

4.3 TRANSPORTATION/CIRCULATION

The City of Cypress Circulation Element is the primary resource for circulation decisions. In addition to the City's Circulation Element prepared by Kimley-Horn and Associates, the County of Orange Master Plan of Arterial Highways impact the City's circulation system. Cypress' circulation system includes a hierarchy of local streets and major regional arterials and, therefore, must coordinate with other transportation agencies such as the Orange County Transportation Authority (OCTA) and Caltrans. In this Section, the existing roadway system is discussed and recent volume counts are summarized. In addition, this Section analyzes buildout of the proposed General Plan Update on the City's circulation system.

4.3.1 ENVIRONMENTAL SETTING

RELATED PLANS AND PROGRAMS

Transportation issues extend beyond the Cypress city limits. As a result, regional agencies have developed programs to forecast and manage county-wide and region-wide traffic. The City must consider other transportation system planning efforts as it prepares for buildout of the proposed General Plan Update.

Most transportation-related plans and programs are established with the goal of maintaining acceptable operating Level of Service (LOS) on the City's transportation system. LOS designations are qualitative descriptions of roadway and intersection operations which range from "A" to "F". Level of Service designations are analogous to letter grades received in school, where "A" is the best and "F" is the worst. Operating conditions at intersections and on street segments are evaluated using standard analysis methodologies which result in number values, which then correspond to Level of Service letter designations. A more detailed description of Level of Service standards is provided in the Traffic Study Appendix A of Technical Appendix A.

GROWTH MANAGEMENT PROGRAM

As a result of the Orange County Measure M (a ½ percent sales tax increase), passed by Orange County voters in 1988, all Orange County cities are required to develop a Growth Management Program (GMP). The stated purpose of the GMP is to ensure that the planning, management, and implementation of traffic improvements and public facilities are adequate to meet the current and projected mobility needs of Orange County.

A traffic LOS policy is to be established by each City, whereby LOS "D" or better is to be designated as the overall goal. However, it is recognized that some arterials are influenced by traffic factors beyond the control of the City; therefore, a lower LOS goal may be adopted for certain arterials. A Deficient Intersection List must also be developed for "problem" locations, and if future developments significantly impact these locations, they may provide mitigation in the form of pro-rata share fees.

The overall objective of the GMP is to ensure that new developments provide their fair share of public facilities and that services and infrastructure keep pace with anticipated growth. The program calls for annual evaluation of compliance with LOS policies, a development phasing program, participation and interaction with other jurisdictions (Growth Management Areas or GMA's) to prioritize and receive funding for regional transportation improvements, provision of a Capital Improvement Program (CIP) to address specific City roadway needs, and development of a Transportation Demand Management (TDM) trip reduction program. Overall, the GMP requires development of a comprehensive program to ensure that improvement of public facilities keeps pace with development, and that new developments provide their fair share of those improvements.

CONGESTION MANAGEMENT PROGRAM

Assembly Bill (AB) 471 (Proposition 111), as subsequently modified by AB 1791, requires every urbanized county with a population of 50,000 or more to adopt a Congestion Management Program (CMP) in order to be eligible for gasoline tax revenues. The City of Cypress must comply with the Orange County CMP requirements in order to receive its allocated portion of Measure M funds.

The CMPHS consists of principal local arterials, Smart Streets and State Highways. In the City of Cypress, Valley View Street and Katella Avenue are on the Orange County CMPHS, and the intersection of Valley View/Katella is designated as a CMP intersection. A minimum operating Level of Service of LOS "E" is required on CMP facilities, unless the facility was operating at a more deficient level when the baseline counts were conducted in 1991. Cities will be required to maintain LOS "E" or better (or baseline levels, if more deficient than "E") on the CMPHS.

An important aspect of the CMP regulations is the requirement that new developments mitigate any significant traffic impacts to the CMPHS. This means that cities need to develop a review process whereby the traffic impacts of new projects are evaluated and impacts mitigated. This serves to ensure that the LOS standards on the CMPHS are maintained. In addition, the CMP contains requirements similar to the GMP, such as a CIP submittal, a trip reduction program (TDM), and the need for inter-jurisdictional coordination.

The CMPHS is monitored through CMP requirements and a minimum LOS standard must be maintained in order to remain eligible for the gas tax revenues. One alternative to physical mitigation (widening streets, adding lanes at intersections, etc.) is to develop a deficiency plan, whereby the CMPHS system as a whole is improved and air quality benefits are provided.

SOUTH COAST AIR QUALITY MANAGEMENT PLAN

In 1985, the South Coast Air Quality Management District (SCAQMD) implemented Regulation XV (Rule 1501), which required employers of more than 100 employees to implement trip reductions programs, to reduce peak hour traffic coming to and from the job site. Measures to reduce peak hour traffic included establishment of a Transportation Management Association to promote TDM programs, with carpool matching and vanpool programs, transit and parking incentives, provision of on-site daycare facilities, and many other approaches. The SCAQMD has since significantly relaxed its TDM program requirements for most businesses, but as a result of the initial Regulation XV emphasis and also by the requirements of the Orange County GMP, all Orange County cities still have an adopted Trip Reduction Ordinance. Articles XVI, XVII, and XVIII of the City of Cypress Municipal Code provide detailed findings and guidelines for trip reduction air pollution reduction measures to be undertaken by businesses in the Cypress Business Park and throughout the City.

REGIONAL ACCESS

The City of Cypress is well served by area freeways, although none are actually located within the City boundaries. The Artesia Freeway (SR-91), Garden Grove Freeway (SR-22), San Diego Freeway (I-405), and San Gabriel River Freeway (I-605) are located to the north, south, and west of the City of Cypress, respectively. Each of these freeways is located within one to two miles from the Cypress city limits.

Bloomfield Street, Moody Street, Valley View Street, and Knott Avenue are all north-south arterials through the City of Cypress, and all have interchanges with the SR-91 Freeway to the north of the City. Valley View Street and Knott Street have interchanges with SR-22/I-405, to the south of the City. To the west of the City, freeway access at the I-605 is provided by Lincoln Avenue, Cerritos Avenue (access to and from the north only), and Katella Avenue.

