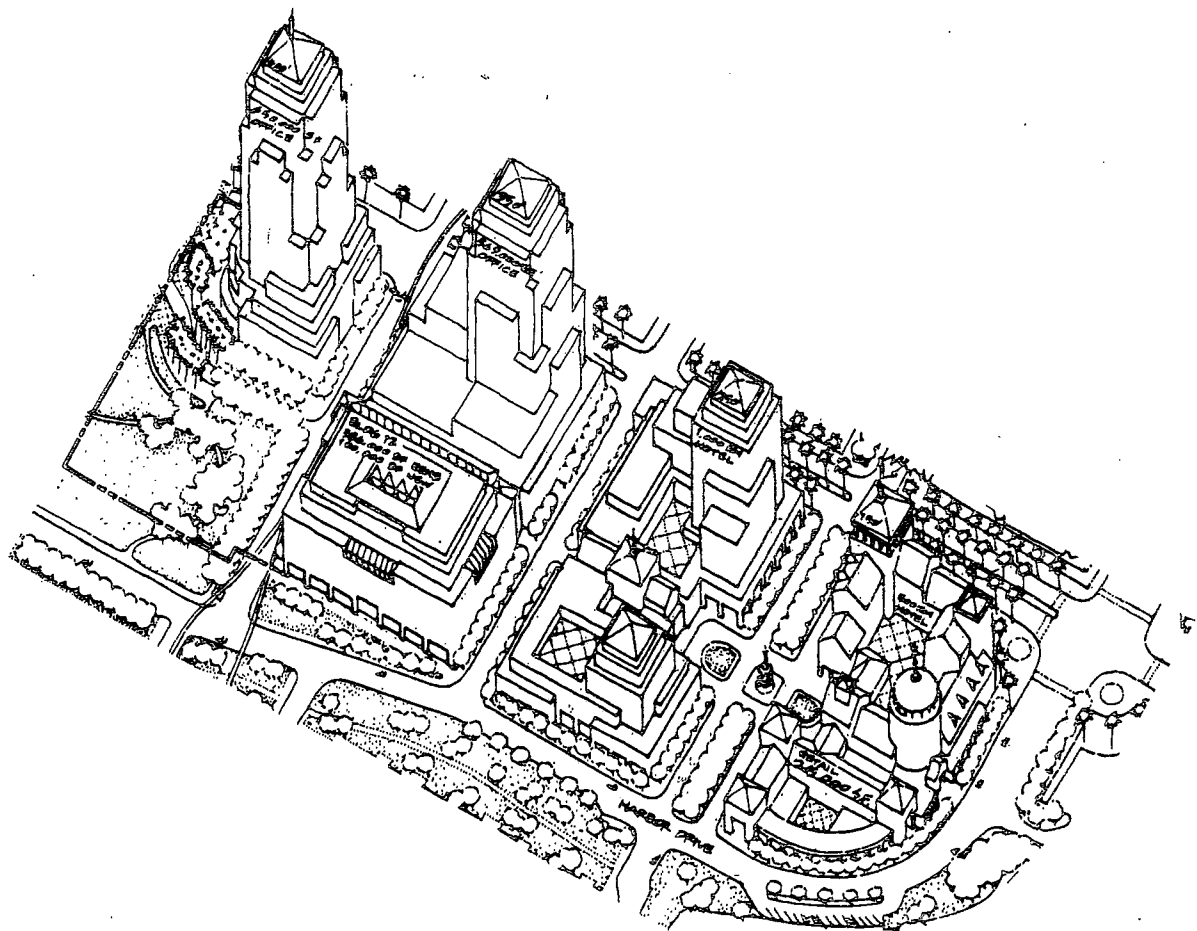




City of San Diego

Final Environmental Impact Report
Navy Broadway Complex Project
San Diego, California



October 1990

2020015

**FINAL
ENVIRONMENTAL IMPACT REPORT
FOR THE
NAVY BROADWAY COMPLEX PROJECT**

City of San Diego
City Administration Building
202 "C" Street
San Diego, California 92101

Contact: Maureen A. Stapleton
Deputy City Manager

October 1990

PREFACE TO THE FINAL EIR

The National Defense Authorization Act for fiscal year 1987, Public Law 99-661, authorized the Navy Broadway Complex project. The Navy and City of San Diego executed a memorandum of understanding (MOU) agreeing to enter into a development agreement, including a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) prepared in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) prepared in accordance with the California Environmental Quality Act (CEQA) have been completed and address the potential environmental impacts of the proposed project.

This document is the Final EIR, for which the City of San Diego is the lead agency. In accordance with Section 21083.5 of CEQA, an EIS may be submitted in lieu of an EIR, to the extent that the EIS complies with CEQA and the State CEQA Guidelines. According to Section 21083.7 of CEQA, when a project requires preparation of both an EIS (in accordance with NEPA) and an EIR (in accordance with CEQA), "the lead agency shall, whenever possible, use the EIS as such EIR as provided in Section 21083.5." As provided by Section 15150 of the State CEQA Guidelines, an EIR "may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public."

The Final EIS was prepared to fully comply with the provisions of both NEPA and CEQA, and contains all discussions required by each act. The Final EIS is being circulated concurrently with and to the same agencies and members of the public as the Final EIR. Please see the Executive Summary of the Final EIS for a general description of the project and the major environmental issues associated with its implementation.

Draft Environmental Impact Report
(Original Text)

**DRAFT
ENVIRONMENTAL IMPACT REPORT
FOR THE
NAVY BROADWAY COMPLEX PROJECT**

City of San Diego
City Administration Building
202 "C" Street
San Diego, California 92101

Contact: Maureen A. Stapleton
Deputy City Manager

April 1990

PREFACE TO THE DRAFT EIR

The legislation authorizing the Navy Broadway Complex project is the National Defense Authorization Act for fiscal year 1987, Public Law 99-661. The Navy and City of San Diego executed a Memorandum of Understanding (MOU) agreeing to enter into a development agreement, which will include a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) are being prepared to address the potential environmental impacts of the proposed project.

This document is the EIR, for which the City of San Diego is the lead agency. In accordance with Section 21083.5 of CEQA, an EIS may be submitted in lieu of an EIR, to the extent that the EIS complies with CEQA and the State CEQA Guidelines. According to Section 21083.7 of CEQA, when a project requires preparation of both an EIS (in accordance with NEPA) and an EIR (in accordance with CEQA), "the lead agency shall, whenever possible, use the EIS as such EIR as provided in Section 21083.5."

The EIS was prepared to fully comply with the provisions of both NEPA and CEQA, and contains all discussions required by each act. As provided by Section 15150 of the State CEQA Guidelines, an EIR "may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public." This EIR incorporates by reference the EIS for the Navy Broadway Complex project. The EIS fully complies with CEQA and the State CEQA Guidelines, so the EIS shall also serve as the EIR for this project. The EIS is being circulated concurrently with and to the same agencies and members of the public as the EIR. Therefore, a summary of the contents of the EIS is not necessary within this EIR. The address to submit comments and request additional information is provided below.

CONTACT FOR INFORMATION AND SEND COMMENTS TO:

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE DRAFT EIR

Written comments must be received at the above address by: _____

JUN 4 1990

CONCLUSIONS TO EIR:

An Environmental Impact Statement (EIS) was prepared to address the environmental impacts of each of the proposed alternatives. This EIR incorporates the EIS by reference. The EIS addressed land use and applicable plans, transportation and circulation, aesthetics and viewshed, public services and utilities, socioeconomics, the physical environment, biological resources, air quality, noise, cultural resources, public health and safety, and energy and conservation.

The preferred alternative, Alternative A, would include a 1.9-acre open space area, a museum, and specific design guidelines consistent with existing plans. Beneficial impacts to land use, viewsheds, recreational facilities, and socioeconomics would result from this alternative.

The proposed alternatives would include transportation demand management measures that would reduce the potential air quality impacts of the project. According to the California Air Resources Board, incorporation of these measures would demonstrate consistency with the State Implementation Plan.

The Regional Air Quality Strategy establishes a goal of maintaining a Level of Service (LOS) C or better to reduce idling of times and vehicular emissions. Cumulative development in the project vicinity would create congestion (Level of Service D or below) at six intersections. The proposed project would contribute a substantial increment to this congestion at one to two of these intersections. City of San Diego standards provide that this incremental contribution to the region's non-attainment of ozone and carbon monoxide standards is a cumulatively significant unmitigated impact.

RECOMMENDED MITIGATION OR ALTERNATIVES FOR SIGNIFICANT UNMITIGATED IMPACTS:

The No Project alternative, which would retain the site in its current condition, would eliminate impacts to air quality and traffic circulation. Other alternatives considered in the EIS would have similar impacts to the proposed project. These alternatives would have a cumulatively significant air quality impact.

MITIGATION MEASURES INCORPORATED INTO THE PROJECT:

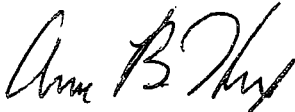
In order to mitigate adverse circulation impacts, intersection improvements would be made in phases timed to construction on the various blocks of the project site. The improvements include the addition of turn lanes at the Broadway/Pacific Highway intersection and the signalization of Harbor Drive north of Broadway and the Pacific Highway/Harbor Drive intersection.

These measures would be implemented by the City of San Diego according to the proposed Development Agreement. Improvements to the Pacific Highway/Grape Street and Broadway/Front Street intersections are also planned by the City as recommended in the Centre City Transportation Action Plan. In addition, "E", "F", and "G" Streets would be extended through the project site. These measures would improve the levels of service (LOS) at three intersections from LOS E-F to LOS D. Other intersections would not be significantly adversely affected by the proposed project.

A Transportation Demand Management (TDM) program would be proposed for the project to reduce peak hour traffic impacts. TDM measures include the provision of reserved carpool spaces and encouraging transit use by accommodating only 80 percent of parking demand on site. Other measures could include the provision of bicycle lockers and transit information.

Operation of several intersections at LOS D would typically be considered a significant traffic impact. However, since the project site is located within Centre City where a densification of uses is necessary to support alternative commute modes, the project is not considered to have a significant traffic impact, from an operational standpoint, after the implementation of the above mitigation measures.

Potentially significant impacts to cultural resources associated with modification or removal of Buildings 1 and 12 would be mitigated by compliance with measures determined through consultation with the State Historic Preservation Officer.



Ann B. Hix, Principal Planner
City Planning Department

NOTICE OF PREPARATION (NOP) FOR A
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
DRAFT ENVIRONMENTAL IMPACT REPORT

LEAD AGENCY:

The City of San Diego, California

PROPOSED ACTION:

The Department of the Navy, in coordination with the City of San Diego, is proposing to redevelop its land known as the Navy Broadway Complex. The project site is located on approximately sixteen acres in downtown San Diego adjacent to the San Diego Bay waterfront and consists of eight city blocks that are bounded by Harbor Drive on the west, Market Street on the south, Pacific Highway on the east, and Broadway on the north (see Exhibits 1 and 2). The site is currently improved with a series of sixteen miscellaneous office and warehouse buildings containing in excess of one million square feet of gross floor area. The buildings were constructed between 1922 and 1945.

The Navy is proposing to consolidate in modern facilities the general regional administrative activities of the naval shore establishment in the San Diego area. These facilities are to be central to the San Diego naval commands, the population of the San Diego area and regional transportation systems. The Navy's objective is to redevelop this site through a public/private partnership designed to meet the Navy's regional administrative office space needs in a manner that will compliment San Diego's bayfront redevelopment. Approximately one million square feet of Navy office space is contemplated to be developed on the site by a private developer(s) for use by the Navy. Additional mixed-use (e.g. office, hotel, specialty retail) private development on the site will be allowed which is intended to offset the cost of the Navy-occupied space thereby reducing cost to the taxpayer.

A conceptual master plan and urban design guidelines will be prepared in coordination with the San Diego community through the City of San Diego to guide the development of the site. It is proposed that the Navy and the City will enter into a development agreement as the mechanism for approval and control of the site's development.

ENVIRONMENTAL CONSIDERATIONS

Prior to entering into such a development agreement, the City of San Diego is required to prepare an Environmental Impact Report (EIR) in compliance with the CEQA. The Navy will also be preparing an Environmental Impact Statement (EIS) for its proposed actions in compliance with the National Environmental Policy Act (NEPA). Because of issues common to both and to facilitate administration, joint hearings and meetings will be conducted for the NEPA and CEQA processes.

The EIR will be a full scope document that will cover all matters of potential environmental concern (an initial study is not attached to this NOP). The environmental analysis will address, but not be limited to, traffic and circulation, land use and planning, waterfront access, aesthetics and view

corridors, public services and utilities, socioeconomics, geology and seismicity, extractable resources, hydrology and drainage, biology, endangered species and critical habitat, air quality, noise, cultural resources, coastal zone management, public health and safety, and energy conservation.

Alternatives that are being considered include variations of private and Navy development on the Broadway Complex site, Navy-only development of the site, development of an alternative site in downtown San Diego, and no action.

COMMENTS ON THE SCOPE OF THE EIR:

The City of San Diego is requesting any comments you may have regarding the scope of the environmental analysis in the EIR. Because of issues common to both the Navy's environmental review and this process and to facilitate administration, the Navy is designated to collect and disseminate questions and comments regarding this process to the City of San Diego for response. Please submit comments, in writing, to the address provided below:

Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
1220 Pacific Highway
San Diego, California 92132-5190
Attn: Captain Wayne Goodermote, CEC, USN

Questions should be addressed to the same address or telephone inquiries can be directed to Anthony Principi, General Counsel, Broadway Complex Project Office, at (619) 532-3291. Written comments must be submitted by December 16, 1988.

In addition, joint public scoping meetings will be held to receive written and oral testimony from governmental agencies and the public about issues that should be addressed in the EIS/EIR. A morning session has been scheduled for agency representatives and an evening session for members of the public. The evening session will adjourn at 11:30 P.M. or earlier, if all comments have been received. The scoping meetings will be conducted by Captain Wayne Goodermote, the Officer in Charge of the Broadway Complex Project Office. The meetings will be informal. Individual speakers will be requested to limit their statements to five minutes. Written statements will be accepted at the meetings or they may be mailed to the address given above.

Both meetings will be open to the general public at the times and locations indicated below:

Morning Session

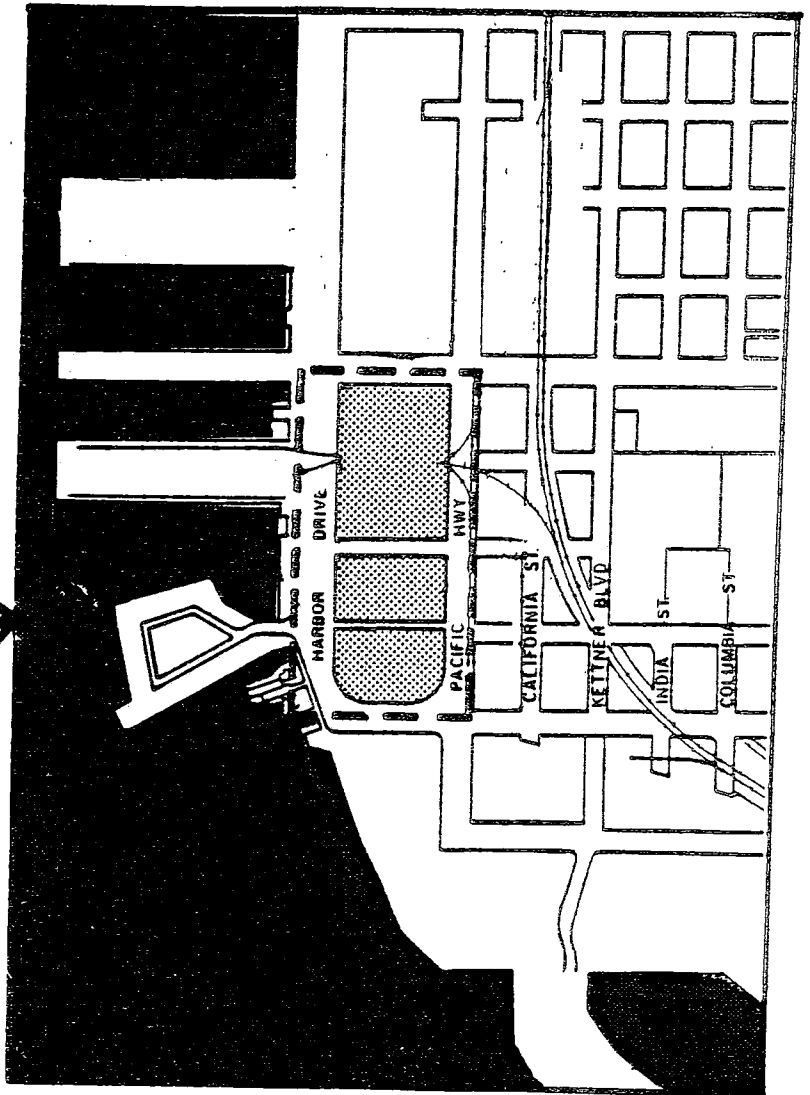
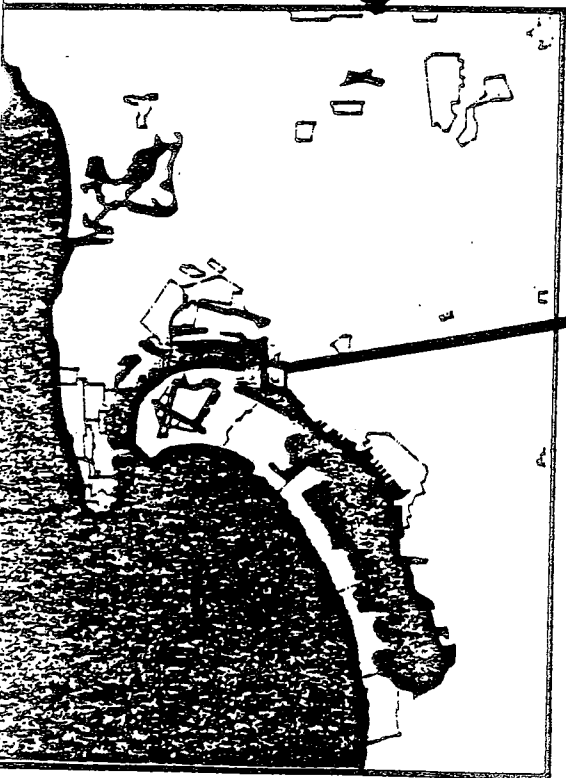
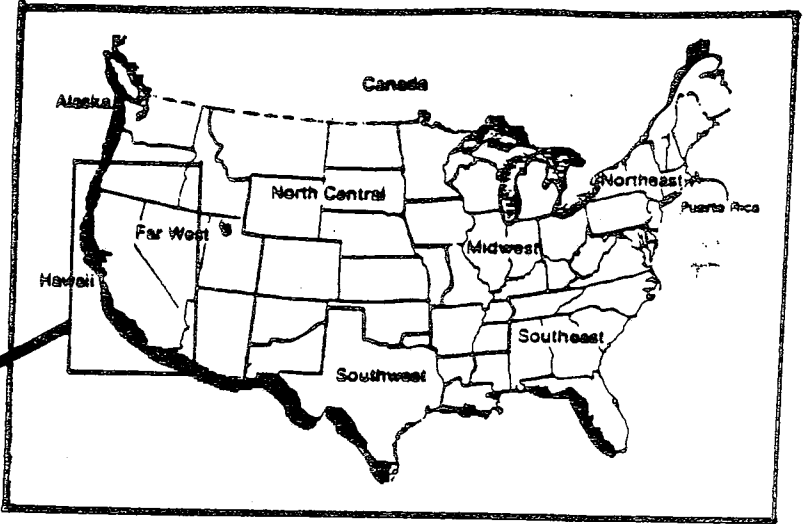
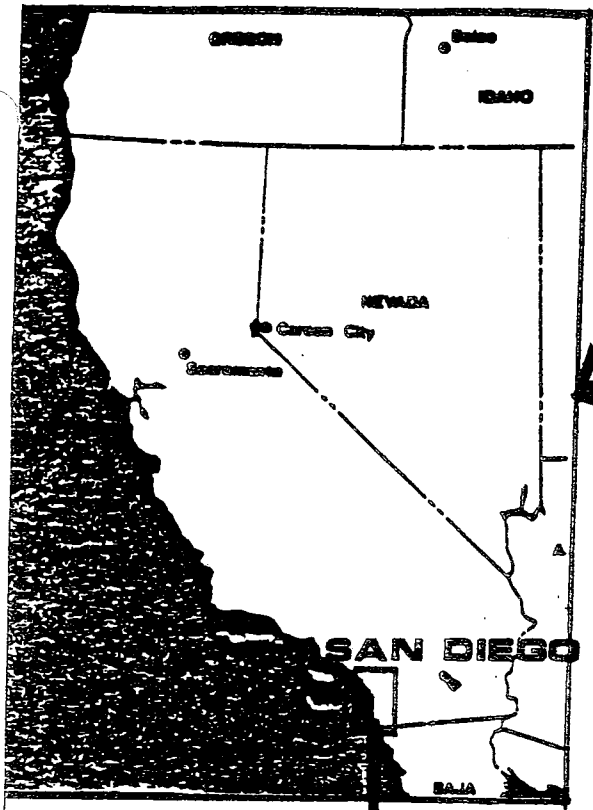
November 14, 1988 - 9:00 a.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

Evening Session

November 14, 1988 - 7:00 p.m.

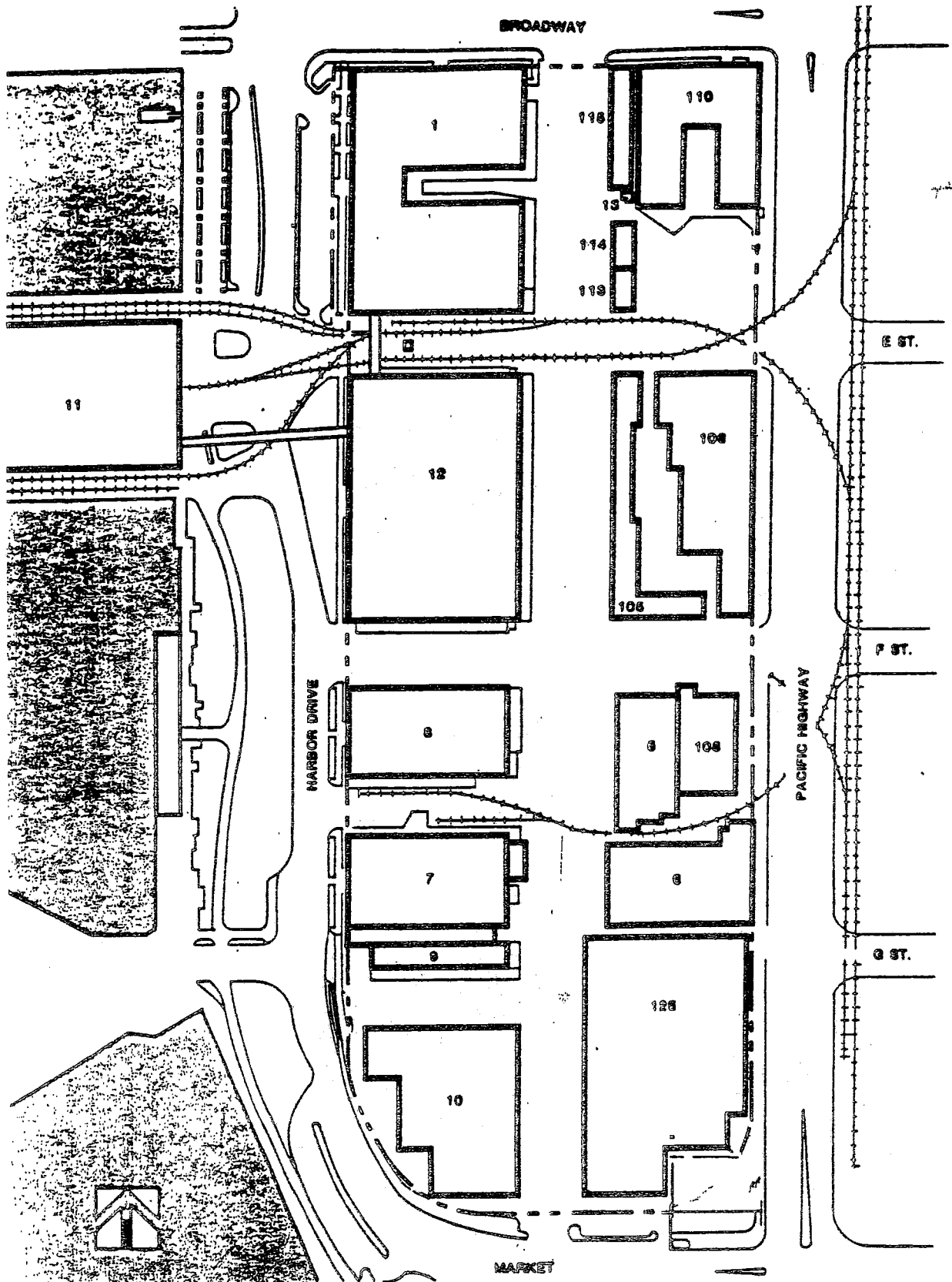
City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101



**BROADWAY COMPLEX,
SAN DIEGO, CALIFORNIA**

LOCATION MAP

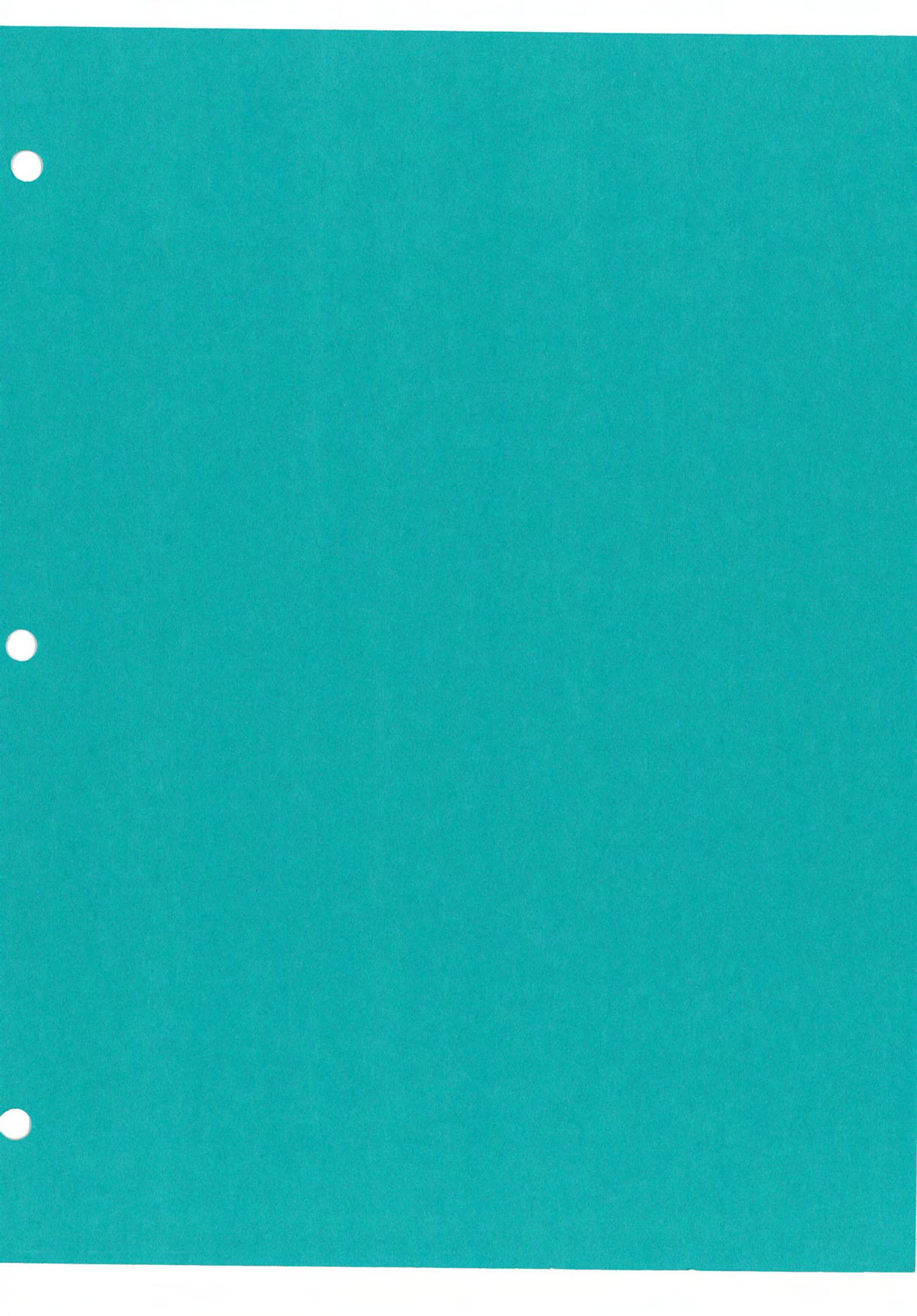
EXHIBIT 1

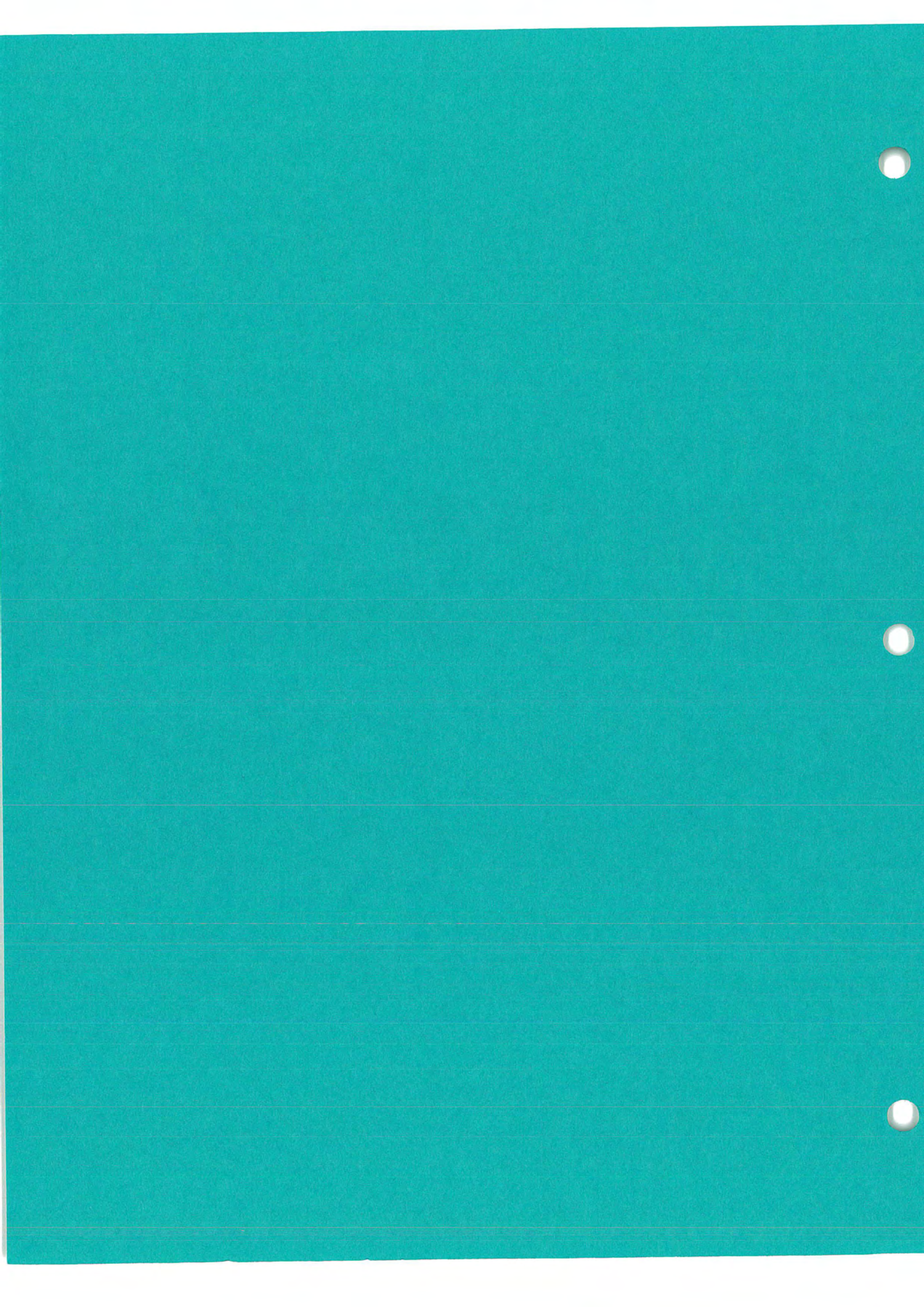


**BROADWAY COMPLEX,
SAN DIEGO, CALIFORNIA**

SITE MAP

EXHIBIT 2

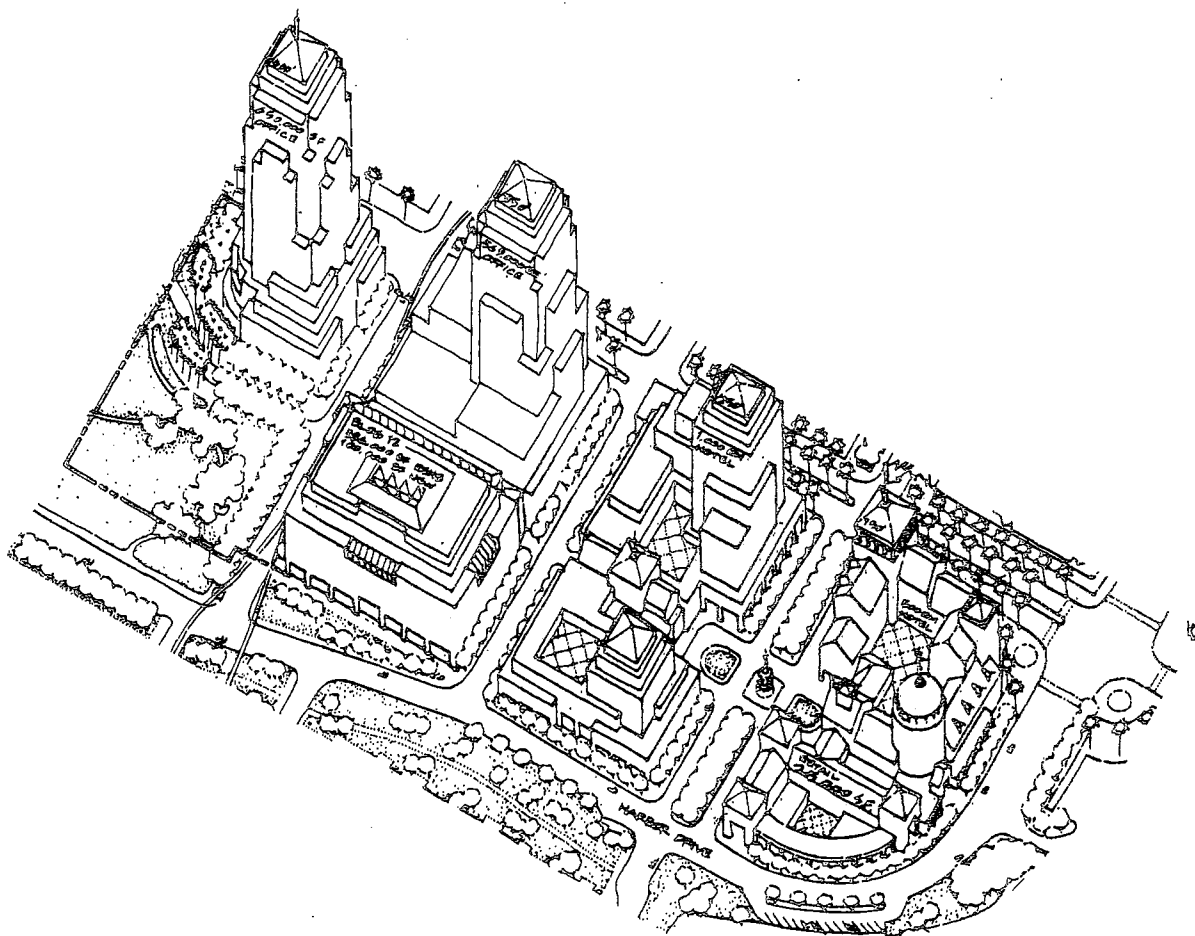




Officer in Charge
Western Division
Naval Facilities Engineering Command
Detachment, Broadway Complex



Final Environmental Impact Statement
Navy Broadway Complex Project
San Diego, California



October 1990

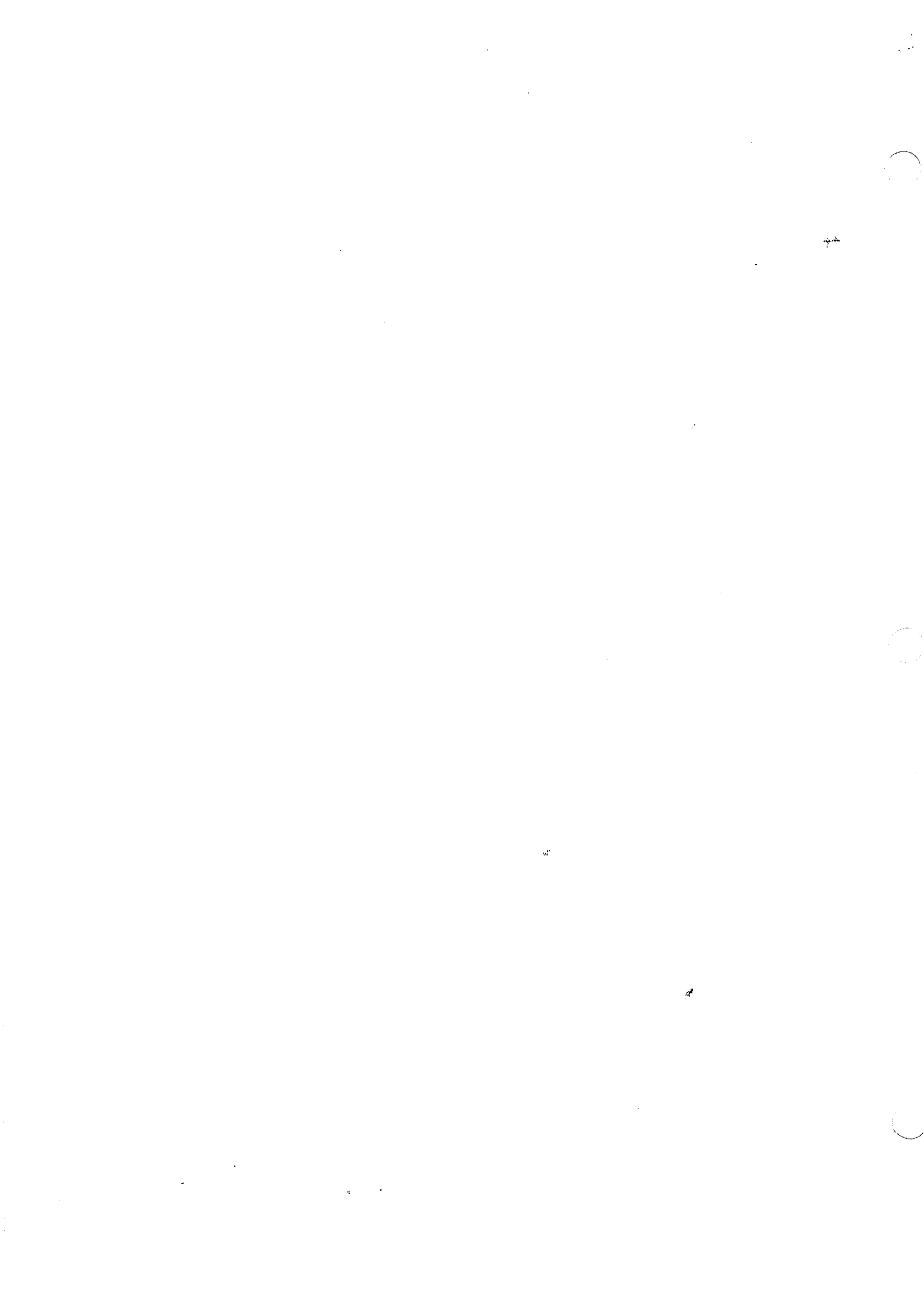
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FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
NAVY BROADWAY COMPLEX PROJECT

Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beach Street, Suite 101
San Diego, California 92101-2937

October 1990



FINAL ENVIRONMENTAL IMPACT STATEMENT (EIS)

U.S. DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

Pursuant to Section 102 of the National Environmental Policy Act of 1969, 40 CFR 1500-1508, and OPNAV Instruction 5090.1.

PROPOSED ACTION

Redevelopment of the Navy Broadway Complex, San Diego, California

LEAD AGENCY

Department of the Navy

ABSTRACT

The Navy has identified a need for administrative office space to accommodate the regional administrative activities of the San Diego naval shore establishment in modern facilities at a site central to other Navy facilities in San Diego. The Navy Broadway Complex is centrally located on approximately 16 acres in downtown San Diego, adjacent to the San Diego waterfront. The site is proposed for redevelopment through a public/private partnership in a manner that will provide needed Navy office space and complement San Diego's bayfront while retaining support activities for the continued operation of the adjacent Navy Pier. The office space will be provided at no cost to the Navy on a portion of the site in return for a long-term ground lease of the remainder of the site to the private developer.

The Navy and the City of San Diego will enter into a development agreement as the mechanism for approval and control of the site's development with approximately 3.25 million square feet of mixed uses that include Navy and commercial offices, a museum, hotel and retail space, and public open space. Alternative A described in the Draft Environmental Impact Statement (DEIS) has been selected as the preferred alternative. The Final Environmental Impact Statement (which incorporates provisions of the DEIS as shown in the table of contents) addresses the full range of potential impacts. Beneficial impacts will occur through the improvement of physical and visual waterfront access, provision of active pedestrian areas, and improved aesthetics. Direct, project-related adverse impacts will be mitigated to a level that is less than significant. A significant unmitigated cumulative impact on air quality will occur. The project will be consistent with local plans for the Central Bayfront and the Centre City, as presented in the Central Bayfront Design Principles and the Centre City San Diego Community Plan.

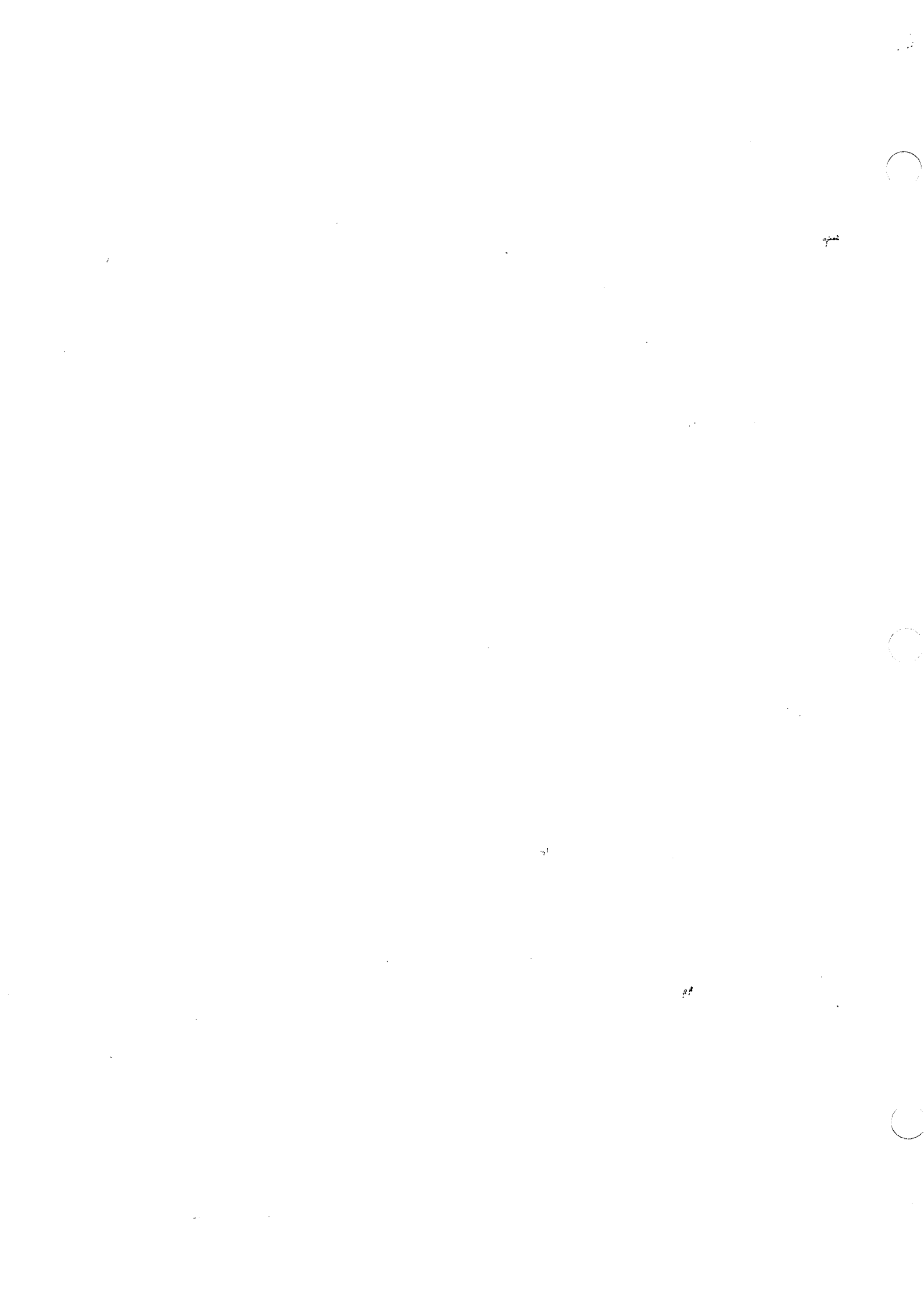
CONTACT FOR INFORMATION AND SEND COMMENTS TO:

W. M. Robinson, Jr., Executive Director
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE FINAL EIS

Written comments must be received by: 17 DEC 1990

JB/06640001.EIS



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Other sections are found in the Draft Environmental Impact Statement, dated April 1990.

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EXECUTIVE SUMMARY

PURPOSE OF AND NEED FOR ACTION

The United States Department of the Navy is the owner and/or operator of 18 administrative, support, and operational installations throughout the City of San Diego area. One such installation is known as the Navy Broadway Complex, which primarily contains administrative and warehouse facilities, and is the location of the Commander, Naval Base, San Diego; the Naval Supply Center, San Diego; and several other Department of Navy activities. The Navy Broadway Complex is centrally located to the other Navy installations on approximately 15.6 acres in downtown San Diego near the waterfront. The site currently houses 405,753 square feet (SF) of office, 179,616 SF of industrial/warehouse buildings, and 421,660 SF of industrial uses for the Navy with a total 1,007,029 SF of development. Although outside of the boundaries of the proposed project, the adjacent Navy Pier is supported by personnel at the Navy Broadway Complex and is part of the complex.

The Naval Supply Center initiated long range plans in 1979 to move much of the warehousing from the Navy Broadway Complex site to new, modern facilities located at existing naval operational bases in the San Diego region. Subsequent to this, a regional study of Navy administrative and facility requirements was conducted. The study reaffirmed that the Navy Broadway Complex with the Navy Pier was essential for national security purposes. The Navy Broadway Complex was determined to be the most suitable site for Navy regional administrative offices because of its central location in relation to other Navy installations, and its proximity to several major regional transportation facilities, including light rail transit lines, a railroad, several bus lines, and an extensive freeway complex.

Redevelopment of the Navy Broadway Complex, with continued operation of the adjacent Navy Pier, was approved by the Chief of Naval Operations in 1983. A need for up to 1 million SF of upgraded office space has since been identified to accommodate Navy administrative personnel.

The typical means by which construction of Navy offices, or other military facilities, is funded is through Congressionally approved Military Construction (MILCON) appropriations, which are taxpayer-funded and Congressionally approved. However, Congress endorsed, through Public Law (P.L.) 99-661, a concept proposed by Navy planners and community groups by which the site would be developed at reduced cost to the taxpayers through a public/private venture. P.L. 99-661 was a component of the National Defense Authorization Act of 1987.

The legislation (and related Office of Management and Budget Guidelines) allows the Secretary of the Navy to enter into long-term leases of portions of the Navy Broadway Complex in consideration for the development of the needed Navy office space on the site at no cost to the Navy.

The Navy and the City of San Diego entered into a Memorandum of Understanding (MOU) on June 1, 1987 to guide the planning and approval process for redevelopment of the Navy Broadway Complex. The MOU specifies that the Navy, in consultation with the City of San Diego, will prepare a development plan and urban design guidelines that will define the nature of development that will occur on the Navy Broadway Complex. The development plan and urban design guidelines would become part of a development agreement between the Navy and the City of San Diego.

PROPOSED ACTION

The proposed action is described as Alternative A in the Draft Environmental Impact Statement. In accordance with this alternative, the Department of the Navy proposes to redevelop the Navy Broadway Complex with 3,250,000 SF of mixed uses (including 300,000 SF of above-grade parking). The project is intended to provide a balance between developed and open space uses on the site, while meeting the Navy's office space objective. Designed to maximize community objectives, the project would provide for a number of beneficial uses. Such uses are described below.

- A 1.9-acre public open space area would be provided for community use at the foot of Broadway, adjacent to the waterfront. This area could potentially be combined with adjacent properties to create an even larger open space that could be considered a new waterfront gateway to downtown San Diego.
- Up to 55,000 SF of space for a museum, which would be completed and operated by a community-sponsored organization.
- Pedestrian and vehicular access would be developed along E, F, and G Streets and would be upgraded on all streets surrounding the site so that access between the downtown core and the waterfront would be improved. Access along the waterfront would also be improved by providing a midblock pedestrian passage parallel to the bayfront.
- View corridors along E, F, and G streets would be opened to the waterfront.
- Ground-level retail would be provided to encourage pedestrian use of the area.

The proposed mix of uses for the project is shown below. Depending on market conditions, the square footage may be modified, with the overall square footage not to exceed 3,250,000 SF.

- Navy office: 1 million SF
- Museum: 55,000 SF
- Commercial office: 650,000 SF
- Hotel: 1,220,000 SF (1,500 rooms)
- Retail: 25,000 SF
- Above-grade parking: 300,000 SF (800 spaces)
- Total parking spaces: 3,105

The project would be designed so that the tallest buildings are in the northeastern portion of the site closest to downtown San Diego, while shorter structures step down to the waterfront to the west and south. The tallest building would be up to 400 feet in height, with the other buildings ranging from 100 to 350 feet. Buildings would have a slender design to provide open view corridors.

COORDINATION

During preparation of the draft and final EIS, affected agencies were contacted for technical information and elaboration of agency concerns. Mitigation measures were developed in coordination with such agencies. Additional coordination with some of the listed agencies may be required during project implementation:

1. City of San Diego (traffic and other infrastructure improvements)
2. California State Historic Preservation Officer (cultural resources)
3. National Park Service (cultural resources)
4. California Regional Water Quality Control Board (temporary construction dewatering)
5. Federal Aviation Administration (construction within a Federal Aviation Regulation imaginary surface)

A complete listing of all agencies consulted during preparation of the EIS is contained in Section 12. A complete listing of all agencies and individuals who commented on the draft EIS is included in Appendix F.

MAJOR ENVIRONMENTAL ISSUES

The draft EIS disclosed the potential environmental impacts of the proposed action and provided mitigation measures to reduce the significant impacts. The draft EIS was based on environmental issues identified by the Navy and through an early consultation process, which included the October 18, 1988 circulation of a Notice of Intent to public agencies and interested individuals, and the November 14, 1988 public scoping meeting. The draft EIS was circulated for public comments on April 13, 1990, and a public hearing was held May 16, 1990. The public review period was closed June 4, 1990. Comments on the draft EIS and responses thereto are included in Appendix F. Complete environmental documentation required by law is contained in the draft EIS and the final EIS, which need to be read together to obtain a comprehensive understanding of the project and its environmental consequences. The following discussion summarizes the major findings of the EIS.

Land Use and Applicable Plans: The project is compatible with surrounding land uses and provides active pedestrian uses such as an open space area (1.9 acres), pedestrian corridors, and space for a waterfront museum. It would substantially improve waterfront access by extending E, F, and G streets through the site to the waterfront and providing pedestrian-oriented improvements. The project is consistent with public access, coastal development, and visual resource policies of the California Coastal Act. It is also consistent with the general principles adopted for development of properties in San Diego's Central Bayfront, as well as with the preliminary Centre City San Diego Community Plan. In addition, the project creates a strong linkage between downtown and the waterfront and implements the City-adopted goals of providing open space at the foot of Broadway and waterfront-oriented land uses.

Transportation/Circulation: Development of Phase I of the project would not substantially affect any intersections. Long-term project operations would adversely affect the operation of several intersections in the project vicinity. Affected intersections include Grape/Pacific, Broadway/Harbor, Broadway/Pacific, and Broadway/Front. Intersection improvements associated with the project or programmed by the City of San Diego would reduce impacts at each intersection to less than significant. In addition to the listed intersections, long-term project traffic would significantly contribute to overcapacity conditions along Pacific Highway south of Broadway and First Avenue south of Ash. Planned improvements along First Avenue would reduce to less

than significant expected impacts along the segment south of Ash. With implementation of a Travel Demand Management program, sufficient parking would be provided to meet parking demands onsite.

Aesthetics and Viewsheds: Viewsheds would be altered by replacing or upgrading the existing buildings. The project would be designed to be visually compatible with the surrounding viewshed and would beneficially affect viewsheds by opening up and/or protecting view corridors along Broadway and E, F, and G streets.

Geology and Seismicity: The site is considered to generally lie within the Rose Canyon fault zone. The project could be subjected to severe seismic shaking, with a potential onsite liquefaction hazard. Design measures to withstand geologic hazards would reduce adverse effects to less than significant.

Biological Resources: Terrestrial biological resources are not present because the site is already developed, so no impacts would occur. No substantial shadows would be cast over the bayfront during the time of the day when the sun is direct (after 9:30 a.m., even during the winter season), thus avoiding any potential significant effects to marine life. Mirrored glass would be prohibited in buildings, reducing the possibility for bird strikes.

Air Quality: Substantial new vehicle trips would be generated. An extensive Travel Demand Management Program would be implemented to substantially reduce the use of single-occupancy vehicles. The air quality management plan and State Implementation Plan are being updated to reflect current growth conditions. The primary means to reduce emissions will be a reduction in single-occupancy vehicles. The project would be compatible. However, the San Diego Air Basin has not attained standards for ozone and carbon monoxide. The project would contribute substantially to congestion at one intersection (Pacific/Grape). Because of the air basin's non-attainment status, this would result in a significant contribution to cumulative regional air quality impacts.

Cultural Resources: The site is underlain with artifacts from waterfront development between the 1880s and 1910s. These materials are buried beneath the dredged fill placed onsite to create dry land for more development. The archaeology, while containing many artifacts, lacks stratigraphic integrity and context, and is therefore unlikely to contribute important information about San Diego's early history. The archaeological resources do not appear to qualify for inclusion in the National Register of Historic Places. This has been confirmed through consultation with the California State Historic Preservation Officer and the Advisory Council on Historic Preservation. Excavation for footings and other below-grade construction would destroy any archaeology that might exist but this would not result in the loss of a significant resource. Should an unanticipated significant archaeological resource be discovered during project excavations, it would be evaluated and, if found to be important, would be treated in accordance with 36 CFR 800.11.

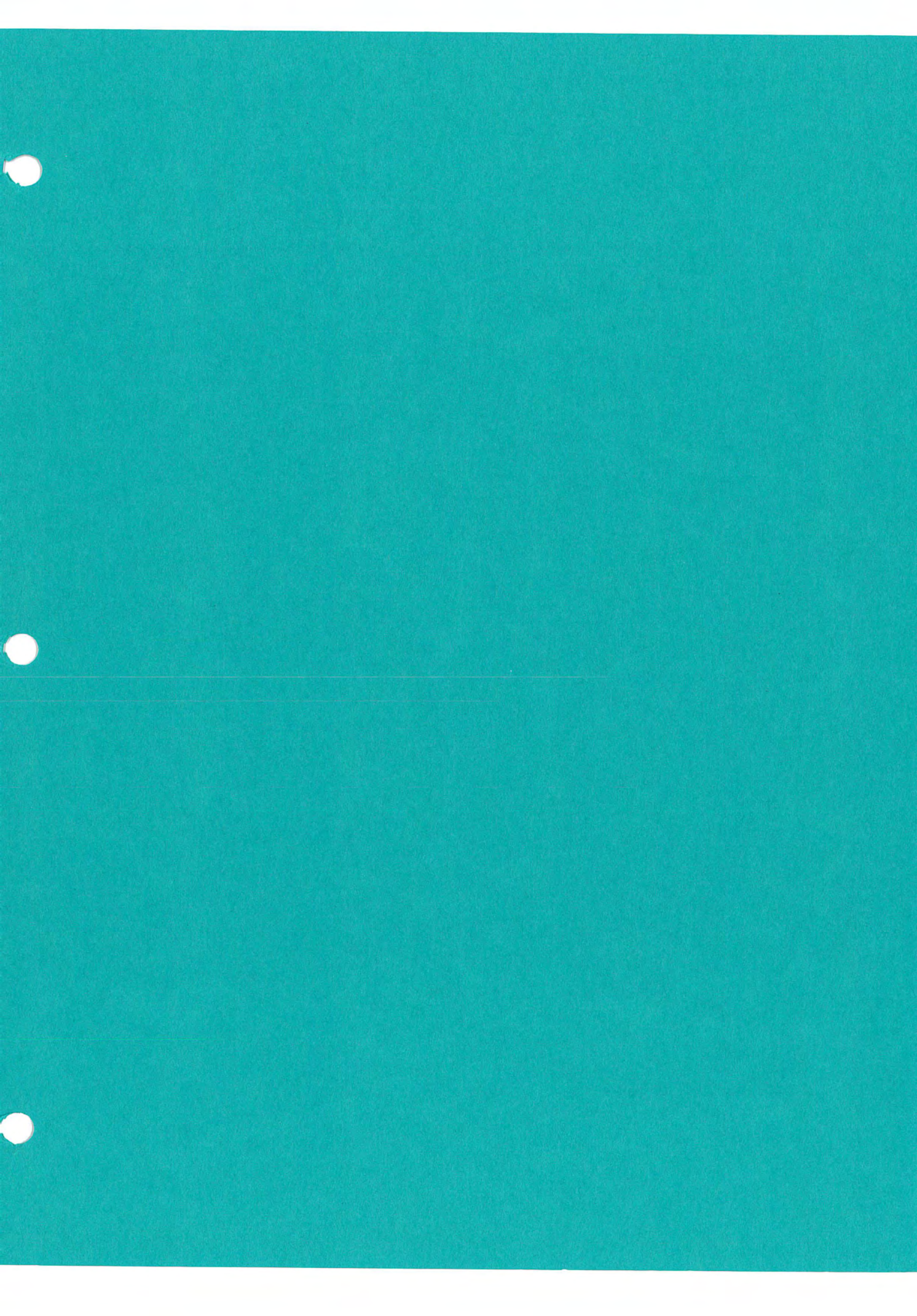
Navy Broadway Complex Buildings 1 and 12, combined with the Navy Pier (located outside the project boundaries), form a unit that represents every major period of Navy development at this location. These structures have been an architectural feature of the San Diego Harbor and skyline for nearly 50 years. As a unit, they appear to qualify for the National Register of Historic Places. Demolition or any substantial modification of these structures would constitute a significant impact. Specific mitigation has been developed in consultation with California SHPO pursuant to the regulations (36 CFR 800) for implementing Section 106 of the National Historic

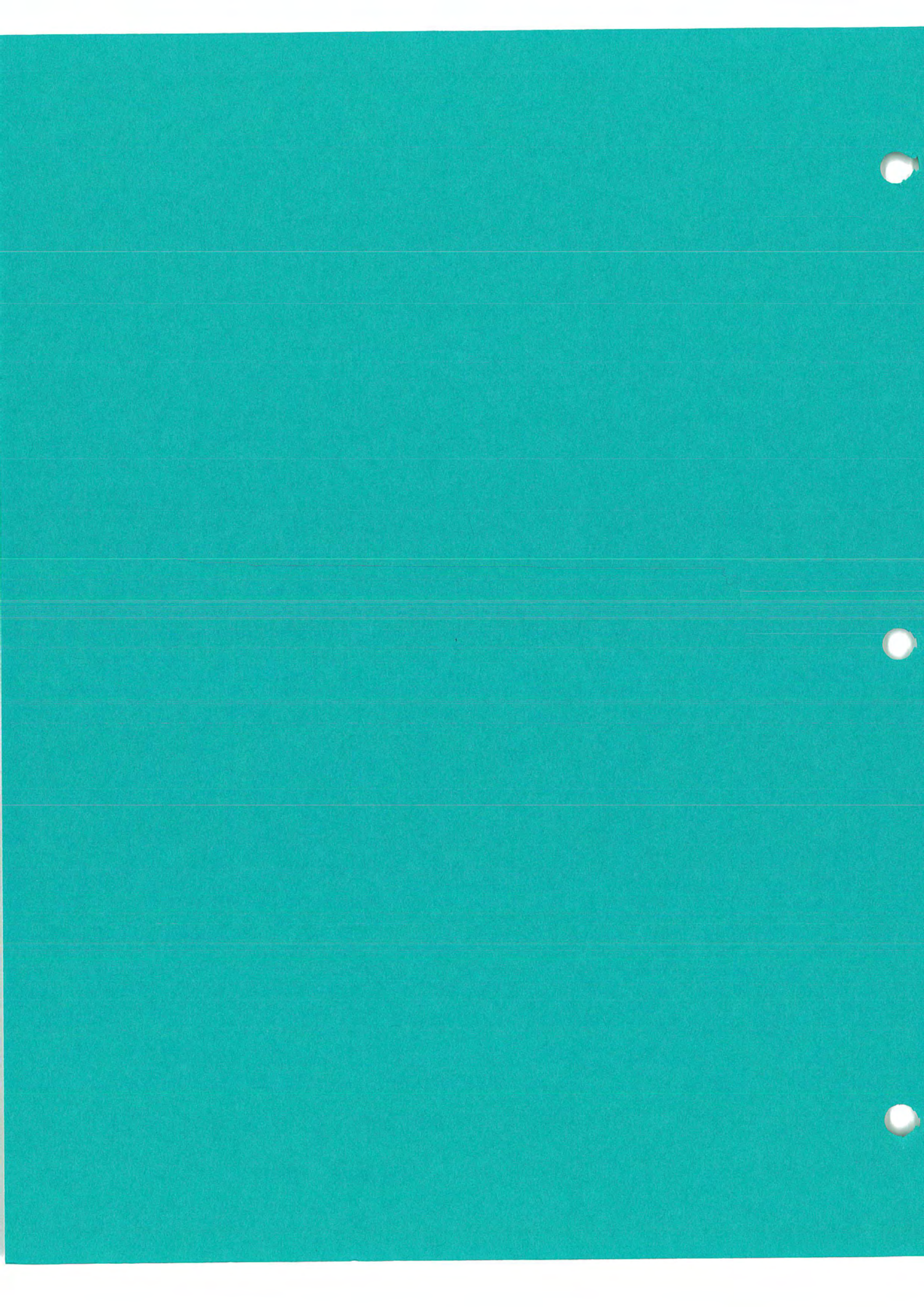
Preservation Act (16 U.S.C. 470f). The Navy will record Buildings 1 and 12 in accordance with the Historic American Buildings Survey Standards prior to demolition or modification.

Public Health and Safety: Minor hazardous waste spills were located or may be located on the site. In addition, transformers that contain PCBs are located on the site although none are known to be leaking. Because the presence of hazardous waste can affect public health, this would be considered a significant impact with any of the alternatives. There are no known major hazardous waste spills or leaking underground storage tanks on the site. Remedial action to remove and properly dispose of any hazardous waste found on the site will occur. Most of the existing buildings on the site contain asbestos. A potential public health hazard would result during demolition, when asbestos fibers could become air-borne. The project would be required to comply with the Federal Clean Air Act to protect the public from exposure to asbestos.

A groundwater plume that has been contaminated with hydrocarbons is 1/3 mile (estimated) and downgradient of the Navy Broadway Complex. Groundwater quality testing at the site found no evidence of contamination. Although unlikely, temporary groundwater dewatering during subsurface construction could draw the plume toward the site. A National Pollutant Discharge Elimination System Permit covering the discharge of construction dewatering effluent was issued by the Regional Water Quality Control Board. The developer will apply for authorization to discharge under authority of that permit.

The 400-foot-high building on Block 1 would exceed non-operational imaginary height surfaces, but based on a Federal Aviation Administration (FAA) determination, would not result in a hazard to air navigation. Buildings on the easterly areas of Blocks 1, 2, and 3 would be obstruction lighted, per FAA standards.





Officer in Charge
Western Division
Naval Facilities Engineering Command
Detachment, Broadway Complex



Draft Environmental Impact Statement
Navy Broadway Complex Project
San Diego, California

April 1990

R-280915

**DRAFT
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
NAVY BROADWAY COMPLEX PROJECT**

Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937

April 1990

DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)

U.S. DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

Pursuant to Section 102 of the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.), OPNAV Instruction 5090.1, and 40 CFR 1500-1508, November 29, 1978.

PROPOSED ACTION

Redevelopment of Navy Land Known as the Navy Broadway Complex, San Diego, California

LEAD AGENCY

Department of the Navy

ABSTRACT

The Navy has identified a need to consolidate the regional administrative activities of the San Diego naval shore establishment in modern facilities at a site central to other Navy facilities in San Diego. The Navy Broadway Complex is centrally located on approximately 16 acres in downtown San Diego, adjacent to the San Diego waterfront. The site is proposed for redevelopment through a public/private partnership to meet the Navy's regional administrative office space needs in a manner that will complement San Diego's bayfront, while retaining support activities for the continued operation of the adjacent Navy Pier. Approximately 1 million square feet of office space is needed for use by the Navy. Additional mixed-use private development (e.g., office, hotel, retail) on the site will be included to offset the cost of the Navy-occupied space, thereby reducing the cost to the taxpayer. It is proposed that the Navy and the city will enter into a development agreement as the mechanism for approval and control of the site's development.

The EIS addresses the issues of traffic and circulation, land use and planning, aesthetics and view corridors, public services and utilities, socioeconomics, geology and seismicity, hydrology and drainage, biology, air quality, noise, cultural resources, coastal policy consistency, public health and safety, and energy conservation. Alternatives assessed in the EIS include variations of combined private and Navy development on the Navy Broadway Complex, Navy-only construction on the site, development of the site in conjunction with an alternative location in downtown San Diego, and no action.

CONTACT FOR INFORMATION AND SEND COMMENTS TO:

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE DRAFT EIS

Written comments must be received at the above address by: 04 JUN 1990

PREFACE TO THE DRAFT EIS

The legislation authorizing this project is the National Defense Authorization Act for fiscal year 1987, Public Law 99-661. The Navy and City of San Diego executed a Memorandum of Understanding (MOU) agreeing to enter into a development agreement, which will include a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) are being prepared to address the potential environmental impacts of the proposed project.

This document is the EIS, for which the Department of the Navy is the lead agency. The EIR, prepared in accordance with CEQA, is being circulated to the public by the City of San Diego simultaneously with this EIS. The EIR incorporates by reference the EIS. The public is invited to review and submit comments on either or both of these documents.

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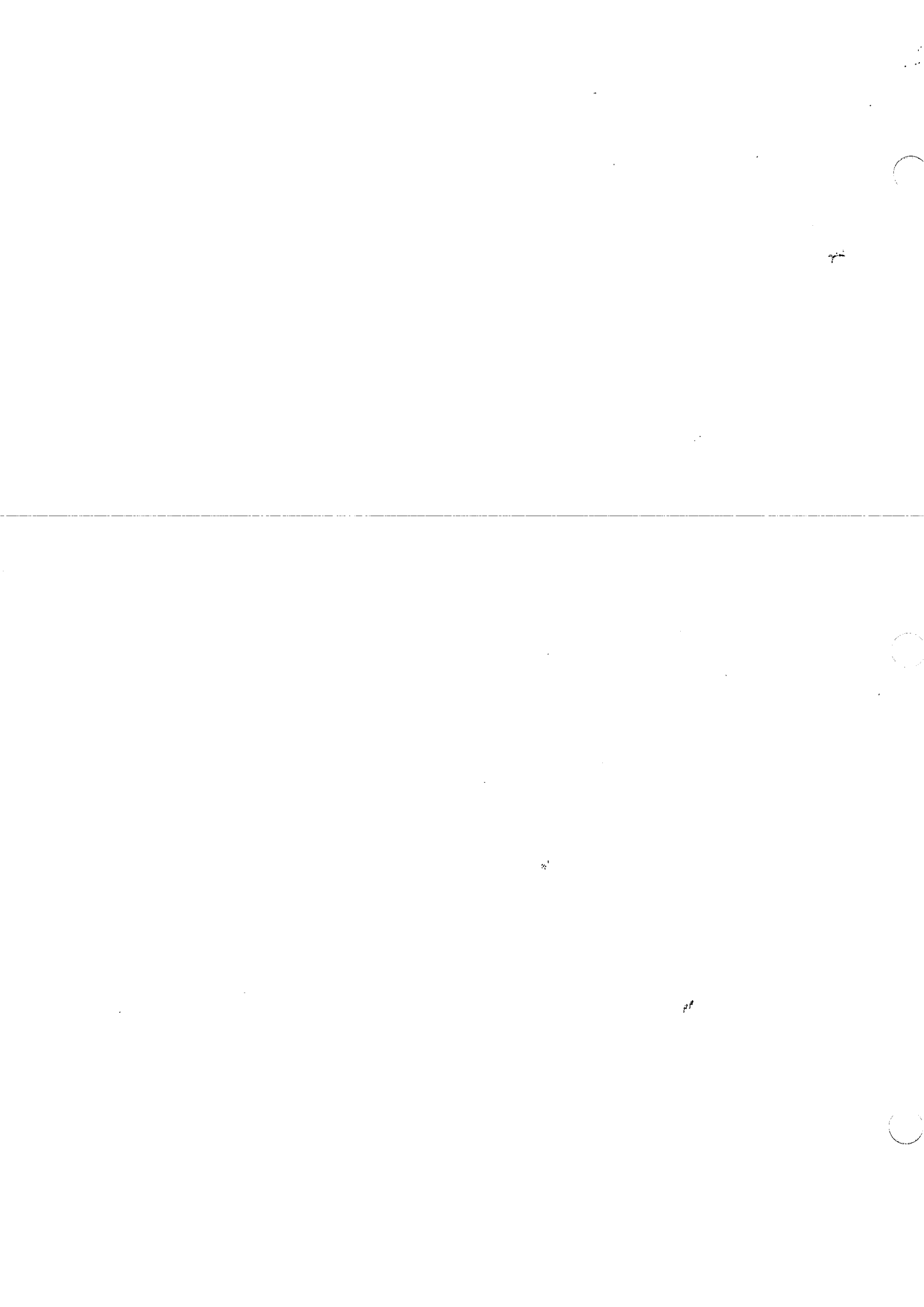
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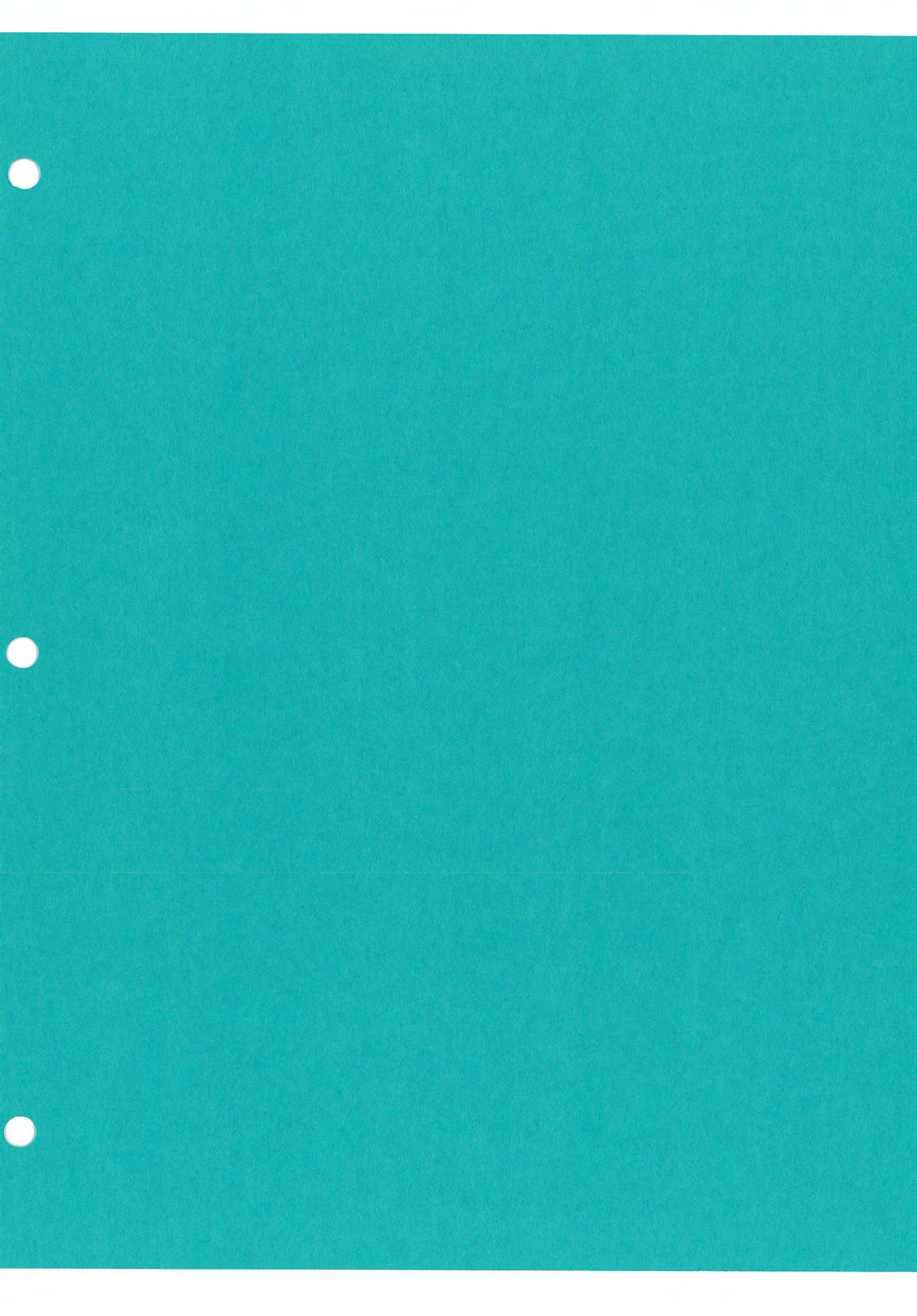
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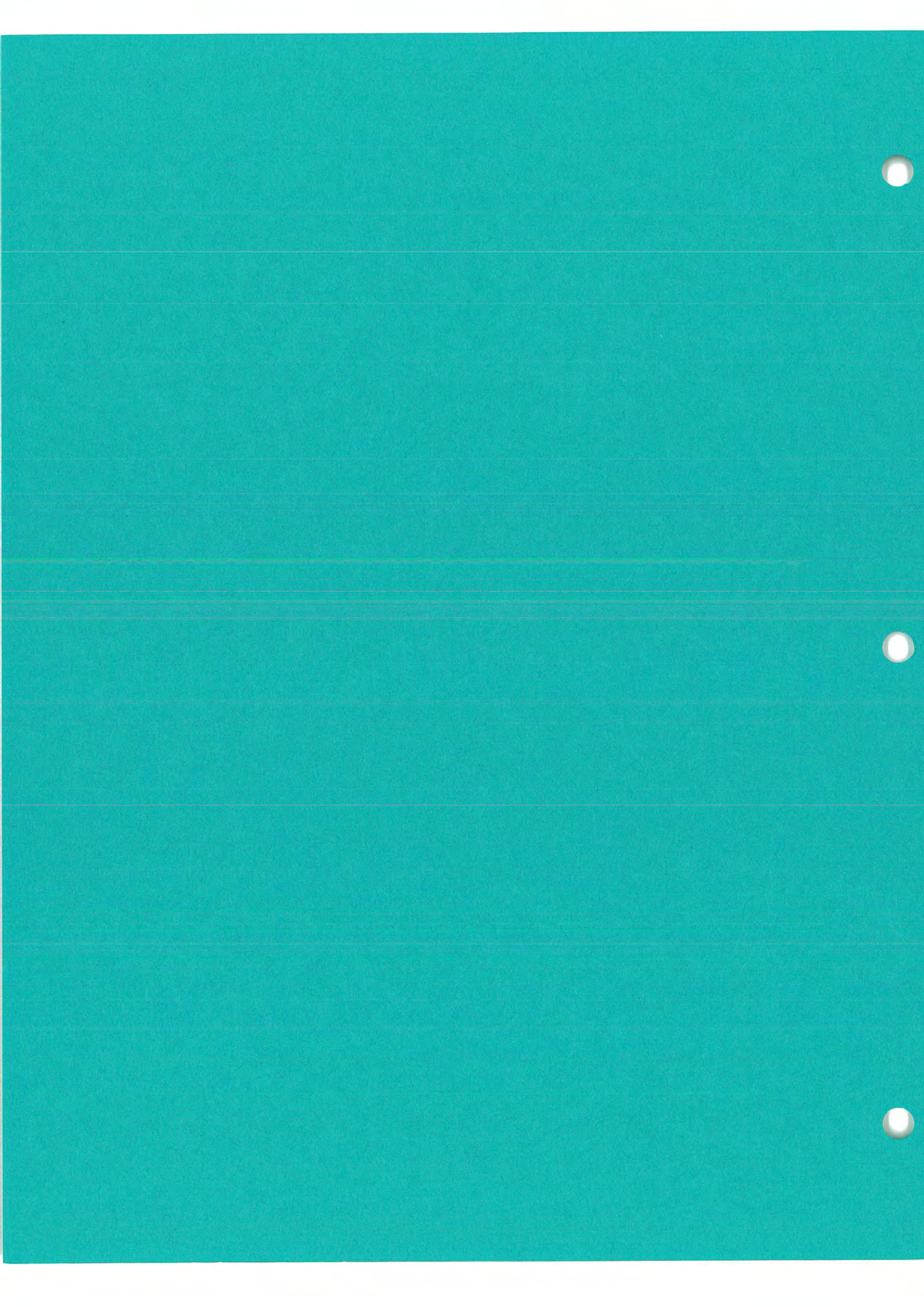
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PREFACE TO THE DRAFT EIR

The legislation authorizing the Navy Broadway Complex project is the National Defense Authorization Act for fiscal year 1987, Public Law 99-661. The Navy and City of San Diego executed a Memorandum of Understanding (MOU) agreeing to enter into a development agreement, which will include a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) are being prepared to address the potential environmental impacts of the proposed project.

This document is the EIR, for which the City of San Diego is the lead agency. In accordance with Section 21083.5 of CEQA, an EIS may be submitted in lieu of an EIR, to the extent that the EIS complies with CEQA and the State CEQA Guidelines. According to Section 21083.7 of CEQA, when a project requires preparation of both an EIS (in accordance with NEPA) and an EIR (in accordance with CEQA), "the lead agency shall, whenever possible, use the EIS as such EIR as provided in Section 21083.5."

The EIS was prepared to fully comply with the provisions of both NEPA and CEQA, and contains all discussions required by each act. As provided by Section 15150 of the State CEQA Guidelines, an EIR "may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public." This EIR incorporates by reference the EIS for the Navy Broadway Complex project. The EIS fully complies with CEQA and the State CEQA Guidelines, so the EIS shall also serve as the EIR for this project. The EIS is being circulated concurrently with and to the same agencies and members of the public as the EIR. Therefore, a summary of the contents of the EIS is not necessary within this EIR. The address to submit comments and request additional information is provided below.

CONTACT FOR INFORMATION AND SEND COMMENTS TO:

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE DRAFT EIR

Written comments must be received at the above address by: 04 JUN 1990

CONCLUSIONS TO EIR:

An Environmental Impact Statement (EIS) was prepared to address the environmental impacts of each of the proposed alternatives. This EIR incorporates the EIS by reference. The EIS addressed land use and applicable plans, transportation and circulation, aesthetics and viewshed, public services and utilities, socioeconomics, the physical environment, biological resources, air quality, noise, cultural resources, public health and safety, and energy and conservation.

The preferred alternative, Alternative A, would include a 1.9-acre open space area, a museum, and specific design guidelines consistent with existing plans. Beneficial impacts to land use, viewsheds, recreational facilities, and socioeconomics would result from this alternative.

The proposed alternatives would include transportation demand management measures that would reduce the potential air quality impacts of the project. According to the California Air Resources Board, incorporation of these measures would demonstrate consistency with the State Implementation Plan.

The Regional Air Quality Strategy establishes a goal of maintaining a Level of Service (LOS) C or better to reduce idling of times and vehicular emissions. Cumulative development in the project vicinity would create congestion (Level of Service D or below) at six intersections. The proposed project would contribute a substantial increment to this congestion at one to two of these intersections. City of San Diego standards provide that this incremental contribution to the region's non-attainment of ozone and carbon monoxide standards is a cumulatively significant unmitigated impact.

RECOMMENDED MITIGATION OR ALTERNATIVES FOR SIGNIFICANT UNMITIGATED IMPACTS:

The No Project alternative, which would retain the site in its current condition, would eliminate impacts to air quality and traffic circulation. Other alternatives considered in the EIS would have similar impacts to the proposed project. These alternatives would have a cumulatively significant air quality impact.

MITIGATION MEASURES INCORPORATED INTO THE PROJECT:

In order to mitigate adverse circulation impacts, intersection improvements would be made in phases timed to construction on the various blocks of the project site. The improvements include the addition of turn lanes at the Broadway/Pacific Highway intersection and the signalization of Harbor Drive north of Broadway and the Pacific Highway/Harbor Drive intersection.

Notice of Preparation

NOTICE OF PREPARATION (NOP) FOR A
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
DRAFT ENVIRONMENTAL IMPACT REPORT

LEAD AGENCY:

The City of San Diego, California

PROPOSED ACTION:

The Department of the Navy, in coordination with the City of San Diego, is proposing to redevelop its land known as the Navy Broadway Complex. The project site is located on approximately sixteen acres in downtown San Diego adjacent to the San Diego Bay waterfront and consists of eight city blocks that are bounded by Harbor Drive on the west, Market Street on the south, Pacific Highway on the east, and Broadway on the north (see Exhibits 1 and 2). The site is currently improved with a series of sixteen miscellaneous office and warehouse buildings containing in excess of one million square feet of gross floor area. The buildings were constructed between 1922 and 1945.

The Navy is proposing to consolidate in modern facilities the general regional administrative activities of the naval shore establishment in the San Diego area. These facilities are to be central to the San Diego naval commands, the population of the San Diego area and regional transportation systems. The Navy's objective is to redevelop this site through a public/private partnership designed to meet the Navy's regional administrative office space needs in a manner that will compliment San Diego's bayfront redevelopment. Approximately one million square feet of Navy office space is contemplated to be developed on the site by a private developer(s) for use by the Navy. Additional mixed-use (e.g. office, hotel, specialty retail) private development on the site will be allowed which is intended to offset the cost of the Navy-occupied space thereby reducing cost to the taxpayer.

A conceptual master plan and urban design guidelines will be prepared in coordination with the San Diego community through the City of San Diego to guide the development of the site. It is proposed that the Navy and the City will enter into a development agreement as the mechanism for approval and control of the site's development.

ENVIRONMENTAL CONSIDERATIONS

Prior to entering into such a development agreement, the City of San Diego is required to prepare an Environmental Impact Report (EIR) in compliance with the CEQA. The Navy will also be preparing an Environmental Impact Statement (EIS) for its proposed actions in compliance with the National Environmental Policy Act (NEPA). Because of issues common to both and to facilitate administration, joint hearings and meetings will be conducted for the NEPA and CEQA processes.

The EIR will be a full scope document that will cover all matters of potential environmental concern (an initial study is not attached to this NOP). The environmental analysis will address, but not be limited to, traffic and circulation, land use and planning, waterfront access, aesthetics and view

corridors, public services and utilities, socioeconomics, geology and seismicity, extractable resources, hydrology and drainage, biology, endangered species and critical habitat, air quality, noise, cultural resources, coastal zone management, public health and safety, and energy conservation.

Alternatives that are being considered include variations of private and Navy development on the Broadway Complex site, Navy-only development of the site, development of an alternative site in downtown San Diego, and no action.

COMMENTS ON THE SCOPE OF THE EIR:

The City of San Diego is requesting any comments you may have regarding the scope of the environmental analysis in the EIR. Because of issues common to both the Navy's environmental review and this process and to facilitate administration, the Navy is designated to collect and disseminate questions and comments regarding this process to the City of San Diego for response. Please submit comments, in writing, to the address provided below:

Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
1220 Pacific Highway
San Diego, California 92132-5190
Attn: Captain Wayne Goodermote, CEC, USN

Questions should be addressed to the same address or telephone inquiries can be directed to Anthony Principi, General Counsel, Broadway Complex Project Office, at (619) 532-3291. Written comments must be submitted by December 16, 1988.

In addition, joint public scoping meetings will be held to receive written and oral testimony from governmental agencies and the public about issues that should be addressed in the EIS/EIR. A morning session has been scheduled for agency representatives and an evening session for members of the public. The evening session will adjourn at 11:30 P.M. or earlier, if all comments have been received. The scoping meetings will be conducted by Captain Wayne Goodermote, the Officer in Charge of the Broadway Complex Project Office. The meetings will be informal. Individual speakers will be requested to limit their statements to five minutes. Written statements will be accepted at the meetings or they may be mailed to the address given above.

Both meetings will be open to the general public at the times and locations indicated below:

Morning Session

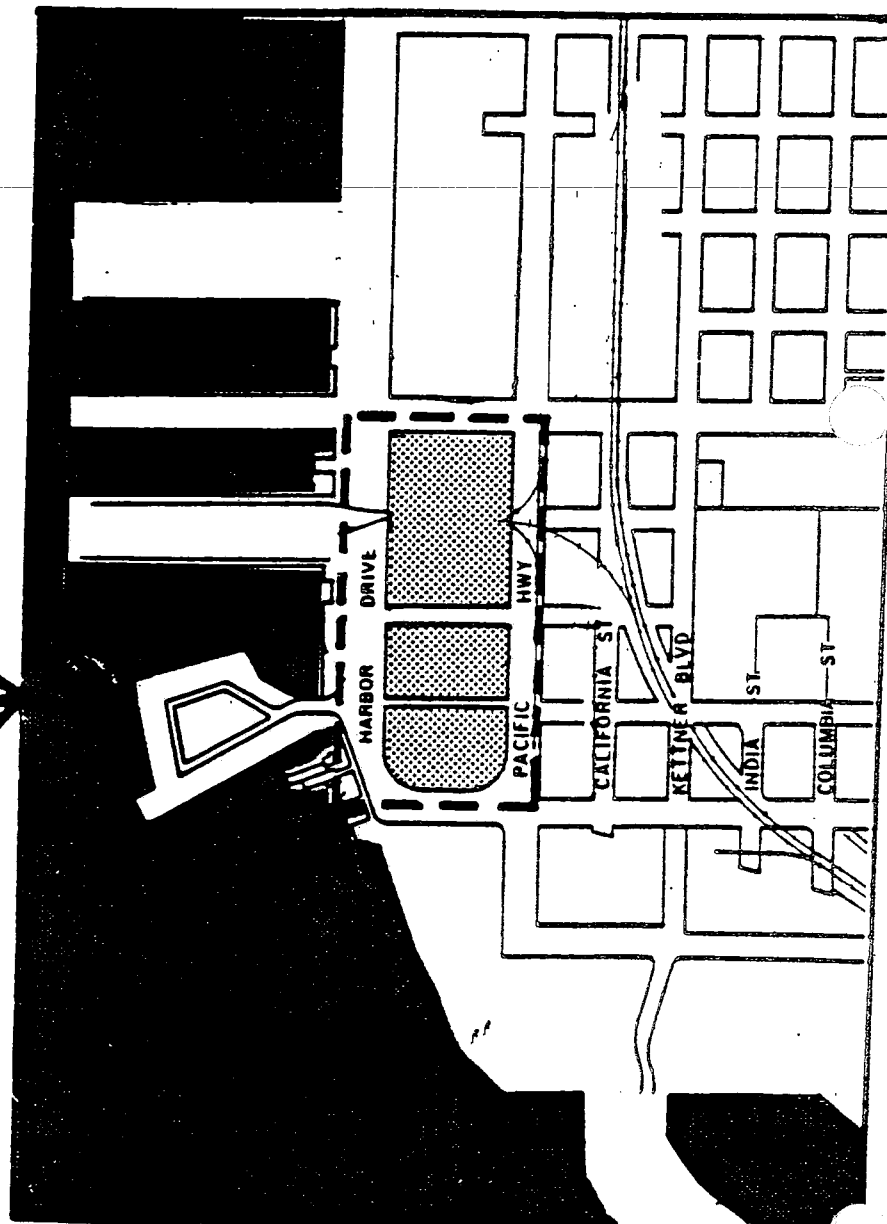
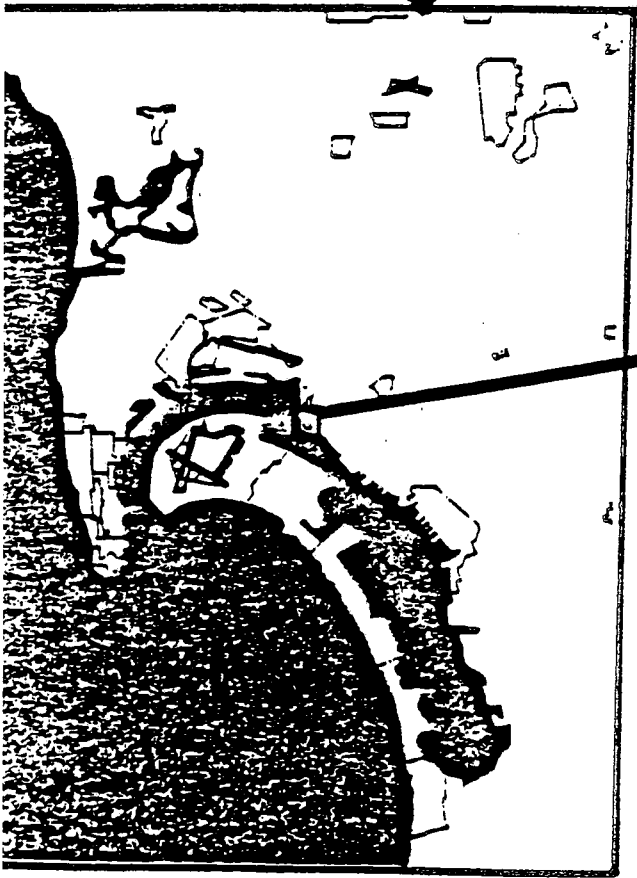
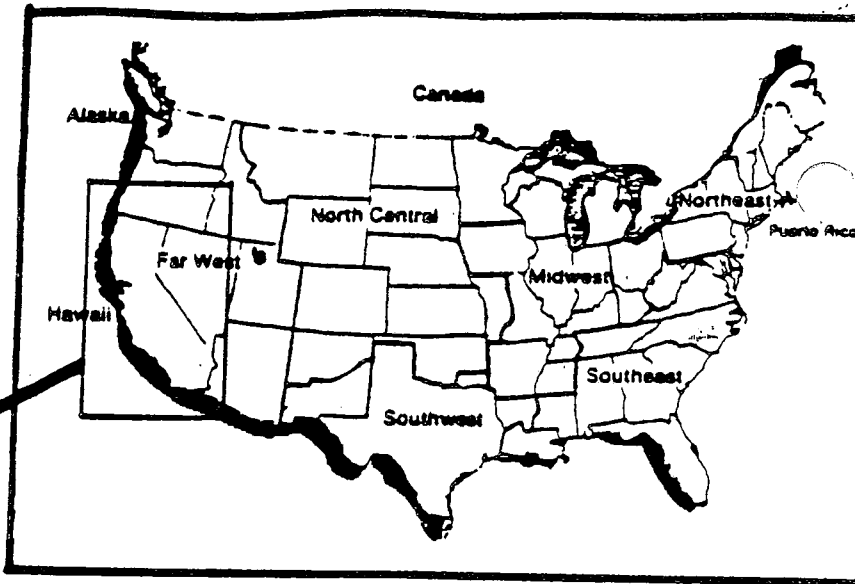
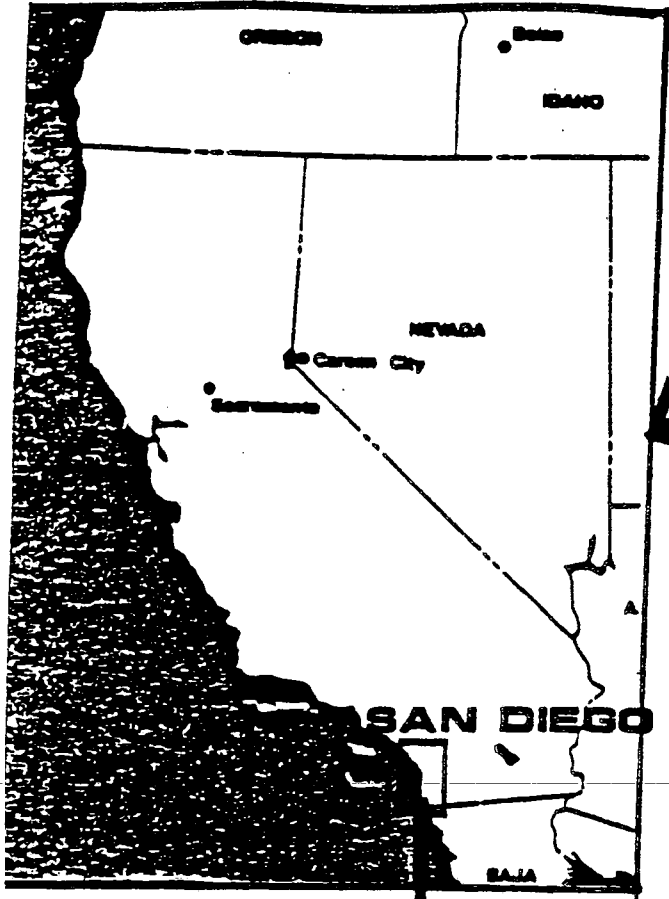
November 14, 1988 - 9:00 a.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

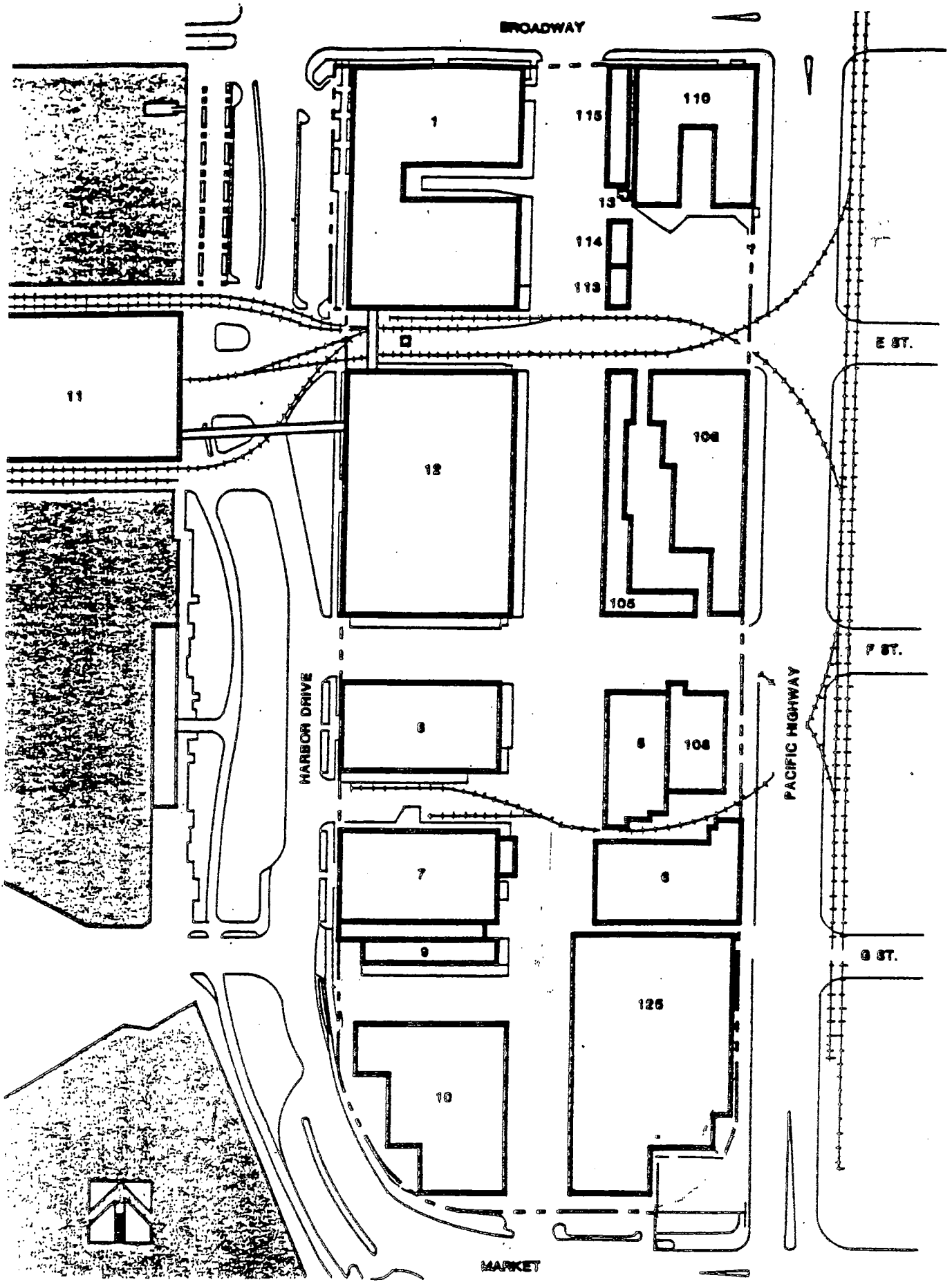
Evening Session

November 14, 1988 - 7:00 p.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

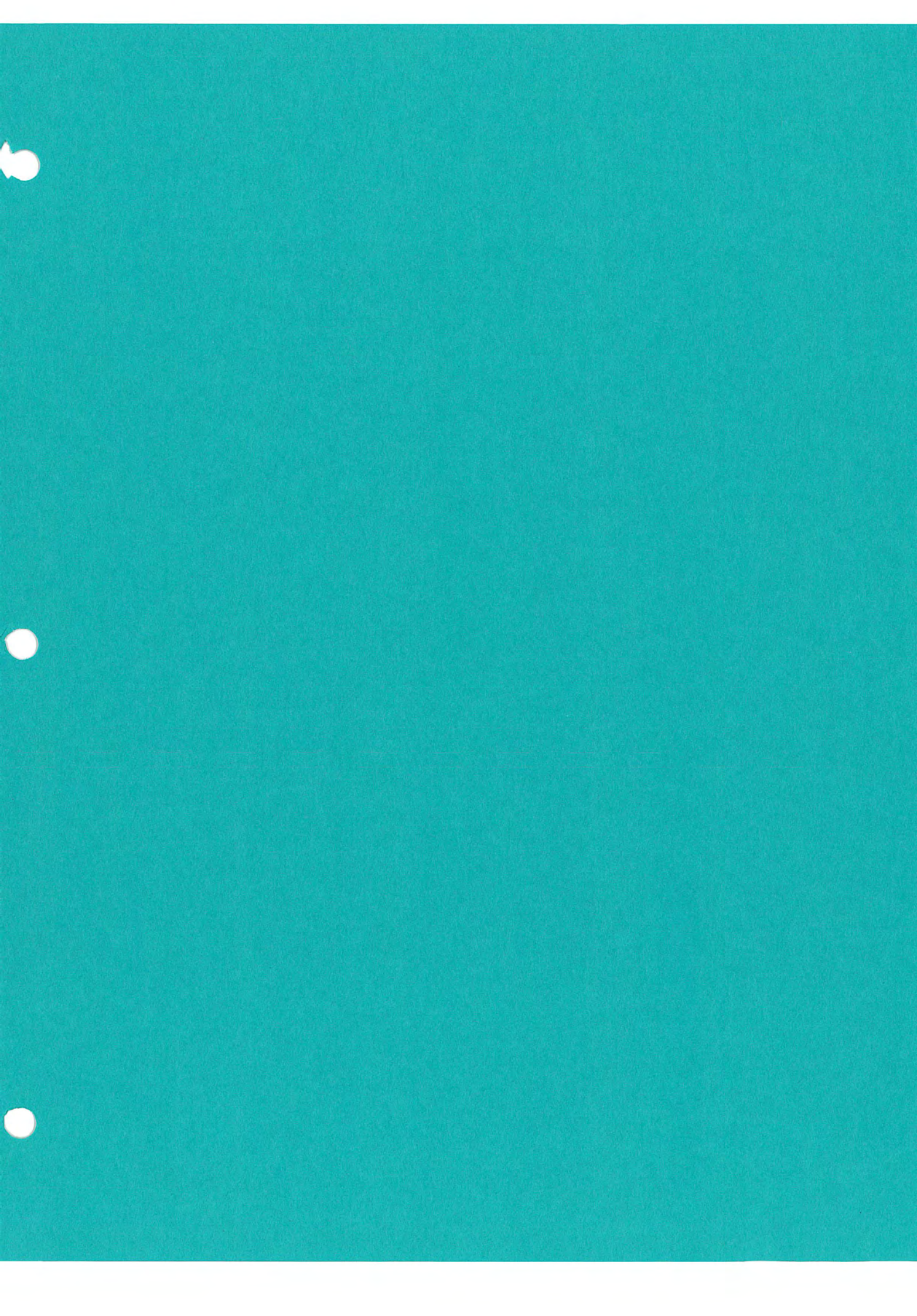


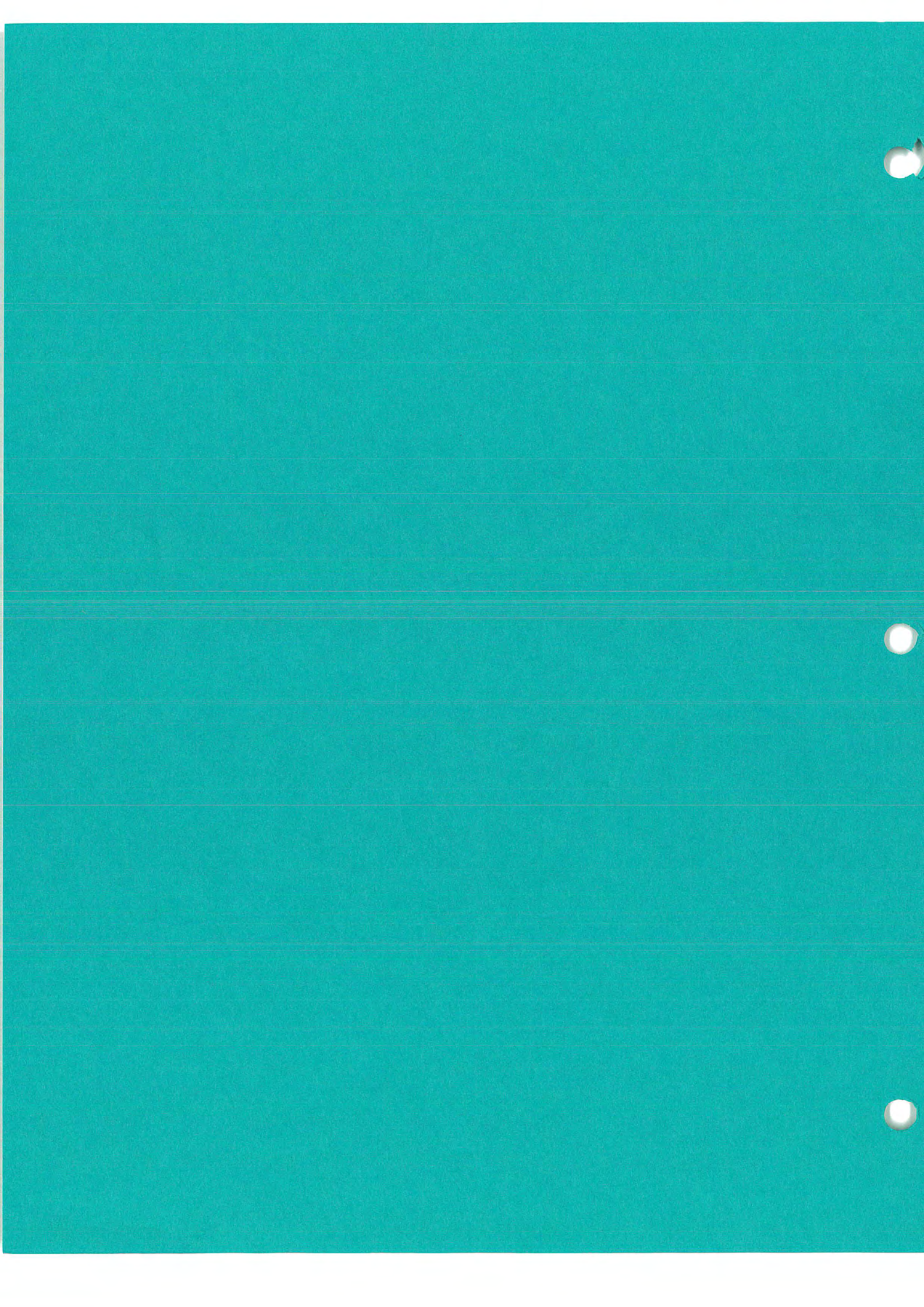
**ROADWAY COMPLEX,
SAN DIEGO, CALIFORNIA**



**BROADWAY COMPLEX,
SAN DIEGO, CALIFORNIA**







SECTION 1
SUMMARY OF PROPOSED ACTION, ENVIRONMENTAL IMPACTS,
AND MITIGATION MEASURES

1.1 INTRODUCTION

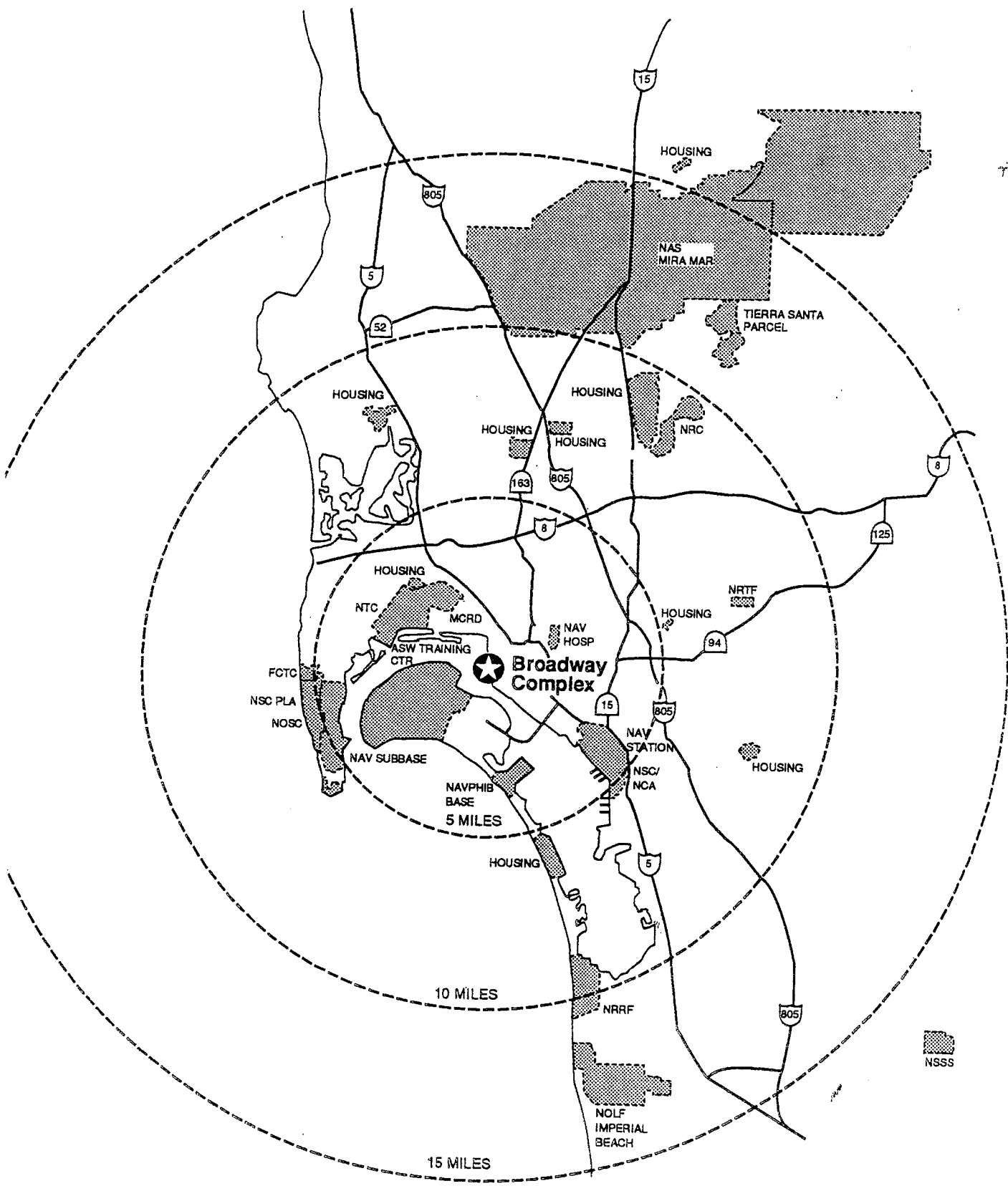
The Navy Broadway Complex is an existing facility in downtown San Diego, California, which is the location of the Naval Supply Center, San Diego; the Commander, Naval Base, San Diego; and several other activities. Constructed primarily between 1921 and 1944, the complex consists of approximately 400,000 square feet (SF) of administrative office and 600,000 SF of warehouse uses on a 15.6-acre site near the San Diego Bay waterfront. It is bounded by Broadway on the north, Harbor Drive on the west and south^a, and Pacific Highway on the east, and is centrally located amidst the 17 other Navy installations in the metropolitan San Diego area. The location of the Navy Broadway Complex and other Navy installations is depicted in Figure 1-1.

In 1982, the Navy reviewed a plan to provide an efficient, upgraded, and centralized administrative facility for numerous Navy installations in the San Diego area. The Navy Broadway Complex was selected as this facility because of its central location, appropriate size, land constraints on area Navy operational bases, and adjacency to the Navy Pier which will continue to operate as a key military asset. The Chief of Naval Operations (CNO) approved this centralized administrative office complex concept (called co-location) at the Navy Broadway Complex in 1983. Subsequently, it was determined that approximately 1 million SF of Navy office space would be needed to accommodate the regional administrative office program, and redevelopment of the site would be necessary.

Construction of Navy offices, or other military uses, is typically funded through Military Construction (MILCON) appropriations, which are taxpayer funded and Congressionally approved. However, the Navy began considering a public-private development venture whereby a private developer would finance the construction of the new central naval facility in exchange for a ground lease for a portion of the site. In this way, the Navy offices could be provided at a reduced cost to taxpayers. An advisory group--the Broadway Complex Coordinating Group (BCCG)--was formed in August 1985 under the auspices of the San Diego Association of Governments (SANDAG) to serve as community advisors for the planning of the Navy Broadway Complex and to initiate consultation with local government authorities.

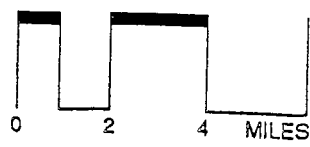
A co-location program was introduced, which provided for the Federal Government to retain title to the property and to lease portions of the property for private revenue-generating uses that could offset the cost of Navy facilities. A key objective of the co-location program was to encourage private land uses that are compatible with Navy administrative uses and surrounding land uses. Federal legislation was passed in 1987 (P.L. 99-661) that authorized the pursuit of a public-private venture to implement the co-location concept on the site (see Appendix A). This legislation specified that detailed plans and terms of the development should be formulated by the Navy and the San Diego community through coordination with the BCCG.

^a Harbor Drive until recently was known as Market Street along the southern boundary of the site, and is occasionally referred to as such in the EIS.



Navy Facilities:
 San Diego Region
 Navy Broadway Complex Project

6640001- AUGUST 1989



NORTH

Figure 1-1

The Navy and City of San Diego signed a Memorandum of Understanding (MOU) in June 1987 to help implement P.L. 99-661. The MOU specifies that the Navy and City will enter into an agreement for the future development of the Navy Broadway Complex site. According to the MOU, the development agreement will include a development plan, urban design guidelines, and phasing for the project (see Appendix B).

1.2 PROPOSED ACTION AND ALTERNATIVES

The Department of the Navy proposes to redevelop the Navy Broadway Complex with up to 1 million square feet of Navy offices and up to 2.5 million square feet of mixed commercial office, hotel, and retail uses. To implement the project, the Navy is proposing to enter into a long-term ground lease of property on the Navy Broadway Complex to a private party(ies). In consideration of the lease, the Navy would obtain its administrative offices without compensation, or at substantially below market value, thereby developing needed Navy facilities at a reduced cost to taxpayers. The ground lease would be with a private party, and would allow for the development and operation of a mix of private office, hotel, and/or retail uses on a portion of the Navy Broadway Complex, along with the Navy offices. The existing Navy Pier and rail lines serving the pier would be retained for use by the Navy.

The development agreement between the Navy and the City of San Diego would guide the redevelopment of the complex. Separate from this project, the Navy has already started a modernization plan to relocate existing warehousing functions on the Navy Broadway Complex to other, more modern storage facilities in the San Diego region.

1.2.1 PROCESS FOR ALTERNATIVES PLANNING

Proposed alternatives to the redevelopment of the Navy Broadway Complex have been formulated through an extensive planning process. Through the BCCG, as well as through general public responses to the potential redevelopment of the site, the Navy has prepared and refined alternative plans to provide a preferred development plan that meets the objectives of the community while also satisfying the needs of the Navy for 1 million SF of office space at a reduced cost to taxpayers.

