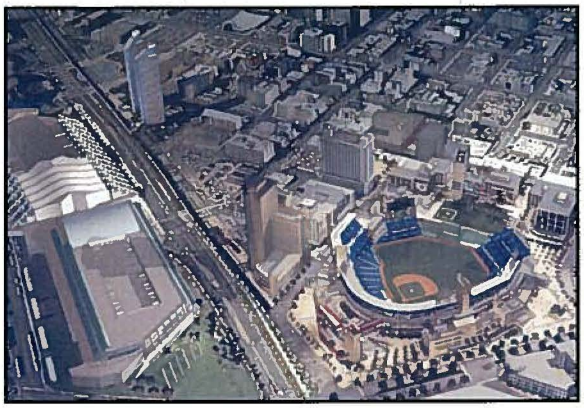

# DRAFT

## Environmental Impact Report for the San Diego Downtown Community Plan, Centre City Planned District Ordinance, and Redevelopment Plan for the Centre City Project Area

**SCH NO. 2003041001**

Centre City Development Corporation
30 YEARS OF DEFINING MOMENTS 1975 – 2005

**VOLUME 2**
**Technical Reports**
**JULY 2005**

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# NOTICE OF PREPARATION AND COMMENT LETTERS

## APPENDIX 2.1

NOTICE OF PREPARATION April 1, 2003

Name: Downtown Community Plan Update

Location: Downtown San Diego.

The Centre City Development Corporation (CCDC), acting as the agent of The Redevelopment Agency of the City of San Diego, will be the Lead Agency and intends to prepare a Master Environmental Impact Report (MEIR) for the proposed Downtown Community Plan Update which includes a series of coordinated amendments to the land use plans that govern downtown San Diego, with primary emphasis on the Centre City Community Plan, the Redevelopment Plan for the Centre City Redevelopment Project, the Centre City Planned District Ordinances, and potentially various neighborhood Focus Plans. Amendments to other implementing plans and policies may be required for consistency. The Centre City Community Plan, along with the Community Plans for other San Diego districts, comprise the Land Use Element of the City's General Plan, and the Centre City Community Plan and Planned District Ordinance are components of the City's Local Coastal Plan (LCP).

We would like to know the views of your agency or organization as to the scope and context of the environmental information germane to your agency's statutory responsibilities or your organization's interests in connection with the proposed action. Although specific proposals and revisions for the Downtown Community Plan Update have not been determined as yet, we are soliciting your concerns now to allow them to be taken into consideration during the initial formulation of the document revisions as well as being addressed during preparation of the Draft MEIR.

If your agency is a responsible agency as defined by Section 15381 of the State CEQA Guidelines, your agency will need to use the environmental documents prepared by CCDC when considering your permit or other approval for the action.

A description of the proposed action, location map and preliminary identification of the potential environmental effects are contained in the attached materials. For additional information on CCDC and the Downtown Community Plan Update, visit our web site at www.ccdc.com/planupdate. Information can also be obtained by contacting consultant team representative Joan Isaacson of Dyett & Bhatia at (619) 232-3166 or joan@dyettandbhatia.com.

Due to the time limits mandated by State law and CCDC's environmental procedures for compliance with State law, your comments should be sent by the earliest possible date but not later than 30 days after your receipt of this notice. Please send your response to the following address: Centre City Development Corporation, 225 Broadway, Suite 1100, San Diego, CA 92101, Attn: Walter Rask. We will need to know the name for a contact person in your agency.

CENTRE CITY DEVELOPMENT CORPORATION

Peter Hall
President

Attachment

## DESCRIPTION OF PROPOSED ACTION

### Overview

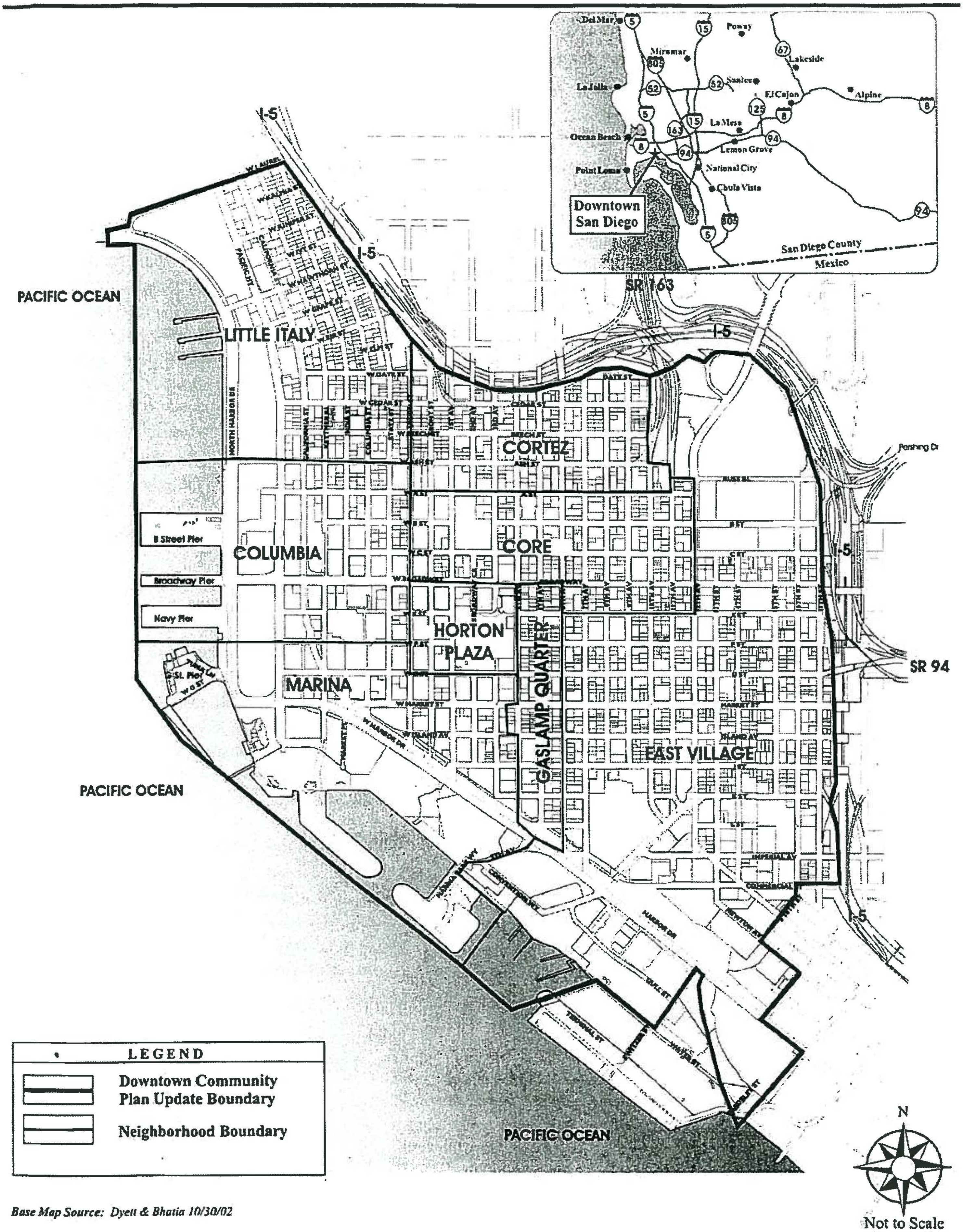
The proposed action, the Downtown Community Plan Update, consists of a comprehensive update of the plans and ordinances that govern development within downtown San Diego, with emphasis on the Centre City Community Plan (also referred to as the Downtown Community Plan), Redevelopment Plan for the Centre City Redevelopment Project, and Centre City Planned District Ordinance and potentially various neighborhood Focus Plans. Amendments to other implementing plans and policies may be required for consistency. The Centre City Community Plan, along with the Community Plans for other San Diego districts, comprise the Land Use Element of the City's General Plan, and the Centre City Community Plan and Planned District Ordinance are components of the City's Local Coastal Plan (LCP).

The project area encompasses approximately 1,500 acres within an area generally known as downtown San Diego. The northern limits of the Downtown Community Plan Area are generally defined by Laurel Street and Interstate 5. The westerly limit is generally San Diego Bay. Interstate 5 forms the eastern boundary. The southern boundary is generally defined by Commercial Street, 16th Street, Newton Avenue, Sigsbee Street, Harbor Drive, and the southwest extension of Beardsley Street. (See Figure 1)

The last comprehensive planning update for downtown San Diego occurred in 1992 when the Redevelopment Plan was updated and the Community Plan and Planned District Ordinances were adopted. A Master EIR was prepared as part of the 1992 planning update.

The Downtown Community Plan Update will respond to today's planning context and development trends, address underdeveloped and underutilized areas of downtown, and analyze the new opportunities that have arisen over the past decade. Another factor that will be taken into consideration is the City's Strategic Framework Element of the General Plan (Resolution No. R-297230), which calls for reinforcing downtown as the region's center and intensifying development, particularly residential. Improving integration, and removing duplication, between downtown's Community Plan, Redevelopment Plan, Planned District Ordinances, and other plans and policies are additional considerations.

The Downtown Community Plan Update process began in April 2002 with a review of current land use trends and downtown conditions. A comprehensive public participation program is integrated with the planning to solicit input from citizens, organizations and government agencies on their goals and visions for downtown development. One of the primary goals during the project's first phase was to collect as much input as possible through stakeholder interviews,




*Base Map Source: Dyett & Bhatia 10/30/02*

Downtown Community Plan Update Area ______________________ Figure 1 public workshops, and Steering Committee meetings, which were all widely publicized through the media, a newsletter, and the project website at www.ccdc.com/planupdate. The results have been summarized in several Working Papers and meeting summaries, all which are posted on the website. Some preliminary planning direction emerging from the public input includes:

- Continuing high density residential development;
- Expanding downtown's role as the regional business hub;
- Providing the complement of services and facilities for maturation of downtown's urban neighborhoods;
- Establishing neighborhood parks and improving connections to the waterfront and Balboa Park;
- Incorporating a multi-modal transportation system and enhancing downtown's walkability;
- Re-connecting downtown to the surrounding communities; and
- Strengthening the public realm as well as the arts and culture community.

Key baseline information for downtown is being updated to assist in developing new land use strategies for downtown including geologic hazards, hazardous materials, historic resources, airport noise and crash hazard contours and transit usage. After the land use and baseline research is completed, a series of land use alternatives will be developed and analyzed to assist in the selection of a preferred plan. The preferred plan will serve as the basis for updating the various land use plans and ordinances which govern development within Centre City. The current schedule estimates that a preferred plan will be determined in the spring of 2003.

Once a preferred plan for downtown has been selected, revisions to the text and maps comprising the Community Plan, Redevelopment Plan, Planned District Ordinance, some neighborhood Focus Plans, and possibly other implementing plans and policies will be made. A Master EIR will be prepared to evaluate the potential environmental consequences of the proposed plans, regulations and policies which make up Downtown Community Plan Update. The draft text of the revised plans and the Draft MEIR are programmed to be circulated for public review in late summer of 2003.

Once the public review period has ended, a Final MEIR will be prepared and the public hearing process will begin. Public hearings are anticipated to begin in fall of 2003.

**Potential Regulatory and Policy Changes**

The focus of the Downtown Community Plan Update consists of coordinated amendments to the Centre City Community Plan, Redevelopment Plan for the Centre City Redevelopment Project, Centre City Planned District Ordinance, and selected neighborhood Focus Plans. Short descriptions of these documents follow.

- Centre City Community Plan: Establishes the vision, land use plan, and associated development policies for the downtown area. It also addresses circulation, parking, parks and open space, and urban design. Downtown's Community Plan along with the Community Plans for other parts of the City comprise the Land Use Element of the General Plan.

- Redevelopment Plan for the Centre City Redevelopment Project: Sets forth the program for redevelopment, rehabilitation, and revitalization of the Centre City Redevelopment Project area pursuant to California Redevelopment Law.

- Centre City Planned District Ordinance: Establishes design and development standards to implement the Centre City Community Plan policies.

- Focus Plans: Lay out plans and projects for the purpose of achieving goals specific to individual downtown neighborhoods, or specific to downtown redevelopment topical issues.

Below is a list of the plans, ordinances and policies which govern development within downtown San Diego. The coordinated amendments to downtown's Community Plan, Redevelopment Plan, Planned District Ordinance, and selected neighborhood Focus Plans may require amendments to other implementing plans, ordinances, and policies contained in this list to ensure planning and regulatory consistency. Consolidation of development goals, policies, and regulations may also occur. The specific documents proposed for amendment, as well as the extent of the recommended revisions, however, cannot be determined until the preferred land use alternative is selected and the new Community Plan is drafted.

<u>Redevelopment Plans</u>

- Centre City Redevelopment Project
- Horton Plaza Redevelopment Project

<u>Community Plans</u>

- Centre City Community Plan

Area Focus Plans

- Asian Pacific Thematic Historic District Master Plan
- Centre City East Focus Plan
- Cortez Focus Plan
- Gaslamp Quarter Urban Design and Development Manual
- Little Italy Focus Plan
- Marina Urban Design Plan and Development Guidelines

Topical Focus Plans

- Arts Plan
- Historic Preservation Focus Plan
- Social Issues Strategy

Municipal Codes (Centre City)

- Centre City Parking Ordinance
- Centre City Planned District Ordinance
- Centre City Transit and Parking Improvement Fund
- Gaslamp Quarter Planned District Ordinance
- Marina Planned District Ordinance

Municipal Codes (Citywide)

- Airport Approach Overlay Zone
- Coastal Overlay Zone
- Lindbergh Field Comprehensive Land Use Plan
- Live/Work Quarters
- Parking Regulations
- Pushcarts
- Sidewalk Cafes
- Sign Regulations

City Policies

- Homeless Policy

## POTENTIAL ENVIRONMENTAL IMPACTS TO BE CONSIDERED

The MEIR will address the following environmental issues:

- Air quality;
- Biology;
- Cultural resources;
- Geology/soils;
- Hydrology/water quality;
- Land use and planning;
- Noise;
- Paleontological resources;
- Population/housing;
- Public safety;
- Public services/utilities;
- Transportation/circulation; and
- Visual quality.

In accordance with Section 16060(d) of the CEQA Guidelines, an Initial Study was not prepared for the project because it was determined that an EIR would clearly be required in light of the fact that an EIR was prepared for the 1992 update process as well as the expectation that the proposed Update could result in significant impacts. Analysis will be completed on a programmatic-level as no specific development or physical changes would occur as a direct result of the Downtown Community Plan Update. More detailed environmental evaluation would occur, as necessary, when individual development occurs pursuant to the Downtown Community Plan Update in accordance with Section 15177 of the CEQA Guidelines.

In addition to the potential environmental effects listed above, the MEIR will evaluate potential cumulative effects of the proposed Downtown Community Plan Update as well as alternatives to the proposed Update. The No Project alternative would evaluate the impacts resulting from continued implementation of existing plans, policies and regulations which govern downtown. As appropriate, other alternatives will be discussed which would avoid or lessen environmental effects related to the proposed Downtown Community Plan Update. These will be identified as the evaluation of environmental impacts is prepared for the MEIR once the preferred plan has been determined.

DISTRIBUTION:

**Federal Agencies**

AMTRAK
United States Army Corps of Engineers
United States Coast Guard
United States Department of Justice
United States Federal Aviation Agency
United States Fish and Wildlife Services
United States Marine Corp Air Station, Miramar
United States National Park Service, National Register Program
United States Navy

**State Agencies**

California Coastal Commission
California Division of Mines and Geology
California Highway Patrol
California Public Utilities Commission
Caltrans, District 11
Office of Planning & Research
Regional Water Quality Control Board
Office of Historic Preservation

**County of San Diego**

Auditor and Comptroller
Air Pollution Control District
Office of Education, Facilities Planning Department
Office of Special Projects
Environmental Health Protection
San Diego Housing Commission
Supervisor District 1
Supervisor District 2
Supervisor District 3
Supervisor District 4
Supervisor District 5

**City of San Diego**

Councilmember, 1st District
Councilmember, 2nd District
Councilmember, 3rd District
Councilmember, 4th District
Councilmember, 5th District
Councilmember, 6th District
Councilmember, 7th District
Councilmember, 8th District
Mayor's Office
City Attorney
City Manager
Central Library
Development Services
Economic Development Division
Engineering and Development Department
Environmental Services
Fire Department
Historic Site Board
Parks and Recreation
Police Department
Water Utilities Department

**Other Cities/Agencies**

Centre City Development Corporation, Manager- Architecture & Planning
Chula Vista, City of, Planning Director
Coronado, City of, Planning Director
Del Mar, City of, Planning Director
El Cajon, City of, Planning Director
Escondido, City of, Planning Director
Imperial Beach, City of, Planning Director
La Mesa, City of, Planning Director
Lemon Grove, City of, Planning Director

National City, City of, Planning Director
Metropolitan Transit Development Board, Planning Director
North County Transit District, Planning Division
Poway, City of, Planning Director
SANDAG, Executive Director
San Diego Gas & Electric
San Diego Transit Corporation
San Diego Unified Port District
Santee, City of, Planning Director
Solana Beach, City of, Planning Director

**Groups and Individuals**

Barrio Logan Community Planning Group
Burlington Northern Santa Fe Railroad
Centre City Advisory Committee
Chamber of Commerce of San Diego
Citizens Coordinate for Century III
Downtown Residents Group
East Village Association
Environmental Health Coalition
Gaslamp Quarter Association
Gaslamp Quarter Foundation
Gaslamp Quarter Association--Land Use and Planning Committee
Greater Golden Hill Community Development Corporation
Greater Golden Hill Planning Committee
Golden Hill Community Planning Group
Hope Community Development Corporation
Hillcrest Community Planning Group
Little Italy Association
St. Vincent De Paul
Save Our Heritage Organization
San Diego Convention Center Corporation
San Diego Convention & Visitors Bureau
San Diego County Archaeological Society, Inc.
San Diego Daily Transcript
San Diego Downtown Partnership
San Diego Federation for Housing and Community Development
San Diego Community College District, Assistant Chancellor
San Diego Unified School District, Assistant Superintendent
Sierra Club, San Diego Chapter
Southeast San Diego Development Committee
South Park Action Council
Uptown Community Planning Group

**DEPARTMENT OF TRANSPORTATION**
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FAX (619) 688-4299
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*Be energy efficient!*

CENTRE CITY
DEVELOPMENT
CORPORATION

MAY 05 2003

Orig. To: ______
Copy To: ______

May 1, 2003

Mr. Walter Rask
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

Dear Mr. Rask:

The Department of Transportation (Department) appreciates the opportunity to comment on the Notice of Preparation for the forthcoming Downtown Community Plan Update MEIR. We have also reviewed the Working Papers previously developed in support of your Downtown Plan Update process.

Given our mission of improving mobility and our direct responsibility as the owner/operator of the State Highway System, the Department considers itself a key stakeholder in the Downtown Plan Update Process. The State highways serving downtown (Interstate 5 and State Routes 94, 163 and 75) should be regarded as both local and regional assets that facilitate access and mobility needs for the entire San Diego region.

The Department recognizes that there is a strong link between transportation and land use. Growth and development can have a considerable impact on traffic and congestion on State transportation facilities. In particular, the pattern of land use can affect both total vehicle miles traveled and the number of trips per household. Good urban design and planning using "smart growth" principles can help to increase mobility and reduce traffic and congestion on State transportation facilities by providing functional alternatives to the automobile.

The City of San Diego's General Plan Strategic Framework Element Growth Strategy (the "City of Villages") has been adopted in order to limit sprawl and concentrate development in contained villages with appropriate infrastructure. These concepts, sometimes referred to as "smart growth," strive for the creation of livable communities, often characterized by compact, mixed-use centers designed at a human scale which enable residents and visitors to achieve a high level of mobility. The Downtown subject area is unique in that it is probably the dominant Urban Activity Center for the San Diego Region. The area presents an unparalleled opportunity to create jobs in conjunction with nearby quality affordable housing in a high density urban setting. Balancing the demand for housing and employment at a community scale enables residents to live and work in the same area, potentially decreasing demand on inter-regional transportation facilities.

For the Downtown area, the Department encourages the City to adhere to its "City of Villages" vision and incorporate mixed use and residential densities that will continue to support transit and other modes. As envisioned in the "City of Villages" plan, the Downtown area should act as a Regional Center area providing convenient access to jobs, housing, and services for residents and visitors. Downtown should be linked to other Village Centers and destinations by convenient transit service, enabling people to achieve a high degree of mobility without over-reliance on a particular mode of travel.

The Department encourages the City to incorporate the following ideals from the "City of Villages" vision: design features and siting which encourage walking and bicycling, vastly expanded public transit options, accessibility for children, the elderly, and persons with disabilities, and transit priority measures to make travel times competitive with the automobile.

**Centre City Needs Multi-Modal Transportation, Including Freeways**

The Department believes that Centre City, as one of the region's primary employment centers, should possess a well-balanced, multi-modal transportation system that accommodates travel not only within Centre City, but to the rest of San Diego and beyond.

A recent Caltrans/City of San Diego/SANDAG study shows that by 2020, traffic on the Interstate 5 corridor will increase by over thirty percent (30%). Growth projections for the Centre City between 2000 and 2020 forecast a 52 % increase in office square footage, almost 7% in retail square footage and a 333% increase in housing units.

Given the importance of mobility options, the Community Plan should provide an assessment of how various transportation options will be incorporated into the project. Specifically, pedestrian and bicycle access to and through Downtown should be provided and Transportation Demand Management (TDM) strategies such as carpool and vanpool formation and parking addressed as well.

While an emphasis on walking and transit can help address local and internal transportation issues, vehicular traffic (particularly to and from freeways) will continue to be the dominant mode into, out of and within the Centre City. Of concern to the Department is how this Plan Update will affect the freeway system. Interstate 5 (I-5) and State Routes 94 and 163 (SR-94, SR-163) currently suffer from congestion during the morning and evening commute periods. Furthermore, only a small percentage of I-5 freeway traffic is projected to "pass through" the Centre City area. In other words, most regional freeway traffic within the Centre City requires access into or out of Centre City or a surrounding activity center (e.g., airport, seaport, Balboa Park). Changes to land use in the Downtown area may contribute to demand beyond that planned for these facilities. Therefore, the Department suggests that the "Planning Principles" developed to guide the Downtown Plan Update reflect a multi-modal transportation system including freeways, where both "mobility" and "access" are well balanced. To that end, the traffic study for the DMEIR should look at rail, bus transit, local street and freeway forecast volumes and capacities.

The Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) document how transportation facilities in the San Diego region are planned to be implemented. The Downtown Community Plan should document clearly a nexus between the phased implementation of the RTP and RTIP with implementation of the Community Plan. In order to assure sound coordination between transportation and land-use, additional land use intensification affecting the local and regional circulation system should only be implemented subject to the development of accompanying transportation projects. Concurrently staged development of transportation and land use is necessary to assure continued high mobility for San Diegans.

**Increasing The Linkages Between Transportation And Land-Use**

The Department seeks any and all opportunities to integrate transportation and land-use plans in the San Diego region. As a growing urban village and the region's primary employment center, the Department envisions a Downtown Plan that integrates recent transportation studies and plans that have been developed in the region.

The Department encourages CCDC to integrate the plan concepts and transportation improvements from the November 2002 Central Interstate 5 Corridor Study into the Downtown Plan Update. This 30-month, $400,000 transportation corridor study developed an effective program of transportation improvements to address overall freeway congestion as well as access issues between I-5 and major activity centers in and around the Centre City area.

Many of the transportation plan concepts developed in the Central I-5 Study were not officially recommended for further consideration (nor included in MOBILITY 2030, SANDAG'S Regional Transportation Plan) due to local/community concerns or anticipated conflicts with the Downtown Plan Update. The Department recognizes this Downtown Plan Update as an opportunity to continue discussion and analysis of these transportation plan concepts with a land-use planning process. The Department recommends that CCDC and its support staff further analyze the outstanding issues from the Central I-5 Study in the Downtown Plan Update.

*1) Major operational improvements to the Centre City I-5 corridor ("S-Curve")*

Much of the recurrent congestion experienced on Interstate 5 in the Centre City "S-Curve" is due to conflicting demand streams from local ramps and intersecting freeways. The proposed improvement to address these operational deficiencies was a "collector-distributor (C-D) road" on the outside of the existing I-5 alignment. The proposed C-D concept would separate freeway "access trips" (to and from local ramps and freeway connectors) from "through trips" already in the general-purpose lanes, thereby improving freeway operations.

This proposed operational improvement may be facilitated via separate travelways and/or viaducts, with structures requiring additional right of way encroaching into Centre City or surrounding neighborhoods. The Department recognizes the potential impacts of the proposed improvement and respects the region's need to further study these impacts. Should CCDC not support improvements such as a "collector-distributor road," the Department recommends that a more viable plan concept to improve freeway operations be developed as part of the Downtown Plan Update.

*2) Major capacity-enhancing improvements to the "S-Curve"*

Notwithstanding its operational deficiencies, much of Interstate 5 in the vicinity of Centre City does not have the capacity for today's traffic demands, particularly in the morning and afternoon commute periods. In 2020, general traffic volumes will increase to a point that freeway segments within the Centre City area will also have insufficient capacity during the peak periods.

The Central I-5 Study recommended that Interstate 5 include an additional two (2) freeway lanes to accommodate high-occupancy vehicle (HOV) lanes through the Centre City area to increase capacity and promote ridesharing. SANDAG has shown its support of this plan concept by including this improvement in its "reasonably-expected" financial scenario of MOBILITY 2030. Given the physical constraints of the "S-Curve," the Department and the partnering agencies acknowledged that one feasible alternative for accommodating two additional lanes on I-5 without significant right of way acquisitions was to:

- Develop the aforementioned "collector-distributor road" outside of the existing I-5 alignment
- Convert one inside lane in each direction into an HOV lane
- Convert the remaining outside auxiliary lane (in each direction) into general purpose lanes (note: auxiliary lanes not needed if C-D road present)

Should CCDC find that a "collector-distributor road" is not feasible, the Department also recommends that a viable freeway HOV lane plan concept be developed as part of the Downtown Plan Update.

*3) Minor operational improvements to the "S-Curve"*

*Freeway Ramp Closures* As part of the analysis for the proposed C-D road, it was recommended that access to and from Interstate 5 be reduced to improve freeway operations. In order to increase spacing between on- or off-ramps, some low-volume ramps were recommended for closure. It is recommended that CCDC and the Department work together to resolve issues with near-term ramp closures (e.g., 'C' Street on-ramp) as well as long-term closures needed to accommodate operational improvements such as a C-D road (1st Avenue on-ramp).

*Freeway Ramp Metering* As general policy, the Department assumes that all local ramp interchanges in the San Diego metropolitan area will have signalized ramp control by the year 2020. The circulation element of the Downtown Plan Update should reflect this policy.

*4) New freeway connection from I-5 to 10th Avenue Marine Terminal and East Village*

The Central I-5 Study recommended that a new freeway connection be established between Interstate 5 and the 10th Avenue Marine Terminal. SANDAG has shown its support of this plan concept by including this improvement in its "revenue-constrained" financial scenario of MOBILITY 2030. The proposed connector would not only remove heavy trucks from the local Barrio Logan community, but also provide additional freeway access to the Convention Center, Ballpark District and East Village. Viable alignments of the proposed freeway connector may involve new roadway structures which could create other impacts on Centre City as well as Barrio Logan. It is recommended that CCDC work with the Department, the Port of San Diego and the local communities to develop viable plan concepts for the proposed and recommended freeway connector within the framework of the Downtown Plan Update process.

*5) Pacific Highway as a potential high-occupancy arterial roadway*

The Central I-5 Study recommended that improvements be made to facilitate general purpose and HOV connectivity between Interstate 5 and Pacific Highway north of Interstate 8. Should HOV lanes not be developed on Interstate 5 through the Centre City, Pacific Highway could serve as a viable alternative to access the downtown area. Improvements to Pacific

Highway have been developed to facilitate HOV demand from I-5 to the Old Town Transit Center as well as Lindbergh Field. The Department recommends that improvements on Pacific Highway be considered and developed south of Laurel Street to Broadway to foster HOV demand further into the Centre City area.

Other transportation-related issues in the Centre City Area include:

*6) Future of HOV and Transit in Centre City*

The Department acknowledges and supports the participation of the Metropolitan Transit Development Board (MTDB) in the Downtown Plan Update. As a transportation partner in the San Diego region, the Department expects that MTDB's Centre City Transit First Study will not only integrate plan concepts from the Downtown Plan Update, but also consider, integrate and analyze previous plan concepts developed in:

- MTDB's TransitWorks and Transit First! endeavors
- SANDAG's adopted Regional Transit Vision, High-Occupancy Vehicle (HOV)/Managed Lane Study and recently adopted 2030 Regional Transportation Plan (MOBILITY 2030), and
- City of San Diego's General Plan Strategic Framework Element Growth Strategy (the "City of Villages")

SANDAG's latest Regional Transportation Plan calls for the development of a regional system of HOV/Managed Lanes as well as a robust "bus rapid transit" (BRT) system to accompany the existing light rail transit and commuter rail systems. The Department supports SANDAG's regional vision of freeway "bus rapid transit" operating on HOV/Managed lanes as a flexible, effective transit mode. In the Centre City area, State Route 94 is planned as a major freeway BRT corridor, with regional transit service provided from Escondido and Chula Vista.

The Department recommends that CCDC and MTDB develop ambitious, yet technically sound plan concepts for regional BRT services from future HOV/Managed lanes on State Route 94. It is also recommended that the Downtown Plan Update integrate any regional BRT services from State Route 94 into the local circulation, street design and zoning plans, especially on the freeway couplets serving SR-94 ('F' and 'G' Streets).

Furthermore, should the Downtown Plan develop viable plan concepts for additional HOV lanes on Interstate 5 (assuming major freeway operational needs also met via some major operational improvement like a C-D road), the Department recommends that CCDC work with regional transportation partners to also include plan concepts for direct access connections from I-5 HOV lanes onto Centre City streets. Direct access ramps (DARs) would provide a more balanced HOV system in the Centre City and also improve and maintain freeway operations.

*7) Potential Improvements to State Route 163*

State Route 163 (The Cabrillo Freeway) is a four-lane freeway from Interstate 8 to Centre City. Due to strong community and environmental concerns, this particular segment has no long-range capacity-enhancing improvements planned. The Department acknowledges local stakeholders' need to preserve the unique nature of State Route 163 and its surrounding environs within Balboa Park.

The Department would like CCDC to include innovative strategies in the Downtown Plan Update that could look at ways to balance travel demand in the corridor with the environmental sensitivities inherent in the route. Examples could include value pricing (Fastrak), HOV/transit-only operation during peak commute hours, weekday HOV/transit operation, etc.

**Turning Interstate 5 Into An Asset**

The Department acknowledges the disruptive nature of transportation facilities, particularly State highways, on surrounding communities in the Centre City area. The Department encourages CCDC to develop a Downtown Plan that reconsiders freeway facilities as assets and to subsequently seek mutually beneficial opportunities to reduce freeway nuisances and disruptions.

The Department also acknowledges CCDC's overarching planning goal to "reconnect" Centre City with its surrounding communities. The Department respects this goal and supports an open dialogue to create and develop opportunities to achieve such goals. These opportunities, however, should be developed in a manner that does not foreclose or inhibit the State's ability to develop long-range transportation improvements within its right of way in the future.

To date, preliminary concepts to "reconnect" Centre City with its surrounding community have been introduced for public debate with minimal participation or input from the Department.

*Cortez Hill Park* The proposed development of linear parkland on the State's right of way in the Cortez Hill area would utilize a portion of the freeway right of way as part of a park and trail system that will encourage people's awareness and appreciation for park and wildlife resources within urban San Diego. However, the Department has not declared the right of way needed for Cortez Hill Park to be "excess" and does not anticipate doing so in the future. The Department continues to work with CCDC toward the development of this parkland, with the understanding that this right of way may need to be reclaimed for future highway improvements.

*"Lid" or "Cover" on Interstate 5* The Department supports "context-sensitive solutions" to transportation improvements to minimize impacts on local communities. The I-15 park deck and enhanced bridges across I-15 at El Cajon Boulevard and University Avenue are examples of this.

Development of an I-5 cover or the use of existing State right of way for non-freeway purposes should be considered in context with the results of the Central I-5 study and other potential transportation project needs. There are many demands on limited right of way that should be carefully considered, taking into account both transportation and land use needs.

Due to the extraordinary cost of context-sensitive measures such as covering I-5, the Department cannot alone advocate for such an infrastructure investment without the collective will of the region to support it. We therefore see the substantial investment in Centre City development as an opportunity to develop a consensus on these types of context-sensitive solutions.

Thank you again for the opportunity to be involved in the Downtown Community Plan Update process. The Department looks forward to continuing cooperation with the City of San Diego in coordinating land use and transportation issues. The Department envisions an increased level of participation in the Plan Update process and subsequent activities, and encourages a more committed partnership to reflect this vision.

Sincerely,

Bill Figge

BILL FIGGE, Chief
Development Review and Public Transportation Branch

**CITY OF CORONADO**
**COMMUNITY DEVELOPMENT**

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CORONADO, CALIFORNIA 92118
E-MAIL: COMDEV@CORONADO.CA.US

CITY HALL
PHONE: (619) 522-7326
FAX: (619) 435-6009

April 14, 2003

Mr. Walter Rask, Manager Architecture & Planning
Center City Development Corporation
225 Broadway, Suite 1100
San Diego, Ca 92101

Dear Mr.Rask:

The City of Coronado appreciates this opportunity to review and comment upon Center City Development Corporation's Notice of Preparation of a Master Environmental Impact Report (MEIR) on the Downtown Community Plan Update that in turn modifies various City of San Diego downtown planning documents.

Coronado's General Plan and Local Coastal Program recognize that the modes of public bay transit should be preserved and enhanced and that such transportation alternatives enrich the quality of life of residents and visitors to the San Diego region.

Therefore, the City of Coronado advises that the MEIR address how the various plans impact the viability of modes of public bay transit. For example: Are the locations and facilities specified for ferry and water taxi operations on the bay designed to encourage their usage? Does the location and operation of the network of bike paths and parking garages provided by these plans encourage the usage of on the water modes of transportation?

Finally, Coronado advises that the MEIR consider the compatibility of the Downtown Community Plan and its related documents to the adopted 2030 Mobility Regional Transportation Plan and its associated Congestion Management Plan.

Please feel free to contact me if you have any questions concerning these comments.

Sincerely,

Tony A. Pena

Tony A. Pena
Director, Community Development Department

cc: Mark Ochenduszko, City Manager
Jim Benson, Director of Engineering

CENTRE CITY
DEVELOPMENT
CORPORATION

APR 17 2003

Orig. To: Walter
Copy To:

I:CD\GENERAL\Letters&Memos\Memos&Ltrs from DirCD\CCDC Plan Update EIR 041503

THE CITY OF SAN DIEGO

April 28, 2003

CENTRE CITY DEVELOPMENT CORPORATION

APR 2 8 2003

Orig. To: Walter

Copy To:

Centre City Development Corporation
225 Broadway, Suite 1100
Mail Station 51D
San Diego, CA 92101
Attn: Mr. Walter Rask

Dear Mr. Rask:

Re: Downtown Community Plan MEIR (Master Environmental Impact Report)

Our department definitely has some concerns regarding the anticipated growth in the downtown area and our ability to provide adequate emergency response services. This project area encompasses approximately 1,500 acres in the downtown area covered by Station 1 (First Ave. and B Street) and Station 4 (Eighth Ave. and J Street). Station 3 (725 W. Kalmia) is located on the fringes of the project and also responds to the downtown area. Over 110 projects are currently underway in the downtown area, including over 9,000 additional residential units and the 46,000-seat ballpark. Projected growth is anticipated as follows:

| | 2003 | 2025 |
|---|---|---|
| Residents | 15,000 | 50,000 |
| Workers | 75,000 | 150,000 |

As an emergency services department, our ability to respond with existing resources to meet the emergency response needs of this community will be compromised by this projected growth and increased density. Over the past several years we have experienced an increase in run volume in the downtown area. Following are total incident counts for each downtown unit:

| Location | Unit | FY 2000 | FY2002 |
|---|---|---|---|
| Station 1 | E1 | 1,967 | 2,455 |
| Station 1 | E49 | 1,659 | 2,009 |
| Station 1 | T1 | 757 | 886 |
| Station 4 | E4 | 2,300 | 2,755 |
| Station 3 | E3 | 1,386 | 1,635 |

1,500 incidents per year is considered an average incident count for our units; 2,000 and above indicates a busy unit. From the above counts, our Department can already justify adding one

DIVERSITY

**Office of the Fire Chief**
Fire and Life Safety Services • 1010 Second Avenue, Suite 400, MS 604 • San Diego, CA 92101-4409
Tel (619) 533-4311 Fax (619) 533-4377

additional engine company in the downtown area. If run volume is projected even to double, additional engine and truck companies would be required to meet this growing demand. We must also consider the additional risk to property and life safety due to the increased number of high-rise structures included as part of this growth in the downtown area. This growth will also increase the number of high-rise inspections performed annually by the Fire Prevention Bureau. Fees are charged for this service and an additional Fire Inspector may be required to handle this additional workload.

Existing station facilities could accommodate two additional engines and a truck company. Rescue 4 could be relocated to another area of the city, and stations 1 and 4 could each house one additional engine. One additional truck company could be located at Station 11 (25th and Broadway). These adjustments could minimize the impact additional station construction might have on the city's capital improvement budget in the future. However, the staffing and operational costs of additional units would remain as an in issue in future budget cycles.

A new fire station in the downtown area needs to be considered, including space for an additional ambulance unit. Currently, a single ambulance unit, M61, is housed at Station 1. Continuing downtown development may force us to confront the inevitable probability that a lack of additional resources will necessitate stripping resources from surrounding communities to meet the demand for emergency response services downtown. Over the next eighteen months we will be conducting an accreditation study comparing our response capabilities to other similar metropolitan areas. This analysis and evaluation will help determine the appropriate number of resources required to meet this increase demand for service.

If you require additional information or have questions, the contact for our department will be Assistant Chief Tracy Jarman. She can be reached at (619) 533-4302 or tjarman@sandiego.gov.

Sincerely,

JBowman

Jeff Bowman
Fire Chief

TKJ/lls

C. Ronald Hicks
Director

# County of San Diego

DEPARTMENT OF GENERAL SERVICES
5555 OVERLAND AVENUE, SAN DIEGO, CA 92123-1294

PROJECT MANAGEMENT
(858) 694-2040
FACILITIES OPERATIONS
(858) 694-3610
FLEET MANAGEMENT
(858) 694-2876
REAL ESTATE SERVICES
(858) 694-2291
DOCUMENT SERVICES
(858) 495-5446

April 18, 2003

Centre City Development Corporation
Attn: Walter Rask
225 Broadway, Suite 1100
San Diego, CA 92101

NOTICE OF PREPARATION – Downtown Community Plan Update

We received the Notice of Preparation dated April 1, 2003 and have reviewed the plan and update background on the project Web site. The issues identified in the Notice of Preparation appear appropriate and sufficient to guide the MEIR preparation.

The County of San Diego intends to be actively involved in this process. Please update your distribution list for the County of San Diego deleting the Office of Special Projects and adding:

Department of General Services
C. Ronald Hicks, Director
County Operations Center, Building 2, Room 240
5555 Overland Avenue, MS 0360
San Diego, CA 92123-1294

The San Diego Housing Commission is a City of San Diego agency and should be identified under the City of San Diego.

Thank you for the opportunity to comment. If you have any questions please contact Tom Fincher at (858) 694-2153.

CRHicks

C. RONALD HICKS, Director
Department of General Services

CENTRE CITY
DEVELOPMENT
CORPORATION
APR 22 2003
Orig. To: WALTER
Copy To:

CRH:TF

cc: Alex Martinez, Deputy Chief Administrative Officer
Community Services Group

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2088
1-800-253-9933
www.sdcdeh.org

RICHARD HAAS
ASSISTANT DIRECTOR

April 29, 2003

CENTRE CITY
DEVELOPMENT
CORPORATION

MAY 01 2003
Orig. To: Walter
Copy To:

Walter Rask
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

Dear Mr. Rask,

This letter is in response to your request for input regarding the proposed Downtown Community Plan Update. Department of Environmental Health staff have reviewed the subject Notice of Preparation, and provide the following feedback.

Jim Henderson, Hazardous Materials Environmental Health Specialist, provided the following feedback. For new business coming in, the Hazardous Materials Division (HMD) plan check programs and continued involvement in the Community Plan will allow for adequate review of new businesses which may be regulated by the Hazardous Materials Division.

The close out of existing businesses is more problematic. One potential impact of the Community Plan Update is the improper management of hazardous materials or waste, or the improper closure of Underground Storage Tanks, resulting from closure of businesses that are displaced as a result of redevelopment. These impacts can be minimized in the following ways.

- Ensuring that the existing businesses managing hazardous materials or waste or operating Underground Storage Tanks, that may be affected by redevelopment, are clearly identified in the plan. This could be done using GIS overlays showing HMD permits and areas proposed for redevelopment.
- Continued reviews of the Community Plan Updates by HMD to identify affected businesses and assure proper closure or permit transfer.

Please contact Mr. Henderson at (619-338-2458) if you have specific questions or concerns.

The Department's Senior Vector Ecologist, James D. Lang, provided feedback to include a rodent surveillance and control program whereby joint inspections are made by the City building inspector and County vector surveillance and control staff whereby they inspect buildings looking for rodents and signs of rodents, then conduct necessary control work. Please contact Dr. Lang (858-694-2888) if you have specific questions or concerns.

Sincerely,

Daniel Reid

DANIEL REID, Chief
Community Health Division

cc: James Lang, Community Health Division
Jim Henderson, Hazardous Materials Division

**MTDB**
Metropolitan Transit Development Board

1255 Imperial Avenue, Suite 1000
San Diego, CA 92101-7490
(619) 231-1466
FAX (619) 234-3407

April 30, 2003

CENTRE CITY
DEVELOPMENT
CORPORATION

MAY 01 2003

Orig. To: Walter
Copy To:

SRTP 836.2 (PC 20482)

Mr. Walter Rask
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

Dear Walter:

Subject: DOWNTOWN COMMUNITY PLAN UPDATE MEIR

Thank you for including MTDB on the distribution list to receive the Notice of Preparation for the Downtown Community Plan Update's Master Environmental Impact Report (MEIR). MTDB is interested in the continued development of a downtown San Diego multimodal transit system and enhancing downtown's walkability. Throughout the Downtown Community Plan Update (DCPU) process, we will carefully consider the potential impacts of the proposed plans, regulations, and policies affecting these networks.

MTDB is proud to partner with Centre City Development Corporation (CCDC) on the Comprehensive Downtown Transit Study (CDTS). We have started work on this important study and anticipate developing recommendations germane to the DCPU process. Throughout the course of this study, we will strive to maintain consistency between the DCPU and CDTS proposed plans. As such, we intend to complete the development of this strategy in close coordination with the DCPU process. Ideally, this would allow for the inclusion of alternative operating strategies and an analysis of their impacts through the DCPU-MEIR process.

We anticipate that transit will continue to play an important role in the multimodal network serving downtown San Diego and that transit alternatives will be considered should mitigation of land use impacts result from the selection of a preferred growth strategy. We are aggressively pursuing development of a preferred downtown San Diego transit operating strategy and hope this would allow for the simultaneously evaluation of transit and land use alternatives through the MEIR process.

We look forward to continued involvement in the DCPU process and a successful marriage between the two plans. Please direct questions regarding the DCTS to the project manager, Brian Sheehan, at (619) 557-4521 or me.

Sincerely,

Toni

Toni Bates
Director of Planning and Development

DDarro
L-CPUMEIR-CCDC.BSHEEH

Port of San Diego
and Lindbergh Field Air Terminal
(619) 686-6200 • P.O. Box 120488, San Diego, California 92112-0488
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June 23, 2003

*Revised to incorporate no substantive changes*

Mr. Harold Sadler
Chairman
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

Dear Mr. Sadler,

This letter is in response to your agency's request for comments on the proposed update of the Centre City Community Plan.

First, let me congratulate you, the Steering Committee, Dyett and Bhatia and the rest of your consulting team on everyone's willingness to reach out to the stakeholder community to request comments and seek consensus on these important decisions. In addition, as one who reads a fair amount of such documents, I found the summary document, Working Paper #7, well written, with graphics that are easy to decipher.

Now to the Port staff's comments. In general, we view the three alternatives similarly with regard to the state-owned tidelands under the Port's jurisdiction. While we support the planning effort of the committee and will consider its recommendations, we would like to point out, for the record, that the Port, as a separate government agency with discrete land use jurisdiction, has the right to designate land uses on state tidelands that are different from those indicated in Working Paper #7 for these same lands.

As a general comment, certain land uses are prohibited on Port tidelands, such as any form of residential; others are limited, such as office and retail land uses. Broadly speaking, office land uses must tie back to the state tidelands trust purposes of promoting commerce (largely defined as visitor serving, maritime or related uses), recreation, navigation and fisheries. Retail land uses, as noted above, must be for visitor serving businesses. With the exception of residential uses, these restrictions are obviously subject to interpretation given an individual set of facts and circumstances. With the aforementioned commentary on proposed land uses, the following are comments on each alternative:

**ALTERNATIVE #1**

As we understand it, keeps the existing land uses in the Port Master Plan for the North Embarcadero and South Embarcadero areas with the exception of Lane Field at the intersection of Broadway and Harbor Drive. Alternative #1 calls for "mixed use" at this site. However, the Port Master Plan and the North Embarcadero Visionary Plan call for a high-rise hotel at this location. The Board of Port Commissioners recently reaffirmed its support for the North Embarcadero Visionary Plan as it was proposed and therefore reaffirmed its commitment to a hotel at this site.

Alternative #1 also proposes the third phase of expansion of the San Diego Convention Center on a part of Port tidelands that makes up the MTDB Trolley maintenance and "marshalling" yards. One would expect that there are significant logistical issues associated with the expansion being at this site in relation to the existing Center. However, that is more of an issue for MTDB and the operator of the Convention Center to comment upon rather than the Port.

The graphics for Alternative #1 do not reflect the 100-foot wide esplanade along Harbor Drive between Broadway and Grape Street. Such an amenity, among others is called for in the North Embarcadero Visionary Plan and the Port Master Plan. CCDC and the Port are developing a joint powers agreement to determine the construction costs of implementing the North Embarcadero Visionary Plan, financing alternatives, including phasing of construction, and related matters.

It is suggested that the graphics for all three alternatives reflect the complete set of public improvements, including the esplanade called for in the North Embarcadero Visionary Plan. Regarding the former Campbell Shipyard site, now the site of the Hilton Convention Center Hotel, there is a designation for a 5-acre park in all alternatives, which is appropriate; however the balance of the site should reflect the approved land uses allowing both the Hilton Hotel and the Spinnaker Hotel on adjacent waterfront property.

Finally, there are four blocks in the East Village area that are designated in all alternatives as "possible future Sports Arena." The Port is purchasing these four blocks from the City of San Diego with the intent to provide additional public parking for the San Diego Convention Center. When not in use for that purpose, the facility will be available for truck, bus and other transportation vehicle staging for the Convention Center. Please remove the aforementioned designation of these four blocks as a possible site for a Sports Arena.

**ALTERNATIVE #2**

Proposes to designate certain Port tidelands within the North Embarcadero area as hotel land uses which is somewhat at variance with the approved North Embarcadero Visionary Plan and Port Master Plan. It also designates a two-parcel area as "open space" on the block bounded by Ash, an extended A Street, Pacific Highway and Harbor Drive. This open space is not consistent with the North Embarcadero Visionary Plan and Port Master Plan amendment. The comments in Alternative #1 regarding the portrayal of the complete range of amenities called for in the North Embarcadero Visionary Plan is applicable to this alternative as well.

Alternative #2 calls for the third phase expansion of the Convention Center underground specifically beneath the Hilton Hotel site on the southern end of the Center. From a feasibility perspective, we question this proposed use. The water table is quite high at this location insuring that any subterranean structure would have to be constructed as a "bathtub" or a self contained, water tight, facility. While, this might be possible, the cost of constructing such a facility would likely be not affordable.

Subterranean construction after the Hilton and Spinnaker Hotels have opened would potentially have drastic affects on their business operations. It would also be highly probable that during construction, access would be prevented, or at least severely impacted, to the Convention Center loading docks, the South Embarcadero Park and the restaurant at the former San Diego Rowing Club. Finally, Alternative #2 calls for residential land uses on the portion of Port tidelands at the MTDB marshalling yards. As previously said, state law prohibits residential land uses on tidelands.

**ALTERNATIVE #3**

Proposes to designate certain Port tidelands within the North Embarcadero area as retail land uses which is at variance with the approved North Embarcadero Visionary Plan and Port Master Plan. We are suggesting that such a concentration of retail would not be feasible from a business perspective since the retail would have to be visitor serving as mentioned. Please note our comments in previous paragraphs in reference to the inclusion of all North Embarcadero Visionary Plan public improvements and the underground expansion of the third phase of the Convention Center. Finally, there is no apparent land use designation proposed for the Port tidelands at the MTDB marshalling yard so we are assuming that existing land uses will continue as such.

Thank you for providing the Port the opportunity to comment on the proposed update to the downtown community plan. We look forward to continuing our participation in the process.

Yours Truly,

Dan Wilkens
Executive Vice President

cam

SANDAG

San Diego's Regional Planning Agency

401 B Street, Suite 800
San Diego, CA 92101-4231
(619) 595-5300
Fax (619) 595-5305
www.sandag.org



May 8, 2002

Walter Rask
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

RE: NOP – Downtown Community Plan Update

Dear Mr. Rask:

SANDAG would like the opportunity to comment on the above referenced project. As the Congestion Management Agency for the San Diego region, SANDAG is responsible for preparing and coordinating the implementation of a Congestion Management Program (CMP) for region. One of the requirements of the CMP is that local jurisdictions implement a CMP Land Use Analysis Program requiring enhanced CEQA reviews for large projects. A large project is defined as:

> *a project that upon completion would be expected to generate either an equivalent of 2,400 or more average daily vehicle or 200 or more peak-hour trips.*

Attached for your use are the most current CMP guidelines for implementing the Land Use Analysis Program, including the enhanced CEQA review. SANDAG would request that when preparing the EIR for the above referenced project, that the City include the CMP requirements in the EIR scope.

Should you have any questions concerning our request or the CMP, please contact me at (619) 595-5369 or mor@sandag.org. We look forward to reviewing a copy of the draft EIR upon completion.

Sincerely,

MARIO R. OROPEZA
Project Manager

CENTRE CITY
DEVELOPMENT
CORPORATION

MAY 09 2002

Orig. To: WALTER
Copy To: ______

MRO/YK/jwc

Attachment: CMP Land Use Analysis Program Excerpt

cc: Nan Valerio, SANDAG
Yukio King, SANDAG

# 2002 CONGESTION MANAGEMENT PROGRAM UPDATE

**January 2003**

This report was financed with federal funds from the U.S. Department of Transportation, Federal Highway Administration, and state funds from the California Department of Transportation

SANDAG
San Diego's Regional Planning Agency

*401 B Street, Suite 800 • San Diego, CA 92101-4231 • (619) 595-5300*

# APPENDIX D: TRAFFIC IMPACT STUDIES GUIDELINES

## 1.0 BACKGROUND

In September 1998, the San Diego Regional Traffic Standards Task Force gathered for the first time to promote "cooperation among the cities, Caltrans, and the County of San Diego to create a region-wide standard for determining traffic impacts in environmental reports." Ultimately the San Diego Traffic Engineers' Council (SANTEC) and the Institute of Transportation Engineers (ITE – California Border Section) were requested to prepare guidelines for traffic impact studies (TIS) that could be reviewed by the Task Force and other appropriate groups. The primary documents used to help prepare these guidelines were SANDAG's *Congestion Management Program* and *Traffic Generators* manual, City of San Diego's *Traffic Impact Study Manual* and *Trip Generation Manual*, and Caltrans' Draft *Guide for the Preparation of Traffic Impact Studies.*

## 2.0 PURPOSE OF TRAFFIC IMPACT STUDIES (TIS)

Traffic impact studies forecast, describe, and analyze the traffic and transit effects a development will have on the existing and future circulation infrastructure. The purpose of the TIS is to assist engineers in both the development community and public agencies when making land use and other development decisions. A TIS quantifies the changes in traffic levels and translates these changes into transportation system impacts in the vicinity of a project.

TIS requirements are usually outlined as part of any environmental (CEQA) project review process; and, in order to monitor effects by these requirements, Notices of Preparation must be submitted to all affected agencies. In addition, the Land Use Analysis Program of the Congestion Management Program requires that an "enhanced CEQA review" be undertaken to evaluate the impacts of large projects on the regional transportation system. These guidelines are intended to provide guidance to local jurisdictions and/or project sponsors in meeting these CMP requirements.

*Note: These guidelines are subject to continual update, as future technology and documentation become available. Local jurisdictions should be consulted regarding their preferred or applicable procedures.*

## 3.0 OBJECTIVES OF TIS GUIDELINES

The following guidelines were prepared to assist local agencies throughout the San Diego region in promoting consistency and uniformity in traffic impact studies. All Circulation/Community Element roadways, all State routes and freeways (including metered and unmetered ramps), and all transit facilities that are impacted should be included in each study.

In general, the region-wide goal for an acceptable level-of-service (LOS) on all freeways, roadway segments, and intersections is "D." For undeveloped or not densely developed locations, as determined by any local jurisdiction, the goal may be to achieve a level-of-service of "C." Individual local jurisdictions, as well as Caltrans, have slightly different LOS objectives. For example, the Regional Growth Management Strategy for San Diego has a level-of-service objective of "D;" while the Congestion Management Program has established a minimum level-of-service of "E", or "F" if that is the existing 1990 base year LOS. In other words, if the existing LOS is "D" or worse, preservation of the existing LOS must be maintained or acceptable mitigation must be identified. Definitions of LOS currently used by Caltrans are provided in Exhibit D-1.

These guidelines do not establish a legal standard for these functions, but are intended to supplement any individual TIS manuals or level of service objectives for the various jurisdictions. These guidelines attempt to consolidate regional efforts to identify when a TIS is needed, what professional procedures should be followed, and what constitutes a significant traffic impact.

The instructions outlined in these guidelines are subject to update as future conditions and experience become available. Special situations may call for variation from these guidelines. Caltrans and lead agencies should agree on the specific methods used in traffic impact studies involving any State Route facilities, including metered and unmetered freeway ramps.

## 4.0 NEED FOR A STUDY

A TIS should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak-hour trips. If a proposed project is not in conformance with the land use and/or transportation element of the general or community plan, use threshold rates of 500 ADT or 50 peak-hour trips. Early consultation with any affected jurisdictions is strongly encouraged since a "focused" or "abbreviated" TIS may still be required – even if the above threshold rates are not met.

Currently, a Congestion Management Program (CMP) analysis is required for all large projects, which are defined as generating 2,400 or more average daily trips or 200 or more peak-hour trips. This size of study would usually include computerized long-range forecasts and select zone assignments. Please refer to the following flow chart (Figure D-1) for TIS requirements.

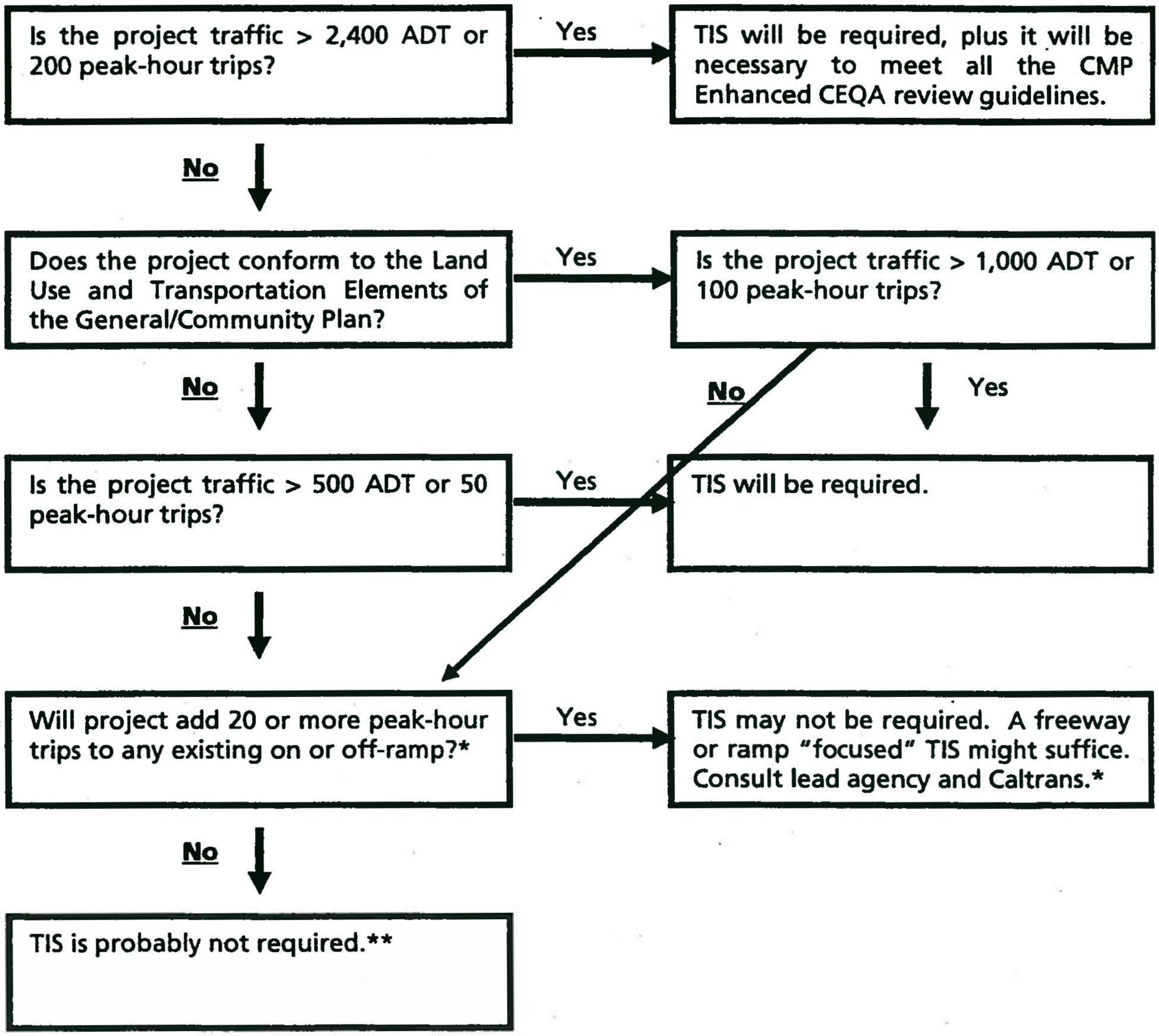
The geographic area examined in the TIS must include the following:

- All local roadway segments (including all State surface routes), intersections, and mainline freeway locations where the proposed project will add 50 or more peak-hour trips in either direction to the existing roadway traffic.

- All freeway entrance and exit ramps where the proposed project will add a significant number of peak-hour trips to cause any traffic queues to exceed ramp storage capacities (refer to Figure D-1). (NOTE: Care must be taken to include other ramps and intersections that may receive project traffic diverted as a result of already existing, or project causing congestion at freeway entrances and exits.)

The data used in the TIS should generally not be more than 2 years old, and should not reflect a temporary interruption (special events, construction detour, etc.) in the normal traffic patterns unless that is the nature of the project itself. If recent traffic data is not available, current counts must be made by the project applicant/consultant.

**Figure D-1**
**Flow Chart For Traffic Impact Study (TIS) Requirements**




* Check with Caltrans for current ramp metering rates and ramp storage capacities. (See Exhibit D-2 – Ramp Metering Analysis)

** However, for health and safety reasons, and/or local and residential street issues, an "abbreviated" or "focused" TIS may still be requested by a local agency. (For example, this may include traffic backed up beyond an off-ramp's storage capacity, or may include diverted traffic through an existing neighborhood.)

## 5.0 PROJECT COORDINATION VIA STAFF CONSULTATION

Early consultation between the development community, local and lead agencies, and Caltrans is strongly recommended to establish the base input parameters, assumptions, and analysis methodologies for the TIS.

It is critical that the TIS preparer discuss the project with the lead reviewing agency's staff engineer/planner at an early stage in the planning process. An understanding of the level of detail and the assumptions required for the analysis should be reached. While a pre-submittal conference is highly encouraged, it may not be a requirement. For straightforward studies prepared by consultants familiar with these TIS procedures, a telephone call or e-mail, followed by a fax verifying key assumptions, may suffice. Always check with the local jurisdictions for their concerns.

## 6.0 SCENARIOS TO BE STUDIED

After documenting existing conditions, both near-term (within approximately the next five years) and long-term (usually for a 20-year planning horizon or build-out of the area), analyses are needed.

All of the following scenarios should be addressed in the TIS (unless there is concurrence with the lead agency or agencies that one or more of these scenarios may be omitted):

- Existing (roadway infrastructure)
- Existing + Near-term Cumulative Projects (approved and pending)
- Existing + Near-term Cumulative Projects + Proposed Project (each phase when applicable)
- Horizon Year (typically Year 2020 or twenty years in the future)
- Horizon Year + Proposed Project (if different from General/Community Plan)

Scenario definitions:

Existing Conditions – Document existing traffic volumes and peak-hour levels of service in the study area. The existing deficiencies and potential mitigation should be identified.

Existing + Near-term – Analyze the cumulative condition impacts from "other" approved and "reasonably foreseeable" pending projects (application on file or definitely in the pipeline) that are expected to influence the study area. This is the baseline against which project impacts are assessed. The lead agency should provide copies of the traffic studies for the "other" projects. If data is not available for near-term cumulative projects, an ambient growth factor should be used.

Existing + Near-term + Proposed Project – Analyze the impacts of the proposed project on top of existing conditions and near-term projects (along with their committed or funded mitigation measures, if any).

Horizon Year – Identify Year 2020 ~~traffic forecasts or 20-year future conditions through the~~ output of a SANDAG model forecast (currently TRANPLAN) or other computer model approved by the local agency. For the CMP analysis, the model must be approved by SANDAG. If the proposed project is consistent with the land uses represented in the model, the TIS may only need to use this condition.

Horizon Year + Proposed Project – If the project land uses are more traffic intense than what was assumed in the horizon year model forecasts, analyze the additional project traffic impacts to the horizon year condition. When justified, and particularly in the case of very large developments or new general/community plans, a transportation model should be run with, and without, the additional development to show the net impacts on all parts of the area's transportation system.

In order to use LOS criteria to measure traffic impact significance, proposed model or manual forecast adjustments must be made to address scenarios both with and without the project. Refer to Table D-1 for guidance on measuring significant project impacts and Table D-2 for guidance on Level of Service and Average Daily Traffic parameters. Model data should be carefully verified to ensure accurate project and "other" cumulative project representation. In these cases, regional or subregional models conducted by SANDAG need to be reviewed for appropriateness.

*Note:* Project trips can be assigned and distributed either manually or by the computer model based upon review and approval of the local agency Traffic Engineer. The magnitude of the proposed project will usually determine which method is employed.

If the manual method is used, the trip distribution percentages should be derived from a computer generated "select zone assignment" or optionally (local agency approval) by professional judgment.

If the computer model is used, the centroid connectors should accurately represent project access to the street network. Preferably the project would be represented by its own traffic zone. Some adjustments to the output volumes may be needed (especially at intersections) to smooth out volumes, quantify peak volumes, adjust for pass-by and diverted trips, and correct illogical output.

## 7.0 TRAFFIC GENERATION

Use of SANDAG (*Traffic Generators* manual and *(Not So) Brief Guide...)* or City of San Diego (both of the City's *Traffic Impact Study Manual* and *Trip Generation Manual*) rates should first be considered. Next, consider rates from ITE's latest *Trip Generation* manual or ITE Journal articles. If local and sufficient national data do not exist, conduct trip generation studies at sites with characteristics similar to those of the proposed project. If this is not feasible due to the uniqueness of the land use, it may be acceptable to estimate defensible trip rates – only if appropriate documentation is provided.

Reasonable reductions to trip rates may also be considered: (a) with proper analysis of pass-by and diverted traffic on adjacent roadways, (b) for developments near transit stations, and (c) for mixed-use developments. (Note: Caltrans and local agencies may use different trip reduction rates. Early consultation with the reviewing agencies is strongly recommended.)

Site traffic distribution, assignment, necessary model adjustments, and Congestion ~~Management Program (CMP) concerns should all follow current SANDAG and City of San Diego procedures.~~

## 8.0 TRAFFIC IMPACT STUDY (TIS) ANALYSIS

The TIS analysis shall determine the effect that a project will have for each of the previously outlined study scenarios. Peak-hour capacity analyses for freeways, roadway segments (ADTs may be used here to estimate V/C ratios), intersections, and freeway ramps must be conducted for both the near-term and long-term conditions. The methodologies used in determining the traffic impact are not only critical to the validity of the analysis, they are pertinent to the credibility and confidence the decision-makers have in the resulting findings, conclusions, and recommendations.

The following methodologies for TIS analysis should be used (unless early consultation with the lead agency and Caltrans has established other methods), along with some suggested software packages and options:

1. Arterials, Multi-lane and Two-lane Highways, and all other Local Streets - current Highway Capacity Manual (HCM): w/Highway Capacity Software (HCS)

2. Signalized Intersections – HCM: w/HCS, TRAFFIX, SigCinema, and SYNCHRO acceptable to Caltrans; and, HCS, TRAFFIX, SIGNAL 94, and NCAP acceptable to local jurisdictions.

3. Unsignalized Intersections – HCM

4. Freeway Segments – HCM or Caltrans District 11 freeway LOS definitions (see Attachment C): w/HCS

5. Freeway Weaving Areas – Caltrans Highway Design Manual (Chapter 500)

6. Freeway Ramps – Caltrans District 11 Ramp Metering Analysis (Attachment B), and Caltrans Ramp Meter Design Guidelines (August 1995), HCS (for ramp design only)

7. Freeway Interchanges – HCM: for diamond interchanges where the timing and phasing of the two signals must be coordinated to ensure queue clearances, consider Passer III-90

8. Transit, Pedestrians, and Bicycles – HCM

9. Warrants for Traffic Signals, Stop Signs, School Crossings, Freeway Lighting, etc. – Caltrans' Traffic Manual

10. Channelization and Intersection Geometry - Caltrans' Traffic Manual and Guidelines for Reconstruction of Intersections, City of San Diego's Traffic Impact Study Manual - Appendix 4

*Note:* Neither local jurisdictions nor Caltrans officially advocate the use of any special software packages, especially since new ones are being developed all the time. However, consistency with the Highway Capacity Manual (HCM) is advocated in most cases. The above-mentioned software packages have been utilized locally. Because it is so important to have consistent end results, always consult with all affected jurisdictions, including Caltrans, regarding the analytical techniques and software being considered (especially if they differ from above) for the TIS.

## 9.0 SIGNIFICANCE OF TRAFFIC IMPACTS TO CONSIDER MITIGATION

The following Table D-1 indicates when a project's impact is significant and mitigation measures are to be identified. That is, if a project's traffic impact causes the values in this table to be exceeded, it is determined to be a significant project impact. (Mitigation for all identified significant impacts should be provided for any project requiring CEQA analysis.)

*Note:* It is the responsibility of Caltrans, on Caltrans-initiated projects, to mitigate the effect of ramp metering, for initial as well as future operational impacts, on local streets that intersect and feed entrance ramps to the freeway. Developers and/or local agencies, however, should be required to mitigate any impact to existing ramp meter facilities, future ramp meter installations, or local streets, when those impacts are attributable to new development and/or local agency roadway improvement projects.

**Table D-1**
**Measure of Significant Project Traffic Impacts**

| Level of Service with Project* | Allowable Change due to Project Impact** | | | | | |
|---|---|---|---|---|---|---|
| | Freeways | | Roadway Segments | | Intersections | Ramp*** Metering |
| | V/C | Speed (mph) | V/C | Speed (mph) | Delay (sec.) | Delay (min.) |
| D, E, & F (or ramp meter delays above 15 min.) | 0.01 | 1 | 0.02 | 1 | 2 | 2 |

*Notes:*
* All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table D-2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigation (within the Traffic Impact Study report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.

*** See Exhibit D-2 for ramp metering analysis.

| KEY: | | | |
|---|---|---|---|
| | V/C | = | Volume to Capacity ratio |
| | Speed | = | Speed measured in miles per hour |
| | Delay | = | Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters |
| | LOS | = | Level of Service |

**Table D-2**
**Roadway Classifications, Levels of Service (LOS) and Average Daily Traffic (ADT)**

| STREET CLASSIFICATION | LANES | CROSS SECTIONS* (APPROX.) | LEVEL OF SERVICE W/ADT** A | B | C | D | E |
|---|---|---|---|---|---|---|---|
| Expressway | 6 lanes | 102-160/122-200 | 30,000 | 42,000 | 60,000 | 70,000 | 80,000 |
| Prime Arterial | 6 lanes | 102-108/122-128 | 25,000 | 35,000 | 50,000 | 55,000 | 60,000 |
| Major Arterial | 6 lanes | 102/122 | 20,000 | 28,000 | 40,000 | 45,000 | 50,000 |
| Major Arterial | 4 lanes | 78-82/98-102 | 15,000 | 21,000 | 30,000 | 35,000 | 40,000 |
| Secondary Arterial/ Collector | 4 lanes | 64-72/84-92 | 10,000 | 14,000 | 20,000 | 25,000 | 30,000 |
| Collector (no center lane) (continuous left-turn lane) | 4 lanes<br>2 lanes | 64/84<br>50/70 | 5,000 | 7,000 | 10,000 | 13,000 | 15,000 |
| Collector (no fronting property) | 2 lanes | 40/60 | 4,000 | 5,500 | 7,500 | 9,000 | 10,000 |
| Collector (commercial-industrial fronting) | 2 lanes | 50/70 | 2,500 | 3,500 | 5,000 | 6,500 | 8,000 |
| Collector (multi-family) | 2 lanes | 40/60 | 2,500 | 3,500 | 5,000 | 6,500 | 8,000 |
| Sub-Collector (single-family) | 2 lanes | 36/56 | — | — | 2,200 | — | — |

LEGEND:

* Curb to curb width (feet)/right of way width (feet): based upon the City of San Diego Street Design Manual and other jurisdictions within the San Diego region.

** Approximate recommended ADT based upon the City of San Diego Street Design Manual.

*Notes:*

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

Not all mitigation measures can feasibly be "hard" (new lanes or new capacity) improvements. A sample mitigation measure might include financing toward a regional ITS (Intelligent Transportation System) project, such as improved or "dynamic" ramp metering with real-time delay information available to motorists. The information can be accessed on either home or in-vehicle computers, or even by telephone (each ramp could have its own phone number with delay information) so the motorist can make a driving decision long before she or he arrives at a congested on-ramp. This sample mitigation would allow a project applicant (especially with a relatively small project) to meet mitigation by paying into a regional ramp meter fee, providing the fee can be established in the near future. In identifying potential mitigation measures, the CMP *Toolbox of Mitigation Strategies* and any adopted Deficiency Plans in the study area should also be consulted.

Other mitigation measures may include Transportation Demand Management recommendations – transit facilities, bike facilities, walkability, telecommuting, traffic rideshare programs, flex-time, carpool incentives, parking cash-out, etc. Additional mitigation measures may become acceptable as future technologies and policies evolve.

## 10.0 SCREEN CHECK

As part of the first draft of a TIS, the preparer must ensure that all required elements have been included. This screen check procedure will help reduce the number of submittals, and will encourage early dialogue between the reviewer and the preparer. The local agency reviewer will check the study for completeness, and strive to return all incomplete submittals within seven working days. A pre-submittal conference is encouraged to determine which elements are not required for the TIS.

Exhibit D-3 contains the TIS Screen Check.

**Exhibit D-1**
**Level of Service (LOS) Definitions**
(generally used by Caltrans)

The concept of Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A Level of Service[1] definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort and convenience, and safety. Levels of Service definitions can generally be categorized as follows:

| LOS | D/C[2] | Congestion/Delay | Traffic Description |
|---|---|---|---|
| (Used for freeways, expressways and conventional highways[3]) | | | |
| "A" | <0.41 | None | Free flow. |
| "B" | 0.42-0.62 | None | Free to stable flow, light to moderate volumes. |
| "C" | 0.63-0.79 | None to minimal | Stable flow, moderate volumes, freedom to maneuver noticeably restricted. |
| "D" | 0.80-0.92 | Minimal to substantial | Approaches unstable flow, heavy volumes, very limited freedom to maneuver. |
| "E" | 0.93-1.00 | Significant | Extremely unstable flow, maneuverability and psychological comfort extremely poor. |
| (Used for conventional highways) | | | |
| "F" | >1.00 | Considerable | Forced or breakdown. Delay measured in average flow, travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle. |
| (Used for freeways and expressways) | | | |
| "F0" | 1.01-1.25 | Considerable<br>0-1 hour delay | Forced flow, heavy congestion, long queues form behind breakdown points, stop and go. |
| "F1" | 1.26-1.35 | Severe<br>1-2 hour delay | Very heavy congestion, very long queues. |
| "F2" | 1.36-1.45 | Very severe<br>2-3 hour delay | Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods. |
| "F3" | >1.46 | Extremely severe<br>3+ hours of delay | Gridlock. |

[1] Level of Service can generally be calculated using "Table 3.1. LOS Criteria for Basic Freeway Sections" from the latest Highway Capacity Manual. However, contact Caltrans for more specific information on determining existing "free-flow" freeway speeds.
[2] Demand/Capacity ratio used for forecasts (V/C ratio used for operational analysis, where V = volume)
[3] Arterial LOS is based upon average "free-flow" travel speeds, and should refer to definitions in Table 11.1 in the HCM.

## Exhibit D-2
## Ramp Metering Analysis

Ramp metering analysis should be performed for each horizon year scenario in which ramp metering is expected. The following table shows relevant information that should be included in the ramp meter analysis "Summary of Freeway Ramp Metering Impacts."

| LOCATION | DEMAND (veh/hr)[1] | METER RATE (veh/hr)[2] | EXCESS DEMAND (veh/hr)[3] | DELAY (min)[4] | QUEUE (feet)[5] |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

NOTES:

[1] DEMAND is the peak hour demand expected to use the on-ramp.

[2] METER RATE is the peak hour capacity expected to be processed through the ramp meter. This value should be obtained from Caltrans. Contact Carolyn Rumsey at (619) 467-3029.

[3] EXCESS DEMAND = (DEMAND) – (METER RATE) or zero, whichever is greater.

[4] DELAY = EXCESS DEMAND ÷ METER RATE X 60 MINUTES/HOUR

[5] QUEUE = (EXCESS DEMAND) X 29 feet/vehicle

*Note:* Delay will be less at the beginning of metering. However, since peaks will almost be more than one hour, delay will be greater after the first hour of metering. (See discussion on next page.)

Summary of Freeway Ramp Metering Impacts
(Lengthen as necessary to include all impacted meter locations)

| LOCATIONS | PEAK HOUR | PEAK HOUR DEMAND D | FLOW (METER RATE) F | EXCESS DEMAND E | DELAY (MINUTES) | QUEUE Q (feet) |
|---|---|---|---|---|---|---|
| | AM<br>PM | | | | | |
| | AM<br>PM | | | | | |
| | AM<br>PM | | | | | |

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse

Gray Davis
Governor

Tal Finney
Interim Director

**Notice of Preparation**

April 1, 2003

To: Reviewing Agencies

Re: Downtown Community Plan Update
SCH# 2003041001

Attached for your review and comment is the Notice of Preparation (NOP) for the Downtown Community Plan Update draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

**Walter Rask**
**Centre City Development Corporation**
**225 Broadway, Suite 1100**
**San Diego, CA 92101**

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Karen [signature]

for: Scott Morgan
Associate Planner, State Clearinghouse

Attachments
cc: Lead Agency

CENTRE CITY
DEVELOPMENT
CORPORATION

APR 0 7 2003

Orig. To: WALTER

Copy To:______

# Document Details Report
# State Clearinghouse Data Base

**SCH#** 2003041001
**Project Title** Downtown Community Plan Update
**Lead Agency** San Diego, City of

---

**Type** **NOP** Notice of Preparation

**Description** The Centre City Development Corporation (CCDC), acting as the agent of The Redevelopment Agency of the City of San Diego, will be the Lead Agency and intends to prepare a Master Environmental Impact Report (MEIR) for the proposed Downtown Community Plan Update which includes a series of coordinated amendments to the land use plans that govern downtown San Diego, with primary emphasis on the Centre City Community Plan, the Redevelopment Plan for the Centre City Redevelopment Project, the Centre City Planned District Ordinances, and potentially various neighborhood Focus Plans. Amendments to other implementing plans and policies may be required for consistency. The Centre City Community Plan, along with the Community Plans for other San Diego districts, comprise the Land Use Element of the City's General Plan, and the Centre City Community Plan and Planned District Ordinance are components of the City's Local Coastal Plan (LCP).

---

## Lead Agency Contact

**Name** Walter Rask
**Agency** Centre City Development Corporation
**Phone** 619-232-3166 **Fax**
**email**
**Address** 225 Broadway, Suite 1100
**City** San Diego **State** CA **Zip** 92101

---

## Project Location

**County** San Diego
**City**
**Region**
**Cross Streets** No. of Laurel St. & I-5/So. of Commercial St., 16th, Newton Ave., Sigsbee, Harbor Dr., Beardsley
**Parcel No.**
**Township** **Range** **Section** **Base**

---

## Proximity to:

**Highways** I-5
**Airports**
**Railways**
**Waterways**
**Schools**
**Land Use**

---

**Project Issues** Air Quality; Biological Resources; Geologic/Seismic; Water Quality; Landuse; Noise; Population/Housing Balance; Public Services; Traffic/Circulation; Other Issues

---

**Reviewing Agencies** Resources Agency; California Coastal Commission; Office of Historic Preservation; Department of Parks and Recreation; Department of Fish and Game, Region 5; Native American Heritage Commission; State Lands Commission; Caltrans, District 11; Department of Housing and Community Development; California Highway Patrol; Caltrans, Division of Transportation Planning; State Water Resources Control Board; Regional Water Quality Control Board, Region 9

---

**Date Received** 04/01/2003 **Start of Review** 04/01/2003 **End of Review** 04/30/2003

Note: Blanks in data fields result from insufficient information provided by lead agency.

# NOP Distribution List

**County:** San Diego

**SCH#** 2003041001

## Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Suzi Betzler
- [x] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [x] **Office of Historic Preservation**
  Hans Kreutzberg
- [x] **Dept of Parks & Recreation**
  B. Noah Tilghman
  Environmental Stewardship Section
- [ ] **Reclamation Board**
  Lori Buford
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [ ] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou

## Health & Welfare

- [ ] **Health & Welfare**
  Wayne Hubbard
  Dept. of Health/Drinking Water

## Food & Agriculture

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture

## Fish and Game

- [ ] **Dept. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Dept. of Fish & Game 1**
  Donald Koch
  Region 1
- [ ] **Dept. of Fish & Game 2**
  Banky Curtis
  Region 2
- [ ] **Dept. of Fish & Game 3**
  Robert Floerke
  Region 3
- [ ] **Dept. of Fish & Game 4**
  William Laudermilk
  Region 4
- [x] **Dept. of Fish & Game 5**
  Don Chadwick
  Region 5, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6**
  Gabrina Gatchel
  Region 6, Habitat Conservation Program
- [ ] **Dept. of Fish & Game 6 I/M**
  Tammy Allen
  Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  Tom Napoli
  Marine Region

## Independent Commissions

- [ ] **California Energy Commission**
  Environmental Office
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [x] **State Lands Commission**
  Betty Silva
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse Planner

- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Lyn Barnett
- [ ] **Office of Emergency Services**
  John Rowden, Manager
- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Santa Monica Mountains Conservancy**
  Paul Edelman

## Dept. of Transportation

- [ ] **Dept. of Transportation 1**
  Mike Eagan
  District 1
- [ ] **Dept. of Transportation 2**
  Don Anderson
  District 2
- [ ] **Dept. of Transportation 3**
  Jeff Pulverman
  District 3
- [ ] **Dept. of Transportation 4**
  Tim Sable
  District 4
- [ ] **Dept. of Transportation 5**
  David Murray
  District 5
- [ ] **Dept. of Transportation 6**
  Marc Birnbaum
  District 6
- [ ] **Dept. of Transportation 7**
  Stephen J. Buswell
  District 7
- [ ] **Dept. of Transportation 8**
  Linda Grimes,
  District 8
- [ ] **Dept. of Transportation 9**
  Gayle Rosander
  District 9
- [ ] **Dept. of Transportation 10**
  Tom Dumas
  District 10
- [x] **Dept. of Transportation 11**
  Bill Figge
  District 11
- [ ] **Dept. of Transportation 12**
  Bob Joseph
  District 12

## Business, Trans & Housing

- [x] **Housing & Community Development**
  Cathy Creswell
  Housing Policy Division
- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [x] **California Highway Patrol**
  Lt. Julie Page
  Office of Special Projects
- [x] **Dept. of Transportation**
  Ron Helgeson
  Caltrans - Planning
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section

**Air Resources Board**

- [ ] Airport Projects
  Jim Lerner
- [ ] Transportation Projects
  Kurt Karperos
- [ ] Industrial Projects
  Mike Tollstrup

- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Jim Hockenberry
  Division of Financial Assistance
- [x] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Mike Falkenstein
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center

## Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [x] **RWQCB 9**
  San Diego Region (9)

CENTER ON POLICY INITIATIVES
3727 CAMINO DEL RIO SOUTH, SUITE 100, SAN DIEGO, CA 92108
PHONE: (619) 584-5744 | FAX: (619) 584-5748
WWW.ONLINECPI.ORG | CENTERPOLICY@ONLINECPI.ORG

Attn: Walter Rask
Centre City Development Corporation
Downtown Information Center
225 Broadway, Suite 160
San Diego, CA

***Re: Notice of Preparation of Master Environment Impact Report (EIR) for the Downtown Community Plan Update***

The Center on Policy Initiatives is a research and advocacy organization concerned about working families. Our primary concern is that issues related to low-income working families in Downtown should not be brushed aside, and there should be sincere implementation of measures that mitigate the impacts caused by new projects. We believe that job quality, housing opportunities and quality of life constitute a whole package that directly impacts the physical well being of the community. Therefore we urge the CCDC to adopt community benefits standards that embrace the values of the community as well as the economic impact of the development. We have reviewed the notice of preparation and have the following concerns:

**Land Use and Planning**

The Land Use section should analyze the existing inventory of employment land, and for future development outline what the nature of employment opportunities are going to be. The nature of employment will help us in evaluating for each of subsequent projects, how many employees will be using the facilities. Although this seems like an economic concern, the number and quality of jobs will impact the physical infrastructure through creating a demand on the housing market, modes of transportation, traffic and roads, and parking. For example, the income of a worker will be a major determinant in whether he drives on the freeway, or takes public transit to work.

**Population and Housing**

Although CCDC is required by redevelopment law to provide for inclusionary housing, we have not seen much of low-income family housing downtown. Most of the "affordable" (i.e. income restricted units) are either SROs or senior housing. However, when we analyze the profile of the low-income population who work there they have nowhere to find housing.

We therefore want the section on Population and Housing to address the following:

a) Existing conditions of housing both within the project area and the surrounding areas (including vacancy rates and rents).

b) Jobs-housing balance in the community and how it will be impacted by the projects.

Decreasing the gap between the affordability of homes and availability of employment creates a livable neighborhood of residents who do not have to travel far for work. It also eases congestion of the freeways and creates walkable pedestrian-oriented streets.

**Public Services, Utilities and Infrastructure**

We understand that the redevelopment plan will also serve as the public financing plan. Whether this is the case, or whether a separate plan is adopted, there should be a clear indication of how public infrastructure such as sewer-lines, schools, and other parks are going to be funded. If there is a development impact fee, it should be substantial enough to be address the level of impact of that project. For each potential project covered by the MEIR, and for the project area overall, the MEIR should:

a) Detail the increase in demand for such services.

b) Discuss the impact on school, fire, police, and transit infrastructure.

c) Enumerate whether public funds are being used to mitigate the impacts.

**Traffic and Circulation**

Overall, the access to the employment sites on future projects should be considered. For each project covered by the MEIR, and for the project area overall, the following should be addressed:

a) If employees are driving, is there sufficient parking allotted for them at rates they can afford?

b) If the employees are taking transit, is there a sufficient transit infrastructure that accommodates the trips intended to be generated as soon as the project is completed? (Note that transit projects take much more time than private development)

c) If the employees are walking or cycling, then is there housing nearby which they can afford with the wages they are expected to be paid by prospective tenants?

Please note that past environmental reviews associated with traffic and circulation impacts in the Centre City area have been woefully inadequate. The environmental work leading up to the Environmental Impact Report for the Centre City Redevelopment Projects, conducted largely in 1978, suffered from a number of glaring oversights. Many of them are described in a letter from then San Diego Region's Council of Governments, authored by Stuart R. Shaffer, Director of Land Use Planning at the time. His letter points out that "transportation impacts described in the MEIR are largely qualitative," as opposed to quantitative. Additionally, he notes that potential impacts of transit projects and a higher level of demand for parking were not addressed.

The previous year, in 1977, a separate EIR was completed for the same project by MSA, Inc., but rejected by the Centre City Development Corporation because it did not address socioeconomic concerns. The second EIR, completed by VTN, was accepted. Gerald M. Bordin, MD, of the Hospital of Scripps Clinic, submitted a comparison of the two documents at a public hearing and he notes:

> The most serious discrepancies between the MSA and VTN EIRS occur in the projections and conclusions regarding traffic in the Centre City of downtown. The MSA EIR states that several downtown streets already have greater than desirable traffic flow . . . MSA utilized Redevelopment Agency data pertaining to "the project's expected available floor space for each general type of function" (p.55). Utilizing the amount of floor space, the location of parking, and the amount of space allocated to retail shops, offices and banking facilities in conjunction with assumptions (stated in the report) regarding continued use of the private automobile as the primary mode of transportation, the type of office, the type of bank and other attractions, projections regarding traffic flow were generated . . . In contradistinction to the MSA EIR, the VTN EIR generates no projections of traffic flow for any of the three projects, fails to take into account the proposed convention center and neglects the retail shops in the Santa Fe terminal area. In fact, VTN did not attempt to thoroughly evaluate traffic impacts. *(Source: Master EIR for the Centre City Redevelopment Projects, 1978.)*

This last comment is supported by statements in the VTN EIR *(VI – p. 62)*:

> The findings, which follow, are provisional due the limitation of available data. The material presented is qualitative rather than quantitative.

Lastly and most importantly, a letter submitted by Dr. Harvey E. Heiges of the U.S. Department of Transportation noted that the Draft Master Supplemental EIR for the Centre City redevelopment projects had "numerous flaws and inconsistencies." Foremost was "the general lack of numerical analysis for anticipated impacts." He further commented on specific problems with the draft and wrote that the misuse of terminology indicated that the writer of the transportation section was "generally not knowledgeable in transportation, and/or is attempting to deliberately mislead the reader." He concluded that the report was "so general as to be meaningless."

The environmental review associated with the Master Environmental Impact Report completed in 1992 suffers from similar problems. Most notably, one of the key assumptions of the report was that the 40 percent transit mode-split would be reached by 2025. A letter from the Metropolitan Transit Development Board makes plain that all parties involved should be aware that such a goal would require a significant increase in resources. Those resources, to the extent they have been forthcoming, have not provided sufficient funding to meet a mode split of 10 percent. In fact, SANDAG data shows that the percent of transit riders remains in single digits; it is the goal of the agency to reach double digits in the year 2020. A separate letter from the City of San Diego, Transportation Planning Division outlines a host of related problems with the traffic and circulation analysis.

With such a dubious track record on traffic and circulation issues, it is our sincere hope that environmental review for the Centre City Redevelopment Project Area reflects special and careful attention paid to analysis of these matters. The public deserves a thorough review of the impacts of downtown redevelopment.

**Economic Impacts**

The proposed development creates thousands of low-wage jobs in industry sectors that depress the median wage of the employment base in the region. There will be hundreds of additional janitors, landscape workers and hotel workers, all paid minimum wage jobs. These low-wage jobs create a cycle of poverty within the communities that serve them, leading to economic, social and physical blight.

Although economic or social impacts of a project are not treated as significant impacts on the environment under CEQA, the EIR may trace a chain of cause and effect through economic changes that may ultimately cause physical changes. In fact "social or economic change related to a physical change may be considered in determining whether the physical change is significant" (*Goleta Union School District v. Regents of University of California (1995)* Cal. App. 4$^{th}$ 1025, 103-1031).

The creation of low wage jobs in retail, service and hospitality industries, without the creation of commensurate affordable housing impacts the physical environment of the community and that of the whole city. As per CEQA Guidelines: "If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether the physical change is significant" (Section 15064(e)). Centre City is not a small employment center for nearby residents, but is a regional employment magnet deluging the whole city with thousands of underpaid workers who will be burdening the City's under-funded Section 8 housing, becoming homeless, and causing physical blight in other parts of the City.

We therefore sincerely urge you to include a section on "Economic Impacts" that will address the issues raised above. Economic impacts are directly correlated to a lot of physical impacts being discussed in the draft EIR.

Sincerely,

Murtaza Baxamusa                Ty Tosdal

Center on Policy Initiatives

[Cc:
MTDB, CCDC
SANDAG
]

SAN DIEGO COUNTY ARCHAEOLOGICAL SOCIETY

# San Diego County Archaeological Society, Inc.

Environmental Review Committee

14 April 2003

To: Mr. Walter Rask
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, California 92101

Subject: Notice of Preparation of a Draft Environmental Impact Report
Downtown Community Plan Update

Dear Mr. Rask:

Thank you for the Notice of Preparation for the subject project, which was received by this Society earlier this month.

We are pleased that cultural resources have been included in the list of subject areas to be addressed in the DEIR. In order to permit us to review the cultural resources aspects of the project, please include us in the distribution of the DEIR when it becomes available for public review. Also, in order to facilitate our review, we would appreciate being provided with one copy of the cultural resources technical report(s) along with the DEIR.

SDCAS appreciates being included in the environmental review process for this project.

Sincerely,

James W. Royle, Jr.

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

CENTRE CITY DEVELOPMENT CORPORATION
APR 16 2003
Orig. To: WALTER
Copy To:

P.O. Box 81106 • San Diego, CA 92138-1106 • (858) 538-0935

June 5, 2003

Mr. Hal Sadler
Chairman
Centre City Development Corporation
225 Broadway, Suite 1100
San Diego, CA 92101

Re: Notice of Preparation of an MEIR for the Downtown Community Plan Update

Dear Mr. Sadler:

This letter responds to the above Notice of Preparation for the Downtown Community Plan Update. As indicated in the project description, the Community Plan Update is being prepared to respond to today's planning context and development trends, address underdeveloped and underutilized areas of downtown, and analyze the new opportunities that have arisen over the past decade. Another factor that will be taken into consideration is the City's Strategic Framework Element which calls for reinforcing downtown as the region's center. One of the preliminary planning directions emerging from the public participation meetings is the need for Expanding Downtown's role as the regional business hub.

The Convention Center is an important piece of the downtown fabric that will help the region achieve the goals identified within the Community Plan Update, particularly with regard to expanding the downtown as a regional business hub. The San Diego Convention Center provides significant economic benefits for the San Diego downtown and the entire region. A recent study found that in Fiscal Year 2002 alone, the Convention Center generated $883 million in regional economic impact including more than $17.5 million in Transient Occupancy Tax revenues. By Fiscal Year 2004, the hotel room taxes are expected to grow to $25.2 million, a 44% increase. In addition the study found that in Fiscal Year 2002, the Center's conventions and trade shows supported nearly 7,950 jobs countywide in sectors as diverse as agriculture, manufacturing, retail trade and residential construction.

Last year, the Center for Exhibition Industry Research reported that San Diego was one of the top ten host cities for a majority of the conventions and trade shows in North America. In order for San Diego to continue to compete with the other major hosting cities, and continue to be a major economic engine for the community, it will be necessary for the Convention Center to expand. Expansion of the Convention Center is critical to the achievement of the planning direction identified in the preliminary planning process. It is therefore important that the Community Plan Master Environmental Impact Report (MEIR) environmental review process adequately consider a Convention Center expansion in its analysis.

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To ensure that the MEIR is adequate, it is essential that it include a reasonable range of alternatives for the Convention Center expansion. The range of alternatives should expand beyond those currently identified as Community Plan options, i.e., the above the rail alternative and two alternatives which show underground options. The underground options may be determined to be infeasible, and for this reason, may not be considered reasonable alternatives for environmental review purposes. It is important that the MEIR include other alternatives in its analysis. One potential alternative would be an expanded Convention Center on the railyard, rather than above. That is not to say that it will be the alternative ultimately selected. The importance of the expanded alternatives analysis is not to change the preferred alternative. It is necessary to ensure that the final MEIR complies with CEQA. The Convention Center looks forward to assisting CCDC with identification and consideration of Convention Center expansion alternatives.

The MEIR should also include adequate assessment of potential impacts associated with Convention Center expansion options. This will be important to ensuring adequate consideration of alternatives and options that may be considered during the environmental review process.

Thank you for the opportunity to provide these comments. The Convention Center stands ready to assist CCDC, as needed, while the Community Plan update process unfolds.

