ADDENDUM (ER 96-033)
TO THE
ENVIRONMENTAL IMPACT REPORT
FOR
PROPOSED MAINPLACE/SANTA ANA EXPANSION

Prepared for:

City of Santa Ana

Submitted by:

Jones & Stokes Associates, Inc.

April 4, 1996

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Prepared for:

City of Santa Ana
Planning and Building Agency
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Santa Ana, CA 92702

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April 4, 1996

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Addendum to the EIR for MainPlace/Santa Ana

SUMMARY

This document was prepared for the City of Santa Ana and is an Addendum to a Environmental Impact Report (EIR) which addresses the potential impacts associated with the proposed expansion of the MainPlace Regional Shopping Center. MainPlace was previously known as the Fashion Square Commercial Center. The Fashion Square Commercial Center EIR, certified in 1983 by the City of Santa Ana, analyzed the impacts of a development consisting of 1.5 million square feet of leasable office space, 1.6 million square feet of gross leasable retail space and a 1,200 hotel guest rooms. The existing MainPlace Regional Shopping Center consists of approximately 1.1 million square feet of leasable retail space.

The proposed expansion consists of the following:

- Removal of an existing Bank of America modular banking facility and construction of an Automated Teller Machine (ATM) drive-through facility.
- Construction of a restaurant (8,000 square-feet) and an approximately 70,000 square-foot cinema.
- Expansion of an existing department store (69,000 square feet) and a two level parking deck.

The overall expansion is approximately 150,000 square feet bringing the total area of the shopping center to approximately 1.25 million square feet.

An analysis was conducted of the issues addressed in the Final Fashion Square Commercial Center EIR (Fashion Square EIR) as well as a review of other potential environmental issues. This review concluded that impacts identified in the Fashion Square EIR were much greater that the impacts associated with the existing facility plus the proposed expansion. Therefore, no new significant effects or an increased severity of previously identified impacts were identified. Additionally, no new information of substantial importance which was not previously known at the time of the Fashion Square EIR were identified.

INTRODUCTION

This Addendum to the Final EIR for the Fashion Square Commercial Center (now known as MainPlace) has been prepared for proposed modifications of 147,000 square feet to three areas of the existing MainPlace Regional Shopping Center, located in the City of Santa Ana, on a site surrounded by the Santa Ana Freeway (I-5), the Garden Grove Freeway (SR-22), and North Main Street. This addendum has been prepared in accordance with the California Environmental Quality Act (CEQA) based on a previously certified EIR, The Final EIR for the City of Santa Ana Redevelopment Project: Fashion Square Commercial Center (Fashion Square EIR) prepared September 1983, and certified in 1983. The Fashion Square Center has subsequently been renamed MainPlace and is regarded as a regional shopping center.

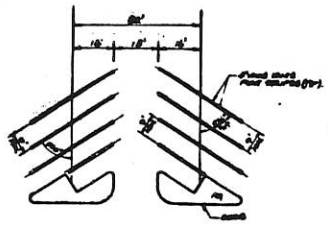
The Final Fashion Square EIR proposed the rehabilitation and redevelopment of the site as a mixed use commercial complex consisting of an ultimate intensity of 1,500,000 square feet of leasable office space, 1,600,000 square feet of gross leasable retail space, and 1,200 hotel guest rooms totaling 979,200 square feet. The project required the demolition of the then existing Main Street Center (163,403 square feet of leasable area) and the construction of new retail and/or office buildings in its place. The then existing Fashion Square Center comprised 521,725 square feet of leasable area which was incorporated into the renovation of the current MainPlace Regional Shopping Center.

EXISTING AREA DESCRIPTION

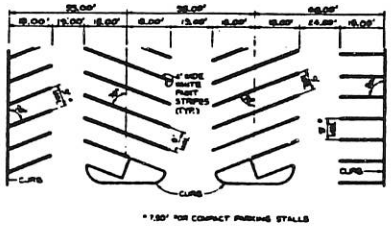
MainPlace is a regional shopping center located in the City of Santa Ana which serves all of central Orange County. There is currently 1,108,080 square feet of retail floor area in the center, including four anchor stores (Bullocks, Nordstrom, and two Robinson's-May). The property has three parking facilities, two of which are located in the northwest corner of the site adjacent to the I-5/SR-22/SR-57 interchange, and one between Main Street and Nordstrom. The Layout is shown in Figure 1. The remainder of the property is surface parking. The total available existing parking spaces is 4,987 spaces.

The surrounding land uses include the Garden Grove Freeway (SR 22) on the north; the Santa Ana Freeway (I-5) on the west; commercial uses including the Fidelity Federal Tower and other office buildings to the south; and, Polly's Pies, vacant land slated for the Main Street Concourse, and the Town & Country Shopping Center located in the City of Orange to the east.

Of note is that the existing square footage of 1,108,080 square feet is approximately 27 percent of the 4,079,200 square feet which was proposed and analyzed in the Fashion Square EIR.

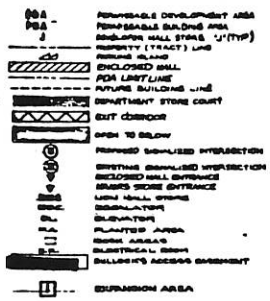


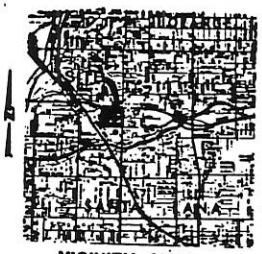
TYPICAL 57.5° PARKING LAYOUT
N.T.S.