The expressed community objectives for redevelopment of the Navy Broadway Complex include the following:

- Provision of a significant open space area at the foot of Broadway.
- Opening of access through the site to provide a link between the downtown core, residential areas, and the waterfront.
- Creation/protection of view corridors along Broadway, E Street, F Street, and G Street.
- Provision of public uses, such as a museum.

The Navy had to balance these community objectives with consideration of coastal development policies and financial objectives for the project. In addition, the Navy needed to consider a

transition of land uses from the high-intensity commercial office, hotel, and residential uses to the east and the waterfront to the west.

The Navy first examined a concept developed in 1986 as part of an overall study of Navy options for the site. The concept included nearly 5 million SF of development on the site, which would have been accommodated with several high-rise structures, approximately 400 feet high, throughout the site. The Navy rejected this alternative because it seemed too dense for the waterfront.

Several other alternatives were considered during the planning process, each with up to 1 million SF of Navy offices. A relatively large amount of specialty retail was considered (over 100,000 SF) within a mixed-use development that also included offices and hotels with approximately 3 million SF of overall development. This alternative was rejected because of insufficient market demand for this amount of specialty retail, given expansion of the nearby Seaport Village specialty shopping center and proximity to a regional shopping mall (Horton Plaza).

Residential use (860 dwelling units) was considered within an approximately 3 million SF development that also included Navy office and hotel uses. This alternative was rejected because it did not provide sufficient revenues on a per-square-foot basis to offset the cost of Navy offices and would result in a more intense development to provide a financial return equal to other alternatives.

1.2.2 SUMMARY OF ALTERNATIVES

The potential alternatives were narrowed to seven, five of which are consistent with the objectives of providing up to approximately 1 million SF of Navy offices at a reduced cost to the taxpayer. Table 1.2-1 presents a statistical summary of each alternative. The Navy's preferred alternative (Alternative A) is described here in more detail than the other six. A detailed description of each alternative is presented in Section 3, beginning on page 3-1.

Alternative A

Alternative A (Figure 1-2), the Navy's preferred alternative, would be developed with 3,250,000 SF of mixed uses (including 300,000 SF of above-grade parking). This alternative is intended to provide a balance between developed and open space uses on the site, while meeting the Navy's office space objective. This alternative would be designed to maximize community objectives and provide for a number of beneficial uses. Such uses are described below.

- A 1.9-acre public open space area would be provided for community use at the foot of Broadway, adjacent to the waterfront (see Figure 1-3). This area could potentially be combined with adjacent properties to create an even larger open space that could be considered a new waterfront gateway to downtown San Diego (Figure 1-4).
- Space for a museum up to 55,000 SF in size oriented to the maritime history and influence on San Diego would be provided (see Figure 1-3).

LAND USE SUMMARY OF PROPOSED ALTERNATIVES

Land Uses
(in Square Feet)

Alternatives	Navy				Private			Public Uses ^c		Parking		Total	
	Office ^a	Industrial	Office	Hotel	Hotel	Retail ^p	Open Space	Museum	Above-Ground Floor Area ^d	Total Spaces ^e	Square Feet ^f	FAR ^g	
A	1,000,000	0	650,000	1,220,000	25,000	25,000	85,000 ^h (1.9 acres) ^h	55,000	300,000 (800 spaces)	3,105	3,250,000	5.45	
B	1,000,000	0	900,000	1,220,000	25,000	25,000	21,000 ^h (0.5 acre) ^h	55,000	300,000 (800 spaces)	3,355	3,500,000	5.88	
C	1,000,000	0	0	1,220,000	25,000	25,000	0	0	225,000 (600 spaces)	2,455	2,470,000	4.15	
D	20,000/ 980,000 (1,000,000) ⁱ	0	1,430,000	1,440,000	25,000	25,000	21,000 ^h (0.5 acre) ^h	0	0	2,905/1,205 (4,110) ⁱ	2,915,000/ 980,000 (3,995,000) ⁱ	5.40 ^j	
E	1,000,000	0	0	0	0	0	0	0	0	1,230	1,000,000	1.68	
F	1,000,000	0	650,000	1,220,000	25,000	25,000	152,000 ^h (3.5 acres) ^h	55,000	365,000 (1,040 spaces)	3,105	3,315,000	5.70	
G	405,753	601,276	0	0	0	0	0	0	0	425	1,007,029	1.69	

a The requested Navy office square footage would be 1,000,000 SF. If not filled by the Navy, the remaining square footage could transfer to commercial office uses.

b Retail square footage excludes ground-level support retail that would be integrated into private office and hotel uses.

c Square footage and acreage are approximate.

d Includes only the square footage in above-grade parking spaces.

e Includes both above- and below-grade parking structures.

f Total square footage devoted to above-grade, enclosed structures. The square footage of open space areas is not included.

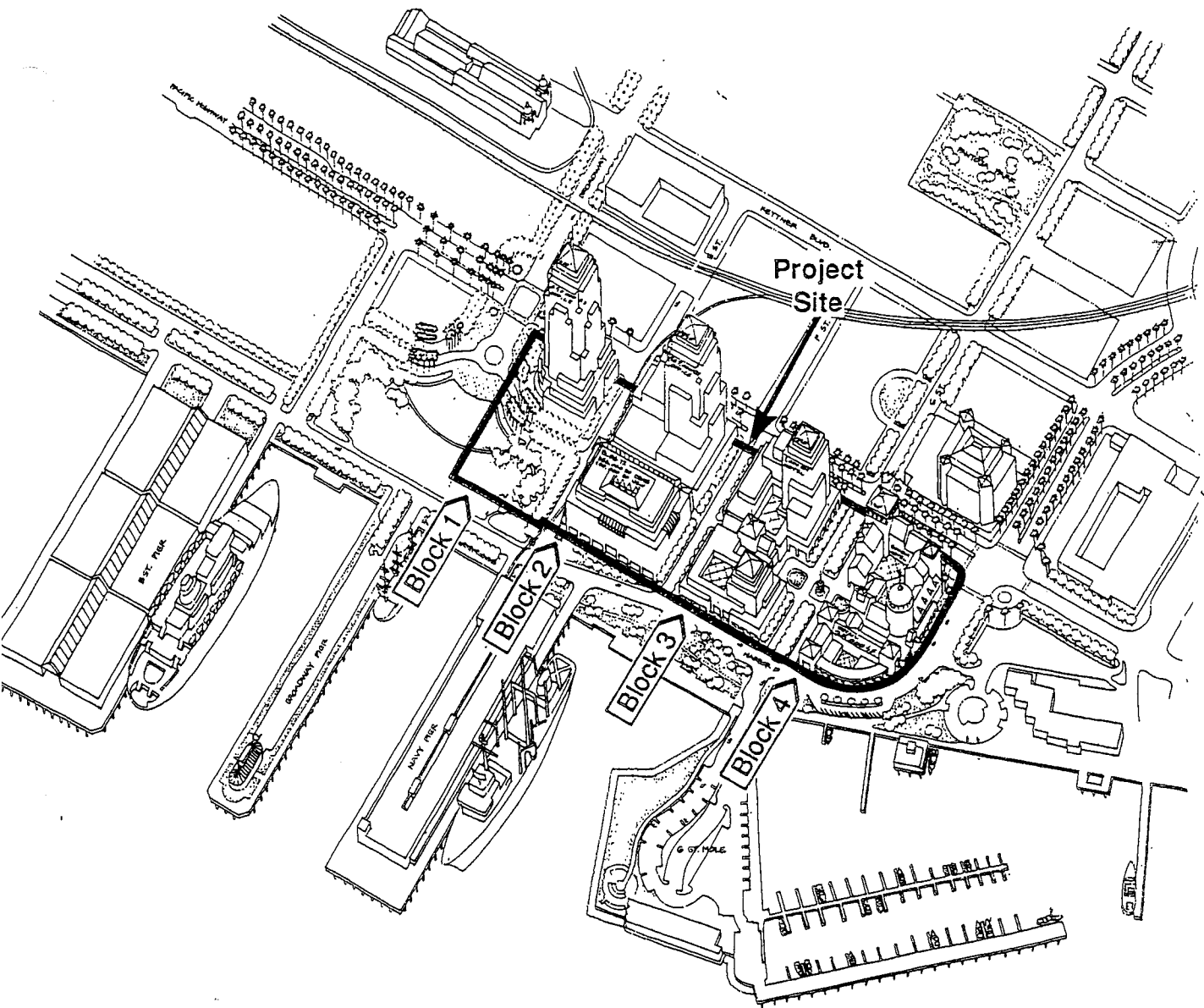
g FAR (floor-to-area ratio) is the ratio of gross square footage to the land held in fee by the Navy (13.67 acres). Above-grade structured parking is included. Square footage devoted to surface and below-grade parking and open space is not included in the FAR.

h Includes only the open space located on the Navy Broadway Complex site.

i Figures shown are: Navy Broadway Complex/Alternative Site and the total, which is shown in parentheses.

j FAR is for Navy Broadway Complex only.





PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office Open Space (1.9 acres)	650,000	650 below-grade	400
2	Navy Office: - Bldg. 12 - New Museum	331,000 669,000 55,000	430 below-grade 800 above-grade	350
3	Above-Grade Parking Hotel	300,000 745,000	750 below-grade	250
4	Hotel Retail	475,000 - 25,000	375 100 below-grade	150
Total		3,250,000	3,105	

Density = 5.45 Gross FAR

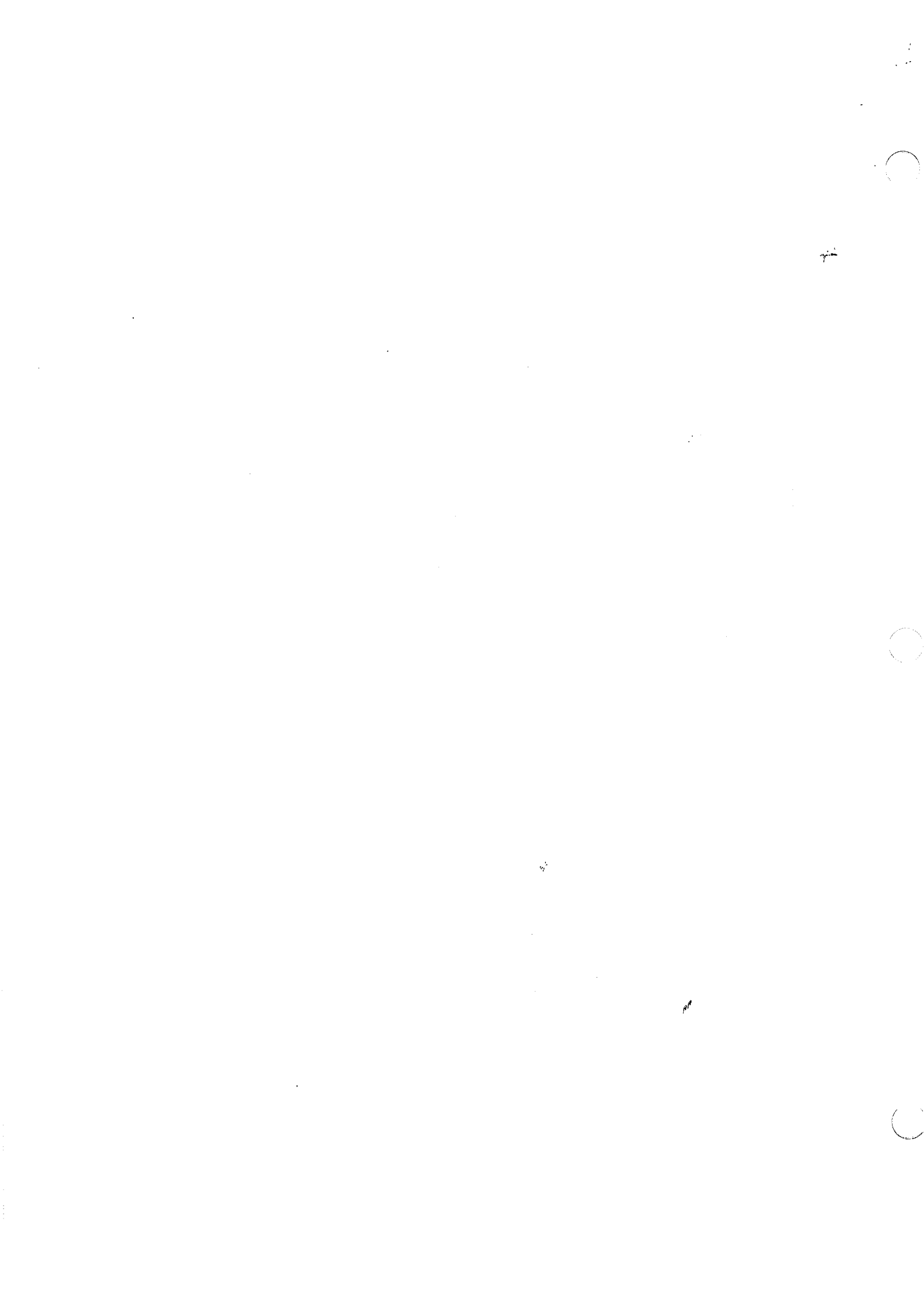
Alternative A Illustrative
Navy Broadway Complex Project

6640001 1/90



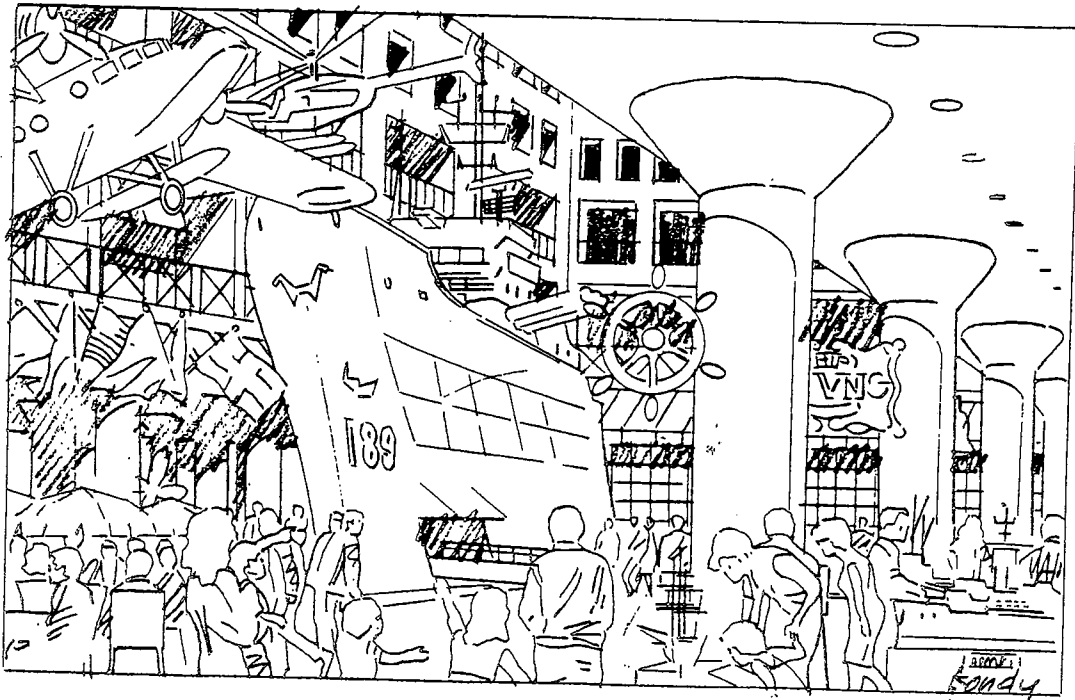
NORTH

Figure 1-2



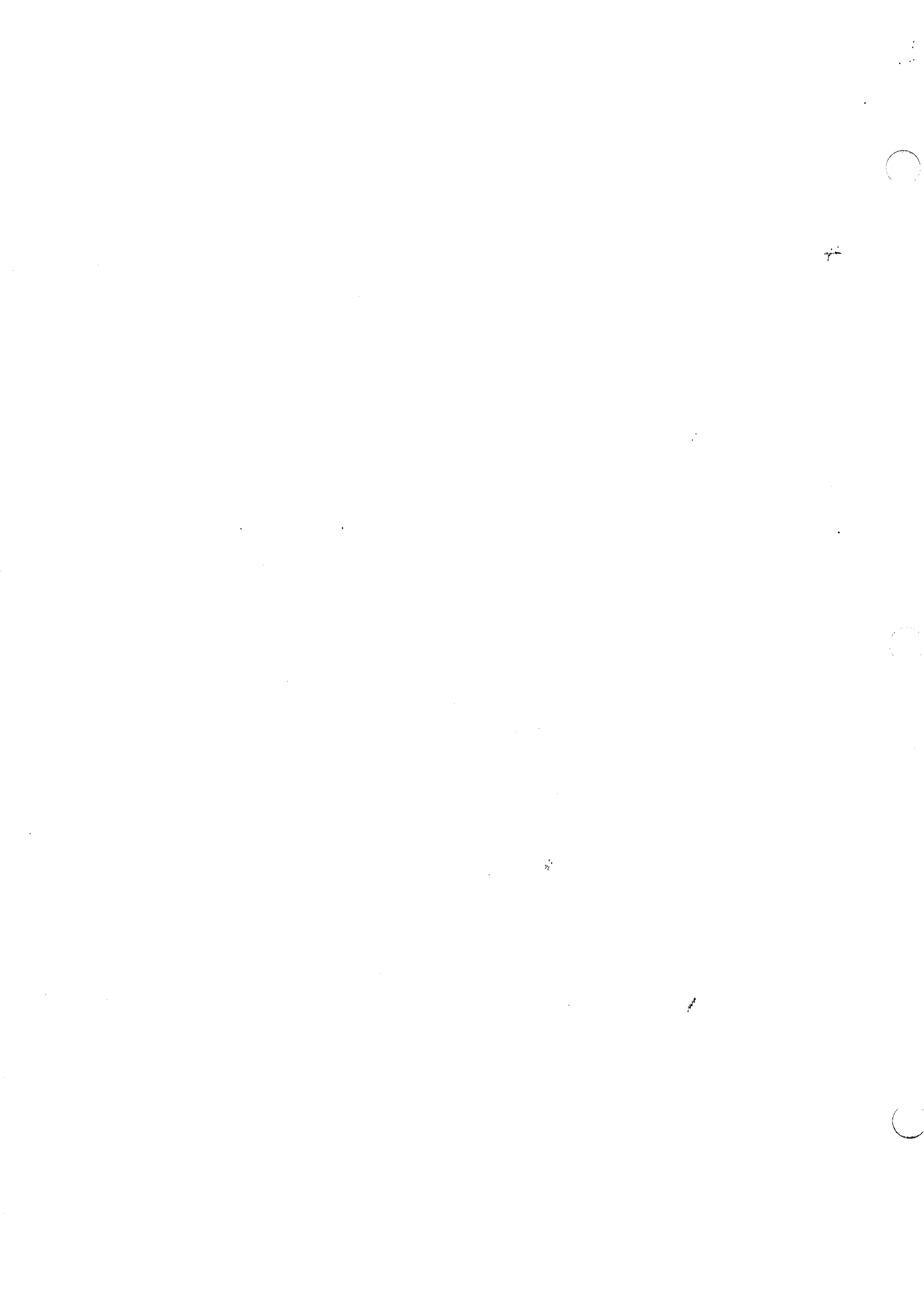


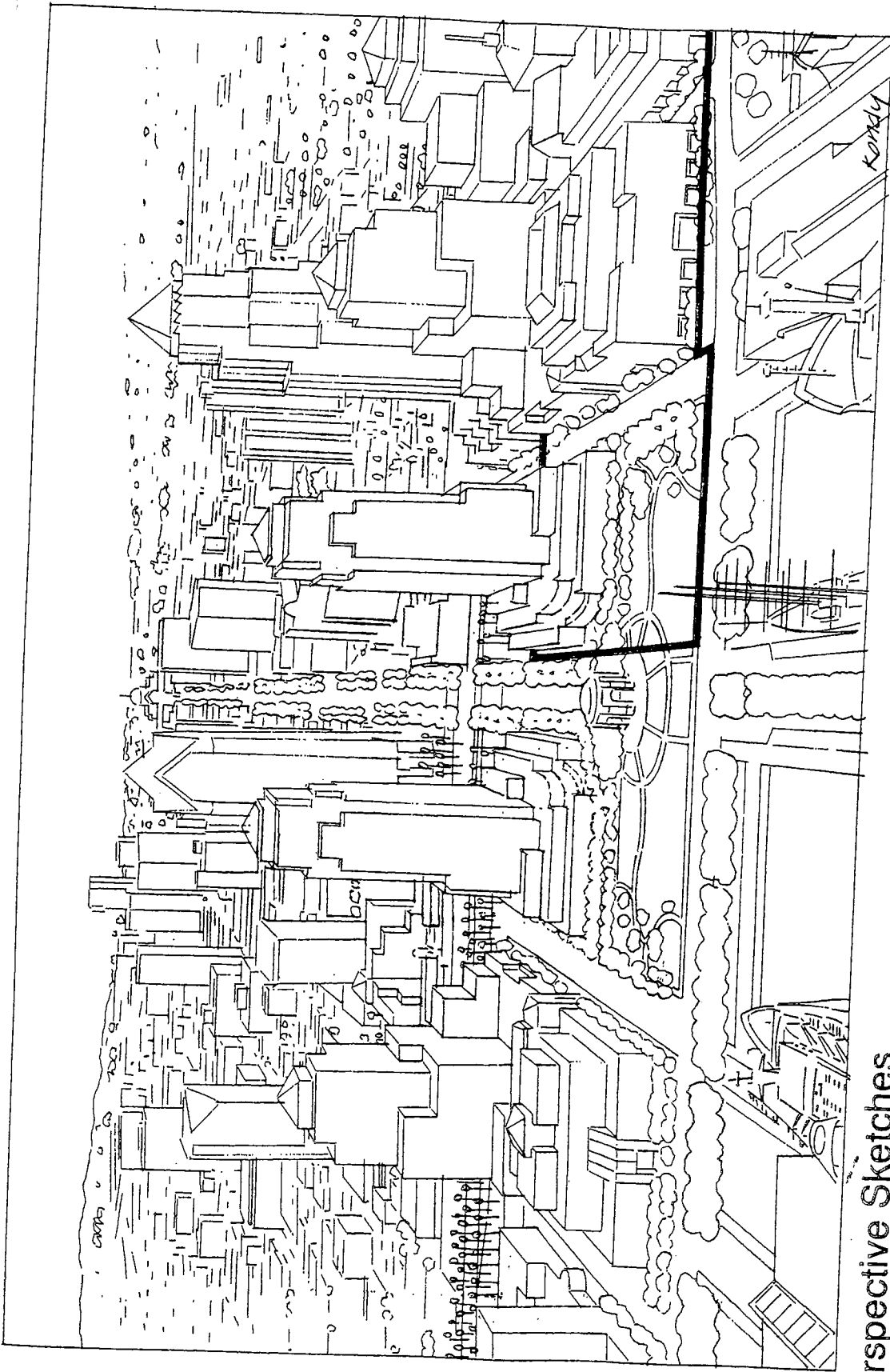
Open Space at the Foot of Broadway



Waterfront Museum in Building 12

erspective Sketches, Open Space and Museum
 Alternative A
 Navy Broadway Complex Project

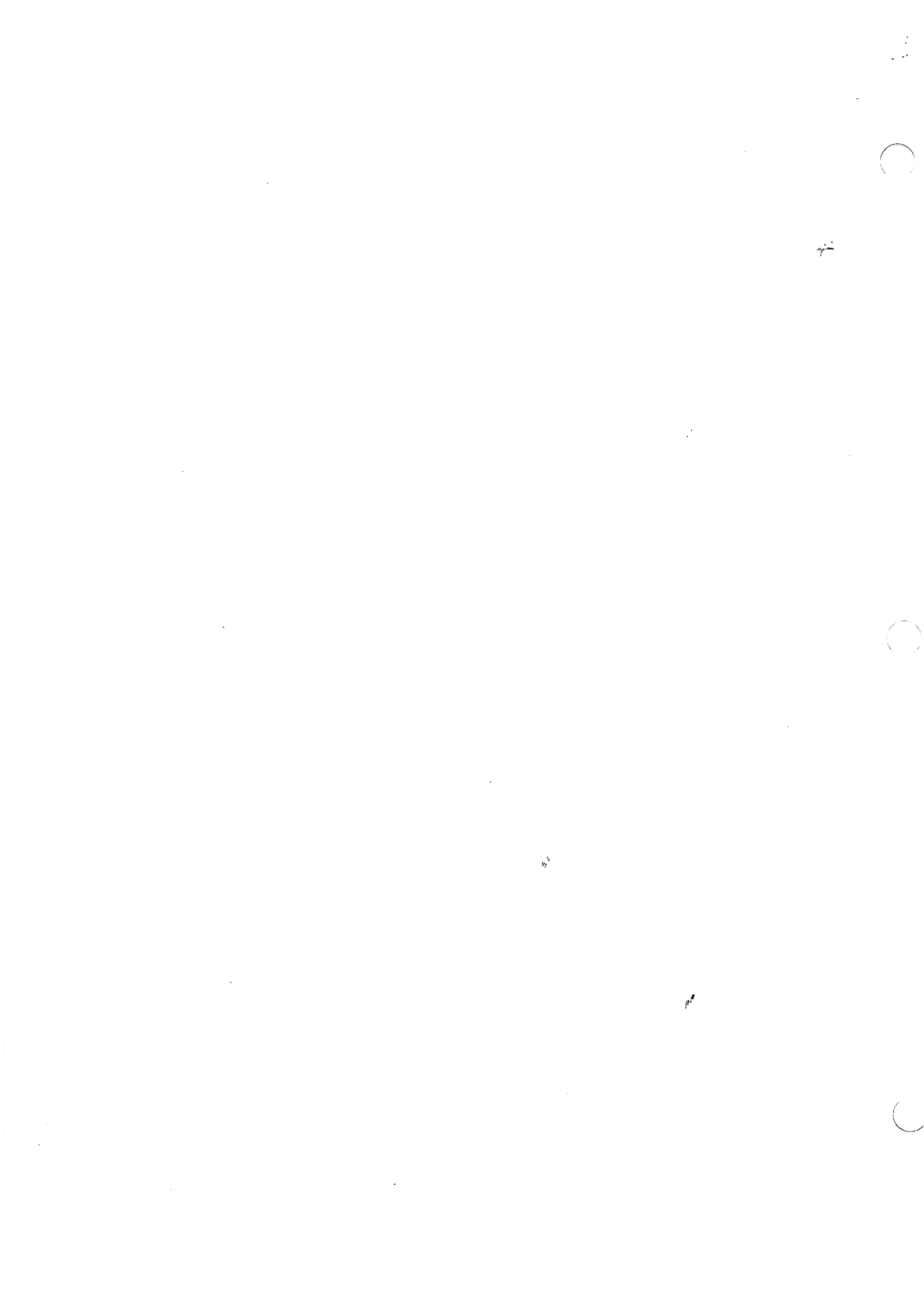




Perspective Sketches
Broadway Terminus,
Alternative A
Navy Broadway Complex Project

6640001 - October 1988

Figure 1-4



- Pedestrian corridors would be developed along E, F, and G Streets and would be upgraded on all streets surrounding the site so that access between the downtown core and the waterfront would be improved (see Figure 1-5). Access along the waterfront would also be improved by providing a midblock pedestrian passage parallel to the bayfront.
- View corridors along E, F, and G streets would be opened to the waterfront.
- Ground-level retail would be provided to encourage pedestrian use of the area.

The anticipated mix of uses for Alternative A is shown below. Depending on market conditions, the square footage may be modified, with the overall square footage not exceeding 3,250,00 SF.

- Navy office: 1 million SF
- Museum: 55,000 SF
- Commercial office: 650,000 SF
- Hotel: 1,220,000 SF (1,500 rooms)
- Retail: 25,000 SF
- Above-grade parking: 300,000 SF (800 spaces)
- Total parking spaces: 3,105

This alternative would be designed so that the tallest buildings are on the northeastern area of the site closest to downtown San Diego, while shorter structures step down to the waterfront to midwest and south. The tallest building would be up to 400 feet in height, with the other buildings ranging from 100 to 350 feet. Buildings would have a slender design to provide open view corridors.

This alternative meets the basic project objectives of providing one million SF of Navy office space at a reduced cost to taxpayers. Because a substantial portion of the site is devoted to public open space instead of buildings, off-setting local government financial contributions would be needed for certain public infrastructure improvements (e.g., roadway and streetscape improvements).

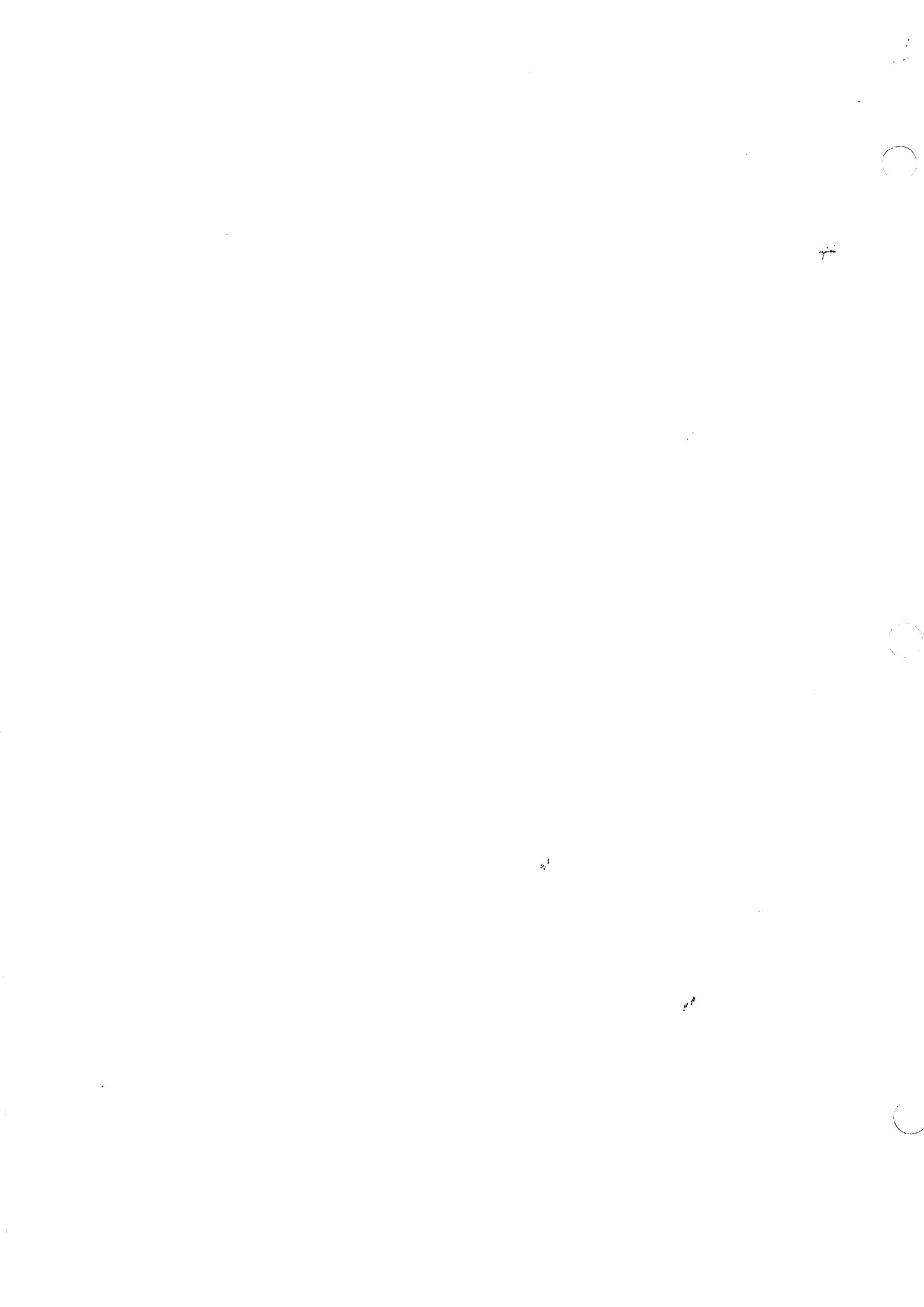
Alternative B

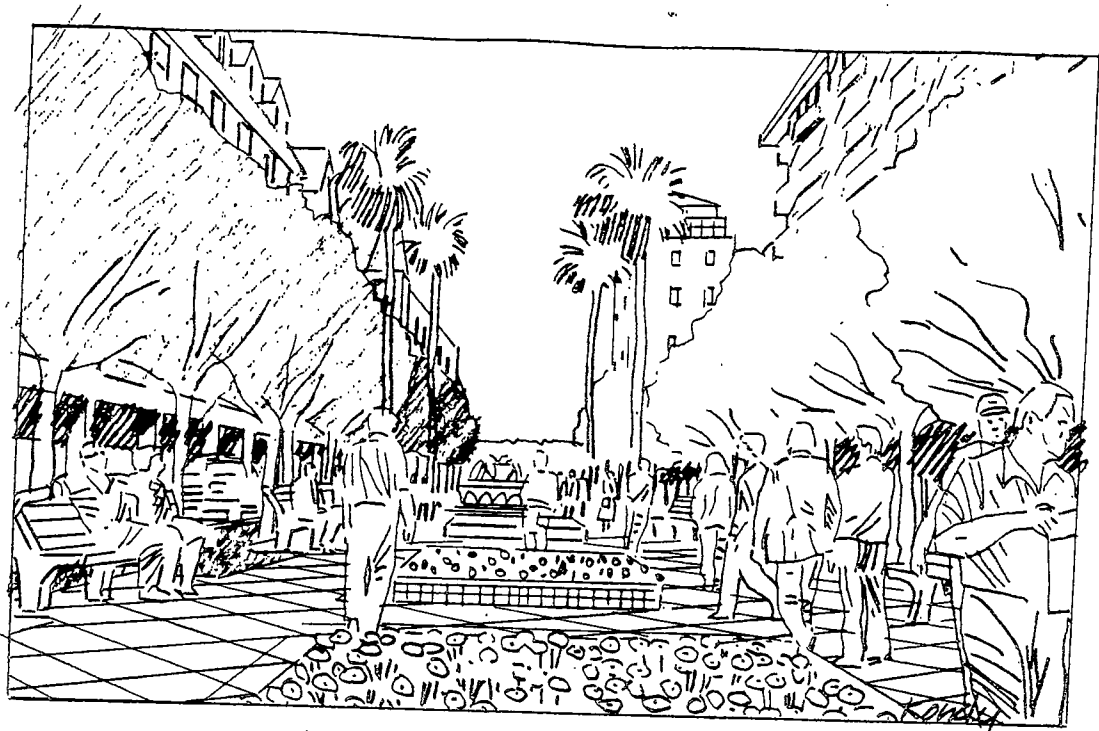
Alternative B (Figure 1-6) would be developed with 3,500,000 SF of mixed uses (including 300,000 SF of above-grade parking). The intent of this alternative is to provide sufficient private development to meet the Navy's office objectives without financial contribution from local government for infrastructure improvements. Proposed uses are similar to Alternative A. However, 300,000 SF more commercial office and 1.4 acres less open space would be developed, as shown in Table 1.2-1 (page 1-5). The 0.5-acre open space in this alternative would be a public plaza at the corner of Broadway and Harbor Drive.

This alternative meets the basic project objectives.

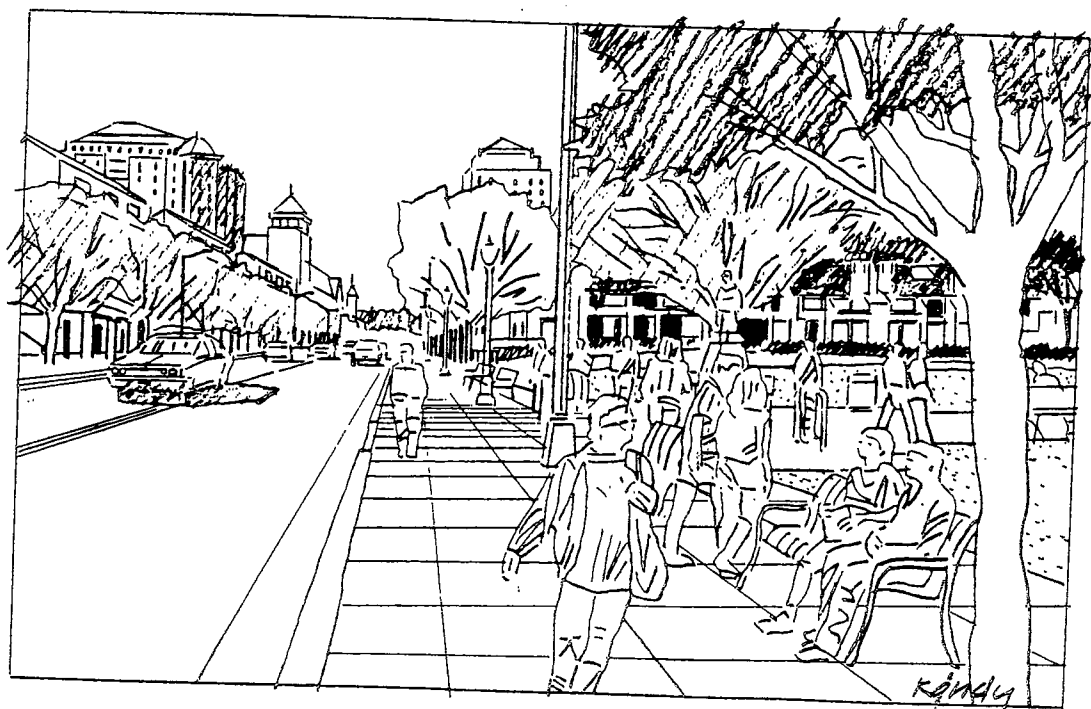
Alternative C

Alternative C (Figure 1-6) would be developed with 2,470,000 SF of mixed uses (including 225,000 SF of above-grade parking). The intent of this alternative is to emphasize rehabilitation of the existing buildings as the means for achieving the Navy's office objectives. Existing Navy buildings would be rehabilitated on the northern half of the site for Navy uses only, with hotels



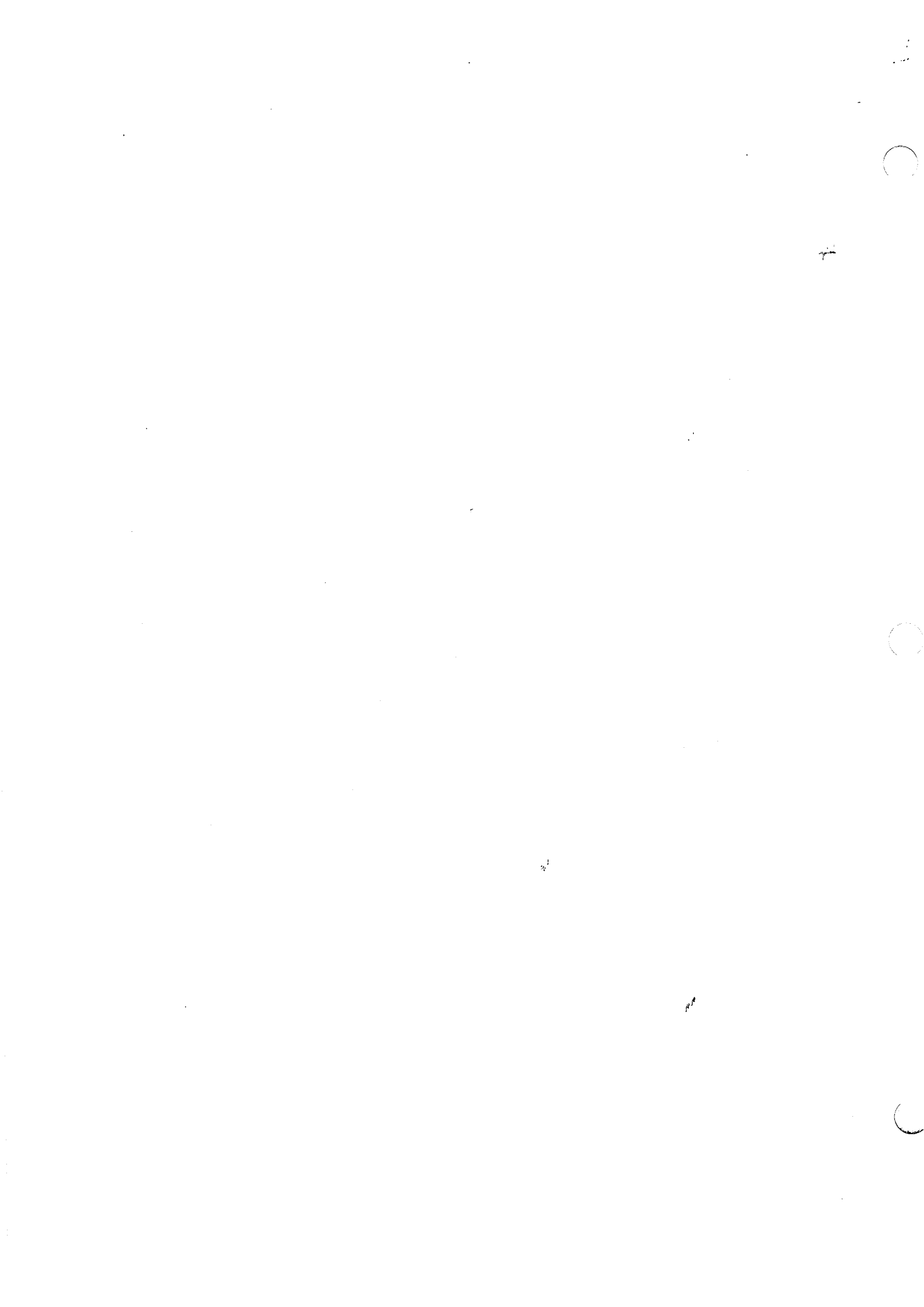


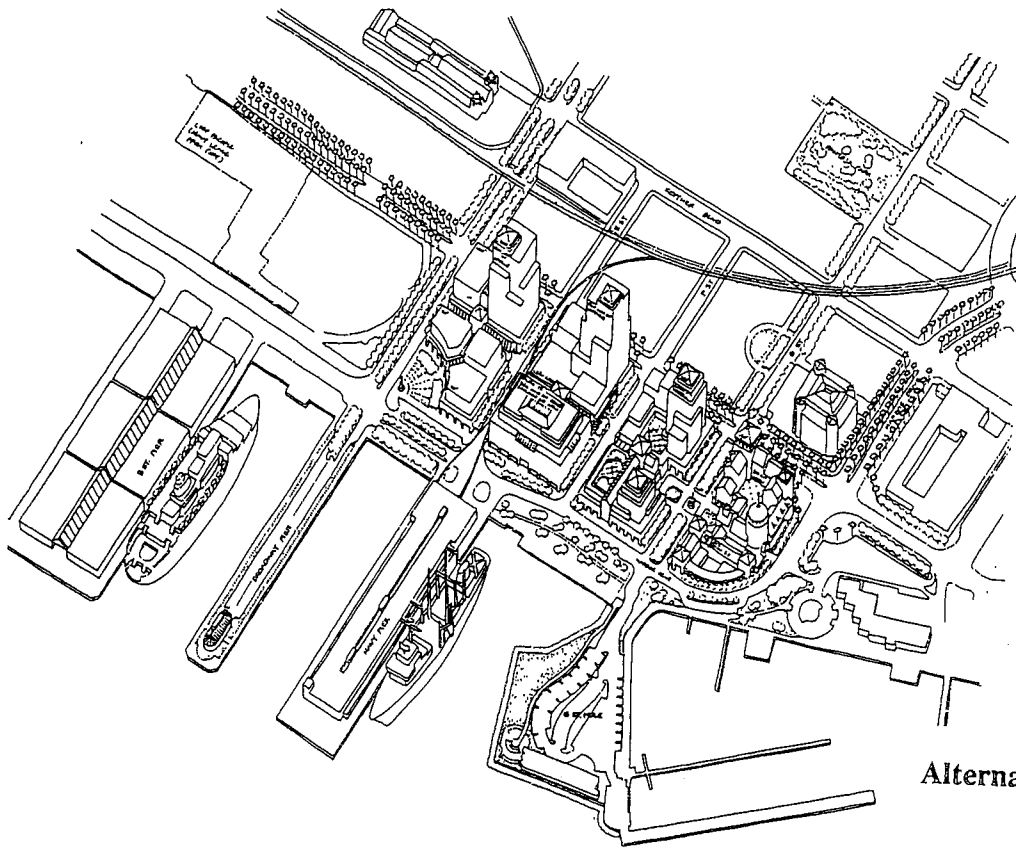
G Street "Promenade"



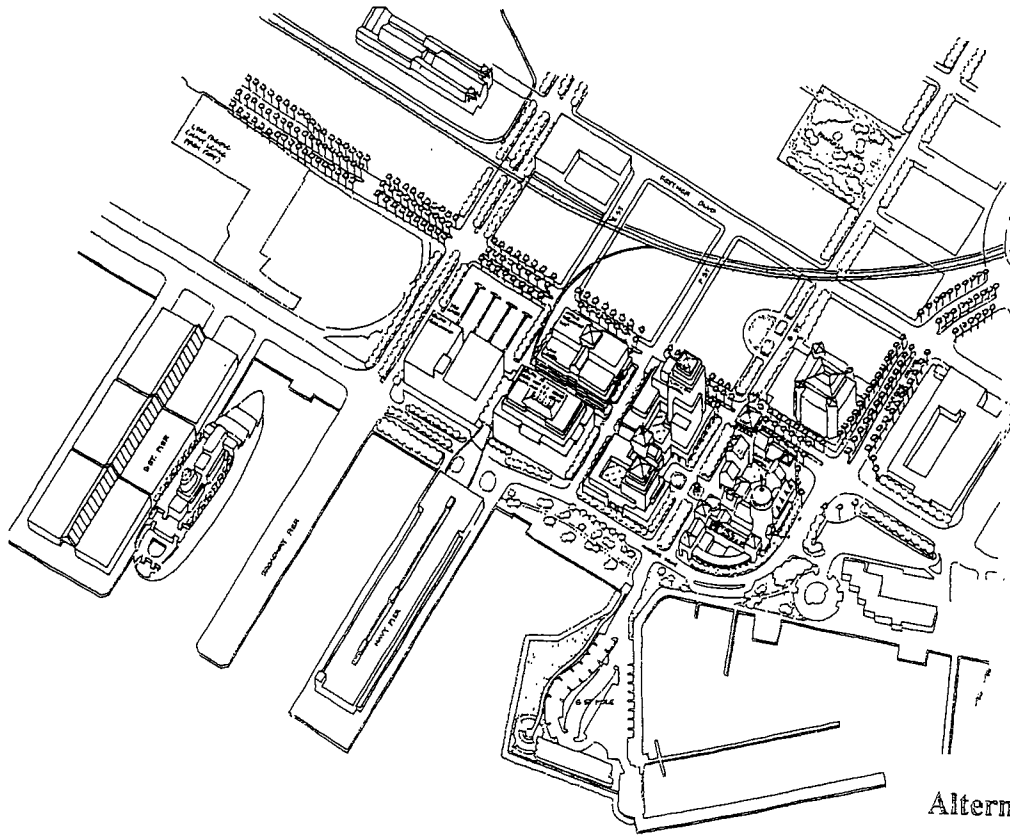
G Street, Looking Toward Site

perspective Sketches, Pedestrian Amenities
Alternative A
Navy Broadway Complex Project





Alternative B



Alternative C

Alternatives B and C Illustratives
Navy Broadway Complex Project





on the southern half. This alternative would require the least amount of private development to support Navy offices without any local financial assistance. Unlike Alternative A, no commercial office would be developed, and, due to space constraints and the configuration of existing buildings that would be rehabilitated, open space and a museum would not be provided. Proposed uses are listed in Table 1.2-1 (page 1-5).

This alternative meets the basic project objectives.

Alternative D

Alternative D is intended to evaluate how an alternative site for the Navy's office objectives could be developed. It would require private development on the Navy Broadway Complex site to generate sufficient revenue for acquisition and use of a second site. Alternative D would be developed with 2,915,000 SF of mixed uses, including approximately 20,000 SF of Navy offices, at the Navy Broadway Complex, and approximately 980,000 SF of Navy offices on a site in the eastern area of downtown San Diego (Figure 1-7). A minimal Navy presence (20,000 SF) would remain at the Navy Broadway Complex to support the Navy Pier. Proposed uses on the Navy Broadway Complex would be similar to Alternative B in intensity and layout--with 0.5 acre of open space--but additional commercial office and hotel uses would be developed in place of Navy offices to meet project financial objectives. No museum would be provided. Proposed development is listed in Table 1.2-1 (page 1-5).

This alternative meets the basic project objectives.

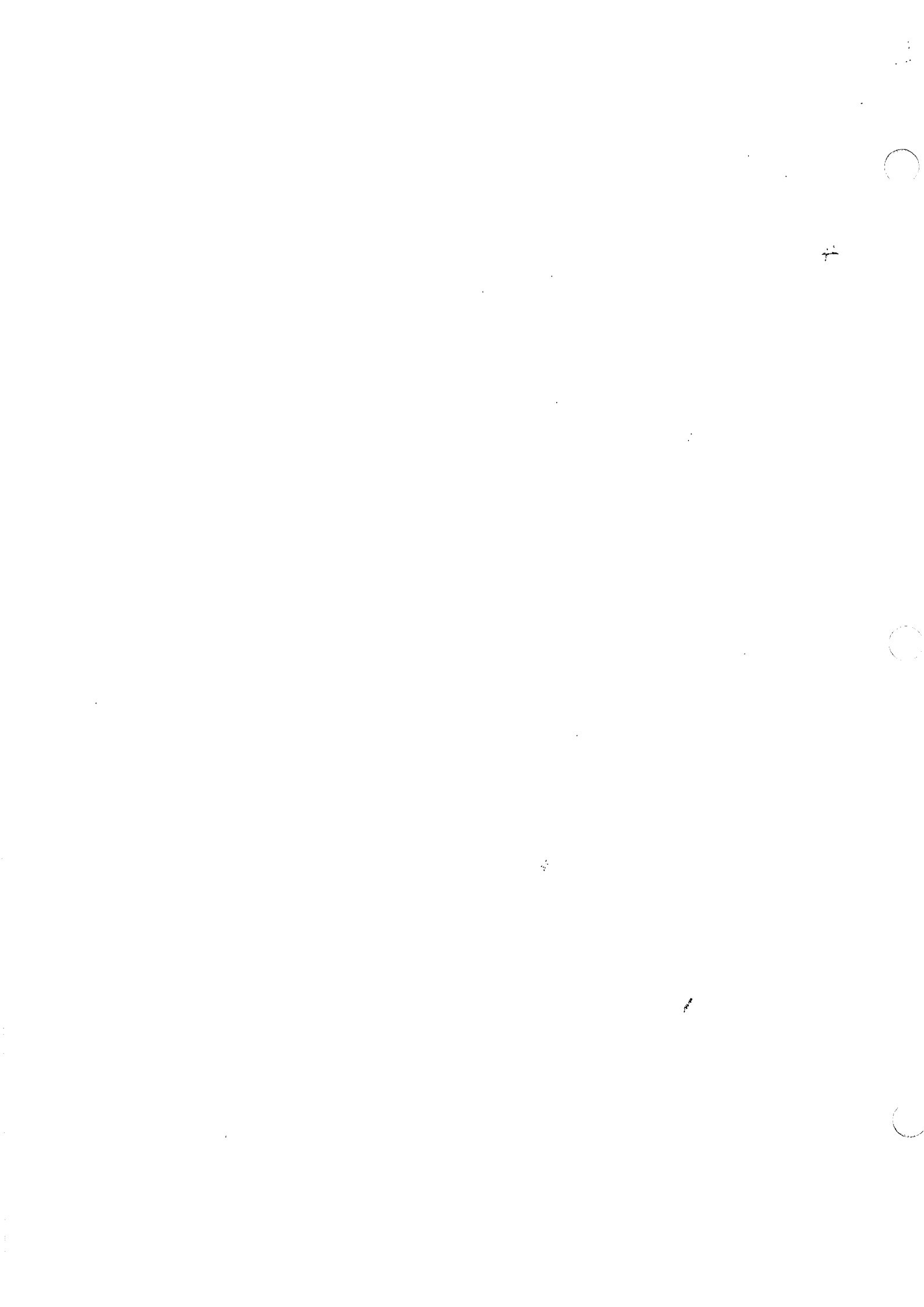
Alternative E

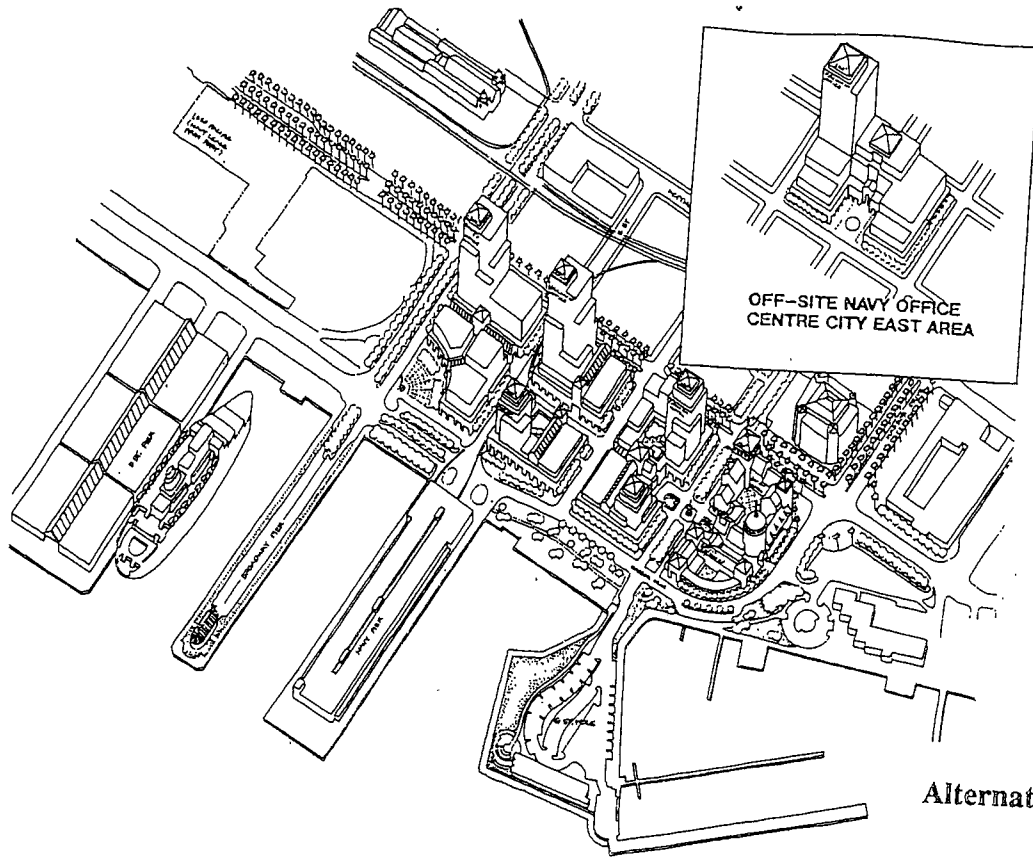
Alternative E (Figure 1-7) would include construction of 1 million SF of Navy offices on the Navy Broadway Complex site and no private development. This alternative evaluates traditional taxpayer-financed congressional funding for construction. Construction would primarily involve the rehabilitation of the two largest buildings on the property, and construction of one new building. Due to the configuration of buildings that would be rehabilitated and the need to minimize expenditure of public funds, no open space or museum would be provided. Table 1.2-1 (page 1-5) lists the uses that would be developed.

Although this alternative provides one million SF of Navy offices, it does not meet the basic project objectives of providing the Navy offices at a reduced cost to taxpayers, because it relies on direct Federal appropriation of tax dollars to totally finance the project.

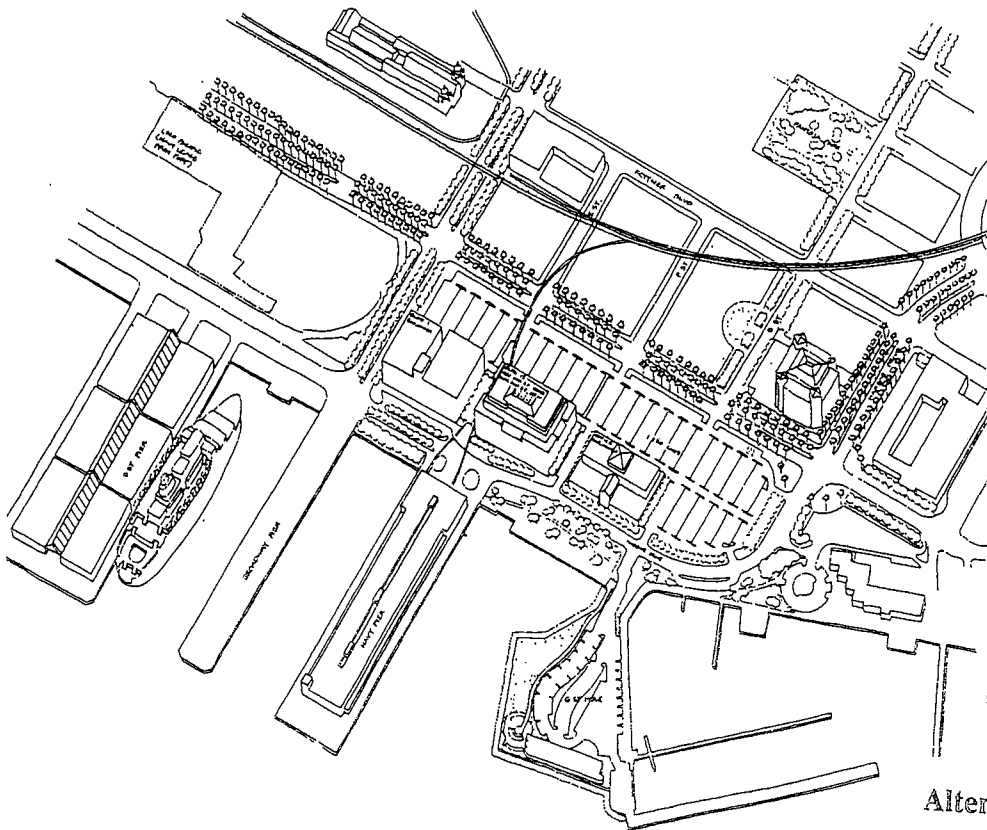
Alternative F

Alternative F (Figure 1-8) would be similar to Alternative A, and would be developed with 3,315,000 SF of mixed uses (including 365,000 SF of above-grade parking), but includes no development on the most northern of the four blocks on the site. The intent of this alternative is to maximize open space onsite, particularly at the foot of Broadway. Approximately 3.5 acres of open space would be provided, 1.4 acres more than with Alternative A. In order to provide this additional open space, development on the other three blocks of the site would be intensified (compared with Alternative A), and up to 500-foot-tall buildings would be built. Proposed uses are listed in Table 1.2-1 (page 1-5).





Alternative D

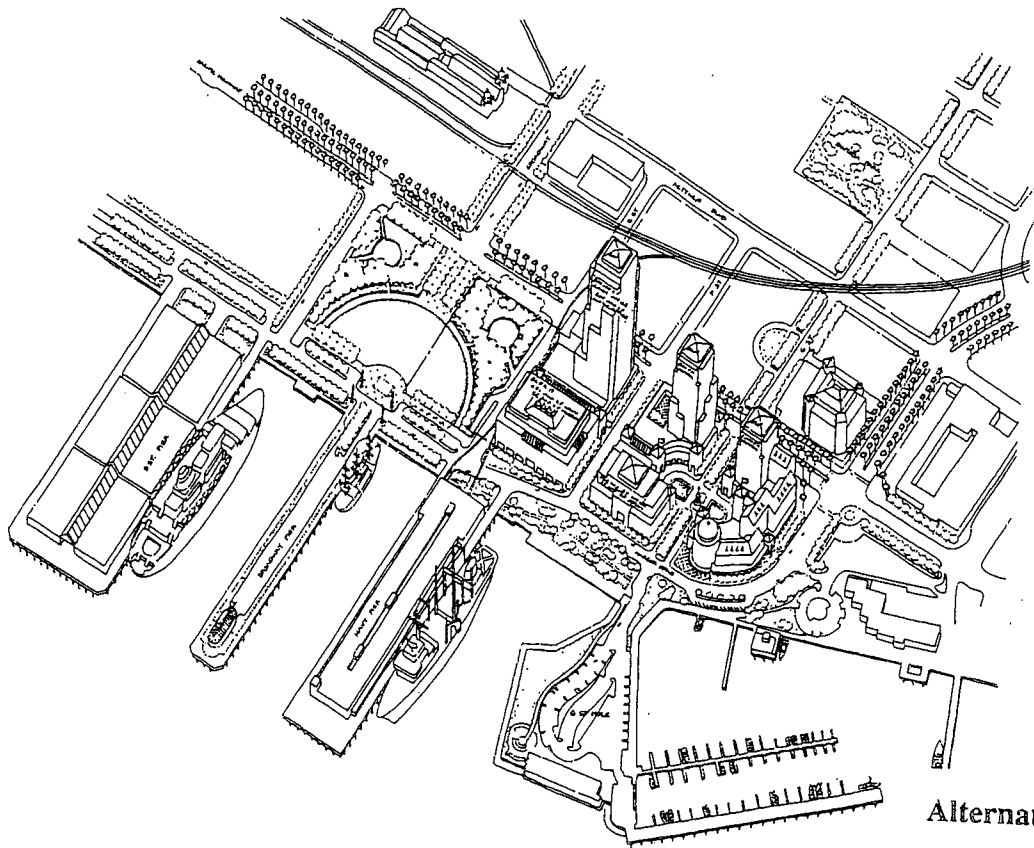


Alternative E

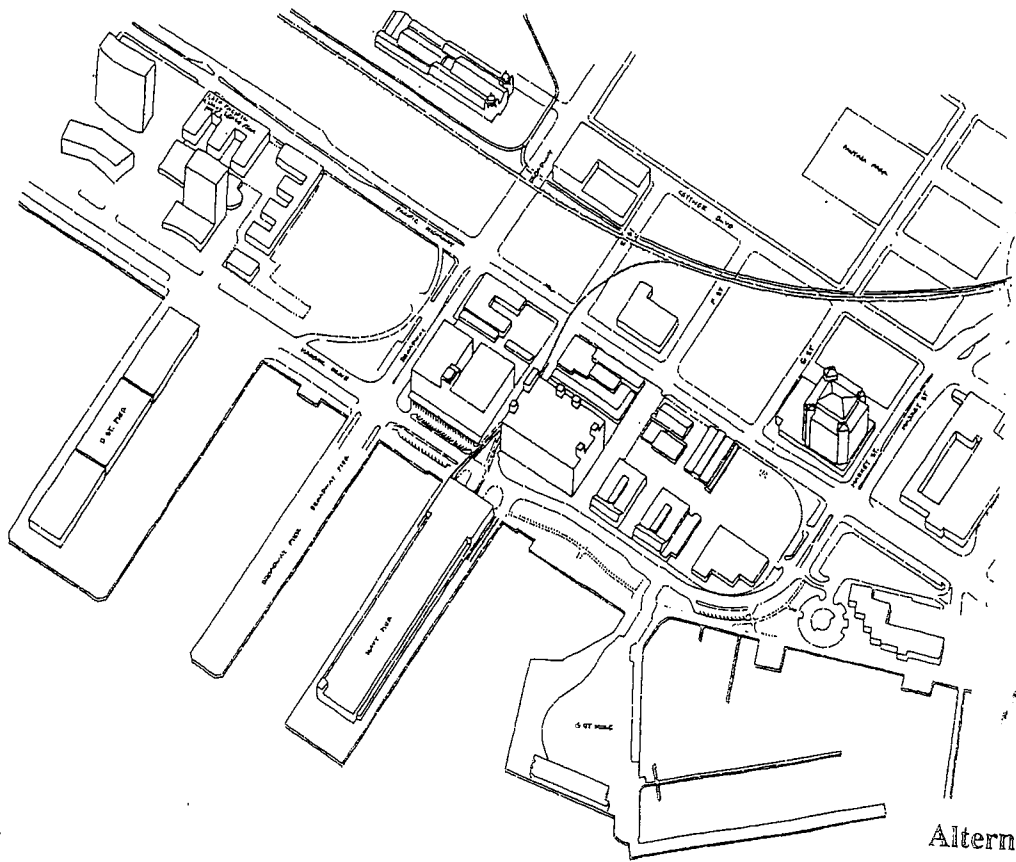
Alternatives D and E Illustratives
 Navy Broadway Complex Project







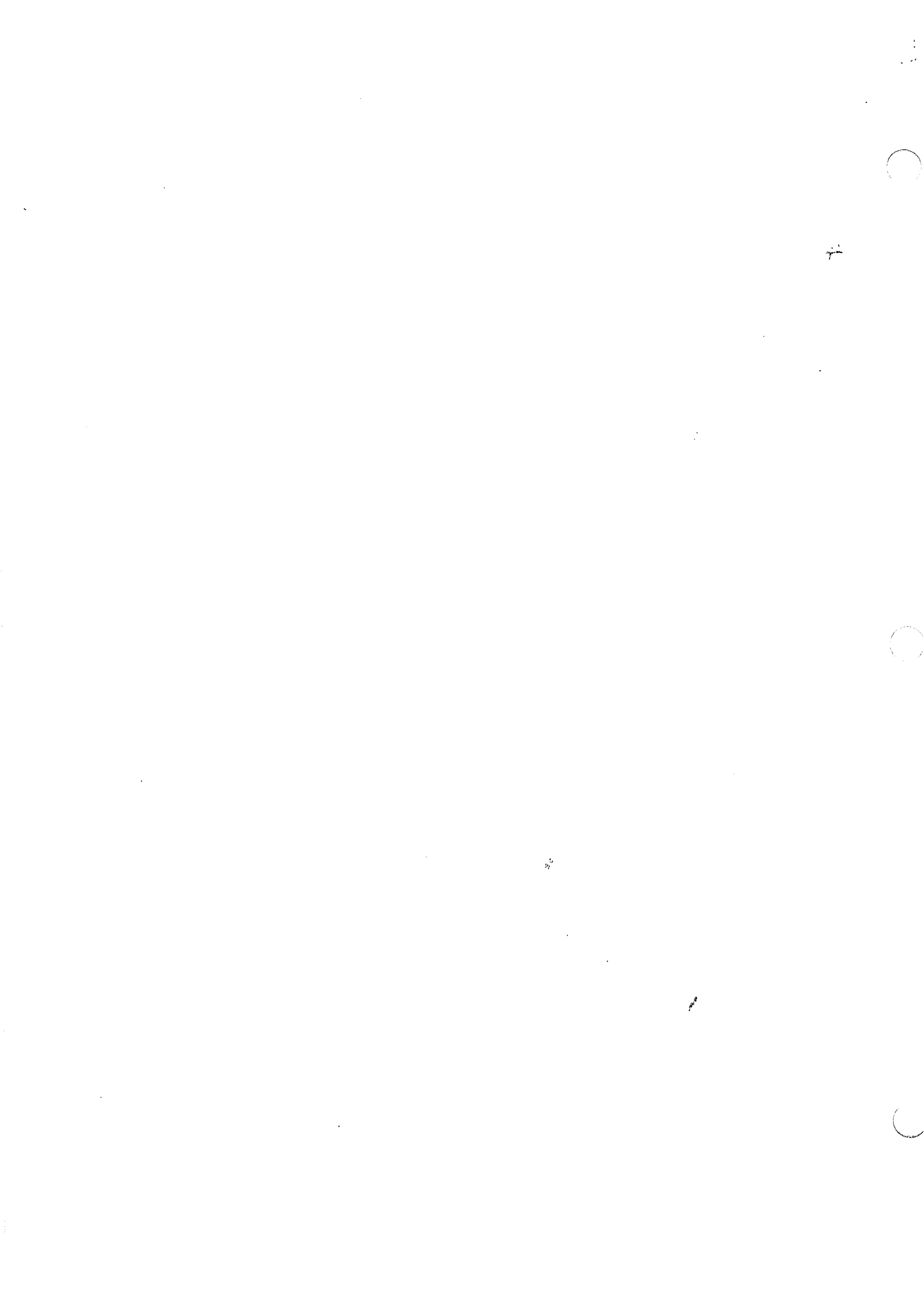
Alternative F



Alternative G

Alternatives F and G Illustratives
Navy Broadway Complex Project





This alternative meets the basic objectives of the project; however, local government financial assistance would be needed for certain infrastructure improvements.

Alternative G

Alternative G (Figure 1-8) is the no-action alternative, so there would be no new development on the Navy Broadway Complex. Existing uses that would be retained are listed in Table 1.2-1 (page 1-5).

This alternative does not meet the objectives of the project.

1.3 DISCRETIONARY ACTIONS

Development of any of the alternatives would require a number of discretionary actions. Provided below is a list of actions that may be required and for which this environmental document may be used:

- Final project approval by Secretary of the Navy and the United States Congress.
- Development Agreement (City of San Diego/Navy). In addition to allowing development of the project, the development agreement would bind subsequent developers to specific conditions and will provide mechanisms for periodic review.
- National Pollution Discharge Elimination System (NPDES) permit (California Regional Water Quality Control Board).
- Federal Aviation Administration Construction Notification (Federal Aviation Administration).
- Coastal Consistency Determination (California Coastal Commission).

1.4 ENVIRONMENTAL SCOPING

On October 18, 1988, a Notice Of Intent (NOI) for the proposed Navy Broadway Complex Project Environmental Impact Statement (EIS) was published in the Federal Register in accordance with the National Environmental Policy Act (NEPA) as implemented by the Department of Navy. A Notice Of Preparation (NOP) of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) was released concurrently. The NOI and NOP briefly described the proposed action, possible alternatives, and the scoping process, and provided the name and address of a contact person. The comment period ended on December 16, 1988. Copies of the NOI and NOP are presented in Appendix C. A copy of the NOP is presented in the EIR.

The purpose of the NOI and NOP was to (1) notify responsible agencies and the general public about the proposed project, (2) solicit comments on issues that should be addressed in the environmental document, and (3) foster coordination and cooperation.

In addition to the NOI and the NOP, two scoping meetings were held on November 14, 1988, to solicit additional public and agency comments.

The following agencies submitted responses to the NOI and NOP:

- United States Department of Health and Human Services
- United States Department of the Interior--Fish and Wildlife Services
- United States Environmental Protection Agency
- California Office of Historic Preservation--Department of Parks and Recreation
- California Department of Transportation--District 11
- California Coastal Commission
- California State Land Commission
- California Department of Fish and Game
- City of San Diego--Transportation Planning Section
- County of San Diego, Chief Administrative Office
- San Diego Unified Port District
- San Diego Metropolitan Transit Development Board
- Centre City Development Corporation

Copies of the specific NOI and NOP responses are available at the address shown on the cover page.

1.4.1 SCOPING COMMENTS

Responses to the NOI and NOP and comments at public scoping meetings requested discussions of the following topics in the document.

Land Use/Planning

- Address compatibility of the proposed project in scale and character with the adjacent planned land uses.
- Address consistency of the project and alternatives with the redevelopment plans and other relevant land use plans and policies of the City of San Diego and the San Diego Unified Port District.
- Address retention of existing and future Navy water-dependent uses on the site, including continued use of the rail spur that serves the site, and planned uses of the Navy Pier.
- Evaluate impacts on public shoreline access, with respect to the Coastal Zone Management Act (CZMA) and the California Coastal Act. Evaluate the opening of E and F Streets and the extension of G Street to the shoreline.
- Address potential impacts on pedestrian activities on the waterfront.

Transportation/Circulation

- Evaluate the potential use of public transit as mitigation for parking and traffic congestion impacts.
- Determine the short-range traffic impacts of project development.

- Determine daily traffic, potential long-range impacts of the development, and a qualitative level of service analysis of affected roadways.
- Include intersection capacity utilization (ICU) analysis at all potentially affected intersections.
- Consider parking demand that may be generated by the project, and any impact on adjacent or nearby public and/or private on-street and off-street parking resources.
- Evaluate applicability of parking strategies currently being considered in downtown San Diego.

Aesthetics and Viewshed

- Address the compatibility, scale, and intensity of the alternatives with all adjacent uses.
- Address consistency of the alternatives with City of San Diego adopted urban design standards and criteria.
- Discuss the effect of the project on view corridors.
- Include a shadow analysis.

Public Services and Utilities

- Include a discussion of the open space and public amenities for recreation to be provided onsite.
- Discuss the sewage and wastewater treatment requirements of the project and impacts on the Point Loma Wastewater Treatment Plant.
- Discuss impacts of increased flows from the project on the existing wastewater treatment system, especially on the system's ability to meet National Pollutant Discharge Elimination System (NPDES) or state-issued permit conditions.
- Discuss any compliance problems that the City experiences with the current sewage treatment and conveyance system (enforcement actions, consent decrees, etc.) and the potential impacts of the proposed project on compliance problems.
- Determine the consistency of the project with the Regional Water Quality Control Board's (RWQCB) new nonpoint-source water management programs.

Physical Environment (Geology/Hydrology/Water Quality)

- Discuss potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site.

- Analyze the effect of groundwater pumping at the project site and throughout Centre City. Address potential underground contamination on the Navy Broadway Complex.
- Determine the project's compliance with state and local water quality management plans.
- Discuss any impacts to beneficial uses that depend on the protection of water quality.

Biological Resources

- Evaluate shading effects to the marine environment that would result from construction of structures located over or adjacent to the San Diego Bay waterfront.
- Evaluate direct, indirect, and cumulative impacts to biological resources.

Air Quality

- Analyze existing air quality conditions; describe violations of Federal and state air quality standards.
- Determine conformity of each alternative with the 1982 State Implementation Plan for the San Diego air basin.
- Evaluate impacts to air quality based on increases in vehicle trips and mileage associated with the full buildout of the project.

Cultural Resources

- Consider Section 106 of the National Historic Preservation Act, and its implementing regulations 36 CFR Part 800.
- Evaluate the historical significance of the existing structures onsite, some of which were built as early as 1922.

Public Health and Safety

- Discuss whether any hazardous substances or hazardous materials are known or suspected to be on the site, and whether they pose a threat to public health, safety, or the environment as a result of contamination of air, soils, or surface water or groundwater. Reference any studies the Department of Defense has performed or contracted under the Defense Environmental Restoration Program (DERP) or the Installation Restoration Program (IRP), and discuss the pertinent findings of such studies.

1.5 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1.5-1 lists the environmental impacts of each alternative and describes the impact as beneficial, not significant, significant but mitigable, or significant and unmitigable (i.e., unavoidable significant impact). A significant impact is defined as a substantial adverse change in the environment.

Based on a comparison of the impacts of the alternatives, Alternative G, the no-action alternative, is the environmentally superior alternative. No environmental changes would occur with this alternative, so there would be no significant impacts. However, none of the public benefits of the project would occur either. This alternative, therefore, does not meet the basic objectives of the project.

Alternatives A, B, and D are environmentally superior alternatives that include new development on the Navy Broadway Complex. Each of these alternatives has substantial public benefits to four environmental resources: City of San Diego and regional planning policy consistency, waterfront access, recreational facilities, and socioeconomics. Alternative A has a substantially larger open space area (1.9 acres versus 0.5 acre) at the foot of Broadway than Alternatives B and D, which would be a beneficial effect associated with recently adopted regional plans intended to guide development in the project vicinity (SANDAG Central Bayfront Design Principles). Therefore, Alternative A is the environmentally preferred alternative that meets both project and community open space objectives.

1.6 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

All environmental issues associated with development of any of the seven proposed alternatives have been addressed. There are no unresolved environmental issues.

The project, because of its location between San Diego's downtown and waterfront, has generated substantial public interest, especially related to the intensity of development of the site and the provision of open space at the foot of Broadway. These issues are discussed in detail in this document.

TABLE 1.5-1
SUMMARY OF ENVIRONMENTAL IMPACTS

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Land Use Compatibility (Section 4.1)	Project is compatible with surrounding land uses and provides active pedestrian uses such as open space area (1.9 acres), pedestrian corridors, and waterfront museum. (B)	Same as Alt. A, except open space area is smaller (0.5 acre). (B)	Same as Alt. A, except no open space is provided and no museum is provided. (N)	Same as Alt. B, except no museum is provided. (B)	Compatible with surrounding land uses, but no pedestrian amenities created. (N)	Same as Alt. A, except larger open space area created. (B)	Same as Alt. E. (N)
Waterfront Access (Section 4.1)	Project would substantially improve waterfront access by extending E, F, and G Streets through the site to the waterfront and providing pedestrian-oriented improvements. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Would improve waterfront access across site, although access would be primarily across parking lots. (N)	Same as Alt. A. (B)	No access across the site to the waterfront would be provided; current conditions would remain. (N)

JB/66400011.S

Key: Each impact is followed by one of the following notations:

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- S/M - Significant but mitigable, i.e., environmental change is substantial and adverse, and can be mitigated to a level below significance.
- S/U - Unavoidable adverse impact, i.e., environmental change is significant and cannot be reduced to a level below significance.

TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Coastal Development Policies (Section 4.1)	Project is consistent with public access, coastal development, and visual resource policies of the California Coastal Act. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A, although the degree to which access through the site is provided would be less than Alt. A. (N)	Same as Alt. A. (N)	None of the coastal policies for public access, coastal development, or visual resources would be implemented. The current conditions would be retained. (N)
San Diego Association of Governments Central Bayfront Design Principles Compatibility (Section 4.1)	Project is consistent with general principles adopted for development of properties located in San Diego's Central Bayfront. (B)	The lack of a large open space area at Broadway/Harbor Drive (only a 0.5-acre plaza would be provided onsite) would not fully meet the intent of contributing to a "significant civic place" at this location. However, such a feature, on a somewhat smaller scale, could still be provided. All other basic guidelines would be followed. (N)	A significant element of the guidelines, provision of an open space area at Broadway/Harbor Drive, would not be provided. This would substantially affect the ability to implement a locally adopted plan. (S/U)	Same as B, although no cultural features (i.e., a museum) would be provided adjacent to the open space, which is an element of the design guidelines. Other pedestrian amenities would be provided. (N)	Same as C. (S/U)	Same as A. (B)	Would not implement design guidelines, but no new development and no change from existing conditions would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
San Diego General Plan Compatibility (Section 4.1)	Mixed-use development of the site is consistent with land use designations for the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N) Navy office site in Centre City East is likely to be consistent with land use designations. (N)	Office uses are consistent with land use designations for the site. (N)	Same as Alt. A. (N)	No development is proposed, so general plan consistency is not applicable. (N)
San Diego Centre City Community Plan Compatibility (Section 4.1)	Project creates a strong linkage between downtown and waterfront and implements goals of providing open space at the foot of Broadway and waterfront-oriented land uses. (B)	Same as Alt. A. (B)	Same as Alt. A with respect to waterfront linkages and waterfront orientation. (N) Would not provide open space at the foot of Broadway. (S/U)	Same as Alt. A at the Navy Broadway Complex. (B) Navy office site in Centre City East is likely to be consistent with land use designations in that area. (N)	Same as Alt. A with respect to waterfront linkages and waterfront orientation. (N) Would not provide open space at the foot of Broadway. (S/U)	Same as Alt. A. (B)	No development is proposed, so community plan compatibility is not applicable. (N)
City of San Diego Columbia and Marina Redevelopment Plan Compatibility (Section 4.1)	Provides a logical and complementary transition between redevelopment project areas and the waterfront. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Would be compatible with redevelopment project areas, although transition to the waterfront would not be as complementary. (N)	Same as Alt. A. (B)	No elements of current operations are incompatible with adjacent redevelopment project areas. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
San Diego Urban Design Program Compatibility (Section 4.1)	Would implement pedestrian (along E, F, G Streets, Broadway and Harbor) design, and open space (at the foot of Broadway) features provided in the city's program.	Same as Alt. A. (B)	Same as Alt. A with respect to pedestrian and design features along E, F, and G Streets and Harbor Drive. (B) Would not provide pedestrian orientation along Broadway as no open space would be provided. (U)	Same as Alt. A. (B)	Would not implement the design features of the city's program. (U)	Same as Alt. A. (B)	Would not implement city's program, but no change from current conditions would occur. (N)
Short-Term Traffic Impacts (Section 4.2)	Development of Phase I of the project (by 1995) would not substantially affect any intersections. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new development would occur by 1995, so no increase in traffic would occur. (N)	Same as Alt. A. (N)	No new development would occur, so no increase in traffic would result. (N)

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Intersection Traffic Impacts (Section 4.2)	<p>The operation of several intersections in the vicinity would be substantially affected:</p> <ul style="list-style-type: none"> • Grape/Pacific (S/M) • Broadway/Harbor (S/M) • Broadway/Pacific (S/M) • Broadway/Front (S/M) <p>Intersection improvements associated with the project or programmed by the City of San Diego would reduce impact at each intersection to below significance.</p>	<p>Same as Alt. A, except the intersection of Broadway/Harbor would also be adversely affected. Intersection improvements associated with the project or programmed by the City of San Diego would reduce impact at each intersection to below significance. (S/M)</p>	<p>Same as Alt. B. (S/M)</p>	<p>Same as Alt. A. (S/M)</p>	<p>Same as Alt. B. (S/M)</p>	<p>Same as Alt. A. (S/M)</p>	<p>No new development will occur so there will be no increase in traffic. (N)</p>

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Roadway Segment Impacts (Section 4.2)	<p>Substantial traffic will contribute to overcapacity conditions along several segments of roadway.</p> <ul style="list-style-type: none"> o Pacific Highway south of Broadway (S/M) o First Avenue south of Ash (S/M) <p>Planned improvements along First Avenue would reduce to below significance expected impacts along the segment south of Ash.</p>	Same as Alt. A. (S/M and S/U)	Same as Alt. A. (S/M and S/U)	Substantial traffic will contribute to overcapacity conditions in vicinity of Navy Broadway Complex along Pacific Highway south of Broadway. (S/M)	Same as Alt. A. (S/M and S/U)	Same as Alt. A. (S/M and S/U)	No new development will occur so there will be no increase in traffic. (N)

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Parking Impacts (Section 4.2)	With implementation of a Travel Demand Management program, sufficient parking would be provided to meet parking demands onsite. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A, except 5 percent of the parking for the Centre City East site would be provided in offsite facilities in that area. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Current parking conditions would remain unchanged. (N)
Viewshed Impacts (Section 4.3)	Viewshed would be altered by replacing or upgrading the existing buildings with more intensive development. Project would be designed to be visually compatible with the surrounding viewshed; would beneficially affect viewshed by opening up view corridors along Broadway and E, F, and G streets. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	The site would appear visually similar from most views, so would not be a substantial change from current conditions. However, view obstructions across the site from G Street toward the waterfront would be removed. (N)	Same as Alt. A, except development on Block 2 may substantially contrast with the scale of surrounding development, introducing an up to 500-foot-high building that would stand out from certain street-end viewpoints. May substantially contrast with surrounding development. (S/U)	There would be no change from current conditions so no impact would occur. (N)

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Shading Impacts (Section 4.3)	Substantially larger shadows would be cast from the site. Because the project area climate is generally moderate, shade is not, itself, considered adverse. No substantial shadows would be cast on any residential uses. (N)	Same as Alt. A. (N)	Same as Alt. A, although shadows would be less than with A. (N)	Same as Alt. A. (N)	Shadows would not be substantially greater than current conditions as only 50 feet in height would be added on one structure. (N)	Same as Alt. A, although shadows associated with Block 2 development would be longer than Alt. A. (N)	There would be no change from current conditions, so no impact would occur. (N)
Police Protection (Section 4.4)	Police protection can be provided to the site without substantially affecting the ability of the San Diego Police Department to provide services to the project vicinity. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)

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TABLE 1.5-1 (continued)

<u>Environmental Resource</u> (Section in document)	<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>	<u>Alternative F</u>	<u>Alternative G</u>
<u>Fire Protection</u> (Section 4.4)	Fire protection devices (e.g., roof sprinklers) that will be required will provide sufficient protection under current water flow pressures to the site (2,500 gallons/minute). Sufficient fire protection personnel are available in the area to provide emergency services to the site without affecting the ability to provide services to the project vicinity. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No changes in the existing conditions would occur, so no affect an fire protection would occur. (N)

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Schools (Section 4.4)	The number of Navy personnel in the region would remain unchanged. An influx of new non-military personnel could cause secondary impacts that contribute cumulatively to schools in the San Diego area that are near or over capacity. School fees for private development would be implemented. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Military personnel in the region would relocate to the site. No increase in regional employment would result, so no increase in students would be expected. (N)	Same as Alt. A. (S/M)	No changes in the existing conditions would occur, so no affect on schools would occur. (N)
Recreational Facilities (Section 4.4)	No existing recreation facilities would be adversely affected. A significant open space area (1.9 acres) would be provided at the foot of Broadway. (B)	Same as Alt. A, except the open space area at the foot of Broadway would be smaller (0.5 acre). (B)	No existing recreation facilities would be adversely affected. (N)	Same as Alt. B. (B)	Same as Alt. C. (N)	Same as Alt. A, except a larger open space area (3.5 acres) would be placed at the foot of Broadway. (B)	No change from existing conditions would result, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Water (Section 4.4)	Existing water supplies and conveyance facilities are sufficient to provide water services to the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact would occur. (N)
Wastewater (Section 4.4)	Existing sanitary sewer lines are not sufficient to transport the increased amounts of wastewater from the site, so would need to be upgraded. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	A reduced amount of wastewater than currently generated would result from this alternative, and it could be handled by existing conveyance facilities. (N)	Same as Alt. A. (S/M)	There would be no change from existing conditions, so no impact would occur. (N)
	The Point Loma Wastewater Treatment Plant has sufficient capacity to accommodate project flows without adversely affecting the plant's ability to provide services or its ability to eventually meet clean water standards. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A., except the net flow from the site would be less than current conditions. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Solid Waste Disposal (Section 4.4)	Existing and planned landfills would be able to accommodate solid waste generated by the project without substantially affecting the ability to handle solid waste in the region. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact to landfills would occur. (N)
Socioeconomics (Section 4.5)	An estimated 8,700 new employment opportunities would be created at the Navy Broadway Complex, a positive effect on job formation in downtown San Diego. (B)	Same as Alt. A, except 11,900 new employment opportunities would be created. (B)	Same as Alt. A, except 5,800 new employment opportunities would be created. (B)	Same as Alt. A, except 14,500 new employment opportunities would be created. (B)	Same as Alt. A, except 6,700 new employment opportunities would be created on the Navy Broadway Complex. However, these personnel would be relocated from other bases in the region. (N)	Same as Alt. A. (B)	No changes in employment would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Erosion (Section 4.6)	During construction onsite soils would be exposed to rain and other hydraulic forces that could eventually convey sediments to the ocean, potentially significantly affecting marine life. An erosion control plan would be implemented. (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	No new construction would occur, so no impacts to erosion would result. (N)
Seismicity (Section 4.6)	There is the potential that a branch of the active Rose Canyon fault may bisect the site. The project could be subjected to severe seismic shaking, with a potential onsite liquefaction hazard. Compliance with building codes would be necessary. (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	No new construction would occur, so there would be no change from current conditions. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Extractable Resources (Section 4.6)	No known extractable resources are located on or beneath the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. In addition, no new development would occur. (N)
Hydrology (Section 4.6)	Because the project site is already covered with impervious materials, no increase in runoff from the site would result. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No change in current conditions would occur so there would be no increase in runoff. (N)
Runoff Water Quality (Section 4.6)	Accidental fuel spills during construction could contaminate water quality. Notification of public officials and immediate cleanup would be necessary in this unlikely instance. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new construction would occur, so there would be no potential impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Construction Air Emissions (Section 4.6)	During construction, equipment emissions from the site would be substantial. Because this is a temporary effect and would not contribute substantially to the violation of air quality standards, the impact is not significant. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new construction would occur with this alternative, so there would be no impact. (N)
Construction Dust Generation (Section 4.6)	Fugitive dust created during construction could create short-term nuisance impacts. Dust control measures would be required. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur with this alternative, so there would be no impact related to dust. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Biological Resources (Section 4.7)	Terrestrial biological resources are not present because the site is already developed, so no impacts would occur. No substantial shadows would be cast over the bayfront during the time of the day when the sun is direct (after 9:30 a.m., even during the winter season), thus avoiding any potential significant effects to marine life. Reflective glass would be prohibited in tall buildings reducing the possibility for bird strikes. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No change in existing conditions would occur, so there would be no impact to biological resources. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Vehicular Emissions (Section 4.8)	Substantial new vehicle trips would be generated. An extensive Travel Demand Management Program would be implemented to substantially reduce the use of single-occupancy vehicles. The air quality management plan and State Implementation Plan are being updated to reflect current growth conditions. Primary means to reduce emissions will be reduction in single occupancy vehicles. The project would be compatible. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new development would occur, so there would be no increase in vehicle emissions. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Vehicular Emissions - Cumulative (Section 5.8)	There would be sufficient congestion at an intersection after project traffic mitigation to result in a significant cumulative regional air quality impacts. (S/U)	Same as Alt. A, except two intersections would have sufficient congestion after mitigation to result in a significant contribution to cumulative regional air quality impacts. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	No new development would occur, so there would be no increase in cumulative intersection congestion. (N)
Carbon Monoxide Emissions (Section 4.8)	Carbon monoxide concentrations associated with traffic would be within federal and state air quality standards. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No increase in vehicle emissions would occur, so no carbon monoxide increase would result. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Construction Noise (Section 4.9)	Temporary construction noise could create significant nuisance noise impacts, especially on week-ends when the nearby waterfront would be actively used. Construction would be scheduled in accordance with local noise ordinances. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur, so there would be no impact related to construction noise. (N)
Traffic Noise (Section 4.9)	Although long-term noise would increase over existing levels as a result of increased traffic, no sensitive receptors would be significantly affected. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new traffic would be generated by this alternative, although it would be exposed to increased noise from general traffic growth in the project area. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Onsite Noise (Section 4.9)	Hotels constructed on the site would be within the 65 dB CNEL from traffic noise, which could create substantial interior noise levels. Engineering design to reduce interior noise levels would be necessary. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No hotel uses are proposed so no impact would occur. (N)	Same as Alt. A. (S/M)	No new development would occur, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

<u>Environmental Resource</u> (Section in document)	<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>	<u>Alternative F</u>	<u>Alternative G</u>
<u>Subsurface Cultural Resources</u> (Section 4.10)	Site is underlain with artifacts from waterfront development between the 1880s and 1910s. These materials are buried beneath the dredged fill placed onsite to create dry land for more development. The archaeology, while containing many artifacts, lacks stratigraphic integrity, and context, and is therefore unlikely to contribute important information about San Diego's early history. The archaeological resources do not appear to qualify for inclusion in the National Register of Historic Places. This has been confirmed through consultation with the California State	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No subsurface excavation would occur, so there would be no impact to subsurface archaeology. (N)	Same as Alt. A. (N)	Same as Alt. E. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Historic Preservation Officer. Excavation for footings and other below-grade construction would destroy any archaeology that might exist but this would not result in the loss of a significant resource. Should an unanticipated significant archaeological resource be discovered during project excavations it would be evaluated and, if found to be important, it would be treated in accordance with 36 CFR 800.11. (N)							
Historical Archaeology (Section 4.10)	Navy Broadway Complex Buildings 1 and 12, combined with the Navy Pier (located outside the	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No building modification would occur, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	<p>project boundaries) form a unit that represents every major period of Navy development at this location. These structures for nearly 50 years have been an architectural anchor to the San Diego Harbor and skyline. As a unit they appear to qualify for the National Register of Historic Places. Demolition or any substantial modification of these structures would constitute a significant impact. Specific mitigation will be developed in consultation with California SHPO pursuant to the regulations (36 CFR 800) for implementing Section 106 of the National Historic</p>						

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
<p>Preservation Act (16 U.S.C. 470f). The Navy proposes to record Buildings 1 and 12 in accordance with the Historic American Buildings Survey Standards prior to demolition or modification. (S/M)</p> <p>Several buildings within a three-block area of the project are either listed, eligible for listing, or appear to qualify for listing on the National Register of Historic Places. The project will not affect the use or integrity of these structures. (N)</p>	Same as Alt. A (N)	Same as Alt. A (N)	Same as Alt. A (N)	Same as Alt. A (N)	Same as Alt. A (N)	Same as Alt. A (N)	No change in existing uses would occur, so there would be no effect on nearby historic resources. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Soil Contamination (Section 4.11)	Minor hazardous waste spills were located or may be located on the site. In addition, transformers that contain PCBs are located on the site although none are known to be leaking. Because the presence of hazardous waste can affect public health, this would be considered a significant impact with any of the alternatives. There are no known major hazardous waste spills or leaking underground storage tanks on the site. Remedial action to remove and properly dispose of any hazardous waste found on the site will occur. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	There would be no change in the current onsite conditions, so no impact would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Asbestos (Section 4.11)	Most of the existing buildings on the site contain asbestos. A potential public health hazard would result during demolition, when asbestos fibers could become air-borne. The project would be required to comply with the Federal Clean Air Act to protect the public from exposure to asbestos. (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	Same as Alt. A (S/M)	There would be no change in current site conditions. Asbestos in onsite buildings does not present an imminent health risk. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Groundwater (Section 4.11)	<p>A groundwater plume that has been contaminated with hydrocarbons is located an estimated 1/3 mile and down-gradient of the Navy Broadway Complex. Groundwater quality testing at the site found no evidence of contamination. Although unlikely, groundwater dewatering during construction could draw the plume toward the site. A National Pollution Discharge Elimination System (NPDES) permit application will be filed with the Regional Water Quality Control Board (RWQCB). The project would comply with any conditions specified in a NPDES permit. (S/M)</p>	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No groundwater dewatering would be necessary, so no impact would occur. (N)	Same as Alt. A. (S/M)	Same as Alt. E. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Aircraft Heights (Section 4.11)	The 400-foot-high building on Block 1 would exceed non-operational imaginary height surfaces, but based on a Federal Aviation Administration (FAA) determination, would not result in a hazard to air navigation. Buildings on the easterly areas of Blocks 1, 2, and 3 would be obstruction lighted, per FAA standards. (N)	Same as Alt. A, except the building on Block 1 would be 300 feet high. It would nevertheless exceed imaginary surfaces, but would not result in a hazard to air navigation. The project would comply with any FAA-imposed conditions. (N)	All buildings would be below any FAA imaginary height surfaces, and would not result in a hazard to air navigation. (N)	Same as Alt. B. (N)	Same as Alt. C. (N)	The 500-foot-high building on Block 2 would exceed operational imaginary height surfaces, but based on previous FAA determinations, would not likely result in a hazard to air navigation. The project would comply with any FAA-imposed conditions. (N)	No new development would occur, so there would be no effect on air navigation. (N)
Natural Gas (Section 4.12)	Natural gas could be provided without adversely affecting the ability of the San Diego Gas and Electric Company (SDGE) to provide services to its service area, and without adversely affecting conveyance facilities. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new development would occur, so there would be no impact on natural gas. (N)

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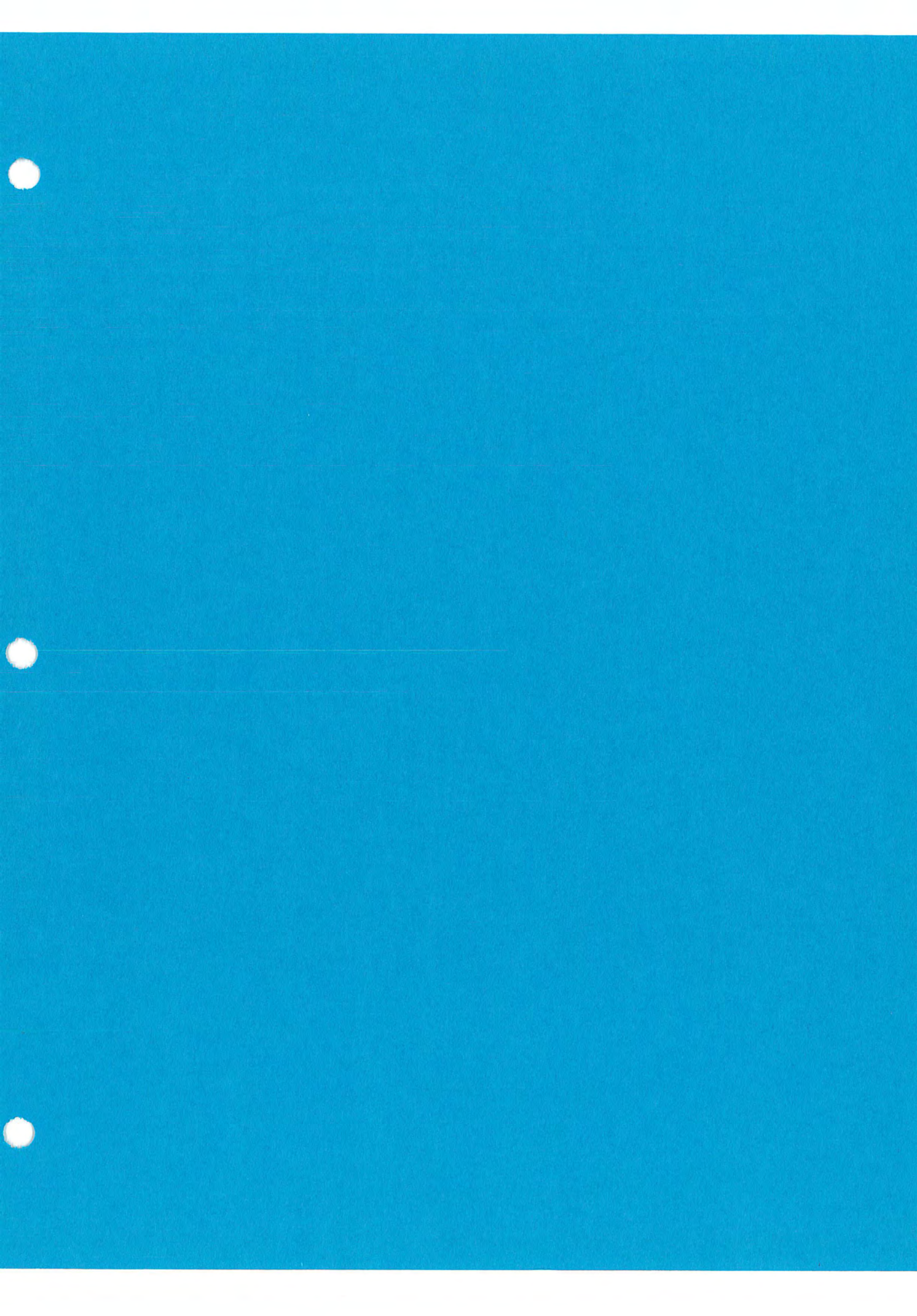
TABLE 1.5-1 (continued)

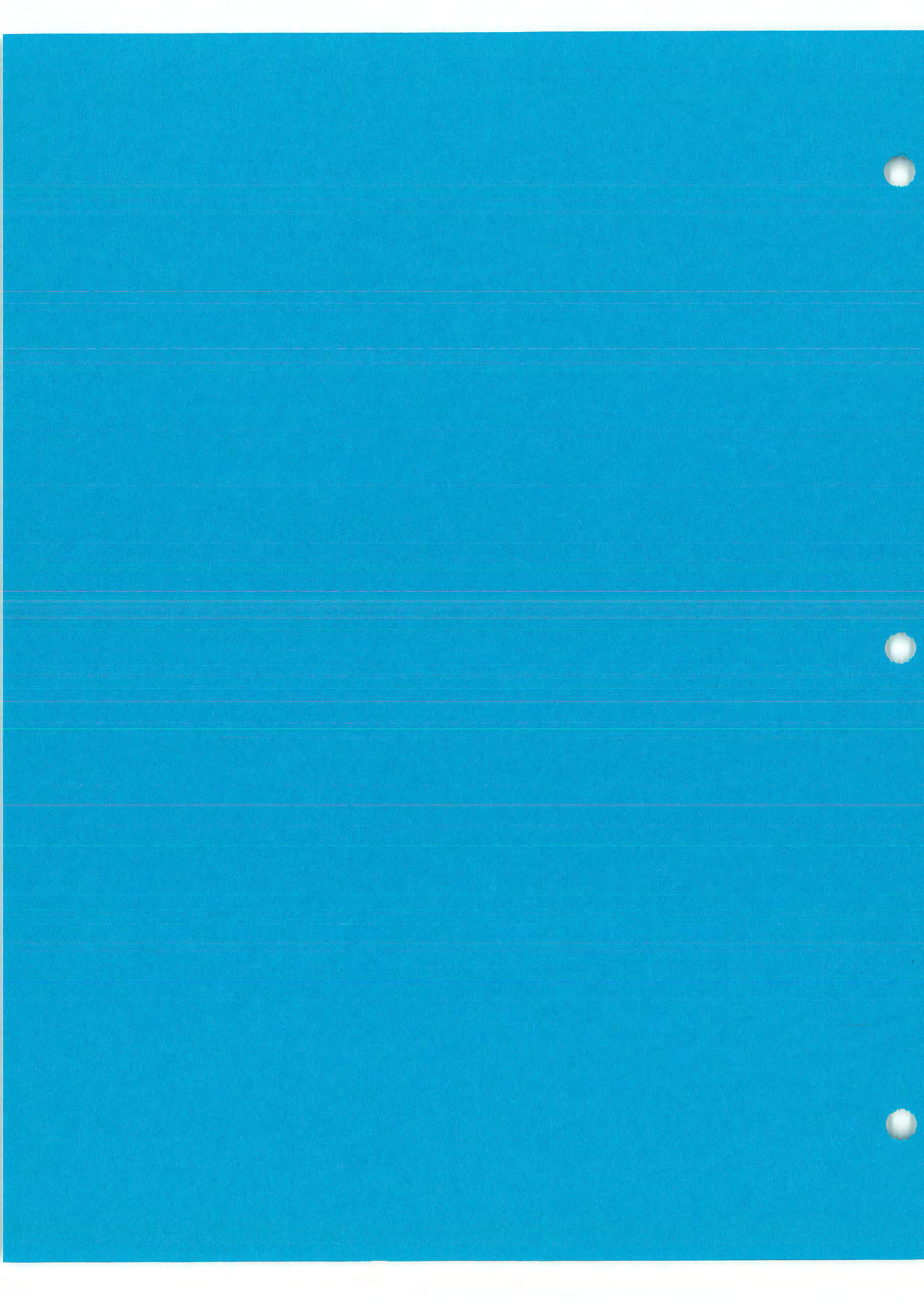
Environment/ Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Electricity (Section 4.12)	Conveyance facilities are not sufficient to provide adequate electrical service to the site. A new 12 kV looped system would be required. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	No new development would occur, so there would be no impact on electrical service. (N)

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Key: Each impact is followed by one of the following notations:

- B - Substantial beneficial environmental change.
- N - Not significant, i.e., environmental change is not substantial and adverse.
- S/M - Significant but mitigable, i.e., environmental change is substantial and adverse, and can be mitigated to a level below significance.
- S/U - Unavoidable adverse impact, i.e., environmental change is significant and cannot be reduced to a level below significance.





SECTION 2

PURPOSE OF AND NEED FOR ACTION

This section addresses the purpose of and need for the proposed action, as required by the National Environmental Policy Act (NEPA), as well as the project objectives, in accordance with the California Environmental Quality Act (CEQA).

The United States Department of the Navy is the owner and/or operator of 18 administrative, support, and operational installations throughout the City of San Diego area. One such facility is known as the Navy Broadway Complex, which primarily contains administrative and warehouse facilities, and is the location of the Commander, Naval Base, San Diego; the Naval Supply Center, San Diego; and several other Department of Navy activities. As previously shown in Figure 1-1, the Navy Broadway Complex is centrally located to the other Navy installations.

The Navy Broadway Complex is located on approximately 15.6 acres in downtown San Diego near the waterfront. Onsite structures were built primarily between 1922 and 1944, with a small gatehouse added in 1956. The site currently houses 405,753 square feet (SF) of office, 179,616 SF of industrial/warehouse buildings, and 421,660 SF of industrial uses for the Navy with a total 1,007,029 SF of development. Although outside of the boundaries of the proposed project, the adjacent Navy Pier is supported by personnel at the Navy Broadway Complex and is part of the complex.

The Naval Supply Center initiated long range plans in 1979 to move much of the warehousing from the Navy Broadway Complex site to new, modern facilities located at existing naval operational bases in the San Diego region. Subsequent to this, a regional study of Navy administrative and facility requirements was conducted. The study reaffirmed that the Navy Broadway Complex with the Navy Pier was essential for national security purposes and also found that consolidation of administrative personnel at one location would free valuable operational space at the other installations. The Navy Broadway Complex was determined to be the most suitable facility for co-location because of its:

- Central location in relation to other Navy installations;
- Proximity to several major regional transportation facilities, including light rail transit lines, a railroad, several bus lines, and an extensive freeway complex;
- Ideal size to support necessary office space.

This co-location concept at the Navy Broadway Complex, with continued operation of the adjacent Navy Pier, was approved by the Chief of Naval Operations in 1983. A need for approximately 1 million SF of upgraded office space has since been identified to accommodate Navy administrative personnel.

The typical means by which construction of Navy offices, or other military facilities, is funded is through Military Construction (MILCON) appropriations, which are taxpayer-funded and Congressionally approved. However, Congress endorsed, through Public Law (P.L.) 99-661, a concept proposed by Navy planners and community groups by which the site would be developed at reduced cost to the taxpayers through a public/private venture. P.L. 99-661 was a component of the National Defense Authorization Act of 1987.

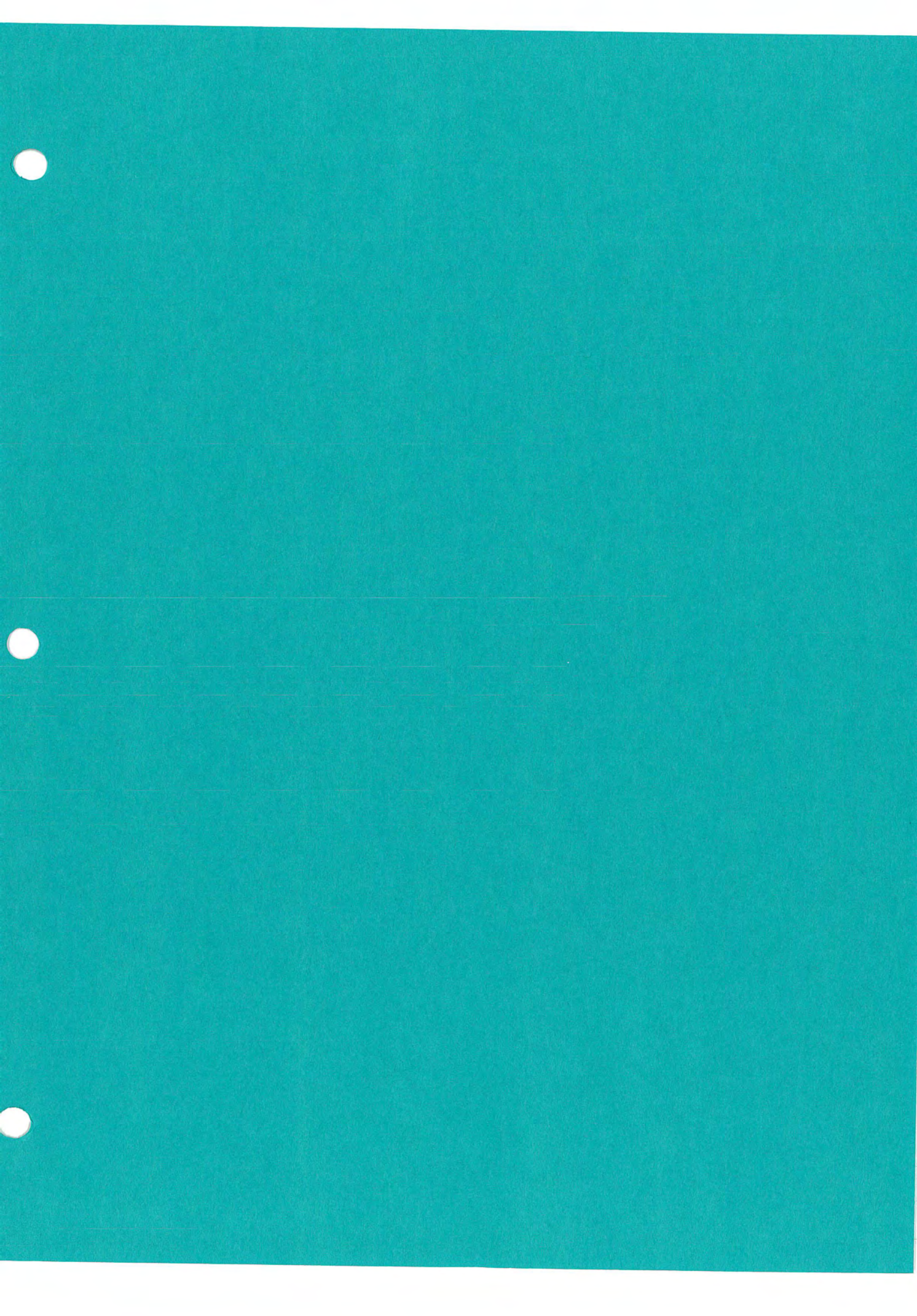
The legislation allows the Secretary of the Navy to enter into long-term leases of property on the Navy Broadway Complex, providing that in consideration of the lease, the Navy obtains without compensation, or at substantially below market value, administrative office facilities for the use by the Navy, thereby providing needed Navy facilities at little or no cost to the taxpayer. The lease would be to a private party(ies), who would develop private uses on a portion of the site, with the Navy offices on other portions of the site.

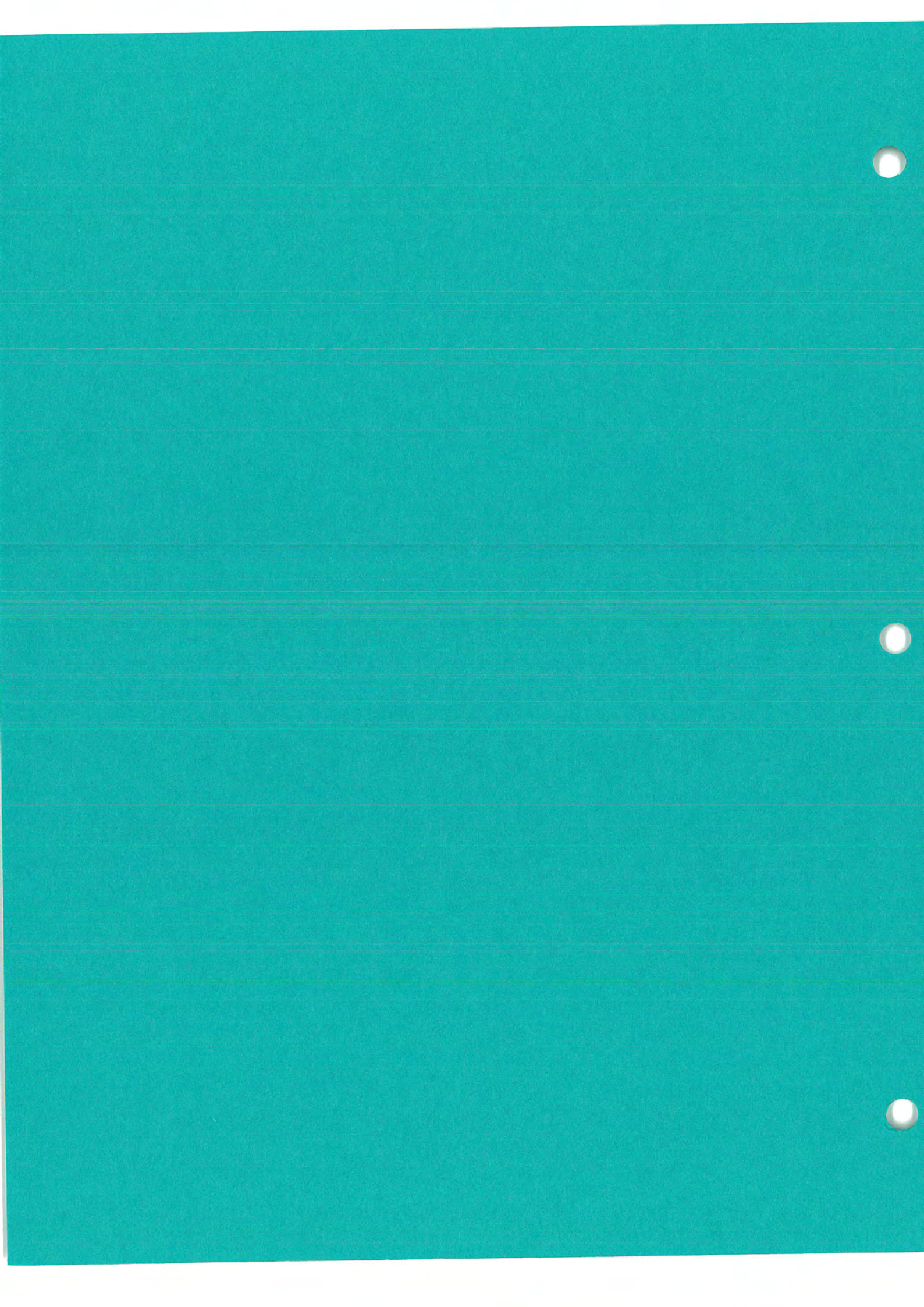
Pursuant to P.L. 99-661, the Navy is proposing to redevelop the Navy Broadway Complex with the following uses:

- Up to 1,000,000 square feet (SF) of Navy administrative offices.
- A mix of private office, commercial, and/or retail uses up to 2,145,000 SF in size.

The proposed development and alternatives are described in detail in Section 3. A copy of P.L. 99-661 is provided in Appendix A.

The Navy and the City of San Diego entered into a Memorandum of Understanding (MOU) on June 1, 1987 to guide the planning and approval process for redevelopment of the Navy Broadway Complex. The MOU specifies that the Navy, in consultation with the City of San Diego, will prepare a development plan and urban design guidelines that will define the nature of development that will occur on the Navy Broadway Complex. The development plan and urban design guidelines would become part of a development agreement between the Navy and the City of San Diego. A copy of the MOU is provided in Appendix B.