Very truly yours,

Carol

Carol Wallace
President & CEO

cc: Walter Rask

# TRANSPORTATION ANALYSIS

# APPENDIX 2.2

# Downtown Community Plan

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## EIR Transportation, Circulation and Access Study

**(Project Number: X4310-043)**

*Prepared by:*

WILSON
&COMPANY
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Suite 1220
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*Prepared for:*

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**225 Broadway, Suite 1100**
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June 30, 2005

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## List of Tables

# Table of Contents (continued)

# Table of Contents (continued)



## List of Figures

# 1.0 Introduction

This report documents the various transportation (traffic, transit, non-motorized, and parking) analyses conducted in support of the Environmental Impact Report (EIR) for the Centre City Development Corporation's (CCDC) *Downtown Community Plan* update. A Master Environmental Impact Report for the Downtown Community was completed in 1992.

The purpose of this Transportation, Circulation, and Access Study is to document the various technical analyses and resulting impacts on transportation systems in the downtown area, with build-out of land uses and circulation system modifications as assumed in the proposed Downtown Community Plan. This study assesses traffic, transit, pedestrian and bicycle facilities, as well as parking requirements associated with the proposed Plan, and identifies projected Level of Service (LOS) on the study area's freeways, ramps, and intersections. Locations where performance levels fall below acceptable LOS standards are noted and mitigation measures are recommended as required to address identified deficiencies. Forecast traffic conditions and peak hour LOS were analyzed utilizing the San Diego Association of Government's (SANDAG) Regional Transportation Model, and detailed computer-based intersection operational analyses using the SYNCHRO software.

## 1.1 Study Area and Context

The Downtown Community Plan study area includes all streets and freeways in the Centre City community planning area as well as those streets that connect the downtown area with the larger San Diego region. **Figure 1-1** illustrates the regional location of the downtown area. The downtown study area encompasses 1,445 acres and is generally bound by Laurel Street to the north, I-5 to the east, Sigsbee and Beardsley Street to the south, and the San Diego Bay to the west, as identified in **Figure 1-2**.

Downtown San Diego is a major activity center for retail, commercial, office, visitor, recreation, marina and residential uses. It is served by two light rail transit lines, Amtrak service, three major freeways, commuter rail service, and numerous express and local bus lines.

The Downtown Community Plan is a key document in guiding and providing a vision for future growth and development of the downtown area. The Downtown Community Plan envisions downtown as a multi-use regional center, with strong employment and residential components. Neighborhoods will include mixed-use centers, parks and open spaces, and a variety of amenities to support active urban lifestyles.

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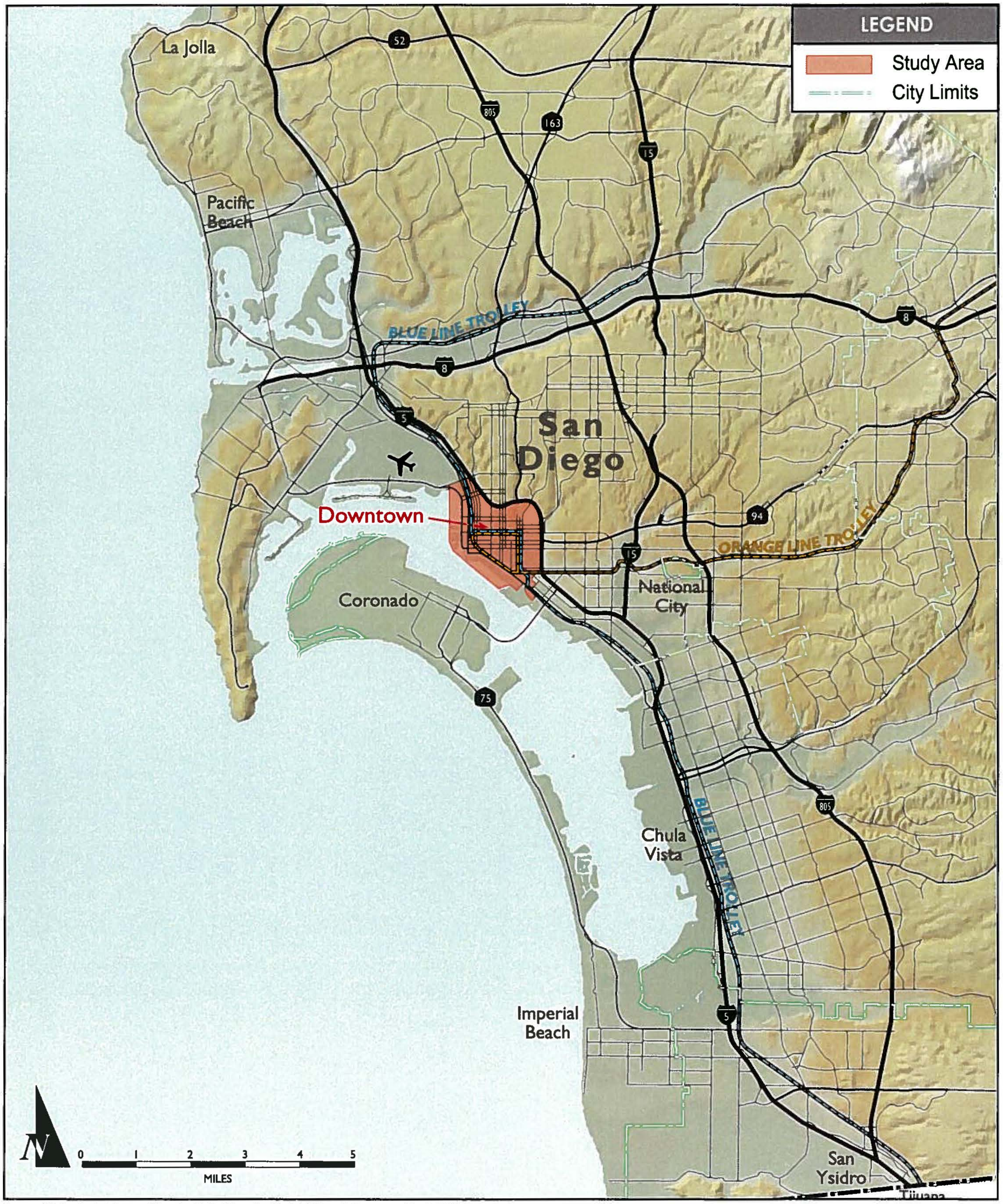


Source: US Geological Survey, 30 meter Digital Elevation Model; Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY

EIR Transportation, Circulation, and Access Study

Figure 1-1
Regional Location

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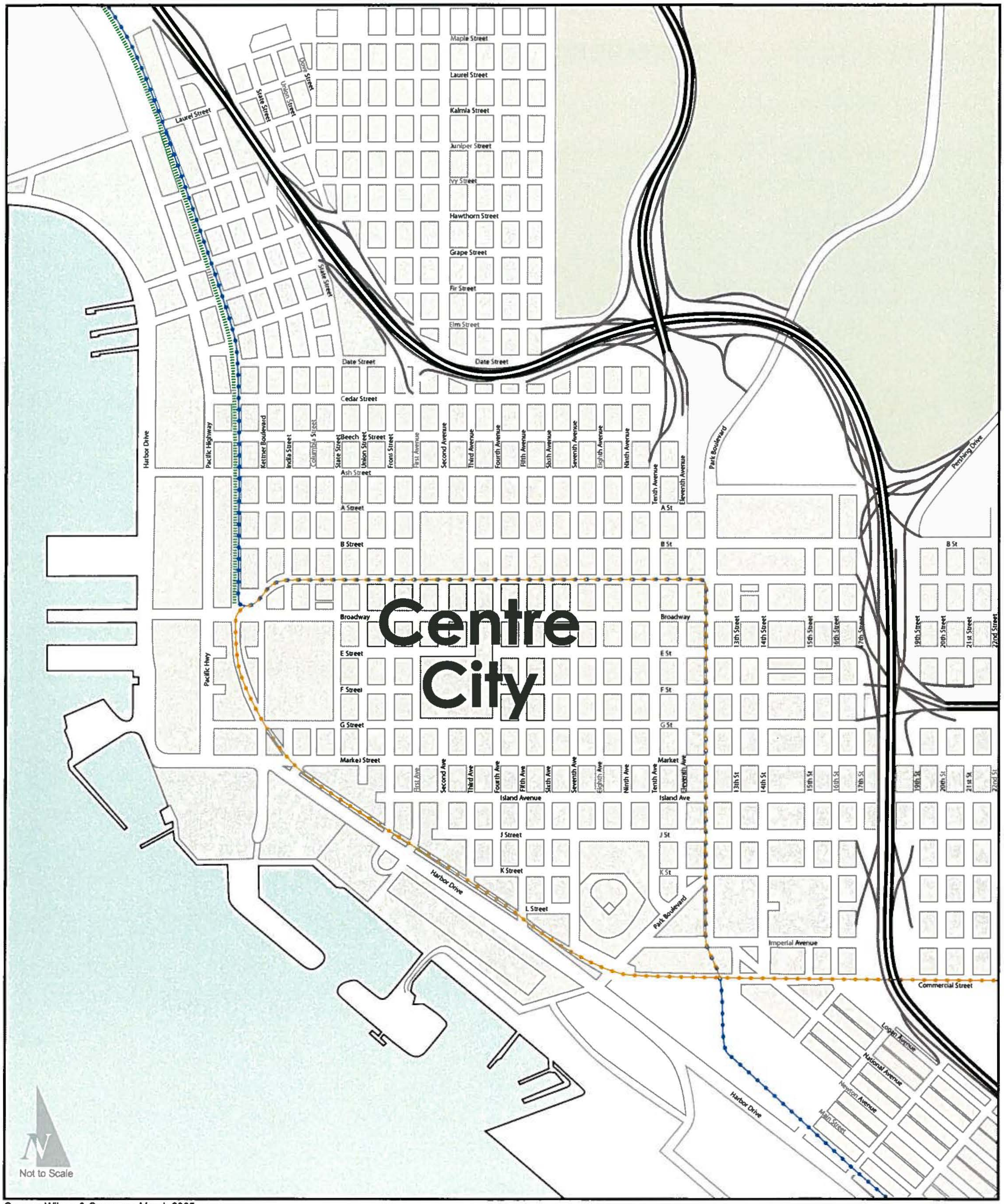


Source: Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY EIR Transportation, Circulation, and Access Study

Figure 1-2
Downtown Study Area

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The following eleven neighborhoods comprise the Downtown Community Plan study area as shown in **Figure 1-3**:

- Ballpark
- Bayside
- Civic Center
- College
- Columbia
- Convention Center
- Cortez
- East Village
- Horton Plaza / Gaslamp
- Little Italy
- Marina

Promoting alternative transportation modes is a key goal of the proposed Downtown Community Plan. The arrangement of land use and the development intensities are intended to encourage walking, bicycling, as well as increased transit utilization.

## 1.2 Existing and Future Development Potential

This study assesses transportation network performance under existing land use and transportation system conditions, as well as under future year land use conditions as specified in the proposed Downtown Community Plan. The previous Community Plan (1992 MEIR) is evaluated as a No Project alternative.

Population and employment, as well as land use characteristics for the Existing, No Project, and the proposed Downtown Community Plan scenarios are displayed in **Table 1.1**.

**Table 1.1**
**Existing and Future Year Study Scenarios**

| Land Use / Demographic Category | Existing | No Project | Proposed Plan |
|---|---|---|---|
| Population[1] | 27,500 | 48,000 | 88,900 |
| Employment | 74,500 | 117,000 | 164,900 |
| Residential (units) | 14,600 | 30,700 | 53,000 |
| Office (s.f) | 13,144,000 | 20,700,000 | 29,157,000 |
| Retail (s.f.) | 2,658,000 | 4,300,000 | 5,801,000 |
| Hotel Rooms | 8,800 | 15,600 | 20,200 |

Source: CCDC, Downtown Community Plan, June 2005

As shown, population, employment and land uses are projected to increase under the proposed Downtown Community Plan, with downtown residential population levels approaching 89,000 and employment reaching approximately 165,000. The No Project alternative would result in build-out population and employment levels approximately 45% and 30% lower, respectively, than the proposed Plan.

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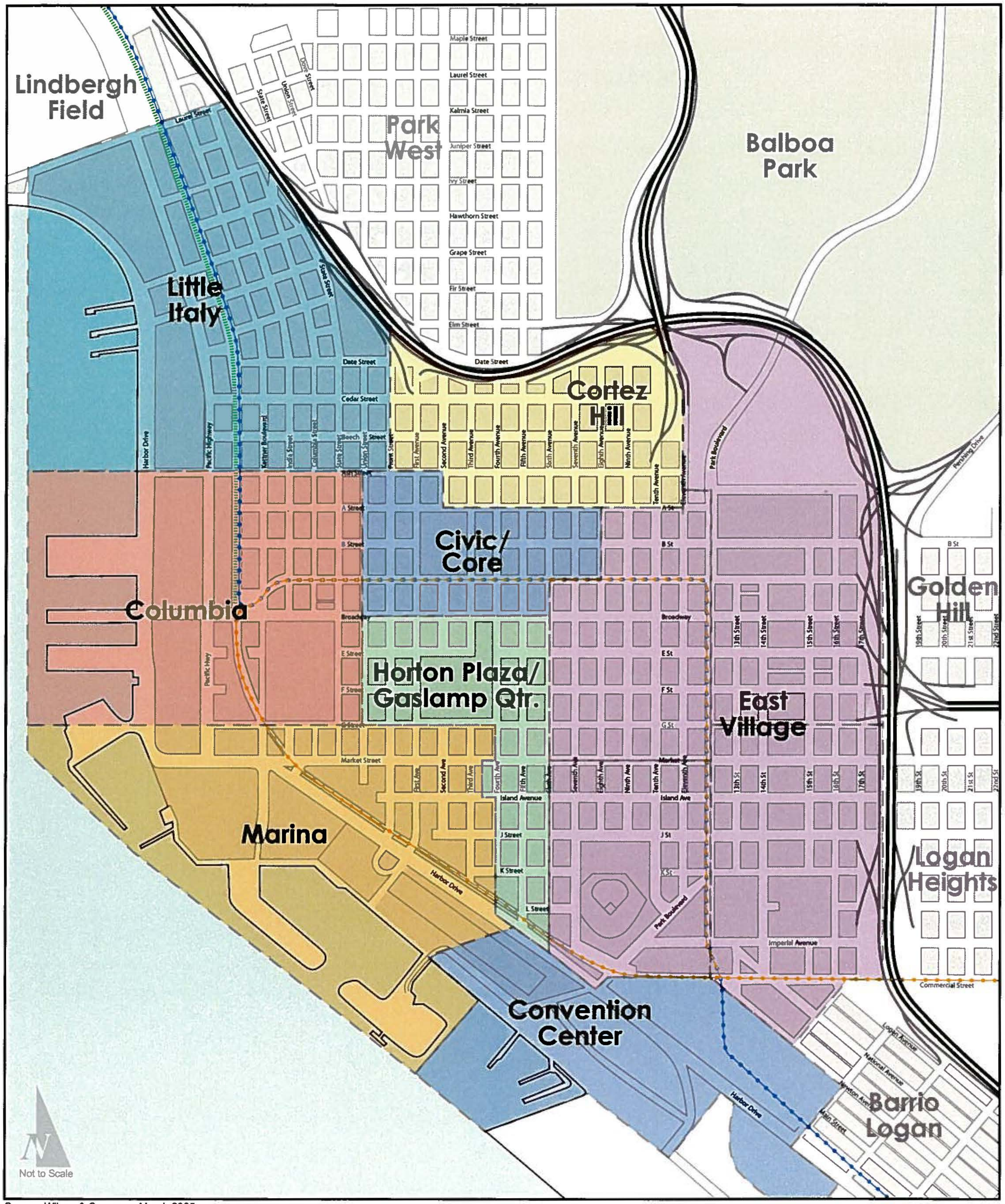


Source: Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY EIR Transportation, Circulation, and Access Study

Figure 1-3
Downtown Neighborhoods

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## 1.3 Report Organization

Following this introductory chapter, the remaining chapters of this technical report are organized as follows:

- **Chapter 2.0 – Methodologies and Standards** discusses the various analysis methodologies which were employed to assess the performance of the transportation system under existing, No Project, and proposed Downtown Community Plan conditions;
- **Chapter 3.0 – Existing Conditions** presents an assessment of existing traffic conditions, including performance of downtown freeway segments, ramps and major street intersections;
- **Chapter 4.0 – Downtown Community Plan Traffic Assessment** discusses future year traffic conditions, impacts and mitigation requirements associated with the proposed Downtown Community Plan. A comparison with the No Project (1992 MEIR) conditions is provided to assist in understanding the impacts and benefits associated with the proposed Downtown Community Plan;
- **Chapter 5.0 – Transit Access and Circulation Assessment** discusses transit service and access requirements under the proposed Downtown Community Plan;
- **Chapter 6.0 – Non-Motorized Transportation Access and Circulation Assessment** discusses non-motorized (walk, bicycle, and pedicab) travel and access requirements associated with the proposed Downtown Community Plan;
- **Chapter 7.0 – Parking Assessment** provides an analysis of future parking needs with build-out of the proposed Downtown Community Plan; and
- **Chapter 8.0 – Summary of Plan Impacts and Mitigation Measures** provides a summary of transportation impacts and mitigation requirements associated with the proposed Downtown Community Plan.

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# 2.0 Methodologies and Standards

This chapter defines the methodologies and standards utilized in the analysis of the downtown transportation system for the proposed *Downtown Community Plan.* The focus is on traffic operations, with identification of impacts to transit, pedestrian, bicycle and parking facilities, as well. This chapter identifies performance thresholds, i.e. criteria which were used to assess the significance of potential impacts on traffic, transit, bicycle, and pedestrian facilities, as well as parking requirements.

## 2.1 Traffic Level of Service Definitions

The concept of Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort, convenience, and safety. **Table 2.1** describes generalized definitions of urban transportation systems at LOS A through F.

**Table 2.1**
**Level of Service Definitions**

| LOS | Congestion/Delay | Traffic Flow Quality |
|---|---|---|
| A | None | Low volumes, high speeds; Speed not restricted by other vehicles; All signal cycles clear with no vehicles waiting through more than one signal. |
| B | None | Operating speeds beginning to be affected by other traffic; Less than 10% of signal cycles have vehicles waiting through more than one signal cycle. |
| C | None to minimal | Operating speed and maneuverability closely controlled by other traffic; Between 10% and 30% of signal cycles have vehicles waiting through more than one signal cycle. |
| D | Minimal to substantial | Tolerable operating speeds; Between 30% and 70% of signal cycles have vehicles waiting through more than one signal cycle. |
| E | Significant | Capacity; Maximum traffic volume an intersection can accommodate; 70% to 100% of signal cycles have vehicles waiting through more than one signal cycle. |
| F | Considerable | Long queues of traffic; unstable flows; travel speeds can drop to zero. |

Source: Highway Capacity Manual 2000

## 2.2 Freeway Segment and Ramp Level of Service

The analysis considers operations on the major freeway segments feeding and traversing the downtown, including I-5, SR-163, and SR-94. Capacity and operational considerations on freeway on- and off-ramps serving the downtown are a major focus of the analysis. The following sections describe the analysis methodologies for freeway segments and ramps.

## Freeway Segment Level of Service

Freeway LOS and performance levels are based on procedures developed by Caltrans District 11, which in turn are based on methods described in the 2000 *Highway Capacity Manual (HCM)*.

The procedure for calculating freeway LOS involves estimating a peak hour volume to capacity (V/C) ratio. Peak hour volumes are estimated from the application of design hour ("K"), directional ("D") and truck ("T") factors to Average Daily Traffic (ADT) volumes. The truck factors (percent trucks) were obtained from the most recent Caltrans data.

The resulting V/C ratio is then compared with accepted ranges of V/C values corresponding to the various Levels of Service, as shown in **Table 2.2**. The corresponding LOS represents an approximation of existing or forecast freeway operating conditions during the peak hour. Freeway LOS is calculated separately for each direction. LOS E or better is considered the maximum acceptable threshold for peak hour freeway operations.

**Table 2.2**
**Freeway Segment Level of Service Definitions**

| LOS | V/C | Congestion/Delay | Traffic Description |
|---|---|---|---|
| A | ≤0.41 | None | Free flow. |
| B | 0.42-0.62 | None | Free to stable flow, light to moderate volumes. |
| C | 0.63-0.80 | None to minimal | Stable flow, moderate volumes, freedom to maneuver noticeably restricted. |
| D | 0.81-0.92 | Minimal to substantial | Approaches unstable flow, heavy volumes, very limited freedom to maneuver. |
| E | 0.93-1.00 | Significant | Extremely unstable flow, maneuverability and psychological comfort extremely poor. |
| F | >1.00 | Considerable; 0-1 hour delay | Forced flow, heavy congestion, long queues form behind breakdown points, stop and go. |

Source: Wilson & Company; February 2005

## Freeway Ramp Level of Service

Two separate methods were used to evaluate the performance of ramps within the Downtown Community Plan study area: volume/capacity analysis and metered on-ramp analysis as discussed below.

<u>Volume/Capacity (V/C) Analysis</u>
The V/C analysis is based on a comparison of each ramp's estimated capacity with its peak hour traffic volumes. The typical capacity of an on- or off-ramp is 1,200 passenger cars per hour per lane. Therefore, a one-lane ramp carrying 960 vehicles during the peak hour would be operating at 80% of capacity. A V/C ratio greater than 1.0 corresponds to unacceptable Level of Service F. A peak hour LOS of E or better is considered acceptable for on- and off-ramps serving the downtown area.

Metered On-Ramp Analysis (Caltrans District 11 Methodology)

Currently, only a few on-ramps within the downtown study area are metered. However, in the future Caltrans plans to implement ramp metering at all freeway on-ramps in the downtown study area. The metered on-ramp operations analysis is based on a comparison of peak hour volumes with peak hour flow rates. Consistent with SANDAG's long range forecasting assumptions and procedures, a future year peak hour metered flow rate of 750 vehicles per hour was assumed for all downtown freeway on-ramps. Any excess demand over this assumed flow rate was identified, along with an estimate of resulting delay and extent of traffic queuing.

## 2.3 Intersection Level of Service

Level of Service for signalized intersections is defined in terms of vehicle delay. **Table 2.3** displays LOS criteria for signalized intersections.

**Table 2.3**
**Peak Hour Intersection Level of Service Definitions**

| Average Stopped Delay Per Vehicle (seconds / vehicle) | LOS Characteristics |
|---|---|
| ≤ 10 | **LOS A** describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay. |
| > 10 – 20 | **LOS B** describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay. |
| > 20 – 35 | **LOS C** describes operations with higher delays which may result from fair progression and/or longer cycles lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping |
| > 35 – 55 | **LOS D** describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable. |
| > 55 – 80 | **LOS E** is considered to be the limit of acceptable delay. Individual cycle failures are frequent occurrences. |
| > 80 | **LOS F** describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay. |

Source: 2000 Highway Capacity Manual

Consistent with previous traffic studies in the downtown study area, LOS E is the maximum acceptable threshold for downtown intersections under peak hour conditions.

## 2.4 Significance Criteria

For the purposes of this EIR analysis, threshold criteria for each transportation system component have been identified to assist in the identification of significant project-related impacts associated with the proposed Downtown Community Plan, as follows.

## Traffic

The primary criteria utilized to define traffic impact significance is the number of transportation facilities projected to operate at LOS F under future conditions. The number of freeway segments, freeway ramps, and intersections projected to operate at LOS F under build-out of the proposed Downtown Community Plan are enumerated as follows:

- **Direct** project-related traffic impacts would result when build-out of the proposed Downtown Community Plan causes a facility operating at acceptable LOS under existing conditions to degrade to substandard LOS F.
- **Cumulatively** significant traffic impacts would result at locations where build-out of the proposed Downtown Community Plan would contribute to substandard (LOS F) traffic operations on facilities that currently operate at LOS F under existing conditions.

## Transit

For the purpose of this study, potential impacts relating to transit would be considered significant if one or more of the following were to occur:

- The capacity and service capabilities of existing and planned transit services would be exceeded under cumulative build-out conditions.
- Key features of planned and assumed transit services were to result in the service degradation of and/or conflicts with other transportation operations in the downtown area, including adjacent roadway and pedestrian facilities.

Significant project-related transit impacts would result when build-out of the proposed Downtown Community Plan would result in substandard operations and capacity related impacts on identified transit services and/or results in conflicts with other transportation operations.

## Non-Motorized Circulation (Pedestrian, Bicycle, and Pedicab)

Pedestrian, bicycle and pedicab circulation is significantly impacted when these facilities are determined to be inadequate to handle demands, due to either limited capacity or potential conflicts with other travel modes, such as vehicular traffic and the Trolley.

Significant project-related pedestrian, bicycle and/or pedicab impacts would occur when build-out of the proposed Downtown Community Plan would result in pedestrian, bicycle and pedicab capacity limitations and/or conflicts with other transportation modes.

## Parking

Parking impacts are considered significant if the projected demand for parking would exceed the projected available parking supply. This in turn could lead to parking impacts in surrounding residential neighborhoods, as people seek parking outside of downtown due to limited parking availability.

Significant project-related parking impacts would occur when build-out of the proposed Downtown Community Plan results in projected parking shortages in the downtown area and/or parking impacts on surrounding residential neighborhoods.

## 2.5 Traffic Modeling and Travel Forecasting Procedures

This section outlines the key assumptions and methods employed to develop daily and peak hour travel forecasts, as well as to estimate LOS for the major downtown transportation facilities, including freeways, freeway ramps, and intersections.

### Land Use and Roadway Network Assumptions

The following land use and network assumptions were utilized in this study:

- **Downtown Community Plan**
  - Downtown Community Plan preferred plan land uses (*Downtown Community Plan*, June 2005)

    For estimating the transportation impacts, the analysis used a buildout traffic volume that would be generated by a realistic rather than maximum buildout of the land use type and intensity possible under the proposed Plans and Ordinances.

    The projected buildout under the proposed Community Plan was derived by CCDC's planning consultant, Dyett & Bahtia, by synthesizing information about existing conditions and development projects in the "pipeline" with potential future growth calculations including density bonus provisions in the proposed Plans and Ordinances. Potential growth was calculated from the application of assumed average intensities to vacant parcels and sites with infill potential. These assumptions were developed while taking into account maximum FAR allowed by the Community Plan, context and compatibility with existing development, and economic and other trends. Potential density bonuses achieved through State affordable housing regulations were not factored in. However, it is not anticipated that these bonus provisions would represent a substantial number of residential units.

    The resulting buildout projection, which is approximately 80% of the worst-case maximum exclusive of State affordable housing bonus programs, provides a reasonable distribution of potential future growth with respect to allowable FAR ranges, land use types, and projected market potential.

- SANDAG Regional Transportation Plan *Revenue Constrained* Transportation Network (Roadway and Transit Networks) plus downtown roadway network modifications, as identified in the proposed Downtown Community Plan. These are discussed further in Chapter 4.0.

➢ **No Project**
- 1992 MEIR/*Centre City Community Plan* future land uses and roadway network assumptions
- SANDAG Regional Transportation Plan (RTP) 2030 *Revenue Constrained* Transportation Network (Roadway and Transit Networks)

Since the analyses were initiated prior to the voter approval of the Transnet extension in November 2004, the SANDAG RTP *Revenue Constrained* roadway network was utilized to represent the worst case scenario in terms of future roadway capacity.

### Development of Forecast Travel Volumes

The SANDAG Regional Transportation Model was utilized to prepare future year build-out traffic forecasts for both the proposed Downtown Community Plan and the No Project alternative. Peak hour traffic volumes were developed from the transportation model output via the following key steps:

1. **Development and application of growth factors to existing peak hour intersection turn movements and freeway on/off ramp peak hour volumes.**

   Growth factors were derived from the SANDAG Transportation Model by comparing modeled "existing" and modeled "future year" peak hour traffic. Growth factors from the modeling were then applied to existing peak hour traffic data to derive future year peak hour volumes.

   For intersections, growth factors were applied by intersection leg, and then iteratively processed via the NCHRP (National Cooperative Highway Research Program) 255 Turn Movement Process, which considers the variations in growth by approach leg to develop an estimate of future year turn movements reflecting potential new/changed travel patterns relative to existing conditions. For freeway ramps, the growth factors were applied directly to existing AM and PM peak hour ramp volumes to derive future year ramp volumes.

2. **Review and refinement of future year peak hour traffic volumes.**

   This included a number of manual adjustment steps to ensure reasonability of the future year forecasts, including:

   - Reconciliation of results determined to be unreasonable, accounting for areas where the base year transportation model was found to over/under estimate traffic volumes.

- Balancing between adjacent intersections, accounting for traffic sinks and sources (driveways, parking structures, etc.)
- Balancing between freeway ramp on/off volumes and the various receiving and contributing surface streets.

### Peak Hour Intersection Analysis

The process described above provided AM and PM peak hour intersection volumes for analysis via the SYNCHRO software (v.6) network simulation model. Measures of effectiveness are determined in SYNCHRO by measuring and averaging travel characteristics of individual simulated vehicles as they travel through the roadway network.

The primary measure of effectiveness for purposes of intersection analysis is the total control delay. The average control delay by approach was used to determine an equivalent average control delay for the intersection by calculating a weighted average delay of all links approaching a particular intersection. This produces a calculated result that is comparable to the average control delay per vehicle used to define intersection Level of Service in the Highway Capacity Manual (HCM 2000).

SYNCHRO is capable of accurately modeling the flow of traffic through a network of intersections, and accounting for the impacts of adjacent intersection operations. It is also capable of incorporating the impacts of adjacent at-grade rail crossings on intersection operations. This is particularly useful in analyzing signals in a network, where traffic flow is significantly affected by signal coordination and/or vehicle spillback from adjacent intersections. Since these above characteristics are prevalent in the downtown area, the SYNCHRO software provided the appropriate tool for assessing downtown peak hour intersection operations.

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# 3.0 Existing Conditions

This chapter presents the results of the Existing Conditions traffic analyses, including current travel demand characteristics and an assessment of existing Level of Service (LOS) on study area freeway segments, freeway ramps, and intersections.

## 3.1 Travel Demand Characteristics

Existing Year 2000 land use characteristics for the downtown study area are presented in **Table 3.1**.

**Table 3.1**
**Existing Year 2000**
**Land Uses**

| Land Use Type | Quantity |
|---|---|
| Residential (units) | 14,600 |
| Office (s.f) | 13,144,000 |
| Retail (s.f.) | 2,658,000 |
| Hotel Rooms | 8,800 |

Source: *Downtown Community Plan*, June 2005

**Table 3.2** displays Year 2000 daily person trips within (originating in and/or destined to) the downtown area, by residential and non-residential land use categories. Approximately 1.23 million person trips currently occur in the downtown area on a daily basis, with about 85% of those trips generated by non-residential land uses.

**Table 3.2**
**Existing Year 2000**
**Daily Person Trips**

| Land Use | Person Trips |
|---|---|
| Residential | 185,970 |
| Non-Residential | 1,040,490 |
| **Total** | 1,226,460 |

Source: SANDAG, December 2004

**Table 3.3** summarizes the estimated mode share of downtown trips under existing conditions.

**Table 3.3**
**Existing Downtown Mode Share**

| | Trips | | Percent | |
|---|---|---|---|---|
| | **Peak²** | **Daily** | **Peak²** | **Daily** |
| **SOV¹** | 203,400 | 609,100 | 51.9% | 49.6% |
| **Carpool** | 101,000 | 371,600 | 25.8% | 30.2% |
| **Transit** | 30,900 | 53,600 | 7.9% | 4.3% |
| **Non-Motorized** | 56,100 | 142,200 | 14.3% | 15.6% |
| **Total** | 391,400 | 1,226,500 | 100.0% | 100.0% |

Source: SANDAG, December 2004

Notes:
1. SOV = Single Occupant Vehicle
2. Peak = Peak Travel Period of 6:00am – 9:00am and 4:00pm – 7:00pm.

As shown above, automobile modes (SOV and carpool) currently carry the largest share (79.8%) of downtown total daily trips, followed by non-motorized modes at 15.6% and transit at 4.3%.

**Table 3.4** displays Year 2000 daily and peak period vehicle trips in the downtown study area. Approximately one-third of the daily vehicle trips currently occur during the peak periods (6:00 to 9:00 AM and 4:00 to 7:00 PM).

**Table 3.4**
**Existing Year 2000**
**Daily Vehicle Trips**

| | Vehicle Trips |
|---|---|
| Peak Periods | 242,780 |
| Daily | 727,335 |

Source: SANDAG, December 2004

**Table 3.5** displays Year 2000 vehicle-miles-traveled (VMT) on downtown surface streets. Approximately 40% of total daily VMT in the downtown area occurs during the peak travel periods.

**Table 3.5**
**Existing Year 2000**
**Daily Vehicle-Miles-Traveled(VMT) on Downtown Surface Streets**

| | Downtown VMT |
|---|---|
| Peak Periods | 156,140 |
| Daily | 383,330 |

Source: SANDAG, December 2004

## 3.2 Existing Roadway Network

This section describes the downtown study area roadway network including freeways, major arterials and collectors. The downtown street pattern is comprised of a grid network with several one-way roadways in both the north-south and east-west directions. **Figure 3-1** displays the downtown study area existing roadway network.

### Roadways

A simplified functional roadway classification system based upon relative traffic volume and function has been developed by the City of San Diego for the current downtown street system. Downtown roadways are divided into six categories: freeway, primary arterial, major street, collector street, business street and local street. Street classifications and examples of characteristic streets are discussed below.

**Freeways** – Freeways serve through traffic and are fully access controlled by grade separations, interchanges and ramp connections. Freeways are typically maintained by the state (Caltrans) and constructed to state criteria. Freeways vary in width from four (4) to eight (8) or more lanes. Regional access to the downtown study area is provided by I-5, SR-163, and SR-94. I-5 is a north/south freeway serving coastal cities in San Diego County and running northward to Orange and Los Angeles counties and beyond. SR-163 is also a north/south freeway running from I-15 in the north, to 10th and 11th Streets in downtown San Diego. SR-163 provides access to I-8, I-805 and I-15, as well as to SR-52. SR-94 is an east-west freeway running from downtown San Diego eastward through southeastern San Diego and terminating at I-8 in eastern San Diego County.

**Prime Arterials** – A prime arterial carries heavy vehicular traffic, relatively low pedestrian traffic, and moderate bicycle and transit traffic. It has a raised center median, bicycle lanes, street trees, traffic safety street lighting, sidewalks, and very restricted access to abutting properties. It may include overhead or underground utilities. Only Harbor Drive, north of Market Street, is classified as a six-lane primary arterial.

**Major Arterials** – Major streets provide a network of roadway access to primary arterials and the freeway system. They also provide access to abutting commercial and industrial properties. They carry moderate to heavy traffic volumes, low to high pedestrian and bicycle movements, and moderate to high transit movements. Major streets have raised center median, street trees, traffic safety street lighting, and sidewalks. The major street right-of-way may include landscaping, pedestrian-scale lighting, overhead or underground utilities, on-street parking and/or bike lanes. Examples of major streets in the downtown area include Pacific Highway, Kettner Boulevard, Front Street, Fifth Avenue, Market Street and Ash Street.

**Collector Streets** – Collector streets primarily provide connections between local/ collector streets and streets of higher classification. The collector street provides access to abutting property and carries low to moderate traffic volumes, low to heavy pedestrian volumes, moderate to heavy bicycle volumes, and low to moderate transit movements. Collector streets have on-street parking, street trees, traffic safety street lighting, and

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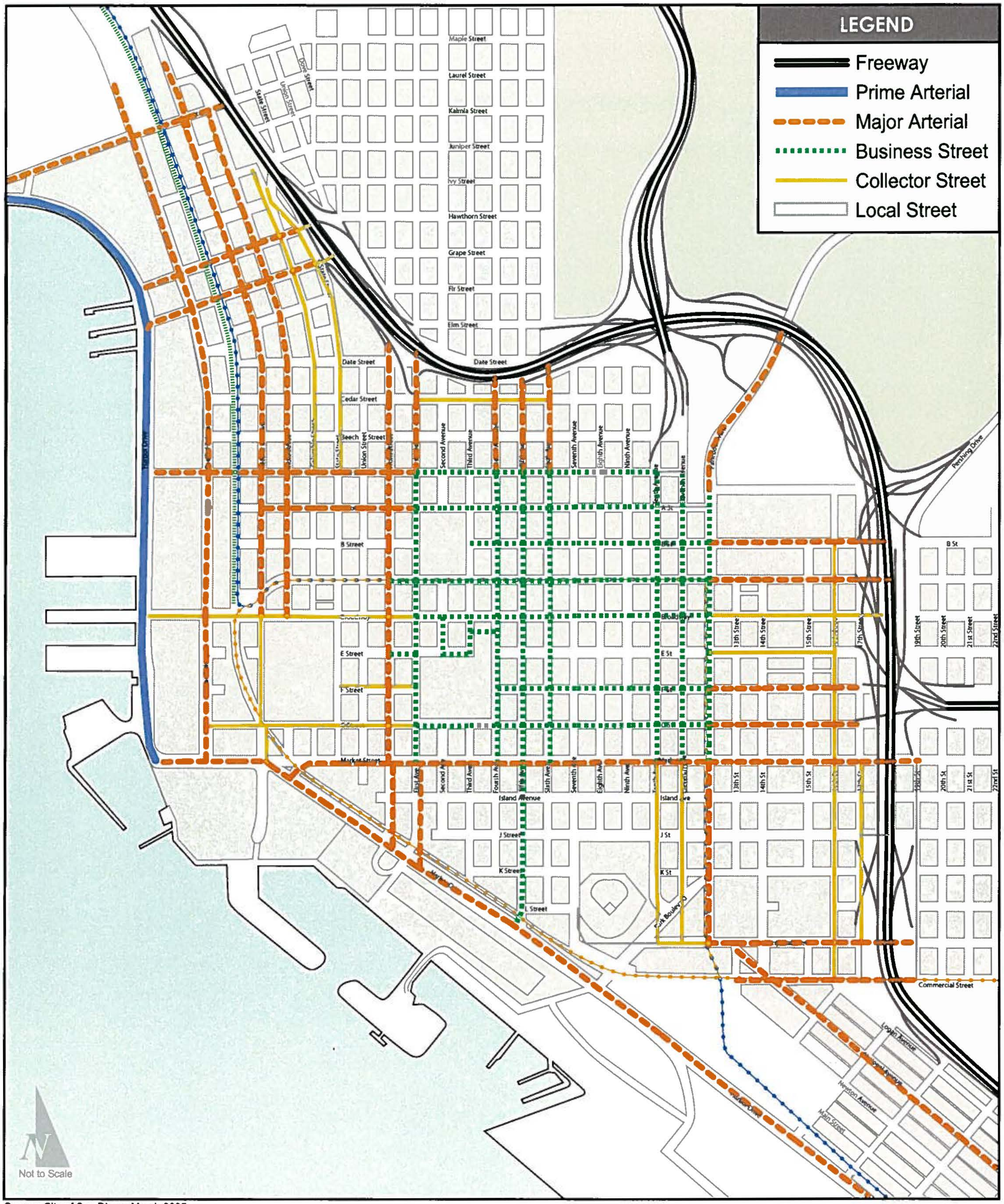


Source: City of San Diego; March 2005



Figure 3-1
Downtown Roadway Classifications
Existing Conditions

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sidewalks. They may also include landscaping, pedestrian scale lighting and overhead or underground utilities. Collector streets in the downtown study area include Columbia Street, State Street, 10th Avenue and 11th Avenue.

**Business Streets** – Business streets are usually two, three or four lane facilities located within the Central Business District (CBD). Their primary purpose is to carry through traffic and to provide access to abutting property. Business streets function as either one- or two-way facilities. The business street is unique in that it carries a high volume of traffic at low travel speeds (given the short spacing of traffic signals at each block). Business streets generally have on-street parking, street trees, street lighting, and sidewalks. They may include landscaping, pedestrian-scale lighting and overhead or underground utilities. A large majority of downtown roadways are classified as business streets.

**Local Streets** – Local streets primarily provide direct access to abutting property. They carry low traffic volumes, low to heavy pedestrian volumes, and low to moderate bicycle volumes. Local streets have on-street parking, street trees, traffic safety street lighting, and sidewalks. They may include landscaping, pedestrian-scale lighting and overhead or underground utilities. Examples of the local streets in the downtown include Seventh Avenue, Ninth Avenue, K Street, 14th Street, Island Avenue, Beech Street and Ivy Street.

**Appendix A** presents a summary of existing roadway width, directional flow, classification, and number of lanes for the existing downtown roadway network.

### Signalized Intersections

Traffic signals assign right-of-way for motorists, pedestrians and Trolley vehicles at the intersection of streets. For the purposes of analyzing existing downtown traffic conditions, 127 signalized intersections were evaluated. **Figure 3-2** shows the location of the analyzed signalized intersections under existing conditions.

The majority of downtown signalized intersections are incorporated into a coordinated and interconnected traffic system through a master controller, enabling synchronized operation along major corridors. Intersections along Pacific Highway, Harbor Drive, Imperial Avenue, and Commercial Street are currently not part of this coordinated system.

## 3.3 Existing Traffic Volumes

**Figures 3-3** and **3-4** illustrate Year 2002 ADT volumes for north-south and east-west roadways, respectively. The heaviest traveled streets in the north-south direction are Harbor Drive, Pacific Highway, Park Boulevard and First Avenue. The heaviest traveled streets in the east-west direction are F Street, Grape Street, Hawthorn Street and Laurel Street. These roadways currently carry traffic volumes in excess of 20,000 vehicles per day.

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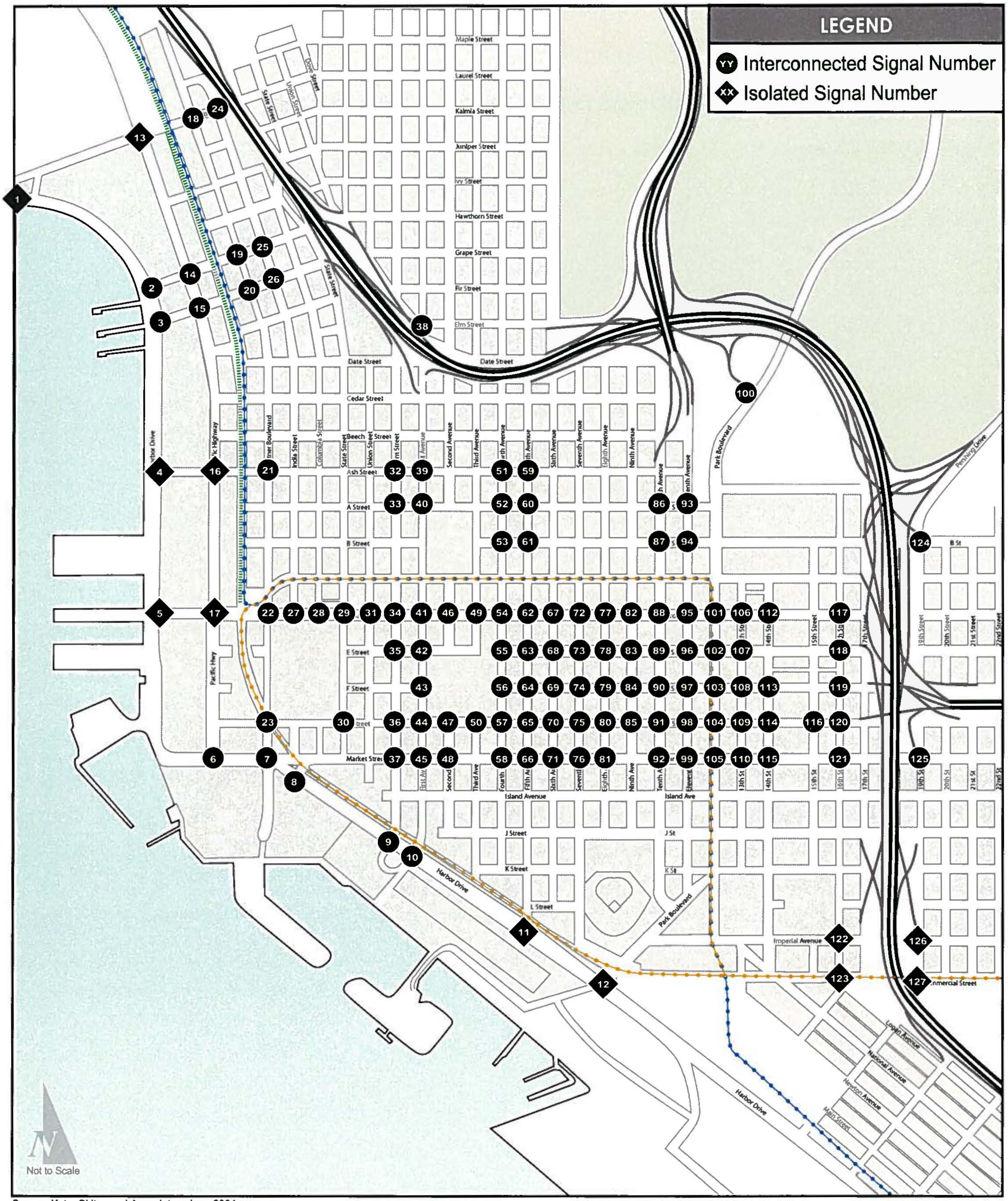


Source: Katz, Okitsu and Associates; June 2004

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Figure 3-2
Downtown Traffic Signal Locations
Existing Conditions

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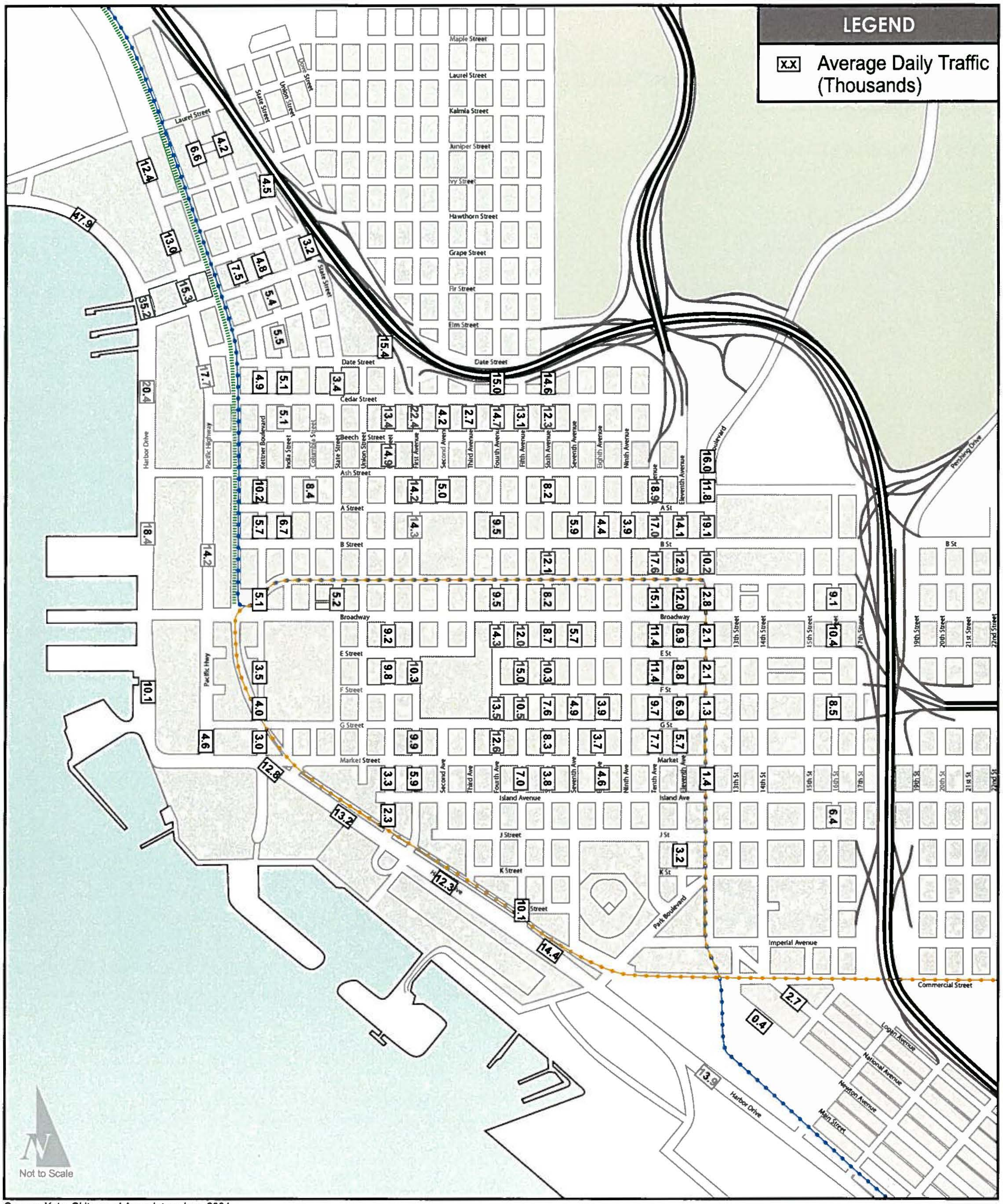

Source: Katz, Okitsu and Associates; June 2004

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Figure 3-3
Downtown Traffic Volumes
North-South Streets
Existing Conditions

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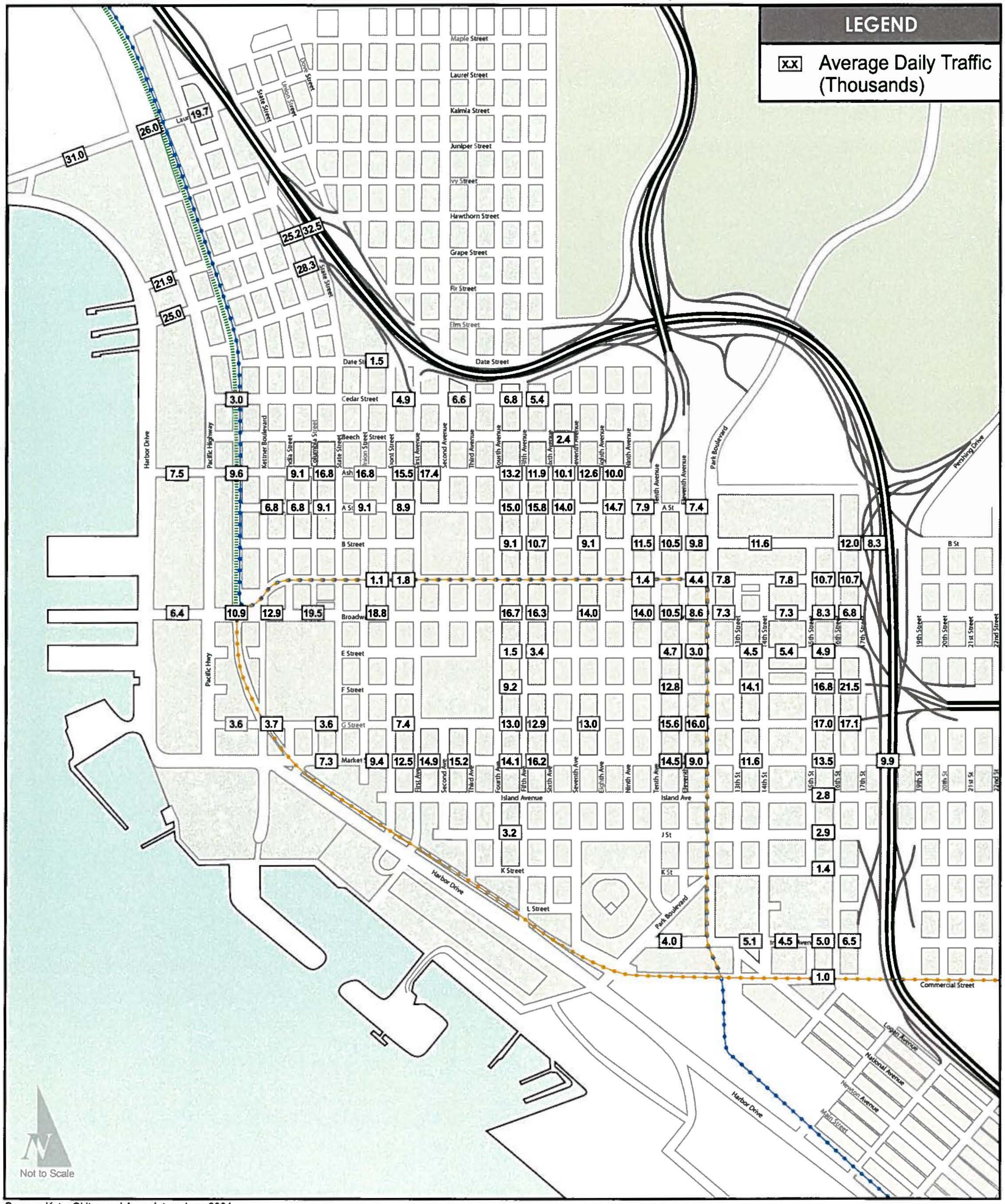


Source: Katz, Okitsu and Associates; June 2004

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Figure 3-4
Downtown Traffic Volumes
East-West Streets
Existing Conditions

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Several screenlines were established across the downtown roadway network to provide an understanding of the overall magnitude of vehicular traffic entering and leaving the downtown study area in the east-west and the north-south directions. A screenline is created by summing traffic volumes along parallel streets that accommodate vehicles traveling in the same general direction (north-south or east-west). **Tables 3.6A** and **3.6B** display an assessment of the existing travel flows in and out of the downtown based upon the established screenline locations. **Figures 3-5A** and **3-5B** display the screenline count locations for east-west and north-south traffic movements, respectively.

**Table 3.6A**
**Existing Conditions**
**Downtown East-West Screenline Analysis**

| Screenline Number | Roadway | Segment | Existing |
|---|---|---|---|
| 1a | Laurel St | Harbor Dr to Pacific Hwy | 31,020 |
| 1b | Hawthorn St | Columbia St to State St | 25,220 |
| 1c | Grape St | Columbia St to State St | 28,300 |
| **Sub-Total** | | | **84,540** |
| 2a | Ash St | Sixth Ave to Seventh Ave | 10,150 |
| 2b | A St | Sixth Ave to Seventh Ave | 14,010 |
| 2c | B St | Sixth Ave to Seventh Ave | 11,070 |
| **Sub-Total** | | | **35,230** |
| 3a | C St | 15th St to 16th St | 10,660 |
| 3b | Broadway | 15th St to 16th St | 8,250 |
| 3c | E St | 15th St to 16th St | 4,860 |
| 3d | F St | 15th St to 16th St | 16,840 |
| 3e | G St | 15th St to 16th St | 16,950 |
| 3f | Market St | 15th St to 16th St | 13,520 |
| 3g | Island Ave | 15th St to 16th St | 2,810 |
| 3h | J St | 15th St to 16th St | 2,930 |
| 3i | K St | 15th St to 16th St | 1,420 |
| 3j | Imperial Ave | 15th St to 16th St | 5,000 |
| 3k | Commercial Ave | 15th St to 16th St | 1,040 |
| 3l | National Ave | Commercial Ave to 16th St | 2,750 |
| **Sub-Total** | | | **87,030** |
| **TOTAL (East-West)** | | | **206,800** |

Source: Katz, Okitsu & Associates, 2004

**Table 3.6B**
**Existing Conditions**
**Downtown North- South Screenline Analysis**

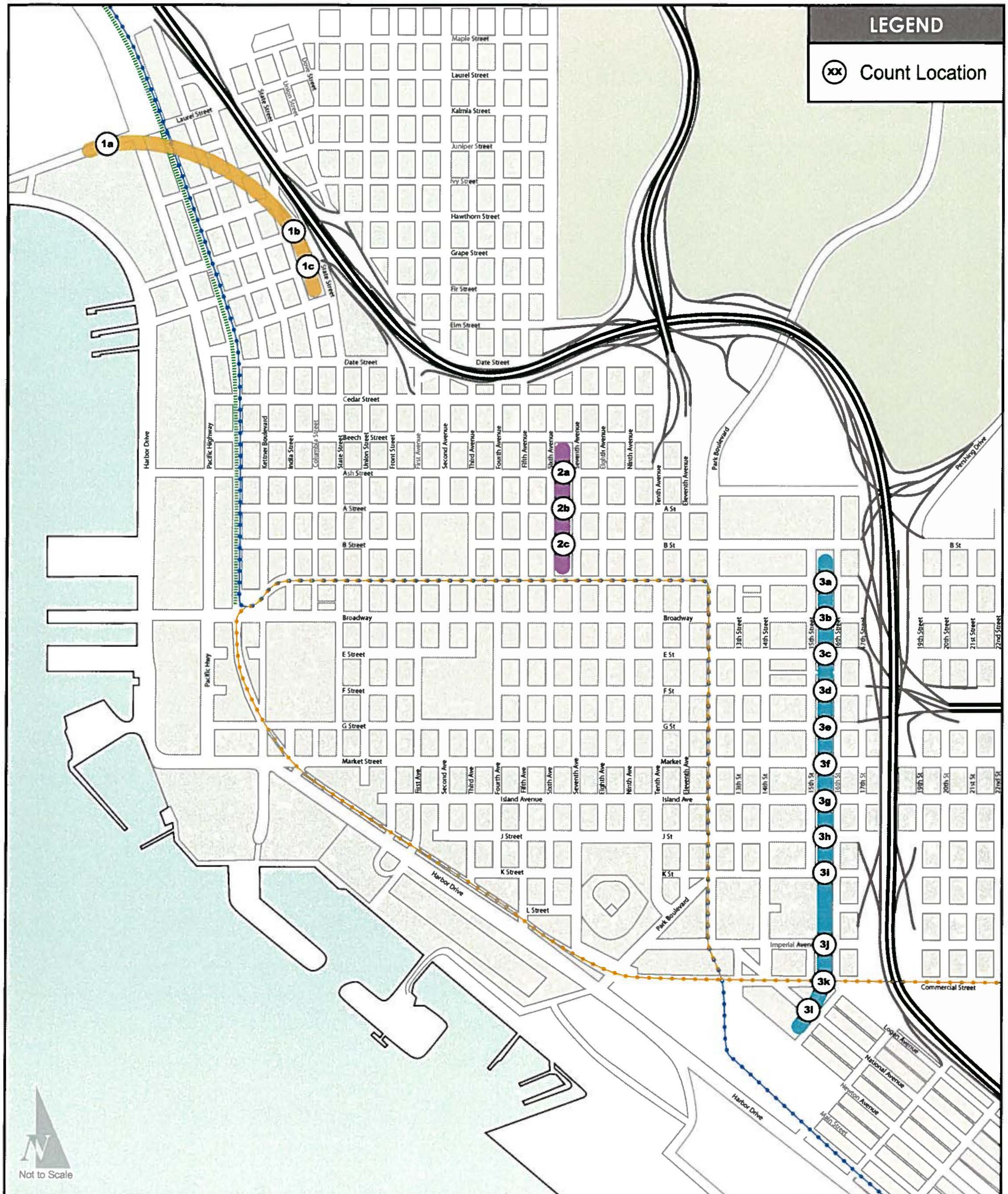
| Screenline Number | Roadway | Segment | Existing |
|---|---|---|---|
| 1a | N. Harbor Dr | Cedar St to Beech St | 47,850 |
| 1b | Pacific Hwy | Cedar St to Beech St | 12,360 |
| 1c | Kettner Blvd | Cedar St to Beech St | 6,570 |
| 1d | India St | Cedar St to Beech St | 4,230 |
| 1e | State St | Cedar St to Beech St | 4,480 |
| 1f | First Ave | Cedar St to Beech St | 22,370 |
| 1g | Second Ave | Cedar St to Beech St | 4,170 |
| 1h | Third Ave | Cedar St to Beech St | 2,670 |
| 1i | Fourth Ave | Cedar St to Beech St | 14,690 |
| 1j | Fifth Ave | Cedar St to Beech St | 13,130 |
| 1k | Sixth Ave | Cedar St to Beech St | 12,350 |
| **Sub-Total** | | | **144,870** |
| 2a | Seventh Ave | A St to B St | 5,910 |
| 2b | Eighth Ave | A St to B St | 4,420 |
| 2c | Ninth Ave | A St to B St | 3,880 |
| 2d | 10th Ave | A St to B St | 17,010 |
| 2e | 11th Ave | A St to B St | 14,140 |
| 2f | Park Blvd | A St to B St | 19,090 |
| 2g | 16th St | Broadway to E St | 10,400 |
| **Sub-Total** | | | **74,850** |
| **TOTAL (North-South)** | | | **219,720** |

Source: Katz, Okitsu & Associates, 2004

As shown, the east-west screenline locations currently carry a total of about 207,000 ADT, while the north-south screenline locations carry approximately 220,000 ADT. Individual streets carrying high volumes include Laurel Street, Hawthorn Street and Grape Street, along with F Street, G Street, and Market Street in the east-west direction, and Harbor Drive, First Avenue, 10th Avenue, and Park Boulevard in the north-south direction.

## 3.4 Existing Peak Hour Freeway Segment and Ramp Performance

As stated previously, the downtown study area is served by three freeways (I-5, SR-94, and SR-163) providing access to the northern, southern, and eastern sections of the city and region. I-5 includes four (4) lanes in each direction, with auxillary lanes to assist in the merge and diverge of traffic at the ramp locations. SR-94 provides four (4) lanes in each direction while SR-163 provides two (2) lanes in each direction through Balboa Park.




Source: Katz, Okitsu and Associates; June 2004

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Figure 3-5A
East-West Screenline Locations
Existing Conditions

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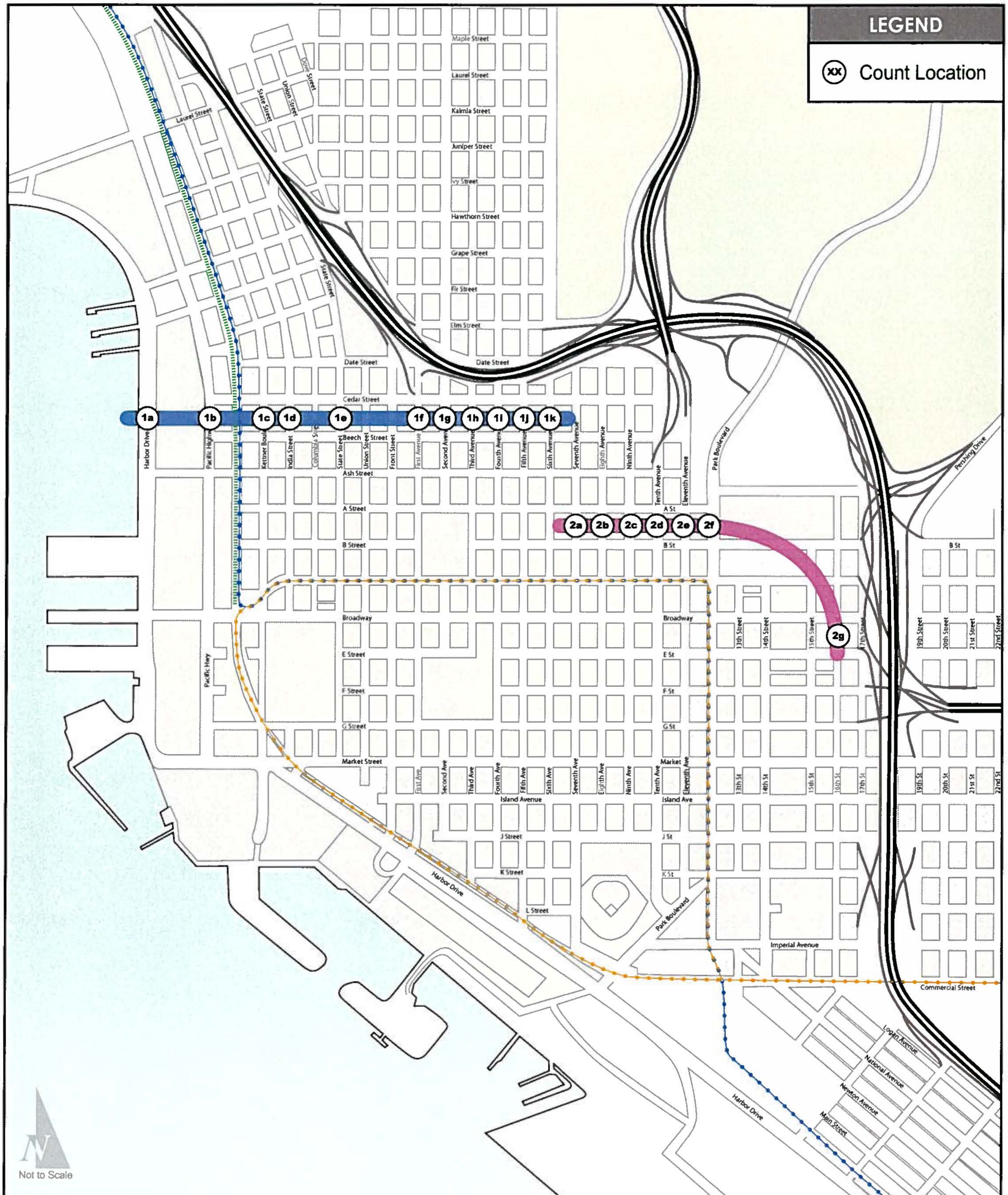


Source: Katz, Okitsu and Associates; June 2004

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Figure 3-5B
North-South Screenline Locations
Existing Conditions

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### Freeway Segment Analysis Results

**Table 3.7** displays peak hour Level of Service (LOS) analysis results for study area freeway segments under existing conditions. As shown, freeway volumes on I-5 through the downtown area currently range from 160,000 to 220,000 ADT. Volumes on SR-94, just east of downtown approach 100,000 ADT; while SR-163, just north of downtown, currently carries approximately 101,000 ADT.

Due to high volumes and limited capacity, three (3) freeway segments currently operate at unacceptable LOS F during the AM and/or PM peak hours, as follows:

- I-5: SR-94 to Pershing Drive (southbound during the PM peak hour)
- I-5: Pershing Drive to SR-163 (southbound during the PM peak hour)
- SR-163: I-5 to Washington St (northbound during the PM peak hour; southbound in the AM peak hour)

### Freeway Ramp Analysis Results

**Table 3.8** lists the freeway ramps providing access to and from the downtown area, as well as existing LOS during the AM and PM peak hours. As shown, the following downtown freeway **on-ramps** are currently operating at LOS F during the AM and/or PM peak hours:

- I-5 Northbound On-Ramp @ B Street (AM peak hour)
- I-5 Northbound On-Ramp @ 11th Avenue (AM and PM peak hour)
- I-5 Northbound On-Ramp @ First Street (PM peak hour)
- I-5 Southbound On-Ramp @ Grape Street (PM peak hour)

The following downtown freeway **off-ramps** are currently operating at LOS F during the AM peak hour:

- I-5 Southbound Off-Ramp @ Cedar Street (AM peak hour)

All freeway **off-ramps** are currently operating at acceptable LOS during the PM peak hour.

**Figures 3-6** and **3-7** display freeway segments and ramps, respectively, which are currently operating at substandard LOS F.

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**Table 3.7**
**Existing Year 2000 Freeway Segment Performance**
**Downtown Study Area**

| Facility | Segment From | Segment To | Daily ADT | Peak Hour % AM | Peak Hour % PM | Direction | Lanes | Peak Hour Capacity | Direction Split AM | Direction Split PM | Truck Factor | Peak Hour Volume AM | Peak Hour Volume PM | V/C AM | V/C PM | LOS AM | LOS PM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I-5 | SR-75 | J St | 179,000 | 0.076 | 0.078 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 8,662 | 6,383 | 0.94 | 0.69 | E | C |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 5,219 | 7,864 | 0.57 | 0.85 | B | D |
| | J St | SR-94 | 178,000 | 0.076 | 0.078 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 8,614 | 6,347 | 0.94 | 0.69 | E | C |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 5,190 | 7,820 | 0.56 | 0.85 | B | D |
| | SR-94 | Pershing Dr | 188,000 | 0.076 | 0.078 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 9,098 | 6,704 | 0.87 | 0.64 | D | C |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 5,482 | 8,260 | 0.69 | 1.03 | C | **F** |
| | Pershing Dr | SR-163 | 205,000 | 0.076 | 0.078 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 9,920 | 7,310 | 0.95 | 0.70 | E | C |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 5,978 | 9,007 | 0.75 | 1.13 | C | **F** |
| | SR-163 | Sixth Ave | 191,000 | 0.076 | 0.078 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.979 | 9,252 | 6,817 | 0.89 | 0.66 | D | C |
| | | | | | | SB | 4L, 2A | 10,400 | 0.376 | 0.552 | 0.979 | 5,575 | 8,400 | 0.54 | 0.81 | B | D |
| | Sixth Ave | First Ave | 202,000 | 0.076 | 0.082 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 8,092 | 8,629 | 0.88 | 0.94 | D | E |
| | | | | | | SB | 5L, 1A | 11,200 | 0.484 | 0.49 | 0.979 | 7,590 | 8,290 | 0.68 | 0.74 | C | C |
| | First Ave | Hawthorn St | 160,000 | 0.076 | 0.082 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 6,409 | 6,835 | 0.70 | 0.74 | C | C |
| | | | | | | SB | 4L, 0A | 8,000 | 0.484 | 0.49 | 0.979 | 6,012 | 6,567 | 0.75 | 0.82 | C | D |
| SR-163 | I-5 | Washington St | 101,000 | 0.072 | 0.081 | NB | 2L, 0A | 4,000 | 0.311 | 0.665 | 0.985 | 2,296 | 5,523 | 0.57 | 1.38 | C | F |
| | | | | | | SB | 2L, 0A | 4,000 | 0.689 | 0.335 | 0.985 | 5,087 | 2,782 | 1.27 | 0.70 | F | C |
| SR-94 | 17th St | 28th St | 99,000 | 0.077 | 0.088 | EB | 4L, 0A | 8,000 | 0.192 | 0.713 | 0.982 | 1,490 | 6,326 | 0.19 | 0.79 | A | C |
| | | | | | | WB | 4L, 0A | 8,000 | 0.808 | 0.287 | 0.982 | 6,272 | 2,546 | 0.78 | 0.32 | C | A |

Source: BRW/URS, Central Interstate 5 Corridor Study, October 2000; Wilson & Company, March 2005

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**Table 3.8**
**Existing Peak Hour Freeway Ramp Level of Service**
**Downtown Study Area**

| | From | To | Peak Hour Ramp Volume AM | Peak Hour Ramp Volume PM | Lanes | Peak Hour Capacity | V/C AM | V/C PM | LOS AM | LOS PM |
|---|---|---|---|---|---|---|---|---|---|---|
| **NB On-Ramps** | 19th Street | NB I-5 | 580 | 850 | 1 | 1,200 | 0.48 | 0.71 | B | C |
| | B Street | NB I-5 | 1,420 | 820 | 1 | 1,200 | 1.18 | 0.68 | **F** | C |
| | 11th Ave | NB I-5 / NB SR-163 | 3,270 | 3,020 | 2 | 2,400 | 1.36 | 1.26 | **F** | **F** |
| | First Avenue | NB I-5 | 1,040 | 2,030 | 1 | 1,200 | 0.87 | 1.69 | D | **F** |
| **SB On-Ramps** | Grape Street | SB I-5 | 1,050 | 1,660 | 1 | 1,200 | 0.88 | 1.38 | D | **F** |
| | First Avenue | SB I-5 | 640 | 1,180 | 1 | 1,200 | 0.53 | 0.98 | B | E |
| | Fifth Avenue | SB I-5 | 560 | 1,140 | 1 | 1,200 | 0.47 | 0.95 | B | E |
| | Park Boulevard | SB I-5 | 270 | 210 | 1 | 1,200 | 0.23 | 0.18 | A | A |
| | C St | SB I-5 | 320 | 490 | 1 | 1,200 | 0.27 | 0.41 | A | A |
| | E Street | SB I-5 | 540 | 340 | 1 | 1,200 | 0.45 | 0.28 | B | A |
| | J Street | SB I-5 | 260 | 410 | 1 | 1,200 | 0.22 | 0.34 | A | A |
| **EB On-Ramps** | G St | EB SR-94 | 500 | 2,730 | 3 | 3,600 | 0.14 | 0.76 | A | C |
| | 19th St | EB SR-94 | 280 | 870 | 1 | 1,200 | 0.23 | 0.73 | A | C |
| **NB Off-Ramps** | NB I-5 | J Street | 540 | 1,030 | 1 | 1,200 | 0.45 | 0.86 | B | D |
| | NB I-5 | B Street | 960 | 670 | 1 | 1,200 | 0.80 | 0.56 | C | B |
| | NB I-5 | Sixth Avenue | 1,330 | 1,200 | 2 | 2,400 | 0.55 | 0.50 | B | B |
| **SB Off-Ramps** | SB I-5 | Cedar Street | 1,210 | 650 | 1 | 1,200 | 1.01 | 0.54 | **F** | B |
| | SB I-5 | Front Street | 1,470 | 800 | 2 | 2,400 | 0.61 | 0.33 | B | C |
| | SB I-5/SB SR-163 | 10th Ave | 3,130 | 2,900 | 3 | 3,600 | 0.87 | 0.81 | D | D |
| | SB I-5 | B Street | 360 | 430 | 1 | 1,200 | 0.30 | 0.36 | A | B |
| | SB I-5 | 17th Street | 370 | 560 | 1 | 1,200 | 0.31 | 0.47 | A | B |
| | SR-163 | Fourth Ave | 420 | 800 | 1 | 1,200 | 0.35 | 0.67 | A | C |
| | SR-163 | Ash St | 1,200 | 460 | 2 | 2,400 | 0.50 | 0.19 | B | A |
| | SR-163 | Park Blvd | 330 | 230 | 1 | 1,200 | 0.28 | 0.19 | A | A |
| **WB Off-Ramps** | SR-94 | F St | 3,450 | 1,050 | 3 | 3,600 | 0.96 | 0.29 | E | A |

Source: SANDAG; Wilson & Company, March 2005

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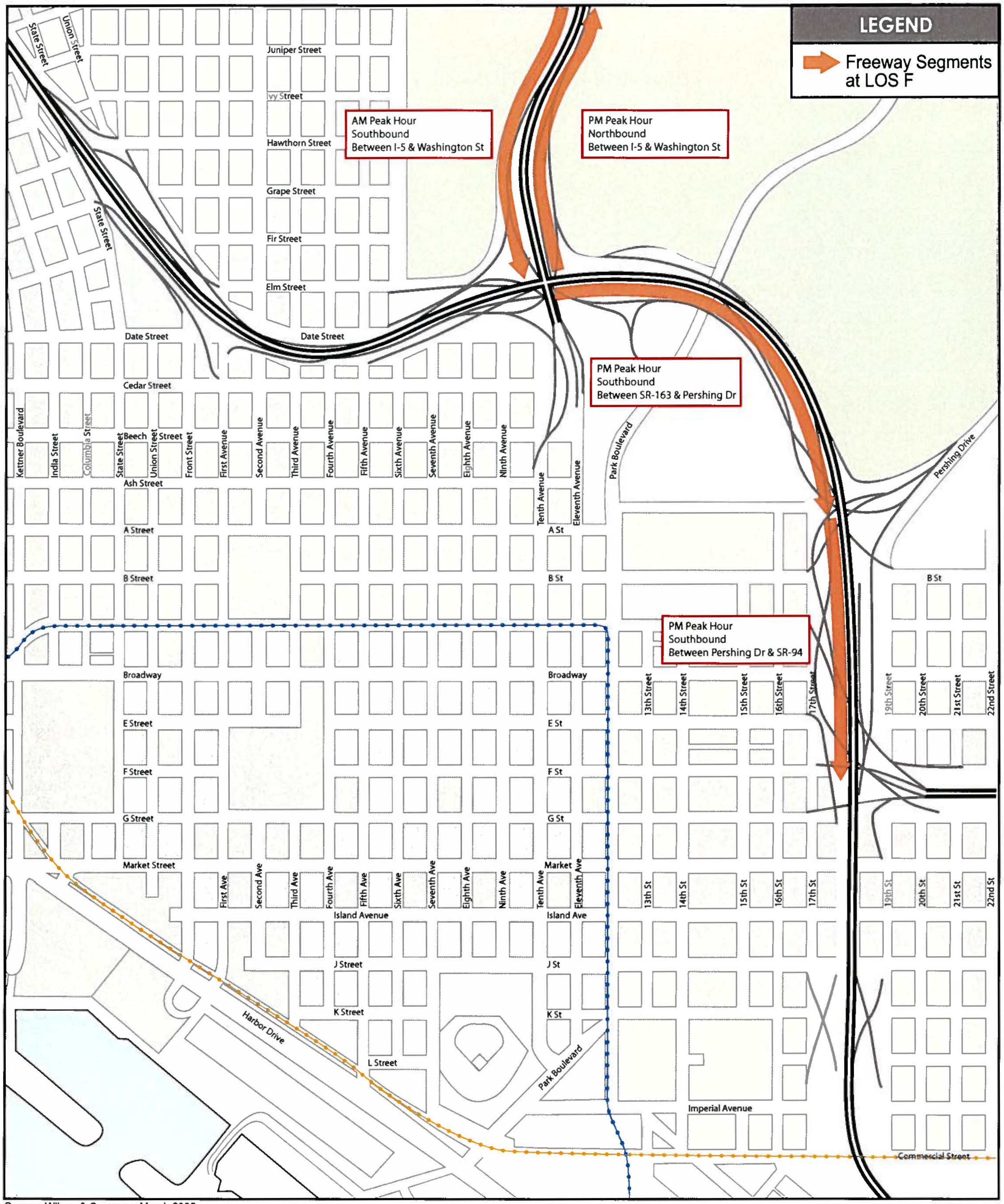


Source: Wilson & Company; March 2005

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Figure 3-6
Freeway Segments at LOS F
Existing Conditions

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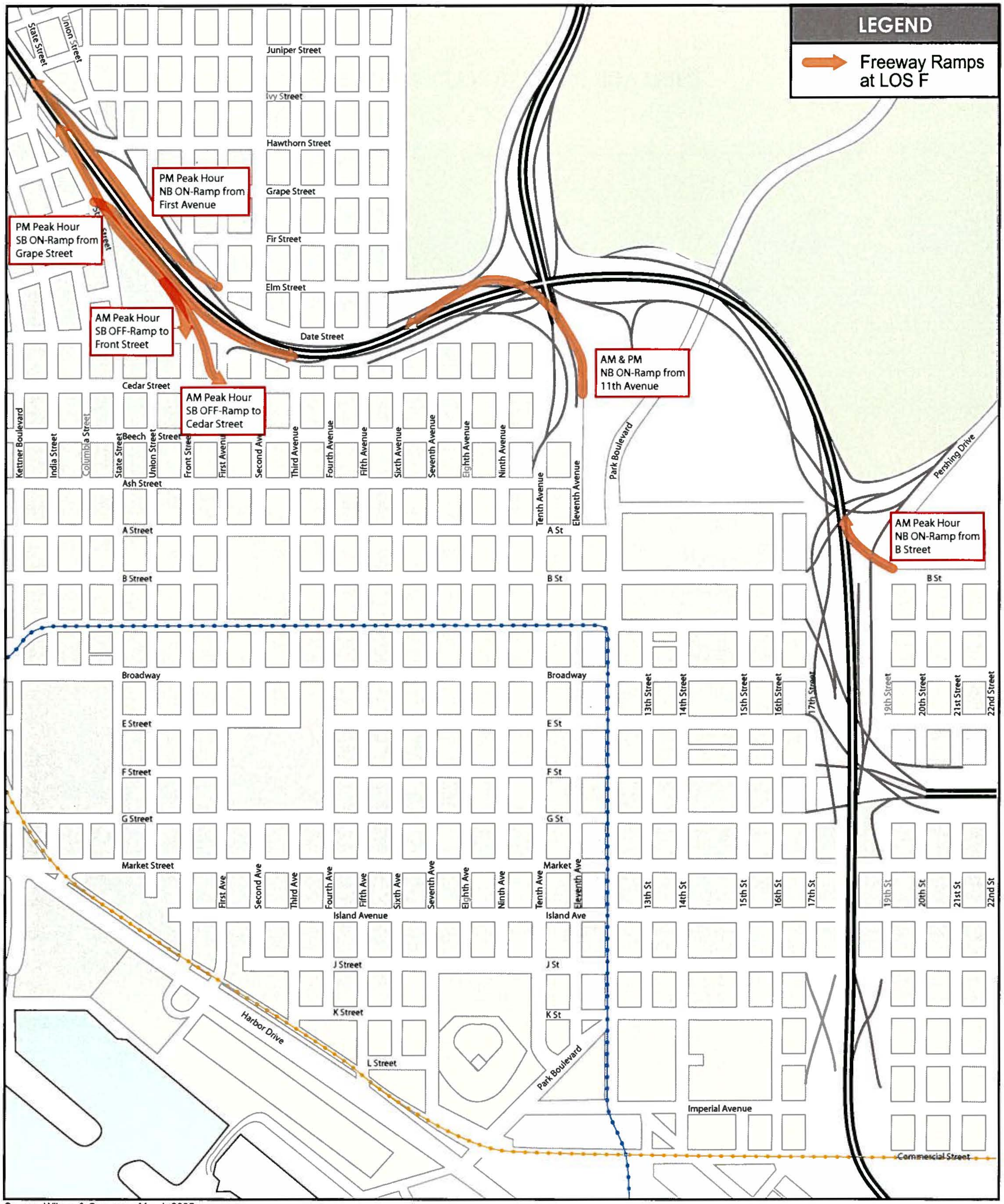


Source: Wilson & Company; March 2005

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Figure 3-7
Freeway Ramps at LOS F
Existing Conditions

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### Metered Freeway On-Ramp Analysis Results

**Table 3.9** displays the analysis results of existing metered freeway on-ramps. There are currently only two metered freeway on-ramp locations in the downtown study area: southbound I-5 from Fifth Avenue and eastbound SR-94 from 19th Avenue.

**Table 3.9**
**Existing Year 2000 I-5 On-Ramp Metering Analysis**
**Downtown Study Area**

| | | | Metering Rates | | Peak Hour Ramp Volume | | Excess Demand | | Delay (Mintues) | | Queue Length (Feet) | | Queue Storage Location (feet) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | On-Ramp | | Arterial | |
| | From | To | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| I-5 | Fifth Ave | SB I-5 | * | 864 | 560 | 1,140 | * | 276 | * | 9.0[1] | * | 6,900[1] | * | 402 | * | 6,498 |
| SR -94 | 19th Ave | EB SR-94 | * | 698 | 280 | 870 | * | 172 | * | 14.8 | * | 4,300 | * | 650 | * | 3,650 |

Source: Wilson & Company; March, 2005

Notes:
1. Values reflect observed delay and queue length.
* Ramp is not metered.

As shown above, during the PM peak hour, the I-5 southbound on-ramp at Fifth Avenue currently generates long queues, backing up onto the local downtown roadway system. The SR-94 eastbound on-ramp at 19th Street also currently has back-ups, with queues also spilling onto the local roadway system.

### Existing Peak Hour Intersection Performance

The flow of traffic within the relatively dense grid roadway network in the downtown is controlled by the performance of intersections, and specifically their operation during the peak hours. A total of 128 intersections were analyzed under existing conditions. As noted previously, the signalized intersections are interconnected via a master controller, which provides for good progression along major east-west and north-south corridors. Most signals in the downtown are currently operated with a cycle length of 70 seconds to facilitate this coordination.

**Table 3.10** displays peak hour intersection delay and LOS analysis results. **Figures 3-8** and **3-9** graphically display the intersection analysis results for the existing AM and PM peak hours, respectively.

**Table 3.10**
**Peak Hour Intersection Level of Service**
**Existing Conditions**

| No. | Intersection | AM Delay | AM LOS | PM Delay | PM LOS |
|---|---|---|---|---|---|
| 1 | Harbor Drive & Laurel Street | 19.9 | B | 52.9 | D |
| 2 | Hawthorn Street & Harbor Drive | 6.4 | A | 6.7 | A |
| 3 | Grape Street & Harbor Drive | 24.2 | C | 78.5 | E |
| 4 | Ash Street & Harbor Drive | 11.2 | B | 19.8 | B |
| 5 | Broadway & Harbor Drive | 5.7 | A | 12.4 | B |
| 6 | Harbor Drive & Pacific Highway | 2.6 | A | 6.1 | A |
| 7 | Harbor Drive & Kettner Boulevard | 8.1 | A | 7.4 | A |
| 8 | Harbor Drive & Market Street | 6.6 | A | 18.7 | B |
| 9 | Harbor Drive & Front St | 12.9 | B | 8.2 | A |
| 10 | Harbor Drive & First Avenue | 2.4 | A | 6.9 | A |
| 11 | Harbor Drive & Fifth Avenue | 4.8 | A | 6.4 | A |
| 12 | Eighth Avenue & Harbor Drive | 8.1 | A | 8.1 | A |
| 13 | Laurel Street & Pacific Highway | 23.6 | C | 50.6 | D |
| 14 | Hawthorn Street & Pacific Highway | 9.2 | A | 11.1 | B |
| 15 | Grape Street & Pacific Highway | 9.0 | A | 18.0 | B |
| 16 | Ash Street & Pacific Highway | 10.0 | A | 22.8 | C |
| 17 | Broadway & Pacific Highway | 7.2 | A | 12.7 | B |
| 18 | Laurel Street & Kettner Boulevard | 9.2 | A | 11.4 | B |
| 19 | Hawthorn Street & Kettner Boulevard | 3.3 | A | 5.3 | A |
| 20 | Grape Street & Kettner Boulevard | 6.4 | A | 18.2 | B |
| 21 | Ash Street & Kettner Boulevard | 7.7 | A | 7.6 | A |
| 22 | Broadway & Kettner Boulevard | 4.3 | A | 4.6 | A |
| 23 | G Street & Kettner Boulevard | 3.8 | A | 4.3 | A |
| 24 | Laurel Street & India Street | 14.5 | B | 13.2 | B |
| 25 | Hawthorn Street & India Street | 11.2 | B | 9.1 | A |
| 26 | Grape Street & India Street | 4.9 | A | 13.2 | B |
| 27 | Broadway & India Street | 5.3 | A | 7.0 | A |
| 28 | Broadway & Columbia Street | 6.9 | A | 5.7 | A |
| 29 | Broadway & State Street | 6.3 | A | 6.2 | A |
| 30 | G Street & State Street | 12.0 | B | 6.6 | A |
| 31 | Broadway & Union Street | 5.7 | A | 5.0 | A |
| 32 | Ash Street & Front Street | 8.5 | A | 5.6 | A |
| 33 | A Street & Front Street | 12.2 | B | 8.1 | A |
| 34 | Broadway & Front Street | 10.3 | B | 12.0 | B |
| 35 | E Street & Front Street | 2.0 | A | 2.1 | A |
| 36 | G Street & Front Street | 4.4 | A | 6.1 | A |
| 37 | Market Street & Front Street | 8.2 | A | 9.9 | A |
| 38 | Elm Street & First Avenue | 4.7 | A | Overflow | **F** |
| 39 | Ash Street & First Avenue | 10.6 | B | 9.1 | A |
| 40 | A Street & First Avenue | 5.4 | A | 7.2 | A |
| 41 | Broadway & First Avenue | 9.4 | A | 11.8 | B |
| 42 | E Street & First Avenue | 6.4 | A | 4.0 | A |
| 43 | F Street & First Avenue | 9.0 | A | 8.2 | A |
| 44 | G Street & First Avenue | 9.3 | A | 9.6 | A |

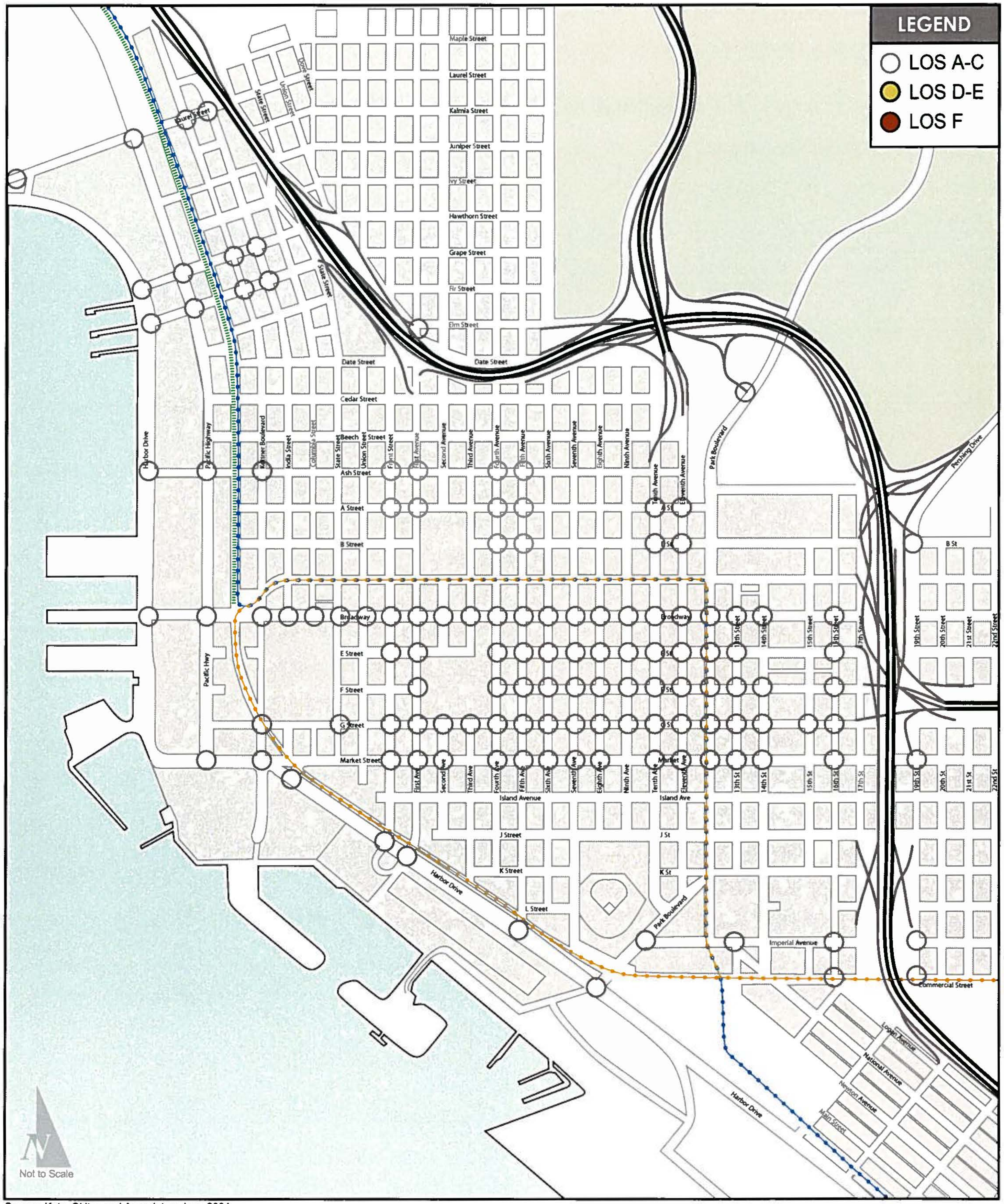
**Table 3.10 (continued)**
**Peak Hour Intersection Level of Service**
**Existing Conditions**

| No. | Intersection | AM Delay | AM LOS | PM Delay | PM LOS |
|---|---|---|---|---|---|
| 45 | Market Street & First Avenue | 3.4 | A | 5.3 | A |
| 46 | Broadway & Second Avenue | 4.8 | A | 9.3 | A |
| 47 | G Street & Second Avenue | 4.0 | A | 4.4 | A |
| 48 | Market Street & Second Avenue | 10.1 | B | 6.9 | A |
| 49 | Broadway & Third Street | 5.6 | A | 6.7 | A |
| 50 | G Street & Third Street | 4.3 | A | 3.6 | A |
| 51 | Ash Street & Fourth Avenue | 9.5 | A | 9.8 | A |
| 52 | A Street & Fourth Avenue | 5.4 | A | 18.2 | B |
| 53 | B Street & Fourth Avenue | 7.1 | A | 11.8 | B |
| 54 | Broadway & Fourth Avenue | 9.7 | A | 8.3 | A |
| 55 | E Street & Fourth Avenue | 6.8 | A | 36.9 | D |
| 56 | F Street & Fourth Avenue | 12.1 | B | 21.5 | C |
| 57 | G Street & Fourth Avenue | 8.3 | A | 3.7 | A |
| 58 | Market Street & Fourth Avenue | 2.1 | A | 3.7 | A |
| 59 | Ash Street & Fifth Avenue | 9.5 | A | 14.4 | B |
| 60 | A Street & Fifth Avenue | 10.6 | B | 12.5 | B |
| 61 | B Street & Fifth Avenue | 9.3 | A | 15.0 | B |
| 62 | Broadway & Fifth Avenue | 8.1 | A | 6.7 | A |
| 63 | E Street & Fifth Avenue | 11.6 | B | 5.4 | A |
| 64 | F Street & Fifth Avenue | 4.6 | A | 12.7 | B |
| 65 | G Street & Fifth Avenue | 8.2 | A | 9.3 | A |
| 66 | Market Street & Fifth Avenue | 5.8 | A | 5.5 | A |
| 67 | Broadway & Sixth Avenue | 0.2 | A | 0.0 | A |
| 68 | E Street & Sixth Avenue | 5.3 | A | 7.9 | A |
| 69 | F Street & Sixth Avenue | 2.0 | A | 3.6 | A |
| 70 | G Street & Sixth Avenue | 6.1 | A | 5.0 | A |
| 71 | Market Street & Sixth Avenue | 2.5 | A | 4.4 | A |
| 72 | Broadway & Seventh Avenue | 8.6 | A | 6.8 | A |
| 73 | E Street & Seventh Avenue | 15.0 | B | 8.3 | A |
| 74 | F Street & Seventh Avenue | 1.3 | A | 4.3 | A |
| 75 | G Street & Seventh Avenue | 5.3 | A | 5.1 | A |
| 76 | Market Street & Seventh Avenue | 3.2 | A | 5.3 | A |
| 77 | Broadway & Eighth Avenue | 6.8 | A | 6.1 | A |
| 78 | E Street & Eighth Avenue | 10.5 | B | 11.3 | B |
| 79 | F Street & Eighth Avenue | 3.0 | A | 6.1 | A |
| 80 | G Street & Eighth Avenue | 7.3 | A | 9.7 | A |
| 81 | Market Street & Eighth Avenue | 6.2 | A | 9.1 | A |
| 82 | Broadway & Ninth Avenue | 9.5 | A | 5.1 | A |
| 83 | E Street & Ninth Avenue | 10.6 | B | 6.0 | A |
| 84 | F Street & Ninth Avenue | 1.6 | A | 6.2 | A |
| 85 | G Street & Ninth Avenue | 4.3 | A | 2.1 | A |
| 86 | A Street & 10th Avenue | 11.9 | B | 30.4 | C |
| 87 | B Street & 10th Avenue | 5.2 | A | 18.7 | B |
| 88 | Broadway & 10th Avenue | 14.6 | B | 12.6 | B |
| 89 | E Street & 10th Avenue | 2.9 | A | 16.8 | B |

**Table 3.10 (continued)**
**Peak Hour Intersection Level of Service**
**Existing Conditions**

| No. | Intersection | AM Delay | AM LOS | PM Delay | PM LOS |
|---|---|---|---|---|---|
| 90 | F Street & 10th Avenue | 1.0 | A | 9.4 | A |
| 91 | G Street & 10th Avenue | 4.0 | A | 8.9 | A |
| 92 | Market Street & 10th Avenue | 3.5 | A | 4.2 | A |
| 93 | A Street & 11th Avenue | 8.5 | A | 10.6 | B |
| 94 | B Street & 11th Avenue | 12.0 | B | 13.3 | B |
| 95 | Broadway & 11th Avenue | 6.3 | A | 8.7 | A |
| 96 | E Street & 11th Avenue | 12.5 | B | 11.9 | B |
| 97 | F Street & 11th Avenue | 2.8 | A | 8.9 | A |
| 98 | G Street & 11th Avenue | 5.7 | A | 7.0 | A |
| 99 | Market Street & 11th Avenue | 8.2 | A | 10.3 | B |
| 100 | Park Boulevard & I-5 SB | 10.5 | B | 11.4 | B |
| 101 | Broadway & Park Boulevard | 7.1 | A | 5.9 | A |
| 102 | E Street & Park Boulevard | 8.9 | A | 5.8 | A |
| 103 | F Street & Park Boulevard | 4.5 | A | 4.9 | A |
| 104 | G Street & Park Boulevard | 17.4 | B | 25.9 | C |
| 105 | Market Street & Park Boulevard | 7.2 | A | 19.4 | B |
| 106 | Broadway & 13th Street | 7.0 | A | 6.5 | A |
| 107 | E Street & 13th Street | 17.6 | B | 22.0 | C |
| 108 | F Street & 13th Street | 2.2 | A | 2.4 | A |
| 109 | G Street & 13th Street | 2.9 | A | 5.0 | A |
| 110 | Market Street & 13th Street | 5.7 | A | 6.0 | A |
| 111 | Imperial Avenue & Park Boulevard | 7.1 | A | 6.9 | A |
| 112 | Broadway & 14th Street | 6.5 | A | 7.4 | A |
| 113 | F Street & 14th Street | 2.5 | A | 7.4 | A |
| 114 | G Street & 14th Street | 4.4 | A | 2.5 | A |
| 115 | Market Street & 14th Street | 7.0 | A | 9.4 | A |
| 116 | G Street & 15th Street | 4.0 | A | 3.6 | A |
| 117 | Broadway & 16th Street | 10.6 | B | 7.1 | A |
| 118 | E Street & 16th Street | 9.2 | A | 9.1 | A |
| 119 | F Street & 16th Street | 22.1 | C | 13.5 | B |
| 120 | G Street & 16th Street | 11.1 | B | 35.9 | D |
| 121 | Market Street & 16th Street | 10.1 | B | 11.4 | B |
| 122 | Imperial Avenue & 16th Street | 5.9 | A | 5.5 | A |
| 123 | Commercial Street & 16th Street | 6.1 | A | 6.6 | A |
| 124 | B Street & 19th Avenue | 6.4 | A | NA | NA |
| 125 | Market Street & 19th Street | 9.1 | A | Overflow | **F** |
| 126 | Imperial Avenue & 19th Street | 5.4 | A | 57.7 | E |
| 127 | Commercial Avenue & 19th Street | 7.1 | A | 7.8 | A |

Source: Katz, Okitsu & Associates, 2004




Source: Katz, Okitsu and Associates; June 2004

**Downtown Community Plan**

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Figure 3-8
AM Peak Hour
Intersection Level of Service Analysis
Existing Conditions

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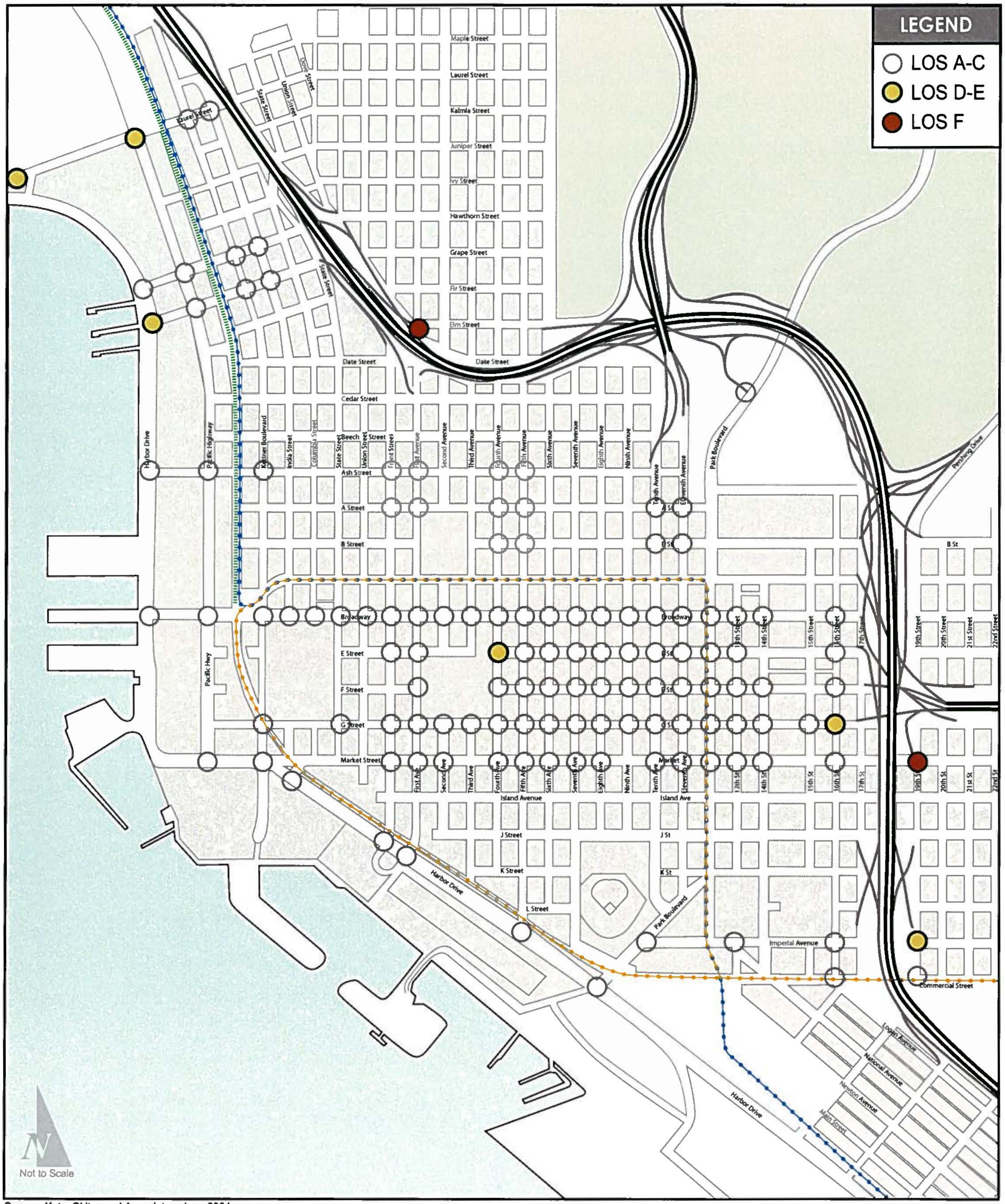


Source: Katz, Okitsu and Associates; June 2004

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Figure 3-9
PM Peak Hour
Intersection Level of Service Analysis
Existing Conditions

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As shown, all intersections are currently operating at LOS C or better during the AM peak hour. Three (3) intersections are currently operating at LOS F during the PM peak hour, as follows:

- Harbor Drive / Market Street
- Elm Street / First Avenue
- Market Street / 19th Street

These results indicate that the downtown grid roadway network and the existing system of one-way streets do a relatively good job of serving and distributing existing traffic flows. The SYNCHRO analyses revealed good signal progression along the major east-west and north-south travel corridors. Problems tend to occur at the interface with the freeway system, typically at on-ramp locations due to closely spaced intersections along with limited ramp capacity and outdated/substandard freeway ramp designs. This along with freeway congestion can make merge movements onto the freeway from the on-ramps difficult during peak travel periods.