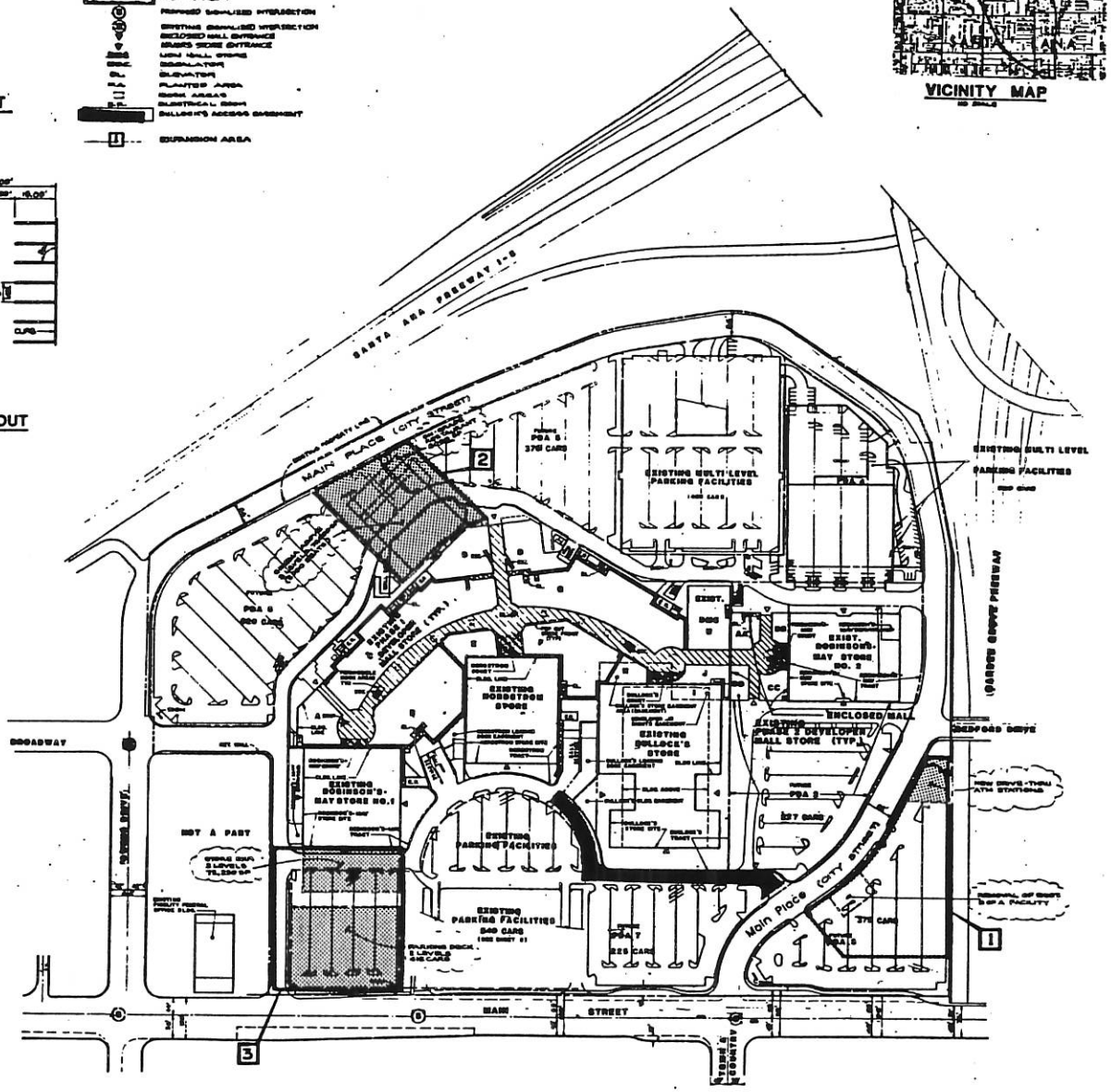
TYPICAL PARKING STALL LAYOUT
N.T.S.

LEGEND





VICINITY MAP



FIRST LEVEL

			PALLER-ROBERTS ENGINEERING, INC.	PREPARED FOR: SANTA ANA VENTURE 3200 N. MAIN ST. SUITE 775 SANTA ANA, CALIFORNIA 92705	"MAIN PLACE/SANTA ANA" SANTA ANA, ORANGE COUNTY, CALIFORNIA	SITE PLAN	SHT. NO. 1
NO.	DATE	REVISION	DATE	SITE PLAN APPROVAL ISSUED FOR			

156,000 s.f. horizontal

PROPOSED EXPANSION

The proposed expansion involves site plan revisions and expansions in three areas of the project site. The expansions total an additional 147,000 square feet and are designated as areas 1, 2, and 3, shown on Figure 1. A description of each of these area expansions follows:

- Area 1: Removal of the existing Bank of America modular banking facility from the surface parking lot bordered by Main Street and SR-22 Freeway. This is located on the northeast corner of the MainPlace site. The area of the removed facility will be resurfaced to provide parking spaces. Drive through automated teller machines (ATMs) will be constructed in the corner of the site adjacent to Bedford Drive and the SR-22 Freeway which is slightly northeast of the existing modular banking facility.

- Area 2: Construction of an on-grade restaurant containing approximately 8,000 square feet of floor area on the west side of MainPlace in the area of the former Rogers Gardens outdoor area. This location has exposure to MainPlace Drive and the I-5 Freeway. Part of the restaurant will be located below a new two-level cinema of approximately 70,000 square feet that will provide for a 3,000 seating capacity. The first level of the new cinema will be located at the same elevation of the second level of the existing mall including the existing food court and existing cinema. This level will maintain its current fire department access and vehicular circulation with only minor modifications.

- Area 3: A three-level expansion of the existing Robinson's-May Store #1 located on the south end of MainPlace. The expansion will be brought eastward of the existing store toward Main Street and add approximately 69,000 square feet of initial planned floor area to the existing store. Modification to the existing grade-level parking area located on the east side of Robinson's-May, adjacent to Main Street, and south of the existing parking deck will also be constructed. This expansion will be a two-level parking deck and will accommodate 416 parking spaces. Pedestrian access from the second level of the anchor expansion to the parking facility will be provided along with a pedestrian and vehicular connection from the existing deck to the new parking facility.

City parking standards for the proposed expansion would require an additional 1,425 spaces. However, these are development standards for strip mall development. No standards are in place for a regional shopping center. The City is considering granting a variance for the parking requirement. Parking that is planned for the proposed expansion will include an additional 182 spaces over the existing 4,987 spaces which will bring total parking to 5,169 spaces, and total required code parking to 6,412 spaces. The variance, if granted, will provide relief for 1,243 spaces.

The City is also considering granting variances for setback and landscaping for the expansions. The required setback is 15-feet and the proposed parking structure would be constructed within the 15-foot setback. The variance would allow for the expansions without having to bring the entire 53 acres into compliance. The variance for landscaping would allow for various plant groupings and clusters instead of the code required 1 planter for each 10 parking spaces throughout all surface parking areas.

CEQA COMPLIANCE

An addendum EIR (14 Cal Code Reg 15164) is prepared under the CEQA when changes and additions to a previously certified EIR are necessary, but none of the conditions pursuant to a subsequent EIR (14 Cal Code of Reg Section 15162) occur as follows:

- where major revisions of the previous EIR result in substantial changes due to the involvement of new significant environmental effects or an increased severity of previously identified significant effects;

- where substantial changes occur with respect to the circumstances under which the project is undertaken which require major revisions of the previous EIR due to new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

- new information of substantial importance which was not previously known at the time the previous EIR was certified.

The proposed expansion would not require major revisions of the Fashion Square EIR because no new significant environmental effects or increased severity of previously identified environmental effects would occur.

No substantial changes in the circumstances related to this expansion have been identified. Therefore, no major revisions to the previous EIR are necessary.

