

APPENDIX B8

**Transportation Demand
Management (TDM) Plans**

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TRANSPORTATION DEMAND MANAGEMENT
STRATEGIC PLAN

FOR THE

ANAHEIM NORTHEAST AREA SPECIFIC PLAN

FOR:

IBI GROUP

ANAHEIM REDEVELOPMENT AGENCY

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1.1 INTRODUCTION AND SUMMARY OF FINDINGS

DC REILLY & ASSOCIATES, acting as a subcontractor to IBI GROUP, has prepared this Transportation Demand Management (TDM) Strategic Plan for inclusion in Status Report #2 for the Anaheim Northeast Area Specific Plan. This TDM Strategic Plan identifies the major issues and options for implementing a transportation demand management program for the Northeast Area, and offers recommendations for proceeding with such a program.

As described in the body of Status Report #2, the goal of the Transit-Centered Alternative is to achieve, at buildout, a 12.2% reduction in average daily vehicle trips from the use of High Occupancy Vehicles (HOVs), transit bus and shuttle services, and commuter rail. This goal is discussed in more detail in the mitigation program associated with the Transit-Centered Alternative. This TDM Strategic Plan identifies how the 12.2% reduction can be achieved, including a brief outline of shuttle bus service proposed as part of the Transit-Centered Alternative to increase use of commuter rail services.

The Transit-Centered Alternative recommended for the Northeast Area will require a comprehensive, multi-faceted circulation improvement program to achieve overall traffic and trip reduction goals. This TDM Strategic Plan is provided to assist policy-makers in understanding the TDM portion of that larger program and to offer recommendations for its implementation.

The TDM Strategic Plan is divided into four sections:

Section 1.2 (Existing/Projected Conditions) evaluates the Northeast Area's proposed shifts in land uses and related impacts on employment, commuting patterns, and transit services. This section builds upon the information and estimates contained in Status Report #2, and offers further analysis of their impacts on travel behavior.

Section 1.3 (Regulatory, Service, Management and Financing Options) considers options in formulating a Transportation Management Program and are evaluated based upon their expected effectiveness, acceptability and cost.

Section 1.4 (Conclusions) presents the conclusions of the analysis of Area conditions and options.

Section 1.5 (Shuttle Bus Operating Plan) discusses the purpose and operating costs for the shuttle services proposed under the Transit-Centered Alternative.

SUMMARY OF RECOMMENDATIONS

ACTIONS:

1. Rely upon continued implementation of Regulation XV.
2. Continue implementation of development requirements in the Transportation Demand Management Facilities Ordinance.
3. Adopt the transportation demand management service options listed as Minimal and Moderate:
 - o Expand the existing Employee Transportation Coordinator (ETC) Network in the Northeast Area.
 - o Provide area-wide Computerized Commuter Matching Services.
 - o Provide Promotion Materials.
 - o Incorporate Transit/HOV Amenities in Existing and New Development.
 - o Publicly Recognize Achievement.
 - o Establish a Guaranteed Return Trip Program.
 - o Provide On-site Coordinator Assistance.
 - o Coordinate Third-Party Vanpool Services.
 - o Coordinate Adoption of Alternative/Flexible Work Schedules.
4. Endorse proposed additional bus and commuter rail services and new commuter shuttle service described in the Traffic and Circulation Section of Status Report #2 and seek funding for these services from outside public agencies and the private sector.
5. Develop a Transit/TDM Services Action Plan to be implemented upon approval of the Northeast Area Specific Plan.
6. Contract for services, perhaps with a locally formed Transportation Management Association (TMA), to clearly establish goals, services and measures of achievement.

7. Develop an Integrated Smart Fare Card System to use with toll roads, commuter rail and bus transit in coordination with the Transportation Corridors Agencies, Orange County Transportation Authority and Metrolink.
8. Consider development of a parking management program in conjunction with neighboring cities, county agencies, regional planning agencies and the private sector.