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# 4.0 Downtown Community Plan Traffic Assessment

This chapter summarizes traffic analysis results associated with build-out of the proposed Downtown Community Plan land uses. Traffic analysis results, including travel demand characteristics and an assessment of Level of Service (LOS) on study area freeway segments, freeway ramps, and intersections are presented. A comparison with No Project (1992 MEIR) conditions is also provided.

## 4.1 Land Use and Travel Demand Characteristics

Total build-out land uses as included in the proposed Downtown Community Plan are presented in **Table 4.1**. As discussed in Chapter 2.2, the land uses represent a realistic development intensity for downtown buildout.

**Table 4.1**
**Proposed Downtown Community Plan**
**Build-out Land Uses**

| Land Use Type | Quantity |
|---|---|
| Residential (units) | 53,100 |
| Office (s.f) | 29,821,000 |
| Retail (s.f.) | 6,070,000 |
| Hotel Rooms | 20,000 |

Source: Downtown Community Plan, June 2005

**Table 4.2** displays daily person trips within (originating in and/or destined to) the downtown area, by residential and non-residential land use with build-out of the proposed Downtown Community Plan.

**Table 4.2**
**Proposed Downtown Community Plan**
**Daily Person Trips**

| Land Use | Person Trips |
|---|---|
| Residential | 479,780 |
| Non-Residential | 2,226,240 |
| **Total** | 2,706,020 |

Source: SANDAG, December 2004

As shown, 2.7 million person trips will be generated on a daily basis, an increase of 120% over existing conditions. Approximately 82% of the person trips are projected to be generated by non-residential land uses, a slightly lower percentage than existing conditions (85%).

**Table 4.3** summarizes the projected mode share of downtown trips under build-out of the proposed Downtown Community Plan.

**Table 4.3**
**Proposed Downtown Community Plan**
**Mode Share**

| | Trips | | Percent | |
|---|---|---|---|---|
| | Peak[2] | Daily | Peak[2] | Daily |
| SOV[1] | 421,640 | 1,207,230 | 45.9% | 44.6% |
| Carpool | 227,180 | 783,740 | 24.9% | 29.0% |
| Transit | 86,440 | 151,610 | 9.4% | 5.6% |
| Non-Motorized | 181,880 | 563,440 | 19.8% | 20.8% |
| Total | 919,140 | 2,706,020 | 100% | 100% |

Source: SANDAG, December 2004

Notes:
1. SOV = Single Occupant Vehicle
2. Peak = Peak Travel Period of 6:00am – 9:00am and 4:00pm – 7:00pm.

As shown, automobile modes (SOV and carpool) will continue to carry the largest share of total daily trips (approximately 74%), with transit serving 5.6% of daily trips, and over 20% of downtown trips served via non-motorized modes, including walk, bicycle, and pedicab.

**Table 4.4** displays daily and peak period vehicle trips under build-out of the proposed Downtown Community Plan. Vehicle trips are projected to increase approximately 112% over existing levels. Similar to existing conditions, approximately one-third of the daily vehicle trips are projected to occur during the peak periods.

**Table 4.4**
**Proposed Downtown Community Plan**
**Daily Vehicle Trips**

| | Vehicle Trips |
|---|---|
| Peak Periods | 513,740 |
| Daily | 1,546,470 |

Source: SANDAG, December 2004

**Table 4.5** displays vehicle-miles-traveled (VMT) on downtown surface streets under build-out of the proposed Downtown Community Plan. VMT levels on downtown streets are projected to increase by 125% over existing conditions. Approximately 35% of daily VMT on downtown surface streets is projected to occur during the peak periods, a slightly lower percentage than under existing conditions (40%).

**Table 4.5**
**Proposed Downtown Community Plan**
**Vehicle-Miles-Traveled (VMT) on Downtown Surface Streets**

| | Daily VMT |
|---|---|
| Peak Periods | 297,990 |
| Daily | 863,940 |

Source: SANDAG, December 2004

## 4.2 Downtown Internal vs. External Trip Making

The proportion of internal downtown work trips (both originating in and destined to the downtown) was reviewed under build-out Downtown Community Plan conditions as a measure of downtown job/housing balance. Generally, the higher the proportion of internal trips, the less the potential for impacts on the regional freeway system and other transportation facilities. As shown below in **Table 4.6**, the proportion of internal downtown work trips would increase from just over 5% under existing conditions to approximately 15% under build-out of the proposed Downtown Community Plan.

**Table 4.6**
**Downtown Internal Work Trips**

| | Existing | | Proposed Plan | |
|---|---|---|---|---|
| Work Trips | No. | Percent | No. | Percent |
| **Internal** | 7,050 | 5.3% | 38,100 | 14.4% |
| **External** | 125,600 | 94.7% | 227,700 | 85.6% |
| **Total** | 132,650 | 100.0% | 265,800 | 100.0% |

Source: SANDAG, December 2004

## 4.3 Community Plan Roadway Network Characteristics

This section describes the future year roadway system as specified by the proposed Downtown Community Plan.

### Proposed Roadway Classifications

A roadway classification scheme was developed as part of the proposed Downtown Community Plan. These roadway classifications are not currently depicted in the City of San Diego's street design manual, but are considered important for the implementation of the overall planning vision for the downtown area.

As detailed in the proposed Downtown Community Plan, the following roadway classifications were assigned to downtown roadways:

- **Boulevards** – Broad roadways that accommodate pedestrians and vehicular traffic and provide access to commercial uses. Traffic volumes are typically high, but speeds are moderate.

- **Green Streets** – Streets that link parks and other downtown amenities, and connect neighborhoods to the waterfront and Balboa Park. These streets typically include enhanced landscaping, including double rows of trees and expanded sidewalk widths, and provide for vehicular and transit access.

- **Residential Streets** – Streets that traverse neighborhoods and have residential orientation, with maximized on-street parking, including diagonal parking where feasible.

- **Main Streets** – Serve Neighborhood Centers and other major activity zones. Typically lined with commercial activity.

- **Multi-Function Streets** – Serves a variety of purposes, not falling within any of the other classifications.

**Figure 4-1** displays the downtown roadway classifications under the proposed Downtown Community Plan.

### Proposed Roadway Network Modifications

To support the proposed street classification system, several improvements and modifications to the existing downtown roadway network have been identified in conjunction with the proposed Downtown Community Plan, as listed in **Table 4.7** and displayed in **Figure 4-2**.

Some of the more significant street modifications proposed by the Downtown Community Plan include the following:

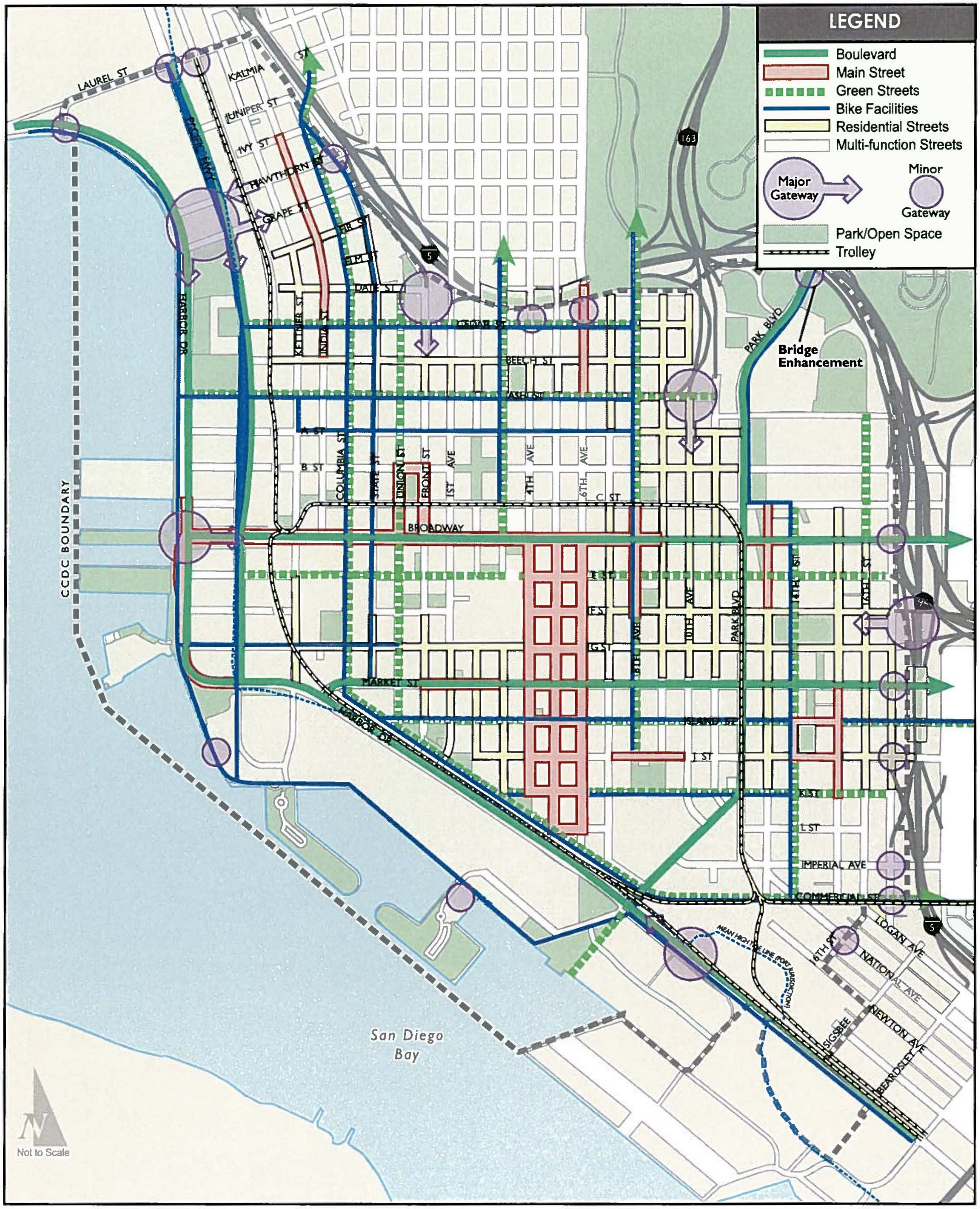
- Closure of the southbound I-5 off-ramp to Cedar Street and conversion of Cedar Street to 2-way traffic from Front Street to Fifth Avenue.

- Conversion of Columbia Street from 3-lanes to 2-lanes during off-peak travel periods.

- Closure of C Street between Columbia Street and Park Boulevard for purposes of implementing a transit-only facility. This along with the desire by SANDAG and MTS to extend the length of the Trolley platforms on C Street could potentially result in closure of both Second Avenue and Seventh Avenue at C Street. These street closures were analyzed as worst-case assumptions and will require further study. It is recognized that other options for accommodating 4-car trains through the downtown may exist, including closure of Trolley stations along C Street.

- Conversion of Sixth Avenue from one-way southbound (3-lanes) to 2-way (one lane each direction) from Elm Street to Ash Street.

- Conversion of Seventh Avenue, between Beech Street and B Street, from 3-lanes to 2-lanes (one-way northbound).




Downtown Community Plan

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Figure 4-1
Proposed Plan Roadway Classifications

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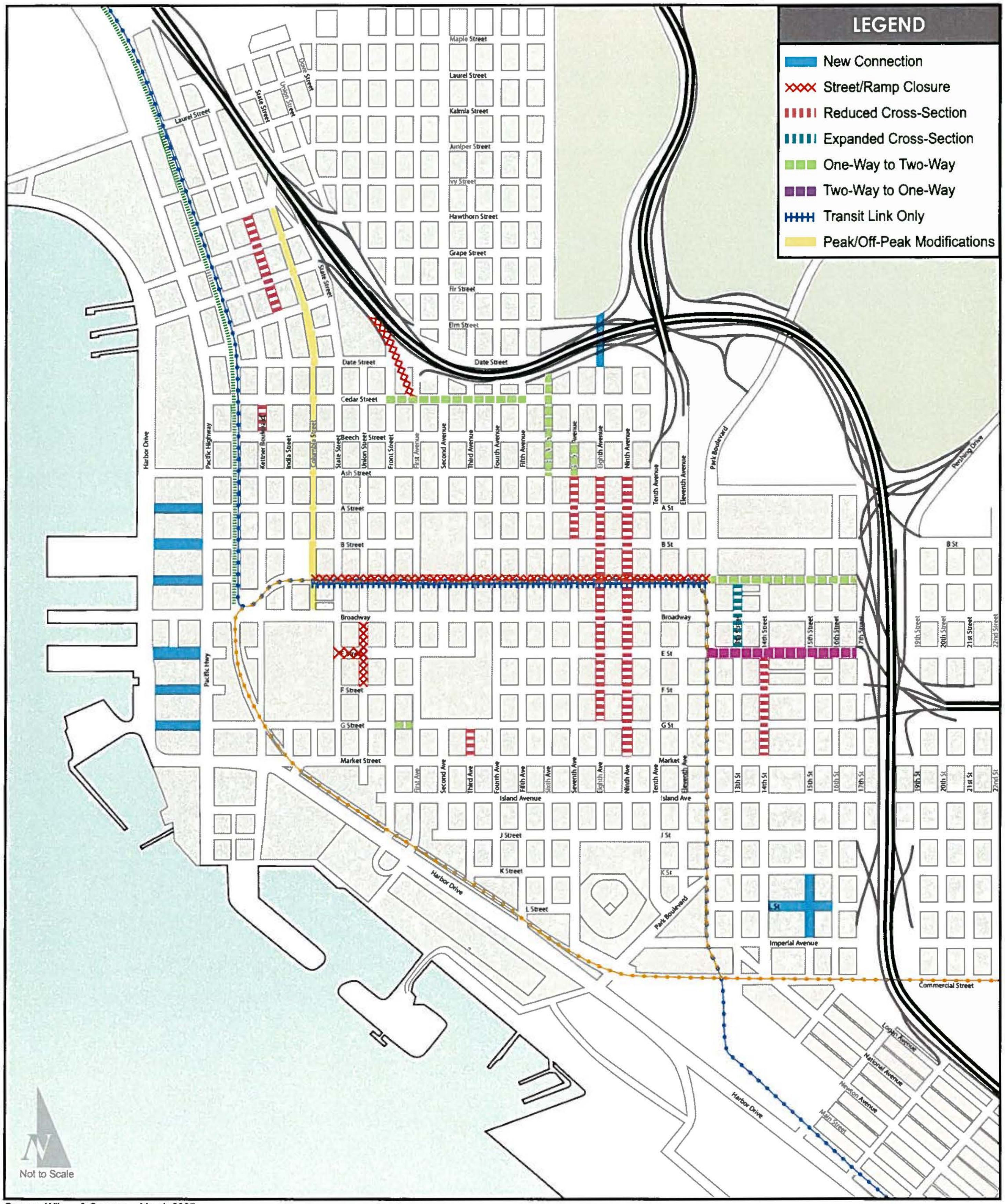


Source: Wilson & Company; March 2005

**Downtown Community Plan**

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Figure 4-2
Proposed Community Plan
Roadway Network Modifications

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Table 4.7
**Downtown Community Plan**
**Proposed Roadway Network Modifications**

| Roadway | Segment | Existing Network | Proposed Plan Network | Purpose / Objectives |
|---|---|---|---|---|
| Cedar Street | Front St to Fifth Ave | Mostly one-way, 2 and 3 lanes; with one two-way, 3-lane section (Eastbound) | two-way, 2 lanes and removal of the off-ramp from I-5 | • accommodate green street section<br>• enhance connectivity in green street network<br>• traffic calming<br>• requires removal of the I-5 off-ramp to Cedar St |
| A Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| B Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| C Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| | Columbia St to Park Blvd | various: two-way, 2-lane; closed; one-way, 1-lane; one-way, 2-lane | Transit link only | • create consistency<br>• closed to vehicular traffic<br>• accommodate trolley, BRT, and/or downtown shuttles<br>• complement westbound one-way traffic on B Street |
| | Park Blvd to I-5 | one-way, 3-lane (Eastbound) | two-way, 2-lane | • increase access around City College<br>• traffic calming in College neighborhood, and north end of 13th Street neighborhood center<br>• accommodate streetscape improvements |
| E Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| | State St to Union St | two-way, 2-lane | closed | • per Federal Courts expansion |
| | Park Blvd to I-5 | various: one-way, 2-lane; two-way, 4-lane; two-way, 2-lane; one-way, 1-lane | one-way, 3-lane (Eastbound) | • create consistency with western portion of street<br>• complement F/G couplet, to carry increased amounts of traffic |
| F Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| G Street | Harbor Dr to Pacific Highway | closed | two-way, 2-lane | • improve connectivity to waterfront |
| | Front St to First Ave | one-way, 3-lanes (Eastbound) | two-way, 3-lane | • create consistency with western portion of street |
| L Street | 14th St to 16th St | closed | two-way, 2-lane | • improve connectivity in Bayside<br>• create finer-grained street grid |
| Kettner Street | Cedar St to Beech St | one-way, 3-lane (Southbound) | one-way, 2-lane | • accommodate residential street section<br>• traffic calming<br>• consistent with adjacent residential segment of KettnerSt, from Fir St to Cedar St |

**Table 4.7 (continued)**
**Downtown Community Plan**
**Proposed Roadway Network Modifications**

| Roadway | Segment | Existing Network | Proposed Plan Network | Purpose / Objectives |
|---|---|---|---|---|
| India Street | Ivy St to Fir St | one-way, 3-lane (Northbound) | one-way, 2-lane | • accommodate neighborhood center section<br>• traffic calming consistent with adjacent neighborhood<br>• center segment of India St, from Fir St to Beech St |
| Columbia Street | Ivy St to Broadway | one-way, 3-lane (Southbound) | 2-lane off-peak/3-lane peak | • accommodate green street section<br>• off-peak traffic calming<br>• accommodate bikeway |
| Union | Broadway to F St | one-way, 2-Lanes (Northbound) | closed | • per Federal Courts expansion |
| Second Avenue | Broadway to C St | Two-way, 2-lane | Closed at C St. | • Extension of Civic Center Trolley Station to accommodate 4-car trains. |
| Third Avenue | G St to Market St | two-way, 3-lane | two-way, 2-lane | • accommodate diagonal parking<br>• accommodate residential street section<br>• traffic calming<br>• consistent with two-way 2-lane traffic from Market St to K St |
| Sixth Avenue | I-5 to Ash St | one-way, 3-lane (Southbound) | two-way, 2-lane | • I-5 NB off-ramp at Sixth Ave currently provides free left-trun onto Sixth Ave; signal would have to be reconfigured<br>• accommodate neighborhood center street section<br>• traffic calming<br>• consistent with traffic north of I-5<br>• provide retail-boosting north-bound turns from Ash St |
| Seventh Avenue | Beech St to Ash St | one-way, 3-lane (Northbound) | two-way, 2 lane | • Consistency with surrounding network |
| | Ash St to B St | one-way, 3-lane (Northbound) | one-way, 2-lane | • Accommodate residential street section<br>• traffic calming<br>• consistent with lanes on residential blocks from Date St to Beech St |
| | B St. to Broadway | One-way, 3-lane (Northbound) | Closed at C St. | • Accommodate 4-car Trolleys. |
| Eighth Avenue | Ash St to Broadway | one-way, 3-lane (Southbound) | one-way, 2-lane | • accommodate green street section<br>• accommodate bikeway<br>• accommodate neighborhood center section<br>• consistent with segment from Date St to Ash St<br>• traffic calming<br>• improve connectivity from A St and B St |
| | Broadway to G St | one-way, 3-lane (Southbound | one-way, 2-lane | • accommodate green street section<br>• accommodate bikeway<br>• accommodate neighborhood center section<br>• consistent with lanes from Date St to Ash St<br>• traffic calming |
| | Date to Elm | Closed | Two-way, 2 lane | • New Connection to Balboa Park/I-5 Lid |

**Table 4.7 (continued)**
**Downtown Community Plan**
**Proposed Roadway Network Modifications**

| Roadway | Segment | Existing Network | Proposed Plan Network | Purpose / Objectives |
|---|---|---|---|---|
| Ninth Avenue | Ash St to Market St | one-way, 3-lane (Northbound) | one-way, 2-lane | • accommodate residential street section<br>• consistent with lanes from Date St to AshSt<br>• traffic calming |
| 13th Street | C St to E St | two-way, 2-lane | two-way, 3-lane | • per Park-to-Bay Link |
| 14th Street | E St to Market St | two-way, 3-lane | two-way, 2-lane | • accommodate green street section<br>• accommodate bikeway<br>• consistent with configuration from C St to E St; Market St to Imperial Ave<br>• traffic calming |
| 15th Street | K St to Imperial Ave | closed | two-way, 2-lane | • improve connectivity in Bayside<br>• create finer-grained street grid |
| new grid | South of Harbor Dr, between Pacific Highway and Kettner St | none | grid of two-way, 2-lane streets extending to waterfront | • improve connectivity to waterfront<br>• create access to redevelopment in police headquarters area |

Source: CCDC; *Draft Downtown Community Plan*, 2004

- Extension of Eighth Avenue north across I-5 and linking with Balboa Park. To the south, Eighth Avenue would be converted from 3-lanes to 2-lanes (one-way southbound) between Ash Street and G Street.
- Conversion of Ninth Avenue, between Ash Street and Market Street, from 3-lanes to 2-lanes (one-way northbound).

## 4.4 Proposed Community Plan Daily Traffic Volumes

**Tables 4.8A** and **4.8B** display forecast traffic volume screenlines for east-west and north-south roadways, respectively with build-out of the proposed Downtown Community Plan. A comparison with existing screenline volumes is also provided.

As shown, compared with existing conditions, overall east-west movements increase by over 85% under build-out of the proposed Downtown Community Plan. Similarly, total north-south traffic movements under the proposed Downtown Community Plan are projected to increase by approximately 60% over existing conditions.

**Table 4.8A**
**Proposed Downtown Community Plan**
**Summary of East-West Screenline Volumes**

| | Roadway | Segment | Existing | Proposed Plan |
|---|---|---|---|---|
| 1a | Laurel St | Harbor Dr to Pacific Hwy | 31,020 | 54,960 |
| 1b | Hawthorn St | Columbia St to State St | 25,220 | 41,940 |
| 1c | Grape St | Columbia St to State St | 28,300 | 51,820 |
| | | **Sub-Total** | **84,540** | **148,720** |
| 2a | Ash St | Sixth Ave to Seventh Ave | 10,150 | 14,210 |
| 2b | A St | Sixth Ave to Seventh Ave | 14,010 | 20,160 |
| 2c | B St | Sixth Ave to Seventh Ave | 11,070 | 19,900 |
| | | **Sub-Total** | **35,230** | **54,270** |
| 3a | C St | 15th St to 16th St | 10,660 | 12,480 |
| 3b | Broadway | 15th St to 16th St | 8,250 | 9,680 |
| 3c | E St | 15th St to 16th St | 4,860 | 6,240 |
| 3d | F St | 15th St to 16th St | 16,840 | 31,370 |
| 3e | G St | 15th St to 16th St | 16,950 | 32,960 |
| 3f | Market St | 15th St to 16th St | 13,520 | 19,500 |
| 3g | Island Ave | 15th St to 16th St | 2,810 | 17,600 |
| 3h | J St | 15th St to 16th St | 2,930 | 12,340 |
| 3i | K St | 15th St to 16th St | 1,420 | 3,780 |
| 3j | Imperial Ave | 15th St to 16th St | 5,000 | 12,130 |
| 3k | Commercial Ave | 15th St to 16th St | 1,040 | 5,130 |
| 3l | National Ave | Commercial Ave to 16th St | 2,750 | 17,730 |
| | | **Sub-Total** | **87,030** | **180,940** |
| **TOTAL (East-West)** | | | **206,800** | **383,930** |

Source: SANDAG; Wilson & Company, April 2005

**Table 4.8B**
**Proposed Downtown Community Plan**
**Summary of North-South Screenline Volumes**

| | Roadway | Segment | Existing | Preferred Plan |
|---|---|---|---|---|
| 1a | N. Harbor | Cedar St to Beech St | 47,850 | 35,270 |
| 1b | Pacific Hwy | Cedar St to Beech St | 12,360 | 42,180 |
| 1c | Kettner Blvd | Cedar St to Beech St | 6,570 | 13,370 |
| 1d | India St | Cedar St to Beech St | 4,230 | 8,770 |
| 1e | State St | Cedar St to Beech St | 4,480 | 8,620 |
| 1f | First Ave | Cedar St to Beech St | 22,370 | 30,320 |
| 1g | Second Ave | Cedar St to Beech St | 4,170 | 7,400 |
| 1h | Third Ave | Cedar St to Beech St | 2,670 | 5,180 |
| 1i | Fourth Ave | Cedar St to Beech St | 14,690 | 21,400 |
| 1j | Fifth Ave | Cedar St to Beech St | 13,130 | 24,450 |
| 1k | Sixth Ave | Cedar St to Beech St | 12,350 | 18,980 |
| | | **Sub-Total** | **144,870** | **215,940** |
| 2a | Seventh | A St to B St | 5,910 | 8,150 |
| 2b | Eighth Ave | A St to B St | 4,420 | 23,150 |
| 2c | Ninth Ave | A St to B St | 3,880 | 17,430 |
| 2d | 10th Ave | A St to B St | 17,010 | 21,640 |
| 2e | 11th Ave | A St to B St | 14,140 | 18,860 |
| 2f | 12th Ave | A St to B St | 19,090 | 25,930 |
| 2g | 16th St | Broadway to E St | 10,400 | 16,280 |
| | | **Sub-Total** | **74,850** | **131,440** |
| **TOTAL (North-South)** | | | **219,720** | **347,380** |

Source: SANDAG; Wilson & Company, April 2005

## 4.5 Downtown Community Plan Traffic Operations

This section summarizes freeway segment, freeway ramp, and intersection Level of Service (LOS) analysis results under build-out of the proposed Downtown Community Plan.

### Freeway Segment Performance

Consistent with the SANDAG RTP *Revenue Constrained* scenario, no new freeway improvements were assumed for the freeway segments serving the downtown study area.

**Table 4.9** displays peak hour LOS analysis results for study area freeways segments under build-out of the proposed Downtown Community Plan.

As shown, freeway segment traffic volumes on I-5 would range from a low of 249,600 (north of SR-75) to a high of 308,400 (north of Sixth Avenue) under proposed Downtown Community Plan build-out conditions. Volumes on SR-163, just north of downtown

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**Table 4.9**
**Proposed Downtown Community Plan**
**Peak Hour Freeway Segment Level of Service**

| Facility | Segment From | Segment To | Daily ADT | Peak Hour % AM | Peak Hour % PM | Direction | Lanes | Peak Hour Capacity | Direction Split AM | Direction Split PM | Truck Factor | Peak Hour Volume AM | Peak Hour Volume PM | V/C AM | V/C PM | LOS AM | LOS PM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I-5 | SR-75 | J St | 249,600 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 11,443 | 8,444 | 1.24 | 0.92 | F | D |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 6,895 | 10,404 | 0.75 | 1.13 | C | F |
| | J St | SR-94 | 248,000 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 11,370 | 8,389 | 1.24 | 0.91 | F | D |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 6,851 | 10,337 | 0.74 | 1.12 | C | F |
| | SR-94 | Pershing Dr | 265,000 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 12,149 | 8,965 | 1.17 | 0.86 | F | D |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 7,320 | 11,046 | 0.92 | 1.38 | D | F |
| | Pershing Dr | SR-163 | 295,700 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 13,556 | 10,003 | 1.30 | 0.96 | F | E |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 8,169 | 12,325 | 1.02 | 1.54 | F | F |
| | SR-163 | Sixth Ave | 291,000 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.979 | 13,354 | 9,854 | 1.28 | 0.95 | F | E |
| | | | | | | SB | 4L, 2A | 10,400 | 0.376 | 0.552 | 0.979 | 8,047 | 12,142 | 0.77 | 1.17 | C | F |
| | Sixth Ave | First Ave | 308,400 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 11,703 | 11,889 | 1.27 | 1.29 | F | F |
| | | | | | | SB | 5L, 1A | 11,200 | 0.484 | 0.49 | 0.979 | 10,978 | 11,422 | 0.98 | 1.02 | E | F |
| | First Ave | Hawthorne St | 254,600 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 9,662 | 9,815 | 1.05 | 1.07 | F | F |
| | | | | | | SB | 4L, 0A | 8,000 | 0.484 | 0.49 | 0.979 | 9,063 | 9,430 | 1.13 | 1.18 | F | F |
| SR-163 | I-5 | Washington St | 131,100 | 0.068 | 0.077 | NB | 2L, 0A | 4,000 | 0.311 | 0.665 | 0.985 | 2,815 | 6,815 | 0.70 | 1.70 | C | F |
| | | | | | | SB | 2L, 0A | 4,000 | 0.689 | 0.335 | 0.985 | 6,236 | 3,433 | 1.56 | 0.86 | F | D |
| SR-94 | 17th St | 28th St | 153,600 | 0.073 | 0.084 | NB | 4L, 0A | 8,000 | 0.192 | 0.713 | 0.982 | 2,192 | 9,368 | 0.27 | 1.17 | A | F |
| | | | | | | SB | 4L, 0A | 8,000 | 0.808 | 0.287 | 0.982 | 9,226 | 3,771 | 1.15 | 0.47 | F | B |

Source: SANDAG; Wilson & Company; March, 2005

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would increase to 120,000 ADT, while volumes on SR-94, just east of downtown, would increase to 146,000 ADT.

Due to these forecast high traffic volumes, all freeway segments in the downtown study area are projected to operate at substandard LOS F under build-out of the Downtown Community Plan during either the AM and/or PM peak hours, as follows:

- I-5: SR-75 to J Street (NB – AM peak hour / SB – PM peak hour)
- I-5: J Street to SR-94 (NB – AM peak hour / SB – PM peak hour)
- I-5: SR-94 to Pershing Dr (NB – AM peak hour / SB – PM peak hour)
- I-5: Pershing Dr to SR-163 (NB – AM peak hour / SB – AM and PM peak hours)
- I-5: SR-163 to Sixth Avenue (NB – AM peak hour / SB – PM peak hour)
- I-5: Sixth Avenue to First Avenue (NB – PM peak hours / SB – PM peak hour)
- I-5: First Avenue to Hawthorn Street (NB – PM peak hour / SB – AM peak hour)
- SR-163: I-5 to Washington St (NB – AM and PM peak hours / SB – AM and PM peak hours)
- SR-94: 17th St to 28th St (EB – PM peak hour / WB – AM peak hour)

The following freeway segments, operating at substandard LOS F under build-out of the Downtown Community Plan, represent direct project-related significant impacts:

- I-5: SR-75 to J Street (NB – AM peak hour / SB – PM peak hour)
- I-5: J Street to SR-94 (NB – AM peak hour / SB – PM peak hour)
- I-5: SR-94 to Pershing Dr (NB – AM peak hour)
- I-5: Pershing Dr to SR-163 (NB – AM peak hour / SB – AM peak hour)
- I-5: SR-163 to Sixth Avenue (NB – AM peak hour / SB – PM peak hour)
- I-5: Sixth Avenue to First Avenue (NB – PM peak hours / SB – PM peak hour)
- I-5: First Avenue to Hawthorn Street (NB – PM peak hour / SB – AM peak hour)
- SR-163: I-5 to Washington St (NB – AM peak hour / SB –PM peak hour)
- SR-94: 17th St to 28th St (EB – PM peak hour / WB – AM peak hour)

The following freeway segments, operating at substandard LOS F under build-out of the Downtown Community Plan, represent cumulatively significant impacts:

- I-5: SR-94 to Pershing Dr (SB – PM peak hour)
- I-5: Pershing Dr to SR-163 (SB – PM peak hour)

- SR-163: I-5 to Washington St. (NB – PM peak hour / SB – AM peak hour)

### Freeway Ramp Performance

Consistent with the SANDAG RTP *Revenue Constrained* scenario, no new freeway ramp improvements were assumed along the freeway system serving the downtown study area. Note that the southbound I-5 off-ramps to Cedar Street was assumed to be closed as proposed by the draft Downtown Community Plan.

**Table 4.10** displays freeway ramp LOS analysis results for downtown study area on-ramps and off-ramps. As shown, the following **on-ramps** would operate at substandard LOS F under build-out of the proposed Downtown Community Plan during the AM and/or PM peak hours:

- I-5 NB On-Ramp @ 19th Street (PM peak hour)
- I-5 NB On-Ramp @ B Street (AM and PM peak hours)
- I-5 NB On-Ramp @ 11th Avenue (AM and PM peak hours)
- I-5 NB On-Ramp @ First Street (AM and PM peak hours)
- I-5 SB On-Ramp @ Grape Street (AM and PM peak hours)
- I-5 SB On-Ramp @ Fifth Avenue (PM peak hour)
- SR-94 EB On-Ramp @ G Street (PM peak hour)
- SR-94 EB On-Ramp @ 19th Street (AM and PM peak hours)

The following freeway on-ramps, operating at substandard LOS F under build-out of the Downtown Community Plan, represent direct project-related significant impacts:

- I-5 NB On-Ramp @ 19th Street (PM peak hour)
- I-5 NB On-Ramp @ B Street (PM peak hour)
- I-5 NB On-Ramp @ First Street (AM peak hour)
- I-5 SB On-Ramp @ Grape Street (AM peak hour)
- I-5 SB On-Ramp @ Fifth Avenue (PM peak hour)
- SR-94 EB On-Ramp @ G Street (PM peak hour)
- SR-94 EB On-Ramp @ 19th Street (AM and PM peak hours)

The following freeway on-ramps, operating at substandard LOS F under build-out of the Downtown Community Plan, represent cumulatively significant impacts:

- I-5 NB On-Ramp @ B Street (AM peak hour)
- I-5 NB On-Ramp @ 11th Avenue (AM and PM peak hours)
- I-5 NB On-Ramp @ First Street (PM peak hour)
- I-5 SB On-Ramp @ Grape Street (PM peak hour)

Table 4.10
Proposed Downtown Community Plan
Peak Hour Freeway Ramp Level of Service

| | From | To | Peak Hour Ramp Volume AM | Peak Hour Ramp Volume PM | Lanes | Peak Hour Capacity Per Lane | V/C AM | V/C PM | LOS AM | LOS PM |
|---|---|---|---|---|---|---|---|---|---|---|
| NB On-Ramps | 19th Street | NB I-5 | 900 | 1,290 | 1 | 1,200 | 0.75 | 1.08 | C | F |
| | B Street | NB I-5 | 1,670 | 1,700 | 1 | 1,200 | 1.39 | 1.42 | F | F |
| | 11th Ave | NB I-5 / NB SR-163 | 4,640 | 4,230 | 2 | 2,400 | 1.93 | 1.76 | F | F |
| | First Avenue | NB I-5 | 3,160 | 3,100 | 1 | 1,200 | 2.63 | 2.58 | F | F |
| SB On-Ramps | Grape Street | SB I-5 | 2,000 | 4,070 | 1 | 1,200 | 1.67 | 3.39 | F | F |
| | First Avenue | SB I-5 | 1,200 | 1,600 | 1 | 1,200 | 1.00 | 1.33 | E | F |
| | Fifth Avenue | SB I-5 | 700 | 1,600 | 1 | 1,200 | 0.58 | 1.33 | B | F |
| | Park Boulevard | SB I-5 | 560 | 950 | 1 | 1,200 | 0.47 | 0.79 | B | C |
| SB On-Ramps | C St | SB I-5 | 960 | 1,020 | 1 | 1,200 | 0.80 | 0.85 | C | D |
| | E Street | SB I-5 | 920 | 1,030 | 1 | 1,200 | 0.77 | 0.89 | C | D |
| | J Street | SB I-5 | 920 | 700 | 1 | 1,200 | 0.77 | 0.58 | C | B |
| EB On-Ramps | G St | EB SR-94 | 1,060 | 4,000 | 3 | 3,600 | 0.29 | 1.11 | A | F |
| | 19th St | EB SR-94 | 1,220 | 2,720 | 1 | 1,200 | 1.02 | 2.27 | F | F |
| NB Off-Ramps | NB I-5 | J Street | 1,100 | 2,970 | 1 | 1,200 | 0.92 | 2.48 | D | F |
| | NB I-5 | B Street | 1,330 | 1,200 | 1 | 1,200 | 0.55 | 1.00 | B | E |
| | NB I-5 | Sixth Avenue | 2,190 | 2,400 | 2 | 2,400 | 0.91 | 1.00 | D | E |
| SB Off-Ramps | SB I-5 | Cedar Street[1] | na | na | na | na | na | na | na | na |
| | SB I-5 | Front Street | 4,260 | 2,320 | 2 | 2,400 | 1.78 | 0.97 | F | E |
| | SB I-5/SB SR-163 | 10th Ave | 3,490 | 3,480 | 3 | 3,600 | 0.97 | 0.97 | E | E |
| | SB I-5 | B Street | 970 | 550 | 1 | 1,200 | 0.81 | 0.46 | C | B |
| | SB I-5 | 17th Street | 1,080 | 1,070 | 1 | 1,200 | 0.90 | 0.89 | D | D |
| | SR-163 | Fourth Ave | 1,250 | 1,100 | 1 | 1,200 | 1.04 | 0.92 | F | D |
| | SR-163 | Ash St | 2,290 | 2,200 | 2 | 2,400 | 0.95 | 0.92 | E | D |
| | SR-163 | Park Blvd | 790 | 500 | 1 | 1,200 | 0.66 | 0.42 | C | B |
| WB Off Ramps | SR-94 | F St | 4100 | 2900 | 3 | 3,600 | 1.14 | 0.81 | F | D |

Source: SANDAG, 2005; Wilson & Company

Notes:
1 The analysis assumed that the Cedar Street off-ramp would be closed.

The following **off-ramps** would operate at substandard LOS F under build-out of the proposed Downtown Community Plan during the AM and/or PM peak hours:

- I-5 SB Off-Ramp @ Front Street (AM peak hour)
- I-5 SB/SR-163 Off-Ramps @ 10th Avenue (AM peak hour)
- I-5 NB Off-Ramp @ J Street (PM peak hour)
- I-5 NB Off-Ramp@ B Street (AM peak hour)
- SR-163 SB Off-Ramp @ Fourth Avenue (AM peak hour)
- SR-94 WB Off-Ramp @ F Street (AM peak hour).

All of the above freeway ramps, operating at substandard LOS F under build-out of the proposed Downtown Community Plan, represent direct project-related significant impacts.

**Figures 4-3** and **4-4** display freeway segments and ramps, respectively, which are projected to operate at substandard LOS F under build-out of the proposed Downtown Community Plan.

## Closure of Cedar Street Off-Ramp

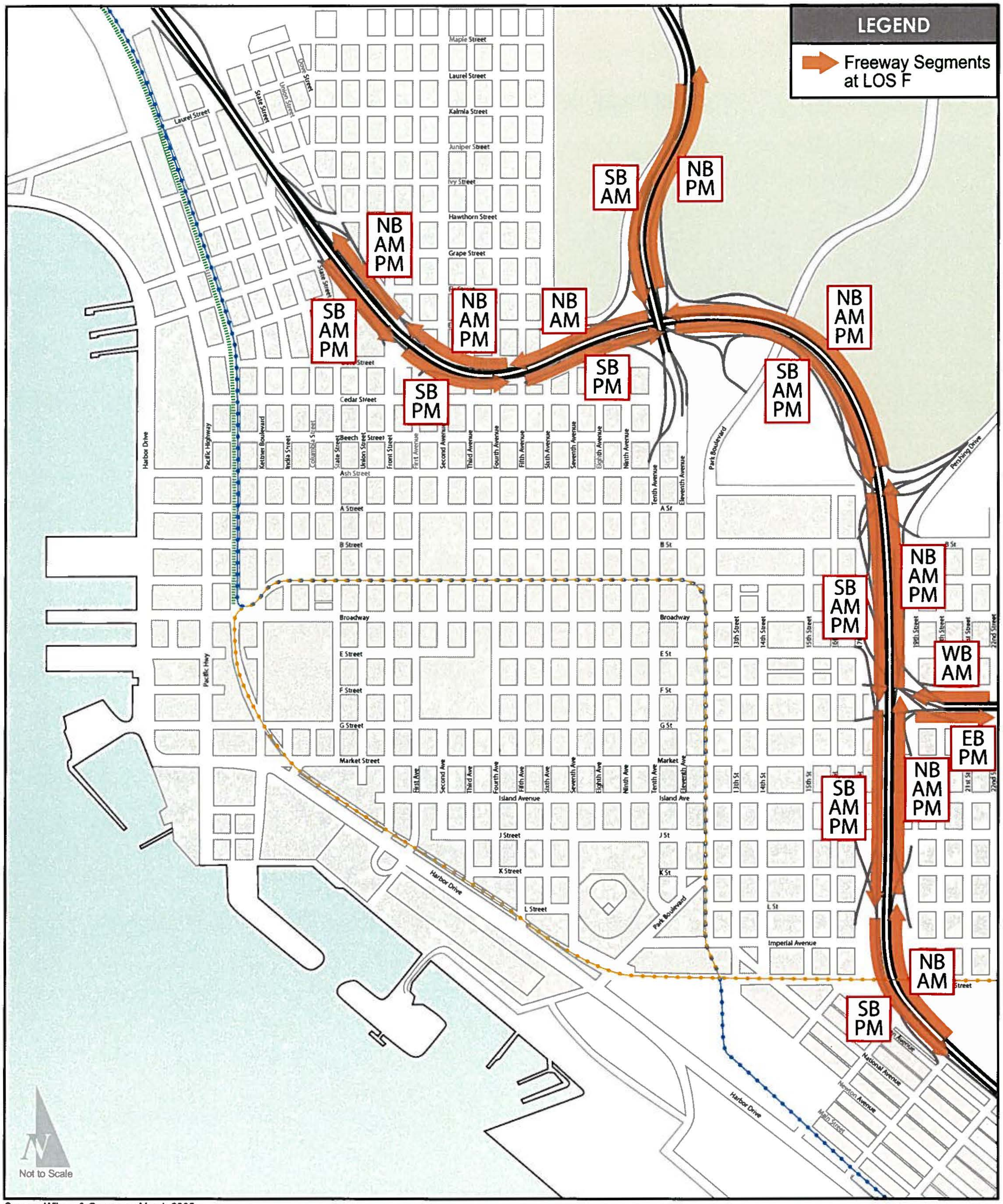
As noted, one of the street modifications proposed by the Downtown Community Plan is the closure of the southbound I-5 off-ramp to Cedar Street and conversion of Cedar Street to 2-way traffic. This ramp is currently operating a LOS F. Closure of the Cedar Street I-5 freeway off-ramp will cause an overall increase in traffic on other off-ramps serving the downtown area, particularly the off-ramp at Front Street and Tenth Avenue. Since a number of these ramps as projected to operate at substandard LOS F under build-out of proposed Downtown Community Plan, and since the closure of the Cedar Street off-ramp will cause additional use of these identified substandard ramps, the closure of the Cedar Street off-ramp from southbound I-5 is also identified as a direct project-related significant impact.

## Analysis of Metered On-Ramps

Consistent with Caltrans policies and directions, it was assumed that all downtown freeway on-ramps would be metered under future build-out conditions. **Table 4.11** displays the results of the analysis of the metered freeway on-ramps under build-out of the proposed Downtown Community Plan. Estimated delays at the freeway on-ramps were categorized as follows:

- <15 minutes of delay
- >15 and <25
- >25 minutes

All delays greater than 15 minutes were identified as significant with the potential for traffic queuing and impacts to adjacent intersection and roadway traffic operations.




Source: Wilson & Company; March 2005

Downtown Community Plan

WILSON & COMPANY EIR Transportation, Circulation, and Access Study

Figure 4-3
Freeway Segments at LOS F
Build-out of Proposed Downtown Community Plan

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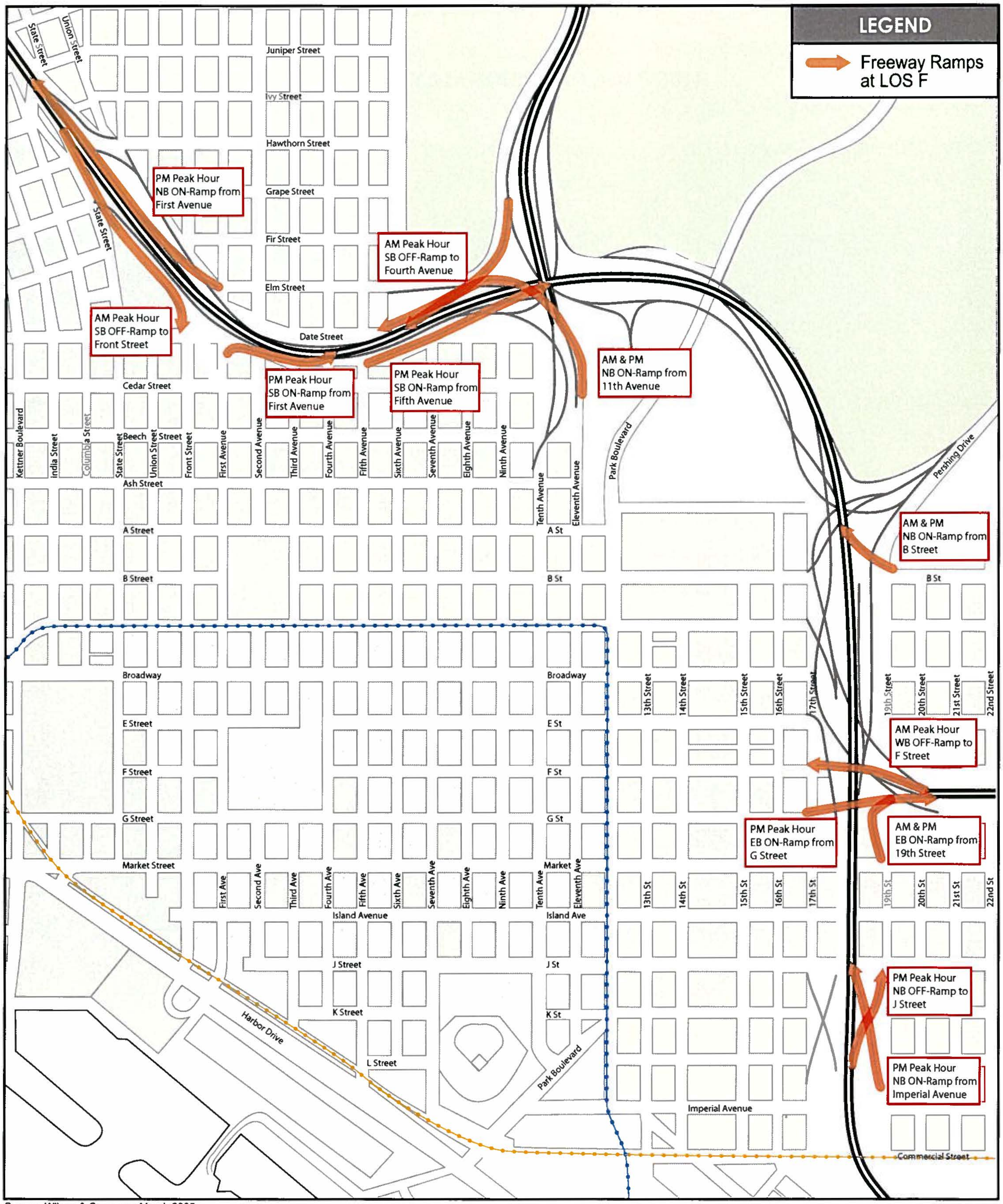


Source: Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY

EIR Transportation, Circulation, and Access Study

Figure 4-4
Freeway Ramps at LOS F
Build-out of Proposed Downtown Community Plan

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**Table 4.11**
**Proposed Downtown Community Plan**
**Metered Freeway On-Ramp Analysis**

| | | | Metering Rates[1] | | Peak Hour Ramp Volume | | Excess Demand | | Delay (Mintues) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | From | To | AM | PM | AM | PM | AM | PM | AM | PM |
| Freeway On-Ramp | 19th Street | NB I-5 | 750 | 750 | 900 | 1,290 | 150 | 540 | <15 | >25 |
| | B Street | NB I-5 | 1,420 | 750 | 1,670 | 1,700 | 250 | 950 | <15 | >25 |
| | 11th Avenue | NB I-5 | 1,733 | 1,178 | 2,460 | 1,650 | 727 | 472 | 15 - 25 | 15 - 25 |
| | 11th Avenue | NB SR-163 | 1,537 | 1,842 | 2,180 | 2,580 | 643 | 738 | 15 - 25 | 15 - 25 |
| | First Avenue | NB I-5 | 1,040 | 2,030 | 3,160 | 3,100 | 2,120 | 1,070 | >25 | >25 |
| | Grape Street | SB I-5 | 750 | 1,430 | 2,000 | 4,070 | 1,250 | 2,640 | >25 | >25 |
| | First Avenue | SB I-5 | 750 | 1,180 | 1,200 | 1,600 | 450 | 420 | >25 | 15 - 25 |
| | Fifth Avenue | SB I-5 | 750 | 1,140 | 700 | 1,600 | 0 | 460 | 0 | 15 - 25 |
| | Park Boulevard | SB I-5 | 1,440 | 1,530 | 560 | 950 | 0 | 0 | 0 | 0 |
| | C Street | SB I-5 | 750 | 750 | 960 | 1,020 | 210 | 270 | 15-25 | 15 - 25 |
| | E Street | SB I-5 | 750 | 750 | 920 | 1030 | 170 | 280 | <15 | 15 - 25 |
| | J Street | SB I-5 | 750 | 750 | 920 | 700 | 170 | 0 | <15 | 0 |
| | 19th Street | EB SR-94 | 750 | 870 | 1,060 | 4,000 | 310 | 3,130 | 15 - 25 | >25 |
| | G Street | EB SR-94 | 750 | 2,730 | 1,220 | 2,720 | 470 | 0 | >25 | 0 |

Source: Wilson & Company; March 2005

Notes:
1. Future metering rates were assumed to be the greater of either existing daily ramp volumes or the Caltrans' minimum ramp flow rate of 750 vehicles/hour.
2. Shaded cells represent excessive delays and significant cumulative impacts. (>15 minutes)

The following twelve (12) metered on-ramps are projected to operate with excessive delays and queues under build-out of the proposed Downtown Community Plan:

- I-5 NB On-ramp @ 19th Street (PM peak hour)
- I-5 NB On-ramp @ B Street (PM peak hour)
- I-5 NB On-ramp @ 11th Street (AM and PM peak hours)
- SR-163 NB On-ramp @ 11th Street (AM and PM peak hours)
- I-5 NB On-ramp @ First Avenue (AM and PM peak hours)
- I-5 SB On-ramp @ Grape Street (AM and PM peak hours)
- I-5 SB On-ramp @ First Avenue (AM and PM peak hours)
- I-5 SB On-ramp @ Fifth Avenue (PM peak hour)
- I-5 SB On-ramp @ C Street (AM and PM peak hours)
- I-5 SB On-ramp @ E Street (PM peak hour)
- SR-94 EB On-ramp @ 19th Street (AM and PM peak hours)

- SR-94 EB On-ramp @ G Street (AM peak hours)

Traffic queues at the above ramps will extend beyond the on-ramps themselves and potentially impact traffic operations at nearby intersections. In a number of locations, queues are projected to be quite significant. The impacts resulting from queuing at these freeway on-ramps represent direct project-related significant impacts.

### Peak Hour Intersection Performance

Under future year build-out conditions, there will be approximately 275 signalized intersections in the downtown study area. Based upon analysis of future traffic operations, 62 downtown study area intersections are projected to operate at substandard LOS F under build-out of the Downtown Community Plan.

**Table 4.12** displays the downtown study area intersections projected to operate at LOS F during the AM and/or PM peak hours along with projected average traffic delays under build-out of the proposed Downtown Community Plan. A brief description of the identified causes of the substandard intersection LOS is also provided. For the most part, substandard intersection LOS is associated with high volumes and limited capacity due to deficient intersection geometry and laneage.

As shown in Table 4.12, 15 intersections would operate at LOS F during both the AM and PM peak hours, 6 intersections would operate at LOS F only during the AM peak hour, and 41 intersections would operate at LOS F only during the PM peak hour. **Figure 4-5** displays the downtown study intersections projected to operate at LOS F during the AM and PM peak hours under the proposed Downtown Community Plan.

All of the identified downtown study area intersections, operating at substandard LOS F during peak hours under build-out of the Downtown Community Plan, represent direct project-related significant impacts, with the exception of the following locations which represent cumulatively significant impacts:

- First Ave/Elm Street (AM and PM peak hours)
- 19th Street/Market Street (PM peak hour)

**Table 4.12**
**Proposed Downtown Community Plan**
**Downtown Intersections Operating at LOS F**
**Build-out Conditions**

| Intersection | | | Delay (seconds) | | LOS | | Cause of Failure | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 1 | Pacific Highway | Laurel St | 66.4 | 220.9 | E | F | N/A | RT Volumes, No Turn Lanes |
| 2 | Harbor Dr | Grape St | 14.9 | 132.2 | B | F | N/A | NB T, NB RT Volumes |
| 3 | Columbia St | Grape St | 12.4 | 159.5 | B | F | N/A | EB RT Volume, No Turn Lane |
| 4 | State St | Grape St | 7.0 | 207.7 | A | F | N/A | NB RT Volume |
| 5 | Fifth Ave | Grape St | 5.0 | 94.9 | A | F | N/A | EB LT Volume |
| 6 | First Ave | Elm St | 87.4 | 83.3 | F | F | NB Traffic heading to I-5 NB | NB Traffic heading to I-5 NB |
| 7 | Sixth Ave | Elm St | 150.5 | 177.7 | F | F | NB and WBL Volume | NB and WB LT Volume |
| 8 | Fourth Ave | Cedar St | 103.5 | 35.9 | F | D | SB/WB Volume - No Turn Lanes | N/A |
| 9 | Sixth Ave | Cedar St | 498.1 | >500.0 | F | F | NB/SB Volume - No Turn Lanes | NB/SB Volume - No Turn Lanes |
| 10 | Park Blvd | I-5 SB On/Off | 22.5 | 85.9 | C | F | N/A | NB LT Turning Volume |
| 11 | Front St | Beech St | 338.7 | 91.6 | F | F | SB/WB Volume - No Turn Lanes | SB/WB Volume - No Turn Lanes |
| 12 | Front St | Ash St | 87.0 | 17.8 | F | B | SBR Volume | N/A |
| 13 | First Ave | Beech St | >500.0 | >500.0 | F | F | Overall Volumes | Overall Volumes |
| 14 | Fourth Ave | Beech St | 94.20 | 132.60 | F | F | Overall Volumes | Overall Volumes |
| 15 | Fifth Ave | Beech St | 407.90 | >500.0 | F | F | Overall Volumes | Overall Volumes |

Notes:
NB = northbound
SB = southbound
WB = westbound
EB = eastbound
RT = right turn
LT = left turn
T = through

**Table 4.12 (continued)**
**Proposed Downtown Community Plan**
**Downtown Intersections Operating at LOS F**
**Build-out Conditions**

| Intersection | | | Delay (seconds) | | LOS | | Cause of Failure | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 16 | Sixth Ave | Beech St | >500.0 | >500.0 | F | F | Overall Volumes, No Turn Lanes | Overall Volumes, No Turn Lanes |
| 17 | Sixth Ave | Ash St | 314.8 | 232.0 | F | F | SB Volume | SB Volume |
| 18 | Harbor Dr | A St | 12.40 | >500.0 | B | F | N/A | SB LT Volume, No Turn Lane |
| 19 | Eighth Ave | A St | 8.3 | 124.6 | A | F | N/A | EB RT, SB LT Volumes |
| 20 | Ninth Ave | A St | 5.0 | 309.4 | A | F | N/A | EB Volume |
| 21 | 10th Ave | A St | 199.3 | 435.9 | F | F | N/A | SB Traffic |
| 22 | 11th Ave | A St | 161.3 | 280.4 | F | F | NB Volume | NB Volume |
| 23 | Harbor Dr | B St | 18.4 | 165.3 | B | F | N/A | SB Volume |
| 24 | Harbor Dr | C St | 89.0 | 21.8 | F | C | SB Volume, No Turn Lane | N/A |
| 25 | Ninth Ave | B St | 13.8 | 121.3 | B | F | N/A | NB Volume |
| 26 | 16th St | B St | 155.7 | 208.3 | F | F | WB Volume | N/A |
| 27 | 15th St | C St | 266.5 | >500.0 | F | F | N/A | EB Volume, No Turn Lane |
| 28 | 16th St | C St | >500.0 | >500.0 | F | F | Overall Volume, No Turn Lanes | Overall Volume, No Turn Lanes |
| 29 | State St | Broadway | 44.1 | 116.5 | D | F | N/A | NB Volume |
| 30 | Eighth Ave | Broadway | 13.4 | 93.5 | B | F | N/A | SB Volume |

Notes:
NB = northbound
SB = southbound
WB = westbound
EB = eastbound
RT = right turn
LT = left turn
T = through

**Table 4.12 (continued)**
**Proposed Downtown Community Plan**
**Downtown Intersections Operating at LOS F**
**Build-out Conditions**

| Intersection | | | Delay (seconds) | | LOS | | Cause of Failure | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 31 | Ninth Ave | Broadway | 8.6 | 107.2 | A | F | N/A | NB Volume |
| 32 | Harbor Dr | E St | 23.8 | 97.1 | C | F | N/A | SB LT Volume, No Turn Lane |
| 33 | 15th St | F St | 175.4 | 19.8 | F | B | WBR and SBR Volume | N/A |
| 34 | 16th St | F St | 300.2 | 96.0 | F | F | WB and SB Volume, No Turn Lanes | WB and SB Volume, No Turn Lanes |
| 35 | State St | G St | 24.1 | 188.8 | C | F | N/A | NB/SB Volume, No Turn Lanes |
| 36 | Union St | G St | 26.5 | 135.7 | C | F | N/A | NB/SB Volume, No Turn Lanes |
| 37 | Eighth Ave | G St | 10.6 | 113.6 | B | F | N/A | SB Volume |
| 38 | Park Blvd | G St | 11.5 | 93.9 | B | F | N/A | EB Volume, No Turn Lanes |
| 39 | 13th St | G St | 12.6 | 105.7 | B | F | N/A | EB Volume, No Turn Lanes |
| 40 | 14th St | G St | 7.1 | 126.2 | A | F | N/A | Overall Volume, No Turn Lanes |
| 41 | 16th St | G St | 6.2 | 428.6 | A | F | N/A | EB T Volume |
| 42 | 17th St | G St | 9.3 | 393.0 | A | F | N/A | EB Volume |
| 43 | 16th St | Market St | 9.6 | 80.2 | A | F | N/A | NB Volume |
| 44 | 19th St | Market St | 14.2 | 140.5 | B | F | N/A | NB Volume |

Notes:
NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.12 (continued)**
**Proposed Downtown Community Plan**
**Downtown Intersections Operating at LOS F**
**Build-out Conditions**

| Intersection | | | Delay (seconds) | | LOS | | Cause of Failure | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 45 | 13th St | Island St | 13.7 | 232.2 | B | F | N/A | Overall Volumes, No Turn Lanes |
| 46 | Eighth Ave | J St | 129.2 | 9.2 | F | A | EBL Volume | N/A |
| 47 | 13th Ave | J St | 11.5 | 81.1 | B | F | N/A | Overall Volume, No Turn Lanes |
| 48 | 19th St | J St | 12.5 | 283.0 | B | F | N/A | NB Volume |
| 49 | 13th St | K St | 11.4 | 212.0 | B | F | N/A | Overall Volume, No Turn Lanes |
| 50 | 14th St | K St | 7.9 | 209.8 | A | F | N/A | Overall Volume, No Turn Lanes |
| 51 | 16th St | K St | 56.3 | 98.9 | E | F | N/A | NBL Volume |
| 52 | 13th St | L St | 186.5 | 281.3 | F | F | Overall Volumes, No Turn Lanes | Overall Volume, No Turn Lanes |
| 53 | 16th St | L St | 455.7 | 511.9 | F | F | Overall Volume, No Turn Lanes | Overall Volume, No Turn Lanes |
| 54 | 13th St | Imperial Ave | 21.4 | 251.6 | B | F | N/A | NB/SB Volume, No Turn Lanes |
| 55 | 16th St | Imperial Ave | 86.8 | 254.4 | F | F | N/A | Overall Volume, No Turn Lanes |
| 56 | 19th St | Imperial Ave | 22.6 | 133.0 | B | F | N/A | Overall Volume, No Turn Lanes |
| 57 | Harbor Dr | Hawthorn St | 99.0 | 31.6 | F | C | WB Volume | N/A |
| 58 | Pacific Highway | Hawthorn St | 217.1 | 30.8 | F | C | WB Volume | N/A |
| 59 | Kettner Blvd | Hawthorn St | 94.1 | 7.7 | F | A | WB Volume | N/A |

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.12 (continued)**
**Proposed Downtown Community Plan**
**Downtown Intersections Operating at LOS F**
**Build-out Conditions**

| Intersection | | | Delay (seconds) | | LOS | | Cause of Failure | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 60 | India St | Hawthorn St | 165.6 | 11.5 | F | B | WB Volume | N/A |
| 61 | Columbia St | Hawthorn St | 157.9 | 24.4 | F | C | WB Volume | N/A |
| 62 | State St | Hawthorn St | 196.4 | 25.2 | F | C | WB Volume | N/A |

Source: Wilson & Company, April 2005

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

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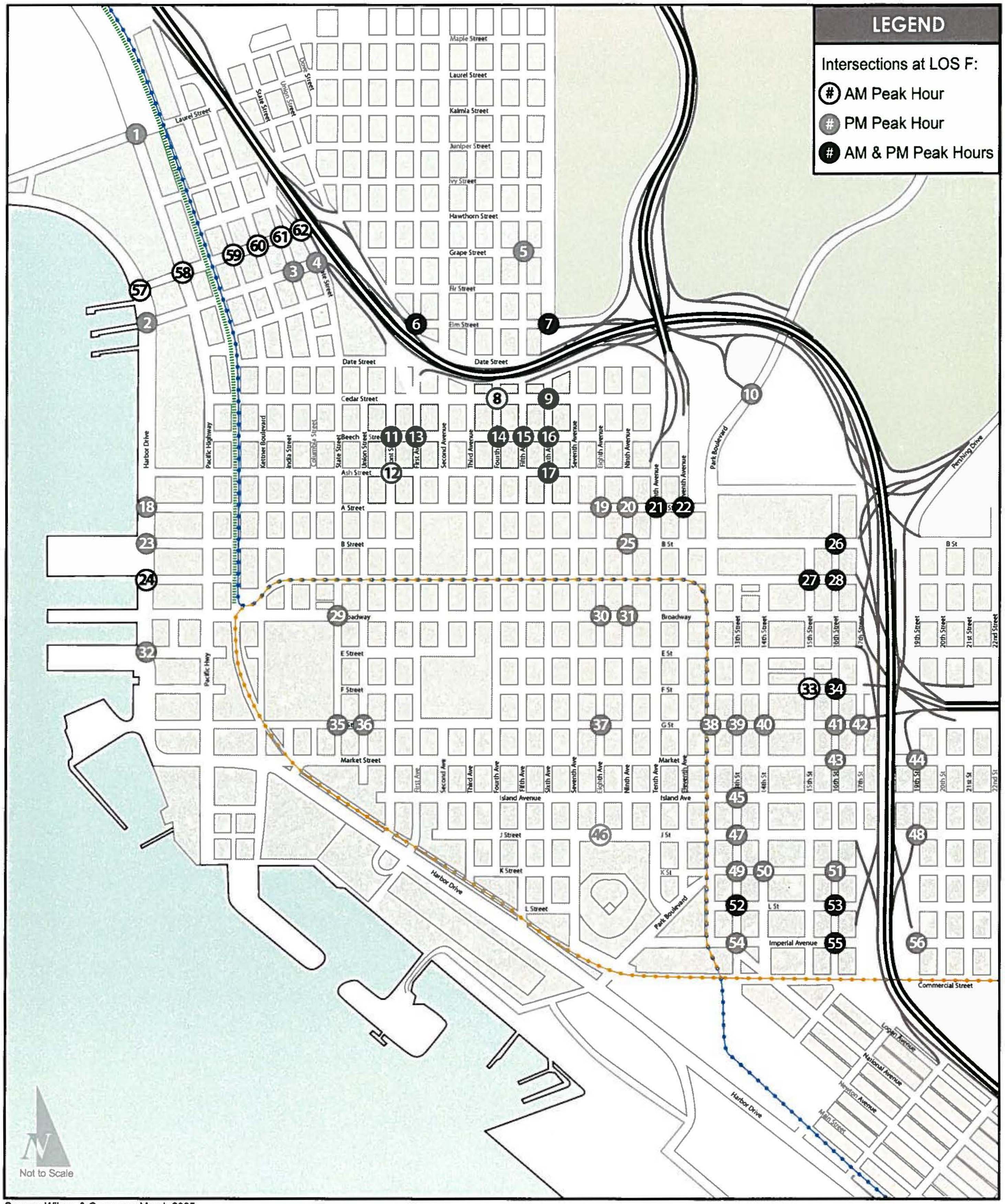


Source: Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY EIR Transportation, Circulation, and Access Study

Figure 4-5
Intersections at LOS F
Build-out of Proposed Downtown Community Plan

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### Potential For Impacts at Rail Crossings

Potential traffic impacts at downtown rail crossings relate to possible added traffic delays associated with Trolley and freight train movements at the following existing gated rail crossing locations:

- Park Boulevard;
- Fifth Avenue;
- First Avenue;
- Front Street; and
- Broadway.

Planned increases in Trolley service frequencies have the potential to cause added delays to downtown traffic volumes under build-out of the proposed Downtown Community Plan. In general, the delays are not anticipated to be significant. Gate down times are generally less than 20-30 seconds per Trolley crossing and periodic signal timing adjustments can minimize delays. At other non-gated Trolley crossings, the Trolley operates with the stream of traffic and under the control of the local signal systems and will have no associated impacts on traffic.

Freight train movements through the downtown can and do cause major disruptions, which would likely continue for the foreseeable future. Freight train movements generally occur during the late evening hours or mid-day and very infrequently occur during the peak travel periods. Other than the additional traffic volumes resulting from build-out of the proposed Downtown Community Plan, the Plan will have no directly associated impacts related to freight train movements through the downtown.

## 4.6 Analysis of Adjacent Neighborhood Roadway Segments

Build-out of the proposed Downtown Community Plan will likely cause traffic volumes increases in the adjacent neighborhoods, both east and north of downtown. **Table 4.13** displays roadway type, forecast ADT traffic volumes, and resulting roadway Level of Service (LOS) on key arterials to the east and north of downtown under existing and build-out of the proposed Downtown Community Plan.

**Table 4.13**
**Proposed Downtown Community Plan**
**Adjacent Neighborhood Roadway Segments**

| Street | Segment | Street Classification | Existing | | Proposed Plan | |
|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS |
| Broadway | East of 19th Street | 4-Lane Major | 4,800 | A | 10,600 | A |
| | East of 25th Street | 4-Lane Major | 3,700 | A | 5,850 | A |
| | East of 28th Street | 4-Lane Major | 3,300 | A | 6,860 | A |

**Table 4.13 (continued)**
**Proposed Downtown Community Plan**
**Adjacent Neighborhood Roadway Segments**

| Street | Segment | Street Classification | Existing | | Proposed Plan | |
|---|---|---|---|---|---|---|
| | | | Volume | LOS | Volume | LOS |
| Market Street | East of 19th Street | 4-Lane Major | 10,000 | A | 14,030 | A |
| | East of 25th Street | 4-Lane Major | 7,900 | A | 15,900 | B |
| | East of 28th Street | 4-Lane Major | 8,400 | A | 16,260 | B |
| Imperial Avenue | East of 19th Street | 2-Lane Collector (With Continuous Left Turn Lane) | 6,900 | B | 11,950 | D |
| | East of 25th Street | 2-Lane Local | 8,400 | F | 12,600 | F |
| | East of 28th Street | 2-Lane Collector | 6,900 | E | 10,820 | F |
| Commercial Street | East of 19th Street | 2-Lane Local | 1,900 | A | 6,320 | D |
| | East of 25th Street | 2-Lane Local | 1,790 | A | 2,740 | B |
| | East of 28th Street | 2-Lane Local | 1,200 | A | 1,550 | B |
| National Avenue | South of Imperial Ave | 4-Lane Collector | 2,500 | A | 12,100 | B |
| | South of Cesar Chavez Parkway | 4-Lane Collector | 4,100 | A | 5,800 | A |
| | South of Sampson Street | 4-Lane Collector | 9,100 | A | 11,100 | B |
| Harbor Drive | South of Park Boulevard | 4-Lane Major | 14,300 | A | 23,760 | C |
| | South of Cesar Chavez Parkway | 4-Lane Major | 11,000 | A | 25,100 | C |
| | South of Sampson Street | 4-Lane Major | 11,500 | A | 24,430 | C |
| Cesar Chavez Parkway | North of Harbor Drive | 2-Lane Major | 8,100 | C | 11,500 | D |
| | North of National Avenue | 4-Lane Major | 11,200 | A | 15,600 | B |
| 25th Street | North of Imperial Avenue | 4-Lane Collector | 9,200 | A | 15,100 | C |
| | North of Market Street | 4-Lane Collector | 11,900 | B | 15,250 | C |
| | North of Broadway | 4-Lane Collector | 10,200 | B | 14,800 | C |
| 28th Street | North of Harbor Drive | 2-Lane Local | 22,800 | F | 26,500 | F |
| | North of National Avenue | 2-Lane Local | 7,600 | F | 8,860 | F |
| | North of Imperial Avenue | 2-Lane Local | 8,400 | F | 9,880 | F |
| | North of Market Street | 2-Lane Local | 9,100 | F | 11,750 | F |
| | North of Broadway | 2-Lane Local | 9,900 | F | 12,500 | F |
| Pershing Drive | North of Florida Drive | 4-Lane Major | 8,500 | A | 11,840 | A |
| Florida Drive | North of Pershing Drive | 4-Lane Major | 22,900 | C | 32,300 | D |

Source: Wilson & Company, 2005

As shown in Table 4.13, forecast traffic volumes on adjacent neighborhood streets under build-out of the proposed Downtown Community Plan will increase over existing conditions anywhere between 50% to 100% or greater depending on the location. However, for the most part forecast volumes would remain within the range of acceptable capacities for each roadway type and no significant change or degradation in roadway LOS would result. A number of roadway segments in the adjacent neighborhoods would, however, operate at LOS F including:

- Imperial Ave, east of 25th St. to east of 28th St.
- 28th St., north of Harbor to north of Broadway

Both of these roadway segments are currently operating at LOS F under existing conditions.

These roadway segments, located in the neighborhoods adjacent to the downtown and identified as operating at LOS F under build-out of the proposed Downtown Community Plan, represent cumulatively significant impacts.

## 4.7 Traffic Impact and Mitigation Requirements

This section identifies the required roadway improvements that would be necessary to mitigate the identified cumulatively significant traffic impacts on the associated study area freeway segments, ramps, and intersections. Given the existing developed nature of the downtown area, the physical feasibility of implementing the identified mitigation measures was a key focus of the analysis.

### Freeway Segments and Ramps

As discussed in Section 4.5, the proposed Downtown Community Plan will contribute to projected substandard traffic conditions on study area freeway segments (I-5, SR-163 and SR-94) and ramps serving the downtown area. Poor operations on the freeway mainlines are caused by high forecast traffic volumes and merge/diverse conflicts at the various on- and off-ramp locations. As a contributing factor to the forecast travel demands on the study area freeway facilities, the proposed Downtown Community Plan will result in both direct and cumulatively significant traffic impacts to these facilities.

As noted previously, the traffic analysis was conducted assuming the various roadway network assumptions included in the "Revenue Constrained" funding scenario of the SANDAG 2030 Regional Transportation Plan (RTP). This was intended at the time of the analysis to represent an appropriate worst-case scenario. Since passage of the Transnet funding program in November 2004, the SANDAG RTP "Mobility" scenario becomes the more realistic funding scenario for the region. This scenario includes implementation of High Occupancy Vehicle (HOV) lanes on I-5 through the downtown area, as well as on SR 94 serving the downtown to/from the east. These improvements will, in part, improve the capacity of the freeway system and resulting traffic operations, but will not specifically address freeway ramp operations and associated access requirements for the downtown area.

Previous SANDAG studies of the freeway system and the ramps serving the downtown area (Central I-5 Corridor Study and I-5 Freeway Deficiency Plan, December 2003) have identified the required freeway and ramp improvements that would be necessary to address projected longer range deficiencies. These included additional through lanes on I-5, supported by new auxiliary lanes and a modified system of ramps serving the downtown area. This study also confirmed that no feasible and acceptable improvement options are available to address projected deficiencies on SR-163, north of downtown. SANDAG, Caltrans and CCDC have recommended further study of the freeway improvement proposals identified in the Central I-5 Corridor Study to ensure proper consideration of all potential community and environmental impacts.

Subject to identification and regional acceptance of a feasible program to improve the freeway segments and ramps in the downtown area, the identified traffic impacts on study area freeway segments and ramps associated with the proposed Downtown Community Plan will remain significant and unmitigated.

It is recommended that CCDC, along with Caltrans, SANDAG, and the City of San Diego continue to pursue and promote improvement of the I-5 freeway through the downtown area, the improvement of SR-94 to/from the east, as well as an improved system of freeway ramps serving the downtown area.

## Near-Term Freeway Ramp Improvement Opportunities

Improvements to the downtown freeway ramps are limited by the amount of capacity on the ramps themselves and the downtown grid system to which they connect. Identified ramps that are projected to operate over capacity (LOS F in Table 4.10) under build-out of the proposed Downtown Community Plan were reviewed to assess the potential for increasing near-term ramp capacity. Ramp capacity can be increased by adding lanes to the ramp to accommodate the expected demand, with each lane of a ramp accommodating approximately 1,200 vehicles per hour.

In general, the addition of lanes to the ramps is restricted by two things:

1. The freeway and/or ramp facilities cannot accommodate either additional merging movements or the necessary entrance/exit lane configuration.
2. The on-street network cannot accommodate either the additional lane(s) feeding or exiting the ramp.

**Table 4.14** summarizes the feasibility of adding additional lanes to the downtown study area ramps based on the preceding two restrictions.

**Table 4.14**
**Proposed Downtown Community Plan**
**Freeway Ramp Improvement Opportunities**

| NB On-Ramps | | Existing # of Lanes | Required # of Lanes | Feasibility |
|---|---|---|---|---|
| From | To | | | |
| 19th Street | NB I-5 | 1 | 2 | **Restricted by freeway lane availability**; NB I-5 has a limited ability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |
| B Street | NB I-5 | 1 | 2 | **Restricted by ramp lane availability**; the current ramp configuration merges with the SB Pershing Drive ramp to NB I-5. The existing configuration restricts the ability to add another lane and accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |
| 11th Avenue | NB I-5 / NB SR-163 | 2 | 4 | **Restricted by freeway lane availability**; the need for additional lanes would be focused on the NB SR-163 movement from 11th Avenue; adding a lane to the NB ramp would move the bottle neck from its current location (current merge point) to a place further north (new merge point). |
| First Avenue | NB I-5 | 1 | 3 | **Restricted by on-street lane availability**; the on-street network cannot accommodate the multi-lane (currently dual-right) turning movement required for this ramp; **Restricted by ramp lane availability;** The entrance ramp is restricted by the bridge width over the Hawthorne Street exit ramps from NB I-5. The facility would need t o undergo substantial modification to accommodate an additional lane of ramp traffic,; in addition, NB I-5 has a limited availability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |

**Table 4.14 (continued)**
**Proposed Downtown Community Plan**
**Peak Hour Freeway Failing Ramps**
**Build-out Conditions**

| SB On-Ramps | | | | |
|---|---|---|---|---|
| From | To | | | |
| Grape Street | SB I-5 | 1 | 4 | **Restricted by on-street lane availability;** the on-street network cannot accommodate the multi-lane turning movement required to access this ramp; in addition, SB I-5 has a limited availability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |
| First Avenue | SB I-5 | 1 | 2 | **Restricted by freeway lane availability**; the ramp currently has a dual-lane entrance, however, the merge point is not carried onto the freeway and is considered a one-lane ramp; the two-lane ramp would need to be carried onto SB I-5, but SB I-5 has a limited availability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |
| Fifth Avenue | SB I-5 | 1 | 2 | **Restricted by ramp lane availability;** the on-street network currently accommodates the dual-lane turning movement required to access this ramp; however, the entrance ramp is restricted by the bridge width over the SR-163 ramps from SB I-5. The facility would need t o undergo substantial modification to accommodate an additional lane of ramp traffic. **Restricted by freeway lane availability**; the freeway to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. |
| **EB On-Ramps** | | | | |
| From | To | | | |
| G Street | EB SR-94 | 3 | 4 | **Restricted by freeway lane availability**; EB SR-94 has a limited ability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. In addition, the entrance ramp is restricted by the bridge width over I-5 out of San Diego. The facility would need t o undergo substantial modification to accommodate an additional lane of ramp traffic. |
| 19th Street | EB SR-94 | 1 | 3 | **Restricted by freeway lane availability**; EB SR-94 has a limited ability to accommodate the additional merge points that would be needed to provide a safe entrance onto the freeway. **Restricted by ramp lane availability;** the ramp is restricted in width by the proximity of the ramp to the existing development. |
| **NB Off-Ramps** | | | | |
| From | To | | | |
| NB I-5 | J Street | 1 | 3 | **Restricted by freeway lane availability;** NB I-5 has a limited availability to accommodate additional exit lanes to the ramp. The additional ramp lanes would also require some modification to allow three lanes of inbound ramp traffic, including signalized control at the ramp intersection with J Street. |
| **SB Off-Ramps** | | | | |
| From | To | | | |
| SB I-5 | Front Street | 2 | 4 | **Restricted by on-street lane availability;** the on-street network would require some modification to allow four lanes of inbound ramp traffic, including closing off the Date Street access to Front Street. |
| SR-163 | Fourth Avenue | 1 | 2 | **Restricted by ramp lane availability;** the ramp is restricted in width by the proximity of the freeway to the south and the residential neighborhood to the north. |
| **WB Off-Ramps** | | | | |
| From | To | | | |
| SR-94 | F Street | 3 | 4 | **Restricted by freeway lane availability;** the exiting freeway lanes (WB) are restricted by the bridge width over I-5 into San Diego. The facility would need t o undergo substantial modification to accommodate an additional lane of ramp traffic. |

Source: Wilson & Company, May 2005

As shown above, there are limited opportunities to provide, on an individual ramp basis, the additional capacity required to adequately serve future demands.

## Reverse Commute Effects

The increase in residential development in the downtown area as currently occurring and as will further occur under the proposed Downtown Community Plan has the potential to increase the "reverse commute". The normal commute is characterized by the downtown serving as an employment center with workers commuting from outlying suburban residential land uses. Under this scenario, the work/peak hour commute is inbound to the downtown in the morning and outbound in the evening. With increased downtown residential development, outbound trips from the downtown in the morning and inbound in the evening are anticipated to increase, a reverse of the normal commuting pattern. Implications from a transportation perspective include increased demands on traditionally non-peak directional transit routes (e.g. northbound Coaster in the AM and southbound in the PM) and increasing demands on freeway on-/off-ramps (downtown freeway on-ramps in the AM and downtown off-ramps in the PM.). It is anticipated that the overall effects of an increasing reverse commute will be beneficial in terms of balancing peak hour demands on key freeway ramps serving the downtown.

### Downtown Intersections

**Table 4.15** displays the downtown study area intersections which have been identified as being significantly impacted by projected traffic related to the build-out of the proposed Downtown Community Plan. The table also identifies the necessary improvements to the intersection geometry / laneage that would be required in order for the intersection to operate at acceptable LOS E or better and to mitigate the traffic impacts associated with the proposed Downtown Community Plan. The table also addresses the feasibility of the identified mitigation measures.

At a number of intersection locations, the physical right-of-way would not enable the implementation of additional through traffic or turn lanes. In other locations, restriping and/or removal of parking will enable implementation of the required improvements. In those intersection locations where the required mitigation measures are not feasible, the identified significant traffic impacts will remain significant and unmitigated.

In addition to the above considerations, subsequent and further review of the identified mitigation measures may find specific measures to be incompatible with other goals and policies of the Downtown Community Plan, including the desire to improve and enhance the downtown pedestrian environment. These issues will need to be addressed as part of CCDC's on-going monitoring of the Plan's mitigation requirements.

**Table 4.15**
**Proposed Downtown Community Plan**
**Intersection Mitigation Requirements**

| Intersection | | | LOS | | | |
|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | Required Mitigation | Feasible? |
| 1 | Pacific Highway | Laurel St | E | F | Separate NB RT | Y |
| 2 | Harbor Dr | Grape St | B | F | Add NB Shared Thru-Right | Y |
| 3 | Columbia St | Grape St | B | F | Add EB T; Separate EB RT | N |
| 4 | State St | Grape St | A | F | Add EB T | Y |
| 5 | Fifth Ave | Grape St | A | F | Separate EB LT | Y |
| 6 | First Ave | Elm St | F | F | Convert NB Thru-Left to NB left only | Y |
| 7 | Sixth Ave | Elm St | F | F | Provide 2 WB LT, 2 WB Thru, 1 WB RT; Provide NB/SB @ 2 Lanes with Shared Turns | Y |
| 8 | Fourth Ave | Cedar St | F | D | Add SB LT, WB LT | Y |
| 9 | Sixth Ave | Cedar St | F | F | Separate WB LT and EB LT; Provide NB @ 2 Thru Lanes w/Shared Turns; Provide SB LT, 2 SB Thru, SB RT | N |
| 10 | Park Blvd | I-5 SB On/Off | C | F | Add NB LT | Y |
| 11 | Front St | Beech St | F | F | Add SB T, WB T, EB T | Y |
| 12 | Front St | Ash St | F | B | Add SB RT | Y |
| 13 | First Ave | Beech St | F | F | Add NB T, WB T, EB T; Separate NB R | N |
| 14 | Fourth Ave | Beech St | F | F | Add WB T, EB T | Y |

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.15 (continued)**
**Proposed Downtown Community Plan**
**Intersection Mitigation Requirements**

| Intersection | | | LOS | | | |
|---|---|---|---|---|---|---|
| No. | N/S Street | E/W Street | AM | PM | Required Mitigation | Feasible? |
| 15 | Fifth Ave | Beech St | F | F | Add WB T, EB T | Y |
| 16 | Sixth Ave | Beech St | F | F | Add WB T, EB T; Provide NB @ 2 Lanes w/Shared Turns; Provide SB @ 2 Thru Lanes w/Shared Left and Separate Right | N |
| 17 | Sixth Ave | Ash St | F | F | Provide 2 SB RT and 2 SB T | N |
| 18 | Harbor Dr | A St | B | F | Provide SB LT | Y |
| 19 | Eighth Ave | A St | A | F | Add SB LT | Y |
| 20 | Ninth Ave | A St | A | F | Separate EB LT; Provide 2 NB T, NB Thru-right, NB RT | N |
| 21 | 10th Ave | A St | F | F | Add 2 EB T, Separate EB RT; Add SB T, Separate SB LT | N |
| 22 | 11th Ave | A St | F | F | Separate EB LT; Add NB T, Separate NB RT | N |
| 23 | Harbor Dr | B St | B | F | Provide SB LT | Y |
| 24 | Harbor Dr | C St | F | C | Provide SB LT | Y |
| 25 | Ninth Ave | B St | B | F | Provide 3 NB T w/ Shared Left | Y |
| 26 | 16th St | B St | F | F | Separate NB LT; Add WB T, Separate WB LT | Y |
| 27 | 15th St | C St | F | F | Provide 2 EB T w/Shared Turns | Y |
| 28 | 16th St | C St | F | F | Provide 2 EB T w/Shared Right, Separate EB LT, WB LT; Add NB T, Separate NB LT, SB LT | Y |

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.15 (continued)**
**Proposed Downtown Community Plan**
**Intersection Mitigation Requirements**

| Intersection | | | LOS | | | |
|---|---|---|---|---|---|---|
| No. | N/S Street | E/W Street | AM | PM | Required Mitigation | Feasible? |
| 29 | State St | Broadway | D | F | Separate NB LT | Y |
| 30 | Eighth Ave | Broadway | B | F | Provide 3 SB T w/ Shared Turns | Y |
| 31 | Ninth Ave | Broadway | A | F | Provide 3 NB T w/ Shared Turns | Y |
| 32 | Harbor Dr | E St | C | F | Provide SB LT | Y |
| 33 | 15th St | F St | F | B | Separate WB LT, WB RT | N |
| 34 | 16th St | F St | F | F | Separate NB LT, SB LT; Add WB T, Separate WB LT, WB RT | N |
| 35 | State St | G St | C | F | Separate NB LT, SB LT | Y |
| 36 | Union St | G St | C | F | Separate NB LT, SB LT | Y |
| 37 | Eighth Ave | G St | B | F | Add SB T | Y |
| 38 | Park Blvd | G St | B | F | Add EB T | Y |
| 39 | 13th St | G St | B | F | Add EB T, Separate EB LT; SB LT | N |
| 40 | 14th St | G St | A | F | Add EB T; Separate SB LT, NB RT | Y |
| 41 | 16th St | G St | A | F | Add EB T | Y |
| 42 | 17th St | G St | A | F | Add EB T | Y |
| 43 | 16th St | Market St | A | F | Separate NB LT, NB RT | Y |

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.15 (continued)**
**Proposed Downtown Community Plan**
**Intersection Mitigation Requirements**

| Intersection | | | LOS | | Required Mitigation | Feasible? |
|---|---|---|---|---|---|---|
| No. | N/S Street | E/W Street | AM | PM | | |
| 44 | 19th St | Market St | B | F | Convert NB LT to Shared NB Thru-Left | Y |
| 45 | 13th St | Island St | B | F | Separate NB LT, SB LT | Y |
| 46 | Eighth Ave | J St | F | A | Separate EB LT | Y |
| 47 | 13th St | J St | B | F | Separate SB LT, NB LT | Y |
| 48 | 19th St | J St | B | F | Add NB T | Y |
| 49 | 13th St | K St | B | F | Separate SB LT, NB LT | Y |
| 50 | 14th St | K St | A | F | Separate EB LT, WB LT, SB LT, NB LT | Y |
| 51 | 16th St | K St | E | F | Separate SB LT, NB LT | Y |
| 52 | 13th St | L St | F | F | Provide 2 NB T, NB RT; Provide EB LT, EB RT, Provide SB Thru-Left | Y |
| 53 | 16th St | L St | F | F | Separate EB LT, WB LT, SB LT, NB LT | Y |
| 54 | 13th St | Imperial Ave | B | F | Provide NB LT, NB T, NB Thru-Right; Provide SB LT, SB T, SB Thru-Right | Y |
| 55 | 16th St | Imperial Ave | F | F | Separate NB LT, SB LT | Y |
| 56 | 19th St | Imperial Ave | B | F | Separate EB LT, Add EB LT | Y |
| 57 | Harbor Dr | Hawthorn St | F | C | Add Shared WB Left-Right | Y |
| 58 | Pacific Highway | Hawthorn St | F | C | Add WB T, Separate WB LT | N |

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.15 (continued)**
**Proposed Downtown Community Plan**
**Intersection Mitigation Requirements**

| Intersection | | | LOS | | | |
|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | Required Mitigation | Feasible? |
| 59 | Kettner Blvd | Hawthorn St | F | A | Add WB T | Y |
| 60 | India St | Hawthorn St | F | B | Add WB T | Y |
| 61 | Columbia St | Hawthorn St | F | C | Add WB T | Y |
| 62 | State St | Hawthorn St | F | C | Add WB T | Y |

Source: Wilson & Company, March 2005

Notes:

NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

As shown above, based upon physical limitations, the identified mitigation measures would be feasible at 50 of the impacted intersections and infeasible at 12 of the impacted intersection locations. As noted previously, subsequent review may find further intersection mitigations to be infeasible due to conflicts with other prescribed goals and policies of the Downtown Community Plan.