Since the certification of the Fashion Square EIR, no new information of substantial importance has been identified. Based on these findings, the City of Santa Ana, lead agency, has determined that a subsequent EIR is not required.

ANALYSIS

The impact analysis follows the same order of discipline headings that were presented in the Fashion Square EIR.

Land Use

The proposed additions are within the approved square footage for the existing retail shopping complex. The addition is consistent with the current land use. No land use impacts would result.

To comply with City standards for parking, the proposed expanded shopping center would require 6,412 spaces. However, only 5,169 spaces are being provided, and the City would need to grant a variance for the difference in parking. This is based on the City requirements for strip mall developments, which are considerably different from a regional shopping mall. In conversation with the City of Santa Ana Case Planner, Jeffrey Rice (pers. comm., March 22, 1996), some parking crowding may occur during the Christmas holiday season. No other parking crowding is anticipated and the impact is not considered significant.

As part of the project, the City is considering a variance on the setback distance for the new parking structure. If allowed, no significant impacts would result from implementation of this setback.

Soils and Geology

The Fashion Square EIR identified no soils and geology constraints or problems with the then proposed development. The current proposed expansion will not result in any adverse soils or geology impacts. No impacts or additional mitigation over that which is included in the Final Fashion Square EIR is required. Terms of the participation agreements already in place for responsibilities regarding soils and seismic reports shall remain in force.

Hydrology

Because the site is already paved, the incorporation of new structures and parking areas, will not result in increased amounts of runoff. Consistent with the determination of the Fashion Square EIR, existing drainage facilities should be adequate to serve the site modifications. Improvements

will be pursuant to the City's standard building permit approval process. The impacts or additional mitigation over that which is included in the Final Fashion Square EIR is required.

Biota

The site is entirely developed and vegetation is comprised of introduced ornamental trees, shrubs and grasses. Consistent with the Fashion Square EIR, there is no native vegetation. No impacts will occur from the proposed expansion.

The City will require decorative landscaping as part of the final plan approval process. A variance for landscaping that would allow for plant groupings and clusters, rather than the required one planter for each 10 parking spaces is being considered.

Archaeology

The Fashion Square EIR refers to a records search that was completed for that EIR. No sites were recorded on the site. Because the site is entirely paved and developed, it is not anticipated that archaeological sites are present under the areas of the proposed expansion modifications. No impacts are expected.

Traffic and Circulation

Existing Roadway System

Freeways

The area is served directly by three freeways, the Santa Ana (I-5), the Garden Grove (SR-22) and the Orange (SR-57), and indirectly by a fourth , the Costa Mesa (SR-55). The I-5 Freeway has been undergoing major improvements over the last several years which has included widening of the freeway mainline to add two additional lanes in each direction and high occupancy vehicle (HOV) lanes, and accompanying improvements to the ramp system. In particular, improvements to the I-5 ramps at 17th Street, Buffalo Street and Santa Clara Avenue were completed in mid-1995. Ramp improvements, including HOV access ramps, are ongoing at Edgewood Road and improvements to the I-5/SR-22 interchange were completed in late 1995. These improvements have resulted in improved traffic flow along the I-5 Freeway and between the I-5 and the Garden Grove Freeways, particularly during peak traffic periods. However, some slowing continues to occur in the vicinity of the I-5/SR-22 interchange on both the I-5 Freeway and the SR-22 Freeway during peak traffic hours.

Arterials

The following arterials surround and provide access to/from MainPlace Mall:

Main Street: This six-lane roadway provides direct access to/from the site at the signalized intersections of Main Street and Town & Country, and Main Street at MainPlace Access Drive. In the vicinity of MainPlace Mall, Main Street has three lanes in each direction with turning lanes at intersections and a median.

Memory Lane: Extending east of Main Street, south of MainPlace Mall, Memory Lane is a six-lane arterial. It intersects Lawson Way, providing access to SR-22. Memory Lane is anticipated to provide primary access, along with Main Street, to the planned Main Street Concourse mixed-use development.

MainPlace Drive: MainPlace Drive is a four-lane loop road surrounding the mall. It intersects Main Street at the signalized intersections at Memory Lane and at Town & Country. MainPlace Drive carries predominantly mall-oriented traffic, and as such, carries low levels of traffic compared to its potential capacity.

Town & Country Road: This four-lane roadway extends east of Main Street at the north end of the project site. Town & Country Road has an interchange with eastbound Route 22 at a four-way stop controlled intersection.

Existing Intersection Analyses

The following intersections were analyzed as part of the original traffic study for the Fashion Square EIR:

Main Street at :
- Chapman Avenue
- Almond Avenue
- Culver/Stewart
- La Veta Avenue
- Town & Country Road
- Edgewood Road
- Santa Clara Avenue
- Buffalo Avenue

17th Street at:
- Spurgeon Street
- Penn Way
- Valencia Avenue
- Santiago Avenue
- Lincoln Avenue

Grand Avenue
Grand Avenue/Glassell Street:
Santa Clara Avenue
WB Garden Grove Freeway Ramps
EB Garden Grove Freeway Ramps
La Veta Avenue
La Veta Avenue at:
Pepper Street
WB Garden Grove Freeway Ramps
Town & Country Road at:
EB Garden Grove Freeway Ramps.

With the implementation of the I-5 widening, Valencia Avenue no longer intersects 17th Street, therefore this intersection has been eliminated from the current analysis.

Three additional intersections have been added as part of this analysis:

Main Street at Memory Lane
Main Street at MainPlace Access Drive
MainPlace Drive at Broadway.

Intersection capacity analyses were conducted for each of the 23 study intersections to determine present operating conditions and level of service. Using existing geometrics and traffic volumes for the AM and PM peak hours, the Intersection Capacity Utilization methodology for intersection analyses was conducted. Table 1 presents volume-to-capacity (V/C) ratios and levels of service (LOS) for each of the study intersections.

As shown in Table 1, all study intersections are operating at an acceptable LOS D and better under existing AM peak hour conditions. During the PM peak hour existing conditions, the intersections of La Veta Avenue at SR-22 westbound ramps, and Grand/Glassell at SR-22 westbound ramps are operating at an unacceptable LOS E and F.

Existing Plus Entitled Project Conditions

"Entitled" projects are those projects which have already been approved for development but have not yet been completed and are therefore not yet generating traffic. By estimating the traffic volumes which would be generated by entitled projects and adding that traffic to the surrounding roadway system and study intersections, a more realistic background condition is created, reflecting how the roadway system will function when carrying all traffic likely to be on the roadways when the proposed development is completed.