Valley View Street and Katella Avenue are both regional arterials that are included on the Congestion Management Plan Highway System (CMPHS). The CMPHS includes the Orange County Transportation Commission (OCTC) adopted Smart Street Network and all State Highways. Under a 20-year traffic improvement program, Orange County will establish 21 "Smart Streets," designed to carry significant volumes of inter-city and intra-city traffic, with enhanced geometrics, including extra travel lanes, limited mid-block access, bus turnouts, left- and right-turn pockets, synchronized signal timing and other improvements. Valley View Street and Katella Avenue are included in the Smart Street Network.

LOCAL ACCESS

CITY ROADWAY CLASSIFICATIONS AND CAPACITIES

The existing City of Cypress arterial system and classifications are based on the County of Orange Master Plan of Arterial Highways (MPAH). The three classifications of arterials in Cypress are "Major", "Primary", and "Secondary". A brief description of these classifications are provided below.

Major Roadway. This classification calls for a 104-foot curb-to-curb width within a 120 feet of right-of-way. A six-lane, divided roadway can be provided within this street section. Based on County of Orange Environmental Management Agency standards, the estimated daily volume capacity for LOS "D" operations is 50,600 vehicles per day (vpd), and 56,300 vpd for LOS "E". Within the City of Cypress, Valley View Street, Lincoln Avenue, and Katella Avenue are classified as Major Roadways.

Primary Roadway. A Primary Roadway provides an 84-foot curb-to-curb width within 100 feet of right-of-way. This street section provides a four-lane, divided street with an LOS "D" capacity of 33,800 vehicles per day. Within the City of Cypress, Moody Street, Knott Avenue, Ball Road, and Cerritos Avenue are classified as Primary Roadways.

Secondary Roadway. A Secondary Roadway provides a 64-foot curb-to-curb width within 84 feet of right-of-way. A Secondary Roadway is a four-lane, undivided roadway with a daily LOS "D" capacity of 22,500 vehicles per day. City of Cypress streets that currently have a Secondary Roadway designation are Bloomfield Street, Denni Street, Walker Street, Holder Street, Crescent Avenue, Orange Avenue, and Oranewood Avenue.

EXISTING ARTERIAL SYSTEM

The City of Cypress circulation needs are served by a traditional grid system of arterials, with approximately ½-mile spacing, and signals at each arterial intersection. In three areas of the city, this grid street system is interrupted by established land uses, the most significant being the Joint Forces Training Center (JFTC) Los Alamitos at the south edge of the City. Because of the size and location of this military installation, access to and from the south is limited to Bloomfield Street, Valley View Street and Knott Avenue. The Los Alamitos Race Track just north of the JFTC Los Alamitos, and the Forest Lawn Cemetery at the north end of the City, also cause some discontinuity in the City's grid street system.

The east-west arterials through the City of Cypress that serve the City's circulation needs are Lincoln Avenue, Orange Avenue, Ball Road, Cerritos Avenue, Katella Avenue, and Oranewood Avenue. The arterials with a north-south alignment which play an important role in the City's circulation system are Bloomfield Street, Denni Street, Moody Street, Walker Street, Valley View Street, Holder Street, and Knott Avenue.

The existing roadway system in the City of Cypress is presented on Exhibit 4.3-1, *Existing Arterial System*. The information presented on this exhibit includes the number of travel lanes, existence or lack of a center street divider, where on-street parking is allowed, and where bicycle lanes are provided.

EXISTING TRAFFIC VOLUMES

Average Daily Traffic (ADT) volumes on City of Cypress arterials were collected by the City of Cypress in September 1999. ADT volumes on each roadway segment are shown on Exhibit 4.3-2, *Existing Daily Traffic Volumes (1999)*. In general, Valley View Street and Katella Avenue carry the highest volumes of traffic on a daily basis. The street segment that presently carries the most traffic is Valley View Street, between Katella Avenue and Orangewood Avenue, at 51,500 vehicles per day.

ADT and volume-to-capacity ratios (V/C) for existing traffic on all arterials in Cypress' circulation system are provided in Table 4.3-1, *Summary of Roadway Operations for Existing Conditions (1999)*. The V/C ratio is a percentage of capacity utilized by existing or projected traffic on a segment of an arterial or an intersection turn movement. All road segments with a V/C ratio greater than one (1) contain traffic volumes that exceed the capacity of the roadway. As shown in Table 4.3-1, one roadway segment within Cypress has a traffic volume that exceeds the capacity of the roadway: Knott Avenue from Cerritos Avenue to Katella Avenue.

EXISTING LEVELS OF SERVICE

A Level of Service (LOS) analysis was conducted to evaluate the existing operating conditions of the City street system and study intersections. The results of the analysis are presented in the following paragraphs.

The City of Cypress has adopted LOS "D" or better as the desired citywide operating standard for most city streets. However, given the influence of regional traffic on Valley View Street, Lincoln Avenue, and Katella Avenue, which are beyond the control of the City of Cypress, LOS "E" or better has been adopted as the minimum operating Level of Service for street segments and intersections on these arterials.

Exhibit 4.3-1, *Existing Arterial System*, illustrates the existing roadway configurations in the City. Corresponding roadway capacities for each type of roadway are summarized on Table 4.3-2, *Daily Roadway Capacities*. These daily capacities are based on County of Orange daily roadway capacities, and represent a theoretical maximum number of vehicles that can be accommodated by each type of roadway, at each Level of Service. Table 4.3-3, *Intersection Level of Service*, explains in detail the existing roadway service levels ranging from "A" (excellent conditions) to "F" (severely congested conditions), and represents a qualitative description of operating conditions.