Appendix C includes graphics displaying existing/assumed intersection geometry and required mitigation for each of the impacted intersections identified above.

**Table 4.16** displays the intersection LOS before and after mitigation for the impacted intersections. As noted previously, at those intersections locations where the required mitigation measures were found to be physically infeasible, the identified traffic impacts will remain significant and unmitigated.

**Table 4.16**
**Proposed Downtown Community Plan**
**Mitigated Peak Hour Intersection Level of Service**

| Intersection | | | Before Mitigation | | | | After Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay | | LOS | | Delay | | Mitigated LOS | |
| No. | N/S Street | E/W Street | AM | PM | AM | PM | AM | PM | AM | PM |
| 1 | Pacific Highway | Laurel St | 66.4 | 220.9 | E | F | 53.6 | 52.4 | D | D |
| 2 | Harbor Dr | Grape St | 14.9 | 132.2 | B | F | 8.3 | 74.6 | A | E |
| 3 | Columbia St | Grape St | 12.4 | 159.5 | B | F | Not Feasible/No Change | Not Feasible/No Change | B | F |
| 4 | State St | Grape St | 7.0 | 207.7 | A | F | 4.5 | 66.9 | A | E |
| 5 | Fifth Ave | Grape St | 5.0 | 94.9 | A | F | 4.2 | 18.8 | A | B |
| 6 | First Ave | Elm St | 87.4 | 83.3 | F | F | 69.5 | 60.5 | E | E |
| 7 | Sixth Ave | Elm St | 150.5 | 177.7 | F | F | 16.8 | 23.6 | B | C |
| 8 | Fourth Ave | Cedar St | 103.5 | 35.9 | F | D | 38.7 | 24.8 | D | C |
| 9 | Sixth Ave | Cedar St | 498.1 | >500.0 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 10 | Park Blvd | I-5 SB On/Off | 22.5 | 85.9 | C | F | 15.3 | 15.9 | B | B |
| 11 | Front St | Beech St | 338.7 | 91.6 | F | F | 21.2 | 15.3 | C | B |
| 12 | Front St | Ash St | 87.0 | 17.8 | F | B | 45.9 | 6.2 | D | A |
| 13 | First Ave | Beech St | >500.0 | >500.0 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 14 | Fourth Ave | Beech St | 94.2 | 132.6 | F | F | 8.2 | 13.9 | A | B |
| 15 | Fifth Ave | Beech St | 407.9 | >500.0 | F | F | 10.2 | 78.9 | B | E |
| 16 | Sixth Ave | Beech St | >500.0 | >500.0 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |

**Table 4.16 (continued)**
**Proposed Downtown Community Plan**
**Mitigated Peak Hour Intersection Level of Service**

| Intersection | | | Before Mitigation | | | | After Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay | | LOS | | Delay | | Mitigated LOS | |
| No. | N/S Street | E/W Street | AM | PM | AM | PM | AM | PM | AM | PM |
| 17 | Sixth Ave | Ash St | 314.8 | 232.0 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 18 | Harbor Dr | A St | 12.4 | >500.0 | B | F | 10.0 | 78.8 | B | E |
| 19 | Eighth Ave | A St | 8.3 | 124.6 | A | F | 7.6 | 33.8 | A | C |
| 20 | Ninth Ave | A St | 5.0 | 309.4 | A | F | Not Feasible/No Change | Not Feasible/No Change | A | F |
| 21 | 10th Ave | A St | 199.3 | 435.9 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 22 | 11th Ave | A St | 161.3 | 280.4 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 23 | Harbor Dr | B St | 18.4 | 165.3 | B | F | 11.8 | 76.6 | B | E |
| 24 | Harbor Dr | C St | 89.0 | 21.8 | F | C | 19.9 | 18.5 | B | B |
| 25 | Ninth Ave | B St | 13.8 | 121.3 | B | F | 12.0 | 23.1 | B | C |
| 26 | 16th St | B St | 155.7 | 208.3 | F | F | 64.7 | 30.6 | E | C |
| 27 | 15th St | C St | 266.5 | >500.0 | F | F | 4.8 | 14.3 | A | B |
| 28 | 16th St | C St | >500.0 | >500.0 | F | F | 64.6 | 70.0 | E | E |
| 29 | State St | Broadway | 44.1 | 116.5 | D | F | 70.2 | 78.9 | E | E |
| 30 | Eighth Ave | Broadway | 13.4 | 93.5 | B | F | 11.8 | 35.8 | B | D |
| 31 | Ninth Ave | Broadway | 8.6 | 107.2 | A | F | 8.3 | 35.4 | A | D |

**Table 4.16 (continued)**
**Proposed Downtown Community Plan**
**Mitigated Peak Hour Intersection Level of Service**

| Intersection | | | Before Mitigation | | | | After Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay | | LOS | | Delay | | Mitigated LOS | |
| No. | N/S Street | E/W Street | AM | PM | AM | PM | AM | PM | AM | PM |
| 32 | Harbor Dr | E St | 23.8 | 97.1 | C | F | 10.3 | 13.1 | B | B |
| 33 | 15th St | F St | 175.4 | 19.8 | F | B | Not Feasible/No Change | Not Feasible/No Change | F | B |
| 34 | 16th St | F St | 300.2 | 96.0 | F | F | Not Feasible/No Change | Not Feasible/No Change | F | F |
| 35 | State St | G St | 24.1 | 188.8 | C | F | 19.8 | 61.1 | B | E |
| 36 | Union St | G St | 26.5 | 135.7 | C | F | 25.7 | 40.5 | C | D |
| 37 | Eighth Ave | G St | 10.6 | 113.6 | B | F | 26.9 | 54.1 | C | D |
| 38 | Park Blvd | G St | 11.5 | 93.9 | B | F | 11.6 | 54.0 | B | D |
| 39 | 13th St | G St | 12.6 | 105.7 | B | F | Not Feasible/No Change | Not Feasible/No Change | B | F |
| 40 | 14th St | G St | 7.1 | 126.2 | A | F | 7.1 | 67.3 | A | E |
| 41 | 16th St | G St | 6.2 | 428.6 | A | F | 7.9 | 19.6 | A | B |
| 42 | 17th St | G St | 9.3 | 393.0 | A | F | 7.3 | 14.9 | A | B |
| 43 | 16th St | Market St | 9.6 | 80.2 | A | F | 8.1 | 28.3 | A | C |
| 44 | 19th St | Market St | 14.2 | 140.5 | B | F | 13.5 | 44.5 | B | D |
| 45 | 13th St | Island St | 13.7 | 232.2 | B | F | 15.3 | 38.3 | B | D |
| 46 | Eighth Ave | J St | 129.2 | 9.2 | F | A | 14.8 | 7.9 | B | A |
| 47 | 13th St | J St | 11.5 | 81.1 | B | F | 10.5 | 22.5 | B | C |

**Table 4.16 (continued)**
**Proposed Downtown Community Plan**
**Mitigated Peak Hour Intersection Level of Service**

| Intersection | | | Before Mitigation | | | | After Mitigation | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Delay | | LOS | | Delay | | Mitigated LOS | |
| No. | N/S Street | E/W Street | AM | PM | AM | PM | AM | PM | AM | PM |
| 48 | 19th St | J St | 12.5 | 283.0 | B | F | 8.4 | 74.3 | A | E |
| 49 | 13th St | K St | 11.4 | 212.0 | B | F | 10.7 | 48.9 | B | D |
| 50 | 14th St | K St | 7.9 | 209.8 | A | F | 10.7 | 38.1 | B | D |
| 51 | 16th St | K St | 56.3 | 98.9 | E | F | 14.4 | 19.0 | B | B |
| 52 | 13th St | L St | 186.5 | 281.3 | F | F | 14.4 | 33.5 | B | C |
| 53 | 16th St | L St | 455.7 | >500.0 | F | F | 54.8 | 76.4 | D | E |
| 54 | 13th St | Imperial Ave | 21.4 | 251.6 | B | F | 11.4 | 11.4 | B | B |
| 55 | 16th St | Imperial Ave | 86.8 | 254.4 | F | F | 11.9 | 36.9 | B | D |
| 56 | 19th St | Imperial Ave | 22.6 | 133.0 | B | F | 22.7 | 22.7 | C | C |
| 57 | Harbor Dr | Hawthorn St | 99.0 | 31.6 | F | C | 18.5 | 11.7 | B | B |
| 58 | Pacific Highway | Hawthorn St | 217.1 | 30.8 | F | C | Not Feasible/No Change | Not Feasible/No Change | F | C |
| 59 | Kettner Blvd | Hawthorn St | 94.1 | 7.7 | F | A | 10.3 | 7.7 | B | A |
| 60 | India St | Hawthorn St | 165.6 | 11.5 | F | B | 39.0 | 4.6 | D | A |
| 61 | Columbia St | Hawthorn St | 157.9 | 24.4 | F | C | 54.4 | 6.6 | D | A |
| 62 | State St | Hawthorn St | 196.4 | 25.2 | F | C | 46.3 | 14.8 | D | B |

Source: SANDAG; Wilson & Company, 2005

As shown, of the 62 impacted intersections, twelve (12) intersections will remain with significant traffic impacts due to the physical infeasibility of the required mitigation measures. At all other intersection locations, the LOS after mitigation will be acceptable (LOS E or better).

## Additional Roadway Network Modifications

In addition to and complimentary with the identified intersection mitigations, the traffic analysis of the proposed Downtown Community Plan identified the need to improve a number of additional streets in the downtown study area. In a number of cases, this included changes from what had been assumed by the Downtown Community Plan as noted previously in Table 4.7.

**Table 4.17** displays additional roadway network modifications to the assumed Community Plan roadway network that would be required to ensure adequate capacity and acceptable traffic operations. Where applicable, these modifications incorporate the intersection mitigation measures identified in Table 4.15 and determined to be physically feasible. **Figure 4-6** displays the additional modifications/recommended changes to the assumed Downtown Community Plan roadway network.

**Table 4.17**
**Downtown Community Plan**
**Additional Roadway Network Modifications**

| Roadway | From | To | Existing | Proposed Plan | Recommended |
|---|---|---|---|---|---|
| Grape St | Harbor Dr | State St | 3-lane EB 1-way, with parking | No Change | 4-lane EB 1-way, no parking |
| Hawthorn St | Harbor Dr | State St | 3-lane WB 1-way, with parking | No Change | 4-lanes WB 1-way, no parking |
| Cedar St | Fourth Ave | Sixth Ave | Mostly one-way, 2 and 3 lanes, with one two-way section. | 2-lane 2-way, with parking; Removal of the southbound off-ramp from I-5 | 2-lane 2-way, with continuous left turn lane and parking; Removal of the southbound off-ramp from I-5 |
| Beech St | Front St | Sixth Ave | 2-lane 2-way, with parking | No Change | 4-lanes 2-way, no parking |
| C St | Park Blvd | I-5 | 3-lane EB 1-way, with parking | 2-lane 2-way, with parking | 3-lane 2-way (2 lane EB, 1 lane WB), with parking |
| G St | Park Blvd | 17thSt | 3-lane EB 1-way, with parking | No Change | 4-lane EB 1-way, no parking, during peak periods |
| Imperial Ave | Park Blvd | 19thSt | 4-lane 2-way, no parking | No Change | 4-lane 2-way, with continuous left turn lane, no parking |
| Fifth Ave | Elm St | Ash St | 3-lane NB 1-way, with parking | No Change | 4-lane NB 1-way, no parking, during peak periods |
| Sixth Ave | Elm St | Ash St | 3-lane SB 1-way, with parking | 2-lane 2-way, with parking | 3-lane SB 1-way, with parking |

**Table 4.17 (continued)**
**Downtown Community Plan**
**Additional Roadway Network Modifications**

| Roadway | From | To | Existing | Proposed Plan | Recommended |
|---|---|---|---|---|---|
| Eighth Ave | Ash St. | G St | 3-lane SB 1-way, with parking | 2-lane 1-way SB, with parking | 3-lane 1-way SB, with parking |
| Ninth Ave | Ash St | Market St | 3-lane NB 1-way, with parking | 2-lane 1-way NB, with parking | 3-lane 1-way NB, with parking |
| 19th St | Imperial Ave | SR-94 | 2-3 lanes 1-way NB | No Change | 3-lane NB 1-way, with parking |

Source: Wilson & Company, 2005

It should be specifically noted that Table 4.17 recommends that Sixth Avenue remain one-way southbound (3 lanes) between Elm Street and Ash Street. The proposed Downtown Community Plan roadway network included Sixth Avenue as a two way, two lane roadway. The traffic analysis indicated that forecast traffic volumes are too high for a two-way/two lane roadway, and the current one-way operation would provide the maximum capacity. This will also serve to eliminate a number of the identified unmitigated impacts under the proposed Downtown Community Plan due to infeasible mitigation at the following intersection locations:

- Sixth Avenue/Cedar Street
- Sixth Avenue/Beech Street
- Sixth Avenue/Ash Street

**Figure 4-7** graphically displays the resulting Downtown Community Plan roadway network modifications (change from existing) with incorporation of the recommended changes noted in Table 4.17 and Figure 4-6.

**Figure 4-8** displays the intersection locations where the significant traffic impacts would remain unmitigated under build-out of the proposed Downtown Community Plan due to physical infeasibility of the required mitigation measures.

## 4.8 Requirements for Monitoring and Further Study Prior to Implementation

It is important to note that in preparation of this EIR, the transportation, circulation, and access features of the proposed Downtown Community Plan have been evaluated collectively and in combination with each other at a planning level of detail. The result is that while individual street modifications may function adequately under future conditions, all localized impacts and related operational considerations may not have been fully identified at a project specific level. Based upon this, it is recommended that all potential roadway modifications and enhancements graphically displayed in Figure 4-6 under go further more detailed evaluations prior to implementation. These evaluations should address specific project requirements relating to operational impacts/benefits

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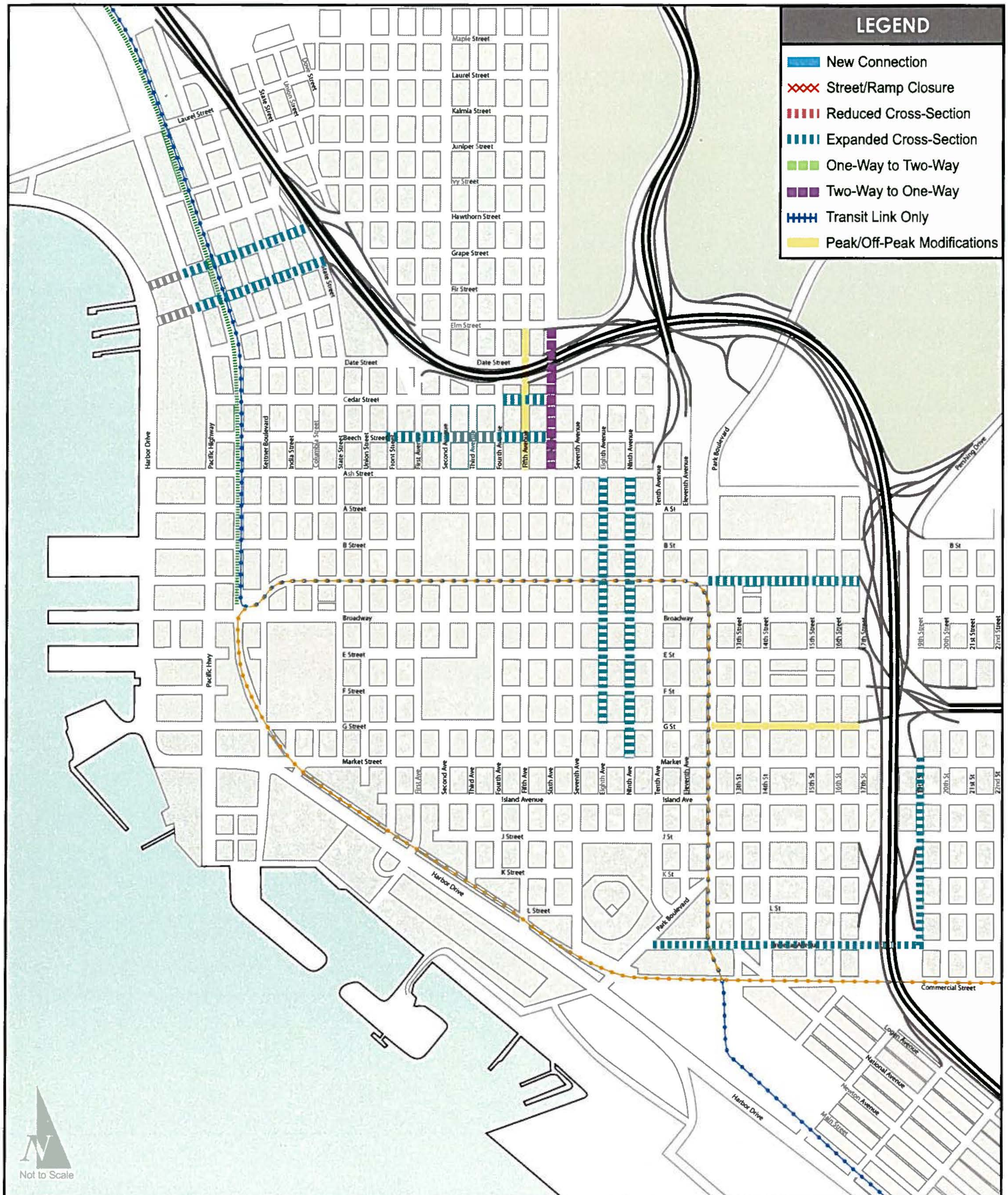


Source: Wilson & Company; March 2005

**Downtown Community Plan**

WILSON & COMPANY EIR Transportation, Circulation, and Access Study

Figure 4-6
Recommended Modifications to
Proposed Community Plan Roadway Network

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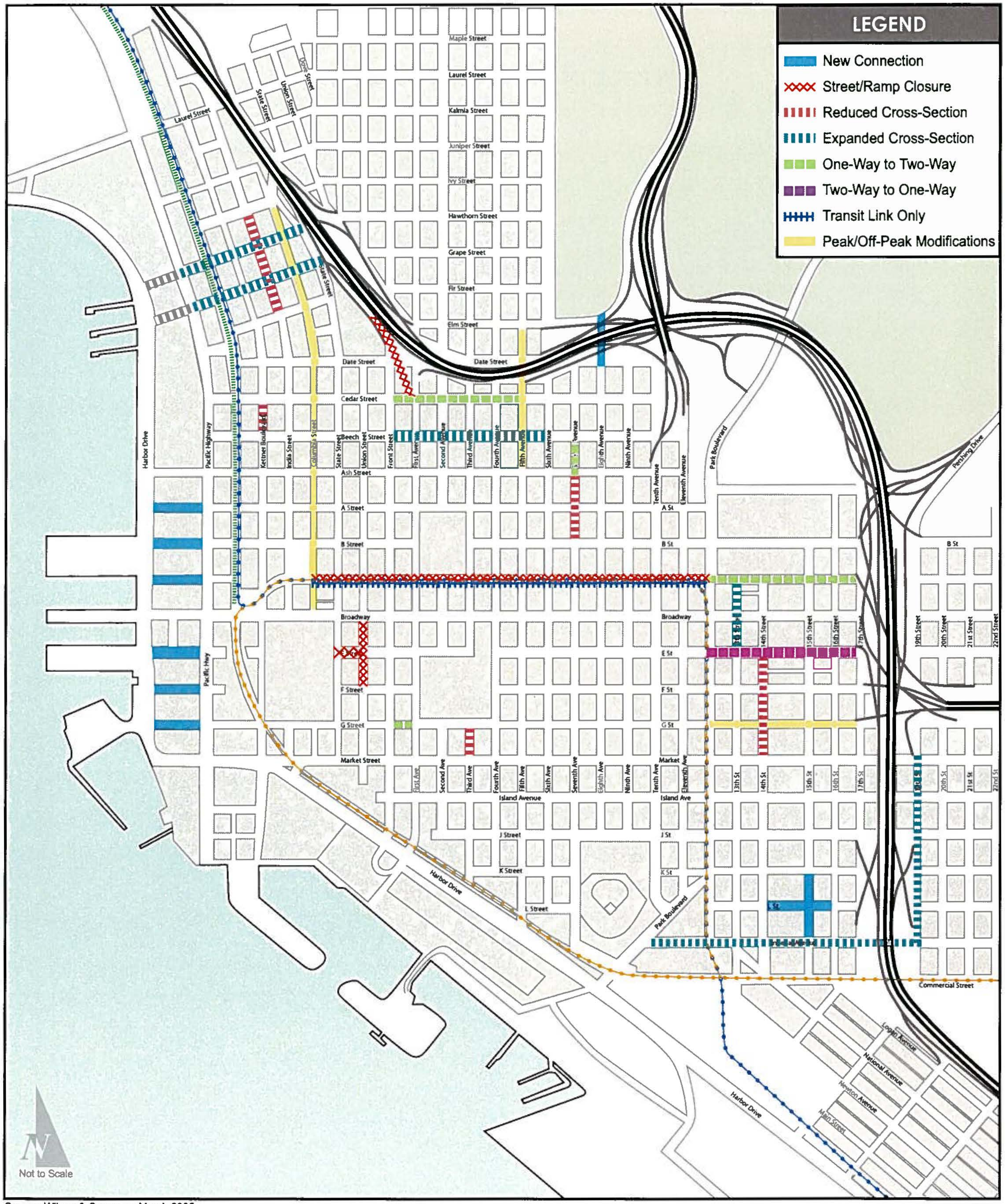


Source: Wilson & Company; March 2005

**Downtown Community Plan**

**WILSON & COMPANY** EIR Transportation, Circulation, and Access Study

Figure 4-7
Future Roadway Network Modifications
With Mitigation

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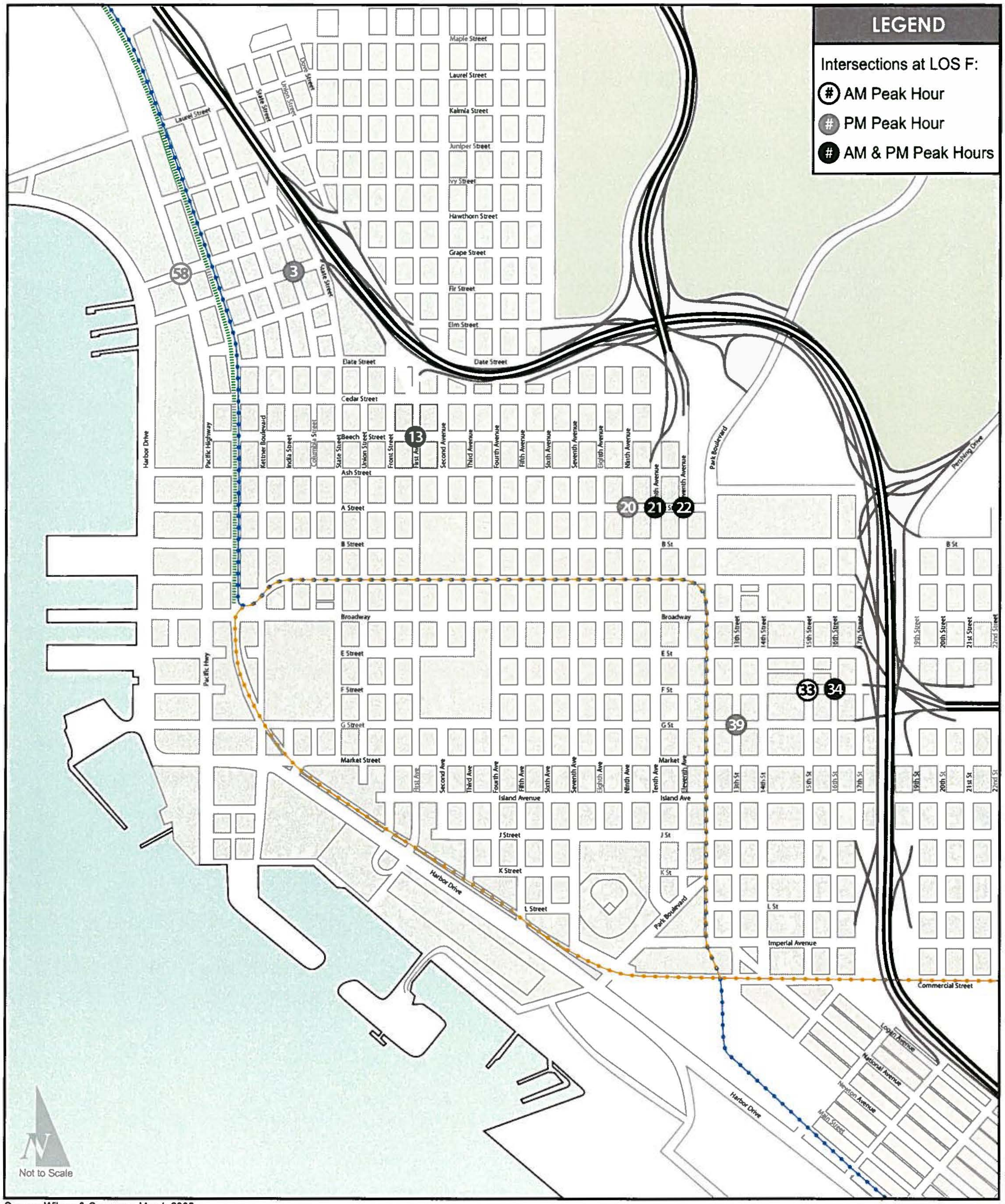


Source: Wilson & Company; March 2005

**Downtown Community Plan**

**WILSON & COMPANY** EIR Transportation, Circulation, and Access Study

Figure 4-8
Intersections with Unmitigated Traffic Impacts
Build-out of Proposed Downtown Community Plan

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including pedestrian and bicycle considerations, design and engineering requirements, and implementation feasibility/timing.

It is also recommended that CCDC conduct a comprehensive downtown-wide assessment of traffic operations at a minimum of every five years. This monitoring program will assist in establishing the timing and need for the identified traffic mitigation measures and related circulation system improvements consistent with downtown's growth and development. This program should also assess traffic in the adjacent neighborhood and assess improvement options, as appropriate.

## 4.9 Potential Impacts Due to Transfer of Development Rights (TDR) Program

The proposed TDR program, while not changing the overall magnitude of planned development in the downtown area, could result in different parcel-specific land use intensities than currently envisioned by the proposed Downtown Community Plan. Depending upon the actual transfer, this could change traffic flow patterns and related demands/impacts as analyzed and identified in the EIR. For the most part, the downtown grid system is effective in moving traffic, with the primary problem areas being the ramps to/from the freeway system. A TDR would not be expected to create new and significantly different traffic impacts compared to those previously identified in this traffic study.

## 4.10 Comparison of Downtown Community Plan and No Project Traffic Performance

This section provides a comparison of traffic impacts under the proposed Downtown Community Plan with the No Project alternative.

### Travel Demand Characteristics

**Table 4.18** provides a trip generation comparison of the proposed Downtown Community Plan and the No Project alternative. Overall, the proposed Community Plan would generate approximately 588,000 (28%) more daily person trips than the No Project alternative. The proposed Community Plan would also generate approximately 298,000 (or about 24%) more vehicle trips on a daily basis that the No Project alternative.

**Table 4.18**
**Downtown Daily Trip Generation Comparisons**
**Proposed Plan vs. No Project**

| | Proposed Plan | No Project | Difference |
|---|---|---|---|
| Person Trips | 2,706,020 | 2,118,030 | +587,990 |
| Vehicle Trips | 1,546,470 | 1,248,440 | +298,030 |

Source: SANDAG; Wilson & Company, 2005

**Tables 4.19** and **4.20** summarize projected downtown trips by mode and the resulting mode share comparisons for both the proposed Community Plan and the No Project alternative.

**Table 4.19**
**Trips By Mode Comparisons**
**Downtown Build-out Conditions**

| | Proposed Plan | | No Project | |
|---|---|---|---|---|
| | **Peak[2]** | **Daily** | **Peak[2]** | **Daily** |
| **SOV[1]** | 421,640 | 1,207,230 | 350,210 | 984,060 |
| **Carpool** | 227,180 | 783,740 | 179,380 | 613,060 |
| **Transit** | 86,440 | 151,610 | 67,310 | 117,080 |
| **Non-Motorized** | 181,880 | 563,440 | 126,970 | 403,830 |
| **Total** | 919,140 | 2,706,020 | 723,870 | 2,118,030 |

Source: SANDAG, December 2004

Notes:
1. SOV = Single Occupant Vehicle
2. Peak = Peak Travel Period of 6:00am – 9:00am and 4:00pm – 7:00pm.

**Table 4.20**
**Mode Share Percentage Comparisons**
**Downtown Build-out Conditions**

| | Proposed Plan | | No Project | |
|---|---|---|---|---|
| | **Peak[2]** | **Daily** | **Peak[2]** | **Daily** |
| **SOV[1]** | 45.9% | 44.6% | 48.4% | 46.5% |
| **Carpool** | 24.9% | 29.0% | 24.8% | 28.9% |
| **Transit** | 9.4% | 5.6% | 9.3% | 5.5% |
| **Non-Motorized** | 19.8% | 20.8% | 17.5% | 19.1% |
| **Total** | 100.0% | 100.0% | 100.0% | 100.0% |

Source: SANDAG, December 2004

Notes:
1. SOV = Single Occupant Vehicle
2. Peak = Peak Travel Period of 6:00am – 9:00am and 4:00pm – 7:00pm.

As shown above, the proposed Downtown Community Plan, when compared with the No Project alternative, would result in increased use of alternative modes as follows:

- 39.5% increase in daily non-motorized trips, including walk, bicycle, and pedicab modes;
- 27.8% increase in daily carpool trips; and
- 29.5% increase in daily transit trips.

**Table 4.21** provides a VMT comparison between the proposed Downtown Community Plan and the No Project alternative.

**Table 4.21**
**VMT Comparison**
**Proposed Plan vs. No Project**

| | Proposed Plan | No Project | Difference |
|---|---|---|---|
| Peak Periods | 297,990 | 259,970 | +38,020 |
| Daily | 863,940 | 658,310 | +205,630 |

Source: SANDAG; Wilson & Company, 2005

As shown, the proposed Downtown Community Plan would result in approximately 35% more daily VMT on the downtown surface street system than the No Project alternative.

### Freeway Segment Performance

**Table 4.22** displays LOS analysis results for study area freeway segments under build-out of the No Project (1992 MEIR) alternative. As shown, freeway segment volumes would generally range from 5,000 to 15,000 ADT lower than under the proposed Downtown Community Plan.

Performance of the downtown area freeway segments under build-out of the proposed Downtown Community Plan and the No Project alternative would generally be similar, with no change in the number of segments operating at LOS F, with the exception of the following:

- I-5; from Pershing to SR-163 – Improves to LOS E in the AM southbound direction under the No Project alternative.
- I-5; from Sixth Avenue to First Avenue – Improves to LOS E in the PM southbound direction under the No Project alternative.

### Freeway Ramp Performance

**Table 4.23** displays freeway LOS analysis results for downtown study area on-ramps and off-ramps under build-out of the No Project alternative.

Performance of the downtown area freeway ramps under build-out of the proposed Downtown Community Plan and No Project alternative would generally be similar, with no change in the number of ramps operating at LOS F, with exception of the following:

- I-5 SB off-ramp to Cedar Street operates at LOS F during the AM peak hour under the No Project alternative. This off-ramp was also to be closed under the proposed Downtown Community Plan.
- I-5 NB on-ramp from 19th Street improves to LOS E during the PM peak hour under the No Project alternative.

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**Table 4.22**
**No Project Alternative**
**Peak Hour Freeway Segment Level of Service**

| Facility | Segment | | Daily ADT | Peak Hour % | | Direction | Lanes | Peak Hour | Direction Split | | Truck | Peak Hour Volume | | V/C | | LOS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From | To | | AM | PM | | | Capacity | AM | PM | Factor | AM | PM | AM | PM | AM | PM |
| I-5 | SR-75 | J St | 237,500 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 10,888 | 8,034 | 1.18 | 0.87 | F | D |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 6,561 | 9,899 | 0.71 | 1.08 | C | F |
| | J St | SR-94 | 236,800 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.624 | 0.448 | 0.98 | 10,856 | 8,011 | 1.18 | 0.87 | F | D |
| | | | | | | SB | 4L, 1A | 9,200 | 0.376 | 0.552 | 0.98 | 6,541 | 9,870 | 0.71 | 1.07 | C | F |
| | SR-94 | Pershing Dr | 249,100 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 11,420 | 8,427 | 1.10 | 0.81 | F | D |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 6,881 | 10,383 | 0.86 | 1.30 | D | F |
| | Pershing Dr | SR-163 | 286,200 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.98 | 13,121 | 9,682 | 1.26 | 0.93 | F | E |
| | | | | | | SB | 4L, 0A | 8,000 | 0.376 | 0.552 | 0.98 | 7,906 | 11,929 | 0.99 | 1.49 | E | F |
| | SR-163 | Sixth Ave | 273,800 | 0.072 | 0.074 | NB | 4L, 2A | 10,400 | 0.624 | 0.448 | 0.979 | 12,565 | 9,272 | 1.21 | 0.89 | F | D |
| | | | | | | SB | 4L, 2A | 10,400 | 0.376 | 0.552 | 0.979 | 7,571 | 11,424 | 0.73 | 1.10 | C | F |
| | Sixth Ave | First Ave | 290,900 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 11,039 | 11,214 | 1.20 | 1.22 | F | F |
| | | | | | | SB | 5L, 1A | 11,200 | 0.484 | 0.49 | 0.979 | 10,355 | 10,774 | 0.92 | 0.96 | E | E |
| | First Ave | Hawthorne St | 243,100 | 0.072 | 0.074 | NB | 4L, 1A | 9,200 | 0.516 | 0.51 | 0.979 | 9,225 | 9,371 | 1.00 | 1.02 | F | F |
| | | | | | | SB | 4L, 0A | 8,000 | 0.484 | 0.49 | 0.979 | 8,653 | 9,004 | 1.08 | 1.13 | F | F |
| SR-163 | I-5 | Washington St | 120,900 | 0.068 | 0.077 | NB | 2L, 0A | 4,000 | 0.311 | 0.665 | 0.985 | 2,596 | 6,285 | 0.65 | 1.57 | C | F |
| | | | | | | SB | 2L, 0A | 4,000 | 0.689 | 0.335 | 0.985 | 5,751 | 3,166 | 1.44 | 0.79 | F | D |
| SR-94 | 17th St | 28th St | 146,500 | 0.073 | 0.084 | EB | 4L, 0A | 8,000 | 0.192 | 0.713 | 0.982 | 2,091 | 8,935 | 0.26 | 1.12 | A | F |
| | | | | | | WB | 4L, 0A | 8,000 | 0.808 | 0.287 | 0.982 | 8,800 | 3,597 | 1.10 | 0.45 | F | B |

Source: SANDAG; Wilson & Company, April 2005

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**Table 4.23**
**No Project Alternative**
**Peak Hour Freeway Ramp Level of Service**

| | From | To | Peak Ramp AM | Hour Volume PM | Lanes | Peak Hour Lane Capacity Per | V/C AM | V/C PM | LOS AM | LOS PM |
|---|---|---|---|---|---|---|---|---|---|---|
| **NB On-Ramps** | 19th Street | NB I-5 | 810 | 1,180 | 1 | 1,200 | 0.68 | 0.98 | C | E |
| | B Street | NB I-5 | 1,560 | 1,440 | 1 | 1,200 | 1.30 | 1.20 | F | F |
| | 11th Ave | NB I-5 / NB SR-163 | 4,320 | 4,200 | 2 | 2,400 | 1.80 | 1.75 | F | F |
| | First Avenue | NB I-5 | 2,540 | 2,800 | 1 | 1,200 | 2.12 | 2.33 | F | F |
| **SB On-Ramps** | Grape Street | SB I-5 | 1,680 | 3,900 | 1 | 1,200 | 1.4 | 3.25 | F | F |
| | First Avenue | SB I-5 | 1,040 | 1,400 | 1 | 1,200 | 0.87 | 1.17 | D | F |
| | Fifth Avenue | SB I-5 | 630 | 1,480 | 1 | 1,200 | 0.53 | 1.23 | B | F |
| | Park Boulevard | SB I-5 | 470 | 780 | 2 | 2,400 | 0.20 | 0.33 | A | A |
| | C Street | SB I-5 | 800 | 980 | 1 | 1,200 | 0.67 | 0.82 | C | D |
| | E Street | SB I-5 | 810 | 650 | 1 | 1,200 | 0.68 | 0.54 | C | B |
| | J Street | SB I-5 | 780 | 620 | 1 | 1,200 | 0.65 | 0.52 | C | B |
| **EB On-Ramps** | G St | EB SR-94 | 960 | 3,770 | 3 | 3,600 | 0.27 | 1.05 | A | F |
| | 19th St | EB SR-94 | 840 | 2,500 | 1 | 1,200 | 0.70 | 2.08 | C | F |
| **NB Off-Ramps** | NB I-5 | J Street | 1,000 | 2,300 | 1 | 1,200 | 0.83 | 1.92 | D | F |
| | NB I-5 | B Street | 1,080 | 770 | 2 | 2,400 | 0.45 | 0.32 | B | A |
| | NB I-5 | Sixth Avenue | 1,900 | 2,340 | 2 | 2,400 | 0.79 | 0.98 | C | E |
| **SB Off-Ramps** | SB I-5 | Cedar Street | 1,600 | 900 | 1 | 1,200 | 1.33 | 0.75 | F | C |
| | SB I-5 | Front Street | 1,880 | 1,200 | 2 | 2,400 | 0.78 | 0.50 | C | B |
| | SB I-5 / SB SR-163 | 10th Ave | 3,510 | 3,220 | 3 | 3,600 | 0.98 | 0.89 | E | D |
| | SB I-5 | B Street | 580 | 500 | 1 | 1,200 | 0.48 | 0.42 | B | B |
| | SB I-5 | 17th Street | 870 | 900 | 1 | 1,200 | 0.73 | 0.75 | C | C |
| | SR-163 | Fourth Ave | 950 | 1,000 | 1 | 1,200 | 0.79 | 0.83 | C | D |
| | SR-163 | Ash St | 1,960 | 1,500 | 2 | 2,400 | 0.82 | 0.63 | D | C |
| | SR-163 | Park Blvd | 460 | 440 | 1 | 1,200 | 0.38 | 0.37 | A | A |
| **WB Off Ramps** | SR-94 | F St | 3,860 | 2,240 | 3 | 3,600 | 1.07 | 0.62 | F | B |

Source: SANDAG; Wilson & Company, April 2005

- SR-94 EB on-ramp from 19th Street improves to LOS C during AM peak hour under the No Project alternative.
- I-5/SR-163 SB off-ramp to 10th Avenue improves to LOS E during AM peak hour under the No Project alternative.
- SR-163 SB off-ramp to Fourth Avenue improves to LOS C under the No Project alternative.

## Intersection Performance

**Table 4.24** displays the downtown study area intersections projected to operate at LOS F during the AM and/or PM peak hours, along with projected average delays under build-out of the No Project alternative.

**Table 4.24**
**No Project Alternative**
**Build-out Peak Hour Intersection LOS**

| Intersection | | | | | Reason Intersection Fails | | Delay | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 1 | Laurel | Harbor | X | X | WB Traffic | EB LT/WB Traffic | 103.2 | 136 |
| 2 | PCH | Hawthorn | X | - | WB Traffic | - | 100.5 | 45.2 |
| 3 | India | Hawthorn | X | - | WB Traffic | - | 95.3 | 5.4 |
| 4 | Columbia | Hawthorn | X | - | WB Traffic | - | 110.8 | 6 |
| 5 | State | Hawthorn | X | - | WB Traffic | - | 147.5 | 13.3 |
| 6 | Harbor | Grape | - | X | - | SB LT Traffic | 13.6 | 242.5 |
| 7 | PCH | Grape | - | X | - | EB Traffic | 16.1 | 85.8 |
| 8 | India | Grape | - | X | - | EB Traffic | 4.7 | 133.6 |
| 9 | Columbia | Grape | - | X | - | EB Traffic | 5 | 165.5 |

Notes:
NB = northbound
SB = southbound
WB = westbound
EB = eastbound
RT = right turn
LT = left turn
T = through

**Table 4.24 (continued)**
**No Project Alternative**
**Build-out Peak Hour Intersection LOS**

| Intersection | | | | | Reason Intersection Fails | | Delay | |
|---|---|---|---|---|---|---|---|---|
| No. | N/S Street | E/W Street | AM | PM | AM | PM | AM | PM |
| 10 | State | Grape | - | X | - | EB Traffic | 4.5 | 164.9 |
| 11 | Sixth | Elm | - | X | - | EB Traffic | 62.8 | 120.8 |
| 12 | First | Cedar | X | X | NB Traffic | NB Traffic | 210.4 | 352.6 |
| 13 | First | Beech | - | X | - | EB/NB Traffic, No Turn Lanes | 65 | 207.5 |
| 14 | Fifth | Beech | - | X | - | EB/NB Traffic, No Turn Lanes | 14.7 | 94.8 |
| 15 | Sixth | Beech | - | X | - | EB/SB Traffic, No Turn Lanes | 16.5 | 86.5 |
| 16 | Second | A | - | X | - | EB Traffic | 36.4 | 109 |
| 17 | Ninth | A | - | X | - | EB/NB Traffic | 8 | 114.5 |
| 18 | 10th | A | X | X | EB/SB Traffic, No Turn Lanes | EB/SB Traffic, No Turn Lanes | 117.3 | 332.8 |
| 19 | 11th | A | X | X | EB/NB Traffic | EB/NB Traffic | 88.3 | 227.3 |
| 20 | Union | Broadway | X | - | EB Traffic | - | 89.3 | 9.8 |
| 21 | Fourth | Broadway | X | - | WB Traffic | - | 94.6 | 59.5 |
| 22 | 15th | F | X | - | WB Traffic | - | 182.3 | 10.6 |
| 23 | 16th | F | X | - | WB/SB Traffic | - | 242.4 | 42 |
| 24 | 16th | G | - | X | - | EB Traffic | 7.6 | 403.5 |

Notes:
NB = northbound
SB = southbound
WB = westbound
EB = eastbound

RT = right turn
LT = left turn
T = through

**Table 4.24 (continued)**
**No Project Alternative**
**Build-out Peak Hour Intersection LOS**

| Intersection | | | | | Reason Intersection Fails | | Delay | |
|---|---|---|---|---|---|---|---|---|
| **No.** | **N/S Street** | **E/W Street** | **AM** | **PM** | **AM** | **PM** | **AM** | **PM** |
| 25 | 17th | G | - | X | - | EB Traffic | 8.8 | 388.6 |
| 26 | 19th | Market | - | X | - | NB Traffic | 12 | 115.5 |
| 27 | 19th | J | - | X | - | NB Traffic | 11.1 | 199.6 |

Source: Wilson & Company, May, 2005

As shown, 27 out of approximately 275 signalized intersections, are projected to operate at LOS F under the No Project alternative. This compares with a total of 62 deficient intersections under build-out of the proposed Downtown Community Plan. Under the No Project alternative, 11 intersections would fail in the AM peak hour; 19 intersections would fail in the PM peak hour; with 4 intersections identified as failing in both the AM and PM peak hours.

# 5.0 Transit Service and Access

This chapter describes transit service and access associated with the proposed Downtown Community Plan. The primary objective of this effort is to review and evaluate existing and planned transit services and demands under the land use intensities and future development patterns contained in the proposed Downtown Community Plan.

The increased densities and mix of land uses included in the proposed Downtown Community Plan will generate additional demands for transit services throughout the downtown area. This in turn, will reduce use of the automobile and overall levels of traffic in the downtown area.

Downtown transit demands were reviewed under both existing and downtown build-out conditions. Comparisons are made between the 1992 Community Plan (No Project Alternative) and the proposed Community Plan to assist in the identification of project benefits and related impacts.

## 5.1 Existing Transit Conditions

The downtown area is served by a rich variety of transit services, including intercity passenger rail, commuter rail, light rail transit, and an extensive network of local bus routes, connecting the downtown area to the rest of the region. Key transit centers serving the downtown include the 12th & Imperial Transfer Station and the Santa Fe Depot, which provide linkages between bus routes, light rail lines, and commuter rail services. The following provides a description of the key transit services in the downtown area:

- **San Diego Trolley -** Two trolley lines run to and through downtown, forming a loop within the downtown area. The Blue Line connects to Mission Valley in the north, and to National City, Chula Vista, and Imperial Beach in the south; ending at the Mexican border in San Ysidro. The 2005 opening of the Blue Line extension through Mission Valley will provide a through connection to San Diego State University and La Mesa. The Orange Line runs from Santee, El Cajon, La Mesa, and Lemon Grove in the northeast and terminates downtown.

- **Coaster Commuter Rail -** The Coaster is a commuter rail service operated by the North County Transit District. The service connects stations located at the Oceanside Transit Center, Carlsbad Village, Carlsbad Poinsettia, Encinitas, Solana Beach, Sorrento Valley, the Old Town Transit Center, and downtown. It uses the historic Santa Fe Depot, located at Columbia and Broadway, as its downtown terminal.

- **Amtrak Intercity Rail** – Amtrak currently provides nine (9) daily intercity connections between downtown San Diego, Los Angeles, and beyond, with additional local stops in Oceanside and Solana Beach.

- **Local/Express Buses -** There are currently 28 MTS bus routes serving downtown with wide service coverage and frequent service linking the downtown area with outlying communities. In addition, peak period express bus service links the downtown area with residential communities along both the I-8 and I-15 corridors.

### Downtown Transit Mode Share

**Table 5.1** displays the number of existing daily transit trips and total daily person trips within (originating and/or destined to) the downtown area. Total person trips incorporate all travel modes including automobile, transit, walk and bicycle trips.

**Table 5.1**
**Existing Downtown Transit Mode Share**

| Trip Purpose/Timeframe | Transit Trips | Total Person Trips | Transit Mode Share |
|---|---|---|---|
| **Work** | 27,800 | 132,650 | 20.9% |
| **Peak Periods** | 30,900 | 391,400 | 7.9% |
| **Total Daily** | 53,550 | 1,226,460 | 4.3% |

Source: SANDAG, February 2005

As shown, over 20% of all downtown work trips currently take place by transit, with an overall transit mode share of 7.9% during peak periods, and 4.3% when considering all downtown person trips during a typical 24 hour period.

## 5.2 Planned Transit Improvements

The proposed Downtown Community Plan assumes future year transit improvements for the San Diego region and the downtown area consistent with the SANDAG Regional Transportation Plan. This assumes implementation of the following regional transit improvements:

- Extension of the Trolley through Mission Valley, including service to San Diego State University;
- Extension of the Trolley northbound along I-5, providing service to University of California, San Diego and University Towne Center via the Mid-Coast corridor;
- New and improved regional transit routes including Bus Rapid Transit (BRT) providing high speed and priority service throughout the region and downtown;
- Improved/new transit stations and centers; and
- Improved local and express bus service levels.

In addition to the regional transit improvements listed above, the analysis for the proposed Downtown Community Plan assumes implementation of a number of additional transit service enhancements focused on the downtown as follows:

- Downtown Bus Rapid Transit (BRT) Services – BRT is a transit service concept currently being studied and implemented by SANDAG across the region. It is a rubber-tire rapid transit system designed to have the look and feel of light rail, offering high capacity service on dedicated lanes or city streets. Proposed BRT routes haven't been determined at this time, but are anticipated to access the downtown core. BRT service would include use of existing parking lanes during peak hours (i.e. no lane reductions). The traffic analysis also assumesas a worst-case scenario that a transit-only lane would be implemented along C Street between Kettner Boulevard and Park Boulevard, requiring closure of the street to through traffic. Further study and refinement of the BRT routes in the downtown area will be undertaken by CCDC and SANDAG.

- Downtown Shuttles – This includes the development of intra-downtown shuttles connecting key activity modes. The downtown shuttle as proposed would connect downtown's neighborhoods, potentially running in a loop along Ash Street, A Street, 13th Street, Market Street, and Kettner Boulevard. A Bay-to-Park shuttle has also been proposed to link Balboa Park to the waterfront. Further study and refinement of the downtown shuttle proposals will be undertaken by CCDC and SANDAG in the future.

- Enhancement of Downtown Trolley Service – SANDAG and MTS are considering options for accommodating 4-car Trolleys through the downtown, and specifically along the C Street corridor. As previously discussed in Chapter 3.0, the current block lengths along C Street limit the Trolley service to three-car trains to avoid the blocking of the cross-streets at the station locations. The increased carry capacity of four-car trains through the downtown is required to serve future peak demands forecasted for the Blue Line in addition to adding flexibility for events at Petco Park and the Convention Center.

  Options under consideration to facilitate the operation of 4-car trains through the downtown include the closure and/or relocation of Trolley stops along C Street, along with expansion of boarding platforms. As a worst-case assumption (specifically relating to potential traffic impacts), the traffic analysis of the proposed Community Plan assumed closure of both Second Avenue and Seventh Avenue at C Street to accommodate an expansion of the Trolley boarding platforms, respectively, to serve 4-car trains. It is important to note that these closures are not specifically proposed as part of the proposed Downtown Community Plan and would be subject to additional study.

**Figure 5-1** displays the future year downtown transit network as assumed under the proposed Downtown Community Plan.

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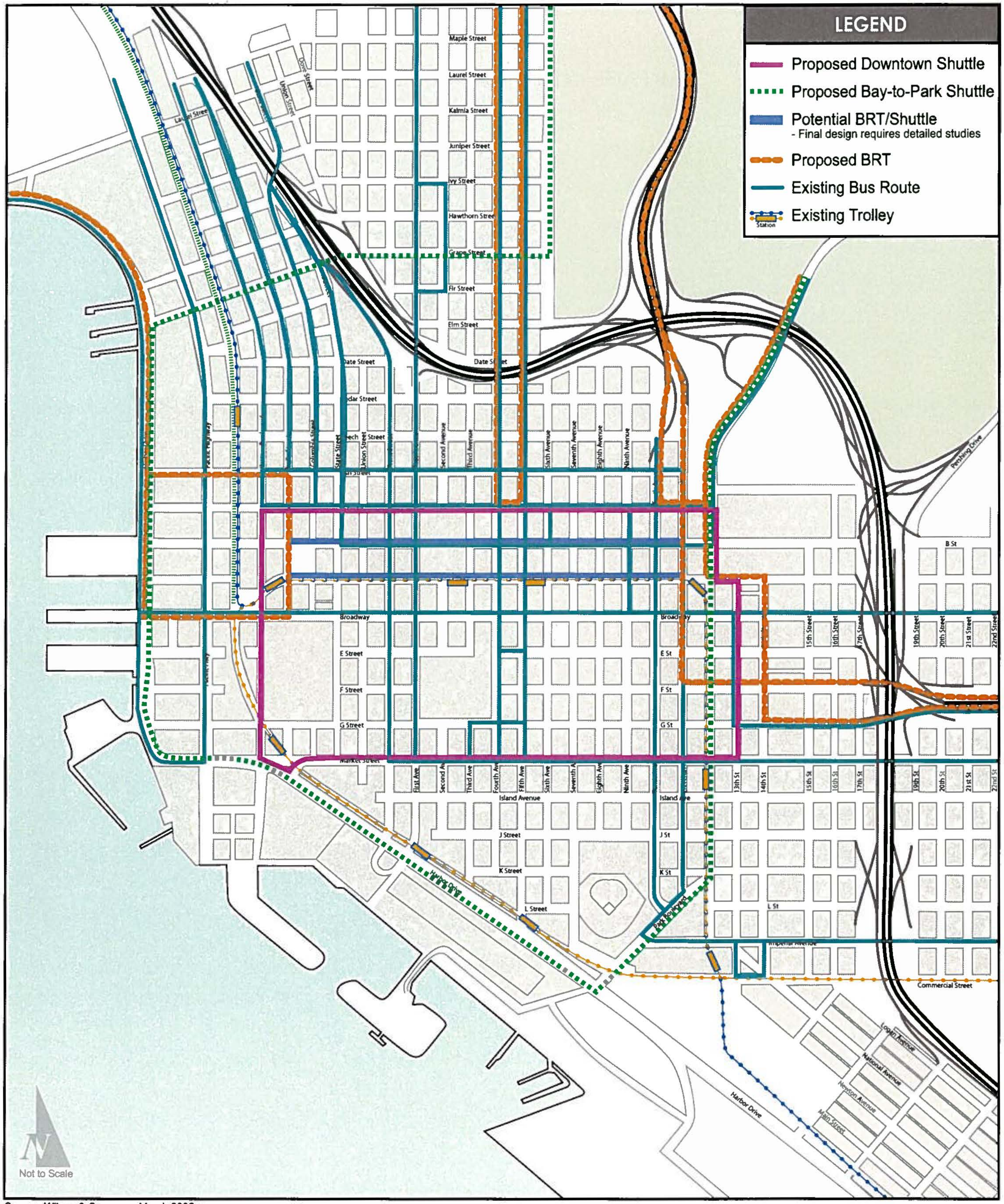


Source: Wilson & Company; March 2005

**Downtown Community Plan**

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Figure 5-1
Future Year Transit Network

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## 5.3 Community Plan Goals and Policies

The transit-related goals and policies included in the proposed Downtown Community Plan focus on providing a safe, convenient, and accessible transit system for the downtown, as follows:

### Goals: Transit System

- Provide land uses to support a flexible, fast, frequent, and safe transit system that provides connections within downtown and beyond.
- Increase transit use among downtown residents, workers, and visitors.

### Policies: Transit System

- Locate the highest intensity of development in or near trolley corridors to maximize adjacency of people, activity, and transit accessibility.
- Work with other agencies to support planned street improvements to accommodate transit.
- Coordinate with the transit agency and other appropriate organizations to implement:
  - Internal shuttle service for local trips, connecting key downtown locations with the wider transit network, and using smaller, cleaner vehicles for flexible neighborhood trips.
  - BRT service, improving the commuter and long-distance transit network with state-of-the-art technology to provide more frequent and faster trips.
  - Bus service modifications to improve service, and to increase transit accessibility when the internal shuttle and BRT services begin.
- Work with all relevant agencies to eliminate or mitigate adverse impacts of freight train traffic on adjacent pedestrians, uses, and residents. Impacts include blocked intersections and horn noise. If impact mitigation strategies fail, reconsider the feasibility of undergrounding freight lines through all strategic portions of downtown.
- Enhance streetscapes within transit corridors to increase attractiveness for users and promote shared transit, pedestrian, and cyclist use.
- Encourage SANDAG to develop real time information and signage systems for all downtown transit options
- Coordinate transit station design with the transit agency to ensure inviting, enjoyable places, with shade, public art, landscaping, and memorable design features reflective of the surrounding environment.
- Cooperate with the transit agency on public programs and campaigns to increase transit use for various types of trips – work, shopping, entertainment, etc.

- Coordinate with regional rail and transit planners to monitor intercity passenger and freight concepts and potential impacts on downtown

## 5.4 Future Year Transit Demands

The SANDAG Regional Transportation Model was utilized to forecast transit demands under build-out of the proposed Downtown Community Plan. **Table 5.2** displays projected transit ridership and resulting transit mode share in the downtown area under build-out of the proposed Downtown Community Plan assuming the downtown transit improvements discussed previously.

**Table 5.2**
**Projected Transit Ridership**
**Proposed Downtown Community Plan**

| Trip Purpose/Timeframe | Transit Trips | Total Person Trips | Transit Mode Share |
|---|---|---|---|
| **Work** | 64,300 | 265,800 | 24.2% |
| **Peak Periods** | 84,100 | 894,100 | 9.4% |
| **Total Daily** | 151,600 | 2,706,000 | 5.6% |

Source: SANDAG, February 2005

As shown above, build-out of the proposed Downtown Community Plan would result in approximately 152,000 daily transit trips in the downtown area, an increase of about 98,000 transit trips or 185% over existing conditions. The proposed Downtown Community Plan would also result in approximately 53,200 additional peak period transit trips and 36,500 additional work-related transit trips, an increase of 170% and 130% respectively, when compared with existing conditions.

Under the proposed Downtown Community Plan, transit would serve approximately 25% all downtown work trips, 10% of all peak period trips, and 6% of all trips to/from and within the downtown area.

## 5.5 Community Plan Transit Impacts

This section discusses the potential for transit-related impacts associated with build-out of the proposed Downtown Community Plan. For the purpose of this EIR, potential impacts relating to transit would be considered significant if one or more of the following were to occur:

- The capacity and service capabilities of existing and planned transit services would be exceeded under cumulative build-out conditions; or
- Key features of planned and assumed transit services were to result in the service degradation of, and/or conflicts, with other transportation operations in the downtown area, including adjacent roadway and pedestrian facilities.

The proposed Downtown Community Plan assumes a high level of downtown transit service, supported by increased development intensities and transit supportive goals and policies. The potential for significant transit related impacts is discussed below:

1. **Potential capacity and service impacts** - The growth and development of downtown as envisioned by the proposed Downtown Community Plan will result in a tripling of transit ridership in the downtown. As noted previously, current SANDAG plans call for a variety of new and enhanced transit services in the downtown area including:

    - More frequent regional transit services, including the Trolley and the Coaster commuter rail;
    - New Bus Rapid Transit (BRT) routes;
    - Downtown shuttle routes; and
    - Improved local and express bus service levels

    A capacity assessment of existing and proposed transit service levels in the downtown area, conducted by SANDAG, indicated adequate future transit system capacity to meet the projected transit ridership demands. **Table 5.3** summarizes the results of the future year transit capacity assessment. The assessment focused on existing and planned transit services across a cordon line surrounding the downtown area and reviewed transit service capacity to/from the downtown area on a peak hour and peak directional basis. Capacity is defined as the number of riders that can reasonably be served via existing/planned transit services.

**Table 5.3**
**Future Downtown Cordon Line Transit Capacity Assessment**

| | Existing | Future Planned (Mobility 2030) |
|---|---|---|
| **Peak Hour/Peak Direction Capacity** | 11,100 | 20,800 |
| **Peak Hour/Peak Direction Demand** | 6,800 | 18,960 |
| **Available Capacity** | 4,300 | 1,840 |

Source: SANDAG/Wilson & Co., June 2005

As shown above, it is estimated that existing transit routes (Trolley, Coaster, local/express bus) providing peak hour service to/from downtown have the capacity to accommodate approximately 40% more trips (estimated available capacity of 4,300 out of 11,100). Future planned transit improvements will increase the capacity of service to/from downtown by approximately 75% (from 11,100 to 20,800 peak hour trips). Peak hour/peak directional transit demands will triple (from 6,800 to 18,960 trips) under future conditions, but would be adequately served via the planned increase in transit service capacity, with a remaining excess available capacity of 1,840.

In summary, the available capacity associated with existing transit services in combination with future plans will ensure the ability to adequately serve the projected increases in transit demand under build-out of the proposed Community Plan.

Therefore, no significant impacts related to transit capacity service levels are anticipated with build-out of the proposed Downtown Community Plan. It is recommended, however, that SANDAG and MTS continue to monitor downtown ridership on an on-going basis and pursue the provision of planned transit improvements in a timely basis.

2. **Potential traffic related impacts** – Potential affects on downtown traffic operations associated with increased transit service frequencies are discussed below:

   - Increased service frequencies at rail crossings – The planned increase in Trolley service frequencies will result in additional train crossings at existing gated crossing locations including Park Boulevard, Fifth Avenue, First Avenue, Front Street, and Broadway. Current crossings at those locations occur on the order of every 4 to 5 minutes during peak hours, and could be reduced to as much as one-half as Trolley frequencies are doubled in the future. While this could result in additional traffic delays at these crossing locations, in general the delays are not anticipated to be significant. Gate down times are generally less than 20-30 seconds per Trolley crossing and on-going signal timing adjustments can minimize delays. To ensure safety and minimum impacts to traffic operations, it is recommended that traffic levels and delays at the downtown gated Trolley crossings be monitored on an on-going basis, and signal timing adjustments and related improvements implemented as required, consistent with SANDAG, MTS, and City of San Diego standards.
   - Reduced roadway capacity due to dedicated transit lanes – Implementation of efficient BRT service in the downtown could require full or partial dedication of a number of travel lanes along downtown streets for the exclusive use of BRT vehicles. As a worst-case scenario, the proposed Plan includes closure of C Street to traffic between Kettner Boulevard and Park Boulevard for use as a dedicated transit-way. BRT service along B Street would include use of existing parking lanes during peak travel periods. The traffic analysis of the proposed Community Plan has not identified any direct impacts to traffic levels of service with the closure of C Street. This is due much in fact to the capacity and alternative routings provided by the local grid street system, and the fact that the current traffic routing on C Street is discontinuous. Local access to driveways and parking structures, however, could likely be affected and would need to be addressed as part of any plan to close C Street. Prior to the closure of C Street to vehicular traffic, it is recommended that CCDC and the City of San Diego review and adequately provide for local traffic access requirements of adjacent properties.

## 5.6 Comparison with No Project Conditions

**Table 5.4** provides a comparison of transit ridership between build-out of the proposed Downtown Community Plan and build-out of the No Project alternative.

**Table 5.4**
**Daily Transit Ridership Comparisons (Build-out Conditions)**
**Proposed Plan vs. No Project**

| | Transit Trips | | Difference |
|---|---|---|---|
| | Proposed Plan | No Project | |
| **Work** | 64,300 | 54,100 | 10,200 |
| **Peak Periods** | 84,100 | 65,500 | 18,600 |
| **Total Daily** | 151,600 | 117,000 | 34,600 |

Source: SANDAG, February 2005

As shown, transit ridership under the proposed Downtown Community Plan would result in approximately 35,000 more total transit riders in the downtown area than under the No Project alternative, a difference of about 30%. About 10,000 more work related transit trips would occur under the proposed Downtown Community Plan as compared to the No Project alternative.

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# 6.0 Non-Motorized (Pedestrian, Bicycle, and Pedicab) Access and Circulation

The downtown environment includes a wide variety of land uses in close proximity, providing numerous opportunities for non-motorized travel including walk, bicycle, and pedicab modes. The proposed Downtown Community Plan places a priority on promoting non-motorized travel and enhancing the pedestrian environment. As envisioned by the Plan, downtown residents, as well as employees and visitors, will be better able to accomplish many of their travel requirements without the need for an automobile.

This chapter reviews non-motorized demands and circulation/access requirements associated with the proposed Downtown Community Plan.

## 6.1 Non-Motorized Circulation and Access Facilities

Currently, key areas of pedestrian activity in the downtown area occur in and around Horton Plaza, the governmental/financial districts along B and C Streets, and throughout the Gaslamp Quarter. Broadway also serves as a significant pedestrian corridor, with the concentration of bus service along the street, and interaction among the business and retail/commercial activities in the area.

**Table 6.1** displays the number of existing non-motorized trips and total daily person trips within the downtown area during peak period and daily timeframes. As shown, over 15% of all downtown trips currently take place via non-motorized modes (walk, bicycle, pedicab).

**Table 6.1**
**Existing Downtown Non-Motorized Trips**

| Time Frame | Non Motorized Trips | Total Person Trips | Non Motorized Mode Share |
|---|---|---|---|
| **Peak Periods** | 56,100 | 391,400 | 14.3% |
| **Total Daily** | 192,240 | 1,226,460 | 15.6% |

Source: SANDAG, February 2005

With growth and development of the downtown, pedestrian activity will greatly increase throughout the entire downtown area. The additional residential development will provide for greater pedestrian activity throughout all hours of the day in many areas of the downtown currently lacking such activity.

The proposed Downtown Community Plan identifies Pedestrian Priority Zones, as shown in **Figure 6-1**. These are places with a variety of land use types (neighborhood centers, active streets, the Civic/core, and areas around major transit stops) which are likely to have increased concentrations of pedestrians. Within these areas, it will be important to ensure adequate facilities (sidewalks, crosswalks, and intersection pedestrian signal

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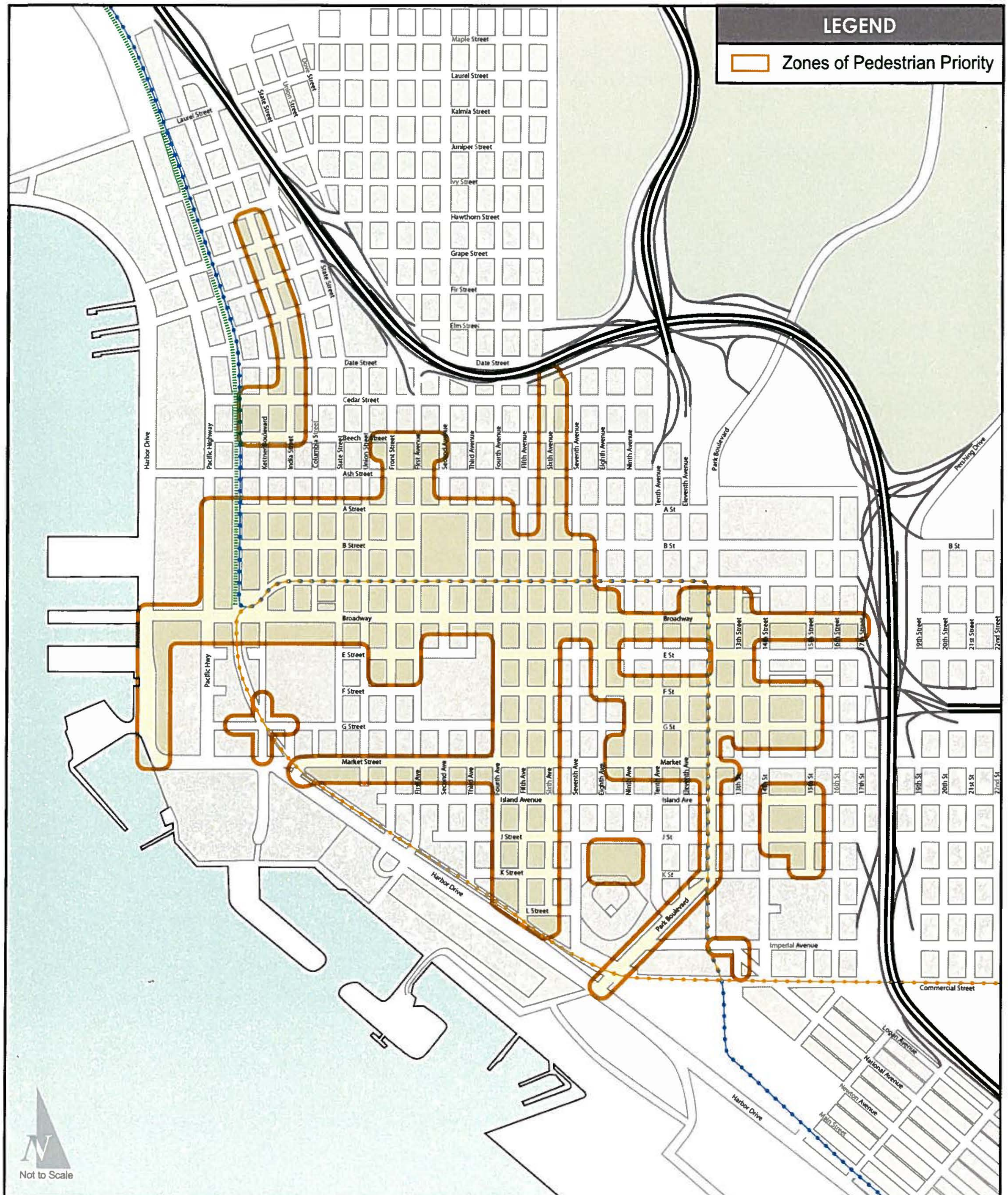


Source: CCDC; Draft Downtown Community Plan; June 2005

**Downtown Community Plan**

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Figure 6-1
Pedestrian Priority Zones

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phasing) to ensure efficient and convenient pedestrian movements. Other key pedestrian features of the proposed Downtown Community Plan include:

- Enhanced sidewalks along Broadway, recognizing the roadway's main street nature; and
- Reinforcement of the role of Park Boulevard as a key pedestrian link.

The downtown area also currently includes a significant number of bicycle and pedicab trips, both of which will increase significantly in the future. Bicycle trips currently take place throughout the downtown area and utilize the existing roadway system with no specifically designated routes or facilities. The growth of residential land uses will likely increase bicycle travel, especially for recreational uses. The bicycle will also be a viable option for many commuters to/from downtown work locations.

The proposed Downtown Community Plan establishes a network of bike facilities, with connections to the waterfront, regional bike trails, and surrounding neighborhoods. The proposed bicycle facilities are located on the streets that are likely to be best suited to bicycles. These are streets that offer north/south and east/west connections but are not freeway couplets and also that connect to the waterfront and important downtown activity centers (including shopping and parks).

Bike facilities are proposed on Pacific Highway (Class II), North Harbor Drive (shared path), Harbor Drive (shared path), and 3rd Avenue, portions of Island, K and Commercial Streets (Class II). The proposed bike facilities create north/south and east/west connections to adjacent neighborhoods as shown on **Figure 6-2**. Third Avenue north of Broadway is two-way and connects to Uptown, satisfying the need for a central north/south connection. An additional north/south connection has been made via Little Italy (on State & Columbia Streets). East/west connections to Sherman Heights (via Island & Commercial, in combination with Park Boulevard and K Street), offer options for non-motorized transportation to downtown amenities. The bike facilities are also intended to work together to provide access to parks and activity centers throughout downtown, including the proposed parks in East Village and the North Embarcadero.

Additionally, provision of bicycle storage in residential units, and provision of bicycle parking for non-residential uses will be required as part of the Planned District Ordinance.

Pedicabs will continue to be most prevalent in areas of the downtown frequented by tourists and visitors, including Seaport Village, the Convention Center, the Gaslamp Quarter, the Ballpark area, as well as major hotels throughout the downtown area.

## 6.2 Community Plan Goals and Policies

The proposed Downtown Community Plan includes the following goals and policies relating to pedestrian and bicycle travel:

### Goals: Pedestrian and Bicycle Movement

- Develop a cohesive and attractive walking and bicycle system within downtown that provides links within the area and to surrounding neighborhoods.
- Facilitate development of mixed-use neighborhoods, with open spaces, services, and retail within convenient walking distance of residents, to maximize opportunities for walking.

### Policies: Pedestrian and Bicycle Movement

- Create a system of bikeways (as shown in Figure 6-2), and encourage regional links such as the San Diego Bayshore Bikeway.
- Use traffic calming measures to control speeds on all freeway couplets – 1st/2nd, 10th/11th, F/G, 4th/5th – while optimizing traffic volumes during peak hour.
- Require bike racks and locking systems in all residential projects, multi-tenant retail and office projects, and governmental and institutional uses.
- In Pedestrian Priority Zones (Figure 6-1):
  - Undertake strategic streetscape improvements (such as sidewalk widening, bulbouts, enhanced lighting and signage);
  - Lengthen traffic signal walk times for pedestrians, and explore feasibility of "all walk" signalization at intersections with heavy pedestrian flow; and
  - Accept lower levels of automobile traffic level of service.

## 6.3 Non-Motorized Travel Demands

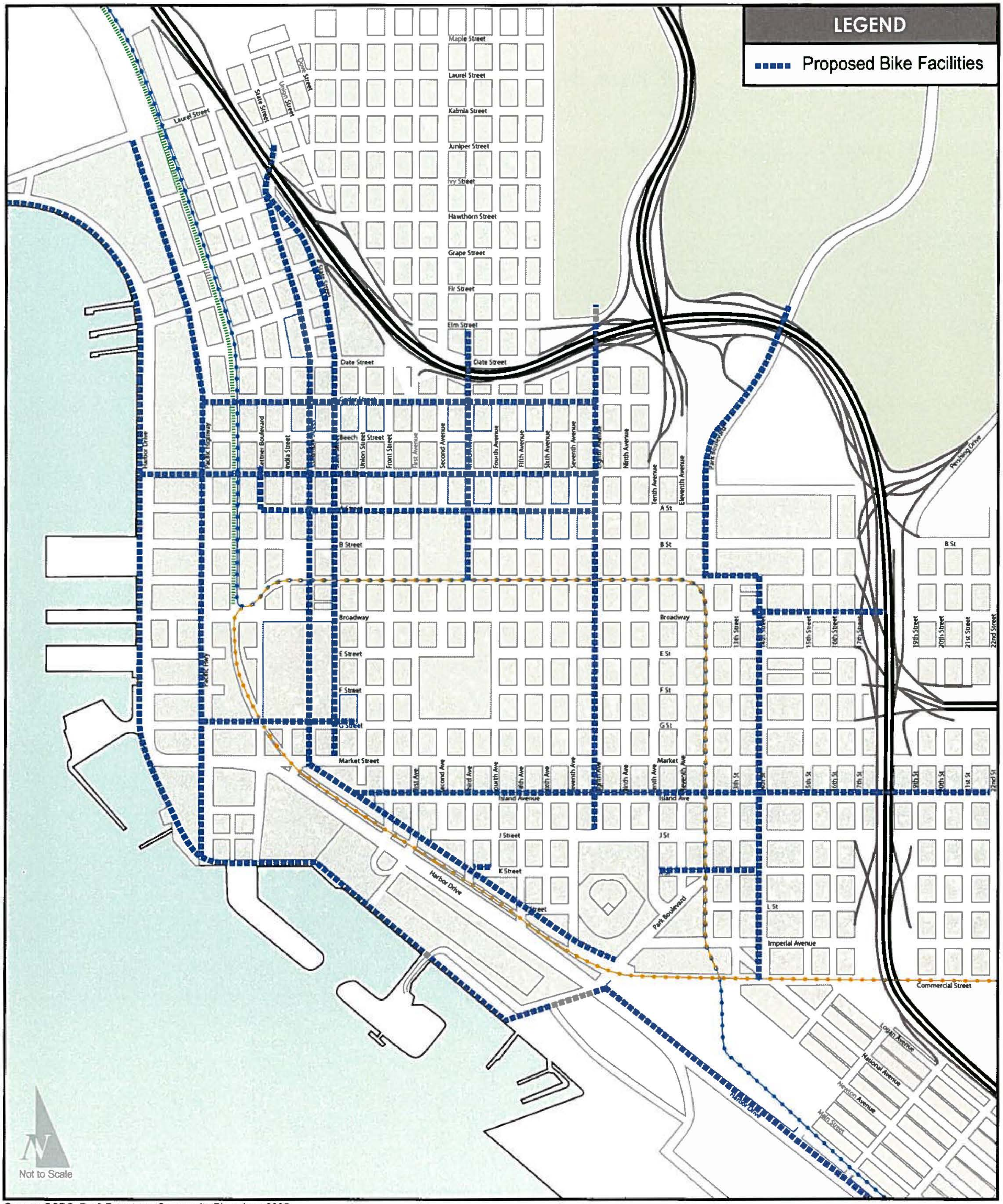
**Table 6.2** displays projected non-motorized (walk, bicycle and pedicab) trips in the downtown area under build-out of the proposed Downtown Community Plan.

**Table 6.2**
**Projected Non-Motorized Trips**
**Proposed Community Plan**
**Build-out Conditions**

| Time Frame | Non-Motorized Trips | Total Person Trips | Non-Motorized Mode Share |
|---|---|---|---|
| **Peak Period** | 176,900 | 894,100 | 19.8% |
| **Total Daily** | 563,400 | 2,706,000 | 20.8% |

Source: SANDAG, February 2005

As shown above, build-out of the proposed Community Plan will result in approximately 563,500 non-motorized trips on a daily basis, an increase of 371,200 trips or 200 percent over existing conditions. Non-motorized trips will account for over 20% of all trips, compared to 15% under existing conditions.




Source: CCDC; Draft Downtown Community Plan; June 2005

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Figure 6-2
Proposed Downtown Bike Facilities

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## 6.4 Community Plan Non-Motorized Impacts

For the purposes of this EIR, pedestrian, bicycle and pedicab circulation impacts would be considered significant if existing and planned non-motorized (pedestrian, bicycle, and pedicab) facilities affected by build-out of the proposed Downtown Community Plan were found to be inadequate to handle projected demands, due to either limited capacity or potential conflicts with other travel modes, such as vehicular traffic and the Trolley.

Non-motorized trip activity in the downtown area is projected to almost triple over existing levels under build-out of the proposed Downtown Community Plan. The potential for significant impacts associated with this increase in non-motorized trip activity is discussed below:

1. Pedestrian safety - One of the key indicators of the quality of the pedestrian environment is the degree to which one may safely cross the street. Intersection width, signalization, crosswalk width, and corner area/clear zone all contribute to the quality of the pedestrian experience. Trolley crossing points can pose particular problems especially as Trolley service frequencies are increased in the future.

   As the downtown grows and develops, it is fully recognized by the City of San Diego that all, if not most, intersections within the downtown grid will need to be signalized with proper provision for pedestrian crossings. The City of San Diego Street Design Manual provides specific criteria and design guidance to ensure the provision of safe pedestrian facilities including intersection cross-walks and sidewalks. As the downtown grows and develops, conformance with the City's pedestrian design requirements will ensure the provision of safe and adequate sidewalk widths in areas of concentrated future pedestrian activity, in conjunction with pedestrian plazas and walkways. Implementation of streetscape improvements, as proposed in the Community Plan's Pedestrian Priority Zones, including sidewalk widening, bulbouts, enhanced lighting and signage, will greatly enhance the pedestrian environment and ensure a focus on pedestrian safety.

2. Bicycle and vehicular conflicts - Additional bicycle trip activity will occur as the downtown grows and develops. Bicycle trips for both commuting and recreational purposes can be expected to increase with the growth in residential development. The proposed Downtown Community Plan designates a system of bicycle facilities providing both local access to downtown land uses and key linkages with regional facilities. The Plan provides for designated bicycle facilities along key streets consistent with the Plan's street typology to ensure safety and compatibility with individual street characteristics and planned cross-sections. Further specifications of bicycle facility type (either Class II bike lanes or Class III bike routes) will be conducted in conjunction with the City of San Diego as the downtown grows and develops. Implementation of the Plan's

policies and designed bikeway system in the downtown area will be conducted, in conjunction with the City of San Diego.

3. Pedicab conflicts with pedestrian and vehicular traffic - Pedicab activity will increase in a number of downtown areas including the Gaslamp Quarter, the Ballpark, Seaport Village, and the Convention Center. Potential conflicts with both vehicular and pedestrian traffic could occur without proper control and designation of pedicab loading and unloading facilities.

   The City of San Diego Traffic Engineering Division, along with the Police Department, currently monitor and enforce pedicab activity and restrictions in the downtown area. The Event Transportation Management Plan, as prepared for the Ballpark, addressed the need for circulation restrictions and controls on pedicabs activity in the vicinity of the Ballpark. As the downtown continues to develop, it is the policy of the City to continue to monitor pedicab activity and develop and enforce various restrictions to ensure safe operation and minimize potential conflicts with pedestrians and vehicular traffic.

In summary, adequate plans and policies have been developed by the City of San Diego to ensure the implementation of adequate non-motorized (pedestrian, bicycle, and pedicab) facilities. As the downtown grows and develops, conformance with City plans and policies, in conjunction with the goals and policies of the Community Plan, will promote and provide for an increase in non-motorized travel in the downtown environment.

Therefore, based upon the above, no significant impacts related to non-motorized travel (walk, bicycle, and pedicab) are anticipated with build-out of the proposed Downtown Community Plan. It is recommended, however, that CCDC and the City of San Diego continue to monitor non-motorized trip activity and pursue the provision of facilities as necessary.

## 6.5 Comparison with No Project Conditions

**Table 6.3** provides a comparison of non-motorized trip projections between the proposed Downtown Community Plan and the No Project alternative.

**Table 6.3**
**Daily Non-Motorized Trip Comparisons**
**Proposed Plan vs. No Project**

| | Non-Motorized Trips | | Difference |
|---|---|---|---|
| | Proposed Plan | No Project | |
| Peak Period | 176,900 | 123,500 | 53,400 |
| Total Daily | 563,400 | 403,900 | 159,500 |

Source: SANDAG, February 2005

As shown, the proposed Downtown Community Plan would generate a greater share of non-motorized trips under future year build-out conditions, an increase of 160,000 daily trips or 40% over the No Project alternative.

# 7.0 Parking Assessment

This chapter provides an assessment of future parking needs associated with build-out of the proposed Downtown Community Plan.

The methodology for conducting this assessment included the following key steps:

1. Research and development of parking demand ratios representative of local downtown conditions.

2. Application of estimated parking demand ratios to both existing land uses and the future growth in downtown land uses to determine associated parking needs.

3. Identification of the future parking requirements associated with build-out of proposed Downtown Community Plan.

## 7.1 Parking Demand Ratios

Research was conducted to identify applicable downtown parking demand ratios from medium to large cities across the country. Most sources and examples of parking demand ratios focus on zoning requirements which are typically not indicative of true parking demands. Zoning codes tend to reflect various policies and strategies aimed at either limiting the expanse of downtown parking to promote use of alternative transportation modes, or creating parking minimums to ensure parking options and the economic vitality of downtowns.

Auto use is generally the key variable in estimating parking demand. For the most part, documented parking standards tend to focus on suburban locations where high auto usage results in higher levels of parking demand. In downtowns, conditions are typically different, resulting in less auto use. Because all downtowns are different (variations in land use, availability of transportation modes and accessibility), a single downtown industry standard or parking demand factor does not exist.

For the purposes of this assessment, baseline parking demand ratios typically associated with high auto use suburban locations were identified from sources such as the Urban Land Institute (ULI), the Institute of Traffic Engineers (ITE), and the City of San Diego Municipal Code. These baseline parking demand ratios were then adjusted to reflect local downtown San Diego conditions relating to the utilization of transit and non-motorized modes and the mixed-use development patterns.

Downtown specific parking demand ratios were developed for office, retail, hotel, and residential land uses under average weekday conditions. It is recognized that other types of land use exist in the downtown area, including public uses such as the Convention Center. Parking demand ratios for public uses can vary significantly depending on the specific characteristics of the use. Estimating parking demands for these uses would require detailed data collection and study beyond the scope of the current effort. As a result, the parking analysis of the proposed Downtown Community Plan focuses on the primary downtown land use types including office, retail, hotel, and residential.

## Office

**Table 7.1** displays the basis for calculation of an *office parking demand ratio* based upon the City of San Diego Municipal Code, transportation industry parking studies, and accounting for transit utilization and mixed-use developments under future conditions in downtown San Diego.

**Table 7.1**
**Determination of an Office Parking Demand Ratio**

| | | Source |
|---|---|---|
| Peak Office Parking Demand (90th percentile ratio - for suburban location) | 3.3 / 1,000 sf | City of San Diego Municipal Code (Minimum Required Outside a Transit Area) |
| Reduction for transit and non-motorized use | -35% (-1.2 / 1,000 sf) | SANDAG Transportation Model (January, 2005) estimates 35% transit and non-motorized trip-making for work trips under the Proposed Plan Reference Tables 5.2 and 6.2 |
| Reduction for mixed-use | N/A | N/A |
| ***Office* Parking Demand Ratio** | **2.1 / 1,000 sf** | |

Source: Wilson & Company February, 2005

As shown above, a parking demand ratio of 2.1 / 1000 sq. ft. was developed to reflect future parking demand for office uses in downtown San Diego.

## Retail

**Table 7.2** displays the basis for calculation of a *Retail parking demand ratio* based upon the City of San Diego Municipal Code, transportation industry parking studies and accounting for transit utilization and mixed-use developments under future conditions in downtown San Diego.

**Table 7.2**
**Determination of a Retail Parking Demand Ratio**

| | | Source / Justification |
|---|---|---|
| Peak Shopping Center Parking Demand (90th percentile ratio - for suburban location) | 5.0 / 1,000 sf | City of San Diego Municipal Code (Minimum Required Outside a Transit Area) |
| Reduction for transit and non-motorized use | -25% (-1.25 / 1,000 sf) | Since transit and non-motorized mode shares are typically lower for non-work trips than for work trips, a more conservative reduction percentage was applied to retail uses compared with office uses. [See Table 7.1] |
| Reduction for mixed-use* | -40% (-1.5 / 1,000 sf) | The Urban Land Institute's ***Shared Parking,*** 1983 |
| ***Retail* Parking Demand Ratio** | **2.3 / 1,000 sf** | |

Source: Wilson & Company February, 2005

Note:

* The mixed-use reduction percentage is applied to estimated parking demand after accounting for transit and non-motorized travel (i.e. 5 spaces per 1,000 sq. ft. x -25% = 3.75 spaces / 1,000 sq. ft ; then 3.75 / 1,000 sq..ft. x -40% = 2.75 / 1,000 sq.ft.).

As shown, a parking demand ratio of 2.3 / 1,000 sq. ft. was developed to reflect future parking demand for Retail uses in the downtown environment.

## Hotel

**Table 7.3** displays the basis for calculation of a Hotel parking demand ratio based upon transportation industry parking studies and accounting for transit utilization and mixed – use developments under future conditions in the downtown area.

**Table 7.3**
**Determination of a Hotel Parking Demand Ratio**

| | | Source / Justification |
|---|---|---|
| Peak Hotel Parking Demand (85th percentile ratio - for suburban locations, weekday) | 0.8 / room | Institute of Transportation Engineers ***Parking Generation*** 3rd Edition, 2004 |
| Reduction for transit and non-motorized use | -35% (-0.28 / room) | Hotel patrons will have many opportunities to engage in downtown activities within walking distance, thereby reducing auto travel. |
| Reduction for mixed-use | N/A | N/A |
| ***Hotel* Parking Demand Ratio** | **0.5 / room** | |

Source: Wilson & Company February, 2005

As shown above, a parking demand ratio of 0.5 / room was developed to reflect future parking demand for hotel uses in the downtown environment.

### Residential

**Table 7.4** displays the basis for calculation of a *Residential parking demand ratio* based upon the City of San Diego Municipal Code, transportation industry parking studies, and accounting for transit utilization under future conditions in the Downtown.

**Table 7.4**
**Determination of a Residential Parking Demand Ratio**

| | | Source / Justification |
|---|---|---|
| Peak Residential Parking Demand (85th percentile ratio - for high-rise apartment; non downtown location) | 1.75/Dwelling Unit | City of San Diego Municipal Code (Basic 1 & 2 bedroom average) |
| Reduction for transit and non-motorized use | -25% (-0.4 / dwelling unit) | SANDAG Transportation Model (January, 2005) estimates 25% transit and non-motorized trip making under the Proposed Plan |
| Reduction for mixed-use | N/A | N/A |
| ***Residential* Parking Demand Ratio** | **1.35 / dwelling unit** | |

Source: Wilson & Company February, 2005

As shown above, a parking demand ratio of 1.35 / dwelling unit was developed to reflect future parking demand for downtown San Diego residential uses.

## 7.2 Existing Conditions

The inventory of parking in downtown San Diego is a dynamic mix of public and private spaces, on-street and off-street spaces, and spaces in surface lots and in parking garages. Redevelopment activity, including demolition of buildings and development of interim surface parking lots, as well as conversion of surface lots into buildings, can have an effect on the amount and availability of parking in the downtown area at any given time.

### Current Parking Supply

The Centre City Development Corporation (CCDC) conducted an inventory of parking supply in Downtown in August 2003, which provided the basis for estimating the current downtown parking supply. The parking inventory summarized the number of parking spaces by parking type, including on-street parking, public off-street, and private off-street. Public parking includes both on-street and off-street lots and structures which are readily available for public use. Private parking is restricted to specific property owners and/or leasees, and is typically associated with residential uses. **Table 7.5** summarizes the results of the CCDC August 2003 parking inventory.

**Table 7.5**
**Current Inventory of Downtown Parking Supply**

| Type | | Number of Spaces |
|---|---|---|
| Public Parking | On-Street Parking | 6,990 |
| | Off-Street Public Parking | 34,230 |
| | **Total Public Parking** | **41,220** |
| Private Parking | Off-Street Private Parking | 15,660 |
| | **Public and Private Parking Total** | **56,880** |

Source: CCDC, August 2003

As shown, the estimated supply of parking in downtown San Diego is approximately 57,000 spaces, with 41,220 or 69% of the inventory being available to the public.

## Current Parking Demand

An estimate of parking demand under current conditions was developed by applying the previously developed parking demands ratios to the primary existing downtown land uses. **Table 7.6** displays a summary of the primary downtown land uses under existing conditions, excluding public/institutional uses for the reasons stated previously.

**Table 7.6**
**Existing Downtown Land Uses**

| Current Land Use | Quantity |
|---|---|
| Office (s.f) | 13,144,000 |
| Retail (s.f.) | 2,658,000 |
| Hotel (rooms) | 8,800 |
| Residential (units) | 14,600 |

Source: Downtown Community Plan, June 2005

**Table 7.7** summarizes existing parking demand by land use category, as well as the total existing parking demand for the downtown area under average weekday conditions.

**Table 7.7**
**Existing Downtown Parking Demand**
**(Average Weekday Conditions)**

| Land Use | Quantity | Parking Demand Ratio | Total Parking Demand |
|---|---|---|---|
| Office (s.f) | 13,144,000 | 2.1 / 1,000 s.f. | 27,602 |
| Retail (s.f.) | 2,658,000 | 2.3 / 1,000 s.f. | 6,112 |
| Hotel (rooms) | 8,800 | 0.5 / room | 4,400 |
| Residential (units) | 14,600 | 1.35 / unit | 19,710 |
| | | **Total Existing Parking Demand** | **57,824** |

Source: Wilson & Company, February 2005

As shown above, the total estimated parking demand under existing conditions in downtown is approximately 57,824 spaces.

## Existing Parking Supply / Demand Comparison

A comparison of the existing downtown parking supply with estimated demand was made with two objectives:

1. Validate the reasonableness of the parking demand ratios.
2. Provide a baseline indicator of current parking conditions in the downtown area.

**Table 7.8** displays the comparison of existing parking supply with estimated demand.

**Table 7.8**
**Existing Parking Supply and Demand**
**(Average Weekday Conditions)**

| | Parking Spaces |
|---|---|
| Existing Parking Supply | 56,880 |
| Existing Parking Demand | 57,824 |
| **Parking Deficit** | **944** |

Source: Wilson & Company, February 2005

As shown above, the existing supply and demand comparison for the primary downtown uses indicates a parking deficit of 944 spaces, representing less than a 2% shortfall. Given the dynamics of the parking estimates (both on the supply and demand side), the comparisons above can reasonably be interpreted to indicate a relative balance in downtown-wide supply and demand under existing conditions, not withstanding the localized parking shortages which can occur during major downtown events.

Furthermore, the comparisons indicate the validity of the parking demand ratios as developed for use in this assessment.