Table 1
Existing Conditions Intersection Capacity Analyses

Intersection	Existing Conditions PM Peak Hour V/C	LOS	Date Counted
Main Street at :			
Chapman Avenue	0.85	D	05/93
Almond Avenue	0.59	A	08/95
Culver/Stewart	0.71	C	11/95
La Veta Avenue	0.83	D	09/95
Town & Country Road	0.67	B	09/95
Memory Lane	0.52	A	09/93
Edgewood Road	0.49	A	09/95
Santa Clara Avenue	0.61	B	09/95
Buffalo Avenue	0.50	A	09/95
17th Street	0.76	C	03/93
Broadway at:			
Main Place Drive	0.39	A	03/93
17th Street at:			
Spurgeon Street	0.56	A	03/93
Penn Way	0.74	C	03/93
Santiago Avenue	0.60	A	09/91
Lincoln Avenue	0.78	C	10/91
Grand Avenue	0.74	C	03/95
Grand Avenue/Glassell Street:			
Santa Clara Avenue	0.68	B	06/91
WB SR-22 Fwy Ramps	1.07	F	02/94
EB SR-22 Fwy Ramps	0.67	B	02/94
La Veta Avenue	0.68	B	02/94
La Veta Avenue at:			
Pepper Street	0.87	D	11/95
WB SR-22 Fwy Ramps	0.94	E	09/95
Town & Country Road at:			
EB SR-22 Fwy Ramps	0.64	B	09/95

Source: Korve Engineering, Inc., March, 1996.

The most significant entitled project in the vicinity of MainPlace is Main Street Concourse. Table 2 shows the land uses to be developed as part of Main Street Concourse and their estimated trip generation. Table 3 presents the V/C ratios and LOS of the 3 study intersections under existing plus entitled projects conditions.

Review of Table 3 shows that 2 additional intersections are projected to operate at unacceptable levels of service E or worse during the PM peak hour with the addition of traffic attributable to the entitled projects, for a total of 4 study intersections operating at LOS E or worse. These intersections are:

Main Street at Chapman Avenue
Main Street at La Veta Avenue
La Veta Avenue at SR 22 WB Ramps
Grand/Glassell at SR 22 WB Ramps

Impacts

Project Trip Generation

Trip generation estimates were prepared for the proposed MainPlace modifications using the Institute of Transportation Engineers' *Trip Generation,* Fifth Edition. Table 4 shows the estimates of project trips for daily, AM peak hour and PM peak hour conditions. The proposed expansion is projected to generate approximately 1,235 trips during the PM peak hour.

Project Trip Distribution and Assignment

Project trips were distributed and assigned to the local area and regional street system based on trip distribution patterns derived from the original traffic study for the Fashion Square EIR and on the Transportation System Improvement Area Model. This traffic forecasting model was developed by Austin-Foust Associates to evaluate the potential traffic related impacts of proposed developments within the Main Street Corridor, of which MainPlace was one.

Intersection Capacity Analysis

Project traffic has been added to the existing plus entitled project traffic volumes, and the 23 study intersections have been analyzed. Table 5 presents the V/C ratios and LOS of the 23 study intersections including existing, entitled projects and proposed expansion traffic.

Review of Table 5 shows that, with the addition of project traffic, no additional intersections are projected to operate at unacceptable levels. The following four intersections which were projected to operate at LOS E or worse during the PM peak hours with the addition of entitled project traffic would continue to operate at unacceptable levels with the addition of proposed project traffic. They are:

Table 2
Entitled Projects Trip Generation

		Daily Trips	PM Peak Hour Trips	
			In	Out
Main Street Concourse:				
Office	931,075 sq. ft.	8,696	224	1,183
Retail	224,960 sq. ft.	15,867	625	687
Restaurant	9,200 sq. ft	1,848	97	86
Hotel	360 rooms	3,045	126	105
Cinema	27,400 sq. ft.	2,131	33	135
Health Club	29,000 sq. ft.	1,371	82	82
Residential	280 d.u.s.	1,278	74	42
TOTAL		34,236	1,261	2,320

Source: Traffic Study for Main Street Concourse, DKS Associates

Table 3
Existing Plus Entitled Projects Conditions
Intersection Capacity Analyses

Intersection	Existing Conditions PM Peak Hour V/C	Existing Conditions PM Peak Hour LOS	Existing + Entitled Conditions PM Peak Hour V/C	Existing + Entitled Conditions PM Peak Hour LOS
Main Street at :				
Chapman Avenue	0.85	D	0.93	E*
Almond Avenue	0.59	A	0.64	B
Culver/Stewart	0.71	C	0.75	C
La Veta Avenue	0.83	D	0.92	E*
Town & Country Road	0.67	B	0.81	D
Main Place Parking	0.51	A	0.87	D
Memory Lane	0.52	A	0.84	D
Edgewood Road	0.49	A	0.72	C
Santa Clara Avenue	0.61	B	0.72	C
Buffalo Avenue	0.50	A	0.57	A
17th Street	0.76	C	0.84	D
Broadway at:				
Main Place Drive	0.39	A	0.45	A
17th Street at:				
Spurgeon Street	0.56	A	0.56	A
Penn Way	0.74	C	0.75	C
Santiago Avenue	0.60	A	0.62	B
Lincoln Avenue	0.78	C	0.79	C
Grand Avenue	0.74	C	0.75	C
Grand Avenue/Glassell Street:				
Santa Clara Avenue	0.68	B	0.68	B
WB SR-22 Fwy Ramps	1.07	F	1.07	F*
EB SR-22 Fwy Ramps	0.67	B	0.67	B
La Veta Avenue	0.68	B	0.76	C
La Veta Avenue at:				
Pepper Street	0.87	D	0.88	D
WB SR-22 Fwy Ramps	0.94	E	1.23	F*
Town & Country Road at:				
EB SR-22 Fwy Ramps	0.64	B	0.83	D

Source: Korve Engineering, Inc., March, 1996.

Table 4
Project Trip Generation

Proposed Uses	Units	Daily Rate	PM Peak Hour Rate	
			In	Out
Retail	69,000 sq. ft.	73.56	3.09	3.09
Restaurant	8,000 sq. ft.	200.89	10.56	9.37
Cinema	70,000 sq. ft.	77.79	5.77	0.37
Drive-Thru ATM	4 stations		26.29	28.48

Source: Institute of Transportation Engineering, *Trip Generation,* 5th Ed.

Proposed Uses	Units	Daily Trips	PM Peak Hour Trips	
			In	Out
Retail	69,000 sq. ft.	5,076	214	214
Restaurant	8,000 sq. ft.	1,607	84	75
Cinema	70,000 sq. ft.	5,445	404	26
Drive-Thru ATM	4 stations		105	114
TOTAL		12,128	807	428

Source: Korve Engineering, Inc., March, 1996.