Existing daily traffic volumes and daily roadway are shown on Exhibit 4.3-2, *Existing Daily Traffic Volume (1999)*. The exhibit provides a general comparison of existing traffic volumes to the roadway carrying capacity, and offers an overview of the operating conditions of the existing arterial system. Review of Exhibit 4.3-2 shows that the existing daily volumes for most street segments are within the daily LOS "D" or "E" capacity limits. The segment of Knott Avenue from Cerritos to Katella Avenue is currently carrying a daily volumes of 38,100 vehicles, which is slightly in excess of its LOS "E" capacity of 37,500.

Intersection analyses were also conducted at the 13 study intersections located along Valley View Street, Lincoln Avenue, and Katella Avenue in the City of Cypress. The Intersection Capacity Utilization (ICU) methodology was used, as specified by the Orange County CMP and GMP. The ICU methodology provides a comparison of intersection volumes to the intersection capacity and the results are then related to LOS values, ranging from "A" to "F". Morning and evening peak hour turning movement counts were conducted at each intersection. Peak hours are generally designated as the highest volume hour within the morning peak period (7:00 A.M. - 9:00 A.M.) and the evening peak period (4:00 P.M. - 7:00 P.M.).

Insert Exhibit 4.3-1 Existing Arterial System

Insert Exhibit 4.3-2 Existing Daily Traffic Volumes (1999)

**Table 4.3-1
SUMMARY OF ROADWAY OPERATIONS FOR EXISTING CONDITIONS (1999)**

Roadway Segment	Existing Conditions	LOS "E" Capacity	ADT	V/C Ratio	LOS
CRESCENT AVENUE:					
West of Bloomfield Street	Secondary	25,000	12,200	0.49	A
Bloomfield Street to Moody Street	Secondary	25,000	12,300	0.49	A
Moody Street to Walker Street	Secondary	25,000	14,600	0.58	A
LINCOLN AVENUE:					
Bloomfield Street to Denni Street	Major	56,300	21,800	0.39	A
Denni Street to Moody Street	Major	56,300	25,700	0.46	A
Moody Street to Walker Street	Major	56,300	20,100	0.36	A
Walker Street to Valley View Street	Major	50,600	24,000	0.47	A
East of Valley View Street	Major	56,300	21,300	0.38	A
ORANGE AVENUE:					
Bloomfield Street to Denni Street	Secondary	25,000	7,100	0.28	A
Denni Street to Moody Street	Secondary	25,000	10,600	0.42	A
Moody Street to Walker Street	Secondary	25,000	13,300	0.53	A
Walker Street to Valley View Street	Secondary	25,000	12,900	0.52	A
Valley View Street to Holder Street	Secondary	25,000	13,200	0.53	A
BALL ROAD:					
Bloomfield Street to Denni Street	Primary	37,500	18,100	0.48	A
Denni Street to Moody Street	Primary	37,500	15,300	0.41	A
Moody Street to Walker Street	Primary	37,500	20,300	0.54	A
Walker Street to Valley View Street	Primary	37,500	18,400	0.49	A
Valley View Street to Holder Street	Primary	37,500	18,600	0.50	A
CERRITOS AVENUE:					
Bloomfield Street to Denni Street	Primary	37,500	23,100	0.62	B
Denni Street to Moody Street	Primary	37,500	21,800	0.58	A
Moody Street to Walker Street	Primary	37,500	24,000	0.64	B
Walker Street to Valley View Street	Primary	37,500	20,600	0.55	A
Valley View Street to Holder Street	Primary	37,500	14,800	0.39	A
Holder Street to Knott Avenue	Primary	37,500	15,100	0.40	A
KATELLA AVENUE:					
West of Valley View Street	Major	56,300	41,300	0.73	C
Valley View Street to Holder Street	Major	56,300	31,500	0.56	A
Holder Street to Knott Avenue	Major	56,300	31,200	0.55	A
ORANGEWOOD AVENUE:					
West of Valley View Street	Primary	37,500	2,200	0.06	A
Valley View Street to Holder Street	Primary	37,500	8,900	0.24	A
Holder Street to Knott Avenue	Primary	37,500	8,000	0.21	A
BLOOMFIELD STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	11,400	0.46	A
Orange Avenue to Ball Road	Secondary	25,000	11,200	0.45	A
Ball Road to Cerritos	Secondary	25,000	11,200	0.45	A
DENNI STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	5,800	0.23	A
Orange Avenue to Ball Road	Secondary	25,000	6,300	0.25	A
Ball Road to Cerritos	Secondary	25,000	5,100	0.20	A

**Table 4.3-1
SUMMARY OF ROADWAY OPERATIONS FOR EXISTING CONDITIONS (1999)**

(CONTINUED)

Roadway Segment	Existing Conditions	LOS "E" Capacity	ADT	V/C Ratio	LOS
MOODY STREET:					
North of Lincoln Avenue	Primary	37,500	18,800	0.50	A
Lincoln Avenue to Orange Avenue	Primary	37,500	15,900	0.42	A
Orange Avenue to Ball Road	Primary	37,500	13,600	0.36	A
Ball Road to Cerritos Avenue	Primary	37,500	10,100	0.27	A
WALKER STREET:					
North of Lincoln Avenue	Secondary	25,000	16,600	0.66	B
Lincoln Avenue to Orange Avenue	Secondary	25,000	17,100	0.68	B
Orange Avenue to Ball Road	Secondary	25,000	17,200	0.69	B
Ball Road to Cerritos Avenue	Secondary	25,000	13,100	0.52	A
Cerritos Avenue to Katella Avenue	Secondary	25,000	15,300	0.61	B
VALLEY VIEW STREET:					
Lincoln Avenue to Orange Avenue	Major	56,300	38,800	0.69	B
Orange Avenue to Ball Road	Major	56,300	39,100	0.69	B
Ball Road to Cerritos Avenue	Major	56,300	39,800	0.71	C
Cerritos Avenue to Katella Avenue	Major	50,600	40,800	0.72	C
Katella Avenue to Orangewood Avenue	Major	56,300	51,500	0.91	E
South of Orangewood Avenue	Major	56,300	46,200	0.82	D
HOLDER STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	8,300	0.33	A
Orange Avenue to Ball Road	Secondary	25,000	7,800	0.31	A
Cerritos Avenue to Katella Avenue	Secondary	25,000	7,300	0.29	A
Katella Avenue to Orangewood Avenue	Secondary	25,000	2,200	0.09	A
South of Orangewood Avenue	Secondary	25,000	6,200	0.25	A
KNOTT AVENUE:					
Cerritos Avenue to Katella Avenue	Primary	37,500	38,100	1.02	F
Katella Avenue to Orangewood Avenue	Primary	37,500	32,000	0.85	D
South of Orangewood Avenue	Primary	37,500	32,100	0.86	D
Notes: V/C Ratio = Volume-to-Capacity Ratio					
Source: City of Cypress 1999 Traffic Flow Map.					