## 7.3 Assessment of Future Parking Demand

**Table 7.9** displays a summary of future growth (over existing)by the primary land use type as anticipated under build-out of the proposed Downtown Community Plan.

**Table 7.9**
**Build-out Growth in Downtown Land Uses**
**Downtown Community Plan**

| Land Use | Planned Growth |
|---|---|
| Office (s.f) | 16,677,000 |
| Retail (s.f.) | 3,412,000 |
| Hotel (rooms) | 11,200 |
| Residential (units) | 38,500 |

Source: CCDC, November 2004

The parking demand associated with build-out of the proposed Downtown Community Plan was calculated by applying the estimated parking demand ratios to the anticipated growth in land uses. **Table 7.10** summarizes the estimated parking demand associated with the planned growth in the primary land uses under the proposed Downtown Community Plan.

**Table 7.10**
**Additional Downtown Parking Demands with Future Growth**
**Downtown Community Plan**
**(Average Weekday Conditions)**

| Land Use | Planned Growth | Parking Demand Ratio | Total Parking Demand |
|---|---|---|---|
| Office (s.f) | 16,677,000 | 2.1 / 1,000 s.f. | 35,022 |
| Retail (s.f.) | 3,412,000 | 2.3 / 1,000 s.f. | 7,848 |
| Hotel (rooms) | 11,200 | 0.5 / room | 5,600 |
| Residential (units) | 38,500 | 1.35 / unit | 51,975 |
| **Total Parking Demand Associated with Future Growth** | | | **100,445** |

Source: Wilson & Company, February 2005

As shown above, the estimated parking demand generated by future downtown growth under build-out of the proposed Downtown Community Plan is estimated at 100,445 spaces. This is over and above the estimated current demand of 57,824 spaces and results in a projected total downtown parking demand of 158,269 spaces.

## 7.4 Parking Impacts

As noted above, future growth as envisioned by the proposed Downtown Community Plan would create additional parking demands, estimated at approximately 98,400 spaces above existing demands. Meeting this demand directly would require more than a 2 ½ fold increase in the supply of parking in the downtown area. Without mandatory mechanisms to ensure the provision of new parking facilities commensurate with demand, the potential for parking shortages would exist, resulting in significant impacts.

For the purpose of this EIR, potential impacts relating to parking would be considered significant if the following were to occur:

- The demand for parking generated by the proposed land uses would exceed the projected available parking supply.

The estimated parking demands associated with forecast growth under the proposed Downtown Community Plan will exceed existing parking supplies. Although proposed development may provide additional parking and/or private companies may construct parking facilities to meet these demands, there is no mechanism to assure that these occur. Therefore, parking impacts associated with build-out of the proposed Downtown Community Plan are considered significant and unmitigated.

## 7.5 Potential Impacts to On-Street Parking

Maintaining an adequate supply of on-street parking in the downtown is important not only to downtown visitors desiring convenient and short-term access, but also economically to the City and adjacent business. It is estimated that there are approximately 7,000 on-street parking spaces in the downtown area. This represents about 12% of the current downtown parking supply. A number of future projects could affect the future supply of downtown on-street parking, as follows:

1. Future street extensions could provide additional on-street parking.
2. Implementation of diagonal on-street parking could provide additional on-street parking.
3. Future street closures could eliminate existing on-street parking.
4. Proposed traffic impact mitigation measures, specifically re-striping of roadway and intersections to provide additional through and turn lanes could require elimination of existing on-street parking.
5. Implementation of Bus Rapid Transit (BRT) service in the downtown area could require the use of parking lanes, at least in the peak hour, and result in the elimination of on-street parking.

However, due to the lack of specific details on the above projects, it is not possible to accurately estimate or quantify the impacts to on-street parking. CCDC and the City of San Diego should endeavor to maintain and enhance the supply of on-street parking in the downtown area whenever possible. In addition, efforts should be made to avoid or replace the loss of on-street parking as a result of roadway improvements.

## 7.6 Potential For Increased Parking in Adjacent Neighborhoods

The potential for parking shortages in the downtown, as previously noted, could result in additional parking in the adjacent neighborhoods, both east and north of I-5. Currently, parking in the adjacent neighborhoods occurs, for the most part, by parkers desiring to avoid the costs of parking in the more central downtown core areas. This generally requires an extensive walk to the primary destinations, which tends to discourage this behavior for all but for a minority of downtown parkers. In the future and with the identified potential for parking shortages in the downtown area, a greater share of parkers could seek parking in the adjacent neighborhoods due to parking supply shortages as well as economic reasons.

The extent of parking in the adjacent neighborhoods will be a function of both the cost and availability of downtown parking as well as the specific uses developed in the adjacent sections of the downtown area. A number of public and private actions may be taken to reduce or avoid the potential parking shortages, but since these actions cannot be assured at this point in time, the potential for downtown parking shortages has been identified as a significant impact. In a similar manner, although the extent and magnitude of parking in the adjacent neighborhoods that would occur with build-out of the proposed Downtown Community Plan is difficult estimate, the potential exists, and is therefore identified as a significant project-related impact.

In response, it is recommended that CCDC evaluate parking conditions within downtown and surrounding areas every five years. Similar to the recommendation for a periodic comprehensive traffic assessment, this program will assist in identifying the extent of downtown spill-over parking in adjacent neighborhoods and assessing various options to discourage its continuation.

## 7.7 Community Plan Goals and Policies

The development of future parking facilities will need to occur in a manner which respects the local downtown community, while at the same time is flexible and responsive to the economic needs of downtown development. The effective management of both supply and demand can minimize the need for expansive parking facilities and ensure their effective utilization.

The proposed Downtown Community Plan identifies the following goals and policies relating to parking:

### Goals: Parking

- Promote quality of life and business viability by allowing the provision of an adequate supply of parking to serve growing needs, while avoiding excessive supplies that discourage transit ridership and disrupt urban fabric.
- Site and design new parking structures to accommodate parking needs from multiple land uses to the extent possible and allow shared parking where possible.

- Distribute new public garages throughout downtown, in locations contributing to efficient circulation, and convenient and proximate to eventual destinations.
- Locate public parking resource(s) near each Neighborhood Center to provide short-term parking for merchants and businesses.

### Policies: Parking

- Require a certain portion of on-site motorcycle and bicycle parking in addition to automobile spaces.
- Emphasize shared parking approaches, including:
  - Development of parking facilities that serve multiple uses, to enable efficient use of space over the course of the day;
  - Parking under new parks that are full-block or larger in size, where not limited by geologic or other constraints; and
  - Enhanced on-street parking through restriping streets where appropriate.
- Allow off-site shared parking arrangements where appropriate to maximize efficient use of parking resources.
- Work with developers of high-intensity developments unable to accommodate parking on site to allow development/use of parking under public parks, where appropriate and feasible.
- Work with the Port to provide public parking in the Waterfront/Marine area, and with the City, County and other agencies in Civic/Core.
- Ensure that all public parking structures maximize the potential for subterranean parking and incorporate other uses at higher floors where feasible. Explore the use of technological advancements (robotic parking, parking lifts, etc.) to improve cost/parking efficiencies in new public garages.
- Maximize the efficiency of street parking by managing metered time limits to correspond with daily activity patterns.

## 7.8 Parking Impact Mitigation Options

A number of additional options and measures will assist the downtown area in meeting future downtown parking demands; although as indicated previously, cannot be assured. These include:

- CCDC's Draft Planned District Ordinance (PDO) Parking Requirements;
- Public parking garages;
- Parking management strategies;
- TDM Goals & Policies on page 7-15 of Community Plan; and
- Update of Comprehensive Downtown Parking Plan.

### Draft PDO Parking Requirements

CCDC has prepared a draft PDO which includes a set of parking minimums for all uses. Parking minimums are intended to ensure that at some level the parking needs of a development are accommodated within the development site. Typically, parking minimums are set at a level lower than market demand, so as not to impede or dictate market level demand and to encourage the use of alternative modes of transportation.

**Table 7.11** summarizes the Draft PDO parking standards and estimates the number of spaces that would result from applying these standards to future land uses as proposed under build-out of the Downtown Community Plan. The draft PDO includes a number of exclusions for smaller scale office and retail uses which would likely occur as part of neighborhood serving mixed-use developments.

**Table 7.11**
**Application of Draft PDO Parking Standards to Future Downtown Land Uses**

| Land Use Type | Planned Growth | Draft PDO Parking Standard | Resulting Future Parking |
|---|---|---|---|
| Office[1] (s.f) | 15,009,300 | 1.5 spaces / 1,000 sf | 22,544 |
| Retail[2] (s.f.) | 682,400 | 1 space / 1,000 sf | 682 |
| Hotel (rooms) | 11,200 | 0.3 spaces / room | 3,360 |
| Residential (units) | 38,500 | 1.0/ unit | 38,500 |
| | | **Total Future Parking** | 65,056 |

Source: CCDC; Wilson & Company, February 2005

Note:
1. Office Developments less than 50,000 sq. ft. would be excluded. Estimated at about 10% of total square footage.
2. Retail development less than 30,000 sq. ft. would be excluded. Estimated at about 80% of total square footage.

As shown, application of the CCDC Draft PDO parking requirements would result in a minimum of 65,056 additional parking spaces with future downtown growth and development. Thus, implementation of the PDO parking standards will help meet future downtown parking demands, but would fall short of fully addressing all the parking requirements of future growth.

### Parking Garages

As the downtown develops, construction of new public or private parking facilities will likely be needed to fully meet anticipated parking demand. The proposed Downtown Community Plan recognizes that new parking must be built to continue downtown's growth as the regional center.

A well-located and designed parking facility should be close to primary destinations with good access. It will also be important that future parking garages complement existing/planned land uses and not detract from the downtown neighborhoods.

Parking garages could be centrally located in key activity nodes or located on peripheral areas near transit services. Typical site dimensions to maximize efficient use would require at a minimum half-block, and in some instances full block areas. Typical multi-level parking structures in the downtown area could provide 600-700 parking spaces each, with larger facilities providing over 1,000 spaces.

Examples of recently constructed parking garages include the Park-It-On-Market structure (533 spaces) at Sixth Avenue and Market Street, the 2,000 space parking structure at the southeast corner of Harbor Drive and Park Boulevard, the 600 space Columbia Parking Garage at C Street and Columbia and the Sixth and K Parkade with 1,230 spaces.

Parking structures do not necessarily need to be above ground. The Community Plan notes that about 3,000 – 4,000 additional spaces could result from two- to three-level subterranean parking under new parks.

### Parking Management Strategies

In addition to constructing additional parking supplies, successful implementation of parking demand measures will assist in off-setting the need for new parking. The proposed Downtown Community Plan seeks to balance the accommodation of new parking spaces with more efficient use of available spaces. A key objective of CCDC, following adoption of the Downtown Community Plan, will be the preparation of a Comprehensive Parking Plan for the downtown area which will lay out a parking management strategy for the downtown area.

Many elements will need to be considered in the development of a parking management strategy for the downtown. While the intent here is not to specify the components of a comprehensive parking management strategy for the downtown area, example measures include:

- Promote shared use – Provide incentives for shared parking for developments with mixed uses to encourage joint development and improve utilization of parking facilities.
- Transit-Parking Coordination – Enhance coordination between parking and transit services, including encouraging commuters to park at remote and fringe locations and utilize downtown transit services.
- Increase parking visibility – Implement wayfinding systems and uniform directional signage to make parkers more aware of on- and off-street parking options.

- Promote Carsharing Programs – Carsharing programs eliminate and reduce the need for an individual to have a personal car available for travel. At least one carsharing program is currently up and running in downtown San Diego.

## 7.9 Conclusions

It is estimated that build-out of the proposed Downtown Community Plan will result in additional parking demands estimated at approximately 98,400 spaces above existing levels of demand. The current inventory of parking in the downtown area is estimated at about 56,900 spaces and a 250% increase would be required to fully meet estimated parking demands with build-out of the proposed Downtown Community Plan. As noted, CCDC's proposed PDO parking requirements will help meet the future downtown parking requirements. Parking management strategies in conjunction with the provision of new parking garages (by both public and private sectors) will further supplement proposed downtown parking requirements. However, since the supply of parking necessary to meet the demands associated with build-out of the proposed Downtown Community Plan cannot be guaranteed and the potential for parking shortages exist, the identified parking impacts remain significant and unmitigated under build-out of the proposed Downtown Community Plan.

## 7.10 Comparison with No Project Conditions

**Table 7.12** provides a comparison of projected parking demands between the No Project alternative and the proposed Downtown Community Plan.

**Table 7.12**
**Comparison of Additional Downtown Parking Demands Related to Future Growth**
**No Project and Proposed Community Plan Build-out**

| Land Use Type | Future Growth Quantity | | Parking Demands (in addition to existing demands) | |
|---|---|---|---|---|
| | No Project | Proposed Plan | No Project | Proposed Plan |
| Office(s.f.) | 7,556,000 | 16,677,000 | 15,868 | 35,022 |
| Retail(s.f.) | 1,642,000 | 3,412,000 | 3,777 | 7,848 |
| Hotel(rooms) | 6,800 | 11,200 | 3,400 | 5,600 |
| Residential(units) | 16,100 | 38,500 | 21,735 | 51,975 |
| **Total Parking Demands (in addition to existing demand)** | | | **44,780** | **100,445** |

Source: Wilson & Company, February 2005

As shown, the overall need for future parking would be approximately 120% greater under build-out of the proposed Downtown Community Plan, compared to the No Project alternative. The proposed Downtown Community Plan will require approximately 55,665 more parking spaces than the No Project alternative under future build-out conditions.

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# 8.0 Summary of Plan Impacts and Mitigation Measures

This chapter provides a summary of key analysis findings relating to transportation, circulation and access issues under build-out of the proposed Downtown Community Plan. Associated impacts and identified mitigation requirements are summarized as well.

## 8.1 Summary of Proposed Downtown Community Plan Impacts

The analysis of transportation, circulation, and access issues under build-out of the proposed Downtown Community Plan involved extensive review of forecast travel demands, projected mode utilization (auto, transit, pedestrian and bicycle), traffic operations, and transportation facility capacity assessments.

Thresholds were established to identify the potential for direct or cumulatively significant impacts due to unacceptable effects on the various components that comprise the downtown transportation circulation system. Key findings focused on the potential for negative impacts and operating deficiencies, along with the identification of suitable mitigation measures to address or resolve the issues.

Identified significant transportation, circulation and access impacts under build-out of the proposed Downtown Community Plan are summarized below.

**Traffic** – The traffic analysis of the proposed Downtown Community Plan identified the following direct or cumulatively significant impacts:

- Significant impacts to all downtown study area freeway segments, including I-5, SR-94, and SR-163.
- Significant impacts to four (4) of the eleven (11) freeway off-ramps serving the downtown study area.
- Significant impacts to nine (9) of the thirteen (13) freeway on-ramps serving the downtown study area.
- Significant impacts to 62 signalized intersections in the downtown study area.
- Significant impacts to two (2) arterial roadway segments in the adjacent neighborhoods.

**Transit** – The analysis of existing and planned transit services and projected demands under build-out of the proposed Downtown Community Plan determined the following:

- The capacity and service capabilities of existing and planned transit services will not be exceeded under proposed Downtown Community Plan build-out conditions.
- The potential for conflicts between existing/planned transit services and other transportation operations (including adjacent roadway and pedestrian facilities) in the downtown area will not be significantly increased under proposed Downtown Community Plan build-out conditions. The monitoring of traffic levels and delays at the downtown at-grade Trolley crossings and implementation of improvements

consistent with SANDAG, MTS, and City of San Diego standards will minimize potential safety conflicts.

Based upon these findings, it was determined that there would be no direct project-related significant transit impacts under build-out of the proposed Downtown Community Plan. In addition, successful achievement of the proposed Downtown Community Plan transit goals and policies will further serve to minimize the potential for transit-related impacts as the downtown area grows and develops.

**Non-Motorized (Pedestrian, Bicycle, and Pedicab) Modes** – The analysis of non-motorized facilities and projected demands under build-out of the proposed Downtown Community Plan determined the following:

- The potential for non-motorized facility capacity limitations and/or conflicts with vehicular traffic and the Trolley under proposed Downtown Community Plan build-out conditions will be minimized via:
  - Adherence to the City of San Diego Street Design Manual which provides specific criteria and design guidance on implementation of required pedestrian facilities.
  - Implementation of streetscape improvements as proposed in the Downtown Community Plan's Pedestrian Priority Zones, including sidewalk widening, bulbouts, and enhanced lighting and signage.
  - Implementation of bicycle facilities consistent with the City of San Diego Bicycle Master Plan.
  - Continued and on-going monitoring and enforcement of pedicab activity by the City of San Diego Traffic Engineering Division and Police Department.

Based upon these findings, it was determined that there would be no direct project-related significant impacts associated with non-motorized modes (pedestrian bicycle, and pedicabs) under build-out of the proposed Downtown Community Plan. In addition, successful achievement of the proposed Downtown Community Plan goals and policies relating to pedestrian and bicycle travel will serve to further minimize the potential for significant impacts associated with the access and circulation of non-motorized modes.

**Parking** – The analysis of downtown parking facilities and demands under build-out of the proposed Downtown Community Plan determined the following:

- Future growth as envisioned by the proposed Downtown Community Plan would create additional parking demands, estimated at approximately 98,400 spaces. Meeting this demand directly would require more than a 2 ½ fold increase in the current supply of parking in the downtown area. Without mandatory mechanisms to ensure the provision of new parking facilities commensurate with demand, parking shortages would likely occur, resulting in significant parking impacts under build-out of the proposed Downtown Community Plan.

- Parking shortages in the downtown area can lead to increased parking in the neighborhoods adjacent to downtown. Although the extended magnitude of parking adjacent neighborhoods that would occur with build-out of the proposed Downtown Community Plan is difficult to estimate, the potential exists, and is therefore identified as a significant project-related impact.

## 8.2 Summary of Required Mitigation Measures

This section provides a summary of the mitigation measures as required to address the transportation, circulation and access impacts associated with the proposed Downtown Community Plan.

**Traffic** – The following mitigation measures have been identified to address the significant traffic impacts:

- Freeway Segment and Ramp Impacts – A previous SANDAG study of the freeway system and the ramps serving the downtown area (Central I-5 Corridor Study; Freeway Deficiency Plan, December 2003) identified the required freeway improvements that would be necessary to address projected longer range deficiencies. These included additional through lanes on I-5, supported by new auxiliary lanes and a modified system of ramps serving the downtown area. This study also confirmed that no feasible and acceptable improvement options are available to address projected deficiencies on SR-163, north of downtown. SANDAG, Caltrans and CCDC have recommended further study of the freeway improvement proposals identified by the Central I-5 Corridor Study to ensure proper consideration of all potential community and environmental impacts.

  Subject to identification and regional acceptance of a feasible program to improve the freeway segments and ramps in the downtown area, the identified cumulative traffic impacts on study area freeway segments and ramps associated with the proposed Downtown Community Plan will remain significant and unmitigated.

  It is recommended that CCDC, along with Caltrans, SANDAG, and the City of San Diego continue to pursue and promote improvement of the I-5 freeway through the downtown area, the improvement of SR-94 to/from the east, as well as an improved system of freeway ramps serving the downtown area.

- Downtown Arterials/Intersections – 62 downtown intersections have been identified as having cumulatively significant traffic impacts under build-out of the proposed Downtown Community Plan. As discussed in Section 4.7 of this report, all but 12 of the intersections can be mitigated through re-striping of the intersection approach lanes. In some cases, this would require the elimination of on-street parking. Three (3) additional cumulatively impacted intersections would be mitigated by maintaining Sixth Avenue as a one-way southbound roadway between Elm Street and Ash Street. The proposed Downtown Community Plan recommends converting this street to two-way operation which reduces the traffic capacity of the roadway below the level of forecasted demands. The additional roadway modifications to incorporate the recommended mitigation measures are presented in Section 4.7.

It is important to note that in preparation of this EIR, the transportation, circulation, and access features of the proposed Downtown Community Plan have been evaluated collectively and in combination with each other at a planning level of detail. The result is that while individual street modifications may function adequately under future conditions, all localized impacts and related operational considerations may not have been fully identified at a project specific level. Based upon this, it is recommended that all potential roadway modifications and enhancements graphically displayed in Figure 4-6 under go further more detailed evaluations prior to implementation. These evaluations should address specific project requirements relating to operational impacts/benefits including pedestrian and bicycle considerations, design and engineering requirements, and implementation feasibility/timing.

It is also recommended that CCDC conduct a comprehensive downtown-wide assessment of traffic operations at a minimum of every five years. This monitoring program will assist in establishing the timing and need for the identified traffic mitigation measures and related circulation system improvements consistent with downtown's growth and development. This program should also assess traffic in the adjacent neighborhood and assess improvement options, as appropriate.

**Transit** – No Mitigation Required

**Non-Motorized (Pedestrian, Bicycle, and Pedicab) Modes** – No Mitigation Required

**Parking** – It is estimated that build-out of the proposed Downtown Community Plan will result in additional parking demands estimated at approximately 98,400 spaces above existing levels of demand. The current inventory of parking in the downtown area is estimated at about 56,900 spaces and a 250% increase would be required to fully meet estimated parking demands with build-out of the proposed Downtown Community Plan. CCDC's proposed PDO parking requirements will help meet the future downtown parking requirements. Parking Management strategies in conjunction with the provision of new parking garages (by both public and private sections) will further address downtown parking requirements. A key objective of CCDC, following adoption of the Downtown Community Plan, will be the preparation of a Comprehensive Parking Plan for the downtown area which will lay out a parking management strategy for the downtown area.

However, since the supply of parking necessary to meet the demands associated with build-out of the proposed Downtown Community Plan cannot be guaranteed and the potential for parking shortages exist, the identified parking impacts remain significant and unmitigated under build-out of the proposed Downtown Community Plan.

It is further recommended that CCDC evaluate parking conditions within downtown and surrounding areas every five years. Similar to the recommendation for a periodic comprehensive traffic assessment, this program will also assist in identifying the extent of downtown spill-over parking in adjacent neighborhoods and assessing various options to discourage its continuation.

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# Appendix A
# Existing Roadway
# Classifications & Characteristics

## Appendix A
## Downtown Roadway Classifications
## Existing Conditions

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| A Street | Kettner Blvd to Columbia St | Major | 52' | 3 | yes | yes | EB |
| | Columbia St to State St | Major | 43' | 3 | yes | yes | EB |
| | State St to Ninth Ave | Major | 52' | 3 | yes | yes | EB |
| | Ninth Ave to Tenth Ave | Business | 52' | 4 | yes | yes | EB |
| | Tenth Ave to Eleventh Ave | Major | 43' | 3 | yes | yes | EB |
| | Eleventh Ave to Park Blvd | Major | 52' | 3 | yes | yes | EB |
| Ash Street | Harbor Dr to Pacific Highway | Major | 52' | 4 | yes | yes | EB/WB |
| | Pacific Highway to Kettner Blvd | Major | 66' | 5 | yes | yes | EB/WB |
| | Kettner Blvd to Front St | Major | 52' | 4 | yes | yes | WB |
| | Front St to Fourth Ave | Major | 50' | 3 | yes | yes | WB |
| | Fourth Ave to Tenth Ave | Business | 52' | 3 | yes | yes | WB |
| B Street | Kettner Blvd to India St | Local | 52' | 2-3 | yes | yes | EB/WB |
| | India St to First Ave | Local | 52' | 2 | yes | yes | EB/WB |
| | First Ave to Park Blvd | Business | 52' | 3 | yes | yes | WB |
| | Park Blvd to I-5 | Major | 52' | 3 | yes | yes | WB |
| Beech Street | Pacific Highway to Tenth Ave | Local | 52' | 2 | yes | yes | EB/WB |
| Broadway | N. Harbor Dr to Pacific Highway | Collector | 83' | 4 | yes | yes | EB/WB |
| | Pacific Highway to First Ave | Collector | 78' | 4 | yes | yes | EB/WB |
| | First Ave to Third Ave | Business | 78' | 4 | yes | yes | EB/WB |
| | Third Ave to Park Blvd | Business | 52' | 4 | yes | yes | EB/WB |
| | Park Blvd to I-5 | Collector | 52' | 4 | yes | yes | EB/WB |
| Broadway Circle | Second Ave to Third Ave | Business | 78' | 1 | yes | yes | EB |
| C Street | Kettner Blvd to Columbia St | Local | 24' | 1 | Yes | No | Trolley Only |
| | Columbia St to Front St | Local | 52' | 1 | yes | no | EB/Trolley |
| | Front St to First Ave | Business | 52' | 1 | yes | no | EB/Trolley |
| | First Ave to Second Ave | Business | 52' | 2 | yes | no | EB/WB/Trolley |
| | Second Ave to Sixth Ave | Business | 38' | 0 | yes | no | Trolley |
| | Sixth Ave to Ninth Ave | Business | 38' | 1 | yes | no | EB/Trolley |
| | Ninth Ave to Park Blvd | Business | 52' | 2 | yes | no | EB/Trolley |
| | Park Blvd to Interstate 5 | Major | 52' | 3 | yes | no | EB |

## Appendix A (continued)
## Downtown Roadway Classifications
## Existing Conditions

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| Cedar Street | Pacific Highway to Front St | Local | 52' | 2 | yes | yes | EB/WB |
| | Front St to First Ave | Local | 52' | 2 | yes | yes | EB |
| | First Ave to Second Ave | Collector | 23' | 1 | yes | yes | WB |
| | Second Ave to Fourth Ave | Collector | 52' | 3 | yes | yes | EB |
| | Fourth Ave to Fifth Ave | Collector | 52' | 2 | yes | yes | EB |
| | Fifth Ave to Sixth Ave | Collector | 52' | 2 | yes | yes | EB/WB |
| | Sixth Ave to Tenth Ave | Local | 52' | 2 | yes | yes | EB/WB |
| Columbia Street | Juniper St to Ash St | Collector | 51' | 3 | yes | yes | SB |
| | Ash St to Broadway | Local | 51' | 3 | yes | yes | SB |
| | G St to Market St | Local | 51' | 2 | yes | yes | NB/SB |
| Commercial Street | 13th St to Fourth Ave | Major | 52' | 2 | no | yes | EB/Trolley |
| | Fourth Ave to Fifth Ave | Major | 52' | 2 | no | yes | EB/WB/Trolley |
| | Fifth Ave to I-5 | Major | 52' | 2 | yes | yes | EB/WB/Trolley |
| Date Street | Kettner Blvd to Union St | Local | 52' | 2 | yes | yes | EB/WB |
| | Union St to Front St | Local | 52' | 1 | yes | yes | EB/WB |
| | Third Ave to Fourth Ave | Local | 32' | 1 | yes | yes | WB |
| | Seventh Ave to Eighth Ave | Local | 40' | 2 | yes | yes | EB/WB |
| | Eighth Ave to Ninth Ave | Local | 52' | 2 | yes | yes | EB/WB |
| E Street | Pacific Highway to Kettner Blvd | Local | 52' | 2 | yes | yes | EB/WB |
| | State St to Union St | Local | 52' | 1 | yes | yes | EB/WB |
| | Front St to First Ave | Business | 30' | 2 | yes | yes | EB |
| | Fourth Ave to Tenth Ave | Collector | 52' | 3 | yes | yes | EB |
| | Tenth Ave to 13th St | Major | 52' | 3 | yes | yes | EB |
| | 13th St to I-5 | Collector | 52' | 3 | yes | yes | EB/WB |
| Elm Street | Columbia St to State St | Local | 52' | 2 | yes | yes | EB/WB |
| F Street | Pacific Highway to RR Tracks | Local | 51' | 2 | yes | no | EB/WB |
| | RR Tracks to Kettner Blvd | Local | 45' | 2 | yes | yes | EB/WB |
| | State St to First Ave | Collector | 52' | 2 | yes | yes | EB/WB |
| Fir Street | Kettner Blvd to State St | Local | 52' | 2 | yes | yes | EB/WB |
| Front Street | I-5 to B St | Major | 52' | 3 | yes | yes | SB |
| | B St to C St | Major | 50' | 3 | yes | yes | SB |
| | C St to Broadway | Major | 52' | 3 | yes | yes | SB |
| | Broadway to E St | Collector | 44' | 3 | yes | yes | SB |
| | E St to F St | Collector | 50' | 3 | yes | yes | SB |
| | F St to G St | Collector | 54' | 3 | yes | yes | SB |
| | G St to Market St | Collector | 56' | 3 | yes | yes | SB |
| | Market St to Harbor Dr | Local | 59' | 3 | yes | no | SB |

## Appendix A (continued)
## Downtown Roadway Classifications
## Existing Conditions

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| G Street | Pacific Highway to Front St | Collector | 52' | 3 | yes | yes | EB/WB |
| | Front St to First Ave | Collector | 52' | 3 | yes | yes | EB |
| | First Ave to Park Blvd | Business | 52' | 3 | yes | yes | EB |
| | Park Blvd to Seventh Ave | Major | 52' | 3 | yes | yes | EB |
| Grape Street | Harbor Dr to India St | Major | 52' | 3 | yes | yes | EB |
| | India St to I-5 | Collector | 52' | 3 | yes | yes | EB |
| Harbor Drive | Pacific Highway to State St | Major | 78' | 4 | yes | no | NB/SB |
| | State St to Market St | Major | 68' | 4 | yes | no | NB/SB |
| Harbor Drive | Market St to Front St | Major | 78' | 4 | yes | no | NB/SB |
| | Front St to Fourth Ave | Major | 68' | 4 | yes | no | NB/SB |
| | Market St to Front St | Major | 78' | 4 | yes | no | NB/SB |
| | Front St to Fourth Ave | Major | 68' | 4 | yes | no | NB/SB |
| | Fourth Ave to Fifth Ave | Major | 86' | 4 | yes | no | NB/SB |
| | Fifth Ave to Seventh Ave | Major | 97' | 4 | yes | no | NB/SB |
| | Seventh Ave to Eighth Ave | Major | 87' | 4 | yes | no | NB/SB |
| | South of Eighth Ave | Major | 93' | 4 | no | no | NB/SB |
| Hawthorn Street | Harbor Dr to Pacific Highway | Major | 48' | 3 | yes | yes | WB |
| | Pacific Highway to India St | Major | 52' | 3 | yes | yes | WB |
| | India St to Columbia St | Collector | 52' | 3 | yes | yes | WB |
| | Columbia St to I-5 | Collector | 46' | 3 | yes | yes | WB |
| Imperial Avenue | Eleventh Ave to Park Blvd | Collector | 52' | 2 | yes | yes | EB/WB |
| | Park Blvd to Fifth Ave | Major | 56' | 4 | yes | yes | EB/WB |
| | Fifth Ave to I-5 | Major | 52' | 4 | yes | yes | EB/WB |
| India Street | Laurel St to Broadway | Major | 51' | 3 | yes | yes | NB |
| | Market St to G St | Local | 51' | 3 | yes | yes | NB/SB |
| Island Avenue | Union St to Third Ave | Local | 52' | 2 | yes | yes | EB/WB |
| | Third Ave to Fourth Ave | Local | 20' | 1 | yes | yes | WB |
| | Fourth Ave to I-5 | Local | 52' | 2 | yes | yes | EB/WB |
| Ivy Street | Kettner Blvd to Columbia St | Local | 52' | 2 | yes | yes | EB/WB |
| J Street | First Ave to Second Ave | Collector | 50' | 2 | no | yes | EB/WB |
| | Second Ave to I-5 | Collector | 52' | 2 | yes | yes | EB/WB |
| K Street | Third Ave to Seventh Ave | Local | 52' | 2 | yes | yes | EB/WB |
| Kalmia Street | Kettner Blvd to India St | Local | 52' | 2 | yes | yes | EB/WB |
| Kettner Boulevard | Laurel St to A St | Major | 51' | 3 | yes | yes | SB |
| | A St to B St | Major | 51' | 2 | yes | yes | NB/SB |
| | B St to C St | Major | 61' | 3 | yes | yes | NB/SB |
| | C St to Broadway | Major | 63' | 3 | yes | yes | NB/SB |
| | Broadway to E St | Collector | 51' | 2 | yes | yes | NB/SB |
| | E St to G St | Collector | 48' | 2 | yes | yes | NB/SB |
| | G St to Harbor Dr | Local | 52' | 2 | yes | yes | NB/SB |

**Appendix A (continued)**
**Downtown Roadway Classifications**
**Existing Conditions**

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| L Street | Harbor Drive to Pacific Highway | Local | 67' | 2 | yes | yes | EB/WB |
| | Pacific Highway to I-5 | Local | 52' | 2 | yes | yes | EB/WB |
| Laurel Street | Harbor Drive to Pacific Highway | Major | 56' | 4 | yes | no | EB/WB |
| | Pacific Highway to I-5 | Major | 52' | 4 | yes | no | EB/WB |
| Market Street | Harbor Dr to Fourth Ave | Major | 68' | 4 | yes | yes | EB/WB |
| | Fifth Ave to Ninth Ave | Major | 68' | 4 | yes | yes | EB/WB |
| Harbor Drive | Laurel St to Grape St | Prime | 88' | 6 | yes | yes | NB/SB |
| | Grape St to 570' s/o Grape St | Major | 96' | 5 | yes | yes | NB/SB |
| | 570' s/o Grape St to Ash St | Major | 85' | 5 | yes | yes | NB/SB |
| | Ash St to Broadway | Major | 76' | 4 | yes | yes | NB/SB |
| | Broadway to Pacific Highway | Major | 78' | 4 | yes | no | NB/SB |
| Pacific Highway | Laurel St to Ash St | Major | 86' | 6 | yes | yes | NB/SB |
| | Ash St to Broadway | Major | 90' | 6 | yes | yes | NB/SB |
| | Broadway to Market St | Major | 76' | 6 | yes | yes | NB/SB |
| | Market St to Harbor Dr | Major | 87' | 4 | yes | yes | NB/SB |
| State Street | I-5 to Ivy St | Collector | 56' | 2 | yes | yes | NB |
| | Ivy St to Hawthorn St | Collector | 56' | 1 | yes | yes | NB |
| | Hawthorn St to Grape St | Collector | 56' | 2 | yes | yes | NB |
| | Grape St to Date St | Collector | 52' | 2 | yes | yes | NB |
| | Date St to Ash St | Collector | 52' | 3 | yes | yes | NB |
| | Ash St to Broadway | Local | 51' | 3 | yes | yes | NB |
| | Broadway to Market St | Local | 40' | 2 | yes | yes | NB/SB |
| Union Street | Island Ave to Market St | Local | 43' | 2 | yes | yes | NB/SB |
| | Market St to Broadway | Local | 51' | 2 | yes | yes | NB/SB |
| | Broadway to C St | Local | 43' | 2 | yes | yes | NB/SB |
| | C St to A St | Local | 47' | 2 | yes | yes | NB/SB |
| | A St to Date St | Local | 51' | 2 | yes | yes | NB/SB |
| First Avenue | I-5 to Harbor Dr | Major | 52' | 3 | yes | yes | NB |
| Second Avenue | I-5 to C St | Local | 52' | 3 | yes | yes | NB/SB |
| | C St to Broadway | Local | 46' | 2 | yes | yes | NB/SB |
| | G St to Market St | Local | 52' | 2 | yes | yes | SB |
| | Market St to J St | Local | 52' | 2 | yes | yes | NB/SB |
| Third Avenue | I-5 to A St | Local | 52' | 3 | yes | yes | NB |
| | A St to Broadway | Local | 52' | 3 | yes | yes | NB/SB |
| | G St to K St | Local | 52' | 2 | yes | yes | NB/SB |
| Fourth Avenue | Date St to Ash St | Major | 52' | 3 | yes | yes | SB |
| | Ash St to Market St | Business | 52' | 3 | yes | yes | SB |
| | Market St to Island Ave | Major | 52' | 2 | yes | yes | SB |
| | Island Ave to K St | Local | 52' | 2 | yes | yes | NB/SB |

## Appendix A (continued)
## Downtown Roadway Classifications
## Existing Conditions

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| Fifth Avenue | I-5 to Ash St | Major | 52' | 3 | yes | yes | NB |
| | Ash St to B St | Business | 52' | 3 | yes | yes | NB |
| | B St to Broadway | Business | 38' | 3 | yes | no | NB |
| | Broadway to Market St | Business | 52' | 3 | yes | yes | NB |
| | Market St to L St | Collector | 52' | 2 | yes | yes | NB/SB |
| | L St to Harbor Dr | Collector | 67' | 2 | yes | yes | NB/SB |
| Sixth Avenue | I- 5 to Ash St | Major | 52' | 3 | yes | yes | SB |
| | Ash St to Broadway | Local | 52' | 3 | yes | yes | SB |
| | Broadway to Island Ave | Major | 52' | 3 | yes | yes | SB |
| | Island Ave to J St | Collector | 52' | 2 | yes | yes | NB/SB |
| | J St to L St | Local | 52' | 2 | yes | yes | NB/SB |
| Seventh Avenue | Date St to Beech St | Local | 52' | 1 | yes | yes | NB/SB |
| | Beech St to A St | Local | 52' | 3-2 | yes | yes | NB |
| | A St to B St | Local | 36' | 3 | yes | yes | NB |
| | B St to Broadway | Local | 52' | 3 | yes | yes | NB |
| | Broadway to Market St | Major | 52' | 3 | yes | yes | NB |
| | Market St to Imperial Ave | Collector | 52' | 2 | yes | yes | NB/SB |
| Eighth Avenue | Date St to Ash St | Local | 52' | 3 | yes | yes | NB/SB |
| | Ash St to Broadway | Local | 52' | 3 | yes | yes | SB |
| | Broadway to Market St | Major | 52' | 3 | yes | yes | SB |
| | Market St to Harbor Dr | Collector | 52' | 4 | yes | yes | NB/SB |
| Ninth Avenue | Date St to Ash St | Local | 52' | 2 | yes | yes | NB/SB |
| | Ash St to A St | Local | 52' | 2 | yes | yes | NB |
| | A St to Broadway | Local | 52' | 3 | yes | yes | NB |
| | Broadway to Market St | Collector | 52' | 3 | yes | yes | NB |
| | Market St to J St | Collector | 52' | 2 | yes | yes | NB/SB |
| | J St to Imperial Ave | Local | 52' | 2 | yes | yes | NB/SB |
| Tenth Avenue | Date St to Beech St | Local | 32' | 2 | yes | yes | NB/SB |
| | Beech St to Ash St | Local | 32' | 3 | yes | yes | NB/SB |
| | Ash St to Market St | Business | 52' | 3 | yes | yes | SB |
| | Market St to Island Ave | Collector | 52' | 3 | yes | yes | SB |
| | Island Ave to Imperial Ave | Collector | 52' | 2 | yes | yes | NB/SB |
| Eleventh Avenue | Ash St to Market St | Business | 52' | 3 | yes | yes | NB |
| | Market St to Island Ave | Collector | 52' | 3 | yes | yes | NB/SB |
| | Island Ave to Imperial Ave | Collector | 52' | 2 | yes | yes | NB/SB |
| Park Boulevard | Russ Blvd to A St | Major | 64' | 4 | yes | yes | NB/SB |
| | A St to C St | Business | 64' | 4 | yes | yes | NB/SB |
| | C St to E St | Business | 52' | 2 | yes | no | NB/Trolley |
| | E St to Market St | Business | 52' | 2 | yes | no | NB/SB/Trolley |
| | Market St to L St | Collector | 52' | 2 | yes | no | NB/SB/Trolley |
| | L St to Imperial Ave | Collector | 52' | 0 | yes | no | Trolley |

**Appendix A (continued)**
**Downtown Roadway Classifications**
**Existing Conditions**

| Roadway | Segment | Classification | Width | Lanes | Curb | Parking | Travel Flow |
|---|---|---|---|---|---|---|---|
| 13th Street | Imperial Ave to C St | Local | 52' | 3 | yes | yes | NB/SB |
| Fourth Avenue | Commercial St to Imperial Ave | Local | 52' | 3 | yes | yes | NB |
| | Imperial Ave to C St | Local | 52' | 3 | yes | yes | NB/SB |
| Fifth Avenue | Commercial St to Imperial Ave | Local | 52' | 2 | yes | yes | NB/SB |
| | K St to C St | Local | 52' | 2 | yes | yes | NB/SB |
| Sixth Avenue | Russ Blvd to B St | Local | 32' | 2 | yes | no | NB/SB |
| | B St to C St | Collector | 52' | 3 | yes | yes | NB/SB |
| | C St to Commercial St | Collector | 52' | 4 | yes | yes | NB/SB |
| Seventh Avenue | A St to F St | Local | 52' | 2 | yes | yes | SB |
| | F St to G St | Local | 52' | 2 | yes | yes | NB/SB |
| | G St to Market St | Collector | 52' | 2 | yes | yes | NB/SB |
| | Market St to Commercial St | Collector | 52' | 2 | yes | yes | SB |

Source: Katz, Okitsu & Associates, 2002

# Appendix B
# Existing Roadway Counts

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **North-South Street Segments** | | | | | | | | | | | | | |
| **Columbia Street** | | | | | | | | | | | | | |
| Ivy St to Hawthorn St | | | 3300 | | | 3200 | | | | | | 3006 | -1% |
| Hawthorn St to Grape St | | 6100 | | | 5800 | | | | | | | 5134 | -2% |
| Date St to Cedar St | | | | 3500 | | | | | | 3530 | | 3540 | 0% |
| Ash St to A St | | | | 6300 | | | | | | 8430 | | 9380 | 6% |
| **Front Street** | | | | | | | | | | | | | |
| Cedar St to Beech St | | 12600 | | | 13000 | | | | | | 13380 | 13472 | 1% |
| Ash St to A St | | | | 13900 | | | | | | 14870 | | 15216 | 1% |
| C St to Broadway | | 11300 | | | 11100 | | | | | | | 10642 | -1% |
| Broadway to E St | | | 10000 | | | | 10700 | | 9200 | | | 8832 | -1% |
| E St to F St | | | 8000 | | | | 9600 | | 9800 | | | 10903 | 4% |
| G St to Market St | | 3800 | | | 3700 | | | | | | | 3505 | -1% |
| Market St to Island Ave | | | | 3300 | | | 3000 | | 3300 | | | 3300 | 0% |
| **Harbor Drive** | | | | | | | | | | | | | |
| Pacific Highway to Kettner Blvd | | 18400 | | | 12400 | | | 14600 | | | | 12590 | -3% |
| Kettner St to Columbia St | | | 18100 | | | 16200 | | | 12750 | | | 10866 | -5% |
| Columbia St to State St | | | 18100 | | | 16200 | | | 12750 | | | 10866 | -5% |
| State St to Market St | | | 18100 | | | 16200 | | | 12750 | | | 10866 | -5% |
| Fourth Ave to Fifth Ave | | | | | 12200 | | 13200 | | | 12310 | | 12354 | 0% |
| Fifth Ave to Seventh Ave | | | | | 12400 | | 12900 | | | | | 14200 | 2% |
| Seventh Ave to Eighth Ave | | | | | 12400 | | 12900 | | | | | 14200 | 2% |
| **India Street** | | | | | | | | | | | | | |
| Laurel St to Kalmia St | | | | 14000 | | | | | | 17210 | | 18525 | 4% |
| Juniper St to Hawthorn St | | | 4300 | | | 4600 | | | | | | 5242 | 2% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hawthorn St to Grape St | | | | 5000 | | | | | | 4810 | | 4749 | -1% |
| Date St to Cedar St | | 5000 | | | 5100 | | | | | | | 5338 | 1% |
| Ash St to A St | | 3400 | | | 3500 | | | | | | | 3740 | 1% |
| A St to B St | | | | 4800 | | | | | | 6650 | | 7504 | 6% |
| **Kettner Boulevard** | | | | | | | | | | | | | |
| Kalmia St to Juniper St | | 6600 | | | 6300 | | | | | | | 5632 | -2% |
| Hawthorn St to Grape St | | | 7000 | | | 8800 | | | | 7520 | | 7680 | 1% |
| Date St to Cedar St | | 4300 | | | 4500 | | | 4900 | | | | 5356 | 2% |
| Ash St to A St | | | | 9300 | | | | 6600 | | 10240 | | 10585 | 2% |
| A St to B St | | | | 5400 | | | | | | 5700 | | 5806 | 1% |
| C St to Broadway | | | | | 5700 | | | 5100 | | | | 4384 | -4% |
| Broadway to E St | | 4200 | | | 3400 | | | | | | | 1889 | -6% |
| E Street to F St | | | 3700 | | | | 3500 | | | | | 3264 | -1% |
| F Street to G Street | | | | | 3100 | | 4000 | 3400 | | 3960 | | 4399 | 6% |
| G St to Harbor Dr | | | 3300 | | | 3100 | 5900 | | 3000 | | | 2864 | -2% |
| **Harbor Drive** | | | | | | | | | | | | | |
| Laurel St to Hawthorn St | | | 55700 | | | 50100 | | | 53000 | | | 51715 | -1% |
| Hawthorn St to Grape St | | 32700 | | | 33700 | | | | 35200 | | | 36353 | 1% |
| 570' s/o Grape St to Ash St | | 17800 | | | 20700 | | | | 20400 | | | 21677 | 2% |
| Ash St to Broadway | | | 15100 | | | | 16700 | | 18400 | | | 20411 | 4% |
| Broadway to Pacific Highway | | 12400 | | | | | | | | 10140 | | 9678 | -2% |
| **Pacific Highway** | | | | | | | | | | | | | |
| Juniper St to Hawthorn St | | | 14100 | | 12800 | | | | 13000 | | | 12493 | -1% |
| Hawthorn St to Grape St | | | | 15500 | | | 17900 | | | 15290 | | 15221 | 0% |
| Elm St to Cedar St | | | 11800 | | 16300 | | | | 17700 | | | 22125 | 8% |
| B St to Broadway | | | | | 11900 | | 12000 | | | 14160 | | 15236 | 4% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E St to F St | | | 9000 | | 8800 | | | | | | | 8116 | -1% |
| G St to Market St | | | 7300 | | 6400 | | | | | | | 3638 | -6% |
| Market St to Harbor Dr | | | 7300 | | 6400 | | | | | | | 3638 | -6% |
| **State Street** | | | | | | | | | | | | | |
| Kalmia St to Ivy St | | 6700 | | | 5500 | | | | | | | 3776 | -4% |
| Ivy Str to Hawthorn St | | | 2000 | | | 1900 | | | 1800 | | | 1710 | -2% |
| Hawthorn St to Grape St | | | | 1600 | | | | | 3200 | | | 4800 | 17% |
| Date St to Cedar St | | | | 2700 | | 2900 | | | | 3390 | | 3638 | 4% |
| Ash St to A St | | 2600 | | | 2500 | | | | | | | 2276 | -1% |
| C St to Broadway | | | | 3100 | | | 5500 | | 5200 | | | 7314 | 14% |
| F St to G St | | 2000 | | | 2200 | | | | | | | 2713 | 3% |
| **First Avenue** | | | | | | | | | | | | | |
| Cedar St to Beech St | | | 18800 | | | 24300 | | | 23200 | 24360 | | 26418 | 4% |
| Ash St to A St | | 16900 | | | 18900 | | | | | | 14150 | 13894 | -2% |
| A St to B St | | 12600 | | | 15000 | | | | | | 14300 | 14514 | 1% |
| E St to F St | | | | | 10800 | | 9900 | | | 10320 | | 10137 | -1% |
| G St to Market St | | | 9200 | | | | 10200 | | 9900 | | | 10277 | 1% |
| Market St to Island Ave | | | 3400 | | | | 4200 | | 5900 | | | 8069 | 12% |
| **Second Avenue** | | | | | | | | | | | | | |
| Cedar St to Beech St | | | | 4200 | | | | | | 3950 | | 3872 | -1% |
| Third Avenue | | | | | | | | | | | | | |
| Cedar St to Beech St | | 2500 | | | 3200 | | | | | | 2420 | 2411 | 0% |
| Ash St to A St | | | | | 5400 | | | | | | 4970 | 4926 | -1% |
| A St to B St | | | | | 8300 | | | | | | 13090 | 13929 | 6% |
| **Fourth Avenue** | | | | | | | | | | | | | |
| Date St to Cedar St | | | | 16000 | | | | | | 14960 | | 14636 | -1% |
| Cedar St to Beech St | | 15300 | | | 14300 | | | | | | 11820 | 11521 | -3% |
| A St to B St | | 11300 | | | 9500 | | | | | | 9530 | 9364 | -2% |
| C St to Broadway | | | 10400 | | | | 10800 | | 9500 | | | 9089 | -1% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Broadway to E St | | | | | 11500 | | | | | 14200 | | 15311 | 4% |
| F St to G St | | | 12800 | | 13500 | | | | | | | 16084 | 3% |
| G St to Market St | | | 9500 | | | | 11900 | | 12600 | | | 14656 | 5% |
| **Fifth Avenue** | | | | | | | | | | | | | |
| C St to Broadway | | 9400 | | | 9200 | | | | | | | 8972 | 0% |
| E St to F St | | | | | 12900 | | 14900 | | | 14970 | | 15931 | 3% |
| F St to G St | | | 10200 | | | | 9900 | | 10500 | | | 10654 | 0% |
| G St to Market St | | 5900 | | | 7300 | | | | | | | 11342 | 8% |
| Island Ave to L St | 7700 | | | | 7600 | | | | | | | 7427 | 0% |
| L St to Harbor Dr | | | 6200 | | | 6000 | 7400 | | 5900 | | | 5757 | -1% |
| **Sixth Avenue** | | | | | | | | | | | | | |
| Interstate 5 to Cedar St | | | | 12800 | | | | | | 14610 | | 15299 | 2% |
| Cedar St to Beech St | | 11900 | | | 11500 | | | | | | | 10598 | -1% |
| Ash St to A St | | 9600 | | | 9800 | | | | | | 8190 | 8056 | -2% |
| B St to C St | | | | | 9600 | | 10300 | | | 12100 | | 13150 | 4% |
| C St to Broadway | | | | | 7800 | | 8200 | | | | | 9251 | 3% |
| E St to F St | | | 7600 | | | | 7400 | | 10300 | | | 12130 | 6% |
| F St to G St | | | 7900 | | | | 6300 | | 7600 | | | 7456 | -1% |
| G St to Market St | | | | | 4600 | | 4900 | | | 8310 | | 10544 | 13% |
| Market St to Island Ave | | | | | 2500 | | | 3800 | | | | 6435 | 17% |
| **Seventh Avenue** | | | | | | | | | | | | | |
| Broadway to E St | | | | | | 4900 | | | 5700 | | | 6631 | 5% |
| F St to G St | | | | | 3700 | | 4100 | | | 3890 | | 3970 | 1% |
| G St to Market St | | | | | 4200 | | 4300 | | | 3680 | | 3498 | -2% |
| **Tenth Avenue** | | | | | | | | | | | | | |
| A St to B St | | 23900 | | | 19700 | | | | | | | 11622 | -6% |
| B St to C St | | | 16100 | | | | 16400 | | 17600 | | | 18420 | 2% |
| C St to Broadway | | | | | 13100 | | | 14700 | | 15070 | | 15977 | 3% |
| E St to F St | | | | | 10700 | | | 11900 | | 11440 | | 11756 | 1% |
| F St to G St | | | 8800 | | | | 9000 | | 9700 | | | 10196 | 2% |

## Appendix B
### Summary of Traffic Count Data and Annual Growth Rates

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G St to Market St | | | 7800 | | 7800 | | 7300 | | | 8560 | | 8798 | 1% |
| J St to K St | | 3300 | | | 3300 | | | | | | | 3300 | 0% |
| **Eleventh Avenue** | | | | | | | | | | | | | |
| | | 16000 | | | 13300 | | | | | | | 8063 | -6% |
| B St to C St | | | 13500 | | | | 12900 | | 12880 | | | 12584 | -1% |
| C St to Broadway | | | 12400 | | | | 11800 | | 12000 | | | 11806 | -1% |
| G St to Market St | | | 6100 | | | | 6100 | | 5700 | | | 5513 | -1% |
| **Park Boulevard** | | | | | | | | | | | | | |
| A St to B St | | | | 17800 | | 16700 | | | | | | 13604 | -3% |
| C St to Broadway | | | | | 3200 | | 4800 | | | 2830 | | 2699 | -2% |
| E St to F St | | | | 2500 | | | 3100 | | 2480 | | | 2468 | 0% |
| F St to G St | | | | 1600 | | | 1300 | | | | | 894 | -6% |
| **Sixth Avenue** | | | | | | | | | | | | | |
| C Street to Broadway | | | | 8200 | 8100 | | | | | 9120 | | 9461 | 2% |
| Broadway to E St | | | | 9800 | 9900 | | 8800 | | | 10900 | | 11308 | 2% |
| G St to Market St | | | | 8900 | | 7900 | | | 8500 | | | 8271 | -1% |
| Island Ave to J St | | | | 6600 | | 6000 | | | 6400 | | | 6284 | -1% |
| Imperial Ave to Commercial St | | | 5100 | | 5400 | | | | | | | 6512 | 3% |
| **Seventh Avenue** | | | | | | | | | | | | | |
| Imperial Ave to Commercial St | | | | | | | | 8800 | | 7170 | | 5842 | -9% |
| **East-West Street Segment** | | | | | | | | | | | | | |
| **A Street** | | | | | | | | | | | | | |
| Kettner Boulevard to India St | | | | 6200 | | | | | | 6800 | | 7019 | 2% |
| India St to Columbia St | | | | | | | | | | | | | |
| Columbia St to State St | | | | 8300 | | | | | | 9080 | | 9364 | 2% |
| State St to Front St | | | | | | | | | | | | | |
| Front St to First Ave | | 11100 | | | 12000 | | | | | | 8900 | 8704 | -2% |
| Fourth Ave to Fifth | | 12400 | | | 12200 | | | | | | 14990 | 15338 | 2% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ave | | | | | | | | | | | | | |
| Fifth Ave to Sixth Ave | | | | 13000 | | | | | | 15810 | | 16949 | 4% |
| Eighth Ave to Ninth Ave | | | | 12700 | | 13500 | | | | 14700 | | 15472 | 3% |
| Tenth Ave to Eleventh Ave | | 8100 | | | 8000 | | | | | | | | 0% |
| Eleventh Ave to Park Blvd | | | | 6600 | | 7900 | | | | 7390 | | 8846 | 10% |
| **Ash Street** | | | | | | | | | | | | | |
| N. Harbor Drive to Pacific Highway | | 7100 | | | 8700 | | | | 7500 | | | 181 | 1% |
| Pacific Highway to Kettner Boulevard | | | | 9300 | | | | | | 9580 | | 9676 | 1% |
| India St to Columbia St | | | | 8900 | | | | | | 9070 | | 9128 | 0% |
| Columbia St to State St | | | | 11100 | | | | | | 16810 | | 19692 | 9% |
| Front St to First Ave | | | 15200 | | | 14600 | | | | 15510 | | 15600 | 0% |
| First Ave to Second Ave | | 21000 | | | 16600 | | | | 15500 | | 16890 | 16523 | -2% |
| Fifth Ave to Sixth Ave | | 15200 | | | 12600 | | | 11900 | | | | 11039 | -4% |
| Eighth Ave to Ninth Ave | | | | 9500 | | 7600 | | | | 10020 | | 10203 | 1% |
| **B Street** | | | | | | | | | | | | | |
| Fourth Ave to Fifth Ave | | | | 7900 | | 8600 | | | 9500 | 9100 | | 9561 | 3% |
| Fifth Ave to Sixth Ave | | | | 9700 | | | | | | 10700 | | 11068 | 2% |
| Eleventh Ave to Park Blvd | | | | 9800 | | 11500 | | | | | | 17485 | 9% |
| Park Blvd to Sixth Ave | | | | 11000 | | | | | | 11630 | | 11852 | 1% |
| Seventh Ave to Interstate 5 | | | | 6400 | | 6500 | | | | 8320 | | 9152 | 5% |
| **Beech Street** | | | | | | | | | | | | | |
| Pacific Highway to Kettner Boulevard | | | 1200 | | | 1400 | | | | | | 1867 | 6% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Broadway** | | | | | | | | | | | | | |
| N. Harbor Drive to Pacific Highway | | 8300 | | | 6500 | | | | | | 6420 | 6258 | -3% |
| Pacific Highway to Kettner Boulevard | | | | | 10800 | | 10900 | | | | | 11152 | 0% |
| Kettner Boulevard to India St | | | 12900 | | | | 13200 | | 12900 | | | 12900 | 0% |
| Union St to Front St | | | | | 18800 | | | | | 18830 | | 18842 | 0% |
| Fourth Ave to Fifth Ave | | | | 17600 | | | 18700 | | 16700 | | | 16188 | -1% |
| Fifth Ave to Sixth Ave | | | | | 16000 | | | 18300 | | 16270 | | 16380 | 0% |
| Ninth Ave to Tenth Ave | | | | 12800 | | | 14000 | | | | | 16188 | 3% |
| Tenth Ave to Eleventh Ave | | | | 10300 | | | 9400 | | 10500 | | | 10622 | 0% |
| Eleventh Ave to Park Blvd | | | | | 8000 | | | 7200 | | 8610 | | 8873 | 2% |
| Fourth Ave to Fifth Ave | | | | | 7200 | | | 7300 | | | | 7435 | 0% |
| Sixth Ave to Seventh Ave | | 6500 | | 6500 | 6400 | | 6800 | | | | | 7114 | 1% |
| **C Street** | | | | | | | | | | | | | |
| Front St to First Ave | | | | | 2700 | | | 1000 | | 1780 | | 1537 | -7% |
| Ninth Ave to Tenth Ave | | | | 2300 | | | 1500 | | 1400 | | | 1071 | -8% |
| Eleventh Ave to Park Blvd | | | | 3500 | | | 4600 | | 4400 | | | 5079 | 5% |
| Fourth Ave to Fifth Ave | | | | | 9700 | | | 7800 | | | | 5763 | -7% |
| Sixth Ave to Seventh Ave | | 7800 | | | 9000 | | | | | | 10730 | 11178 | 4% |
| **Cedar Street** | | | | | | | | | | | | | |
| Pacific Highway to Kettner Boulevard | | | 2200 | | | 2200 | | | | 2970 | | 3267 | 5% |
| Union St to Front St | | | | | | 4400 | | | | 4930 | | 5227 | 3% |
| Second Ave to 3th Ave | | | | 7500 | | | | | | 6570 | | 6298 | -2% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fourth Ave to Fifth Ave | | | | | | | | 6500 | | 6820 | | 7156 | 2% |
| Fifth Ave to Sixth Ave | | | 6100 | | | | | | 6300 | 5350 | | 5162 | -2% |
| **Columbia Street** | | | | | | | | | | | | | |
| Ivy St to Hawthorn St | | | 3300 | | | 3200 | | | | | | 3006 | -1% |
| Hawthorn St to Grape St | | 6100 | | | 5800 | | | | | | | 5134 | -2% |
| Date St to Cedar St | | | | 3500 | | | | | | 3530 | | 3540 | 0% |
| Ash St to A St | | | | 6300 | | | | | | 8430 | | 9380 | 6% |
| **E Street** | | | | | | | | | | | | | |
| Fourth Ave to Fifth Ave | | | | 1900 | | | 3000 | | 1530 | | | 1351 | -4% |
| Fifth Ave to Sixth Ave | | | | | 3100 | | 3400 | | | 3400 | | 3532 | 2% |
| Eleventh Ave to Park Blvd | | | | 2900 | | | 2700 | | 3000 | | | 3062 | 1% |
| Fourth Ave to Fifth Ave | | | | | 4500 | | | 4600 | | 5420 | | 5863 | 4% |
| **F Street** | | | | | | | | | | | | | |
| Front St to First Ave | | 2800 | | 2700 | 2600 | | | | | | | 2167 | -2% |
| Fourth Ave to Fifth Ave | | | | 7200 | | | 8100 | | 9200 | | | 10733 | 6% |
| Fifth Ave to Sixth Ave | | 11200 | | | 9600 | | | | | | | 6400 | -5% |
| Tenth Ave to Eleventh Ave | | | | 11900 | | | 12500 | | 12800 | | | 13381 | 2% |
| 14th St to 15th St | | 14900 | | | 14900 | | | | | | | 14900 | 0% |
| 16th St to 17th | | | | 20600 | | | 19700 | | 21500 | | | 22064 | 1% |
| **G Street** | | | | | | | | | | | | | |
| Pacific Highway to Kettner Blvd | | 2500 | | | | | 3600 | | | | | 5184 | 9% |
| Kettner Blvd to India St | | | | 3100 | | | 3700 | | | | | 4894 | 6% |
| Columbia St to State St | | | | 3400 | | | 3400 | | 3600 | | | 3727 | 1% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

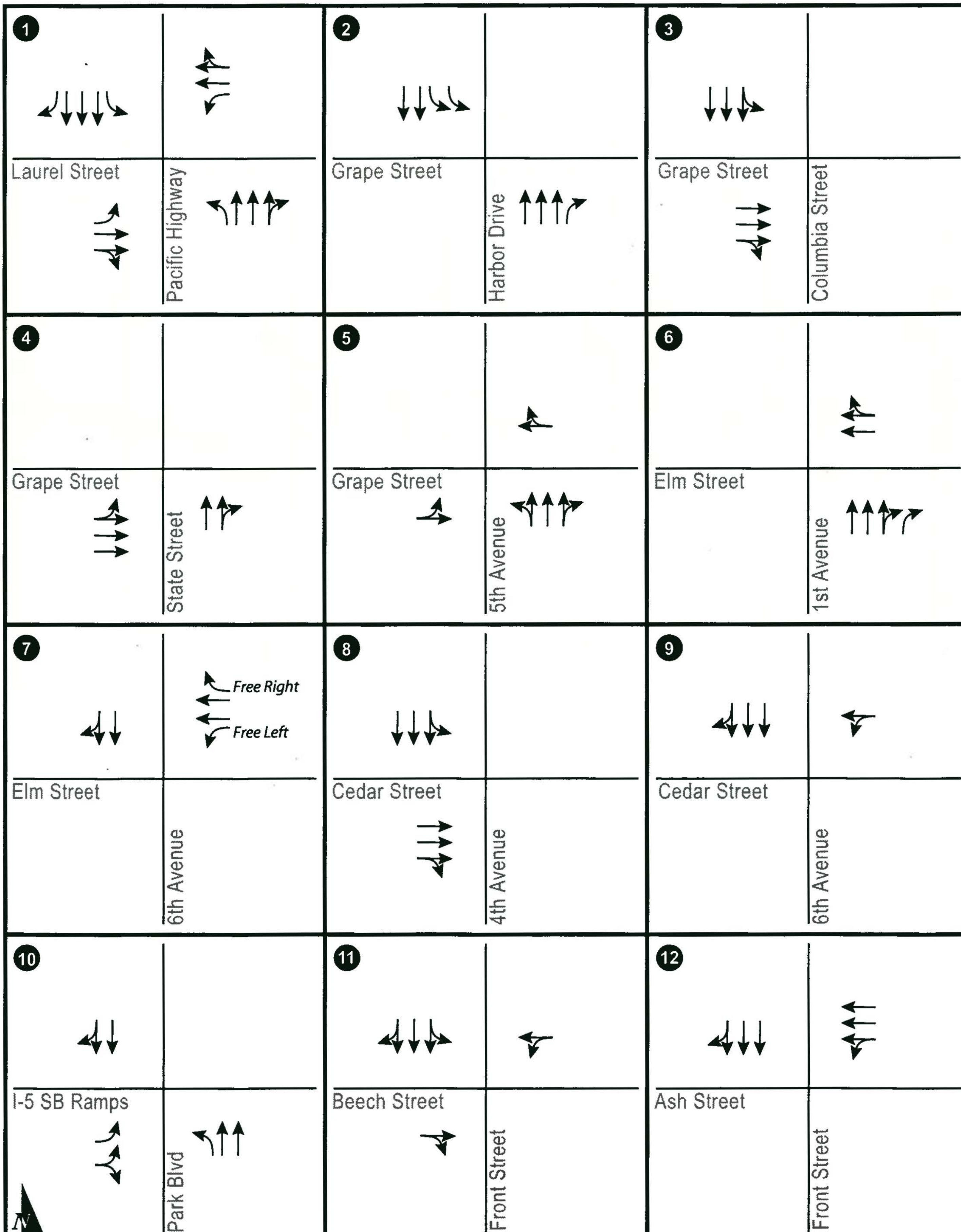
| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Front St to First Ave | | 6900 | 6800 | | 8500 | | | 7700 | | | | 8295 | 2% |
| Fourth Ave to Fifth Ave | | | | | 11600 | | 14300 | | | 12950 | | 13553 | 2% |
| Fifth Ave to Sixth Ave | | 11100 | | | 12300 | | | 12900 | | | | 14295 | 3% |
| Ninth Ave to Tenth Ave | | 13100 | | | 13000 | | | | | | | 12802 | 0% |
| Tenth Ave to Eleventh Ave | | | | 13600 | | | 13900 | | 15600 | | | 16976 | 3% |
| Eleventh Ave to Park Blvd | | | | | 12400 | | 14500 | | | 15960 | | 17793 | 6% |
| 14th St to 15th St | | | | 13300 | | 13800 | | | 15690 | | | 17382 | 4% |
| Sixth Ave to Seventh Ave | | | | 17300 | | | 16800 | | 17130 | | | 17029 | 0% |
| **Grape Street** | | | | | | | | | | | | | |
| Harbor Dr to Pacific Highway | | 20100 | | | 20200 | | | | 25000 | | | 27612 | 3% |
| **Hawthorn Street** | | | | | | | | | | | | | |
| Harbor Drive to Pacific Highway | | | | 20100 | | | 20800 | | | 21930 | | 22378 | 2% |
| Pacific Highway to Kettner Blvd | | | 21200 | | | 21800 | | | | | | 23034 | 1% |
| Kettner Blvd to India St | | 21500 | 21700 | | | | | | | | | 23517 | 1% |
| India St to Columbia St | | 23000 | | | 23000 | | | | | | | 23000 | 0% |
| State St to Interstate 5 | | | | 26300 | | | | | | 32840 | | 35562 | 4% |
| **Imperial Avenue** | | | | | | | | | | | | | |
| Tenth Ave to Eleventh Ave | | | 4500 | | 4000 | | | | | | | 2444 | -6% |
| Fourth Ave to Fifth Ave | | | 7100 | | 5100 | | | | | | 4520 | 4315 | -5% |
| Sixth Ave to Seventh Ave | | | 7700 | | 6800 | | | | | | 6490 | 6363 | -2% |
| **Laurel Street** | | | | | | | | | | | | | |
| Harbor Drive to Pacific Highway | | | 31100 | | | 33800 | | | | 34970 | | 36213 | 2% |

**Appendix B**
**Summary of Traffic Count Data and Annual Growth Rates**

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | Annual Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pacific Highway to Kettner Blvd | | 27300 | | | 28000 | | | 26000 | | | | 25175 | -1% |
| Kettner Blvd to India St | | | | 18200 | | | | | | 19650 | | 20172 | 1% |
| **Market Street** | | | | | | | | | | | | | |
| Union St to Front St | | 9500 | | | 7900 | | | 9400 | | | | 9334 | 0% |
| Front St to First Ave | | | | 9500 | | | 11300 | | 12490 | | | 14849 | 6% |
| Second Ave to Third Ave | | | | | 14900 | | | 15200 | | | | 15608 | 1% |
| Fourth Ave to Fifth Ave | | | 13000 | | | | 9400 | | 14140 | | | 14760 | 1% |
| Fifth Ave to Sixth Ave | | | 13600 | | | | 15300 | | 16200 | | | 17749 | 3% |
| Eleventh Ave to Park Blvd | | | 13600 | | | | 9800 | | 9000 | | | 7478 | -6% |
| 13th St to 14 St | | | | | 12500 | | | | | | 11560 | 11415 | -1% |
| 17th St to 19th St | | | | | 12600 | | 11700 | | | 9880 | | 9027 | -4% |

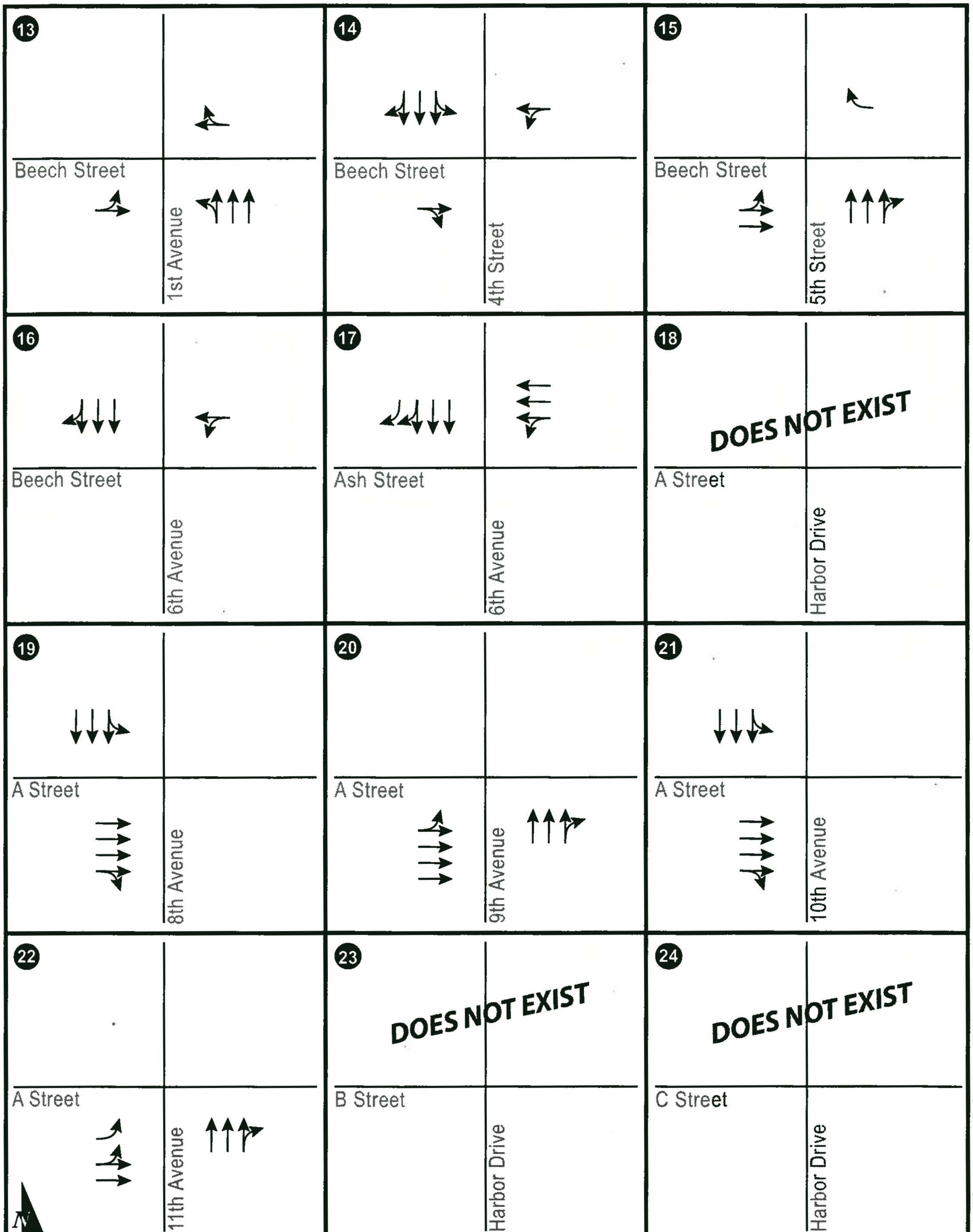
Source: Katz, Okitsu & Associates; 2002

# Appendix C
## LOS F Intersection Geometry
## Unmitigated and Mitigated



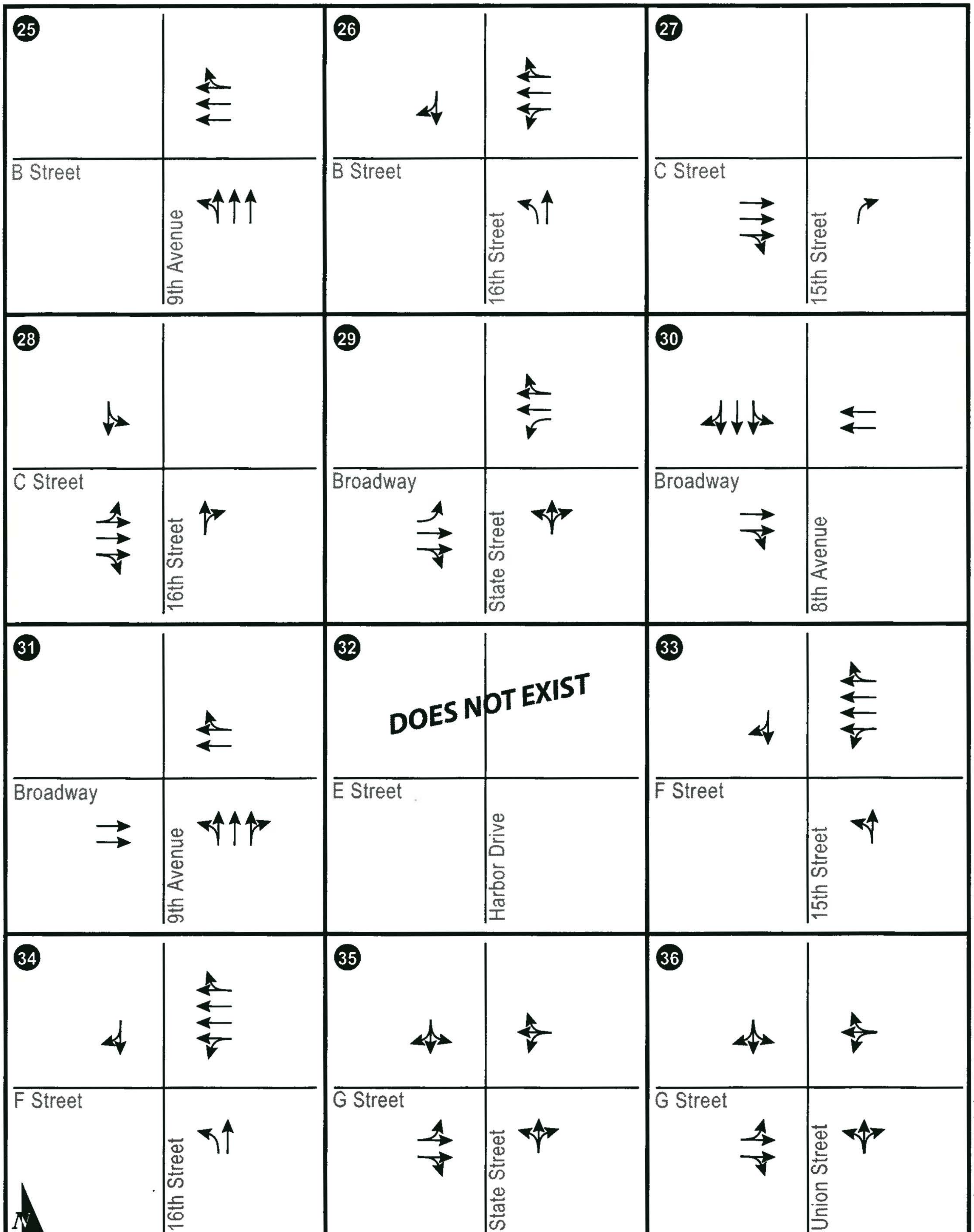

Source: Wilson & Company, April 2005

| LEGEND | | |
|---|---|---|
| ← Existing Geometry | WILSON & COMPANY CCDC Community Plan | Figure C-1, Page 1 of 6<br>Intersection Geometrics<br>Existing Conditions |




Source: Wilson & Company, April 2005

| LEGEND | | |
|---|---|---|
| ← Existing Geometry | WILSON & COMPANY CCDC Community Plan | Figure C-1, Page 2 of 6<br>Intersection Geometrics<br>Existing Conditions |



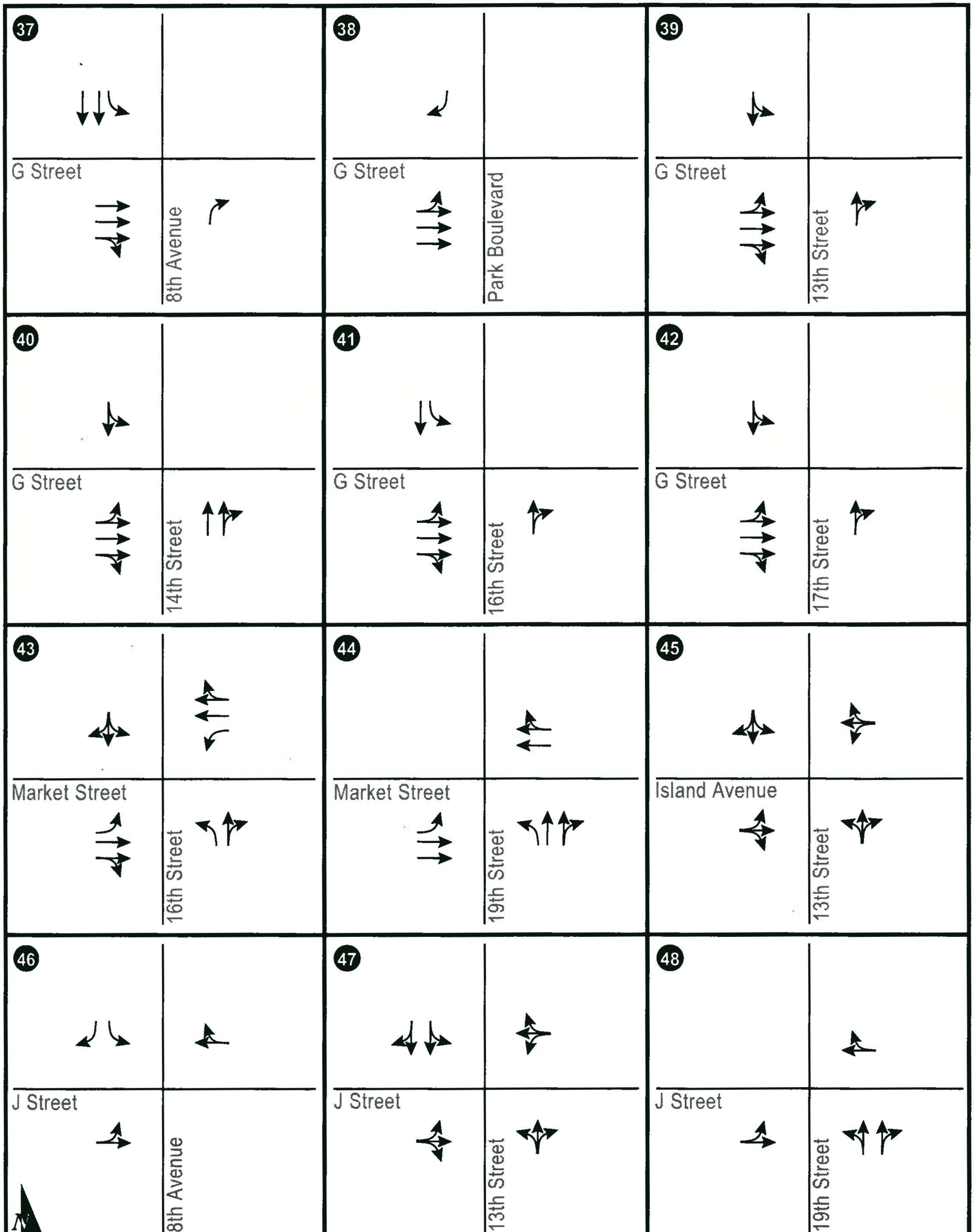

Source: Wilson & Company, April 2005

LEGEND

← Existing Geometry

WILSON & COMPANY **CCDC Community Plan**

Figure C-1, Page 3 of 6
Intersection Geometrics
Existing Conditions



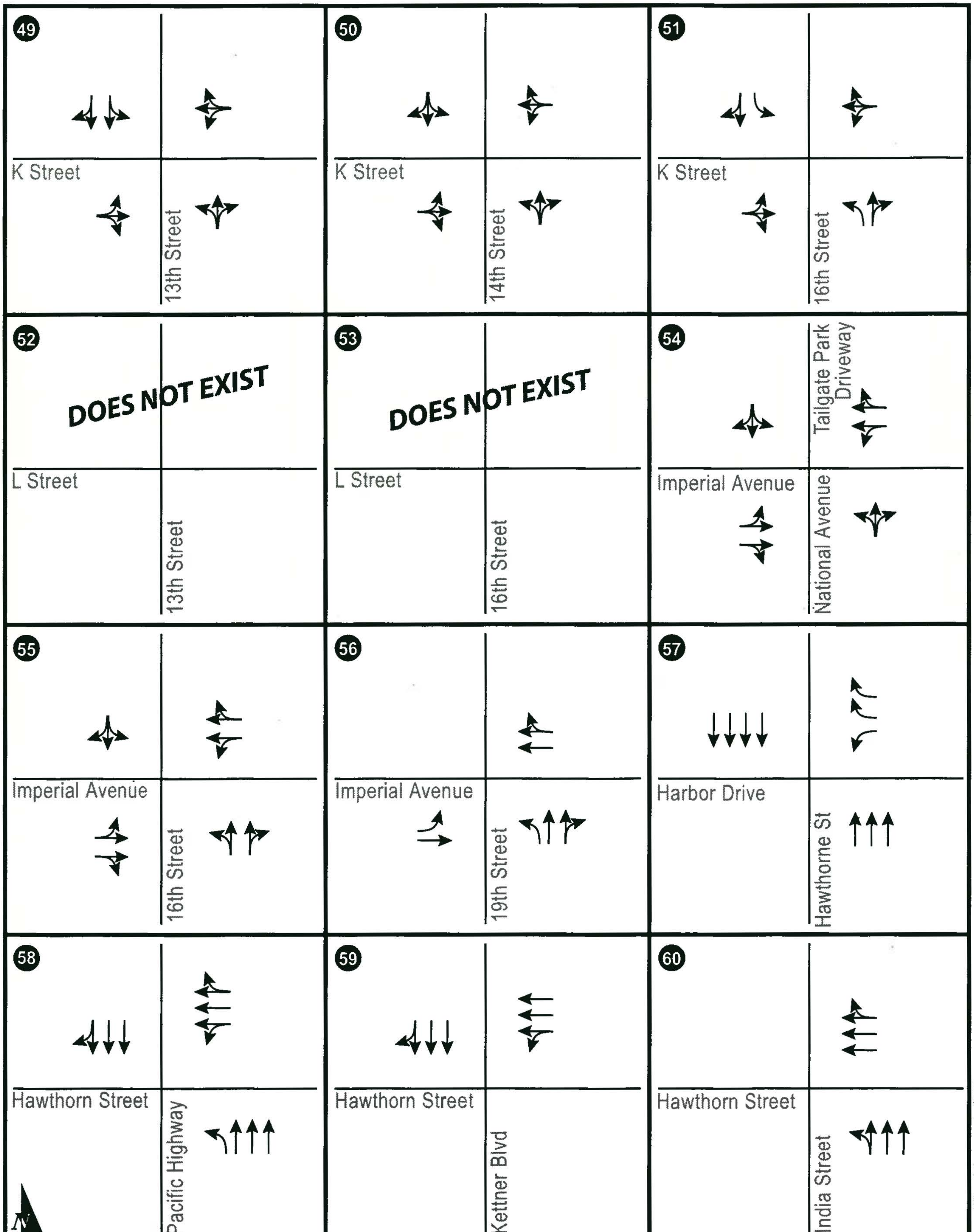

LEGEND

← Existing Geometry

WILSON & COMPANY CCDC Community Plan

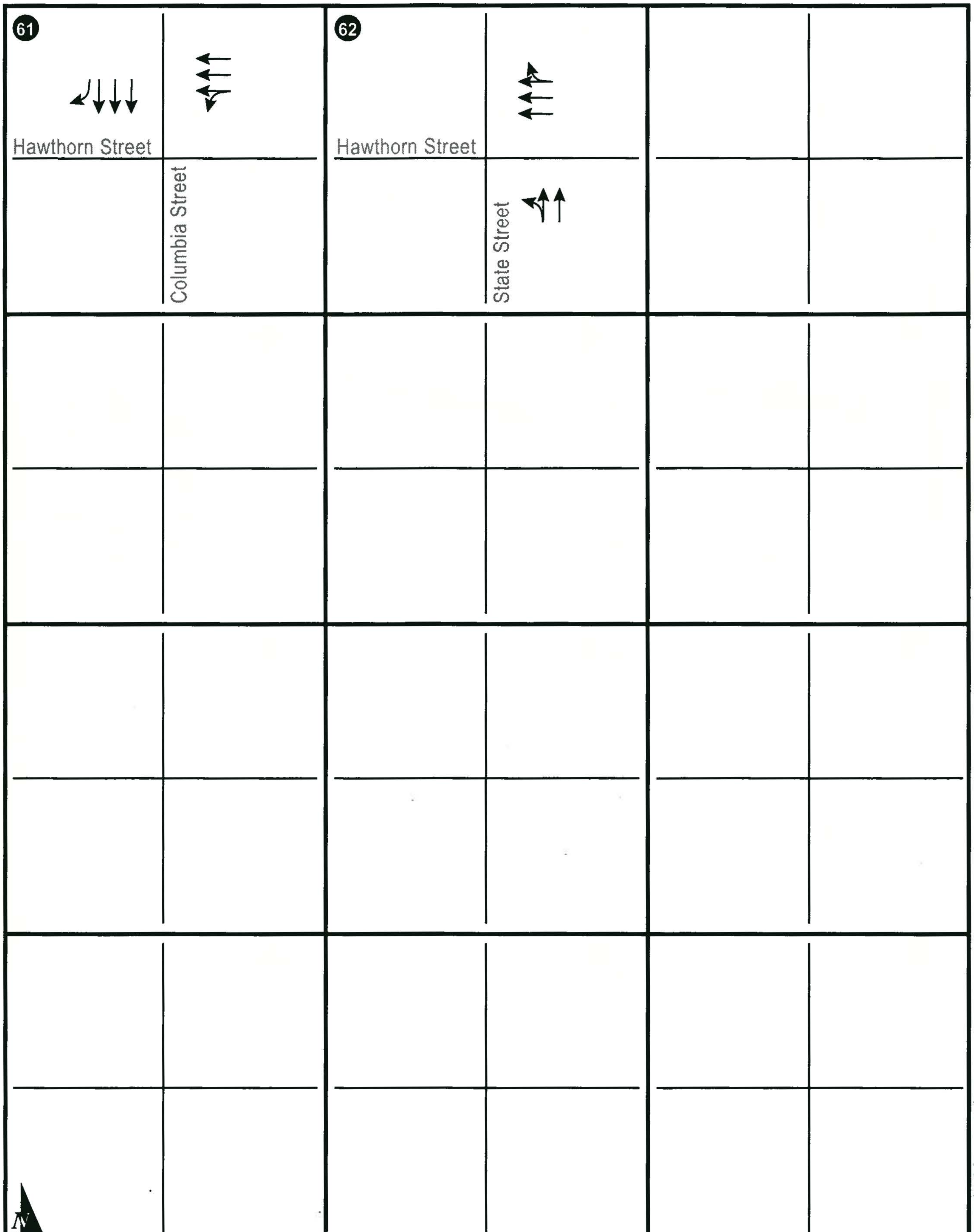
Figure C-1 , Page 4 of 6
Intersection Geometrics
Existing Conditions

Source: Wilson & Company, April 2005




Source: Wilson & Company, April 2005

| LEGEND | | |
|---|---|---|
| ← Existing Geometry | WILSON & COMPANY CCDC Community Plan | Figure C-1 , Page 5 of 6<br>Intersection Geometrics<br>Existing Conditions |