SECTION 3
ALTERNATIVES INCLUDING THE PROPOSED ACTION

3.1 **PROJECT LOCATION**

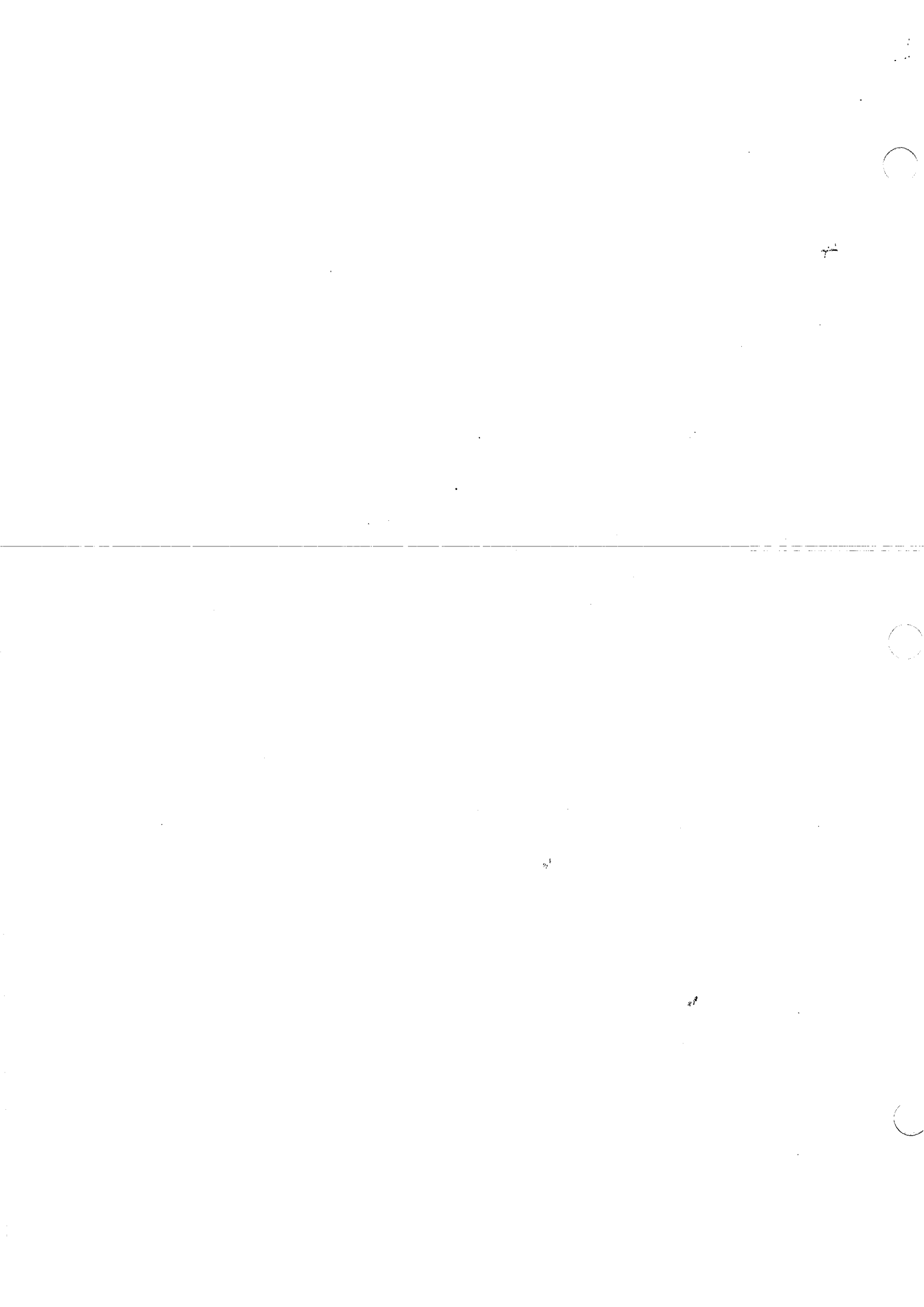
The site of the proposed project, known as the Navy Broadway Complex, is located in the City of San Diego, California, within the downtown area known as Centre City. The regional location of the site is depicted in Figure 3-1. The Navy Broadway Complex is located in the western area of the City near the San Diego Bay waterfront, as depicted in Figure 3-2. It is bounded by Broadway on the north, Pacific Highway on the east, and Harbor Drive on the south and west. The Navy Broadway Complex, which consists of approximately 15.6 acres, is located on eight city blocks. As shown in Figure 3-3, the eight city blocks are consolidated into four larger blocks, noted in this document as Blocks 1, 2, 3, and 4 from north to south, with each bounded by Pacific Highway on the east and Harbor Drive on the west, and separated by the extensions of E, F, and G streets.

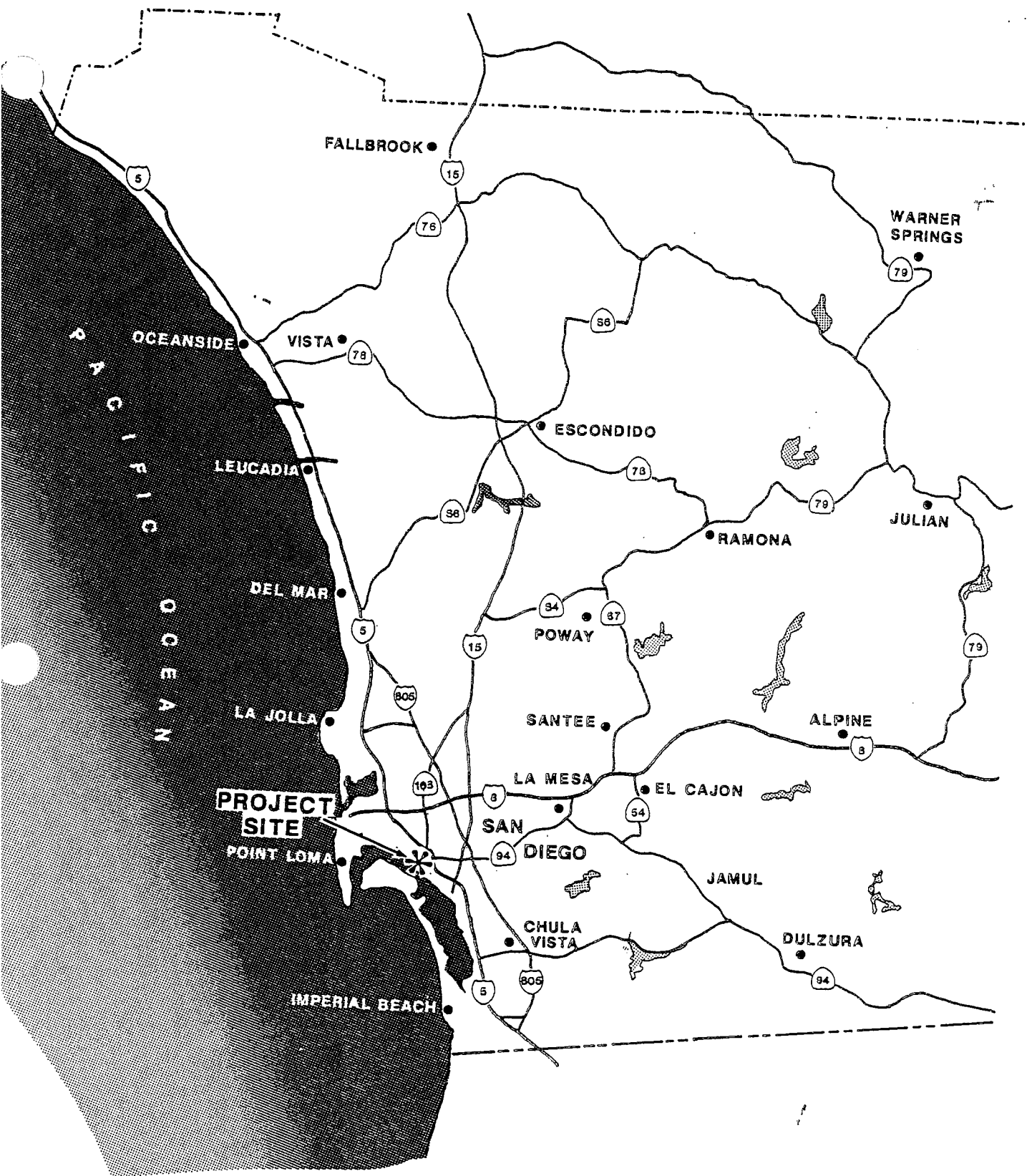
3.2 **ALTERNATIVES**

The planning process for the co-location of administrative offices at the Navy Broadway Complex was initiated in 1979 when relocation of warehouses on the site was first considered, followed in 1983 by approval of the co-location concept by Chief of Naval Operations. The formation of the advisory Broadway Complex Coordinating Group (BCCG) served as the next step in the planning process. It was not until passage of P.L. 99-661 in 1987 that the process to generate detailed development concepts for the Navy Broadway Complex was initiated. Since that time, and particularly since 1988--after a project development team was assembled--a number of alternatives to redevelopment of the Navy Broadway Complex have been systematically examined.

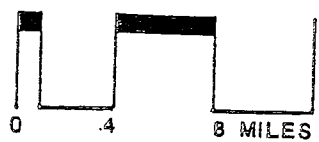
The following criteria were considered in developing alternative concepts:

- Provide up to 1 million square feet (SF) of administrative offices for the co-location onsite of Navy administrative personnel in the San Diego Region.
- Maintain a Navy presence at the Navy Broadway Complex. This is required by the need to provide support personnel for the adjacent Navy Pier, which must continue in operation for national security purposes. The Navy Pier is used for ship berthing, storage, and load-outs. In order to support the Navy Pier, a rail line that bisects the site and is used periodically would be retained.
- Allow for private development opportunities through a ground lease such that sufficient lease revenues are generated to significantly or fully offset the cost of Navy offices.
- Develop a high-quality project that provides open space at the foot of Broadway, opens view corridors between the downtown core and the waterfront, maximizes pedestrian access and public uses, and results in an aesthetically pleasing project. This responds to community desires as expressed in local policy plans and through the BCCG.





ional Setting
 vy Broadway Complex Project



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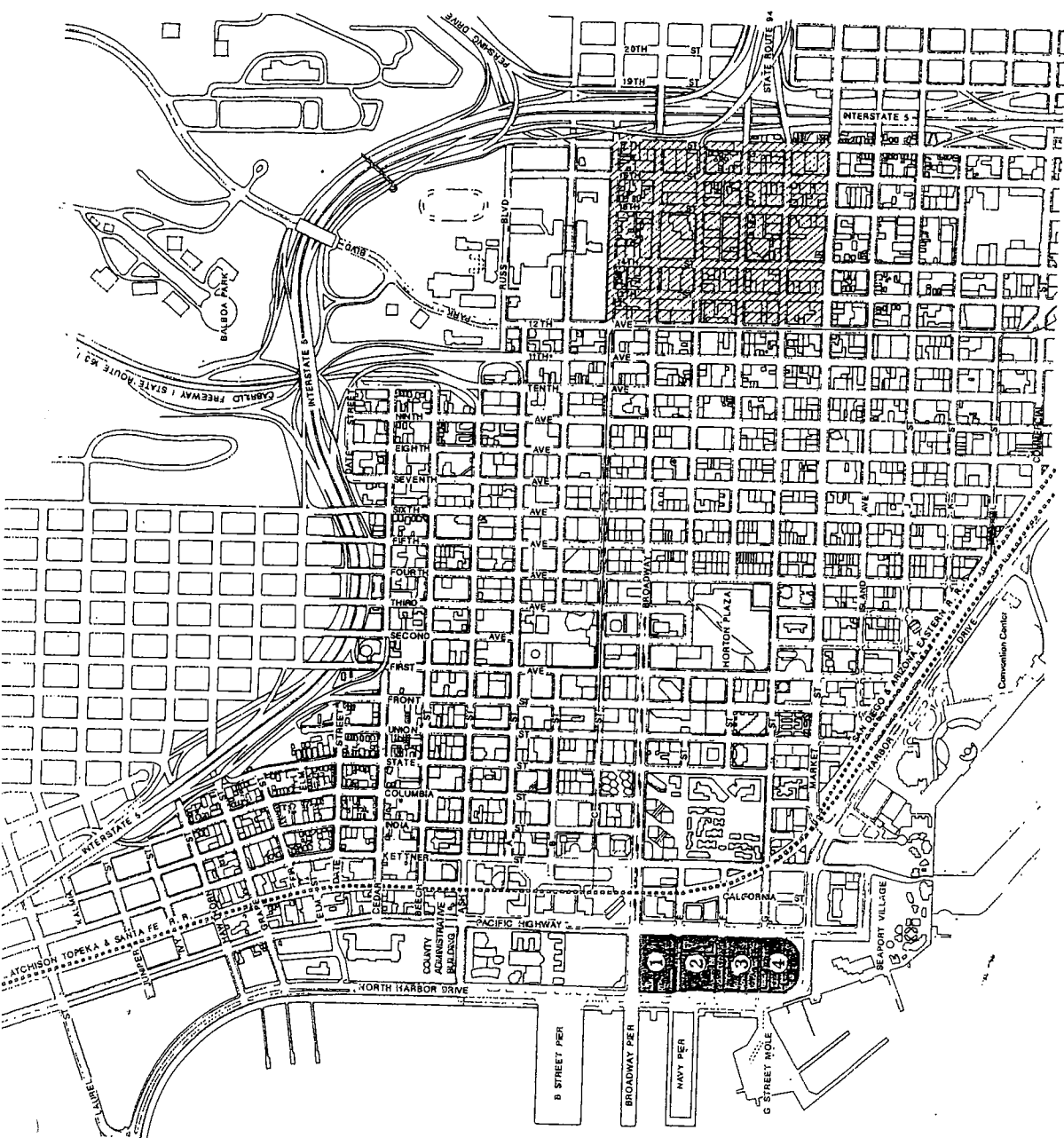
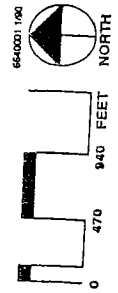


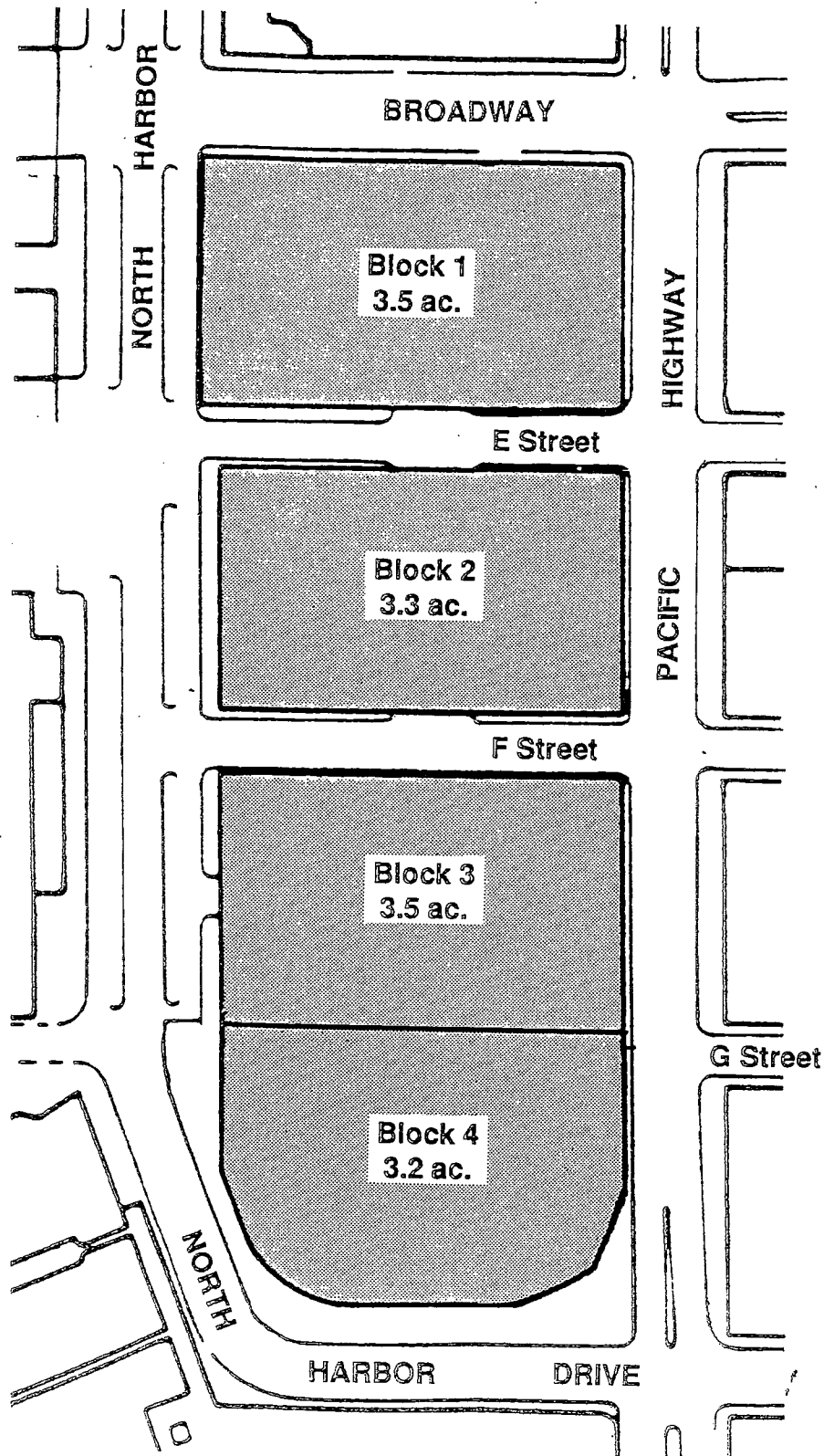
Figure 3-2

Vicinity Map



Navy Broadway Complex Project





Project Blocks
 Navy Broadway Complex Project

5840001-July 1989



NORTH
 Figure 3-3



Several alternative concept plans were considered but rejected in the planning process. Each alternative included a mix of land uses that included 1 million SF of Navy offices. Each alternative was evaluated for its consistency with the criteria expressed above, and its compatibility with planning policies.

Several alternatives with variations in overall square footage were considered, but were found to either be insufficient in size to offset the costs of the Navy offices or were too intense to meet community objectives. These alternatives were rejected from further consideration.

An alternative that included over 100,000 SF of specialty retail, along with a mix of other uses, was considered. Although this alternative would have met with criteria that were being considered for redevelopment of the site, it was rejected because of insufficient market demand for this much specialty retail, given the expansion of the nearby Seaport Village specialty retail shopping center and the Horton Plaza regional shopping mall.

A mixed-use development that would have included 860 residential units in mid- and high-rise structures on a portion of the site was also considered. This alternative was rejected because it would not have provided sufficient revenues per square foot to offset the costs of Navy offices.

A final alternative that was considered was similar to the Navy's preferred alternative, Alternative A, and was announced to the public in March, 1989. This alternative included a mixed-use development of Navy and commercial offices, a museum, hotels, and a small amount of retail. It also included 1.3 acres of open space at the northwest area of the site, at the foot of Broadway. The tallest building would have been 350 feet in height. Subsequent to the announcement, there was community discussion calling for additional open space at the foot of Broadway. In response to this community input, this alternative was revised and replaced by an alternative that provided 1.9 acres of open space at the foot of Broadway and a 400-foot-high building.

The Navy narrowed the potential development concepts to seven alternatives after consideration of potential alternatives and after receiving community input on a preferred alternative. The seven alternatives are considered in the environmental impact analysis, and are listed below and described in detail in the following sections. Table 1.2-1 (page 1-5) summarizes each alternative. Alternatives include:

- The proposed action (i.e., the preferred alternative) and three mixed-use development alternatives on the Navy Broadway Complex.
- Construction of only military uses on the Navy Broadway Complex using traditional congressionally funded Military Construction (MILCON).
- An alternative with development of primarily private commercial and office uses on the Navy Broadway Complex and development of Navy offices on a second site in the eastern area of downtown San Diego.
- The no action alternative, whereby existing Navy uses on the site remain unchanged.

The rationale for selecting each of these alternatives for further consideration is discussed in the following sections.

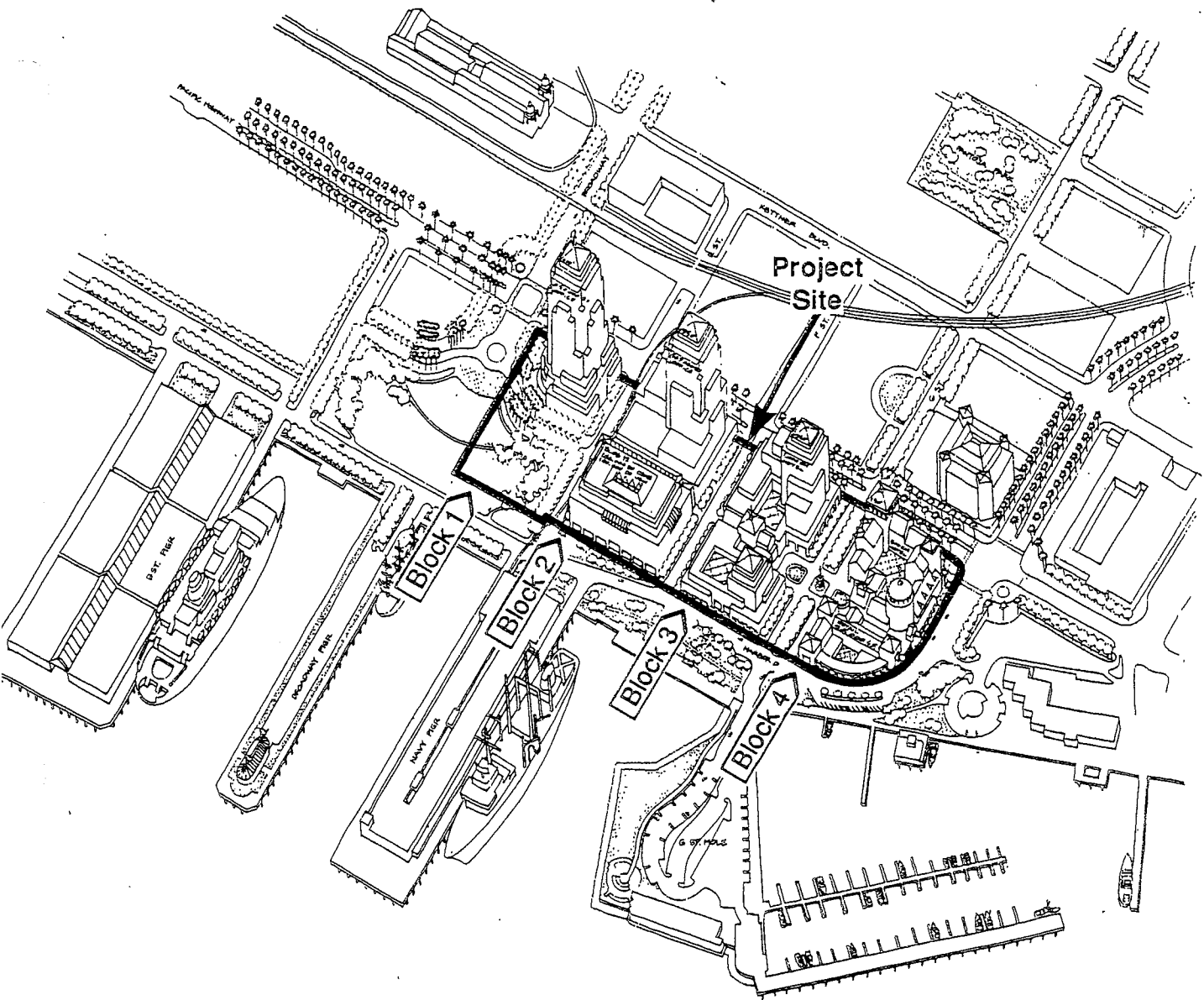
The Navy Broadway Complex would be developed according to design guidelines to be adopted by the Navy and the City of San Diego. Draft design guidelines have been prepared for the project and are presented in Appendix D. The guidelines would become part of the development agreement to be adopted by the City and Navy. The guidelines describe allowable land uses, land use intensities, maximum heights (by block), and parking standards. With the exception of the Alternative E, which includes military construction only, and Alternative G (no action), each of the alternatives is generally consistent with the design guidelines. Alternatives E and G are not consistent with the guidelines because they retain the site for exclusive Navy use.

The mix of land uses shown for each of the proposed mixed-use alternatives (i.e., Alternatives A, B, C, D, and F) is based on anticipated market conditions. Depending on actual market conditions at the time of development, modifications in the square footage of each proposed land use may occur. However, in no event would the overall square footage of development exceed the total square footage shown for each alternative.

3.2.1 ALTERNATIVE A

Alternative A implements all the criteria that were established in developing the alternatives, and is conceptually illustrated on Figure 3-4. Alternative A is the Navy's preferred alternative, and it includes the following public benefits:

- A 1.9-acre open space would be provided at the foot of Broadway (see Figure 1-2, page 1-6). This open space area would help implement a long-standing desire by the City of San Diego to provide a gateway to the City from the waterfront. The City of San Diego and the San Diego Unified Port District may contribute adjacent property to create an even larger open space at the foot of Broadway. (Coordination with the City and the Port District would be needed to reserve the adjacent area as open space. If reserved, an approximately 10-acre open space area at the foot of Broadway could be provided. (See Figure 1-3, page 1-7). The provision of open space outside of the project boundaries is not a part of this project.
- The project would provide up to 55,000 square feet of unimproved space for a community-sponsored group to have a museum, which would be oriented towards showcasing the maritime heritage of the City, and the historical significance of this section of the waterfront. Together with the open space on Block 1, the museum will help to create a pedestrian environment oriented to the waterfront (see Figure 1-2, page 1-6).
- E, F, and G Streets, which currently terminate at the eastern boundary of the site (at Pacific Highway), would be extended and developed with broad sidewalks through the site to provide vehicular and pedestrian access between downtown and the waterfront (see Figure 1-4, page 1-8). G Street would provide sidewalks up to 30 feet wide that would be landscaped to enhance pedestrian and visual access between the Marina neighborhood to the east and the G Street Mole at the waterfront.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office Open Space (1.9 acres)	650,000	650 below-grade	400
2	Navy Office: - Bldg. 12 - New Museum	331,000 669,000 55,000	430 below-grade 800 above-grade	350
3	Above-Grade Parking Hotel	300,000 745,000	750 below-grade	250
4	Hotel Retail	475,000 - 25,000	375 100 below-grade	150
Total		3,250,000	3,105	

Density = 5.45 Gross FAR

Alternative A
Navy Broadway Complex Project

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NORTH

Figure 3-4



- Taller buildings would include slender towers rising from broad bases and would be constructed on the inland side of the site nearest Broadway, stepping down to the waterfront and to the south to provide a visual transition between the higher density downtown core to the north and east and the lower density waterfront and specialty retail to the west and south. View corridors along E, F, and G streets would be enhanced to maximize public views of the waterfront from corridors.

The basic project objectives of providing Navy offices at reduced cost to the taxpayers would be met, although some local financial assistance by the City of San Diego for infrastructure improvements (e.g., roadway and streetscape improvements) would be required.

Alternative A includes development of 3,250,000 SF of mixed uses on the Navy Broadway Complex. The conceptual illustrative for this alternative shows the tallest buildings on the northeasterly area of the site, peaking on Block 1 with other structures stepping down in height towards the Seaport Village shopping center to the south, and to the waterfront on the west, as shown in Figure 3-4. Figure 3-5 depicts an illustrative site plan for Alternative A. (It should be noted that all figures showing the alternatives are conceptual and intended only to represent an illustrative example of the scale and possible general appearance of development.) Figure 3-6 depicts massing guidelines for this alternative.

Description of Alternative A

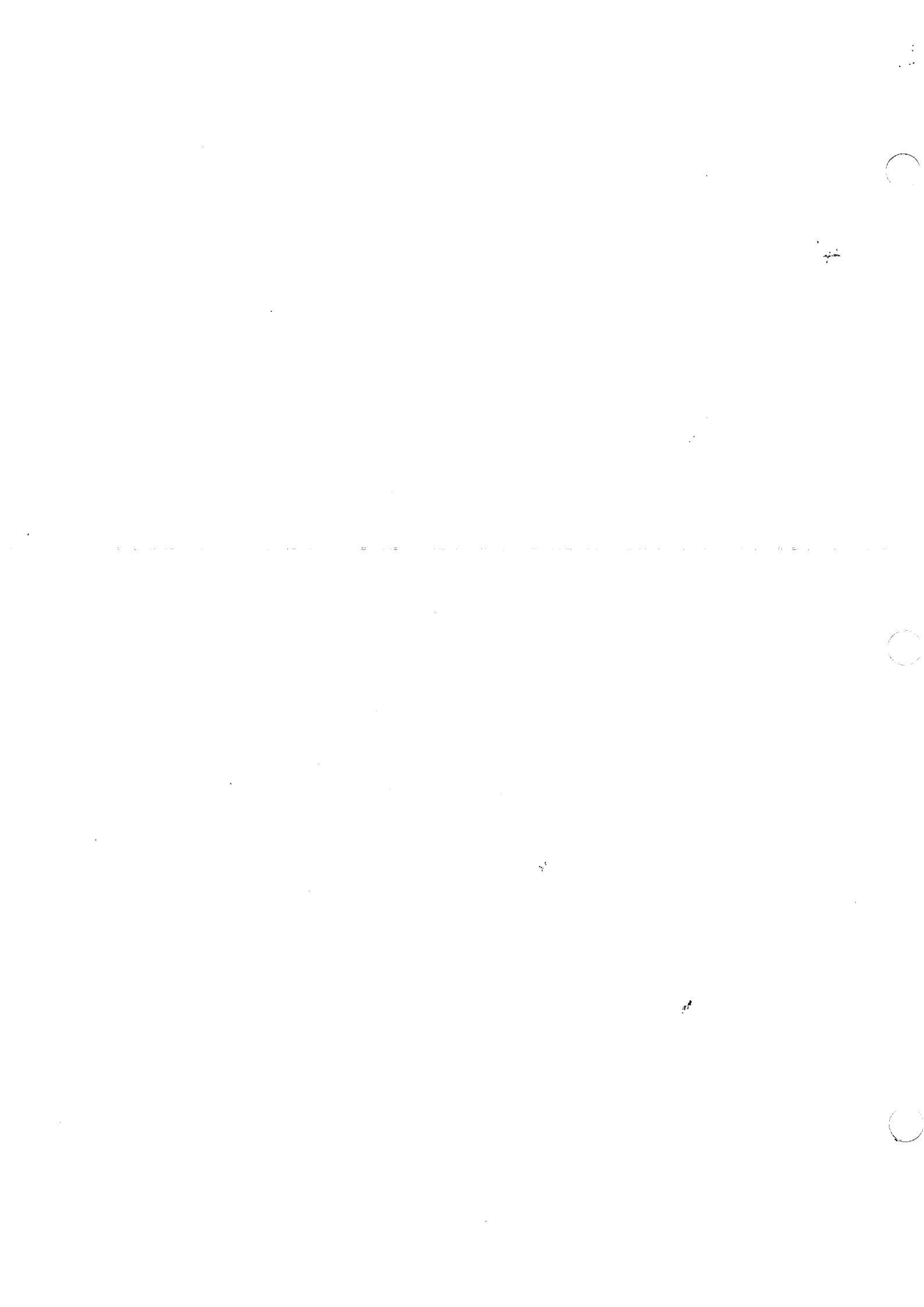
Alternative A would include a mix of open space, Navy office, museum, hotel, commercial office, and retail land uses in up to 3,250,000 SF of development. The gross floor area ratio (FAR) for this alternative would be 5.45. The precise mix and location (by block) of land uses would be determined by market conditions. For purposes of this analysis, the following land uses by block are assumed.

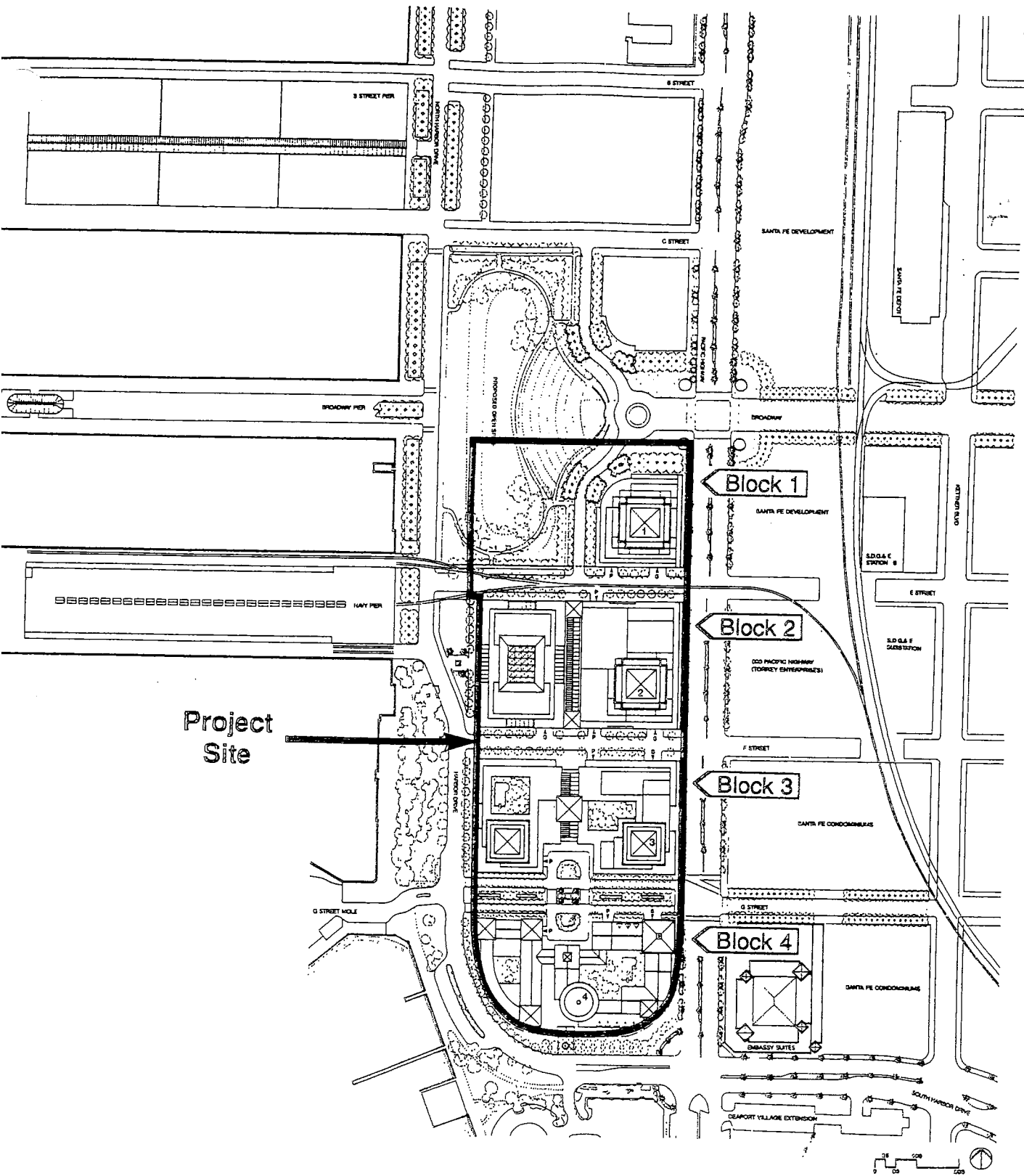
Block 1

A 650,000 SF commercial office building and approximately 1.9 acres of open space are proposed. If a contiguous segment of Broadway is abandoned and the Port District dedicates an adjacent similarly sized area of open space, an approximately 10-acre open space area at the foot of Broadway could be created, as depicted in Figure 3-4. Broadway could be re-routed around the open space to its terminus at Harbor Drive.

The commercial office building would include a street-level podium, upon which a stepped tower would be developed. The office podium would have a 75-foot setback from Broadway to create a visual link to the waterfront and would be 400 feet high. Its tallest component would be next to Pacific Highway at the easterly end of the site, and it would step down towards the open space and the waterfront. Ground-level support retail and restaurant uses would be included. An illustrative cross section of this plan is depicted in Figures 3-7 and 3-8.

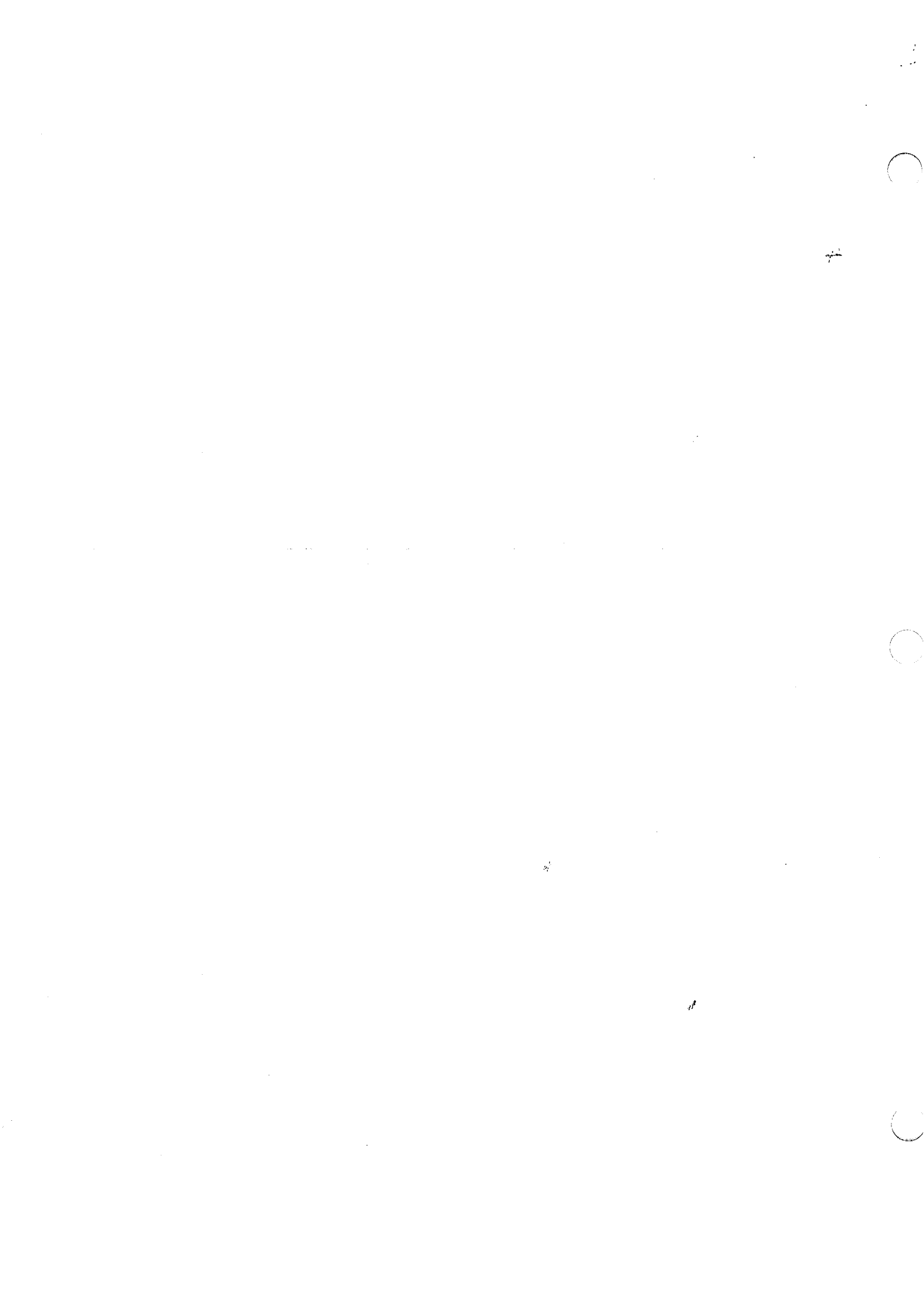
Below-grade parking would be provided for 650 vehicles, which is 1 space per 1,000 SF.

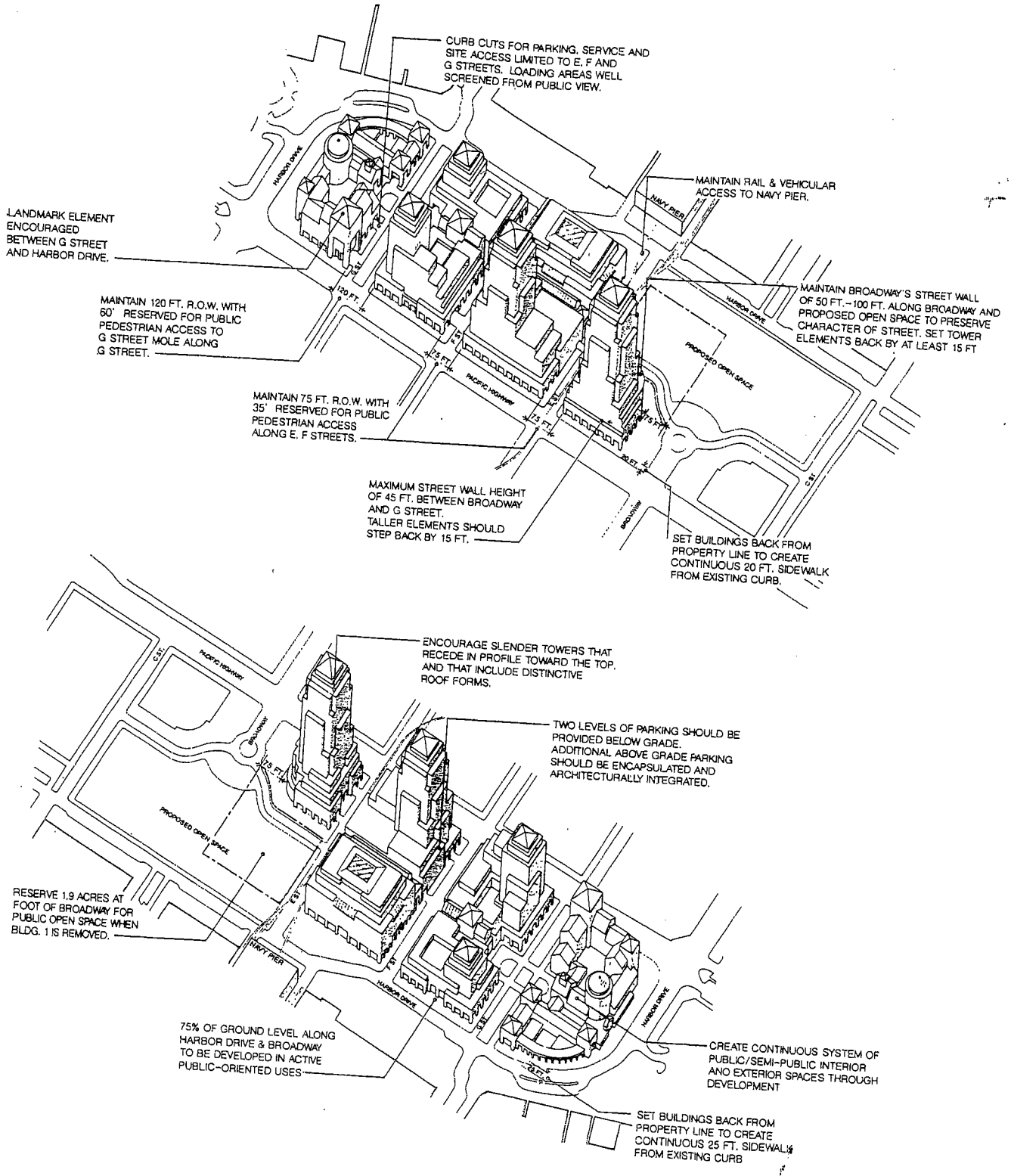




Project Site

Alternative Site Plan, Alternative A
 Navy Broadway Complex Project

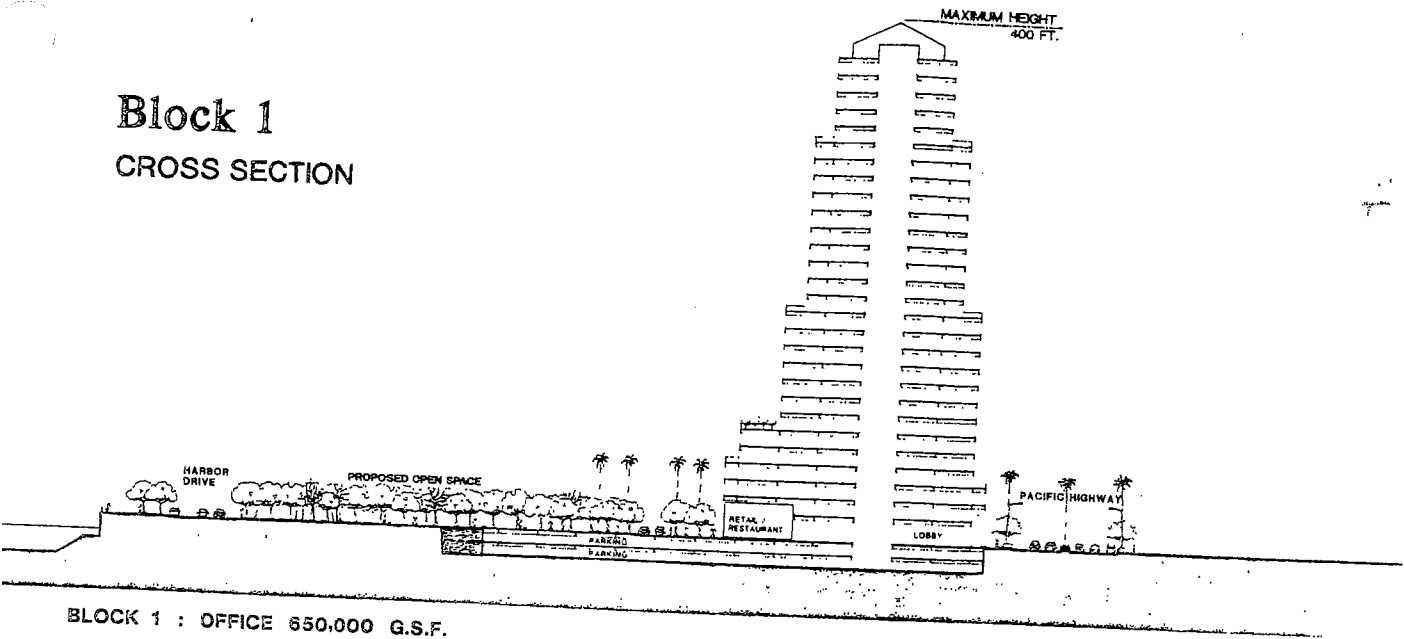




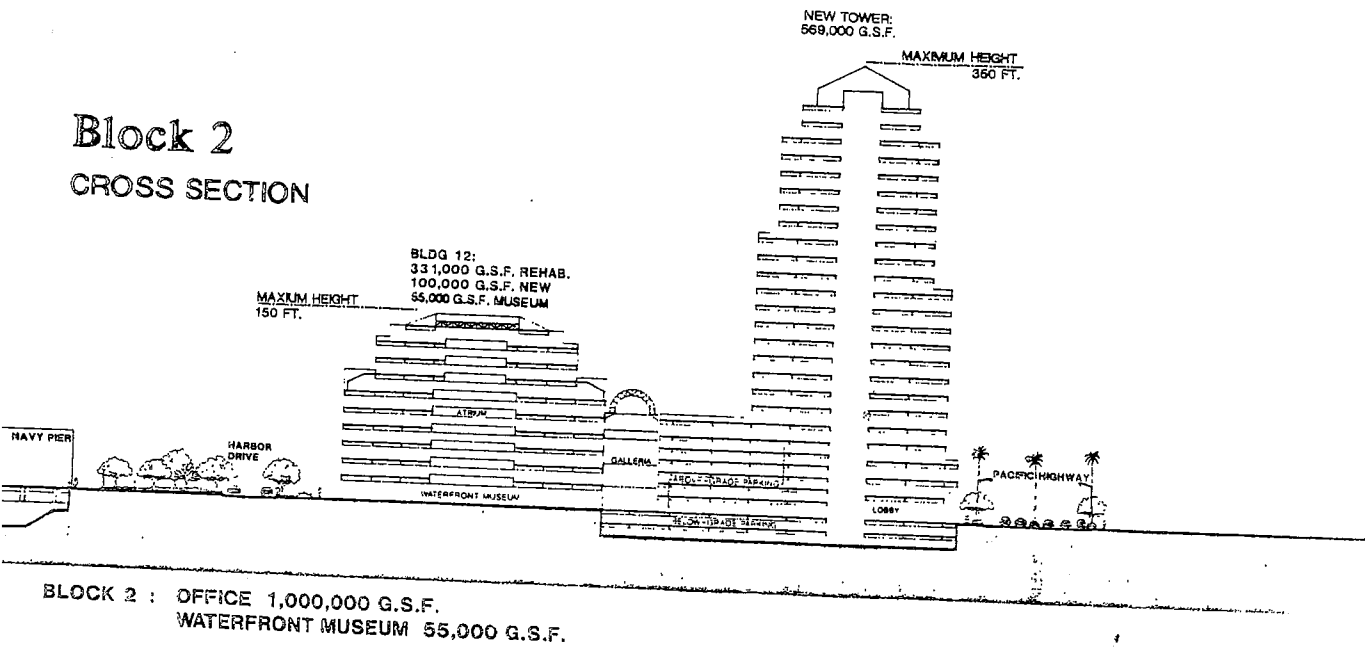
Massing Guidelines
 Alternative A
 Broadway Complex Project



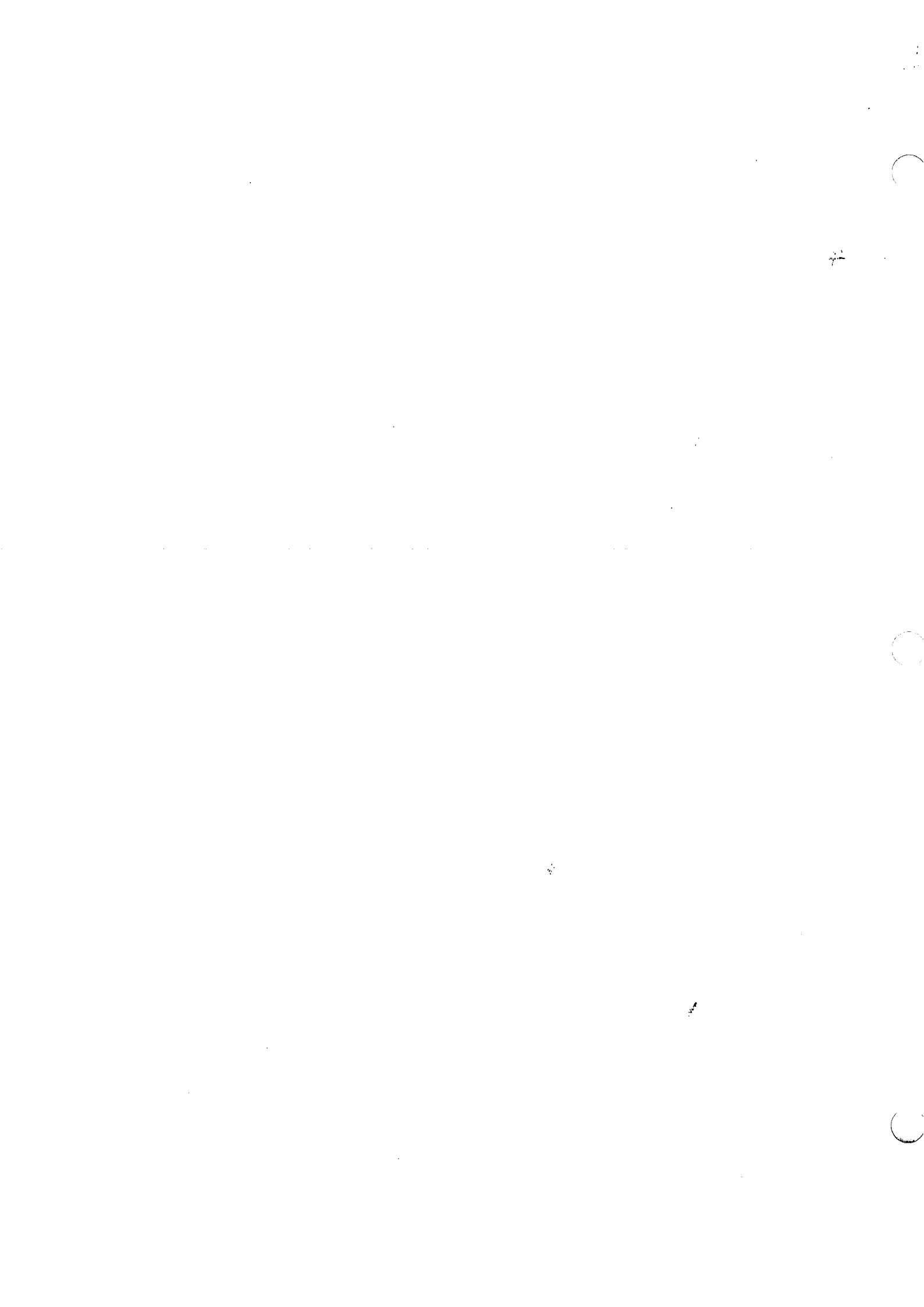
Block 1
CROSS SECTION



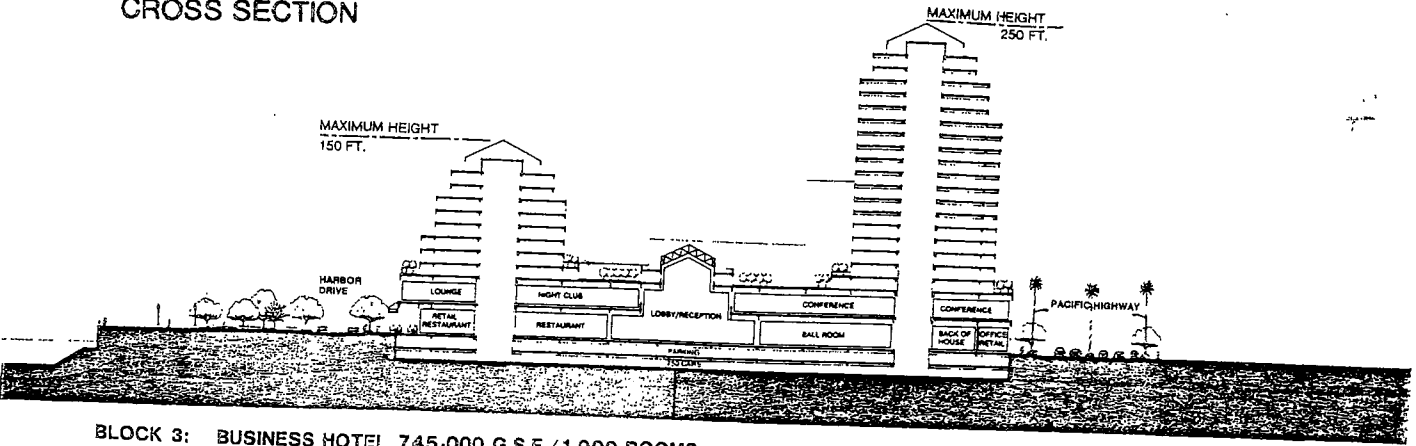
Block 2
CROSS SECTION



Alternative Cross Sections, Alternative A
Blocks 1 and 2
Navy Broadway Complex Project

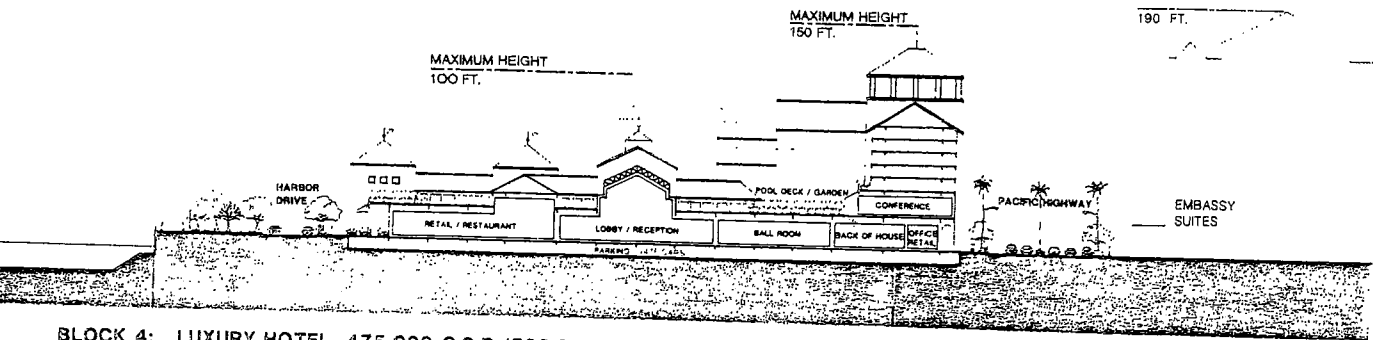


Block 3
CROSS SECTION



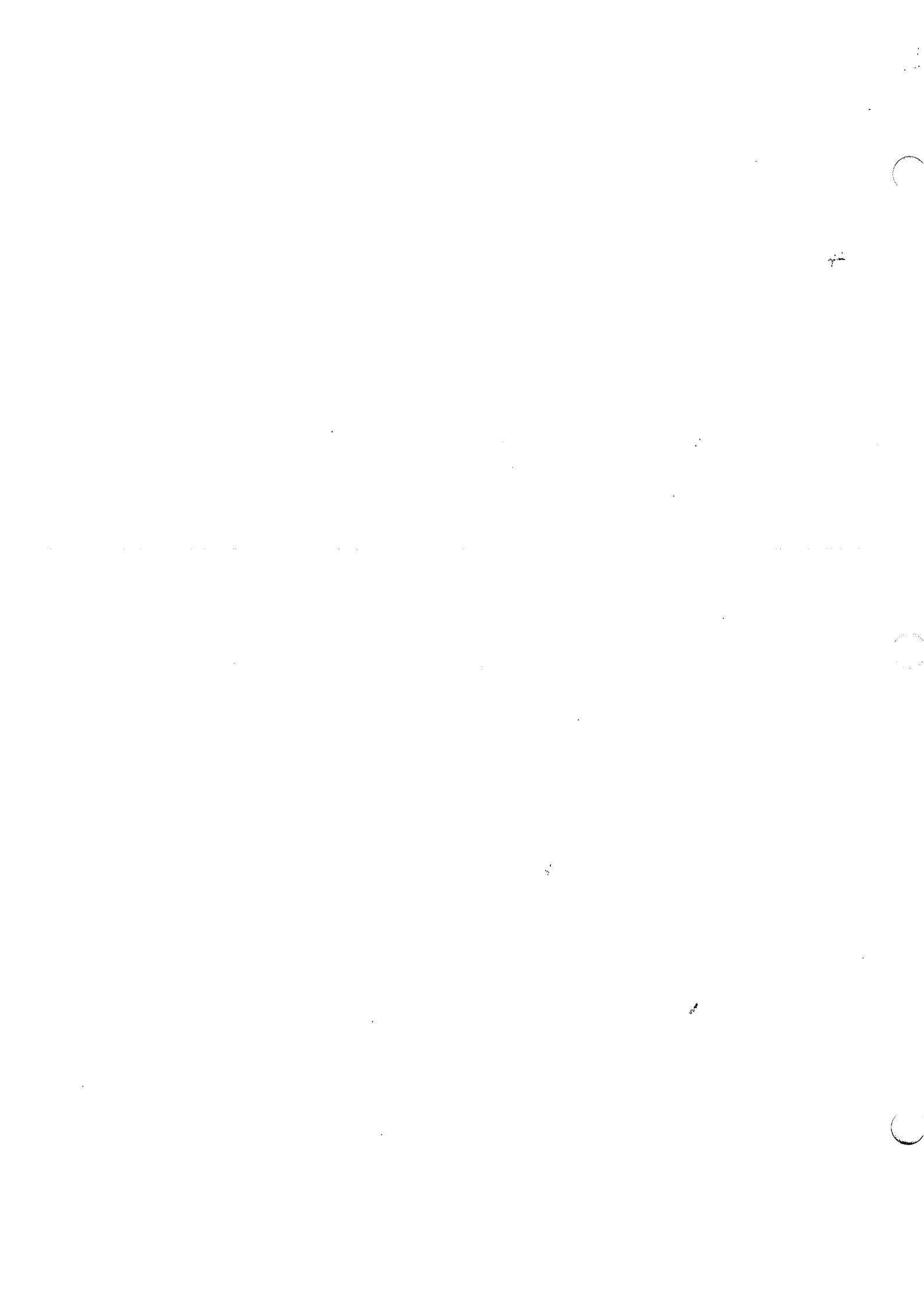
BLOCK 3: BUSINESS HOTEL 745,000 G.S.F./1,000 ROOMS

Block 4
CROSS SECTION



BLOCK 4: LUXURY HOTEL 475,000 G.S.F./500 ROOMS
RETAIL/RESTAURANT 25,000 G.S.F.

Alternative Cross Sections, Alternative A
Blocks 3 and 4
Bay Broadway Complex Project



Block 2

Up to 1,000,000 SF of Navy office uses would be developed on Block 2. A 25-floor tower with a maximum height of 350 feet and 569,000 SF would be located on the eastern half of the block along Pacific Highway. On the western half of the block, an existing Navy building (Building 12) would be rehabilitated or a new building of 486,000 SF would be developed. Approximately 100,000 SF within Building 12 would be new construction added above the roof of the existing building, if that building were rehabilitated. Within the Block 2 square footage, a museum of up to 55,000 SF in size would be provided, with its principal entry on the ground floor oriented to the open space on Block 1 at the foot of Broadway. Figure 3-7 also depicts an illustrative cross section of this block.

A total of 1,230 parking spaces would be provided, 430 below grade and 800 in a five- to six-floor, 300,000 SF encapsulated above-grade structure. Fleet vehicle parking and storage would be provided for 230 vehicles within this total. This is equal to about 1.23 spaces per 1,000 SF, of which 0.23 space per 1,000 SF would be for storage of those vehicles and one space per 1,000 SF would be for patrons/employees of the Navy offices.

Block 3

This block would be developed with a 1,000-room, 745,000-SF hotel. As conceptually shown in Figure 3-4, two midrise towers would be constructed on a single base. A tower up to 250 feet high would be constructed on the easterly area of the site adjacent to Pacific Highway, stepping down to a 150-foot-high building on the westerly area of the site toward Harbor Drive. The hotel would include ground- and second-level support retail and restaurants, and conference and ballroom facilities. An illustrative cross section of the proposed Block 3 development is depicted in Figure 3-8.

Below-grade parking would be provided for 750 vehicles, which is approximately 1 space per 1,000 SF or 0.75 spaces per room.

Block 4

Block 4 would be developed with a 500-room, 475,000-SF hotel that includes an additional 25,000 SF of retail and/or restaurant uses. Unlike the support retail that would be provided in the mix of land uses on Blocks 1 and 3, the retail on Block 4 would be independent of, but ancillary to, the hotel uses proposed on this block. As shown in Figure 3-4, the developments on Blocks 1, 2, and 3 step down towards this block, which would have a maximum structural height of 150 feet. As with the other development on the site, the taller structures on Block 4 would be on the easterly area of the block, stepping down to lower structures as the site approaches the waterfront to the west. The hotel would provide retail uses on the ground floor. Figure 3-8 depicts an illustrative cross section of Block 4 development.

Below-grade parking would be provided for 475 vehicles at a ratio 0.75 spaces per hotel room and 4 spaces per 1,000 SF of retail.

Phasing Plan for Alternative A

The phasing for this and all other alternatives would be dictated by market conditions. A possible phasing program is depicted in Figure 3-9. For purposes of analysis, it is assumed that the project would be developed over an approximately 11-year period. Based on market conditions, the timing and onsite location of development may differ from the phasing shown herein. Open space would be provided in the last phase. This is because Navy offices would not be constructed until the third phase of the project, after sufficient private development has occurred to offset the cost of the Navy offices. Building 1, which currently has 319,000 SF of Navy offices and is located on the site of the future open space, would need to be retained on the site until new Navy offices are completed.

The phases and associated construction activity are as follows:

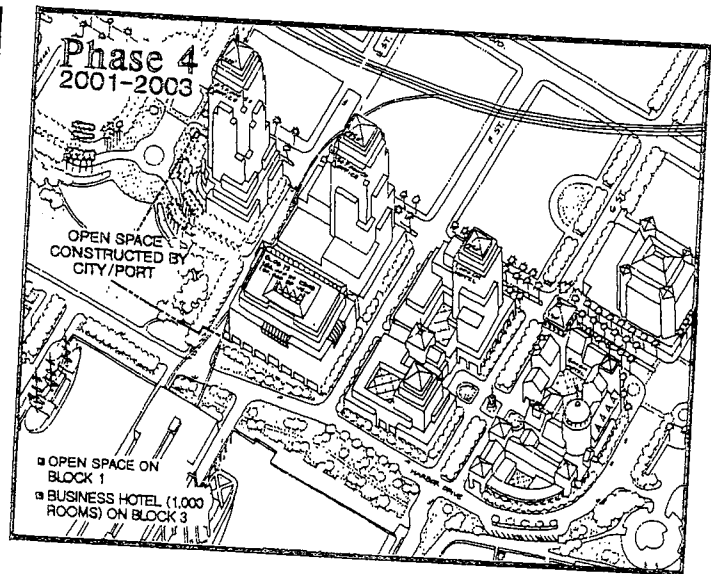
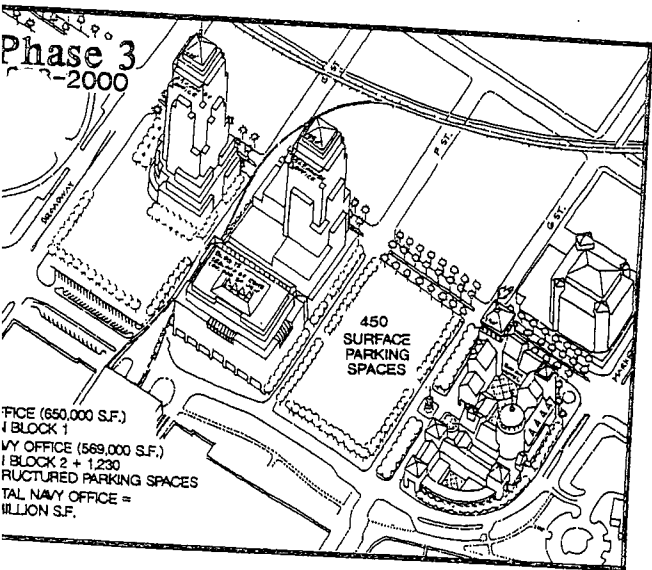
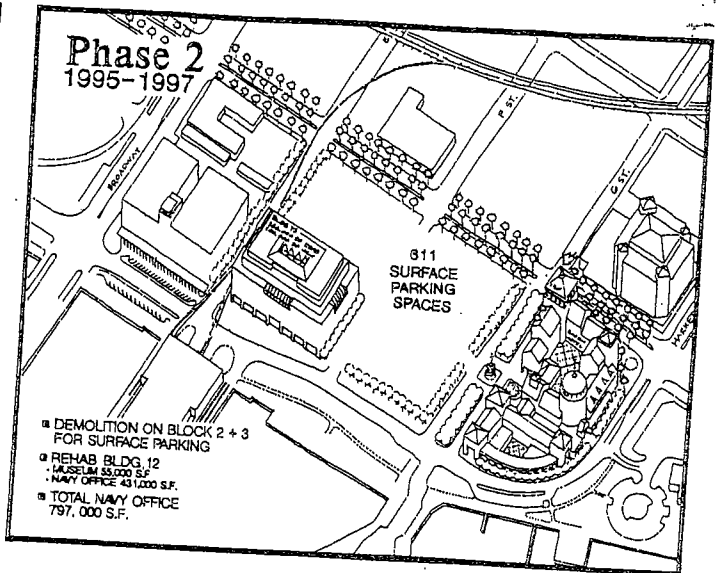
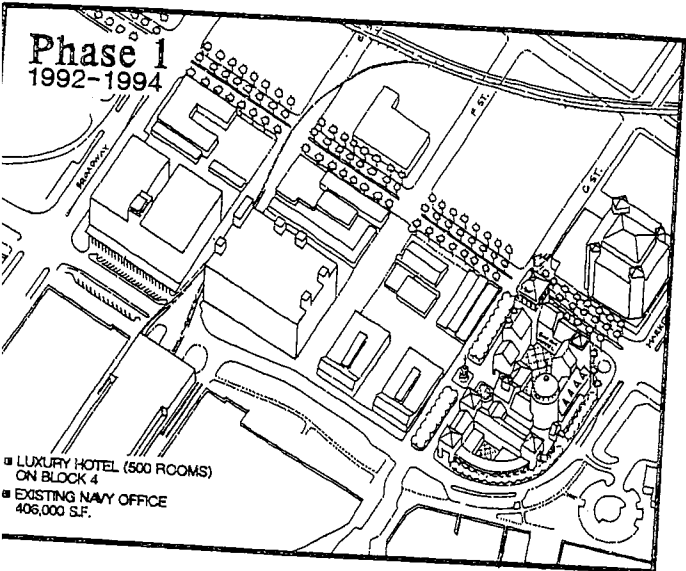
- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: Building 12, located on the westerly area of Block 2, would be rehabilitated and expanded. At the same time, the buildings on the easterly half of Block 2 and all buildings on Block 3 would be demolished and the site used for temporary surface parking.
- Phase 3--1998-2000: The commercial office would be constructed on the easterly area of Block 1. The new Navy office would be constructed on the easterly area of Block 2.
- Phase 4--2001-2003: Building 1 would be demolished for the construction of the open space and the hotel on Block 3 would be constructed.

3.2.2 ALTERNATIVE B

Alternative B is similar to Alternative A, but includes more commercial office space and less open space. This alternative is intended to meet the project objectives with no financial assistance from the City of San Diego. Alternative B includes an additional 250,000 SF of commercial office space for a total onsite development of 3,500,00 SF. This would be sufficient to fully offset the cost of the new Navy offices.

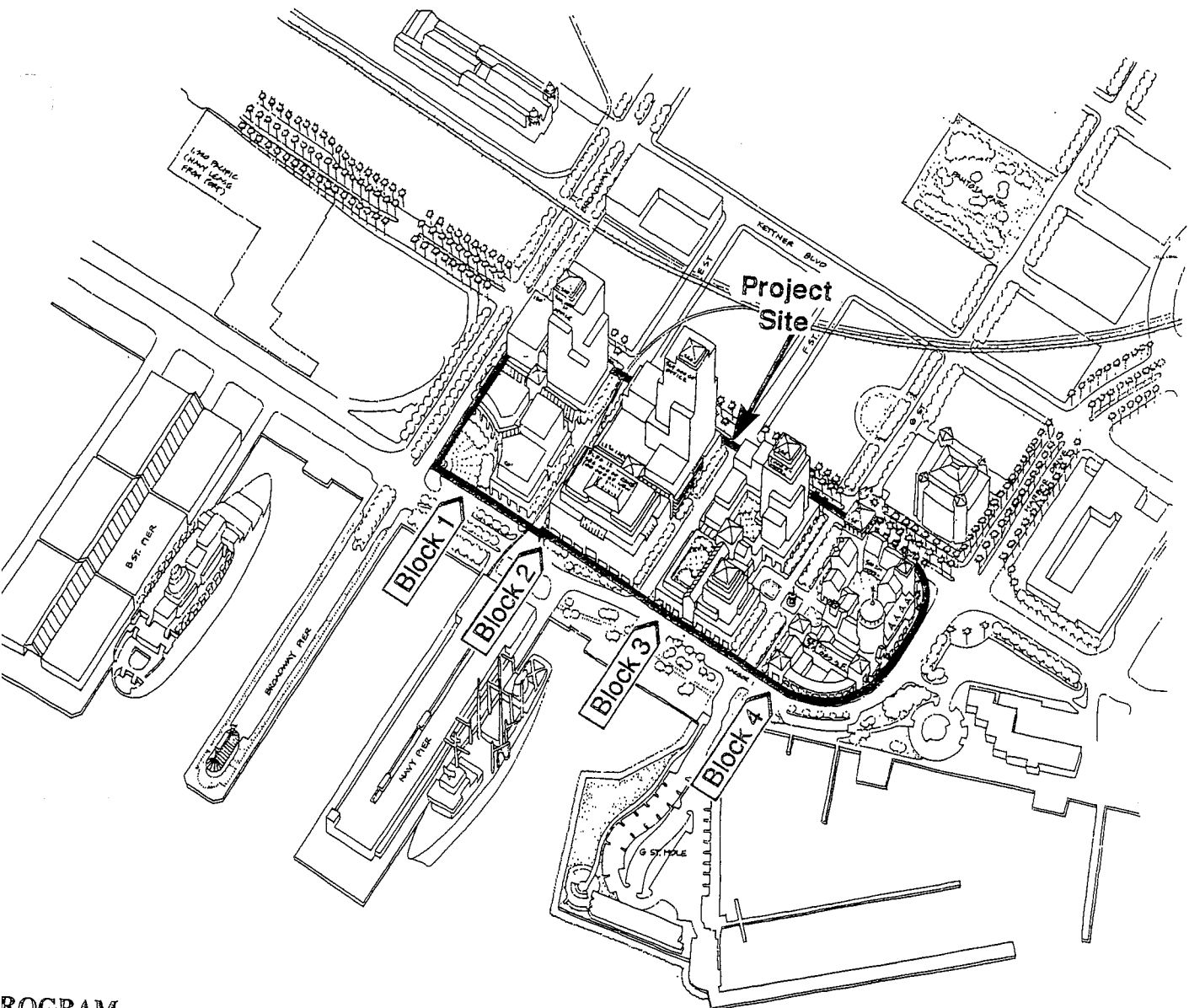
Less open space would be available on Block 1, where the additional commercial office is proposed. Alternative B includes a 900,000-SF commercial office development in a 300-foot-high building on Block 1. As shown in Figure 3-10, the 1.9-acre open space in Alternative A would be reduced to a 0.5-acre pedestrian plaza located at the foot of Broadway. Consolidation of adjacent City and Port District land is not considered in this alternative, and the circulation and configuration of Broadway would not be altered.

All other land uses on Blocks 2, 3, and 4 would be the same as Alternative A, including a maritime museum and public and visual access to the waterfront.



Proposed Phasing Program
Alternative A
Navy Broadway Complex Project





PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office	300,000	900	300
	Open Space (0.5 Acre)		below-grade	
2	Navy Office:			
	- Bldg. 12	331,000	430	350
	- New Museum	669,000	below-grade	
		55,000	800	
	Above-Grade Parking		above-grade	
	Hotel	300,000		
		745,000	750	250
	Hotel		below-grade	
	Retail	475,000	375	150
		25,000	100	
			below-grade	
		3,500,000	3,355	

Density = 5.88 Gross FAR

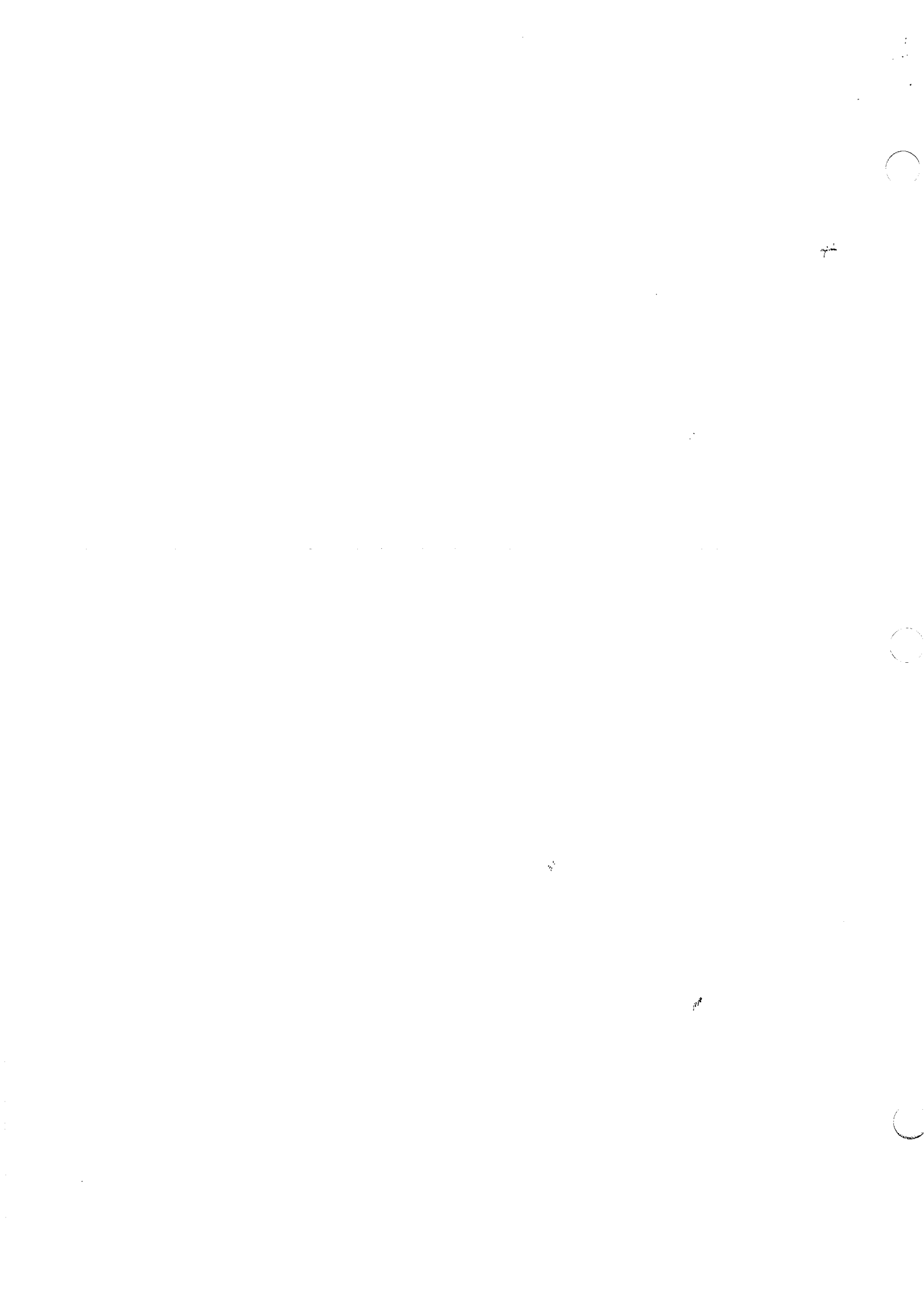
Alternative B
Navy Broadway Complex Project

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NORTH

Figure 2-10



Alternative B is similar to Alternative A in terms of building massing and layout, with the tallest buildings on the northeasterly area of the site--in this case peaking on Block 2 at 350 feet--stepping down toward Broadway on the north, Seaport Village on the south, and the waterfront to the west, as shown in Figure 3-10.

Description of Alternative B

Alternative B would include a mix of Navy office, museum, commercial office, hotel, open space, and retail uses in up to 3,500,000 SF of development. The overall FAR for this alternative would be 5.88. As with Alternative A, the location and mix of land uses would be determined by market conditions. Proposed uses, by block and approximate heights, are described below.

Block 1

A 900,000-SF commercial office building would be developed. The commercial office building would be similar in design to the building proposed in Alternative A, but would extend development to cover more area of the block (see Figure 3-4 and Figure 3-10). As conceptually shown, the office building would include a stepped tower up to 300 feet high with an adjacent 150-foot-tall wing to the north. These structures would step down to lower-lying bases located to the west, adjacent to a 0.5-acre pedestrian plaza. Ground-level retail uses would be provided adjacent to the pedestrian plaza.

Below-grade parking for 900 vehicles would be provided, which is 1 space per 1,000 SF.

Blocks 2, 3, and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1 (page 3-13).

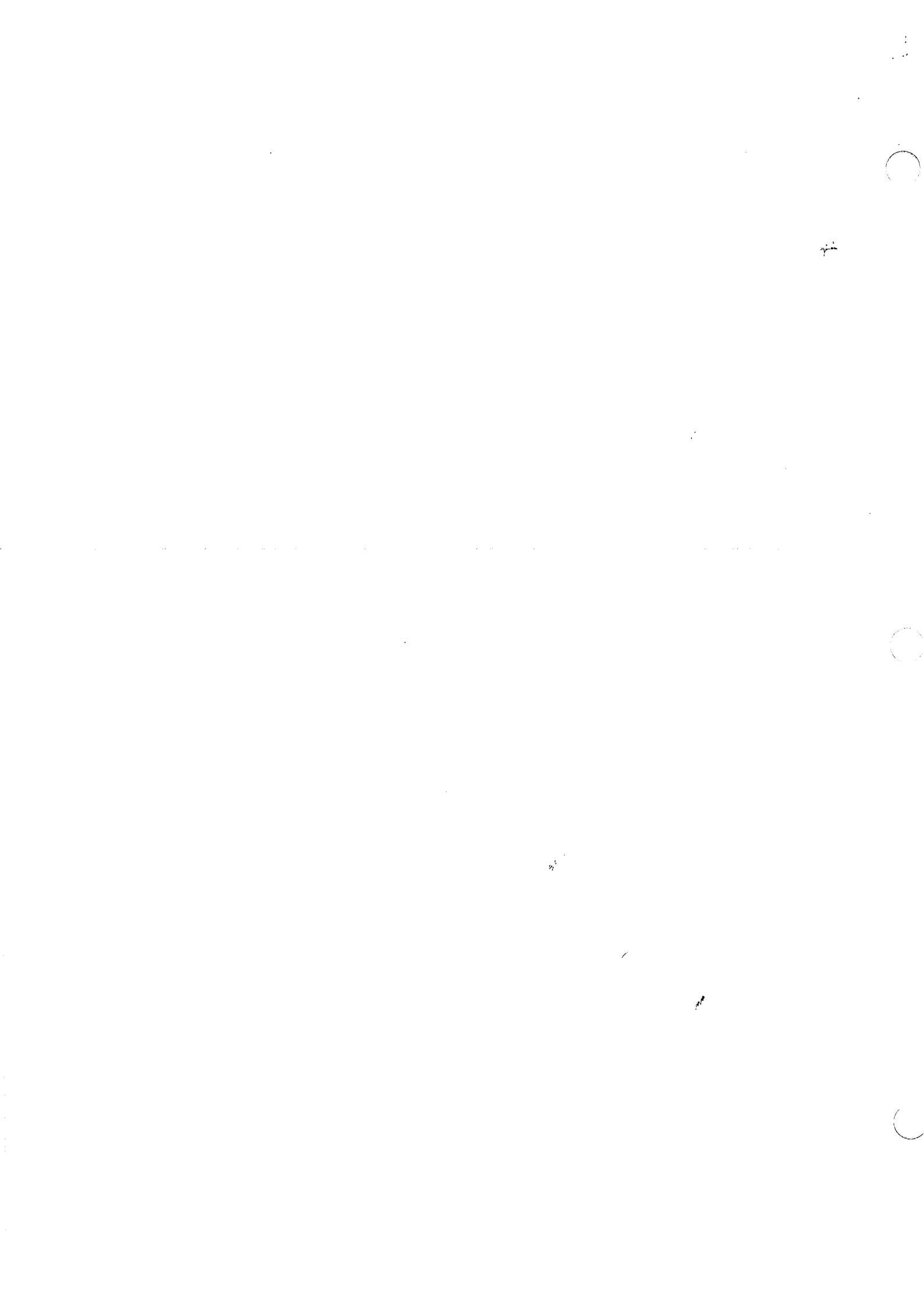
Phasing Plan for Alternative B

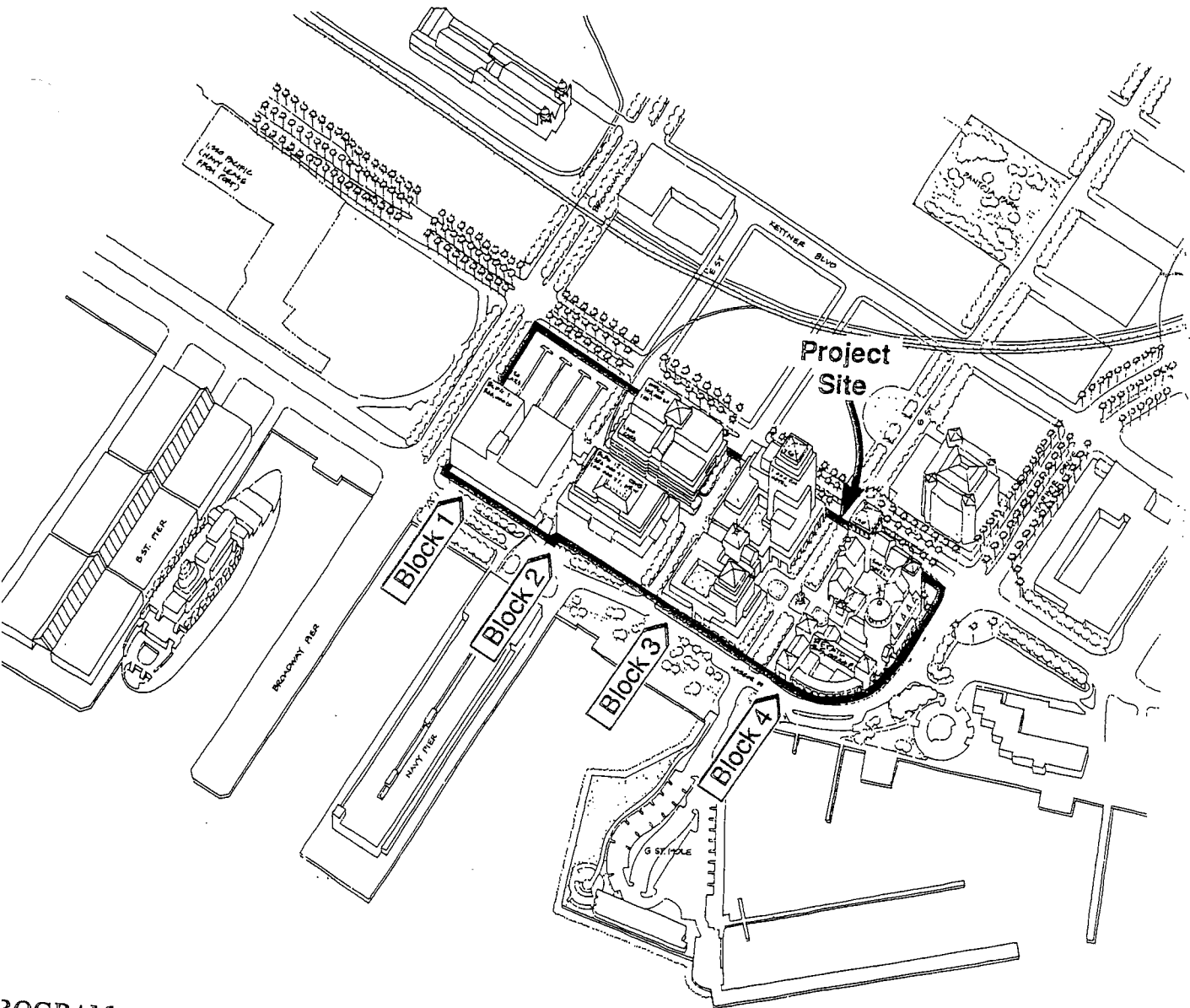
Phasing for Alternative B would be the same as for Alternative A. Please see Section 3.2.1 (page 3-14).

3.2.3 ALTERNATIVE C

Alternative C is intended to provide the minimum private development necessary to offset the costs of providing 1,000,000 SF of Navy offices. Instead of new offices on Block 2, supported in part by commercial office on Block 1, Alternative C focuses on rehabilitation of the two largest existing onsite buildings, Buildings 1 (on Block 1) and 12 (on Block 2), supplemented by a new low-rise Navy office building also on Block 2 (see Figure 3-11). The costs of rehabilitating the two existing buildings and building a new one on Block 2 would be offset by the same amount of hotel and retail on Blocks 3 and 4 as in Alternatives A and B. Total onsite development, including Navy offices, would be 2,470,000 SF.

Although this alternative would reduce the total onsite development, compared with Alternatives A and B, its configuration would not allow for the provision of open space on Block 1 at the foot of Broadway, because that is the current location of Building 1. Furthermore, a museum would not be financially supportable with this alternative. The circulation and





PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
	Navy Office (Bldg. 1)	366,000	230 surface	100
	Navy Office: - Rehab Bldg. 12	386,000	400 below-grade	150
	- New	248,000	600 above-grade	
	Above-Grade Parking	225,000		
	Hotel	745,000	750 below-grade	250
	Hotel	475,000	375 below-grade	150
	Retail	25,000	100 below-grade	
Total		2,470,000	2,455	

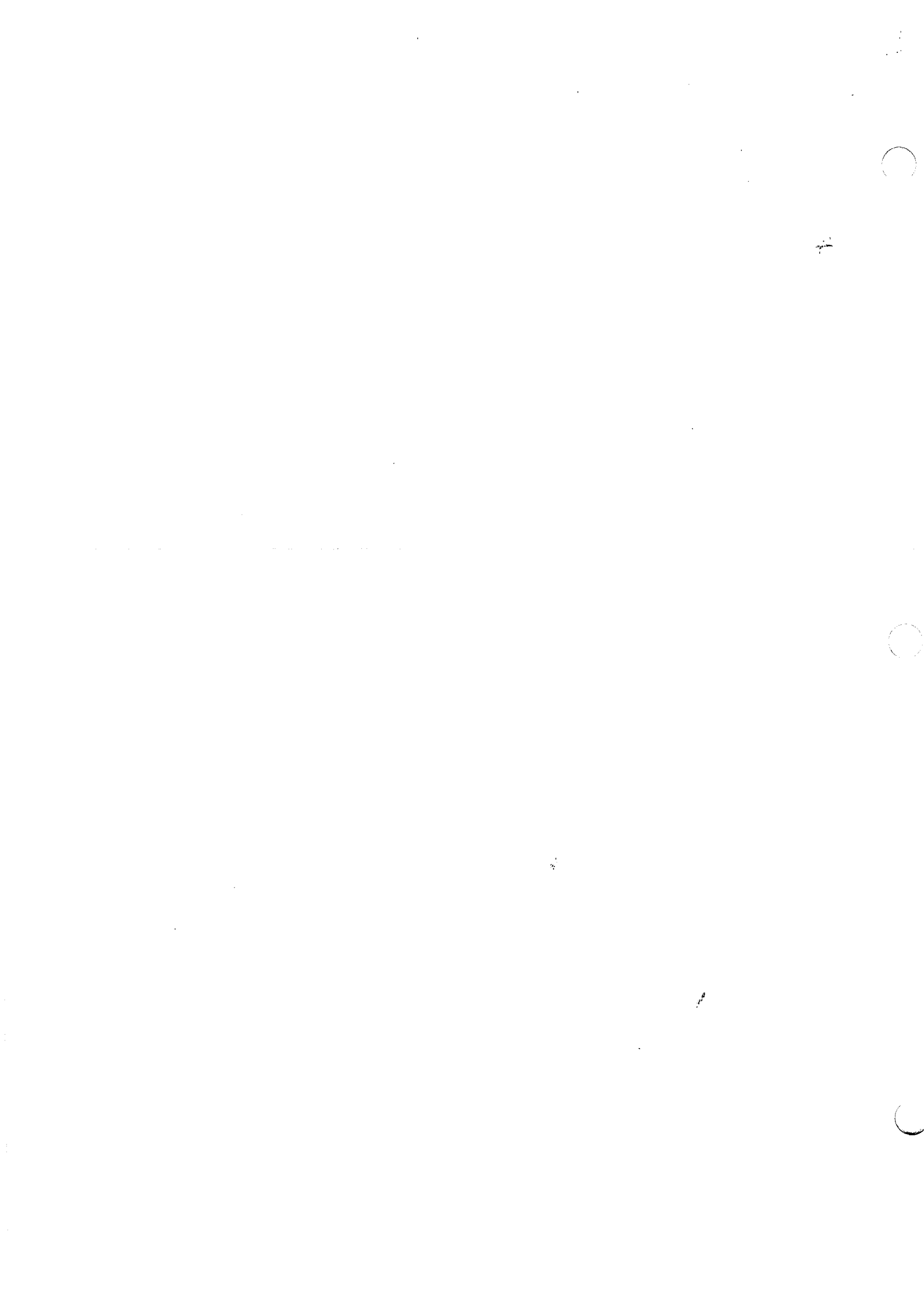
Density = 4.15 Gross FAR

**Alternative C
Navy Broadway Complex Project**

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Figure 3-14



configuration of Broadway would not be altered, but E, F, and G streets would be extended through the site, with G Street serving as a major pedestrian linkage.

Alternative C is different from Alternatives A and B in terms of building massing and layout. The stepping down of structures toward the waterfront, as found in Alternatives A and B, would not occur with this alternative. Instead, the massing would generally follow existing patterns found on Blocks 1 and 2, with the higher structures on the westerly area of the blocks, as conceptually shown in Figure 3-11.

Description of Alternative C

Uses proposed for Alternative C are described below. The overall FAR for this alternative would be 4.15. Building heights are approximate.

Block 1

The existing building on the westerly area of the block, Building 1, would be rehabilitated to include 366,000 SF of Navy office uses. The existing building height, 100 feet, would be unchanged. Ground-level retail would not be included in this building.

Surface parking for 230 vehicles would be provided on the easterly area of the block. The parking ratio for this block would be combined with additional Navy office parking that would be provided on Block 2 to arrive at an overall Navy office parking ratio of 1.23 spaces per 1,000 SF. This is delineated further in the discussion of Block 2.

Block 2

This block would include Navy office uses only. Building 12, on the westerly area of the block, would be rehabilitated to include 386,000 SF of rehabilitated and 100,000 SF of new office space within a 150-foot-high structure. A 130-foot-high building housing 148,000 SF of office space would be constructed on the easterly area of the block.

A total of 1,000 parking spaces would be provided, 400 below grade and 600 in a three- to five-floor, 225,000-SF above-grade structure. Including Block 1, a total of 1,230 parking spaces (230 for fleet vehicle storage) would be provided for 1,000,000 SF of Navy office space, a ratio of 1.23 spaces per 1,000 SF of office (of which one space per 1,000 SF would be for employee use).

Blocks 3 and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1 (page 3-13).

Phasing Plan for Alternative C

Alternative C would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.

- Phase 2--1995-1997: Building 12 would be rehabilitated and expanded on Block 2. At the same time, existing buildings on Block 3 and the easterly area of Block 1 and Block 2 would be demolished and the areas used for temporary surface parking.
- Phase 3--1998-2000: Building 1 would be rehabilitated on Block 1.
- Phase 4--2001-2003: The new Navy office would be constructed on the easterly area of Block 2, and the hotel would be constructed on Block 3.

3.2.4 ALTERNATIVE D

Alternative D was developed to consider development of most of the Navy offices at a location other than the Navy Broadway Complex, with the costs of the Navy offices supported primarily by private development on the Navy Broadway Complex. The Centre City East area--where San Diego's new civic center is proposed--was considered the most likely alternative location for Navy office uses due to the potential availability of parcels that could accommodate nearly 1,000,000 SF of office space and due to its proximity to the Navy Broadway Complex (approximately 1 mile). This area is shown in Figure 3-2, page 3-3.

The Navy would retain approximately 20,000 SF of office space at the Navy Broadway Complex to provide the minimum necessary support personnel for the continued operation of the Navy Pier. Approximately 980,000 SF of Navy offices would be provided in the Centre City East area. To offset the Navy's costs, 2,915,000 SF of mostly private, mixed-use development (except the 20,000 SF of Navy offices) would be provided at the Navy Broadway Complex. Total development with this alternative would be 3,995,000 SF.

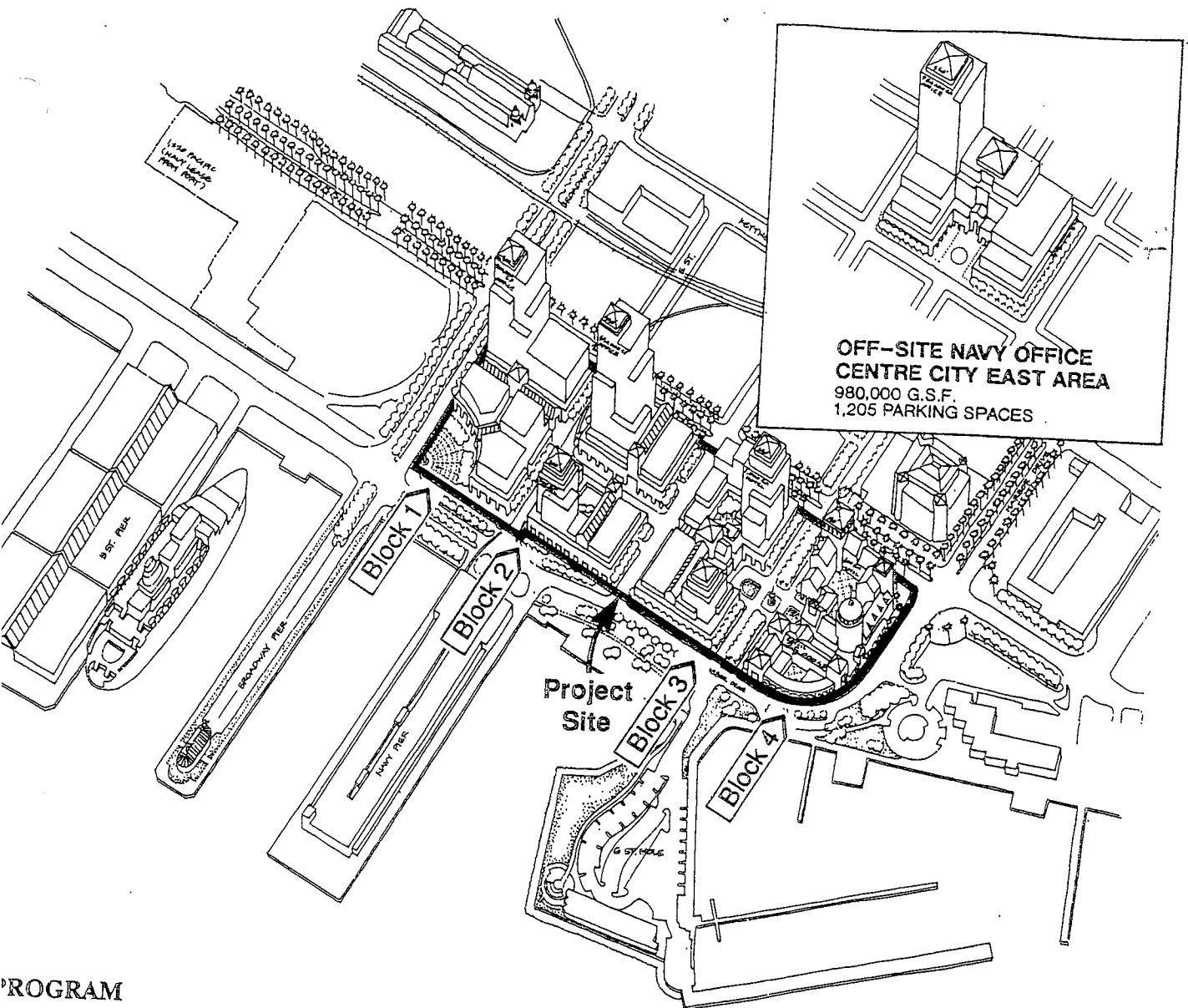
A 0.5-acre pedestrian plaza would be provided at the northwesterly corner of Block 1 at the foot of Broadway, and E, F, and G streets would be extended through the site with G Street providing a major pedestrian linkage. A maritime museum would not be provided because insufficient revenues would be generated by the project.

Alternative D is similar to Alternative B in terms of building massing and layout on the Navy Broadway Complex. The tallest buildings would be on the northeasterly area of the site, with heights peaking on Block 2 and stepping down towards Broadway on the north, Seaport Village on the south, and the waterfront on the west, as shown in Figure 3-12. Blocks 1, 3, and 4 would be developed as proposed in Alternative B. Block 2 would have a 300-room hotel on the westerly area of the block.

The Navy offices would be developed in a 980,000-SF building that covers two currently unspecified blocks in Centre City East, as conceptually shown in Figure 3-12. The building would be designed to have a stepped podium base leading to a 350-foot-high tower.

Description of Alternative D

Uses included in Alternative D are described below by block. The overall FAR on the Navy Broadway Complex would be 5.4 and the offsite development would have an FAR of approximately 7.0. Building heights are approximate.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office Open Space (0.5 Acre)	900,000	900	300
2	Commercial Office Hotel Navy Office	530,000 200,000 20,000	below-grade 780 below-grade	350
3	Hotel	745,000	750	250
4	Hotel Retail	475,000 25,000	below-grade 375 100	150
Site	Navy Office	980,000	below-grade 805	350
	Above-Grade Parking	100,000	below-grade 400	
		3,995,000	above-grade 4,110	

Density = 5.4 Gross FAR

**Alternative D
Navy Broadway Complex Project**

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Figure 3-12



Block 1

The development on Block 1 would be the same as with Alternative B. Please see the description in Section 3.2.2, page 3-13.

Block 2

The easterly area of Block 2 would be developed with 530,000 SF of commercial office and 20,000 SF of Navy office in a tower up to 350 feet high, rising from a broad podium base. The design of this building would be similar to the building proposed in the same location in Alternative A (see Figure 3-4 and Figure 3-12). The office on the easterly area would step down to a 200-foot-high hotel tower located on the westerly area of the block. The hotel would have 200,000 SF of space and would include 300 suites. Total square footage on this block would be 750,000. Ground-level retail uses would be provided in both buildings.

Below-grade parking would be provided for 780 vehicles at a ratio of 1.04 spaces per 1,000 SF.

Blocks 3 and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1, page 3-13.

Offsite

A total of 980,000 SF of Navy office uses would be developed at the offsite Centre City East location. The maximum height of the building would be 350 feet.

Parking for 1,205 vehicles would be provided--805 spaces in a below-ground structure and 400 spaces in a 100,000 SF above-ground parking structure. A ratio of 1.23 spaces per 1,000 SF of office would be provided, of which 0.23 space per 1,000 SF would be for fleet vehicle storage and one space per 1,000 SF for employees/patrons.

Phasing Plan for Alternative D

Alternative D would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: The first 500,000 SF of offsite Navy offices would be developed.
- Phase 3--1998-2000: The commercial office and pedestrian plaza would be constructed on Block 1. The hotel would be developed on Block 3.
- Phase 4--2001-2003: The commercial office (with 20,000 SF of Navy office) and a suites hotel would be constructed on Block 2. In addition, the remaining 480,000 SF of offsite Navy offices would be constructed.

3.2.5 ALTERNATIVE E

Alternative E would provide 1,000,000 SF of Navy offices on the Navy Broadway Complex with no private development. Traditional funding mechanisms, i.e., Congressionally appropriated tax dollars, would be used to finance construction. The project would consist solely of development of 1,000,000 SF of Navy offices, as depicted in Figure 3-13. No open spaces or pedestrian plazas would be developed on the site, nor would there be an extension of E Street, F Street, and G Street for vehicular access through the site. Pedestrian access through the site would not be inhibited by fencing or any other physical barriers, but it would be primarily across parking lots instead of along sidewalks.

Description of Alternative E

Uses proposed in Alternative E are described below. The overall FAR for this alternative would be 1.68. Building heights are approximate.

Block 1

Building 1 would be retained on the westerly area of the block and rehabilitated to include 366,000 SF of office space. The building would be a maximum of 100 feet high. In addition, 270 surface parking spaces would be provided.

Block 2

Building 12 would be retained on the westerly area of the block and would be rehabilitated and expanded to include 486,000 SF of office space, 100,000 SF of which would be new construction on the roof of the building. The building would be up to 150 feet high. The easterly area of the block would be used for surface parking for 360 vehicles.

Block 3

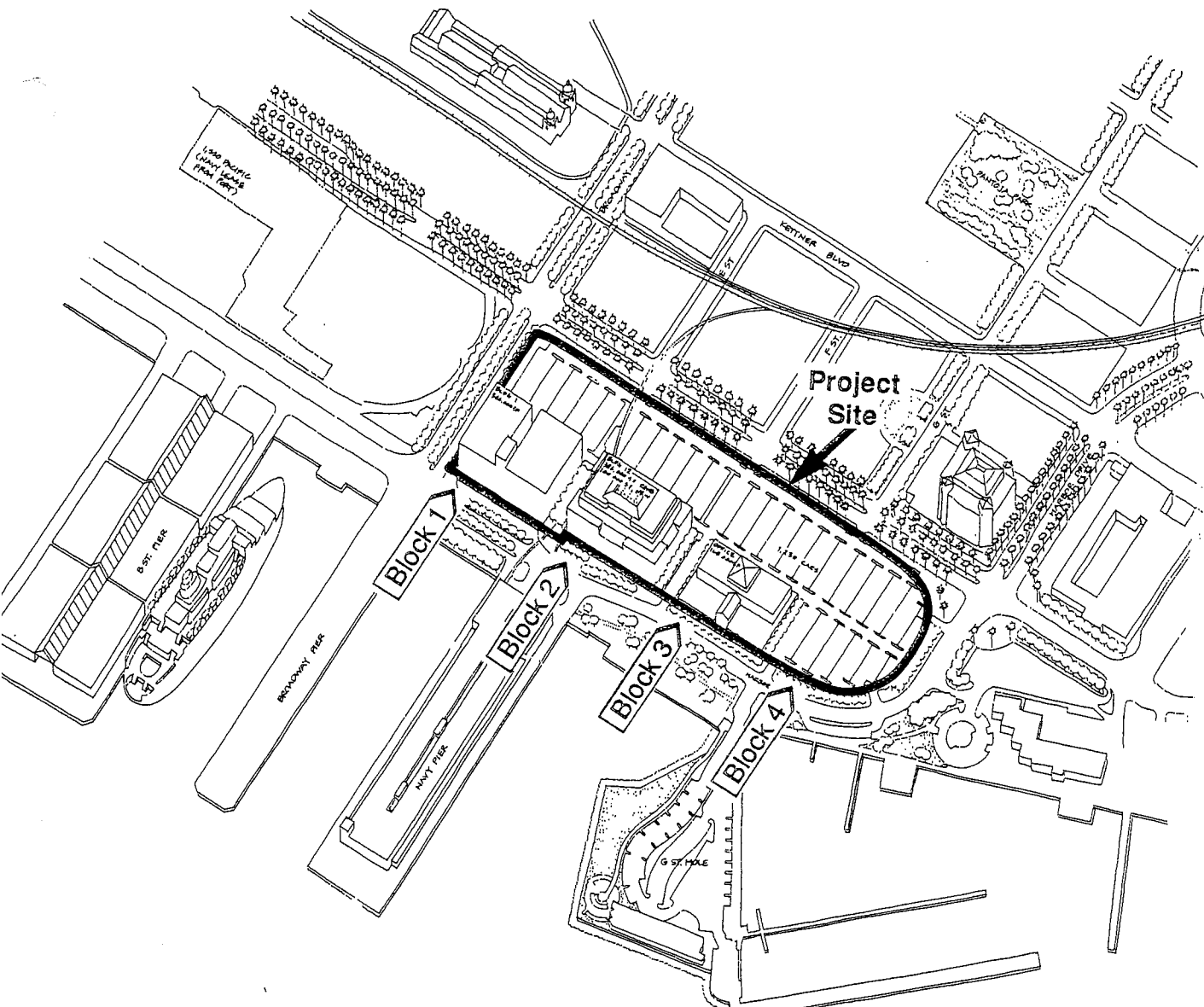
A new 148,000 SF office building that would not exceed 100 feet in height would be constructed on the westerly area of this block. The easterly area of the block would be used for surface parking for 207 vehicles.

Block 4

This block would be used for surface parking. A total of 393 spaces would be provided. Total parking on the site would be 1,230 spaces (230 for fleet vehicle storage), a ratio of 1.23 spaces per 1,000 SF of office, of which one space per 1,000 SF would be for employees/patrons.

Phasing Plan for Alternative E

It is assumed that this alternative would be developed in one phase, between 1996 and 1998.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Navy Office: - Bldg. 1			
2	Navy Office: - Bldg. 12 - New	366,000	270	100
3	Navy Office: - New	386,000	360	150
4	Parking	100,000	surface	
		148,000	207	0
			surfaces	
Total		1,000,000	393	0
			surfaces	
			1,230	

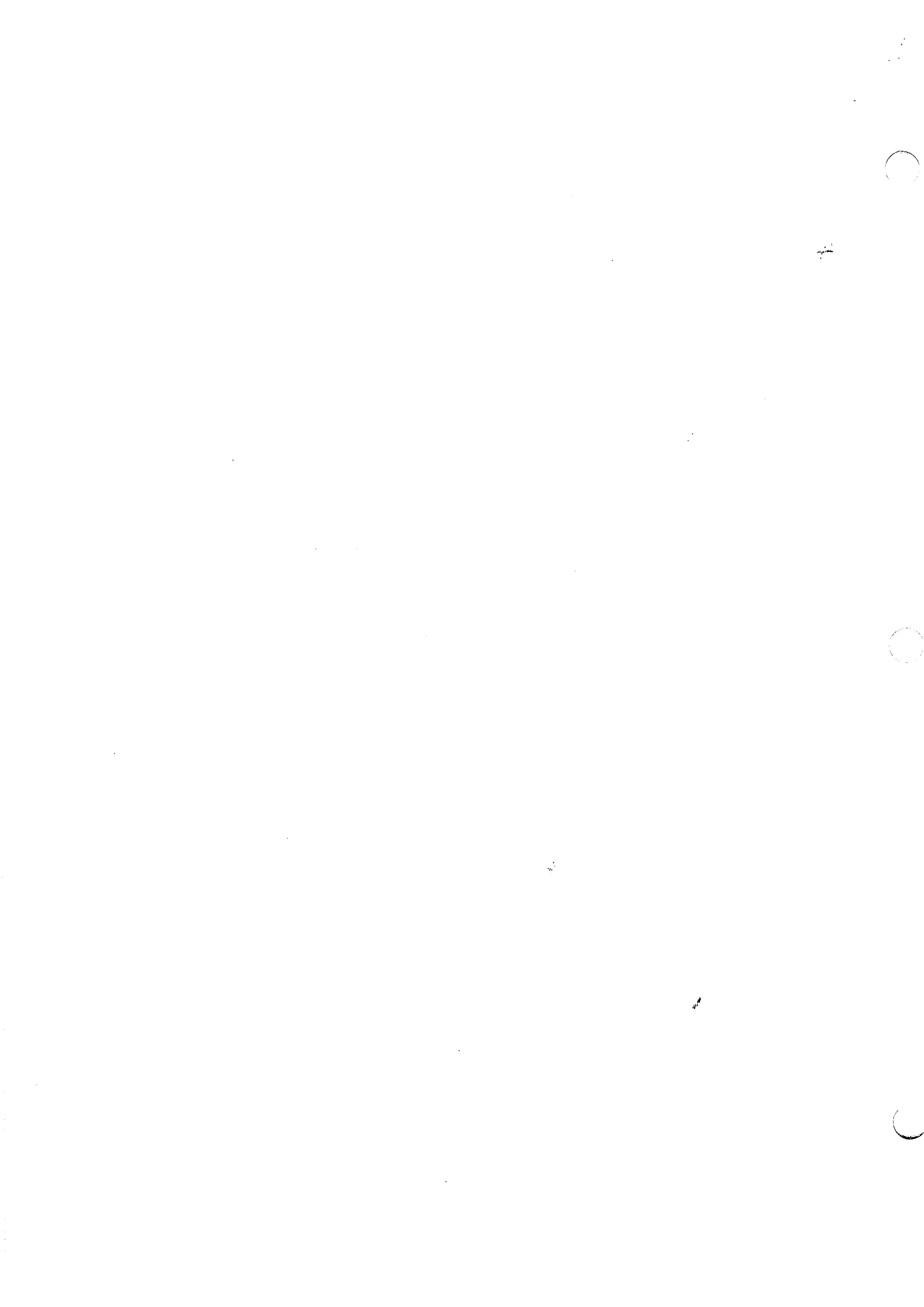
Program Density = 1.68 Gross FAR

**Alternative E
Navy Broadway Complex Project**

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Figure 3-12



3.2.6 ALTERNATIVE F

As discussed in Section 3.2, page 3-5, subsequent to the public announcement of the Navy's proposed concept for redevelopment of the Navy Broadway Complex, which included approximately 1.3 acres of open space on the 3.5-acre Block 1 site, there was community discussion of providing a larger open space at the foot of Broadway. The proposed concept was modified to create 1.9 acres of open space at the foot of Broadway (Alternative A).

A concept was also developed, Alternative F, reserving the entire 3.5 acres on Block 1 for open space. The density of development on the other three blocks would be increased equal to the full development program for Alternative A, in order to provide sufficient development to offset the costs of providing Navy offices (see Figure 3-14). Local financial assistance from the City of San Diego for infrastructure improvements (e.g., roadway and streetscape improvements) would be required. Adjacent property to the north under the control of the City of San Diego and the San Diego Unified Port District would be added to create an even larger open space at the foot of Broadway. A significant waterfront gateway to downtown San Diego could be created at the foot of Broadway. Development of this alternative is not contingent upon the development of adjacent City and Port District property.

The public benefits offered by this alternative would be the same as Alternative A, except that more public open space would be provided. Because the same amount of development as shown in Alternative A would be required to sufficiently offset the costs of Navy offices, development on Blocks 2, 3, and 4 would be intensified. Building heights on Blocks 2, 3, and 4 would be higher than Alternative A, with towers up to 500 feet high on Block 2 (instead of Alternative A's 350 feet), 350 feet high on Block 3 (instead of 250 feet high), and up to 250 feet high on Block 4 (instead of 150 feet high). (The tallest building in Alternative A is the 400-foot-high commercial office building proposed on Block 1.) Building massing and layout would be similar to Alternatives A, B, and D, with the tallest buildings on the easterly area of Block 2, stepping down to shorter buildings toward the waterfront to the west and a specialty shopping center to the south, as shown in Figure 3-14.