COST ESTIMATES

Transportation Demand Management Services:

\$200,000 - \$500,000 annually
(based upon services)

Shuttle Bus Services:

\$120,000 - \$180,000 annually

Total: \$320,000 - \$680,000 annually

FINANCING OPTIONS

1. Redevelopment Agency tax increment funds
2. Caltrans - State funds
3. OCTA - Measure M funds, transit operating funds
4. Fees-for-Services - charged to employers/building owners, developers
5. Surcharge on use of future Smart Card Fare Card System
6. Assessments on the value of parking spaces

1.2 EXISTING/PROJECTED CONDITIONS

This TDM Strategic Plan reflects the projected changes in existing land use and circulation conditions as contained in the Transit-Centered Alternative. It accommodates and builds upon changes in the proposed mix of land uses, employment, commuting patterns, vehicle occupancy, and proximity to planned services and infrastructure improvements. The type of employment, number of employers with 100 or more employees, existing commuting patterns and availability of commuter rail and HOV lanes will have a significant impact on the design and ultimate success of a transportation demand management program.

1.2.1 Existing Conditions

Description of the Area

The Northeast Area is comprised of 2,815 acres in an area bounded by the Santa Ana River and the Riverside Freeway (SR-91) on the south, the Orange Freeway (SR 57) on the west, the Imperial Highway on the east, and Orangethorpe Avenue on the north. The Area includes land under the jurisdiction of the cities of Anaheim and Placentia, the Anaheim Redevelopment Agency, and the Orange County Water and Orange County Flood Control Districts. Of the total acreage, 47 percent is devoted to industrial uses and 33 percent is publicly owned, primarily for flood control and ground water purposes.

Development

The Anaheim portion of the Northeast Area (hereinafter, references to the Northeast Area describe the Anaheim portion only) currently has approximately 15.47 million square feet of industrial use, 5.88 million square feet of office use, 1.59 million square feet of retail use and .5 million square feet of residential use, for a total 23.44 million square feet of development. Traditional light industrial uses make up most of the building space, followed closely by major corporate industrial facilities and multi-tenant business parks.

Employment/Regulation XV Coverage

As reflected in the body of Status Report #2, existing employment is estimated to be 46,350 workers. Average state and regional employment statistics suggest that as much as 45 percent of employees in a given area work for employers of 100 or more employees. This is the case in cities such as Pasadena and Irvine. However, data from the South Coast Air Quality Management District (SCAQMD) indicates that 14,979 employees work for such employers in the Northeast Area, accounting for 32% of area-wide employment. Employers of 100 or more employees are governed by the SCAQMD's Regulation XV, which requires bi-annual trip reduction plans and annual reports on progress towards achieving an average vehicle ridership (AVR) of 1.5 persons in this area. State law now prohibits the expansion of Regulation XV to employers of 50-99 employees until 1997, although the SCAQMD has included this option in

its Air Quality Management Plan (which has a horizon of 2010) along with the possibility of raising the region's AVR goals.

Mode Split/AVR

We have reviewed estimates of the AVR for the Northeast Area from available data and conclude that Barton-Aschman's estimate of an existing 17% market share for HOVs (with 2.25 persons per vehicle) and a 3% transit market share for all trips results in a current 1.12 AVR. This translates into 30,614 vehicle trips that are currently being eliminated, leaving 247,695 average daily vehicle trips with an average occupancy of 1.12 persons per vehicle. This figure is supported by the estimated area-wide average of about 1.12 AVR for Orange County. These estimates reflect all daily vehicle trips, not just commuter trips.

HOV Facilities and Transit Services

Carpool lanes currently exist on the I-405 and on State Routes (SR) 55 and 57. Carpool lanes are under construction on the I-5 and are planned on SR 91 between Riverside County and SR 55 by 1995 (OCTA estimate). These lanes are restricted to two or more persons, although this will be increased to three or more persons as total traffic and HOV use increases.

The Northeast Area is currently served by bus routes operated by the Orange County Transportation Authority (OCTA), including east-west lines 30, 38 and 38A, from Cerritos to the Mall of Orange and operating, respectively, on Orangethorpe and LaPalma; north-south lines 22 and 73, peak hour services from the Brea Mall area to, respectively, Tustin and Irvine; and north-south line 69, from Cal State Fullerton to the Santa Ana Rail Station.