Table 5
Existing Plus Entitled Plus Project Conditions
Intersection Capacity Analyses

Intersection	Existing Conditions PM Peak Hour V/C	Existing Conditions PM Peak Hour LOS	Existing + Entitled Conditions PM Peak Hour V/C	Existing + Entitled Conditions PM Peak Hour LOS	Existing + Entitled + Project Conditions PM Peak Hour V/C	Existing + Entitled + Project Conditions PM Peak Hour LOS
Main Street at :						
Chapman Avenue	0.85	D	0.93	E*	0.95	E*
Almond Avenue	0.59	A	0.64	B	0.66	B
Culver/Stewart	0.71	C	0.75	C	0.76	C
La Veta Avenue	0.83	D	0.92	E*	0.94	E*
Town & Country Road	0.67	B	0.81	D	0.83	D
Main Place Parking	0.51	A	0.87	D	0.90	D
Memory Lane	0.52	A	0.84	D	0.87	D
Edgewood Road	0.49	A	0.72	C	0.74	C
Santa Clara Avenue	0.61	B	0.72	C	0.74	C
Buffalo Avenue	0.50	A	0.57	A	0.59	A
17th Street	0.76	C	0.84	D	0.85	D
Broadway at:						
Main Place Drive	0.39	A	0.45	A	0.53	A
17th Street at:						
Spurgeon Street	0.56	A	0.56	A	0.56	A
Penn Way	0.74	C	0.75	C	0.75	C
Santiago Avenue	0.60	A	0.62	B	0.62	B
Lincoln Avenue	0.78	C	0.79	C	0.79	C
Grand Avenue	0.74	C	0.75	C	0.75	C
Grand Avenue/Glassell Street:						
Santa Clara Avenue	0.68	B	0.68	B	0.68	B
WB SR-22 Fwy Ramps	1.07	F*	1.07	F*	1.07	F*
EB SR-22 Fwy Ramps	0.67	B	0.67	B	0.67	B
La Veta Avenue	0.68	B	0.76	C	0.76	C
La Veta Avenue at:						
Pepper Street	0.87	D	0.88	D	0.90	D
WB SR-22 Fwy Ramps	0.94	E*	1.23	F*	1.23	F*
Town & Country Road at:						
EB SR-22 Fwy Ramps	0.64	B	0.83	D	0.85	D

Source: Korve Engineering, Inc., March, 1996.

Main Street at Chapman Avenue
Main Street at La Veta Avenue
La Veta at SR-22 WB Ramps
Glassell Avenue at SR-22 EB Ramps

The capacity values used in this analysis were consistent with those used in the 1983 Traffic Study for Fashion Square, which were 1500 vehicles per lane per hour for left turn lanes and 1600 vehicles per lane per hour for through and right turn lanes. Recently, both the City of Orange and the City of Santa Ana have assumed 1700 vehicles per lane per hour for all lanes. The increase in assumed capacity was based on current traffic flow characteristics within these cities. Assuming the revised capacity values, only two intersections would be projected to operate at unacceptable levels:

La Veta at SR-22 WB Ramps
Glassell Avenue at SR-22 EB Ramps

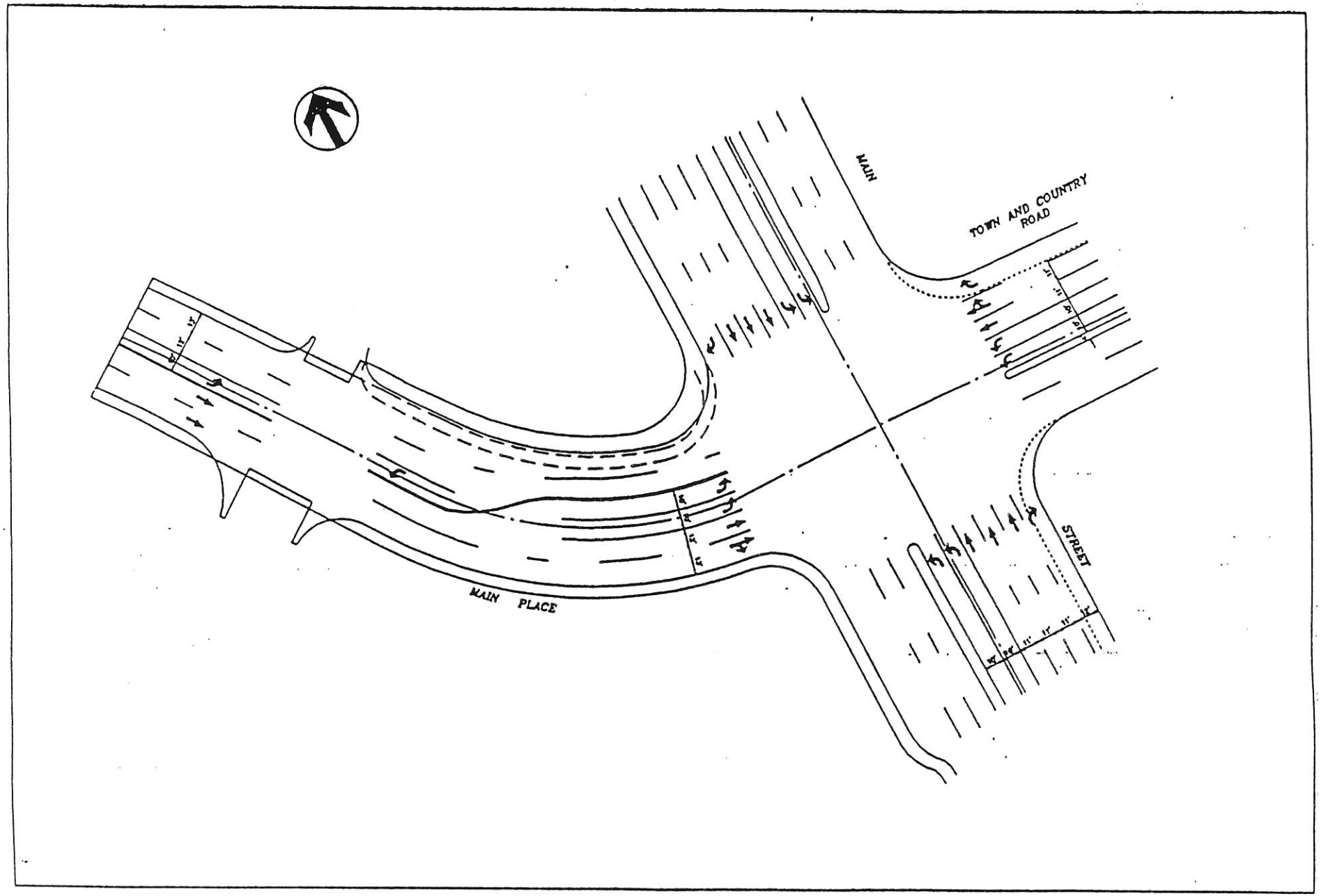
Eight traffic-related mitigation measures were identified in the Fashion Square EIR. Most of these mitigation measures have been implemented during the initial phases of development of MainPlace with the following exception:

> "Provide funding for the construction of a pair of new freeway ramps on the west side of Fashion Square linking the Santa Ana Freeway with a public road surrounding the project."