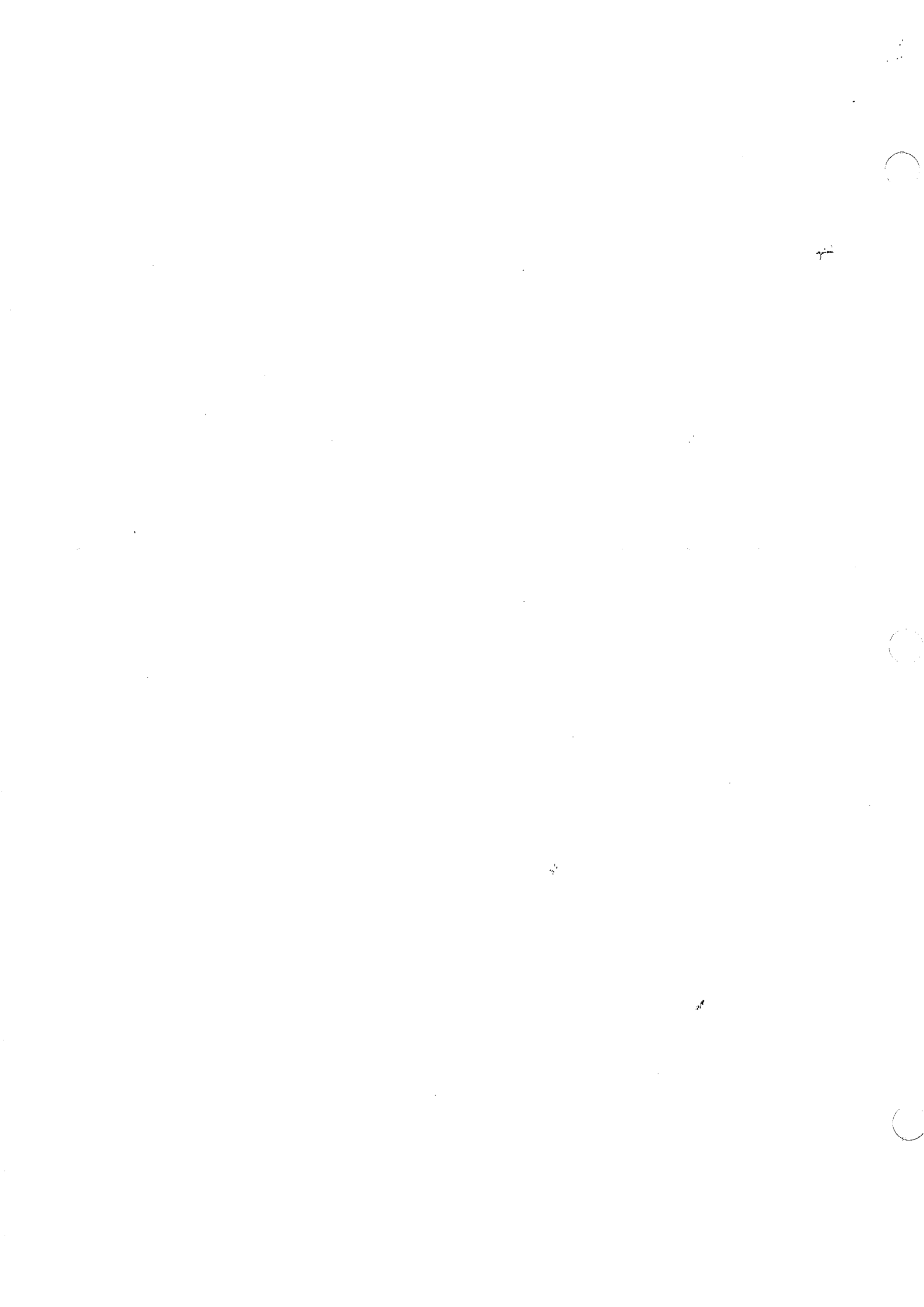
Alternative F includes the development of 3,315,000 SF of mixed uses in the Navy Broadway Complex. A total of 650,000 SF of commercial office, 1,000,000 SF of Navy office, a 745,000 SF and 475,000 SF hotel, and an up to 55,000 SF museum would be developed. E, F, and G streets would be extended through the site, with G Street serving as a major pedestrian linkage. The overall intensity of uses differs from Alternative A only in the amount of above-grade parking that would be provided (to offset parking that would have been on Block 1), with Alternative F providing 365,000 SF versus Alternative A's 300,000 SF.

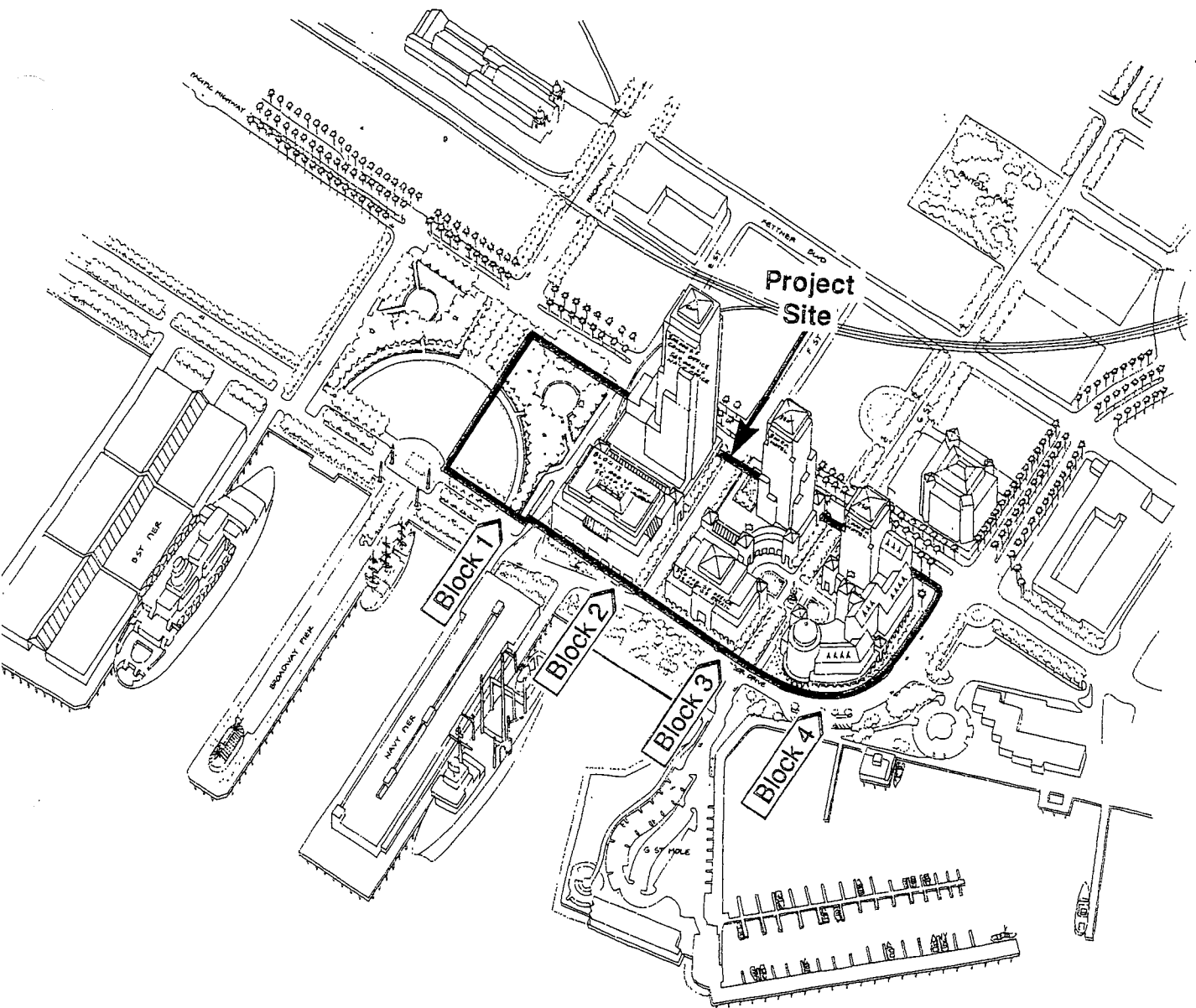
Description of Alternative F

Uses considered in Alternative F are described below by block. The overall FAR for this alternative would be 5.7. Building heights are approximate.

Block 1

The approximately 3.5-acre block would be developed as open space. If the City abandons a contiguous segment of Broadway to allow open space development and the Port District dedicates an approximately 3.5- to 4-acre parcel of open space, an approximately 10-acre park could be





PROGRAM

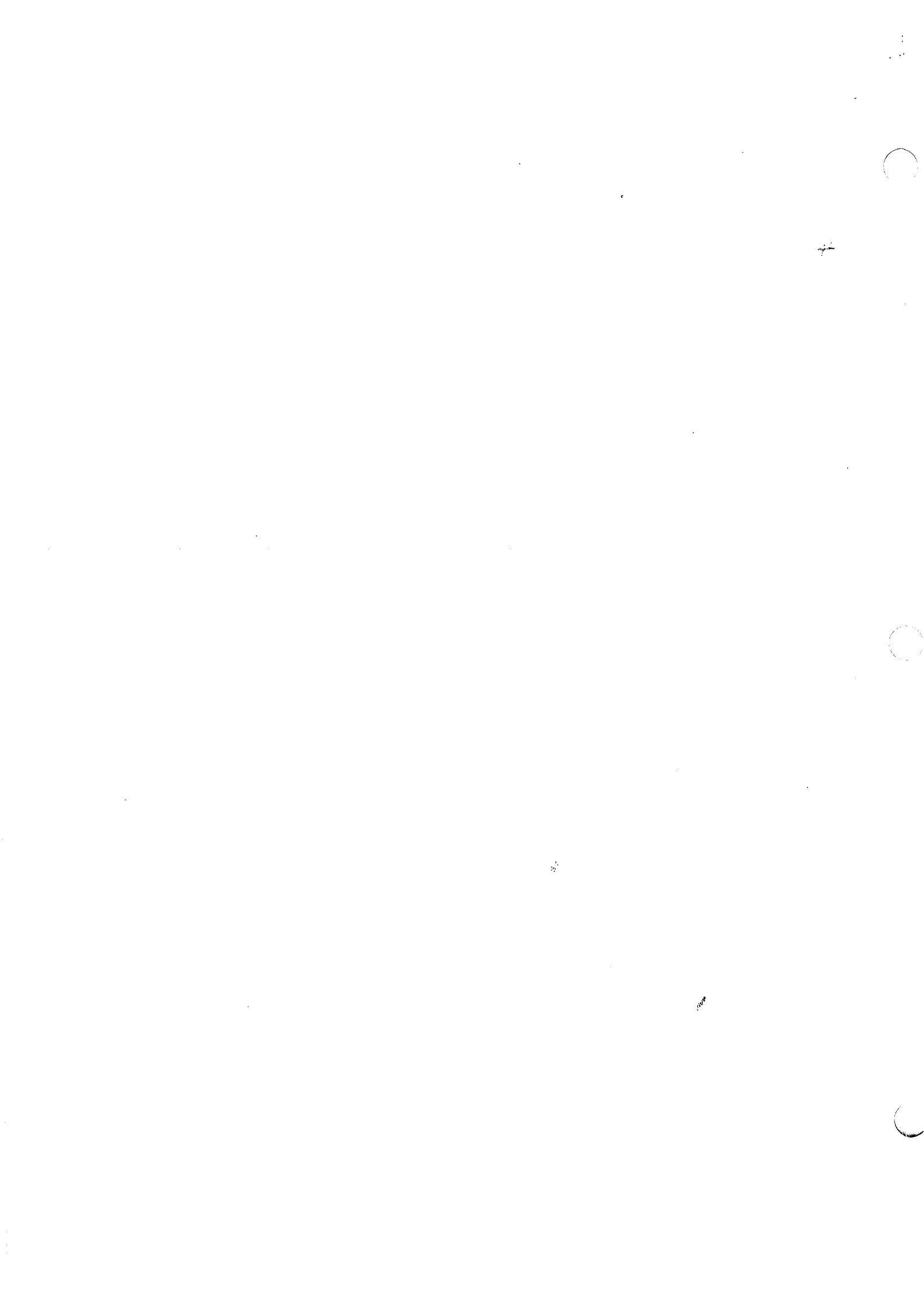
Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
	Open Spaces (3.5 acres)	0	0	0
	Navy Office:			
	- Bldg. 12			
	- New	331,000	490	500
	Commercial Office	669,000	below-grade	
	Museum	300,000	1,040	
	Above-Grade Parking	55,000	above-grade	
	Commercial Office	365,000		
	Hotel	350,000	825	350
	Retail	475,000	below-grade	
	Hotel	25,000		
		745,000	750	250
		3,316,000	3,105	

Density = 5.7 Gross FAR

**Alternative F
Navy Broadway Complex Project**

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developed at the foot of Broadway (see Figure 3-14). Broadway, which currently extends through the proposed bayfront park, would terminate as a "T" intersection at Pacific Highway. No parking would be provided on this block.

Block 2

An 869,000-SF office building would be developed in a 500-foot-high structure on the easterly area of Block 2. The Navy would occupy 569,000 SF, with the remaining 300,000 SF to be used for commercial office. On the westerly half of the block, existing Building 12 would be rehabilitated and 100,000 SF would be added to accommodate a total of 431,000 SF of Navy office and up to a 55,000-SF museum within a building 150 feet high.

A total of 1,530 parking spaces would be provided, 490 below grade and 1,040 in a 6.5-floor, 365,000-SF above-grade structure that would be located in the podium of the new office building. This block would provide parking at a ratio of 1.17 spaces per 1,000 SF, or 1 space per 1,000 SF of commercial office and 1.23 spaces per 1,000 SF of Navy office (of which one space per 1,000 SF would be employee parking and 0.23 space would be for fleet vehicles).

Block 3

This block would be developed with a 500-room, 350-foot-high hotel on the easterly area of the block, and a 150-foot-high building supporting 350,000 SF of commercial office and 25,000 SF of retail and restaurant uses on the westerly area of the block.

Below-grade parking would be provided for 825 vehicles, a ratio of approximately 4 spaces per 1,000 SF of retail, 0.75 spaces per hotel room, and 1 space per 1,000 SF of commercial office.

Block 4

A 1,000-room, 745,000-SF hotel would be developed within an up to 250-foot-high building, with its highest point on the easterly area of the block, stepping down to 75- to 100-foot-high structures on the westerly area of the block.

Below-grade parking for 750 vehicles would be provided at a ratio of approximately 1 space per 0.75 rooms.

Phasing for Alternative F

Alternative F would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: Building 12 would be rehabilitated and expanded on the westerly area of Block 2.
- Phase 3--1998-2000: The commercial office and Navy office on the easterly area of Block 2 would be developed.

- Phase 4--2001-2003: The commercial office and hotel would be developed on Block 3. Building 1 on Block 1 would be demolished.

3.2.7 ALTERNATIVE G

Alternative G is the no action alternative, which assumes that the site would continue to operate with a mix of Navy office and Navy warehouse uses. No new development would occur on the site. The project site is currently developed with 405,753 SF of Navy office and 601,276 SF of industrial/warehouse uses, as depicted in Figure 3-15.

No open spaces or pedestrian plazas would be developed on the site. Pedestrian and vehicular access between downtown and the waterfront through the Navy Broadway Complex would not be provided.

Description of Alternative G

Uses existing on the Navy Broadway Complex and included as the no action alternative, by block, are described below. The overall FAR for this alternative is 1.69.

Block 1

A total of 366,452 SF of Navy office and 39,729 SF of industrial/warehouse uses are located on Block 1. Building 1, located on the westerly area of the block, is the tallest building at 100 feet. Surface parking is provided for 140 vehicles.

Block 2

A total of 37,186 SF of Navy office and 421,660 SF of industrial uses are located on Block 2. Building 12, located on the westerly area of the block, is the tallest building at approximately 100 feet. Surface parking is provided for 25 vehicles.

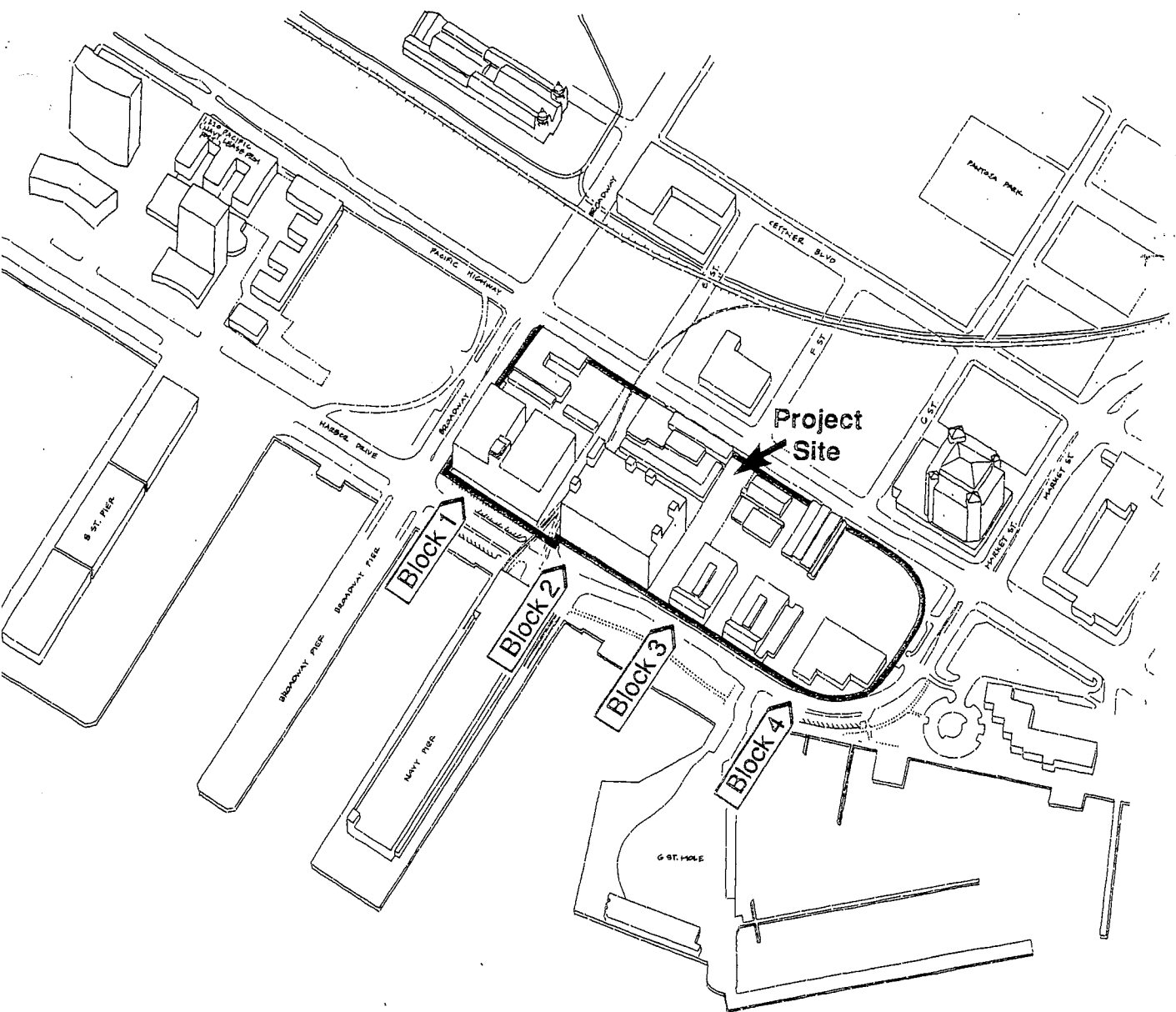
Block 3

A total of 2,115 SF of Navy office and 109,610 SF of industrial/warehouse uses are located on Block 3. The highest building on this block is 40 feet. No parking is provided.

Block 4

A total of 30,227 SF of industrial/warehouse uses are located on Block 4. The highest building is 40 feet. Surface parking is provided for 260 vehicles.

Parking on the entire Navy Broadway Complex totals 425 spaces, which is a ratio of 0.42 spaces per 1,000 SF (approximately one space per 2,500 SF).



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
	Navy Office	366,452	140	100
	Indus./Warehouse	39,729	surface	100
	Navy Office	37,186	25	100
	Industrial	421,660	surface	100
	Navy Office	2,115	0	40
	Indus./Warehouse	109,610		
	Indus./Warehouse	30,277	260	40
		1,007,029	425	

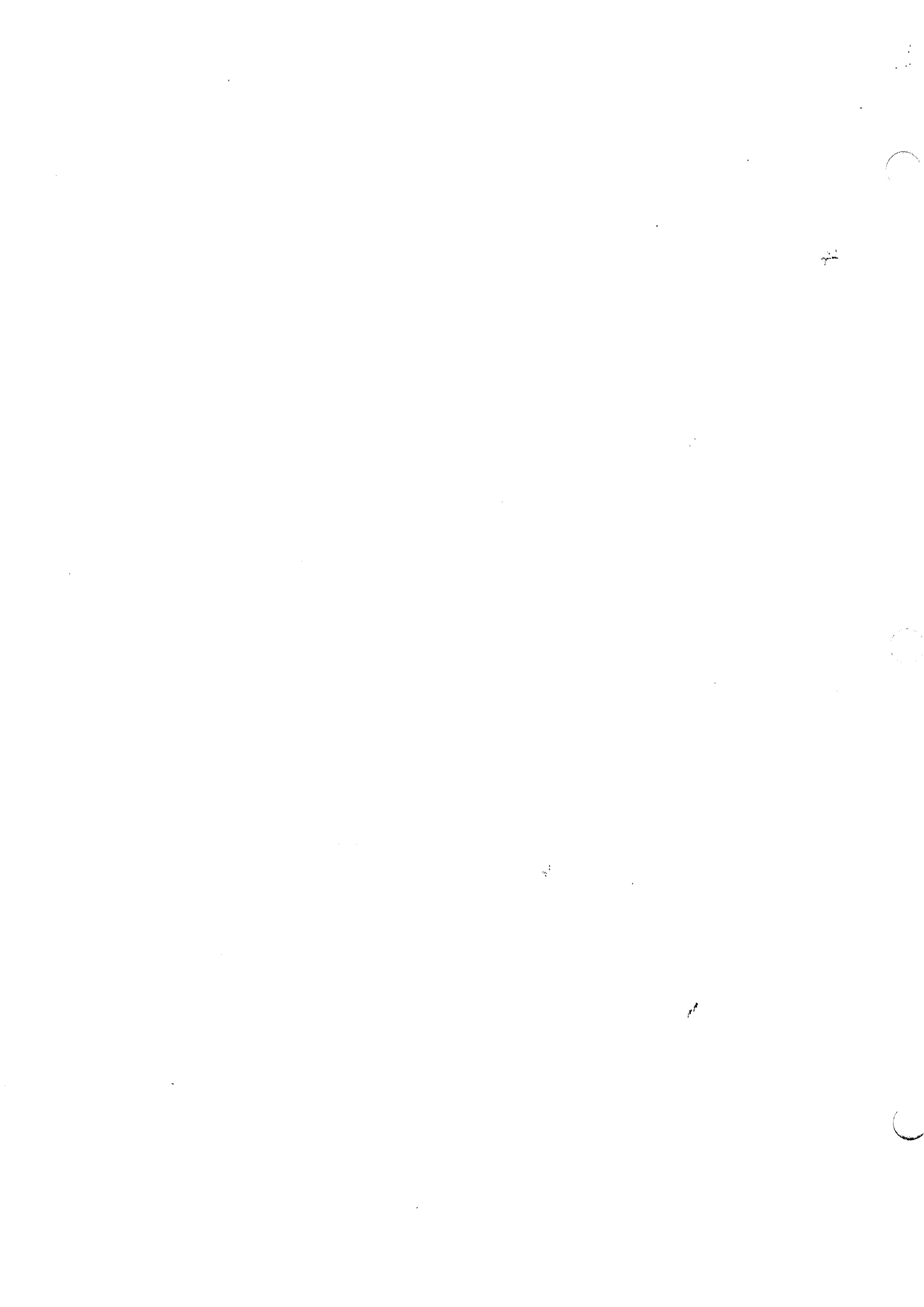
Density = 1.89 Gross FAR

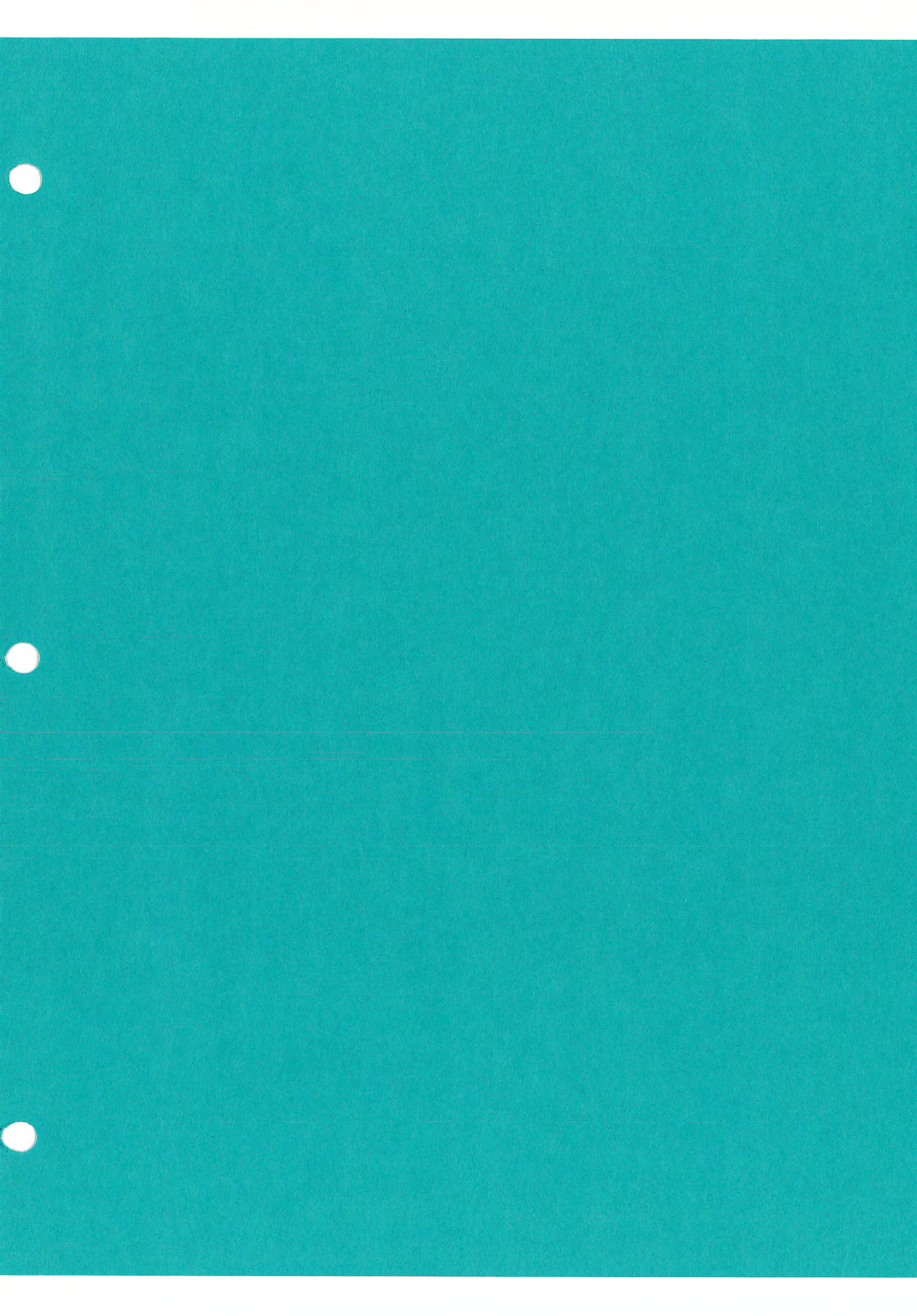
Alternative G
Navy Broadway Complex Project

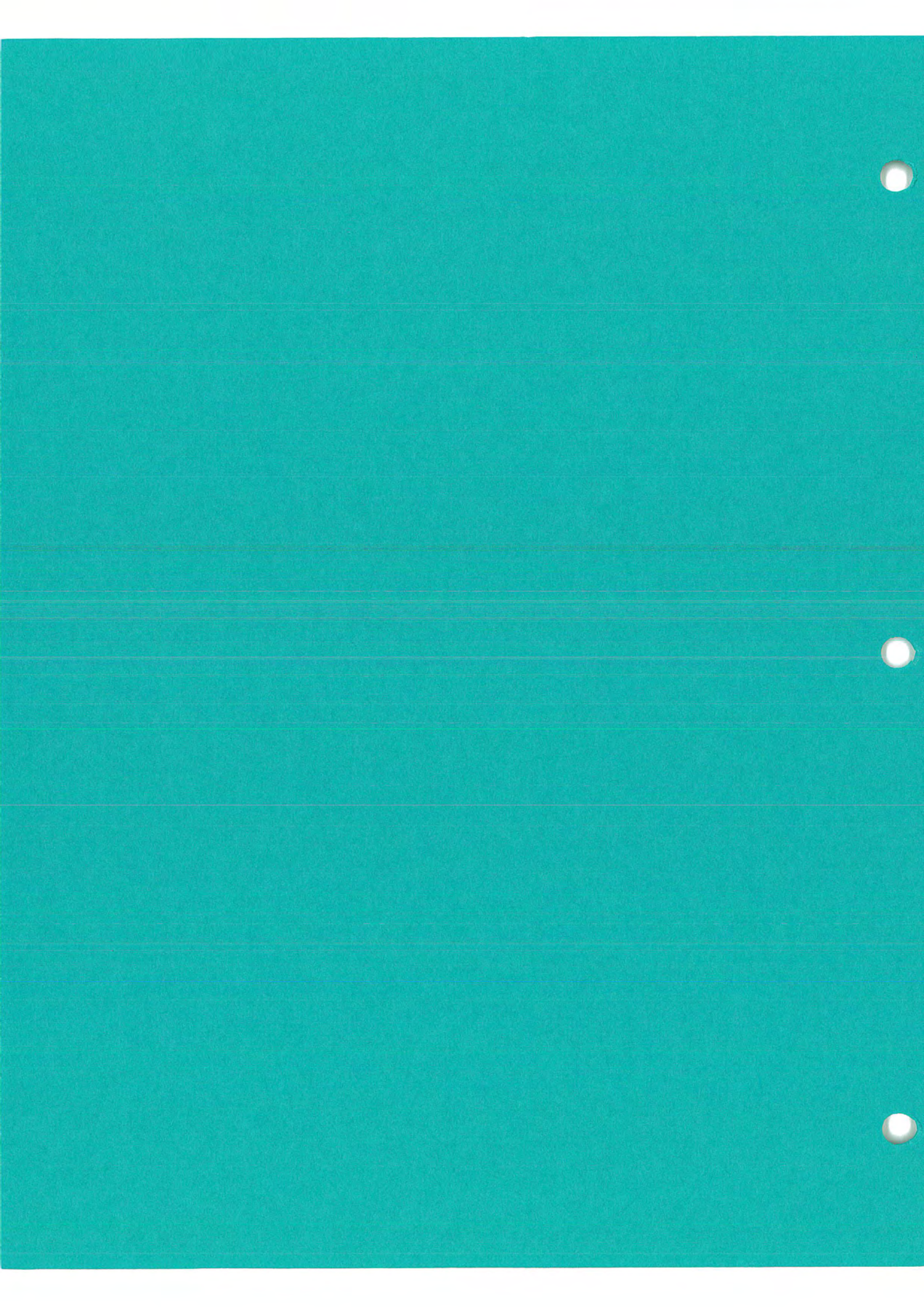
3640001 - July 1989



Figure 3-15







SECTION 4

AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES, AND MITIGATION MEASURES

4.1 LAND USE AND APPLICABLE PLANS

4.1.1 LAND USE COMPATIBILITY

AFFECTED ENVIRONMENT

Existing Land Uses

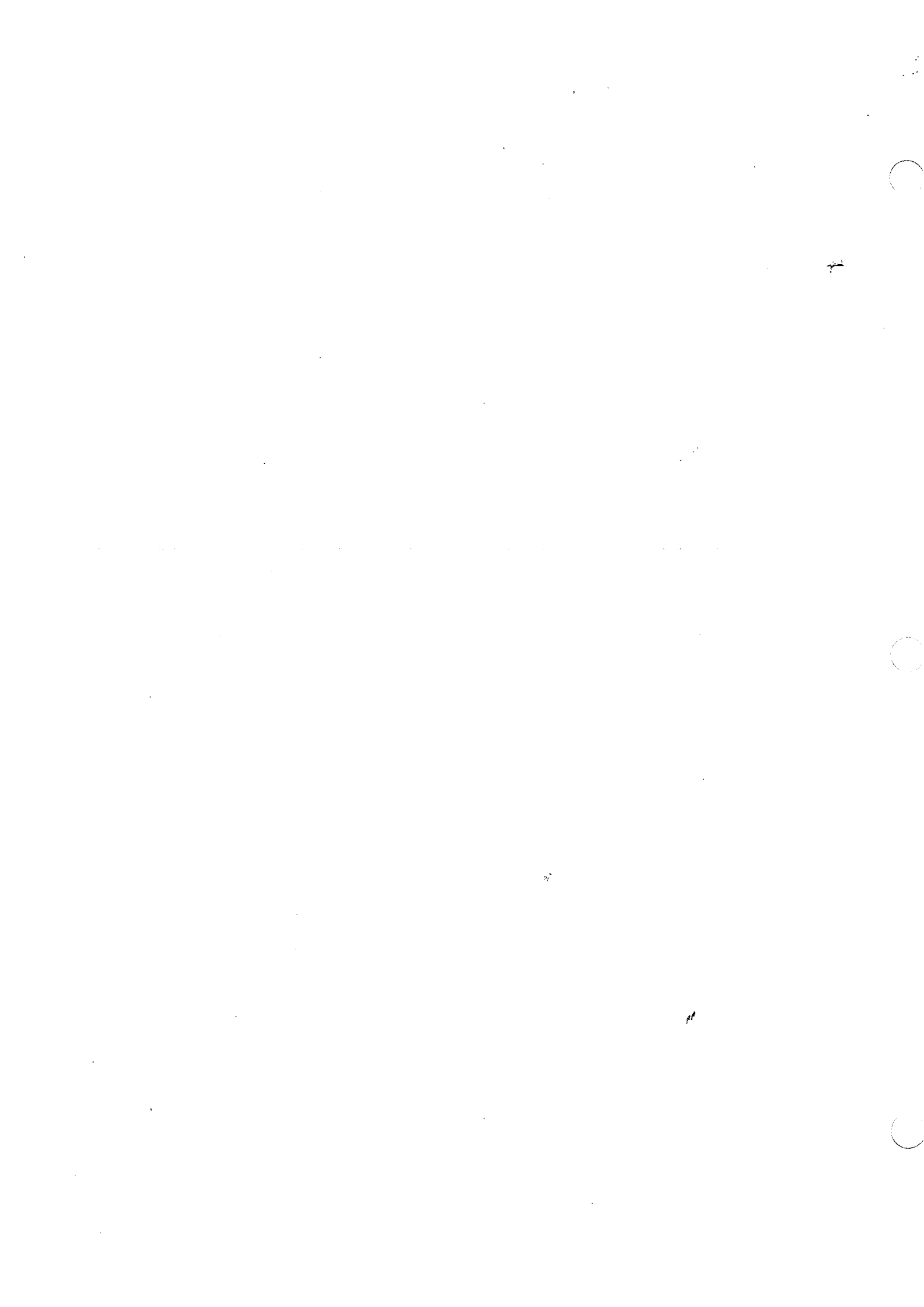
The Navy Broadway Complex project site is located in Southern California within the coastal City of San Diego, which has a population of approximately 1.05 million. As shown on Figure 3-1, page 3-2, and Figure 3-2, page 3-3, the site is located on the western edge of the City just east of Harbor Drive, the waterfront street adjacent to San Diego Bay. The San Diego Bay waterfront is occupied primarily by the Port of San Diego and the naval shore establishment. The Port of San Diego is used as the base for cruise lines, shipping, tour boat operations, marinas, commercial fishing, and hotels, and also includes a convention center and Lindbergh Field, San Diego's primary airport. The San Diego naval shore establishment is a crucial facility for the command of naval operations, administration, support, and communications in the Pacific Ocean.

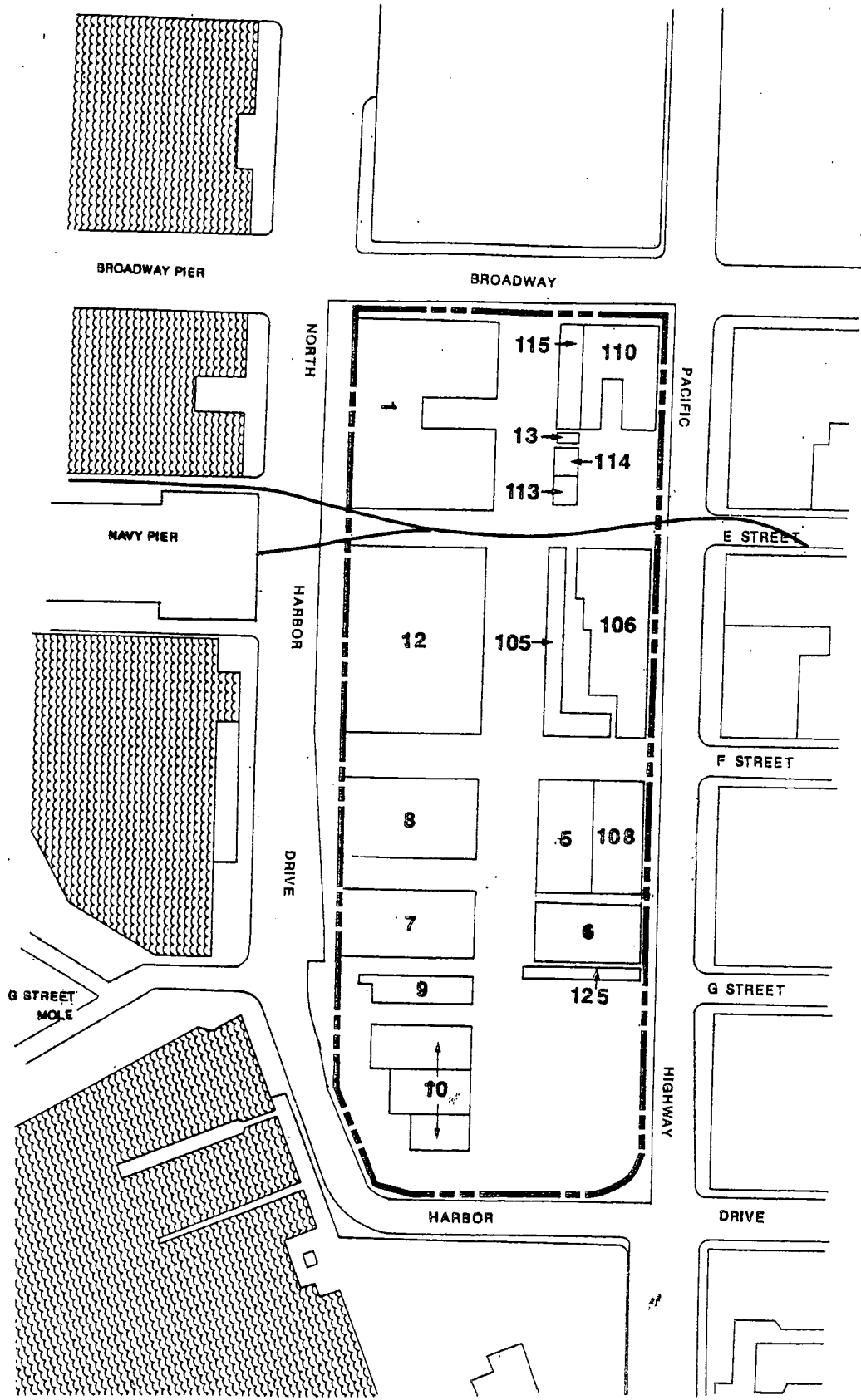
The Navy Broadway Complex site is located several blocks west of the San Diego Centre City core and approximately 2 miles west of Interstate 5 (I-5), a primary north/south interstate highway corridor. Regional access to the project area is provided via I-5, I-8, I-805, State Route 94 (SR-94), and SR-163 (see Figure 3-2, page 3-3).




The site is bounded by Harbor Drive to the west and south, Broadway to the north, and Pacific Highway to the east. The project site is east of the Navy Pier and southeast of the Broadway and B Street piers. Harbor Drive is the primary waterfront street in the vicinity. It parallels Pacific Highway in the project area and connects waterfront tourist attractions, the County Administration Center, Lindbergh Field, and naval and port activities located along San Diego Bay.

Existing Onsite Uses and Property Ownership

The Navy Broadway Complex currently has two large and 14 smaller Navy administrative office and warehouse facilities containing approximately 1 million square feet of gross floor area. The Naval Supply Center; Naval Communications Station; and Commander, Naval Base, San Diego are the primary existing tenants. Approximately 2,100 military and civilian personnel are employed at the site. The project site is one of 18 Navy installations within the metropolitan San Diego area. The Navy presence in San Diego is nationally important because it represents approximately one-fourth of the total Navy fleet. Figure 4-1 depicts the location of onsite buildings and Table 4.1-1 describes the uses and characteristics of each building. Most of the existing structures were built prior to 1945, with the oldest building dating to 1922.





-  Project Site
-  Building Number
(Refer to Table 4.2-1)
-  Railroad Tracks

Site Building Locations
 Navy Broadway Complex Project

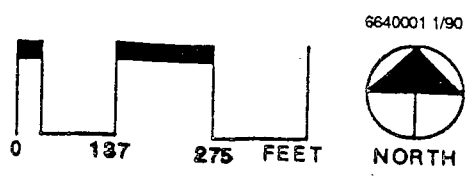


Figure 4-1

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TABLE 4.1-1
EXISTING ONSITE IMPROVEMENTS

Building No.	Height (floors)	Total Area (square feet [SF])	Industrial Space (SF)	Office Space (SF)	Storage (SF)
1	8	357,577	38,577	319,000	0
5	2	15,219	15,219	0	0
6	2	30,688	30,688	0	0
7	1	25,913	0	0	25,913
8	1	22,090	22,090	0	0
9	1	4,855	1,319	2,115	1,421
10	1	30,277	30,277	0	0
12	7	427,041	413,176	13,865	0
13	1	84	84	0	0
105	1	11,455	0	11,455	0
106	1	20,350	8,484	11,866	0
108	2	12,960	12,960	0	0
110	2	40,856	0	40,856	0
113	2	2,304	1,152	1,152	0
114	1	1,440	1,440	0	0
115	1	4,004	0	4,004	0
125 ^a	1	--	--	--	--
Total		1,007,113	574,026	405,753	27,334

a Building 125 was partially demolished and now only a small portion remains. It is used for nonrefrigerated storage and is not included in the overall onsite square footage totals.

Navy-owned railroad tracks are located on the project site in the E Street alignment between Buildings 1 and 12 and are used an average of twice per year. The railroad tracks lead to the Navy Pier across Harbor Drive and provide rail transport of supplies and oversized equipment to and from the pier.

Existing access to the project site is restricted to authorized military and civilian personnel. No public access into or through the site is available. E, F, and G Streets currently approach the site from the east and terminate at Pacific Highway without connections through to Harbor Drive.

The Navy Broadway Complex property is entirely controlled by the Navy and primarily owned by the Federal government. Federal ownership originates from initial conveyance of several parcels to the Federal government by the City of San Diego in 1919. Subsequent conveyances occurred in 1933, 1938, and 1940. The Navy owns approximately 13.7 of the 15.6 acres. Property not owned by the Navy is limited to the alignments and strips of land adjacent to E and F Streets and a small portion of the parking area north of North Harbor Drive and west of Pacific Highway. The alignments of E and F Streets comprise a total of 1.5 acres and are owned by the San Diego Unified Port District (SDUPD). They are under long-term lease to the Navy (until the year 2044). The narrow strips adjacent to the E and F Street alignments (approximately 0.1 acre total) are under lease from the City of San Diego (until 2049). The parking area north of Harbor Drive comprises approximately 0.3 acre and is leased from the SDUPD on a year-to-year renewal option basis. These three leases total 1.9 acres.

Surrounding Land Uses

The project site is located in an area of San Diego that has been undergoing land use changes and substantial redevelopment. Old and new commercial and office uses are intermixed with older warehouses in the Centre City area, several blocks to the east and northeast. Lindbergh Field, San Diego's major airport, is located approximately 1.5 miles to the northwest. Visitor-serving uses and hotels are located in the immediate vicinity of the site. Figure 4-2 depicts the major surrounding land uses in the project vicinity.

Land uses in the immediate vicinity include the following:

- Restaurant uses and parking are located immediately to the north across Broadway. The Port of San Diego Cruise Ship Terminal (B Street Pier), the Holiday Inn Complex, and the County of San Diego Administration Building are also located to the north.
- The Broadway Pier, which extends west from the terminus of Broadway, is located northwest of the site directly across North Harbor Drive. The Broadway Pier contains the customs office, vehicle parking, and pedestrian-oriented open space.
- The Navy Pier and Transit Shed, which are used for ship berthing, storage, and load out, are located directly west of project site Buildings 1 and 12 (Figure 4-2), across North Harbor Drive. The pier is connected to Building 12 by an enclosed conveyor bridge over North Harbor Drive.
- The G Street Mole is located west of the southern area of the site, and supports commercial fishing, restaurant, and pedestrian-oriented open space uses.
- Harbor Seafood Market and Seaport Village are located south of the site across Harbor Drive. Seaport Village is developed with specialty retail shopping uses. The Marriott Hotel and Convention Center and the Embarcadero Marina Park are located to the south and southeast of these areas.

1. Seaport Village
2. Embassy Suites
3. Harbor Seafood Market
4. Old Police Station
5. SDG & E Station B
6. Park Row
7. Horton Plaza
8. Amtrak/Santa Fe Depot
9. Navy Buildings (1220 Pacific Highway)
10. Holiday Inn Complex
11. Maritime Museum
12. Port of San Diego Cruise Ship Terminal/B Street Pier
13. County of San Diego Administration Building
14. Marriott Hotel
15. Parking (Lane Field)
16. G Street Mole
17. Broadway Pier
18. Navy Pier
19. Pantoja Park
20. Convention Center

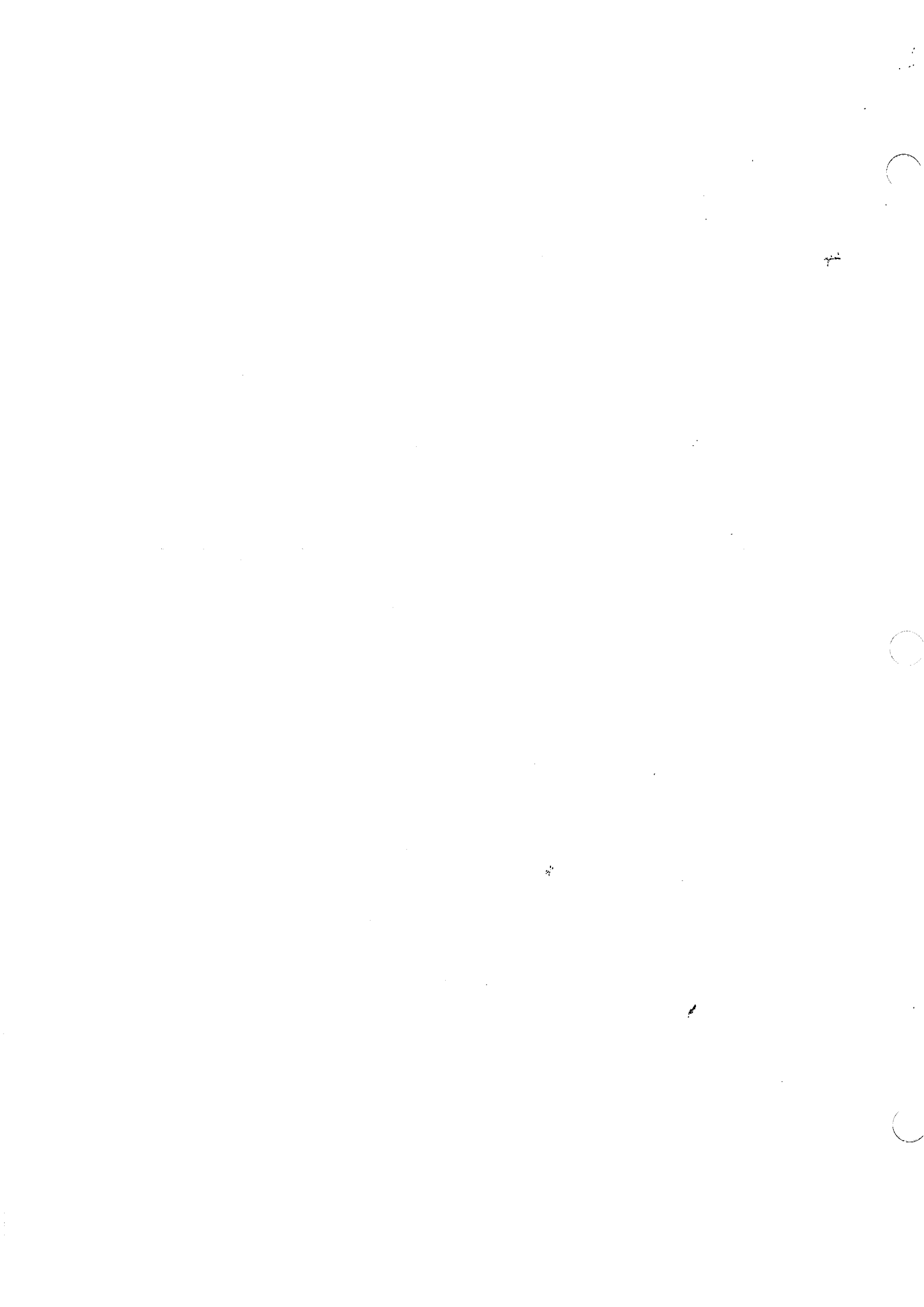


Figure 4-2

Surrounding Land Use Context



Navy Broadway Complex Project



- The Embassy Suites Hotel is located to the east of the southern area of the site, across Pacific Highway from Block 4. The old (unoccupied) San Diego Police Station and the Seaport Village expansion area are located south of the Embassy Suites Hotel, across the intersection of Harbor Drive and Pacific Highway. The San Diego Gas and Electric facilities substation and steam plant are also located east of the project site across Pacific Highway. Other land uses to the east include the Marina residential neighborhood, an area of relatively high-density housing, and Pantoja Park. Horton Plaza, the major downtown retail shopping mall, is located farther east.
- The Amtrak/Santa Fe Railroad depot is located to the northeast, across the intersection of Pacific Highway and Broadway. Santa Fe property occupies the blocks around the depot northeast of the site. The central core for downtown San Diego is located east of the depot.

Planned Surrounding Land Uses

A number of office, commercial, hotel, residential, and mixed-use projects are proposed or under construction in the vicinity of the project site. The larger of these projects are listed in Table 4.1-2 and shown on Figure 4-3.

The most active area in the project vicinity is the Centre City core, located east-northeast of the site. The largest planned project is the proposed Santa Fe Development to the northeast of the site, with a proposed 3,700,000 SF of office and 100,000 SF of commercial retail and restaurant uses. The development would consist of eight buildings ranging in height from 14 to 32 stories. This project is proposed to be developed over a 10- to 20-year period beginning in 1992.

Several other office developments with anticipated completion dates between 1989 and 1992 are also located in the Centre City's central core. Over 7,000,000 SF of office uses are proposed over the next 20 years or are under construction in this area, further reinforcing this area as San Diego's downtown core. Ancillary commercial retail uses are included in several of these developments. Commercial retail uses are planned or under construction primarily to the east and south of the site, the largest being the 180,000 SF expansion of Seaport Village (south of the site). Over 500,000 SF of commercial retail uses are proposed in the project vicinity.

Approximately 1,300 hotel rooms are planned or under construction in the downtown core. In addition, more than 1,500 rooms are also planned to the south in the Hyatt Regency (875 rooms) and to the southeast in Roger Morris Plaza (750 rooms). The new San Diego Convention Center, with approximately 500,000 square feet of exhibit, meeting, and ballroom space, has been recently completed to the southeast.

Residential land use is the other predominant planned use in the project area, with over 2,000 dwelling units either proposed or under construction. Approximately 90 percent of these units are in the Marina residential area, located east and southeast of the site. The largest residential projects include the Courtyard, with 400 units, and Tyson Plaza, with 368 units. Plans for a 700-unit condominium project are being prepared by Santa Fe Southern Pacific for a site east of Pacific Highway and south of F Street, as are plans for the 200-unit Huntington project located southwest of State Street and Broadway. Other residential projects in this area include Columbia Place, Roger Morris Plaza (as part of the hotel project), and One Harbor Drive.

TABLE 4.1-2

PLANNED AND PROPOSED SURROUNDING LAND USES

Number ^a	Project Name ^b	Office (SF)	Commercial (SF)	Hotel (rooms)	Residential (units)	Other (SF)	Anticipated Completion
1	Santa Fe Development	3,700,000	100,000	-	-	-	1992-2010
2	Cabot, Cabot & Forbes	344,000	17,000	-	-	-	unknown
3	Manulife Towers	411,000	-	-	-	-	unknown
4	Symphony Towers/Marriott	520,000	-	262	-	-	1988-1989
5	Great American Plaza	530,000	-	276	-	-	1991
6	Emerald Shapery Center	375,000	-	435	-	-	1990
7	Koll Center (Phases I and II)	690,000	15,000	335	32	15,000 (health club)	1989-1991
8	800 Pacific Highway	535,000	-	-	-	-	unknown
9	Horton Plaza	18,500	13,500	-	34	-	unknown
10	Bristol Square	60,000	-	-	-	-	1989
11	G Street Mole, Fish Restaurant, and Market	-	15,000	-	-	-	1989
12	Columbia Place	-	-	-	103	-	1989
13	Courtyard	-	80,000	-	400	-	1990
14	Tyson Plaza	33,000	58,000	-	368	-	unknown
15	Roger Morris Plaza	-	-	750	150	-	unknown
16	Hyatt Regency	-	-	875	-	-	1991
17	Seaport Village (Expansion)	-	180,000	-	-	-	1992
18	One Harbor Drive	-	50,000	-	198	-	1991
19	Convention Center	-	-	-	-	251,000 (exhibit 107,000 (convention space))	1989
20	Santa Fe Condominiums	-	-	-	700	-	unknown
21	Huntington	-	-	-	200	-	unknown
	Total	7,316,500	528,500	2,933	2,185	N/A	

a See Figure 4-5 for the location of the listed projects.

b All square footage is to the nearest 1,000 square feet.

Source: City of San Diego 1988 and 1989; Centre City Development Corporation 1988 and 1989.



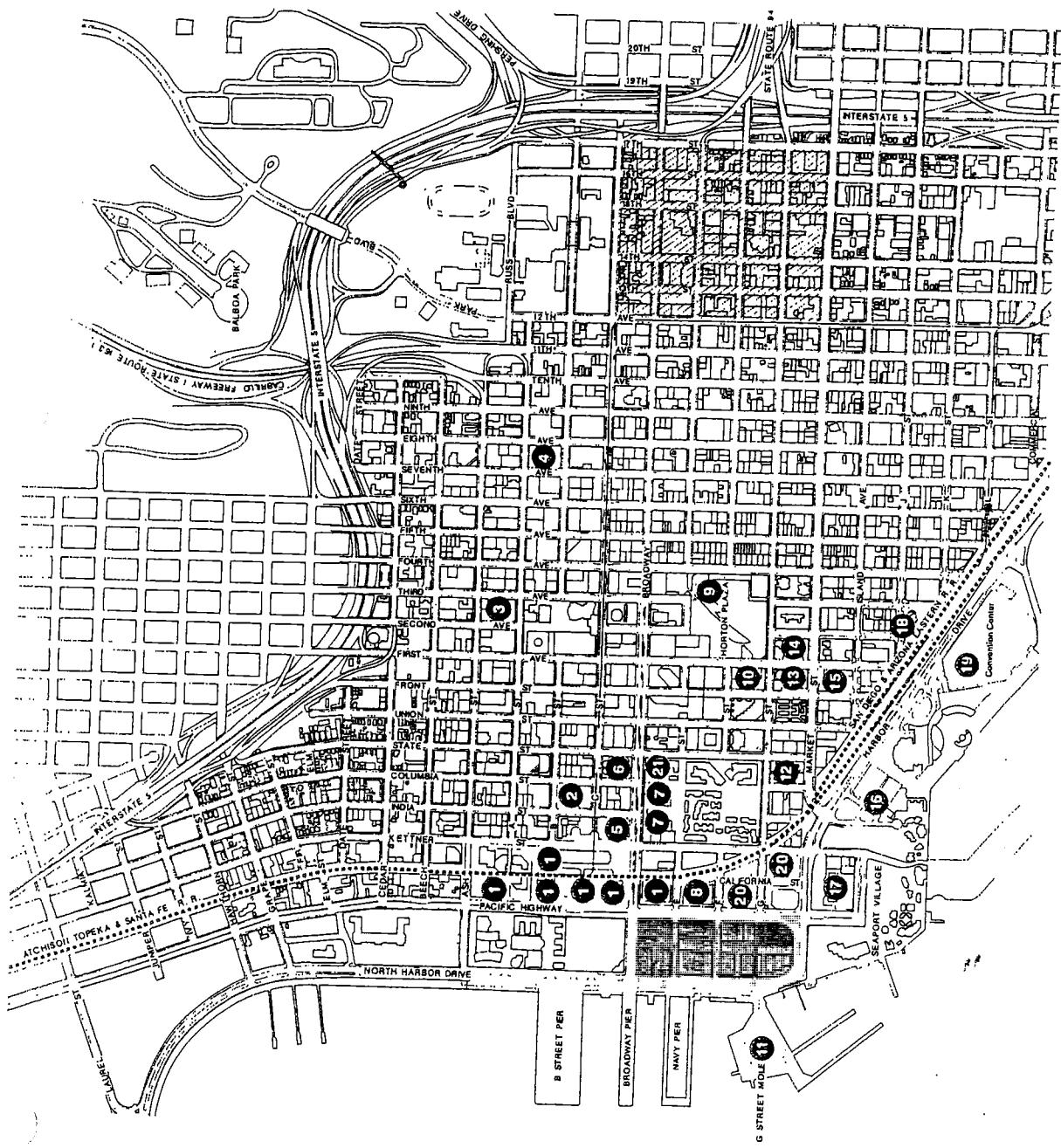
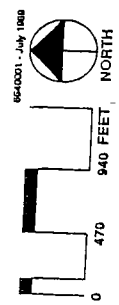
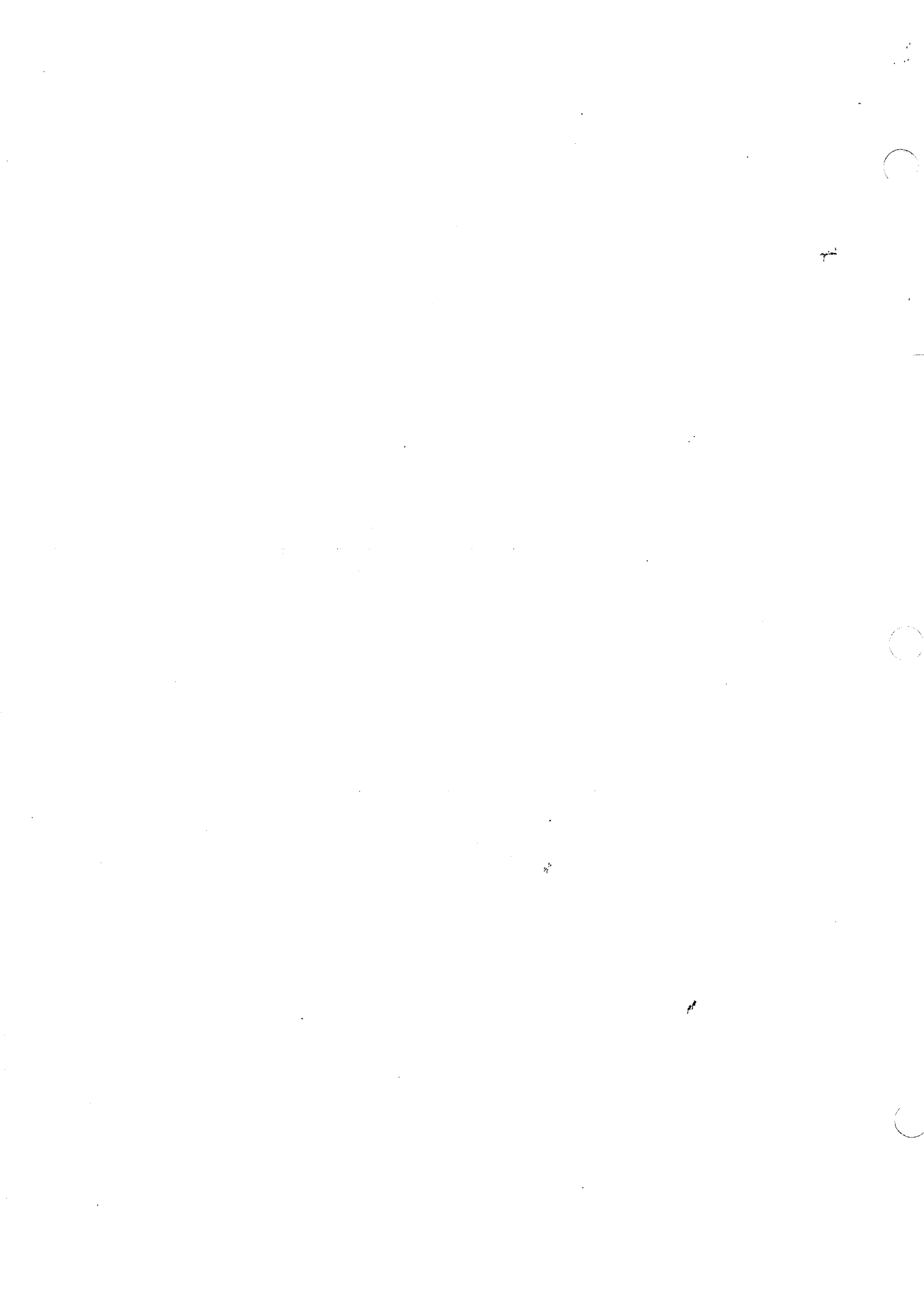
- Legend**
- 1 Santa Fe Development
 - 2 Cabot, Cabot & Forbes
 - 3 Manville Towers
 - 4 Symphony Towers/Marriott
 - 5 Great American Tower
 - 6 Emerald Shapery Center
 - 7 Koll Center
 - 8 800 Pacific Highway
 - 9 Horton Plaza
 - 10 Bristol Square
 - 11 G Street Mole
 - 12 Columbia Place
 - 13 Courtyard
 - 14 Tyson Plaza
 - 15 Roger Morris Plaza
 - 16 Hyatt Regency
 - 17 Seaport Village (Expansion)
 - 18 One Harbor Drive
 - 19 Convention Center
 - 20 Santa Fe Condominiums
 - 21 Huntington
-  Project Site
 -  Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 4-3

Location of Planned and Proposed Projects



Navy Broadway Complex Project



Waterfront Access

The Navy Broadway Complex is located in an area of San Diego that has high pedestrian use because of its proximity to the waterfront and such attractions as the Broadway Pier; the B Street Pier, with the Cruise Ship Terminal; the G Street Mole, a commercial fishing pier, restaurant, and park; Seaport Village, a specialty retail complex to the south; and the Bayfront Promenade, which connects these uses. These uses are all located within two blocks of the project site.

Lateral Waterfront Access

Lateral pedestrian access is depicted in Figure 4-4. There is a high level of pedestrian activity in the project vicinity, especially along the Bayfront Promenade, a broad sidewalk adjacent to the waterfront and Harbor Drive. Lateral pedestrian access along the promenade and the waterfront in the project vicinity is unobstructed. The promenade consists of a wide, wooden boardwalk surrounded by a grass parkway that makes a transition into a sidewalk in the vicinity of both the Navy and Broadway Piers. The portion of the promenade in the vicinity of the B Street Pier and Cruise Ship Terminal becomes unlandscaped asphalt. The entrance to the Navy Pier includes a truck and train access right-of-way across the sidewalk, which infrequently disrupts pedestrian travel for short periods.

Perpendicular Waterfront Access

Perpendicular pedestrian access to the waterfront is depicted in Figure 4-4. Pedestrian activity along Broadway, which provides the major link between the project vicinity and the waterfront, is higher than is typically found along major streets in downtown areas. However, a relatively high level of vehicle traffic in the roadway, fairly narrow sidewalks, and a lack of pedestrian-oriented uses reduce potential levels of pedestrian travel.

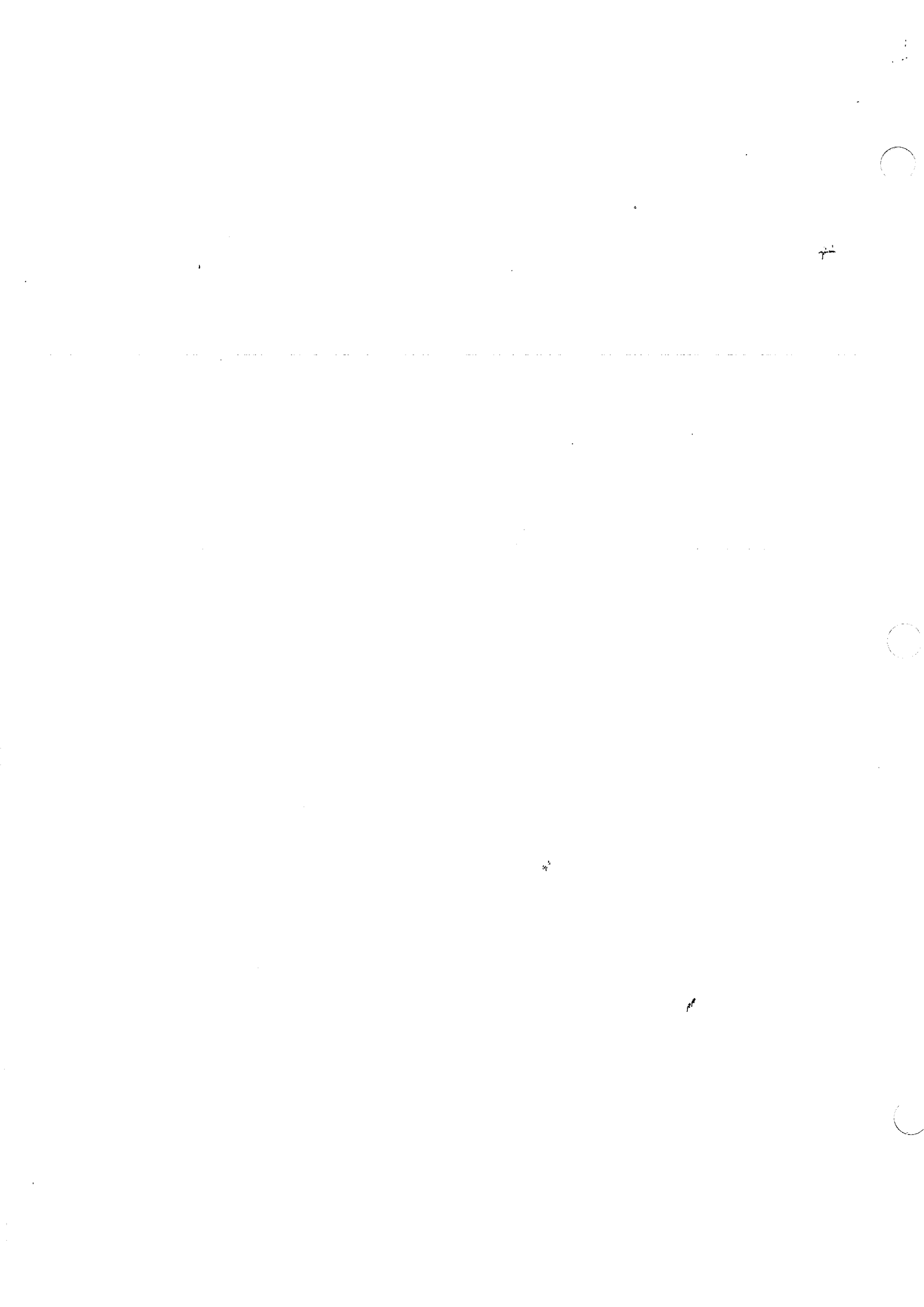
Harbor Drive also provides perpendicular access to the waterfront in the project vicinity; however, pedestrian travel to the waterfront appears to be less along this street than along Broadway. Harbor Drive does not connect the waterfront to inland uses that generate as many pedestrians as Broadway (e.g., offices, hotels, retail uses). Future and recently completed development near Harbor Drive, such as the Embassy Suites Hotel and convention center, should increase the use of Harbor Drive for perpendicular access to the waterfront.

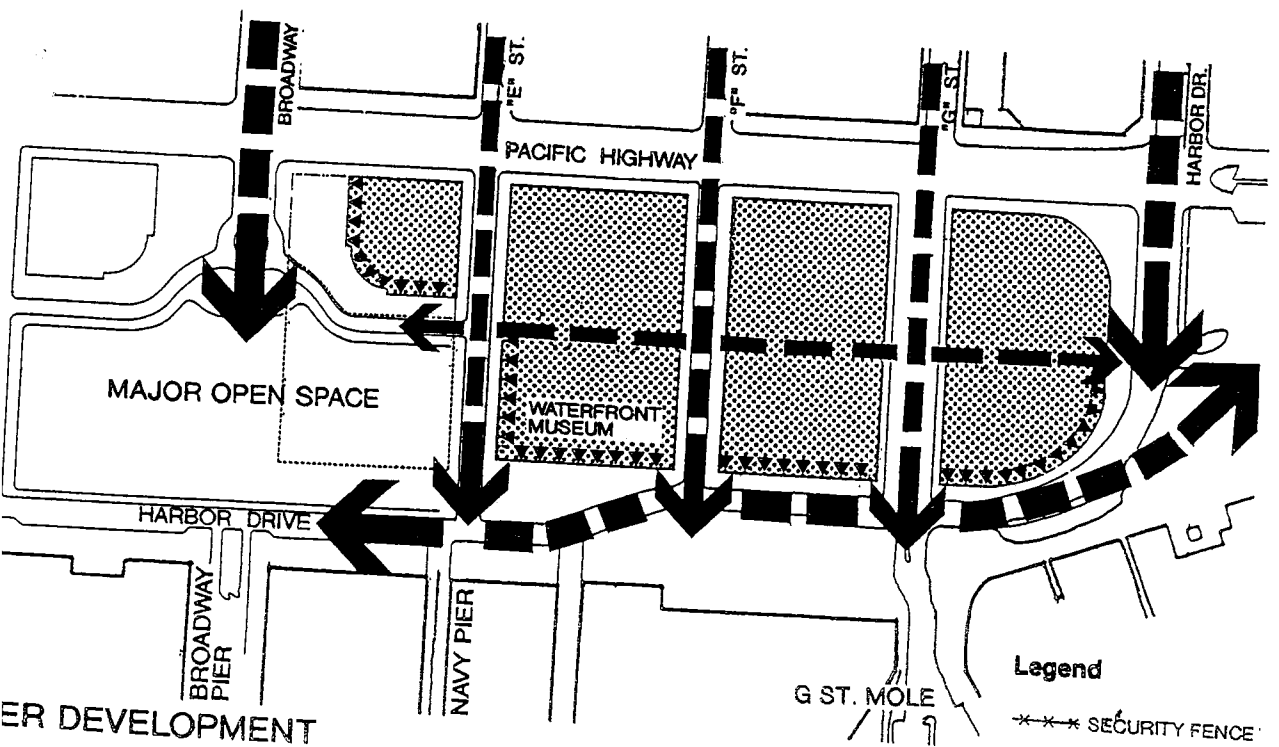
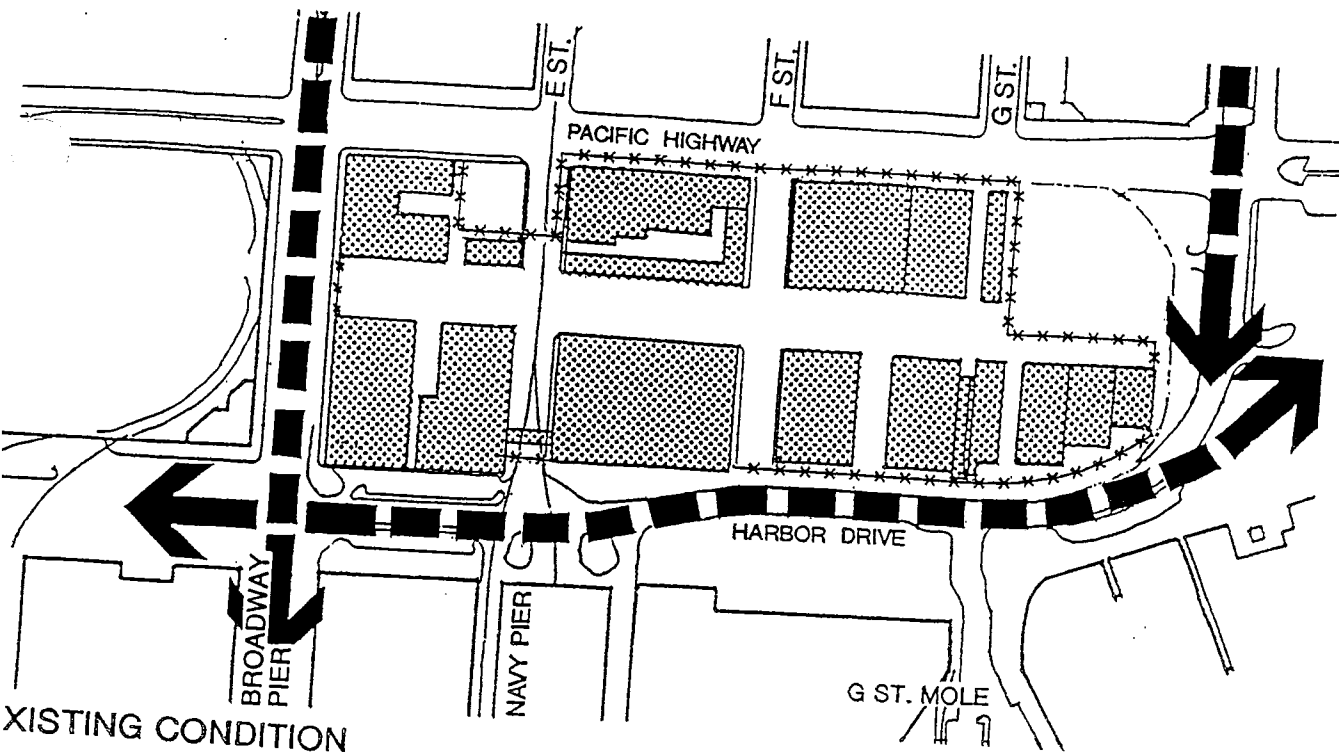
E, F, and G Streets do not cross the Navy Broadway Complex, as depicted in Figure 4-4, so perpendicular waterfront access is not available along these streets.

Planned Pedestrian Access

The Urban Design Plan for Centre City designates several pedestrian access ways in the vicinity of the project site to link the waterfront with the Centre City core. The basic goal of the urban design concept developed by CCDC is to "link the interior core area to the waterfront with a series of major streets, pedestrian ways, small parks and plazas."¹

The Urban Design Plan includes policies that focus on the physical form of the pedestrian accessways. Figure 4-5 shows the locations of planned pedestrian accessways in the project vicinity. Pedestrian access and activity areas are along the major streets that border the site:





Legend

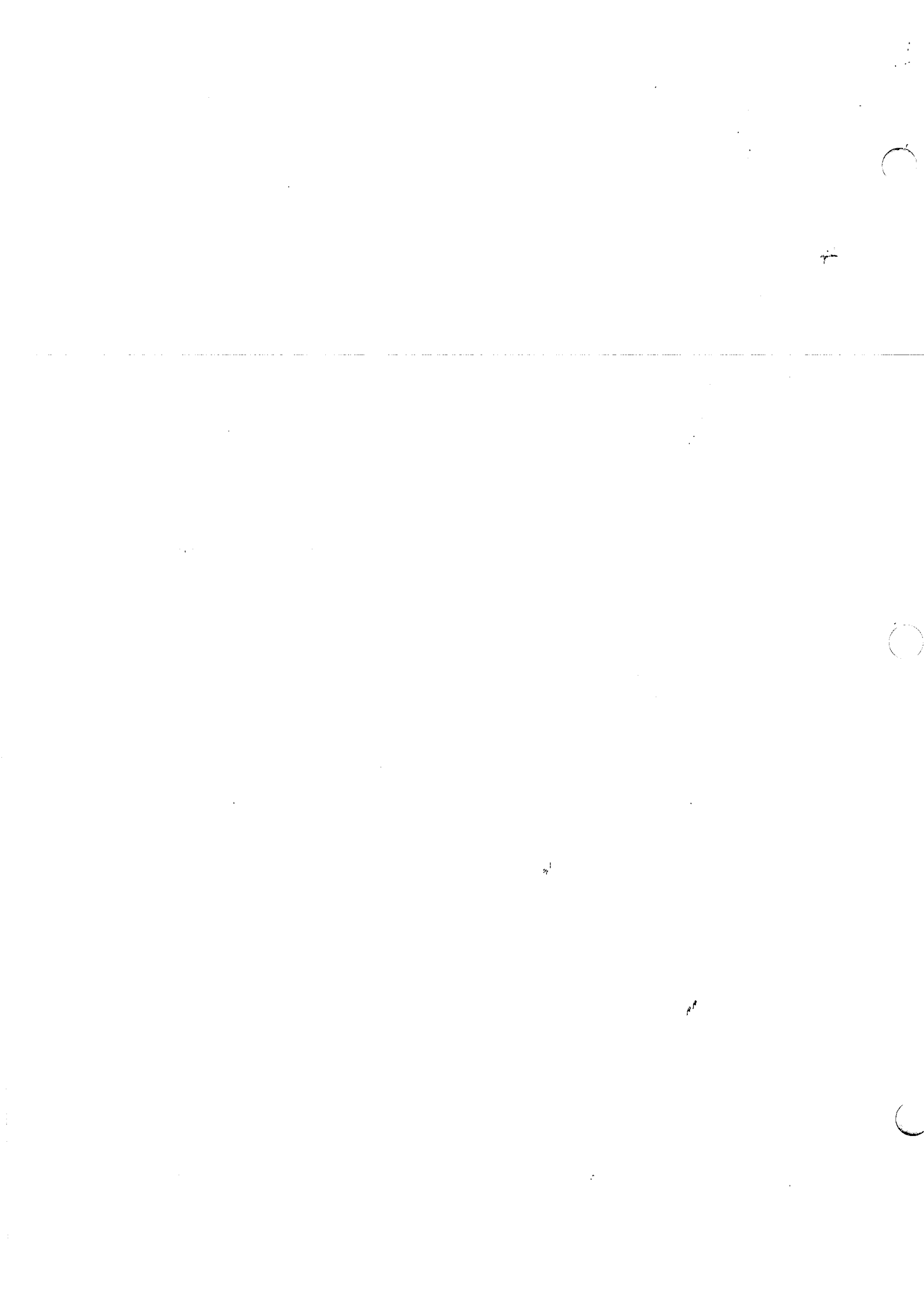
- x—x—x— SECURITY FENCE
- ▼▼▼▼ PUBLIC-ORIENTED GROUND LEVEL USE
- ←←←← PUBLIC PEDESTRIAN ACCESS

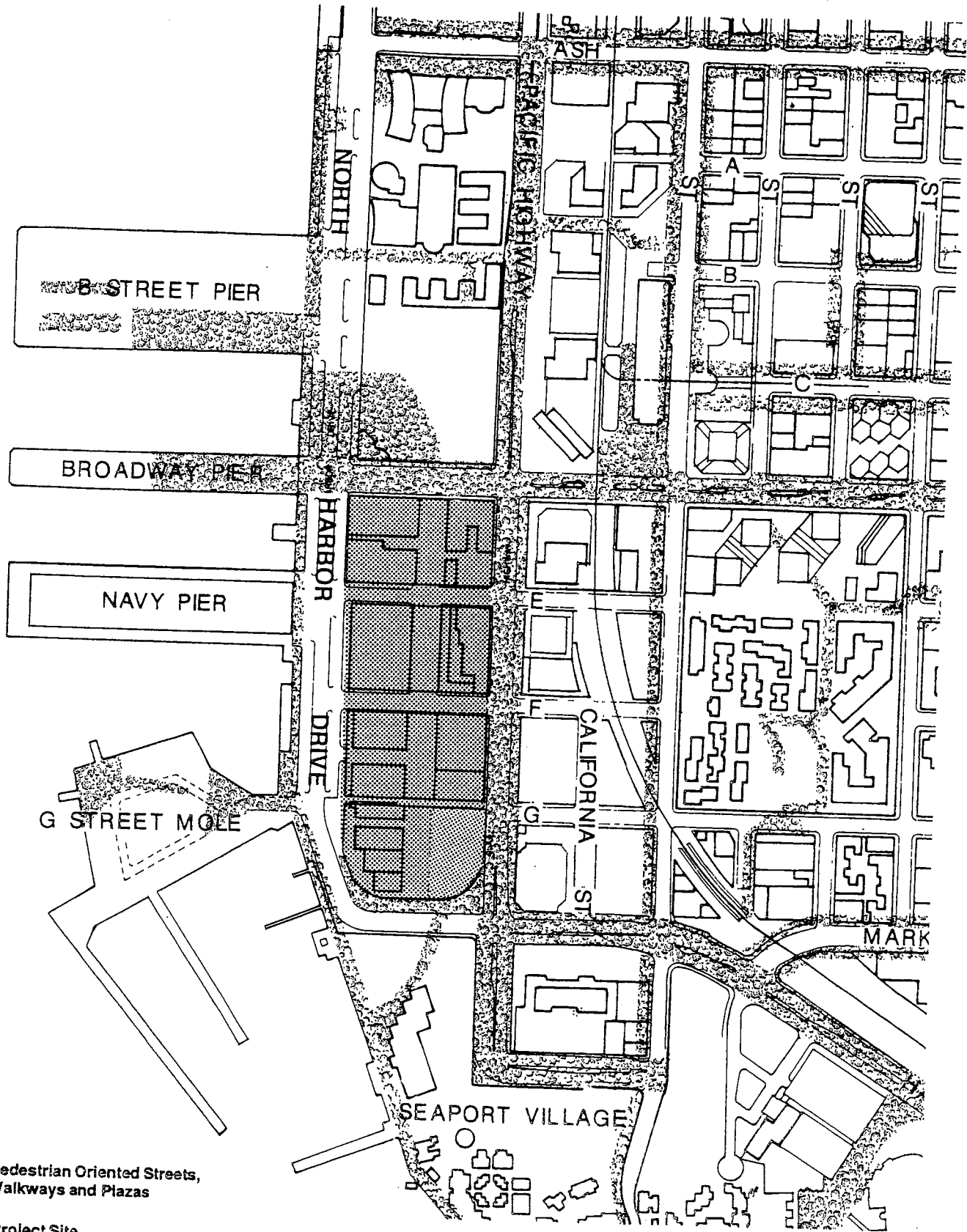
**Public Pedestrian Access:
Existing and With Alternative A
Navy Broadway Complex Project**

9640001 - October 1989



**NORTH
Figure 4-4**





SOURCE: CITY OF SAN DIEGO, 1983

Planned Pedestrian
Corridors & Facilities
Navy Broadway Complex Project

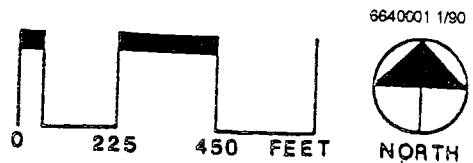
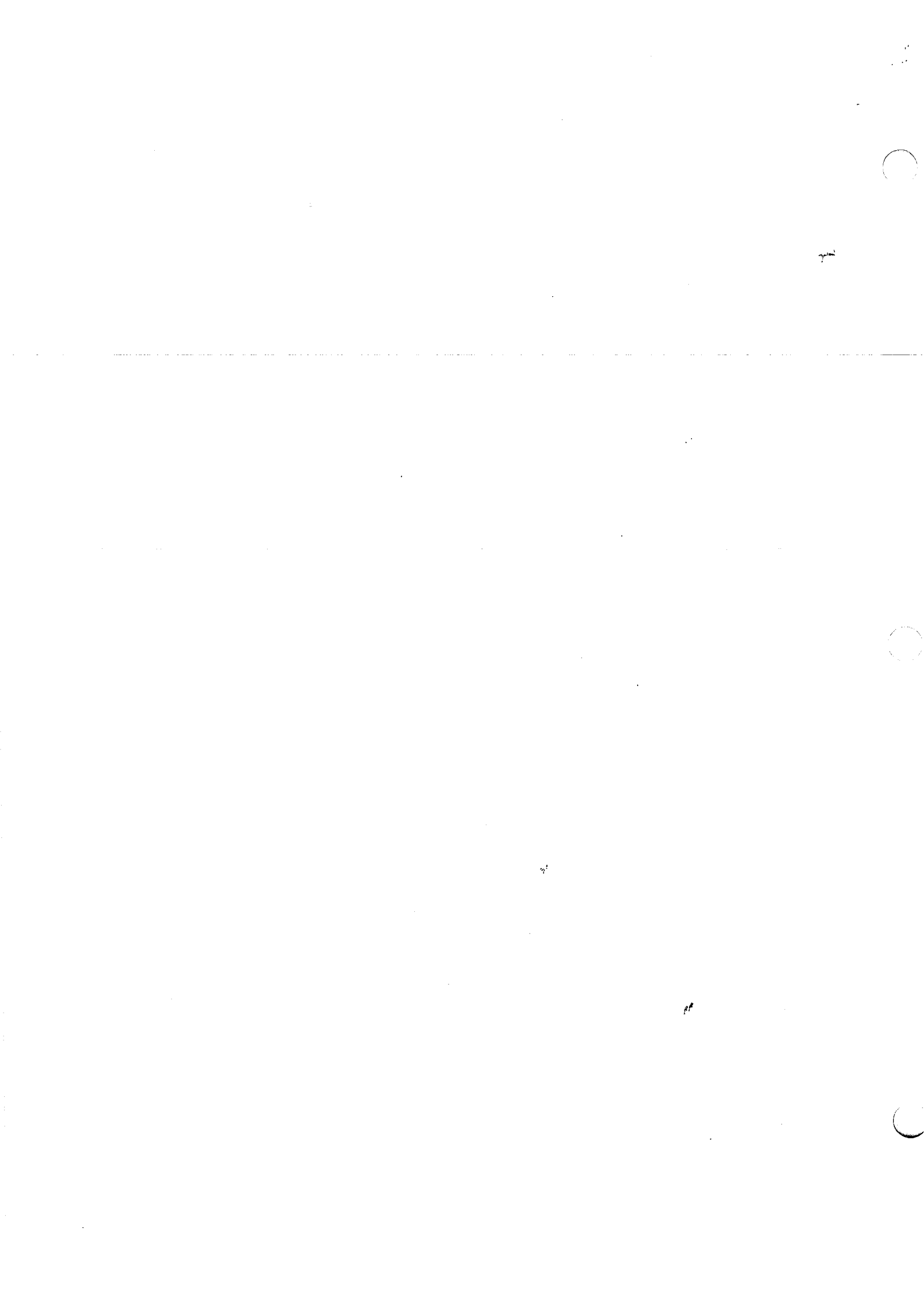


Figure 4-5



Broadway, Harbor Drive, and Pacific Highway. The intent of the proposed pedestrian circulation system is to link developments. The plan includes a series of linear parks and plazas.

One linear park is currently in the design stage, commissioned by CCDC and proposed to be located along the existing railroad and proposed LRT right-of-way linking Seaport Village to the Gaslamp Quarter. The linear park would include bicycle lanes, pedestrian walkways, and benches.

The Port District Master Plan and Embarcadero Plan designates pedestrian accessways to waterfront activities in the project vicinity. The Master Plan calls for "windows to the water at frequent and convenient locations around the entire periphery of the bay with public right of way, automobile parking, and other appropriate facilities."² The Master Plan also calls for "access along the waterfront wherever possible with the promenades and paths where appropriate, and elimination of unnecessary barricades which extend into the water."³

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Table 4.1.3 provides a summary of the compatibility of each alternative with surrounding land uses and planning goals (discussed in Sections 4.1.2 through 4.1.5, pages 4-16 through 4-34).

Alternative A would be compatible with existing and planned surrounding land uses, and would not create any significant environmental effects associated with land use compatibility. The commercial office and Navy office buildings located in the eastern area of Blocks 1 and 2 would provide a logical continuation of high-rise office development planned directly northeast (e.g., Santa Fe Development) and east (e.g., 800 Pacific Highway) of these blocks in the Columbia Subarea of Centre City. These buildings would step down to the waterfront. Along Block 1, the office building would provide ground-floor pedestrian-oriented retail uses, fronting onto a 1.9-acre open space area (which may be a component of a larger open space). This would provide an active pedestrian area that would be consistent with the pedestrian orientation of the waterfront, and would have a beneficial land use effect. Navy offices would be located along the western area of Block 2, most likely in a rehabilitated Building 12. A museum on the ground floor of this building would beneficially affect land use compatibility by providing a pedestrian-oriented use.

Hotel uses proposed on Blocks 3 and 4 would be compatible with land uses adjacent to these blocks, providing a logical land use transition between existing (e.g., Embassy Suites Hotel) and planned (e.g., Santa Fe Condominiums) hotel and high-density residential land uses in the Marina Subarea of Centre City to the east, the specialty retail at Seaport Village to the south, and waterfront uses to the west. Ground-level retail, especially along the western area of the blocks, would benefit the pedestrian orientation of this area.

Alternative B provides a similar level of land use compatibility as Alternative A. The primary land use compatibility difference between this alternative and Alternative A is that a 0.5-acre pedestrian plaza would be developed at the northwest corner of Block 1, rather than a 1.9-acre open space area that could become part of a larger open space. Although it does not provide as much open space as Alternative A, this alternative would nevertheless still enhance the pedestrian environment along the waterfront, and would not create any land use incompatibilities.

TABLE 4.1-3
SUMMARY OF LAND USE AND POLICY COMPATIBILITY

Alternative	Compatibility With Surrounding Land Uses	California Coastal Policy Consistency	Central Bayfront Design Principles Consistency	San Diego General Plan Land Use Plan Compatibility
A	Yes	Yes	Yes	Yes
B	Yes	Yes	No	Yes
C	Yes	Yes	No	Yes
D				
Navy Broadway Complex	Yes	Yes	No	Yes
Offsite Location	Unk	NA ^a	NA ^a	Yes
E	Yes	Yes	No	Yes
F	Yes	Yes	Yes	Yes
G	Yes	NA	No	No

Alternative	San Diego Centre City Community Plan (1976) Compatibility	San Diego Redevelopment Plans Compatibility	San Diego Urban Design Program Compatibility
A	Yes	Yes	Yes
B	Yes	Yes	Yes
C	No	Yes	No
D			
Navy Broadway Complex	Yes	Yes	Yes
Offsite Location	Yes	NA ^a	NA ^a
E	No	Yes	No
F	Yes	Yes	Yes
G	No	Yes	No

a The subject policies are not applicable to the offsite Navy uses.

Source: Michael Brandman Associates 1989.

Alternative C does not enhance the waterfront's pedestrian and open space characteristics as much as either Alternative A or Alternative B, nor does it create any new land use incompatibilities. Unlike either of the first two alternatives, a pedestrian plaza or open space area at the northwest corner of Block 1 would not be created. Instead, that corner would remain occupied by Building 1, which currently occupies the site. This use would not be beneficial to the pedestrian orientation encouraged by proximity to the waterfront, but would not be a change from current conditions. The same is true for Block 2. Unlike the first two alternatives, Building 12 would be rehabilitated, but a museum would not be provided. Thus, as with Block 1, beneficial pedestrian uses would not be created. The use would be similar in character to the current use of the building, so no land use incompatibility would be created. Blocks 3 and 4 would be developed as proposed in the first two alternatives, so the same level of land use compatibility would occur with those alternatives as with this one. No significant adverse environmental effects would result.

Alternative D is the same as Alternative B with respect to Blocks 1, 3, and 4, and would provide a compatible use. Unlike Alternative B (or any of the other alternatives), this alternative would include a hotel, commercial office, and only a small amount of Navy office uses on Block 2. No museum would be developed on Block 2. The configuration of the block, with the office uses in the eastern area and hotel uses in the western area, provides a logical land use transition between the Centre City office core to the east and the waterfront to the west. The site for the approximately 980,000 SF of Navy offices, while not precisely identified, would be in the Centre City East area near the new City Hall site. Because this area is changing to more intensive administrative and office uses, it is likely that this component of Alternative D would be compatible with surrounding land uses.

Alternative E would not enhance the waterfront's open space and pedestrian facilities, nor would it create any land use incompatibilities. Military-only uses, such as those currently found on the site, would be retained. Rather than a mix of Navy industrial and office uses, as is currently found on the site, the site would be devoted strictly to offices. No significant adverse change to land use compatibility would result from this alternative.

Alternative F provides a similar level of land use compatibility as Alternative A, with two notable differences. Unlike Alternative A, or any other alternative, no development would occur on Block 1, leaving it available to create a 3.5-acre open space at the foot of Broadway. Active pedestrian uses, and possibly cultural uses, would be beneficial land uses compatible with the waterfront. Development on Blocks 2, 3, and 4 would be intensified (over Alternative A) to meet Navy project objectives, and a combination of hotel and commercial office development is proposed on Block 3. This would not be incompatible with adjacent planned high-density residential uses. No significant adverse environmental effects to land use compatibility would, therefore, result from this alternative.

Alternative G, the no-action alternative, would not provide the enhancement to land use compatibility that is associated with Alternatives A through D. No adverse environmental change would occur either, as the uses that have been on the site for the last several decades would be retained.

Waterfront Access Effects

All of the proposed alternatives have either a beneficial or no effect on pedestrian access to the waterfront, depending on the alternative. To the extent that any of the alternatives improve

pedestrian access over current conditions, the alternatives implement the Urban Design Plan for Centre City.

Effect on Lateral Waterfront Access

None of the proposed alternatives would adversely affect lateral waterfront access. The primary lateral access along the waterfront is the Bayfront Promenade. None of the elements proposed in any of the alternatives would remove or physically alter the promenade. The proposed alternatives would either improve overall lateral waterfront access or would not change existing available access, as described below.

Development in accordance with Alternatives A, B, C, D, E, or F would provide beneficial effects to lateral pedestrian access to the waterfront. Alternatives A and F would provide a park and Alternatives B and D would provide an open space plaza on the Navy Broadway Complex site at the northeast corner of Broadway and Harbor Drive. Figure 4-4, page 4-10, depicts pedestrian access associated with Alternative A. Pedestrian access associated with Alternatives B, D, and F would be nearly identical. Uses that encourage pedestrian activities would be developed along the frontage of the plaza and along Harbor Drive. A broad sidewalk, sufficient to provide pedestrian flow, landscaping, and street furniture (a portion of which may be in the public right-of-way), is proposed to be created along Harbor Drive for the length of the project site. Pedestrian access along Pacific Highway would be improved by providing 20-foot-wide sidewalks with substantial landscaping, and by stepping development back from the street so as to provide a more pedestrian-oriented atmosphere. Pedestrian activity at the Centre City East site for Alternative D would not affect lateral access to the waterfront because this site is not proximate to the waterfront.

Alternative C, which would retain Buildings 1 and 12 along Harbor Drive, would not alter pedestrian access along Harbor Drive between Broadway and F Street, but would provide the same beneficial effect to pedestrian access along Blocks 3 and 4 as Alternatives A, B, and D.

Development of Alternative E and retention of Alternative G (no action) would not change the current configuration of pedestrian access along Harbor Drive or Pacific Highway, and would, therefore, have no effect.

Effect on Perpendicular Waterfront Access

Alternative A, with the 1.9-acre open space proposed at the foot of Broadway, and Alternative F, with the 3.5-acre open space at the foot of Broadway, would be the most beneficial alternatives with regard to perpendicular access to the waterfront. Buildings would be set back 75 feet from the property line to provide a 25-foot-wide sidewalk along Broadway with Alternative A, creating sufficient space for street furniture, substantial landscaping, and high levels of pedestrian use. With Alternative F, no development would occur on Block 1, and Broadway would be a T-intersection at Pacific Highway, removing all vehicular movement through this area. Provision of a park-like setting at the foot of Broadway, under either alternative, could draw pedestrians to the area. In addition, urban design guidelines proposed for these alternatives would provide for ground-level treatments that encourage pedestrian activity.

E, F, and G Streets, which currently do not provide public access through the site, are proposed to be extended through the site and developed with 17 1/2- to 30-foot-wide sidewalks along each side of the street. North-facing street walls along E, F, and G Streets would be stepped back to

maximize solar access to the sidewalk along the north side of each street. This would allow for increased pedestrian flow between the Centre City and the waterfront. Direct pedestrian access between Marina residential development and the G Street Mole would be provided along G Street. Harbor Drive, which also provides perpendicular access to the waterfront, would be improved with broad sidewalks designed to improve pedestrian flow to the waterfront.

Alternatives B and D would provide the same pedestrian improvements as Alternatives A and F, except that instead of a large open space, a plaza would be developed at the foot of Broadway. Although not likely to draw the same amount of public use as Alternatives A or F, these alternatives would result in beneficial effects to perpendicular access to the waterfront along Broadway; E, F, and G Streets; and Harbor Drive.

With Alternative C, access along Broadway would remain unchanged from its current condition. Access along E, F, and G Streets and Harbor Drive would be improved as described with Alternative A, so a beneficial effect to pedestrian access along these streets would result.

Alternative E, which also would retain Buildings 1 and 12, and would provide surface parking along Blocks 3 and 4, would not provide the same level of benefit to public access as Alternatives A through D because pedestrian-oriented improvements would not be provided. Nevertheless, pedestrian access through the site would be provided, albeit through surface parking lots on Blocks 3 and 4, so an overall benefit to pedestrian access (compared with existing conditions) would result.

Pedestrian access associated with Alternative G would remain unchanged from current conditions. E, F, and G Streets would remain closed to pedestrian access. There would be no beneficial or adverse effects to pedestrian access with this alternative.

MITIGATION MEASURES

No significant adverse environmental impacts would result from implementation of any of the alternatives; therefore, no mitigation measures are proposed.

4.1.2 FEDERAL PLANS AND POLICIES

AFFECTED ENVIRONMENT

The project site is located on Federal property. Federal property is not subject to local land use regulations; consequently, local land use plans and regulations in the project area do not designate land uses for the Navy Broadway Complex. Nevertheless, the site is located in an active, urban area, and surrounding land use designations and policies for surrounding property play a major role in defining compatibility between the proposed action and surrounding uses. In consideration of this, the full range of Federal, state, and local plans for the site and surrounding areas are discussed in Sections 4.1.2 through 4.1.4.

Federal Aviation Regulations

The Federal Aviation Administration (FAA) identifies compatibility zones around airport runways in which land use restrictions should be considered to protect the public's safety. These include Clear Zones and Part 77 Imaginary Surfaces. Clear Zones are fan-shaped (trapezoidal) areas extending outward from a runway. Imaginary surfaces are angled surfaces projecting outward and

upward from an airport. The farther away a property is from an airport, higher structures are permitted before the imaginary surface is penetrated. Part 77 of the Federal Aviation Regulations defines airspace around civil airports that should be free of obstructions to air navigation during critical flight phases. Ideally, no obstructions should penetrate the imaginary surfaces surrounding an airfield, as defined in Part 77. The imaginary surfaces are determined by runway length and type of navigational approach instrumentation available. Section 4.11, Public Health and Safety, provides a detailed discussion of Part 77 requirements for development of the site. The site is affected by imaginary surfaces related to operations at both Lindbergh Field to the north and North Island Naval Air Station to the west.

Part 77 requires the submission of a Notice of Proposed Construction or Alteration (FAA Form 7460-1) for any structure that might potentially penetrate one of the imaginary surfaces. The submission of this form initiates an airspace study by the FAA of the structure's potential impact on air navigation. The FAA makes one of the following determinations regarding the proposed structures:

- Does not require a notice to the FAA.
- Is not identified as an obstruction under any standard of Federal Aviation Regulations Part 77 and would not be a hazard to air navigation.
- Is identified as an obstruction under the standards of Federal Aviation Regulations Part 77 but would not be a hazard to air navigation.
- Is identified as an obstruction under the standards of Federal Aviation Regulations Part 77 and is determined to be a hazard to air navigation.

Additionally, the FAA may recommend structure marking and lighting for any of these cases.

Coastal Zone Management Act Consistency

The California Coastal Commission (CCC), established in 1972, is responsible for regulating development and land uses within the state's coastal zone. The project site is located between the coastal zone boundary, as established by state legislation and the California Coastal Plan and the waterfront. However, the Federal Coastal Zone Management Act of 1972 (CZMA) provides that "lands, the use of which is by law subject solely to discretion of or which is held in trust by the Federal Government" are excluded from state regulatory authority over the coastal zone.⁴ To ensure that Federal actions consider state coastal policies, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, has established regulations (15 CFR 930) for the consistency of Federal activities with approved state coastal management programs, in accordance with Section 307(c)(1) of the CZMA. Section 307(c)(1) states: "each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs." A Federal activity is defined as any function, including the planning and/or construction of facilities, that is performed on behalf of a Federal agency in the exercise of its statutory responsibilities (15 CFR 930.30).

A Coastal Consistency Determination (CCD) is made by the Navy, with review and comment by the CCC. For the Navy Broadway Complex Project, the CCD is scheduled to be submitted for CCC review and comment following public circulation of this environmental document. The CCD

evaluates the proposed project's consistency with the applicable policies of the California Coastal Act of 1976 (Division 20 of the State Public Resources Code, Section 30000 et. seq.), which is the approved state coastal management program.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Compliance With Federal Aviation Regulations

A detailed discussion of the compliance of each alternative with Federal Aviation Regulations is presented in Section 4.11.2, page 4-221.

Compliance With the Coastal Zone Management Act (CZMA)

A discussion of the proposed projects' compliance with CZMA is presented in Section 4.1.3 (page 4-18), State of California Plans and Policies.

MITIGATION MEASURES

No significant environmental impacts are identified herein; therefore, no mitigation measures are necessary.

4.1.3 STATE OF CALIFORNIA PLANS AND POLICIES

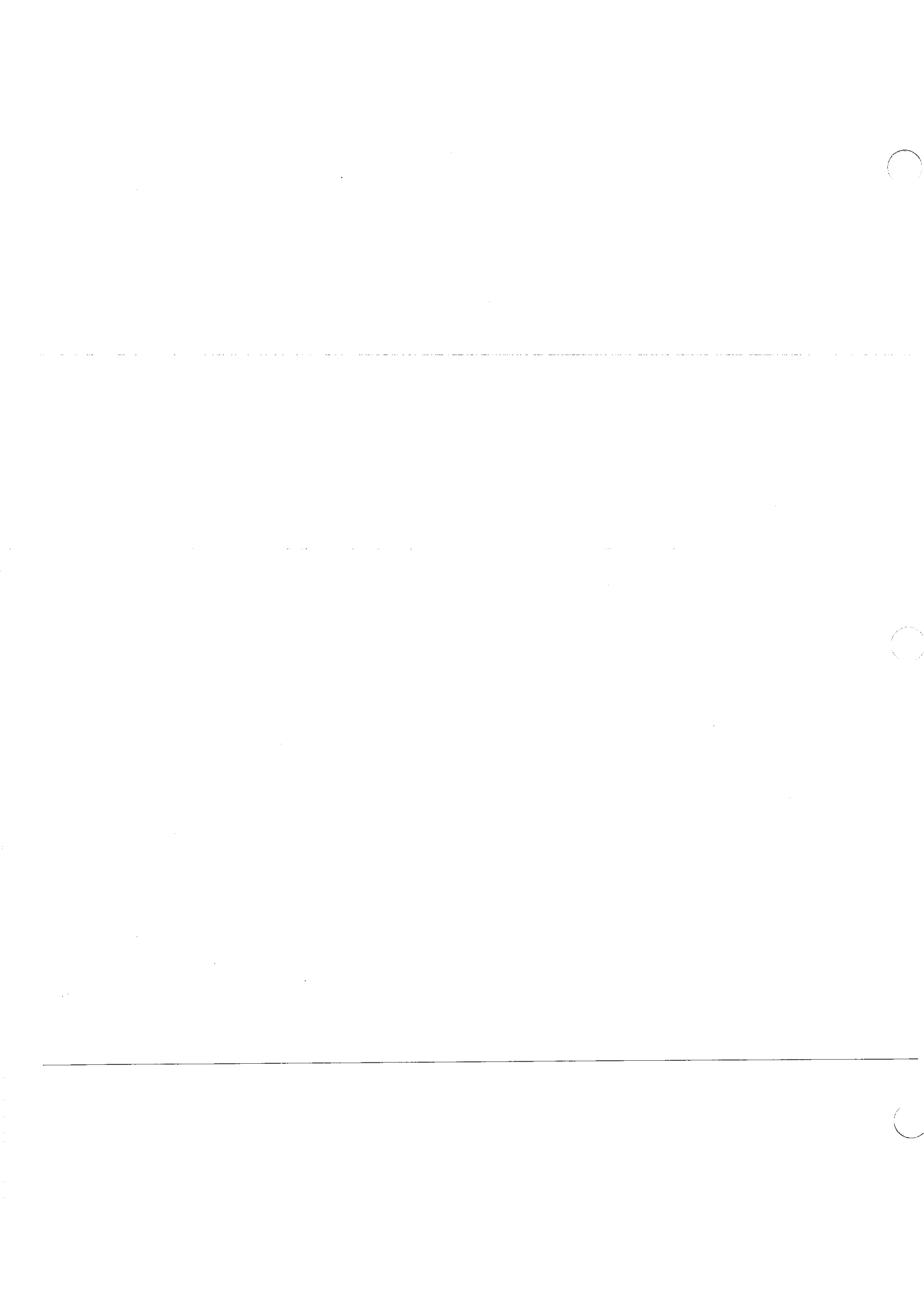
AFFECTED ENVIRONMENT

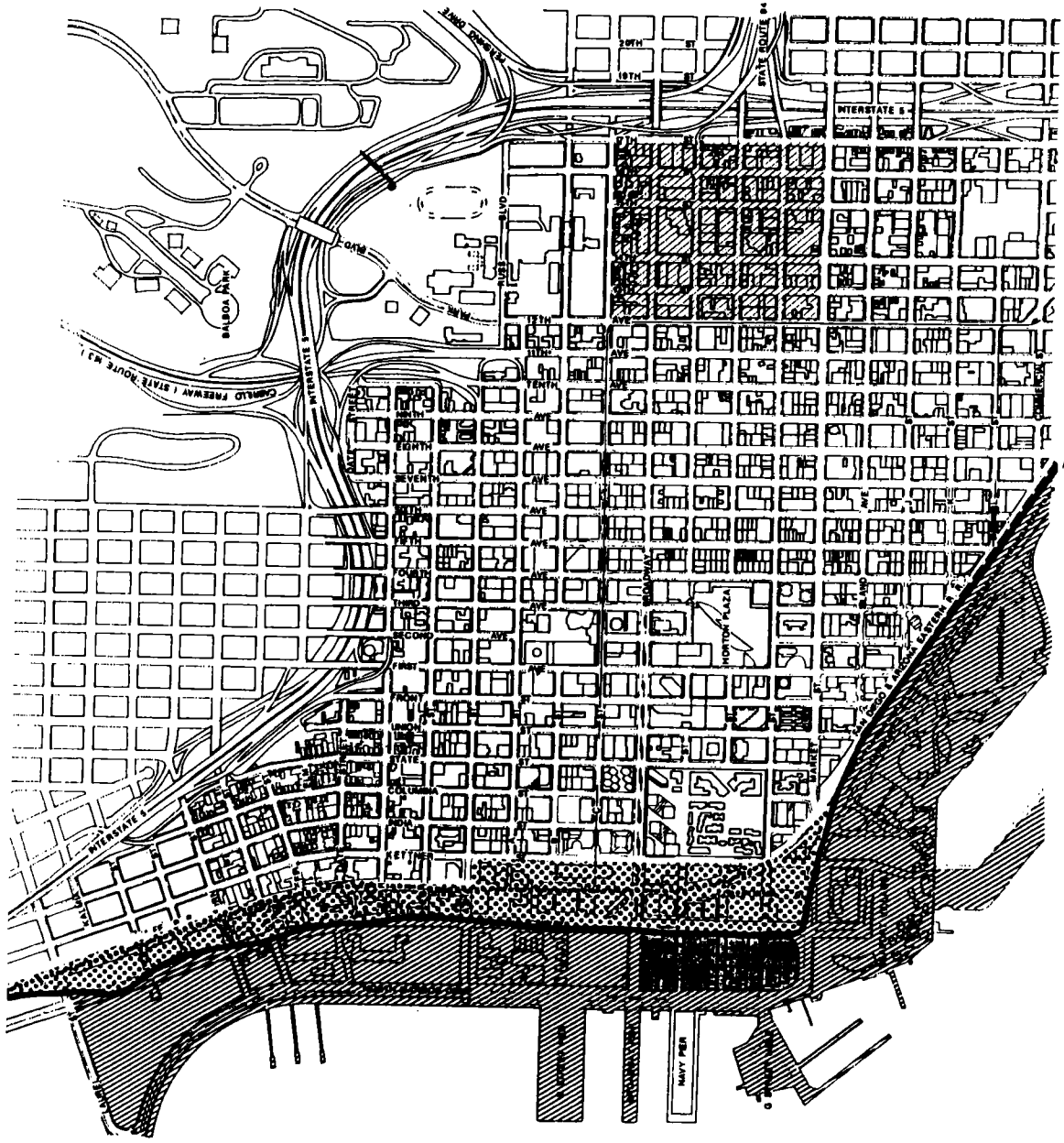
California Coastal Act Policies

Chapter 3 of the California Coastal Act provides planning and management policies for development within the coastal zone (Public Resources Code Section 30200 et. seq.). The key policies relevant to the project site include maximizing public access, emphasizing visitor-serving commercial uses, protecting coastal resources, and locating new development. Consistency with the CZMA is based on the project's relationship to policies in Chapter 3 of the act.

The California Coastal Act requires that each nonfederal jurisdiction located along the coastline prepare a Local Coastal Plan (LCP) that provides guidelines and policies for development of properties within the coastal zone. The LCP serves as the master plan for development within the coastal zone, and includes land use maps depicting allowable land uses. An LCP and its implementation program must be reviewed and certified by the California Coastal Commission (CCC) prior to delegating coastal permit authority to the local government. Prior to LCP certification, the authority to grant coastal development permits remains with the CCC.

The project site is surrounded by coastal zone jurisdiction of the San Diego Unified Port District and the City of San Diego (see Figure 4-6). The Port District has coastal jurisdiction along the San Diego bayfront in the vicinity of the project site. Its boundaries run approximately along the western edge of Pacific Highway at the project site, coincident with the historic mean high tide line. The City of San Diego has coastal jurisdiction between the historic mean high tide line and the inland boundary of the coastal zone, which is located along Kettner Boulevard near the project site.

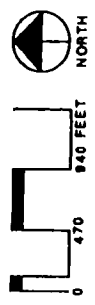




- Legend**
- Mean High Tide Line
 - SDUPPO Coastal Jurisdiction
 - City of San Diego Coastal Jurisdiction
 - Project Site (Federal Property Excluded from the State and Local Coastal Jurisdiction)
 - Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 4-6

Coastal Zone Jurisdiction



SOURCE: PORT MASTER PLAN REVISED (1987)
CITY OF SAN DIEGO (1989)

Navy Broadway Complex Project

San Diego Unified Port District Coastal Jurisdiction

The LCP for the Port District's jurisdiction is contained within the Port Master Plan that was certified in January 1981 by the CCC. The Centre City/Embarcadero Plan, adopted in May 1976 as a component of the Port Master Plan, focuses on San Diego's central waterfront. The Port District has an approved LCP and implementation program, therefore, projects within the area covered by the plan are subject to review by the CCC only if development extends into the bay itself or if the development is not consistent with the LCP.

The Port District does not designate any land uses or land use policies for the Navy Broadway Complex, because it is under Federal control. The Port's Centre City/Embarcadero Plan designates land uses for the areas immediately north, south, and west of the site, as shown on Figure 4-7, including commercial recreation (i.e., hotels, tourist-oriented uses) to the north and northwest; marine terminal and park plaza to the northwest and west; commercial fishing, commercial recreation, and park plaza to the west and southwest; and specialty shopping to the south.

