dr (4-way Stop Control)	EB WB NB SB **Overall**	B A A A A(4.1)	B A A A A(3.7)	A A A A A(3.1)					

Notes:
1. LOS with existing traffic and geometrics.
2. LOS with projected traffic and existing geometrics.
3. LOS with projected traffic and recommended geometrics.

congested area in front of Buildings 43-551 and 43- 024, causing potential safety hazards and travel delays.

Davis Highway and 2nd Street

Calculated LOS values revealed that the overall intersection operates at LOS F during the morning peak hour for projected traffic conditions. If a traffic signal is installed in conjunction with minor geometric improvements, the LOS improves to C. To improve the intersection LOS the eastbound left-turn storage lane length should be increased. Further, the transition for the eastbound right-turning movement should be smoother. The traffic volumes satisfy the Peak Hour Volume Warrant for traffic signals during the morning, noon, and evening peak hours in accordance with the Manual on Uniform Traffic Control Devices.

Community Center Road West

Calculated LOS values reveal that the overall intersection operates at LOS C during the noon and evening peak hours for projected traffic with STOP control. To enhance safety, an eastbound left-turn lane on Oil Well Road and left- and right-turn lanes are required on the Community Center Road West exit. Further, 50-foot corner radii are necessary to accommodate truck-turning movements.

Community Center Road East

Calculated LOS values revealed that the overall intersection operates at LOS F during the noon and evening peak hours for projected traffic and without traffic signalization. With traffic signals and geometric improvements, the intersection operation improves to LOS C. To improve the intersection to the LOS noted above, an eastbound left-turn lane on Oil Well Road and left- and right-turn lanes are required on the Community Center Road East exit. The traffic volumes at the intersection satisfy the Peak Hour Volume Warrant for traffic signals during the noon and evening peak hours in accordance with the Manual on Uniform Traffic Control Devices.

Muldoon Gate

According to discussions with AAFES officials, the joint Community Center will have a market draw of about 30,000 people. The housing at Fort Richardson accommodates both Army and Air Force personnel. Trips to the Community Center from Fort Richardson will likely be about 60-40 split via Arctic Valley Drive/Glenn Highway and Davis Highway, respectively. If Muldoon Gate is closed, it is estimated that the percentage split will easily reverse itself with a 40-60 split via Arctic Valley Drive/Glenn Highway and Davis Highway, respectively. However, it should be noted that return trips from the Community Center to Fort Richardson housing areas, most military personnel will use Davis Highway because Glenn Highway provides a less convenient and longer route to the housing areas. To minimize LOS impacts to the Davis Highway intersections at Oil Well Road and 2nd Street, the Muldoon Gate hours of operation and schedule should be published and posted noting any exceptions to the normal gate schedule.

Tyndall AFB

Transportation

Table CI-2-2 provides characteristics of major roads in the Tyndall AFB region.

Table CI-2-2. Characteristics of Major Roads in the Tyndall AFB Region
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County	*Road*	*Segment*	*1997 AADT*[1]	*1997 LOS*[2]
Bay	SR 20	U.S. 231 to Calhoun Co.	4,100	B
		Washington Co. to U.S. 231	1,245	A
	U.S. 98	Walton Co. line to Phillips Inlet	11,900	A
		Phillips Inlet to SR 79	14,100	B
		Hwy 79 to Thomas Drive	21,800	B
		Thomas Drive to Hathaway Bridge	55,400	F
		Hathaway Bridge to Beck Ave	41,600	F
		Beck Ave to SR 75 (U.S. 231)	30,200	C
		SR 75 to Parker (Business 98)	27,300	B
		Parker to Tyndall AFB	27,300	B
		Tyndall AFB to Gulf County line	5,500	B
	SR 79	Washington Co. line Urban Area Boundary	3,600	A
		Urban Area Boundary to U.S. 98	3,200	B
	SR 77	Washington Co. line to County Road (CR) 388	10,800	C
		CR 388 to CR 2300	10,900	B
		CR 2300 to Bailey Bridge	14,400	C
	U.S. 231	Jackson Co. to SR 20	7,100	A
		SR 20 to Titus Rd.	13,062	A
Gulf	U.S. 98	Bay Co. to South Beacon Hill	6,631	C
		Beacon Hill to N highland View	6,631	C
		CR 30A to Franklin Co.	2,244	A
	SR 71	Port St. Joe to Wewahitchka	2,521	B
Franklin	U.S. 98	Gulf Co. to Apalachicola	6,179	C
		Apalachicola Bridge	5,870	B
		Apalachicola Bridge to Eastpoint	4,590	B
		Eastpoint to SR 65	4,590	B
		SR 65 to Carrabelle	4,903	B
	SR 65	U.S. 98 to Liberty Co.	844	A
Liberty	SR 65	Franklin Co. to CR 67	325	A
Calhoun	SR 71	Gulf Co. to Blountstown	2,633	B
	SR 20	Bay Co. to Clarksville	3,800	B
		Through Clarksville	4,100	C
		Clarksville to Blountstown	4,600	B

Table CI-2-2. Characteristics of Major Roads in the Tyndall AFB Region
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County	*Road*	*Segment*	*1997 AADT*[1]	*1997 LOS*[2]
Washington	SR 77	Bay Co. to S of Wausau	4,300	B
	SR 79	North of Ebro to South of Vernon	2,840	B
Jackson	I-10	Washington Co. to Gasden Co.	13,700	A
	SR 71	State of GA Border to Calhoun Co.	N/A	N/A

Source: U.S. Air Force 1997
Notes: 1. AADT = Annual Average Daily Trips
2. LOS = Level of Service
AADT and LOS for Calhoun and Washington Counties reflect 1995 levels.