**Table 4.3-2
DAILY ROADWAY CAPACITIES**

Type of Arterial	Description	Level of Service				
		A	B	C	D	E
Collector	2-Lane Undivided	7,500	8,800	10,000	11,300	12,500
Secondary	4-Lane Undivided	15,000	17,500	20,000	22,500	25,000
Primary	4-Lane Divided	22,500	26,300	30,000	33,800	37,500
Major – 6	6-Lane Divided	33,900	39,400	45,000	50,600	56,300
Major – 8	8-Lane Divided	45,000	52,500	60,000	67,400	75,000

A summary of the existing intersection operating conditions (1999) is presented on Table 4.3-4, *Intersection Analysis Existing Conditions*. With the exception of one intersection, all study intersections are operating at

LOS “D” or better. The intersection of Katella Avenue and Knott Avenue is currently operating at LOS “E” in the evening peak hour. The City LOS standard for this intersection is LOS “E”, since it is located along Katella Avenue, one of the regional arterials through the City.

**Table 4.3-3
INTERSECTION LEVEL OF SERVICE**

LOS	Interpretation	Volume-to-Capacity Ratio
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0-0.60
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	0.61-0.70
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Fair operations. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	0.81-0.90
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	0.91-1.00
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Over 1.00
Source: Highway Capacity Manual Special Report 209, Transportation Research Board, Washington, D.C., 1985 and Interim Materials on Highway Capacity, NCHRP Circular 212, 1982.		

The CMP LOS standard is “E” or “baseline”, if it was measured worse than “E” in 1991 when the “baseline” counts were conducted. All intersections are currently operating within CMP standards. The general LOS goal under GMP requirements is a Level of Service “D” or better operations. However, certain streets/intersections can be designated to have lower LOS standards, if certain conditions exist, as described earlier. For the City of Cypress, a Level of Service “E” standard applies to Valley View Street and Katella Avenue, given that they serve regional, as well as local, traffic. All other roadways in the City have a LOS “D” standard. These standards are consistent with the GMP.

BUS SYSTEM

The City of Cypress is currently served by five Orange County Transportation Association (OCTA) bus lines (Routes 21, 25, 42, 46, and 50), as illustrated in Exhibit 4.3-3, *Existing Bus Routes*. Routes 21 and 50 serve the Cypress Business Park along Valley View and Katella, respectively; Route 42 serves the Lincoln Avenue corridor, Route 46 provides east-west service generally through the middle of the city, and Route 25 provides north-south service along Knott Avenue. All of the routes, with the exception of Route 25, operate 7 days a week, including holidays. Route 25 operates Monday through Saturday, with no Sunday or holiday service. Service frequencies and times are reviewed and modified by OCTA from time to time. Up-to-date route schedules and information for all OCTA services are posted on the OCTA web site at “www.octa.net”.

**Table 4.3-4
INTERSECTION ANALYSIS EXISTING CONDITIONS (1999)**

Intersection	Existing Conditions			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
Lincoln / Bloomfield	0.48	A	0.49	A
Lincoln / Moody	0.53	A	0.69	B
Lincoln / Walker	0.59	A	0.87	D
Lincoln / Valley View	0.64	B	0.78	C
Valley View / Orange	0.72	C	0.74	C
Valley View / Ball	0.90	D	0.82	D
Valley View / Cerritos	0.62	B	0.68	B
Valley View / Katella	0.72	C	0.84	D
Valley View / Orangewood	0.77	D	0.62	B
Katella / Lexington	0.58	A	0.59	A
Katella / Walker	0.71	C	0.74	C
Katella / Holder	0.43	A	0.65	B
Katella / Knott	0.75	C	0.92	E

OCTA routes connect with other transit providers from other cities, including Long Beach Transit and Los Angeles Metropolitan Transportation Authority (MTA). OCTA also provides the ACCESS Service, which is a shared-ride service for people with functional limitations caused by a disability.

BIKEWAY SYSTEM

Existing bikeways in the City of Cypress are shown on Exhibit 4.3-4, *Existing Bikeways*. A bikeway can either be an on-road bikeway, which would include both striped bike lanes and signed-only bikeways, or an off-road paved bikeway. In some cases, off-road bikeways utilize City sidewalks, where there is sufficient width to accommodate both bicycles and pedestrians.

RAIL TRANSPORTATION

Existing rail lines in the City of Cypress are illustrated on Exhibit 4.3-5, *Existing Truck Routes and Rail Lines*. The existing Southern Pacific Rail Line, with a northwest-southeast alignment, crosses the northeast corner of the City. The right-of-way was purchased some years ago by the Orange County Transportation Authority (OCTA) for potential use as a commuter rail line. This purchase precludes freight use of the east-west rail line, which crosses through the Cypress Business Park at the south end of the City, since it is a spur line off of the purchased main line.

Cypress is a member of The Western Orange County Cities Association (WOCCA), which is evaluating the feasibility of an urban rail system serving the cities of West Orange County. No specific alignment for this potential urban rail system has yet been established.