The direct ramps to/from the I-5 Freeway have not been implemented on a permanent basis although they have been used for temporary freeway access during the I-5 widening. There may be some reconsideration of this mitigation measure, based on current Caltrans policy regarding dedicated ramps to private development. Also, there may be an opportunity to augment ramp capacity in a way which would provide greater area-wide benefit.

In addition, significant improvements to the circulation system have been implemented as part of the I-5 widening project and the planned Main Street Concourse project. These include:

- Completion of the Broadway overcrossing and reconfiguration of the I-5 freeway ramps, providing more direct access to Broadway and MainPlace.
- Widening of Owens Drive (now called Memory Lane) east of Main Street and reconfiguration of the intersection of Owens Drive at Main Street.
- Enhancements to the intersection of Main Street at MainPlace Access Drive.
- Improvements to intersection of Main Street at MainPlace Drive/Town & Country Road (see Figure 2).



Source: Main Street Concourse EIR

Figure 2
MAIN STREET AT MAINPLACE/TOWN & COUNTRY ROAD
RECOMMENDED CUMULATIVE MITIGATION

- Improvements along La Veta Avenue, including the intersection of Main Street at La Veta Avenue and La Veta Avenue at Pepper Street.

These improvements in combination with the mitigation measures originally identified for the Fashion Square EIR, which have already been implemented, will provide adequate roadway capacity to accommodate estimated traffic to be generated by the proposed expansion.

The proposed expansion modifications are not estimated to result in any additional significant impacts compared to those identified in the Traffic Study for Fashion Square EIR. The measures identified to mitigate the anticipated impacts of the Fashion Square Commercial Center served to mitigate a much larger project than the proposed expansion and that which exists as MainPlace. The measures are more than adequate to mitigate the estimated impacts of the proposed MainPlace expansion.

Noise

Environmental Setting

As discussed in the Fashion Square EIR, vehicle traffic is the primary source of noise in the project area. Major roadways previously described in that EIR continue to be the primary sources of traffic noise in the area. The extension of Broadway Street over the Santa Ana freeway which provides an additional link for traffic between the project site and the west side of the Santa Ana freeway has been completed. A noise barrier along the west side of Broadway Street between the freeway and Santa Clara Avenue has been completed.

The Fashion Square EIR reports the results of sound level measurements that were taken in the residential area which is located near Memory Lane (formerly Owens Drive) and Main Street. Measurements were taken during the peak afternoon traffic period at the three locations depicted in Figure 28 of the Fashion Square EIR. 12-minute average sound levels were 64 dBA, 57 dBA, and 52 dBA respectively at Positions 1, 2, and 3. Sound levels reported in the Fashion Square EIR have likely increased in the time since those measurements were taken. Noise from traffic is proportional to the volume of traffic. A rule of thumb is that a doubling of the traffic volume is needed to increase traffic noise by 3 dB, and a tripling of traffic volume would be needed for a 5 dB increase in noise, generally considered to be the threshold of a distinctly perceptible increase in noise.

Since the time the Fashion Square EIR was prepared, the amount of retail space at the center has increased from approximately 522,000 square feet to 1,100,000 square feet or a factor of about 2:1. This corresponds to about a 3 dB increase in traffic noise for the immediate area and access to MainPlace parking. Accordingly, existing peak period sound levels are estimated to be 67 dBA, 60 dBA, and 55 dBA respectively at the three positions where measurements were previously taken. A 3 dB increase in traffic noise implies that the contours depicted in Figure 28 in the EIR would expand to a distance of about 1.5 times the distances to the associated roadways shown in Figure 28.

In urban settings, peak period average sound levels are generally within 1 to 2 dB of Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (DNL) values. The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 to 10:00 p.m. and 10 dBA for the hours from 10:00 p.m. to 7:00 a.m. The DNL descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 and 10:00 p.m. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly higher. For the purposes of this discussion, peak period sound levels are considered to be equivalent to DNL values.

The City of Santa Ana General Plan Noise Element identifies the following standards and guidelines for land uses:

	Desirable Maximum CNEL or DNL	**Maximum Acceptable CNEL or DNL**
Residential, low density	55	65
Residential, medium density	60	65
Residential, high density	65	70
Schools	60	70
Commercial, office	65	75
Industrial	70	75

Using these guidelines, existing sound levels are considered to be generally consistent with the land uses in the area.

Impacts

As with the project proposed in the Fashion Square EIR, the proposed expansion modification will generate additional noise in the local area due to demolition of existing on-site structures, construction activities, construction traffic, and project-generated traffic. No pile driving activities will be associated with construction (pers. communication, Ron Brunswig, April 1, 1996). Because the City of Santa Ana noise ordinance (No. NS-1441) limits noise from construction that occurs outside daytime hours and because there are no noise sensitive land uses in the immediate vicinity of the project, construction noise impacts are considered less than significant and no mitigation is required.

The Fashion Square EIR identified increases in traffic noise in the range of 3 to 5 dB along Memory Lane (then Owens Drive) within a couple hundred feet of Main Street as a result of the project. These increases corresponded to increasing the uses in the area from about 522,000 square feet of retail space to a total of 1,500,000 square feet of office space, 1,600,000 square feet of retail space, and 1,200 hotel guest rooms. The current project would add 8,000 square feet of restaurant space, a 70,000 square foot cinema, and 69,000 square feet of retail space for a total of 147,000 square feet. Increasing the existing retail floor area of 1,108,000 square feet by 147,000 square feet

is estimated to increase existing traffic noise levels in the area by less than 1 dB. Because a 1 dB increase is well below the 3 dB threshold of a perceptible increase, the impact of the project-related traffic noise in the area is considered less than significant and no mitigation is required.

Air Quality

Environmental Setting

Air Quality Standards and Monitoring Data

Carbon monoxide (CO) levels are a public health concern when CO combines with hemoglobin and can reduce the rate at which oxygen is transported in the blood stream. Both the cardiovascular system and the central nervous system can be affected. State and federal ambient air quality standards for CO have been set at levels intended to keep CO from combining with more than 15% of the blood's hemoglobin. State and federal CO standards have been set for both 1-hour and 8-hour averaging times. The state 1-hour CO standard is 20 ppm, and the federal 1-hour CO standard is 35 ppm. State and federal standards are both 9 ppm for an 8-hour averaging period. State CO standards are phrased as values not to be exceeded. Federal CO standards are established as values not to be exceeded more than once per year. Both the state and federal 8-hour CO standards, as well as the state 1-hour CO standard, have been violated several times during the last four years in the project region (ARB 1994, 1993, 1992, 1991).