The Embarcadero Plan is subdivided into four zones designated with specific land uses and design themes. The Navy Broadway Complex site is not located within any of these zones, but is between the civic zone to the north, which is the "zone of highest activity," and the fish harbor to the south, which is a tourist and commercial fishing-related zone.⁵

City of San Diego Coastal Jurisdiction

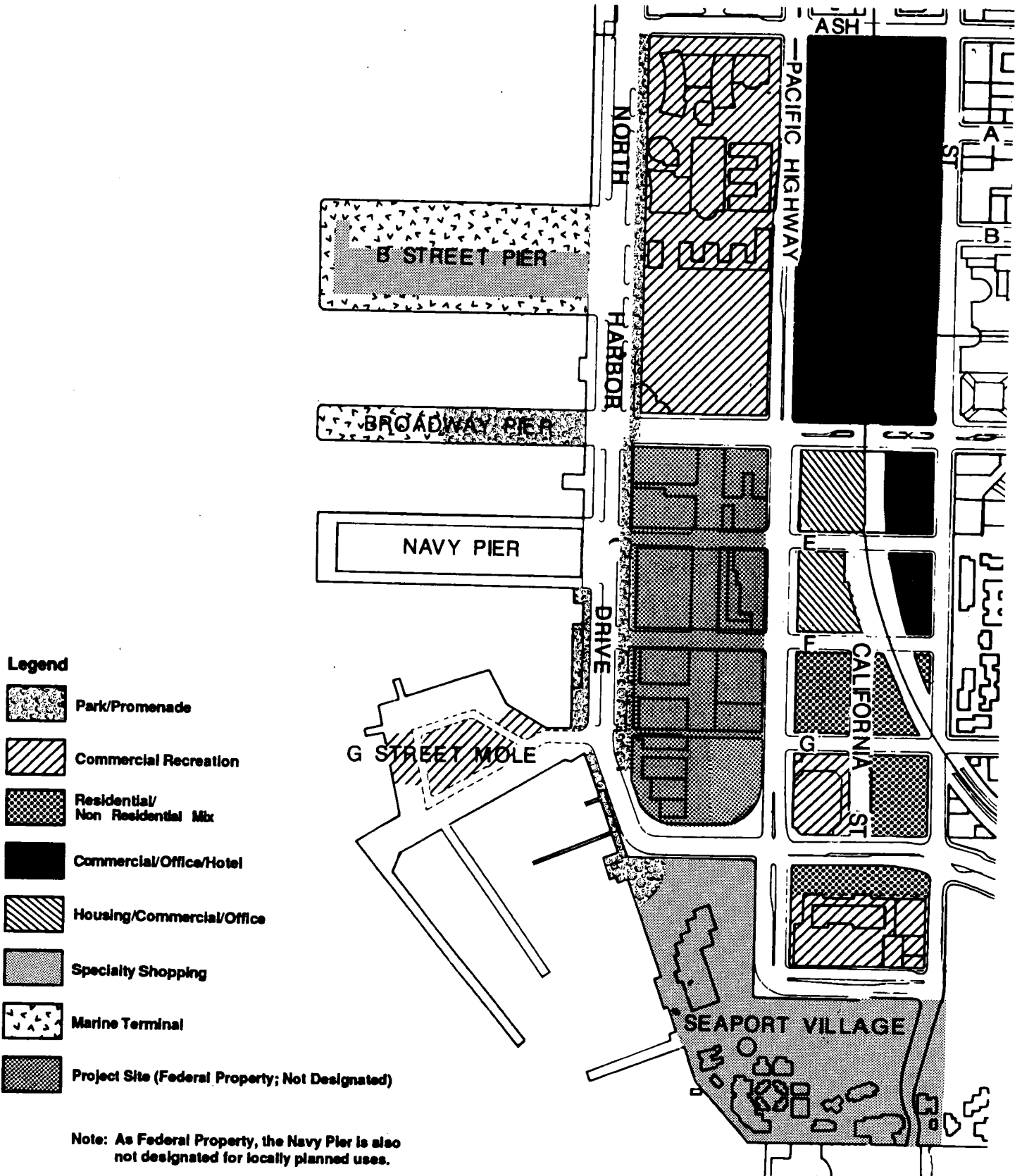
In the project vicinity, the City of San Diego's LCP covers a strip of land between the historic mean high tide line along Pacific Highway and the coastal zone boundary at Kettner Boulevard (Figure 4-6, page 4-19). The LCP, which was adopted by the CCC on January 13, 1988, defers land use designations in the project vicinity to the Centre City Plan and the other City planning documents (i.e., the Columbia and Marina redevelopment plans) that address land uses within the coastal zone.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

A summary of coastal consistency issues related to public access, coastal development, and visual resource policies is presented herein. The full discussion of the Navy's Coastal Consistency Determination (CCD) is being submitted for review by the California Coastal Commission (CCC) following the public circulation period of this environmental document.

Public Access Policies

The development of any of the mixed-use alternatives (Alternatives A, B, C, D, and F) would substantially improve public access to the waterfront. The five alternatives that contain both Navy and private development (Alternatives A, B, C, D, and F) would open public access to the waterfront from inland blocks where none now exists on E, F, and G Streets. The resulting improvement of public access would greatly enhance the pedestrian and vehicular circulation at the waterfront, especially at G Street where a direct connection to the G Street Mole would be provided. Design guidelines for these alternatives include broad pedestrian ways through the project with 35 feet in width allocated on E and F Streets and 60 feet on G Street. These



Surrounding Land Use Designations Navy Broadway Complex Project

Figure 4-7



features maximize perpendicular access to the waterfront, consistent with the public access policies of the California Coastal Act.

Alternative E represents minimal new development to accommodate the Navy's office objective, and does not enable construction of the Navy facilities at a reduced cost. As a result, the feasibility of providing public access is diminished. Despite this, the alternative would open E Street to public vehicle and pedestrian access, which would improve the current situation. Also, informal pedestrian access would be possible across the surface parking area on Blocks 3 and 4. This alternative would maximize public access to the extent feasible and would be consistent with the state coastal policies.

Alternative G (no action) would perpetuate the current lack of perpendicular waterfront access through the project site.

Alternatives A, B, and F would provide public open space at the foot of Broadway, which would also substantially enhance waterfront access and public use. Alternative A includes a full waterfront block plus approximately one-third of an adjacent inland block (1.9 acres total) of Navy land as open space. Alternatives B and D include a 0.5-acre open space area at the corner of Broadway and Harbor Drive. Open space for Alternative F includes the waterfront block mentioned in Alternative A plus the adjacent inland block (3.5 acres). Provision of waterfront open space is consistent with public access policies, and a substantial public benefit.

None of the alternatives alter the existing space available for lateral access along the waterfront next to the project site (i.e., Harbor Drive and the promenade). The mixed-use alternatives (A, B, C, D, and F) provide an important benefit with a mid-block pedestrian-way parallel to Harbor Drive.

Alternatives A, B, C, D, E, and F would include sufficient onsite parking to accommodate project-generated traffic in light of the project's location in a transit-served, downtown area (see Section 4.2, page 4-60). The proximity of the project to the planned Bayside Line of the light rail transit system, the AMTRAK station, and existing bus lines provides substantial transit access for all of the alternatives. In addition, off-peak project times (evenings, weekends) generally coincide with times that waterfront visitation is highest. The project would, therefore, provide additional parking to the waterfront when demand for public access to the waterfront is highest. The transit availability and adequate provision of parking are consistent with public access policies.

Coastal Development Policies

The uses proposed for Alternatives A, B, C, D, and F consist of Navy (maritime related) activities, visitor-serving development (e.g., hotel or supporting retail uses), and commercial development that is necessary to ensure the overall project's economic feasibility. Alternative E, which includes only Navy offices, is a maritime-related activity. The project site is located within an urban area on an already developed site, so it does not adversely affect sensitive, natural coastal, or marine resources. Consequently, all alternatives that include new development, including Alternative E, would be consistent with Coastal Act policies regarding the location and type of new development in the coastal zone.

The office, hotel, and retail uses proposed for Alternatives A, B, C, D, and F would be compatible with land uses adjacent to the project site, as discussed previously. Adjacent planned uses in the SDUPD and City of San Diego LCPs consist of similar commercial and visitor-serving uses.

Visual Resource Policies

By opening E, F, and G Streets through the project site, Alternatives A, B, C, D, and F would increase the visibility of the bay from inland vantage points. Coastal views along the waterfront would remain unchanged, because new structures would not encroach into the Harbor Drive and promenade corridor. The design guidelines for the project are written to reinforce the urban design objectives of the local plans for adjacent property, so Alternatives A, B, C, D, and F would be compatible with the planned urban design themes for the waterfront. Therefore, these alternatives would be consistent with Coastal Act visual resource policies.

Alternative E would be a low-intensity development with buildings on the northern three blocks. Surface parking would be located on the east side of these blocks and on the entirety of the southern block. Visual access to the water from inland points would be substantially increased due primarily to the removal of existing buildings obstructing views on the southern blocks. Consequently, this alternative would also be consistent with coastal visual resource policies.

Alternative G would retain current view obstructions from inland vantage points, contrary to the objectives of the Coastal Act policies. No change from existing conditions would result.

MITIGATION MEASURES

No mitigation measures are necessary, because the proposed new development alternatives are consistent with coastal policies.

4.1.4 REGIONAL AGENCY PLANS AND POLICIES

AFFECTED ENVIRONMENT

San Diego Association of Governments Policies

The San Diego Association of Governments (SANDAG) is a regional agency established to oversee and plan for regional growth. SANDAG develops and publishes regional growth projections and participates in the development of such regional programs as air quality management planning. SANDAG also participates in and administers multi-agency studies. SANDAG commissioned a study entitled "Central Bayfront/Broadway Complex Development Strategies, Final Report" (1988), which focused on the planning and development processes necessary for managing growth that is forecast to occur in the "Central Bayfront" area, which covers 270 acres, including the Navy Broadway Complex. The study was sponsored by the Broadway Complex Coordinating Group (BCCG), a group comprised of the Navy and other Central Bayfront property owners, community groups, local agencies, and local civic and business leaders. The study was prepared in recognition of a perceived lack of coordination between jurisdictions, landowners, and interest groups regarding future development in the Central Bayfront. The study evaluates opportunities and constraints for development of the Central Bayfront. As a result of this study, the BCCG prepared and adopted in 1989 the Central Bayfront Design Principles (1989).

The Central Bayfront Design Principles is a comprehensive set of principles to guide the design of future development in the Central Bayfront. The Central Bayfront Design Principles was adopted by the BCCG and proposed for consideration and ultimate adoption by the Centre City

Planning Committee (CCPC), the City of San Diego, the U.S. Navy, the County of San Diego, Centre City Development Corporation (CCDC), and the San Diego Unified Port District.

The following is a summary of design guidelines endorsed in the Central Bayfront Design Principles:

- Development should make a transition in scale and intensity, stepping down from the downtown core to the waterfront.
- Development at the waterfront should be spaciouly sited to provide physical and visual access to the water's edge.
- Parking should be provided in accordance with City-adopted parking ratios, and all parking should be in encapsulated structures incorporated into building design, with a minimum of two below-ground levels before any above-ground levels are constructed.
- A wide mix of land uses and activities should be encouraged along the bayfront.
- Development should include publicly oriented facilities that serve the San Diego community and visitors to the City.
- All development should incorporate the amenity of the waterfront in its design and be planned and sited to complement the design premise of development in an urban park-like environment.

Additional guidelines specific to the Navy Broadway Complex were also developed. A floor area ratio (FAR) of 7.0 was adopted for new development on Block 1, a 6.5 FAR was adopted on Block 2, and a 5.5 FAR was adopted on Blocks 3 and 4. The guidelines provide for a distribution of FAR between blocks within a single ownership to achieve open space and massing objectives. An overall FAR of 6.13 would apply to the entire site. A "significant civic place" is encouraged at Broadway and Harbor Drive to include open space, landscaping, and public assembly areas. Adjacent to the civic place would be a museum and other cultural uses.

The Central Bayfront Design Principles was adopted and approved for distribution to participating agencies on September 22, 1989, by the BCCG and adopted and approved by the Centre City Planning Committee (CCPC) on November 9, 1989.

A discussion of SANDAG growth projections is provided in Section 4.5, Socioeconomics (page 4-129). Air quality planning is discussed in Section 4.8, Air Quality (page 4-154).

Metropolitan Transit Development Board

Formation of the Metropolitan Transit Development Board (MTDB) was authorized in 1975 by the passage of California Senate Bill 101. The MTDB consists of 15 appointed individuals from the San Diego City Council, city councils of several other cities within the San Diego region, and the County of San Diego Board of Supervisors, plus one individual representing the State of California. The MTDB jurisdiction covers approximately 570 square miles of southwestern San Diego County. The MTDB maintains several subsidiary corporations, including the San Diego Trolley, Inc., which provides light rail transit (LRT) service; the San Diego Transit Corporation

(SDTC), the county's major bus operator; and San Diego & Arizona Eastern Railway Company (SD&AE), a railroad system covering over 108 miles of track right-of-way.

Existing major transit facilities within the Centre City area are described in Section 4.2 (page 4-35), Transportation/Circulation, and are shown on Figure 4-11, page 4-41. The nearest existing LRT line to the Navy Broadway Complex is the terminus of the South line on C Street, near the Santa Fe Station northeast of the site. The nearest planned LRT line is the Bayfront line, which is planned to be aligned within the existing Santa Fe right-of-way, one block east of the site.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Conformance With SANDAG Policies

Alternatives A and F would be in substantial compliance with the guidelines expressed in the Central Bayfront Design Principles (1989). Each alternative would be designed to:

- Step down to the waterfront.
- Open up and provide physical and visual access to the waterfront.
- Have a minimum of two below-grade parking structures before any parking is provided above grade (to the extent engineering is feasible).
- Provide a wide mix of land uses.
- Include publicly oriented facilities.
- Include wide sidewalks and an open space at the foot of Broadway to create a park-like environment.

The prescribed FAR is exceeded on Block 2, but the overall FAR for these alternatives (5.45 for Alternative A and 5.70 for Alternative F) is well within the 6.13 FAR established for the entire site. As previously described, the guidelines allow the distribution of FAR across the entire site to achieve open space and massing objectives. Both of these alternatives would allow for the creation of a significant civic area at Broadway and Harbor Drive, with Alternative A providing 1.9 acres and Alternative F providing 3.5 acres of open space on the Navy Broadway Complex site. If combined with adjacent properties owned by the City of San Diego and the Port District, up to 10 acres of open space could be created. Both of these alternatives include a museum adjacent to the open space area, which is consistent with the guidelines. The only inconsistency between these alternatives and guidelines is the amount of onsite parking. The draft CCPC plan recommends a ratio of one space per 1,000 SF of office and retail space. This is below the historic demand for parking spaces in the downtown core, but, with a combination of traffic/parking control measures (see Section 4.2, page 4-60), this lower level of parking is intended to reduce traffic in the Centre City core. A ratio of 1.23 spaces per 1,000 SF of Navy office is proposed by the Navy, 0.23 space in excess of that proposed by the City. However, the additional 0.23 space per 1,000 SF is to be used for Navy fleet vehicle storage. These vehicles are not generally used during the peak hour, so this addition of space would not result in any additional environmental impacts. Proposed parking for retail is four spaces per 1,000 SF, but given that only 25,000 SF of retail is proposed, proposed parking would exceed City-recommended

parking by only 75 vehicles, which would not be substantial. The impact of not meeting this guideline is, therefore, not significant. The substantial compliance with the guidelines expressed in the Central Bayfront Design Principles would be a beneficial change over the existing conditions at the site.

None of the other alternatives meet all the guidelines expressed in the design principles. Alternative B would not provide the same opportunity as Alternatives A and F to create a significant civic place at Broadway and Harbor Drive. It would provide only a 0.5-acre plaza in this area. Alternative D is the same as Alternative B, but does not include a museum. There would be an adverse impact from these alternatives, as they would inhibit implementation of a locally adopted plan. Nevertheless, the impact would not be significant as there would still be the opportunity to develop an open space at Broadway and Harbor Drive, although it would be on a smaller scale than envisioned, and all other basic guidelines in the design principles would be followed.

Alternatives C and E provide no open space at the foot of Broadway and no museum. This would also be an adverse impact on the ability to implement a locally adopted plan. In the case of these alternatives, a significant element of the plan would not be implemented--the provision of an open space at Broadway and Harbor Drive. Therefore, the impact would be considered significant.

The current onsite conditions would be retained with Alternative G, so this alternative would not be consistent with the design principles. This would not be a significant impact, because there would be no change in existing conditions.

Conformance With Metropolitan Transit Development Board Policies

The proposed alternatives' use of transit facilities operated by the MTDB is discussed in Section 4.2.2, page 4-64.

MITIGATION MEASURES

No environmental impacts would result from the proposed alternatives; therefore, no mitigation measures are necessary.

4.1.5 CITY OF SAN DIEGO PLANS AND POLICIES

AFFECTED ENVIRONMENT

General land use plans and policies applicable to the project vicinity are contained in the City of San Diego Progress Guide and General Plan and the Centre City Community Plan. The 1976 Centre City Community Plan is currently being updated by the Centre City Planning Committee (CCPC), a 26-member volunteer committee comprised of civic and business leaders appointed by the mayor and City Council. The committee includes a representative of the Navy.

The Centre City Development Corporation (CCDC), the City's redevelopment agency for downtown, has prepared redevelopment and urban design documents. CCDC planning documents that provide guidelines for development in downtown San Diego and along the bayfront include the Urban Design Program for Centre City, the Marina Redevelopment Plan, and the Columbia Redevelopment Plan.

City of San Diego Progress Guide and General Plan

The City of San Diego Progress Guide and General Plan, adopted in 1979, divides the City into 44 community planning areas. The project site is located within the boundaries of the Centre City community planning area. Of all the planning documents that designate land uses in the project vicinity, the City's Progress Guide is the most general. Community plans contain more specific land use goals and policies for each community. The Progress Guide and General Plan map (updated in 1985) designates the project site for "mixed land uses." Areas surrounding the project site to the north, south, east, and west are also designated for "mixed land uses." The area farther south of the project site and Seaport Village are designated "resource based parks/park and recreation."⁶

Centre City Community Plan

The Centre City Community Plan, adopted by the City Council in 1976, provides policies for development in downtown San Diego. The plan is currently being updated. An objective of the plan is to "maintain and strengthen the role of Centre City as the prime cultural, administrative, economic, and governmental center of the entire region. . . ." ⁷ Policies aimed at achieving this objective include promoting growth and intensifying land uses in Centre City, coordinating development with other agencies with jurisdiction in Centre City (e.g., Port District), implementing urban design guidelines, and maximizing urban open space.

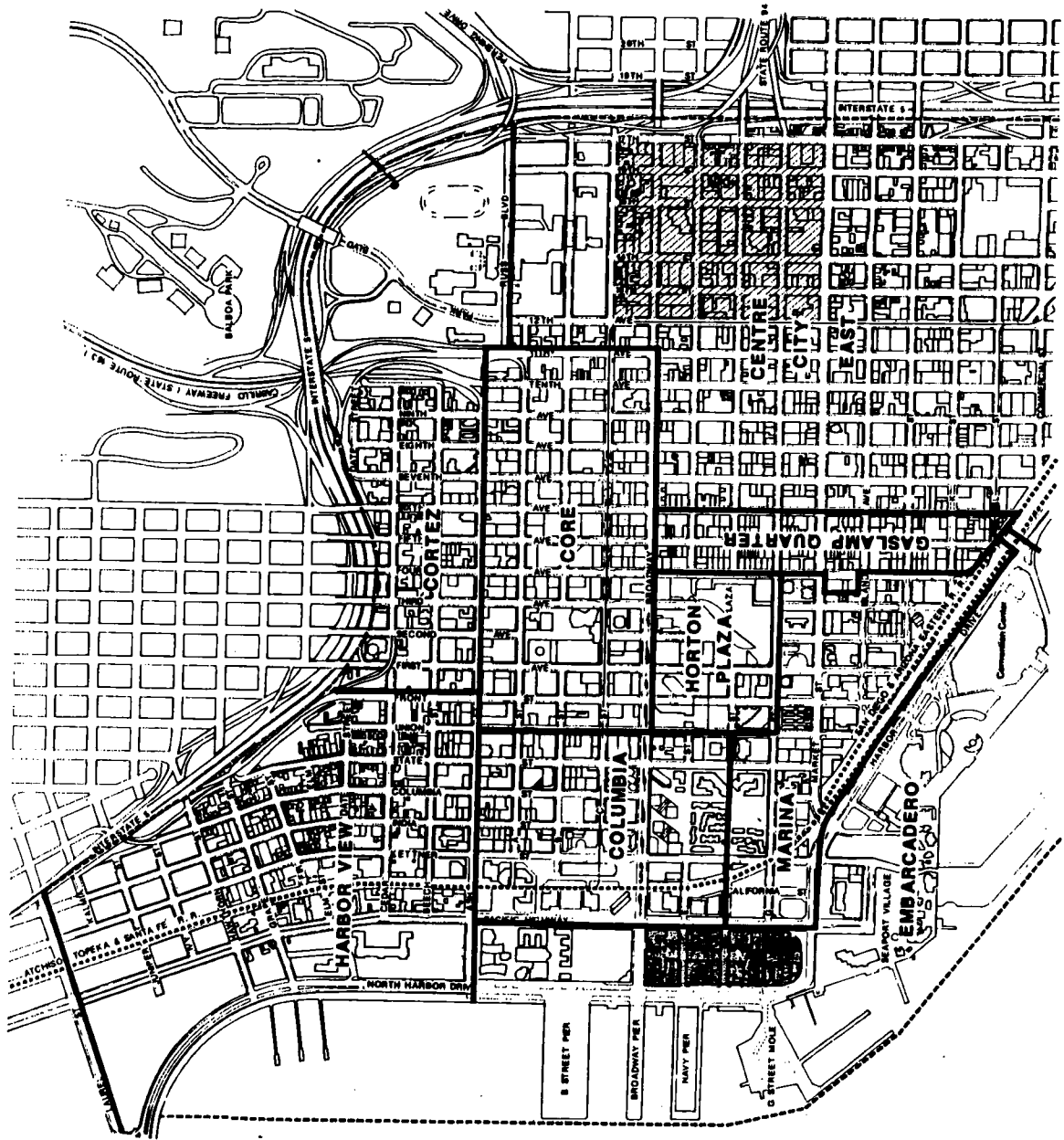
The community plan recognizes the importance of integrating waterfront amenities and balancing land uses in the Embarcadero area, although the Embarcadero is primarily under the jurisdiction and land use control of the Port District. Major land holdings in the Central Bayfront area of the Embarcadero are under the ownership of the County of San Diego and the Navy, as well as the Port District. The project site is located in the Embarcadero area within the Central Bayfront.

The Centre City Community Plan divides Centre City into seven subareas. The project site is not under the jurisdiction provided by the plan, but is surrounded by the boundaries of the Columbia Subarea north of F Street and the Marina Subarea south of F Street. Figure 4-8 depicts the planning boundary for these subareas.

Columbia Subarea

The goal of future development within the Columbia Subarea is "to intensify development in this Subarea, maximize its location adjoining the Waterfront to create a strong linkage with the present Business Core."⁸ The plan proposes a full range of land uses in this area, including commercial retail, specialty shops, office, commercial recreation, residential, and public and semi-public uses, including government offices and convention facilities. Since the preparation of the Redevelopment Plan, the site for the proposed Convention Center has been relocated to Harbor Drive, between Market Street and Fifth Street.

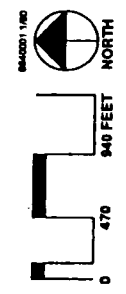
Although outside of its jurisdiction, the Center City Community Plan's Columbia Subarea includes land use recommendations for the Navy Broadway Complex. The plan views the site as two distinct areas: Blocks 1 and 2, upon which the most visually evident uses are located, and Blocks 3 and 4, with "low-rise structures, which tend to wall off the waterfront."⁹ The uses on Blocks 1 and 2 are described in the community plan as areas to consolidate Navy uses, while including a plaza along Broadway. The plan suggests that Blocks 3 and 4 are too valuable for the Navy



- Legend**
- Subarea Boundaries
 - Center City Community Plan Boundary
 - Project Site
 - Location of possible Navy Office for Alternative D (with Encompass 2 Blocks)

Figure 4-3

Downtown San Diego
City Planning Boundaries



Navy Broadway Complex Project



uses they support, and that these uses should be moved to existing Navy facilities located throughout the City of San Diego.

The boundaries of the Columbia Subarea coincide with the boundaries of the Columbia Redevelopment Project (with the exclusion of the Embarcadero area). The redevelopment project is subsequently discussed.

Marina Subarea

The goal for future development of the Marina Subarea as identified in the Centre City Community Plan is "to create a new residential community on privately owned lands, oriented to San Diego Bay and the Horton Plaza Redevelopment Project."¹⁰ The plan recommends the creation of a new residential neighborhood and waterfront recreation area. Preferably, new housing would "vary from dwellings over ground-floor uses to garden and high-rise apartments sited in a spacious park-like environment." In addition, the plan encourages a mixed-use element in the Marina Subarea, where townhouse and high-rise residential buildings would contain commercial retail, services, and office uses.

The boundaries of the Marina Subarea coincide with the Marina Redevelopment Project boundaries.

Concept Plan

As an interim step in the Centre City Community Plan update process, a Concept Plan (1989) has been prepared by the Centre City Planning Committee (CCPC) to provide a general framework for the updated community plan. This is not an adopted plan, and is highly dynamic at this point. The Centre City Concept Plan divides the Centre City into 12 geographic areas. The project site is within the area designated as the "Waterfront." The boundaries of the waterfront roughly coincide with the Embarcadero (Figure 4-8, page 4-28). The emphasis for development and use of the waterfront is for "public access, open space, views, public/tourist oriented activities along the water," and "mixed-use/office in adjacent areas."¹¹ The Navy is participating with the CCPC in the preparation of the plan.

The offsite location for Alternative D would be in either the East Broadway Anchor (Centre City East) or the easterly area of the Central Core of the Concept Plan. The East Broadway Anchor replaces in name the northerly area of the college district. The East Broadway Anchor is seen primarily as a major educational/institutional use area, with FARs dictated by use, and the Central Core is seen as a high density commercial/office area, with FARs up to 10.

Centre City Development Corporation (CCDC) Planning Documents

The CCDC is an advisory body created in 1975 by the Redevelopment Agency of the City of San Diego. The advisory body is under contract with the agency and the City of San Diego. The CCDC was organized to plan and implement redevelopment plans and related activities in the Centre City of the City of San Diego. CCDC policy is established by a seven-member board that is appointed by the City Council. The primary objective of the CCDC is to eliminate blight, and to provide for orderly development that includes residential, commercial, and public uses through the redevelopment process. The CCDC currently administers the redevelopment of approximately 325 acres in the Marina, Columbia, Horton Plaza, and Gaslamp Quarter subareas. It is currently anticipated that the CCDC may administer an additional 400 acres in the Centre City East and

Barrio Logan subareas, and may eventually administer redevelopment projects in portions of the Core, Cortez Hill, and Harborview.

Both the Columbia and the Marina redevelopment projects extend through the project site and out to the Centre City Community Plan boundary into San Diego Bay. Blocks 1 and 2 of the project site, north of the extension of F Street, are within the Columbia project area, and Blocks 3 and 4, south of the extension of F Street, are within the Marina project area. However, the CCDC has no land use jurisdiction within the Embarcadero area, where the project site is located. Nevertheless, new taxable development that is located within the Columbia and Marina redevelopment subareas, regardless of whether it is within the Embarcadero area, provides property tax increment funds to the City of San Diego Redevelopment Agency.

Redevelopment Plans

The Columbia Redevelopment Project Land Use Map designates mixed land uses to the east and northeast of the site, north of F Street, as depicted on Figure 4-7, page 4-21. Uses include office, commercial, hotel, and housing. The Marina Redevelopment Project Land Use Map designates residential, mixed uses, and commercial recreation (i.e., hotel) uses east of the site and south of F Street.

Urban Design Program

The Centre City Urban Design Program (1983) was prepared by the CCDC as an element of the Centre City Community Plan to guide development designs in the Marina and Columbia redevelopment project subareas. The project site is located within the Embarcadero Urban Design Area. The Embarcadero is described as "the place where San Diego meets the sea" and where pedestrian opportunities and visual access should be maximized.

The urban design program describes guidelines that are relevant to potential new development on the Navy Broadway Complex site, including the following:

- Pedestrian-oriented streets, walkways, and plazas are to be located along the roadways that border the project site (i.e., Harbor Drive, Broadway, and Pacific Highway), as depicted on Figure 4-5, page 4-11. A public park/green space is shown along Harbor Drive between the Navy Pier on the north and G Street on the south. The Port District has recently completed the pedestrian-oriented walkways and public park/green space along Harbor Drive as a segment of a proposed waterfront promenade.
- Market Street and Broadway from Pacific Highway east, and Pacific Highway throughout the project area and adjacent to the site, are designated as "Gateway Streets," because they link the most intensively developed areas of the Centre City with the waterfront. Gateway streets are intended to serve as the major vehicular thoroughfares and should have visually attractive adjacent development.
- Broadway is depicted as a "Central Area Activity Corridor" throughout the project area and adjacent to the site. Urban forms that complement this designation are intended to create an "intensely urban atmosphere...by using hard surface materials, introducing formal landscaping and lining the streets with retail and entertainment activities."¹²

The design program emphasizes protection of significant views to the waterfront and the Cityscape in the design of new buildings.

There are a number of other guidelines for design presented in the design program, and a complete description can be found in that document. The primary mechanism for implementing the urban design program for any project is through development agreements between project applicants and the City of San Diego. The CCDC serves as the design review body for proposed developments in areas affected by the program.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

General Plan Compatibility

Alternatives A, B, C, D, and F are all compatible with the "mixed land uses" designation for the project site in the San Diego Process Guide and General Plan. Each alternative includes a mix of commercial, office, retail, and hotel uses, which are consistent with the designation. No adverse land use effects associated with General Plan compatibility would be associated with these alternatives.

A precise location for the offsite component of Alternative D has not been established, so its compatibility with any land use designations has not been determined. However, because it would be in an area generally devoted to office and institutional uses, it would probably be consistent.

Alternative E includes only office uses. This is one of the land uses included in the mixed land uses category, so would also be considered compatible. As a result, no adverse environmental effects would occur.

Alternative G, which includes industrial/warehouse land uses as well as office uses, would not be compatible with this land use designation because industrial uses are not among the uses included in the mixed land use category. Since this alternative represents no change from the existing environmental conditions and no new development would occur, no significant environmental impact would be created.

Compatibility With the 1976 Centre City Community Plan

The Columbia Subarea of the Centre City Community Plan includes policies for redevelopment of the Navy Broadway Complex. The Marina Subarea does not. Therefore, this discussion focuses on the compatibility of the proposed alternatives with the adjacent Columbia Subarea.

Alternatives A, B, D, and F would help implement the goal of creating a strong linkage between the waterfront and the downtown core, with the more intensive office uses on the easterly area of Blocks 1 and 2 adjacent to the Columbia Subarea (with its more intensive office and commercial uses) stepping down to the waterfront-oriented uses along Harbor Drive. The plaza/open space area shown in these alternatives at the foot of Broadway, the consolidation of Navy uses on Block 2 (except with Alternative D, in which most Navy uses are moved to Centre City East), and the removal of Navy uses from Blocks 3 and 4 and replacement with more waterfront-oriented uses are compatible with the stated goals of the Columbia Subarea. Since these alternatives help to implement the goals of the Columbia Subarea, the impacts associated with these alternatives would be beneficial.

The Navy office uses for Alternative D would be located in either the Business Core or the City College subareas. Office uses are designated through a large portion of these subareas, although more intensive office uses such as the offsite Navy office would generally be more compatible in the Business Core, where urban design guidelines suggest FARs of approximately 6, versus 3 to 4 in the City College area. The Business Core has extended into the College Subarea, and this is recognized by the 1989 Concept Plan.

Alternative C would be generally compatible with the Columbia Subarea, as it focuses Navy uses on Blocks 1 and 2 and replaces Navy uses on Blocks 3 and 4 with waterfront-oriented uses. This alternative would be beneficial with respect to achieving certain goals of the Columbia Subarea. However, this alternative would not be compatible with the goal of providing a plaza along Broadway, and would, therefore, conflict with a locally adopted land use goal. Although this would not be a change from existing conditions, the goals were created to guide future development of the site. Therefore, this alternative would result in a significant effect related to inconsistency with a locally adopted land use goal.

Alternative E would be similarly incompatible with the goal of providing a plaza along Broadway. This alternative would not meet other expressed goals of the Columbia Subarea since it would limit public access between the downtown core and the waterfront by locating parking lots on the eastern half of Blocks 1, 2, and 3, plus all of Block 4. Thus, this alternative would not be compatible with the stated goals of the Columbia Subarea, and would create a significant impact related to inconsistency with a locally adopted land use goal.

Alternative G would not implement any of the stated goals of the Columbia Subarea. However, because no new development is proposed with this alternative, local land use goals would not be applicable. Therefore, no impact would result from this alternative.

Redevelopment Plan Compatibility

The development of Blocks 1 and 2 under each alternative would be compatible with the Columbia Redevelopment Project, which includes "commercial/office/hotel"-designated land uses directly northeast and "housing/commercial/office"-designated land uses directly to the east of these blocks. Alternatives A, B, C, D, and F would provide a beneficial impact to land use compatibility, in that they provide a logical and complementary transition between the uses to the east and the waterfront. Although it does not provide the same type of transitional land uses, Alternative E includes office development on Blocks 1 and 2 that would be compatible with similarly designated land uses to the east.

Alternative G would neither enhance land use compatibility nor create any land use incompatibilities related to designated land uses to the east of Blocks 1 and 2. There are no current operations (which would be retained with Alternative G) that would be incompatible with designated land uses to the east and northeast of these blocks.

None of the proposed alternatives include development on Blocks 3 and 4 that would be potentially incompatible with the Marina Redevelopment Project. Alternatives A, B, C, D, and F all include hotel uses on these blocks, with Alternative F also including commercial office uses on Block 3. This would be compatible with the "residential/nonresidential mix" and the "commercial recreation" mix located to the east.

Alternative E includes low-rise Navy office development in the western area of Block 3 and surface parking in the eastern area of Block 3 and on the entire Block 4. It does not provide the same level of compatibility as the alternatives discussed above, but would not create any incompatibilities with the designated land uses to the east. Although it would not create a land use incompatibility, the Marina Redevelopment Plan specifies that all parking spaces should be in enclosed parking structures.

Alternative G would neither enhance land use compatibility, nor would it create any land use incompatibilities related to designated land uses to the east of Blocks 3 and 4. There are no current operations (which would be retained with Alternative G) that would be incompatible with designated land uses to the east of these blocks.

Compatibility With the Urban Design Program

Alternatives A, B, and F, and the onsite component of Alternative D would be compatible with the Centre City Urban Design Program. Pedestrian-oriented streets would be provided along Harbor Drive, Broadway, Pacific Highway, and Market Street. Development along the gateway streets--Market Street, Broadway, and Pacific Highway--would be designed to be visually attractive at the street level as well as at a distance. Broadway would be made into an active pedestrian area, with wide sidewalks and an open space area (Alternatives A and F) or plaza area (Alternatives B and D) at Harbor Drive. The open space at the foot of Broadway shown in Alternatives A and F could be extended to the north to create up to 10 acres of open space that is compatible with the planned pedestrian corridors and facilities, as shown in the urban design program (Figure 4-5, page 4-11).

In addition to these features, these alternatives would open E, F, and G Streets, which are currently closed through the Navy Broadway Complex, to pedestrians and vehicles and would provide wide, pedestrian-oriented walkways to encourage pedestrian flow through the site. This would be a beneficial impact of the project with regard to urban design, especially as it relates to G Street, where pedestrian access would be opened up through the site, connecting the Marina residential area to the east to the G Street Mole and the waterfront to the west.

The location of the offsite Navy office development associated with Alternative D is east of the Urban Design Program study area.

Alternative C would be generally compatible with the Urban Design Program, except that the pedestrian orientation along Broadway would not be provided, primarily because no open space would be established at the foot of Broadway. This would be a significant impact of this alternative because it would not be compatible with a locally adopted goal.

Alternative E would not be compatible with the Urban Design Program. None of the design features described in the Urban Design Program (e.g., pedestrian-oriented streets and an open space at the foot of Broadway) would be implemented. As such, this alternative would have a significant impact because it is not consistent with a locally adopted goal.

Alternative G would not implement any of the plans found in the Urban Design Program. However, because no new development would result from this alternative, consistency with the program is not applicable. Therefore, no significant impacts would result.

MITIGATION MEASURES

Significant adverse environmental effects related to compatibility with the Centre City Community Plan and the Centre City Urban Design Program would result from implementation of Alternatives C and E because they would not provide an open space or plaza at the foot of Broadway. Building 1 would need to be retained at the foot of Broadway with either alternative, so mitigation of this impact is not feasible and an unavoidable adverse impact would result.

ENDNOTES:

- 1 Centre City Development Corporation, 1983.
- 2 San Diego Unified Port District, 1980 (revised 1987).
- 3 Ibid.
- 4 California Coastal Zone Conservation Commission, 1975.
- 5 San Diego Unified Port District, 1976.
- 6 City of San Diego, 1985.
- 7 City of San Diego, 1976a.
- 8 Ibid.
- 9 Ibid., page 105.
- 10 Ibid.
- 11 City of San Diego, 1988.
- 12 Centre City Development Corporation, 1983.

4.2 TRANSPORTATION/CIRCULATION

The analysis presented herein is a summary of a traffic study prepared by Korve Engineering, Inc. for the proposed project. A complete copy of the study is available for review at the Broadway Complex Project office, 555 West Beech Street, Suite 101, San Diego, California 92101-2937.

4.2.1 AFFECTED ENVIRONMENT

The Navy Broadway Complex is served by a variety of transportation systems, and is located close to a major freeway (I-5), an intercity and commuter rail line (AMTRAK), the San Diego Trolley light rail transit (LRT) system, and an extensive bus network. This system is described in detail below.

Circulation Characteristics

Major Street System

The project vicinity is served by several major roadways within the jurisdiction of the City of San Diego. Regional access to the project vicinity is provided by I-5, the principal regional north-south route. Local access is depicted on Figure 4-9. I-5 runs northwest/southeast along the perimeter of San Diego's Centre City. Northbound access to I-5 is provided from the south via ramps at the Grape/Hawthorn one-way couplet, First Street, the 5th/6th one-way couplet, B Street, C Street, E Street, and J Street. Southbound access to I-5 is provided from ramps at Hawthorn Street, the Front/First one-way couplet, the 10th/11th one-way couplet, B Street, and Imperial Avenue. Pacific Highway, Ash Street, Broadway, Market Street and G Street are the major corridors connecting the project area to the freeway system serving Centre City.

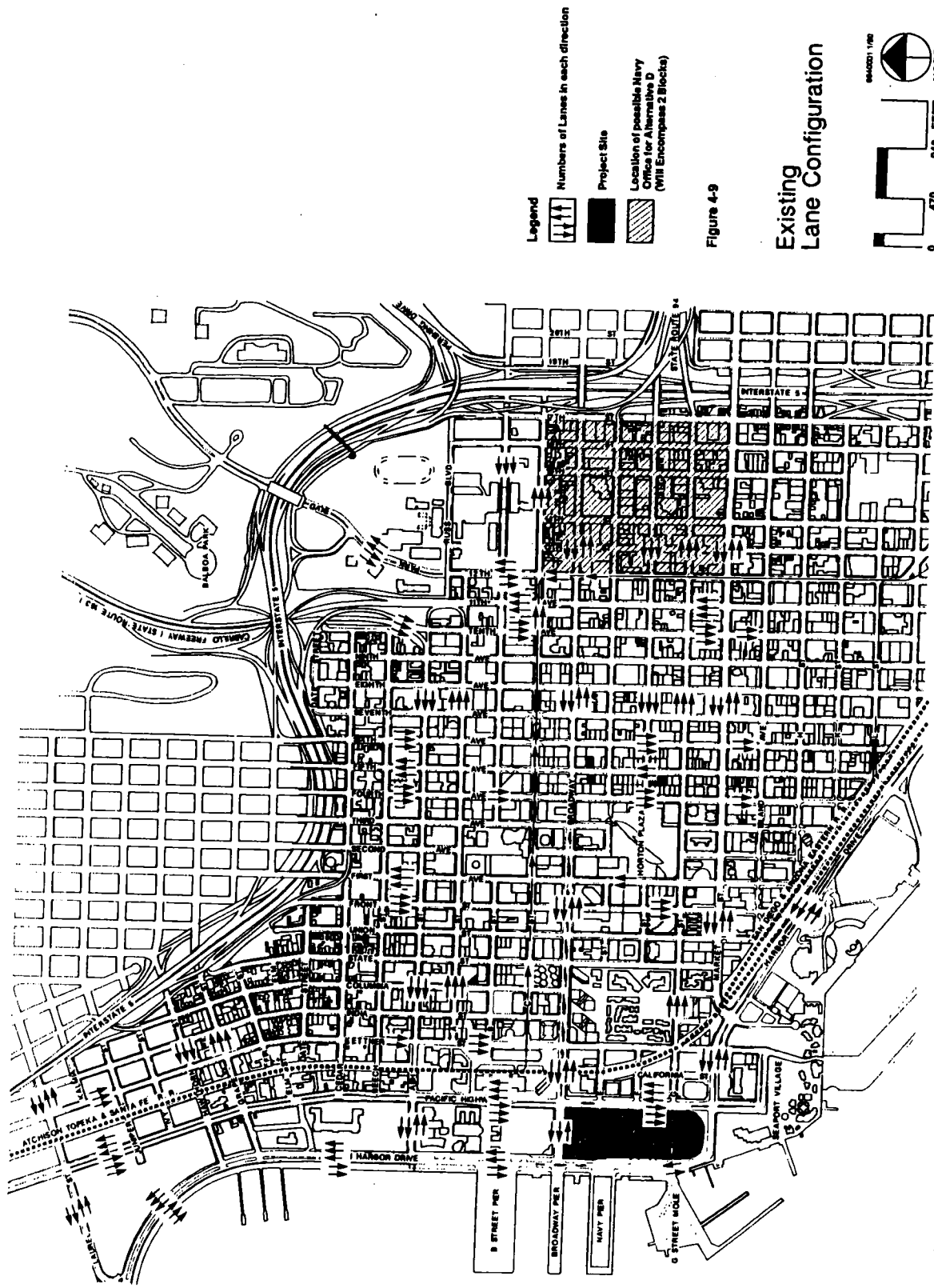
The local roadways affecting travel patterns in the project vicinity include Harbor Drive, Pacific Highway, the Kettner/India couplet, the Front/First couplet, Laurel Street, the Hawthorn/Grape couplet, Ash Street, Broadway, Market Street, and G Street. The most heavily traveled north-south routes are Harbor Drive and Pacific Highway. Laurel Street and the Hawthorn/Grape couplet, which provide access to I-5 ramps, are the most heavily used east-west routes. The number of lanes on each of these routes is shown on Figure 4-9. Note that Figure 4-9 depicts the planned realignment of Harbor Drive south of the project site.

Traffic Volumes

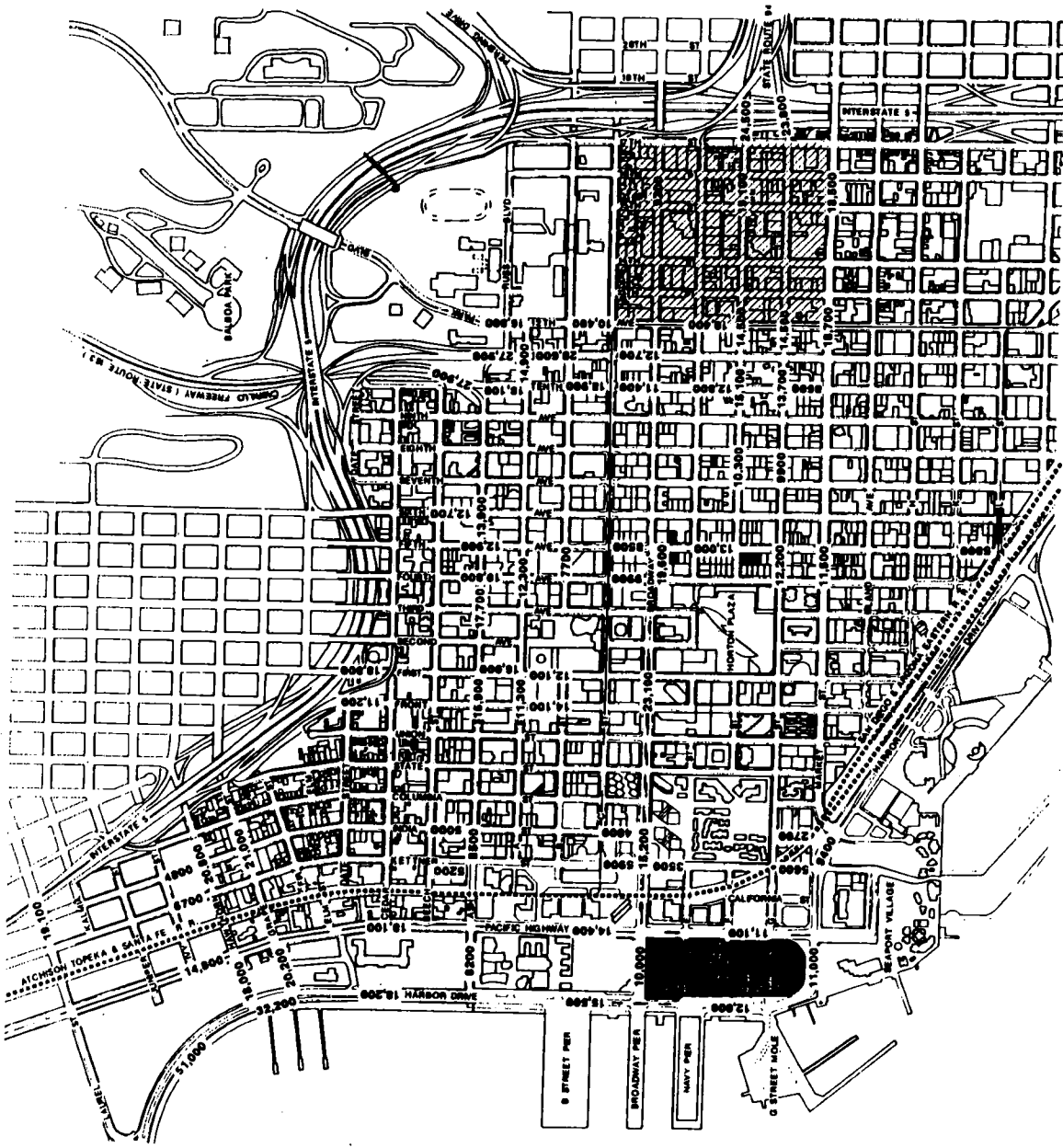
Traffic count data from 1988 were provided by the Traffic Division of the City of San Diego (see Figure 4-10).¹ These counts are the most current available, and are used as the basis for modeling traffic conditions through the year 2010.

The largest traffic volumes in the project vicinity occur on Harbor Drive and Laurel Street north of the project site. Most of this traffic is composed primarily of traffic traveling between I-5 and the Airport/Point Loma area. Pacific Highway and the Hawthorn/Grape couplet form a corridor between the Central Bayfront and I-5 that carries heavy traffic volumes to the north of the project site.





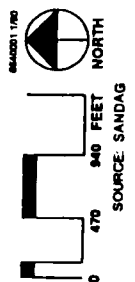
Navy Broadway Complex Project



- Legend**
- Average Daily Trips
 - Project Site
 - Location of possible Navy Office for Alternative D (With Encroachment 2 Blocks)

Figure 4-10

Average Daily Traffic for Major Streets



Navy Broadway Complex Project



Roadway Capacities

Traffic volumes are useful in understanding the general nature of traffic in an area but alone do not indicate the ability of the street network to carry traffic. To provide a measure of the current level of roadway use, the daily volumes on each roadway link are compared with the maximum desirable daily volumes. The maximum desirable daily volumes cited in the following analysis are based on City of San Diego street design standards.² The comparison of current volumes to roadway capacities results in the development of a volume-to-capacity (V/C) ratio for each of the roadway segments evaluated. This V/C ratio is an indicator of the quality of traffic flow on each route.

The V/C ratios for the major routes in the project vicinity are shown in Table 4.2-1. The Grape-Hawthorn couplet currently operates at 80 percent of its daily capacity and is the primary connector between I-5 and the Pacific Highway corridor. It serves as a primary route to and from the San Diego Airport (Lindbergh Field) and is heavily congested. The remaining roadway segments have V/C ratios of less than 0.70.

Intersection Capacities

Levels of service referred to in this report are calculated by the "intersection capacity utilization (ICU)" methodology as set forth by the Transportation Division of the City of San Diego. The ICU analysis is the methodology used for traffic studies conducted for the City of San Diego. The p.m. peak period is used for this analysis as it represents the time of the day with the highest traffic volumes. The traffic conditions were evaluated for 13 signalized intersections in the project vicinity for the evening peak period. Turning movement counts were conducted for these intersections on October 25, 1988 and October 26, 1988. The peak hour for these intersections occurs between 4:30 and 5:30 p.m. This is characteristic of downtown areas, where p.m. peak volumes are higher than a.m. peak volumes due to the concentration of retail uses, which generate much lower traffic levels during the a.m. peak hour. The service levels are shown in Table 4.2-2.

During the p.m. peak hour, the intersections of Grape/Harbor and Grape/Pacific operate at service level B, which indicates good operating conditions. Surveys indicated that long queues exist on Grape Street during the evening peak period. This queueing of vehicles occurs because of capacity constraints at the on-ramps to I-5 and are not related to capacity limitations at adjacent intersections. The remaining intersections operate at service level A. This indicates very good intersection operations with little delay to vehicles.

Public Transit/Transportation

The transit needs in the project vicinity are served by the San Diego Transit Corporation, Strand Express, the San Diego Trolley, Inc., and AMTRAK. Surveys of travel modes to Centre City indicate that transit use represents approximately 7 percent of all daily trips.³ The local transit routes are shown on Figure 4-11.

The 10 SDTC bus routes operating in the project area carry a total of approximately 12.6 million passengers annually.⁴ The highest volume transit lines are routes 2, 4, 7, 29, and 34. The two Strand Express bus routes serve 1.7 million passengers annually. The San Diego Trolley, which carries the highest ridership of any single transit line, served 9.3 million passengers in 1986. The San Diego line of AMTRAK carried 1.4 million passengers in 1986.⁵

TABLE 4.2-1
COMPARISON OF CURRENT VOLUMES

Street Segment	Approximate Max. Desirable Daily Volumes	Existing Conditions Daily Traffic	Volume/ Capacity
Ash Street			
w/Pacific Highway	46,000	8,200	0.16
w/India	46,000	8,500	0.16
Broadway			
w/Pacific Highway	30,000	10,000	0.30
w/India	30,000	15,200	0.45
G Street			
w/Kettner	23,000	1,500	0.06
w/India	23,000	2,800	0.11
Grape			
w/Pacific Highway	23,000	20,200	0.78
w/India	23,000	21,000	0.81
Hawthorn			
w/Pacific Highway	23,000	18,000	0.70
w/India	23,000	20,800	0.80
Harbor			
n/Grape	46,000	32,200	0.62
n/Ash	46,000	18,200	0.35
n/Broadway	30,000	15,500	0.46
s/Broadway	15,000	12,000	0.71
e/Pacific Highway	30,000	9,400	0.28
India			
n/Hawthorn	23,000	4,800	0.19
n/Ash	23,000	5,000	0.19
n/Broadway	23,000	4,000	0.15

Note: The notation accompanying each segment indicates a directional reference. For example, "w/Pacific Highway" signifies a location west of Pacific Highway.

TABLE 4.2-1 (continued)

Street Segment	Approximate Max. Desirable Daily Volumes	Existing Conditions Daily Traffic	Volume/ Capacity
Kettner			
n/Hawthorn	23,000	6,700	0.26
n/Ash	23,000	5,200	0.20
n/Broadway	23,000	5,900	0.23
Laurel			
w/Pacific Highway	30,000	30,400	0.90
Pacific Highway			
n/Hawthorn	46,000	14,800	0.29
n/Ash	46,000	18,100	0.35
n/Broadway	46,000	14,400	0.28
n/G Street	46,000	11,100	0.21
Market Street			
w/Fifth	30,000	11,500	0.34

Source: SANDAG, City of San Diego.

TABLE 4.2-2

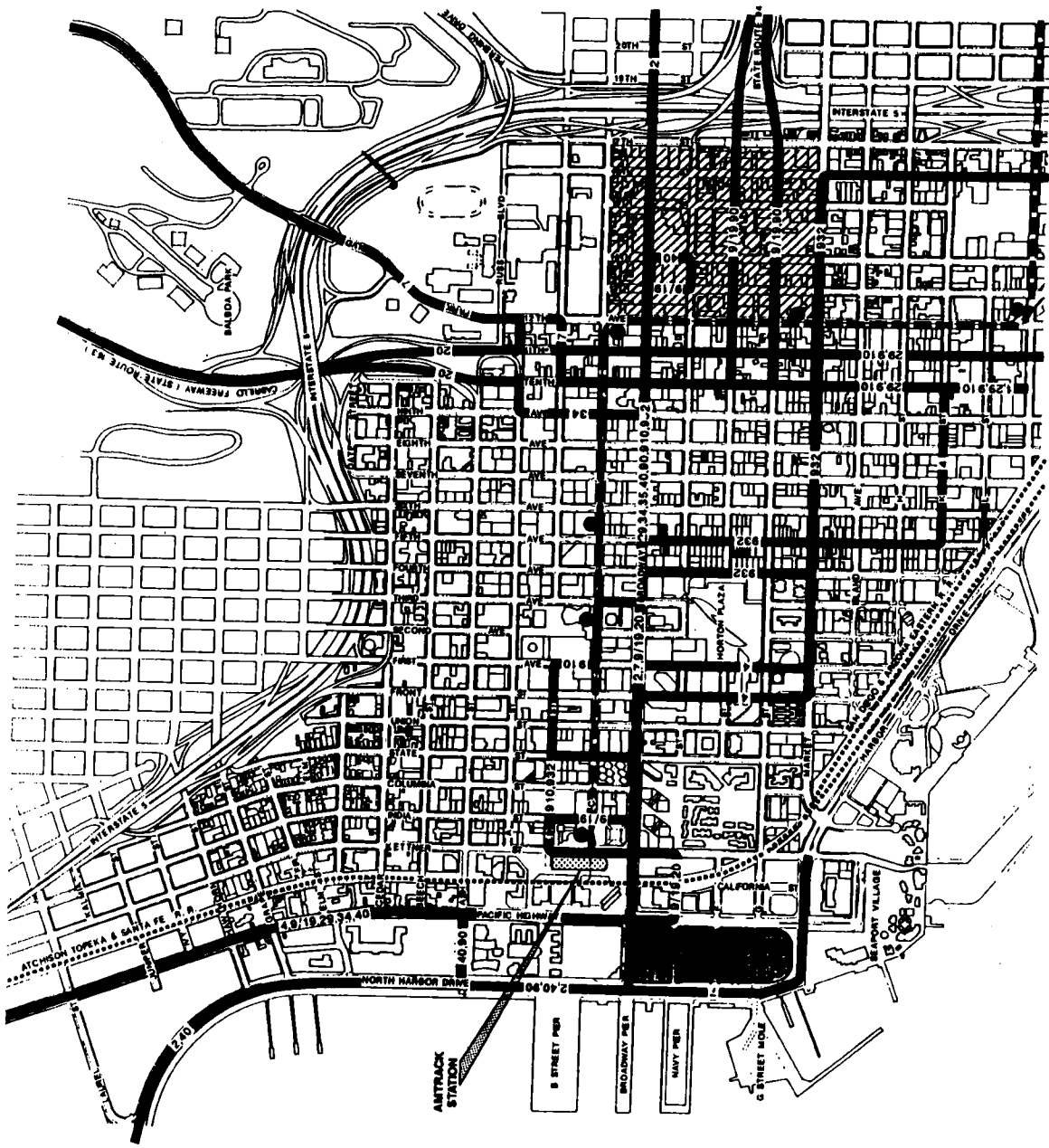
**INTERSECTION SERVICE LEVELS
Existing P.M. Peak Hour Conditions**

Intersection	ICU ^a	Service Level
Hawthorn/Harbor	0.48	A
Grape/Harbor	0.61	B
Grape/Pacific	0.64	B
Broadway/Kettner	0.51	A
Ash/Pacific	0.45	A
N. Harbor/Pacific	0.52	A
Ash/Harbor	0.41	A
N. Harbor/Kettner	0.53	A
Broadway/Kettner	0.44	A
Broadway/Pacific	0.45	A
Hawthorn/Pacific	0.41	A
Broadway/Front	0.40	A
Ash/Front	0.34	A

a Intersection Capacity Utilization

Source: Korve Engineering, Inc. 1989.





- Legend**
- Bus Routes
 - Line Number
 - LRT Line
 - LRT Station
 - Project Site
 - Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 4-11

Transit Routes



Navy Broadway Complex Project

The SDTC operates approximately twenty bus lines into Centre City area and ten of these lines provide service within two blocks of the project site. The midday frequencies for most of these routes are about 30 minutes. Evening peak-hour frequencies are generally in the 10- to 15-minute range. Lines 2, 4, 7, 20, 29, and 34 are the high-volume bus routes in the project vicinity. These bus routes operate along Harbor Drive, Pacific Highway, or Broadway. Route 27 provides express service from Tierrasanta to the County Administrative Center through one morning and one evening run.

The Strand Express provides regional bus service from the Centre City to both Imperial Beach and the San Ysidro International Border. Both routes approach the project area on Broadway and make their turnaround on Kettner at the Santa Fe Station.

The San Diego Trolley has the highest daily ridership levels for any single transit line in the Centre City area. The "South Line" runs from the Santa Fe Station (Kettner/C Street) to the east along C Street into the core of Centre City. It then travels south along a 15.9-mile route to the Mexican border. The South Line operates at 30-minute intervals during early morning and late evening hours, and 15-minute intervals between 7:00 a.m. and 7:00 p.m.

The recently expanded "East Line" of the San Diego Trolley runs from the Centre City transfer station at Imperial and 12th Street east to El Cajon. It spans over 17.3 miles and operates at 30 minute intervals during off-peak hours. It runs at 15 minute intervals in each direction during peak hours.

AMTRAK provides service into the Centre City at the Santa Fe Station via the Atcheson, Topeka and Santa Fe (AT&SF) Railroad line. AMTRAK provides intercity and commuter rail service between San Diego and the Los Angeles area. The Los Angeles-San Diego AMTRAK line currently serves well over 1 million passengers annually.

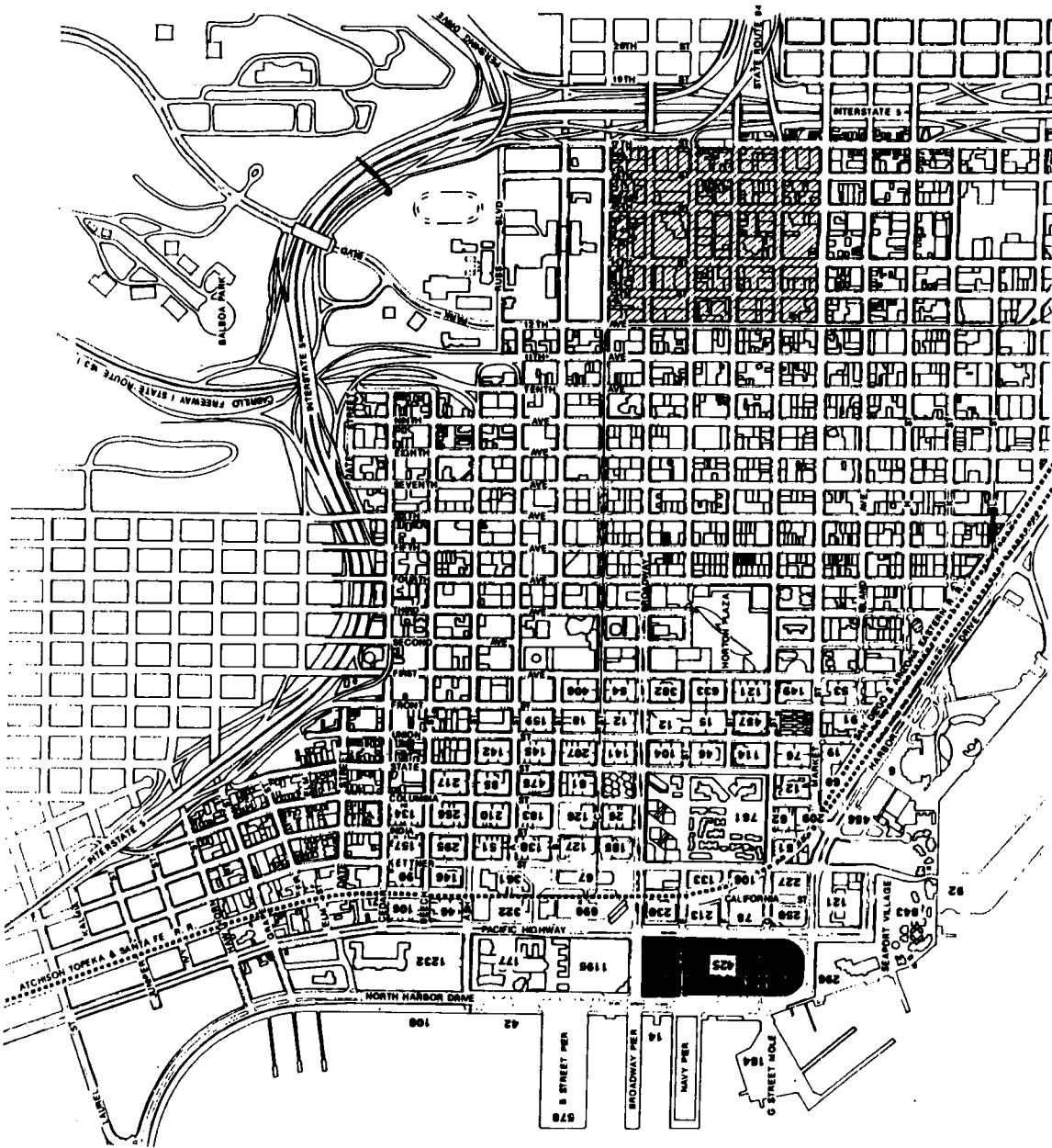
Parking

There are approximately 15,550 parking spaces within 15 minutes walking distance of the project site.⁶ This includes 13,220 off-street spaces and 2,330 on-street spaces. The Navy Broadway Complex has 425 dedicated on- and off-street parking spaces (see Figure 4-12).

The largest off-street parking areas in the project vicinity are the lots at the County Administrative Center and the Lane Field site, both to the north, with 1,232 and 1,195 spaces, respectively. The county site is bounded by Hawthorn Street, Harbor Drive, Ash Street, and Pacific Highway. The Lane Field site is located just north of the project site. The parking lots adjacent to the Santa Fe Station, located on the east side of Pacific Highway between Broadway and Ash Street, contain 1,020 spaces. Parking facilities near Seaport Village provide 843 spaces.

The overall occupancy of the on-street and off-street parking facilities located within a 15-minute walking distance of the project site (depicted on Figure 4-13), is 75 percent. The peak use of on-street spaces averages 83 percent, with off-street lots and structures averaging 74 percent. This includes the two major parking facilities at Lane Field and the county site.








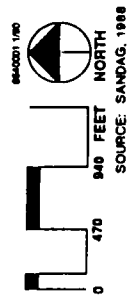
- Legend**
-  Existing Parking Spaces
 -  Project Site
 -  Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

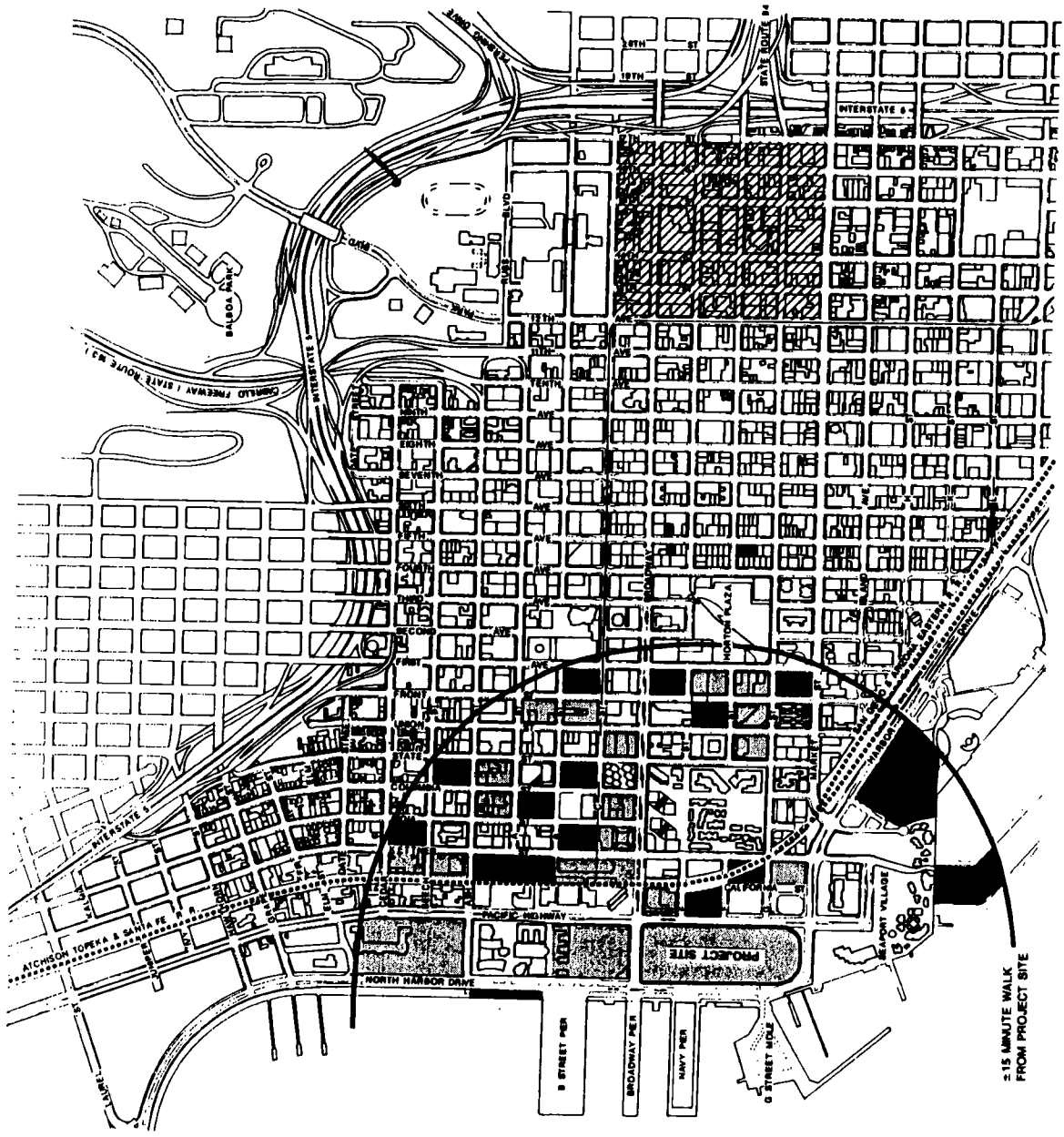
Figure 4-12

Parking Inventory



Navy Broadway Complex Project





Legend

- 86 - 100% Occupied
- 76 - 85% Occupied
- 0 - 75% Occupied
- Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 4-13

Mid-Afternoon
Parking Occupancy
March 1988

0 470 940 FEET NORTH
Source: SANDAG, 1988

Navy Broadway Complex Project



Several blocks in the project vicinity exhibit high occupancy rates during peak-demand periods. In commercial areas such as the Centre City, parking occupancy rates of 100 percent are not obtained except in isolated areas (single lots or street sections) due to continuous inflow and outflow from large lots and garages. Motorists looking for parking spaces begin to experience difficulty at occupancy rates of 80 to 90 percent. At occupancy rates of more than 90 percent, a parking deficiency occurs. For purposes of this report, a parking area is considered to be fully utilized when it is 90 percent or greater occupied.

The public parking (1,020 spaces) that is currently available at the lots adjacent to the Santa Fe Station will eventually be removed when the area is developed (projected to begin in 1992). A substantial number of parking spaces would likely be constructed for the Santa Fe project in structured facilities and designated specifically for employees and guests during weekday working hours. As a result, a substantial quantity of the public parking spaces in the area will be lost.

The parking occupancy levels generally increase as motorists travel east from the project site to the core of the downtown area. Higher occupancy levels typically occur on the east side of the railroad line. The heaviest parking use occurs near the Civic Center (at Second and C Streets), where occupancy levels exceed 90 percent. This occupancy level represents the effective capacity of larger parking facilities.

Bikeways

The existing system of bicycle routes in the central bayfront area is depicted on Figure 4-14.⁷ There are bicycle routes along Harbor Drive, Market Street, Ash Street, and the Kettner/India couplet. A bicycle fitted-bus is provided on Routes 9 and 910 in the Centre City. All bikeways in the Centre City area and near the project site are Class III facilities.

Planned Transportation Improvements

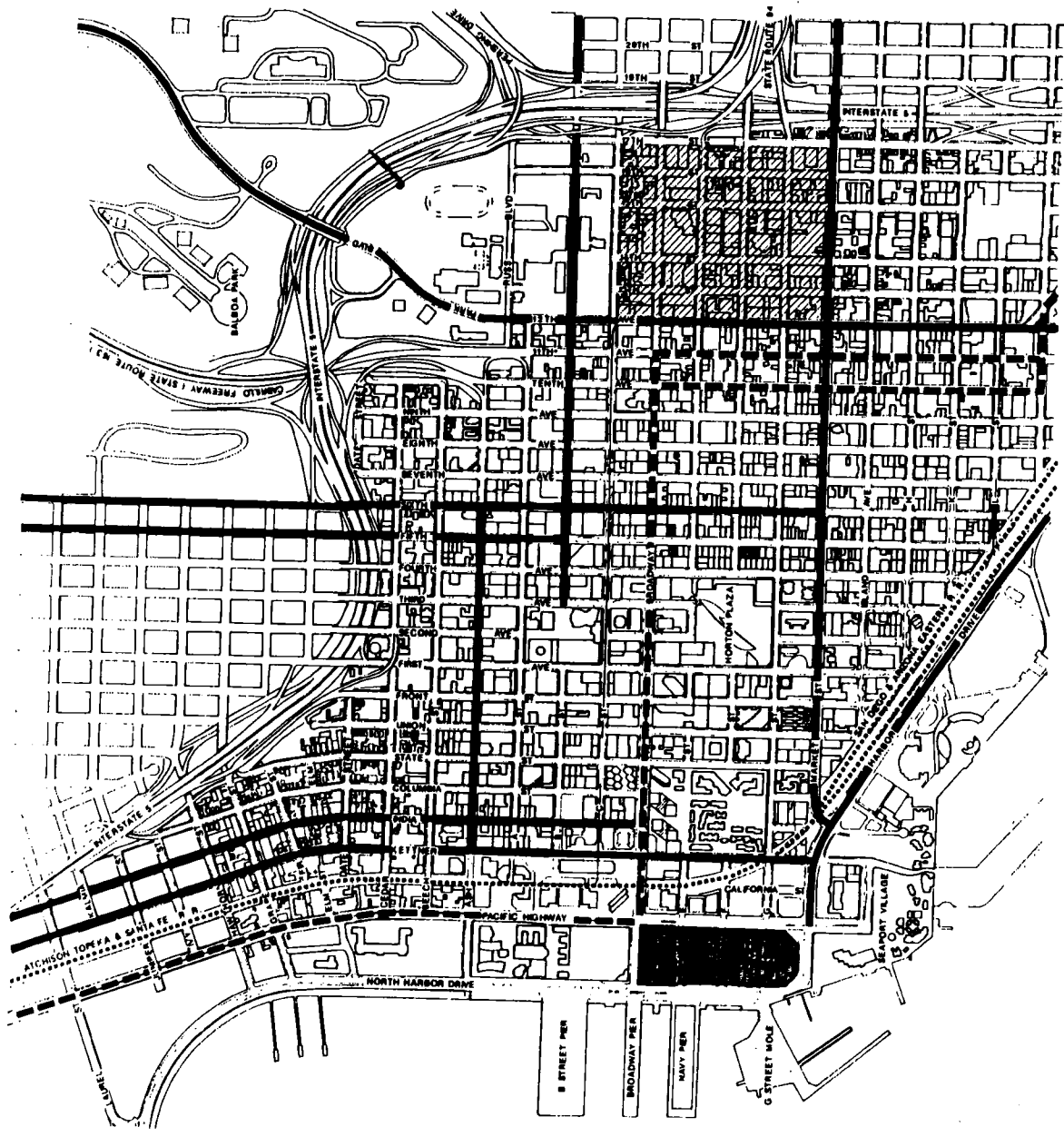
The following section describes roadway, transit, parking, and bikeway improvements that have been programmed for the City Centre area by the City of San Diego, the MTDB, or Caltrans.

Roadway Improvements

The City of San Diego has designated funds in their 1989 Capital Improvement Program (CIP) for the extension of Front Street/First Street one-way couplet and Eighth Avenue to Harbor Drive.⁸ The Front Street project will involve the extension of the Front-First one-way couplet. The connection to Harbor Drive will be provided along Front Street and First Street, where two one-way streets will be constructed to cross the railroad tracks.

The Eighth Avenue project provides an upgraded connection to Harbor Drive south of the Navy Broadway Complex. Eighth Avenue will be widened at its connection with Harbor Drive to provide adequate intersection capacity. In conjunction with these projects, the City of San Diego will be eliminating railroad crossings on E Street and F Street between Pacific Highway and Kettner Boulevard.⁹ Access to these short, one-block long roadway sections will be restricted to adjacent parking lots only.









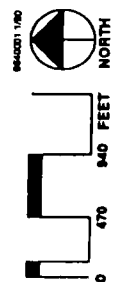
- Legend**
-  Bike Route
 -  Bike Bus (Routes 8, 910)
 -  Project Site
 -  Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 4-14

Bicycle Routes



SOURCE: CITY OF SAN DIEGO

Navy Broadway Complex Project



The California Department of Transportation (Caltrans) has programmed a number of freeway improvements along I-5, SR 163, and I-8 that could provide additional capacity for commuter traffic to the Centre City area.¹⁰ This includes a project to widen I-5 for auxiliary lanes and ramp improvements between Imperial Avenue and SR 163. This project is programmed for implementation in fiscal year 1991 at a cost of approximately \$3.9 million.

Transit Improvements

The most significant transit improvement in the project vicinity is the planned construction of the Bayside Line of the San Diego Trolley. The MTDB has adopted a preferred alignment that will be constructed along a 1.6-mile route for an estimated \$40 million.¹¹ Beginning at Grape Street, the Bayside line will travel south along the AT&SF railroad right-of-way to its junction with Commercial Street, where it will travel east to a transfer station that connects with the existing South and Euclid lines. The Bayside line is scheduled to begin operation in June 1990.¹² Future trolley lines are planned that would extend the Bayside line to communities north of Centre City.

Based on recommendations made by the Los Angeles-San Diego State Rail (LOSSAN) Corridor Study Group in 1987, the State of California is in the process of implementing a \$246-million improvement program for AMTRAK commuter service along the corridor. This two-phase program includes an initial program of low cost time reduction projects, track upgrades, and implementation of commuter rail service. Subsequently, the program will involve station and track improvements, the addition of more AMTRAK trains and cars, and additional time-saving projects.

Parking Improvements

The City of San Diego does not currently have any plans for the construction of public surface lots or parking structures in the vicinity of the Navy Broadway Complex, although a 1,950-space parking garage is currently planned at Seaport Village to serve existing and planned retail uses at that location. In addition, a parking garage with 1,270 spaces is planned in conjunction with the proposed Hyatt Hotel adjacent to Seaport Village. The Parking Management Plan currently being prepared for the Centre City area calls for the establishment of parking interceptor sites at the periphery of the downtown area. These sites would be located in proximity to I-5 and other major freeways that access the Centre City. The objective of the program is to reduce the relative proportion of long-term parking within the downtown and the related traffic congestion created by employee traffic.

Bikeway Improvements

The development of bikeways along the full length of the Pacific Highway is planned by the City of San Diego.¹³ A linear park, currently in the design stage, will link Seaport Village to the Gaslamp Quarter and will include a bicycle lane.

4.2.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The transportation impacts of each project alternative are assessed for both a short-term and long-term horizon period. The short-term scenario involves an analysis of projected conditions in 1995. The long-term assessment addresses the impacts of a build-out scenario for the Centre City area as identified by the City of San Diego and CCDC.

The impact of each project alternative is established by forecasting traffic volumes to indicate roadway and intersection conditions. For roadway volumes, a significant impact occurs when the projected daily volume exceeds the capacity identified in the City of San Diego's street design standards by more than 10 percent and the project alternative contributes substantially to this over capacity.

Short-Term Baseline Scenario (1995)

The baseline analysis for the short-term scenario assumes the construction and occupation of 19 new projects in the Centre City area as identified by the City of San Diego.¹⁴ A list of the projects, and their trip generation characteristics, is shown in Table 4.2-3. It is assumed that approximately 75 percent of the 2.8 million square feet of new office space would be occupied by 1995.¹⁵ The location of the short-term projects, as referenced in Table 4.2-3, is shown in Figure 4-15.

The baseline scenario assumes completion and partial occupation of the projects described in Table 4.2-3 and no change in existing land use for the Navy Broadway Complex. The short-term baseline, therefore, includes the implementation of cumulative development through 1995.

The assessment of the short-term project impacts is based on a determination of the level of traffic generated by each of the project alternatives. A comparison of the various project options to the baseline scenario provides the measure of the impact of each alternative in the short-term period.

Short-Term Project Traffic Generation (1995)

The short-term alternatives represent the level of development that would occur on the Navy Broadway Complex by 1995. The land use type and intensity for each alternative, based on expected phasing would be:

- Alternative A: 500 hotel rooms
- Alternative B: 500 hotel rooms
- Alternative C: 500 hotel rooms
- Alternative D: 500 hotel rooms
- Alternative E: No change
- Alternative F: 1,000 hotel rooms
- Alternative G: No change

The trip generation levels for the seven project alternatives are shown in Table 4.2-4. Alternatives A, B, C, D, and F would involve demolition of the existing buildings on Block 4, which would result in a reduction of 785 daily trips and 100 evening peak hour trips. As a result, the net increase in trips generated by Alternatives A through D would be approximately 2,720 daily trips and 180 evening peak hour trips. Alternative F would generate a net increase of approximately 6,220 daily and 460 p.m. peak hour trips. Alternatives E and G would result in no additional trips on the roadway network through the year 1995. The completion of construction for Alternative E would occur after 1995. The no-action alternative, Alternative G, would also generate no additional trips by 1995.

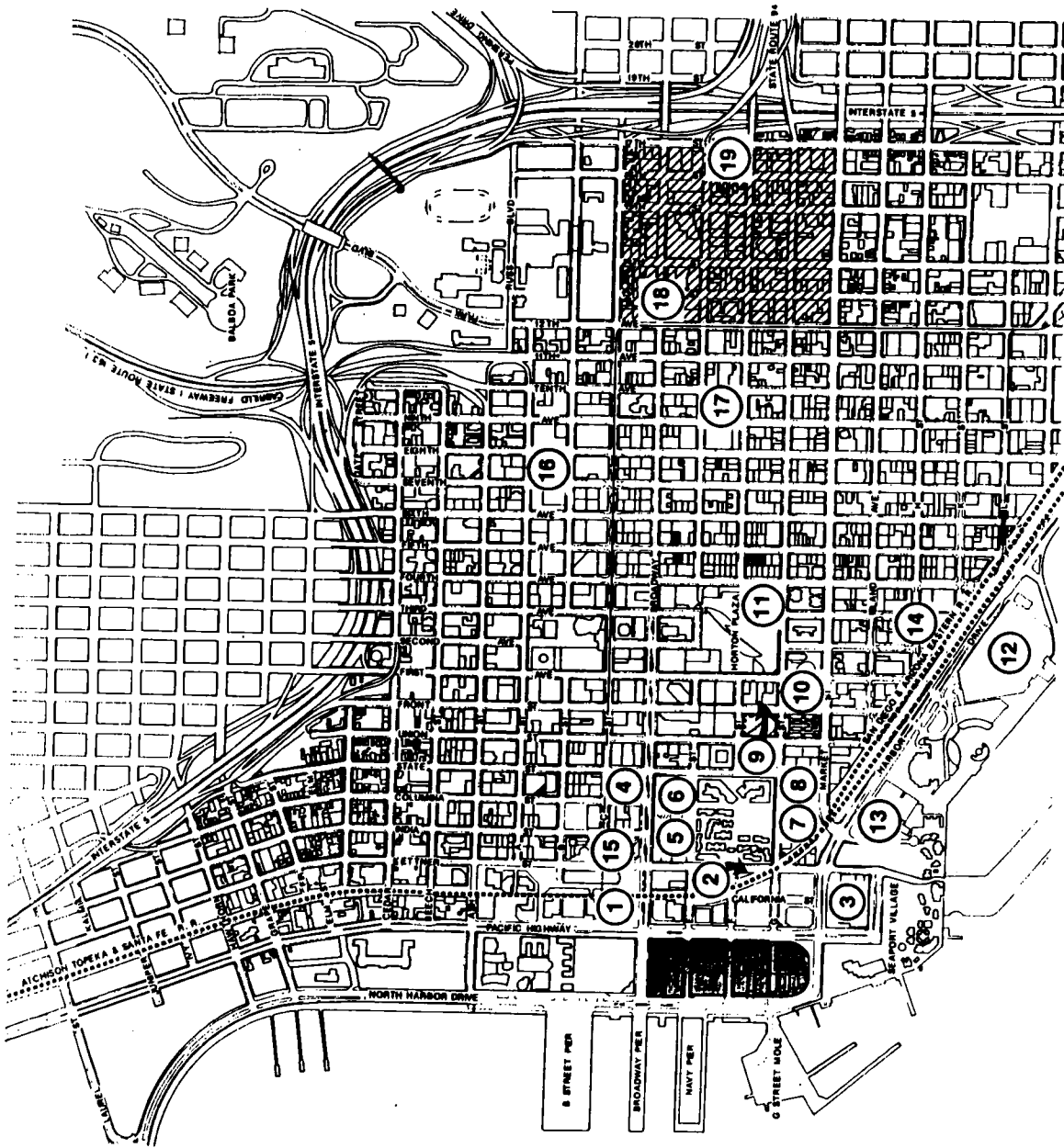
TABLE 4.2-3
SHORT-TERM CUMULATIVE PROJECTS
Net Trip Generation Levels (By 1995)

Project Description	Land Use	Intensity	Daily Trips	P.M. Peak Trips	
				In	Out
1. Santa Fe	Office	500,000 sf	4,880	140	550
	Hotel	435 rooms	3,050	120	120
2. 7 on Kettner	Townhouses	7 units	50	4	2
3. Seaport Village	Retail	180,000 sf	3,780	190	190
4. Emerald Shapery	Office	375,000 sf	3,660	100	410
	Hotel	435 rooms	3,050	120	120
5. Koll Center II	Office	325,000 sf	3,170	90	360
	Apartments	8 units	60	4	2
6. Koll Center I	Office	185,000 sf	1,800	50	200
	Retail	180,000 sf	3,780	190	190
	Townhouse	24 units	170	15	5
7. 500 G Street	Condominium	96 units	670	50	20
8. Columbia Place	Condominium	103 units	720	55	25
9. Bristol Square	Office	60,000 sf	720	20	75
10. Courtyard	Apartments	400 units	2,800	215	90
	Retail	80,000 sf	2,160	120	120
11. 800 Fourth	Apartments	34 units	240	20	10
	Office	18,500 sf	220	5	25
	Retail	13,500 sf	370	20	20
12. Convention Center	Public	655,000 sf	7,300	370	370
13. Hyatt Regency	Hotel	875 rooms	6,125	245	245
14. One Harbor Drive	Retail	50,000 sf	1,350	75	75
	Condominium	198 units	1,390	105	45
15. Great American	Office	530,000 sf	5,170	145	580
	Hotel	276 rooms	1,930	75	75
16. Symphony Towers	Office	620,000 sf	6,050	170	680
	Hotel	262 units	1,800	75	75
17. Peach Tree Inn	Hotel ^a	301 units	1,200	50	50
18. Civic Center	Office	750,000 sf	7,300	205	820
	Library	275,000 sf	6,600	330	330
19. CCE Maisons	Apartments	40 units	280	20	10

a The proposed Peach Tree Inn is a low income hotel facility, so the trip generation rates were decreased as shown.

Source: City of San Diego Transportation Division 1989.





Legend

- 1 Santa Fe
- 2 on Kettner
- 3 Seaport Village Expansion
- 4 Emerald Shapery
- 5 Koll Center II
- 6 Koll Center I
- 7 800 G Street
- 8 Columbia Place
- 9 Bristol Square
- 10 Courtyard
- 11 800 Fourth
- 12 Convention Center
- 13 Hyatt Regency
- 14 One Harbor Drive
- 15 Great American Plaza
- 16 Symphony Towers
- 17 Peach Tree Inn
- 18 Civic Center
- 19 CCE Mansions

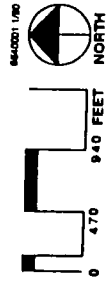
⑤ Cumulative Project Location

■ Project Site

▨ Location of possible Navy Offices for Alternative D (Will Encompass 2 Blocks)

Figure 4-15

Short-Term Cumulative Project Location



Source: City of San Diego, CCDC, 1989.

Navy Broadway Complex Project



TABLE 4.2-4
SHORT-TERM ALTERNATIVES (1995)
Net Trip Generation Characteristics

Alternative	Land Use	Intensity	Daily Trips	P.M. ^a Peak Trips	
				In	Out
A	Hotel	500 rooms	2,715	120	60
B	Hotel	500 rooms	2,715	120	60
C	Hotel	500 rooms	2,715	120	60
D	Hotel	500 rooms	2,715	120	60
E	NA	-	-	-	-
F	Hotel	1,000 rooms	6,215	260	200
G	NA	-	-	-	-

a The demolition of office and industrial uses on Block 4 (Alternatives A, B, C, D, and F) would result in a net reduction of 785 daily trips, 20 inbound p.m. peak trips, and 80 outbound p.m. peak trips.

Source: Korve Engineering, Inc. 1989.

Short-Term Project Distribution

The distribution of project traffic on the roadway network is based on data provided by the City of San Diego.¹⁶ The distribution is based on projected short-term patterns that reflect existing travel characteristics in the Centre City area. The same distribution is used for all project alternatives. This distribution assumes that 91 percent of the evening peak trips are made to destinations that are outside of the Centre City area. A substantial proportion of these trips are assigned to adjacent freeways such as I-5, SR-94, and SR-163.

Approximately nine percent of the trips are assigned to internal destinations such as the Civic Center, Convention Center, Horton Plaza, etc. The project distribution is described in Table 4.2-5.

Short-Term Intersection Conditions (1995)

The short-term traffic conditions are described for both the baseline scenarios and the project alternatives on the basis of the levels of service for the thirteen study intersections. The service levels, and ICU ratios, are shown in Table 4.2-6 for the seven project alternatives. The analysis indicates that all of the intersections would operate at service level D or better in the short-term scenario.

TABLE 4.2-5
SHORT-TERM ALTERNATIVES
Trip Distribution Characteristics

Route	Direction	Percent
Freeways		
I-5	To/From North	17%
I-5	To/From South	8%
SR-163	To/From North	28%
SR-94	To/From East	20%
Major Streets		
Harbor Drive	To/From North	2.5%
Pacific Highway	To/From North	3.5%
Fifth/Sixth Couplet	To/From North	3%
Park Boulevard	To/From North	2%
Pershing Drive	To/From North	1%
Broadway	To/From East	2.5%
Market Street	To/From East	2.5%
Harbor Drive	To/From South	1%
External to Centre City		91%
Internal to Centre City		9%
Total Distribution		100%

The intersections of Harbor/Kettner, Broadway/Kettner, and Broadway/Front would operate at service level D under all of the alternatives, including the No Action Alternative (Alt. G). In addition, the intersections of Grape/Pacific and Market/Pacific would operate at service level C with all the alternatives. The remaining intersections would operate at service level A or B with these alternatives. None of the alternatives would cause any intersections to significantly degrade in the short term.

Long-Term Baseline Scenario (Buildout)

The baseline assessment for the long-term scenario is derived from the adopted land use plan for the Centre City area. The most recent changes to cumulative development assumptions in the City Centre land use plan were made in the Sixth Amendment to the Columbia Redevelopment Plan, which identifies long-term growth in the project area. For regional planning purposes, land use assumptions for the Navy Broadway Complex are assumed to be consistent with the Central Bayfront Design Principles (SANDAG 1989) (see Section 4.1.4, page 4-23), which identifies densities for the downtown waterfront area. An average FAR of 6.13 is identified for the Navy Broadway Complex. Based on a buildable area of 13.67 acres, this FAR would result in approximately 3.59 million square feet of development on the site.

TABLE 4.2-6
SHORT-TERM INTERSECTION SERVICE LEVELS (1995)

Intersection	Baseline Scenario LOS/ICU ^a	LOS/ICU by Alternative						
		Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G
Hawthorn/Harbor	A/.50	A/.50	A/.50	A/.50	A/.50	A/.50	A/.50	A/.50
Grape/Harbor	B/.65	B/.65	B/.65	B/.65	B/.65	B/.65	B/.65	B/.65
Grape/Pacific	C/.72	C/.72	C/.72	C/.72	C/.72	C/.72	C/.73	C/.72
Broadway/Harbor	A/.54	A/.54	A/.54	A/.54	A/.54	A/.53	A/.54	A/.53
Ash/Pacific	B/.62	B/.62	B/.62	B/.62	B/.62	B/.60	B/.66	B/.60
N. Harbor/Pacific	C/.74	C/.74	C/.74	C/.74	C/.74	C/.74	C/.75	C/.74
Ash/Harbor	A/.46	A/.46	A/.46	A/.46	A/.46	A/.47	A/.46	A/.47
N. Harbor/Kettner	D/.80	D/.80	D/.80	D/.80	D/.80	D/.80	D/.80	D/.80
Broadway/Kettner	D/.85	D/.85	D/.85	D/.85	D/.85	D/.84	D/.85	D/.84
Broadway/Pacific	A/.57	A/.57	A/.57	A/.57	A/.57	A/.55	A/.57	A/.55
Hawthorn/Pacific	A/.44	A/.44	A/.44	A/.44	A/.44	A/.44	A/.44	A/.44
Broadway/Front	D/.81	D/.81	D/.81	D/.81	D/.81	D/.80	D/.84	D/.80
Ash/Front	A/.53	A/.53	A/.53	A/.53	A/.53	A/.51	A/.55	A/.51

a Level of Service (LOS)/intersection capacity utilization (ICU).

Source: Korve Engineering, Inc. 1989.

A total of 3.59 million square feet is more than any of the seven project alternatives. The greatest level of development on the Navy Broadway Complex assumed for any project alternative is a total of 3.55 million square feet--Alternative B.

Long-Term Roadway Conditions (Buildout)

Traffic projections for the long-term baseline scenario and the project alternatives were prepared by the City of San Diego using the Centre City Transportation Action Plan (CCTAP) model for the study area. These forecasts provided daily traffic volumes along the major roadways accessing the Centre City area. The circulation element incorporated in the Sixth Amendment to the Columbia Redevelopment Area, adopted February 28, 1989, includes the designation of Harbor Drive as a six-lane major street. The Central Bayfront Design Principles identifies the conversion of Harbor Drive, between Pacific Highway and Broadway, to a pedestrian-oriented two-lane street. The project alternatives designate this section of Harbor Drive as a two-lane facility (two through lanes and a center left-turn lane). As such, the project is consistent with the Design Principles.

Traffic volume projections along 14 of the individual roadway segments would exceed the designated capacity of the route under the long-term scenario with development of all the alternatives, unless otherwise noted. These routes are listed as follows:

- Ash Street east of Columbia
- Ash Street east of Front
- Ash Street east of Second
- Broadway east of Ketter
- Broadway east of Fifth
- Eleventh Avenue south of I-5
- First Street south of Ash Street (except Alternatives D and G)
- Grape Street east of Kettner
- Harbor Drive south of Laurel
- Harbor Drive south of Hawthorn
- Pacific Highway south of Broadway (except Alternatives D and G)
- Pacific Highway south of Grape
- Pacific Highway south of Laurel
- Tenth Avenue south of I-5

The baseline condition under which long-term traffic improvements are planned by the City of San Diego shows all of the 14 segments would exceed their capacity. Of the 14 roadway segments that would exceed their capacity, 12 segments would exceed the capacity without new development (i.e., Alternatives A through F) on the Navy Broadway Complex.

The proposed Alternatives A through F (except where noted) would contribute substantially to the exceedance of the capacity at 2 of the 14 roadway segments, so these alternatives would significantly affect the operation of the subject segments. These segments are:

- Pacific Highway south of Broadway (Alternatives A, B, C, E, and F)
- First Avenue south of Ash (Alternatives A, B, C, E, and F)

The Pacific Highway segment, which is immediately east of the Navy Broadway Complex, would be improved as a result of the project to accommodate additional capacity through the installation of a median with left turn pockets and traffic signals. The First Avenue segment would be mitigated through improvements that are planned by the City of San Diego through the Centre City Transportation Action Program (CCTAP) and Centre City Development Corporation (CCDC). These improvements are described in Section 4.2.3, page 4-65.

Traffic projections at the four freeway interchanges serving the Centre City area indicate that there is adequate capacity to serve anticipated demand under the long-term scenario. This includes the ramp junctions of I-5 with Front/Second and Hawthorn, I-5 with J Street, State Route 163, and State Route 94. The most heavily congested interchange would be the ramps connecting the City Centre to State Route 94. The on- and off-ramps to SR-94 would operate at approximately 90 percent of capacity under the long-term projections.

The southbound off-ramp from State Route 163 would also be heavily utilized under the long-term scenario, with the projected peak hour demands approximately equalling the capacity. The off-ramp from southbound I-5 to Front/Second would operate at approximately 80 percent of capacity under the long-term scenario. The remaining interchange ramps would operate at less than 80 percent of capacity.

Long-Term Intersection Conditions (Buildout)

The assessment of long-term conditions at the intersections in the project vicinity is a two-step process. The first step involves the conversion of daily roadway volumes to peak hour turning movement counts. This was accomplished by applying adjustment factors (e.g., the percent of daily traffic that occurs in evening peak hour) to develop peak roadway volumes. These roadway volumes were then adjusted, based on the short-term intersection analysis, to establish projected turning movement volumes. The long-term service levels are calculated for each intersection on the basis of these forecast volumes. The service levels are shown in Table 4.2-7, along with an identification of which intersections would be significantly affected.

All of the intersections in the project vicinity would operate within the baseline condition for all alternatives. The intersection of Broadway/Pacific would operate at service level F under Alternatives A, B, and D and at service level E under alternatives C and G. Under Alternative F, Broadway would be closed and would form a T-intersection at Pacific Highway which would operate at service level F. The intersection of Pacific/Broadway would be significantly affected by Alternatives A, B, D, and F.

The Grape/Pacific intersection would operate at service level E for Alternatives A, B, C, D, E, and F, and would, therefore, be significantly affected by the project.

The intersection of Broadway/Front would operate at service level E for Alternatives A, B, C, D, E, and F. The intersection of Broadway/Harbor would operate at service level F for Alternative B and service level E for Alternatives C and E. These two intersections would be significantly affected by these alternatives.

The remaining intersections of Hawthorn/Harbor, Grape/Harbor, Ash/Pacific, N. Harbor/Pacific, Ash/Harbor, N. Harbor/Kettner, Hawthorn/Pacific, and Front/Ash would operate at service level D or better under all alternatives, so there would be no significant impact.

The development of the open space at the foot of Broadway, as identified in Alternatives A and F, would result in a closure of Broadway between Pacific Highway and Harbor Drive. Alternative A provides an internal route through the open space that would connect the intersection of Broadway/Pacific Highway to Harbor Drive via a new connection to Harbor Drive north of Broadway (e.g., B Street or C Street) and E Street, and would require a partial vacation of Broadway. This would maintain a somewhat direct connection from Broadway to Harbor Drive and thereby result in a moderate change in travel patterns. The segment of Broadway located west of Pacific Highway would be shortened to provide open space. If the length of this segment is less than the estimated queue length, the roadway segment would be significantly affected. Based on an analysis of the queues generated by projected traffic volumes, this segment should be a minimum of 200 feet in length. The intersection of Harbor Drive and the new connection to Harbor Drive north of Broadway would be adversely affected, as it would serve the function of controlling traffic currently provided at the intersection of Harbor Drive/Broadway and require the installation of a traffic signal. With the installation of a signal, the intersection would operate at service level B conditions under Alternative A. The intersection of Broadway/Pacific Highway would operate at service level F.

TABLE 4.2-7
LONG-TERM INTERSECTION SERVICE LEVELS (BUILDOUT)
VOLUME/CAPACITY RATIOS

Intersection	Baseline Scenario	Alt. A		Alt. B		Alt. C		Alt. D		Alt. E		Alt. F		Alt. G		
		LOS ^a	ICU ^b	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Hawthorn/Harbor	A	0.58	0.57	N	0.58	N	0.57	N	0.58	N	0.58	N	0.57	N	0.49	N
Grape/Harbor	D	0.85	0.87	N	0.85	N	0.78	N	0.83	N	0.83	N	0.87	N	0.79	N
Grape/Pacific	E	0.95	0.98	Y	0.95	E	0.98	E	0.94	Y	0.94	Y	0.98	Y	0.78	N
Broadway/Harbor	F	1.07	0.66	N	1.07	E	0.89	D	0.98	Y	0.98	B	0.68	Y	0.74	N
Ash/Pacific	E	0.92	0.79	N	0.92	D	0.81	D	0.80	N	0.80	C	0.79	N	0.89	N
N. Harbor/Pacific	D	0.85	0.83	N	0.85	D	0.83	D	0.82	N	0.82	D	0.83	N	0.56	N
Ash/Harbor	D	0.89	0.79	N	0.89	D	0.79	D	0.80	N	0.80	C	0.79	N	0.66	N
N. Harbor/Kettner	D	0.85	0.84	N	0.85	D	0.83	D	0.84	N	0.83	D	0.84	N	0.68	N
Broadway/Kettner	E	0.91	0.88	N	0.91	D	0.87	D	0.87	N	0.87	D	0.88	N	0.71	N
Broadway/Pacific	F	1.19	1.21	Y	1.19	E	1.18	F	1.18	Y	0.96	E	0.99	Y	0.96	N
Hawthorn/Pacific	D	0.85	0.79	N	0.85	C	0.74	C	0.79	N	0.76	C	0.79	N	0.73	N
Broadway/Front	E	0.92	0.93	Y	0.92	E	0.93	E	0.93	Y	0.94	E	0.93	Y	0.82	N
Ash/Front	B	0.66	0.66	N	0.66	B	0.66	B	0.66	N	0.69	B	0.66	N	0.62	N

a LOS--level of service.
b ICU--intersection capacity utilization.
c Under Alternatives A and F, the service level is shown for the intersection of Harbor Drive/C Street due to the establishment of the park and the realignment of Broadway.
d Under Alternative F, the service level reflects changes in travel patterns due to the closure of Broadway between Pacific Highway and Harbor Drive.

Source: Korve Engineering, Inc. 1989.

The open space shown in Alternative F is bounded by Pacific Highway, E Street, Harbor Drive, and the new connection to Harbor Drive north of Broadway (e.g., B Street or C Street). Alternative F would require the full vacation of Broadway, between Pacific Highway and Harbor Drive, and would not provide any internal streets. Existing and future traffic on Broadway destined for Harbor Drive would be diverted onto Pacific Highway and use either the new connection to Harbor Drive north of Broadway or E Street for access. The intersection of Harbor Drive and the new connection to Harbor Drive north of Broadway would operate at service level B with the installation of a traffic signal. The intersection is projected to operate at service level C under Alternative F; these operating conditions would be better than for the remaining alternatives due to its conversion to a T-intersection.

Vehicular Access to the Project

The primary access to the site for all seven alternatives is provided via Pacific Highway. The intersections of Pacific Highway with E Street, F Street, and G Street would be signalized to provide for the primary movements into and out of the designated parking facilities. Each of the alternatives would also have a secondary access via connections to Harbor Drive. If the distance between the parking facility access driveway and the adjacent major street is less than the estimated queue length, the roadway segment would be significantly affected. Access to individual parking facilities would, therefore, be located between Pacific Highway and Harbor Drive to provide sufficient queueing space. The lane configurations along E Street, F Street, and G Street are shown in Figure 4-16.

The segments of E Street, F Street, and G Street located between Harbor Drive and Pacific Highway would have a three lane section. This would allow for two outbound lanes at Pacific Highway which would include one exclusive left turn lane and a shared left/right lane. In order to maintain an adequate queueing area for outbound vehicles in these lanes, the parking garage access points should be located a minimum distance from the traffic signals at Pacific Highway. This distance is established on the basis of a queueing analysis for outbound traffic from the parking facilities during the p.m. peak hour. The following queueing analysis is conducted for each of the project alternatives.

The estimated queue lengths are summarized for each alternative in Table 4.2-8. This table indicates the peak outbound traffic demand, the adjusted volume per cycle, and the resulting queue lengths.

The signing plan for the parking facilities would be designed to direct site traffic to the signalized intersections along Pacific Highway. The access points along Harbor Drive, which would be a two-lane facility along the western boundary of the project site, would be controlled by stop signs on the minor street approach.

Alternative E would provide driveways on Pacific Highway at E Street, F Street, and G Street. These driveways would access surface parking lots that would serve the Navy office uses on the site. The lots would be open for public pedestrian circulation from Pacific Highway to the waterfront area.

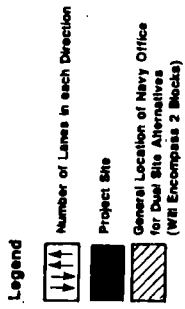
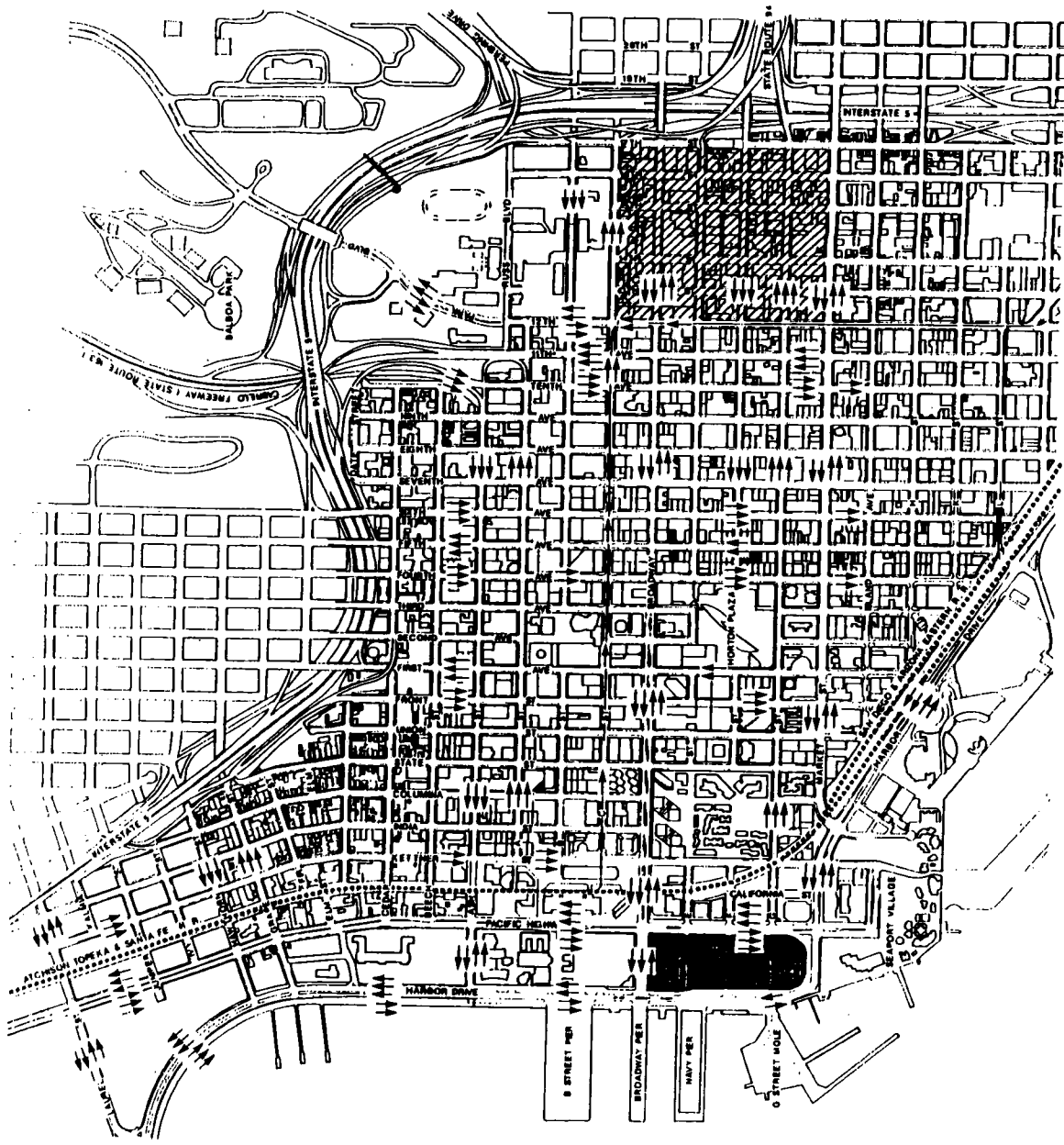
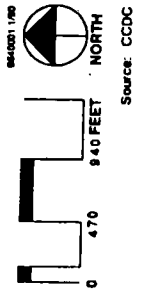


Figure 4-16

Future Long-Term Lane Configuration



Navy Broadway Complex Project



TABLE 4.2-8

PROJECT ACCESS QUEUE LENGTHS
P.M. Peak Hour

Alternative	Access Street	At Pacific Highway			At Harbor Drive		
		Outbound Volume	Adjusted ^a Volume per Cycle	Queue ^b Length	Outbound Volume	Adjusted ^a Volume per Cycle	Queue ^b Length
A	E Street	400	12	120 ft	300	10	100 ft
	F Street	320	10	100 ft	130	4	40 ft
	G Street	300	10	100 ft	160	6	60 ft
B	E Street	490	14	140 ft	190	6	60 ft
	F Street	320	10	100 ft	130	4	40 ft
	G Street	300	10	100 ft	160	6	60 ft
C	E Street	230	8	80 ft	100	4	40 ft
	F Street	270	8	80 ft	120	4	40 ft
	G Street	300	10	100 ft	160	6	60 ft
D	E Street	400	12	120 ft	180	6	60 ft
	F Street	230	8	80 ft	110	4	40 ft
	G Street	300	10	100 ft	160	6	60 ft
E	E Street	145	4	40 ft	55	2	20 ft
	F Street	90	4	40 ft	40	2	20 ft
	G Street	160	6	60 ft	60	2	20 ft
F	E Street	305	10	100 ft	270	8	80 ft
	F Street	370	12	120 ft	160	6	60 ft
	G Street	400	12	120 ft	200	6	60 ft
G	E Street	75	4	40 ft	-	-	-
	F Street	-	-	-	-	-	-
	G Street	120	4	40 ft	-	-	-

a The adjusted volume per cycle is based on a 100 second cycle length and a peaking factor of 0.8.

b The queue length dimensions are based on two outbound lanes on all of the access streets at both Pacific Highway and Harbor Drive. It is also based on a car length of 20 feet per vehicle.

Alternative G would maintain the existing building structures on the site and the gated security area around the project boundary. It would allow vehicular access to the site by Navy personnel only and would prohibit pedestrian movements to the waterfront. Alternative G results in no change to the existing circulation system around the site.

The railroad spur located on E Street would be maintained with each of the designated alternatives. It presently receives infrequent use (e.g., three to four trains per year) and is designated for Navy operational purposes. The rail spur would be located in the left-turn lane for joint use by vehicles and rail.

Long-Term Parking Conditions

The following assessment of future parking conditions related to the project is based on the identification of the proposed parking supply, the parking demand, and a Transportation Demand Management (TDM) plan. The purpose of a TDM plan is to provide programs to encourage the use of alternative modes of transportation, thereby reducing the demand for onsite parking for use by single occupant vehicles. This parking assessment utilizes recent data developed in the ongoing Parking Management Study developed by the City of San Diego for the Centre City and Balboa Park areas.¹⁷

The proposed onsite parking supply for the project alternatives was established through the application of parking ratios for the different land use types. The base parking ratio for Navy office uses is 1.0 per 1,000 square feet; an additional allotment of 0.23 spaces per 1,000 square feet is made to accommodate the storage of fleet vehicles for official business use.

Office (private):	1.00 spaces per 1,000 SF
Office (Navy):	1.00 spaces per 1,000 SF
Hotel:	0.75 spaces per room
Retail:	4.00 spaces per 1,000 SF

The use of these parking rates results in an onsite parking supply for each alternative as shown in Table 4.2-9, page 4-62. The onsite supply ranges from 425 spaces for Alternative G (no action) to 3,355 spaces for Alternative B. Alternative D would have 2,905 onsite spaces and 1,205 spaces at the alternative Navy office site. Alternatives A and F would each have 3,105 spaces and Alternative C would have 2,455 spaces.

The City of San Diego has no minimum or maximum parking requirements for development in the Centre City area. The parking supply ratios applied to the various land uses in the project are based on surveys of typical supply levels provided in recent Centre City projects. The development of a parking management plan for the Centre City area is the primary objective of the ongoing Parking Management Study for the Centre City and Balboa Park areas.

The parking demand for the various project alternatives determines the level of parking that must be accommodated by the project. The initial parking demand calculations are based on demand rates for typical suburban projects that do not consider the increased use of alternative transportation modes (transit, carpooling, shared parking, etc.) that occurs in downtown areas. As such, the demand rates are not meant to indicate a minimum level of onsite parking that would be required for the project alternatives. Rather, the initial parking demand levels are used primarily to establish how much of the parking demand is met by the onsite supply and what proportion of the demand would

be met by other transportation modes. The parking demand rates used in this assessment, based on an ongoing survey being conducted in Centre City, are as follows:

- Office uses: 2.5 per 1,000 S.F.
- Retail uses: 1.0 per 1,000 S.F.
- Hotel uses: 1.0 per room

The parking demand projections shown in Table 4.2-9 indicate that the onsite supply provided for the various project alternatives would serve between 20 and 55 percent of the total demand. Alternatives A, B, C, D, and F would provide a parking supply that would satisfy between 50 and 55 percent of the projected demand onsite. Alternative E would serve 40 percent of its total demand onsite. Finally, Alternative G, the no build option, would provide an onsite supply that serves 21 percent of the estimated demand.

The future parking needs of each alternative will be met through a combination of onsite parking, transit, other modes, and onsite Travel Demand Management measures. This would include the application of such Travel Demand Management (TDM) programs as improved transit use through better service and accessibility, increased ridesharing through provision of reserved carpool spaces, and development of shared parking through a mix of land uses. It would be provided through the application of three primary programs.

- Transit: based on the proximity of the project to two LRT stations on the Bayside LRT line, as well as the provision of transit information to future office and hotel employees.
- Ridesharing: provision of reserved carpooling spaces at desirable locations within the parking facilities.
- Mixed Use: development of shared use of the parking facilities through the close proximity of the office and hotel uses, which have substantially different peaking characteristics.

Table 4.2-10 indicates the level of parking that would be accommodated by the project alternatives both without and with TDM. Alternatives A, B, D, E, and F would accommodate 80 percent of the parking demand, without TDM, and would require that 20 percent of the demand be met by off-site parking. Alternative C would meet 85 percent of its parking demand without TDM, thus requiring that 15 percent of the demand be met by offsite parking. Alternative G, the no build scenario, would meet only 50 percent of its parking demand without TDM. This would require that 50 percent of its demand be met by offsite parking.

The addition of TDM to the seven project alternatives incorporates a mix of measures designed to meet the full parking needs of the project. The successful application of TDM measures to reduce the level of vehicular traffic by increasing transit and ridesharing use has been documented in San Diego through surveys of major downtown employers. There would be no reliance on offsite facilities to meet the parking demand for Alternatives A, B, C, D, and F. Alternative E would experience a parking short-fall of 14 percent that would have to be met by the use of offsite parking facilities. Approximately 50 percent of the total demand for Alternative G (no action) would be met by offsite facilities.

**TABLE 4.2-9
PROJECT PARKING DATA**

Alternative	Land Use	Intensity	Supply	Demand	
A	Office (private)	650,000 SF	650	1,625	
	Office (Navy)	1,000,000 SF	1,000 ^a	2,500	
	Hotel	1,500 rooms	1,125	1,500	
	Retail	25,000 SF	<u>100</u>	<u>25</u>	
	Total			2,875^a	5,650
B	Office (private)	900,000 SF	900	2,250	
	Office (Navy)	1,000,000 SF	1,000 ^a	2,500	
	Hotel	1,500 rooms	1,125	1,500	
	Retail	25,000 SF	<u>100</u>	<u>25</u>	
	Total			3,125^a	6,275
C	Office (Navy)	1,000,000 SF	1,000 ^a	2,500	
	Hotel	1,500 rooms	1,125	1,500	
	Retail	25,000 SF	<u>100</u>	<u>25</u>	
	Total			2,225^a	4,025
D	Office (private)	1,430,000 SF	1,430	3,575	
	Office (Navy)	20,000 SF	20 ^a	50	
	Hotel	1,700 rooms	1,350	1,700	
	Retail	25,000 SF	<u>100</u>	<u>25</u>	
		Onsite Subtotal		2,900^a	5,350
	Offsite Navy	980,000 SF	<u>980^a</u>	<u>2,450</u>	
	Total			3,880^a	7,800
E	Office (Navy)	1,000,000 SF	<u>1,000^a</u>	<u>2,500</u>	
	Total		1,000^a	2,500	
F	Office (private)	650,000 SF	650	1,625	
	Office (Navy)	1,000,000 SF	1,000 ^a	2,500	
	Hotel	1,500 rooms	1,125	1,500	
	Retail	25,000 SF	<u>100</u>	<u>25</u>	
	Total			2,879^a	5,650
G	No new buildings	-	425	2,020	

a This does not include spaces used for storage of Navy fleet vehicles (230 spaces with each alternative).

TABLE 4.2-10
PARKING NEEDS ASSESSMENT
Modal Distribution by Land Use Type
(Percentage)

Alternatives	<u>Without TDM</u>					<u>With TDM</u>					
	On-site	Shared Parking	Transit	Other ^a	Total	TDM site	Shared Parking	Transit	Other ^a	Total	
Alt. A											
Office	40	16	15	5	76	24	40	16	15	5	100
Hotel	75	16	15	-	100+	15	75	16	15	-	100+
Retail	85	-	15	-	100	15	85	-	15	-	100+
Alt. B											
Office	40	16	15	5	76	24	40	16	15	5	100
Hotel	75	16	15	-	100+	15	75	16	15	-	100+
Retail	85	-	15	-	100	15	85	-	15	-	100+
Alt. C											
Office	40	24	15	5	84	16	40	24	15	5	100
Hotel	75	24	15	-	100+	15	75	24	15	-	100+
Retail	85	-	15	-	100	15	85	-	15	-	100+
Alt. D											
Office	40	20	15	5	80	20	40	20	15	5	100
Hotel	75	20	15	-	100+	19	75	20	15	-	100+
Retail	85	-	15	-	100	15	85	-	15	-	100+
Alt. E											
Office	40	-	15	5	60	25	40	-	15	5	85
Alt. F											
Office	40	16	15	5	76	24	40	16	15	5	100
Hotel	75	16	15	-	100+	15	75	16	15	-	100+
Retail	85	-	15	-	100	15	85	-	15	-	100+
Alt. G											
No build	20	-	15	15	50	-	20	-	15	15	50

^a The "other" category includes a 5 percent allowance for office uses located within the core area of the Centre City.