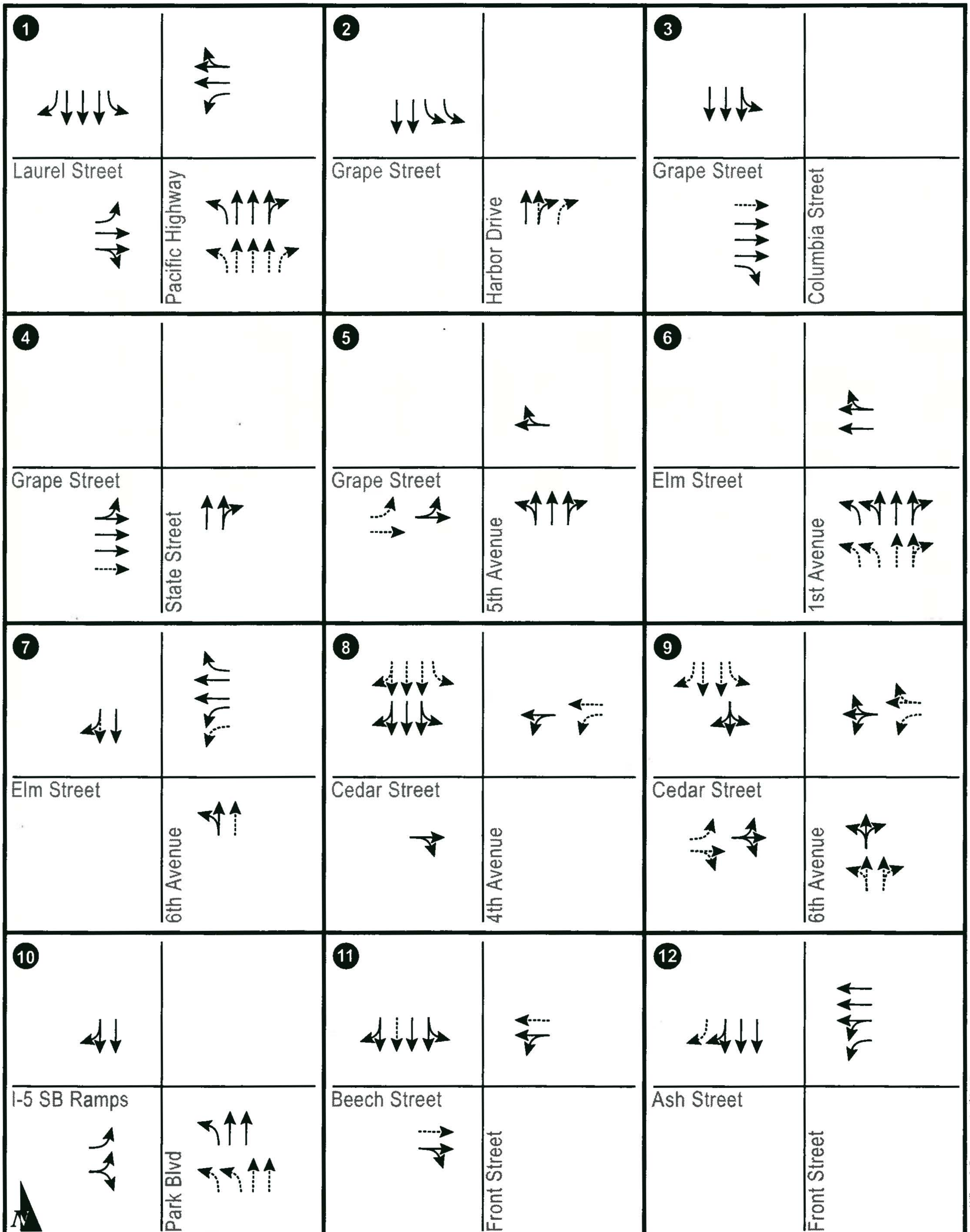

Source: Wilson & Company, April 2005

**LEGEND**

← Existing Geometry

WILSON & COMPANY **CCDC Community Plan**

Figure C-1 , Page 6 of 6
Intersection Geometrics
Existing Conditions




Source: Wilson & Company, April 2005

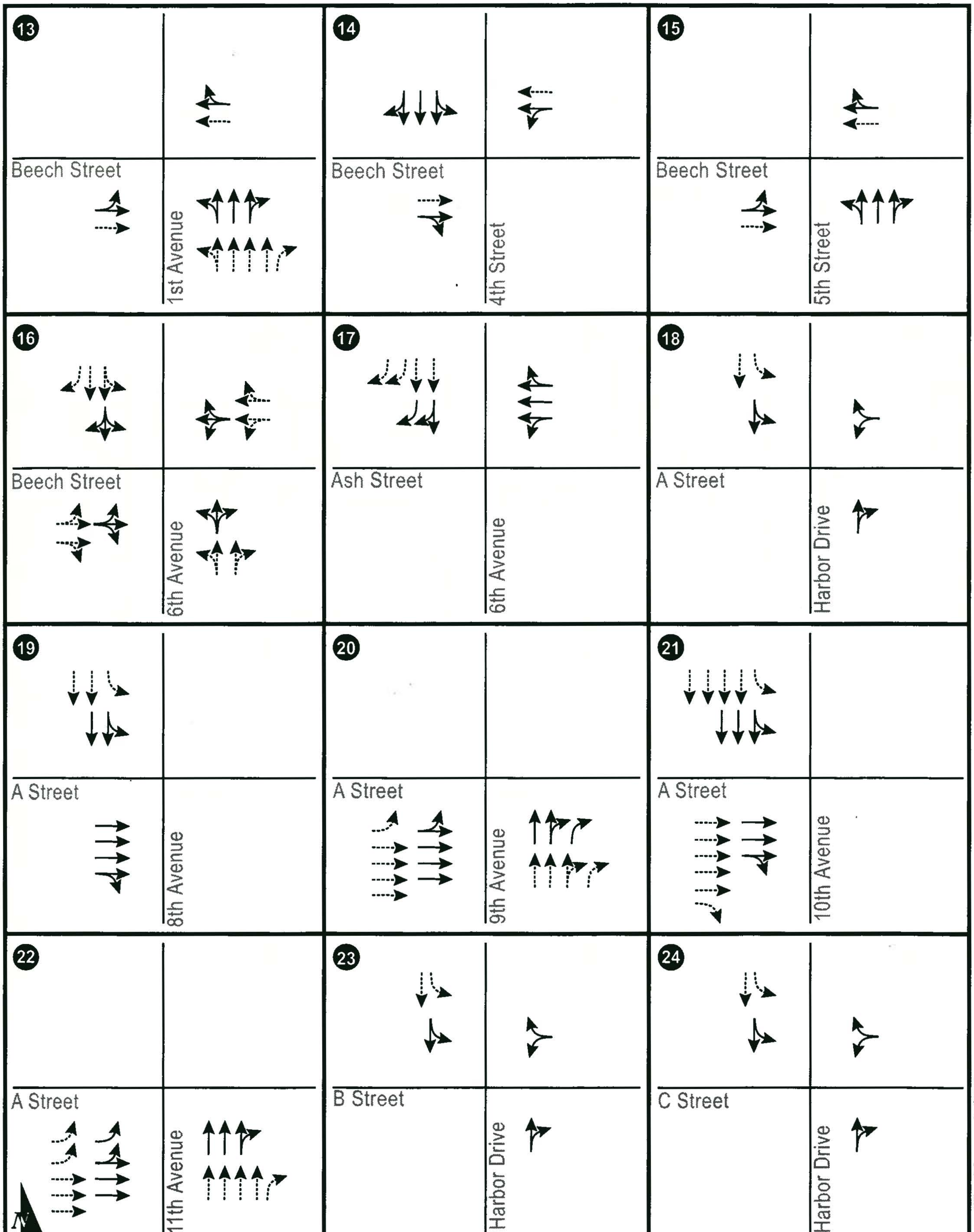
**LEGEND**

← CCDC Preferred Plan Geometry

←--- Recommended Mitigation

WILSON & COMPANY **CCDC Community Plan**

Figure C-2, Page 1 of 6
Intersection Geometrics
Preferred Plan with Mitigation




Source: Wilson & Company, April 2005

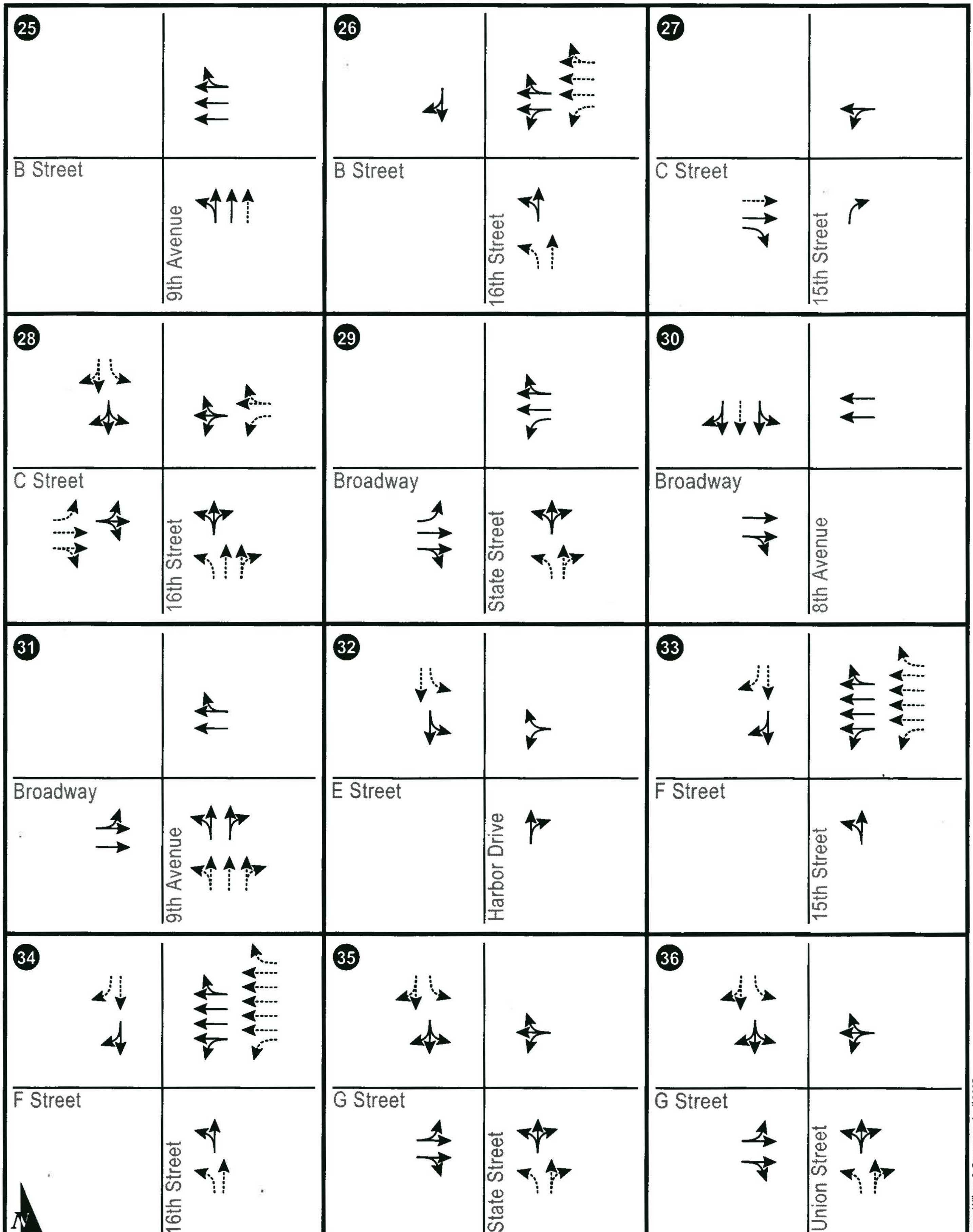
LEGEND

← CCDC Preferred Plan Geometry

←-- Recommended Mitigation

WILSON & COMPANY CCDC Community Plan

Figure C-2, Page 2 of 6
Intersection Geometrics
Preferred Plan with Mitigation




Source: Wilson & Company, April 2005

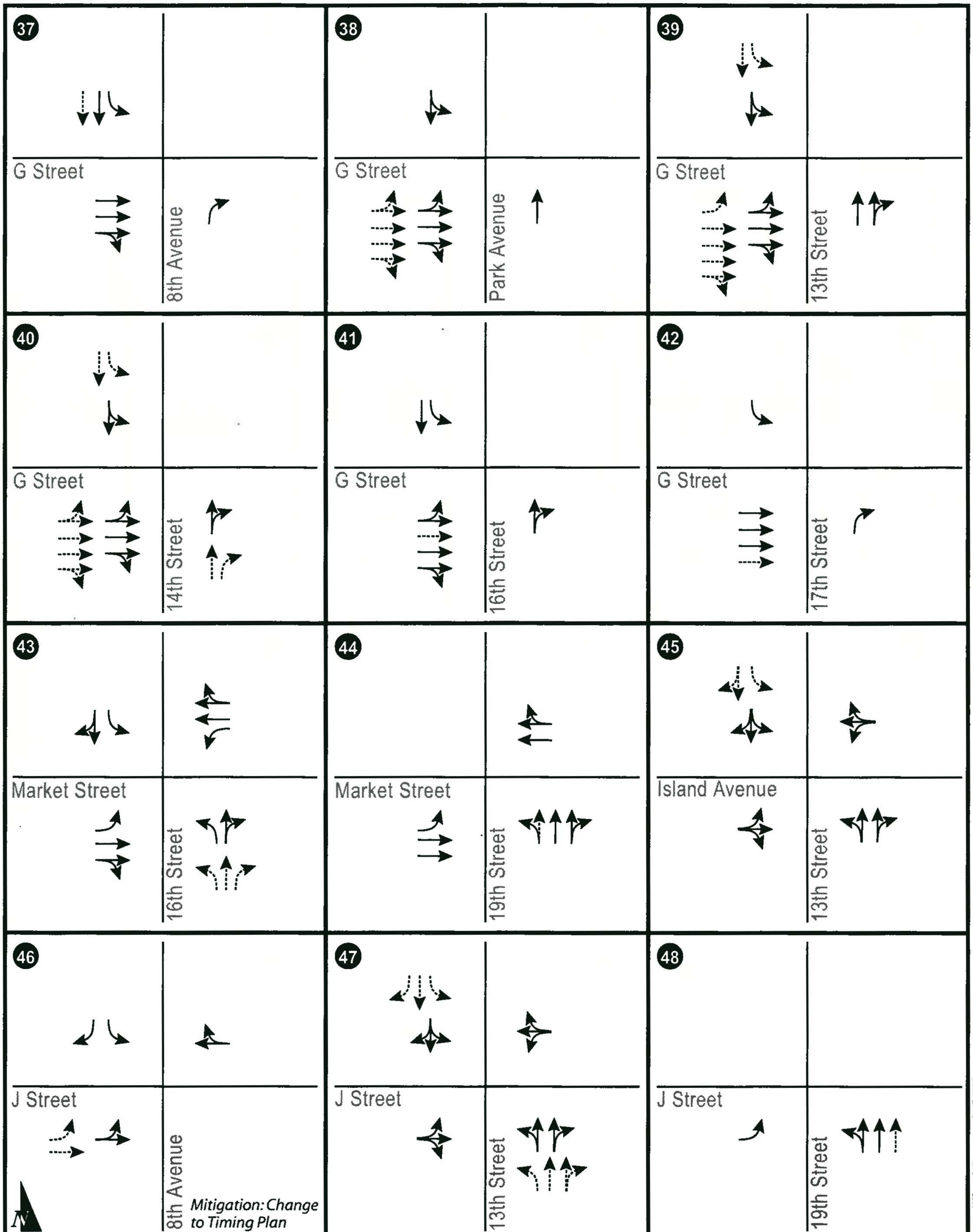
**LEGEND**

← CCDC Preferred Plan Geometry

←-- Recommended Mitigation

WILSON & COMPANY **CCDC Community Plan**

Figure C-2, Page 3 of 6
Intersection Geometrics
Preferred Plan with Mitigation



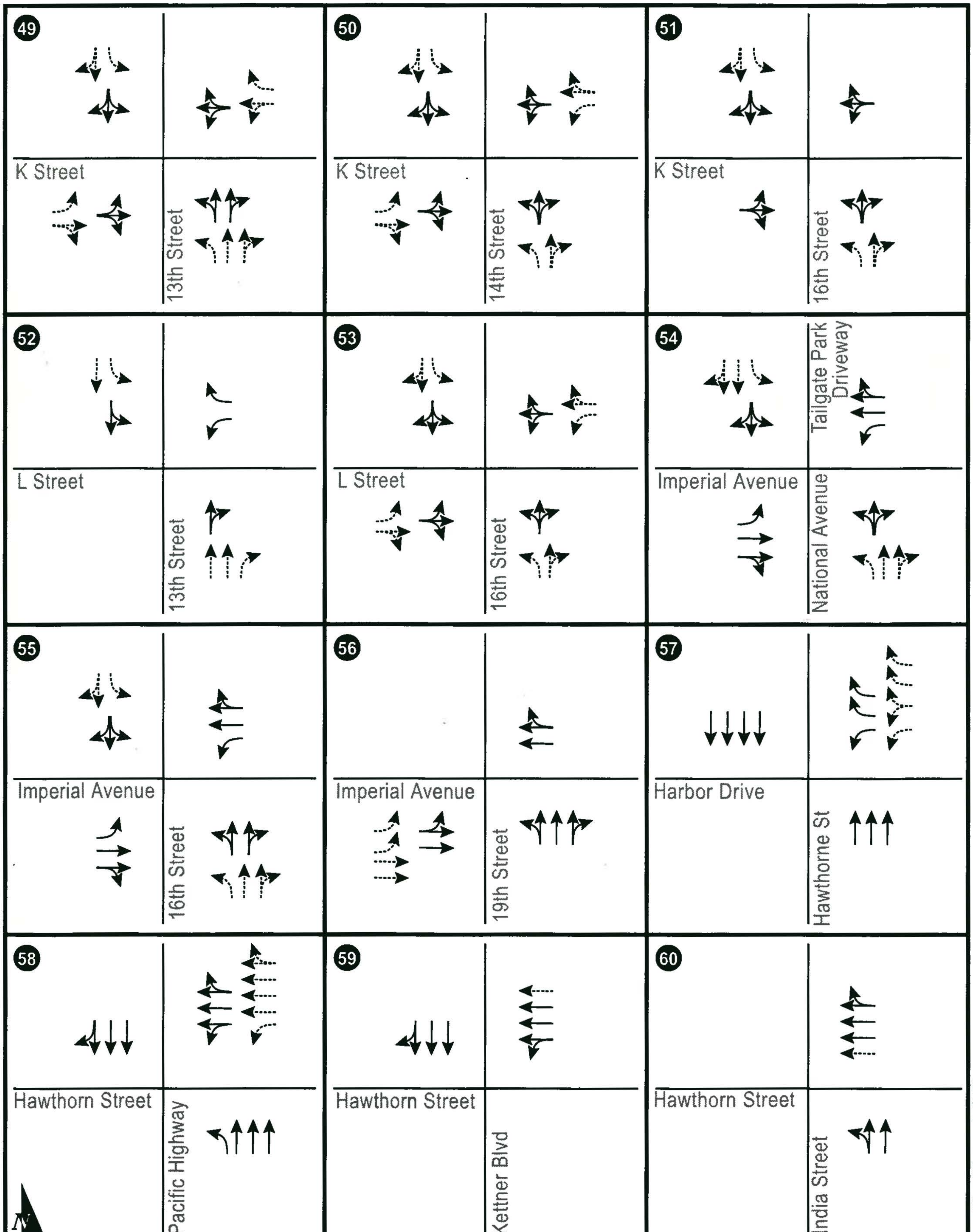

Source: Wilson & Company, April 2005

**LEGEND**

- ← CCDC Preferred Plan Geometry
- ←--- Recommended Mitigation

**WILSON & COMPANY** **CCDC Community Plan**

Figure C-2, Page 4 of 6
Intersection Geometrics
Preferred Plan with Mitigation



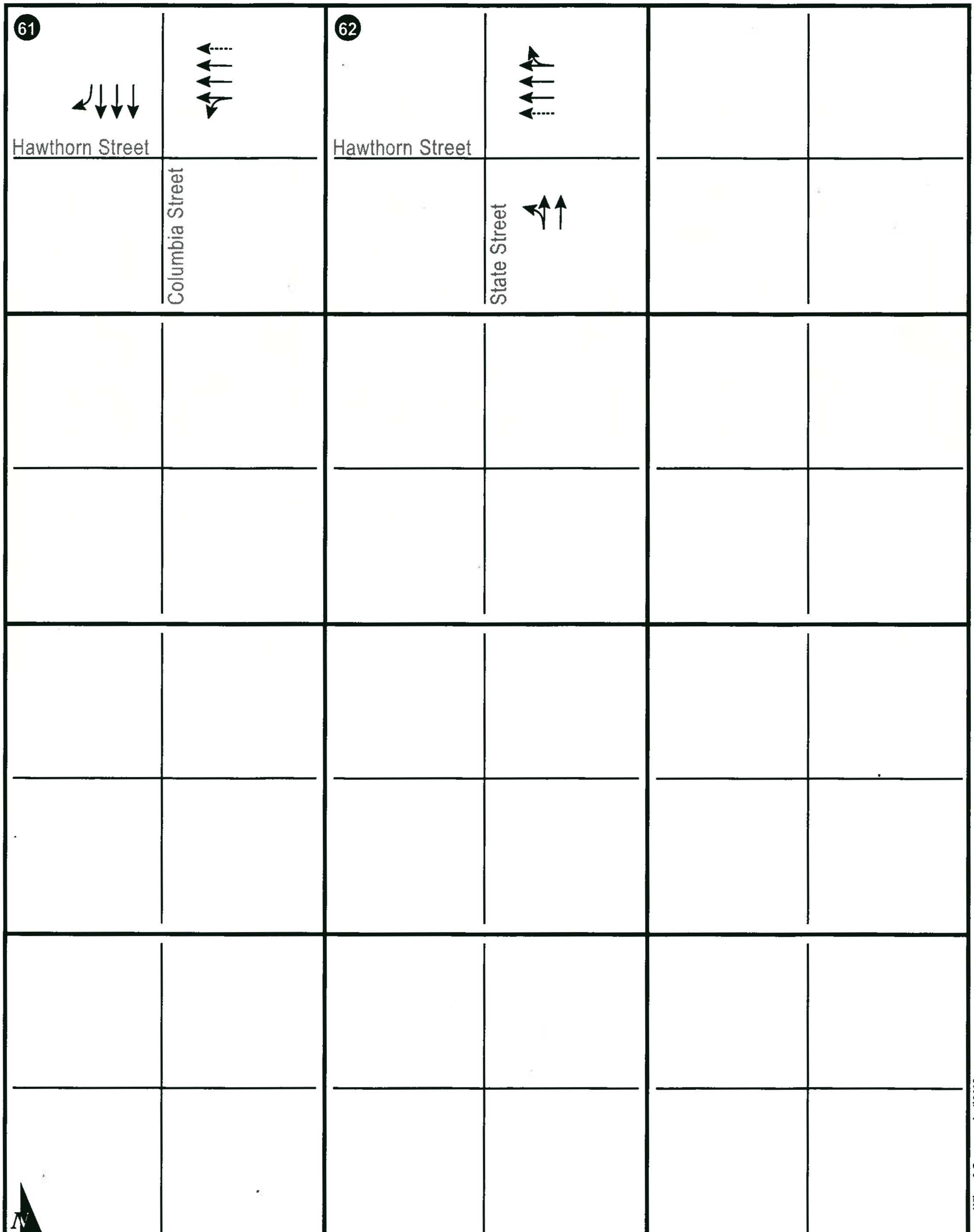

Source: Wilson & Company, April 2005

**LEGEND**

- ← CCDC Preferred Plan Geometry
- ←--- Recommended Mitigation

WILSON & COMPANY **CCDC Community Plan**

Figure C-2, Page 5 of 6
Intersection Geometrics
Preferred Plan with Mitigation




LEGEND

← CCDC Preferred Plan Geometry

←-- Recommended Mitigation

WILSON & COMPANY CCDC Community Plan

Figure C-2 , Page 6 of 6
Intersection Geometrics
Preferred Plan with Mitigation

Source: Wilson & Company, April 2005

# HISTORICAL ANALYSIS

## APPENDIX 2.3

# HISTORICAL RESOURCES REPORT

**For**

# PROPOSED DOWNTOWN COMMUNITY PLAN

**Prepared by**

**Marie Burke Lia, Attorney at Law**
**Historic Preservation Legal Consultant to**
**Centre City Development Corporation**

**Prepared for**

**Centre City Development Corporation**

**June 2005**

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## Introduction

The purpose of this Report is to provide data on identified historical resources and potential historical resources within Centre City, and the restrictions on redevelopment of such resources, as background information for the Proposed Downtown Community Plan. It should be noted that this Report and its related documents address structures and not subsurface or archaeological resources.

## Methodology

The methodology used to develop this data was as follows. The first step was to identify existing and potential historical resources. Because Centre City is the oldest part of San Diego outside of Old Town, it has a large and well documented collection of historical resources. Many of these resources have been recognized as individually significant by local, state and federal authorities or, in other instances, have been recognized as contributors to historical districts. Other potential historical resources have been identified in Historic Resource Inventories which have been conducted in Centre City for the Centre City Development Corporation in 1988-1989, 1995, 1998 and 2001-2004. These Inventories were conducted to identify existing and potential historical resources for two purposes. The first purpose was to enable Centre City planning to properly account for the existence of identified historical resources. The second purpose was to facilitate a determination by the City's Historical Resources Board as to which of the potential historical resources should be designated as local historical resources and, therefore, enable later Centre City planning to properly account for such additional historical resources. In addition to the above-referenced 1988-1989 Inventories, a 2001 photographic survey of Centre City structures, which had not been included in the Inventories but were believed to be more than 45 years of age, was completed for consideration by the 2001 to 2004 Inventories.

The Centre City historical resource data base is, therefore, complete and additional structure research was not required for purposes of this Report.

The second methodology step was to segregate the identified and potential historical resources into categories for purposes of analysis in terms of significance and impacts on Centre City planning. Five categories of identified and potential historical resources were developed. These categories were based upon the specific status of identified properties in terms of federal and/or local governmental recognition and on the potential status of identified properties which might qualify for such recognition. The first and highest level category consists of structures listed on the National or California Registers of Historic Places individually or as contributors to a National or California Register Historical District. The second level category consists of structures formally determined eligible for the National or California Registers. The third level category consists of structures listed on the Local Register of Historical Resources and the fourth level category consists of structures determined by the Inventories to be potentially eligible for the Local Register. The fifth level category consists of structures identified as potential contributors to proposed Historical Districts.

The third methodology step was to review current Centre City environmental documents and provisions of the San Diego Municipal Code to determine the development restrictions present with reference to each of the above five categories.

## Report

The following Report was based upon review and analysis of all of the above data.

### 1. National Register or California Register Listed Structures

Fourteen individual properties, outside of the Gaslamp Quarter but within Centre City, have been listed on the National Register. The California Register automatically includes all California properties listed on the National Register. No Centre City properties are listed on the California Register but not the National Register.

In addition, the Gaslamp Quarter, a sixteen and one-half block area between Fourth and Sixth Avenues and Broadway and the railroad tracks, was listed on the National Register as a National Register Historic District in 1980. Approximately eighty-six structures were identified as potential contributors to the District when it was nominated. Since that time, approximately thirty-eight have been formally determined to be contributors to the District by state and federal officials and five have been demolished. The other structures included within the original Nomination are presumed to be contributors for purposes of development and environmental review. The same area and generally the same buildings have been identified as contributors to a local Gaslamp Quarter historical district, but, for purposes of this Report, they are considered within this category.

With reference to structures listed on the National Register and structures identified as contributing structures within a National Register Historic District, the 1992 Master Environmental Impact Report (MEIR) and Mitigation Monitoring and Reporting Program (MMRP) require that such structures be retained onsite and that any improvements, renovation, rehabilitation and/or adaptive reuse of these historic properties shall ensure their preservation according to applicable guidelines.[1] Guidelines relevant to structures listed on the National Register are the Secretary of the Interior's Standards for Rehabilitation. These Standards are intended to make a compatible use of a property possible through repair, alterations and additions, while preserving those portions or features which convey the property's historical, cultural or architectural values.[2]

1 1992 Master Environmental Impact Report (MEIR) and Mitigation Monitoring and Reporting Program (MMRP) for the Centre City Redevelopment Project Area.

2 The Secretary of the Interior's Standards for Rehabilitation are contained in Appendix A to this Report.

Development Restrictions

National Register listed structures are the highest level of historical resources within Centre City. Within National Historic Preservation programs and policies, only National Historical Landmarks are considered superior, but Centre City has no National Historical Landmarks.[3]

Any redevelopment project which would improve, renovate, rehabilitate and/or adaptively reuse a National Register listed structure in accordance with the Secretary of the Interior's Standards for Rehabilitation would be permitted with ministerial review.

Within the City of San Diego, including Centre City, any redevelopment project which would demolish or substantially alter a National Register listed structure would require a discretionary Site Development Permit. The City's Planning Commission could act on the Site Development Permit application only after considering the Historical Resources Board's recommendation on the subject. The Planning Commission could only approve such a project if it found that there were no feasible measures that could further minimize the potential adverse effects to the resource, that all feasible measures to mitigate for the loss of the resource had been provided, and that denial of the permit would result in economic hardship to the owner. Economic hardship is defined as meaning there is no reasonable beneficial use of the property and it is not feasible to derive a reasonable economic return from the property.[4]

Since the Site Development Permit is a discretionary permit, environmental review would be required. The clear intent of the above-referenced MEIR and MMRP is to prevent, wherever possible, the demolition or substantial alteration of National Register listed individual structures and contributors to the Gaslamp Quarter National Register Historic District. If a proposed redevelopment project would cause demolition or substantial alteration of a National Register listed structure, a Supplemental Environmental Impact Report (SEIR) would be required. The SEIR and its related Findings and Statement of Overriding Considerations would have to prove that individual mitigation measures or project alternatives are infeasible and that the overall project is acceptable despite significant impacts because of specific overriding considerations. Within the past thirteen years, SEIRs have been prepared and adopted on at least three occasions when properties, which were considered potential contributors to the Gaslamp Quarter National Register Historical District, were proposed for demolition to accommodate new development. Documentation of the affected resource by an Historic American Building Survey (HABS) is also required in such instances but, as the result of a 1998 change in the California Environmental Quality Act (CEQA) Guidelines, such documentation may or may not serve to reduce the impacts to the resource to below a level of significance.

A discretionary Site Development Permit to demolish or substantially alter a National Register listed structure within Centre City would take six to eight months to process.

3 Nearby Balboa Park and the Hotel del Coronado are National Historic Landmarks.
4 The requirements for a Site Development Permit for demolition of an historical resource are found in San Diego Municipal Code §126.0504.

Within the Gaslamp Quarter, vacant sites and sites containing buildings which were not identified as contributors in the National Register Nomination and which were not identified as significant to the local Historic District are available for redevelopment without a Site Development Permit. The redevelopment of such sites is subject to the General Design Regulations of the Gaslamp Quarter Planned District Ordinance.[5]

If a federal undertaking was associated in any way with a redevelopment project which would demolish or substantially alter a National Register listed resource, a Section 106 process would also be required.[6] A federal undertaking is defined as any federal involvement in the redevelopment project such as funding or permitting. A Section 106 process is a type of federal environmental review which requires consultation with the State Office of Historic Preservation and the federal Advisory Council on Historic Preservation. After concluding the consultation process, the project may proceed to implementation. With the exception of a Federal Court House proposal recently initiated by the Federal Government, Centre City redevelopment has not experienced federal undertakings in recent years.

## 2. National Register or California Register Eligible Structures:

Six properties within Centre City and outside the Gaslamp Quarter were determined eligible for the National Register in the 1980s by the Keeper of that Register. These properties were determined eligible before the 1992 MEIR and MMRP were adopted, but those documents required that buildings determined potentially eligible for the National Register pursuant to a 1988-1989 Inventory should be the subject of a Historic Preservation Certification Application (Part 1) for purposes of formally determining such eligibility.[7] Consequently, in the 1990s, an additional eleven properties were determined potentially eligible for the National Register by the State Office of Historic Preservation. Three additional Chinese properties have been determined eligible as well. It is reasonable to assume that the intent of these MEIR and MMRP provisions was to treat properties formally determined to be eligible for the National Register as if they had been listed on the National Register. The California Register automatically includes all California properties determined eligible for the National Register. No Centre City properties have been determined eligible for the California Register but not the National Register.

### Development Restrictions

Structures determined eligible for the National Register by the Keeper of that Register are the next highest level of historical resources within Centre City. Structures determined eligible for the California Register by the State Historic Resources Commission are considered comparable.

Any redevelopment project which would improve, renovate, rehabilitate and/or adaptively reuse a National or California Register eligible structure in accordance with the Secretary of the Interior's Standards for Rehabilitation would be permitted with ministerial review.

5 San Diego Municipal Code §103.0407.
6 Section 106 refers to that section in the National Historic Preservation Act and is codified at 36 CFR Part 800.
7 Mitigation, Monitoring and Reporting Program, page 9.

Demolition or substantial alteration of a National or California Register eligible structure would require a Site Development Permit and a Supplemental Environmental Impact Report in the same manner as described above for National Register listed structures. If a federal undertaking was associated in any way with such a project, a Section 106 process would also be required.

A discretionary Site Development Permit to demolish or substantially demolish a National or California Register eligible structure within Centre City would take six to eight months to process.

### 3. Local Register Listed Individual Sites

One hundred twenty-five individual properties, outside of the Gaslamp Quarter but within Centre City, are listed on the Local Register of Historical Resources.

With reference to structures listed on the Local Register, the 1992 MEIR and the MMRP require that such buildings be retained on site to the extent feasible and that any development that proposes to remove such building must prepare a specific analysis for Redevelopment Agency consideration. That analysis must first establish that it is not feasible to retain the building, or substantial portions of it, such as its facade, for incorporation into the proposed development. If incorporation is infeasible, the analysis must then address whether the building can be relocated and preserved at another site in a manner acceptable to the Agency. If the Agency finds that both incorporation and relocation are infeasible, documentation of the building, including photo documentation of its interior and exterior and "as built" drawings of the structure, according to Historic American Building Survey (HABS) standards will be required as mitigation for its removal.[8] However, a 1998 change in California Environmental Quality Act (CEQA) Guidelines may or may not lead to the conclusion that the above documentation requirement would be inadequate to mitigate the impacts caused by the demolition of a Local Register resource, in which case an Supplemental Environmental Impact Report (SEIR) could be required.

Development Restrictions

Structures listed on the Local Register of Historical Resources are the next highest level of historical resources within Centre City.

Any redevelopment project which would improve, renovate, rehabilitate and/or adaptively reuse a Local Register listed structure in accordance with the Secretary of the Interior's Standards for Rehabilitation would be permitted with ministerial review.

Relocation of a Local Register listed resource for preservation at another site, in a manner acceptable to the Agency and after full documentation, has been permitted by the Historical Resources Board without the requirement of a Site Development Permit or a SEIR.

#### A. Local Register Buildings of Significance to the Gaslamp Quarter

8 Mitigation, Monitoring and Reporting Program, pages 9.-10

Eighty-one individual properties within the boundaries of the City's Gaslamp Quarter Historic District are listed as Buildings of Significance to that local district. Contributors to local historical districts are considered equal to individual listings on the local register. However, because these same structures are presumed to be contributors to the National Register Historic District for purposes of development and environmental review, their status and development restrictions are discussed above in Section 1.

**B. Contributing Buildings to Asian/Pacific Historic Thematic District**

Seventeen buildings have been identified as contributors to this District which occurs between Second and Sixth Avenues and J and Market Streets. Three additional buildings were identified as contributors to this local district and also identified individually as National Register eligible buildings, consequently their status and development restrictions are discussed above in Section 1. Thematic Historic Districts are composed of individual sites which represent the historic theme within specific boundaries, but structures not representing the historic theme are not contributors.

Development Restrictions

Structures listed on the Local Register of Historical Resources are the next highest level of historical resources within Centre City.

Only the identified contributing buildings are considered designated local historical sites. Other sites within the boundaries of the Thematic District are not restricted unless they are individually listed on the local register or are a Building of Significance to the Gaslamp Quarter.

Any redevelopment project which would improve, renovate, rehabilitate and/or adaptively reuse a Local Register listed structure in accordance with the Secretary of the Interior's Standards for Rehabilitation may be permitted with ministerial review.

Relocation of a Local Register listed resource for preservation at another site, in a manner acceptable to the Agency and after full documentation, has been permitted by the Historical Resources Board with ministerial review, i.e. without the requirement of a Site Development Permit or a SEIR. However, the relocation of a resource within an historic district outside the district may result in the requirement of Site Development Permit and a SEIR.

**4. Local Register Eligible per Centre City Inventories**

In 1988 and 1989, Centre City Development Corporation, through their historic preservation legal consultant, conducted a Historic Property Inventory of the proposed 1992 Centre City Redevelopment Project Area Expansion. This Inventory identified one hundred sixteen sites which were considered eligible for the local register. Subsequently, in 1990 and 2004, the Historical Resources Board reviewed the sites on this Inventory for the Little Italy, Cortez and Core subareas and determined which should be listed on the local register and which should not. Those listed on the local register in these three subareas have been included in the above discussion of Local Register Listed individual sites.

Two subareas included within the 1988-1989 Inventory have not been fully reviewed by the Historical Resources Board. These two subareas are now included in East Village. In 1999 much of this area was included within the Ballpark Project Area and a specific Historic Property Inventory was conducted and reviewed by the Historical Resources Board for the purpose of determining which sites should be listed on the local register and which should not. Those listed on the local register in the Ballpark Project Area have been included in the above discussion of Local Register Listed individual sites.

In 2001-2004, Centre City Development Corporation, through their historic preservation legal consultant, prepared an Update of the 1988-1989 Inventory's Bayside, East Village and Core subareas. The Historical Resources Board staff and their consultants from the Gensler Architectural and Planning firm reviewed these "Updates" and included seventy sites there from, along with eligibility recommendations, in a document entitled "East Village Combined Surveys," which was submitted to the City's Historical Resources Board in January of 2005. These seventy sites are considered potentially eligible for the Local Register.

During that same period, CCDC consultants prepared a photographic inventory of all structures within these three subareas that appeared to be more than forty-five years of age but hadn't been included in the 1988-19189 Inventories. This photographic inventory was reviewed by the Historical Resources Board staff, their consultants from the Gensler Architectural and Planning Firm and members of the public, resulting in a determination that approximately fourteen of these "Over 45" sites were potentially eligible for the Local Register. These fourteen sites and one unresolved Core subarea site, along with Historical Resources Board staff eligibility recommendations, were included within the East Village Combined Surveys document submitted to the City's Historical Resources Board in January of 2005. Subsequent proceedings before the Board have reduced the number of potential Local Register eligible properties to a total of seventy-eight.

Development Restrictions

If any of these structures are ultimately listed on the Local Register of Historical Resources they will be treated as Local Register Listed Individual Sites and as described in Section 3 above.

## 5. Potential Contributors to Proposed Historical Districts

Proposed Warehouse District

In 1999, a Settlement Agreement was entered into by parties to litigation over the new Ballpark to be constructed in the East Village District. The Agreement required, among other things, the evaluation of a potential Warehouse District within Centre City in accordance with national, state and local criteria. Upon completion of that evaluation, Save Our Heritage Organization (SOHO) and the National Trust for Historic Preservation (NTHP) are charged with the determination as to whether a potential warehouse district, qualifying for listing on any register, exists and, if so, with the responsibility to direct that a district nomination be prepared. The recently completed "Historic Assessment Report for a Proposed Warehouse Thematic District," prepared by Heritage Architecture and Planning, will serve as this evaluation. The Report identified fifty-nine structures as potential contributors to a Local Register Warehouse Thematic District. It did not find that a California or National Register District was present. The boundaries of the proposed District are the railroad easement along Harbor Drive and Commercial Avenue on the South, the west side of Fourth Avenue on the west, the mid-block between Market Street and Island Avenue on the north and the east side of 15th Avenue on the east.

Thematic Historic Districts are composed of individual sites which represent the historic theme within specific boundaries, but structures not representing the historic theme are not contributors. Included within these fifty-nine potential contributors to a Warehouse District are some structures already designated as local historical resources. It is possible that the designation of such a Warehouse Thematic Historic District will be considered by the Historical Resources Board in 2005.

Proposed African-American District

In 2002, CCDC awarded a contract to document the history of African-Americans within a study area that encompassed the East Village, Gaslamp Quarter, Marina and southern Core Districts to Mooney & Associates. That purpose of the study was to examine the buildings, environment and cultural landscape of the study areas within the context of African-American history and culture. The recently released "Downtown San Diego African-American Heritage Study" identifies seventeen standing buildings/structures that have significant association with the contributions and experiences of African-Americans in the downtown planning area between 1806 and 1960. The study also identifies twenty-one locations of former buildings, or non-standing resources, which were also significant to the history of this community and its members. The boundaries of this potential thematic historic district are Pacific Highway on the west, Broadway on the north, 15th Avenue on the east and Harbor Drive on the south.

Thematic Historic Districts are composed of individual sites which represent the historic theme within specific boundaries, but structures not representing the historic theme are not contributors. Included within these seventeen potential contributors to an African-American Thematic Historic District are some structures already designated as local historical resources. It is possible that the designation of such an African-American Thematic Historic District will be considered by the Historical Resources Board in 2005.

## Summary

As illustrated in Tables 1 and 2 below, the more significant the resource, the less available the site is for redevelopment. Significant resources include National or California Register listed, National or California Register Eligible, Local Register Listed and Local Register Eligible, in descending order. Table 1 illustrates the constraints presented by various historical designations and Table 2 illustrates the probability of impacts to properties with various historical designations. Table 3 is a list of the properties included in categories 1 though 4 above as of the date of this Report.

**TABLE 1**
**Constraints Presented by Various Historical Designations**

| Historical Designation/Status | Level of Constraint |
|---|---|
| National Register Listed* | Highly Constrained |
| National Register Eligible** | Highly Constrained |
| Local Register Listed | Moderately Constrained |
| Gaslamp Quarter Contributors | Highly Constrained |
| Asian Pacific Contributors | Moderately Constrained |
| Local Register Eligible | Only Constrained if Designated |

**TABLE 2**
**Probability of Impacts to Properties with Various Historical Designations**

| Historical Designation/Status | Removal | Substantial | |
|---|---|---|---|
| | | Alteration | Relocation |
| National Register Listed* | Very Low | Very Low | Low |
| National Register Eligible** | Very Low | Very Low | Low |
| Local Register Listed | Low | Low | Moderate |
| Gaslamp Quarter Contributors | Very Low | Very Low | Low |
| Asian Pacific Contributors | Low | Low | Low |
| Local Register Eligible | TBD | TBD | TBD |

* Includes California Register Listed
** Includes California Register Eligible

**TABLE 3**
**Inventoried Historic Resources within the Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **National Register Listed** | |
| 1. 868 Fourth Avenue | Balboa Theater |
| 2. 733 Eighth Avenue | Eagles Hall |
| 3. 702 Ash Street | El Cortez Hotel |
| 4. 326 Broadway | U.S. Grant Hotel |
| 5. 1202 Kettner Blvd. | McClintock Warehouse |
| 6. 233 A Street | Medico-Dental Building |
| 7. 105 West F Street | Panama Hotel |
| 8. 1600 Pacific Highway | San Diego Civic Center |
| 9. 530 Broadway | San Diego Trust & Savings |
| 10. 1050 Kettner Blvd. | Santa Fe Depot |
| 11. 123 Broadway | Spreckels Theater Building |
| 12. 325 West F Street | U.S. Courthouse |
| 13. 815 E Street | U.S. Post Office |
| 14. 1014 Fifth Ave/602 Broadway | Walker Scott Owl Drug |
| 15. Various | Gaslamp Quarter Historic District |
| **National Register Eligible** | |
| 16. 500 West Broadway | Armed Services YMCA |
| 17. 301 West Market | Pacific Soap Factory |
| 18. 903 Kettner | SDG&E Substation B |
| 19. G at California Street | Plaza de Pantoja |
| 20. 720 Fourth Avenue | Golden West Hotel |
| 21. 339 West Broadway | Hotel San Diego |
| 22. 1572 Second Avenue | Anton Mayrhofer Residence |
| 23. 509 12th Avenue | Bay View Hotel |
| 24. 1620 Sixth Avenue | Bradley-Woolman Funeral Church |
| 25. 330-336 C Street | California Theater |
| 26. 350 Cedar Street | Elks Club Lodge |
| 27. 1568 Ninth Avenue | John Ginty Residence |
| 28. 420-424 Ash Street | J.C. Hearne Surgical Hospital |
| 29. 1654-1668 State Street | Our Lady of the Rosary Church |
| 30. 1535 Third Avenue | St. Joseph's Cathedral |
| 31. 1362 Fourth Avenue | San Diego Gas & Electric |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the**
**Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **National Register Eligible (Continued)** | |
| 32. 1245 Island Avenue | Sheldon Residence |
| 33. 540 Third Avenue | Plants & Fireproofing Building |
| 34. 500 Third Avenue | Ying On Benevolent Assn. Building |
| 35. 426-428 Third Avenue | Chinese Benevolent Assn. Building |
| **Local Register Listed** | |
| 36. 1250 Sixth Avenue | San Diego Athletic Club |
| 37. 625 Broadway | John D. Spreckels Building |
| 38. 402 Island Avenue | Davis-Horton House |
| 39. Broadway at Fourth Ave. | Horton Plaza and Fountain |
| 40. 325 Island Avenue | Brooklyn (Kahle) Hotel |
| 41. 1157 Columbia Street | San Diego Steam Laundry |
| 42. 325 Island Avenue | Horton Grand Hotel |
| 43. 765 Tenth Avenue | Buckner Hotel |
| 44. Second Ave and Ash St | Kiessig Corner |
| 45. 215 Seventh Avenue | Western Metal Building |
| 46. 611 Island Avenue | Klauber Wagenheim Building |
| 47. 305 Eighth Avenue | Showley Bros. Candy Factory |
| 48. 715 J Street | Simon Levi Building |
| 49. 861 Sixth Avenue | Timken Building |
| 50. 330 Eighth Avenue | Levi Wholesale Grocery |
| 51. Various (20+ buildings) | Asian/Pacific Historic District |
| 52. 427 C Street | Marston Department Store |
| 53. 1301 Fifth Avenue | Sanford Hotel |
| 54. 1702 India Street | Bernadini Building |
| 55. 1572 Columbia Street | Fire Station #6 |
| 56. 1665 Union Street | Shaffer Residence |
| 57. 1658 Front Street | Clawson Jones Rental |
| 58. 205 West Date | Silverhorn/Hord Residence |
| 59. 820 West Ash | Parron Hall |
| 60. 2260 Columbia Street | Foster-Kleiser Building |
| 61. 1917 India Street | Fintzelberg Commercial Building |
| 62. 1702 Kettner Blvd | Electrical Products Co. |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the**
**Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Listed (Continued)** | |
| 63. 1703 India Street | DeFalco's Grocery |
| 64. 1731 India Street | Tait's Meat Market |
| 65. 1743 India Street | Auto Body Company |
| 66. 1747 India Street | Muller Grocery |
| 67. 2400 India Street | McDonough Cleaners |
| 68. 800 West Ivy | Adams-Henry Company |
| 69. 2308 Kettner Blvd | San Diego Macaroni Co. |
| 70. 1557 Columbia | Ballatore's Residence |
| 71. 1762 Columbia | St. Anne's Clinic |
| 72. 1764 Columbia | Tait Rentals |
| 73. 532 West Grape | Vue de L'Eau |
| 74. 648 West Hawthorne | Fiesta Apartments |
| 75. 1907 Kettner Blvd | Pray Rentals |
| 76. 1620 State Street | Ordway Residence |
| 77. 1632 State Street | Cook Residence |
| 78. 1642 State Street | Spaeth Rental |
| 79. 1644 State Street | Spaeth Residence |
| 80. 1610 Union Street | Millard Rental |
| 81. 1620 Union Street | Cassidy Home |
| 82. 1642 Union Street | Kutchin Home |
| 83. 1654 Union Street | French Rental |
| 84. 354 Eleventh Avenue | Carnation/Qualitee Dairy |
| 85. 230 West Cedar | Rawson Residence |
| 86. 317 Ash Street | First Church Christ Science |
| 87. 1468 First Avenue | San Diego Nurses Club |
| 88. 1545 Second Avenue | Wilsonia Hotel |
| 89. 1502 Sixth Avenue | Dr. Peper Residence |
| 90. 1609 Eighth Avenue | Alexandria Apartments |
| 91. 1604 Seventh Avenue | Mills Residence |
| 92. 1471 Eighth Avenue | Kroenert Residence |
| 93. 629 J Street | Julian Produce Company |
| 94. 726 West Beech | Star Builders Company |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Listed (Continued)** | |
| 95. 400 Eighth Avenue | Fire Station #4 |
| 96. 900 E Street | Guymon-Fletcher-Lovett Building |
| 97. 906 Tenth Avenue | First Baptist Church |
| 98. 21 16th Avenue | Residence |
| 99. 33 16th Avenue | Residence |
| 100. 53 16th Avenue | Residence |
| 101. 525 C Street | Scripps Building |
| 102. 1041 Fifth Avenue | Jessop & Sons Building |
| 103. 371 Eighth Avenue | Shieffer & Sons Warehouse |
| 104. 1290 J Street | Rosario Hall |
| 105. 808 J Street | Wellman Peck/TR Produce |
| 106. 421 17th Avenue | Evans Home |
| 107. 911 Sixth Avenue | Leland Hotel |
| 108. 721 14th Avenue | Daggett Residence |
| 109. 719 14th Avenue | Murray Apartments |
| 110. 171 14th Avenue | Wonder Bread Building |
| 111. 602 Broadway | Fletcher-Salmons Building |
| 112. 500 Broadway | First National Bank |
| 113. 1312 12th Avenue | Riviera Apartment Hotel |
| 114. 501 7th Avenue | Clermont/Coast Hotel |
| 115. 81 buildings located on Fourth Avenue, Fifth Avenue, Sixth Avenue, Broadway, F Street, Market Street, and J Street | Gaslamp Quarter Historic District |
| 116. 614 Fifth Avenue | Backesto Block Building |
| 117. 813 Fifth Avenue | Hubbell Building |
| 118. 809 Fifth Avenue | Marston Building |
| 119. 611 Fifth Avenue | McGurck Block |
| 120. 526-46 Market Street | I.O.O.F. Building |
| 121. 432 F Street | Keating Building |
| 122. 825-31 Fifth Avenue | Nesmith-Greely Building |
| 123. 835-45 Fifth Avenue | Louis-Bank of Commerce |
| 124. 631-33 Fifth Avenue | Yuma Building |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the**
**Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Listed (Continued)** | |
| 125. Fifth Avenue and E Street | First National Bank |
| 126. 750 Fifth Avenue | Spencer Ogden Building |
| 127. 722-28 Fifth Avenue | Llewelyn Building |
| 128. 660 Fifth Avenue | Cole Block |
| 129. 560 Fourth Avenue | The Royal Pie Bakery |
| 130. 552 Fifth Avenue | The Marin Hotel |
| 131. 17 buildings located on Sixth Avenue, Fifth Avenue, Fourth Avenue, Third Avenue, and Market Street | Asian/Pacific Thematic District |
| 132. 526 Third Avenue | Chinese Consolidated Benevolent Society Building |
| 133. 502 Third Avenue | Ying-On Merchants and Labor Benevolent Association Building |
| 134. 611-617 B Street | Southern Hotel |
| 135. 927-945 Broadway | Frances Apartments |
| 136. 428 C Street | Kress Department Store |
| 137. 619 C Street/1071 Sixth Avenue | Burnham Building |
| 138. 640 C Street | Hamilton Fine Foods |
| 139. 801-819 C Street | Rowe Market Building |
| 140. 827 C Street | Hotel Churchill |
| 141. 914 C Street | Pacific Telephone & Telegraph |
| 142. 926-928 C Street | Remington Rand Company Building |
| 143. 1012 C Street | YWCA Building |
| 144. 1037-1041 Fourth Avenue | Waldorf Hotel/Plaza Hotel |
| 145. 950 Ninth Avenue | Carnegie Apartments |
| 146. 1018 Ninth Avenue | Ed Fletcher Real Estate Office |
| 147. 901 Tenth Avenue | Ameila Apartments |
| 148. 930 Tenth Avenue | First Baptist Church Annex |
| 149. 1045 Tenth Avenue | Frazee-Kurtz Paint & Annex |
| 150. 1151-1159 Tenth Avenue | Harwood Tichenor Rental Property |
| 151. 1229 Tenth Avenue | Elkins Apartments |
| 152. 1130-1134 Eleventh Avenue | Lesinsky House |
| 153. 820 E Street | San Diego City Library |
| 154. 1027 Sixth Avenue | San Diego Federal |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Listed (Continued)** | |
| 155. 1401 J Street | Carter Hotel |
| 156. 1125-1133 Sixth Avenue | Vegetarian Cafeteria |
| 157. 612-640 F Street | Maryland Hotel |
| 158. 447 Ninth Avenue | Hiatt Family House |
| 159. 200 Sixth Avenue | National City & Otay Railroad |
| 160. 1460 Island Avenue | Electric Laundry Company Bldg. |
| 161. 102-150 West Broadway | Pickwick Hotel |
| **Local Register Eligible** | |
| 162. 1531-1541 Broadway | Parcel No. 534-352-04 |
| 163. 1640 Broadway | Parcel No. 534-224-04 |
| 164. 109-113 C Street | Parcel No. 533-516-10 |
| 165. 1317 C Street | Parcel No. 534-205-02 |
| 166. 1321 C Street | Parcel No. 534-205-02 |
| 167. 1333 C Street | Parcel No. 534-205-03 |
| 168. 1343-1345 C Street | Parcel No. 534-205-12 |
| 169. 1425 C Street | Parcel No. 534-204-06 |
| 170. 901-923 E Street | Parcel No. 534-336-01 |
| 171. 1035 E Street | Parcel No. 534-335-09 |
| 172. 1045 E Street | Parcel No. 534-335-09 |
| 173. 1327-1335 E Street | Parcel No. 534-345-10 |
| 174. 1401-1429 E Street | Parcel No. 534-344-01 |
| 175. 1508-1544 E Street | Parcel No. 534-352-02 & 03 |
| 176. 741 F Street | Parcel No. 535-102-10 |
| 177. 801-821 F Street | Parcel No. 535-103-01 |
| 178. 1328-1344 F Street | Parcel No. 534-345-12 |
| 179. 1451-1453 F Street | Parcel No. 535-171-01 |
| 180. 1455 F Street | Parcel No. 535-171-09 |
| 181. 1610-1620 F Street | Parcel No. 534-360-12 |
| 182. 643-655 G Street | Parcel No. 535-106-11 |
| 183. 675 G Street | Parcel No. 535-106-11 |
| 184. 903-915 Island | Parcel No. 535-126-01 |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the**
**Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Eligible (Continued)** | |
| 186. 701 Island Avenue | Parcel No. 535-115-01 |
| 187. 1619-1625 Island Avenue | Parcel No. 535-393-13 |
| 188. 704 J Street | Parcel No. 535-115-04 |
| 189. 1335 J Street | Parcel No. 535-372-15 |
| 190. 1479 J Street | Parcel No. 535-396-04 |
| 191. 1619 J Street | Parcel No. 535-394-01 |
| 192. 1615 K Street | Parcel No. 535-383-01 |
| 193. 726-732 Market Street | Parcel No. 535-105-07 |
| 194. 1101 Market Street | Parcel No. 535-123-10 |
| 195. 1425-1431 Market Street | Parcel No. 535-153-14 |
| 196. 1704-1710 Market Street | Parcel No. 535-190-02 |
| 197. 1488 Market Street | Parcel No. 535-161-04 |
| 198. 1715 Market Street | Parcel No. 535-190-08 |
| 199. 705 Sixth Avenue | Parcel No. 535-101-03 |
| 200. 701 Seventh Avenue | Parcel No. 535-102-06 |
| 201. 615 Eighth Avenue | Parcel No. 535-104-03 |
| 202. 701-729 Eighth Avenue | Parcel No. 535-103-04 |
| 203. 660 Tenth Avenue | Parcel No. 535-136-01 |
| 204. 734 Tenth Avenue | Parcel No. 535-131-05 |
| 205. 743-733 Tenth Avenue | Parcel No. 535-132-04 |
| 206. 650 Eleventh Avenue | Parcel No. 535-135-09 |
| 207. 727-733 Eleventh Avenue | Parcel No. 535-133-15 |
| 208. 741 Eleventh Avenue | Parcel No. 535-133-03 |
| 209. 760-770 Eleventh Avenue | Parcel No. 535-132-07 |
| 210. 941 Eleventh Avenue | Parcel No. 534-333-02 |
| 211. 509 Twelfth Avenue | Parcel No. 535-151-05 |
| 212. 999 Twelfth Avenue | Parcel No. 534-341-10 |
| 213. 1025 Twelfth Avenue | Parcel No. 534-206-03 |
| 214. 1166 Twelfth Avenue | Parcel No. 534-193-10 |
| 215. 341-343 Thirteenth Avenue | Parcel No. 535-372-04 |
| 216. 353-357 Thirteenth Avenue | Parcel No. 535-372-03 |
| 217. 416 Thirteenth Avenue | Parcel No. 535-156-06 |

**TABLE 3 (Continued)**
**Inventoried Historic Resources within the**
**Downtown Community Plan Update**

| ADDRESS | RESOURCE NAME |
|---|---|
| **Local Register Eligible (Continued)** | |
| 218. 454 Thirteenth Avenue | Parcel No. 535-156-08 |
| 219. 360 Fifteenth Avenue | Parcel No. 535-396-04 |
| 220. 648 Fifteenth Avenue | Parcel No. 535-174-04 |
| 221. 1037 Fifteenth Avenue | Parcel No. 534-225-04 |
| 222. 39 Sixteenth Avenue | Parcel No. 535-623-04 |
| 223. 255 Sixteenth Avenue | Parcel No. 535-383-02 |
| 224. 701 Sixteenth Avenue | Parcel No. 535-180-01 |
| 225. 716 Sixteenth Avenue | Parcel No. 535-172-06 |
| 226. 815 Sixteenth Avenue | Parcel No. 534-360-12 |
| 227. 349-363 Seventeenth Avenue | Parcel No. 535-406-01 |
| 228. 420-424 Seventeenth Avenue | Parcel No. 535-393-08 |
| 229. 430 Seventeenth Avenue | Parcel No. 535-393-09 |
| 230. 454 Seventeenth Avenue | Parcel No. 535-393-11 |
| 231. 470 Seventeenth Avenue | Parcel No. 535-393-13 |
| 232. 505 Seventeenth Avenue | Parcel No. 535-190-14 |
| 233. 508 Seventeenth Avenue | Parcel No. 535-164-03 |
| 234. 512 Seventeenth Avenue | Parcel No. 535-164-03 |
| 235. 515 Seventeenth Avenue | Parcel No. 535-190-13 |
| 236. 518 Seventeenth Avenue | Parcel No. 535-164-03 |
| 237. 525 Seventeenth Avenue | Parcel No. 535-190-41 |
| 238. 531 Seventeenth Avenue | Parcel No. 535-190-40 |
| 239. 532-534 Seventeenth Avenue | Parcel No. 535-164-04 |
| 240. 768 Seventeenth Avenue | Parcel No. 535-180-05 |
| 241. 914 Seventeenth Avenue | Parcel No. 534-360-07 |

# Appendix A

Secretary of the Interior's Standards for Rehabilitation

1. A property will be used as it was historically or will be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alterations of features, spaces and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

# PUBLIC SERVICE LETTERS

# APPENDIX 2.4

THE CITY OF SAN DIEGO

RECEIVED
5 2004
SAN DIEGO

February 3, 2004

IN REPLYING
PLEASE GIVE
OUR REF. NO.
4050

Ms. Ellery Foster
Projects Design Consultants
701 B Street, Suite 800
San Diego, Ca. 92101

**SUBJECT:** Centre City Community Plan Update

Dear Ms. Ellery Foster:

Recently you requested information from the San Diego Police department on the growth of the Downtown area and how it is going to affect the Police Department. Attached you will find the responses to those questions. If you require any other input on this subject please feel free to contact me.

Existing Level of Service

What is the location of the police station, which serves the downtown planning area?

**There is one station (Central Division) that serves the downtown area. It is located at 2501 Imperial Ave.**

How many police officers are on patrol in the area? How many administrative staff are employed by the downtown station?

**Presently there are 178 officers assigned to Central Division. This includes detectives; community services officers, sergeants, lieutenants and a captain. There are three administrative personnel assigned to Central division. The minimum number of officers that patrol in the downtown area at any one time is 7 officers and one sergeant. The maximum that patrol downtown would be (on a Friday or Saturday night at 10:00 pm) 22 officers and three sergeants.**

What is the ratio of officers to population (e.g., 1 officer per 1,000 residents)?

**1.65**

What is the per capita goal?

**2.0**

Are there planned increases in facilities or staffing in the near future?

**There is no planned increase for additional facilities in the next five years. A projected figure of an additional thirty eight officers, plus equipment and civilian staff, has been recommended due to the increase in population and the completion of Petco Park. There will be officers on an overtime basis working in the area of Petco Park during each event there.**

What is the average response time by call priority?

| | |
|---|---|
| **Priority E** | **7.0 (Minutes)** |
| **Priority 1** | **13.9** |
| **Priority 2** | **27.9** |
| **Priority 3** | **77.3** |
| **Priority 4** | **76.5** |

**The average response time for emergency (E) and priority 1 calls is thirteen minutes. Communications Division considers this to be adequate. In the downtown area the response times for E and 1 calls is somewhat less due to the shorter distances that officers travel to get to the calls.**

Are there minimum response times, which are mandated by state or federal regulations?

**No.**

What are the Police Department's primary activities associated with serving downtown?

**Our mission is to maintain peace and order by providing the highest quality police services in response to community needs by: preventing crime, apprehending criminals, developing partnerships and respecting individuals.**

How do social issues such as homeless, crime drug dealing, and prostitution impact police services in the downtown area?

**All of the above impact police services. The Police Department will continue to problem solve the above issues and develop tactics to combat crime trends.**

**The Police Department is funded by a budget decided upon by the City Council after recommendation from the City Manager.**

Impacts to Service as a result of the Community Plan Update

Do the planned increases in population (e.g., permanent residents, day-time office workers, night-time entertainment patrons) and/or land use types pose any unique problems to police?

**There will be an increased demand for police services. As mentioned prior, the Police Department has projected a need for an additional thirty-eight officers, plus staff and equipment, over the next five years.**

Would such social issues as homelessness, crime, drug dealing, and prostitution worsen as a result of this future planned scenario? Or, would these social issues improve as downtown becomes more of a 24-hour area?

**The Police Department will continue to pro-actively problem solve social issues in the downtown area. It is unknown at this time if a 24-hour area will have an impact on crime statistics, but the general belief is that a 24-hour area would impact the Police Department in calls for service.**

What are the constraints to provide a police force that keeps up with anticipated demand?

**To keep up with anticipated demand the Police Department will need additional resources such as personnel, equipment, and training.**

Sincerely,

Joel H. Bryden
Captain, Central Division

THE CITY OF SAN DIEGO

January 7, 2004

Ellery Foster, Project Planner
Project Design Consultants
701 B Street, Suite 800
San Diego, CA 92101

Reference: Centre City Community Plan Update

Dear Ms. Foster:

Thank you very much for the opportunity to supply you with information as your firm prepares a new Master Environmental Impact Report (MEIR) for an update of the Centre City Community Plan. Attached are the answers to your questionnaire to complete the EIR.

If you should have any questions concerning our responses, please give me a call at (619) 533-4407, and I will be glad to clarify any response.

Sincerely,

Samuel L. Oates
Fire Marshal

SLO/cm

Enclosures: 1. Questionnaire
2. Fire Station Legend

cc: Jeff Bowman, Fire Chief
Tracy Jarman, Assistant Fire Chief, Support Services
August F. Ghio, Assistant Fire Chief, Operations
Senior Staff Members

**Fire and Hazard Prevention**
Fire and Life Safety Services • 1010 Second Avenue, Suite 300 • San Diego, CA 92101
Tel (619) 533-4400 Fax (619) 544-6806

**Fire and Emergency Services: Request for Information**

<u>Existing Level of Service</u>

- What are the location(s) of the fire stations(s) which serve the downtown planning area?

  *Fire Stations 1 and 4 are located within the Centre City Community Planning Area (CPA). Fire Stations 3, 7 and 11 are located just outside the Centre City CPA.*

  *Station #1-1222 1st Avenue*
  *Station #4-404 8th Avenue*

  *Station #3-725 Kalmia Street*
  *Station #7-944 Crosby Street*
  *Station #11-945 25th Street*

- What are the service area boundaries for each of these stations?

  *The service area (Engine District) for Fire Stations 1, 3, 4, 7, and 11 are partially or wholly contained in the Centre City CPA (see attached legend).*

- How many firefighters serve the area? How many emergency response personnel? How many administrative staff members are employed by the downtown station(s)?

  *29 Firefighters*
  *2 Emergency Medical Technicians (non-fire suppression)*
  *2 Paramedics (non-fire suppression)*

- Is there a per capita ratio (#firefighters/residents) goal?

  *1 per 1,000 citizens.*

- Are there planned increases in facilities or staffing in the near future?

  *Not in the near future.*

- What kind and how much equipment do the downtown station(s) maintain?

  ***Station 1***
  *Engines (2)*
  *100' Aerial Ladder Truck (1)*
  *Light and Air Apparatus (1)*
  *Battalion Chief Suburban (1)*
  *Explosive Device Technician (EDT) Apparatus (1)*
  *Canteen Apparatus (1)*
  *Chemical Response Apparatus (1)*
  *Utility Apparatus (1)*

  ***Station 4***
  *Engine (1)*
  *Heavy Rescue Apparatus (1)*

  ***Station 3***
  *Engine (1)*

  ***Station 7***
  *Engine (1)*

  ***Station 11***
  *Engine (1)*

- What is the average response time by call priority?

  *Fiscal Year 2003 response times for Centre City CPA are obtained using Deccan's CAD Analyst. Response times are based on the first arriving emergency vehicle's time from notification of the incident to arrival on scene. In the case of structure fire, it is based on the engine's page to on scene; for medical priority, it is the engine's and ALS' dispatch to on scene. Following are the average response times:*

  *<u>Structure Fire</u>:*

  | | |
  |---|---|
  | *First Engine Page to On Scene* | *Average 3:58 minutes* |
  | *First Ladder Page to On Scene* | *Average 5:21 minutes* |
  | *EFF Page to On Scene* | *Average 6:22 minutes* |

  *<u>Medical Priority</u>:*

  | | |
  |---|---|
  | *First Engine Page to On Scene* | *Average 3:44 minutes* |
  | *First ALS Queue to On Scene* | *Average 6:26 minutes* |

- What does the fire department consider to be an adequate average response time by call priority?

  *<u>Structure Fire</u>:*

  | | |
  |---|---|
  | *First Engine Page to On Scene* | *6 minutes* |
  | *First Ladder Page to On-Scene* | *9 minutes* |
  | *Effective Fire Force Page to On Scene* | *12 minutes* |

  *<u>Medical Priority</u>:*

  | | |
  |---|---|
  | *First Engine Page to On Scene* | *8 minutes* |
  | *First ALS Queue to On Scene* | *12 minutes* |

- Are there minimum response times which are mandated by state or federal regulations?

  *No.*

- What are considered adequate response times in other urban areas?

  *The National Fire Protection Association (NFPA) recommended standard is five minutes.*

- What are the fire department's primary activities associated with serving downtown?

  *Fire, Rescue, Emergency Medical Services, and Hazardous Materials Response.*

- What is the fire department's source of funding? Does new development provide a direct or indirect increase in available funding?

  *Fire's source of funding is the City General Fund as well as some grant funds and small donations. Developer funding is used to construct some new fire stations, e.g., 46's.*

Impacts to Service as a result of the Community Plan Update

- Do the planned increases in population (e.g., permanent residents, day-time office workers, night-time entertainment patrons) and/or land use types pose any unique problems to fire protection services?

  *Yes, increased traffic congestion will hinder timely responses in the downtown area. The run volume for the downtown response units has already increased with the growth in the downtown area and is anticipated to increase further with the opening of the ballpark and additional proposed growth. The San Diego Harbor area could be a target for terrorists activities.*

- Are there any special needs created by increased number of high rises (particularly residential)?

  *Increase in medical aids and a decreased ability to respond to other emergencies.*

- What are the constraints to providing fire/emergency services that keep up with anticipated demand?

  *Diminishing Fire Department resources continue to make it difficult to keep up with the anticipated demand.*

- What are some ways to incorporate fire prevention techniques into new development?

  *Make sure existing codes are followed during planning and construction of new developments. In addition, assure existing developments are inspected annually and are conducting yearly fire evacuation drills.*

- Is there anything that land use planning can do to aid in fire protection?

  *Yes, set aside property or incorporate a fire station into a new development.*

- If a new station is needed, please provide location and site criteria.

  *An ideal station could be located at 10th Avenue around Broadway. Another consideration would be a station around the San Diego Convention Center with the consideration of a fire boat.*

THE CITY OF SAN DIEGO



February 20, 2004

Ms. Ellery Foster, Project Planner
Project Design Consultants
701 B. Street, Suite 800
San Diego, CA 92101

Dear Ms. Foster:

Following are the responses to your questions about the existing Central Library, and the planned new Main Library.

## EXISTING LEVEL OF SERVICE

***1. What are the names, locations, and service boundaries of the libraries that serve the downtown planning area?***

The only library serving downtown is the Central Library at 820 E. Street. Libraries closest to downtown are:

- Logan Heights at 811 South 28th Street (3 miles from the Central Library)
- University Heights at 4193 Park Blvd. (3 miles from the Central Library)

Almost all library studies have indicated that use of a library drops when potential users are farther away than two miles, so the two branches listed above are not included in determining downtown service outlets.

Plans are to break ground for a new Main Library between J and K, and 11th and 12th sometime in 2004. This will located the library in the extreme East Village area of downtown.

***2. How many volumes does the each library have?***

Because the other libraries are outside of the downtown area, only the current Central Library will be listed. The existing Central Library has a collection of approximately 700,000 items including books, media (CDs, DVDs, etc.), and magazines.

DIVERSITY

San Diego Public Library
820 E Street • San Diego, CA 92101-6478
Tel (619) 236-5870 Fax (619) 236-5878

*3. How many staff members are there for each library?*

The Central Library has a public service staff of approximately 95 full time equivalents. In addition, administrative and support staff bring the total up to approximately140 full time equivalents.

*5. Does the San Diego public library system have a service ration goal? For instance, number of square feet of library space for resident.*

Yes, standards for new libraries are as follows:

- A minimum building size of 15,000 square feet of dedicated library space, with at least one building of a minimum of 25,000 square feet in each of the eight City Council Districts.
- A minimum 1.5 to 3-acre library site.
- A minimum of one parking space per 200 square feet of building space with an addition of one space per 80 square feet of meeting room space.
- A minimum of 6.7 positions per branch, with increasing staff levels based on use.
- One data technician for every 50 computers.
- Book and media (CD, audio, and video-tapes) collection of 2.00 items per capita

The branch system is based on the premise that the main library is the resource backup for the entire system.

*6. Are there any minimum service standards mandated by local or state regulations?*

The above guidelines were approved by the San Diego City Council. There are no mandated state standards.

*7. What library programs are offered to the community?*

The number and variety of community programs offered by the existing Central Library is extensive. Just a few of the programs include:

- Tours and visits by elementary and upper level students. Some of these are walk in visits, but many visits are from outlying areas via school bus trips
- Patent workshops
- Live musical and theatrical performances
- Career workshops

- Book talks
- Local author events
- Exhibitions and displays
- Art exhibits
- Civic meetings
- Educational symposiums
- Instructional classes

**8. *How many square fee, resources, and employees will the new Main Library contain?***

The New Main Library will:

- Be nine stories, with two additional floors of underground parking
- Have a total of 495,942 square feet including parking
- Be able to contain a collection of 1,260,000 items
- Have over 400 computers
- Have 1,200 reader seats
- Have a sloped floor auditorium that will seat 350 people
- Have a, 3,000 square foot art gallery
- Have a community room on the top floor of the library that will seat over 300 people
- Have 13 group study and seminar rooms
- Have a public service staff of 105, and a support staff of 55, for a total in full-time equivalent of 160 people.

**9. *What is the library's source of funding? Does new development provide a direct or indirect increase in available funding?***

The Library is a department of the City of San Diego, and operational funding comes mostly from the general fund. Some operational funding also comes from the State and private gifts.

Capital funding of the new $150 million Main Library building will come from a State of California $20,000,000 grant, City issued bonds, and private funding. The mix of private funding and bonds has not yet been determined.

## IMPACTS TO SERVICE AS A RESULT OF THE COMMUNITY PLAN UPDATE

**10. *Do the planned increased in population and/or land uses pose any unique problems to library services?***

One of the unique features in the new Main Library is a "popular library" on the first floor-almost a branch library within the new Main. This popular library will help serve the expanding population However, the New Main being located astride the Ball Park and East Village, makes it a relatively long distance away from some of the areas of downtown where the greatest residential growth is taking place. It is a considerable distance from Little Italy or the Columbia District to the new Main.

When the new Main was sited in the Columbia District on Kettner during the mid-1990s, there was interest among some of the Library Commissioners for establishing a branch at the eastern edge of the downtown area. Now that the new Main is to be located in the south and east part of downtown, there may be a need for a branch or station to serve the large residential population to the north and west.

***11. What are the constraints to providing library services that keep up with anticipated demand?***

The operational and capital budgets of the library are finite, and may experience reductions in the years ahead.

The ability of the library to keep adding branch libraries is limited by financial as well as staffing limitations.

***12. Will the new Main Library sufficiently meet the demand created by the Year 2030 projected 82,800 downtown residents?***

As stated in the response to question #10, if the popular library is to serve as the "branch" for downtown, it is not large enough and may be to far from a good portion of the population to be served.

***13. If a new library branch is needed, please provide locational and site criteria.***

As stated in the answer to question #9, a branch or station may be required to serve the growing population in Little Italy and the Marina and Columbia Districts.

Locational and site criteria (taken from the 4th edition of my book, ***A Checklist of Library Building Considerations*** published by the American Library Association) are listed below. Some of the criteria will need to be adapted to meet the requirements of an urban downtown community. General requirements for a branch library location are:

## *A. General Conditions*

1. Is the site conveniently located to the population served by the library?

2. Does the site provide high visibility and identification to the population served?
3. Is the site affordable?
4. Will the site provide visibility of the building and its function from the street?
5. Will a library be an appropriate use of the land parcel in question?
6. Will the site retain or enhance the natural contours of the land?
7. Is the site zoned for a library? If not, is future library zoning possible?
8. Are there existing structures on the site that must be demolished?
9. If an existing structure must be demolished, does it present asbestos, lead paint, or unusual environmental problems?
10. If the library is to be a branch of a system, are there overlapping service areas from other branches in the system?
11. Will the use of the site for a library add aesthetic value or other amenities to the neighborhood?
12. Are there liabilities or nuisance factors to adjacent properties and their activities?
13. Will the use of the site for a library have any negative impact on the surrounding areas?
14. Will the library fit in with the architectural style of neighboring buildings?
15. Will the buiiding work with the traffic flow of adjacent areas?

## *B. Location*

1. Is the location of the site considered satisfactory and acceptable by the population being served?
2. Is the site accessible to all segments of the community served?
3. Is the site relatively close to the part of the community that is understood to be most active, and that will generate the most use?
4. Is the site appropriate for the library given its function and clientele?
5. Would library usage:
   a) Increase if another site was selected?
   b) Decrease if another site was selected?
   c) Stay the same if another site was selected?
6. Will this location best meet library objective of providing materials and

services to the greatest number of people at the lowest cost?

7. Is the location in an area that is frequently visited by members of the community for daily activities such as shopping, working, and seeking out other services?
8. Is the site located near commercial, retail, cultural, and other activities within the community?
9. Does the proposed site present a safety issue for customers and library staff?

## *C. Accessibility*

1. Is the site easily accessible to those living in the area served?
2. Is the site easily reached by the greatest number of potential customers?
3. Are travel times from target population areas to the library acceptable?
4. Have automobile traffic patterns near the library been considered?
5. Is the site located on a busy highway that will require a separate street-type entrance or driveway?
6. Is the site accessible to public transportation?
7. Is bicycle access encouraged?
8. Are there sidewalks for pedestrian access?
9. Is the site conveniently accessible to private vehicle transportation?
10. Does the entrance to the library provide adequate space and ease of accessibility to accommodate all arriving individuals and groups at all times?

## *D. Size*

1. Does the size of the site provide adequate space for current needs?
2. Will the site provide room for future expansion and/or remodeling?
3. Does the site include enough space for appropriate green space and landscaping?
4. Is the site large enough to accommodate on-site parking?
5. Does the property contain possible easements?
6. Does the property accommodate adequate setbacks to meet zoning and aesthetic considerations?
7. Is the property configuration adequate for successful completion of the building project?

8. Is there enough space on the property and/or adjacent to it for staging during construction

## *E. Environmental Issues*

1. Has an environmental impact report been made for the proposed site?
2. Is the site oriented so that it is possible to take advantage of solar energy?
3. Are complications likely to arise from the nature of the ground beneath the building?
4. Does the site have adequate drainage?
5. Is the site above the level of a 100-year flood plain?
6. Has a subsurface probe been done to examine soil conditions, utilities, and other factors?
7. Has the site been improved; that is, are curbs, gutters, water, sewers, and electricity available?
8. Are there any natural or artificial barriers?
9. Are there any hidden problems of geology, topography, archaeology, buried objects, or toxic waste?
10. Do neighboring facilities pose possible environmental/nuisance problems?
11. Has the condition of the soil been tested to determine the stability of the site?
12. Are there advantages to the slope of the land?
13. Are there disadvantages to the slope of the land?

Please call me at 619.533.3415 or email me at wsannwald@sandiego.gov if you have any questions.

Sincerely,

William W. Sannwald

William W. Sannwald,
Library Design and Development Manager

c. Anna Tatar, Library Director
Margaret Kazmer, Deputy Director, Central Library
Darren Greenhalgh, New Main Library Project Manager

SDCS

# SAN DIEGO CITY SCHOOLS

EUGENE BRUCKER EDUCATION CENTER • 4100 Normal Street, San Diego, CA 92103-2682 Tel.: (619) 725-7372 Fax: (619) 574-1487

OFFICE OF INSTRUCTIONAL SUPPORT
Instructional Facilities Planning Department

PDC RECEIVED DEC 30 2003 SAN DIEGO

December 23, 2003

Ellery Foster
Project Design Consultants
701 B Street, Suite 800
San Diego, CA 92101

SUBJECT: **School Services: Request for Information**

Dear Mr. Foster:

Following are the answers to the questions in your "School Services: Request for Information" survey. In a number of cases, due to the tentative nature of the Centre City Community Plan, we cannot provide definitive answers to your questions.

<u>Existing Level of Service</u>

- **What are the names, locations, and service areas of the schools which serve the downtown planning area?**
  The following schools are physically located in the Centre City Development Corporation (CCDC) Area:
  Washington Elementary (Currently K-6, K-5 starting 2004-05), 1734 Union Street
  San Diego High School (9-12), 1405 Park Boulevard

  In addition, the following schools serve parts of the CCDC, but are not physically located within its boundaries:
  Perkins Elementary (K-5), 1110 Beardsley Street
  Sherman Elementary (K-5), 450 24th Street
  Roosevelt Middle School (6-8), 3366 Park Boulevard
  Memorial Junior High (6-9), 2850 Logan Avenue

  Boundary maps of these schools are attached.

- **What is the current enrollment and capacity of each of the schools serving the downtown planning area?**

| | School | Enrollment | 03-04 Capacity |
|---|---|---|---|
| K-5 | Perkins | 400 | 561 |
| K-5 | Sherman | 699 | 1025 |
| K-5 * | Washington | 309 | 461 |
| 6-9 | Memorial | 1588 | 1618 |
| 6-8 | Roosevelt | 1074 | 1361 |
| 9-12 * | San Diego HS | 2786 | 2844 |

- **What are the criteria used by the District for assessing adequate level of service?**
  The District evaluates enrollment, capacity and site factors such as the hardcourt and field area play space per student, percentage of capacity in portable classrooms, students per acre, etc, in determining adequate level of service. The District has developed planning criteria for these factors, and aims to have elementary schools of no more than approximately 700 students, middle schools at 1,500 and high schools at 2,000.

- **What generation factor does your District use in forecasting the number of school-aged children generated by new development?**
  The generation factor used by the District depends on the type of new development (condo, apartment, single family housing) and other factors such as number of bedrooms per unit. District-wide K-12 generation factors range from 0.06 for privately owned apartments to 1.80 for publicly owned apartments.

- **Would these generation rates be different for the type of residential development occurring downtown?**
  As stated above, the generation rate used is dependent on the type of development. Current development downtown generates a low number of students attending SDUSD schools – about 0.06 K-12 students per unit. Your cover letter stated that there would be an increase over 30 years of 42,300 units. At the current rate, this increase would translate to over 2,500 K-12 students. If the proposed mix of development changes significantly from the high-end condo style that presently dominates, the generation rate used will change accordingly.

- **Are there planned increases in facilities or staffing serving downtown?**
  Staffing is directly related to enrollment size. Proposition MM, approved by the voters in 1998, has delivered extra classroom space to San Diego High School. No new elementary school will be built in the CCDC area under Proposition MM, but two new schools will be built near the CCDC area (Golden Hill and Laura Rodriguez), and one school will be rebuilt and expanded (Burbank). Sherman Elementary will also be significantly rebuilt. These increases to elementary capacity will positively impact the schools currently serving the CCDC area. A new middle school is being planned to the south-east of the CCDC area, which will positively impact Memorial Junior High.

Impacts to Service as a result of the Community Plan Update

- **What, if any, new schools (elementary, middle and/or high schools) or personnel would be required to meet the school service needs of the community plan update?**
  More detailed information on the type of residential development expected in the Community Plan Update would be required before this question can be definitively answered.

- **Does the District foresee any problems providing new schools or personnel to meet anticipated demand?**
  While the precise level of need cannot be determined at this point in time due to the lack of specificity of the residential development mix planned, the availability of land within the CCDC area to build new schools would be one of the biggest issues in providing extra capacity for a growing downtown student population.

- **If the proposed Community Plan Update would impact school service, are there other means for providing any additional school or staffing needs created by this project in addition to developer fee?**
  The District participates in the State School Facility Program, which provides financial resources to assist in the building of new schools. The District also has the authority to place propositions on the ballot to gain voter approval for funds to build new facilities.

- **Please provide locational and site criteria for a downtown school.**
  The major criteria include situation near major arterial streets for accessibility, safe routes for walking to the school, and the situation of schools within residential neighborhoods to promote the 'neighborhood school concept'. Under

Proposition MM, new schools built in the Mid City area of San Diego have averaged 7 acres. The District is exploring new concepts for planning urban schools which may require smaller acreages, but there are density and play space requirements that limit the amount of reduction possible.

- **Could future downtown students be served by combinations of charter schools and standard public schools?**
  All current District students can attend their local public school, participate in District Choice, Magnet and integration programs to attend other public schools, or apply to attend one of the 22 charter schools currently operational in the District. Future downtown students would have the same opportunities.

I hope that our answers to your questions have been helpful. If you have further questions, please do not hesitate to contact me at (619) 725-7241.

Sincerely,

Charles Ryners on

Charles Rynerson
Demographer

Enclosure

c. M. Hopper
L. Smith
J. Wolf

WRM\D:\Documents\WordDocs\Schools\SanDiego\CCDCSurvey121903b.doc

SAN DIEGO CITY SCHOOLS
Office of Instructional Support
Instructional Facilities Planning Department

March 25, 2004

# Demographic Information - Downtown San Diego
# SDUSD Students Resident in New Centre City Housing

***Centre City New Development - Units Built, 1999 - 2002****

| | |
|---|---|
| New Housing Units completed 1999 - 2002* | 1068 |
| SDUSD K-12 (Fall 2003) | 47 |
| **K-12 Students per new unit** | **0.044** |
| SDUSD K-5 (Fall 2003) | 28 |
| **K-5 Students per new unit** | **0.026** |

*(*Source: City of San Diego Planning Dept. - Housing Completions)*

*Current development (under construction and planned) listed on the CCDC web site has similar characteristics to recently completed development, in terms of the mix of apartments and condos, and market-rate and affordable housing.*

***Mid-term (3-5 years) student generation estimated from current development***

| | |
|---|---|
| Units under development | 10000 |
| K-12 Students per new unit | 0.044 |
| **SDUSD K-12** | **440** |
| K-5 Students per new unit | 0.026 |
| **SDUSD K-5** | **262** |

*The 10,000 units currently in the "pipeline" may generate about 260 elementary students. With the 2004 grade configuration change at Washington Elementary (from K-6 to K-5), and new schools opening in 2005 and 2006 that will allow boundary adjustments at Sherman and Perkins Elementary schools, Centre City's neighborhood elementary schools (Washington, Sherman, and Perkins) can easily accomodate this increase in local resident students.*

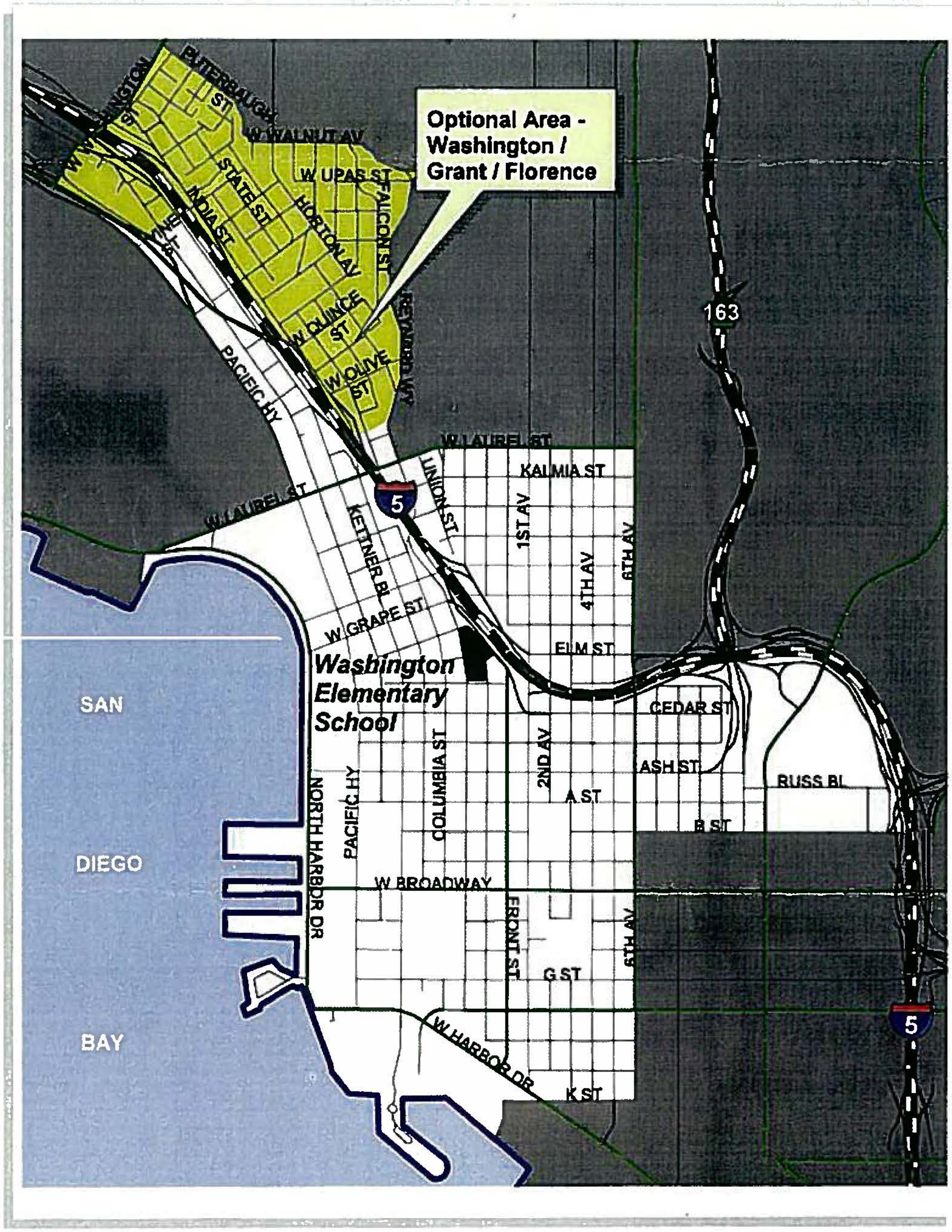
*If current generation rates are maintained, approximately 23,000 additional units would have to be built to generate enough students for an elementary school of 600 students.*

*We will continue to monitor the impact of new development in the CCDC area and see if generation rates begin to change as new housing comes online.*

# Washington Elementary School

Attendance Area 2003-2004

Note: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.

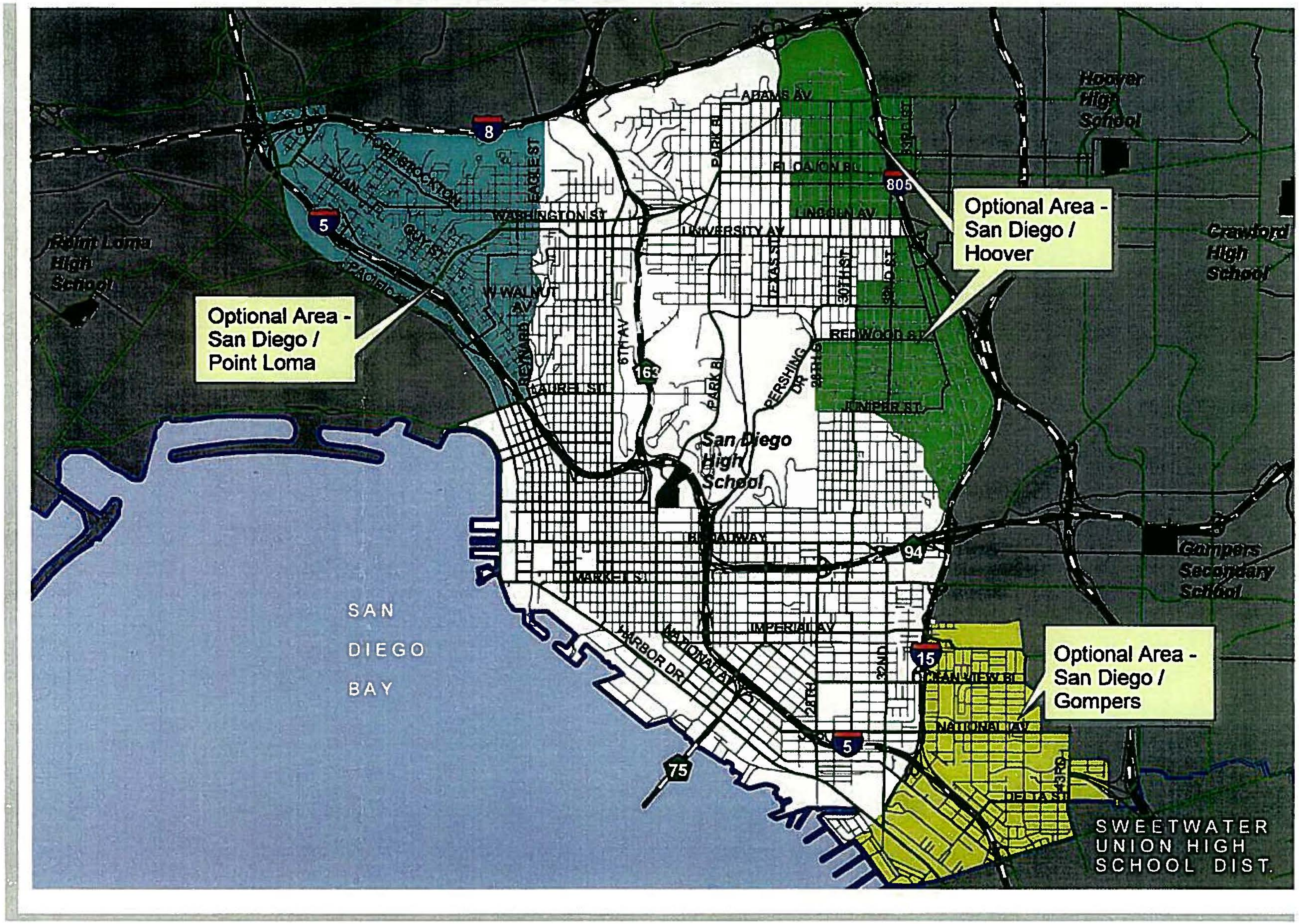


SDCS

# San Diego High School

## Attendance Area 2003 - 2004

NOTE: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.

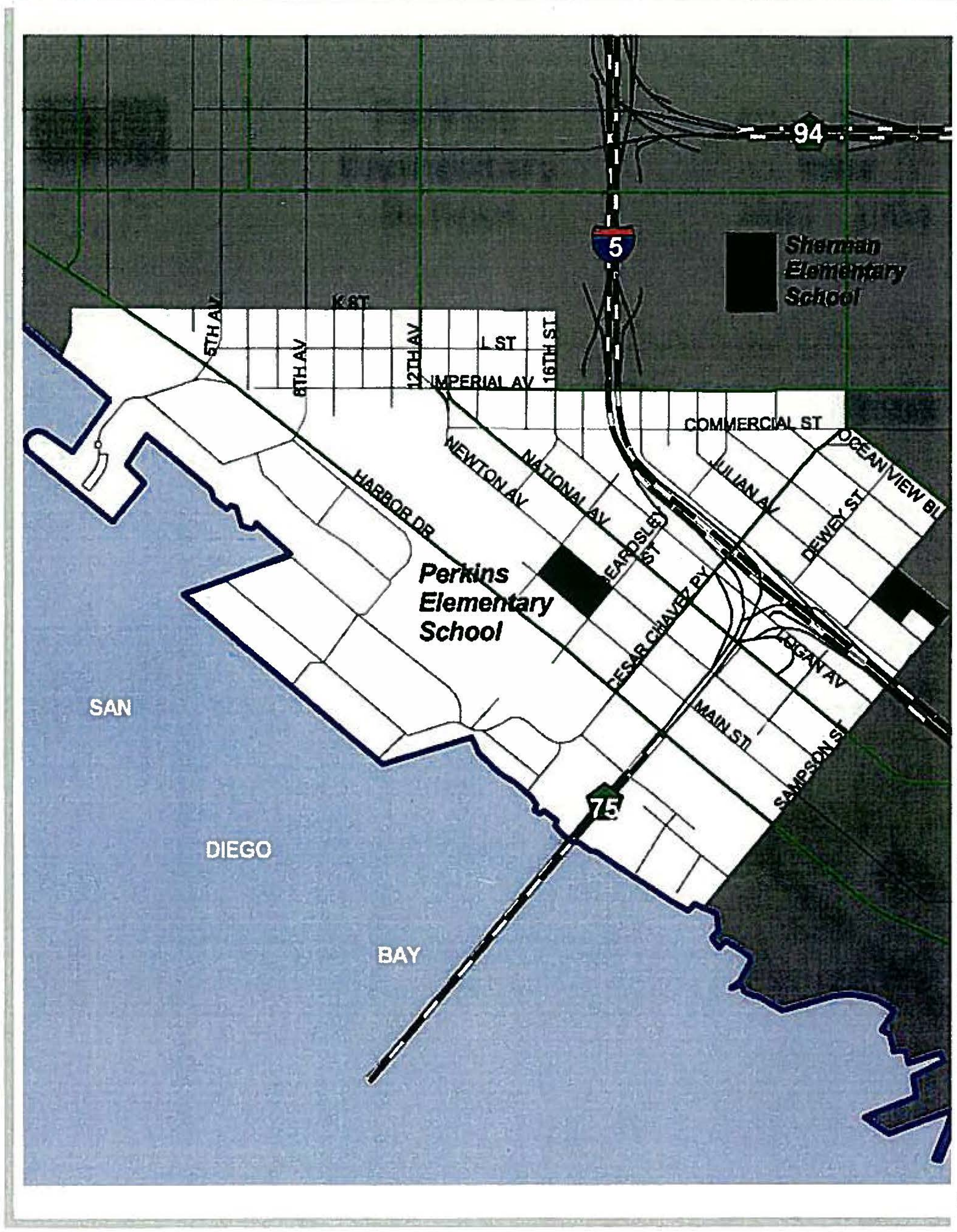


SDCS

# Perkins Elementary School

## Attendance Area 2003 - 2004

NOTE: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.