Insert Exhibit 4.3-3 Existing Bus Routes

Insert Exhibit 4.3-4 Existing Bikeways

Insert Exhibit 4.3-5 Existing Truck Routes And Rail Lines

TRUCK CIRCULATION

Designated truck routes through the City of Cypress are illustrated on Exhibit 4.3-5, *Existing Truck Routes and Rail Lines*. Truck routes are established to designate specific roadways on which trucks may travel within and through the City. These routes direct trucks away from streets that are inappropriate or inadequate to serve substantial truck traffic. Trucks are allowed to access locations on Secondary and Local Streets for site deliveries (i.e. goods delivery or moving vans), however, they must take the most direct route to and from the designated truck routes.

4.3.2 STANDARDS OF SIGNIFICANCE

In accordance with CEQA, the effects of a proposed project are evaluated to determine if they will result in a significant adverse impact on the environment. An EIR is required to focus on these effects and other mitigation measures to reduce or avoid any significant impacts which are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Transportation/Circulation impacts resulting from the implementation of the proposed General Plan Update could be considered significant if they cause the following results:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of street system (i.e., result in a substantial increase in either the number of vehicle trips, to the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion/management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (refer to Section 7.0, *Effects Found Not To Be Significant*);
- Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (refer to Section 7.0, *Effects Found Not To Be Significant*);
- Result in inadequate emergency access (refer to Section 7.0, *Effects Found Not To Be Significant*);
- Result in inadequate parking capacity (refer to Section 7.0, *Effects Found Not To Be Significant*); and/or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Based on these standards, the effects of the proposed project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

4.3.3 IMPACTS AND MITIGATION MEASURES

Exhibit 4.3-6, *General Plan Arterial System*, illustrates the City’s General Plan roadway designations and identifies locations where street segments have not yet been constructed. The analysis below evaluates

Insert Exhibit 4.3-6, General Plan Arterial System

the ability of the City's General Plan arterial system to accommodate the anticipated development allowed under the General Plan Land Use Plan.

2020 TRAFFIC VOLUMES

○ BUILDOUT OF THE PROPOSED GENERAL PLAN UPDATE MAY RESULT IN INCREASES IN TRAFFIC VOLUMES WITHIN THE CITY OF CYPRESS.

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: New development within the City of Cypress along with regional traffic growth would result in an increase in traffic volumes within the City. To evaluate the ability of the Circulation Element to accommodate buildout of the Land Use Plan, the City was first divided into 35 land use (refer to Exhibit 4.3-7, *Transportation Analysis Zones*). For traffic analysis purposes, these areas are referred to as Traffic Analysis Zones (TAZ).

Within each TAZ, vacant and underutilized parcels were identified, and the type and quantity of potential land uses allowed by build-out of the Land Use plan was quantified. Trip generation estimates of the amount of traffic that would be generated by this potential development were developed, using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (6th Edition). A summary of the potential development at buildout by TAZ, and the associated trip generation for that development is provided on Table 3 of the Traffic Appendix in Technical Appendix A.

Transportation Demand Management (TDM) reductions were applied to the business park uses, reflecting the City's commitment to the development of alternatives to the single-person vehicle commute trip. In addition, reductions for "passby" traffic were applied to the retail trip generations. "Passby" traffic is a documented occurrence that accounts for vehicles that are already on the road system and simply make a mid-trip stop at a retail use (i.e. on the way home from work, a person stops at the grocery store or at a drive-through restaurant).

Net traffic generation was then distributed from each TAZ to other TAZ's in the City, and to areas outside the City of Cypress. Trip distribution assumptions were based on the locations of trip producers (residential areas) and trip attractors (employment, shopping, school, entertainment, and other uses), and the interrelationships between the two. Trip distribution assumptions also took into account the street system in place to carry project traffic, and accessibility to the area freeways.

Based on traffic counts that were obtained during September 1999, the total average daily vehicle trips generated by the existing uses within the City were estimated at 1,061,400 ADT. The City of Cypress is now approximately 95 percent built out and contains only limited undeveloped land (approximately 149 acres). This increase in development increases the total trip generation within the City of Cypress to an estimated 1,209,652 ADT, an increase of 14 percent over the existing ADT estimate.

The resulting future daily traffic volumes on the arterial street system, assuming buildout of the General Plan Land Use Plan are shown on Exhibit 4.3-8, *Future Daily Traffic Volumes*. ADT and volume-to-capacity (V/C) for the proposed General Plan Update traffic are provided in Table 4.3-5, *Summary of Roadway Operations for Buildout Conditions (2020)*. Buildout peak hour traffic volumes, which serve as a basis for the intersection analysis, are provided in the ICU worksheets contained in the Traffic Study Appendix A of Technical Appendix A.

Exhibit 4.3-7, Transportation Analysis Zones

Exhibit 4.3-8, Future Daily Traffic Volumes

As shown on Table 4.3-5, only one roadway segment exceeds the roadway capacity upon buildout of the proposed General Update:

- Knott Avenue from Cerritos Avenue to Katella Avenue.

Under existing conditions (1999), this roadway segment carries a daily volume of 38,100 vehicles, which slightly exceeds the LOS “E” capacity of 37,500 vehicles. Under buildout conditions (2020), this segment is projected to carry a volume of 39,594 vehicles, which represents an increase of 1,394 vehicles over existing conditions. Under both existing and buildout conditions, this roadway segment would operate at LOS “F”. This is considered a significant and unavoidable impact.

The traffic volumes added to all other major roadway segments as a result of buildout of the proposed General Plan Update would not exceed the LOS “E” capacity of the roadways. The impacts to all other major roadway segments are considered to be less than significant.

Policies in the Proposed General Plan Update: The Circulation Element includes the following policies:

- CIR-1.1 Respond to transportation problem areas with efforts to implement both interim and long-term solutions.
- CIR-1.3 Encourage development which contributes to a balanced land use, which in turn serves to reduce overall trip lengths (i.e., jobs/housing balance, locate retail in closer proximity to resident/patrons).
- CIR-1.5 The City of Cypress will continue involvement in plans and programs related to the Circulation Element. This involvement is anticipated to result in traffic studies to be undertaken by City staff, to identify specific circulation programs and improvements to be implemented, in order to satisfy the various related programs.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are available.