Ozone is a public health concern because it is a respiratory irritant that also increases susceptibility to respiratory infections. Ozone causes substantial damage to leaf tissues of crops and natural vegetation, and damages many materials by acting as a chemical oxidizing agent. Ozone is formed by the combination of reactive organic gases (ROG) and oxides of nitrogen (NOx) in the presence of sunlight. State and federal standards for ozone have been set for a 1-hour averaging time. The state 1-hour ozone standard is 0.09 parts per million (ppm), not to be exceeded at any time. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than three times in any 3-year period. Both the state and federal ozone standards have been violated several times during the last four years in the project region (ARB 1994, 1993, 1992, 1991).

Health concerns associated with suspended particles focus on those particles small enough to reach the lungs when inhaled because they can lodge in the lungs and contribute to respiratory problems, including permanent lung damage. Fine particles can also interfere with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. Few particles larger than 10 microns in diameter reach the lungs, so particulate matter smaller than 10 microns in diameter (PM10) is the focus of the state and federal standards. State and federal PM10 standards have been set for 24-hour and annual averaging times. The state 24-hour PM10 standard equals 50 micrograms per cubic meter ($\mu g/m^3$) and the federal 24-hour standard is 150 $\mu g/m^3$. The state annual PM10 standard is 30 $\mu g/m^3$, an annual geometric mean, whereas the federal annual PM10 standard is 50 $\mu g/m^3$, an annual arithmetic mean. Federal and state 24-hour PM10

standards may not be exceeded more than 1 day per year, and both annual standards may not be exceeded at all. Both the annual and 24-hour state PM10 standards have been violated several times during the last four years in the project region (ARB 1994, 1993, 1992, 1991).

Attainment Status and Air Quality Planning

The project region, located in the Orange County portion of the South Coast Air Basin (SCAB), is classified as a nonattainment area for the state and federal CO standards, an extreme nonattainment area for the state and federal ozone standards and a nonattainment area for the state and federal PM10 standards (Chico, personal communication, March 26, 1996).

The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring air quality and enforcing air quality regulations in the Orange County portion of the SCAB. In 1994, the SCAQMD prepared an air quality attainment plan (AQMP) for the SCAB which included the project region. The ozone portion of this plan forms the ozone SIP for the SCAB. Additionally, the SCAQMD is revising the 1994 AQMP and the revised version is due to ARB in 1997. The PM10 portion of this revised plan, which will later become the PM10 SIP, is due to EPA in February 1997 (Hogo, personal communication, October 27, 1996).

Impacts

Calculation of Construction Emissions

Three sources of construction-related emissions are assessed in this analysis: construction worker vehicles, construction trucks, and construction equipment. Emissions of CO, ROG, NOx, and PM10 generated by construction workers commuting to the project site were estimated by multiplying the maximum number of construction worker trips expected to be made per day times the average trip length and an emission rate for each pollutant. Emission rates were generated using EMFAC7F, release 1.1, a program created by ARB to estimate vehicle emission rates. The maximum number of trips expected to be made during any day of construction was used to ensure that this would be a worst-case analysis. Construction truck emissions were calculated similarly.

Exhaust emissions generated by the operation of construction equipment were estimated by multiplying the maximum number of hours of operation of each type of equipment expected to be used on the busiest day of construction by an emission rate for each pollutant. Emission rates for the various types of construction equipment were taken from the document "Compilation of Air Pollutant Emission Factors" (EPA 1985). This document contains emission rates for a broad range of pollutant-producing equipment and activities. The maximum number of pieces of equipment and maximum number of hours of equipment operation expected to occur during project construction was used to ensure that this would be a worst-case analysis.

Dust emissions generated by operation of construction equipment in unpaved areas were estimated by multiplying the maximum number of acres of land expected to be disturbed in a single day during the construction period by a fugitive dust emission rate taken from the EPA document described above.

Calculation of Vehicular and Stationary Operation Emissions

The Fashion Square EIR included estimates of emissions of CO, ROG, NOx, and PM10 generated by motor vehicles traveling to and from the project site, and the on-site use of natural gas. Emissions of CO, ROG, NOx, and PM10 generated by motor vehicles and on-site natural gas use were estimated for the proposed MainPlace modifications by multiplying the emissions estimated in the Fashion Square EIR by a factor equal to the proposed expansion's square footage divided by the square footage analyzed in the Fashion Square EIR.

Construction-Related Impacts

As shown in Table 6, construction of the proposed MainPlace modifications would result in the emission of approximately 72 pounds per day (ppd) of CO, 8 ppd of ROG, 75 ppd of NOx, and 119 ppd of PM10. These quantities are clearly below the SCAQMD construction emission thresholds of 550 ppd of CO, 75 ppd of ROG, 100 ppd of NOx, and 150 ppd of PM10.

Operation-Related Impacts

As shown in Table 7, even though emissions for pollutant emissions generated by the proposed MainPlace modifications are above AQMD thresholds, these emissions coupled with the emissions for the existing center would be well below the quantities generated by the project analyzed in the Fashion Square EIR.

Shade/Shadow, Solar Glare, Illumination

The Fashion Square EIR examined shade/shadow from the assumption that high-rise buildings could be built onsite. This was assumed at the time based on the square footage that was proposed, and the lack of a finite configuration. That analysis examined multi-story building ranging from 8 to 52 stories at various setbacks from area residential neighborhoods. It was determined that no impacts would result. The existing buildings onsite are no higher than three stories and pose no shade/shadow impacts to offsite structures. The proposed expansions of the restaurant/cinema and the Robinson's-May department store addition are also proposed at a maximum of three stories, will blend with the existing structure, and will not result in any adverse impacts to shade/shadow.

Table 6
Maximum Pollutant Emissions Generated During Construction of Proposed Main Place Modification

Emission Source	CO	ROG	NOx	PM10
Construction Equipment	21.6	3.3	52.1	3.2
Construction Vehicles	15.6	4.1	21.6	3.4
Construction worker vehicles	35	1.1	1.2	0.1
Ground Disturbance	0	0	0	112
Total Daily Emissions	72	8	75	119

Notes:

1) Analysis of construction equipment and vehicle emissions is based on the assumption that the following equipment would be used simultaneously on a peak construction day: 1 bulldozer (6 hours), 1 backhoe (6 hours), 1 crane (8 hours). Additionally, 30 heavy truck trips would be made on a peak construction day. The construction equipment is an average of the type of equipment used on this type of project. Construction is expected to continue for approximately one year. This was based on discussions with the developer and Jones & Stokes Associates' experience in working with projects of this size.