A substantial portion of the parking facilities designated for the commercial office and the Navy office uses would be available during the weekday evening and weekend periods for public use. The provision of these parking spaces would assist in alleviating projected parking shortages for tourists in the Central Bayfront area.

Long-Term Transit Conditions

The project alternatives would generate a substantial number of transit trips due to the proximity of the project site to the Bayside Light Rail Transit (LRT) line and the level of bus service provided to the study area. The project site is within two blocks of the Santa Fe and Seaport Village stations on the proposed Bayside LRT Line, scheduled to begin operation in late 1990.

The project provides pedestrian corridors that can be linked through other planned pedestrian corridors to the LRT stations. In addition, a total of 10 bus routes provide service within walking distance of the project site.

The level of daily transit riders that are estimated for the project alternatives are based on a 25 percent utilization by office employees and 20 percent by hotel employees. These patronage levels are based on the future travel demand profiles established in the parking management program for the Centre City area.

The future transit demand is allocated between LRT and bus patrons on the basis of existing ridership levels. The Bayside LRT line is estimated to attract approximately 10 percent of the employees from the future project site. Other transit facilities, such as bus, express bus, and AMTRAK commuter trains, are estimated to carry between 10 percent (hotel) and 15 percent (office) of the employees. The projected number of daily person trips on transit facilities is shown in Table 4.2-11.

**TABLE 4.2-11
LONG-TERM TRANSIT USE
Daily Person Trips**

Alternative	Bayside LRT Line	Bus/Other Transit
A	1,700	2,400
B	1,900	2,800
C	1,100	1,600
D (Navy Broadway Complex site)	1,600	2,200
(Centre City east site)	900	1,300
E	900	1,300
F	1,700	2,400
G	500	700

4.2.3 MITIGATION MEASURES

The following improvement programs are suggested to mitigate the impacts on the transportation infrastructure created by both project-related and cumulative development.

Short-Term Improvements

The assessment of short-term traffic conditions on the roadway network indicates that there are no significant impacts under any of the seven project alternatives. The 13 study intersections would operate at service level B or better under all options. As no significant impacts were identified in the short-term analysis, this section will focus on mitigations for the long-term scenario.

Long-Term Improvements

Alternatives A, B, C, D, E, and F

Intersections

The long-term intersection assessment indicates that with development of either of these six alternatives, up to four intersections would be significantly affected as listed below:

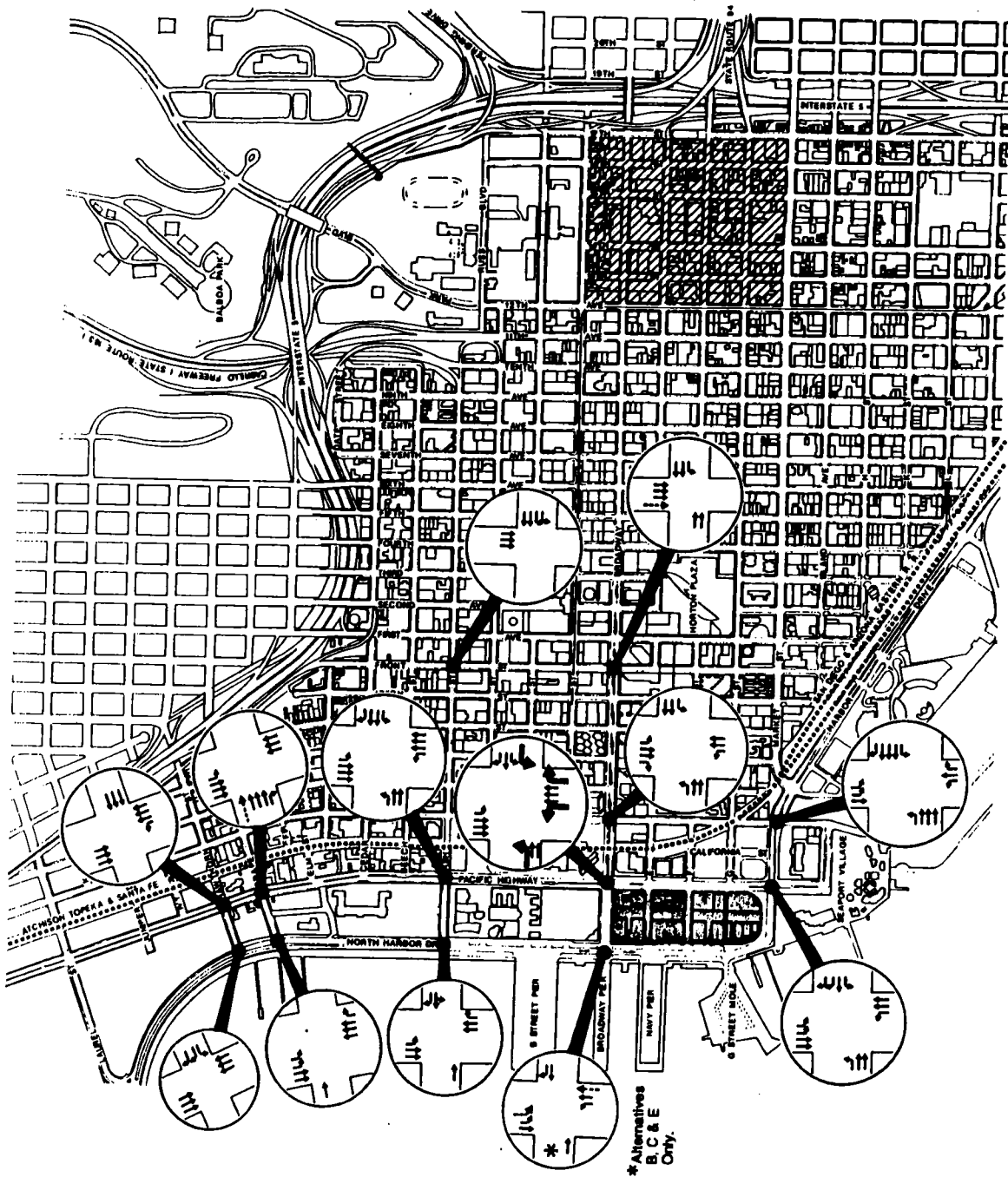
- Grape/Pacific Highway (All six alternatives)
- Broadway/Harbor (Alternatives B, C, and E)
- Broadway/Pacific Highway (All six alternatives)
- Broadway/Front (All six alternatives)

Planned Improvements -- The long-term network for the Centre City area is based on a series of recommendations in the CCTAP (1985) and, more recently, by CCDC in the Sixth Amendment of the Columbia Redevelopment Plan (1989). These recommendations indicate suggested lane configurations for the major roadways in the Centre City. The following intersection improvements are planned by CCTAP and CCDC and would reduce the project's contribution to intersection impacts to a level that is less than significant. These improvements, and others to be implemented as a result of the project alternatives, are depicted in Figure 4-17.

In addition, the proposed alignments of Harbor Drive, Pacific Highway, and the new connection to Harbor Drive north of Broadway are shown in Figures 4-18 and 4-19. The improvements shown on these figures would be required to provide adequate operating conditions with the closure of Broadway under Alternatives A and F.

- Pacific/Grape: Pacific Highway currently provides three through lanes in each direction and a southbound left-turn pocket. Grape Street has three eastbound lanes and an eastbound right-turn pocket. The suggested improvement is the restriping and reconfiguration of Grape Street to provide for a 4-lane section, as recommended in CCTAP. These improvements would result in service level D conditions under the long-term scenario. This improvement, to be installed by the City of San Diego, should be implemented when the service levels at this intersection exceed acceptable levels based on current traffic counts.





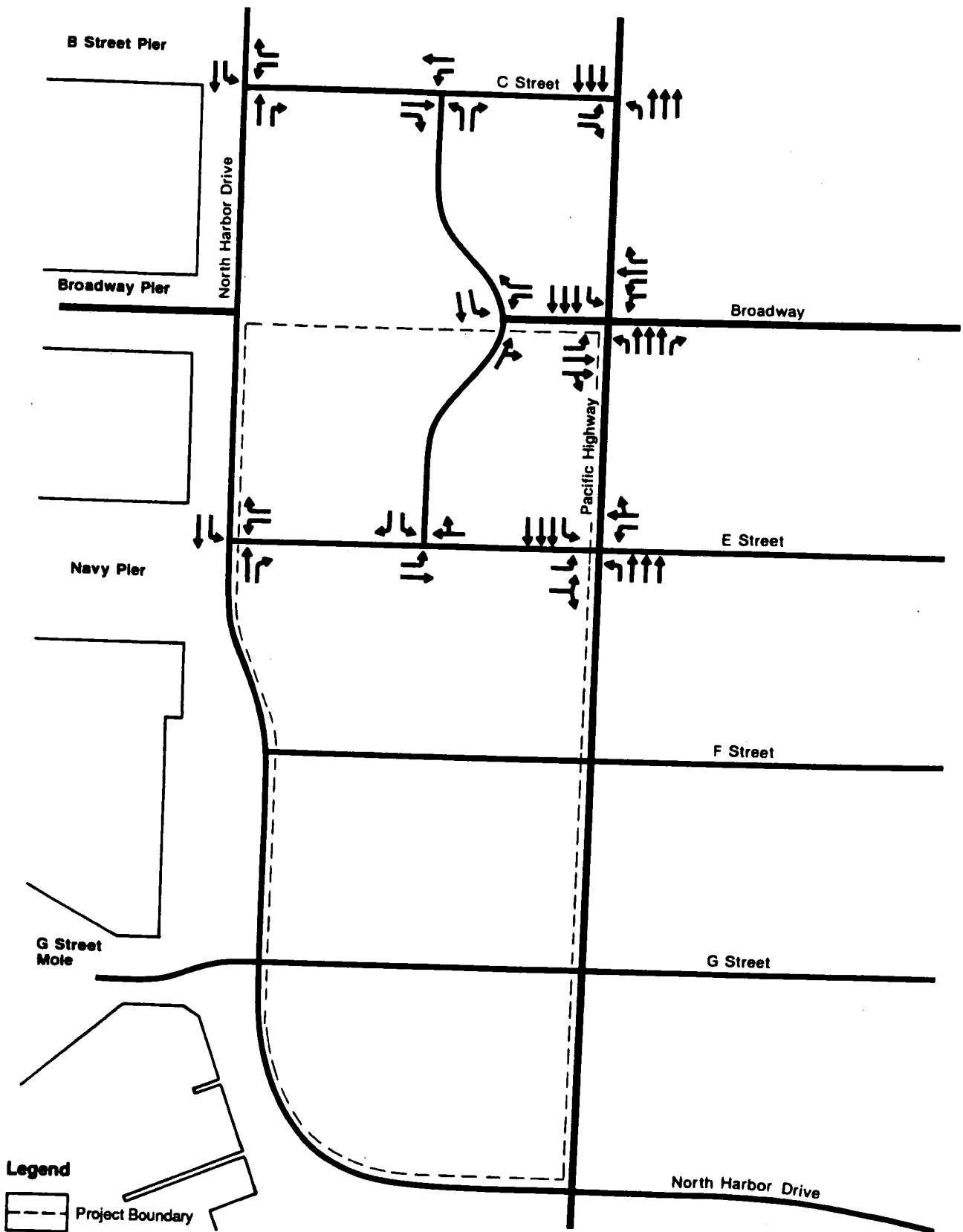
4-66

Figure 4-17

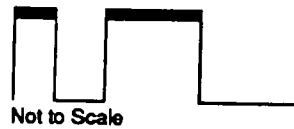
Future Intersection Configuration



Navy Broadway Complex Project



Future Intersection Configurations
 Alternative A
 Navy Broadway Complex Project

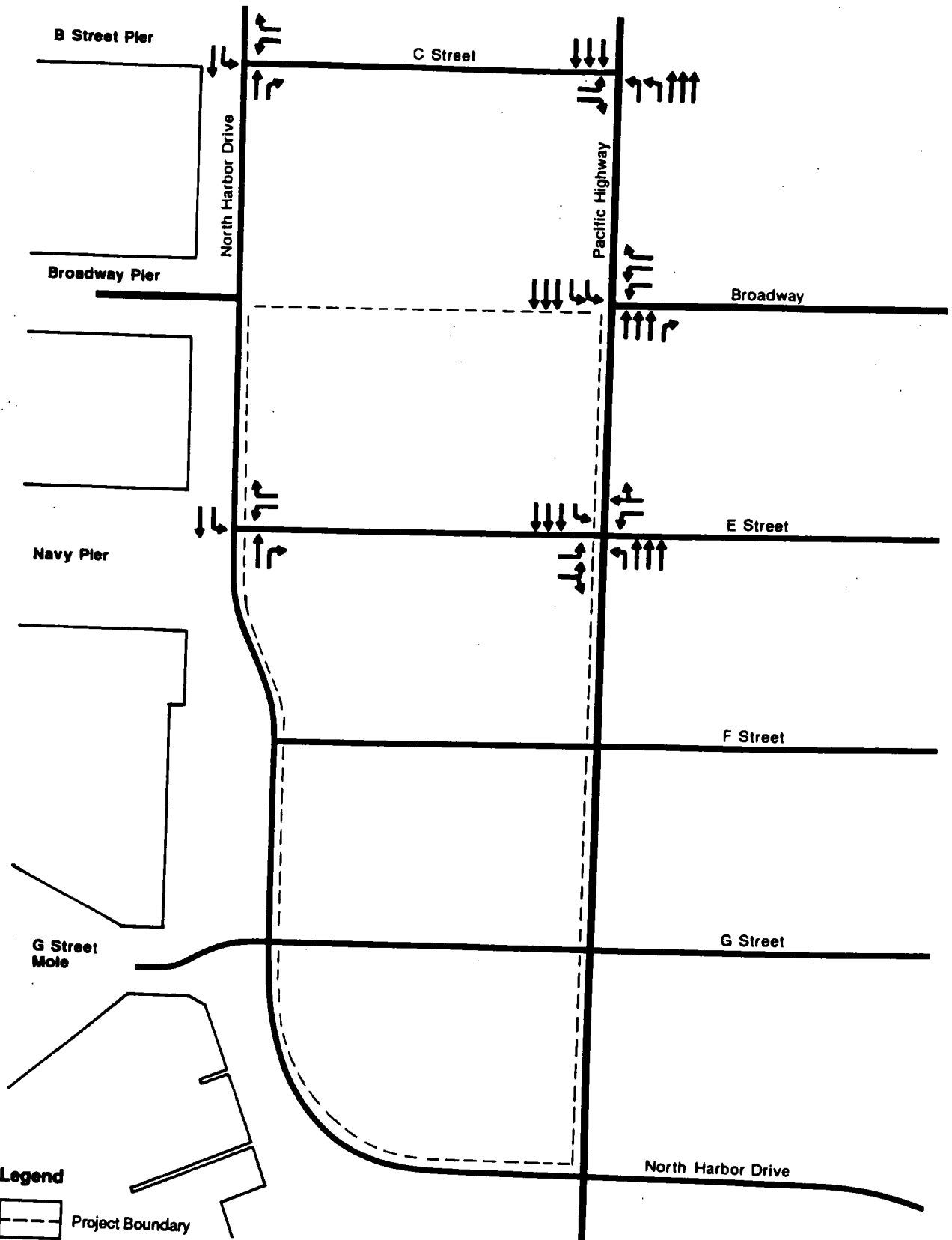


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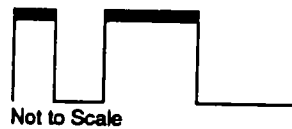
Figure 4-18





Legend
 - - - Project Boundary

Future Intersection Configurations
 Alternative F
 Navy Broadway Complex Project



Not to Scale

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NORTH

Figure 4-19



- **Broadway/Front:** Broadway provides two through lanes in each direction and a westbound left-turn lane. Front Street has three through lanes in the southbound direction. The suggested improvement is the restriping and reconfiguration of Front Street to provide for a 4-lane section, as recommended in CCTAP. These improvements would result in service level D conditions under the long-term scenario. This improvement, to be installed by the City of San Diego, should be implemented when the service levels at this intersection exceed acceptable levels based on current traffic counts.

Improvements Associated With the Project -- The following mitigation measures are not included in the CCTAP or by CCDC, and would be required to mitigate the impacts of Alternatives A through F, as noted. These improvements would result in service level D conditions for Alternatives A, B, D, and F, and service level C conditions for Alternatives C and E.

- **Broadway/Pacific:** Pacific Highway currently provides three through lanes in each direction and a southbound left-turn lane. Broadway has two through lanes in each direction and a westbound left-turn lane. The improvements include the provision of additional turn lanes in the northbound, eastbound, and westbound directions. They would be constructed by the City of San Diego upon initiation of development of any block on the Navy Broadway Complex. These are summarized as follows:
 - Exclusive northbound left-turn lane
 - Exclusive northbound right-turn lane
 - Exclusive eastbound right-turn lane
 - Second westbound left-turn lane
- **Broadway/Harbor:** Harbor Drive currently provides one through lane and left-turn pockets in each direction. Broadway has two westbound through lanes and one eastbound through lane. The Sixth Amendment to the Columbia Redevelopment Plan includes a recommendation that Harbor Drive be widened to a six-lane section along this section of the waterfront. This recommendation would severely limit the amount of open space that could be provided along the waterfront. In addition, the widening of Harbor Drive is not consistent with recently adopted design principals by BCCG and CCPC, and as such, this improvement is not recommended. The suggested improvement for Alternatives B, C, D, and E is the widening of the immediate intersection of Broadway/Harbor to provide a second northbound through lane and a second southbound left-turn pocket. No mitigation measures are required at this intersection for Alternatives A, F, and G. Improvements to Broadway and Harbor Drive would be installed by the City of San Diego upon completion of the open space area at the foot of Broadway.
- A traffic signal at the intersection of Harbor Drive and the new connection to Harbor Drive north of Broadway would alleviate traffic impacts that result from the redirection of traffic around the proposed open space area (Alternatives A and F). Improvements to this intersection would be installed by the City of San Diego upon completion of the open space area at the foot of Broadway.

- A traffic signal at the intersection of Pacific Highway and the new connection to Harbor Drive north of Broadway would alleviate traffic impacts that would result from redirection of traffic around the proposed open space that entirely covers Block 1 (Alternative F). Improvements to this intersection would be installed by the City of San Diego upon completion of the open space area at the foot of Broadway.

The above mitigation measures would be implemented in a phased manner in conjunction with the development of individual blocks on the project site. The phasing plan for each stage of development is identified in a Development Agreement between the Navy and the City of San Diego. The phasing plan requires that associated mitigation measures be implemented in conjunction with the development of any individual block on the project site. This would include the installation of access-related improvements to Pacific Highway as well as the extension of E Street, F Street, or G Street from Harbor Drive to Pacific Highway. Table 4.2-12 provides a description of the improvement phasing plan as currently outlined in the development agreement.

The service levels at the four intersections are shown with the addition of the above mitigations in Table 4.2-13.

In addition, the following measure will reduce trip generation from the Navy Broadway Complex, and would be implemented by the project upon completion of each phase.

- Long-Term Travel Demand Management (TDM) Program: The alternative projects will incorporate a TDM program designed to reduce the number of vehicular trips, thereby reducing associated traffic impacts and parking needs. The TDM program will be put in place prior to the occupancy of any uses and will be incorporated into all commercial uses. As described earlier in the impacts section, this program could include a number of measures such as:
 - Onsite transit amenities
 - Transit pass sale and information area
 - Coordination of a rideshare matching system
 - Preferential carpool and/or vanpool parking
 - Onsite bike lockers
 - Development of pedestrian corridors to transit stops/stations
 - Shared parking arrangement through mix of land uses

Unavoidable Intersection Impacts -- There are no intersections where unavoidable adverse impacts would occur after implementation of the mitigation measures listed above.

Roadway Segments

As discussed in Section 4.2.2, page 4-47, 14 roadway segments would exceed their capacity in the long-term scenario. The segments are located along Ash Street, Broadway, Eleventh Avenue, Grape Street, Harbor Drive, Tenth Avenue and Pacific Highway. Although the development of Alternatives A through F would result in additional traffic at each of these segments, only substantial (and, therefore, significant) project contributions would occur along the following segments:

- Pacific Highway south of Broadway (all six alternatives)
- First Avenue south of Ash (Alternatives A, B, C, E, and F)

TABLE 4.2-12

**TRANSPORTATION IMPROVEMENT PHASING PLAN^a
Navy Broadway Complex Project Alternatives**

Development Increment	Facilities to Be Constructed
A. Development of any block	<ol style="list-style-type: none"> 1. Widen Pacific Highway to create exclusive left-turn lanes in northbound and southbound directions at E, F, and G Streets. 2. Widen Pacific Highway to create exclusive northbound left- and right-turn lanes at Broadway and Pacific Highway. 3. Restripe Broadway to create second left-turn pocket in westbound direction and new eastbound left-turn lane at Pacific Highway (except Alternative F). For Alternative F, restripe westbound Broadway to two right-turn and two left-turn lanes. Modify traffic signal, as needed.
B. Development of Block 3 and/or 4	<ol style="list-style-type: none"> 1. Construct new G Street between North Harbor Drive and Pacific Highway (40 feet curb-to-curb width). 2. Install traffic signal at G Street and Pacific Highway.
C. Development of Block 2 and/or 3	<ol style="list-style-type: none"> 1. Construct new F Street between North Harbor Drive and Pacific Highway (40 feet curb-to-curb width). 2. Install traffic signal at F Street and Pacific Highway.
D. Development of Block 1 and/or 2	<ol style="list-style-type: none"> 1. Construct new E Street between North Harbor Drive and Pacific Highway (52 feet curb-to-curb width). Install rubber railroad crossing on new E Street and across Pacific Highway and North Harbor Drive at E Street. 2. Install traffic signal at E Street and Pacific Highway. 3. Install traffic signal at E Street on North Harbor Drive (Alternatives A & F).
E. Development of Open Space	<ol style="list-style-type: none"> 1. Construct new C Street (or B Street, as needed) between North Harbor Drive and Pacific Highway (52 feet curb-to-curb width).
a For all alternatives, except as otherwise noted.	

TABLE 4.2-13

**LONG-TERM INTERSECTION SERVICE LEVELS WITH MITIGATIONS
P.M. Peak-Hour Conditions**

Intersection	Alt. A <u>LOS ICU</u>	Alt. B <u>LOS ICU</u>	Alt. C <u>LOS ICU</u>	Alt. D <u>LOS ICU</u>	Alt. E <u>LOS ICU</u>	Alt. F <u>LOS ICU</u>
Pacific/Grape	D 0.88	D 0.86	D 0.85	D 0.88	D 0.85	D 0.88
Harbor/Broadway	NA	D 0.81	C 0.73	NA	C 0.73	NA
Pacific/Broadway	D 0.89	D 0.87	C 0.77	D 0.89	C 0.77	D 0.87
Front/Broadway	D 0.86	D 0.85	D 0.89	D 0.86	D 0.89	D 0.86

Source: Korve Engineering, Inc.

Planned Improvements -- CCTAP and CCDC have programmed improvements that would mitigate roadway capacity exceedances at several of the 14 segments in the project vicinity. Programmed improvements are proposed for both of the segments for which the proposed alternatives would contribute to significant increases in traffic levels.

- First Avenue: The restriping and reconfiguration of First Avenue to provide for a 4-lane section, as recommended in CCTAP and CCDC plans. This improvement, to be installed by the City of San Diego, should be implemented when roadway volumes on this segment exceed acceptable levels based on current traffic counts.
- Pacific Highway: The proposed widening of Pacific Highway would mitigate future roadway conditions along this corridor. The improvement would be constructed by the City of San Diego in a phased manner upon development of individual blocks in the Navy Broadway Complex.

Unavoidable Roadway Segment Impacts -- There are no roadway segments where unavoidable adverse impacts would occur after implementation of the mitigation measures listed above.

ENDNOTES:

- 1 San Diego Association of Governments, 1987b.
- 2 City of San Diego, 1987c.
- 3 PRC Engineering, 1985.
- 4 Metropolitan Transit Development Board, 1987.
- 5 Wilbur Smith and Associates, 1987.
- 6 San Diego Association of Governments, 1988.
- 7 Commuter Computer.
- 8 Stave, City of San Diego, personal communication, 1988.
- 9 Berg, City of San Diego, personal communication, 1988.
- 10 San Diego Association of Governments, 1986.
- 11 Metropolitan Transit Development Board, op. cit.
- 12 Robenheimer, Metropolitan Transit Development Board, personal communication, 1988.
- 13 Stave, op. cit.
- 14 Pazargadi, City of San Diego, April 25, 1989.
- 15 Pazargadi, op. cit.
- 16 Pazargadi, op. cit.
- 17 Wilbur Smith Associates, 1988.

4.3 AESTHETICS AND VIEWSHED

4.3.1 AFFECTED ENVIRONMENT

Project Site Appearance

The Navy Broadway Complex is a fully developed site with 16 buildings that range in height from approximately 20 feet to 100 feet. Figure 4-20 is an aerial photograph of the site. Buildings 1 and 12, at 100-feet high, are the two most visually prominent buildings on the site. Both buildings are located on the northwestern two blocks of the site (see Figure 4-1, page 4-2), with Building 1 located adjacent to and south of Broadway and Building 12 located south of Building 1. No other buildings on the site are higher than 40 feet. Because of this size variation, Buildings 1 and 12 are visible from some of the more distant range viewsheds, whereas the remaining buildings on the site are generally visible only from nearby streets.

Structures on the project site, particularly Buildings 1 and 12, are well-maintained. The buildings are rectangular with minimal architectural variation. Buildings 1 and 12 are built to the property line along Harbor Drive, and Building 1 is built to the property line along Broadway. Fences and buildings on the project site block certain views from streets leading from the downtown core to the waterfront.

Public Views of the Site

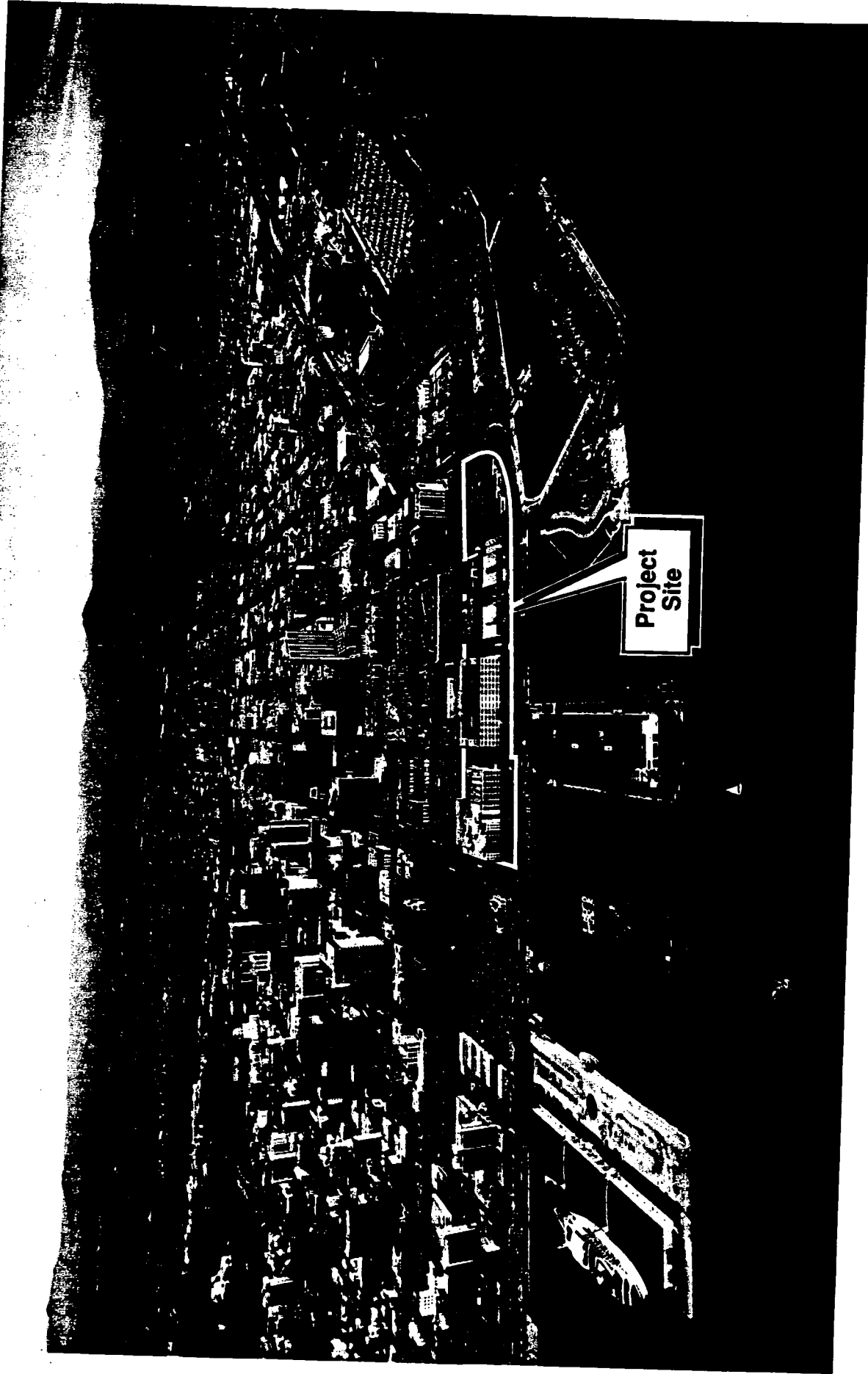
The project site is in a visually important area because of its proximity to the waterfront and its visibility from several key viewpoints. The project site is visible from three types of views:

- Panoramic views from Coronado and Harbor Islands across the bay.
- Gateway views from Harbor Drive at Laurel Street and I-5 at Olive Street looking south, and from Harbor Drive near the Convention Center looking north.
- Street-end views from the downtown along Broadway, E, F (Pantoja Park), G, and Market streets.

Photographs were taken of the project site and surrounding area from each of these viewpoints. The photograph viewpoint locations are depicted on Figure 4-21. Each photograph is followed by a visual simulation of Alternative A and Alternative F. Alternatives A and F were selected for visual simulations because they include the tallest proposed buildings of all the alternatives. The project site is discussed below in the context of these public views.

Panoramic Views

Figures 4-22 and 4-25 depict panoramic views of the site and surrounding area from Harbor Island and Coronado, respectively. The existing buildings on the project site are visually subordinate to several high-rise buildings in the nearby downtown core that are also visible from these viewpoints. Buildings 1 and 12 are the two most visible buildings on the site, with the remaining 14 buildings barely visible.

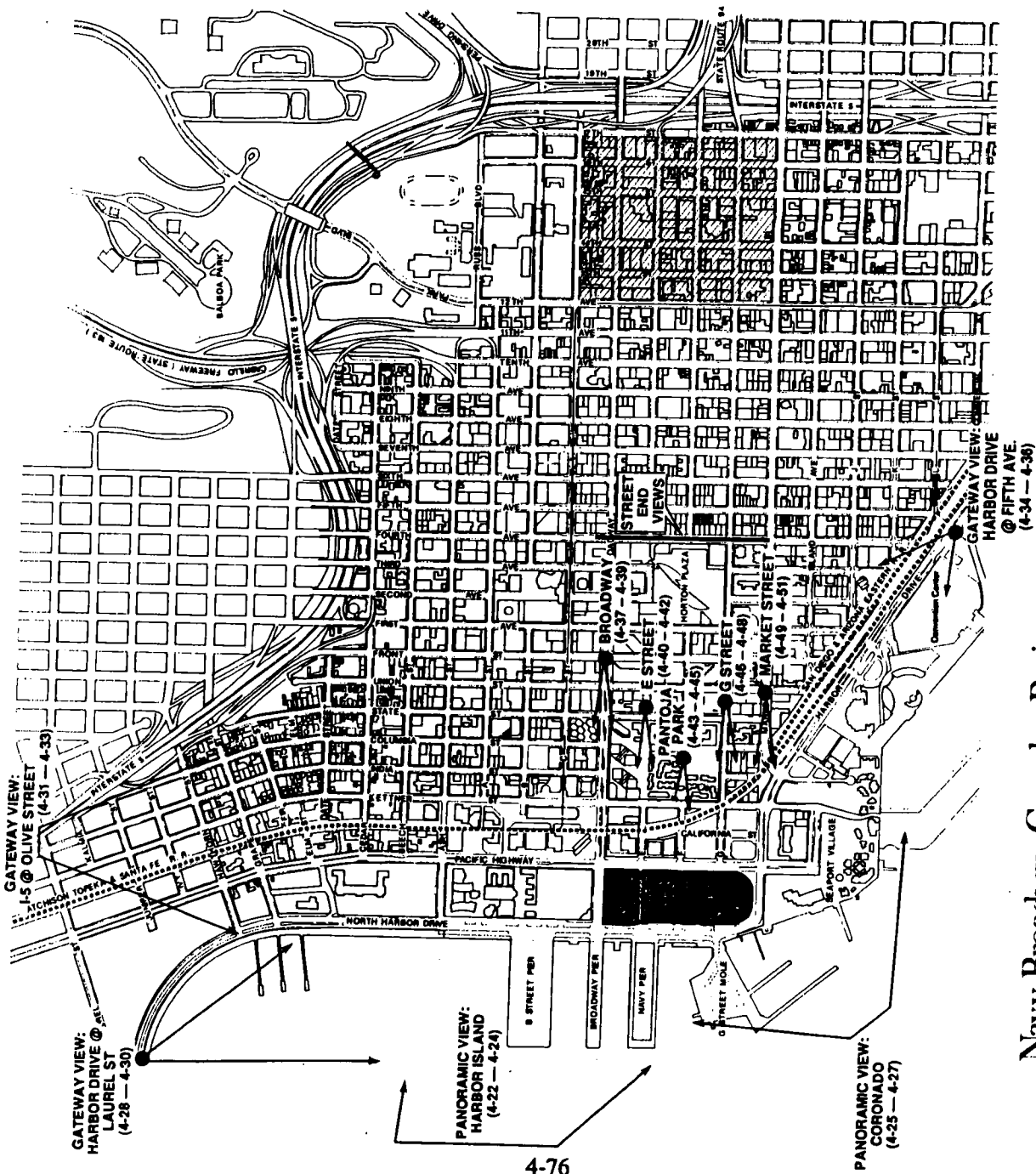


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Aerial View Project Site
Navy Broadway Complex Project

Figure 4-20





4-76

- Legend**
- Direction of Photograph
 - Figure on Which Viewshed is Shown
 - Project Site
 - Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

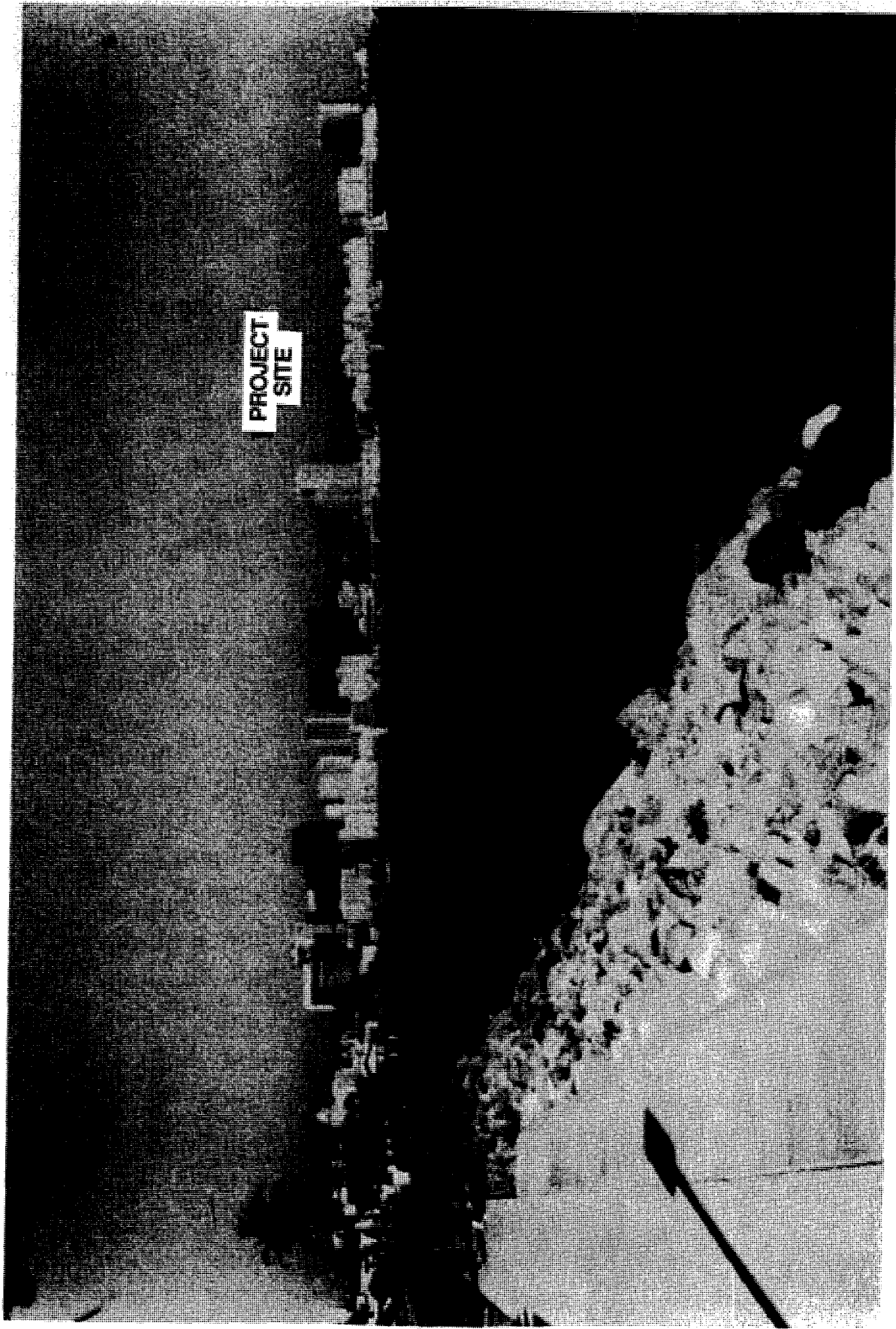
Figure 4-21

Viewshed Index Map



Navy Broadway Complex Project

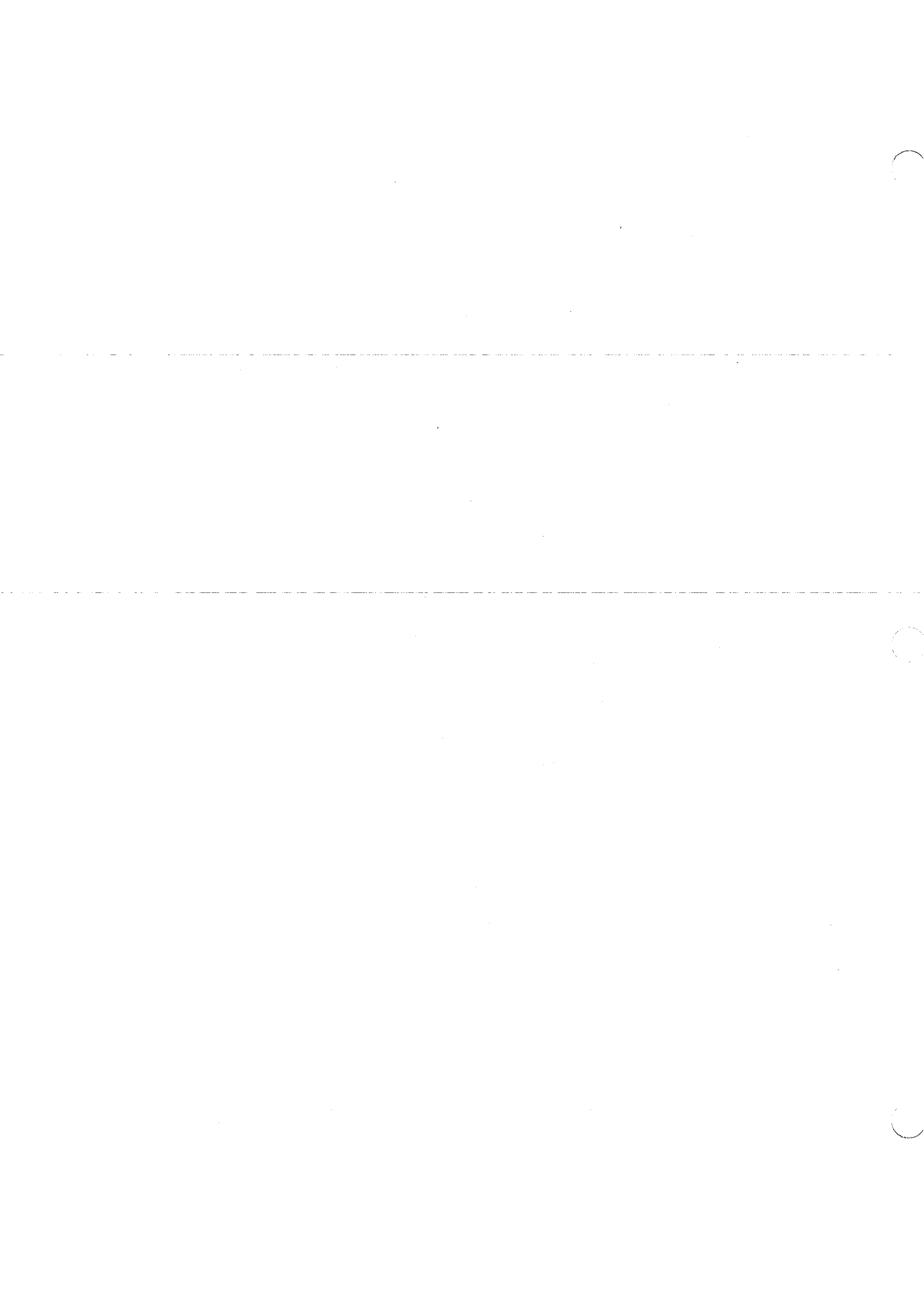


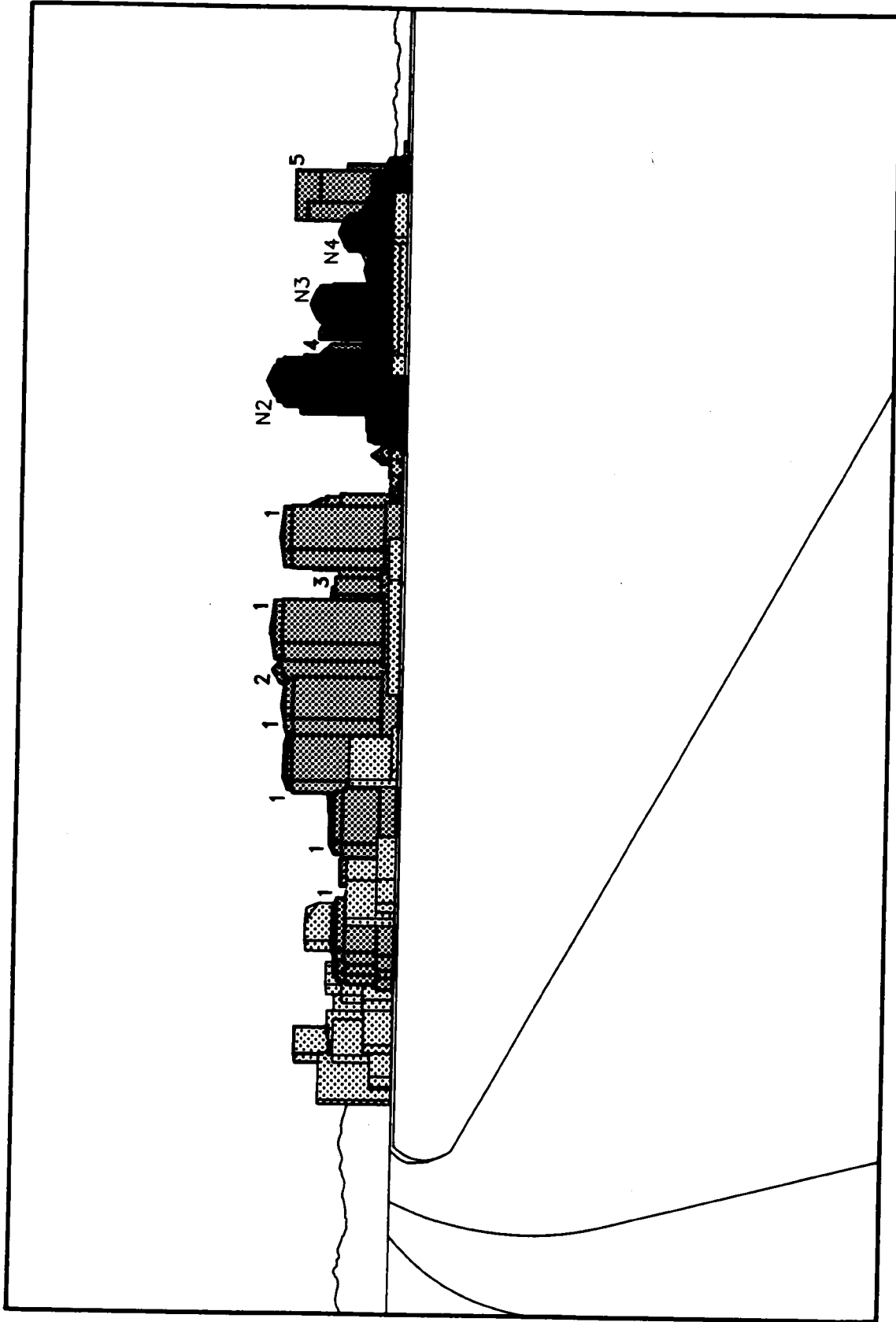


Panoramic View from Harbor Island
Navy Broadway Complex Project

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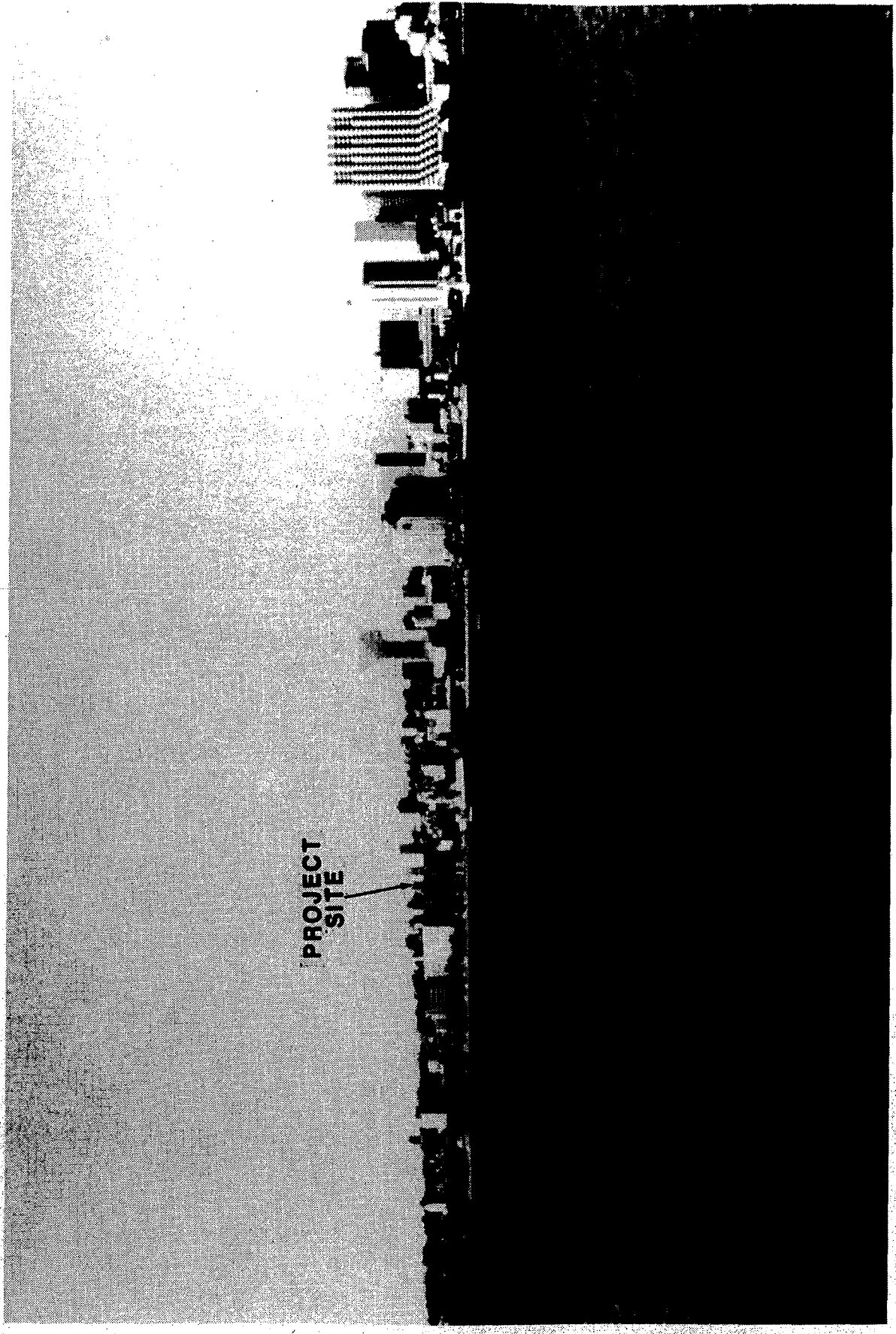
Figure 4-22





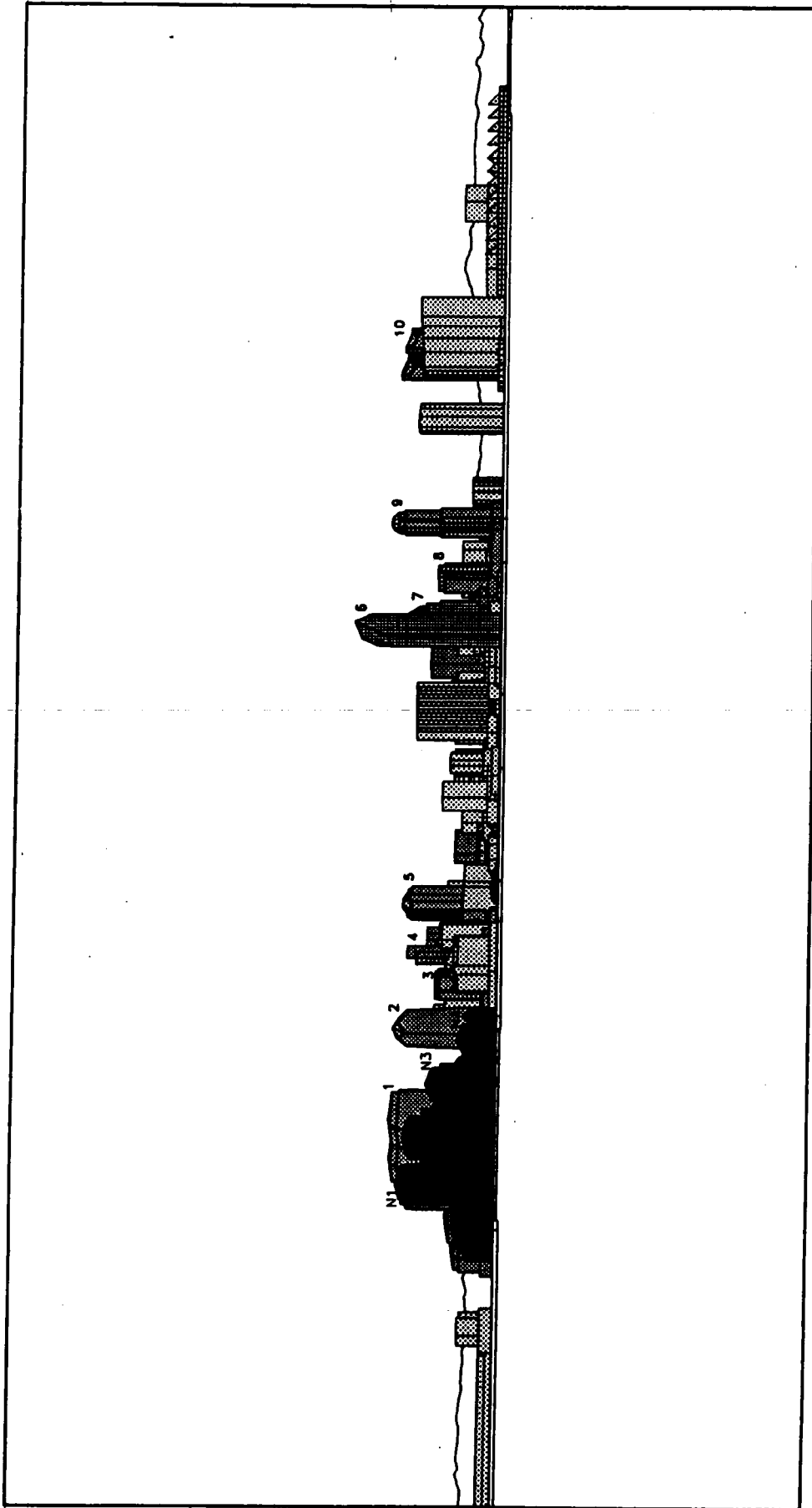
Panoramic View of Alternative F from Harbor Island Navy Broadway Complex Project

-  Existing
 -  Downtown Proposed
 -  Navy Broadway Complex (Block #)
-
- 1. Santa Fe Development
 - 2. Great American Plaza
 - 3. Koll Center
 - 4. One Harbor Drive
 - 5. Hyatt Regency






PROJECT
SITE

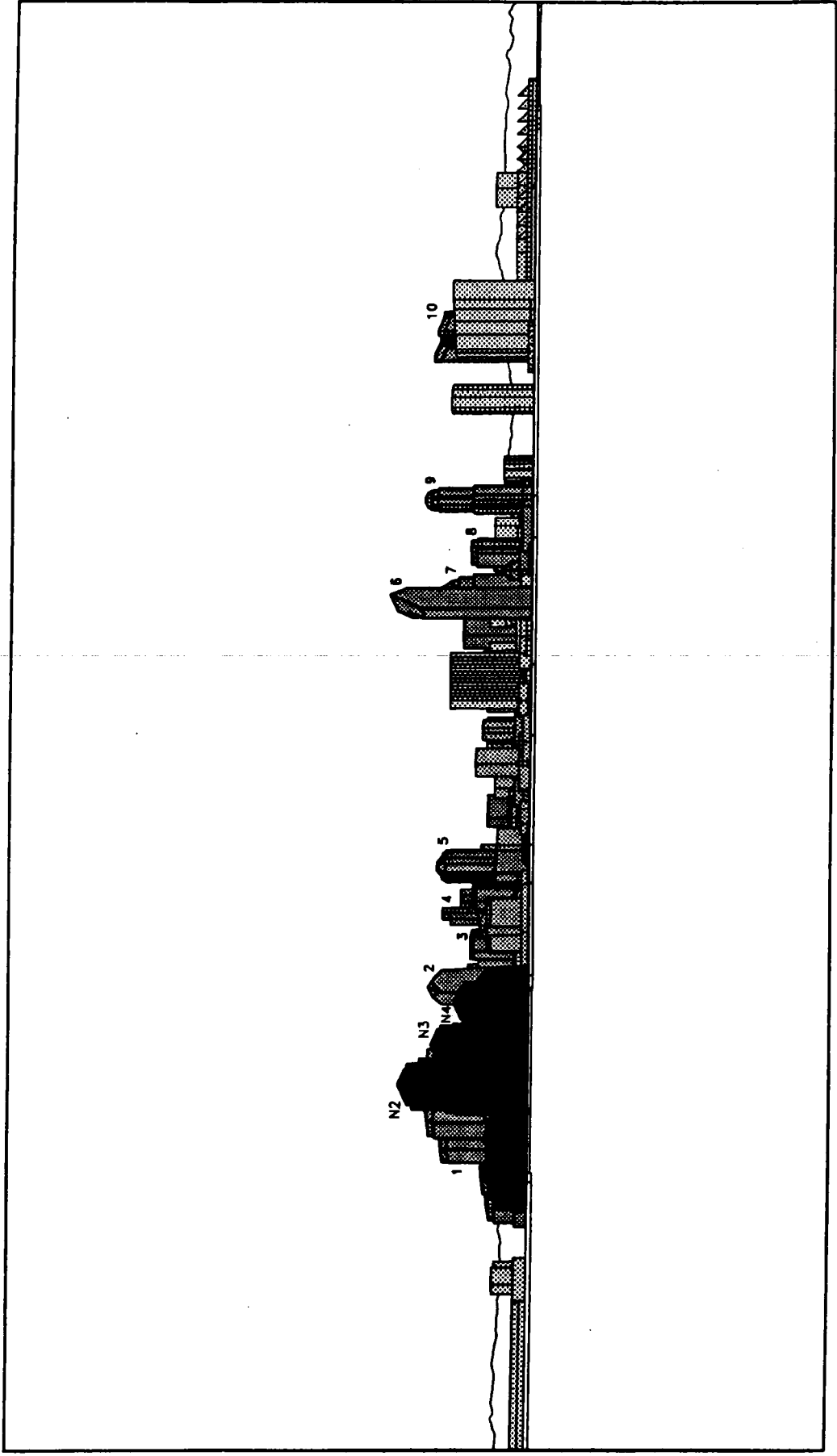
Panoramic View from Coronado Navy Broadway Complex Project






1. Santa Fe Development
2. Great American Plaza
3. Koll Center
4. Emerald-Shapery Center
5. The Huntington
6. Hyatt Regency
7. The Courtyard
8. Tyson Plaza
9. Roger Morris Plaza
10. One Harbor Drive

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Panoramic View of Alternative A from Coronado Navy Broadway Complex Project



- 1. Santa Fe Development
- 2. Great American Plaza
- 3. Koll Center
- 4. Emerald-Shapery Center
- 5. The Huntington
- 6. Hyatt Regency
- 7. The Courtyard
- 8. Tyson Plaza
- 9. Roger Morris Plaza
- 10. One Harbor Drive

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

**Panoramic View of Alternative F
from Coronado
Navy Broadway Complex Project**

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Figure 4-27

Major proposed buildings in the vicinity include the Santa Fe, Emerald Shapery, Koll Center, Great American, and the Hyatt Hotel projects. All include high-rise structures, with some up to 500 feet. Once developed, the skyline would fill in and appear more densely developed than it does currently.

Gateway Views

Figure 4-28 depicts the view of the site and surrounding area from Harbor Drive at Laurel Street, a "gateway" into the project area from the north. The high-rise buildings in the downtown core are visually less dominant in this view than in the views from Harbor Island and Coronado due to the view angle. The most dominant features are the bay and the boats docked in the marina. Buildings on the project site, though visible from this viewpoint (particularly Buildings 1 and 12), are in the background of the viewshed and are not prominent.

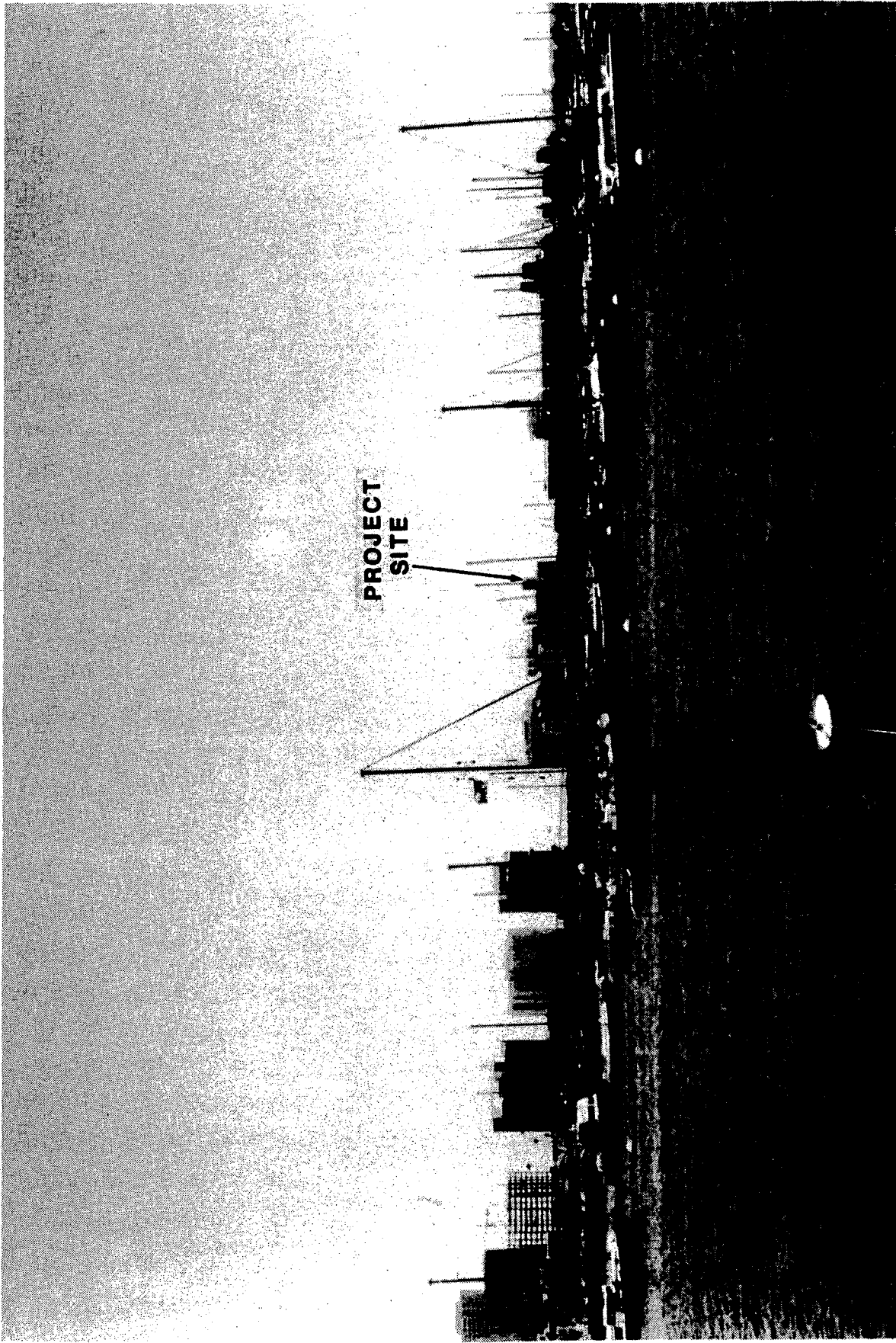
The gateway view along I-5 at Olive Street (see Figure 4-31) is dominated by structures in the foreground and by the high-rise buildings in the downtown core. The project site is in the distant background from this viewpoint, and is not visually prominent.

Figure 4-34 depicts the view toward the site from the southern gateway at Harbor Drive and Fifth Avenue near the Convention Center. Buildings 1 and 12 are the only buildings visually evident on the site from this point. The Embassy Suites Hotel and other structures in the foreground dominate the viewshed from this viewpoint, with Buildings 1 and 12 in the background of the viewshed.

Street-End Views

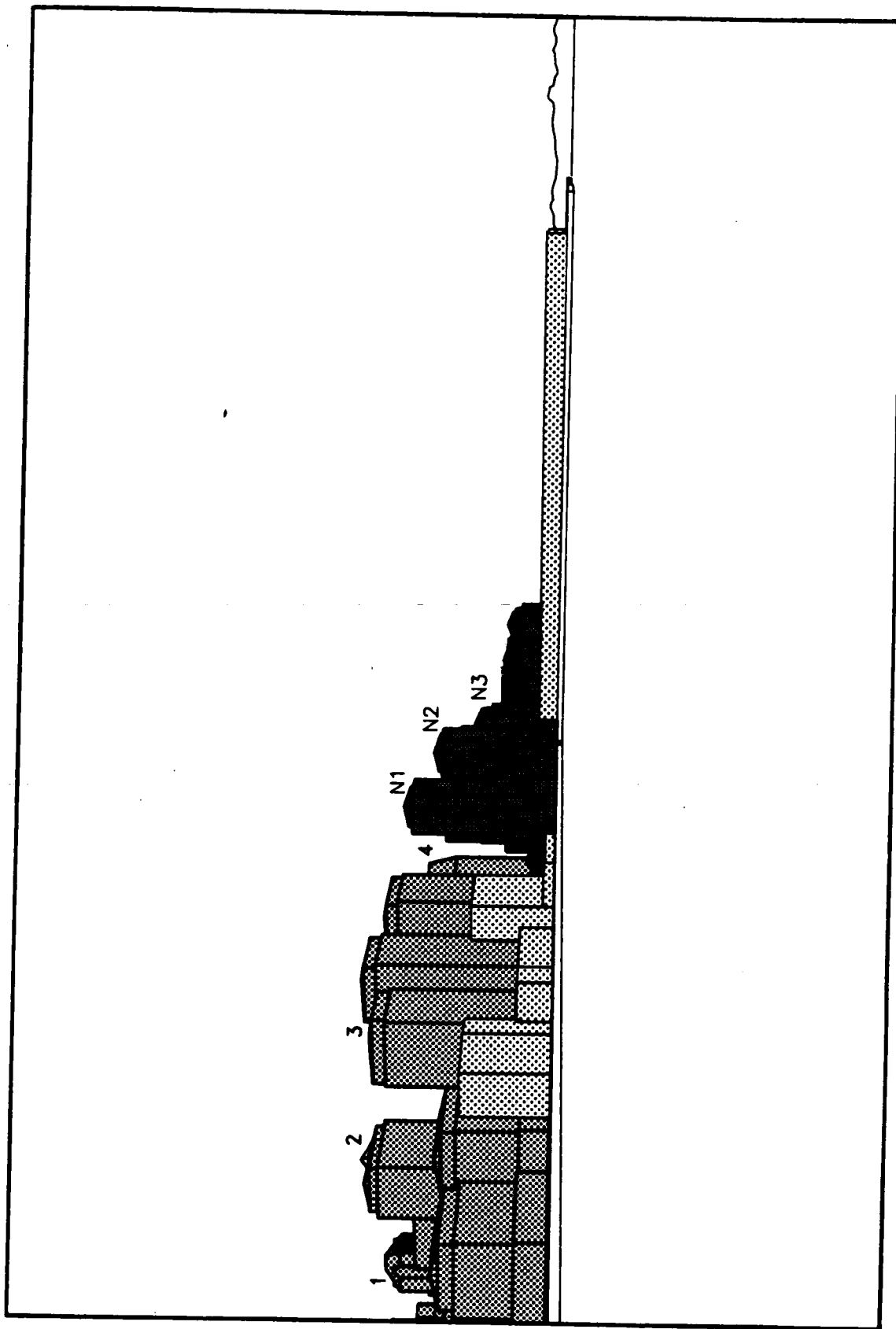
Street-end views toward the site are depicted from Broadway (Figure 4-37), E Street (Figure 4-40), F Street (at Pantoja Park, Figure 4-43), G Street (Figure 4-46), and Market Street (Figure 4-49). Views of the site from these locations are described below:

- **Broadway:** Project site buildings are almost entirely obstructed by other buildings in the viewshed (Figure 4-37). Within two blocks of the site, the project structures, particularly Building 1, become more prominent in the viewshed, although other facilities, such as the Broadway Pier and B Street Pier, also become visually prominent.
- **E Street:** As shown in Figure 4-40, existing buildings on the project site are visible in the background of the viewshed. The view from E Street toward the bayfront is obstructed by a chain link fence on the site and by the Navy Pier. The bay is not visible from E Street.
- **F Street:** The view from F Street (Figure 4-43) is shown from Pantoja Park. The view of the site from this point is largely obstructed by vegetation and residential development, although Building 12 is visible. At F Street adjacent to the site, the view through the site of the bayfront is obstructed by chain link fences.
- **G Street:** The view along G Street toward the bayfront is largely unobstructed. Buildings on the project site in this viewshed are one to two floors high and are not visually prominent in the viewshed (see Figure 4-46). Adjacent to the site, the view through the site toward the bayfront is largely obstructed by Building 9.



**PROJECT
SITE**

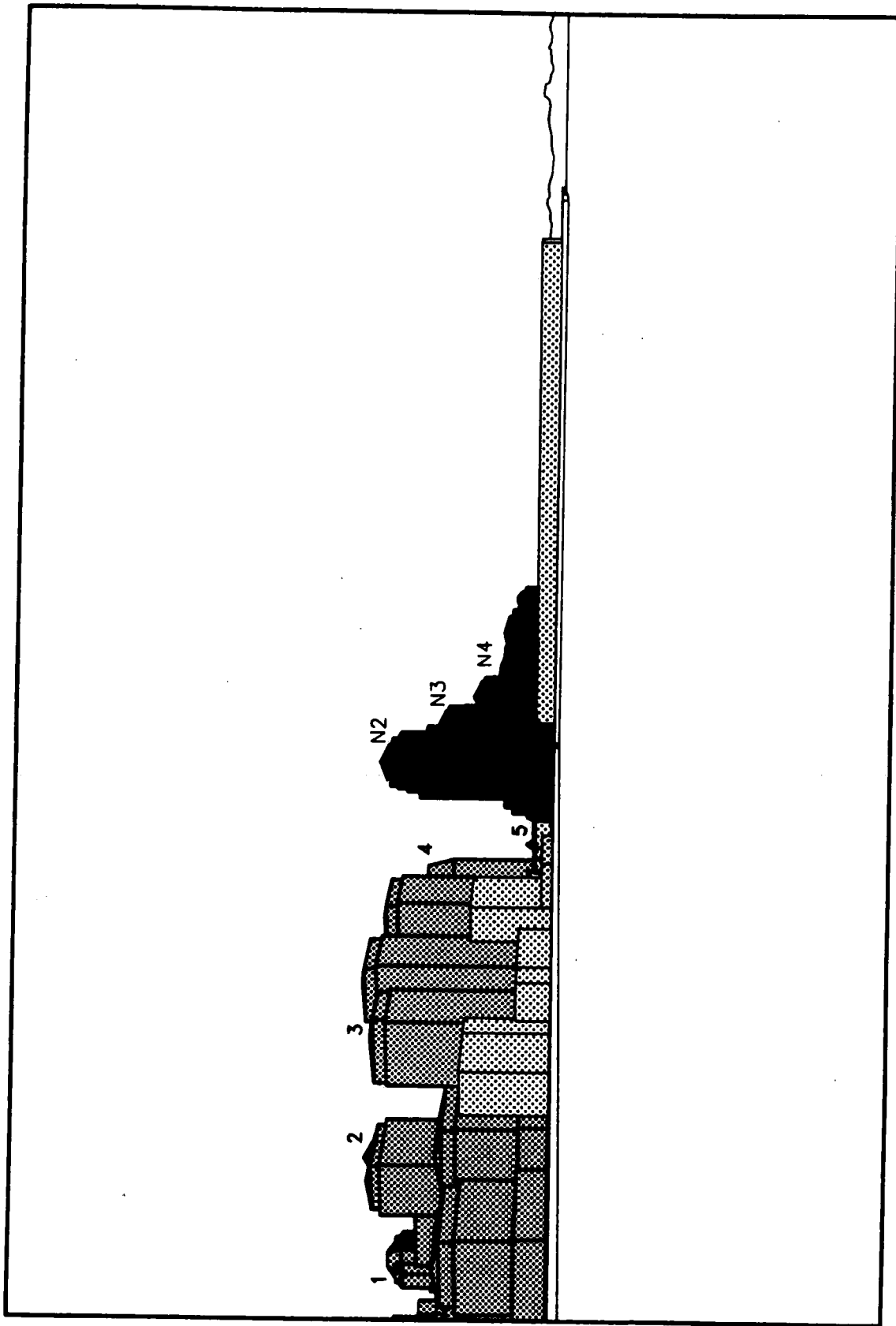
**Gateway View from Harbor Drive at Laurel Street
Navy Broadway Complex Project**



Gateway View of Alternative A
 from Harbor Drive at Laurel Street
 Navy Broadway Complex Project

1. The Huntington
2. Great American Plaza
3. Santa Fe Development
4. Hyatt Regency

- Existing
- Downtown Proposed
- Navy Broadway Complex (Block #)



Gateway View of Alternative F from Harbor Drive at Laurel Street Navy Broadway Complex Project

1. The Huntington
2. Great American Plaza
3. Santa Fe Development
4. Hyatt Regency
5. Santa Fe Condominiums

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

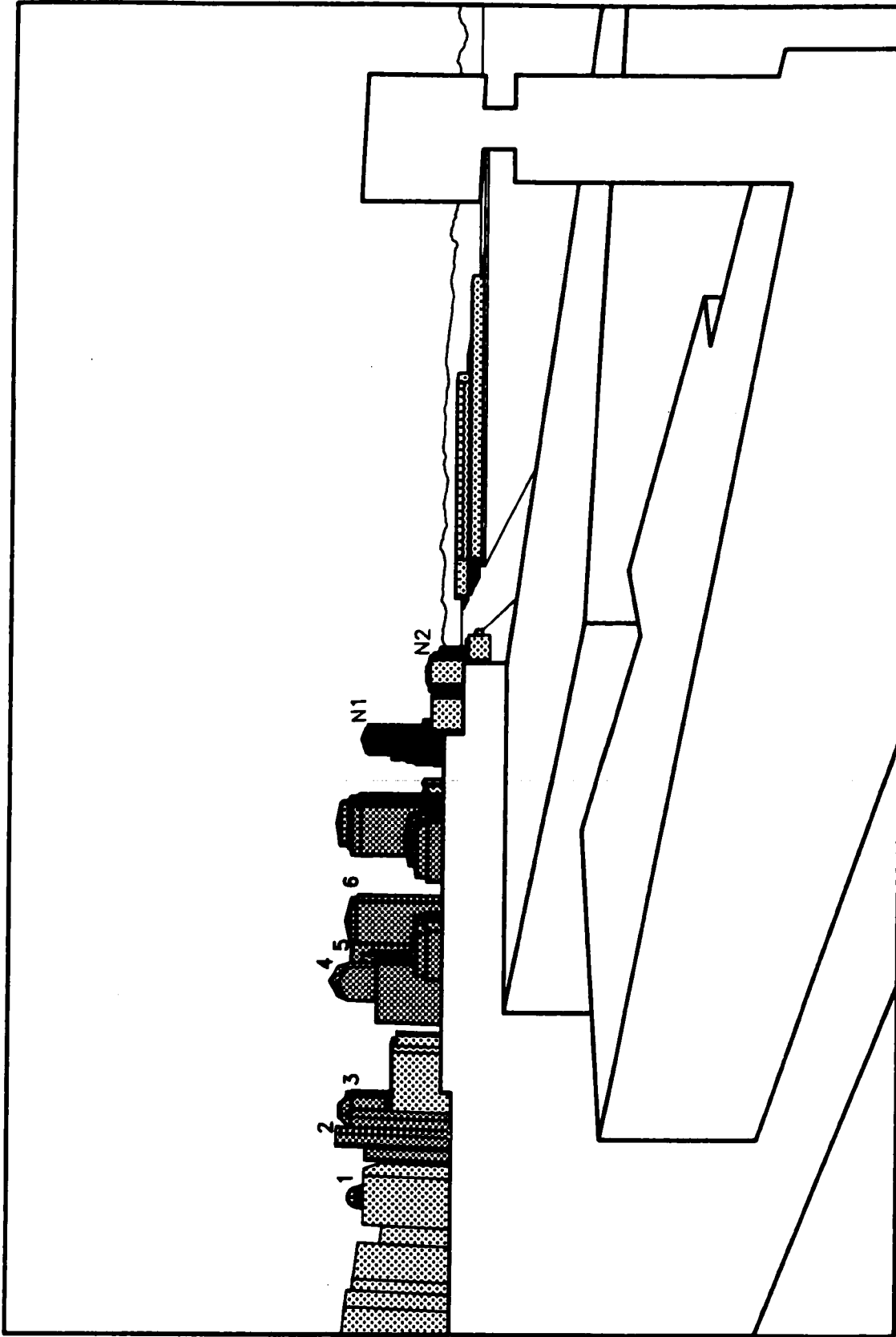
6640001 1/90

Figure 4-30



4-87

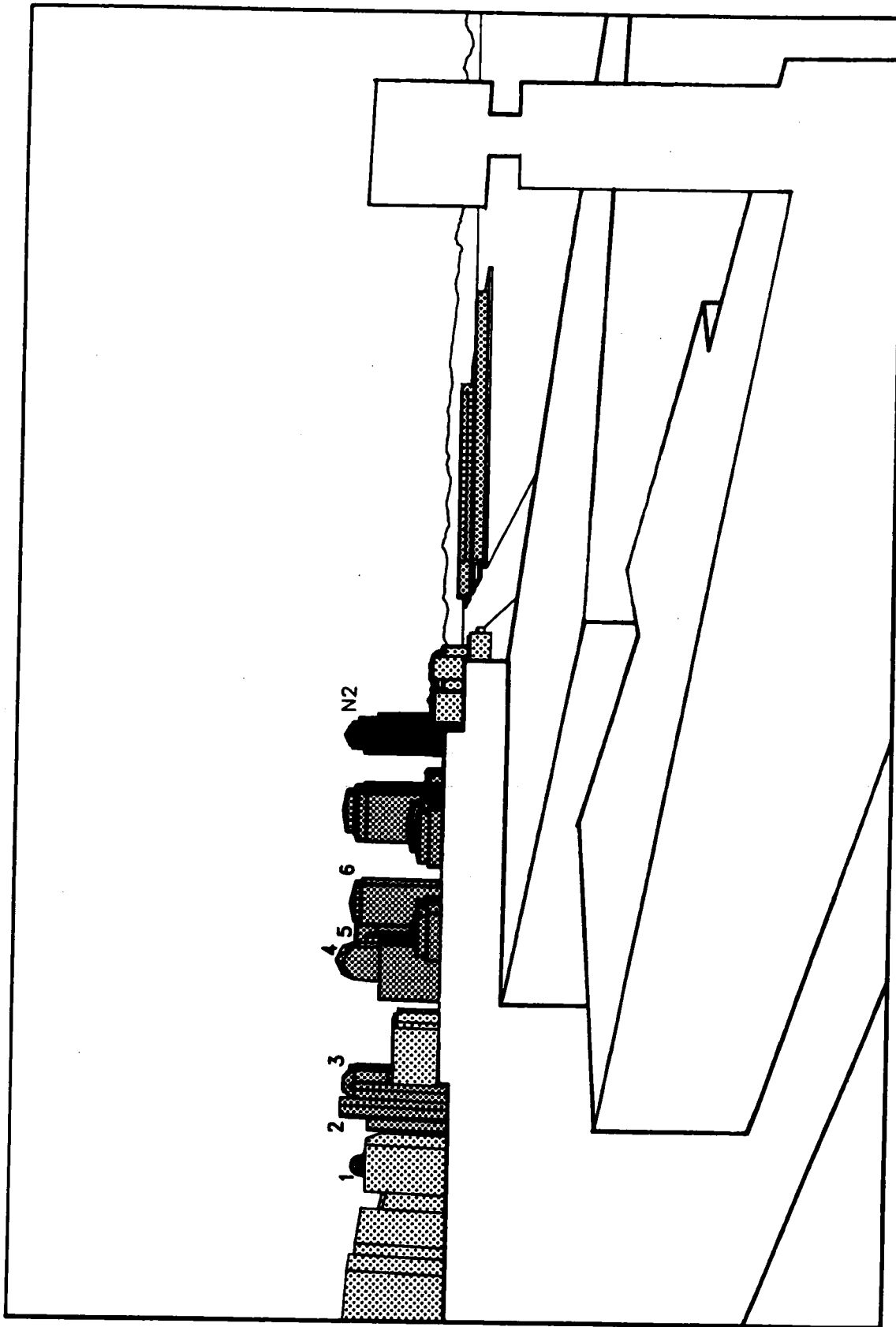
Gateway View from I-5 at Olive Street
Navy Broadway Complex Project



- Existing
 - Downtown Proposed
 - Navy Broadway Complex (Block #)
1. Roger Morris Plaza
 2. Emerald-Shapery Center
 3. The Huntington Plaza
 4. Great American Plaza
 5. Hyatt Regency
 6. Santa Fe Development

Gateway View of Alternative A
from I-5 at Olive Street

Navy Broadway Complex Project



- 1. Roger Morris Plaza
- 2. Emerald-Shapery Center
- 3. The Huntington
- 4. Great American Plaza
- 5. Hyatt Regency
- 6. Santa Fe Development

Existing

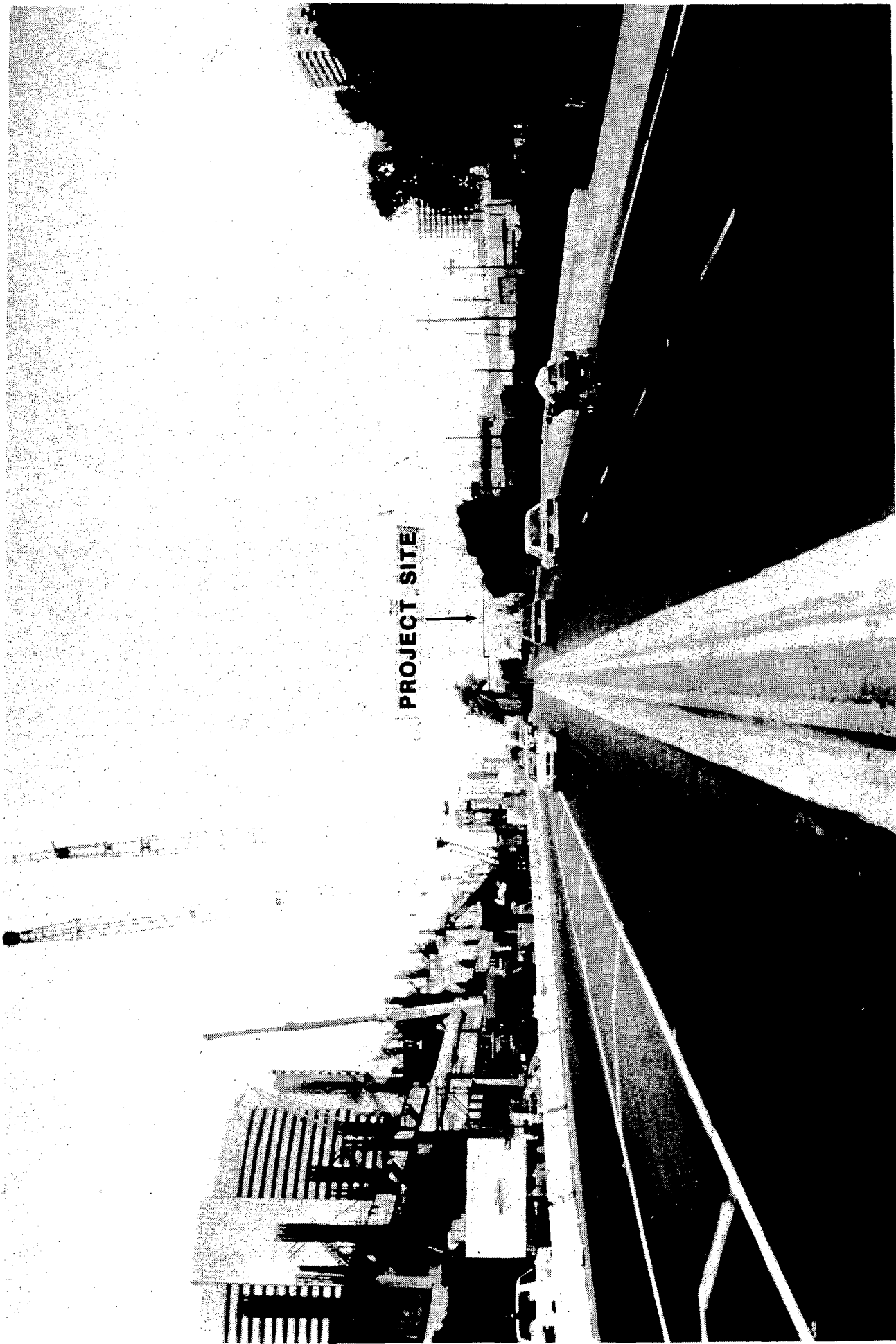
Downtown Proposed

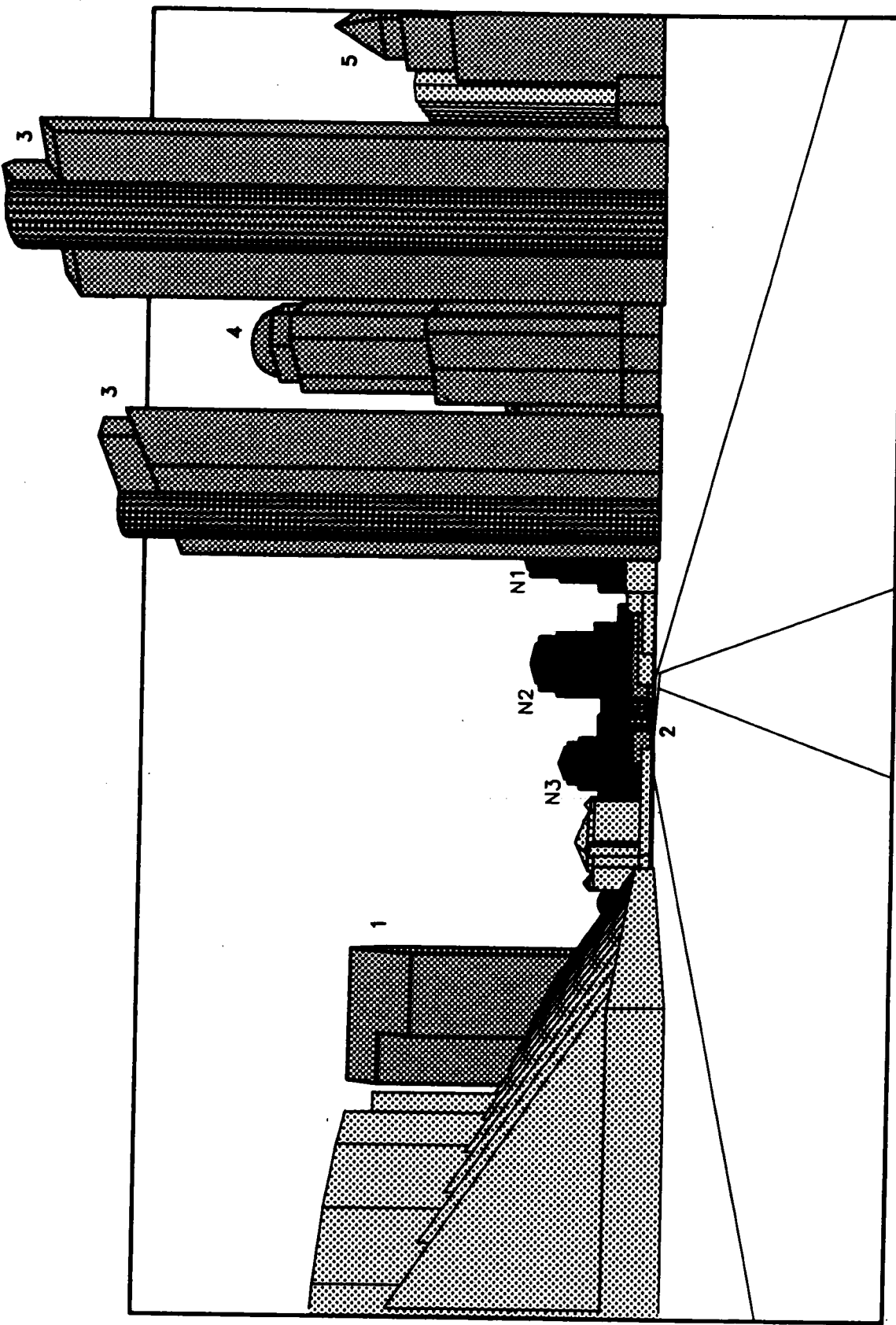
Navy Broadway Complex (Block #)

Gateway View of Alternative F from I-5 at Olive Street Navy Broadway Complex Project

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Figure 4-3





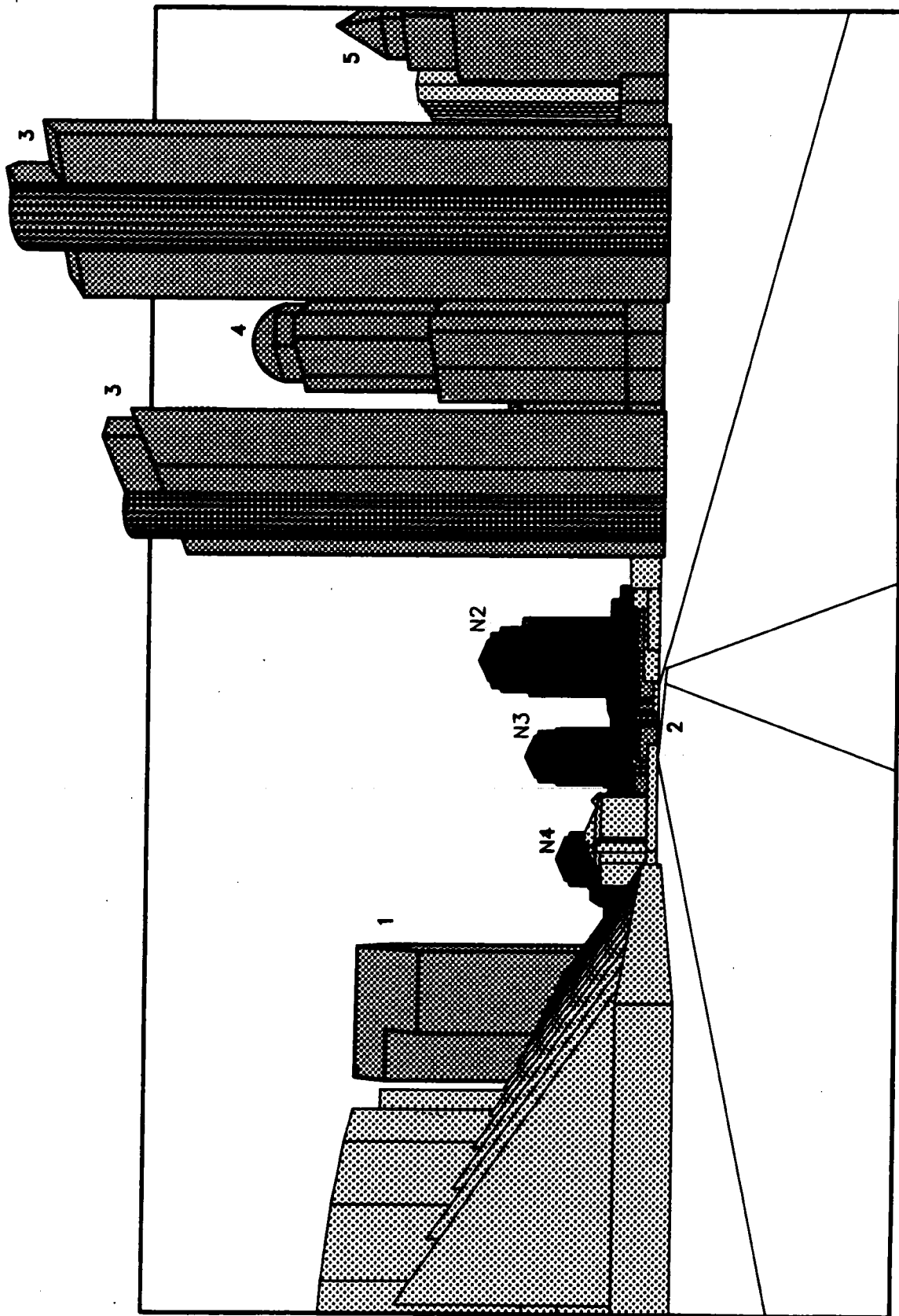
- 1. Hyatt Regency
- 2. Santa Fe Condominium
- 3. One Harbor Drive
- 4. Roger Morris Plaza
- 5. The Courtyard

Existing

Downtown Proposed

Navy Broadway Complex (Block #)

Gateway View of Alternative A from Harbor Drive at 5th Avenue Navy Broadway Complex Project



- 1. Hyatt Regency
- 2. Santa Fe Condominiums
- 3. One Harbor Place
- 4. Roger Morris Plaza
- 5. The Courtyard

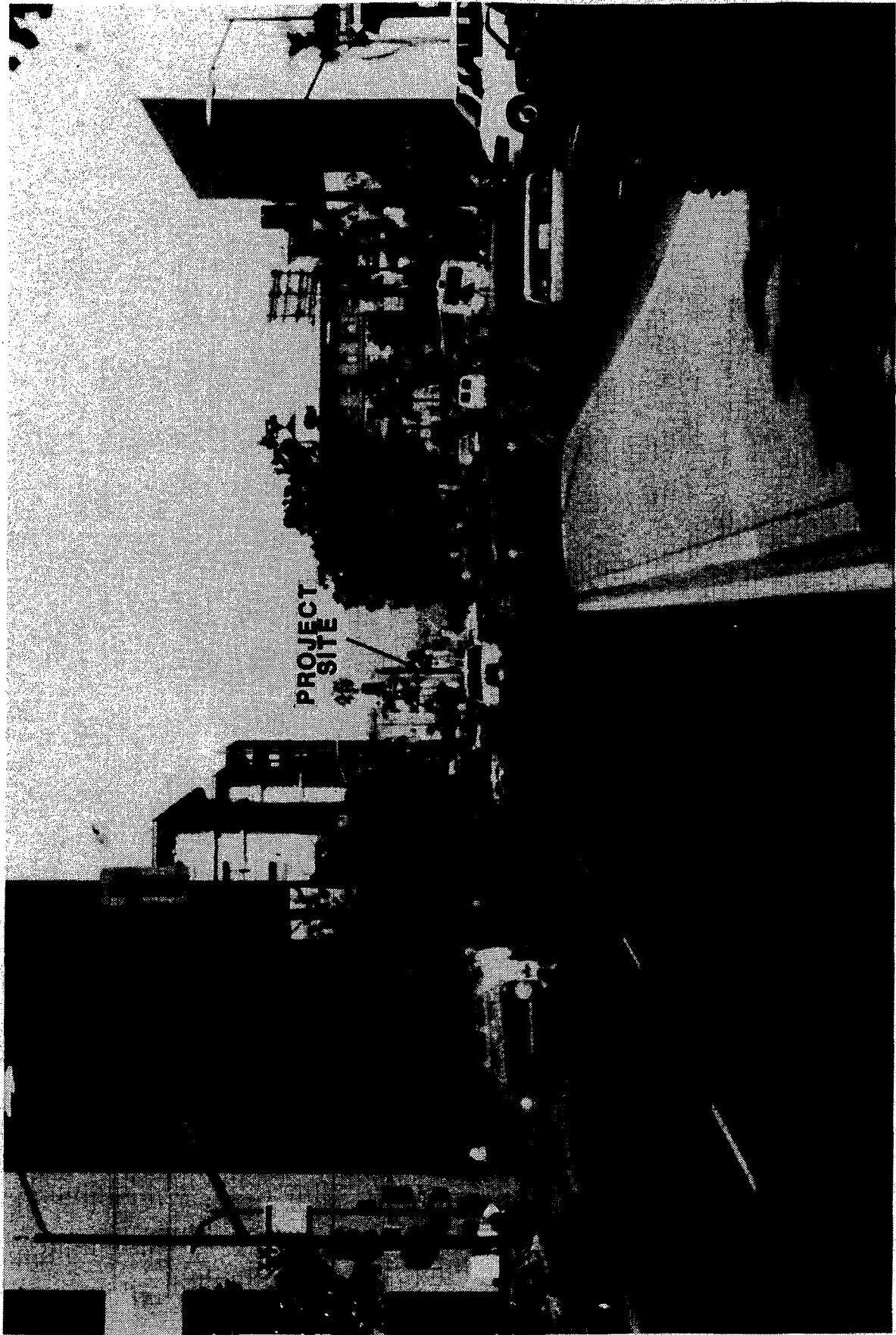
- Existing
- Downtown Proposed
- Navy Broadway Complex (Block #)

Gateway View of Alternative F from Harbor Drive at 5th Avenue Navy Broadway Complex Project

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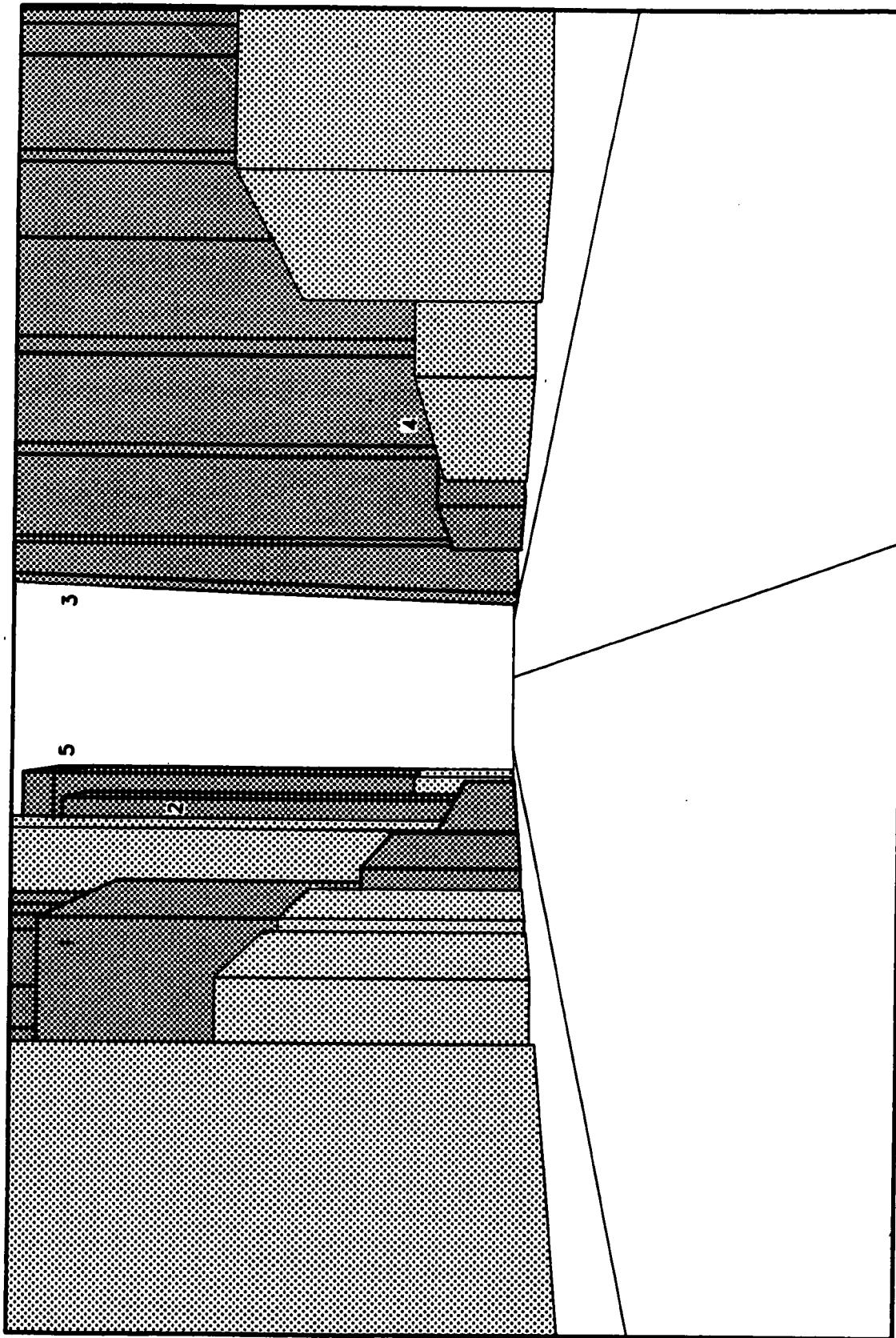
Figure 4-36





Street - End View from Broadway at Front Street
Navy Broadway Complex Project



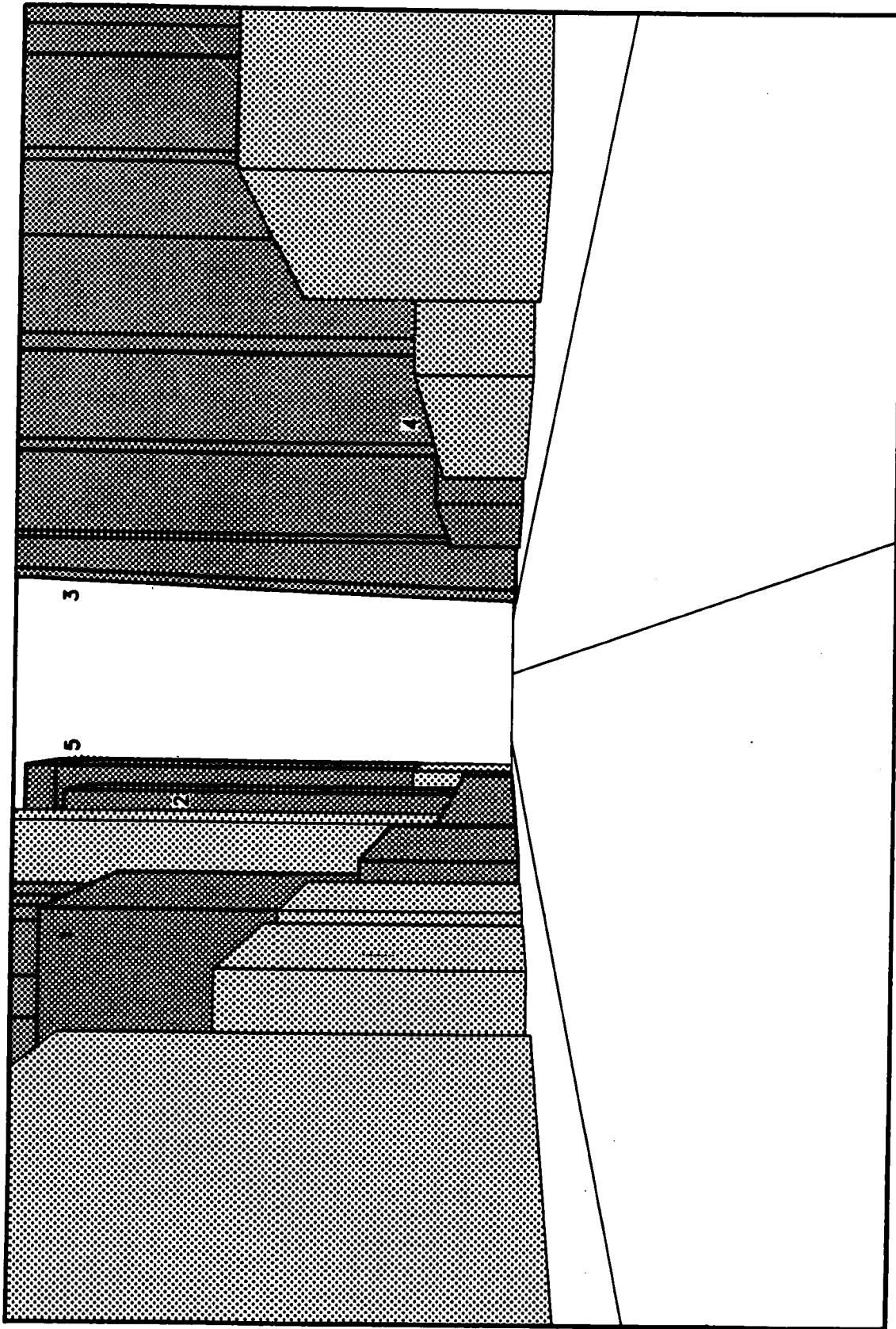


1. The Huntington
2. Koff Center
3. Great American Plaza
4. Emerald-Shapery Center
5. Santa Fe Development

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Street - End View of Alternative A
from Broadway at Front Street
Navy Broadway Complex Project





1. The Huntington
2. Koll Center
3. Great American Plaza
4. Emerald-Shapery Center
5. Santa Fe Development

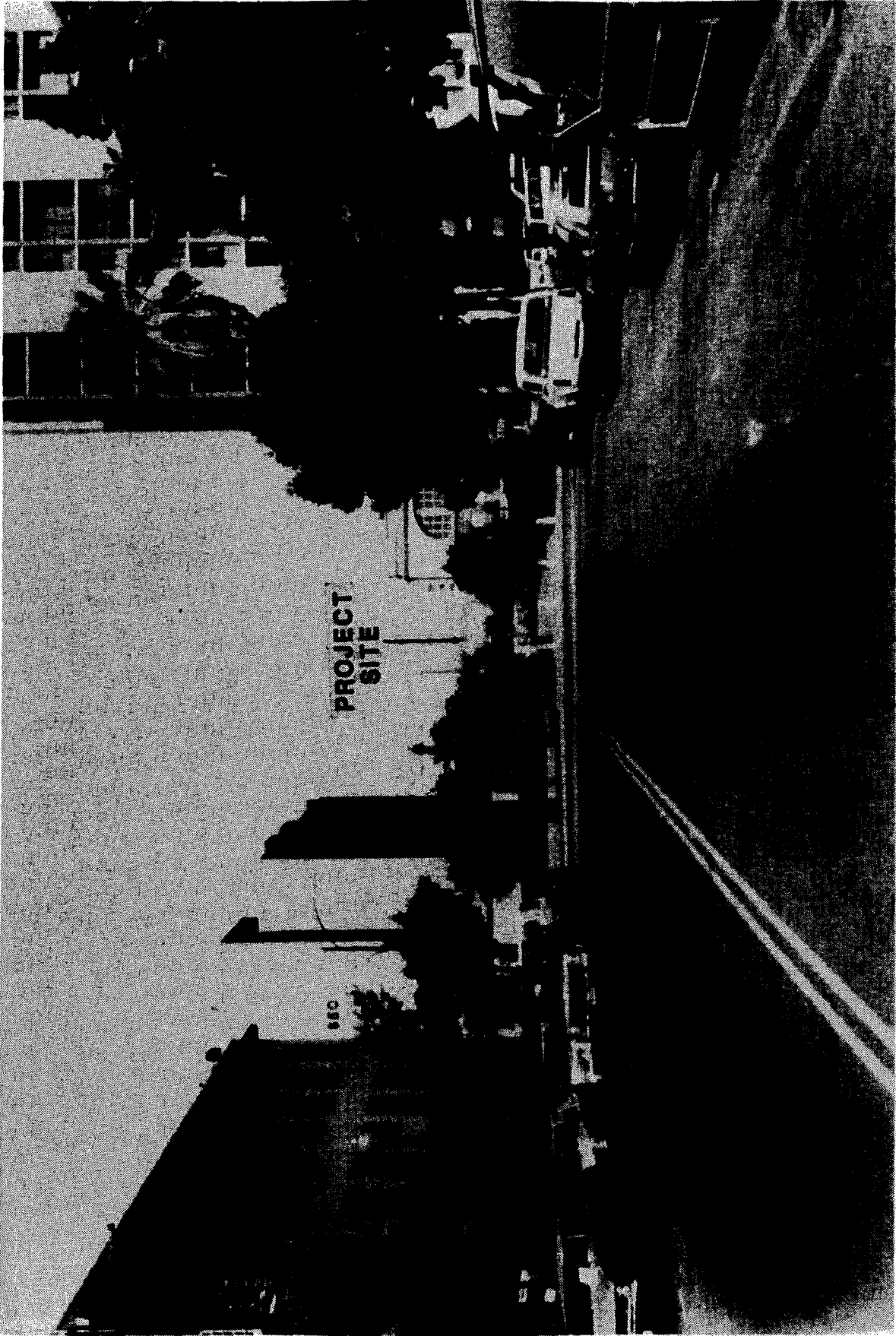
-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Street-End View of Alternative F
from Broadway at Front Street
Navy Broadway Complex Project

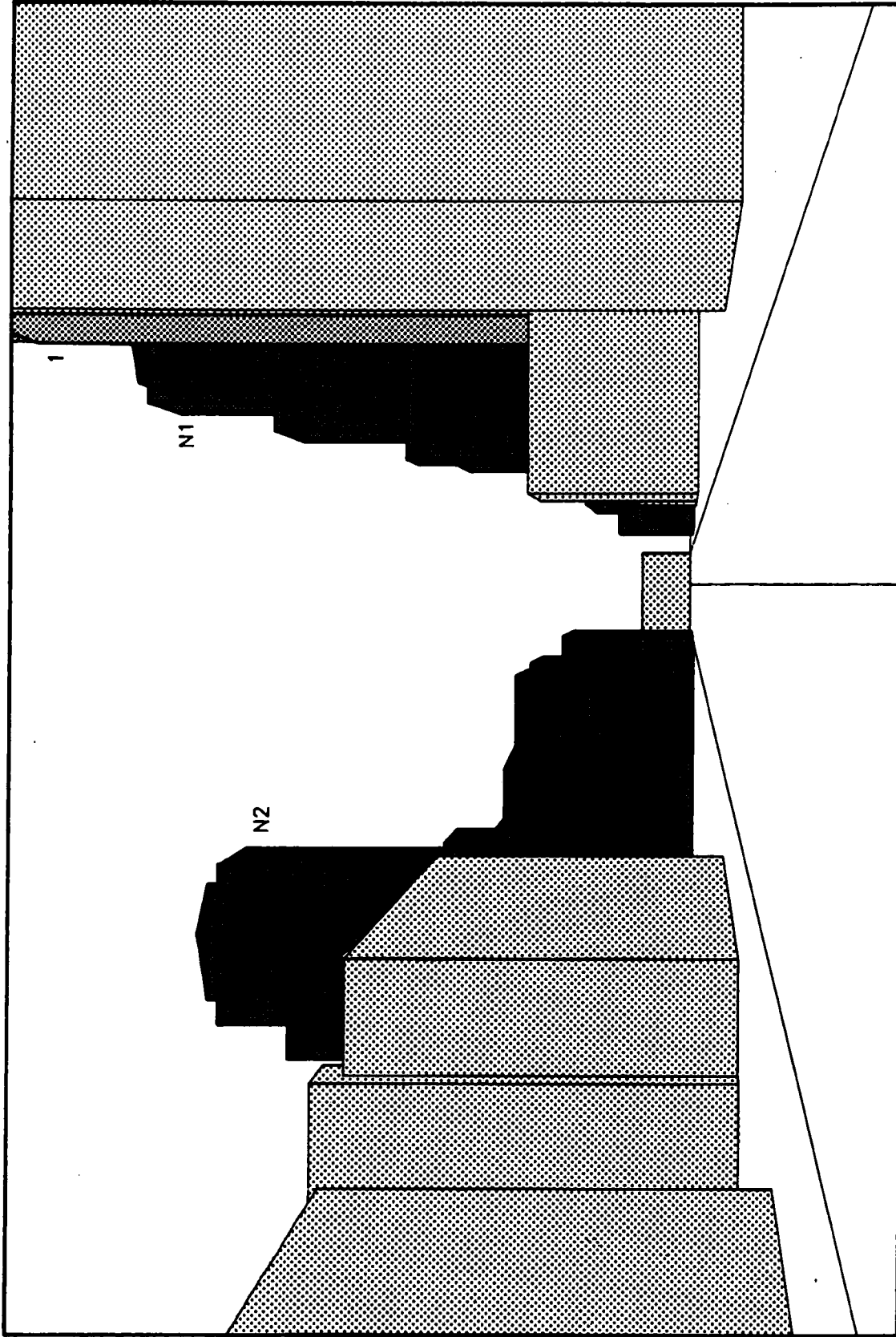
6640001.1/90

Figure 7








Street - End View from E Street at Union Street
Nayv Broadway Complex Project



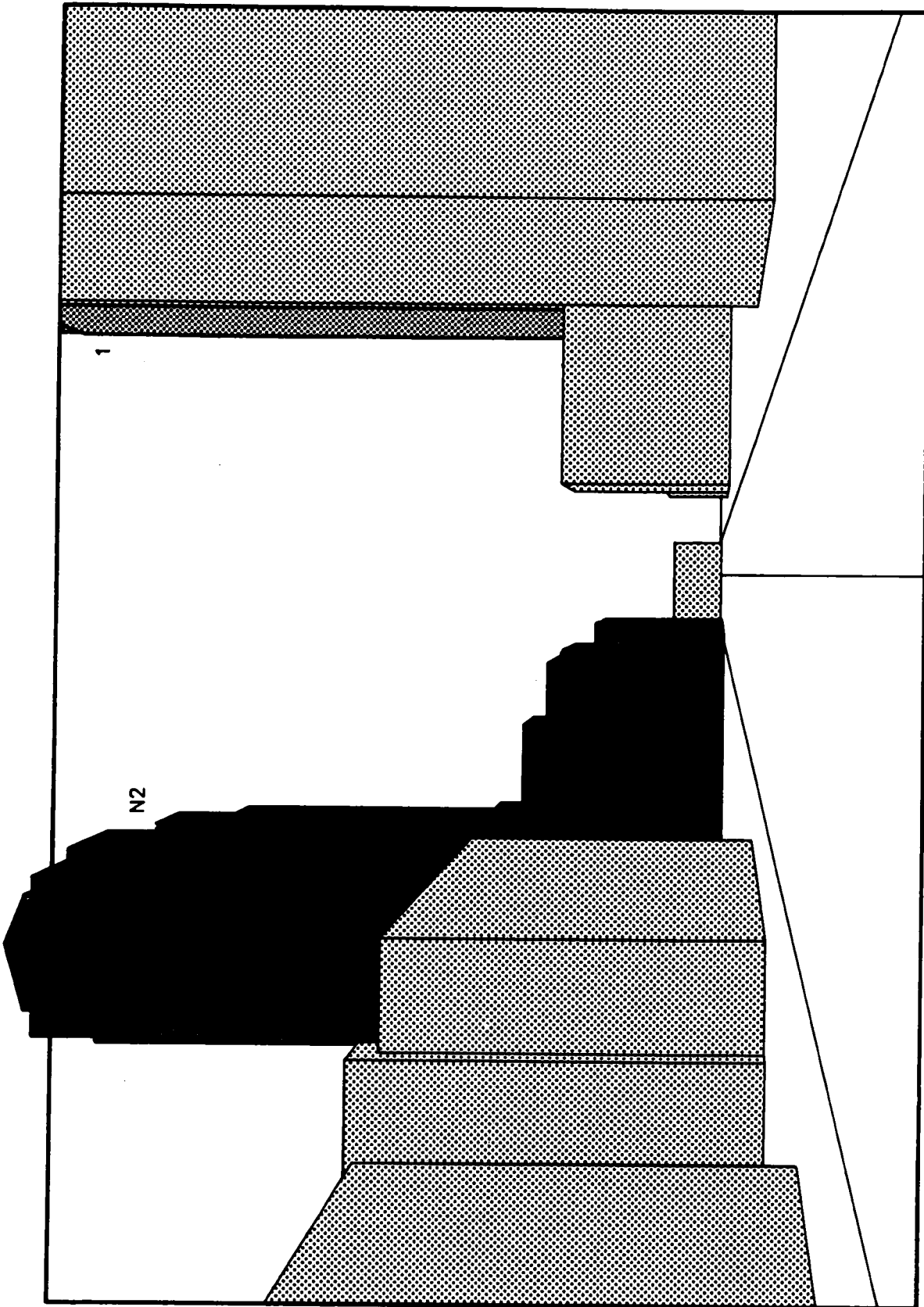
1. Santa Fe Development

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Street - End View of Alternative A
 from E Street at Union Street
 Navy Broadway Complex Project