The Transportation Commissions of Riverside, Orange and Los Angeles, in cooperation with the regional commuter rail operating agency, Metrolink, plan to establish commuter rail service within the next two years from Riverside through this Area to Los Angeles and Irvine.

1.2.2 Projected Impacts

Development

The Transit-Centered Alternative proposes a mix of 18.18 million square feet of industrial use, 10.86 million square feet of office use, 2.84 million square feet of retail use and .5 million square feet of residential use, for a total of 32.38 million square feet, an increase of just over five million square feet, with a significant shift to office development from existing building uses. This shift will have a substantial impact on total employment.

Employment/Regulation XV Coverage

Employment is projected to rise under the Transit-Centered Alternative by 40%, from 46,350 to 64,860 employees. The greatest portion of this increase will be among Business Park, Corporate Headquarters and General Office workers, with a slight drop projected in Warehousing and Industrial workers. As the

mix of development and workers shifts from predominantly industrial to a combination of industrial and office uses, which reflects regional workforce averages, the percentage of employees covered by Regulation XV should rise from 32% to the South Coast Basin's normal range of 45% (employees working for employers of 100 or more workers, as a percentage of the total workforce).

Mode Split/AVR

Overall, the Transit-Centered Alternative will increase daily vehicle trips from 247,695 to 272,863. This modest 9.3% increase in trips can occur despite the 40% increase in employment only because of the reduction of the 34,587 daily vehicle trips, or 12.2%, that is assumed will be achieved through implementation of a transportation demand management program and use of alternative transportation modes (bus transit, commuter rail, carpools, etc.). This is in addition to the trips not being taken from existing use of HOVs and transit. Thus, the number of trips that would otherwise have to be mitigated through road improvements or widenings will instead be eliminated through a TDM program.

Trip reduction estimates by Barton-Aschman project mode splits will rise from the current estimated 3% transit and 17% HOV, to a potential maximum of 15% transit and 35% HOV, which would increase AVR for the Northeast Area from an estimated 1.12 to approximately 1.56. This is an optimistic projection which is useful in determining potential trip reduction for individual employers located near transit stations, along the route of the proposed shuttle service, or with significant TDM programs. However, it is important to note that this level of AVR is not necessary to achieve the trip reduction goal for the entire area as envisioned in the Transit-Centered Alternative. Eliminating the 34,587 vehicle trips assumed for the Transit-Centered Alternative requires a 1.24 AVR for the Northeast Area. Experience shows that, without a significant increase in transit services and provision of TDM assistance to employers and worker, such an increase will be difficult to achieve for the whole Northeast Area. Certainly, employers governed by Regulation XV have a much greater chance of achieving that or even higher AVR levels. But, since such employers will constitute only between 32-45% of all employees in the area, they will have to have much higher AVRs to bring the area-wide average up to 1.24, unless employers of 99 or less workers take full advantage of new transit services and can be encouraged to undertake voluntary TDM programs.

The changes in average daily vehicle trips are for all trips, not just home-to-work trips, which make up the bulk of peak period traffic. Commuters are by far the largest market for transit and HOV services, but they account for only 80% of average daily vehicle trips. If average daily vehicle trip reduction goals are to be achieved solely with commuters, an estimated 43,820 employees of the 64,860 total projected employees, or 68%, will need to be involved in some form of transit or HOV usage. (These figures assume a 1:1 employee to vehicle trip reduction from transit and a 1.5:1 reduction from HOVs averaging 2.5 passengers per vehicle.) Without a significant TDM program, including increased transit and HOV promotion, experience shows that this level of participation will be difficult to achieve in the face of falling gasoline prices (inflation-adjusted).

HOV Facilities and Transit Services

The Transit-Centered Alternative assumes the following level of HOV facilities and transit services:

- Carpool lanes on SR 55, 57 and 91, and I-405 and I-5, restricted to 3 persons or more.
- OCTA local bus service to the Northeast Area at twice the level of current service, plus six express bus routes with 30 minute headways.
- Commuter rail service from Riverside to Los Angeles and Irvine with 20 minute headways through the Area.
- Multi-modal terminus/commuter rail station at Catellus site and a commuter rail station at Lakewood site.