Level of Significance After Policies/Mitigation: Significant and unavoidable impact for one roadway segment: Knott Avenue from Cerritos Avenue to Katella Avenue. Less than significant impact for all other major roadway segments.

CMP LOS STANDARDS

- **BUILDOUT OF THE PROPOSED GENERAL PLAN UPDATE MAY RESULT IN THE EXCEEDENCE OF LOS STANDARDS ESTABLISHED BY THE CMP FOR DESIGNATED CYPRESS ROADWAY SEGMENTS.**

Level of Significance Before Policies/Mitigation: Potentially Significant Impact.

Impact Analysis: The City’s General Plan arterial system is shown on Exhibit 4.3-8, *Future Daily Traffic Volume (2020)*. The buildout roadway and right-of-way widths (refer to Exhibit 4.3-9, *Standard Street Sections*), are assumed to be in place for this future condition. A Buildout analysis was conducted to determine if the General Plan roadway system would accommodate the anticipated traffic volumes under buildout of the General Plan Land Use Plan. As shown on Table 4.3-5, with the exception of one roadway segment, the projected traffic volumes do not exceed the planned roadway capacities, and the City’s roadway system would operate within the designated Level of Service standard for each roadway segment,

when built out to its General Plan designations. The segment of Knott Avenue, between Cerritos and Katella Avenues would continue to operate at LOS “F” with the addition of buildout traffic. This segment of Knott Avenue is already built to its primary standards.

In order for the City of Cypress to comply with the County CMP, all CMP roadways within Cypress must operate at a LOS “E” or better. A buildout analysis was conducted to determine if the General Plan roadway system could accommodate the anticipated traffic volumes under buildout of the General Plan Land Use plan. As shown on Table 4.3-5, with the exception of one roadway segment, the projected traffic volumes do not exceed the planned roadway capacities, and the City’s roadway system would operate within the designated Level of Service standard for each roadway segment at buildout of the proposed General Plan Update.

The segment of Knott Avenue, between Cerritos and Katella Avenues would continue to operate at LOS “F” with the addition of traffic associated with buildout of the proposed General Plan Update. This segment of Knott Avenue is already built to its primary standards. The intersection of Katella Avenue and Knott Avenue is predicted to operate at LOS “E” or better in both peak hours upon buildout.

Buildout intersection analyses results are presented on Table 4.3-6, *Intersection Analysis Buildout Conditions*. It should be noted that the study intersections are located along Valley View Street, Lincoln Avenue, and Katella Avenue, for which the City has adopted an LOS standard of “E.” All intersections are projected to operate at LOS “E” or better in both peak hours. Even with the addition of traffic associated with buildout of the proposed General Plan Update, 9 of the 13 intersections meet LOS “D” or better operations in both peak hours. Therefore, buildout of the proposed General Plan Update would not result in any additional exceedance of standards on intersections in the City.

Policies in the Proposed General Plan Update: The Circulation Element includes the following policies:

- CIR-1.2 Participate in transportation planning efforts which involve other governmental agencies, mandated programs, and regulation in order to minimize environmental impacts related to transportation, and to enhance transportation systems.

- CIR-1.4 Require new development to conform to the standards and criteria of the City of Cypress and other mandated programs. This includes mitigation of traffic impacts to the surrounding street system.

- CIR-1.7 Maintain consistency between the City Circulation Element and the Orange County Master Plan of Arterial Highways (MPAH).

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are required.

Level of Significance After Policies/Mitigation: Significant and unavoidable impact for one roadway segment: Knott Avenue from Cerritos Avenue to Katella Avenue. Less than significant impact for all other major roadway segments and intersections.

**Table 4.3-5
SUMMARY OF ROADWAY OPERATIONS FOR BUILDOUT CONDITIONS (2020)**

Roadway Segment	Existing Conditions	LOS "E" Capacity	ADT	V/C Ratio	LOS
CRESCENT AVENUE:					
West of Bloomfield Street	Secondary	25,000	12,596	0.50	A
Bloomfield Street to Moody Street	Secondary	25,000	12,740	0.51	A
Moody Street to Walker Street	Secondary	25,000	14,888	0.60	A
LINCOLN AVENUE:					
Bloomfield Street to Denni Street	Major	56,300	24,656	0.44	A
Denni Street to Moody Street	Major	56,300	29,000	0.52	A
Moody Street to Walker Street	Major	56,300	24,020	0.43	A
Walker Street to Valley View Street	Major	50,600	26,260	0.52	A
East of Valley View Street	Major	56,300	22,086	0.39	A
ORANGE AVENUE:					
Bloomfield Street to Denni Street	Secondary	25,000	10,866	0.43	A
Denni Street to Moody Street	Secondary	25,000	12,996	0.52	A
Moody Street to Walker Street	Secondary	25,000	15,484	0.62	B
Walker Street to Valley View Street	Secondary	25,000	15,548	0.62	B
Valley View Street to Holder Street	Secondary	25,000	15,570	0.62	B
BALL ROAD:					
Bloomfield Street to Denni Street	Primary	37,500	20,090	0.54	A
Denni Street to Moody Street	Primary	37,500	19,388	0.52	A
Moody Street to Walker Street	Primary	37,500	22,448	0.60	A
Walker Street to Valley View Street	Primary	37,500	20,520	0.55	A
Valley View Street to Holder Street	Primary	37,500	18,900	0.50	A
CERRITOS AVENUE:					
Bloomfield Street to Denni Street	Primary	37,500	24,276	0.65	B
Denni Street to Moody Street	Primary	37,500	23,038	0.61	B
Moody Street to Walker Street	Primary	37,500	26,266	0.70	B
Walker Street to Valley View Street	Primary	37,500	22,214	0.59	A
Valley View Street to Holder Street	Primary	37,500	16,498	0.44	A
Holder Street to Knott Avenue	Primary	37,500	16,114	0.43	A
KATELLA AVENUE:					
West of Valley View Street	Major	56,300	48,652	0.86	D
Valley View Street to Holder Street	Major	56,300	33,892	0.60	A
Holder Street to Knott Avenue	Major	56,300	32,312	0.57	A
ORANGEWOOD AVENUE:					
West of Valley View Street	Primary	37,500	2,200	0.06	A
Valley View Street to Holder Street	Primary	37,500	10,486	0.28	A
Holder Street to Knott Avenue	Primary	37,500	9,048	0.24	A
BLOOMFIELD STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	11,400	0.46	A
Orange Avenue to Ball Road	Secondary	25,000	14,966	0.60	A
Ball Road to Cerritos	Secondary	25,000	11,200	0.45	A
DENNI STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	8,014	0.32	A
Orange Avenue to Ball Road	Secondary	25,000	7,142	0.29	A
Ball Road to Cerritos	Secondary	25,000	8,536	0.34	A