2) Analysis of construction worker vehicle emissions is based on the assumption that there would be 35 workers coming to the construction site on a peak construction day.

3) Analysis of ground disturbance emissions is based on the assumption that 3 acres of unpaved ground would be disturbed on a peak construction day. This assumes that existing paving would be removed from the construction zone and is based on the maximum total area disturbed of the project areas, shown on Figure 1.

4) Any discrepancy in the sum of total emission shown in table is due to rounding.

Source: Calculations by Jones & Stokes

Table 7
Operation-Related Emissions for the Proposed Main Place Modifications

Pollutant	1983 Project (1) (3.3 Million sf) emission (lbs/day)	1996 Baseline (2) (1.1 million sf) emission (lbs/day)	1996 Addendum (2) (150,000) sf) emission (lbs/day)	Total 1996 (1.25 million sf) emissions (lbs/day)	AQMD Thresholds
CO	11,995	4,028	545	4,573	550
ROG	674	226	31	257	55
NOx	2,489	836	113	949	55
PM10	305	103	14	117	150

Source:
(1) Fashion Square EIR
(2) Calculations by Jones & Stokes

The Fashion Square EIR also examined the use of reflective materials for building surfaces which could have adverse affects to motorists on area streets. The existing structure was designed and constructed with no such reflective surfaces. It is assumed that the proposed expansions will be constructed in a manner consistent with the existing structures, and no solar glare is anticipated. No impacts will result.

The MainPlace site is part of an area that is largely commercial and produces illumination from signage and parking. The Fashion Square EIR determined that no significant impacts to surrounding land uses would result from project illumination. The proposed modifications represent a small percentage of the already existing structures on the site. No differential in illumination will result from the proposed additions. No impacts will result.

Aesthetics

The proposed modifications represent a small percentage of the structures already in place. The City will require that the new modifications blend with the existing structure. The proposed modifications are similar in height at three stories to the existing structures and will not result in any obtrusive or out-of-scale visual elements. The visual appearance of the proposed modifications will not result in any significant adverse impacts.

Housing/Population

Based on the projected employment figures that were generated in the Fashion Square EIR, for a commercial/retail establishment, 1 employee is required for every 500 square feet of space. For the proposed expansion of approximately 147,000 square feet, then, approximately 300 new employees may be required. That would be 138 persons for the expanded Robinson's-May department store, and approximately 160 persons for the cinema complex and restaurant. It can be assumed that less employees per square foot would be required for the cinema complex, however, a greater number are required in restaurant operations.

It is typical that most employees will be hired from the local surrounding community, especially with a higher unemployment rate that is currently being experienced in central Orange County. The exception may be higher-level managerial personnel who may commute. The number of new hires will not have an effect on the demand for new housing in the area, and will not create a significant inflow of persons relocating to the area. No significant impacts will result to population or housing demands within Santa Ana or the surrounding communities.

John Wayne Airport

The proposed 147,000 square-foot expansion to MainPlace, and the associated approximately 300 new employees will not result in any increased demand for service from John Wayne Airport. The addition would not create any new hazards to aircraft approaching or departing the airport. No significant impacts will occur.

Public Services and Utilities

The Fashion Square EIR assumed the development of a total of over 4 million square feet based on 1.5 million for office, 1.6 million for retail, and over 979,000 square feet for hotel uses. The impacts for natural gas, electricity, telephone, water, sewer, solid waste, police, and fire were all based on that number. In consideration that the current actual developed square footage is 1.1 million square feet, and the proposed expansion is 147,000 square feet, the anticipated requirements for public services and utilities were never met.

No impacts were identified for natural gas and electricity although energy conservation measures were recommended (see Energy Section below).

Water and sewer improvements that were put in place to accommodate the existing MainPlace structures should be able to accommodate the proposed expansions. The Orange County Sanitation District completed a major sewer upgrade to the project area with entitlements for Main Street concourse. Any additional modification will be the responsibility of the developer. No significant impact is anticipated.

It is not expected that the proposed 147,000 square foot expansion will constrain the capability of telephone, solid waste, police and fire services. The conclusions of the Fashion Square EIR regarding on-site security and fire suppression services should remain a requirement for the proposed expansion.

Energy Conservation

As with the structure that was proposed in the Fashion Square EIR, the new 147,000 square foot expansion, will need to be designed for optimum energy efficiency in accordance with Energy Conservation Standards for non-residential buildings. The projected natural gas consumption for the 150,000 square foot addition would be 3 million cubic feet/month based on a consumption rate of 20 cubic feet per month per square foot, while the projected electricity consumption would be 600,000 Kwh/month based on a consumption rate of 4.0 Kwh per month per square foot. These numbers are approximations.

The originally projected energy usages in the Fashion Square EIR, based on building of over 4 million square feet of office, retail and hotel uses resulted in a projected consumption of over 86 million cubic feet per month of natural gas and over 13 million Kwh/month of electricity. Based on a ratio comparison, the existing MainPlace's 1.1 million square feet combined with the proposed 147,000 square foot expansion will be approximately one-third of that which was originally projected for energy usage. No impacts will result.

PERSONAL COMMUNICATIONS

Brunswig, Ron. Senior Vice President, Urban Retail Properties, Santa Ana, CA. April 1, 1996 - telephone conversation.

Chico, Tom. Program supervisor. South Coast Air Quality Management District, Diamond Bar, CA. March 26, 1996 - telephone conversation.

Hogo, Henry. Planning Manager. South Coast Air Quality Management District, Diamond Bar, CA. October 12, 1995 - telephone conversation.

Rice, Jeffrey. Case Planner. City of Santa Ana, Planning and Building Agency, Santa Ana, CA. March 22, 1996 - telephone conversation.

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BIBLIOGRAPHY

City of Santa Ana, 1978. Ordinance No. NS-1441. An Ordinance of the City of Santa Ana Amending Article VI of Chapter 18 of the Santa Municipal Code Relating to Noise Control.

City of Santa Ana, 1982. City of Santa Ana General Plan, Noise Element, pgs. 72-74. Adopted September 1982, per Resolution 82-122.

South Coast Air Quality Management District, 1993. CEQA Air Quality Handbook.

Traffic Impact Analysis for the Main Street Concourse, DKS Asociates, January 2, 1992.

Trip Generation, Instituted Transportation Engineers, 5th Edition.

Ultrasystems, Inc., 1983. Final Environmental Impact Report for the City of Santa Ana Redevelopment Project: Fashion Square Commercial Center. Prepared for the City of Santa Ana, Community Redevelopment Agency.