While it is uncertain how all of these services and facilities will be funded and put into service in the Northeast Area, some are already planned or being implemented by the OCTA, Caltrans and Metrolink. Others, such as new bus services and rail facilities, will require a high degree of local participation in their planning and financing. The combined increased level of transit plays a major role in helping achieve the trip reduction goals for the Area.

1.2.3 Existing Regulations

SCAQMD's Regulation XV

Employers of 100 or more employees are currently complying with Regulation XV, affecting approximately 32%, or slightly under 15,000, of the Northeast Area's estimated total employees. This may be expected to increase to 20,755 (32%) or to as many as 29,187 (45%) employees by the year 2010. Approximately one-half to two-thirds of these employees will need to participate in transit or HOVs if the SCAQMD's 1.5 AVR goal for employers in this area is to be achieved. While the long-term results of implementing Regulation XV are still unknown, a recent study showed an average annual increase of two percent in AVRs for employers complying with the regulation. Experience indicates, however, that employer-based trip reduction programs show significant effectiveness only with sustained efforts by employers, especially top management, over three to five years.

According to the SCAQMD, Regulation XV will have to be expanded before the end of the decade to at least employers of 50-99 employees and possibly to employers of 25-49 employees if the region is to comply with state and federal clean air mandates, and avoid sanctions or imposition of a federal implementation plan with more onerous regulations. SCAQMD is also examining alternatives such as increasing area AVR goals and expanding Regulation XV to building sites of 100 or more employees rather than just employers.

It is still unknown as to whether the SCAQMD will be able to extend Regulation XV to smaller employers after 1997. It would be impossible to achieve the trip reduction requirements of the Transit-Centered Alternative by limiting the Northeast Area TMP to employers currently covered by Regulation XV, even if all of their employees commuted by transit.

Irvine's Trip Reduction Ordinance

The City Council of the City of Irvine in December 1992 unanimously adopted a Trip Reduction Ordinance (TRO) after a two year planning and community involvement effort by a coalition of business and public officials. The TRO was adopted to meet Irvine's commitment to trip reduction goals associated with a significant expansion of office development in the Irvine Business Complex (IBC), an area around John Wayne Airport. It is aimed at achieving an additional 15% vehicle trip reduction over existing trip reductions in peak periods for traffic to, from or within the IBC. In addition, the TRO replaces Regulation XV for employers of 100 or more employees because state law requires SCAQMD to enforce more stringent local ordinances that apply citywide.

The TRO uses Regulation XV as a foundation, but differs with the air quality regulation in order to achieve Irvine's traffic reduction goals. All employers and most buildings in Irvine will eventually have to comply with the TRO, although with differing responsibilities. Employers of 100 or more employees are being phased in first (Irvine is assuming responsibility from SCAQMD for these employers) and must comply much the way they did under Regulation XV. This includes submitting annual trip reduction plans to the City for approval and implementing approved plans, although Irvine has adopted an incentive based reporting system that rewards AVR performance.

If Regulation XV is extended to smaller employers, the TRO is extended 90 days prior to the effective date of the regional regulation. Building owners with buildings or complexes of 240 or more employees on-site must adopt and implement Trip Reduction Support Plans, which focus on providing support for all employers and workers at their sites in the areas of facility improvements, information dissemination and employee coordination/assistance in forming and maintaining transit use and HOV arrangements. Employers not required to submit Trip Reduction Plans must provide information (one page only) each year about their AVRs, any services or incentives they may be offering, and the name, address and phone number of a contact person. All employer AVR data are provided for both AM and PM peak periods.

The TRO was developed under the auspices of the Irvine Transportation Authority, a city agency that was established to focus private and public policy attention and resources on alternative transportation. The ITA is governed by a fifteen member Board of Directors that includes all five City Council members, key private sector representatives from the Irvine Chamber of Commerce, Building Industry Association, Industrial League of Orange County, IBC Developers' Consortium, and the University of California, Irvine, plus a member at large and non-voting representatives from the OCTA, Irvine Company and the Planning and Transportation Commissions. The ITA Board played the key role in building consensus on this ordinance, although the

City's commitment to the 15% trip reduction goal as a mitigation measure was key in ensuring that action in some form was taken.