**Table 4.3-5
SUMMARY OF ROADWAY OPERATIONS FOR BUILDOUT CONDITIONS (2020)
(CONTINUED)**

Roadway Segment	Existing Conditions	LOS "E" Capacity	ADT	V/C Ratio	LOS
DENNI STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	8,014	0.32	A
Orange Avenue to Ball Road	Secondary	25,000	7,142	0.29	A
Ball Road to Cerritos	Secondary	25,000	8,536	0.34	A
MOODY STREET:					
North of Lincoln Avenue	Primary	37,500	20,756	0.55	A
Lincoln Avenue to Orange Avenue	Primary	37,500	21,206	0.57	A
Orange Avenue to Ball Road	Primary	37,500	16,170	0.43	A
Ball Road to Cerritos Avenue	Primary	37,500	11,130	0.30	A
WALKER STREET:					
North of Lincoln Avenue	Secondary	25,000	21,930	0.88	D
Lincoln Avenue to Orange Avenue	Secondary	25,000	22,042	0.88	D
Orange Avenue to Ball Road	Secondary	25,000	21,362	0.85	D
Ball Road to Cerritos Avenue	Secondary	25,000	18,712	0.75	C
Cerritos Avenue to Katella Avenue	Secondary	25,000	21,180	0.85	D
VALLEY VIEW STREET:					
Lincoln Avenue to Orange Avenue	Major	56,300	40,798	0.72	C
Orange Avenue to Ball Road	Major	56,300	42,592	0.76	C
Ball Road to Cerritos Avenue	Major	56,300	42,858	0.76	C
Cerritos Avenue to Katella Avenue	Major	50,600	47,478	0.84	D
Katella Avenue to Orangewood Avenue	Major	56,300	56,100	1.00	E
South of Orangewood Avenue	Major	56,300	51,518	0.92	E
HOLDER STREET:					
Lincoln Avenue to Orange Avenue	Secondary	25,000	8,632	0.35	A
Orange Avenue to Ball Road	Secondary	25,000	9,230	0.37	A
Cerritos Avenue to Katella Avenue	Secondary	25,000	8,730	0.35	A
Katella Avenue to Orangewood Avenue	Secondary	25,000	4,314	0.17	A
South of Orangewood Avenue	Secondary	25,000	6,200	0.25	A
KNOTT AVENUE:					
Cerritos Avenue to Katella Avenue	Primary	37,500	39,594	1.06	F
Katella Avenue to Orangewood Avenue	Primary	37,500	33,456	0.89	D
South of Orangewood Avenue	Primary	37,500	34,278	0.91	E
NOTE: V/C Ratio = Volume-to-Capacity Ratio					

**Table 4.3-6
INTERSECTION ANALYSIS BUILDOUT CONDITIONS (2020)**

Intersection	Buildout Conditions (2020)			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
Lincoln / Bloomfield	0.49	A	0.52	A
Lincoln / Moody	0.58	A	0.80	C
Lincoln / Walker	0.69	B	0.99	E ⁽¹⁾
Lincoln / Valley View	0.69	B	0.85	D
Valley View / Orange	0.78	C	0.89	D
Valley View / Ball	0.92	E ⁽¹⁾	0.91	E ⁽¹⁾
Valley View / Cerritos	0.70	B	0.79	C
Valley View / Katella	0.77	C	0.88	D
Valley View / Oranewood	0.85	D	0.68	B
Katella / Lexington	0.58	A	0.59	A
Katella / Walker	0.82	D	0.84	D
Katella / Holder	0.45	A	0.67	B
Katella / Knott	0.78	C	0.95	E ⁽²⁾

Notes:
 1. Intersection worsens from LOS "D" under Existing Conditions to LOS "E" with buildout traffic.
 2. Intersection remains at LOS "E".

CONSISTENCY WITH CMP, GMP & AQMP

○ BUILDOUT OF THE CITY OF CYPRESS IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN UPDATE MAY RESULT IN INCONSISTENCIES WITH THE CMP, GMP & AQMP.

Level of Significance Before Policies/Mitigation: Less Than Significant Impact.

Impact Analysis: The City of Cypress is eligible for both Proposition 111 (CMP) and Measure M (GMP) funding, as long as it demonstrates compliance with program requirements. Both programs are directly linked to transportation issues, with requirements that all new developments mitigate their traffic impacts on the surrounding street system. Although the specific requirements of the CMP and GMP differ, both include issues such as LOS standards, coordination with other jurisdictions, TDM ordinances and application, monitoring of conditions, and mitigation of impacts. The AQMP supplements these two programs, although its primary focus is on achieving and maintaining air quality standards.

Overall, these programs acknowledge that land use, transportation, and air quality issues are all interrelated. The requirements under each of these programs serve to ensure a safe and efficient transportation system, which is the primary goal of the Circulation Element of the proposed General Plan Update. Implementation of the proposed General Plan Update therefore, would not result in significant impacts to the CMP, GMP & AQMP. In addition, policies proposed in the General Plan Update would enhance the support of the CMP, GMP & AQMP.