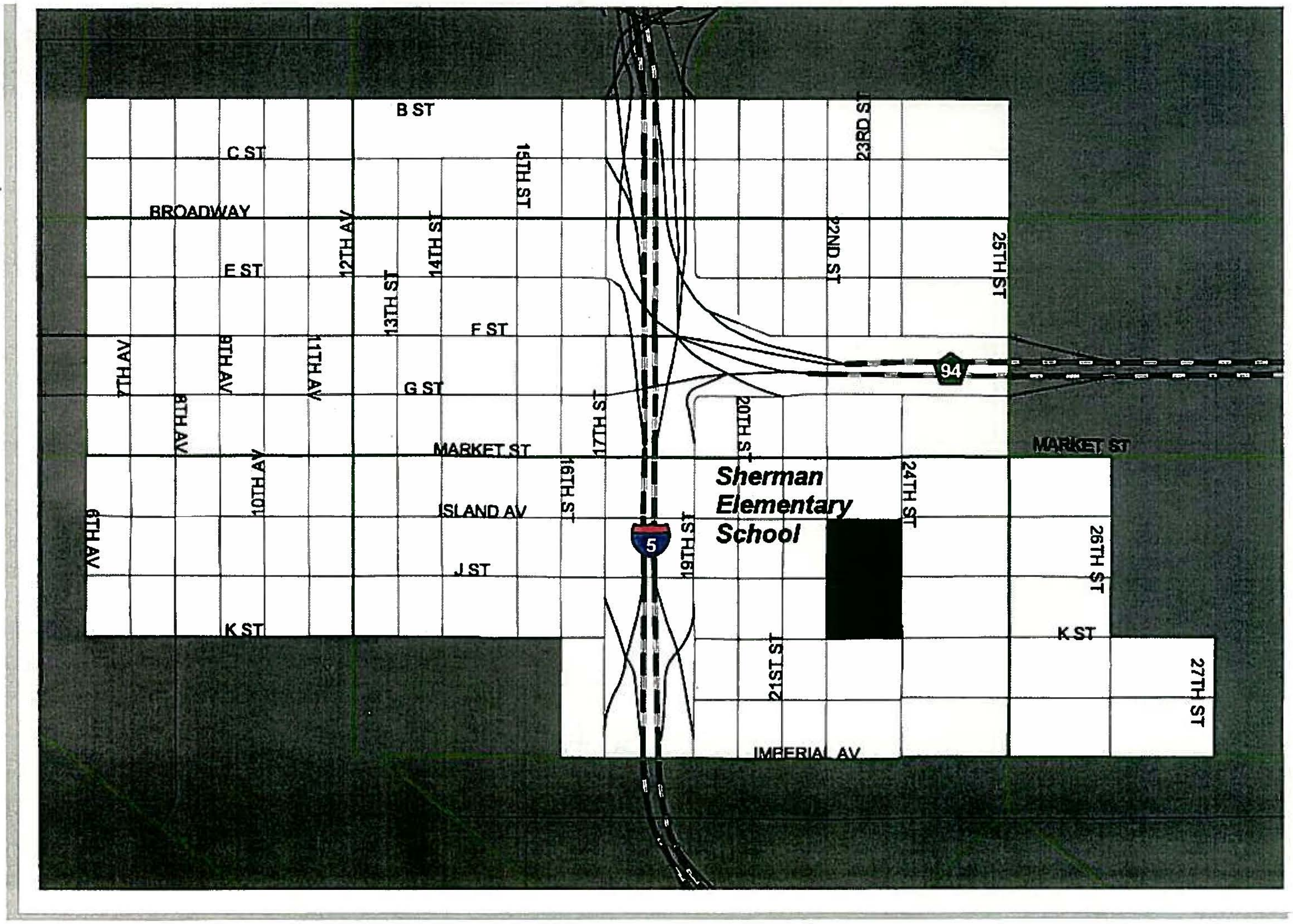


SD
CS

# Sherman Elementary School

## Attendance Area 2003 - 2004

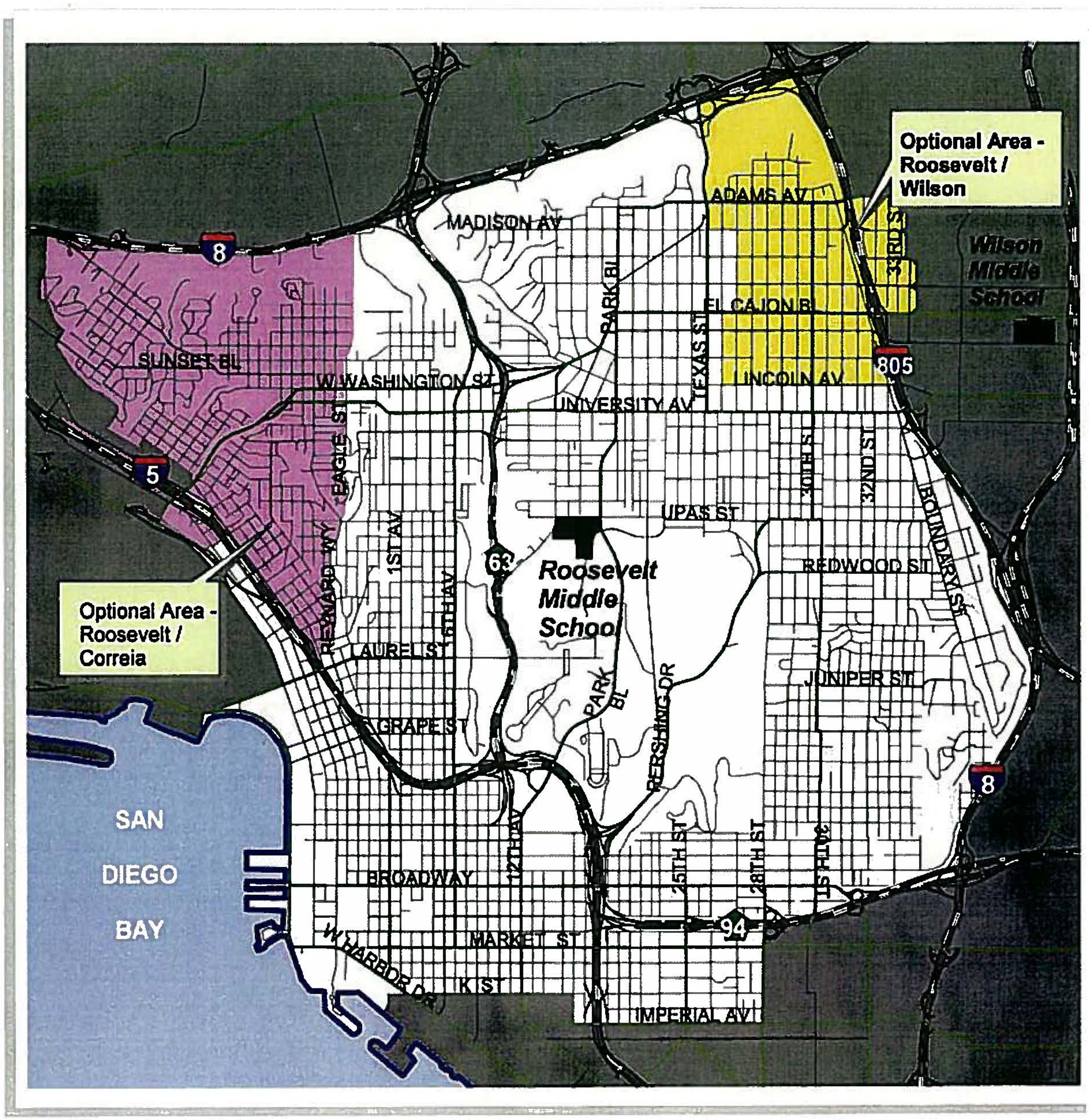
NOTE: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.



# Roosevelt Middle School

**Attendance Area 2003 - 2004**

NOTE: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.

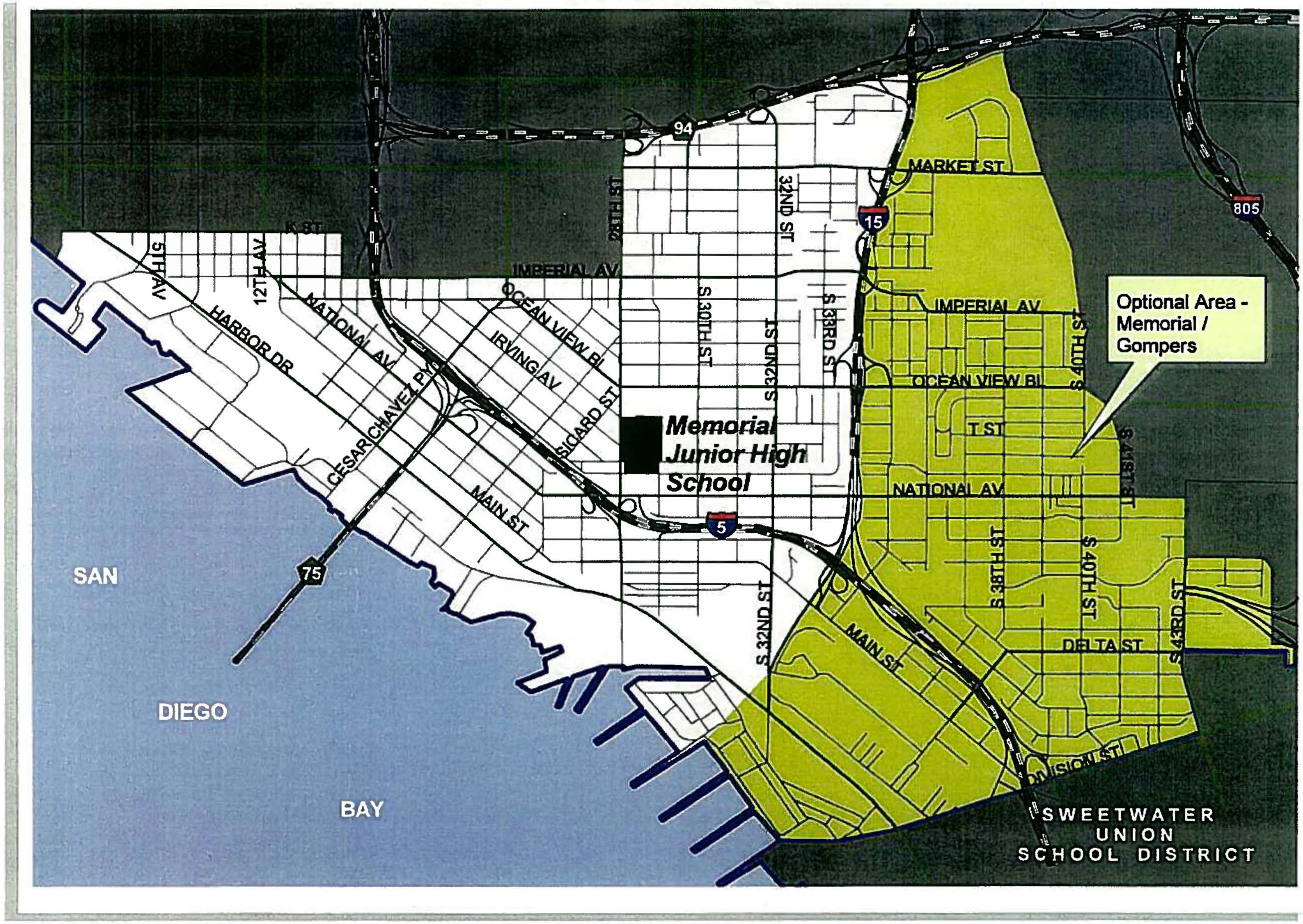


SDCS

# Memorial Junior High School

**Attendance Area 2003 - 2004**

NOTE: Maps reflect boundaries ONLY for the year indicated. Boundaries are reviewed annually and may change.



# GEOLOGY ANALYSIS

# APPENDIX 2.5

REPORT

# GEOLOGIC HAZARDS STUDY SAN DIEGO DOWNTOWN COMMUNITY PLAN UPDATE

*Prepared for:*

Project Design Consultants
701 B Street, Suite 800
San Diego, CA 92101

URS Project No. 27644564.01000

July 24, 2002
Revised October 16, 2002

URS

1615 Murray Canyon Road, Suite 1000
San Diego, CA 92108-4314
619-294-9400 Fax: 619-293-7920

URS

July 24, 2002
Revised October 16, 2002

Mr. Bruce McIntyre
Project Design Consultants
701 B Street, Suite 800
San Diego, CA 92101

Subject: Geologic Hazards Study
San Diego Downtown Community Plan Update
URS Project No. 27644564.01000

Dear Bruce:

In accordance with our proposal dated April 5, 2002, URS Corporation is pleased to present the accompanying Geologic Hazards Study as part of an update of the Downtown Community Plan. An objective of this study was to identify geologic/seismic issues that may pose development constraints within the planning area.

In the past ten years, several new active faults have been discovered in downtown San Diego. Moreover, all of San Diego is now assigned to UBC Seismic Zone 4. Liquefaction hazards have long been recognized around the margins of San Diego Bay. As described in this report, the City of San Diego requires site-specific investigations and mitigation measures, as required to address potential geologic hazards.

We appreciate the opportunity to participate in the Downtown Community Plan Update.

Sincerely,

URS CORPORATION

David L. Schug, C.E.G.
Engineering Geologist

DLS:lej

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1615 Murray Canyon Road, Suite 1000
San Diego, CA 92108
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Fax: 619.293.7920

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**Figures**

This report presents results of URS Corporations' (URS) Geologic Hazard Study for an update of the Downtown San Diego Community Plan.

## 1.1 PURPOSE AND SCOPE

The purpose of this study was to provide an overview of potential geologic hazards that might affect planning and redevelopment within the Downtown Planning Area. (Figures 1 and 2). An emphasis of the study was to summarize pertinent new geologic information available since about 1992 (when the previous Master Plan was prepared). Faulting and related seismic hazards are key issues in the downtown area because of the presence of the Rose Canyon fault zone. The fault crosses the downtown area with a complex pattern of faulting that includes active[1] and potentially active[2] fault traces. Fault rupture is a significant hazard in areas crossed by active faults and to a lesser degree in areas crossed by potentially active faults.

Related seismic hazard issues include ground shaking and liquefaction. The presence of nearby seismic sources, the occurrence of young geologic materials and shallow ground water may potentially result in significant levels of ground shaking and zones of liquefaction in the downtown area.

The scope of this study included reviewing available geotechnical reports and published geologic information. Pertinent references are listed at the end of this report. Over the years, a wide range of geotechnical reports and fault investigations have been prepared for various developments in the downtown area. A number of fault hazard studies have been performed for the Centre City Development Corporation (CCDC) for various downtown redevelopment projects. For this investigation we have reviewed a variety of information sources and contacted various agencies or individuals including the following;

- City of San Diego geologists
- California Geological Survey (CGS, formerly California Division of Mines and Geology)
- Geotechnical consultants working in the downtown San Diego area

A brief overview of fault hazard investigations in the downtown area is presented the following section. Fault hazard mitigations required by the City of San Diego and the State of California are discussed within the text of this report.

## 1.2 OVERVIEW

In recent years more focus has been placed on fault hazards. The presence of a complex pattern of Quaternary age faulting and the discovery in 1985 of active fault traces in downtown

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[1] "Active" faults are those faults that have shown evidence of surface displacement during the Holocene (an epoch of geologic time covering the past 11,000 years). For planning and project siting purposes, the potential for surface faulting is generally considered to exist along active and to a lesser degree, "potentially active" faults. Those faults that have been active during the Holocene and particularly those faults that have been repeatedly active during the Holocene are considered to have the greatest potential for future surface displacements.

[2] Potentially active faults are those faults that have been active during the Quaternary period (past 1.6 million years, includes the Pleistocene and Holocene epochs).

ultimately led the City of San Diego to establish requirements for fault investigations. The Downtown Special Fault Zone (Zone 13) was established in 1992 and it requires geologic hazard investigations as part of the building permit process for proposed developments. More specifically, the City requires site specific investigations of potential fault hazards within Zone 13 (Figure 1). In most cases, this results in fault trenching investigations to evaluate the presence or absence of faulting within the site area. On a block-by-block basis, consultants' geotechnical investigations are the primary means of identifying fault locations downtown.

Some previous studies have addressed multi-block areas for proposed redevelopment projects. (e.g., Woodward-Clyde, 1994a, and 1997). More often, geotechnical investigations are performed for a specific project involving a city block or a portion of a city block. Generally, these investigations become public knowledge or part of the public record only if the planned development progresses to the permit stage and the reports are submitted to the City.

Faulting was encountered during the construction of the Police Administration and Training Center in the eastern portion of downtown and investigations established these faults as active (Patterson and others, 1986). Subsequent trenching investigations for adjacent developments extended the mapped locations of active faults in this area. A review of the Rose Canyon fault zone by the CGS summarized available findings for this area and referred to this zone of faulting as the Downtown Graben (Treiman, 1992). The CGS later established this group of fault traces as an Earthquake Fault Hazard Zone under the provisions of the Alquist-Priolo Act. Since the establishment of the zone, studies to the south have found faults that are active and are likely continuations of the faults in the previous Earthquake Fault Zone to the north. The revised boundaries of this hazard zone are shown on Figure 2.

Earlier trenching studies included geologic logging of an east-west trench excavation for a major sewer interceptor along E Street (Artim and Streiff, 1981), which revealed a fault on Broadway between Front Street and First Avenue. This was initially evaluated as a potentially active fault and was referred to as the San Diego fault. The San Diego fault was recently determined to be active, and is now within an Earthquake Fault Zone (Figure 2).

Other significant fault investigations relative to the downtown area were performed as part of the Caltrans effort to seismically retrofit the San Diego – Coronado Bay Bridge. CGS assisted Caltrans on this project and they performed detailed geophysical and subsurface investigations in and adjacent to San Diego Bay. This work by Kennedy (and Clarke, 1999) refined previous offshore work and revealed a complex zone of active faulting along the Silver Strand and Coronado faults. Several new faults appear to project into downtown.

The CGS's fault hazard assessment efforts include periodic review of new information relative to Earthquake Fault Zones. Such a review in currently being completed for the downtown area and it appears that preliminary changes will be made to the hazard mapping, as shown of Figure 2. Not all faults located in the downtown area meet the CGS criteria for inclusion within an Earthquake Fault Zone. Recent investigations have found faults in other areas of downtown that appear to have little if any recent activity (Holocene movement) and are considered potentially active faults. Areas with potentially active faults found in recent studies include sites in Little Italy, and the area northwest of the Downtown Graben in the vicinity of the El Cortez Hotel (Figure 2).

Other seismic hazards of specific concern in the downtown area include strong ground shaking, liquefaction and lateral spreading. City of San Diego Municipal Code requires evaluation of liquefaction and the State of California Seismic Hazard Mapping Act of 1990 was enacted to "protect public safety from the effects of strong ground shaking, liquefaction, landslides or other ground failure, and other hazards caused by earthquakes". This act closely resembles the Alquist-Priolo Earthquake Fault Zoning Act. The CGS is in the process of issuing Seismic Hazard Zone Maps that show zones of required investigation to determine the need for mitigation of potential liquefaction and /or earthquake-induced landslide ground displacements. These maps have not been completed for the San Diego area, however, existing City mapping shows area of potential liquefaction in the downtown area.

The 1997 Unified Building Code identifies San Diego within Seismic Zone 4, the highest zone of ground shaking hazard. Previous versions of the UBC had San Diego in Zone 3. With inclusion in Zone 4, structure design became more stringent with regard to seismic shaking mitigation.

The geologic setting of the Downtown Planning area is described in this report section.

## 2.1 GEOLOGIC SETTING

The Downtown Planning area lies within a low relief coastal plain along the margins of San Diego Bay. The historic high tide line is located approximately along Pacific Coast Highway and the former alignment of Harbor Drive. This high tide line represents the former extent of tidal flats and marshes along the bay margins. Areas of hydraulic fill and reclaimed land ring the downtown area between the current Bay margin and the historic high tide line. Inland from the bay margins, the coastal plain rises towards low foothills that are incised (cut) by southerly flowing natural drainages. Some of the larger drainages are named such as Sweitzer Creek.

All of downtown San Diego is underlain by Pleistocene age terrace/marine deposits assigned to the Bay Point Formation (Kennedy, 1975). Episodic changes in sea level during the late Pleistocene (past several hundred thousand years) have resulted in a variety of depositional units ranging from deposits of sand, silt and clay to gravels and cobbles.

The age of the Bay Point Formation is considered to span a fairly wide range. Kern (1977), interpreted much of the Bay Point Formation as being deposited about 125,000 years ago corresponding to a major highstand of sea level. Studies by Deméré (1981) and Artim and Streiff (1981) have yielded estimates of up to 560,000 years before present for marine deposits mapped as the Bay Point Formation in areas of downtown San Diego. A review of shells collected from trenches excavated within the Ballpark District (Dr. George Kennedy, SDSU) indicates it is reasonable to infer that the uppermost parts of the Bay Point Formation probably deposited about 125,000 years before present (Woodward-Clyde, 1998b).

At varying depths, downtown San Diego is underlain by Pliocene/Pleistocene marine sediments of the San Diego Formation. These sediments are exposed in the mesas north and east of downtown.

The Plan update area encompasses a portion of downtown San Diego that is currently occupied by parking lots, various light industrial businesses, and commercial and residential buildings, many of which are multi-story high rise buildings. Development in downtown San Diego began in the 1800's and the area was extensively developed by the 1930's. As a result some parcels have been redeveloped numerous times and the natural landforms have been highly modified or obscured for many decades. This is an important point in the assessment of geologic hazards, and faulting in particular because much can be learned from the natural landforms. Historic aerial photographs are often very useful in analyzing the terrain assessing fault hazards in an area that has been altered by development. Unfortunately for hazard assessment in downtown San Diego, the early development modified much of the downtown area and largely predates the historic stereographic aerial photos, so no record of the natural landforms exists.

## 2.2 GROUNDWATER

Groundwater in the downtown area is relatively shallow as a result of the proximity of the ocean and can be approximated based on the elevation of an area. In general, groundwater is encountered a few feet above mean sea level (MSL) in the downtown area. Areas very close to the Bay may see some daily changes in groundwater level resulting from tidal variation. Groundwater levels in other areas of downtown may be locally affected by temporary dewatering systems for adjacent structures under construction or, in a few cases, permanent dewatering systems. Localized, perched water is also encountered in the downtown area at elevations above the permanent groundwater surface.

Below ground structures located within several City blocks inland of San Diego Bay require temporary dewatering to lower the groundwater table. There are current ordinances that deter permanent dewatering. In the downtown area, the ground surface gains elevation at a steeper gradient then the groundwater table. Below ground construction at distance from the Bay can typically take place without the need for dewatering, depending upon the depth of the proposed excavation. Below ground structures can also be designed to withstand hydrostatic pressures of the permanent groundwater table. Therefore, it is generally feasible to construct multi-level below grade structures anywhere within the downtown planning area.

This report section describes the earthquake history and potential earthquake sources affecting downtown San Diego.

## 3.1 TECTONIC SETTING

The tectonic setting of the San Diego area is influenced by plate boundary interaction between the Pacific and North American lithospheric plates. This crustal interaction occurs along a broad zone of northwest-striking predominantly right-slip faults that span the width of the Peninsular Ranges and extend offshore into the California Continental Borderland Province. At the latitude of San Diego, this zone extends from the San Clemente fault zone, located approximately 60 miles west (offshore) of San Diego to the San Andreas Fault, located about 90 miles east of San Diego.

Geologic, geodetic and seismic data indicate that the faults along the eastern margin of the plate boundary, including the San Andreas, San Jacinto and Imperial Faults, along with their associated branches, are currently the most active and appear to be dominant in accommodating the motion between the two adjacent plates. A smaller portion of the relative plate motion is being accommodated by northwest-striking faults to the west including the Elsinore, Rose Canyon, San Miguel, and Agua Blanca fault zones, and offshore faults including the Coronado Bank, San Diego Trough, and San Clemente fault zones (see Figure 3). Many of these faults have experienced historic seismic activity.

## 3.2 HISTORICAL SEISMICITY

The available record of large historical earthquakes (M6 and greater), dating back to the early mission days in the late 1700s, for coastal San Diego is probably as complete as any other region in California (Anderson and others, 1989). The epicentral locations of recorded seismicity since 1932 in southern California and northern Baja California are shown in Figure 3.

San Diego has experienced strong shaking and minor damage from several local and distant earthquakes, but none have been very destructive (Agnew and others, 1979; Toppozada and others, 1981). Most of these earthquakes apparently originated at long distances from San Diego, generally from locations in the Imperial Valley or northern Baja California. Earthquakes in 1800, 1862 and 1892 are believed to have produced the strongest intensities in the downtown San Diego area.

Anderson and others (1989) suggest that the 1862 earthquake produced the strongest historical shaking and was located closer to San Diego than any other earthquakes. During the 1862 earthquake, shaking of an estimated MM intensity of VI to VII was felt in San Diego based on reported damage that included cracking of adobe buildings and upsetting of small objects (breaking of dishes, etc.). The epicenter for the 1862 earthquake is not known; however, based on an evaluation of felt reports by Toppozada and others (1981), it is suggested the event could have been in or near San Diego Bay. Toppozada and others (1981) estimated the magnitude of the 1862 earthquake at M5.9.

Seismographs were established in San Diego in the early 1930s. Since then, San Diego Bay has been the location of repeated "swarms" of small to moderate magnitude earthquakes. A 1985 series of earthquakes (largest event M4.7) was generally centered about 1 km south of the San Diego-Coronado Bay Bridge (Reichle and others, 1985). A similar series of small earthquakes in 1964 was also generally located beneath southern San Diego Bay (Simons, 1977).

In July 1986, a M5.3 earthquake occurred about 70 km offshore and northwest of San Diego, near Oceanside, California. This area has been characterized by an abundance of small aftershocks since 1986 (Hauksson and Jones, 1988). Although the 1986 "Oceanside earthquake" was felt strongly in many areas of San Diego, it did not cause significant damage in the downtown area.

## 3.3 ROSE CANYON FAULT ZONE

In the regional tectonic sense, all of downtown San Diego is within the Rose Canyon fault zone (RCFZ). The fault zone is part of a through going fault system extending at least as far north as Oceanside, and south (and probably beyond) the area of the U.S./Mexico International Border. The on-shore portion of the Rose Canyon fault zone extends along the northeast flank of Mount Soledad and continues southward along the eastern margins of Mission Bay. Between Mission Bay and San Diego Bay, the zone appears to widen as it extends below San Diego Bay. The eastern margin of the fault zone as it approaches downtown appears to be bounded by the Old Town fault. This fault is often projected into downtown from the area of about Washington Street.

Geologic studies north of Balboa Avenue in Rose Canyon discovered faulting along a primary trace of the Rose Canyon fault zone (Rockwell and others, 1991). Various studies in the eastern downtown area (discussed in Treiman, 1993) had previously confirmed downtown area faults that also showed Holocene (last 10,000 years) displacements and were thus considered “active.”

Several significant faults, considered to be major strands of the RCFZ are mapped within San Diego Bay. The three principal faults identified in the bay are the Spanish Bight, Coronado, and Silver Strand Faults. Recent seismic reflection profiling in San Diego Bay (1996) has been carried out by CDMG as part of seismic retrofitting evaluations of the Coronado Bridge. These investigations have resulted in revised locations and orientations of faults in the vicinity of the bridge and along the bay margins. Many of the newly mapped faults have pronounced northeasterly trends, which generally project into downtown. To date, the possible continuation of these faults on land has not been investigated.

For the purpose of assessing potential development constraints, seismic hazards of significance to the Master Plan area include: fault rupture, seismic shaking and liquefaction as discussed below:

## 4.1 DOWNTOWN FAULTING

Faults revealed in the Downtown Planning Area are considered to be within the RCFZ; significant faults include the Downtown Graben and San Diego faults, as discussed below.

### 4.1.1 Downtown Graben

As previously defined, the Downtown Graben[3] (Treiman, 1993) encompassed an area roughly bounded by C Street and F Street, 12th Avenue and 15th Avenue. The Graben was discovered as part of geotechnical investigations for the Police Administrative and Technical Center (PATC) and adjacent buildings (Patterson and others, 1985; Sangines and Reed, 1986). The zone includes several faults that are considered active.

The graben had been suspected to continue south towards the bay based on the local topography. Faults have since been discovered in areas several blocks south of the PATC. Fault investigations revealed northeast-trending faults along K Street between 12th Avenue and 13th Avenue (WCC, 1994a), and between Island Avenue and J Streets along 14th Street (Leighton & Associates 1998). The western margin of the Downtown Graben may be defined by faults encountered between 12th Avenue and 13th Avenue. Various investigations west 12th Street, including extensive trenching investigations for the Ballpark District have not revealed any faults to the west of 12th Avenue. A northwest trending fault revealed in exploratory trenches along 16th Street and Imperial Avenue may represent a southerly extension of the active faults that make up the eastern margin of the graben. According to CGS, the "Preliminary Review Map" extends the previous EFZ south to encompass these faults (Figure 2).

### 4.1.2 San Diego Fault

As discussed above, the San Diego fault was discovered in 1981 during the excavation of a cross town sewer project (Artim and Streiff, 1981). Subsequent studies to the south encountered the fault and revealed evidence of active faulting. Additional studies have traced the fault across parcels north and south of Broadway as shown approximately on Figure 2. The San Diego fault is currently included in an Alquist-Priolo Earthquake Fault Zone (Figure 2).

### 4.1.3 Other Faults

Other faults have been located during recent investigations downtown, west of Interstate 5 in the Little Italy neighborhood. To date, these faults have not shown evidence of active faulting. These faults are classified as potentially active because they displace Pleistocene deposits, but do not show evidence of displacement within Holocene deposits.

[3] A graben is a downthrown fault-bounded block

Similar, potentially active faults have also been found northwest of the Downtown Graben in the vicinity of the El Cortez Hotel near Beech and Cedar Streets and Tenth and Twelve Avenues (Figure 2).

## 4.2 SEISMIC SHAKING

The recent increase in seismicity offshore of Oceanside and in San Diego Bay compared to the relative seismic quiescence over the past several decades is considered significant by some researchers (Heaton and Jones, 1989). There are differences of opinion regarding the lack of damaging earthquakes in the San Diego area. Despite the fact that the historical record (at least for large earthquakes) dates back some two hundred years, it is important to note that this period is short compared to the average interval or return period between large, potentially damaging earthquakes. Therefore, based only on historical records of earthquake activity, the seismic hazard in coastal San Diego is difficult to quantify.

The Downtown Planning Area will likely be subject to moderate to severe ground shaking in response to a local or more distant large magnitude earthquake occurring during the expected life span of proposed facilities. All of downtown San Diego, is located essentially within a mile or so of the Rose Canyon fault zone which is considered a significant seismic hazard to the San Diego metropolitan area.

Estimates of the maximum earthquake for the Rose Canyon fault zone range from M6.5 to M7.2 (City of San Diego, 1983; Woodward-Clyde, 1985). Recent regional seismic hazards evaluations indicate that a maximum magnitude earthquake for the Rose Canyon fault zone results in peak levels of shaking of about 0.5g to 0.6g for coastal San Diego sites located within about one mile from the fault (California Division of Mines and Geology, 1992). It is important to note that the "maximum magnitude earthquake" generally represents a rare seismic event with a very low probability of occurrence and is usually not the design basis earthquake for typical projects. Smaller earthquakes are much more likely to occur. For example, Anderson and others (1989) report that for a typical site in coastal San Diego, seismic shaking with peak accelerations of 0.1g to 0.2g are "expected about once every 100 years".

Based on a probabilistic analysis of all known potential seismic sources affecting coastal San Diego, Berger and Schug (1991) evaluated hazard for sites located about 1 to 5 kilometers (0.6 to 3 miles) from the Rose Canyon fault zone. They reported that these sites could experience peak ground accelerations associated with a 10 percent probability of nonexceedance (or alternately, 90 percent probability of nonexceedance) in a 50-year period range between about 0.34g to 0.40g. For the same 50-year period, it is estimated there is about 50 percent chance of exceeding peak ground accelerations between about 0.12g and 0.15g. These estimates would apply to virtually all of downtown San Diego.

These evaluations are consistent with recent regional hazard mapping efforts by the CGS. A review of the Peak Ground Acceleration Atlas (CGS, 1999) for the San Diego are shows a peak ground acceleration with a 10% probability of being exceeded in 50 years for the downtown area to be within a range of 0.30g to 0.40g.

## 4.3 SOIL LIQUEFACTION

Seismically induced soil liquefaction is a phenomenon in which loose to medium dense saturated granular materials develop high pore water pressures and lose shear strength due to cyclic ground vibrations induced by earthquakes. For the areas of downtown underlain by the Bay Point Formation, the probability of soil liquefaction affecting the site is considered to be low.

Significant liquefaction hazard exists for the Bay margins and areas in major drainages (Figure 2). Along the Bay margin, sites are commonly underlain by relatively loose, saturated deposits of fill and younger Bay deposits that are susceptible to liquefaction.

Lateral spreading is a lateral ground movement that takes place when liquefaction occurs adjacent to a slope or open face. The loss of strength in the liquefied material near the base of a slope can result in a slope failure. These kinds of failures have occurred adjacent to rivers and streams and along waterfronts and beaches during recent seismic events.

## 4.4 OTHER HAZARDS

The entire planning area is located on flat to gently sloping topography, greatly reducing the potential for landslide activity. There have been no landslides identified on or adjacent to the planning area.

Tsunamis and seiches are seismic-induced waves and oscillations of relatively confined bodies of water, such as San Diego Bay. There is some potential, albeit low of a tsunami and/or seiche affecting property along the bay front.

Mitigations of potential seismic hazards include investigations, planning and special design, as discussed below.

## 5.1 FAULT RUPTURE

The Downtown Planning area contains active and potentially active faults. Since new ruptures are most likely to occur along past rupture surfaces, faulting is a significant development constraint within the area. New faults will undoubtedly be revealed as various parcels are redeveloped.

The potentially active faults currently known in the downtown area are not as significant a hazard as the active faults but are still a possible constraint to development. For planning purposes the City has developed hazard maps that include fault locations and the State has the Earthquake Fault Hazard Zone Maps.

Mitigations for fault rupture consist of building setbacks from the surface trace of the identified fault. Specific recommendations for building setbacks need to be evaluated based on site-specific geologic studies. Some previous fault set-backs have ranged from 5 feet to 50 feet in downtown San Diego. In some limited situations building foundations have been designed to accommodate fault movements. This approach is not appropriate for active faults.

### 5.1.1 Earthquake Fault Zone

The State of California's designation of an Earthquake Fault Zone does not allow for a structure for human occupancy to be placed across the trace of an active fault. Also, no structure is permitted within 50 feet of the fault as this area is presumed to be underlain by active branches of the fault, unless proven otherwise by a geological investigation. Potentially active faults are not specifically regulated within an Earthquake Fault Zone.

### 5.1.2 City of San Diego

Building setbacks are required by the City of San Diego for active faults and strongly recommended for potentially active faults. The need for and the location and width of a structural setback is recommended by the geotechnical consultant and evaluated by the City during the building permit process. If a setback is not recommended for a potentially active fault a "Notice of Geologic and Geotechnical Condition" may be required to be signed and recorded as a condition of obtaining a building permit from the City (City of San Diego, 1998 Building Code Amendments, Section 1804.10.4).

Known active faults in the Downtown Planning area include faults within the "Downtown Graben" and the San Diego fault. It is also likely that other faults may be present within the Graben that would pose development constraints.

The San Diego fault has been shown to be active and should be setback from when considering new construction in this area. The limits of the area affected by the San Diego fault are not known with certainty. At the southern end of the currently mapped fault, it appears the fault dies out or steps laterally. The fault has been located north of Broadway but is not well located beyond that area. A new EFZ will be established for this fault (Figure 2).

## 5.2 SEISMIC SHAKING

Specific developments within the planning area are required to be designed in accordance with the Uniform Building Code (UBC) Seismic Zone 4 requirements. The 1997 version of the UBC was adopted by the City in 1998. The 1997 UBC contains some special seismic design criteria that will apply to the downtown planning area, given the proximity to the Rose Canyon Fault Zone. Site specific seismic design criteria (often with more conservative design recommendations than specified in the Code) may be required for critical or essential structures.

## 5.3 SOIL LIQUEFACTION

Mitigations for liquefaction and lateral spreading may be warranted for developments within the zones of high or moderate liquefaction hazard adjacent to the Bay or major drainages may be susceptible to liquefaction and in some cases lateral spreading (City Hazard Categories 31 and 32). Liquefaction hazards should be confirmed with site specific geotechnical explorations. Investigations are required in Hazard Categories 31 and 32 (City of San Diego, 1998 Building Code Amendments, Section 91.1804 – Foundation Investigation).

Mitigation measures for liquefaction include various forms of ground improvement to reduce or eliminate the potential of the subsurface to liquefy, and foundation designs intended to accommodate for any settlement associated with liquefaction. Examples of ground improvement include, soil densification, jet grouting, deep dynamic compaction, stone columns and wick drains. Examples of foundation designs aimed at minimizing or eliminating liquefaction hazard include mat foundations and extending foundations below the zone of liquefaction (placing structures on piles or piers).

## 5.4 OTHER HAZARDS

Potential mitigation measures have not been required for landslides, and it is unlikely that major new developments would be affected by landslide hazards. Potential impacts due to tsunamis and seiches would likely be limited to the margins of San Diego Bay. At present, specific design measures doe not appear warranted to mitigate tsunamis and/or seiches.

Anderson, J.G., T. Rockwell, and D.C. Agnew. 1989. "A Study of the Seismic Hazards in San Diego," *Earthquake Spectra*. Vol. 5, No. 2.

Artim, E. and Streiff, D. 1981. Trenching the Rose Canyon Fault Zone. United States Geological Survey. USGS Contract No. 14-08-0001-19118.

Berger, V. and Schug, D.L. 1991. Probabilistic Evaluation of Seismic Hazard in the San Diego – Tijuana Region in Earthquake Perils – San Diego Region, Abbott, P.C. and Elliott, W.J. eds.

California Division of Mines and Geology. 1991. Alquist-Priolo Special Studies Zones, Point Loma Quadrangle, Official Map.

California Geological Survey, 2002. Draft Proposed Zone Boundaries, Point Loma Quadrangle.

City of San Diego. Planning and Development Review, BDR-Geology Section, "Active," "Potentially Active" and "Inactive" Faults – Defined, May 20, 1999.

City of San Diego. 1996. Seismic Safety Study, Geologic Hazards and Faults, Sheet 17.

City of San Diego Seismic Safety Study. 1983. Updated by Leighton & Associates.

Deméré, T. 1981. "A Newly Recognized late Pleistocene Marine Fauna from the City of San Diego" in Geologic Investigation of the Coastal Plain, Abbott, P.L., and O'Dunn, eds.

Hart, Earl W., 1997, Fault-Rupture Hazard Zones in California, Alquist-Priolo Special Studies Zone Act of 1972: California Division of Mines and Geology, Special Publication 42.

Hauksson, E. and L.M. Jones. 1988. "The July 1988 Oceanside ($M_L$=5.3) Earthquake Sequence in the Continental Borderland, Southern California," *Bulletin of the Seismological Society of America*. Vol. 78. pp. 1885-1906.

Heaton, T.H. and L.M. Jones. 1989. "Seismological Research Issues in the San Diego Region," *Southern California Earthquake Preparedness Project Workshop on "The Seismic Risk in the San Diego Region: Special Focus on the Rose Canyon Fault System,"* G. Roquemore and S. Tanges, eds.

International Conference of Building Officials. 1997. Uniform Building Code.

Kennedy, M.P., and Clarke, S.H. 1997. Analysis of Late Quaternary Faulting in San Diego Bay and Hazard to the Coronado Bridge, State of California, Division of Mines and Geology OFR-97-104.

Kennedy, M.P. and Welday, E.E. 1980. "Recency and Character of Faulting Offshore Metropolitan, San Diego, California." California Division of Mines and Geology, Map Sheet 40.

Kennedy, M.P., Tan, S.S., Chapman, R.H., and Chase, G.W. 1975. "Character and Recency of Faulting, San Diego Metropolitan Area, California." California Division of Mines and Geology. Special Report No. 123.

Kern, J.P. 1977. "Origin and History of Upper Pleistocene Marine Terraces, San Diego, California.: GSA Bulletin, Vol. 88.

Leighton and Associates. 1998. "Fault Trenching Investigation, East Side of 14th Street between Island Avenue and J Street," prepared for Centre City Development Corporation.

Patterson, R.H., Schug, D.L. and Ehleringer, B.E. 1986. "Evidence of Recent Faulting in Downtown San Diego, California (abstract)." Geological Society of America, Abstracts with Programs, 82nd Annual Meeting, Los Angeles, California.

Reichle, M., P. Bodin, and J. Brune. 1985. "The June 1985 San Diego Earthquake Swarm (Abstract)," EOS Transactions, American Geophysical Union. Vol. 66. p. 952.

Rockwell, T.K., et. al. 1991. "Minimum Holocene Slip Rate for the Rose Canyon Fault in San Diego, California" in Environmental Perils in the San Diego Region, P.L. Abbott and W.J. Elliott, eds., San Diego Association of Geologists, pp. 37-46.

Sangines, E.M. and Reed, L.D. 1991. "Recent Fault Discoveries in Downtown San Diego, California" in Proceedings Workshop on The Seismic Risk in the San Diego Region: Special Focus on the Rose Canyon Fault System, Roquemore, G., ed., San Diego Association of Geologists, p. 26.

State of California, Division of Mines and Geology. 1997. Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117.

Toppozada, T.R., C.R. Real, and D.L. Parke. 1981. "Preparation of Isoseismal Maps and Summaries of Reported Effects for Pre-1990 California Earthquakes," *California Division of Mines and Geology Open File Report 81-11 SAC*. 182p.

Treiman, J.A. 1993. The Rose Canyon Fault Zone, Southern California, California Division of Mines and Geology, Open-File Report 93-02.

Woodward-Clyde Consultants. 1998a. "Phase One Geotechnical Investigation, a Ballpark for San Diego. East Village, Downtown San Diego." Prepared for Centre City Development Corporation.

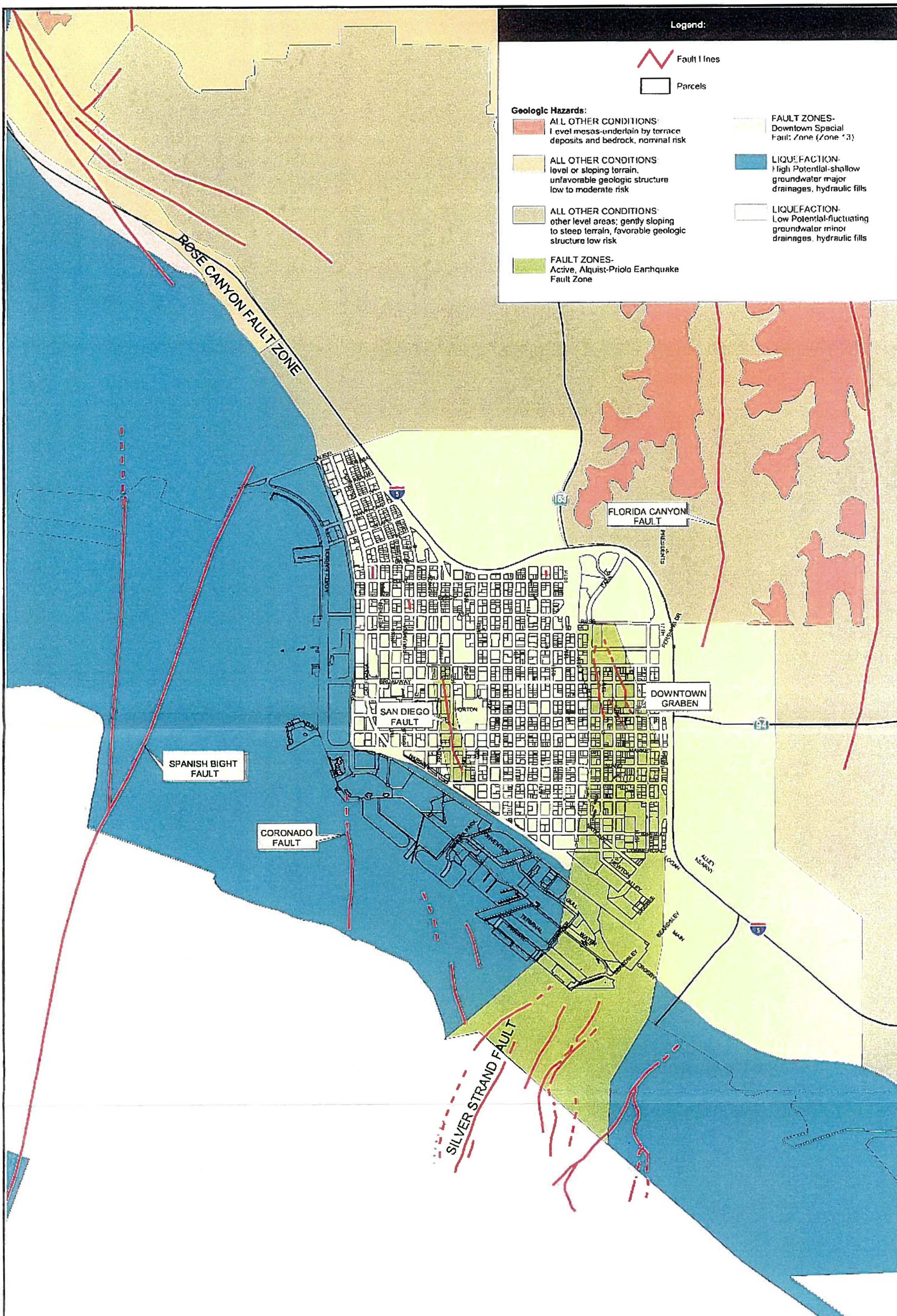
Woodward-Clyde Consultants. 1998b. "Preliminary (Phase I) Fault Hazard Investigation, A Ballpark for San Diego, East Village, San Diego, California." Prepared for Centre City Development Corporation.

Woodward-Clyde Consultants. 1997. "Multiblock Area of Preliminary Fault Hazard Investigation of Downtown San Diego, San Diego, California." Consulting report for Centre City Development Corporation.

Woodward-Clyde Consultants. 1994a. "Report of Fault Hazard Investigation for the Entertainment and Sports Center, San Diego, California." Unpublished consulting report for Centre City Development Corporation.

Woodward-Clyde Consultants. 1994b. "Fault Hazard Investigation, Proposed Convention Center Expansion, San Diego, California." Unpublished consulting report for San Diego Unified Port Authority.

Woodward-Clyde Consultants. 1981. "Supplemental Geologic Investigation for the Proposed Naval Regional Medical Center, Florida Canyon, West Site, San Diego, California." Unpublished consultants report, Woodward-Clyde Consultants, Project No. 581613-GE01, May 21, 1981.




SOURCES: SanGIS (Geo Hazards, Faults), Dyatt and Bhatia (land use), CDMG 1996 and 1980 (Evidence of Faulting).

**GEOLOGICAL HAZARDS**
**SAN DIEGO COMMUNITY PLAN UPDATE**

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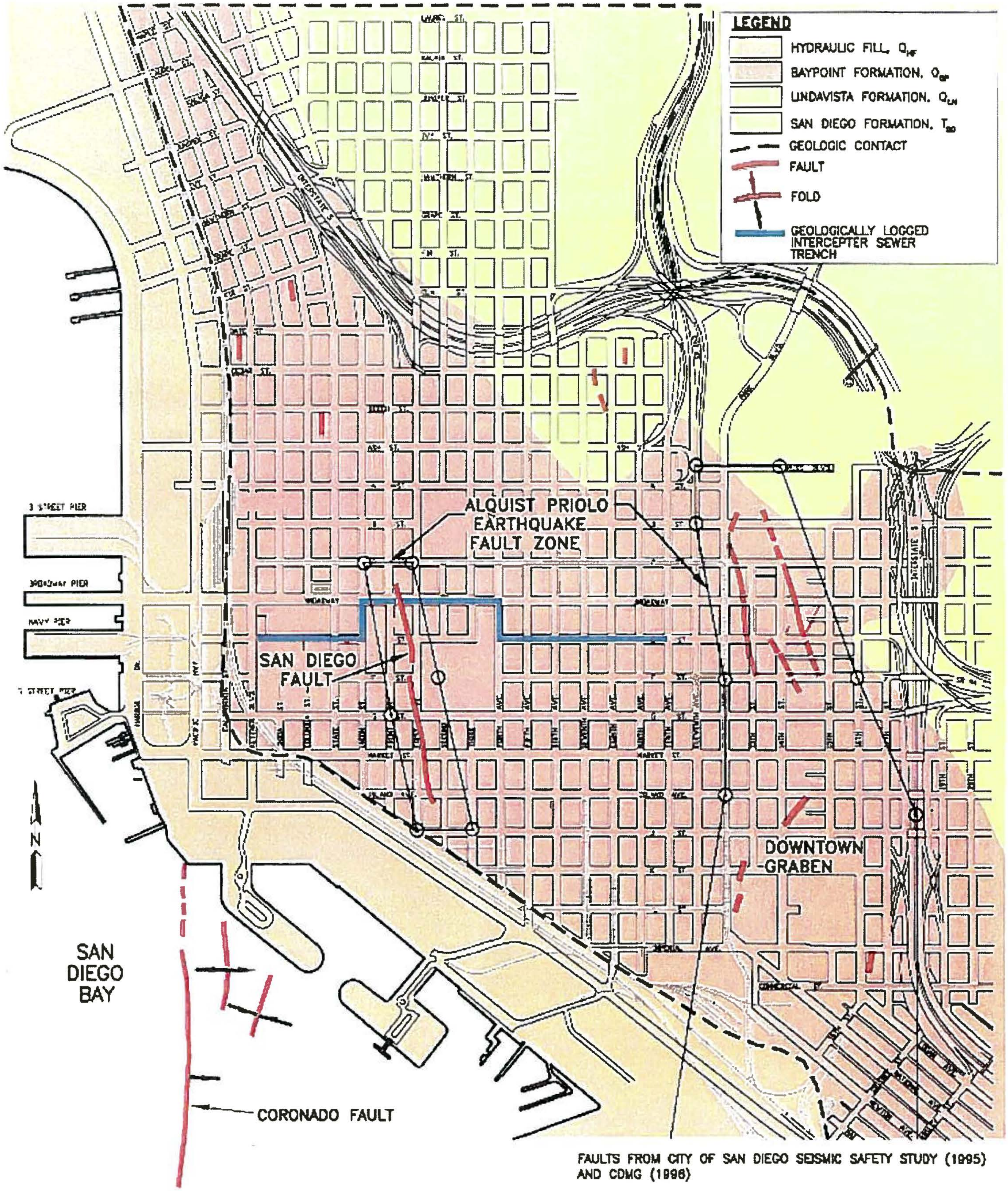


FAULTS FROM CITY OF SAN DIEGO SEISMIC SAFETY STUDY (1995) AND CDMG (1998)

DOWNTOWN GEOLOGIC MAP
SAN DIEGO DOWNTOWN COMMUNITY PLAN UPDATE

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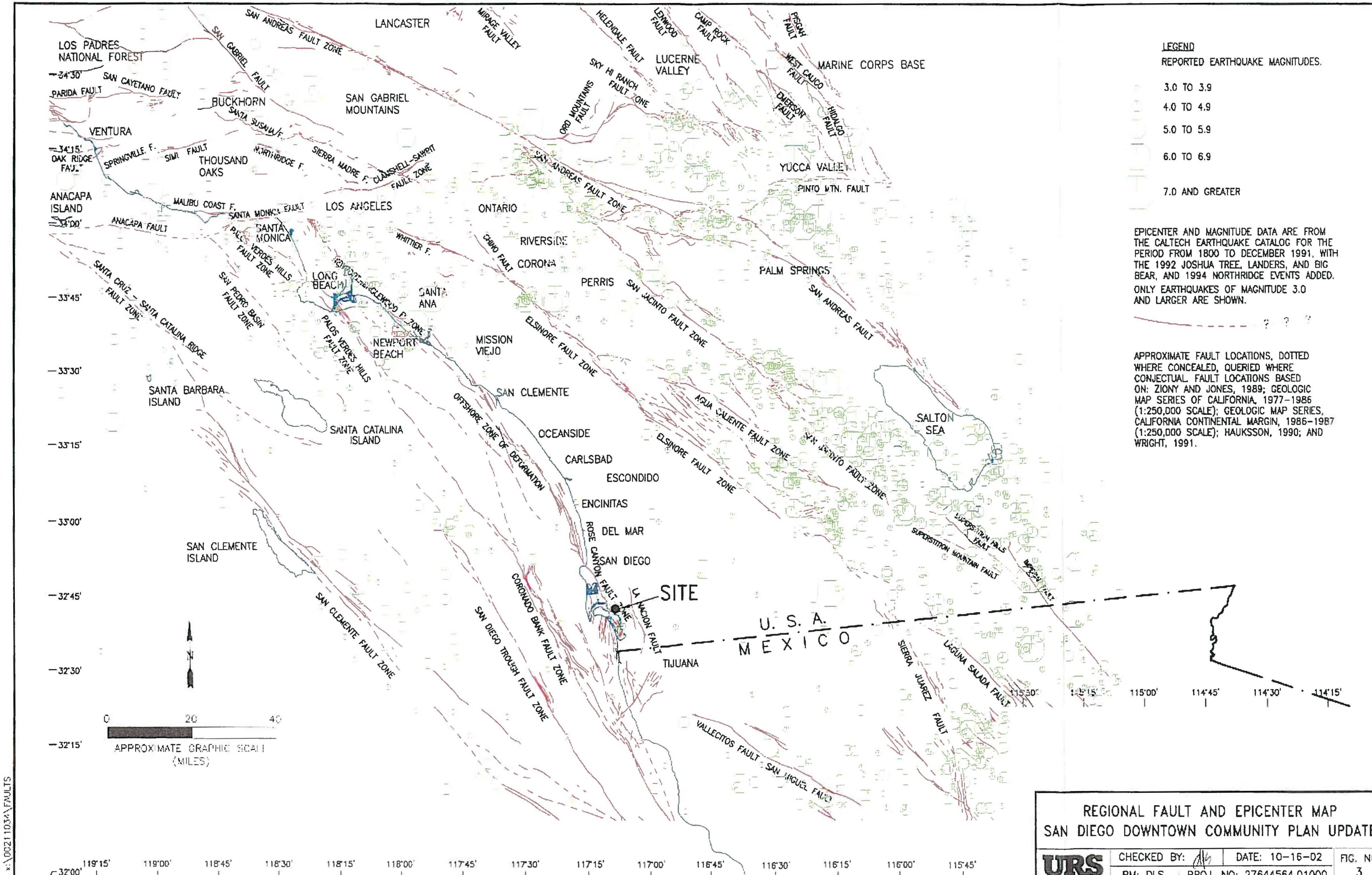


REGIONAL FAULT AND EPICENTER MAP
SAN DIEGO DOWNTOWN COMMUNITY PLAN UPDATE

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# NOISE ANALYSIS

# APPENDIX 2.6

**Giroux & Associates**
Environmental Consultants

# NOISE IMPACT ANALYSIS

# DOWNTOWN COMMUNITY PLAN

# CITY OF SAN DIEGO, CALIFORNIA

Prepared for:

ProjectDesign Consultants
Attn: Bruce McIntyre
701 "B" Street, Suite 800
San Diego, California 92101

Date:

July 19, 2005

Project No.: P05-017

*3 Rushingwind, Irvine, California 92614 - Phone (949) 387-5477 - Fax (949) 387-5478*

## INTRODUCTION

The Downtown Community Plan would centralize land uses in downtown San Diego. The plan would increase residential land use and commercial activities in promoting downtown as the single regional center for employment, commerce and residential development. The proposed site of the Downtown Community Plan encompasses the downtown area of San Diego historically referred to as "Centre City." The downtown core is already intensely developed. Plan implementation would widen the area of higher density use. Plan activities would involve demolition, construction, razing and redeveloping the sites with multi-story structures, and operation of mixed-use developments.

The Downtown Community Plan site is approximately 1,445 acres in size, and the area is bounded by the Interstate 5 freeway to the north and east, and the San Diego Bay shoreline to the west and south. Lindbergh Field (San Diego International Airport) is situated at the northwest corner of the downtown area, adjacent to the proposed Downtown Community Plan, but it is not a part of the plan.

Noise associated with the Downtown Community Plan would occur from both the construction (short-term) and the operational (long-term) phases of the development. This report analyzes the existing noise levels and evaluates the proposed Community Plan for associated potential noise impacts. It also compares the 1992 Community Plan (No Project) alternative to the proposed Community Plan to determine if plan implementation will substantially change noise exposures of noise-sensitive uses compared to build-out according to the current plan.

## NOISE SETTING

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is commonly defined as unwanted sound. Sound can be characterized by a variety of parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of sound pressure ratioed to an assumed zero sound level is called a decibel (dB).

Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale similar to the Richter Scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called "A-weighting", written as dBA. Any further reference to decibels in this discussion written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or, alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

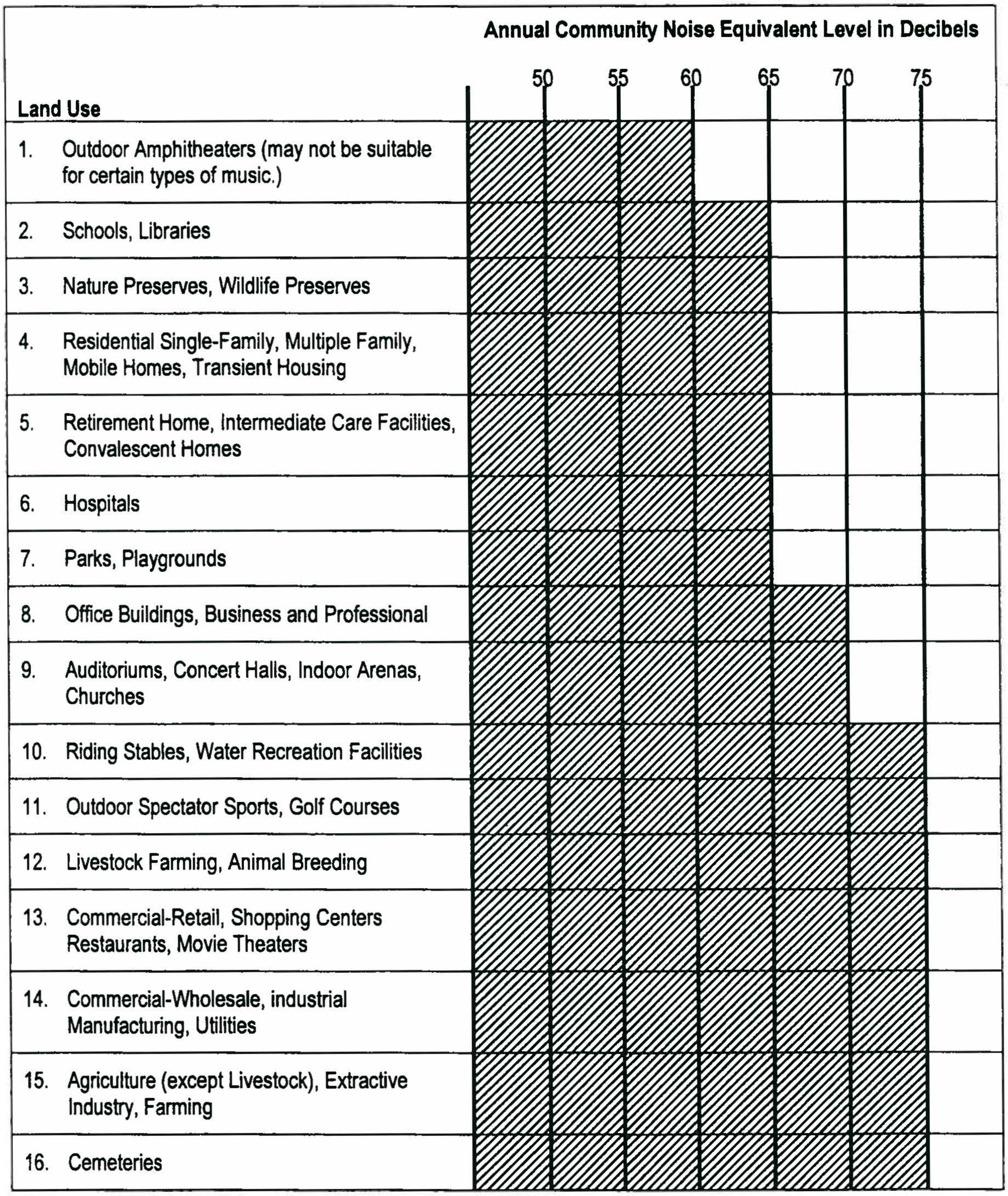
An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Since typical noise attenuation within residential structures is about 15-20 dB, an exterior noise exposure of 60-65 dB CNEL is generally the noise/land use compatibility guideline for any new residential dwellings in California. For less noise-sensitive land uses, such as industrial developments, retail, office or other commercial development within the development site, exterior standards are less stringent because most activities occur inside, and require only a limited amount of noise protection. While a 45 dB CNEL interior noise level is desirable for residences to allow sleep and other quiet activities, the interior levels of retail, commercial or industrial uses are not similarly constrained.

### NOISE STANDARDS

Figure 1 shows the noise/land use compatibility guidelines set forth for the City of San Diego in the City's Progress Guide and General Plan (Acoustical Report Guidelines for City of San Diego California Environmental Quality Act [CEQA] Document, December 2003). The guidelines are based primarily on noise/land use recommendations from the State Department of Health Office and Noise Control. They are further modified based upon the U. S. Department of Housing and

# Figure 1

## City of San Diego Noise Land Use Compatibility Chart




**COMPATIBILE**

The average noise level is such that indoor and outdoor activities associated with the landuse may be carried out with essentially no interference from noise.

**INCOMPATIBLE**

The average noise level is so severe that construction costs to make the indoor environment acceptable for performance of activities would probably be prohibitive. The outdoor environment would be intolerable for outdoor activities associated with the land use.

Source: Progress Guide and General Plan (Transportation Element).

Urban Development (HUD) document entitled "Planning Guidelines for Local Agencies." An exterior noise exposure of 65 dB as the average CNEL is considered compatible for residential, school, health care, libraries or similarly noise-sensitive uses. When the exterior noise loading exceeds 60 dB CNEL, a study is required by the City to determine what additional mitigation measures are necessary to attenuate noise levels to the interior standard of 45 dB CNEL.

The City of San Diego, in its Municipal Code, has established numerical standards for receiving land use and construction activities. The standards vary for receiving land uses, based upon their sensitivity, and also depend on the time of day. Construction noise has a performance standard of 75 dB averaged over a 12-hour period. These Ordinance standards are presented in Table 1.

Existing noise levels around the Centre City/downtown area derive mainly from transportation-related activities, particularly from on-road traffic. Operation of the San Diego Trolley and BNSF Railroad creates periodically audible noise from both the moving trains as well as the clanging of bells near each intersection crossing. Lindbergh Field (San Diego International Airport) aircraft noise is most audible in the northwestern corner of the project area. The noise-impacted area due to aircraft flights, however, is only a small portion of the plan area. The ballpark is a special noise generator during facility use during ballgames and special functions. Industrial activities have historically been localized noise sources at numerous activities within the planning area such as ship-building, heavy equipment repair, building products manufacture, etc. The size and scope of heavy industry is continually diminishing, but the Tenth Avenue Marine Terminal is a continuing operation that entails cargo ships, goods handling, and late night trucking. As with the aircraft noise in the northwestern corner of the planning area, industrial activity noise affects a fairly limited portion of the site in the southwestern corner

## AMBIENT NOISE LEVELS

In order to better define current baseline noise characteristics, a noise monitoring study was conducted on April 12, 2005. A sound level meter, the Larson-Davis Labs Model 700 Dosimeter, Serial No. B0407, was placed at seven different noise-sensitive receptor sites throughout the Downtown Community Plan area in the City of San Diego, particularly close to I-5. The results of the monitoring are shown in Table 2. Figure 2 maps the seven various noise monitored sites and Table 3 is the map key for the monitored locations.

Noise monitoring was conducted for 15 minutes at each location using the digital sound level meter. Monitoring experience shows that 24-hour CNEL are approximately +2 dB higher than daytime measured Leq levels. The addition of +2 dB to the measured short-term Leq data in Table 2 is therefore considered a reasonably accurate representation of the CNEL exposure at each monitoring location.

## Table 1

# City of San Diego Noise Standards (dB Leq)

| Municipal Code Ordinance 59.5.0401 | Allowable Level | | |
|---|---|---|---|
| **Land Use** | **7:00 a.m. – 7:00 p.m.** | **7:00 p.m. – 10:00 p.m.** | **10:00 p.m. – 7:00 a.m.** |
| R-1 | 50 | 45 | 40 |
| R-2 | 55 | 50 | 45 |
| R-3 and higher | 60 | 55 | 50 |
| Commercial | 65 | 60 | 60 |
| Manuf./Industrial | 75 | 75 | 75 |

| Municipal Code Ordinance 59.5.0404 | Time Limits[1] | Performance Standards[2] |
|---|---|---|
| Construction Noise | 7:00 a.m. – 7:00 p.m.<br>+ Sundays/Holidays | 75 dB – 12 hours |

[1]May be waived if the public benefit outweighs the short-term noise impact, i.e., nocturnal construction is allowed at the discretion of the City's Noise Abatement and Control Administrator if daytime lane closure on roadways would impact the community worse than would limited nocturnal construction.
[2]At any residential property line.

## Table 2

**Short-Term Noise Readings**
**City of San Diego: Downtown Community Plan**
**April 12, 2005**

| Site | Time | Leq* | Lmax | Lmin | $L_{10}$ | $L_{25}$ | $L_{50}$ | $L_{90}$ |
|---|---|---|---|---|---|---|---|---|
| 1 | 1340-1355 | 64.1 | 74.0 | 58.5 | 65.5 | 63.5 | 62.5 | 61.0 |
| 2 | 1410-1425 | 67.1 | 81.5 | 59.5 | 69.5 | 67.5 | 65.0 | 62.0 |
| 3 | 1435-1450 | 59.4 | 74.5 | 54.0 | 61.5 | 59.5 | 58.0 | 55.5 |
| 4 | 1457-1512 | 63.4 | 71.0 | 59.0 | 65.0 | 63.5 | 62.5 | 60.5 |
| 5 | 1525-1540 | 68.4 | 80.5 | 61.5 | 69.5 | 67.0 | 66.0 | 64.5 |
| 6 | 1552-1607 | 66.8 | 72.5 | 59.5 | 70.0 | 68.0 | 65.5 | 61.5 |
| 7 | 1616-1631 | 63.8 | 76.5 | 56.5 | 66.5 | 63.0 | 60.5 | 58.5 |

* = CNEL is estimated to be Leq + 2.0 dB.

## Figure 2

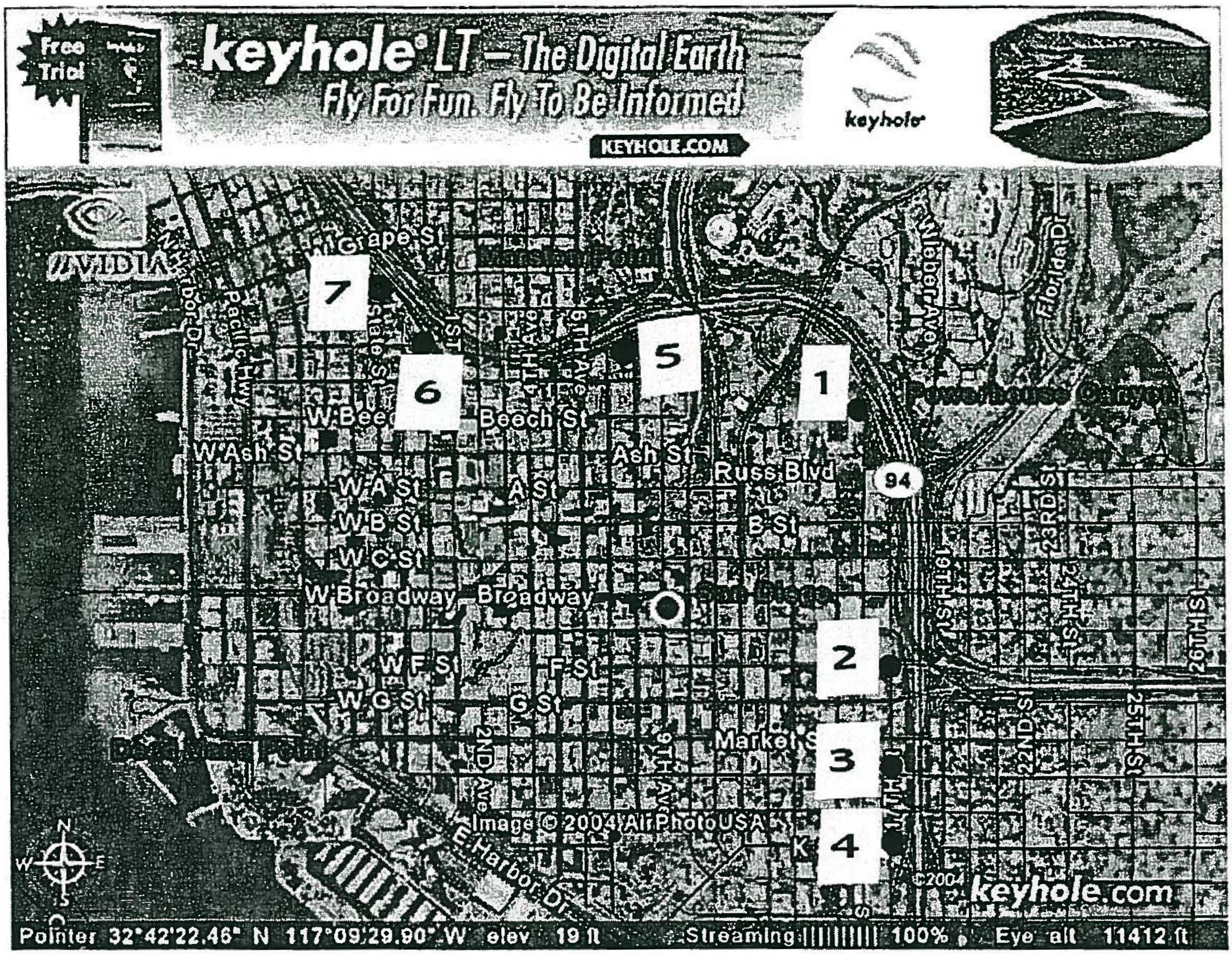

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**Table 3**

**Map Key: Noise Location Monitoring**

**APRIL 12, 2005**

| Sites | |
|---|---|
| 1 | San Diego City College Football Stadium<br>Parking Lot, East Side of Stadium |
| 2 | Multi-Family Residence<br>$17^{th}$ & F Streets, Southwest corner |
| 3 | Single-Family Residence<br>$17^{th}$ & Island Streets, Northeast corner |
| 4 | Multi-Family Residence<br>$17^{th}$ & K Streets |
| 5 | Multi-Family Residence<br>Date & $8^{th}$ Streets, South Side of Date |
| 6 | Amici Park<br>Date & Front Streets, Southwest corner |
| 7 | Washington Elementary School Playground area<br>State Street |

Each monitored site appears to have background noise typical of the steady "hum" from nearby Interstate 5 freeway traffic. Six out of the seven monitored sites near residences have existing estimated noise levels equal to or above 65 dB CNEL. These sites exceed the City of San Diego exterior noise standards for noise- sensitive land uses, but all seven sites are within the City standards for less noise-sensitive uses such as commercial, retail, office, etc.

The residential uses that experience noise levels of 65+ dB CNEL are considered potentially noise-impacted and future additional residential uses in these areas would require mitigation for any required exterior space. Because of the pervasiveness of noise from the freeway, airport, rail and local streets, noise mitigation to achieve General Plan standards can be difficult. Creative site planning to create noise-sheltered areas may be required. There appear to be no existing siting constraints in any monitored area for commercial, retail or office uses, unless outdoor dining will be a component of the site uses.

The theoretical extent of the 65 dB CNEL contour is well over 1,000 feet from Interstate 5 (based upon near-freeway reference noise levels and standard distance-decay curves). However, because of irregular terrain and intervening structures, the contour distance varies markedly over very small distances. It is therefore not possible to establish a freeway traffic noise contour map because the contour distances change so dramatically. As a rule of thumb, the measured noise levels are approximately -10 dB lower than their theoretical values for infinite and unobstructed line-of-sight. The theoretical contour 65 dB CNEL distance of almost 2,000 feet is thus reduced to around 400 feet along much of the freeway alignment.

## NOISE IMPACTS

Community noise problems typically occur at levels that are well below the threshold for hearing loss. Noise at less than hearing loss levels, however, may nevertheless create a variety of negative effects through loss of sleep, interference with communication or lack of concentration. Noise-induced stress varies from one person to another and varies even within the same person from one day to the next. There are therefore no clear-cut limits that characterize a stress-free noise environment.

Noise impacts would be considered significant if they cause standards to be exceeded where they are currently met, or if they create a measurable increase in noise levels in an already noisy environment. Appendix G of CEQA Guidelines list the following noise and/or vibration impacts as potentially significant:

- Levels exceeding standards in general plans or noise ordinances
- Excessive ground-borne vibration or ground-borne noise
- A substantial permanent increase
- A substantial temporary or periodic increase
- Exposure of sensitive receptors living or working within 2 miles of a public airport to excessive noise levels.

The terms "substantial" or "excessive" are not defined in most environmental compliance guidelines. Noise level increases are considered substantial or exposures are considered excessive if they violate standards or measurably increase an already loud baseline. The issue of standards relates to the first significance criterion above. "Measurable" is a function of human perception thresholds.

Noise analysis methodology is accurate only to the nearest whole decibel, and most people only notice a change in the noise environment when pre- and post-development differences are around 3 dB. Masking effects of existing traffic at any off-site receivers possibly affected by increases in development-related transportation will likely minimize perceptibility. A clearly perceptible (+3 dB) increase in noise exposure of sensitive receivers would be considered significant. Given, however, the logarithmic nature of the decibel scale, the likelihood that development-related traffic will be of sufficient magnitude to reach these thresholds in areas of already elevated noise volumes is low.

Noise/land use compatibility standards apply to those noise sources preempted from local control. These include on-road vehicles, trains, ships, or aircraft. Non-preempted noise sources such as mechanical equipment, amplified sound, construction equipment, etc. are typically regulated by ordinance. Ordinance limits may be expressed as numerical standards, or as a simple prohibition against creating a nuisance. Impacts amenable to control by ordinance could derive from commercial activities, from maintenance and other service functions, or from vehicle movements in, out and within various parking facilities. Such activities may not necessarily violate numerical standards, but could be perceived as a nuisance by virtue of time of day, nature of the activity, or because of isolated single events.

Temporary noise generation will result during construction activities during both demolition and construction activities. Construction activities, especially heavy equipment operations, will create short-term noise increases near various individual development sites. For development activities within San Diego City limits, the duration and intensity of such noise is regulated by ordinance limits. Compliance with these limits is generally presumed to create a less-than-significant impact.

Upon completion, vehicular traffic on streets around any individual development area may create a higher noise exposure in an area of already elevated traffic noise. Traffic noise not only may create an impact upon the environment due to a development, but noise-sensitive uses may be constrained by the acoustic environment. This is particularly true in locating new residential land uses in areas of already elevated noise. The noise impact analysis needs to consider both the effects of development implementation upon the environment, as well as the limitations imposed by ambient noise conditions upon the development.

The Downtown Community Plan area is within 2 miles of both Lindbergh Field (San Diego International Airport) and NAS North Island, and parts of the downtown area are traversed by flight paths from either location. Aircraft noise is potentially a significant source of impact for land uses underneath the flight path and its surrounding area.

### SENSITIVE RECEIVERS

Noise standards are generally expressed relative to populations that are sensitive to noise intrusion. The greatest noise sensitivity is for sleep disturbance. A secondary sensitivity would occur if noise intrudes into contemplative or learning environments. The types of uses considered as primary "sensitive receivers" are therefore residences, health care facilities or transient occupancies where undisturbed sleep is an important aspect of the use. Secondary sensitive receivers would include schools, libraries, churches, museums, meeting rooms, etc. Most secondary sensitive receivers, as well as many residential occupancies, normally operate with windows closed in air conditioned environments. Maintaining an acceptable interior exposure through structural noise attenuation is a greater noise issue than exterior exposures, but the magnitude of exterior noise determines the robustness of the structural characteristics that will be needed to achieve the necessary level of reduction.

Ambient noise may also intrude into outside uses where reasonable quiet is an expectation of the use. Residential recreational space, passive parks, amphitheaters or similar outdoor space would also be considered a sensitive receiver location. As previously noted, numerous studies have found that the intrusiveness of chronic noise rises sharply at the levels established by the City of San Diego as planning level noise standards for noise-sensitive uses. These levels are 65 dB CNEL in usable outdoor space, and 45 dB CNEL in habitable interior rooms.

### NUISANCE NOISE

The weighted 24-hour average is reasonably well suited to characterize possible intrusion from sources that are active 24 hours per day such as roadways. This standard is less well suited for short-term loud noise events such as aircraft landings or take-offs, or single event train passages with warning horns and crossing bells. Psychological adaptation to continuous noise sources is reasonably good for humans, but loud single event noise has a startling effect. Because the bulk of aircraft noise across the planning area is from quieter landings rather than noisier take-offs, train noise tends to have a greater nuisance noise impact potential. A number of measures have been considered in attempting to create quieter train operations in/near downtown San Diego. A "quiet zone" plan is under development that will balance the need for both public and train personnel safety without the need for highly noise-intrusive train horns and crossing bells. Grade separation between train and street traffic is the optimum noise attenuation measure, but such measures are not feasible within the space constraints of downtown San Diego. Intelligent crossing design and alternative warning measures are thus under consideration to balance the needs between warning the public of train movement versus a desire to minimize single event noise nuisance. Future planned higher density residential development within downtown San Diego will be less noise-constrained by single event train noise if the "quiet zone" program is effectively implemented.

## LAND USE COMPATIBILITY

The City of San Diego regulates the noise that one land use may project upon another through the Municipal Noise Ordinance. The more ubiquitous noise sources, however, such as on-road traffic, aircraft, trains or ships, are pre-empted from local control. The City thus regulates the types of land uses exposed to given levels of noise strengths from such sources through its discretionary land use planning authority. Noise-sensitive uses are normally located in low noise environments, and less sensitive uses such as commercial, industrial or open space are placed into higher noise areas. Planning standards also restrict the introduction of major noise generators considered incompatible with existing or future patterns of land use. Except for incremental increases in noise conditions from development-related traffic, plan implementation would not likely generate any noise/land use incompatibility based upon the following considerations:

1. No substantial new categories of noise generators would be introduced by the proposed plan.

2. The plan would encourage intensified mixed uses that reflect current downtown development patterns which are considered "smart" growth.

3. Ambient noise levels are traditionally high in urban areas. They contribute to the excitement and vitality of the urban core. The expectation of quiet is considerably less in downtown areas that it is in residential suburbs or semi-rural areas. Application of the same noise/land use compatibility standards for all areas of the City may not be a true reflection of the noise expectation at any location.

Although the "traditional" exterior and interior noise standards have been applied to the planning area, levels in excess of these thresholds may not be as significant in the downtown area than if the same standards had been applied to less developed and/or less vibrant areas of the City.

## CONSTRUCTION ACTIVITY IMPACTS

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the specific types of equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases, dominated initially by demolition of existing structures and by large earth-moving equipment, then by the foundation and parking facility construction, and finally for finish construction. The demolition and earth-moving sources are the noisiest with equipment noise typically ranging from 75 to 90 dB at 50 feet from the source. Pile drivers, if needed, may have equipment noise levels in excess of 100 dB at 50 feet from the source.

Figure 3 shows the range of construction noise emissions from various pieces of construction equipment. Point sources of noise generation are attenuated by a factor of 6 dB per doubling of distance through geometrical (spherical) spreading of sound waves. The quieter construction noise sources will drop to a 65 dB exterior/45 dB interior level by about 200 feet from the source. For an uninterrupted line of sight, loudest sources may require over 1,000 feet from the source to reduce the 90+ dB source strength to an acceptable level. With multiple existing structures within the various development areas, interference with line-of-sight propagation will reduce the potential construction activity "noise envelope" in most instances to well below its theoretical maximum extent.

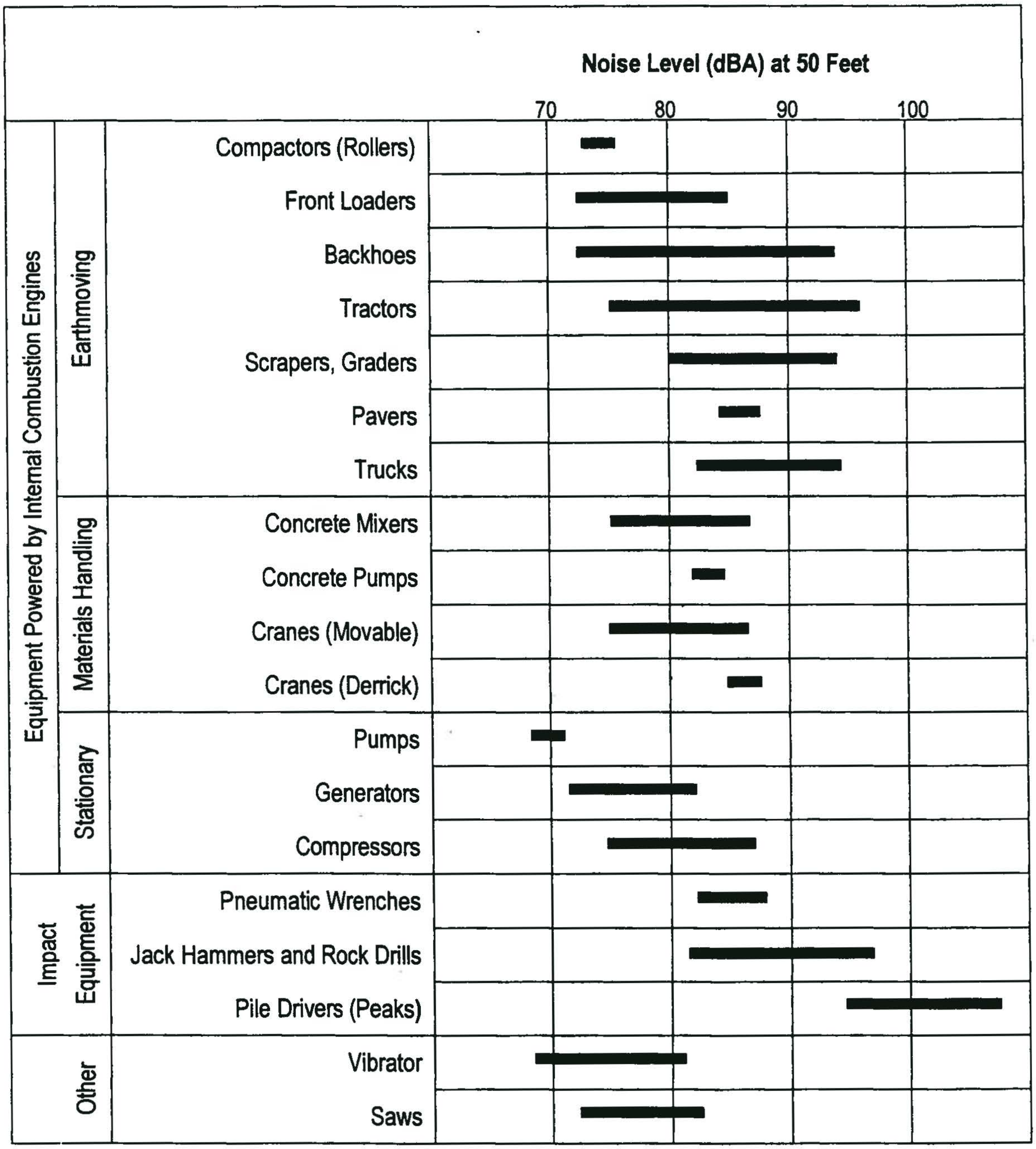
Construction noise sources are not strictly related to a community noise standard because they occur only during selected times and the source strength varies sharply with time. Construction activities are also treated separately in municipal noise ordinances because they do not represent a chronic, permanent noise source. To abate the potential nuisance from construction noise, especially in very close proximity to any adjacent noise-sensitive development, the City of San Diego Noise Ordinance (Municipal Code Ordinance 59.5.0404) and the County Noise Ordinance (Section 36.410) limit the hours of allowable construction activities and establish performance standards for construction noise at any residentially zoned property. Provisions of the City Ordinance are as follows:

**Section 59.5.0404 Construction Noise**

A. It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator.

Figure 3

# Typical Construction Equipment Noise Generation Levels




Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

B. Except as provided in Subsection C hereof, it shall be unlawful for any person, including the City of San Diego, to conduct any construction activities so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

C. The provisions of Subsection B of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

Monitoring experience at large construction projects has found that the mobile nature of heavy equipment and its variable duty cycle generally precludes any violations of the numerical 75 dB performance standard. Significant impacts, evidenced by any violation of Ordinance limits, would generally occur only if activities occur outside the allowable time window. Compliance with time limits will generally maintain a less-than-significant noise impact from construction activities.

Because the exact pattern of future land use within any development parcel within the next 25 years is not precisely known, source/receiver distances as a basis for determining significance potential is not known. If adverse impact potential clearly exists, developments are generally conditioned to provide noise protection to nearby noise-sensitive uses as a matter of City policy.

## TRAFFIC NOISE IMPACT ANALYSIS

### Freeway Noise

Freeway traffic noise is audible as a steady hum throughout much of the eastern and northern portions of the planning area. For sensitive residential, school/community college or health care facilities with a direct view of the freeway lanes, exterior noise levels can be well in excess of City of San Diego exterior standards. High exterior levels also place a constraint on meeting interior standards unless structures contain highly upgraded acoustical features such as dual-paned windows, air conditioning and dual-layer walls and ceilings. However, the closest development and grade separation between more distant receivers and the travel lanes reduces the freeway noise impact envelope to much less than its theoretical maximum. Noise measurements conducted near a variety of sensitive receivers where freeway noise was generally muted, but audible, showed that existing noise levels were approximately 10-15 dB lower than they would be under direct line-of-sight conditions.

The average existing distance of the 65 dB CNEL noise contour near I-5 is 400 feet from the freeway centerline when partial shielding from closer-in development is present. The contour distance will expand somewhat in response to future traffic growth. If, however, growth in freeway traffic volumes causes a further travel speed reduction, the two effects will off-set, and future noise levels will be very similar to existing conditions. As a worst-case, it was assumed that speeds will remain unchanged, and that future freeway traffic noise will be in direct proportion to 24-hour volumes. Because of the logarithmic relationship between volumes and decibels, however, future noise levels will not be substantially different even with anticipated growth seen as follows:

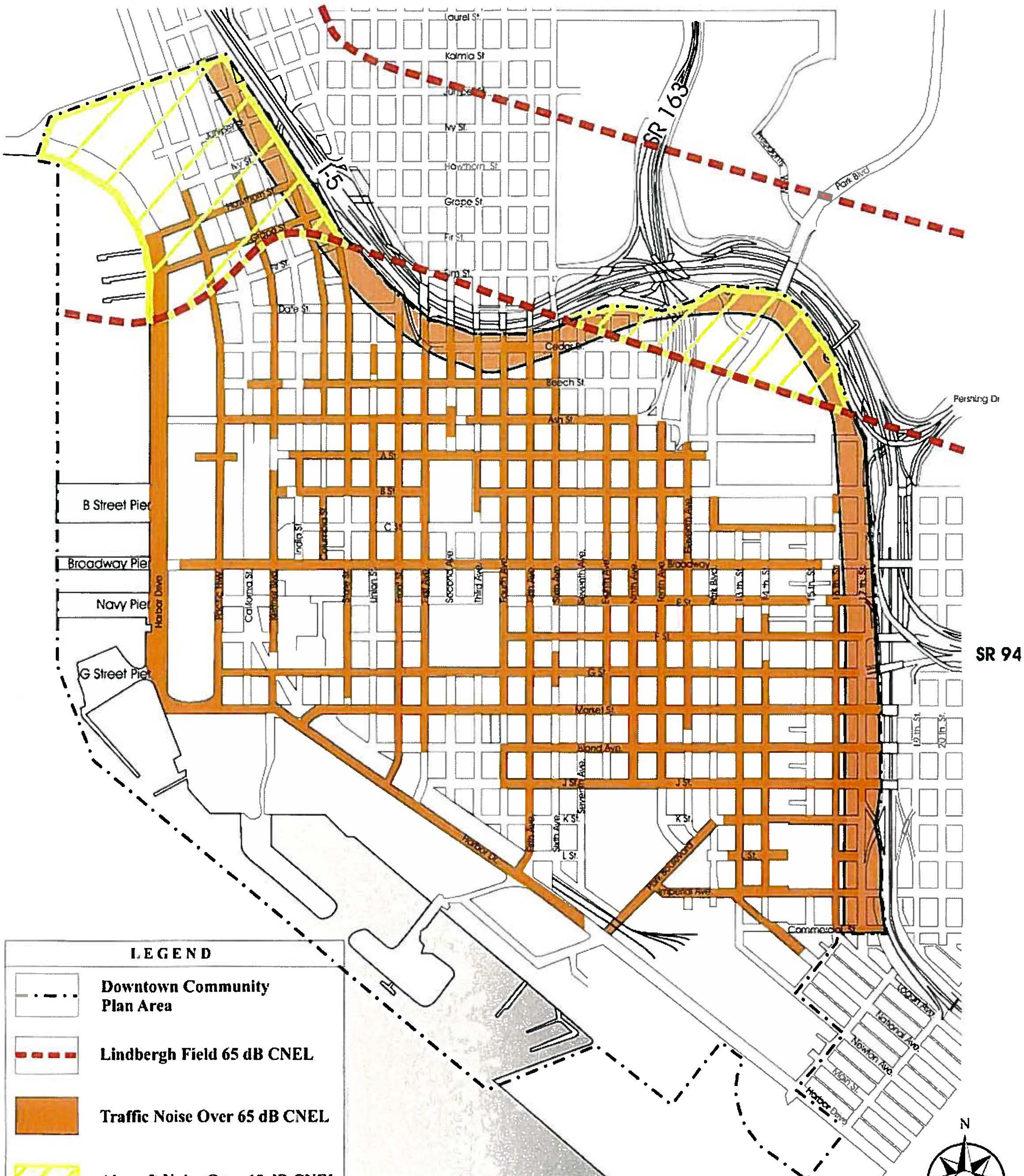
| | | |
|---|---|---|
| Existing ADT (SR-163-6$^{th}$ Ave) | = | 223,000 per day |
| Existing distance to 65 dB CNEL | = | 400 feet (with partial screening) |
| | | |
| Future ADT (same segment) | = | 291,000 per day |
| Noise traffic noise increase | = | + 1.16 dB CNEL |
| Future distance to 65 dB CNEL | = | 475 feet (with partial screening) |

Noise changes of less than +1.4 dB are imperceptible even under controlled acoustic laboratory situations. Changes of less than 3 dB under ambient conditions are generally not perceived by people as a substantial increase when the increase is spread out over time. Freeway noise will therefore sound almost identical some 25 years hence as it does today. The 65 dB CNEL contour may slightly expand (if capacity is increased to maintain current speeds under increased volumes), but not at an amount that is considered a significant change. The extent of the 65 dB CNEL freeway noise contour as a possible constraint for exterior uses at noise-sensitive developments is shown in Figure 4.

## Arterial Traffic Noise

Increases in daily traffic levels from existing average daily traffic (ADT) around the Downtown Community Plan/Centre City downtown area will range from a few thousand vehicles per day on less-traveled streets to almost 43,000 vehicles per day on Laurel Street, between Harbor and Pacific Highway. If traffic noise is forecast to increase by + 3dB (which requires a doubling of current traffic volumes), and if sensitive uses are exposed to future levels exceeding 65 dB CNEL at required outdoor space, a significant noise impact may occur. However, because patterns of land use will likely change in the next several decades (with a heavy emphasis on mixed uses), it is not possible to clearly establish a correlation between traffic noise changes and possibly impacted uses. One can, however, identify those roadway segments where a possible traffic noise constraint may exist that will require protection of usable outdoor space for sensitive uses, and enhanced structural measures to meet interior standards.

Roadway noise levels from development-area traffic were calculated using the Caltrans microcomputer version of the federal highway traffic noise model (FHWA-RD-77-108), consistent with Caltrans roadway noise assessment guidelines. The traffic noise impact analysis was based upon the traffic volumes for three scenarios (Existing, Development in Accordance with the current 1992 Community Plan [No Project], and Proposed Plan), and traffic data as shown in the project traffic study (Downtown Community Plan, EIR Transportation, Circulation and Access Study, Wilson & Company, March 2005). The traffic study analyzed 36 representative links where an ADT comparison was made for the various development scenarios. These analyzed links represent north-south and east-west screen-line locations that are representative of traffic in/out and back/forth through the Centre City area. They cover only a partial spectrum of downtown traffic. The traffic noise analysis based upon the traffic study is therefore a representative sampling of a much wider pattern of future traffic noise changes.




| LEGEND |
|---|
| Downtown Community Plan Area |
| Lindbergh Field 65 dB CNEL |
| Traffic Noise Over 65 dB CNEL |
| Aircraft Noise Over 65 dB CNEL |

*Note: The end of streets carrying low traffic volumes may experience high noise levels due to "spill over" noise generated by high volume cross streets.*

Not to Scale

*Source: Giroux and Associates, 6/2005, Lindbergh Field 2004 Noise Contours for Downtown Community Plan Area*

Noise Contours Map — Figure 4

A substantial worsening of the noise environment related to increases in traffic generated by future downtown development is presumed to exist if noise levels increase by +3.0 dB. The calculated traffic noise (dB CNEL) at a 50-foot reference distance from the roadway centerline is shown in Table 4. The maximum traffic noise increases along the 36 analyzed roadway segments are summarized in Table 5.

Significant noise increases (+3.0 dB CNEL or more) will occur along a number of Community Plan roadway segments. However, many of these increases would occur without the proposed development. Those segments that would experience significant traffic noise increases (dB CNEL) are shown in Table 6. Of the impacted streets, only India Street would not experience an significant noise increase under the 1992 Plan, but the difference between the 1992 Plan and the Proposed Plan is only +0.6 dB which is an undetectable difference.

One roadway segment (National Street) will experience an individually significant traffic noise increase (+4.4 dB CNEL), with implementation of the proposed Community Plan when compared to noise levels under the 1992 Plan. However, that same segment would experience a significant noise level increase under the 1992 Plan such that the project impact cumulative beyond what would be experienced under the 1992 Plan. The minimal noise difference in affected segments between build-out under the 1992 Plan versus the Proposed Plan suggests that traffic noise is a cumulative impact issue related to overall growth and not due to possible changes in development patterns. As previously noted, these noise impact findings along the traffic screen-line streets are considered representative of the much wider downtown traffic grid.

For a typical vehicle mix of autos and trucks, and for observed day/night driving patterns in San Diego, a daily traffic volume of 10,000 ADT traveling at 35 mph produces a weighted 24-hour noise level of 65 dB CNEL at 50 feet from the roadway centerline (FHWA-RD-77-108). In downtown "street canyons," sound reflection from buildings across the street increases noise levels, and somewhat lesser traffic volumes will create 65 dB CNEL at roadway edge sensitive receivers. The reflection component varies with any given location depending upon the building massing across the street. For average development conditions, around 7,000 ADT will pose a possible traffic noise constraint for noise sensitive uses. Because commercial uses are considered less noise sensitive, it requires around 20,000 ADT to generate a 70 dB CNEL noise level that might pose a noise constraint on such uses, particularly if the commercial activity included an outdoor component. Levels of 75 dB CNEL or more are considered a potential major impediment to mixed uses such as those proposed in the downtown planning area. Daily volumes of 60,000 ADT would likely create noise levels exceeding 75 dB at the roadway edge.