A significant number of public forums were held as part of a larger community involvement campaign, employer and building owner input was sought and compromises were reached on a range of issues to address their various concerns. The TRO was initially controversial, but discussion of the issues and review of alternatives with all concerned eventually resulted in unanimous approval by a philosophically diverse City Council.

The City of Irvine is finding that, by having local control, it is easing employers' burdens in reporting and complying with trip reduction requirements. The TRO allows more flexible and responsive local control over how trip reduction programs are approved and implemented, and greater access to the regulators by those being regulated. Irvine has been able to assist employers in coordinating with each other and in adopting trip reduction strategies that go beyond air pollution reduction efforts.

The TRO is mostly self-supporting, with annual trip reduction plan and support plan fees funding the additional staff and other costs of the program. However, the TRO limits employer trip reduction fees so that they can be no higher than SCAQMD's Regulation XV fees.

SCAQMD Guidance

Regional planning efforts are currently underway that will require cities to assume greater responsibility for achieving mobile source pollution reductions, with an emphasis on vehicle trip elimination strategies. While the Air Quality Management Plan for the South Coast Air Basin and the Regional Mobility Plan for the Southern California Association of Governments (SCAG) area have included adoption of local trip reduction ordinances in regional air quality and mobility plans over the past decade, these agencies are now cooperating to clearly specify the goals and extent of such local ordinances. Cities are to adopt a resolution of intent by June 1993 and a full-fledged Trip Reduction Ordinance by December 1993, according to the SCAQMD's Draft Handbook for Preparing a Local Government Trip Reduction Ordinance.

1.3 REGULATORY, SERVICE, MANAGEMENT AND FINANCING OPTIONS

A transportation demand management program that must achieve measurable reductions in vehicle trips requires the adoption and integration of strategies in three areas: regulation, or the legal framework by which goals and controls will be established; services, which relate to the nature and extent of the support to be given to those seeking to meet established goals; and program management, which ranges from loose to tight control. In addition, financing decisions provide the foundation for the whole program. Various options are available within each of these areas.

1.3.1 Regulatory Options

History shows that voluntary adoption of trip reduction programs does not come close to meeting the goals required to meet clean air mandates or traffic reduction commitments. It is for this reason that the SCAQMD adopted Regulation XV, which essentially placed into law what was the common practice of professionals implementing ridesharing programs around the country since the early 1970's. Thus, rules have been increasingly used to set out goals and controls for organizations (usually employers) that can have the greatest impact on use of transit and HOVs. Employers are targeted because the nation's transportation network is designed to meet peak PM demand, largely from commuters. However, organizations such as building owners, large event centers (i.e., stadiums) and shopping malls are increasingly being targeted for participation in trip reduction programs.

The two regulatory options for the Northeast Area TDM program listed below are not mutually exclusive. Both should be considered as part of a whole regulatory package.

Option 1: Rely upon continued implementation of Regulation XV.

This option requires no specific or immediate actions by the Cities of Anaheim and Placentia, but it will not achieve the 12.2% trip reduction goal by itself. Employers would continue to be governed by the SCAQMD, which eventually will expand the regulation to cover smaller employers and/or entire building sites. This will, over time, increase the number of employers and commuters covered by the regulation in the Northeast Area and spread the resultant participation in alternative transportation to what may be a significant portion of the employee population. The timing of such an expansion is uncertain, however, as is the long-range effectiveness of the regional regulation.

This option would entail continuous monitoring of Regulation XV and, if appropriate, future local action to ensure performance. Adoption of this option would essentially postpone a decision on regulation.

Option 2: Continue implementation of development requirements in the TDM Facilities Ordinance.

Over the past ten years or more, cities in Southern California and throughout the nation have placed varying degrees of TMP requirements on new development only. Both Anaheim and Placentia, along with all Orange County cities, adopted ordinances in early 1992 placing trip reduction requirements on new development to comply with state mandates for Congestion Management Plans. These requirements relate mostly to facility improvements to support use of transit and HOVs.

Such an ordinance can also be augmented as needed. The cities of Pasadena and Los Angeles have more stringent trip reduction