Policies in the Proposed General Plan Update: The Air Quality, Growth Management and Circulation Elements include the following policies:

- AQ-1.8 Implement the required components of the Congestion Management Plan, and continue to work with Orange County on annual updates to the CMP.
- AQ-2.1 Utilize incentives, regulations and/or Transportation Demand Management (TDM) programs in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips which would otherwise be made.
- AQ-2.2 Utilize incentives, regulations and/or Transportation Demand Management in cooperation with other jurisdictions to reduce the vehicle miles traveled for auto trips which still need to be made.
- GM-1.1: Within three years of the issuance of the first building permit for a development project or within five years of the first grading permit for said development project, whichever occurs first, ensure that the necessary improvements to transportation facilities to which the project contributes measurable traffic are constructed and completed to attain Level-of-Service (LOS) D at the intersections under the sole control of the City.
- GM-1.2: Level of Service (LOS) will be measured by the Traffic Level of Service Policy Implementation Manual established by the Local Transportation Authority.
- GM-1.3: All development contributing significant impacts to intersections on the Deficient Intersection List and all projects contributing cumulatively, or individually, 10 percent or more of the traffic using an intersection shall be assessed a mitigation fee determined by the jurisdictions in the Growth Management Area and locally administered as part of the City's Capital Improvement Program.
- GM-1.4: Promote traffic reduction strategies through Transportation Demand Management (TDM) measures adopted by City ordinance.
- GM-2.1: Require that all new development pay its share of the street improvement costs associated with the development, including regional traffic mitigation.
- GM-2.2: New revenues generated from Measure M shall not be used to replace private developer funding which has been committed for any project.
- GM-2.8: A ten-year Performance Monitoring Program shall be developed to provide an annual evaluation of compliance with development phasing and evaluation of the maintenance of transportation service levels.
- GM-2.9: A Seven-Year Capital Improvement Program shall be adopted and maintained in conformance with provisions of Measure M for the purpose of maintaining adopted traffic level of service standards established in this Element.
- GM-3.2: The City will continue to cooperate with the County of Orange in annually updating its Congestion Management Plan pursuant to the requirement of AB 471 in order to continue to receive its share of State gasoline sales tax revenues.
- CIR-1.2 Participate in transportation planning efforts which involve other governmental agencies, mandated programs, and regulations in order to minimize environmental impacts related to transportation, and to enhance transportation systems.

CIR-2.3 Ensure that effective Transportation Demand Management (TDM) measures and programs are being implemented.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

ALTERNATIVE TRANSPORTATION

○ BUILDOUT OF THE CITY OF CYPRESS IN ACCORDANCE WITH THE PROPOSED GENERAL PLAN UPDATE MAY RESULT IN AN INCREMENTAL INCREASE IN DEMAND FOR TRANSIST SERVICE AND MAY ENHANCE POLICIES SUPPORTING ALTERNATIVE TRANSPORTATION.

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: OCTA bus ridership has increased by approximately 31 percent during the period between 1990 and 2000 and the bus fleet grew from 668 vehicles to 757 vehicles during that same time period. Over time, as future development occurs and the population and employment of the City increases, there is expected to be an increase in public transit ridership and a resulting increased in the demand for transit service. Transit service is viewed as a supplement to automobile transportation within Cypress and is expected to become an increasingly important alternative mode of transportation as the City continues to grow. The OCTA expects to expand bus service by another 49 percent by 2010, therefore, the proposed General Plan Update would not result in significant impacts to the transit system within the City.

Exhibit 4.3-3 identifies that the business park and retail uses along Katella Avenue and Valley View Avenue, respectively, have access to existing bus route services. As these areas develop in the future and efforts are increased to reduce dependence on the single occupancy vehicle, there may be an increased need for expanded bus service. As urban rail develops in the West Orange County area, expanded bus service can also provide feeder service between rail stations, park-and-ride lots, and the Cypress Business Park area.

Generally, the existing bikeway system serves most areas of the City, including the Business Park area. With completion of the bikeway system it would further link together schools, community civic centers, service areas, parks, employment centers and regional bike paths. The proposed system would provide an additional access to recreation and open space resources within the City.

The Circulation Plan, which includes a public transportation plan and a bikeways and sidewalk facilities plan, along with the goals and policies in the Circulation Element would enhance the use of alternative forms of transportation in the City. Therefore, no significant alternative transportation impacts would occur with implementation of the proposed General Plan Update.

Policies in the Proposed General Plan Update: The Circulation Element includes the following policies:

CIR-2.1 Encourage development and improvements which incorporate innovative methods of accommodating transportation demands.

CIR-2.2 Give high priority to the establishment of a high-quality public transit system that minimizes dependency on the automobile.

CIR-2.3 Ensure that effective Transportation Demand Management (TDM) measures and programs are being implemented.

CIR-2.4 Encourage development and site design which facilitate implementation of high quality,

desirable bicycle routes which meet or exceed established standards.

- CIR-2.5 Implement adequate sidewalks to meet the required uses and needs, which serves to encourage alternative modes of transportation. Bicycle routes which utilize sidewalks require establishment of a City ordinance, per the Vehicle Code.
- CIR-2.6 Respond to increases in demand for additional bus service through interaction with OCTA and other available resources.
- CIR-2.7 Implement plan to install handicap access ramps to improve disabled access to transportation facilities.
- CIR-2.8 Enhance the sidewalk environment to encourage pedestrian activities through streetscape and transit enhancement programs.
- CIR-2.9 Enhance transit environment by improving passenger loading sites by providing bus benches, safety lighting, and other projects to enhance bus stops.

Mitigation Measures: No mitigation measures beyond the policies identified in the proposed General Plan Update are required.

Level of Significance After Policies/Mitigation: Less Than Significant Impact.

4.3.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Development under the proposed General Plan Update would create an unavoidable significant impact for one roadway segment: Knott Avenue from Cerritos Avenue to Katella Avenue. Although policies and mitigation measures would be implemented on a project-by-project basis, this roadway segment would remain operating at a LOS "F", thus, the impact would remain unavoidable and significant. However, impacts to all other roadway segments and intersections within the City would be reduced to a less than significant level.