66-0001 1/90

Figure 4-41



1. SANTA FE DEVELOPMENT

EXISTING



DOWNTOWN PROPOSED

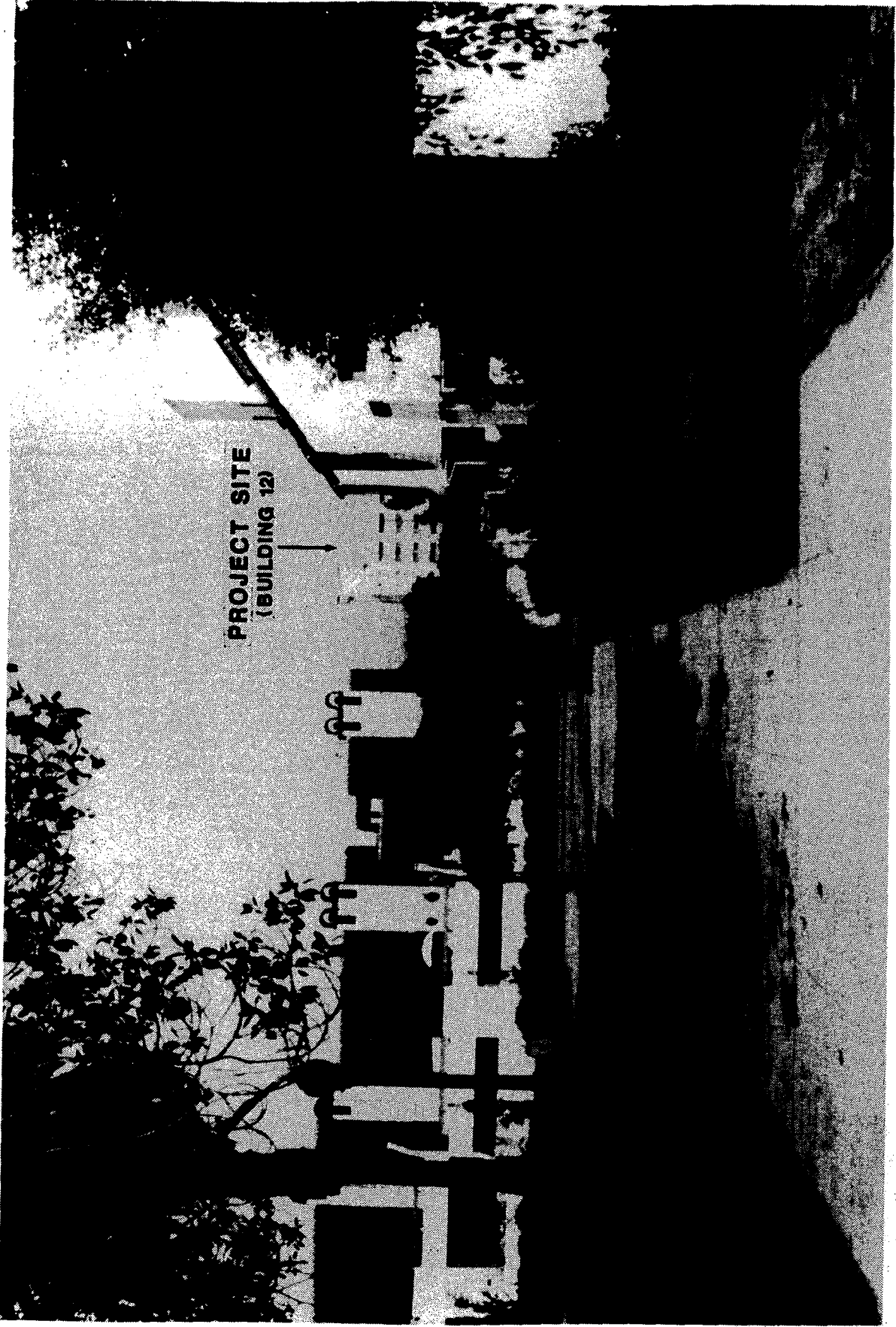


NAVY BROADWAY COMPLEX (BLOCK #)



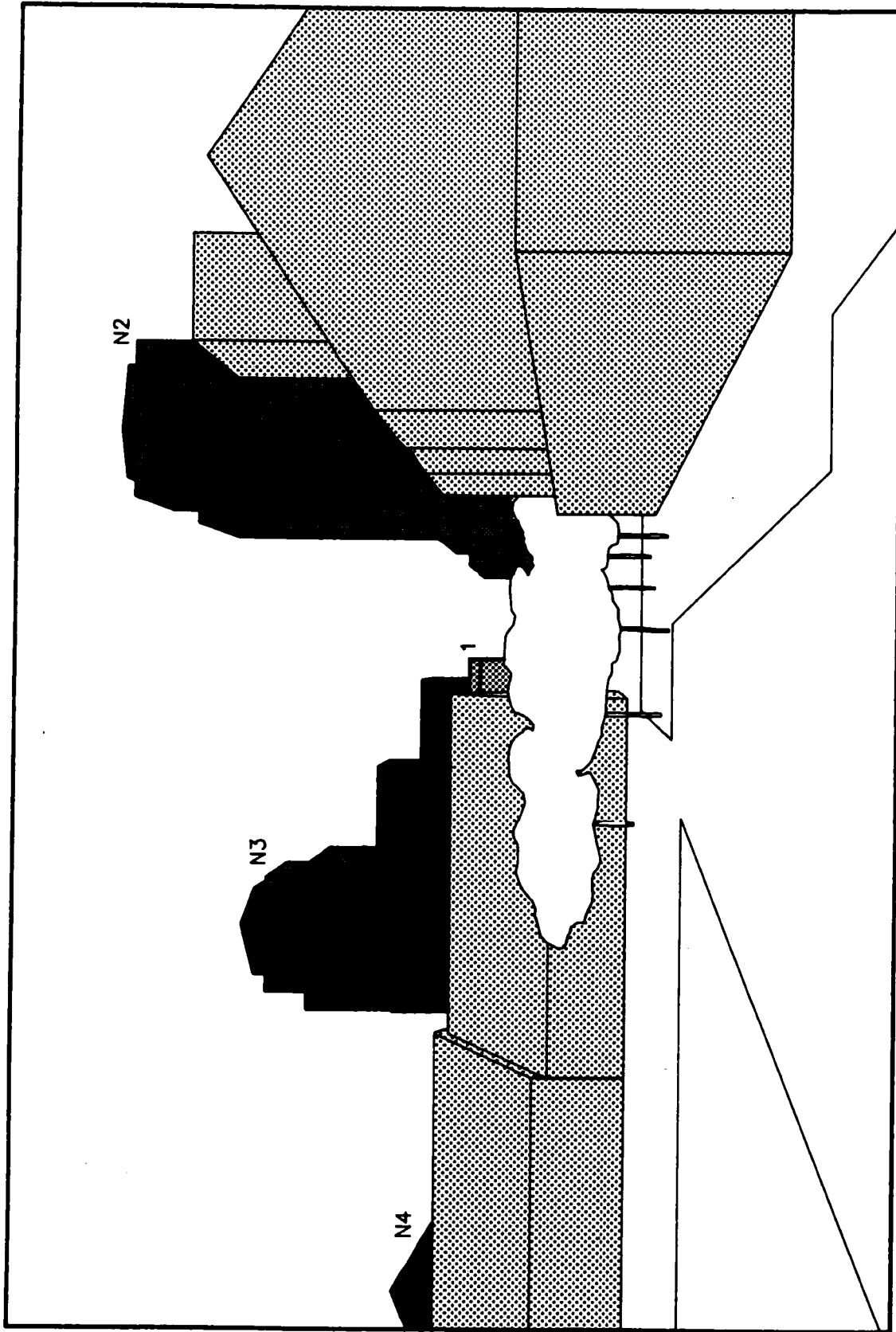
Street-End View of Alternative F
from E Street at Union Street

Navy Broadway Complex Project






PROJECT SITE
(BUILDING 12)

Street-End View from F Street at Pantoja Park
Navy Broadway Complex Project



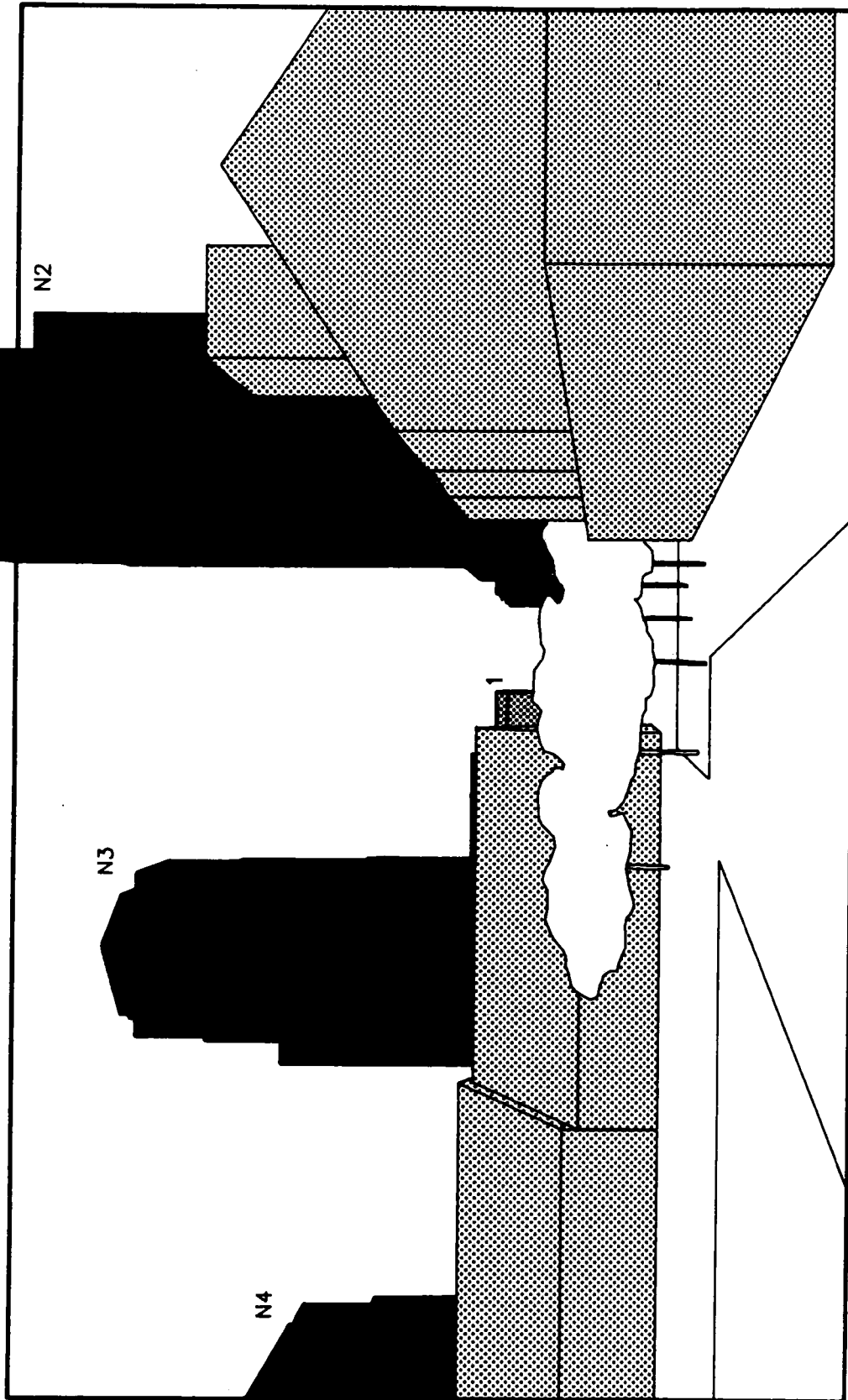
1. Santa Fe Condominiums

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Street - End View of Alternative A
 from F Street at Pantoja Park
 Navy Broadway Complex Project

66-0001 1/90

Figure 4-4A



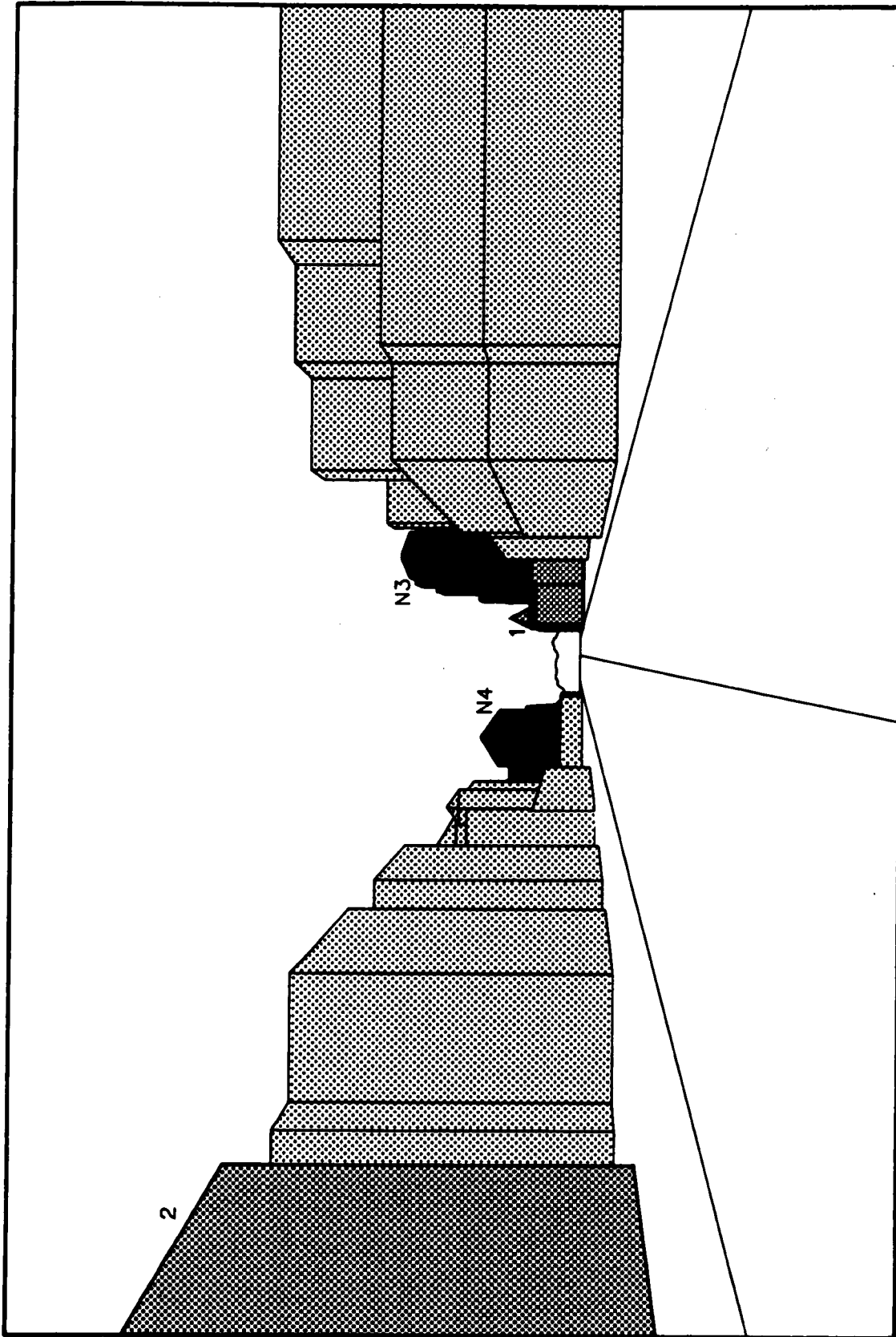
Street-End View of Alternative F
 from F Street at Pantoja Park
Navy Broadway Complex Project

- Existing
 - Downtown Proposed
 - Navy Broadway Complex (Block #)
1. Santa Fe Condominiums
- 6640001 1/90
- Figure 4





Street - End View from G Street at Front Street
Navy Broadway Complex Project



- 1. Santa Fe Condominiums
- 2. Courtyard

Existing

Downtown Proposed

Navy Broadway Complex (Block #)

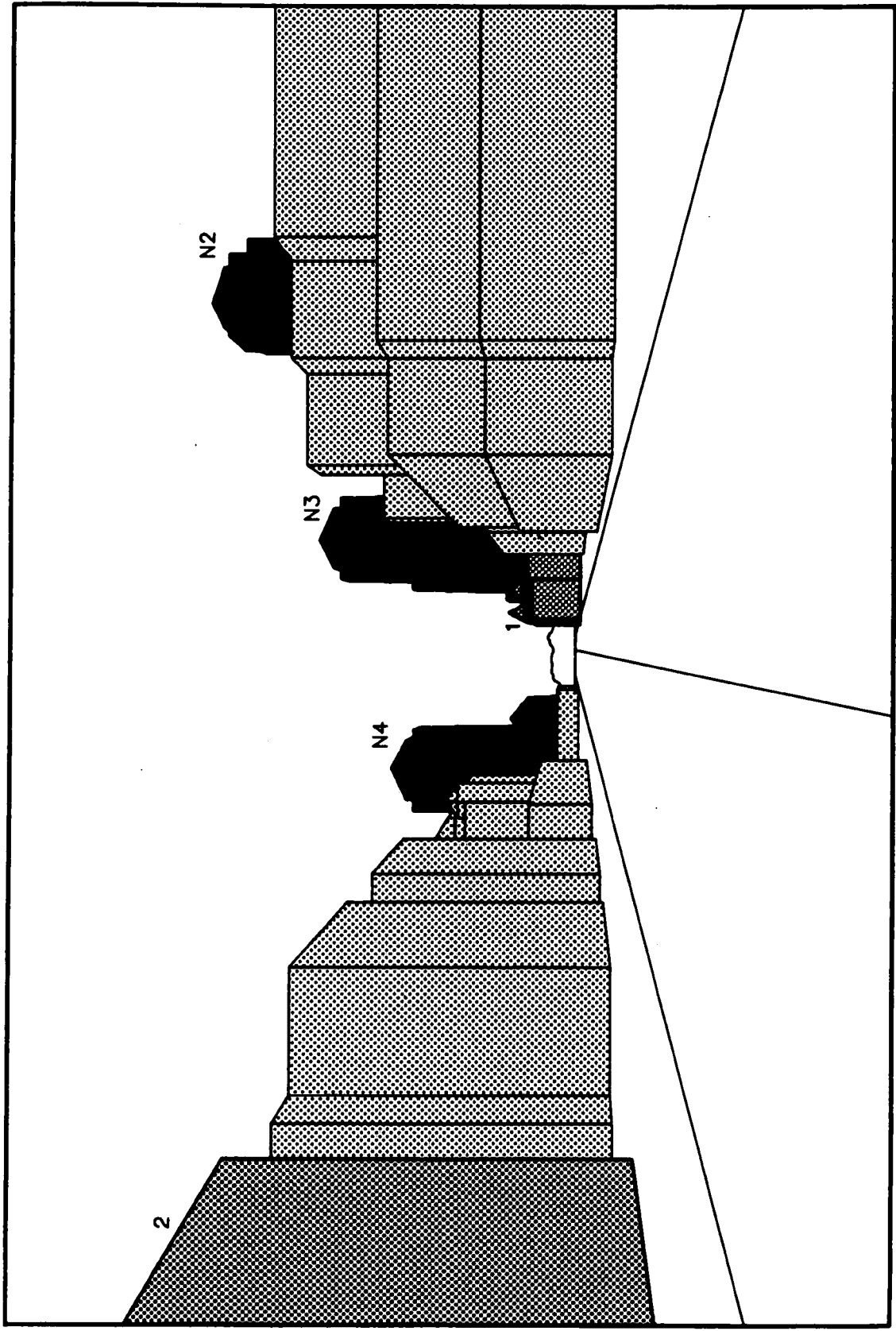
Street - End View of Alternative A
from G Street at Front Street

Navy Broadway Complex Project

664001 1/00

Figure 4-47



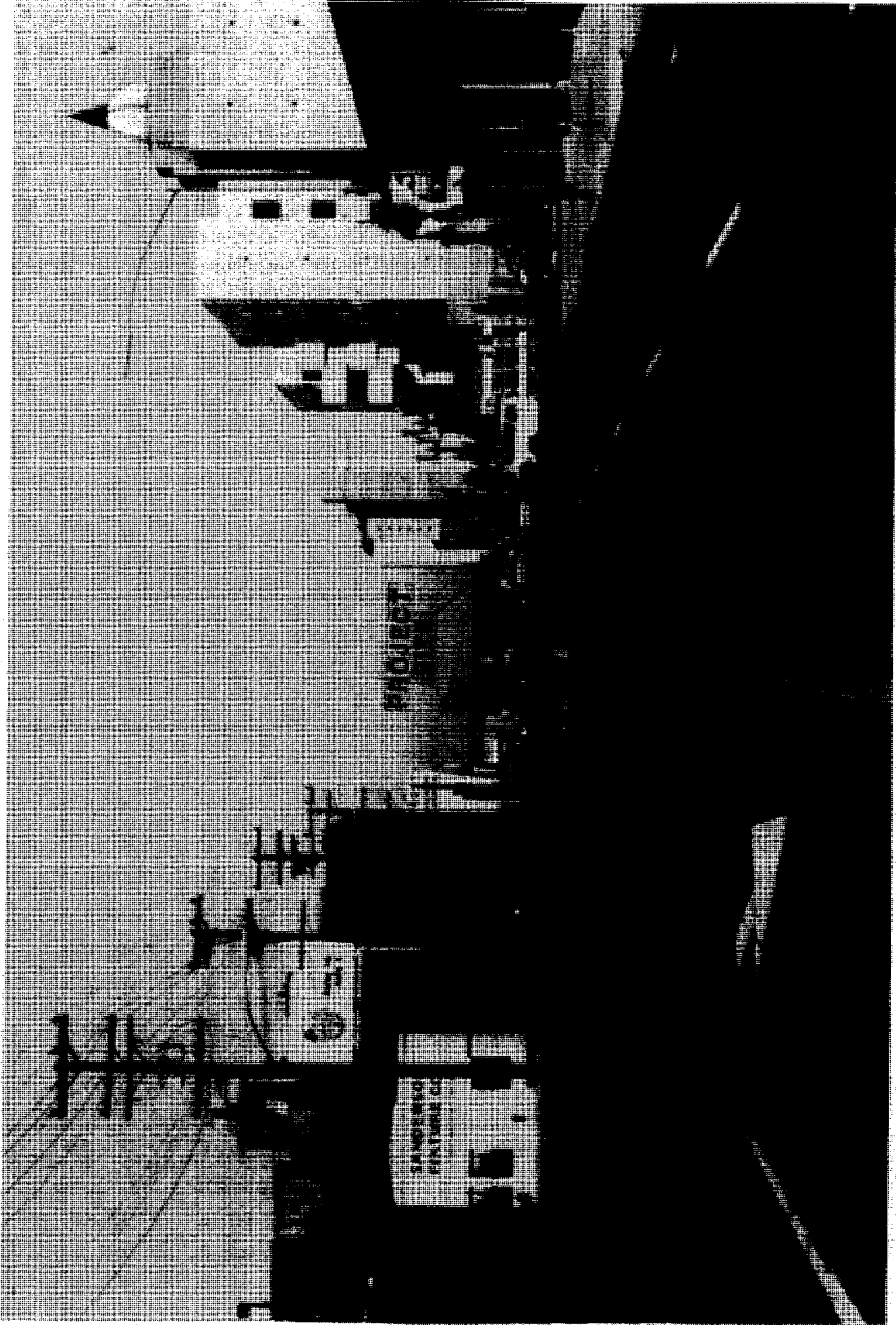


- 1. Santa Fe Condominiums
- 2. Courtyard

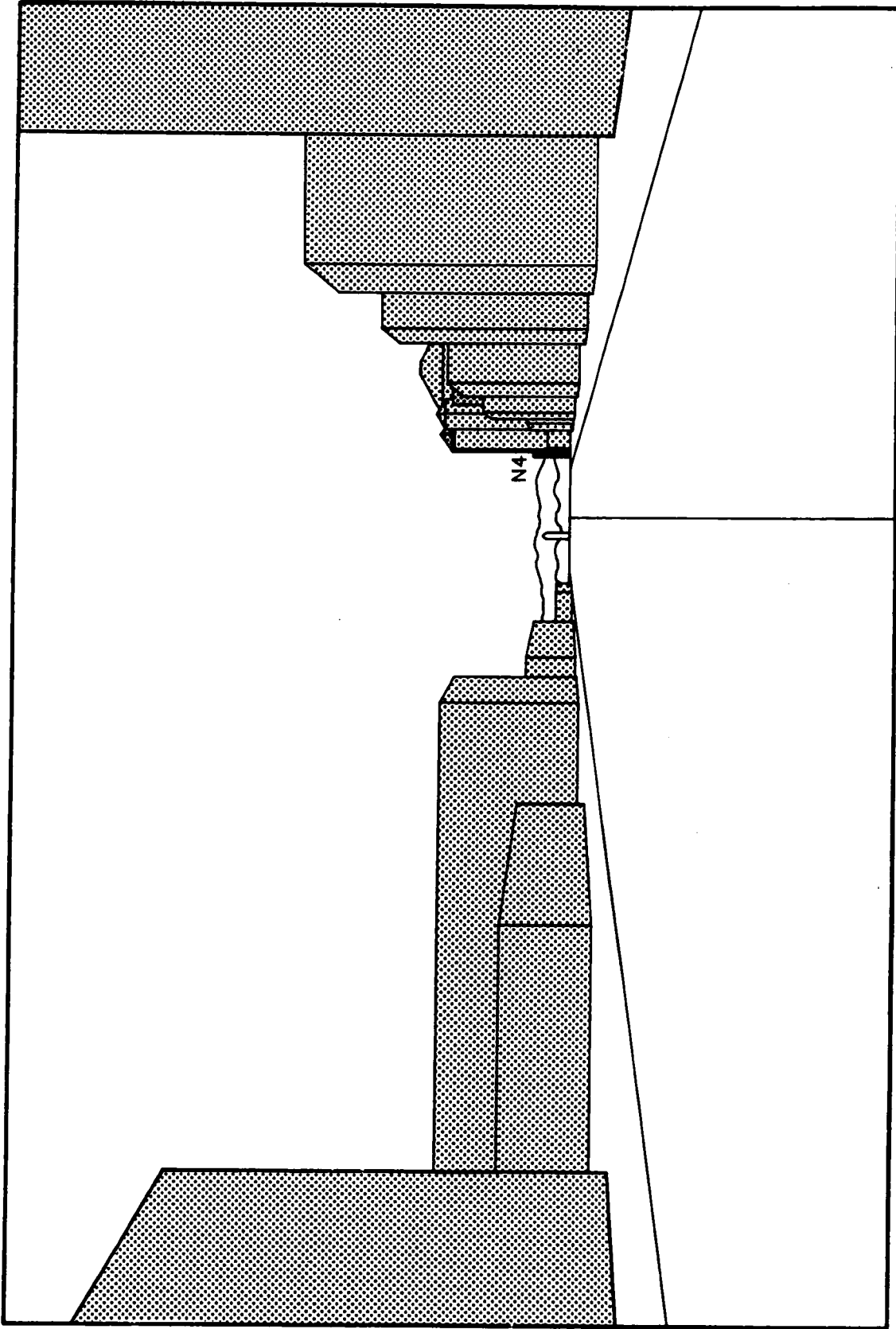
- Existing
- Downtown Proposed
- Navy Broadway Complex (Block #)

Street-End View of Alternative F
 from G Street at Front Street
 Navy Broadway Complex Project






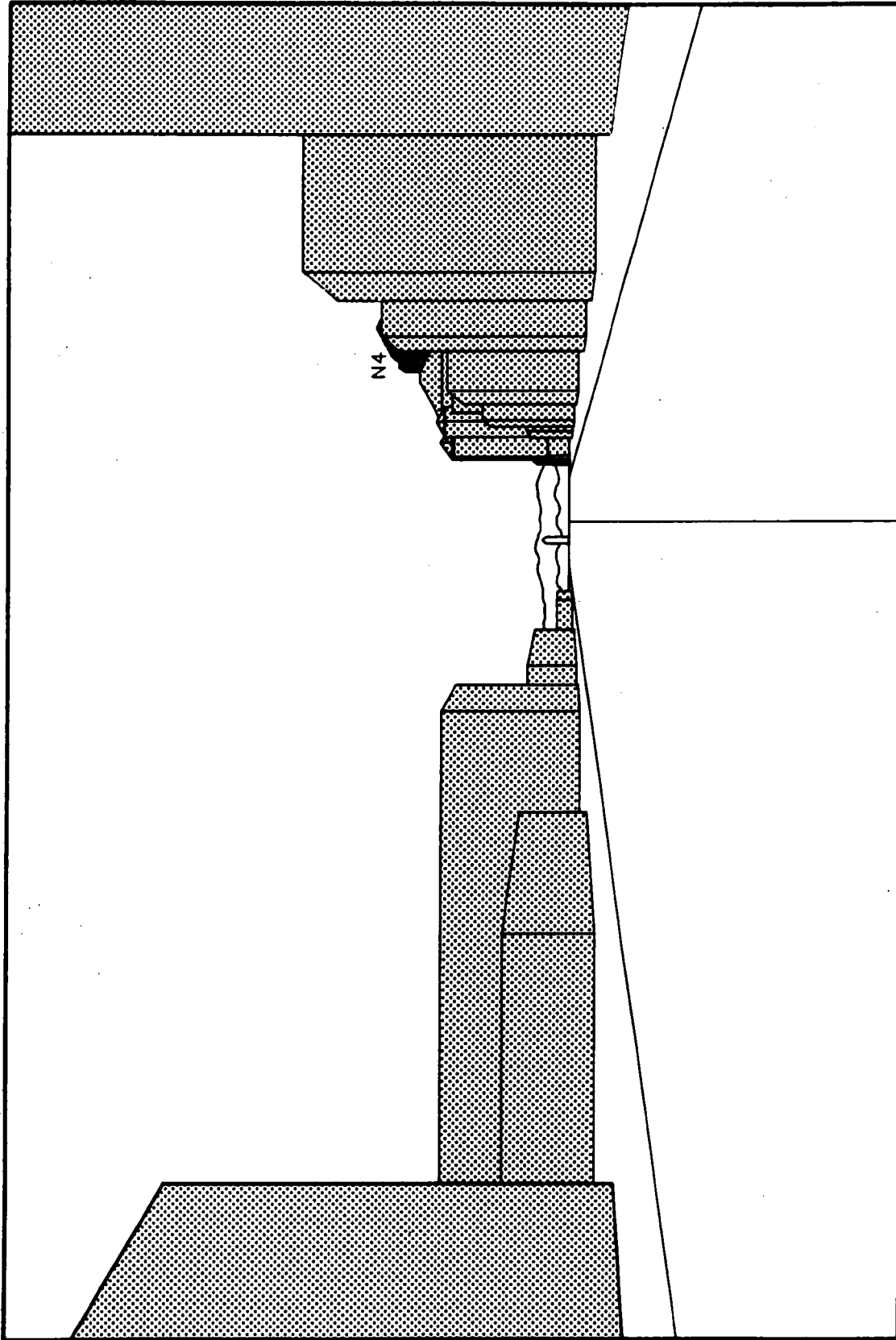


Street - End View from Market Street at Front Street
Nay Broadway Complex Project



Street - End View of Alternative A
 from Market Street at Front Street
 Navy Broadway Complex Project

-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)



-  Existing
-  Downtown Proposed
-  Navy Broadway Complex (Block #)

Street-End View of Alternative F
 from Market Street at Front Street
 Navy Broadway Complex Project

- Market Street--Project site buildings are not visible in the view along Market Street, as depicted in Figure 4-49, page 4-36. Buildings on the project site near Market Street are one to two floors high and are obstructed by intervening buildings located along Market.

Planned View Corridors

As previously discussed in Section 4.1, page 4-30, Broadway, Pacific Highway, and Market Street are all identified as "Gateway Streets" in the Centre City Urban Design Program.¹ "Gateway Streets" link the most intensively developed areas of Centre City with the waterfront and are intended to be major visual corridors, with increased pedestrian use as redevelopment occurs. Private development along these corridors should, according to the program, be designed to enhance the visual quality of the corridor.²

Shade/Shadows

Climate in the City of San Diego Centre City is characterized as moderate year-round. The influence of shade from building is not as critical an issue as it is in areas with temperature extremes, where shade can moderate extremely high temperatures and reduce already cool or cold weather.

The primary area of shading from existing project structures is towards the north and northeast, where shadows are cast during the warmest part of the day on the winter solstice. The winter solstice is considered important because it is the day when shadows are at their longest, and it occurs during the cooler part of the year. Due to the current low height of project structures, with no building higher than 150 feet, no substantial shadows are created during the winter solstice.

4.3.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Development of any of the proposed alternatives, except the no-action alternative (Alternative G), would substantially alter the visual characteristics of the Navy Broadway Complex. Existing buildings would be replaced by new or rehabilitated structures. Several currently proposed buildings in the vicinity of the proposed project are anticipated to be completed by the time any of the proposed alternatives are built out (by around 2003), so this analysis assumes buildout of these buildings. Specifically, it is assumed that the Santa Fe Development, Emerald-Shapery Center, Great American Plaza, Koll Center, The Courtyard, One Harbor Drive, and the Hyatt Regency will have been completed, and they are depicted in visual simulations presented herein.

Draft urban design guidelines have been established so that the project will not only complement but also enhance the visual conditions of the project area and create a visually pleasing transition between the downtown core and the Bayfront to the west and south. The draft design guidelines are provided in Appendix D and are subject to minor refinement between the Navy and the City. Alternatives A, B, and the onsite component of Alternative D are all generally consistent with the draft guidelines. Alternatives C and F are partially consistent. Alternatives E and G are not consistent.

Effects on Public Views of the Site

Effects on Panoramic Views

Figure 4-23, page 4-78, depicts a simulated view of Alternative A, as seen from Harbor Island. For comparison, Figure 4-22, page 4-77, depicts the existing view. Figure 4-26, page 4-82, depicts the simulated view of Alternative A from Coronado, compared with the existing view in Figure 4-25, page 4-80. As shown in Figures 4-23, page 4-78, and 4-26, page 4-81, Alternative A provides a smooth visual transition between the downtown core and the waterfront, with buildings stepping down to the south. The Hyatt Regency will become a focal point of the skyline, with the buildings decreasing in height toward the site. Alternative A would not adversely affect the viewshed from this viewpoint; rather, it would complement the existing/planned viewshed and would "complete" the skyline between the downtown core and the proposed Hyatt Regency.

Alternative B and the onsite component of Alternative D would appear the same as Alternative A from this viewpoint, because the buildings would be nearly the same height.

Alternative C would not adversely affect the viewshed from this viewpoint, although it would not provide that same level of visual transition as Alternative A between the downtown core and the area to the south. Rather, this alternative would appear to step down from the downtown, rising as it approaches the southerly area of the site, then stepping down again to the south.

Alternatives E and G would appear visually similar to each other from these viewpoints, and would not substantially alter the viewshed (except that the surrounding skyline would be altered by planned development). Because neither of these alternatives would alter the viewsheds, they would have no adverse visual effect.

Figures 4-24, page 4-79, and 4-27, page 4-82, depict a simulation of Alternative F from Harbor Island and Coronado, respectively. This alternative would provide a contrast in the skyline, with a cluster of higher buildings on Blocks 2, 3, and 4. Both figures show that this alternative would create a second focal point in the viewshed. Compliance with the intent of the draft urban design guidelines for the project (Appendix D) would create a development visually compatible with the skyline.

Effects on Gateway Views

Figures 4-29 (page 4-85), 4-32 (page 4-88), and 4-35 (page 4-91), depict simulated views of Alternative A from Harbor Drive at Laurel Street, Interstate 5 at Olive Street, and Harbor Drive at 5th Avenue, respectively. Figures 4-28 (page 4-84), 4-31 (page 4-87), and 4-33 (page 4-89), depict the existing views. The views of Alternative A from these viewpoints show visual compatibility with the intensity and form of adjacent and surrounding land uses. The greatest visual contrast created is the view from Harbor Drive at 5th Avenue (see Figure 4-35, page 4-91), but smooth visual transition is provided between the existing Embassy Suites Hotel (adjacent to Block 3 in the figure) and the proposed alternative. Alternative A would remain visually subservient to the Hyatt Regency, One Harbor Drive, as well as several other existing and planned buildings that would also be in the viewshed. Thus, it would not adversely affect gateway views.

Alternative B and the onsite component of Alternative D would appear visually similar to Alternative A from these viewpoints, so would also not adversely affect the viewshed.

Alternatives C and E would be less visible than Alternative A. Thus, neither of these alternatives would adversely affect the viewshed.

Figures 4-30 (page 4-86), 4-33 (page 4-89), and 4-36 (page 4-92), depict visual simulations of Alternative F from the same viewpoints as shown in Figures 4-29 (page 4-85), 4-32 (page 4-88), and 4-35 (page 4-91). This alternative would be more visually prominent than either the existing condition or Alternative A. However, it would remain visually compatible with adjacent development, and, therefore, is not considered to have a significant adverse effect on gateway viewsheds.

Effects on Street-End Views

Figures 4-38 (page 4-94), 4-41 (page 4-97), 4-44 (page 4-100), 4-47 (page 4-103), and 4-49 (page 4-105), depict simulated views of Alternative A from Broadway at Front Street, E Street at Union Street, F Street at Pantoja Park, G Street at Front Street, and Market Street at Front Street, respectively. The view along Broadway (Figure 4-38, page 4-94) shows a progression of buildings stepping down to the waterfront, with development on Block 1 of the Navy Broadway Complex providing a smooth transition. The view from E Street (Figure 4-41, page 4-97) shows a corridor framed by the Santa Fe development and buildings on Block 2 of the Navy Broadway Complex. The buildings step down toward the street. Block 1 buildings, which are less visible from this viewpoint, nevertheless step down from the Santa Fe development. The existing Navy Pier would continue to delineate the extension of E Street at the waterfront.

The view from Pantoja Park at F Street (see Figure 4-44, page 4-100) would be of a more intensive development than seen today, with the view of Building 12 blocked by a substantially taller building on Block 2. However, the project would be visually compatible with other buildings in the viewshed. The view along F Street, when closer to the Navy Broadway Complex, would be opened up to provide views of the waterfront, where such views are currently occluded by existing onsite development. This would be a benefit of Alternative A. The view from G Street (Figure 4-47, page 4-103) would also be opened up to the waterfront, another visual benefit of this alternative. Building heights would provide a smooth visual transition from other buildings on the street to the waterfront. Buildings on Alternative A would not be substantially visible from Market Street (see Figure 4-50, page 4-106).

In summary, Alternative A would be generally more visible from street-end views than the existing onsite development. Development would be designed to be visually compatible with surrounding development, and would open up view corridors to the waterfront, from F Street and G Street, where views are currently obstructed by existing Navy Broadway Complex development. Alternative A would not adversely, but would beneficially, affect street-end views.

Alternative B and the onsite component of Alternative D would provide the same level of visual compatibility as Alternative A from these view points, due to the similarity in scale and layout of these alternatives, so they also beneficially affect the street-end views.

Alternative C, with its lower buildings on Blocks 1 and 2, would be less visible than Alternative A, so would also not adversely affect the subject viewsheds. Alternative C would instead appear similar to the existing condition. Alternative E would also have lower buildings than Alternative A, and would have a similar appearance from the subject viewsheds as it currently appears. Thus, it would not adversely alter the current views of the site.

Figures 4-39 (page 4-95), 4-42 (page 4-98), 4-45 (page 4-101), 4-48 (page 4-104), and 4-51 (page 4-107) provide visual simulations of Alternative F from the same viewpoints as depicted with Alternative A. Unlike Alternative A, no development of the Navy Broadway Complex would be seen from Broadway at Front Street (Figure 4-39, page 4-95) because a park would be developed on Block 1, the only block visible from this viewpoint. The view from E Street at Union Street shows a tall building on Block 2 rising well above intervening buildings (see Figure 4-42, page 4-98). This view shows a substantial contrast between the Navy Broadway Complex and other area development. The view from Pantoja Park down F Street would be of intensive development (see Figure 4-45, page 4-101), with no intervening buildings of similar scale. From G Street at Front Street, Alternative F would be larger than the scale of other area development, but the contrast would be less than the view from E Street and from Pantoja Park (Figure 4-48, page 4-104). As with Alternative A, the views of the waterfront down G Street would be opened up with this alternative. The view down Market Street (Figure 4-51, page 4-107) would be similar between this alternative and Alternative A, with existing development dominating the viewshed.

The changes to the views from E Street and Pantoja Park caused by Alternative F would be considered significant aesthetic impacts. This alternative contrasts substantially with surrounding structures seen from these view points. Nonetheless, aesthetic considerations are highly subjective, and this alternative would be required to comply with draft design guidelines that would be adopted by the City and the Navy. Moreover, the view corridors to the bay down F Street and G Street, which are currently blocked by existing Navy Broadway Complex development, would be opened, thereby providing a benefit.

The viewshed of the Alternative G would remain unchanged from current conditions. Although no adverse changes in the viewshed would occur with this alternative, the opportunity to upgrade the appearance of the Navy Broadway Complex and open view corridors through the site would not be created.

Effects on Centre City East Views

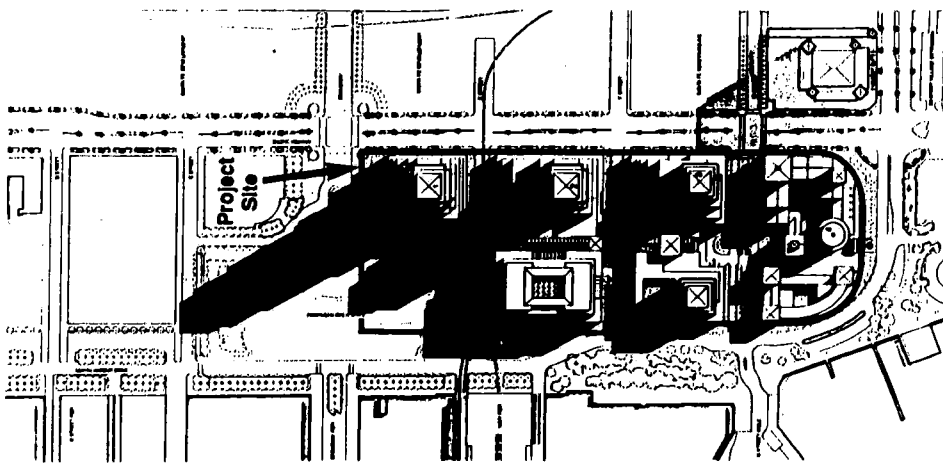
The offsite Navy development associated with Alternative D would be in character with the visual resources in the Centre City East area, in the context of the proposed City Hall and the general intensification of land uses planned for this area. However, because a specific location for this alternative has not been established, the effect of this alternative on its surrounding viewshed has not been determined.

Effects on Planned View Corridors

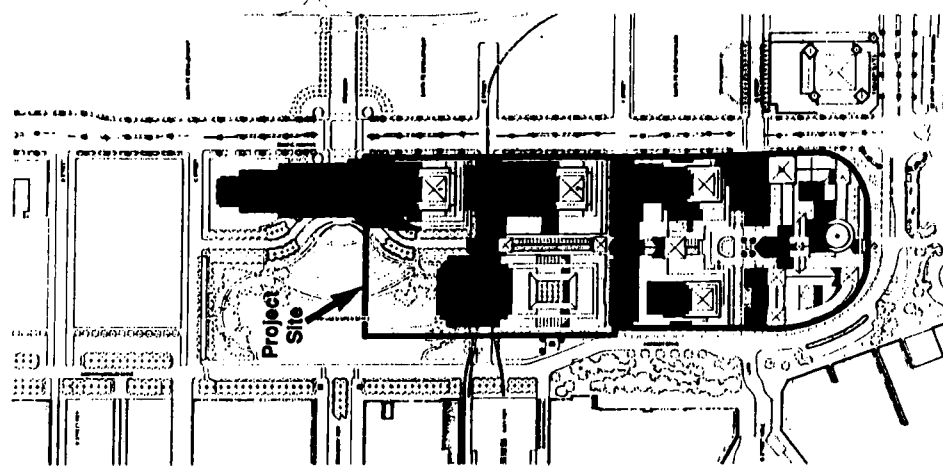
Please refer to Section 4.1.2 (page 4-33) for a discussion of the consistency of each of the alternatives with the Centre City Urban Design Program.

Effects From Shadows

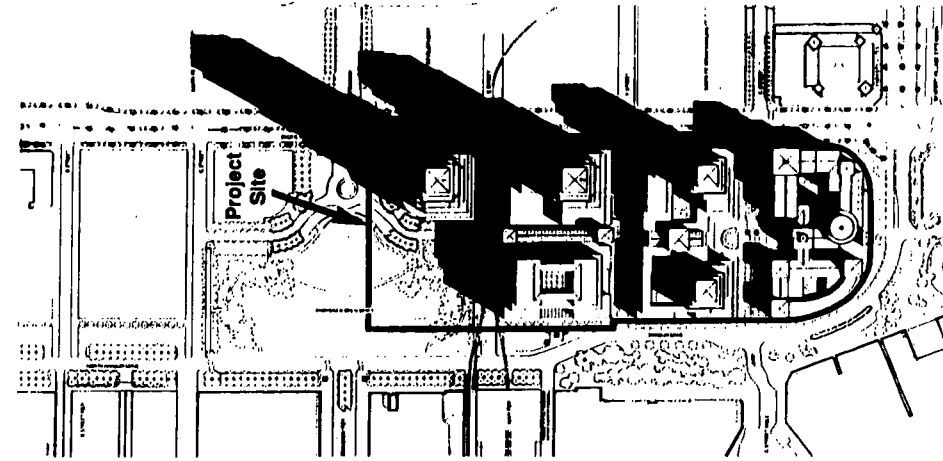
Figures 4-52 and 4-53 depict the shadows that would be cast at the winter solstice for Alternatives A and F, respectively. These alternatives cast the longest shadows of any alternatives. These shadows are indicative of the largest shadowing between the noon and 2 p.m. that would result from any of the alternatives. The mid-morning shadow (at 10 a.m.) is also shown. As



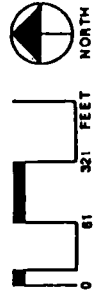
10:00 A.M.



12:00 P.M.



2:00 P.M.

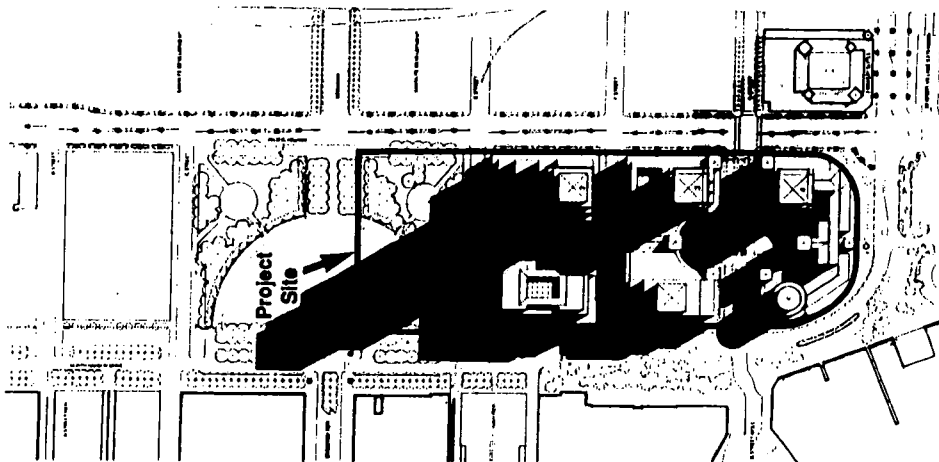


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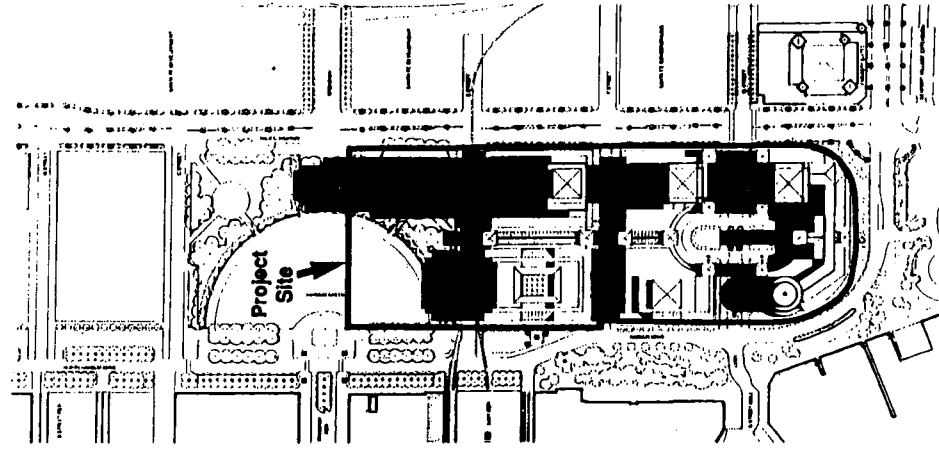
Solar Access (Dec.22)
for Alternative A

Figure 4-52

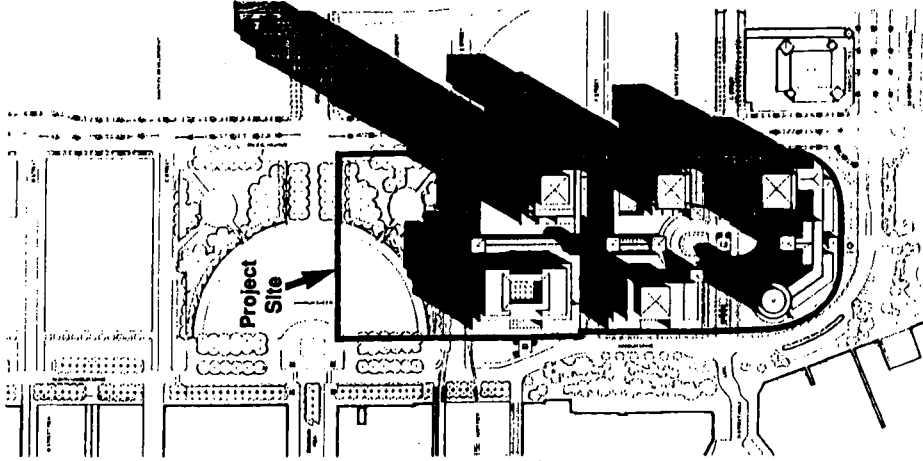
Navy Broadway Complex Project



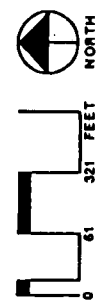
10:00 A.M.



12:00 P.M.



2:00 P.M.



04/0001.190

Solar Access (Dec.22)
for Alternative F

Figure 4-53

shown, the shadows would extend north to cover a portion of the Block 1 proposed open space areas at noon for each of these alternatives, moving northeast in the afternoon to cast on primarily office development proposed across Pacific Highway. Shadows would only touch, but would not substantially cover the Santa Fe Condominiums proposed east of Block 3. This is the only residential use that would be affected by shadows from Navy Broadway Complex development, and with the longest possible shadows (Alternative F) would not be substantially covered.

The casting of shadows in moderate climate areas such as in the project area is not necessarily adverse. In fact, shading can provide a moderating effect on hotter summer temperatures, so would be considered beneficial to public uses in the warmer times of the year. During the cooler times, temperatures are moderate enough that shading would not be considered substantially adverse. Therefore, no significant adverse effects from shading would result from any of the alternatives.

4.3.3 MITIGATION MEASURES

Compliance with the draft urban design guidelines (Appendix D) would mitigate aesthetic impacts associated with development of Alternative A, Alternative B, Alternative C, the onsite component of Alternative D, and from most viewpoints, Alternative F.

A significant unavoidable adverse change in the visual environment would occur with respect to views of Alternative F, as seen from E Street and Pantoja Park.

No significant adverse visual changes would result from either Alternative E or Alternative G, so no mitigation is necessary for either of these alternatives.

ENDNOTES:

1. Centre City Development Corporation, 1983.
2. Ibid.

4.4 PUBLIC SERVICES AND UTILITIES

The following analysis is based on consultation with purveyors of public services and utilities that may be affected by the proposed alternatives. A major component of the project involves relocation of personnel from one area of San Diego to the project area.

4.4.1 POLICE PROTECTION

AFFECTED ENVIRONMENT

The City of San Diego Police Department provides police protection to the project area. The department's main station is at Broadway and Fourteenth Street. The response distance to the project site is approximately 1 mile. The project area is located within the Central Division Command, which is one of seven area commands. The Central Division staff currently includes a captain, four patrol lieutenants, 16 sergeants, 140 officers, and 15 detectives. There are 59 patrol vehicles assigned to the Central Division. The Central Division services a population of over 67,000 residents and is responsible for 11.3 miles (3 percent) of the City's 330.7-square-mile jurisdiction.¹ The City of San Diego Police Department is adequately staffed to provide police protection to the project region and vicinity.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The City of San Diego Police Department has expressed that any of the alternatives that increase vehicular traffic on surrounding streets and arterials may increase the risk of traffic accidents. Only Alternative G would not generate this effect. Circulation system improvements proposed to mitigate impacts from this and other area development, as discussed in Section 4.2.3, page 4-65, would reduce this potential adverse effect to a level that is less than significant.

In addition, the Police Department has identified car prowls on parked vehicles as another potential adverse effect of the higher density uses proposed by all the alternatives except Alternative G. The existing police facilities, manpower, and available equipment are adequate to provide the project site and surrounding area with a sufficient level of police protection in cases of emergency. No significant adverse effects on the ability to provide police protection or public safety are anticipated from development of any of the alternatives.

MITIGATION MEASURES

Because no significant adverse effects are expected from any of the alternatives, no mitigation measures are necessary.

4.4.2 FIRE PROTECTION

AFFECTED ENVIRONMENT

Fire protection services for the project area are provided by the City of San Diego Fire Department. A Federal fire station, located at the 32nd Street Naval Station, has a mutual aid agreement to assist the City at the site, at the City's request.^{3,4} The fire stations that serve the project area are listed in Table 4.4-1 along with the equipment located at each station.

TABLE 4.4-1

FIRE STATIONS IN THE
VICINITY OF THE BROADWAY COMPLEX

Station	Location	Equipment
1	1222 1st Street	Two engine companies, chemical fire-fighting rig, light air rig, truck company, and paramedic
3	725 W. Kalamia	Engine company
4	404 8th Avenue	Engine company and rescue unit
11	945 25th Street	Engine company and truck company
Naval Station San Diego	32nd Street	Three engine companies

Source: Sumler, City of San Diego Fire Department, personal communication, 1988.

Station 1 is within 0.5 mile of the project site and is the nearest City fire station. The average response time to the project area from City stations is approximately 4 to 6 minutes. The City stations that serve the project area are currently adequately staffed.⁵ The Federal fire station at the 32nd Street Naval Station is 3.7 miles from the project site. It provides fire protection to both federal and nonfederal facilities, pursuant to the San Diego County Mutual Aid Plan. The Federal fire station at 32nd Street is adequately staffed to respond to emergencies in the project vicinity. The average response time to the project area is 6 minutes.

The project site is currently served with a fire flow of 2,500 gallons per minute (gpm).

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Redevelopment of the project site with Alternatives A, B, C, D, E, or F would result in construction of new buildings, and underground parking facilities (i.e., Alternatives A, B, C, D, and F) that would be susceptible to fire hazards. However, the project would include sprinklers and other fire safety measures that would avoid fire hazard impacts. Fire flow of 2,500 gpm would be required with a sprinkler fire system to adequately serve the site. The current flow of 2,500 gpm, therefore, would be sufficient to serve Alternatives A, B, C, D, E, and F.

Existing structures would be retained with Alternative G in their current condition. Many of the older buildings do not contain fire safety equipment such as roof sprinklers. These buildings are existing and would not introduce any new hazards to Navy personnel on the site.

According to fire department personnel, the existing facilities, manpower and equipment at the city and Federal fire departments are adequate to maintain a sufficient level of fire protection

service to the project site if any of the alternatives are developed. Therefore, no significant impacts to fire protection services are anticipated with implementation of any of the alternatives.

MITIGATION MEASURES

No impacts would result from development of the alternatives; therefore, no mitigation measures are necessary.

4.4.3 SCHOOLS

AFFECTED ENVIRONMENT

The project area is within the boundaries of the San Diego Unified School District (SDUSD). The SDUSD provides public school facilities for grades K through 12. As of October 1987, the SDUSD had 107 elementary schools (grades K-6), 8 middle schools (grades 6-8), 12 junior high schools (grades 7-9), and 15 high schools (grades 10-12).⁶ A majority of SDUSD schools are currently operating near or over capacity.⁷ The SDUSD is levying school impact fees for the long-range planning and construction of new facilities. The fees, authorized through California Government Code Section 53080, are \$1.50 per square foot for newly constructed residential structures and \$0.25 per square foot for newly constructed commercial structures.⁸

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

None of the proposed alternatives would directly contribute students to the elementary and secondary schools within the San Diego Unified School District, since residential uses are not being proposed by any alternative. In general, Alternatives A, B, C, D, E, and F would result in the relocation and centralization of outlying Navy administrative personnel already located in the region, so would not result in the introduction of new Navy personnel to the area. However, indirect impacts could potentially occur from the in-migration of civilian personnel and their families as a result of private development associated with Alternatives A, B, C, D, and F.

The density of uses proposed by Alternative E would be similar to that which currently exists onsite, and would not create the need for additional military employment or civilian employment. This alternative would centralize existing military employees within the region. Thus, the amount of Navy personnel and family members within the region would not increase with Alternative E, and no indirect impacts to city schools are anticipated with this alternative.

With Alternative G (no action), all offsite administrative uses would remain in their existing locations throughout the county. There would be no increase in Navy personnel or influx of military families to the region. Therefore, impacts to schools within the district would not occur with implementation of Alternative G.

Since Alternatives A, B, C, D, and F propose an increase in land use density, and propose both military and private development, in-migration of non-military personnel and their families could occur with these five alternatives. The influx of civilian families with elementary school age children could potentially result in indirect adverse impacts to elementary schools, since the combined capacity of these schools (i.e., 63,990) has already been exceeded by over 2,300 students, as shown in Table 4.4-2. Alternatives A, B, C, D, and F could, therefore, contribute incrementally to a cumulatively significant impact. Secondary schools within the District are below their

combined maximum capacity (Table 4.4-2), and they could accommodate approximately 6,700 more secondary grade students.

TABLE 4.4-2
MAXIMUM CAPACITY AND CURRENT ENROLLMENT OF
ELEMENTARY AND SECONDARY SCHOOLS
WITHIN SAN DIEGO UNIFIED SCHOOL DISTRICT

Grade	Current Enrollment (October 1988)	Maximum Capacity	Capacity Remaining
Elementary	66,309	63,990	-2,319
Secondary	50,748	57,450	+6,702

Source: San Diego Unified School District, 1989.

MITIGATION MEASURES

The Navy office component of any of the alternatives would not result in increased Navy personnel in the region, so no mitigation measures for Navy offices are necessary. Private development has the potential to cause regional immigration, so the following mitigation measure is proposed for the private development component of Alternatives A, B, C, D, and F:

- As authorized by California Government Code Section 53080, the developer of private uses on the Navy Broadway Complex will be assessed a fee of \$0.25 per square foot of private commercial and office uses, but excluding parking structures. The fee will be paid to the San Diego City School District.

4.4.4 RECREATIONAL FACILITIES

AFFECTED ENVIRONMENT

The City of San Diego has 13,776 acres of neighborhood, community, and regional parks. Ninety percent of the parkland within the City is concentrated in a few regional parks, such as Balboa Park, Mission Bay Park, Mission Trails Regional Park, and the La Jolla Underwater Park. The remaining 10 percent (1,272 acres) is located within numerous neighborhood and community parks.⁹ The San Diego Unified Port District also provides park facilities, such as the Bayfront Promenade and the G Street Mole.

The City of San Diego Park and Recreation Department has established standards for neighborhood and community parks. Neighborhood parks vary in size from 5 to 10 acres and are intended to serve approximately 3,500 to 5,000 people. Community parks vary from 13 to 20 acres and serve approximately 18,000 to 25,000 residents. The City does not have a standard

for regional parks. The majority of the parkland in Balboa Park (including the San Diego Zoo) and the La Jolla Underwater Park are tourist-oriented and serve both residents and visitors.¹⁰

The Port District has established a boardwalk along the bay that connects a number of recreation-oriented uses in the project vicinity, such as the G Street Mole and the B Street and Broadway Piers. The boardwalk and associated facilities provide a high level of recreation amenity in the project vicinity.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The City of San Diego determines the amount of park land necessary for recreational activities by the number of people anticipated from proposed residential developments. None of the alternatives include residential uses, so there would be no new demands on park facilities. These facilities would, therefore, not be affected by project development.

Four of the seven alternatives are proposed to include significant active and/or passive recreation opportunities at the foot of Broadway. Most notably, the Navy is proposing to provide 1.9 acres of open space area at the foot of Broadway as part of Alternative A and 3.5 acres as part of Alternative F. This could be combined with adjacent property (not under the control of the Navy) to the north of the site to create even larger open space areas (see Figure 3-4, page 3-7).

Alternatives B and D would provide 0.5 acre of open space plazas at the foot of Broadway (see Figures 3-10 and 3-12, pages 3-16 and 3-21). In addition, Alternatives A, B, C, D, and F propose wide sidewalks along, and the opening up of, E, F, and G Streets through the site. Therefore, each of these alternatives would provide substantial recreational benefits.

Alternatives E and G would not provide any new recreational amenities on the Navy Broadway Complex. Therefore, no beneficial recreational effects would result from these alternatives.

MITIGATION MEASURES

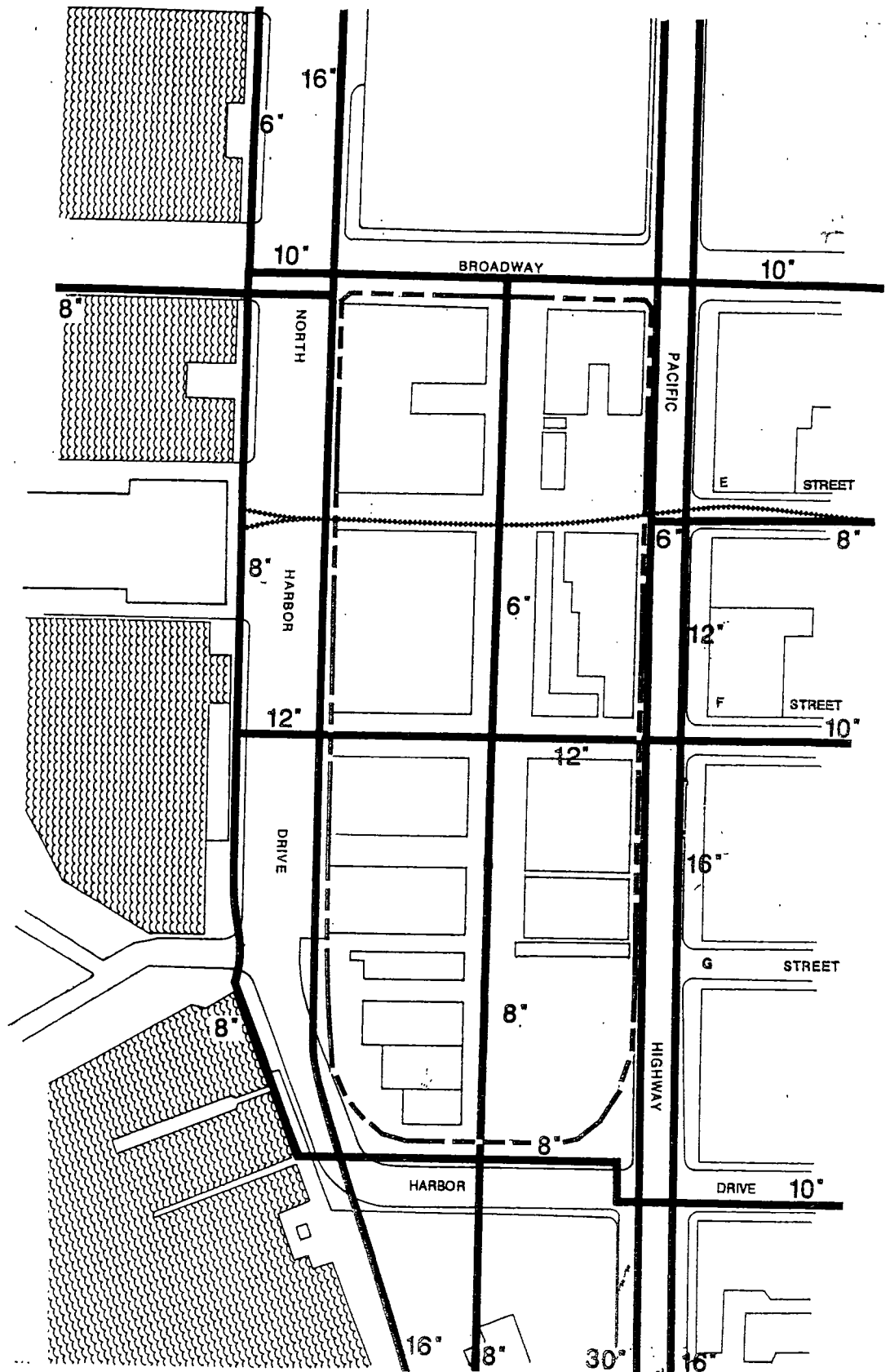
None of the alternatives would generate any significant adverse recreation impacts, so no mitigation measures are necessary.

4.4.5 WATER

AFFECTED ENVIRONMENT

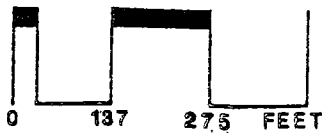
Water for the project area is supplied by the City of San Diego under the administration of the Water Utilities Department. City water is supplied by the Colorado River and the California State Water Project, and is stored in numerous reservoirs. The University Heights Reservoir, located approximately 5 miles northeast of the project site, provides water to the Centre City and the Navy Broadway Complex. Water conveyed from this reservoir is controlled with pressure regulating valves. One of these valves is located at Pacific Highway and F Street adjacent to the project site. Water pressure in the project area is adequate to serve existing needs.¹¹

The primary water facilities adjacent to the project site include 30-inch, 16-inch, and 12-inch mains in Pacific Highway; a 16-inch main in Harbor Drive; and a 10-inch main in Broadway (Figure 4-54). In addition, 6- and 8-inch mains bisect the site from Broadway to Market Street. The water facilities in the project area currently operate within their capacity.¹²



Water Facilities
 by Broadway Complex Project

4-120



6640001 1/90



NORTH

Sheet 4 of 4



ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The City of San Diego Water Utilities Department applies daily consumption rates for water usage by land use categories. Table 4.4-3 lists the consumption rates and the amount of water projected to be consumed by each alternative. Alternatives A, B, C, D, and F would consume greater quantities of water per day than the existing uses, Alternative G. Alternative E would consume less water than Alternative G.

The uses proposed for Alternative A, B, and F would consume similar amounts of water (309,171 gallons, 334,171 gallons, and 309,171 gallons of water per day, respectively). Alternative D would consume the largest amount of water (436,221 gallons per day), whereas Alternative E would consume approximately 51 percent less water than the existing uses (Alternative G), or 59,425 gallons per day.

Since the existing water facilities in the project vicinity are currently operating well within their service capacity, there would be no significant impacts to water service from the reduced density uses of Alternative E, or the continued onsite uses of Alternative G. These facilities also have sufficient capacity to serve the additional uses proposed by Alternatives A, B, C, D, and F without resulting in significant impacts to water service.

Although the proposed alternatives would not adversely affect existing water facilities, the City of San Diego Water Utilities Department has expressed the need for upgrading the existing cast iron mains near the project site. The Water Utilities Department has an ongoing capital improvement program to upgrade the cast iron water mains within the City, and recommends replacement of all such mains with new mains ranging from 12 to 16 inches. The City specifically recommends upgrading the mains in those portions of Broadway and F Street onsite, which are currently 10-inch and 12-inch mains, respectively, to 16-inch diameter mains. These would connect to existing 16-inch mains in Broadway, F Street, and Harbor Drive (Figure 4-54, page 4-120). The City plans to change the Harbor Drive main from a high pressure transmission main to a downtown pressure distribution main.

MITIGATION MEASURES

None of the alternatives would significantly affect the ability of the City to provide water service; therefore, no mitigation measures are necessary.

4.4.6 WASTEWATER

AFFECTED ENVIRONMENT

Sanitary sewer and wastewater treatment facilities that serve the project area are operated by the City of San Diego Water Utilities Department. The metropolitan sewage collection system consists of a network of collection sewers and interceptors that convey wastewater from the San Diego Metropolitan Sewer Service Area (and participating agencies) to the Point Loma Wastewater Treatment Plant (PLWTP).

TABLE 4.4-3

WATER CONSUMPTION RATES FOR THE PROPOSED LAND USES
(Net Increases)

Alternative	Proposed Uses	Water Consumption Rate Per Day	Anticipated Daily Water Requirements
A	1,244,247 SF office ^a	100 gal./1,000 SF	124,425 gallons
	1,500 hotel rooms	180 gal./room	270,000 gallons
	55,000 SF museum	90 gal./1,000 SF	4,950 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		309,171 gallons
B	1,494,247 SF office ^a	100 gal./1,000 SF	149,425 gallons
	1,500 hotel rooms	180 gal./room	270,000 gallons
	55,000 SF museum	90 gal./1,000 SF	4,950 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		334,171 gallons
C	594,247 SF office ^a	100 gal./1,000 SF	59,425 gallons
	1,500 hotel rooms	180 gal./room	270,000 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		239,221 gallons
D	1,044,247 SF office ^a	100 gal./1,000 SF	104,425 gallons
	1,800 hotel rooms	180 gal./room	324,000 gallons
	980,000 SF office (offsite)	100 gal./1,000 SF	98,000 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		436,221 gallons
E	594,247 SF office ^a	100 gal./1,000 SF	59,425 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		(30,779) gallons
F	1,244,247 SF office ^a	100 gal./1,000 SF	124,425 gallons
	1,500 hotel rooms	180 gal./room	270,000 gallons
	55,000 SF museum	90 gal./1,000 SF	4,950 gallons
	(601,360 SF industrial)	(150 gal./1,000 SF)	(90,204 gallons) ^b
	Total		309,171 gallons
G	No New Uses	NA	0 gallons
	Total		0 gallons

a Reflects proposed uses in excess of the existing 405,753 square feet of office space onsite. Existing square footage has been subtracted from proposed uses to reflect the potential net increase in water consumption.

b Reflects the reduction in water consumption associated with removal of existing industrial uses.

Source: Jim Wageman, City of San Diego Water Utilities Department, 1989, and Michael Brandman Associates, 1989.

Numerous sewer facilities serve the project site (Figure 4-55). Wastewater from the site is conveyed south to Market Street via a 15-inch sewer main in Pacific Highway. Another 15-inch sewer line in Market Street conveys wastewater to a 36-inch regional trunk sewer in Kettner Boulevard, which then transports wastewater north to the Point Loma Treatment Plant. An abandoned 24-inch line crosses the southwesterly area of the site; there are no current plans to remove this line. Wastewater flows in the project area are currently within the capacity of existing lines; however, approved development in the project area would require upgrading of the 15-inch sewer lines in Pacific Highway and Market Street to Kettner Boulevard.¹³

According to the City of San Diego, Point Loma Plant has capacity to treat 223 million gallons per day (mgd) and has a flow rate of 190 mgd, indicating sufficient capacity^a. It provides advanced primary treatment, then discharges treated wastewater to the ocean through an outfall. However, the Federal Clean Water Act of 1975 and the National Pollution Discharge Elimination System (NPDES) permit for the PLWTP require that wastewater receive secondary treatment. Therefore, the City does not comply with the Clean Water Act and with the NPDES permit for this plant.¹⁴

The United States Environmental Protection Agency (EPA) and the Regional Water Quality Control Board (RWQCB) are joint plaintiffs suing the City of San Diego for noncompliance with the Clean Water Act and the NPDES permit, and has issued to the City a cease and desist order requiring compliance by 1996. The City has indicated it may not be able to meet this date and is negotiating an agreement with EPA and RWQCB.^{15, 16}

Nevertheless, the City has committed to providing secondary treatment at the Point Loma Wastewater Treatment Plant, although the timeline has not been finalized. The City is planning to expand capacity at the plant to 240 mgd by 1992 and to 340 mgd by 2050. Secondary treatment of all this wastewater would be provided.¹⁷ Wastewater flow projections through 2010 are 207 mgd, so adequate plant capacity is projected at least through 2010.¹⁸

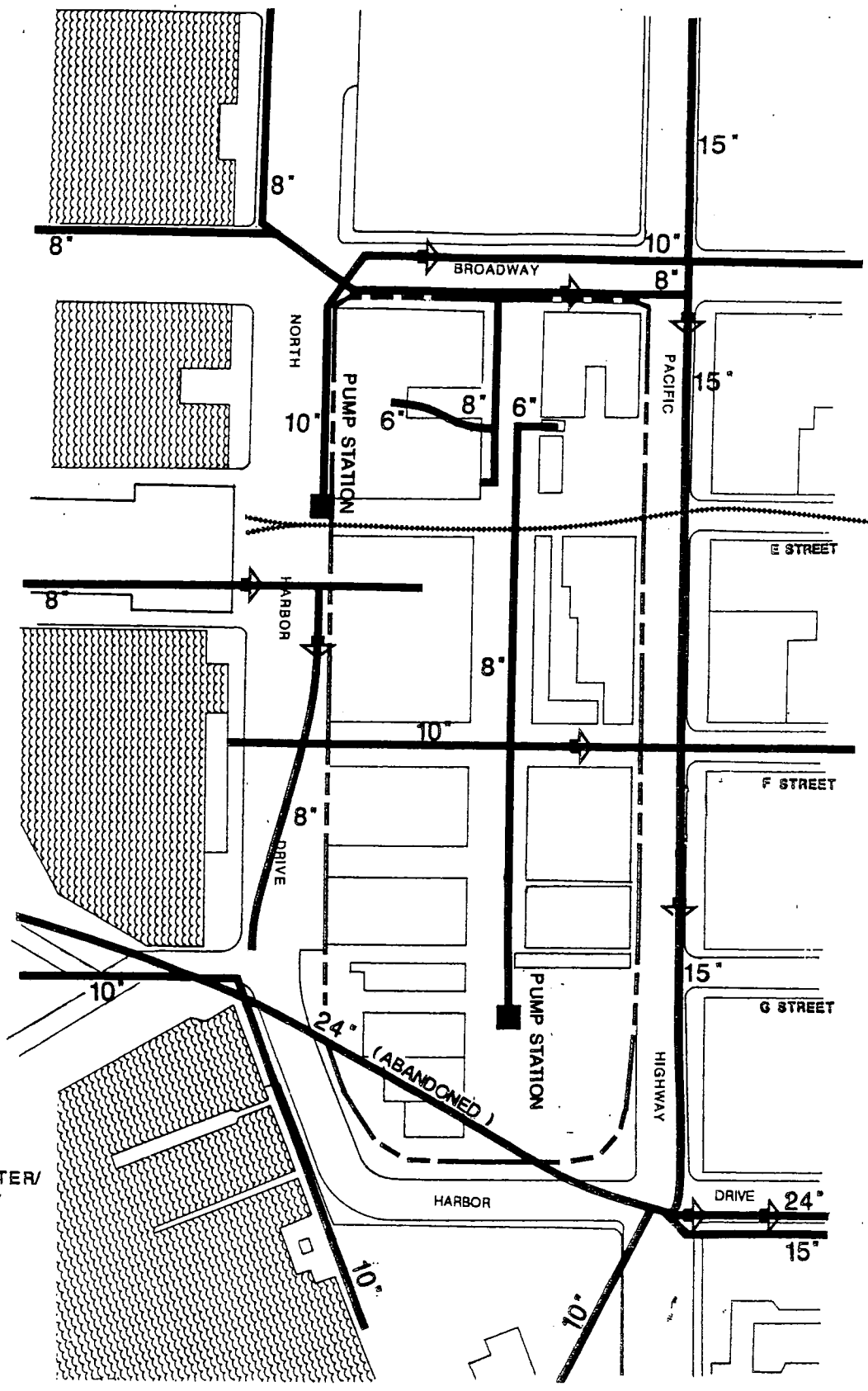
The Point Loma Plant is also subjected to the California State Ocean Plan, which provides water quality standards for wastewater outfalls for the purpose of maintaining beneficial uses of the ocean. Compliance with the plan is monitored by the California Department of Health Services (DHS). DHS has indicated that there are no toxicity problems at the plant's outfall, but that there are periodic coliform problems at the outer edges of some kelp beds. The City of San Diego is considering an outfall extension or a chlorination/dechlorination/discharge program to resolve this problem.¹⁹

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The City of San Diego Water Utilities Department has established daily generation rates for wastewater typically produced by the various land uses. Table 4.4-4 lists the generation rates and the amount of wastewater anticipated from the proposed alternatives. At even the highest rate

^a The Regional Water Quality Control Board (RWQCB) has indicated there is some question concerning plant capacity, and is requesting additional information from the city. Nevertheless, RWQCB has also indicated that the system is not capacity constrained.





- Legend
- SEWER LINE DIAMETER/
DIRECTION OF FLOW
 - RAILROAD TRACK
 - PROJECT SITE

Sewer Facilities Broadway Complex Project

4 124

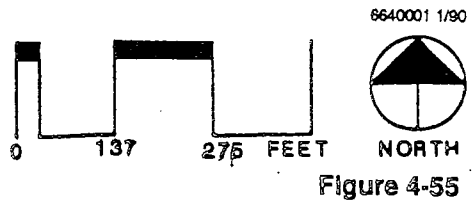


TABLE 4.4-4

**WASTEWATER GENERATION RATES FOR THE PROPOSED LAND USES
(Net Increases)**

Alternative	Proposed Uses	Wastewater Generation Rate Per Day	Anticipated Wastewater Generation
A	1,244,247 SF office ^a	85 gal./1,000 SF	105,760 gallons
	1,500 hotel rooms	140 gal./room	210,000 gallons
	55,000 SF museum	70 gal./1,000 SF	3,850 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
	Total		250,495 gallons
B	1,494,247 SF office ^a	85 gal./1,000 SF	127,011 gallons
	1,500 hotel rooms	140 gal./room	210,000 gallons
	55,000 SF museum	70 gal./1,000 SF	3,850 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
	Total		271,746 gallons
C	594,247 SF office ^a	85 gal./1,000 SF	50,510 gallons
	1,500 hotel rooms	140 gal./room	210,000 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
	Total		191,395 gallons
D	1,044,247 SF office ^a	85 gal./1,000 SF	88,760 gallons
	1,800 hotel rooms	140 gal./room	252,000 gallons
	980,000 SF office (offsite)	85 gal./1,000 SF	83,300 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
	Total		354,945 gallons
E	594,247 SF office ^a	100 gal./1,000 SF	50,510 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
Total		(18,605) gallons	
F	1,244,247 SF office ^a	85 gal./1,000 SF	105,760 gallons
	1,500 hotel rooms	140 gal./room	210,000 gallons
	55,000 SF museum	70 gal./1,000 SF	3,850 gallons
	(601,360 SF industrial)	(115 gal./1,000 SF)	(69,115 gallons) ^b
	Total		250,495 gallons
G	No New Uses	NA	0 gallons
	Total		0 gallons

a Reflects proposed uses in excess of the existing 405,753 square feet of office space onsite. Existing square footage has been subtracted to identify the net increase or decrease in wastewater generation.

b Reflects the reduction in wastewater generation associated with the removal of existing industrial uses.

Source: Jim Wageman, City of San Diego Water Utilities Department, 1989 and Michael Brandman Associates, 1989.

of wastewater generation (354,945 gallons/day, Alternative D), the project would increase flows at the Point Loma Plant by less than 0.2 percent. Both the City of San Diego and the RWQCB have expressed that this additional wastewater would not significantly affect the quality of water discharged from the outfall, nor would it affect the ability of the City to provide secondary treatment of wastewater. It would also not significantly affect the capacity of the treatment system.^{20,21} The EPA has concurred with this conclusion.²²

The density of uses proposed by Alternatives A, B, C, D, and F would significantly increase the amount of wastewater conveyed through existing sewer facilities. Each of these alternatives would represent a substantial increase over the existing uses (i.e., Alternative G), and would result in significant impacts to sewer conveyance facilities.

The uses proposed for Alternative E would result in a decrease in the amount of wastewater currently being generated at the site, so it would not cause any significant impacts. The existing sewer facilities currently provide adequate service to the project site. Therefore, no significant impacts would occur with Alternative G.

MITIGATION MEASURES

The following measures are proposed to mitigate significant impacts from Alternatives A, B, C, D, and F to sanitary sewer facilities:

- The existing 15-inch diameter mains located in Pacific Highway and in Market Street (Figure 4-55, page 4-124) will be upgraded by the project developer, in coordination with the City of San Diego, to a capacity sufficient to serve future onsite development, as well as future upstream and tributary developments that would be linked to them. As recommended in a sewer pipeline capacity analysis, 1,800 linear feet of sewer line will be replaced from the intersection of Pacific Highway and E Street to the intersection of Market Street and Kettner Boulevard. The sewer line will be constructed upon demand for a new line created by the project. Upon implementation of these measures, adverse impacts from Alternatives A, B, C, D, and F related to sewer facilities would be avoided.

4.4.7 SOLID WASTE

AFFECTED ENVIRONMENT

Solid waste disposal in the project area is provided by the combined services of the City of San Diego and private contractors. Refuse collected from the project site is currently taken to the West Miramar Landfill, a Class III facility operated by the City of San Diego Disposal Division. The landfill currently receives 1.6 million cubic yards of refuse per year and has a remaining capacity of 26 million cubic yards. The City has estimated that the landfill will reach capacity in 1995; consequently, the City is in the process of identifying a replacement landfill site. The City has entered into a joint powers agreement with the County of San Diego to determine the location of new sites within the City. In addition, the City is considering expanding the West Miramar site.²³

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Alternatives A through F would generate greater quantities of solid waste than the existing onsite uses (Alternative G). In addition to typical daily solid waste production during project operations, Alternatives A through F would require demolition of most existing onsite structures. The increase of daily solid wastes, and disposal of demolished construction materials, would incrementally decrease the life expectancy of landfills serving the area.

The City of San Diego Waste Management Department has indicated that the current capacity of the West Miramar landfill will provide sufficient solid waste disposal through the year 1995, after which an alternative arrangement will be needed to provide the necessary capacity for future solid waste disposal.

The San Diego County Department of Public Works Solid Waste Division uses a generation factor of 1.6 tons per person per year to determine the quantity of solid waste produced by land uses.²⁴ Table 4.4-5 lists the quantity of solid waste expected to be generated by future employees of the proposed project alternatives (A through G).

**TABLE 4.4-5
ANTICIPATED SOLID WASTE GENERATION
FOR PROPOSED ALTERNATIVES**

Alternatives	Increase in Employees ^a	Solid Waste Generation Factor ^b	Solid Waste Generation (tons/yr)
A	8,648	1.6 tons/yr/employee	13,800
B	9,759	1.6 tons/yr/employee	15,600
C	5,745	1.6 tons/yr/employee	9,200
D	12,340	1.6 tons/yr/employee	19,700
E	4,545	1.6 tons/yr/employee	7,300
F	8,648	1.6 tons/yr/employee	13,800
G	0	1.6 tons/yr/employee	0

a Assumes net increase in employment on Navy Broadway Complex over current estimated level of 2,122 employees (Alternative G).

b Generation factor represents average annual per capita trash generation for residential, commercial, and industrial uses, and demolition activities, for 1988 population (Eric Swanson, personal communication, San Diego County Department of Public Works Solid Waste Division, 1989).

Source: Michael Brandman Associates, 1989.

The largest increase of solid waste would occur with the Alternative A, the Alternative B, the Alternative D, and Alternative F, from which an anticipated 13,800, 15,600, 19,700, and 13,800 tons, respectively, would be generated per year. Alternative C and Alternative E would result in lesser increase to solid waste generation (i.e., 9,200 and 7,300 additional tons per year over existing uses, respectively). The West Miramar landfill will provide adequate solid waste disposal through 1995, and the City of San Diego is currently planning to develop new landfills, or expand existing ones, to serve the city's future disposal requirements, so no significant impacts to solid waste disposal are anticipated with implementation of any of the alternatives.

With Alternative G, the site would not be redeveloped, no demolition would take place, and no increase in solid waste generation would occur. Therefore, there would be no significant impacts.

MITIGATION MEASURES

As no significant impacts to solid waste would result from any of the alternatives, no mitigation measures are necessary.

ENDNOTES:

- 1 City of San Diego, 1987c.
- 2 Hagman, San Diego Police Department, personal communication, 1988.
- 3 Inman, San Diego Fire Department, personal communication, 1988.
- 4 George, San Diego Fire Department, personal communication, 1988.
- 5 Sumler, San Diego Fire Department, personal communication, 1988.
- 6 San Diego Unified School District, personal communication, 1988.
- 7 Cherry, San Diego Unified School District, personal communication, 1988.
- 8 City of San Diego, op. cit.
- 9 Smith, San Diego Parks and Recreation Department, personal communication, 1988.
- 10 Ibid.
- 11 Jacoby, San Diego Water Conservation Department, personal communication, 1988.
- 12 Ibid.
- 13 Graft, San Diego Water Utilities Department, personal communication, 1988.
- 14 Child, San Diego Water Utilities Department, personal communication, 1989.
- 15 McCann, Regional Water Quality Control Board - San Diego Region, personal communication, 1989.
- 16 Tomsavic, Environmental Protection Agency, personal communication, 1989.
- 17 Child, op. cit.
- 18 City of San Diego, op. cit.
- 19 Child, op. cit.
- 20 McCann, op. cit.
- 21 Child, op. cit.
- 22 Tomsavic, op. cit.
- 23 Clay, West Miramar Landfill, personal communication, 1988.
- 24 Swanson, San Diego Public Works Department, personal communication, 1988.

4.5 SOCIOECONOMICS

The socioeconomic analysis is based primarily on local and regional growth projections that are provided by the City of San Diego and the regional planning agency for San Diego, the San Diego Association of Governments (SANDAG). Statistics are generally provided by geographic area. The largest area is the "Major Statistical Area" (MSA), which covers the entire San Diego Bay area to several miles inland; next is the "Sub-Regional Area" (SRA), which includes the north-central area of the bay; and the smallest geographic area for which statistics are provided is Centre City, which includes the downtown core and waterfront. The boundaries of the areas are depicted on Figure 4-56. The SRA is a statistical subarea of the MSA, and the Centre City is a statistical subarea of the SRA.

4.5.1 AFFECTED ENVIRONMENT

Regional Population, Housing, and Employment

Existing Regional Population

San Diego County has an estimated 1988 population of 2,320,700,¹ making it the 10th largest metropolitan area in the country. San Diego County is one of the fastest growing counties in California with a 71-percent population increase between 1970 and 1988.²

The City of San Diego comprises almost half of the county's population and is now the second largest city in California.³ The 1988 population is estimated at 1,058,700.⁴ Although the City's rate of growth is not as high as the county's, the City's population has increased 51 percent since 1970 and 4.5 percent since 1986.

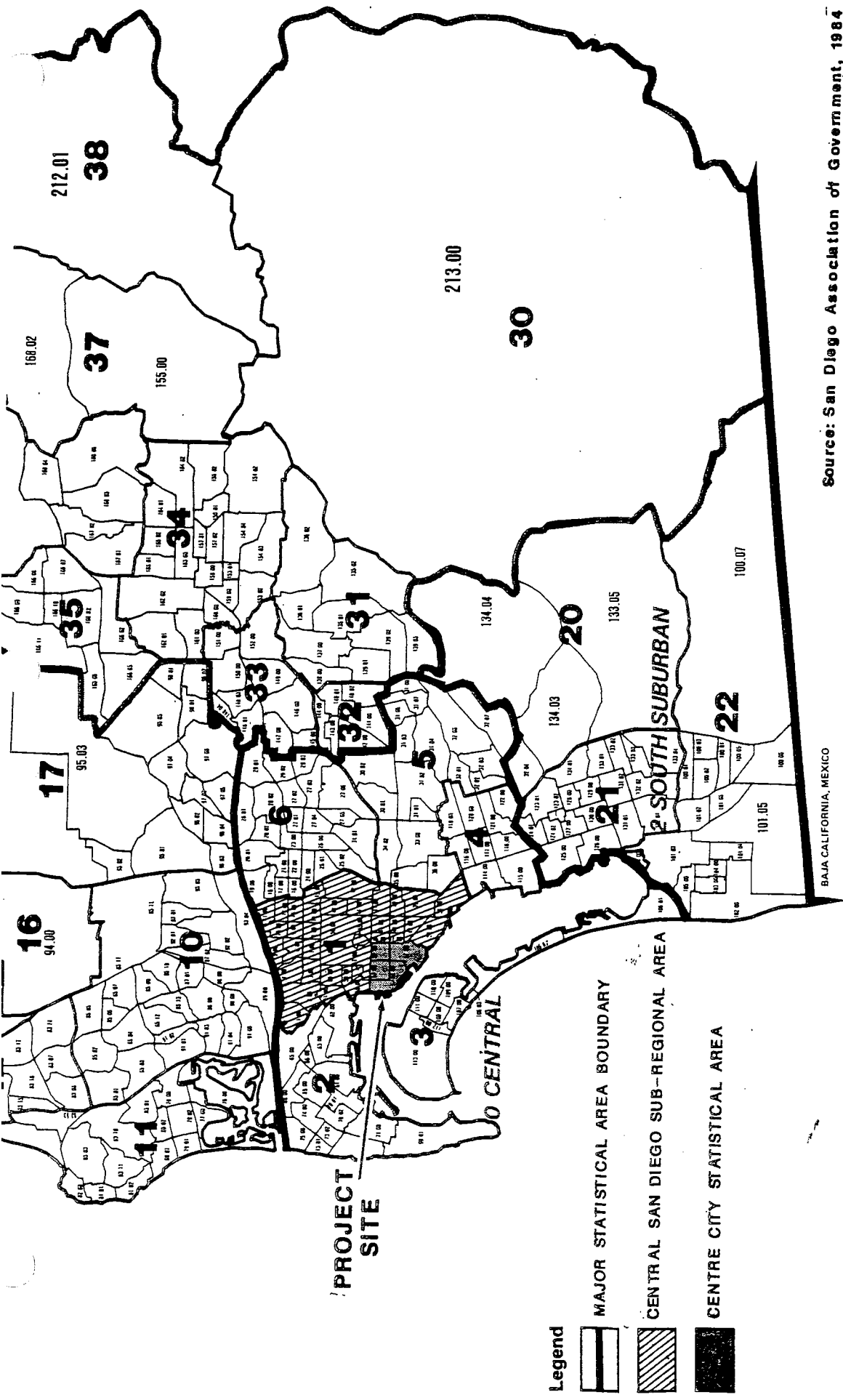
Existing Regional Housing

San Diego County had an estimated 855,545 housing units (as of January 1, 1987), an increase of nearly 19 percent since 1980 and nearly 4 percent since 1986. Single-family units have dominated the regional housing inventory, constituting over 57 percent of the total housing. The countywide vacancy rate is 5.6 percent. There are an estimated 10,411 military housing units in the county.

The City of San Diego had an estimated 401,570 housing units (as of January 1, 1987), an increase of over 17 percent since 1980 and nearly 4 percent since 1986. Single-family residences constitute approximately 55 percent of all units. There are an estimated 5,745 military housing units in the City, which is more than half the county total. The City's housing vacancy rate is 4.9 percent.⁵

Existing Regional Employment

San Diego County's civilian labor force numbered 833,300 as of 1986, the most recent year for which data were available. For the third consecutive year, the county's employment showed a significant growth rate of 5.5 percent and a drop in the unemployment rate. The largest growth was in the services sector, which includes an expanding tourism industry and wholesale-retail trade. Table 4.5-1 depicts the labor force by occupation.



Source: San Diego Association of Government, 1984

6640001 1/50
NO SCALE



NORTH
Figure 4-56

Statistical Areas Navy Broadway Complex Project

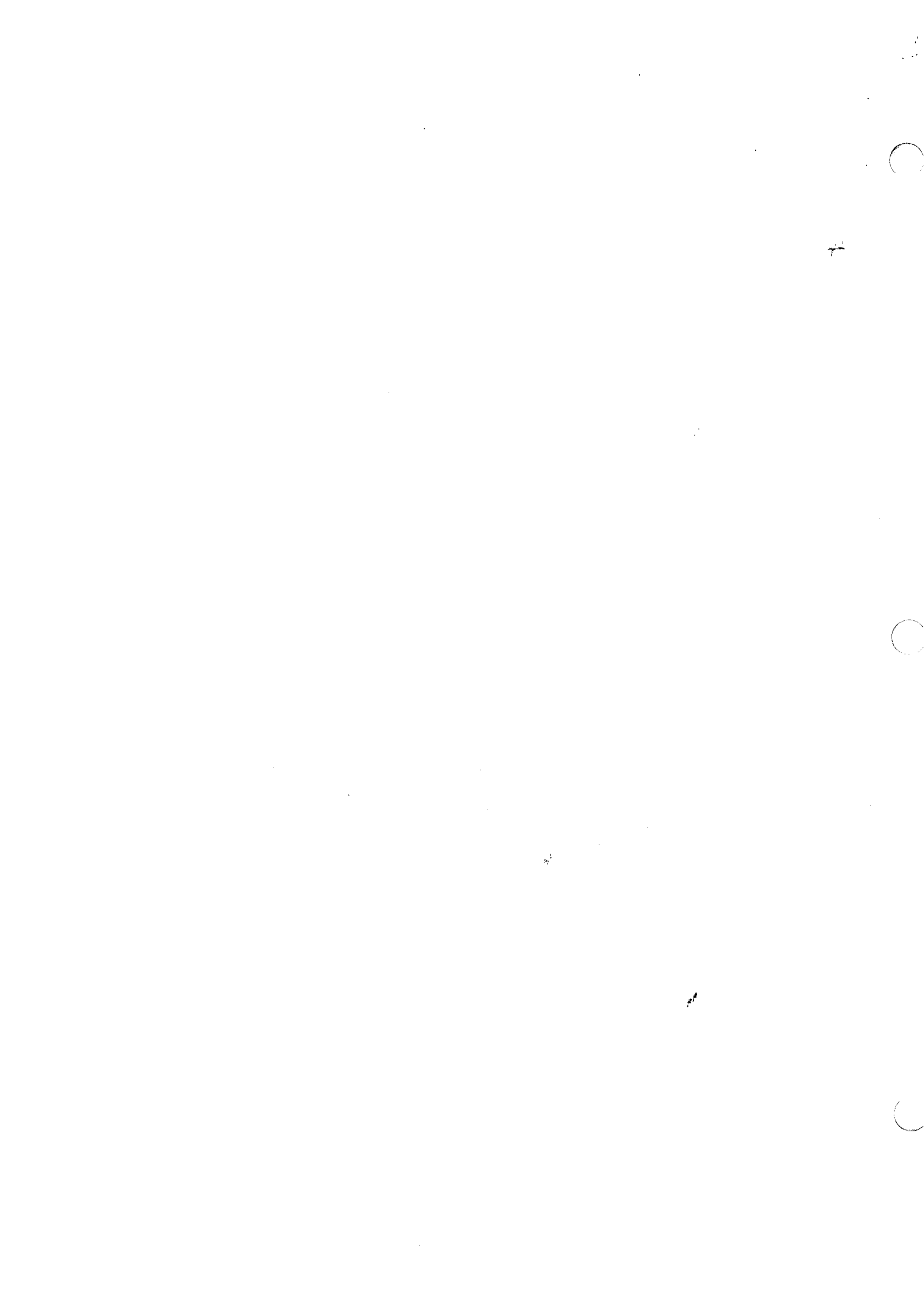


TABLE 4.5-1
EMPLOYMENT BY OCCUPATION
COUNTY OF SAN DIEGO

Occupation	1986	
	Number of Employees	Percent of total
Agricultural, Forestry, Mining, Fishing	12,400	1.5
Construction	52,000	6.2
Nondurable Manufacturing	21,600	2.6
Durable Manufacturing	100,400	12.1
Transportation, Communication	32,100	3.9
Wholesale Trade	34,800	4.2
Retail Trade	162,700	19.5
Finance, Insurance, Real Estate	56,200	6.7
Services	211,1002	5.3
Government	<u>150,000</u>	<u>18.0</u>
TOTAL	833,300	100.0

Source: California Employment Development Department, 1987.

As shown in Table 4.5-1, the county employment base is diverse. According to the City of San Diego, the county's and city's economy has broadened substantially over the past 20 years "from a base of aerospace and the military to include significant manufacturing and tourism."⁶ However, it is estimated that the Navy and the Marine Corps still contribute approximately 20 percent of the county's gross product,⁷ which constitutes a substantial segment of the overall economy.

Projected Regional Population

Population forecast data prepared by SANDAG in 1987 indicate that "long-term forecasts show a slight decline of population growth; however, San Diego will nevertheless maintain its status as one of the fastest growing counties in California."⁸ The county is forecast to gain 444,726 persons by the year 2000, as shown in Table 4.5-2.

TABLE 4.5-2

REGIONAL GROWTH PROJECTIONS

Year	City of San Diego			County of San Diego		
	Population	Housing	Employment	Population	Housing	Employment
1988 ^a	1,058,700	415,590	592,562	2,320,700	765,262	1,026,761
1990 ^{b, c}	1,029,600	385,600	534,500	2,424,240	865,800	930,200
1995 ^b	1,160,234	446,385	659,448	2,567,193	958,023	1,263,391
2000 ^b	1,238,738	484,941	707,915	2,765,421	1,051,006	1,366,140
2010 ^b	1,375,232	543,437	812,583	3,133,851	1,204,899	1,589,260

a 1988 estimates from City of San Diego Planning Department.

b SANDAG, 1987c.

c Current (1988) population employment and housing estimates exceed the projected 1990 estimates by approximately 30,000.

Source: Michael Brandman Associates, Inc., 1989.

The average annual projected growth rate in San Diego County is 2.2 percent, which is greater than both California's (1.1 percent) and the United States (0.8 percent).⁹ The estimated average annual increase of 41,000 people is not as large as the recent growth of 69,000 persons between 1986 and 1987. Most growth is expected north of I-8. By the year 2010, the majority of the region's population is expected to reside in north city and north county MSAs.

The City of San Diego is also expected to grow at a reduced rate over the next decade. The growth rate is expected to remain steady and average approximately 1 percent annually through 2000, with an anticipated overall increase of approximately 180,000 persons over 1988 estimates (Table 4.5-2). The most current (as of 1988) population estimates for the city exceed, by 30,000 people, the projected (in 1987) city population by 1990, indicating a more rapid rate of growth than expected.

Projected Regional Housing

The county is anticipated to increase its housing inventory by 37 percent, or nearly 286,000 units, to reach approximately 1,051,000 units by 2000 (Table 4.5-2). A majority of the growth is expected to occur in the northern region where more land is considered available for development.¹⁰

The City of San Diego's recent building boom is expected to slow to a degree and the north should continue to grow faster than the south. By the year 2000, 69,000 new houses are projected to be built, bringing the citywide total to 484,941 units.¹¹ As with population, however, the City's estimated housing stock in 1988 exceeds by 30,000 units the total projected (in 1987) for 1990, suggesting a more rapid growth rate than projected.

Projected Regional Employment

The county is expected to gain 339,379 civilian jobs by 2000, a civilian employment increase of 33 percent over 1988 (Table 4.5-2). The highest rate of growth is expected in the wholesale, retail, and services sectors (including tourism), with high technology, manufacturing, transportation, communication, utilities, finance, insurance, and real estate also showing growth. Along with agriculture, forestry, and fisheries, construction and government jobs will decline in percentage of total regional employment. Little change is anticipated in the number of military ships, aircraft, and personnel assigned to San Diego.¹²

The City of San Diego is expected to experience slower employment growth than the region as a whole. By 2000, it is projected that there will be 115,253 new jobs--a 19 percent increase over 1988 levels. However, the current estimate of city employment exceeds the projected employment for 1990 by 58,000, suggesting a more rapid than projected rate of employment growth.

Local Population, Housing, and Employment

Existing Local Population

The population of the Central MSA (where the project site is located) (Figure 4-30, page 4-86) grew 11 percent between 1980 and 1986, reaching a total 1986 population of 548,722. The smaller statistical area--Central San Diego SRA--represented approximately 6.4 percent of the region's 1980 population, with a total of 117,400 persons.

The SRA population has increased 23 percent since 1980 and is currently (1988) 144,805.¹³ The Centre City substatalistical area had a 1987 population of 12,132.¹⁴

Existing Local Housing

The 1986 housing inventory for the MSA was 199,105 units, a 7-percent increase from 1980. The SRA's housing inventory grew 9 percent during the same time period to 60,560 in 1986.¹⁵ Centre City had a housing inventory of 7,709 units in 1987.¹⁶

Existing Local Employment

Employment totaled 259,722 in the Central MSA in 1986, a growth of 5 percent between 1980 and 1986. The SRA had an increase in employment of 20 percent for the same time period, reaching 151,000 in 1986.¹⁷ Centre City had 60,300 jobs in 1986.¹⁸

Projected Local Growth

Population, housing, and employment growth projections are provided by MSA and SRA, but not for the smaller Centre City statistical area, where only current data are available (except with

regard to employment). Estimates of current (1986/1987) population, housing, and employment exceed 1990 projections for the Central MSA and Central San Diego SRA, indicating a greater than expected level of growth. Table 4.5-3 depicts projected local population, housing, and employment growth.

Projected Local Population

Central MSA population is projected to increase by approximately 28,400 between 1986 and 2000, which is an overall increase of 5.2 percent. At this rate, the Central MSA is projected to be San Diego's slowest growing MSA. The smaller Central San Diego SRA is projected to increase by 3,100 people between 1986 and 2000, a 2-percent increase. However, as noted in Table 4.5-3, the current (1986) population for the SRA already exceeds the projected 1990 population by nearly 21,000 people (or 17 percent). Given this, it is reasonable to assume that actual growth will exceed projected growth in 2000.

Projected Local Housing

Most housing growth in the region between 1986 and 2000 is projected to occur outside the Central MSA. The housing inventory in the MSA is anticipated to increase 12 percent between 1986 and 2000, to 222,134 units. The SRA is projected to increase by 14 percent during this period, bringing the total housing inventory to 69,329 for the SRA.

Projected Local Employment

Total employment for Central MSA is projected to increase by 23 percent (or approximately 60,000 jobs) between the years 1986 and 2000. The largest projected growth in employment in the MSA is anticipated to occur south of I-8. Employment in the Central San Diego SRA is expected to increase by 44 percent (or 56,776 jobs) over the same period. One-third of the projected increase is expected to occur in Centre City, with a projected increase of 19,000 jobs--a 32-percent growth--between 1986 and 2000.

4.5.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Direct Effects on Population, Housing, and Employment

None of the alternatives include the development of residential uses, and therefore, they would not directly contribute to local or regional growth in population or housing. Employment growth associated with development of Alternatives A, B, C, D, and F could result in indirect housing demands and population growth through project-induced in-migration to the region. However, given the substantial housing and population base in San Diego (415,590 housing units and a population of over 1 million in 1988), new employees to the region associated with the project would be absorbed without notable secondary effects. Alternative E (military construction), which consolidates existing Navy administrative staff located in San Diego on the project site and provides no other employment, and Alternative G (no action) would not generate any substantial long-term employment opportunities and, therefore, would not result in-migration to the region. Table 4.5-4 shows the anticipated employment levels for each alternative and Table 4.5-5 compares these levels with the employment growth projected for the Central MSA, Central San Diego SRA, and the Centre City area for 1995 and 2000. Employment levels depicted in Tables 4.5-4 and 4.5-5 represent the jobs in excess of the approximately 2,100 jobs currently held by Navy and civilian administrative personnel onsite.

GROWTH PROJECTIONS BY STATISTICAL AREA

Year	Central MSA			Central San Diego SRA			Centre City Statistical Area		
	Population	Housing	Employment	Population	Housing	Employment	Population	Housing	Employment
1980 ^a	495,500	180,800	247,600	117,400	55,700	126,100	--	--	--
Current ^{b,c}	548,721	199,105	259,772	144,806	60,560	128,233	12,132	7,709	60,300
1990 ^{a,d}	521,900	196,100	251,900	123,900	61,100	152,200	--	--	--
1995 ^c	559,763	212,554	303,112	150,733	65,645	176,422	--	--	76,740
2000 ^c	577,118	222,134	319,311	157,212	69,329	185,009	--	--	79,344

a Unmarked SANDAG Series 6; 1980, 1990, 2000.

b 1987 (i.e., "current") population and Centre City housing provided by the City of San Diego.

c SANDAG Series 7; 1986, 1995, 2000. (The "current" year for housing and employment outside of Centre City is assumed to be 1986, the most recent data year available.)

d Note that current (1986) population, housing, and employment exceeds the 1990 projected levels in the Central MSA. Current (1986) population also exceeds the projected 1990 population in the Central San Diego SRA.

Source: SANDAG.

TABLE 4.5-4
NET EMPLOYMENT LEVEL--ALTERNATIVES A THROUGH G

Proposed Alternative	Land Use Assumptions	Employment Levels ^a
Alternative A	1,000,000 SF Navy office	6,667
	650,000 SF commercial office	2,889
	1,500 hotel rooms	1,200
	55,000 SF museum	15
	25,000 SF retail	<u>50</u>
	Subtotal	10,821
	Net Increase	8,699^a
Alternative B	1,000,000 SF Navy office	6,667
	900,000 SF commercial office	4,000
	1,500 hotel rooms	1,200
	55,000 SF museum	15
	25,000 SF retail	<u>50</u>
	Subtotal	11,932
	Net Increase	9,810^b
Alternative C	1,000,000 SF Navy office	6,667
	1,500 hotel rooms	1,200
	25,000 SF retail	<u>50</u>
	Subtotal	7,917
	Net Increase	5,795^b
Alternative D	20,000 SF Navy office	133
	1,430,000 SF commercial office	6,355
	1,800 hotel rooms	1,440
	25,000 SF retail	50
	980,000 SF Navy office (offsite)	<u>6,544</u>
	Subtotal	14,522
	Net Increase	12,400^b
Alternative E	1,000,000 SF Navy office	<u>6,667</u>
	Subtotal	6,667
	Net Increase	4,545^b

TABLE 4.5-4 (continued)

Proposed Alternative	Land Use Assumptions	Employment Levels ^a	
Alternative F	1,000,000 SF Navy office	6,667	
	650,000 SF commercial office	2,889	
	1,500 hotel rooms	1,200	
	55,000 SF museum	15	
	25,000 SF retail	<u>50</u>	
		Subtotal	10,821
	Net Increase	8,699^b	
Alternative G	405,753 SF Navy office	----	
	601,360 SF industrial	----	
		Subtotal	<u>2,122^c</u>
		Net Increase	0

a Employment levels assume 150 gross square feet (gsf) of Navy office use per employee, 225 gsf of commercial office use per employee, 1.25 hotel rooms per employee, and 4,000 gsf of museum use per employee.

b Net total assumes future employment level in excess of existing 2,122 employees onsite.

c Estimated existing onsite employment.

Source: Korve Engineering, Inc. and Michael Brandman Associates, 1989.

TABLE 4.5-5

RELATIONSHIP OF ANTICIPATED EMPLOYMENT LEVELS
TO EMPLOYMENT GROWTH PROJECTIONS FOR 1995 AND 2000

Project Alternative	Anticipated Emp. Level For Project Alternative	Central MSA		Central San Diego SRA		Centre City Statistical Area	
		1995 Employ. Proj. %	2000 Employ. Proj. %	1995 Employ. Proj. %	2000 Employ. Proj. %	1995 Employ. Proj. %	2000 Employ. Proj. %
A	8,648 ^a	307,485	324,753	176,473	180,100	76,740	79,344
B	9,759 ^a	307,485	324,753	176,473	180,100	76,740	79,344
C	5,745 ^a	307,485	324,753	176,473	180,100	76,740	79,344
D	10,899 ^a	307,485	324,753	176,473	180,100	76,740	79,344
E	4,545 ^a	307,485	324,753	176,473	180,100	76,740	79,344
F	8,648 ^a	307,485	324,753	176,473	180,100	76,740	79,344
G	0 ^a	307,485	324,753	176,473	180,100	76,740	79,344

4-138

a Anticipated employment level assumes future employment in excess of existing 2,122 employees onsite.

Source: SANDAG, Series 7 Regional Growth Forecasts, July 1988 and Michael Brandman Associates 1989.

Alternatives A, B, C, D, E, and F would provide employment opportunities that vary according to the uses proposed (see Tables 4.5-4, page 4-136 and 4.5-5, page 4-138). Alternatives C and E propose 1 million square feet of Navy office uses and would result in similar employment levels (5,745 and 4,545, respectively). In addition to the proposed office uses, Alternative C also includes 1,500 hotel rooms, resulting in an additional 1,200 jobs. Alternatives A, B, and F propose similar land uses (i.e., office, hotel, and museum uses) and intensities, and would generate similar employment levels (8,699, 9,810, and 8,699, respectively). The uses proposed by Alternative D would generate the highest net employment level (12,400 employees). Approximately 980,000 square feet of Navy office uses would be developed at an offsite location in the Centre City East area, supporting 6,544 employees, and 7,978 employees would be on the Navy Broadway Complex.

Long-term employment generated by Alternatives A through G would represent a minor percentage (averaging 2 percent) of the projected employment within the Central MSA by the year 2000 (Table 4.5-5, page 4-138). The largest percent contribution to employment growth would be experienced within the Centre City Census Tract, the smallest statistical area. Long term employment levels associated with Alternatives A, B, D, and E (i.e., 11, 13, 14, and 11 percent, respectively) would represent a substantial contribution of employment opportunities for the Centre City area by 2000, which would be a beneficial effect of these alternatives.

Employment opportunities associated with Alternatives C, E, and G would represent a relatively minor percentage of the predicted employment within the Central MSA (1 to 2 percent), Central San Diego SRA (1 to 3 percent), and Centre City area (7, 6, and 3 percent, respectively). The additional employment associated with Alternative C and Alternative E would also beneficially affect employment levels.

Fiscal Impact Assessment

A fiscal impact report was prepared for the proposed alternatives and is on file at the Broadway Complex Office, 555 West Beech Street, Suite 101, San Diego, California, 92101-2937. Provided below is a summary of the report's conclusions.

Methodology

The fiscal impact assessment evaluates the public (governmental) cost and revenue implications derived from changes in employment associated with the project. Only the primary costs that would be incurred and the immediate revenues which would be generated from the proposed development alternatives have been evaluated. Indirect impacts were not addressed due to the difficulty in accurately predicting the secondary consequences of growth, and the potential for double counting when primary and secondary impacts are viewed simultaneously. Three methodological approaches are used: (1) application of municipal tax rates for property, sales, and transient occupancy tax revenues; (2) per capita multipliers for anticipated police and fire protection costs; and (3) per acre multipliers for other revenues and municipal expenditures such as planning, engineering, and other support services. The projected total employment generated from the proposed project alternatives is summarized in Table 4.5-6.

TABLE 4.5-6

PROJECTED TOTAL EMPLOYMENT BY PHASE^a

Alternative	Phase 1 1992-1994	Phase 2 1995-1997	Phase 3 1998-2000	Phase 4 2001-2003	Stabilized Occupancy 2004-2006
A	2,122	2,572	3,349	10,021	10,821
B	2,122	2,572	3,349	11,143	11,932
C	2,122	2,572	3,701	7,128	7,917
D	2,122	2,572	3,920	11,783	14,513
E	2,122	2,122	6,667	6,667	6,667
F	2,122	2,922	3,699	8,815	10,821
G	2,122	2,122	2,122	2,122	2,122

a Total employment includes existing 2,122 Navy personnel currently on the site. Years refer to approximate years required to reach stabilized occupancy by phase. Based on employment assumptions presented in WK&A fiscal impact assessment report.

Source: Korve Engineering, Inc. and William-Kuebelbeck & Associates, Inc. 1989.

The per acre and per capita revenue and expense multipliers were calculated based upon the current land use distribution and daytime population of the City of San Diego. These multipliers were then applied to employment estimates shown in Table 4.5-6 and the acreage from the project site to derive fiscal impacts from development on the Navy Broadway Complex.

Conclusions

The annual tax revenues generated to the City of San Diego at project buildout (for property taxes) and stabilized occupancy (for retail sales tax and hotel occupancy tax) are summarized in Table 4.5-7. The fiscal impacts of the respective development alternatives are presented in Table 4.5-8. The key findings of the fiscal impact assessment are listed below.