The following build-out ADTs will produce the following possible noise constraints for continued noise-sensitive Centre City development:

| | | |
|---|---|---|
| Up to 7,000 ADT | - | no constraint (<65 dB CNEL) |
| 7,000 - 20,000 ADT | - | minor mitigation (65 – 70 dB CNEL) |
| 20, - 60,000 ADT | - | moderate mitigation (70 – 75 dB CNEL) |

Table 4

**CNEL in dB at 50 feet from Centerline**

| Roadway: East-West Segments | Existing | 1992 Plan | Proposed Plan |
|---|---|---|---|
| **Laurel Street** (Harbor – Pacific Highway) | 70.1 | 73.9 | **72.6** |
| **Hawthorn Street** (Columbia – State Street) | 69.2 | 71.3 | **71.4** |
| **Grape Street** (Columbia – State Street) | 69.7 | 71.9 | **72.3** |
| **Ash Street** (6th Street – 7th Street) | 65.3 | 64.9 | 64.7 |
| **A Street** (6th Street – 7th Street) | 66.7 | 68.1 | 58.5 |
| **B Street** (6th Street – 7th Street) | 65.6 | 67.0 | 58.2 |
| **C Street** (15th Street – 16th Street) | 65.5 | 66.6 | 64.1 |
| **Broadway** (15th Street – 16th Street) | 64.4 | 62.5 | 64.1 |
| **E Street** (15th Street – 16th Street) | 62.1 | 63.7 | 63.2 |
| **F Street** (15th Street – 16th Street) | 67.5 | 69.8 | **70.2** |
| **G Street** (15th Street – 16th Street) | 67.5 | 69.8 | **70.4** |
| **Market Street** (15th Street – 16th Street) | 66.5 | 66.1 | **68.1** |
| **Island Avenue** (15th Street – 16th Street) | 59.7 | 66.4 | **67.7** |
| **J Street** (15th Street – 16th Street) | 59.9 | 65.8 | **66.1** |
| **K Street** (15th Street – 16th Street) | 56.7 | 63.6 | 61.0 |
| **Imperial Avenue** (15th Street – 16th Street) | 62.2 | 66.3 | **66.0** |
| **Commercial Avenue** (15th Street – 16th Street) | 55.4 | 59.9 | 62.3 |
| **National Avenue** (Commercial – 16th Street) | 59.6 | 63.3 | **67.7** |

**Bold face** = significant impact.

**Table 4**
**(continued)**
**CNEL in dB at 50 feet from Centerline**

| Roadway: North-South Segments | Existing | 1992 Plan | Proposed Plan |
|---|---|---|---|
| **North Harbor** (Cedar Street – Beech Street) | 62.0 | 70.3 | **70.7** |
| **Pacific Highway** (Cedar Street – Beech Street) | 66.1 | 69.9 | **71.5** |
| **Kettner Blvd.** (Cedar Street – Beech Street) | 63.4 | 65.0 | **66.5** |
| **India Street** (Cedar Street – Beech Street) | 61.5 | 64.0 | 64.6 |
| **State Street** (Cedar Street – Beech Street) | 61.7 | 64.8 | 64.6 |
| **First Avenue** (Cedar Street – Beech Street) | 68.7 | 69.5 | **70.0** |
| **Second Avenue** (Cedar Street – Beech Street) | 61.4 | 65.6 | 63.9 |
| **Third Avenue** (Cedar Street – Beech Street) | 59.5 | 61.2 | 62.3 |
| **Fourth Avenue** (Cedar Street – Beech Street) | 66.9 | 68.0 | **68.5** |
| **Fifth Avenue** (Cedar Street – Beech Street) | 66.4 | 67.6 | **69.1** |
| **Sixth Avenue** (Cedar Street – Beech Street) | 66.1 | 68.1 | **68.0** |
| **Seventh Avenue** (A Street – B Street) | 62.9 | 65.5 | 64.3 |
| **Eighth Avenue** (A Street – B Street) | 61.7 | 67.7 | **68.8** |
| **Ninth Avenue** (A Street – B Street) | 61.1 | 67.5 | **67.6** |
| **Tenth Avenue** (A Street – B Street) | 67.5 | 68.4 | **68.6** |
| **Eleventh Avenue** (A Street – B Street) | 66.7 | 66.3 | **68.0** |
| **Twelfth Avenue** (A Street – B Street) | 68.0 | 68.3 | **69.3** |
| **Sixteenth Avenue** (Broadway – E Street) | 65.4 | 66.9 | **67.3** |

## Traffic 5

### Traffic Noise Increases from Existing

| Roadway: | Noise Level Increase (Delta) (dB CNEL) | | |
|---|---|---|---|
| **East-West Segments** | **1992 Plan vs Existing** | **Proposed Plan vs 1992 Plan** | **Proposed Plan vs Existing** |
| **Laurel Street** (Harbor – Pacific Highway) | +3.8 | -1.3 | +2.5 |
| **Hawthorn Street** (Columbia – State Street) | +2.1 | +0.1 | +2.2 |
| **Grape Street** (Columbia – State Street) | +2.2 | +0.4 | +2.6 |
| **Ash Street** (6th Street – 7th Street) | -0.4 | -0.2 | -0.6 |
| **A Street** (6th Street – 7th Street) | +1.4 | -9.6 | -8.2 |
| **B Street** (6th Street – 7th Street) | +1.4 | -8.8 | -7.4 |
| **C Street** (15th Street – 16th Street) | +1.1 | -2.5 | -1.4 |
| **Broadway** (15th Street – 16th Street) | -1.9 | +1.6 | -0.3 |
| **E Street** (15th Street – 16th Street) | +1.6 | -0.5 | +1.1 |
| **F Street** (15th Street – 16th Street) | +2.3 | +0.4 | +2.7 |
| **G Street** (15th Street – 16th Street) | +2.3 | +0.6 | +2.9 |
| **Market Street** (15th Street – 16th Street) | -0.4 | +2.0 | +1.6 |
| **Island Avenue** (15th Street – 16th Street) | +6.7 | +1.3 | +8.0 |
| **J Street** (15th Street – 16th Street) | +5.9 | +0.3 | +6.2 |
| **K Street** (15th Street – 16th Street) | +6.9 | -2.6 | +4.3 |
| **Imperial Avenue** (15th Street – 16th Street) | +4.1 | -0.3 | +3.8 |
| **Commercial Avenue** (15th Street – 16th Street) | +4.5 | +2.4 | +6.9 |
| **National Avenue** (Commercial – 16th Street) | +3.7 | +4.4 | +8.1 |

**Traffic 5**
**(continued)**
**Traffic Noise Increases from Existing**

| **Roadway:** | **Noise Level Increase (Delta) (dB CNEL)** | | |
|---|---|---|---|
| **North-South Segments** | **1992 Plan vs Existing** | **Proposed Plan vs 1992 Plan** | **Proposed Plan vs Existing** |
| **North Harbor** (Cedar Street – Beech Street) | +8.3 | +0.4 | +8.7 |
| **Pacific Highway** (Cedar Street – Beech Street) | +3.8 | +1.6 | +5.4 |
| **Kettner Blvd.** (Cedar Street – Beech Street) | +1.6 | +1.5 | +3.1 |
| **India Street** (Cedar Street – Beech Street) | +2.5 | +0.6 | +3.1 |
| **State Street** (Cedar Street – Beech Street) | +3.1 | -0.2 | +2.9 |
| **First Avenue** (Cedar Street – Beech Street) | +0.8 | +0.5 | +1.3 |
| **Second Avenue** (Cedar Street – Beech Street) | +4.2 | -1.7 | +2.5 |
| **Third Avenue** (Cedar Street – Beech Street) | +1.7 | +1.1 | +2.8 |
| **Fourth Avenue** (Cedar Street – Beech Street) | +1.1 | +0.5 | +1.6 |
| **Fifth Avenue** (Cedar Street – Beech Street) | +1.2 | +1.5 | +2.7 |
| **Sixth Avenue** (Cedar Street – Beech Street) | +2.0 | -0.1 | +1.9 |
| **Seventh Avenue** (A Street – B Street) | +2.6 | -1.2 | +1.4 |
| **Eighth Avenue** (A Street – B Street) | +6.0 | +1.1 | +7.1 |
| **Ninth Avenue** (A Street – B Street) | +6.4 | +0.1 | +6.5 |
| **Tenth Avenue** (A Street – B Street) | +0.9 | +0.2 | +1.1 |
| **Eleventh Avenue** (A Street – B Street) | -0.4 | +1.7 | +1.3 |
| **Twelfth Avenue** (A Street – B Street) | +0.3 | +1.0 | +1.3 |
| **Sixteenth Avenue** (Broadway – E Street) | +1.5 | +0.4 | +1.9 |

**Table 6**

**Road Segments Experiencing Significant**

**Increases in Future Traffic Noise (dB CNEL)**

| Segment | Proposed Plan vs Existing | 1992 Plan vs. Existing | Proposed Plan Increment |
|---|---|---|---|
| **Island Avenue** (15th – 16th Street ) | +8.0 | +6.7 | +1.3 |
| **J Street** (15th – 16th Street) | +6.2 | +5.9 | +0.3 |
| **K Street** (15th – 16th Street) | +4.3 | +6.9 | -2.6 |
| **Commercial Street** (15th – 16th Street) | +6.9 | +4.5 | +2.4 |
| **National Street** (Commercial – 16th Street) | +8.1 | +3.7 | +4.4 |
| **North Harbor** (Cedar – Beech Street) | +8.7 | +8.3 | +0.4 |
| **Pacific Highway** (Cedar – Beech Street) | +5.4 | +3.8 | +1.6 |
| **Eighth Avenue** (A – B Street) | +7.1 | +6.0 | +1.1 |
| **Ninth Avenue** (A – B Street) | +6.5 | +6.4 | +0.1 |

The output from the traffic model for downtown build-out under the Proposed Plan for all downtown roadways was examined to determine which roadway segments would require the greatest level of noise mitigation for future uses with usable outdoor space facing grid street traffic. Similarly, exterior levels exceeding 70 dB CNEL require moderately upgraded acoustical protection for residential interiors in order to meet the City's 45 dB CNEL interior standard. The following streets are forecast to carry greater than 20,000 ADT, and thus may require moderately upgraded noise protection for such uses:

| East – West Streets | North-South Streets |
|---|---|
| "B" Street ( east half) | Harbor Drive |
| "A" Street | Pacific Avenue |
| Broadway | Front Street (north half) |
| "F" Street (east half) | 1st Avenue (north half) |
| "G" Street (east half) | $10^{th}$ Avenue (north half) |
| Market Street (west half) | $11^{th}$ Avenue (north half) |

Figure 4 shows the degree of traffic noise protection that will be appropriate for various Proposed Plan area roadways for noise-sensitive uses. Figure 4 similarly shows the freeway noise envelope that may constrain future noise-sensitive use closest to I-5.

## AIRCRAFT NOISE

Airport noise covers a broader geographic area, and is not amenable to effective mitigation. Downward radiating noise cannot be readily blocked while still maintaining any "natural" ambience in usable outdoor space. Residential or other noise-sensitive development near aircraft noise thus relies more heavily on meeting interior noise standards through upgraded noise insulation rather than on creating noise shielded outdoor environments. The airport noise contours for Lindbergh Field and for NAS North Island are being considered in the "San Diego County Airport Land Use Compatibility Plan Policy Document" (March, 2005 Draft). The NSA North Island 65 dB CNEL contour does not extend into downtown. The Lindbergh noise contours cover the northwest corner of the plan area. The contours are packed tightly across a small portion of the development site. Areas north of Grape Street are moderately noise impacted (>65 dB CNEL). Strong noise constraints are experienced in the area from Ivy to Laurel Streets, where noise-sensitive land uses are not advised. A very small section of the plan area near Laurel Street has aircraft noise exceeding 75 dB CNEL. Industrial or inactive uses such as parking structures or rental car storage are best suited for land where 75 dB CNEL or higher noise levels are experienced. It was assumed that the future airport noise contours would remain unchanged over time. Figure 4 shows the location of the 65 dB CNEL contour within the Community Plan area as a consideration for siting noise-sensitive land uses within the northwest corner of the plan area.

Although CNEL is the noise metric applied to land uses near airports, the noise character near an airport is more a series of loud single events rather than a 24-hour level. The Building Code is strongly focused on protecting interior noise exposures for residences and hotels near airports.

The airport noise trigger level for considering structural mitigation requirements for residential uses near airports is 60 dB CNEL that same as for roadway noise interior mitigation.

### RAILWAY NOISE

Train and trolley movements throughout the downtown area are relatively slow. Electric trolleys produce short-term noise levels of 75 dB during single events, but the hourly average trolley noise along any track alignments is well below 65 dB. Diesel train engines may produce short-term levels of 85 dB during maneuvering events, but again the duration of the noise is insufficient to create a measurable noise constraint except near the station where engines idle continuously during train turn-arounds.

The major noise issue near the BN&SF track is from train horns and crossing bells. The warning system must be loud enough to alert drivers in vehicles to remain clear of the track and that the gates will be coming down for at-grade crossings. That same safety measure becomes a noise nuisance for any residential uses, especially during normally quieter evening or nocturnal hours. Noise levels of up to 95 dB may occur from a train horn at a distance of 50 feet directly in front of the train. Under line of sight conditions, the noise could be audibly intrusive in residential interiors near the tracks as much as 1,000 feet away.

Use of horns is discretionary with the engineer. However, his/her first responsibility is for safe operation of the train. The tendency is therefore to err on the side of caution. Unless there are alternative programs in place to obviate the need for warning horns, they will likely be used. "Quiet zone" programs have been developed throughout the country, varying from one jurisdiction to another. Because rail service is national, a new federal law was enacted that unified the approach to the development of quiet zones. The use of horns is required at all public highway crossings unless alternative measures are implemented that are at least as equally effective in maintaining public safety as use of horns. The new federal law, published in the Federal Register on April 27, 2005, outlines all the possible safety measures that may be undertaken. The law specifies a safety rating for all supplementary safety measures (SSMs), modified SSMs and alternative safety measures (ASMs). The menu of selected measures is used to develop a Quiet Zone Risk Index (QZRI). If the risk index with use of these measures is lower than from use of horns, a quiet zone may be established. Quiet zones may be 24-hour per day programs, or special measures may be implemented only at certain times in creating partial quiet zones. Given the City of San Diego's historic interest in pursuing creation of quiet zones in areas of noise-sensitive uses, creation of such a zone in portions of the downtown area near the tracks is quite likely once capital and operating costs of SSMs or ASMs are identified and funding becomes available.

### SHIPPING NOISE

On-going cargo operations as the Tenth Avenue Marine Terminal generate noise from ship traffic, cargo handling equipment, and truck traffic. Except possibly for a ship horn, in-terminal activities are generally inaudible at off-site receivers because of distance and the intervening warehouse structures acting as sound barriers. Trucking activity, however, may create excessive noise at residential uses in Barrio Logan along the cargo terminal access route. For shipping activities, "time is money." There is therefore a rush to load on unload cargo to minimize the ship idle time. Much of the trucking activity may occur at night because roads are less congested and the cargo thus moves faster through the facility. A heavy truck is the noise equivalent of 30 cars at 35 mph, and each nocturnal truck movement counts as ten such events in calculating CNELs. One truck round trip at night in/out of the terminal generates an equivalent noise level as 600 daytime cars.

Most marine terminal trucks use Crosby Street for access. Structures along this street confine the vehicle noise within a limited corridor without expanding far into the community. The location of the noise generation on the fringe of the planning area and the restriction of the noise to the immediate vicinity of site access routes will generally not create a substantial impediment to area-wide development because of noise.

Noise measurements were made at the Port of Oakland during a ship off-loading as a representative activity occurring at the Tenth Avenue Marine Terminal. The activity entailed a crane stacking cargo containers on the dock, customs clearance, yard jitneys moving the containers and placing them on truck trailers, and truck movement in/out of the clock area. The measured noise level at 200 feet from the centroid of activity was 66 Leq. In the absence of any obstruction to line-of-sight propagation, the noise "footprint" of this activity, as representing marine terminals in general, is as follows:

| Noise Level | Distance | Land Use Standard |
|---|---|---|
| 75 dB | <200' | Manufacturing & Industrial |
| 70 dB | <200' | M-C Boundary (daytime) |
| 65 dB | 225' | M-R2 Boundary (daytime)<br>M-R3 Boundary (evening) |
| 62.5 dB | 270' | M-R1 Boundary (daytime)<br>M-R2 Boundary (evening)<br>M-R3 Boundary (night) |
| 60 dB | 400' | M-R1 Boundary (evening)<br>M-R2 Boundary (night) |
| 57.5 dB | 530' | M-R1 Boundary (night) |

Unloading of ships, warehousing and loading of trucks generally occurs farther than 530 feet from the nearest homes. Intervening buildings also decrease the extent of possible excess noise. Possible noise issues for marine terminal operations therefore derive primarily from truck traffic through off-site noise-sensitive uses, and not from terminal operations themselves.

## BALLPARK NOISE

The ballpark is a unique noise source that affects a several block radius through noise from ballgames and other venue uses. The duration of such events is much less than 24 hours such that the noise is considered more of a possible nuisance rather than a CNEL-based land use/noise compatibility issue. The ballpark noise signature, as determined from noise monitoring at a number of similar ballparks throughout the United States, is calculated to extend 2-3 blocks in each direction with a northward contour shift because of the park geometry and spectator seating. However, the hourly average noise level does not exceed 60 dB much beyond the physical ballpark boundary because most loud noise events tend to be brief.

The ballpark area contains few traditional single family homes with yards or patios where quiet is a normal expectation. Loft conversions, transient occupancies and mixed use developments are more oriented toward having acceptable indoor noise levels. Because the ballpark does not generate a measurable CNEL contour as a basis for defining noise attenuation requirements, any noise protection is focused more toward single event noise reduction rather than the 45 dB CNEL interior standard for transportation noise control. Because the level of attenuation is essentially the same whether for single events or long-term averages, any new noise-sensitive development near the ballpark (within 2-3 blocks) must incorporate the same structural features (dual-paned windows, supplemental ventilation, upgraded insulation, etc.) to reduce sleep disturbance potential from late inning spectator or ballpark operation noise.

## INDUSTRIAL NOISE

Noise conflicts in area of close proximity between residential and industrial uses can result both from on-site activities (manufacture or handling of goods), and from truck traffic in/out of a facility. The time of day may also affect perceived noise conflicts if industrial activities occur during normal "quiet" hours. Contrary to traffic noise which has a more predictable pattern of noise generation, propagation and decay, there are limited reference noise levels for industrial uses that are published in the technical literature. Noise levels from one facility to another can vary hundred-fold as a function of activity type, location, schedule, traffic, etc. There is no characteristic noise "signature" for the industrial-type activities allowed under the "Flexible Use" designation in the proposed Community Plan.

The City of San Diego regulates the levels of noise that may cross the boundary between any adjacent land uses through stated limits in the Municipal Code. The most stringent noise standards are applied to residences and other noise-sensitive land uses. However, at the boundary between dissimilar uses, the applicable noise standard is the numerical average between the standard applicable to each one individually. Any noise "down-zoning" of Community Plan land use to a less stringent standard could create a less stringent standard if the subject parcel abuts a sensitive use. Similarly, conversion of an industrial use such as warehousing to residential use could create a new noise standard for any other remaining non-converted industrial use. To guard against land use encroachment that may create impacts or noise constraints due to zoning or land use changes, a grandfathering of current standards can minimize such conflicts. This grandfathering of standards would apply as follows:

1. If some existing residential zoning is changed to mixed-use or other less sensitive uses, the interface standard with any other adjacent remaining residence will remain the original residential-to-residential standard. This would protect existing residential uses such as in Barrio Logan from any relaxation of standards that might be created by noise "down-zoning."

2. If existing non-residential uses are converted to residences, hotels, etc., the noise standard that existed at any adjacent use prior to conversion will remain. Residual non-residential uses will be required to meet any new ordinance levels created by the conversion. The proximity of noise-generating uses and their right to continue to be held to the less stringent pre-conversion standard should be noted on any real estate disclosures in rentals or sales.

Under both scenarios, the remaining land use will be prohibited from a change in compliance standards that could be created by land use changes. Existing residences would not be newly impacted, and existing industrial uses would not be newly constrained, if current noise standards were grandfathered into future development patterns.

## MITIGATION

Traffic changes from adoption of the proposed Downtown Community Plan would result in limited significant noise increases along City roadways. Of the nine roadway segments where significant changes in traffic noise are forecast to occur, there would be a significant increase (>3.0 dB CNEL) along eight of them under the 1992 Plan alternative. There is little indication of any measurable change in plan area traffic noise except in a cumulative sense. Although development implementation has little individual noise impact, many roadway segments will have exposures along their rights of way in excess of the City of San Diego guidelines for noise-sensitive land uses. The mitigation required to achieve a less-than-significant impact is as follows:

- Prior to approval of a Building Permit for any noise-sensitive use (excluding residential and hotel uses) within 475 feet of the centerline of Interstate 5 or adjacent to a roadway carrying more than 7,000 ADT, an acoustical analysis shall be performed to confirm that architectural or other design features are included which would assure that noise levels within habitable rooms would not exceed 45 dB(A).

- Prior to approval of a Development Permit for any residential development within 475 feet of the centerline of Interstate 5 or adjacent to a roadway carrying more than 7,000 ADT, an acoustical analysis shall be performed to determine if any required outdoor open space areas would be exposed to noise levels in excess of 65 dB(A) CNEL. As feasible, noise attenuation measures shall be identified which would maintain noise levels in required outdoor recreation areas to a level below 65 dB(A) CNEL. Recommended measures shall be incorporated into building plans before approval of a Building Permit.

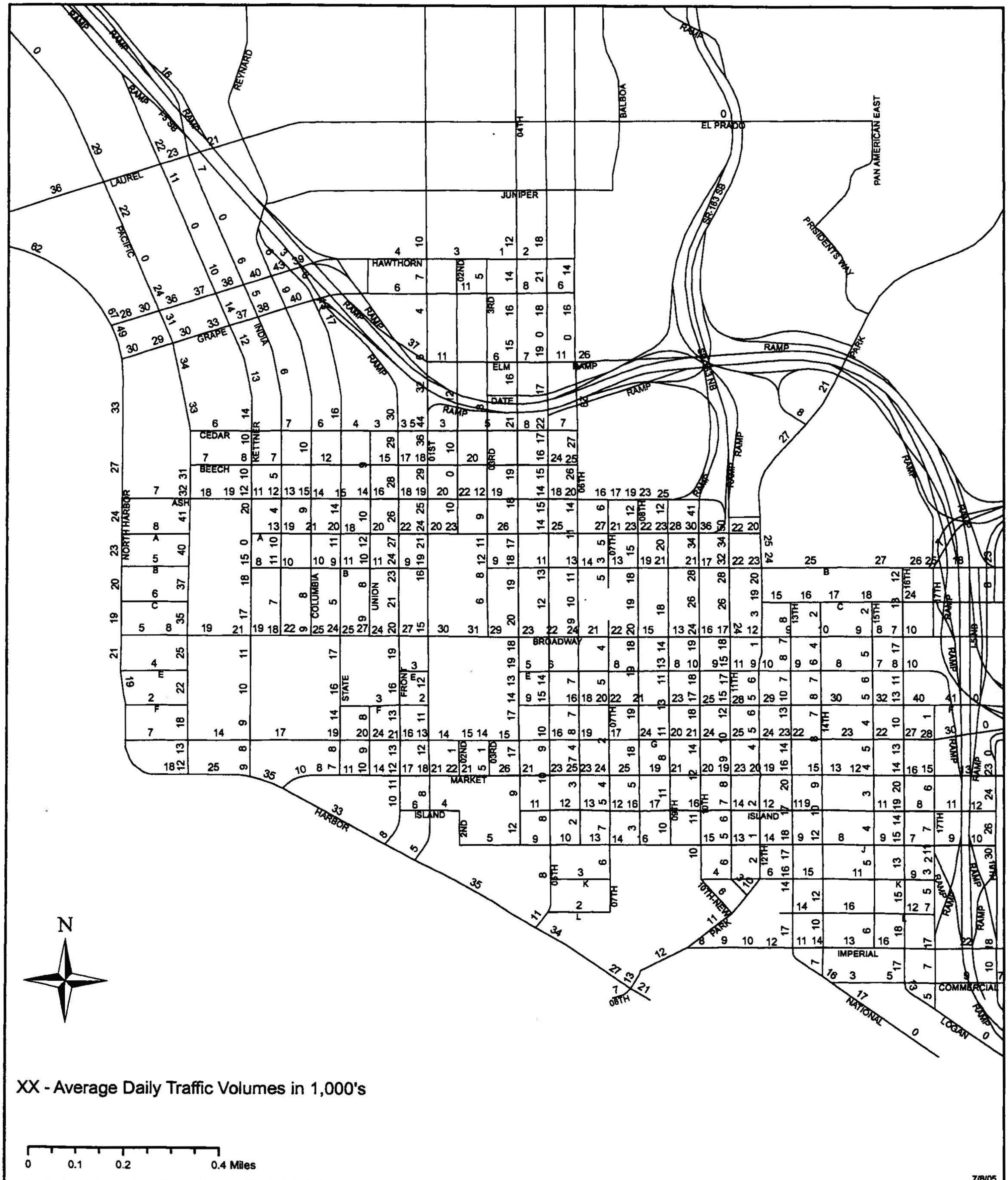
- Prior to approval of a Development Permit for any public park or plaza within 475 feet of the centerline of Interstate 5 or adjacent to a roadway carrying more than 7,000 ADT, an acoustical analysis shall be performed to determine if any recreation areas would be exposed to noise levels in excess of 65 dB(A) CNEL. As feasible, noise attenuation measures shall be identified which would maintain noise levels in recreation areas to a level below 65 dB(A) CNEL. Recommended measures shall be incorporated into building plans before approval of a Building Permit.

- Short-term construction noise intrusion will be limited by conditions on building permits in compliance with City ordinances to limit activities to hours with least noise sensitivity. These same permits should specify access routing to minimize construction truck traffic past existing residential or other noise sensitive uses.

- Residual industrial activities shall be regulated by City noise ordinances. With changing patterns of land use, most "heavy" industrial use will likely relocate outside the Plan area.

- The far northwest corner of the plan area is considered aircraft noise-impacted. Proposed development bounded by Grape Street and Laurel Streets shall be additionally evaluated for airport noise mitigation. Proposed land use plans within this area shall place the least noise- sensitive uses closest to Laurel Street as the area of highest airport noise impact within the planning area. Noise sensitive uses within the area of airport noise exceeding 65 dB CNEL shall employ structural noise protection to achieve a 45 dB CNEL interior, and shall grant the airport operator an avigation easement that agrees to accept the noise exposure as a condition for development. All future permanent occupants within any area within the 65 dB CNEL contour shall be notified and acknowledge the existence of airport noise in any real estate transactions or lease of living quarters.

# Appendix A




Source: SANDAG Regional Transportation Model June 2005

Average Daily Traffic Volumes Utilized for Noise Analysis

# AIR QUALITY ANALYSIS

# APPENDIX 2.7

**Giroux & Associates**
**Environmental Consultants**

# AIR QUALITY ANALYSIS

# DOWNTOWN COMMUNITY PLAN

# CITY OF SAN DIEGO, CALIFORNIA

Prepared for:

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Date:

June 17, 2005

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## INTRODUCTION

The Downtown Community Plan would centralize land uses in downtown San Diego. The plan would increase residential land use and commercial activities in promoting downtown as the single regional center for employment, commerce and residential development. The proposed site of the Downtown Community Plan encompasses the downtown area of San Diego historically referred to as "Centre City." The downtown core is already intensely developed. Plan implementation would widen the area of higher density use. Plan activities would involve demolition, construction, razing and redeveloping the sites with multi-story structures, and operation of mixed-use developments.

The Downtown Community Plan site is approximately 1,445 acres in size, and the area is bounded by the Interstate 5 freeway to the north and east, and the San Diego Bay shoreline to the west and south. Lindbergh Field (San Diego International Airport) is situated at the northwest corner of the downtown area, adjacent to the proposed Downtown Community Plan, but it is not a part of the plan. The current land uses, Year 2030 No Project land uses, and the proposed 2030 Community Plan land uses are as follows:

| Build-Out Area | 2005 Existing | 2030 (1992 Plan) Build-Out | 2030 Proposed Plan Build-Out |
|---|---|---|---|
| Population | 27,500 | 48,000 | 88,900 |
| Employment | 74,500 | 117,000 | 164,900 |
| Residential (units) | 14,600 | 30,700 | 53,000 |
| Office (s.f.) | 13,144,000 | 20,700,000 | 29,157,000 |
| Retail (s.f.) | 2,658,000 | 4,300,000 | 5,801,000 |
| Hotel Rooms | 8,800 | 15,600 | 20,200 |

Potential air quality impacts associated with implementation of the Downtown Community Plan would occur from both the construction (short-term) and the operational (long-term) phases of individual developments. This report identifies the existing ambient air quality levels and evaluates the impact of future emissions associated with development within the proposed Community Plan area upon the baseline. It also compares the 1992 Community Plan (No Project) alternative to the proposed Community Plan to determine if plan implementation will substantially change air pollution emissions compared to build-out according to the current plan.

Because air pollution is not constrained by geographical borders, the relationship between growth and air quality is primarily regional. Transferring growth from far suburbs to an urban core may be air quality beneficial by reducing trip lengths or by shifting travel from low passenger individual automobiles to alternative modes of transportation. Quantification of such effects is difficult without complex computer models that can combine any change in regional emissions patterns with meteorology and atmospheric chemistry to predict future patterns of air quality. Qualitatively, however, "smart growth" that mixes residential, commercial and employment uses in higher density nodes with available multiple transportation modes is considered an extremely positive air quality strategy.

## CLIMATE

The climate of San Diego is characterized by a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes and little temperature change throughout the year. The average daily maximum in summer in downtown San Diego is in the upper 70s with an average daily maximum of 65 degrees F in winter. The thermostat action of the nearby oceanic reservoir keeps the daily oscillation of temperature close to 15 degrees. Summer nights in the downtown area are around 65 degrees F, while early winter mornings drop to the upper 40s.

Limited rainfall occurs in winter while summers are often completely dry. An average of 10 inches of rain falls each year from mid-November to early April. Year to year variations in rainfall amounts are the rule rather than the exception. Rainfall amounts of one-half or twice the annual average are not uncommon. Measurable rain typically falls on 20 days per year with only 6 days of moderate (0.5" in 24 hours) rainfall annually.

Unfortunately, the same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted by the climate. The onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego, and the sinking air within the offshore high pressure system forms a massive temperature inversion that traps all air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, cause a number of reactive pollutants to undergo photochemical reactions and form smog that degrades visibility and irritates tear ducts and nasal membranes. High smog levels in coastal communities occasionally occur when polluted air from the South Coast (Los Angeles) Air Basin drifts seaward and southward at night, and then blows onshore the next day. Such weather patterns are particularly frustrating because no matter what San Diego County does to achieve clean air, such inter-basin transport will cause occasionally unhealthy air over much of the County despite its best air pollution control efforts.

## METEOROLOGICAL SETTING

Local meteorological conditions in downtown San Diego typically conform well to the regional pattern of strong onshore winds by day, especially in summer, and weak offshore winds at night, especially in winter. These local wind patterns are driven by the temperature difference between the normally cool ocean and the warm interior. In summer, moderate breezes of 8 to 12 mph blow onshore by day, and may continue all night as a light onshore breeze because the land remains warmer than the ocean. In winter, the onshore flow is weaker, and reverses in the evening as the land becomes cooler than the ocean.

While winds affect the horizontal extent of pollution dispersion, the onshore flow by day and the nocturnal land breeze are both accompanied by characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The strong onshore flow undercuts a huge layer of warm sinking air within the pacific high pressure cell. The interface between the cool layer near the ground and the warm layer aloft is a boundary where the normal decrease of temperature with height is reversed (an inversion). It acts like a giant lid over the coastal airshed where pollutants are continually added from below, but without any vertical dilution because of the impermeability of the inversion boundary. When the polluted layer moves inland where the surface topography rises, the inversion remains at about the same height. The same amount of pollution can be thought of as being squeezed into a progressively shallower layer with correspondingly higher and higher concentrations.

In winter at night, the air near the ground cools by contact with the radiating ground surface while the air aloft remains warm. The radiation inversions thus formed are very shallow and occur in conjunction with nearly calm winds. The shallow vertical barrier and light horizontal transport lead to a marked stagnation of emissions from localized sources such as freeways, large parking lots, and major intersections. Such micro-scale "hot spots" associated with these cool-season radiation inversions are, however, less pervasive, less severe, and more amenable to mitigation than the regional photochemical air pollution that occurs in conjunction with the regional, warm-season marine/subsidence inversions. With continued improvement in vehicular emissions faster that the rate of growth of automobiles, “hot spots” have almost ceased to exist even in the downtown waterfront area of San Diego.

# AIR QUALITY

## Ambient Air Quality Standards (AAQS)

In order to gauge the significance of the air quality impacts of the proposed Centre City Community Plan development, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Recent research has shown, however, that chronic exposure to ozone at levels which just marginally meet clean air standards may nevertheless have adverse health effects. Simply meeting standards may therefore not be sufficient to protect public health unless an additional margin of safety is created.

National AAQS were established in 1971 for six pollution species. States have the option to add other pollutants, require more stringent compliance, or to include different exposure periods. Because California had established state AAQS before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The entries in Table 1 include the most recently (1997) adopted federal standards for chronic (8-hour) ozone exposure or for ultra-small diameter particulate matter of 2.5 microns or less in diameter (called "PM-2.5"). Implementation of these standards had been put on hold through an order issued by the U.S. Circuit Court of Appeals. That stay was appealed to the U.S. Supreme Court. In a unanimous decision, the Supreme Court ruled in February 2001, that the U.S. Environmental Protection Agency (EPA) did indeed have the proper authority to adopt national clean air standards, and that a cost-benefit analysis need not accompany such new rules. However, the Court ruled that attainment schedules for new standards were inconsistent, and that new schedules must be prepared. EPA signed a consent decree in November 2002, to revise the attainment designation for a variety of air basins that meet the 1-hour federal ozone standard, but exceed the "new" (1997) 8-hour standard. The frequency of violations of the 1-hour ozone standard is close to zero in San Diego County. EPA has redesignated the SDAB as "attainment" for the 1-hour federal standard. However, the 8-hour ozone standard is still frequently violated at the APCD Alpine monitoring station. The EPA action with regard to the 8-hour standard non-attainment designation will have a minor effect on air quality attainment planning in the region. Whereas planning for the hourly standard will focus on maintenance, the regional non-attainment plan will shift its focus to ultimately also meeting the 8-hour standard.

Analysis of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted on June 20, 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard. The state standard became enforceable in 2003 when it was incorporated into the California Health and Safety Code.

# Table 1
# Ambient Air Quality Standards

| Pollutant | Averaging Time | California Standards | | Federal Standards | | |
|---|---|---|---|---|---|---|
| | | Concentration | Method | Primary | Secondary | Method |
| Ozone ($O_3$) | 1 Hour | 0.09 ppm (180 μg/m³) | Ultraviolet Photometry | 0.12 ppm (235 μg/m³) | Same as Primary Standard | Ultraviolet Photometry |
| | 8 Hour | 0.07 ppm (140 μg/m³) | | 0.08 ppm (157 μg/m³) | | |
| Respirable Particulate Matter ($PM_{10}$) | 24 Hour | 50 μg/m³ | Gravimetric or Beta Attenuation | 150 μg/m³ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 20 μg/m³ | | 50 μg/m³ | | |
| Fine Particulate Matter ($PM_{2.5}$) | 24 Hour | No Separate State Standard | | 65 μg/m³ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 12 μg/m³ | Gravimetric or Beta Attenuation | 15 μg/m³ | | |
| Carbon Monoxide (CO) | 8 Hour | 9.0 ppm (10 mg/m³) | Non-Dispersive Infrared Photometry (NDIR) | 9 ppm (10 mg/m³) | None | Non-Dispersive Infrared Photometry (NDIR) |
| | 1 Hour | 20 ppm (23 mg/m³) | | 35 ppm (40 mg/m³) | | |
| | 8 Hour (Lake Tahoe) | 6 ppm (7 mg/m³) | | – | – | – |
| Nitrogen Dioxide ($NO_2$) | Annual Arithmetic Mean | – | Gas Phase Chemiluminescence | 0.053 ppm (100 μg/m³) | Same as Primary Standard | Gas Phase Chemiluminescence |
| | 1 Hour | 0.25 ppm (470 μg/m³) | | – | | |
| Lead | 30-Day average | 1.5 μg/m³ | Atomic Absorption | – | – | – |
| | Calendar Quarter | – | | 1.5 μg/m³ | Same as Primary Standard | High Volume Sampler and Atomic Absorption |
| Sulfur Dioxide ($SO_2$) | Annual Arithmetic Mean | – | Ultraviolet Fluorescence | 0.030 ppm (80 μg/m³) | – | Spectrophotometry (Pararosaniline Method) |
| | 24 Hour | 0.04 ppm (105 μg/m³) | | 0.14 ppm (365 μg/m³) | – | |
| | 3 Hour | – | | – | 0.5 ppm (1,300 μg/m³) | |
| | 1 Hour | 0.25 ppm (655 μg/m³) | | – | – | |
| Visibility Reducing Particles | 8 Hour | Extinction coefficient of 0.23 per kilometer–visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape. | | No Federal Standards | | |
| Sulfates | 24 Hour | 25 μg/m³ | Ion Chromatography | | | |
| Hydrogen Sulfide | 1 Hour | 0.03 ppm (42 μg/m³) | Ultraviolet Fluorescence | | | |
| Vinyl Chloride | 24 Hour | 0.01 ppm (26 μg/m³) | Gas Chromatography | | | |

## Table 2

## Health Effects of Major Criteria Pollutants

| Pollutants | Sources | Primary Effects |
|---|---|---|
| Carbon Monoxide ($CO$) | • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust.<br>• Natural events, such as decomposition of organic matter. | • Reduced tolerance for exercise.<br>• Impairment of mental function.<br>• Impairment of fetal development.<br>• Death at high levels of exposure.<br>• Aggravation of some heart diseases (angina). |
| Nitrogen Dioxide ($NO_2$) | • Motor vehicle exhaust.<br>• High temperature stationary combustion.<br>• Atmospheric reactions. | • Aggravation of respiratory illness.<br>• Reduced visibility.<br>• Reduced plant growth.<br>• Formation of acid rain. |
| Ozone ($O_3$) | • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. | • Aggravation of respiratory and cardiovascular diseases.<br>• Irritation of eyes.<br>• Impairment of cardiopulmonary function.<br>• Plant leaf injury. |
| Lead (Pb) | • Contaminated soil. | • Impairment of blood function and nerve construction.<br>• Behavioral and hearing problems in children. |
| Fine Particulate Matter (PM-10) | • Stationary combustion of solid fuels.<br>• Construction activities.<br>• Industrial processes.<br>• Atmospheric chemical reactions. | • Reduced lung function.<br>• Aggravation of the effects of gaseous pollutants.<br>• Aggravation of respiratory and cardio respiratory diseases.<br>• Increased cough and chest discomfort.<br>• Soiling.<br>• Reduced visibility. |
| Fine Particulate Matter (PM-2.5) | • Fuel combustion in motor vehicles, equipment, and industrial sources.<br>• Residential and agricultural burning.<br>• Industrial processes.<br>• Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics. | • Increases respiratory disease.<br>• Lung damage.<br>• Cancer and premature death.<br>• Reduces visibility and results in surface soiling. |
| Sulfur Dioxide ($SO_2$) | • Combustion of sulfur-containing fossil fuels.<br>• Smelting of sulfur-bearing metal ores.<br>• Industrial processes. | • Aggravation of respiratory diseases (asthma, emphysema).<br>• Reduced lung function.<br>• Irritation of eyes.<br>• Reduced visibility.<br>• Plant injury.<br>• Deterioration of metals, textiles, leather, finishes, coatings, etc. |

Source: California Air Resources Board, 2002.

Because of the strong evidence that chronic ozone exposure is more harmful than short-term hourly levels, the ARB has proposed adoption of a new ozone standard. The new standard would mirror the federal longer-term (8 hour) exposure limit. Adoption of the new state standard is anticipated for 2005 with implementation beginning in 2006.

## Baseline Air Quality

Development area air quality can be best characterized from ambient measurements made by the San Diego County Air Pollution Control District (APCD), the agency responsible for air quality planning, monitoring and enforcement in the San Diego Air Basin (SDAB). The APCD air quality monitoring station located on 12$^{th}$ Street in downtown San Diego is the closest station to the development area that monitors the full spectrum of air quality. Table 3 summarizes the last six years of monitoring data from the downtown station. Healthful air quality is seen in almost every pollution category. No national air quality standards were exceeded during the last six years (one violation per year is allowed under federal guidelines). The more stringent State standards for ozone and the State standard for respirable particulates (PM-10) were infrequently exceeded. Levels of carbon monoxide or nitrogen oxides, which are more indicative of local source/receptor relationships, are seen in Table 3 to be very low at this downtown monitoring station.

With only two violations of the federal 1-hour ozone standard in five years from 1999-2003 in the region, SDAPCD initiated a request for re-designation of the basin as "attainment" for the 1-hour standard that request was granted in 2003. The 8-hour ozone standard is, however, still exceeded frequently at the Alpine air monitoring station. The basin was designated as "non-attainment" for the 8-hour federal standard. However, no major change in the attainment planning process is anticipated. The attainment plan will continue to contain emissions reduction programs to achieve the 8-hour standard now that the 1-hour standard has been met.

## Sources of Pollution

Nitrogen oxides (NOx) and reactive organic gases (ROG) are the two precursors to photochemical smog formation. In San Diego County, over 50 percent of the 205 tons per day of ROG emitted comes from mobile (cars, ships, planes, heavy equipment, etc.) sources. For NOx, 90 percent of the 221 tons emitted daily are from mobile sources (California ARB, 2003). Computer modeling of smog formation has shown that attainment of the federal ozone standard is possible at these emission levels on days when there is no substantial transport of pollution from the South Coast Air Basin or other airshed. As noted above, the federal one-hour ozone standard has been met at all basin-wide air monitoring stations since 1999.

## Table 3

### Downtown San Diego Air Quality Monitoring Summary
**(Number of Days Standards Were Exceeded and Maximum Levels during Such Violations)**

| Pollutant/Standard | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|
| **Ozone ($O_3$)** | | | | | | |
| 1-hour > 0.09 ppm | 1 | 0 | 1 | 1 | 0 | 0 |
| 1-hour > 0.12 ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| 8- Hour > 0.08 ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| Max 1-hour Conc. (ppm) | 0.10 | 0.09 | 0.12 | 0.10 | 0.09 | 0.08 |
| **Carbon Monoxide (CO)** | | | | | | |
| 1-hour > 20. ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| 8- Hour > 9. ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| Max 1-hour Conc. (ppm) | 8 | 7 | 7 | 7 | 5 | 5 |
| Max 8-hour Conc. (ppm) | 4.8 | 4.6 | 4.6 | 4.8 | 3.5 | 3.9 |
| **Nitrogen Dioxide ($NO_2$)** | | | | | | |
| 1-hour > 0.25 ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| Max 1-hour Conc. (ppm) | 0.09 | 0.12 | 0.12 | 0.10 | 0.10 | 0.11 |
| **Sulfur Dioxide ($SO_2$)** | | | | | | |
| 1-hour > 0.25 ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| 24-hour > 0.045 ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| Max. 1-Hr. Conc. (ppm) | 0.04 | 0.04 | 0.04 | 0.05 | 0.03 | 0.04 |
| Max. 24-Hr. Conc. (ppm) | 0.011 | 0.008 | 0.010 | 0.012 | 0.007 | 0.008 |
| **Inhalable Particulates (PM-10)** | | | | | | |
| 24-hour > 50 $\mu g/m^3$ | 0/56 | 4/59 | 6/60 | 5/60 | 7/60 | 11/60 |
| 24-hour > 150 $\mu g/m^3$ | 0/56 | 0/59 | 0/60 | 0/60 | 0/60 | 0/60 |
| Max. 24-Hr. Conc. ($\mu g/m^3$) | 48 | 69 | 65 | 66 | 85 | 139* |
| **Ultra-Fine Particulates (PM-2.5)** | | | | | | |
| 24-hour > 65 $\mu g/m^3$ | - | 0/289 | 1/273 | 0/317 | 0/352 | 2/312 |
| Max. 24-Hr. Conc. ($\mu g/m^3$) | - | 46.9 | 66.3 | 54.1 | 46.9 | 170.1* |

- = No data until 1999.
X=Final 2003 data not yet released.
*During the County wildfires (October 26-27, 2003)

## Air Quality Management Planning

Historical violations of national AAQS in the SDAB, particularly those for ozone in inland foothill areas, required that a plan be developed outlining the pollution controls that were to be undertaken to improve air quality. In San Diego County, the attainment planning process is embodied in a regional air quality management plan developed jointly by the APCD and San Diego Association of Governments (SANDAG). Several plans had been adopted in the late 1970s and early 1980s under the title "Regional Air Quality Strategies" (RAQS).

The California Clean Air Act (AB-2595) mandated that a state clean air plan be developed to address meeting state standards as well as the often less stringent federal criteria. A basin plan was therefore developed and adopted in 1991 that predicted attainment of all national standards by the end of 1997. As noted above, this forecast was slightly optimistic, but not far afield from the observed attainment date beginning in 1999. Attainment planning required by AB-2595 continues to use the RAQS acronym.

A plan to meet the federal 1-hour standard for ozone was developed in 1994 through an update of the 1991 State Plan. This local plan was combined with those from all other California non-attainment areas with serious (or worse) ozone problems to create the California State Implementation Plan (SIP). The SIP was adopted by the Air Resources Board (ARB) in 1994, and forwarded to the U.S. EPA for their approval. After considerable analysis and debate, particularly regarding air-sheds with the worst smog problems, EPA finally approved the SIP in mid-1996.

In current air quality plans, all progress towards attainment, including offsetting the effects of growth, is expected to derive from existing local, state and federal rules and regulations. Controversial rules previously evaluated that were judged by some people to be overly intrusive into personal lifestyles (mandatory trip reduction programs or minimum average vehicle occupancy goals) are not needed to reach attainment. Any violations of federal ozone standards in the Year 2000 or beyond are forecast to occur only on days when transport from the Los Angeles Basin creates substantially elevated baseline levels upon which any local basin impacts would be superimposed.

Attainment of federal clean air standards is presumed to occur if the standard is exceeded on an average of no more than once per year over a three-year period. The criterion was met at all air basin monitoring stations for the federal ozone standard in 1999-2002. A re-designation request as "attainment" for the one-hour ozone standard was approved by EPA in 2003. The basin officially was re-designated on July 28, 2003. The attainment plan in the SIP was re-designated as a "maintenance plan," but the re-designation itself has little effect on continued air quality improvement efforts. The designation of the air basin as "non-attainment" for the federal 8-hour ozone standard will require a SIP revision to outline the attainment strategy for meeting the 8-hour standard. The elements of the one-hour ozone maintenance plan will be transferred to create the SIP for the 8-hour standard.

The proposed Downtown Community Plan relates to the RAQS/SIP process through the land use and growth assumptions that are incorporated into the air quality-planning process. If a proposed development is consistent with the City of San Diego General Plan, then the development presumably has been anticipated within the regional air quality plan. The Strategic Framework Element (SFE) is the conceptual framework and foundation for the City General Plan update that is currently in progress. The SFE represents the City's approach for shaping future growth. The essence of the SFE is the "City of Villages" concept, and it designates the downtown area as the single regional center for employment, commerce, and residential development. The proposed Community Plan enhances Centre City/downtown's role as a regional center, pursuant to the SFE. The Downtown Community Plan development will include residential/transit/office/retail and recreational uses in the Centre City/downtown area, thereby reducing single-occupancy vehicle miles traveled. The Plan has been adopted by the City Council and it is consistent with the City General Plan. Implementation of the proposed development would not cause unanticipated air emissions not already predicted in current SANDAG growth projections.

The current RAQS and the ozone maintenance plan are based upon growth and associated emissions patterns derived from the 1992 Plan. The proposed Community Plan anticipates an intensification of uses within Centre City. However, that intensification is anticipated to only represent a shift in regional growth patterns by transferring a limited increment of future growth from distant suburbs to the urban core. Such a shift is considered regionally air quality positive by promoting shorter trip lengths, access to alternative modes of transportation, and smaller, more efficient dwelling units. The proposed Community Plan, if approved, will be incorporated into the next air quality planning update cycle for the RAQS and SIP to restore internal consistency and to capture the air quality efficiencies associated with recommended downtown development patterns.

# AIR QUALITY IMPACT

## Sources of Impact

The proposed Community Plan implementation may generate air pollutant emissions that may impact local and regional air quality. These emissions derive mainly from mobile sources associated with individual development-related transportation. The mobile nature of these emissions is such that no single receptor site is significantly impacted. Rather, the emissions associated with downtown development will mix with those from numerous similar developments throughout the San Diego Air Basin. While the incremental impact from any single development is very small, the cumulative impact from all such developments, in conjunction with the sometimes limited regional dispersion meteorology and abundant sunlight to drive the smog formation process, ultimately leads to the region's inability to meet photochemical pollution clean air standards.

Secondary concerns surrounding future development pursuant to the proposed plan include dust generated from demolition activities, site clearing, grading, excavating, and travel on unpaved roadways; combustion emissions from heavy duty construction equipment; increased power plant emissions from SDG&E plants providing electricity; on-site combustion emissions from natural gas and other fuels; and from a number of small population activity-related emissions sources. These sources are either temporary, or are much smaller in magnitude than the automotive combustion sources.

## Standards of Significance

CEQA guidelines define a potentially significant air quality environmental impact as one which could:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including release of emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; or
- Release air contaminants beyond the boundaries of the premises upon which the use emitting the contaminants is located.

CEQA guidelines also identify various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Hazardous air contaminants, such as asbestos and lead-based paint, could be contained in the older structures that may be demolished during renovation activities. Any demolition or renovation requires a pre-construction hazards assessment. If such materials are present, particularly asbestos, a number of strictly regulated remediation procedures would be implemented. Such mandatory measures are required to protect both remediation workers and the general public. Remediation impacts are therefore less-than-significant through required compliance with existing hazards control regulations.

For developments that create mainly automobile traffic whose emissions require complex photochemical reactions to reach their most harmful stage, there is no way to measure the impact to establish a "measurable contribution." Various air pollution control/ management agencies have developed guidelines using total project emissions as a surrogate for determining regional impact potential. If development area traffic is already congested, or will become congested due to the proposed development, a micro-scale "hot spot" may be created. Emissions of carbon monoxide (CO) are thus potentially critical around traffic congestion nodes. In all areas of San Diego, the project's contribution to regional smog formation is important. Reactive organic gases (ROG) and nitrogen oxides (NOx) as smog precursors are important in a regional sense. Of these two pollutants, City of San Diego CEQA implementation guidelines focus on ROG as the indicator for any potentially adverse regional air quality impacts.

The City of San Diego recently adopted (June 2003) significance threshold levels for air pollutants are as follows:

| | **Potentially Significant Emissions (lb/day)** | | | | |
|---|---|---|---|---|---|
| | **CO** | **ROG** | **NOx** | **SOx** | **PM-10** |
| City of San Diego Screening Guidelines | 550 | 55 | 250 | 250 | 100 |

Impact significance in the City's guidelines focuses on development operational activity impacts. However, PM-10 emissions from construction activities are specifically referenced as a source of potential impact. Temporary construction equipment exhaust emissions are not identified in City CEQA guidelines as emissions sources that need to be analyzed relative to the same standards. However, because such activities may contribute ozone-forming pollutants in an ozone non-attainment air basin, the above significance screening criteria were applied to construction equipment exhaust emissions as well.

If these threshold levels are exceeded, it may be possible to apply a more rigorous significance test that translates these emissions into ambient air quality. However, because most emissions require additional chemical transformation to achieve their most unhealthful form, it is generally not possible to isolate the small incremental impact from any one project within the entire basin-wide air quality pattern. Except for CO, which is emitted in its already unhealthful form, exceeding the surrogate screening thresholds above is likely a basis for a finding of a significant impact because of the inherent limitations in quantifying the actual ambient air quality effect.

## Construction Activity Impacts

Dust will be created during clearing, grading, excavation and building assembly of various developments within the Downtown Community Plan planning area. Three types of dust emissions may be associated with construction. Large particles are generated that settle out again rapidly in close proximity to the source. A fraction of the material is small enough to remain suspended in the air semi-indefinitely. The size cut-off for these total suspended particulates (TSP) is around 30 microns in diameter. An even lesser fraction of TSP is small enough to enter deep lung tissue. The size cut-off for particulate matter that is deeply respirable is 10 microns or less and is called PM-10. State and federal ambient air quality standards have been established for PM-10. The PM-10 fraction of TSP is assumed to be around 50 percent. Most PM-10 dust is comprised of chemically inert soil particulates with very little of the material in the ultra-small diameter (2.5 microns or less, called PM-2.5) size range. PM-2.5 material is capable of reaching deepest lung tissue and causing the most adverse health impacts. Except for diesel particulate matter (DPM) from heavy equipment exhaust, very little PM-2.5 is generated by construction activities.

The main impacts from construction dust are the soiling nuisance from off-site deposition of larger particles, and visibility effects of smaller particles. EPA indicates that the primary impact distance from large diameter construction dust is less than 100 feet. Most dust soiling effects during construction will remain within each individual construction site. The size of any individual Community Plan development activities is unknown, but typical redevelopment projects are generally 5 acres or less, with 1-2 acre sites being the average site size. Generally, large development sites (20+ acres) are not under simultaneous disturbance. Because the air basin's non-attainment status for PM-10, restrictions on grading disturbance areas are often imposed to keep dust emissions under the significance thresholds.

In the City of San Diego Air Quality Guidelines publication, revised in July 2003, the accepted estimate of PM-10 emissions from site grading is 26.4 pounds per graded acre if only minimal dust control is practices. Daily watering and implementation of aggressive dust control techniques can reduce PM-10 emissions to about 10 pounds per graded acre. San Diego is non-attainment for PM-10 emissions, therefore best available control methods (BACMs) are recommended. The City of San Diego requires use of best management practices for dust control in the issuance of any grading permits as a standard condition. A menu of San Diego approved BACMs are detailed in the mitigation discussion as standard measures to be applied for any new downtown construction activities.

In order to analyze PM-10 dust emissions for the Downtown Community Plan development, various disturbance "footprints" have been calculated and shown to produce the following estimated daily PM-10 emissions:

| Disturbance Footprint (acres) | Standard Dust Control (pounds per day) | Enhanced Dust Control (BACM) (pounds per day) |
|---|---|---|
| 2 | 53. | 20. |
| 5 | 132.* | 50. |
| 6 | 158.* | 60. |
| 7 | 185.* | 70. |
| 9 | 238.* | 90. |
| 10 | 264.* | 100. |
| 11 | 290.* | 110.* |

*Exceeds significance thresholds of 100 pounds per day.

With usage of required BACMs, daily footprint areas of less than 10 acres may be under simultaneous disturbance without exceeding the significance thresholds. PM-10 impacts from downtown construction would be less-than-significant with a 10-acre disturbance restriction.

The Downtown Community Plan development activities could involve demolition, excavation, loading, hauling and disposal of excess materials from the demolition and excavation activities, which are separate from generic grading activities. Emissions from the demolition and excavation activities were thus calculated separately. Excess materials are to be hauled away to an approved landfill. For purposes of analysis, an approved landfill is presumed to be within twenty miles of any development site(s).

Demolition of existing buildings would generate dust as walls are pulled down and concrete foundations are broken up. The PM-10 emission factor for demolition activities is stated in the SCAQMD CEQA Air Quality Handbook (1993) to be 42 pounds per 100,000 cubic feet of demolition volume. It is presumed that 100,000 cubic feet is the maximum volume of building which will be torn down and hauled away in one day. The PM-10 dust emissions associated with demolition of 100,000 cubic feet is 42 pounds, which is well within the City of San Diego guideline threshold of 100 pounds per day. The addition of 10-20 pounds of PM-10 from "grading" activities on a typical 1-2 acre parcel would not cause the 100 pound per day PM-10 threshold to be exceeded.

If any existing structures to be demolished or renovated were built when hazardous compounds were routinely used as building products, they may have asbestos containing materials (ACMs), lead based paint (LBP), or other harmful building materials within their structures. Any demolition or renovation requires a pre-construction hazards assessment. If such materials are present, particularly asbestos, a number of strictly regulated remediation procedures must be implemented. Such mandatory measures are required to protect both remediation workers and the general public. Remediation impacts are therefore less-than-significant through required compliance with existing SDAPCD hazards control regulations.

In addition to small dust particles that remain suspended in the air semi-indefinitely, construction also generates many large particles that are easily filtered by human breathing passages, but that settle out rapidly on parked cars and other nearby horizontal surfaces around the construction perimeter. Large-particle emissions thus comprise more of a soiling nuisance rather than any potentially unhealthful air quality impact. With west to east winds, dust soiling potential is likely greatest directly east of any development site. Good control of fine particulates also results in substantial reduction in nuisance potential from larger particulate matter. While dust deposition can be minimized, it often cannot be completely eliminated. While temporary soiling nuisance is considered adverse, it does not constitute a significant air quality impact.

It should be noted that current regulatory philosophy relative to airborne particulates is that PM-10 is not an adequate predictor of potential health impacts. It has been clearly demonstrated that the health risk lies in much smaller particulate matter with diameters of 2.5 microns or less, called "PM-2.5." National AAQS for PM-2.5 were adopted on July 17, 1997, and California adopted its own annual standard on June 20, 2002. Research has shown that mechanical abrasion processes such as clearing or grading of soil contribute little to the area PM-2.5 burden. Soil dust is more chemically benign than typical urban atmospheric PM-2.5. In the almost complete absence of PM-2.5 within the fugitive dust generated during grading and construction activities, project-related construction activities will not adversely impact PM-2.5 exposure in the San Diego area.

Facilities construction will require heavy equipment operations to prepare the ground, excavate for utilities and services, and perform building erection. The average commercial development in California requires 250,000 brake horsepower hours (BHP-HR) of equipment operations. Typical redevelopment sites are 5 acres or less. A 10-acre site would be a worst-case maximum. For purposes of analysis, a 5- and 10-acre parcel were analyzed for heavy equipment operations emissions. For a 5- or 10-acre per year disturbance area and 200 days of construction per individual site, the average daily construction equipment emissions, relative to the City of San Diego daily significance thresholds are as follows (pounds/day):

| | Daily Emissions | | City of San Diego Screening Guidelines | Percent of Threshold | |
|---|---|---|---|---|---|
| Pollutant | Assumed 5-Acre Project | Assumed 10-Acre Project | | Assumed 5-Acre Project | Assumed 10-Acre Project |
| CO | 11.8 | 23.6 | 550 | 2.1 | 4.2 |
| ROG | 3.6 | 7.2 | 55 | 6.5 | 13.1 |
| NOx | 53.6 | 107.2 | 250 | 21.4 | 42.9 |
| SOx | 3.8 | 7.6 | 250 | 1.5 | 3.0 |
| PM-10 | 1.8 | 3.6 | 100 | 1.8 | 3.6 |

Source: SCAQMD CEQA Handbook (1993); Table A9-3-A 6,250 BHP-HR/day average equipment utilization.

As shown above, daily equipment exhaust emissions for even a 10-acre parcel, are all well below significance threshold levels. As with the dust emissions, the non-attainment status of the air basin, plus the possible proximity of adjacent residential uses to individual sites, requires that best available control measures (BACMs) for heavy equipment exhaust be implemented even if significance thresholds are not exceeded. A menu of BACMs is included in the mitigation discussion.

Construction activities use diesel-fueled equipment that emits diesel particulate matter (DPM) in its exhaust. DPM is a known carcinogen. Individual cancer risk at any off-site receptor is calculated by assuming that a person sits continuously outside of their home for the next 70 years while breathing exhaust pollutants. The excess cancer risk from construction activities due to DPM is typically less-than-significant because:

1. Construction activities last only a few months out of the 70-year risk "window."

2. Many people are gone during the daytime when equipment is operating, and do not remain outside their home to continuously when they are home.

3. Emissions standards for new construction equipment require soot filters that will make the equipment fleet for future major construction activities much cleaner than the current fleet.

DPM exposure is of concern in the City of San Diego because many residences are located near freeways that have a high percentage of trucks traveling through the City. Residents living near freeways may have double the cancer risk due to DPM than the public at large (a cancer risk of 0.002 near the freeway versus 0.001 for San Diego residents at large). Short-term diesel exhaust from construction activities, however, will not substantially exacerbate that risk.

During finish work in each individual Downtown Community Plan development activity, application of paintings and coatings will create ROG emissions, some of which could exceed the City of San Diego's significance threshold. Use of available emissions reduction measures are recommended to reduce these emissions. Emissions minimization can be accomplished by using low-VOC paints and efficient transfer systems. Use of such measures for paint and coatings application can reduce emissions from architectural coatings to perhaps 1/3 of their unmitigated values. With phased build-out and with the above recommended measures and compliance with SDAPCD Rule 67, ROG emissions from paints and coatings can likely be maintained at less-than-significant levels.

Construction activities are most noticeable in the immediate vicinity of the construction site. There is, however, some potential for "spill-over" into the surrounding community. Spillage may be physical, such as dirt tracked onto public streets or dropped from trucks. Spill-over may also be through congestion effects where detours, lane closures, or construction vehicle competition with non-project peak hour traffic slows traffic beyond the immediate construction site to less pollution-efficient travel speeds. Such off-site effects are controllable through good housekeeping and proper construction management/scheduling. Management techniques are suggested in the mitigation discussion to reduce potential spill-over impacts.

## Project Operational Impacts

### Mobile Source Emissions

Minor amounts of "direct" air pollution emissions will be associated with individual developments within the proposed Downtown Community Plan. Asphalt paving emissions for parking lots, or landscape utility equipment or pesticides/herbicides used in landscape maintenance are examples of direct emissions. They represent a very minor fraction of the total development burden.

The bulk of the development-related impacts would derive from the trips generated by any land use intensification within the Centre City/downtown area. The proposed Downtown Community Plan assumes a 25 year span.

The future mobile source emissions associated with build-out of the Downtown Community Plan development were calculated using the California Air Resources Board (ARB) URBEMIS2002 computer model. Emissions from existing vehicular operations (Year 2005), emissions from Year 2030 (1992 Plan) vehicular operations, and Year 2030 Proposed Plan vehicular emissions were calculated. The results of these emissions calculations are summarized in Table 4. The computer outputs from the emissions model is attached as an appendix to this report.

The existing vehicular uses associated with current land uses clearly contribute to the basin-wide inability to attain the ozone standard based upon the City of San Diego guidelines. Table 4 shows that the future vehicular emissions levels associated with the proposed Downtown Community Plan development, while they are still significant, are lower than the currently existing vehicle emissions for ROG, $NO_x$, and CO. This is attributed to the fact that vehicles are becoming more "clean" with improvements in technology and programs designed to reduce harmful emissions. PM-10 emissions primarily derive from roadway dust, and tire or brake wear. Little PM-10 derives from engine exhaust except for heavy trucks. PM-10 emission rates thus will grow in direct proportion to downtown development without benefiting from continued emissions reductions from a cleaner vehicle fleet. Future PM-10 emissions associated with planning area traffic will therefore be significantly higher for both the 1992 Plan or proposed Community Plan alternatives.

## Table 4

### Community Plan Regional Emissions summary (pounds/day)

| Existing Year 2005 | ROG | NOx | CO | SOx | PM-10 |
|---|---|---|---|---|---|
| Area Sources | 726.1 | 152.7 | 65.6 | 0.0 | 0.3 |
| Mobile Sources | 8,460.1 | 11,366.9 | 113,950. | 100.0 | 9,764.4 |
| **TOTAL** | **9,186.2** | **11,519.6** | **114,016.** | **100.0** | **9,764.7** |
| **Year 2030 (1992 Plan)** | | | | | |
| Area Sources | 1,525.5 | 306.9 | 130.4 | 0.0 | 0.6 |
| Mobile Sources | 2,708.5 | 2,810.4 | 33,125.5 | 95.6 | 16,640.3 |
| **TOTAL** | **4,234.0** | **3,117.3** | **33,255.9** | **95.6** | **16,640.9** |
| **Year 2030 (Proposed Plan)** | | | | | |
| Area Sources | 2,631.1 | 497.4 | 210.9 | 0.0 | 1.0 |
| Mobile Sources | 3,422.2 | 3,469.5 | 40,899.2 | 117.9 | 20,528.5 |
| **TOTAL** | **6,053.3** | **3,966.9** | **41,110.1** | **117.9** | **20,529.5** |

Source: URBEMIS2002 Computer Model (output in Appendix).

### Area Source Emissions

Table 4 also shows Area Source ROG emissions (hair sprays, deodorants, cleaning products, landscape maintenance equipment, etc.), increase significantly over time with the anticipated increase in Centre City residential uses. Electrical generation air emissions are not included in the Area Source contribution because there is no correlation between electrical generation and consumption under the current regional power grid distribution system. ROG emissions are seen to exceed the City's 55 pound per day CEQA threshold, and to increase substantially over time. Because "excessive" ROG levels already exist and the technology is not available to completely eliminate ROGs from area source emissions, no reasonable level of mitigation could reduce such levels to a less-than-significant impact for these pollutants. There are a variety of statewide pollution control programs that have been adopted to reduce ROG emissions from consumer products which are not incorporated into the above URBEMIS2002 model calculations. The current goal is for a ten (10) percent reduction in statewide ROG emissions from consumer products (Area Sources) in this decade. Such a reduction in the Area Source emissions estimates will not change the conclusion that ROG emissions increases will continue to significantly exceed the City's CEQA thresholds for ROG under both the 1992 Plan and the proposed Community Plan alternatives.

**Cumulative Emissions**

Construction emissions are generally considered a short-term source of air quality impact and are thus typically analyzed separately from long-term (operational) impacts. However, because downtown revitalization of underused land will occur for decades, construction activity impacts are not really short-term. They will combine with any operational (mainly mobile source) emissions to create a cumulative impact.

Construction activities will vary from month-to-month and year-to-year. For purposes of analysis, it was assumed that 20 acres of land may undergo construction disturbance annually, with six months of heavy equipment operations and three months of extensive soil disturbance (excavation or grading). Concurrently, an average of 10,000 cubic feet of existing development was assumed demolished on a typical day.

The resulting combined construction and operations emissions are shown in Table 5. The combined operational and construction activity emissions at area-wide build-out are shown in Table 6. The inclusion of construction emissions into the project air pollution burden does not substantially change any conclusions derived from the operational emissions alone as follows:

1. Inclusion of relatively small amounts of equipment exhaust emissions does not measurably change the conclusion that vehicular emissions improvements will more than off-set any emissions increases from traffic growth (and construction activities) for the three major gaseous air pollutants (ROG, $NO_x$, or CO).

2. Heavy equipment operations will create small increases in combined $SO_2$ emissions, but not at substantial levels.

3. PM-10 emissions from grading, demolition and equipment exhaust will increase the overall level of "excess" emissions above the adopted significance threshold. However, PM-10 increases will be significant without any consideration of any additional construction activity increment.

The combination of construction and operations emissions creates no new impacts, but incrementally exacerbates the significant PM-10 impact resulting from increased regional vehicular travel.

## Table 5

### Combined Construction and Operational Emissions (lbs/day)

| Emissions Sources | ROG | NOx | CO | SOx | PM-10 |
|---|---|---|---|---|---|
| | | | | | |
| Operations – Year 2005 | 9,186.2 | 11,519.6 | 114,016. | 100.0 | 9,764.7 |
| | | | | | |
| Operations – Year 2030 | 6,053.3 | 3,966.9 | 41,110.1 | 117.9 | 20,529.5 |
| | | | | | |
| Long-Term Change | -3,132.9 | -7,552.7 | -72,905.9 | +17.9 | +10,764.8 |
| | | | | | |
| Construction Equipment | +7.2 | +107.2 | +23.6 | +7.6 | +3.6 |
| Grading Dust | --- | --- | --- | --- | +50.0 |
| Demolition Dust | --- | --- | --- | --- | +4.2 |
| | | | | | |
| Net Change-All Sources | -3,125.7 | -7,445.5 | -72,882.3 | +25.5 | +10,882.6 |
| | | | | | |
| Significance Threshold | +55 | +250 | +550 | +250 | +100 |

## Table 6

### Daily Emissions Generated At Build Out (lbs/day)

| | ROG (lbs/day) | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | $PM_{10}$ (lbs/day) |
|---|---|---|---|---|---|
| Stationary Sources | 2,631.1 | 497.4 | 210.9 | 0.0 | 1.0 |
| Mobile Sources | 3,422.2 | 3,469.5 | 40,899.2 | 117.9 | 20,528.5 |
| Construction Sources | 7.2 | 107.2 | 23.6 | 7.6 | 57.9 |
| **BUILD OUT TOTAL** | **6,060.5** | **4,074.1** | **41,133.7** | **125.6** | **20,587.4** |

### Non-Criteria Pollutants

Non-criteria pollutants include hazardous or toxic air contaminants, or nuisance fumes, dusts or odors. Except for DPM, general development contributes negligibly to non-criteria emissions. The replacement of existing industrial uses within the Community Plan area with "clean" mixed uses will likely reduce the non-criteria pollutant impact potential from existing planning area activities such as equipment or vehicle maintenance, or food processing and marketing. Restaurants or other food services may sometimes create odors from cooking or putrescible waste storage in a mixed-use environment, but use permit conditions and odor control technologies are normally required to minimize nuisance potential within an individual development.

### Regional Planning Considerations

Implementation of the proposed Downtown Community Plan (Centre City) would reduce the level of emissions reductions that will be achieved by a cleaner future vehicle fleet by intensifying residential, non-residential and hotel uses compared to levels of use that would be realized under the current plan (no development). The plan-to-plan differential emissions in Table 6 (Proposed Plan vs. 1992 Plan) are significant for four of the five pollutants analyzed. However, although the emissions difference is potentially significant, it should be noted that the Downtown Community Plan area has been adopted by the City Council as a regional center for employment, commerce and residential development. It is designed to reduce emissions by providing housing within walking distance of jobs, improving traffic and parking conditions, encouraging less reliance on the private automobile, providing food, entertainment, and shopping opportunities within the community, and providing employment opportunities. Development-related emissions would occur in greater amounts if this level of growth were dispersed over a wider area. The no-development alternative is therefore not environmentally preferred.

The proposed Community Plan represents "smart growth" that reduces air emissions compared to the same level of growth that would occur on a regional scale under the 1992 Plan. The unmet residential demand under the 1992 Plan would presumably be met at more outlying locations in the region. However, the SDAPCD notes as follows in "Tools for Reducing Vehicle Trips Through Land Use Design,"

> "Low density sprawl cannot continue forever. In fact, SANDAG projects the region will run out of urban residential land by 2010. Consequently, growth must be more compact in the future."

Table 6

**Regional Emissions Changes (lbs/day)**

| 2030 (1992 Plan) vs. Existing | ROG | NOx | CO | SOx | PM-10 |
|---|---|---|---|---|---|
| Area Sources | +799.4 | +154.2 | +64.8 | 0.0 | +0.3 |
| Mobile Sources | -5,751.6 | -8,556.5 | -80,824.6 | -4.4 | +6,875.9 |
| TOTAL | -4,952.2 | -8,402.3 | -80,759.8 | -4.4 | +6,876.2 |
| **2030 Proposed Plan vs. Existing** | | | | | |
| Area Sources | +1895.0 | +344.7 | +145.3 | 0.0 | +0.7 |
| Mobile Sources | -5,037.9 | -7,897.4 | -73,050.9 | +17.9 | +10,764.1 |
| TOTAL | -3,132.9 | -7,552.7 | -72,905.6 | +17.9 | +10,764.8 |
| **2030 Proposed Plan vs. 2030 (1992 Plan)** | | | | | |
| Area Sources | +1,105.6 | +190.5 | +80.5 | 0.0 | +0.4 |
| Mobile Sources | +713.7 | +659.1 | +7,773.7 | +22.3 | +3,888.2 |
| TOTAL | +1,819.3 | +849.6 | +7,854.2 | +22.3 | +3,888.6 |
| **City of San Diego Thresholds** | **55.** | **250.** | **550.** | **250.** | **100.** |

The SDAPCD advocates the following regional land use/air quality strategies:

- Designate future transit corridors and rail station sites as "Transit Focus Areas," and zone such areas for compact, pedestrian-oriented development.
- Incorporate residential uses in existing employment areas.
- Designate a central business core and direct commercial uses there, enabling ridesharing and daytime worker errands on foot.
- Promote revitalization and infill development in mixed-use core areas.

The proposed Community Plan incorporates these strategies better than the 1992 Plan. Adoption of the proposed plan is more consistent with air quality/land use planning strategies. Any differential in emissions between the existing and proposed plans that are shown to exceed CEQA thresholds will be more than eliminated by better conformity of the proposed plan to air quality planning strategies.

**Toxic Air Contaminants**

Concentrated development does have the potential to expose pollution-sensitive land uses to higher levels of air pollution than for suburban development patterns. Although local impacts for criteria air pollutants have been reduced to acceptable levels through dramatically cleaner vehicles, localized toxic air contaminant impacts may still exist in compact developments or in mixed-use areas. The primary hazardous pollutant of concern is diesel particulate matter (DPM), but other hazardous airborne compounds such as benzene (gas stations), chrome (plating shops), perchloroethylene (dry cleaners) or other toxic air contaminants (TACs) may be present.

The California Air Resources Board has developed a set of guidelines (the "Guidelines") that include recommended setbacks to separate TAC sources from pollution-sensitive receivers. The ARB uses residences, schools, day care centers and medical facilities to exemplify such sensitive receivers Its Guidelines are strongly driven by diesel exposure, which is generally taken to be a 70-year lifetime exposure risk; however, the ARB also recommends considering ways to avoid even short-term exposure to vehicular air pollution (diesel particulates and other toxic air contaminants) by maintaining an adequate buffer between the sources of the pollution and the sensitive receivers. The ARB then recommends the following setback distances for sensitive receivers:

- 500 feet from any freeway
- 1,000 feet from any major rail yard or chrome plating operation
- 1,000 feet from any distribution center with more than 100 trucks per day
- Immediately downwind of a port or petroleum refinery
- 300 feet from any dry cleaning operation or large gas station

The ARB emphasizes that the Guidelines are "advisory and should not be interpreted as defined "buffer zones." The ARB further acknowledges that other important considerations must be considered in the land use process, including addressing housing and transportation needs, community economic development priorities and other quality of life issues, and that the recommendations in the Guidelines "need to be balanced with other State and local policies." Further, they "recognize the opportunity for more detailed site-specific analysis always exists, and that there is no "one size fits all" solution to land use planning."

The Guidelines could be relevant to certain uses that would be permitted in the Community Plan area, along the eastern and northern periphery near I-5, and in the southwestern corner closest to the Tenth Avenue Marine Terminal, and existing chrome plating operations in Barrio Logan.

Port, warehousing or chrome plating sources are marginally within a zone of possible impact within the extreme southwestern corner of the planning area. As with the freeway proximity, development planning closest to the sources should consider localized patterns of emissions, meteorology and proposed land uses, particularly wind patterns that may minimize on-site exposure.

## Micro-Scale Impact Analysis

Local air quality in the Downtown Community Plan area is generally good, particularly for non-regional pollutants such as carbon monoxide (CO). 1-hour maximum CO levels at the nearest SDAPCD air monitoring station were 5.0 ppm, or approximately 25 percent of the allowable (state) standard. In order to determine whether future possible traffic congestion may contribute to localized air pollution standard violations, a screening procedure based upon the California roadway dispersion model CALINE4 was run for a number of intersections in the development area. The model was run for the four (4) traffic scenarios (Existing A.M., Existing P.M., Build-out A.M., and Build-out P.M.) provided by the development Traffic Consultant (Wilson & Company). The intersections with worst-case carbon monoxide levels near sensitive land uses in the development area were analyzed to evaluate any changes due to changes in patterns of growth anticipated as part of the Downtown Community Plan development.

The model combines the results of the traffic analysis with very restrictive dispersion conditions in order to generate a worst-case impact assessment. Carbon monoxide was used, because unlike regional pollutants such as ozone, CO is directly related to source activity immediately adjacent to the receptor (a primary, unreacted pollutant impact).

The results of the micro-scale impact analysis are summarized in Table 7. Maximum existing CO levels in the development vicinity are less than 8 ppm. The most recent CO levels are 5.0 ppm, as seen in Table 3. It would take an additional + 15.0 ppm to meet or exceed the state standard of 20 ppm. The maximum CO exposure for future build-out scenarios are 6. 4 ppm, or less. The maximum development-related CO impact at any intersection analyzed for both the existing and build-out conditions is +1.3 ppm. No existing or future CO "hot spots" are forecast to occur at any intersection near the development area from a combination of background (no development) plus cumulative traffic. Micro-scale air quality impacts are therefore individual and cumulatively less-than-significant.

## Table 7

### Micro-Scale Air Quality Impact Analysis (Hourly CO concentrations [ppm] above background)

| Existing A.M. | |
|---|---|
| **Intersection:** | **Value** |
| Harbor Drive/Grape Street | 2.1 |
| Pacific Highway/Laurel Street | 2.1 |
| 16th Street/F Street | 4.7 |
| **Existing P.M.** | |
| Harbor Drive/Laurel Street | 6.7 |
| Harbor Drive/Market Street | 4.6 |
| First Avenue/Elm Street | 7.4 |
| Fourth Avenue/E Street | 2.9 |
| 16th Street/G Street | 3.9 |
| **Build-Out A.M.** | |
| State Street/Hawthorne Street | 5.7 |
| Front Street/Beech Street | 5.1 |
| 8TH Street/J Street | 1.7 |
| 13TH Street/L Street | 1.7 |
| 16TH Street/C Street | 1.9 |
| 16th Street/F Street | 6.0 |
| 16th Street/L Street | 1.8 |
| **Build-Out P.M.** | |
| State Street/Grape Street | 6.4 |
| 10TH Street/A Street | 6.2 |
| 13TH Street/Island Street | 1.8 |
| 13TH Street/L Street | 1.8 |

| | |
|---|---|
| 16th Street/C Street | 3.0 |
| 16th Street/G Street | 5.0 |
| 16th Street/L Street | 2.1 |
| 17th Street/G Street | 5.3 |

Note: Add +5 ppm background and compare to 20 ppm state standard.
Source: Screening procedure based on CALINE4 model.

## MITIGATION

Short-term construction activities during excavation and grading activities could exceed the recommended significance thresholds, depending upon disturbance acreage and amount of equipment operating onsite. Even if thresholds are not exceeded, the non-attainment status of the San Diego air basin requires use of best management practices for PM-10 or ozone precursors to reduce cumulative impacts from all basin-wide construction activities. The matrix of recommended enhanced mitigation measures is based, in part, upon the construction activity emissions mitigation plan implemented during Ballpark construction. Although individual developments within the Community Plan area are likely to be smaller in area/scope than the Ballpark, the concentration of sensitive uses within Centre City argues for use of all best management practices for air pollution impact minimization during construction. The following mitigation measures are recommended for all Community Plan construction activities:

1. During grading activities, any exposed soil areas shall be watered twice per day. On windy days or when fugitive dust can be observed leaving the development site, additional applications of water shall be applied as necessary to prevent visible dust plumes from leaving the development site. Under windy conditions where velocities are forecast to exceed 25 miles per hour, all ground disturbing activities shall be halted until winds that are forecast to abate below this threshold.

2. The development shall implement dust suppression techniques to prevent fugitive dust from creating a nuisance offsite. These dust suppression techniques are considered best available control measures (BACMs):

   a. Portions of the construction site to remain inactive longer than a period of three months shall be seeded and watered until grass cover is grown or otherwise stabilized in a manner acceptable to the CCDC.

   b. All on-site access points shall be paved as soon as feasible or watered p eriodically or chemically stabilized.

   c. All material transported offsite shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

   d. The area disturbed by clearing, grading, earthmoving, or excavation operations shall be minimized at all times.

3. All vehicles on the construction site shall travel at speeds less than 15 miles per hour.

4. All material stockpiles subject to wind erosion during construction activities, which will not be utilized within three days, shall be covered with plastic, an alternative cover deemed equivalent to plastic, or sprayed with a nontoxic chemical stabilizer.

5. Where vehicles leave the construction site and enter adjacent public streets, the streets shall be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface. Any visible track-out extending for more than fifty (50) feet from the access point shall be swept or washed within thirty (30) minutes of deposition.

6. All diesel-powered vehicles and equipment shall be properly operated and maintained.

7. All diesel-powered vehicles and gasoline-powered equipment shall be turned off when not in use for more than five (5) minutes as required by state law.

8. The construction contractor shall utilize electric or natural gas-powered equipment in lieu of gasoline or diesel-powered engines, where feasible.

9. As much as possible, the construction contractor shall time the construction activities so as not to interfere with peak hour traffic. In order to minimize obstruction of through traffic lanes adjacent to the site, a flag-person shall be retained to maintain safety adjacent to existing roadways, if necessary.

10. The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew.

11. Low VOC coatings shall be used as required by SDAPCD Rule 67. Spray equipment with high transfer efficiency, such as the high volume-low pressure (HPLV) spray method, or manual coatings application such as paint brush hand roller, trowel, spatula, dauber, rag, or sponge, shall be used to reduce VOC emissions, where practical.

12. If construction equipment powered by alternative fuel sources (LPG/CNG) is available at comparable cost, the developer shall specify that such equipment be used during all construction activities on the development site.

13. The developer shall require the use of particulate filters on diesel construction equipment if use of such filters is demonstrated to be cost-competitive for use on this development.

14. During demolition activities, safety measures as required by City/State for removal of toxic or hazardous materials shall be utilized.

15. Rubble piles shall be maintained in a damp state to minimize dust generation.

## REFERENCES

California Air Resources Board, “The 2001 Almanac of Emissions and Air Quality,” 2004

California Air Resources Board, "URBEMIS2002 Computer Program," Version 7.4.2 for Windows, 20002

California Air Resources Board, “Air Quality and Land Use Handbook: A Community Health Perspective,” March, 2005.

City of San Diego CEQA Air Quality Guidelines, June 2003

San Diego Air Pollution Control District, “Tools for Reducing Vehicle Trips Through Land Use Design.”

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

U.S. Environmental Protection Agency, "Compilation of Air Pollutant Emission Factors," AP-42, Fifth Ed., 1995

# APPENDIX

## URBEMIS2002 Computer Model

## Existing

## Year 2030 No Development

## Year 2030 With Development

Existing

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 726.12 | 152.66 | 65.62 | 0.00 | 0.29 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 8,460.13 | 11,366.90 | 113,950.08 | 100.03 | 9,764.39 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 9,186.25 | 11,519.56 | 114,015.70 | 100.03 | 9,764.68 |

Existing

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2005
Construction Duration: 12
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 14600
Retail/Office/Institutional/Industrial Square Footage: 4400000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source | ROG | NOx | CO | SO2 | PM10 TOTAL | PM10 EXHAUST | PM10 DUST |
|---|---|---|---|---|---|---|---|

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Existing

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

| Source | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Natural Gas | 11.59 | 152.64 | 63.87 | - | 0.29 |
| Wood Stoves - No summer emissions | | | | | |
| Fireplaces - No summer emissions | | | | | |
| Landscaping | 0.25 | 0.02 | 1.75 | 0.00 | 0.01 |
| Consumer Prdcts | 714.28 | - | - | - | - |
| TOTALS(lbs/day,unmitigated) | 726.12 | 152.66 | 65.62 | 0.00 | 0.29 |

Existing

UNMITIGATED OPERATIONAL EMISSIONS

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Condo/townhouse general | 821.24 | 870.71 | 8,809.88 | 7.62 | 742.06 |
| Non-Residential | 6,871.90 | 9,557.02 | 96,022.17 | 84.25 | 8,222.66 |
| Hotel | 767.00 | 939.17 | 9,118.03 | 8.15 | 799.67 |
| TOTAL EMISSIONS (lbs/day) | 8,460.13 | 11,366.90 | 113,950.08 | 100.03 | 9,764.39 |

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type | Trip Rate | Size | Total Trips |
|---|---|---|---|
| Condo/townhouse general | 4.00 trips / dwelling units | 14,600.00 | 58,400.00 |
| Non-Residential | 37.83 trips / 1000 sq. ft. | 15,802.00 | 597,789.69 |
| Hotel | 8.00 trips / rooms | 8,800.00 | 70,400.00 |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 56.10 | 2.30 | 97.10 | 0.60 |
| Light Truck < 3,750 lbs | 15.10 | 4.00 | 93.40 | 2.60 |
| Light Truck 3,751- 5,750 | 15.50 | 1.90 | 96.80 | 1.30 |
| Med Truck 5,751- 8,500 | 6.80 | 1.50 | 95.60 | 2.90 |
| Lite-Heavy 8,501-10,000 | 1.00 | 0.00 | 80.00 | 20.00 |
| Lite-Heavy 10,001-14,000 | 0.30 | 0.00 | 66.70 | 33.30 |
| Med-Heavy 14,001-33,000 | 1.00 | 10.00 | 20.00 | 70.00 |
| Heavy-Heavy 33,001-60,000 | 0.80 | 0.00 | 12.50 | 87.50 |
| Line Haul > 60,000 lbs | 0.00 | 0.00 | 0.00 | 100.00 |
| Urban Bus | 0.10 | 0.00 | 0.00 | 100.00 |
| Motorcycle | 1.60 | 87.50 | 12.50 | 0.00 |
| School Bus | 0.30 | 0.00 | 0.00 | 100.00 |
| Motor Home | 1.40 | 14.30 | 78.60 | 7.10 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 10.8 | 7.3 | 7.5 | 10.8 | 7.3 | 7.3 |
| Rural Trip Length (miles) | 15.0 | 10.0 | 10.0 | 15.0 | 10.0 | 10.0 |
| Trip Speeds (mph) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| % of Trips - Residential | 27.3 | 21.2 | 51.5 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Non-Residential | | | | 50.0 | 25.0 | 25.0 |
| Hotel | | | | 5.0 | 2.5 | 92.5 |

Existing

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2005.
The double counting internal work trip limit changed from  to 15943.2.
The double counting shopping trip limit changed from  to 12380.8.
The double counting other trip limit changed from  to 30076.

2030 No Project

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 1,525.54 | 306.94 | 130.43 | 0.00 | 0.58 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 2,708.52 | 2,810.84 | 33,125.52 | 95.57 | 16,640.33 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 4,234.07 | 3,117.78 | 33,255.96 | 95.57 | 16,640.91 |

2030 No Project

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2005
Construction Duration: 12
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 30700
Retail/Office/Institutional/Industrial Square Footage: 7800000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source | ROG | NOx | CO | SO2 | PM10 TOTAL | PM10 EXHAUST | PM10 DUST |
|---|---|---|---|---|---|---|---|

Phase 3 - Building Construction Assumptions: Phase Turned OFF

2030 No Project

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

| Source | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Natural Gas | 23.36 | 306.93 | 128.68 | - | 0.58 |
| Wood Stoves - No summer emissions | | | | | |
| Fireplaces - No summer emissions | | | | | |
| Landscaping | 0.25 | 0.02 | 1.75 | 0.00 | 0.01 |
| Consumer Prdcts | 1,501.94 | - | - | - | - |
| TOTALS(lbs/day,unmitigated) | 1,525.54 | 306.94 | 130.43 | 0.00 | 0.58 |

2030 No Project

UNMITIGATED OPERATIONAL EMISSIONS

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Condo/townhouse general | 350.38 | 264.54 | 3,147.09 | 8.94 | 1,550.68 |
| Non-Residential | 2,089.93 | 2,304.87 | 27,253.90 | 78.61 | 13,681.04 |
| Hotel | 268.21 | 241.44 | 2,724.54 | 8.02 | 1,408.61 |
| TOTAL EMISSIONS (lbs/day) | 2,708.52 | 2,810.84 | 33,125.52 | 95.57 | 16,640.33 |

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type | Trip Rate | Size | Total Trips |
|---|---|---|---|
| Condo/townhouse general | 4.00 trips / dwelling units | 30,700.00 | 122,800.00 |
| Non-Residential | 40.03 trips / 1000 sq. ft. | 25,000.00 | 1,000,840.00 |
| Hotel | 8.00 trips / rooms | 15,600.00 | 124,800.00 |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 52.50 | 0.00 | 100.00 | 0.00 |
| Light Truck < 3,750 lbs | 15.90 | 0.00 | 100.00 | 0.00 |
| Light Truck 3,751- 5,750 | 16.70 | 0.00 | 100.00 | 0.00 |
| Med Truck 5,751- 8,500 | 7.60 | 0.00 | 100.00 | 0.00 |
| Lite-Heavy 8,501-10,000 | 1.00 | 0.00 | 80.00 | 20.00 |
| Lite-Heavy 10,001-14,000 | 0.30 | 0.00 | 66.70 | 33.30 |
| Med-Heavy 14,001-33,000 | 0.90 | 0.00 | 22.20 | 77.80 |
| Heavy-Heavy 33,001-60,000 | 0.70 | 0.00 | 0.00 | 100.00 |
| Line Haul > 60,000 lbs | 0.00 | 0.00 | 0.00 | 100.00 |
| Urban Bus | 0.20 | 0.00 | 50.00 | 50.00 |
| Motorcycle | 1.50 | 33.30 | 66.70 | 0.00 |
| School Bus | 0.10 | 0.00 | 0.00 | 100.00 |
| Motor Home | 2.60 | 0.00 | 92.30 | 7.70 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 10.8 | 7.3 | 7.5 | 10.8 | 7.3 | 7.3 |
| Rural Trip Length (miles) | 15.0 | 10.0 | 10.0 | 15.0 | 10.0 | 10.0 |
| Trip Speeds (mph) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| % of Trips - Residential | 27.3 | 21.2 | 51.5 | | | |

% of Trips - Commercial (by land use)

| | Commute | Non-Work | Customer |
|---|---|---|---|
| Non-Residential | 50.0 | 25.0 | 25.0 |
| Hotel | 5.0 | 2.5 | 92.5 |

2030 No Project

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2030.
The double counting internal work trip limit changed from  to 33524.4.
The double counting shopping trip limit changed from  to 26033.6.
The double counting other trip limit changed from  to 63242.

2030 with Project

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 2,631.13 | 497.36 | 210.89 | 0.00 | 0.95 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 3,422.20 | 3,469.49 | 40,889.15 | 117.92 | 20,528.47 |

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| TOTALS (lbs/day,unmitigated) | 6,053.33 | 3,966.84 | 41,100.04 | 117.92 | 20,529.42 |

2030 with Project

URBEMIS 2002 For Windows 7.5.0

File Name: <Not Saved>
Project Name: Centre City
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: June, 2005
Construction Duration: 12
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 53000
Retail/Office/Institutional/Industrial Square Footage: 10100000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source | ROG | NOx | CO | SO2 | PM10 TOTAL | PM10 EXHAUST | PM10 DUST |
|---|---|---|---|---|---|---|---|

Phase 3 - Building Construction Assumptions: Phase Turned OFF

'00 30 With Project

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

| Source | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Natural Gas | 37.96 | 497.34 | 209.14 | - | 0.94 |
| Wood Stoves - No summer emissions | | | | | |
| Fireplaces - No summer emissions | | | | | |
| Landscaping | 0.25 | 0.02 | 1.75 | 0.00 | 0.01 |
| Consumer Prdcts | 2,592.92 | - | - | - | - |
| TOTALS(lbs/day,unmitigated) | 2,631.13 | 497.36 | 210.89 | 0.00 | 0.95 |

2030 With Project

UNMITIGATED OPERATIONAL EMISSIONS

| | ROG | NOx | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| Condo/townhouse general | 604.89 | 456.69 | 5,433.08 | 15.44 | 2,677.07 |
| Non-Residential | 2,470.01 | 2,700.17 | 31,928.14 | 92.09 | 16,027.44 |
| Hotel | 347.30 | 312.63 | 3,527.93 | 10.39 | 1,823.97 |
| TOTAL EMISSIONS (lbs/day) | 3,422.20 | 3,469.49 | 40,889.15 | 117.92 | 20,528.47 |

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030  Temperature (F): 85  Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type | Trip Rate | Size | Total Trips |
|---|---|---|---|
| Condo/townhouse general | 4.00 trips / dwelling units | 53,000.00 | 212,000.00 |
| Non-Residential | 33.54 trips / 1000 sq. ft. | 34,958.00 | 1,172,491.35 |
| Hotel | 8.00 trips / rooms | 20,200.00 | 161,600.00 |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 52.50 | 0.00 | 100.00 | 0.00 |
| Light Truck < 3,750 lbs | 15.90 | 0.00 | 100.00 | 0.00 |
| Light Truck 3,751- 5,750 | 16.70 | 0.00 | 100.00 | 0.00 |
| Med Truck 5,751- 8,500 | 7.60 | 0.00 | 100.00 | 0.00 |
| Lite-Heavy 8,501-10,000 | 1.00 | 0.00 | 80.00 | 20.00 |
| Lite-Heavy 10,001-14,000 | 0.30 | 0.00 | 66.70 | 33.30 |
| Med-Heavy 14,001-33,000 | 0.90 | 0.00 | 22.20 | 77.80 |
| Heavy-Heavy 33,001-60,000 | 0.70 | 0.00 | 0.00 | 100.00 |
| Line Haul > 60,000 lbs | 0.00 | 0.00 | 0.00 | 100.00 |
| Urban Bus | 0.20 | 0.00 | 50.00 | 50.00 |
| Motorcycle | 1.50 | 33.30 | 66.70 | 0.00 |
| School Bus | 0.10 | 0.00 | 0.00 | 100.00 |
| Motor Home | 2.60 | 0.00 | 92.30 | 7.70 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 10.8 | 7.3 | 7.5 | 10.8 | 7.3 | 7.3 |
| Rural Trip Length (miles) | 15.0 | 10.0 | 10.0 | 15.0 | 10.0 | 10.0 |
| Trip Speeds (mph) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| % of Trips - Residential | 27.3 | 21.2 | 51.5 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Non-Residential | | | | 50.0 | 25.0 | 25.0 |
| Hotel | | | | 5.0 | 2.5 | 92.5 |

2030 with Project

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Changes made to the default values for Area

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2030.
The double counting internal work trip limit changed from  to 57876.
The double counting shopping trip limit changed from  to 44944.
The double counting other trip limit changed from  to 109180.