TABLE 4.5-7

PROJECTED ANNUAL TAX REVENUES TO CITY OF SAN DIEGO AT
PROJECT BUILDOUT^a
(in Thousands of Dollars)

Alternative	Annual Property Tax Revenue ^b	Annual Sales Tax Revenue ^c	Annual Transient Occupancy Tax ^d
A	\$2,115 ^e	\$565	\$9,286
B	5,371	565	9,286
C	3,193	565	9,286
D	7,364	652	11,246
E	0	0	0
F	4,659 ^e	565	9,286
G	0	0	0

- a Property taxes based on project buildout in 2003. Retail sales and transient occupancy tax revenues based on project stabilized occupancy in 2005.
- b Includes 1 percent property tax increment to city as well as zoological exhibits tax at \$0.005 per \$100 assessed value. Based on estimated construction cost value of private development at project buildout in 2003. Increases 2 percent annually, per Proposition 13.
- c Based on 1 percent of taxable retail sales tax at project stabilized occupancy in 2005. Increases annually at estimated 5 percent inflation rate.
- d Based on 9 percent of gross hotel room revenues at project stabilized occupancy in 2005. Increases annually at estimated 5 percent inflation rate.
- e After deduction of estimated annual \$2.55 million tax allocation bond payments for city-funded public improvement.

Source: Williams-Kuebelbeck & Associates, Inc. 1989.

TABLE 4.5-8

PROJECTED NET AND CUMULATIVE FISCAL IMPACTS OF PROJECT
(in Thousands of Dollars)

Development Alternative	Net Annual Fiscal Impact in 2005 ^a	Cumulative Fiscal Impact in 2005 ^a	Net Annual Fiscal Impact in Year 20	Cumulative 30-Year Fiscal Impact
A	\$19,383	\$100,936	\$41,317	\$576,104
B	23,691	130,275	47,188	686,206
C	18,743	101,592	38,224	547,827
D	30,708	176,476	60,825	894,620
E	-2,138	-19,325	-4,667	-72,435
F	21,209	129,806	42,371	628,408
G	-697	-8,248	-1,521	-25,554

a At full development stabilized occupancy.

Source: Williams-Kuebelbeck & Associates, Inc., 1989.

- Alternatives A, B, C, D, and F all generate significant property tax increment, as well as retail sales tax and hotel transient occupancy tax revenues to the City of San Diego from the proposed private development on the site. Alternatives E and F do not generate tax revenues to the city, as they include only Navy facilities.
- Transient occupancy tax is the most significant component of the tax revenues that would be generated from private development of the Navy Broadway Complex. Annual transient occupancy tax at stabilized occupancy (2005) ranges from \$9.3 million under the A, B, C, and F Alternatives, to \$11.2 million under Alternative D.
- Alternatives A, B, C, D, and F would all generate net annual[#] operating surpluses to the City of San Diego by 1994, while the Alternatives E and G would consistently yield annual operating deficits throughout the 30-year projection period.

- By year 30 of the proposed project (2021), Alternatives A, B, C, D, and F would generate cumulative surpluses to the City of San Diego of \$576.1 million, \$686.2 million, \$547.8 million, \$894.6 million, and \$628.4 million, respectively. Conversely, Alternatives E and G would yield cumulative deficits of \$72.4 million and \$25.6 million, respectively.

4.5.3 MITIGATION MEASURES

Alternatives A through F would provide positive economic and employment effects to the project area and would not result in any significant impacts. Therefore, no mitigation measures are necessary. Even though Alternative G would not generate an increase in employment opportunities, and Alternatives E and G would not generate positive fiscal effects, no significant environmental impacts would result.

ENDNOTES:

- 1 Turner, City of San Diego, personal communication, 1988.
- 2 Ibid.
- 3 City of San Diego, 1987b.
- 4 Turner, op. cit.
- 5 San Diego Association of Governments, 1987a.
- 6 City of San Diego, op. cit.
- 7 Ibid.
- 8 San Diego Association of Governments, op. cit.
- 9 City of San Diego, op. cit.
- 10 San Diego Association of Governments, op. cit.
- 11 Ibid.
- 12 City of San Diego, op. cit.
- 13 Polinsky, San Diego Association of Governments, 1988.
- 14 Turner, op. cit.
- 15 Polinsky, op. cit.
- 16 Turner, op. cit.
- 17 Polinsky, op. cit.
- 18 Turner, op. cit.

4.6 PHYSICAL ENVIRONMENT

4.6.1 GEOLOGY AND SEISMICITY

The following discussion summarizes a geotechnical investigation¹ conducted for the project site by Hirsch and Company in February 1988.

AFFECTED ENVIRONMENT

Geologic Setting

The project site lies in an area of low relief within the coastal plain adjacent to San Diego Bay. The project area is located west of the historical high tide line in an area that was previously characterized by the tidal flats and marshes that naturally existed around the margins of San Diego Bay. Holocene-age lagoon and bay sediments accumulated in these areas over a gently sloping surface of older Pleistocene-age deposits. The site has subsequently been reclaimed by the hydraulic fill placed between 1920 and the late 1930s. The fill was placed over the depositional surface of the bay deposits to form the existing land surface.

Soils

The project site is covered with surface pavement. Below the surface pavement the site is underlain by a layer of fill soils that was placed over the natural bay deposits. The bay deposits are in turn underlain by older Pleistocene sedimentary deposits of the Bay Point Formation. These geologic units are described below in the order of increasing age.

Fill

Hydraulic fill soils derived from bay dredging operations are located on the project site. The average fill depth is about 10 feet north of F Street. South of F Street, the fill ranges from 7 to 10 feet with an average of approximately 8 feet. The hydraulic fill soils consist of light brown to gray silty and poorly graded fine sands which contain abundant shell fragments, few silt and clay layers, and occasional clay balls and pockets.

The upper few feet of the hydraulic fill soils have been locally reworked. Imported fill (up to 3 feet) has been placed on the hydraulic fill in the northwestern and eastern portions of the site. The observed imported fill soils are generally similar to the hydraulic fill soils and consist of brown silty sands with some clay layers and balls.

Bay Deposits

Late Quaternary-age embayment deposits underlie the fill soils. The deposits generally consist of very loose to medium dense silty and clayey sands with some sandy and clayey silt layers. The average depth of bay deposits is approximately 8 feet north of F Street and 16 feet south of F Street. The bay deposits south of F Street generally thicken toward the west.

Bay Point Formation

Pleistocene-age terrace deposits of the Bay Point Formation underlie the bay deposits to the maximum depths explored (approximately 44 feet). The deposits consist of medium dense to very

dense clayey and silty sands, poorly graded sands, sandy silts, and very stiff to hard sandy lean clays, with clay interbeds and zones within the granular strata. The deposits transition from clayey sands to poorly graded sands and from medium dense to dense or very dense conditions with depth below the top of the Bay Point Formation soils. The depth of dense to very dense portions of the deposits varies across the site and appears to range from approximately 15 to 40 feet below the existing ground surface.

Faulting and Seismicity

The project site, like much of downtown San Diego, is within the Rose Canyon Fault zone. The onshore portion of the Rose Canyon Fault zone extends along the northeast flank of Mount Soledad and continues southward along the eastern portion of Mission Bay. The zone widens and diverges between Mission Bay and San Diego Bay as it continues across to Coronado and beyond to the south. The most significant traces of the Rose Canyon Fault zone generally trend north to north-northwest near downtown San Diego.

The Rose Canyon Fault zone is considered to present a significant seismic hazard to the coastal San Diego area; recent earthquake activity within the general area of southern San Diego Bay further demonstrates the seismic activity of this zone of faults. During July 1985 a series of earthquakes up to Richter magnitude 4.2 were recorded in the vicinity of San Diego Bay. The surface rupture potential associated with faults in the Rose Canyon Fault zone is not well understood. In downtown San Diego, fault traces within the Rose Canyon Fault zone have been difficult to locate due to development dating back many decades which may obscure or obliterate surface geologic expression of faults. In many areas, shallow groundwater conditions also limit geologic studies to shallow exposures. Recent studies in the eastern downtown area have found faults that show Holocene (last 10,000 years) displacements, and many of the offshore faults in and around San Diego Bay are also believed to displace Holocene sediments. Therefore, at least some portions of the fault zone are considered "active."

In addition to the Rose Canyon Fault zone, other major active faults (which have produced recurring earthquakes having a magnitude greater than 4.0) are the Elsinore Fault zone and the Coronado Banks Fault zone, which are approximately 45 miles northeast and 13 miles southwest of the site, respectively.

Liquefaction Potential

The soils on the site, especially the loose sands, could be subject to liquefaction. Liquefaction is a phenomenon known to occur when loose, sandy, water-saturated soils are subjected to strong seismic ground motion of significant duration. The soil loses its normal cohesive properties and behaves more like a liquid than a solid.

The very loose to medium dense sands and nonplastic silts of the hydraulic fills and bay deposits below the groundwater level represent a potential liquefaction hazard to the project site during significant ground shaking. The consequences of liquefaction, should it occur at this site, probably would be seen as localized sand boils, ground cracks, and ground settlements. It is possible that lateral movement of soils into the bay could occur as a result of soil liquefaction. The relatively dense sands and silts of the Bay Point Formation have a low potential for liquefaction. The project site would not be subject to a greater risk of liquefaction potential than other adjacent areas along the San Diego Bay.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Effects on Soils and Erosion

Construction of Alternatives A through F would result in the potential short-term exposure of soils to wind and rain, resulting in two potential environmental impacts:

1. Erosion and hydraulic conveyance of sediments downstream of the site into San Diego Bay, which could affect marine life.
2. Contribution of particulates to the air stream, which could degrade air quality. This is discussed in Section 4.8, page 4-163.

Alternative D, with its additional offsite component, could add sedimentation to storm drains in the easterly Centre City area (in addition to the erosion that could occur at the Navy Broadway Complex site). This sedimentation, if it were to occur, would eventually be conveyed to San Diego Bay. If large areas of the project site(s) were left with exposed soils during storms, the environmental impact from erosion could be significant, because sedimentation of the Bay could adversely affect marine biological resources.

Alternative G would retain the site in its current condition, which is mostly covered with pavement and buildings, with few areas of exposed soils. Therefore, no significant erosion impacts would result.

Effects from Geologic Hazards

Faulting and Seismicity

The precise location of the Rose Canyon Fault and its associated branches is not known. Thus, it is unknown if there is any faulting within the boundaries of the project site or the Centre City site for Alternative D. If the fault does bisect the project or alternative site, seismic activity could cause surface rupture and substantial damage to structures, which would be a significant impact to all of the alternatives.

Since the project site and alternative site are located in a seismically active region, strong seismic activity would be expected to occur within the lifetime of the project. Seismic groundshaking could result in substantial damage to structures and is considered a significant impact to Alternatives A through F.

Additional damage to the Navy Broadway Complex could occur if liquefaction is realized during a seismic event. This is considered a significant impact to Alternatives A through F. It is unknown if a liquefaction hazard is present at the alternative site for Alternative D. However, due to its inland location, the liquefaction potential at this site is likely to be lower than at the Navy Broadway Complex.

With Alternative G, potential seismic shaking could affect existing structures onsite. With the exception of a portion of Building No. 1, none of the existing buildings comply with earthquake safety standards set by the Uniform Building Code. This does not represent a change from current conditions, so no impact would result.

MITIGATION MEASURES

The Regional Water Quality Control Board (RWQCB) was consulted regarding specific mitigation measures for erosion control. RWQCB does not generally develop erosion control measures. The following measure would mitigate any impacts from soil erosion during construction:

- An erosion control plan will be implemented during construction of new structures at the Navy Broadway Complex site and (if it is selected) at the alternative site. The plan will be prepared by the project developer and will receive appropriate approvals prior to the initiation of construction. Major components of the plan would include (but not be limited to) the following:
 - Regular watering of exposed soil.
 - Hydroseeding of large (1-acre-plus) areas of exposed soils that will remain exposed and undisturbed by construction for 3 or more months at a time.
 - Draining any areas where ponding occurs.
 - Placing sandbags in gutters and near storm drains wherever construction activities occur.

Upon implementation of this measure, adverse impacts from soils erosion would be avoided (Alternatives A through F).

Compliance with building codes would mitigate significant impacts from geologic hazards.

4.6.2 EXTRACTABLE RESOURCES

AFFECTED ENVIRONMENT

An analysis was conducted of the potential for extractable resources to be located on or beneath the site. Based on information available from the U.S. Bureau of Land Management² and the California Division of Oil and Gas,³ the project site is not known to have any extractable resources such as oil, gas, or aggregate, and no resources are currently or are known to have been extracted from the site.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The project site and the second site location for Alternative D are not known to contain any extractable resources, and there is no evidence to suggest any would be found during the excavation and grading phases of Alternatives A through F. Therefore, construction of Alternatives A through F would not result in significant impacts to extractable resources.

Since the project site does not contain extractable resources, the existing onsite structures associated with Alternative G would not preclude the mining of essential natural resources. Thus, no significant impacts to extractable resources would occur.

MITIGATION MEASURES

Because no significant impacts to extractable resources would occur, no mitigation measures are necessary.

4.6.3 HYDROLOGY

AFFECTED ENVIRONMENT

Surface Hydrology/Drainage

The project site is level, at street grade, and covered with impervious surfaces. During rain storms, surface water flows to existing subsurface storm drains located on and adjacent to the project site. Five storm drains (one 36-inch, one 24-inch, two 18-inch, and one 16-inch) convey storm water to the San Diego Bay (see Figure 4-57).⁴

The project site is west of the historic mean high tide line of San Diego Bay. However, according to the National Flood Insurance Program, it is within flood hazard Zone C, which denotes minimal flooding.

Groundwater

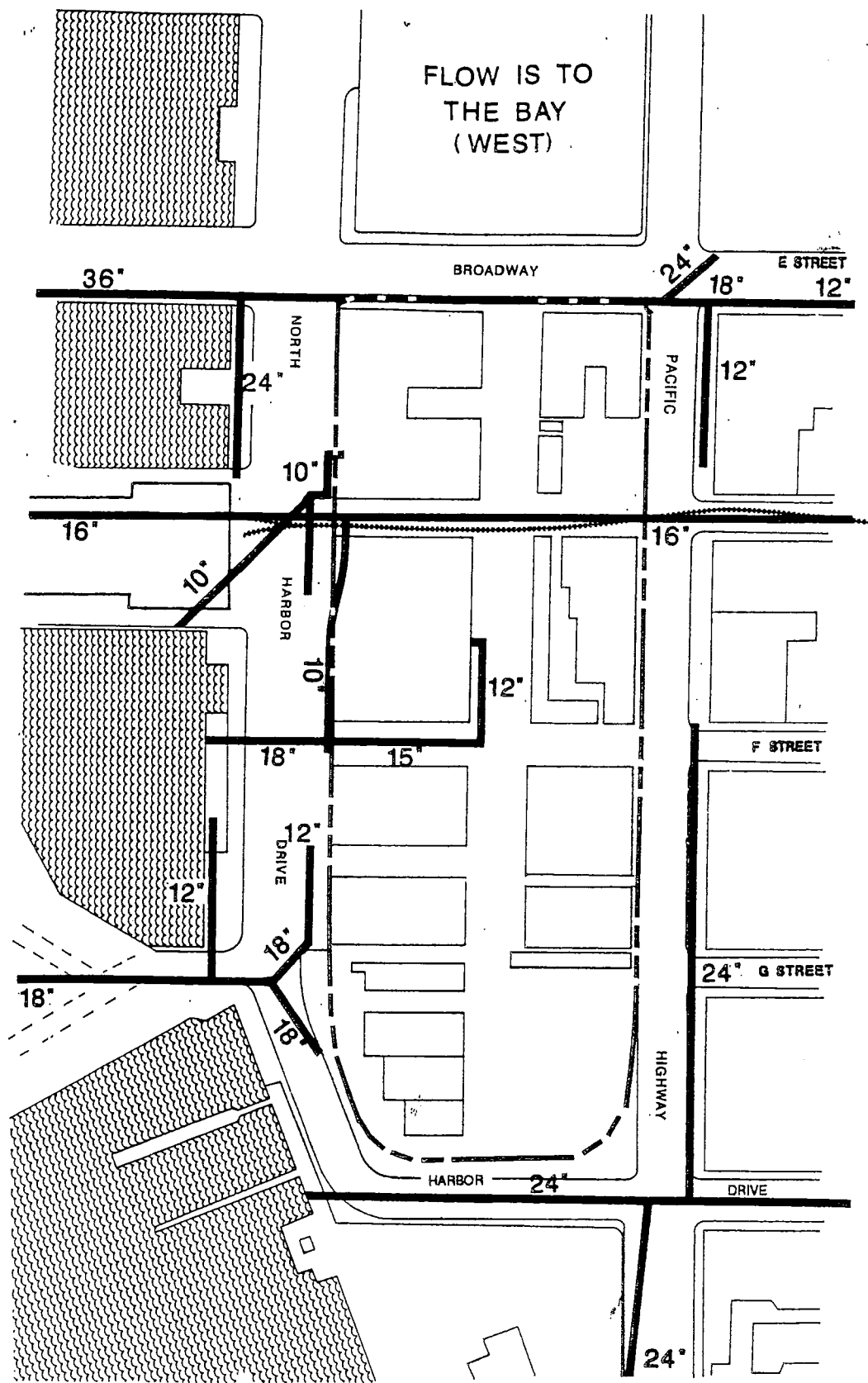
Groundwater was encountered at depths ranging from approximately 7.5 to 11 feet below the project site (approximately 0.5 to 2.5 feet above mean sea level). The proximity of the site to the San Diego Bay causes groundwater level variations due to tidal fluctuations.⁵

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Implementation of Alternatives A through F would result in increased sedimentation during demolition and construction activities as subsurface soils are exposed to runoff (see Section 4.6.1, page 4-146). No long-term increases in runoff would occur since the Navy Broadway Complex site is already fully developed with impervious surfaces.

One additional concern, expressed by the Environmental Protection Agency (EPA) with respect to water quality, is associated with the potential for nonpoint source pollution from an accidental fuel spill from construction vehicles during project construction or from runoff from the site. In the unlikely event that a large spill were to occur, hydrocarbons could be released directly to the storm-drain system and flow to the bay. The EPA also expressed concern with regard to nonpoint source water contamination from runoff across parking lots. The RWQCB was consulted on this issue and indicated it has not adopted standards or programs for accidental spill response or for control of runoff water quality. RWQCB is developing a runoff control program that would be implemented by municipalities and include standards for water quality in storm-drain systems prior to release into receiving waters. This would have no effect on the project, as the standards would not be directed toward individual developments.⁶

Alternatives A, B, C, D, and F would all include subsurface parking. Construction and operation of these alternatives would require temporary and permanent groundwater dewatering. There is a potential for contaminated groundwater to be drawn to the site during dewatering. This issue is discussed in Section 4.11, page 4-220.



- Legend:
- STORM DRAIN DIAMETER
 - RAILROAD
 - PROJECT SITE

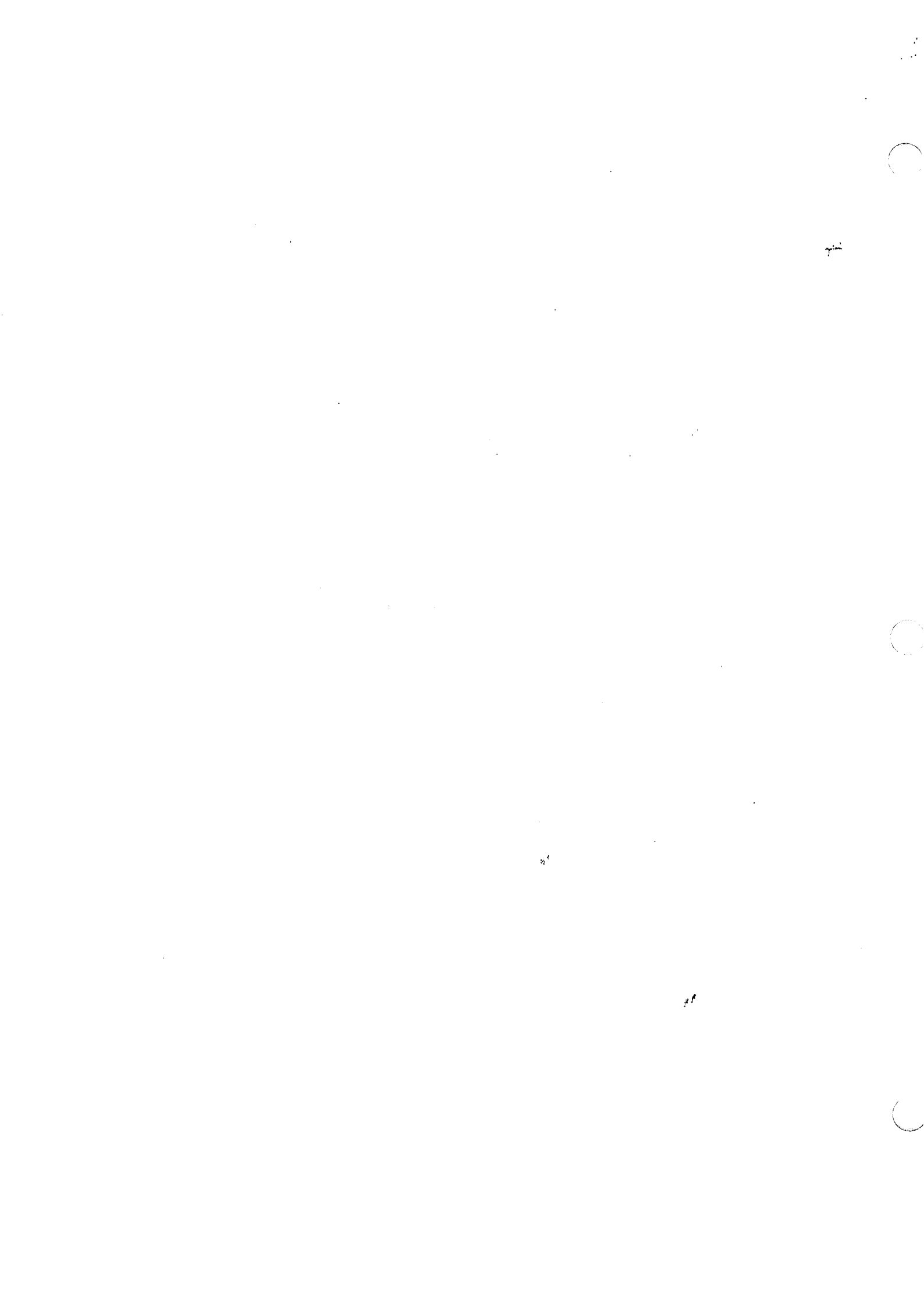
Storm Drain Facilities Navy Broadway Complex Project

4-149



6640001 1/90

Figure 4-57



MITIGATION MEASURES

- The erosion control plan, described in Section 4.6.1, page 4-147, includes the placement of sandbags in gutters and around storm drains during grading. If fuel was accidentally released during construction, it would collect near the sandbags before it enters the storm drain. The construction personnel will be required to notify local health officials immediately to clean up spilled fuel in order to minimize the amount entering the storm-drain system.

ENDNOTES:

- 1 Hirsch and Company, 1988.
- 2 Ortiz, Bureau of Land Management, personal communication, 1988.
- 3 Guerard, California Division of Oil and Gas, personal communication, 1988.
- 4 Hirsch and Company, op. cit.
- 5 Hirsch and Company, Ibid.
- 6 Posthumous, Regional Water Quality Control Board, personal communication, 1989.

4.7 BIOLOGICAL RESOURCES

4.7.1 AFFECTED ENVIRONMENT

Regional Setting

The project site is located in a highly urbanized region that fronts San Diego Bay. Because of this urbanization, the diversity of native biological species is generally low. However, the adjacent San Diego Bay displays a rich variety of biologic resources. There are three major areas in which significant levels of environmental pollution are found in the bay: heavy metals associated with ship anticorrosion activities near the entrance to the bay, PCBs associated with runoff from activities near Harbor Island, and copper ore residuals associated with ship loading in National City.

Local Setting

The project site is fully developed with urban uses and has been for several decades. As such, there are no areas of the site where biological resources are located that are not substantially disturbed.

Vegetation is confined to a number of invasive weedy species, with a limited amount of landscape material at the periphery of the site. Typical flora found on the site includes mustard (Brassica sp.), Russian thistle (Salsola iberica), horseweed (Conyza canadensis), and sow thistle (Sonchus sp.). None of these species is indigenous to the area and none is considered threatened or endangered by either Federal or state resource agencies.

Wildlife is limited to those species typically associated with highly disturbed urban environments. Species that could be found on the site include the side-blotched lizard (Uta stansburiana), house finch (Caropdacus mexicana), mourning dove (Zenaida macroura), American crow (Corvus brachyrnchos), and European starling (Sturnus vulgaris). As with vegetation, none of these species is considered threatened or endangered by either Federal or state resource agencies.

The San Diego Bay waterfront is located one block west of the site. A monitoring program near the Broadway Pier was conducted in the 1970s to determine if the San Diego Gas and Electric plant, located adjacent to the Navy Broadway Complex, was causing any degradation of marine wildlife habitat. The monitoring program found a rich and diverse marine habitat in this area, and found no signs of substantial deterioration. No other studies are known to have been conducted in the project area since.^{1,2} The project site contributes urban runoff to this area through storm water flows that exit the site via storm drains that empty into the bay. Although not conclusive, it can be assumed that runoff from the site does not substantially affect the marine habitat of San Diego Bay because the habitat value in this area is considered rich and diverse.

The offsite location for Navy offices under Alternative D would be in the highly urbanized Centre City East area. Although a specific site has not been selected, it is probable that the biological resources on the site would be similar to those found on the Navy Broadway Complex site.

4.7.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

None of the alternatives would alter the biological nature of the Navy Broadway Complex site, which would continue to function as a developed, urban site. There would be no direct effect

on terrestrial biological resources associated with any of the alternatives because there are no known threatened or endangered biological resources on the Navy Broadway Complex site.

The offsite Navy offices associated with Alternative D would also be located in an urbanized area. Although a specific site has not been selected, it is improbable that any sensitive biological resources would be affected due to the urban nature of the area.

Three primary concerns to biological resources have been raised through the environmental scoping process. The first issue raised was that if any over-water structures were developed, they could shade the marine environment and reduce productivity of nearshore plants and animals. Such structures could also eliminate foraging habitat for such birds as the Federal- and state-listed endangered California least tern (*Sterna antillarum browni*). None of the alternatives includes over-water structures. Representatives of the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) were informed of this and agreed that the project would not have a significant shading impact on marine habitat.^{3,4}

A second concern is the potential for bird strikes if reflective materials are used on project structures. The design guidelines proposed for the project (Appendix D) prohibit the use of large areas of reflective glass. Thus, compliance with these guidelines would resolve this potential concern. If nonreflective glass is used, USFWS agrees there would be no significant impact.⁵

The third concern was shading marine resources from onshore project structures. None of the alternatives include any construction in, over, or within 150 feet of the waterfront. An investigation of shading effects of the alternatives found that the highest proposed buildings, a 400-foot-high building on Block 1 and a 500-foot-high building on Block 2 (Alternatives A and F, respectively), would not cast a shadow over the waterfront when the sun is most direct, between 10 a.m. and 2 p.m., during the winter solstice, when shadows are longer than at any other time of the year (see Figures 4-52, page 4-112 and 4-53, page 4-113). Under this condition, shadows would be cast over the near-shore area in the immediate vicinity of the site between sunrise and approximately 9:00 to 9:30 a.m. However, an existing seawall facing the same direction already casts shadows over this area during the same time period. Thus, shadows from development of any of the alternatives would not cause any apparent adverse effects to bay bottom habitats. After reviewing this issue, both USFWS and NMFS agree there would be no adverse effects.^{6,7}

An additional concern that was addressed with USFWS and NMFS, but not expressed during environmental scoping, is the discharge of groundwater that would result from construction and operation of Alternatives A, B, C, D, and F, all of which would have subsurface parking that is below the groundwater table. As discussed in Section 4.11 (page 4-212), groundwater beneath the site was tested for contamination and was found to contain no hazardous or toxic substances. Given its proximity to the waterfront and the fact that groundwater beneath the site is near sea level, it is probable that groundwater beneath the site is of similar composition as San Diego Bay. Given these factors, USFWS and NMFS do not feel that discharge to the ocean would adversely affect marine resources.^{8,9}

Both USFWS and NMFS would be concerned if it was found that groundwater being discharged contained toxic substances (see Section 4.11, page 4-220). However, both agencies stated that compliance with conditions that may be imposed as part of a National Pollution Discharge Elimination System permit application (also see Section 4.11, page 4-220) would avoid adverse impacts to marine resources.^{10,11}

4.7.3 MITIGATION MEASURES

- Design guidelines adopted by the Navy and City of San Diego will specify that no reflective glass will be used in development of new buildings (Alternatives A, B, C, D, and E).

ENDNOTES:

- 1 Kenney, United States Department of Interior, Fish and Wildlife Service, personal communication, 1989.
- 2 Hoffman, United States Department of Commerce, National Marine Fisheries Service, personal communication, 1989.
- 3 Kenney, op. cit.
- 4 Hoffman, op. cit.
- 5 Kenney, op. cit.
- 6 Ibid.
- 7 Hoffman, op. cit.
- 8 Kenney, op. cit.
- 9 Hoffman, op. cit.
- 10 Kenney, op. cit.
- 11 Hoffman, op. cit.

4.8 AIR QUALITY

4.8.1 AFFECTED ENVIRONMENT

Climate

San Diego's climate is largely determined by the position of the semi-permanent mid-Pacific high pressure system and the proximity of the moderating effects of the nearby ocean. The resulting Mediterranean-type climate is characterized by cool, dry summers and mild winters. Limited rainfall occurs in winter while summers are often completely dry. Rainfall averages only 10 inches per year and falls mainly from November to late March from the fringes of mid-latitude storms. Temperatures average 62 degrees Fahrenheit with winter lows around 48 degrees Fahrenheit. Temperatures over 100 degrees Fahrenheit or below 32 degrees Fahrenheit almost never occur in the coastal area because the ocean and the onshore breezes moderate any temperature extremes.¹

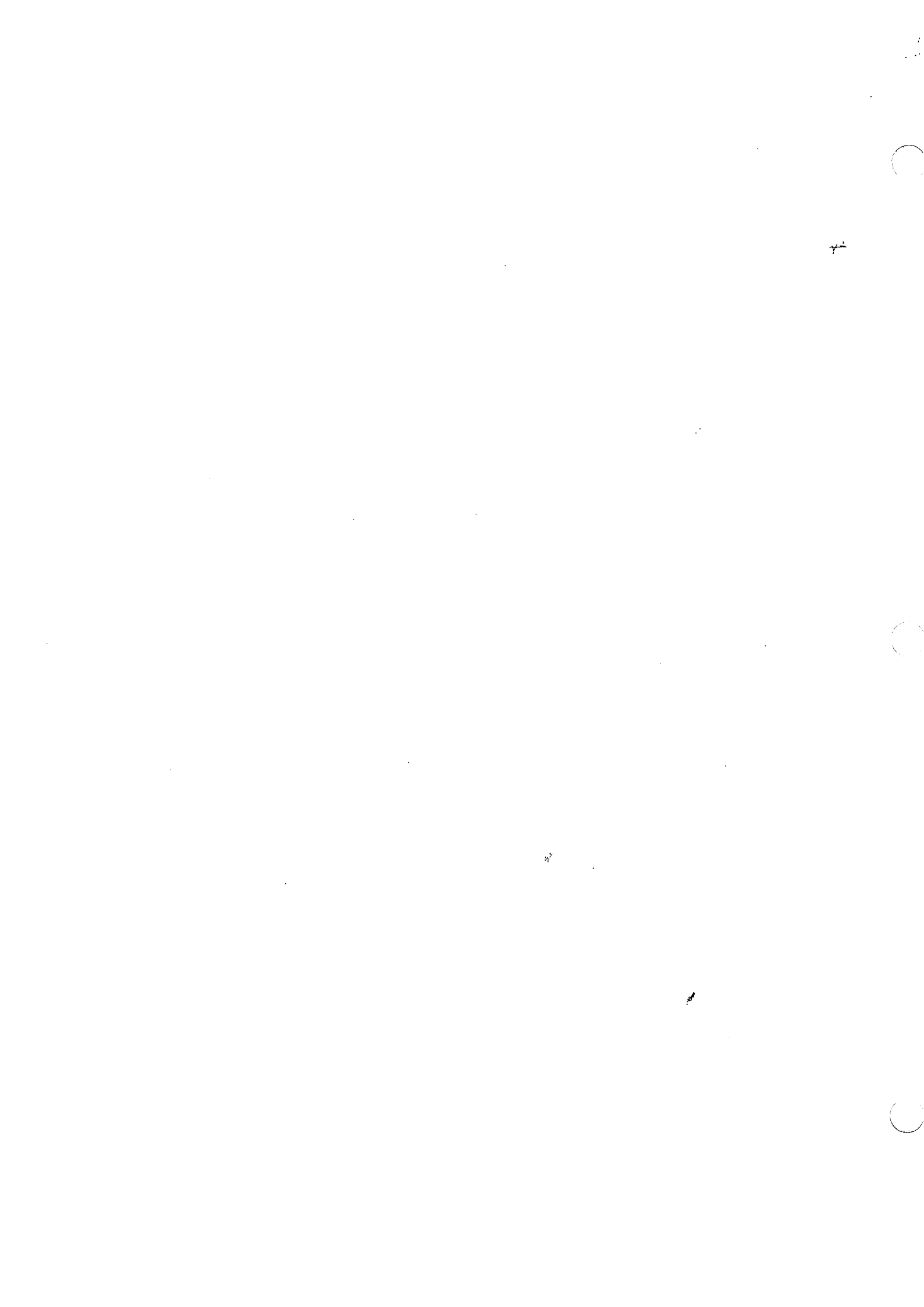
Meteorology

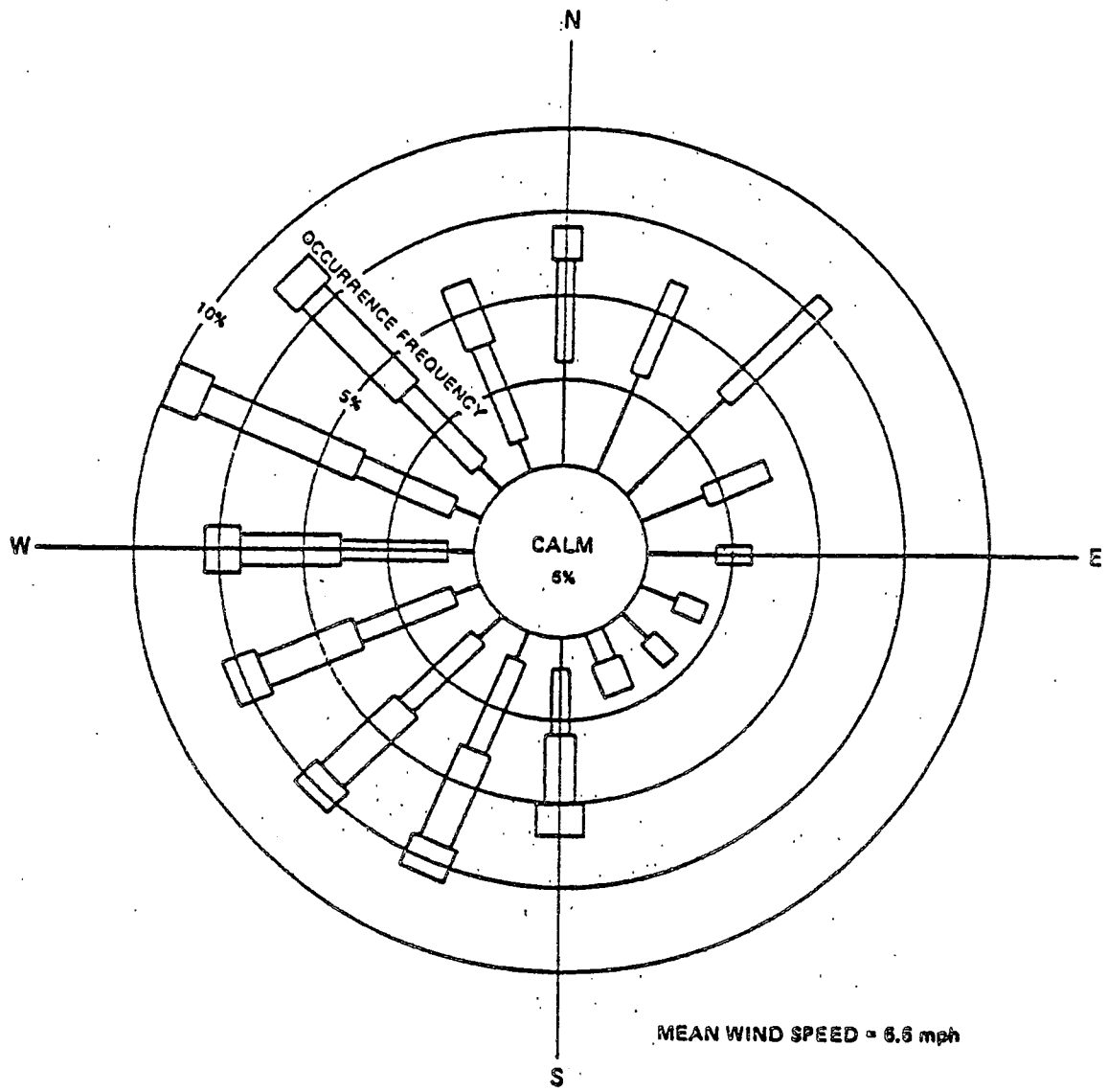
Air pollution transport is primarily affected by prevailing wind patterns. The dominant winds are onshore except in the winter. Figure 4-58 indicates the wind direction frequencies at Lindbergh Field, 1.5 miles north of the project site. Onshore flow dominates with a wide distribution of directions from south-southwest to north-northwest. Offshore flow is less frequent and blows from north-northeast. The onshore flow has moderate average wind speeds of 8 to 12 miles per hour (mph) while the offshore flow is weaker with average speeds of 2 to 4 mph. The onshore flow coming off the ocean is usually unpolluted.²

Local air pollution sources contribute to air quality degradation that can become significant when the onshore flow affects the foothill communities east of the metropolitan area. Whereas the moderate onshore flow rapidly ventilates the coastal corridor by day, a slow nocturnal return flow may allow for localized stagnation of pollutants, especially on cool, clear winter nights. There may be isolated carbon monoxide "hot spots" in traffic-intensive areas in the downtown area.³

In conjunction with the winds that control horizontal dispersion, there are two characteristic temperature inversions that affect the vertical depth through which any locally generated air pollutants are mixed. When the cool, onshore flow of marine air undercuts a large dome of warm, sinking air over the ocean, a marine/subsidence inversion is formed that creates an impermeable barrier that traps all pollutants within the marine air layer. As this layer moves inland and pollutants are added from urban activities without any dilution from above, the shallow layer becomes progressively more polluted. Hydrocarbons and oxides of nitrogen emitted mainly by vehicular sources in coastal areas react under sunlight, forming photochemical smog (mainly ozone) that can create unhealthy levels of air quality in foothill communities.⁴

A second characteristic inversion forms when the air near the ground cools at night by heat radiation while the undisturbed air aloft remains warm. A shallow radiation inversion forms, trapping surface-based emissions within a few hundred feet of the ground. These inversions may trap vehicular pollutants such as carbon monoxide (CO) or oxides of nitrogen near sources such as freeways, major intersections, or large parking facilities, creating localized health concerns.





Wind Rose at Lindbergh Field
Navy Broadway Complex Project



Both inversions occur throughout the year, but their maximum effectiveness and impact are well separated seasonally. About 70 percent of all summer afternoons have marine/subsidence inversions that may cause degraded air quality in inland areas such as El Cajon or Alpine, while 60 percent of all winter nights have radiation inversions that may cause elevated CO levels around the project site.⁵

Air Quality

Ambient Air Quality Standards

Ambient air quality standards (AAQS) are the levels of air pollutant concentration considered safe to protect the public health and welfare. They are designed to protect people most susceptible to 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. Collectively, these are called "sensitive receptors." National AAQS were established by the Environmental Protection Agency (EPA) in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods.⁶ Standards applicable in California are shown in Figure 4-59.

Ambient Air Quality

Ambient air quality is described in terms of compliance with state and Federal standards. One requirement of the California Clean Air Act (1988) is for the California Air Resources Board (CARB) to establish criteria and designate areas of the state as attainment, nonattainment, or unclassified for any state standard. In June 1989, CARB adopted criteria and designations for each area based on those criteria. An attainment designation for an area signifies that pollutant concentrations did not violate the state standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the state standard at least once, excluding those occasions when a violation(s) was caused by an exceptional event, as defined in the criteria. The designation of attainment or nonattainment for each pollutant with respect to national standards is based on similar criteria as required by the Clean Air Act Amendments (1977).

The San Diego Air Basin is designated nonattainment for several pollutants. The entire Basin is designated nonattainment of state and national ozone standards, and state PM₁₀ (particulate matter less than 10 microns in diameter) standards. The western half of the Basin is designated as nonattainment of state and national carbon monoxide standards and state nitrogen dioxide standards.

Baseline levels of air quality near the project site have been monitored by the San Diego Air Pollution Control District (APCD) for many years at the monitoring station on Island Avenue in downtown San Diego. Table 4.8-1 summarizes the air quality monitoring results from this station for the past 5 years. Specific AAQS exceedances are discussed below.

AMBIENT AIR QUALITY STANDARDS

AIR POLLUTANT	CALIFORNIA	FEDERAL	
	CONCENTRATION	PRIMARY (>)	SECONDARY (>)
Ozone	0.09 ppm, 1-hr. avg. \geq *	0.12 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.
Carbon Monoxide	9.0 ppm, 8-hr. avg. $>$ ^{a)} 20 ppm, 1-hr. avg. $>$	9 ppm, 8-hr. avg. ^{d)} 35 ppm, 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.
Nitrogen Dioxide	0.25 ppm, 1-hr. avg. $>$ ^{f)}	0.053 ppm, annual avg. ^{e)}	0.053 ppm, annual avg. ^{e)}
Sulfur Dioxide	0.05 ppm, 24-hr. avg. \geq with ozone \geq 0.10 ppm, 1-hr. avg. or TSP \geq ug/m ³ , 24-hr. avg. 0.25 ppm, 1-hr. avg. $>$ ^{b)}	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.
Suspended Particulate Matter (PM10)	30 ug/m ³ , annual geometric mean $>$ 50 ug/m ³ , 24-hr. avg. $>$ ^{c)} **	50 ug/m ³ , annual ^{g)} arithmetic mean 150 ug/m ³ , 24-hr. avg.	50 ug/m ³ , annual ^{g)} arithmetic mean 150 ug/m ³ , 24-hr. avg.
Sulfates	25 ug/m ³ , 24-hr. avg. \geq		
Lead	1.5 ug/m ³ , 30-day avg. \geq	1.5 ug/m ³ , calendar quarter	1.5 ug/m ³ , calendar quarter
Hydrogen Sulfide	0.03 ppm, 1-hr. avg. \geq		
Vinyl Chloride	0.010 ppm, 24-hr. avg. \geq		
Visibility Reducing Particles	In sufficient amount to reduce the prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 obs.		

- a) Effective December 15, 1982. The standards were previously 10 ppm, 12-hour average and 40 ppm, 1-hour average.
b) Effective October 5, 1984. The standard was previously .5 ppm, 1-hour average.
c) Effective August 19, 1983. The standards were previously 60 ug/m³ TSP, annual geometric mean, and 100 ug/m³ TSP, 24-hour average.
d) Effective September 13, 1985, standard changed from $>$ 10 ug/m³ (\geq 9.3 ppm) to $>$ 9 ppm (\geq 9.5 ppm).
e) Effective July 1, 1985, standard changed from $>$ 100 ug/m³ ($>$.0532 ppm) to $>$.053 ppm ($>$.0534 ppm).
f) Effective March 9, 1987, standard changed from \geq .25 ppm to $>$.25 ppm.
g) Effective July 1, 1987. The standards were previously:
Primary - Annual geometric mean TSP $>$ 75 ug/m³, and 24-hour average TSP $>$ 260 ug/m³.
Secondary - Annual geometric mean TSP $>$ 60 ug/m³, and 24-hour average TSP $>$ 150 ug/m³.

* ppm = parts per million by volume.
** ug/m³ = micrograms per cubic meter.

National & State Ambient Air Quality Standards Navy Broadway Complex Project

AMBIENT AIR QUALITY STANDARDS (continued)

NOTES:

1. California standards, other than carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide and particulate matter — PM₁₀, are values that are not to be equaled or exceeded. The carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide and particulate matter — PM₁₀ standards are not to be exceeded.
2. National standards, other than ozone and those based on annual averages or annual geometric means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors.
9. At locations where the state standards for oxidant and/or suspended particulate matter are violated. National standards apply elsewhere.
10. Measured as ozone.

TABLE 4.8-1

**DOWNTOWN SAN DIEGO AIR QUALITY MONITORING
SUMMARY 1982-1986**

(Number of days standards were exceeded, and maximums for periods indicated)

Pollutant/Standard	1983	1984	1985	1986	1987
Ozone					
1-HR \geq 0.10 ppm ^a	15	17	23	12	8
1-HR $>$ 0.12 ppm	5	3	5	2	1
1-HR \geq 0.20 ppm	1	0	0	0	0
Max. 1-HR (ppm)	0.23	0.16	0.16	0.16	0.14
Carbon Monoxide					
1-HR $>$ 20 ppm	0	0	0	0	0
8-HR $>$ 9 ppm	0	0	0	0	0
Max. 1-HR (ppm)	16.0	12.0	15.0	16.0	12.0
Max. 8-HR (ppm)	8.0	7.6	9.4	9.0	9.4
Nitrogen Dioxide					
1-HR \geq 0.25 ppm	0	0	0	0	0
Max. 1-HR (ppm)	0.20	0.17	0.21	0.18	0.22
Sulfur Dioxide					
1-HR \geq 0.25 ppm	0	0	0	0	0
24-HR \geq 0.05 ppm	0	0	0	0	0
Max. 1-HR (ppm)	0.04	0.09	0.05	0.05	0.05
Max. 24-HR (ppm)	0.017	0.038	0.023	0.027	0.011
Total Suspended Particulates					
24-HR \geq 100 $\mu\text{g}/\text{m}^3$	7/58 ^b	11/61 ^b	14/63 ^b	13/59 ^b	12/60 ^b
24-HR $>$ 260 $\mu\text{g}/\text{m}^3$	0/58 ^b	0/61 ^b	0/63 ^b	0/59 ^b	0/60 ^b
Max. 24-HR ($\mu\text{g}/\text{m}^3$)	150	164	176	214	194
Lead Particulates					
1-MO \geq 1.5 $\mu\text{g}/\text{m}^3$	0/12 ^b	0/12 ^b	0/12 ^b	0/12 ^b	0/61 ^b
Max. 1-MO ($\mu\text{g}/\text{m}^3$)	0.82	0.60	0.38	0.28	.15
Sulfate Particulates					
24-HR \geq 25 $\mu\text{g}/\text{m}^3$	1/58 ^b	0/61 ^b	0/54 ^b	0/60 ^b	ND ^c
Max. 24-HR ($\mu\text{g}/\text{m}^3$)	25.8	18.0	15.4	17.6	

a Changed to 0.09 in 1988.

b Number of days standard was exceeded/number of days sample was taken.

c No Data.

Source: California Air Resources Board, Summary of Air Quality Data, 1983-1987. San Diego APCD Island Avenue Station.

Ozone

During summer's longer daytime hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between nitrogen dioxide and reactive organic compounds. Levels of ozone, a colorless toxic gas that irritates the lungs and damages materials and vegetation, exceed Federal and state standards throughout the Basin. The state standard (0.09 parts per million [ppm], 1 hour) was exceeded an average of 12 days each year at the Island Avenue Station. The less restrictive Federal standard (0.12 ppm, 1 hour) was exceeded an average of 3 days each year during 1983 through 1987. The stage one episode (or stage one "smog alert") (over 0.20 ppm/hr), during which hazards to persons with sensitive health can occur, was exceeded once during the 5-year period in 1983. The highest 1-hour ozone level was 0.23 ppm in 1983.⁷

Carbon Monoxide

Carbon monoxide (CO) is a colorless gas, produced almost entirely from automobiles, that interferes with the transfer of oxygen to the brain. From 1983 to 1986, the state and Federal 8-hour CO standard (over 9.0 ppm) was exceeded only once, in 1985. The state and Federal 1-hour CO standards (20.0 ppm and 35.0 ppm, respectively) were not exceeded from 1983 through 1987. The highest 1-hour CO level recorded during this period at the downtown San Diego monitoring station was 9.4 ppm in 1985 and 1987, well within Federal and state standards.⁸

Nitrogen Dioxide

Nitrogen dioxide is a reddish-brown gas that can cause breathing difficulties at high levels. The 1-hour state standard for nitrogen dioxide (over 0.25 ppm, 1 hour) was not exceeded at the Island Avenue Station from 1983 through 1987. The maximum daily nitrogen dioxide concentration measured during the last 5 years was 0.22 ppm in 1987.⁹

Total Suspended Particulates/Particulate Matter

The 24-hour standard for total suspended particulates (TSP) was exceeded on approximately 19 percent of the days monitored between 1983 and 1987. The maximum concentration during this period was approximately twice the standard. On July 1, 1987, the Environmental Protection Agency (EPA) replaced the TSP Standard with a new particulate standard known as PM₁₀. PM₁₀ includes only particulate matter 10 microns or less in diameter. PM₁₀ is not monitored at the Island Avenue Station. However, the entire air basin is designated as nonattainment for PM₁₀ standards, so exceedances at this station would be expected.

State Implementation Plan

The California Air Resources Board (CARB) is the agency responsible for preparing and implementing an Air Quality Management Plan (AQMP). To do this, the CARB has compiled the State Implementation Plan (SIP), which outlines air quality conditions in each of the state's 14 air basins and details measures to achieve the National Ambient Air Quality Standards. In addition, the CARB has established more strict standards for some pollutants due to unique circumstances in California.

The SIP is compiled from air quality plan revisions prepared for each air basin by designated local agencies. In the San Diego Air Basin (SDAB), the Air Pollution Control District (APCD) is responsible for preparing and revising the basin's plans.

The current SIP for the San Diego Air Basin was adopted in 1982. The purpose of the SIP is to develop implementation strategies that will lead to attainment of Federal clean air standards. The San Diego Air Basin continues to be a nonattainment area for ozone and carbon monoxide. However, the SIP for San Diego acknowledged that the region would not likely become an attainment area by the target year, 1987, because of atmospheric conditions that draw polluted air from the South Coast Air Basin to the north into the San Diego Air Basin.¹¹

Nevertheless, the SIP contained a number of strategies to reduce air pollutant emissions originating in the San Diego Air Basin. The SIP based its strategies on growth projections for population, employment, and housing. These projections are derived, in part, from adopted general plans. The projections used for the SIP are the San Diego Association of Governments (SANDAG) "Series V" growth projections prepared in 1980. The forecast projected a regionwide population of 2,454,000 in the year 1995. Based on the 1989 population level of 2,418,000, it is anticipated that the 1995 forecast level will be achieved by 1990. The SIP is in the process of being updated to reflect current and expected growth projections. SANDAG Series VII growth projections, which have not yet been adopted, are expected to be the basis for the updated SIP.^{13,14,15}

SANDAG is the agency responsible for planning transportation control measures aimed at improving air quality and coordinating the implementation of these measures by local governments. Table 4.8-2 describes four transportation tactics developed by SANDAG that were included in the 1982 SIP for the San Diego Air Basin.

The new SIP is due to CARB in 1991.¹⁶ According to SANDAG and the CARB, the primary means that would be used to reduce emissions within the San Diego Air Basin would be to encourage a reduction in single-occupancy vehicles through ridesharing and public transit.^{17,18}

4.8.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

A project will normally have a significant effect on the environment if it will violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations.¹⁹

The approval of the proposed project would result in increased stationary and mobile sources in the basin. Stationary sources include short-term emissions onsite from construction activities and long-term stationary-source emissions resulting from offsite electrical power generation, natural gas consumption onsite and equipment and materials required by the land uses associated with the completed project. Mobile source considerations include short-term construction activities and long-term traffic generation. The proposed commercial land uses impact air quality almost exclusively through vehicular traffic generated by the development. Generally, such impacts occur both regionally and on a local scale. Regionally, personal commuting, hotel visitor traffic and commercial service trips will add to regional trip generation and increase the vehicle miles traveled (VMT) within the San Diego Air Basin. Locally, traffic within the project vicinity, especially during peak hour traffic, will be added to the local roadway system. The most adverse scenario would be with a congested traffic condition occurring during periods of poor atmospheric ventilation. If this condition occurs there will be a definite potential for the formation of micro-scale air pollution "hot spots" within the project vicinity.

TABLE 4.8-2
1982 STATE IMPLEMENTATION PLAN
TRANSPORTATION TACTICS (T1-T4)

T-1 Ridesharing

- Increase Level of Rideshare Matching Service
- Expand Employer Promotion
- Expand Vanpools
- Expand Subscription Bus Service
- Taxipool

T-2 Transit

- Increase Frequency of Service
- Increase Service Area Coverage
- Decrease Transit Travel Times
- Reduce Transit Fares
- Increase Express Bus Service
- Construct Light Rail Transit
- Restructure Transit Routes
- Increase Transit Attractiveness and Convenience

T-3 Bicycling

- Bicycle Lanes and Paths
- Bicycle Parking
- Showers and Lockers for Bicyclists
- Bicycle Racks on Buses
- Direct Subsidy to Bicycle Commuters

T-4 Intercity Bus and Rail

- Increase Frequency of Rail Service
- Decrease Rail Travel Time
- Increase Frequency of Intercity Bus Schedule

The following impact discussion is organized into two general categories for ease of presentation: short-term impacts (fugitive dust and construction equipment emissions) and long-term impacts (stationary and mobile sources).

Short-Term Emissions

The preparation of the project site for building construction would produce two types of air contaminants: exhaust emissions from construction equipment and motor vehicles traveling to the site, and fugitive dust generated as a result of soil movement. These construction impacts could be expected during each phase of development. The emissions produced during grading and

construction activities, although of short-term duration, could be troublesome to workers and adjacent developments, even if prescribed wetting procedures are followed.

Exhaust Emissions From Construction Equipment and Vehicles

Heavy-duty equipment emissions are variable because of day-to-day differences in construction activities and equipment used. Typical emissions for construction equipment were obtained from the Environmental Protection Agency, "Compilation of Air Pollution Emission Factors, Volume I: Mobile Sources," September 1985. Assumptions regarding the type of construction equipment to be used during each phase of construction were based on an environmental impact report prepared for a 700,000-square-foot building in Los Angeles.²⁰ Appendix E contains the heavy-duty equipment emission factors. Air pollutant emissions for each alternative are given in Table 4.8-3. The amount of pollutants generated by construction equipment indicated in Table 4.8-3 assumes equipment is operating 8 hours each day and all equipment is assumed to be operating at the same time. Also, the phases would occur independent of one another and the total amount of emissions generated for each alternative would occur over several years. Because the emissions would be temporary and would not likely contribute substantially to the exceedance of any air quality standards, the impact would not be significant. Alternative D would generate the greatest amount of construction equipment emissions, followed by Alternative B, Alternatives A and F, Alternative C, and Alternative E. Alternative G would not generate any construction equipment emissions.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust that may have a substantial temporary impact on local air quality. Emissions are associated with demolition, ground excavation and site preparation. Dust emissions vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing weather. The quantity of fugitive dust generated is proportional to the silt content of the soil (that is, particles smaller than 75 microns in diameter) and inversely proportional to the square of the soil moisture. Based on the U.S. EPA-42 emission factor, typical dust lofting rates are 1.2 tons of fugitive dust per month per acre disturbed.²¹ However, this factor does not take into account the relatively high water table at the Navy Broadway Complex, which results in moister soil and less dust generation. Dust control through regular watering and other fugitive dust abatement measures required by the San Diego Air Pollution Control District (APCD) can reduce levels from 50 to 75 percent. Dust emission rates therefore depend on the length of the construction activities and the care with which dust abatement procedures are implemented.

If the uncontrolled dust emission factor is applied to the 15.6-acre site for Alternatives A, B, E, and F, an estimated 18.7 tons of fugitive dust could be generated for each month of construction activity. However, this amount assumes the entire site would be under construction simultaneously and no watering or other dust-palliative measures will be used. In reality, only one-fourth of the site would be under construction at any one time, so the maximum dust generation (not considering the higher moisture content of onsite soils) would be approximately 4.7 tons per month. With dust control measures, the total is reduced to about 2 tons per month of construction activity. Alternative C would generate substantially less dust than Alternatives A, B, and E since the two major buildings on Blocks 1 and 2 would be rehabilitated and not demolished. Alternative D would generate additional fugitive dust at the offsite location. Alternative G would not generate any construction-related fugitive dust. While the overall dust generation is substantial for Alternatives A, B, C, D and E, the daily rate of fugitive dust generation is well

TABLE 4.8-3

ESTIMATED HEAVY-DUTY CONSTRUCTION EQUIPMENT EMISSIONS

	Pollutant (lb/day)				
	Carbon Monoxide	Exhaust Hydrocarbons	Nitrogen Oxides	Sulfur Oxides	Particulates
Alternative A					
Phase 1 (1992-1994)	380	58	899	90	60
Phase 2 (1995-1997)	109	16	257	26	17
Phase 3 (1998-2000)	933	141	2,183	219	146
Phase 4 (2001-2003)	<u>604</u>	<u>91</u>	<u>1,412</u>	<u>142</u>	<u>95</u>
Total	2,026	306	4,751	477	318
Alternative B					
Phase 1 (1992-1994)	380	58	899	90	60
Phase 2 (1995-1997)	109	16	257	26	17
Phase 3 (1998-2000)	1,098	166	2,568	258	172
Phase 4 (2001-2003)	<u>604</u>	<u>91</u>	<u>1,412</u>	<u>142</u>	<u>95</u>
Total	2,191	331	5,136	516	344
Alternative C					
Phase 1 (1992-1994)	380	58	899	90	60
Phase 2 (1995-1997)	77	12	180	18	12
Phase 3 (1998-2000)	115	17	270	27	18
Phase 4 (2001-2003)	<u>604</u>	<u>91</u>	<u>1,412</u>	<u>142</u>	<u>95</u>
Total	1,176	178	2,761	277	185
Alternative D					
Phase 1 (1992-1994)	380	58	899	90	60
Phase 2 (1995-1997)	380	58	899	90	60
Phase 3 (1998-2000)	1,667	252	3,898	392	261
Phase 4 (2001-2003)	<u>604</u>	<u>91</u>	<u>1,412</u>	<u>142</u>	<u>95</u>
Total	3,031	459	7,108	714	476
Alternative E					
Phase 1 (1996-1998)	194	29	455	46	30
Alternative F					
Phase 1 (1992-1994)	380	58	899	90	60
Phase 2 (1995-1997)	109	16	257	26	17
Phase 3 (1998-2000)	933	141	2,193	219	146
Phase 4 (2001-2003)	<u>604</u>	<u>91</u>	<u>1,412</u>	<u>142</u>	<u>95</u>
Total	2,026	306	4,751	477	318
Alternative G					
	0	0	0	0	0

Source: U.S. EPA-42 1985 and Michael Brandman Associates 1988.

within the dispersive capacity of the air basin without any adverse air quality impacts. It should also be noted that much of this dust is comprised of large particles that are easily filtered by human breathing passages and settle out rapidly on nearby foliage, parked cars and other horizontal surfaces. The dust thus comprises more of a nuisance rather than any potentially unhealthful air quality impact.

In addition to dust, demolition of onsite structures could result in the release to the airstream of asbestos particles. This issue is addressed in Section 4.11.

Long-Term Mobile-Source Emissions

Regional Air Quality

Emissions from vehicle usage for all the alternatives were calculated in this study with the California Air Resources Board (CARB) computer model. The Urbemis 2 program was specifically designed to quantify the number of vehicles generated by a given land use and the associated emissions. Input variables include the types and extent of the land uses, trip generation rates, wind speed, and temperature. Based on the proposed land uses, as well as other data provided by the traffic consultant, the number of vehicle trips and pollutant emissions were calculated. The projected vehicle trips and emissions are summarized in Table 4.8-4.

TABLE 4.8-4

NET MOBILE SOURCE POLLUTANT EMISSIONS AT PROJECT BUILDOUT

Alternative	Total Vehicle Trips ^a	Net Emissions ^a (lbs/day)		
		TOG ^b	CO ^c	NOx ^d
A	23,000	270	2,405	445
B	25,100	315	2,810	525
C	17,800	180	1,590	280
D	29,200	425	3,800	725
E	9,400	20	190	50
F	23,000	270	2,405	445
G	10,700	0	0	0

a Net vehicle emissions are based on alternative land uses' vehicle-related emissions less the existing (Alternative G) land uses' vehicle-related emissions.

b Total organic gases.

c Carbon Monoxide.

d Nitrogen oxides.

Source: URBEMIS 2 (CARB 1987) and Michael Brandman Associates Analysis 1989.

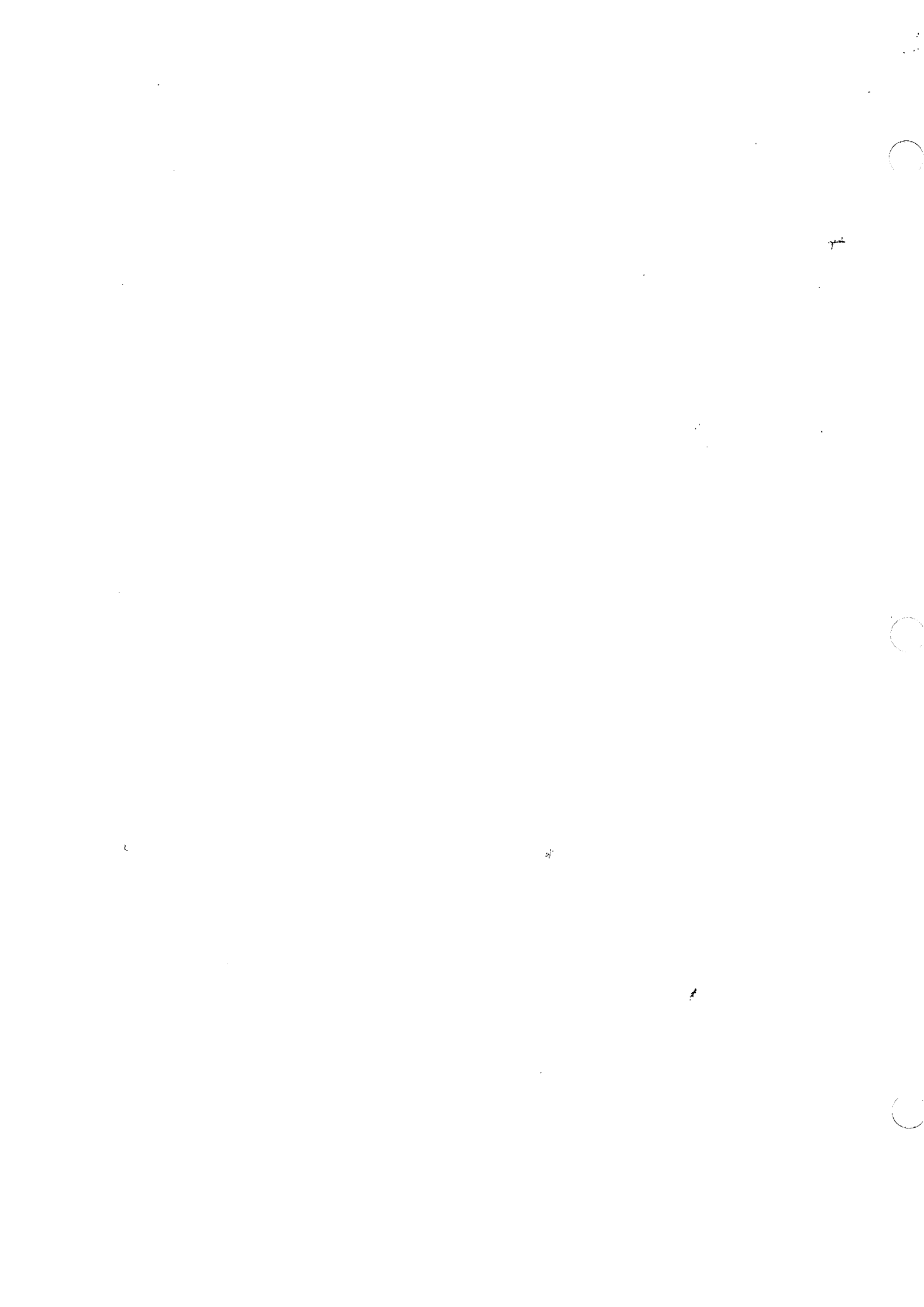
Alternative A would have the potential to generate 270 pounds per day of total organic gases, 2,406 pounds per day of carbon monoxide and 445 pounds per day of nitrogen oxides. Alternative D would generate more total vehicle trips and vehicle-related emissions than Alternatives A, B, C, E and F. Alternative G (no project) would not generate any additional vehicle-related emissions. Reactive organic gases are a component in the formation of ozone. The model slightly overestimates the quantity of reactive organic gases generated by the project, since total organic gases (TOG) is the category that is quantified by the computer model, and reactive organic gases is a subset of TOG. Ozone measurements taken over the past 5 years at the Island Street Station in Downtown San Diego have exceeded both the state and federal standards for ozone. The project would contribute to an already existing violation of the ozone standard; however, the significance of its impact must be considered in the context of air quality planning, discussed on pages 4-170 through 4-172.

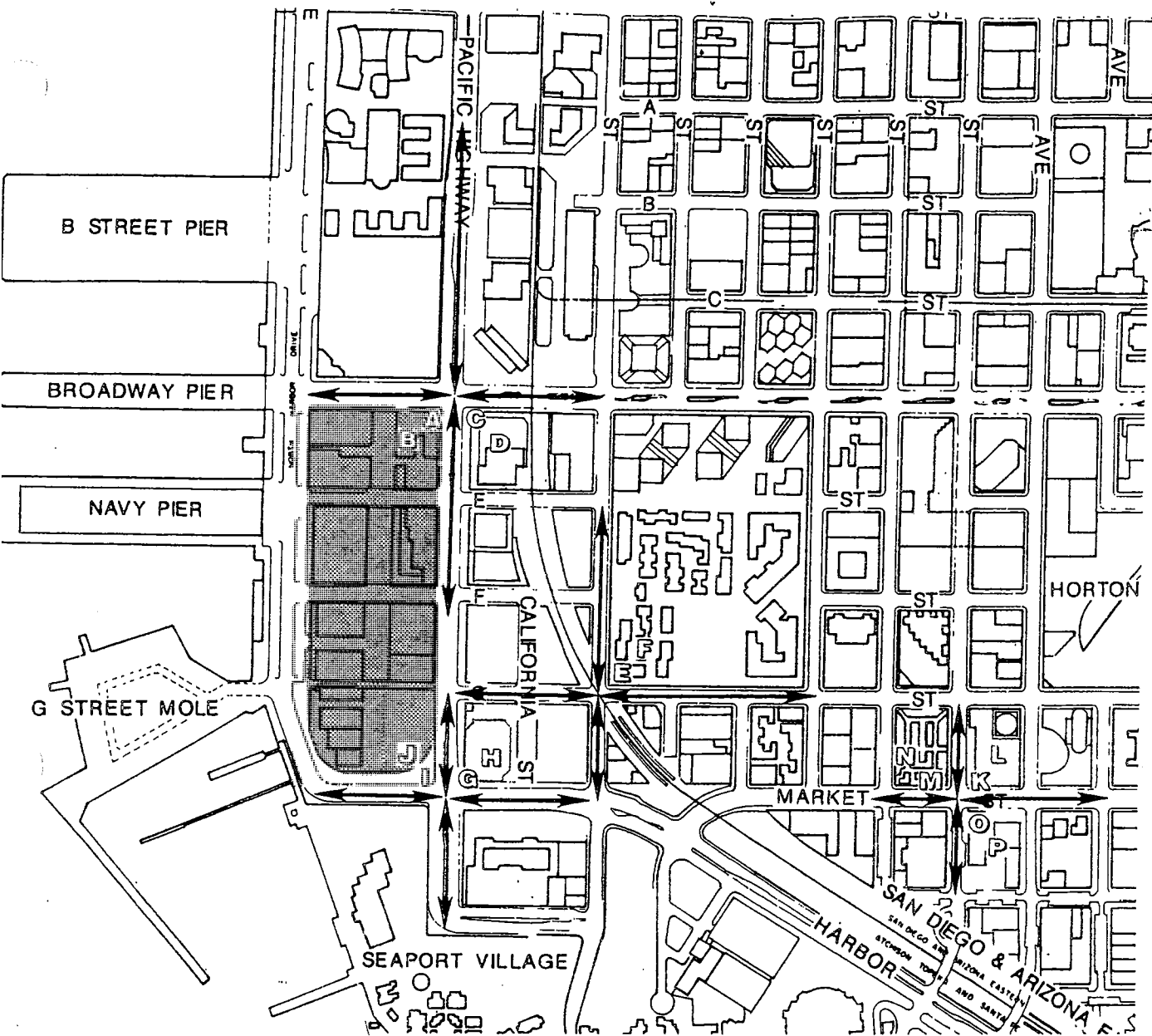
Local Air Quality

The impact of the proposed project alternatives on local air quality with respect to carbon monoxide was assessed through the use of Caltrans Caline 4 Air Quality Model, which allows microscale carbon monoxide concentrations to be estimated along a roadway corridor or intersection. Figure 4-60 shows the locations for which the Caline 4 model was completed. The locations were selected because they were the areas with the highest concentration of traffic near the project site and adjacent to sensitive receptors. Areas along the waterfront were not modeled because traffic volumes are less and, as explained below, the locations selected with higher volumes did not exceed Federal or state standards for carbon monoxide.




Computer readouts for the Caline 4 model appear in Appendix E, and Table 4.8-5 presents the results of the analysis for the worst-case wind angle and windspeed condition. Input to the model was based on the following assumptions and methodology:

- The calculations assume a meteorological condition of almost no wind (1.0 meters/second), a flat topographical condition between the source and receptor and a mixing height of 1,000 meters.
- CO concentrations are calculated for the 1-hour averaging period, and then compared to the state and Federal 1-hour standards.
- Concentrations are given in parts per million (ppm) at each of the receptor locations indicated in Figure 4-60. The receptor locations indicate sensitive receptors (i.e., condominiums, hotel, park, etc.).
- The average travel speed (most adverse-case assumption) was assumed to be 20 miles per hour on the roadways analyzed. Emission factors provided by the CARB for 1989 were used for existing conditions and emission factors for 2002 were used for all alternative conditions (EMFAC7C, CARB 1987).
- Ambient (background) CO concentrations that represent the second worst-case CO concentration at the San Diego - Island Avenue monitoring station were added to the model results. The background concentration is 11.0 ppm for the 1-hour average (CARB 1987).





Legend

-  Project Site
-  Indicates Roadway Link Modeled
-  Receptor Locations

Caline Modeling Locations
Navy Broadway Complex Project

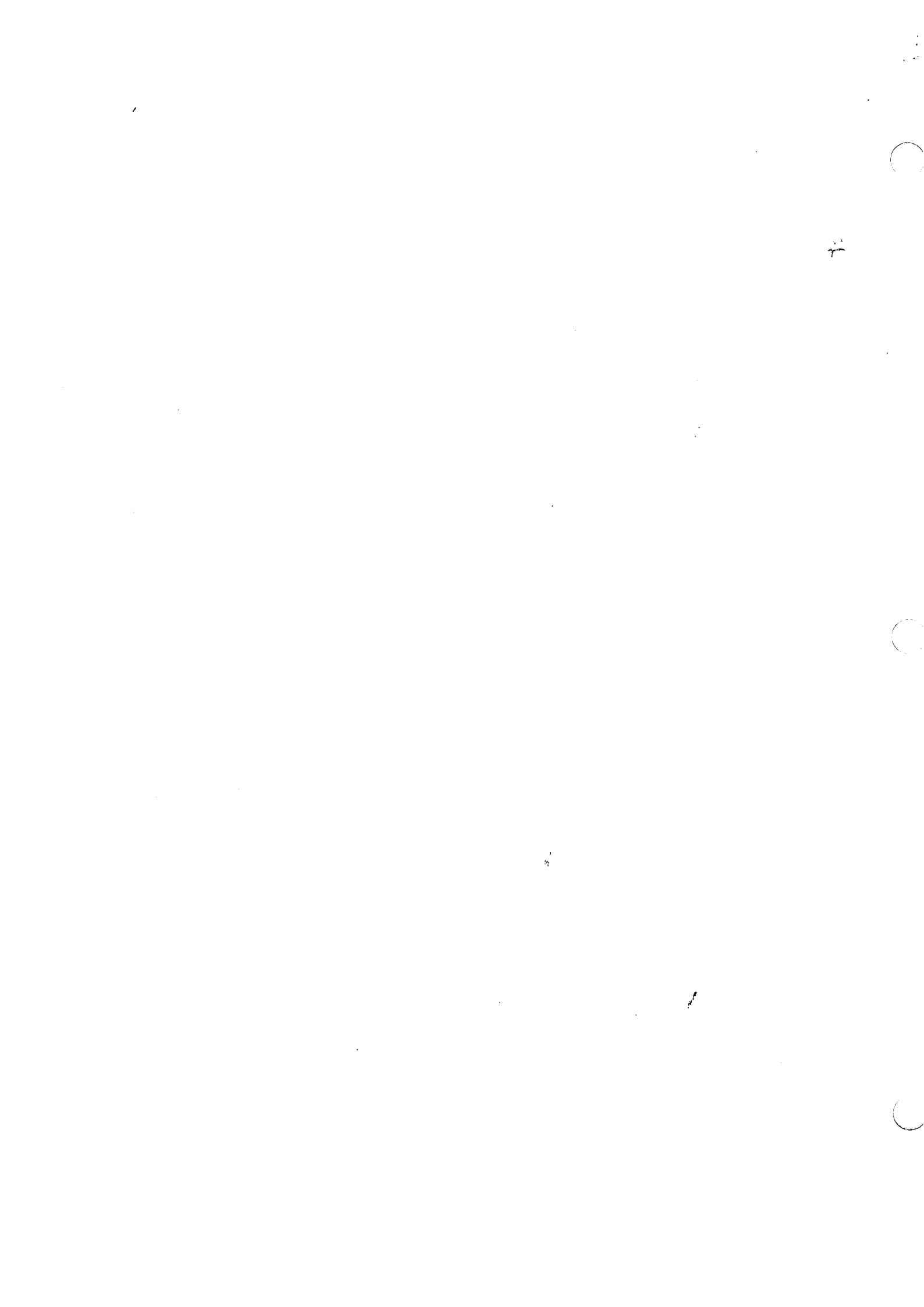
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Figure 4-60



MAXIMUM CARBON MONOXIDE CONCENTRATIONS^a
(Parts per Million)

Intersection	Receptor Location on Figure 4-60	Existing	Carbon Monoxide Concentrations (1 hr) ^b						
			Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Broadway/Pacific Coast Highway									
Receptor 1	A	12.1	12.5	12.5	12.5	12.3	12.5	12.5	12.4
Receptor 2	B	11.7	11.9	11.9	11.8	11.9	11.9	11.9	11.9
Receptor 3	C	12.1	12.5	12.5	12.3	12.5	12.5	12.5	12.4
Receptor 4	D	11.7	11.9	11.9	11.8	11.9	11.9	11.9	11.9
G Street/Kettner St.									
Receptor 1	E	11.8	12.1	12.1	12.0	12.1	12.1	12.1	12.0
Receptor 2	F	11.5	11.7	11.7	11.6	11.7	11.7	11.7	11.7
Pacific Coast Highway/Market Street									
Receptor 1	G	12.5	12.5	12.5	12.3	12.5	12.5	12.5	12.1
Receptor 2	H	12.0	12.0	12.0	11.9	12.0	12.0	12.0	11.7
Receptor 3	I	12.4	12.4	12.5	12.3	12.5	12.5	12.4	12.1
Receptor 4	J	11.9	12.0	12.0	11.8	12.0	12.0	12.0	11.7

TABLE 4.8-5 (continued)

Intersection	Receptor Location on Figure 4-60	Existing	Carbon Monoxide Concentrations (1 hr) ^b						
			Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Market/Front Street									
Receptor 1	K	12.3	12.5	12.4	12.4	12.3	12.4	12.4	12.3
2	L	11.9	11.9	11.9	11.9	11.8	11.9	11.9	11.8
3	M	12.3	12.5	12.4	12.4	12.3	12.4	12.4	12.3
4	N	11.9	11.9	11.9	11.9	11.8	11.9	11.9	11.8
5	O	12.3	12.5	12.4	12.4	12.3	12.4	12.3	12.3
6	P	11.9	11.9	11.9	11.9	11.8	11.9	11.9	11.8

a The federal standards are 35 ppm (1-hour average) and state standards are 20 ppm (1-hour average).

b Concentrations of carbon monoxide in ppm. Background CO levels of 11.0 ppm have been added to the 1-hour average concentrations.

Source: Korve Engineering, Inc. and Michael Brandman Associates, Inc. 1989.

As indicated in Table 4.8-5, carbon monoxide concentrations at the 16 receptor locations for all of the alternatives would not violate state or Federal 1-hour standards. Therefore, none of the project alternatives would have a significant impact on local air quality.

Long-Term Stationary Source Emissions

Stationary source emissions were quantified based on the various proposed land uses and gas and electric consumption rates provided by the San Diego Gas and Electric Company (Sigman 1988 and Schlu 1989). Emission factors were obtained from the U.S. Environmental Protection Agency's Compilation of Air Pollutant Emission Factors, AP-42. Appendix F contains the computer runs for these emissions. The stationary emissions for the proposed project alternatives are summarized in Table 4.8-6.

Consistency With the State Implementation Plan

According to the San Diego APCD, the CARB will be responsible for determining whether the project is consistent with the SIP.²² CARB indicates that measures to substantially reduce the number of single-occupancy vehicles would be the primary measure of consistency. This is the primary means by which the updated SIP will reduce emissions, so incorporation of such measures would determine conformance with not only the 1982 SIP, but also with the updated SIP currently in preparation.²³

The U.S. Environmental Protection Agency (EPA) has indicated that because the San Diego Air Basin is a nonattainment area for air quality, all reasonable efforts should be made to not increase vehicular air emissions. In discussions with the EPA, it was agreed that no net increase in vehicle emissions is a desirable goal, but may not be feasible; nevertheless, a reduction in potential emissions to the maximum extent practical is strongly encouraged. EPA acknowledged that conformance with the SIP is a decision made on the local level.²⁴

The proposed mixed-use alternatives (A, B, C, D, F) would generate, without mitigation, between 28,000 (Alternative C) and 42,000 (Alternative B) daily vehicle trips, with Alternatives A, D, and F each generating approximately 38,000 trips. Including offsite Navy offices, Alternative D would generate approximately 52,000 daily trips. Approximately 40 percent of these trips (16,000) would be associated with Navy-personnel relocated to the site (except Alternative D, in which 30 percent would be Navy personnel related). These personnel are already located in the San Diego Air Basin, and would simply be relocated to the Navy Broadway Complex. This consolidation provides substantial opportunities to reduce regional emissions loads associated with commute trips by these personnel, as discussed below.

Vehicle trips that are new to the San Diego Air Basin would constitute the remaining approximately 60 percent of the project's trip generation. A Travel Demand Management (TDM) plan (see Section 4.2.3, page 4-70) will be implemented as part of the project to substantially reduce single-occupancy vehicle usage at the site. In addition, the site is located within walking distance of an AMTRAK rail station, 10 bus lines, and two light-rail transit lines (one is under development). This provides a substantial opportunity for utilizing mass transit and reducing single-occupancy vehicle use. By consolidating Navy personnel from a number of smaller, dispersed facilities to a single facility proximate to these transit opportunities, single-occupancy vehicle usage by Navy personnel would be substantially reduced in the air basin, with estimated reductions of 40 percent. Please see Section 4.2.3, page 4-60, for a discussion of TDM-related reductions.

TABLE 4.8-6
PROJECTED STATIONARY SOURCE EMISSIONS^a
(lbs/day)

Alternative	CO		NO _x		Pollutant SO _x		Particulates		HC	
A	30.04	(14.32)	161.30	(74.83)	14.10	(6.08)	4.74	(2.04)	2.90	(1.60)
B	32.72	(17.00)	176.10	(89.80)	15.50	(7.48)	5.22	(2.52)	3.12	(1.82)
C	23.08	(7.36)	122.82	(36.52)	10.44	(2.42)	3.52	(0.82)	2.38	(1.08)
D	31.50	(15.78)	166.60	(80.3)	13.92	(5.90)	4.70	(2.00)	3.36	(2.06)
E	10.70	(-5.02)	59.22	(-27.08)	5.62	(-2.40)	1.88	(-0.82)	0.82	(-0.48)
F	32.72	(17.00)	176.10	(89.80)	15.50	(7.48)	5.22	(2.52)	3.12	(1.82)
G	15.72	(0)	86.30	(0)	8.02	(0)	2.70	(0)	1.30	(0)

a Numbers in parentheses indicate the net emissions over Alternative G (no action).

Source: U.S. EPA-42 1985 and San Diego Gas and Electric 1988 and 1989.

Based on City of San Diego estimates of TDM effectiveness, the TDM measures proposed for this project and the project's proximity to mass transit are estimated to reduce daily vehicle trips from each of the proposed land uses by the following amounts:

<u>Land Use</u>	<u>Estimated Trip Reduction by TDM</u>
Office	60 percent
Hotel	* 25 percent
Retail	15 percent

Implementation of the TDM plan would reduce the number of trips by approximately 40 percent, which would result in a substantial reduction in potential vehicular emissions. After application of the TDM plan, trips associated with the mixed-use alternatives (A, B, C, D, and F) would range from 17,800 (Alternative C) to 25,100 (Alternative B), with Alternatives A, D, and E at approximately 23,000. Alternative D (including its offsite component) would generate a total of 30,200 trips. If the existing 16,000 vehicles that are associated with Navy personnel located throughout the air basin are discounted, the net increase in daily vehicle trips would be reduced to 2,800 and 7,100 at Navy Broadway Complex, and up to 14,200 with the onsite and second site component of Alternative D (see Table 4.8-7). These net trip levels assume that all of the

remaining vehicles are new to the air basin, a premise which probably overstates the new vehicle travel.

TABLE 4.8-7
NET INCREASE IN VEHICULAR TRAFFIC

Mixed-Use Alternative	Daily Trips After TDM	Less Trips Associated With Navy Personnel	Net New Trips
A	23,000	16,000	7,100
B	25,100	16,000	9,100
C	17,800	16,000	2,800
D (onsite only) ^a	21,700	16,000	5,700
(onsite and offsite)	30,200	16,000	14,200
F	23,000	16,000	7,000

a Does not include offsite Navy offices.

Source: Michael Brandman Associates 1990 and Korve Engineers 1990.

According to the CARB, the incorporation of measures into the project which substantially reduce single-occupancy vehicles would demonstrate consistency with the SIP.²³ As with the CARB and as stated previously, the EPA strongly encourages a reduction in single-occupancy vehicles to the maximum extent practical. The reduction in vehicle trips achieved by implementing the TDM plan would be considerable. There are no known measures to cause a further reduction. Since the Navy Broadway Complex Project would be consistent with the current (1982) and proposed SIP, no significant impacts to air quality would be caused by the project.

4.8.3 MITIGATION MEASURES

The following mitigation measure would be applicable to Alternatives A, B, C, D, E, and F.

Short-Term (Construction) Emissions

- Fugitive dust will be controlled by regular watering as required by the SDAPCD and through erosion control and street washing to reduce dirt spillage onto traveled roadways near the construction site. This measure will be implemented by the project developer and will be included in construction bid packages.

Long-Term Emissions

The primary means by which long-term emissions will be reduced is through a Travel Demand Management (TDM) program. The TDM program for the proposed alternatives is outlined in detail in Section 4.2.3, page 4-60.

ENDNOTES:

1. National Oceanic and Atmospheric Administration (NOAA), 1986.
2. Ibid.
3. San Diego Air Pollution Control District (APCD), 1982.
4. Ibid.
5. Ibid.
6. Ibid.
7. California Air Resources Board, 1983, 1984, 1985, and 1986.
8. Ibid.
9. Ibid.
10. Ibid.
11. San Diego APCD, op. cit.
12. Davis, San Diego APCD, personal communication, 1989.
13. Ibid.
14. Valerio, San Diego Association of Governments (SANDAG), personal communication, 1989.
15. Wyman, California Air Resources Board, personal communication, 1989.
16. Davis, op. cit.
17. Valerio, op. cit.
18. Wyman, op. cit.
19. State of California, California Environmental Quality Act, Statutes and Guidelines, 1986.
20. Michael Brandman Associates, Draft Environmental Impact Report for the California Receptor Center - Los Angeles County, July 1988.
21. U.S. Environmental Protection Agency, Compilation of Air Pollutant Emission Factors (AP-42), September 1985.
22. Davis, op. cit.
23. Wyman, op. cit.
24. Tomsavic, Environmental Protection Agency, personal communication, 1989.
25. Wyman, op. cit.

4.9 NOISE

4.9.1 AFFECTED ENVIRONMENT

Background

People are often subjected to a multitude of sounds in the urban environment. Many of these sounds are by-products of desirable and necessary day-to-day activities. Some of these sounds, such as from cars and trucks, jet aircraft, and air conditioners, are undesirable and may be detrimental to health. These sounds are generally referred to as noise.¹

The human ear is not equally sensitive to sound at all frequencies, so a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. An A-weighted decibel (dBA) scale performs this compensation by discriminating against frequencies not discernible to the human ear. The basis for comparison is the faintest sound audible to the average, young male, human ear at the frequency of maximum sensitivity.²

Using the dBA scale as a base, noise metrics have been developed that attempt not only to measure noise levels but also to adjust those levels according to their duration, frequency, and time between single noise events. A number of Federal agencies, including the Department of Defense, have adopted the day-night average noise level or Ldn as their noise metric to evaluate noise compatibility. The Ldn weights noise events occurring during the nighttime (10:00 p.m. to 7:00 a.m.) hours by 10 dBA, to account for increased sensitivity to noise during that period.³

While the Federal government has adopted the Ldn metric for project evaluation, the State of California and the City of San Diego have adopted the Community Noise Equivalent Level (CNEL) as their noise metric.⁴ CNEL applies an additional 5 dB penalty to sounds occurring in the evening (7:00 p.m. to 10:00 p.m.). However, the two metrics are essentially equal and used interchangeably. The noise analysis for the Navy Broadway Complex uses the CNEL metric.

Noise Standards

State of California Standards and Guidelines

The State of California has adopted noise standards in areas of regulation not preempted by the Federal government. State standards regulate noise levels of motor vehicles, freeway noise affecting classrooms, noise insulation, occupational noise control, and airport noise. The state has also developed land use compatibility guidelines for community noise environments.⁵ None of these state standards would apply to the project because the site is being considered for office, commercial, and hotel uses. However, as a guideline for hotel uses, an interior noise level of 45 dB CNEL in habitable rooms is a residential noise standard.

The State Office of Noise Control has published guidelines for noise and land use compatibility. The objective of the guidelines is to provide a community noise environment that the state deems to be generally acceptable. Office, business commercial, and professional uses are normally acceptable in areas of 70 dB CNEL or less and conditionally acceptable in areas of up to 78 dB CNEL if sound attenuation is provided.⁶

The City of San Diego

The City of San Diego's General Plan provides applicable noise criteria for land use compatibility for transportation sources within its circulation element, as shown in Figure 4-61. Hotels are compatible in areas of 65 dB CNEL or less, office buildings are compatible in areas of 70 dB CNEL or less, and commercial-retail uses are compatible in areas of 75 dB CNEL or less.⁷

Existing Noise Levels

Navy Broadway Complex Site

The dominant noise source in the area is roadway traffic and rail movements. The area is also exposed to aircraft noise from Lindbergh Field, located 1.5 miles to the north, but the levels are not significantly above ambient levels because the site is not directly beneath the primary runway flight tracks. AMTRAK rail lines are located immediately east of the project site. Rail lines, used an average of twice per year by the Navy, also cross through the site along E Street.

A noise survey was conducted by MBA staff on July 6 and 7, 1988 to document the existing noise environment in the project vicinity. Noise measurements were conducted at four sites for a total of 8 hours. The noise monitoring locations are identified in Figure 4-62, and the results are summarized in Table 4.9-1. The L_{max} (maximum sound level recorded during the noise measurement duration) ranged from 72.0 dB to 84.0 dB. Noise sources contributing to the L_{max} were those typical of an urban environment (i.e., semi-trucks, buses, a fire truck with siren, and airplanes).

Traffic Noise

Existing traffic noise along the major roadway was calculated using the Federal Highway Traffic Noise Prediction Model.⁸ This model was modified to generate CNEL and 24-hour average noise level (Leq) values. Model input data were derived from the traffic analysis (Section 4.2, page 4-35) and from field observations. Input includes ADT levels; day/night percentages of autos, medium, and heavy trucks; vehicle speeds; ground attenuation factors; and roadway widths.

The distances from existing roadway centerlines to the 60, 65, and 70 dB CNEL and Leq are provided in Table 4.9-2. The noise contour distances describe worst-case conditions since they do not take into account any obstructions to the noise path (i.e., walls, buildings, etc.). The existing 70 dB CNEL and Leq do not extend onto the project site.

Lindbergh Field Aircraft Noise

According to the Lindbergh Field Quarterly Noise Report (for the period ending March 31, 1988), the project site is located outside the 65 dB CNEL and thus is not subject to significant aircraft noise impacts.⁹

4.9.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The potential noise impact of the project can be divided into short- and long-term impacts. Short-term impacts are due to noise generated by equipment during the construction phase. Long-term impacts are associated with the generation of project traffic along both existing and proposed

		Annual Community Noise Equivalent Level in Decibels					
Land Use		50	55	60	65	70	75
1	Outdoor Amphitheaters (may not be suitable for certain types of music.	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
2	Schools, Libraries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
3	Nature Preserves, Wildlife Preserves	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
4	Residential-Single Family, Multiple Family, Mobile Homes, Transient Housing	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
5	Retirement Home, Intermediate Care Facilities, Convalescent Homes	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
6	Hospitals	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
7	Parks, Playgrounds	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
8	Office Buildings, Business and Professional	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
9	Auditoriums, Concert Halls, Indoor Arenas, Churches	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
10	Riding Stables, Water Recreation Facilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
11	Outdoor Spectator Sports, Golf Courses	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
12	Livestock Farming, Animal Breeding	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
13	Commercial-Retail, Shopping Centers, Restaurants, Movie Theaters	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
14	Commercial-Wholesale, Industrial Manufacturing, Utilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
15	Agriculture (except Livestock), Extractive Industry, Farming	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
16	Cemeteries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible



COMPATIBLE
The average noise level is such that indoor and outdoor activities associated with the land use may be carried out with essentially no interference from noise.



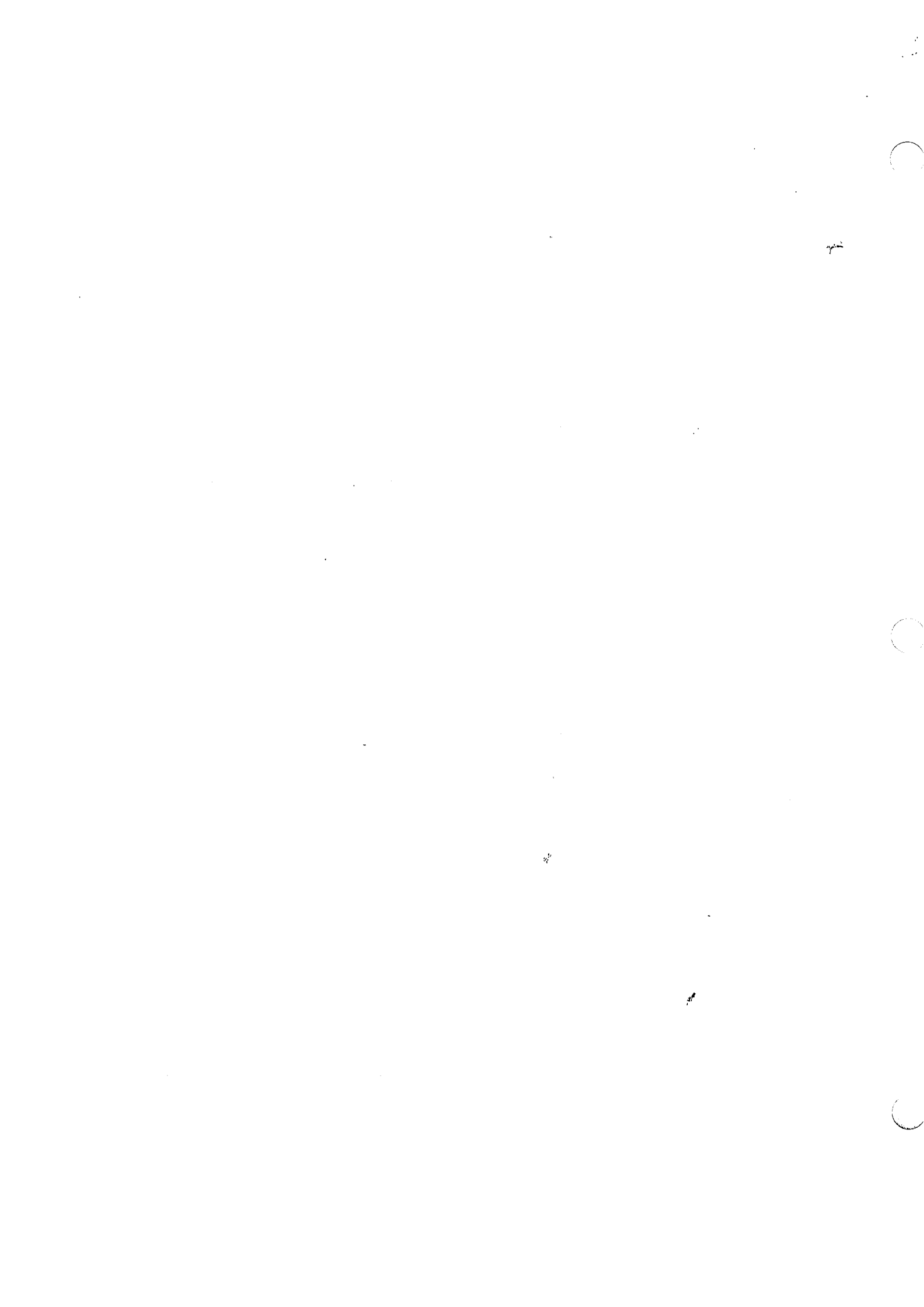
INCOMPATIBLE
The average noise level is so severe that construction costs to make the indoor environment acceptable for performance of activities would probably be prohibitive. The outdoor environment would be intolerable for outdoor activities associated with the land use.

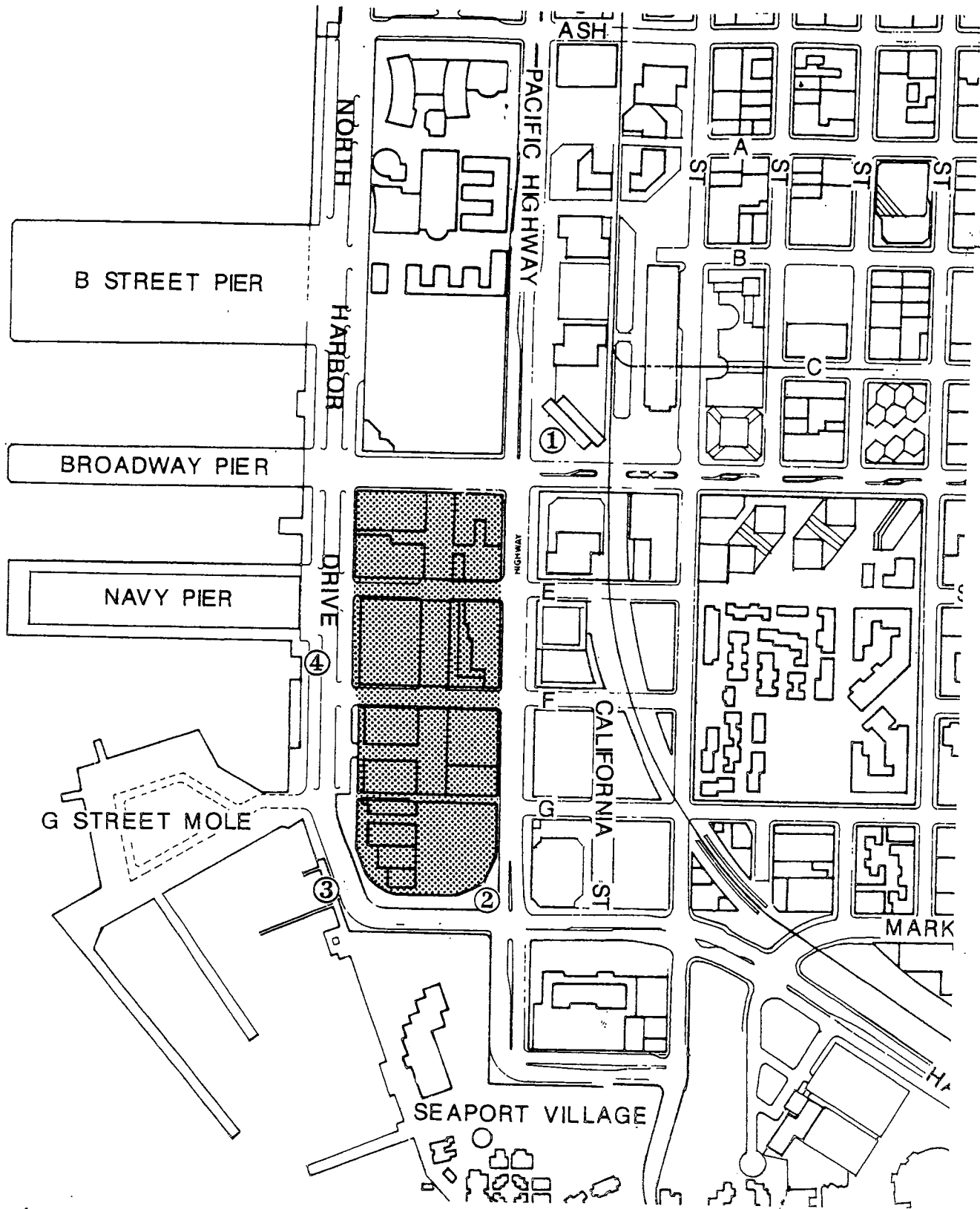
Source: City of San Diego Planning Department

City of San Diego Noise
Land Use Compatibility Chart
Navy Broadway Complex Project

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Figure 4-61





Legend



Noise Monitoring Locations



Project Site

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Noise Monitoring Locations
 Navy Broadway Complex Project

4-177

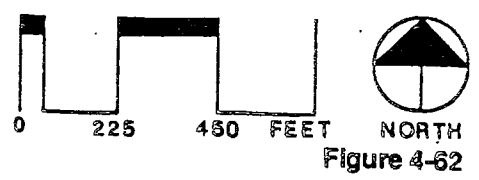


Figure 4-62



TABLE 4.9-1
NOISE MEASUREMENT RESULTS

Location	L _{max} ^a	L ₁₀ ^b	L ₃₃ ^c	L ₅₀ ^d	L ₉₀ ^e
Site 1					
July 6, 1988 (5:07-6:07 p.m.)	84.0	69.0	65.0	63.5	59.5
July 7, 1988 (1:13-2:13 p.m.)	79.0	72.0	69.0	67.0	62.0
Site 2					
July 6, 1988 (12:35-1:35 p.m.)	82.5	70.5	66.5	64.5	60.0
July 7, 1988 (12:01-1:01 p.m.)	80.5	68.0	64.0	62.5	58.5
Site 3					
July 6, 1988 (2:30-3:30 p.m.)	84.0	69.0	65.0	63.0	58.0
July 7, 1988 (7:59-8:59 a.m.)	72.0	76.0	67.0	62.0	57.0
Site 4					
July 7, 1988 (9:13-10:13 a.m.)	77.5	62.5	58.5	57.0	53.5
July 7, 1988 (10:17-11:17 a.m.)	77.5	63.5	60.0	58.5	55.5
Range	72.0-84.0	62.5-76.0	58.5-69.0	57.0-67.0	53.5-62.0

a L_{max} is the maximum sound level recorded during the noise measurement duration.

b L₁₀ is the sound level exceeded 10 percent of the noise measurement duration.

c L₃₃ is the sound level exceeded 33 percent of the noise measurement duration.

d L₅₀ is the sound level exceeded 50 percent of the noise measurement duration.

e L₉₀ is the sound level exceeded 90 percent of the noise measurement duration;
it is also considered the background noise level.

Source: Michael Brandman Associates 1989.

TABLE 4.9-2

EXISTING ROADWAY NOISE LEVELS (LEQ-P.M. PEAK)^a

Roadway Segment	Distance to CNEL From Roadway Centerline (ft.)			LEQ at ^b 50 feet (dB)
	55 dB	65 dB	72 dB	
Harbor Drive				
North of Grape Street	3,515	353	<50	71.5
Grape Street to Ash Street	2,264	218	<50	69.9
Ash Street to Broadway	1,481	150	<50	68.3
South of Broadway	619	62	<50	65.5
Ash Street				
West of Pacific Highway	586	61	<50	64.5
Pacific Highway to India	439	46	<50	63.6
Broadway				
West of Pacific Highway	956	99	<50	66.4
Pacific Highway to India	1,453	147	<50	68.2
Grape Street				
West of Pacific Highway	1,042	105	<50	67.3
Pacific Highway to India	1,083	109	<50	67.5
Hawthorne Street				
West of Pacific Highway	929	94	<50	66.8
Pacific Highway to India	1,073	108	<50	67.5
India Street				
North of Hawthorne	248	28	<50	61.1
Hawthorne to Ash Street	258	28	<50	61.3
Ash to Broadway	207	<50	<50	60.3
G Street to Market	140	<50	<50	58.6
Kettner Boulevard				
North of Hawthorne	346	37	<50	62.6
Hawthorne to Ash	269	29	<50	61.4
Ash to Broadway	305	33	<50	62.0
Broadway to F Street	181	<50	<50	59.7
F Street to Market	289	31	<50	61.8
Market Street				
West of Pacific Highway	786	81	<50	65.8
East of Kettner Boulevard	672	70	<50	65.1

TABLE 4.9-2 (continued)

Roadway Segment	Distance to CNEL From Roadway Centerline (ft.)			LEQ at ^b 50 feet (dB)
	55 dB	65 dB	72 dB	
Laurel				
Pacific Highway to Kettner Blvd.	2,171	218	<50	70.2
Pacific Highway				
North of Hawthorne	2,343	237	<50	70.0
Hawthorne to Ash	2,252	228	<50	69.6
Ash to Broadway	1,792	183	<50	68.6
Broadway to Market	1,282	133	<50	67.2
South of Market	1,680	172	<50	68.3

a Does not measure any obstructions to noise path.

b CNEL measured in feet from centerline of near travel lane.

Source: Michael Brandman Associates 1988.

roadways. The following describes the general characteristics of each type of noise impact for each of the project alternatives.

Short-Term Construction Noise Impacts

Construction noise represents a short-term impact on ambient noise levels for each of Alternatives A through F. Noise generated by construction equipment, including earth movers, material handlers, and portable generators can reach high levels. The U.S. Environmental Protection Agency¹⁰ has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Although noise ranges were found to be similar for all construction phases, the erection phase (laying subbase and paving) tended to be less noisy. Noise levels vary from 79 dBA to 88 dBA (energy average) at 50 feet during the erection phase of construction.

Implementation of any of Alternatives A through F would cause a short-term annoyance to noise-sensitive land uses in the surrounding area due to construction activities. On weekends when, due to the visitor-serving nature, more people are in the area, this impact may be considered a significant nuisance impact to users of the nearby waterfront.

Alternative G, the no action alternative, would result in no short-term noise impacts to the project area.

Long-Term Noise Impacts

With community noise assessment, changes in noise levels greater than 3 dB are often identified as significant to sensitive receptors, while changes less than 1 dB are not discernible to most residents and are not considered significant. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. No scientific evidence is available to support the use of 3 dB as the significant threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. However, in a community noise situation, the noise exposure is over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB appears to be appropriate for most people.

Table 4.9-3 quantifies the distances to the 60, 65, and 70 dB CNEL contours and lists the CNEL value at 50 feet from the centerline of the near travel lane for roadways in the project vicinity for each of the alternatives. Long term buildout of the project area is assumed. As with the existing noise levels, the future roadway noise levels were calculated based on the Federal Highway Administration's Highway Traffic Noise Prediction Model. The roadway noise levels presented in Table 4.9-3 assume no natural or man-made shielding between the roadway and the noise receptor.

As in any downtown urban area characterized by dense development, future traffic noise levels are expected to be relatively high in the vicinity of the Navy Broadway Complex. The proposed hotels in Alternatives A, B, C, D, and F would be within the 65 dB CNEL contour from Pacific Highway. This could result in noise levels in excess of 45 dB CNEL in hotel rooms, which would be significant.

TABLE 4.9-3

FUTURE ROADWAY NOISE LEVELS^a

Roadway Segment: Broadway East of Harbor

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	70	208	654	69.7	3.6	0.6
B	71	212	666	69.8	3.6	0.6
C	69	205	643	69.6	3.5	0.5
D	68	202	634	69.6	3.4	0.4
E	69	205	643	69.6	3.5	0.5
F	71	212	666	69.8	3.6	0.6
G	62	184	577	69.2	3.0	0.0

Roadway Segment: Broadway East of Kettner

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	111	344	1,086	71.9	4.0	0.8
B	107	329	1,037	71.7	3.8	0.6
C	108	333	1,052	71.8	3.8	0.6
D	100	306	965	71.4	3.4	0.2
E	108	333	1,052	71.8	3.8	0.6
F	107	329	1,037	71.7	3.8	0.6
G	95	292	919	71.2	3.2	0.0

TABLE 4.9-3 (continued)

Roadway Segment: Harbor South of Broadway

Alternative	Distance (feet) From <u>Roadway Centerline to CNEL</u>			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	0	82	258	66.7	1.4	0.7
B	0	79	250	66.5	1.3	0.6
C	0	82	258	66.7	1.4	0.7
D	0	67	212	65.8	0.5	(0.2)
E	0	82	258	66.7	1.4	0.7
F	0	79	250	66.5	1.3	0.6
G	0	69	218	65.9	0.7	0.0

Roadway Segment: Harbor West of Pacific

Alternative	Distance (feet) From <u>Roadway Centerline to CNEL</u>			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	72	221	695	70.3	4.3	2.5
B	74	227	715	70.4	4.4	2.6
C	63	191	601	69.6	3.7	1.9
D	57	170	536	69.1	3.2	1.4
E	63	191	601	69.6	3.7	1.9
F	74	227	715	70.4	4.4	2.6
G	0	126	394	67.8	1.8	0.0

TABLE 4.9-3 (continued)

Highway Segment: Kettner South of Broadway

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	0	92	289	66.8	7.3	0.2
B	0	94	294	66.8	7.3	0.2
C	0	93	292	66.8	7.3	0.2
D	0	76	238	65.9	6.4	(0.7)
E	0	93	292	66.8	7.3	0.2
F	0	94	294	66.8	7.3	0.2
G	0	89	280	66.6	7.1	0.0

Highway Segment: Pacific South of Broadway and North of Market

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	97	288	904	70.6	3.4	2.1
B	92	270	848	70.4	3.1	1.8
C	105	313	983	71.0	3.7	2.4
D	84	241	754	69.9	2.6	1.3
E	105	313	983	71.0	3.7	2.4
F	92	270	848	70.4	3.1	1.8
G	67	181	563	68.6	1.3	0.0

TABLE 4.9-3 (continued)

Roadway Segment: G Street West of Seventh

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	0	110	347	67.6	3.5	0.5
B	0	111	348	67.6	3.5	0.5
C	0	109	342	67.5	3.5	0.5
D	0	107	337	67.4	3.4	0.4
E	0	109	342	67.5	3.5	0.5
F	0	111	348	67.6	3.5	0.5
G	0	97	305	67.0	3.0	0.0

Roadway Segment: Market Street West of Ninth and East of Kettner

Alternative	Distance (feet) From Roadway Centerline to CNEL			Future CNEL (dB) at 50 Feet ^b	Increase Over Existing CNEL (dB) at 50 Feet	Increase of Each Alternative Over Future CNEL (dB) at 50 Feet
	70 CNEL	65 CNEL	60 CNEL			
A	87	271	854	71.2	3.6	0.6
B	85	263	829	71.0	3.4	0.4
C	85	262	826	71.0	3.4	0.4
D	76	235	740	70.5	2.9	(0.1)
E	85	262	826	71.0	3.4	0.4
F	85	263	829	71.0	3.4	0.4
G	77	239	753	70.6	3.0	0.0

a Does not consider any obstructions to the noise path.

b CNEL measured in feet from the centerline of the near travel lane.

As Table 4.9-3 indicates, roadway noise level increases due to each of the development alternatives ranges from 0.4 dB to 2.6 dB over the no action alternative, Alternative G. The projected noise level increases for each of the alternatives are at a level that is less than significant.

Rail traffic along the rail lines that bisect the site would be infrequent, occurring an average of twice per year. Thus, any noise associated with this source would not be considered significant due to its infrequency.

Alternative G would result in no long-term noise impacts to the project area, although it would be exposed to additional noise from traffic as traffic levels associated with cumulative development increase.

4.9.3 MITIGATION MEASURES

The following mitigation measures are recommended for each of the Alternatives A through F of the proposed Navy Broadway Complex project.

Short-Term Impacts

- Compliance with the San Diego County Code requires that significant noise-generating construction activities will be limited to Monday through Saturday, 7:00 a.m. to 7:00 p.m.

Long-Term Impacts

- Prior to the issuance of building permits for the hotel structures (Alternatives A, B, C, D, and F), building specifications for hotel structures describing the acoustical design features of the structures and evidence prepared by an acoustical consultant that these sound attenuation measures will satisfy the interior noise standard of 45 dB CNEL shall be submitted to the City Building Inspection Department for approval.

ENDNOTES:

- 1 U.S. Department of Housing and Urban Development, 1985.
- 2 Harris, 1979.
- 3 Federal Interagency Committee on Urban Noise, 1980.
- 4 City of San Diego, 1976a.
- 5 State of California, 1976.
- 6 Ibid.
- 7 City of San Diego, op. cit.
- 8 U.S. Department of Transportation, 1978.
- 9 San Diego Unified Port District, 1988.
- 10 U.S. Environmental Protection Agency, 1971.

4.10 CULTURAL RESOURCES

This section is based upon a cultural resources study that was prepared for the project. A complete copy of the report is available for review at the Broadway Complex Project Office, 555 West Beech Street, Suite 101, San Diego, California 92101-2937. The study involved a literature search of the historical background of the project area and a surface and subsurface investigation of the site, to document cultural properties located within the project area that may qualify for the National Register of Historic Places. The cultural resources study was prepared in accordance with the regulations for protection of Historic Properties (36 CFR Part 800), which implement Section 106 of the National Historic Preservation Act. Section 106 mandates Federal agencies to take into account the effects of their undertakings on properties included in or eligible for the National Register. The National Register Criteria for Evaluation (36 CFR 60.4) are used to assess a property's eligibility. This study is being used to make determinations of eligibility in consultation with the California State Historic Preservation Officer (SHPO). SHPO has concurred with the basic findings of this analysis. For those properties found to meet National Register criteria, consultation will be initiated with the Advisory Council on Historic Preservation, as required by Section 106. The Advisory Council's comment will be included in the final environmental documentation.

4.10.1 AFFECTED ENVIRONMENT

Regional Historic Setting

The Navy Broadway Complex includes 10 major structures and various smaller buildings that were constructed between the early 1920s and the mid-1940s. Many of the buildings have been remodeled and are well maintained, giving the impression that the complex is not as old as the original construction dates would suggest.

The project site is bounded by Pacific Highway, Harbor Drive (on two sides), and Broadway. These streets were formerly known as Atlantic Street (Pacific Highway), Ocean Street (Harbor Drive), and D Street (Broadway), and were laid out as part of the development of New Town San Diego during the 1850s. The majority of the project site was actually located below the high tide line during the 1800s (when New Town San Diego was laid out). It was only after the improvement of the harbor began in the early 1900s, culminating in the construction of a bulkhead and the use of dredged materials to fill behind the bulkhead, did the project site become dry land.

Overview of Project Area History

Prior to 1850, the focus of activity in San Diego revolved around the Presidio of San Diego, Old Town, and the Mission San Diego de Alcala, all of which were located near the San Diego River several miles to the north of the site. The project area consisted primarily of tidal flats and open shore. In 1850, a survey party that included William Heath Davis and Andrew B. Gray chose the upland area near the project site for a camp. Gray thought the place would make a fine site for a town. Gray and Lieutenant T. D. Johns drew up plans for a new town site, which encompassed the project area. The New Town concept was presented to a group of San Diegans, who on March 16, 1850, formed a partnership to buy and develop the 160-acre site¹. At the time, about half of the New Town plots lay below the level of mean high tide.

The construction of New Town began in the summer of 1850. A deep-water wharf was constructed just to the south of the present Navy Broadway Complex. After the wharf was

completed in 1851, ships could off-load cargo and passengers directly at the pier rather than requiring the use of lighters to ferry them to the shore.^{2,3} In October 1868, Stephen S. Culverwell constructed a wharf at New Town at the foot of F Street, which extended 150 feet into the bay.⁴

In the mid-1880s, the City experienced the first of a series of major construction booms. City crews paved streets, gas and electricity were introduced, street car tracks were laid down, and several water mains and drains carried sewage and stormwater to the deep waters of the bay. Along the waterfront, wharves became a focal point of the importation of goods into San Diego.

The major wharves constructed within the current boundaries of the project site included Culverwell's Wharf and the Spreckels Brothers' Wharf (see Figure 4-63). The Spreckels Brothers' Wharf was also known as the Coal Bunkers Wharf.⁵ It was approximately 2,000 feet long, in a zig-zag configuration, with rail carts and steam-driven cable lines and winches to unload cargos of coal, cement and lumber. The wharf was located at the foot of G Street and extended through the southern area of the present Navy Broadway Complex. Adjacent to the Spreckels Brothers' Wharf was Culverwell's Wharf, at the foot of F Street, which also extended out several hundred feet over the tidal area to deep water. Culverwell's Wharf was subsequently purchased by William Jorres and later bore his name. Structures were constructed at the end of the wharf in the approximate locations of Buildings Nos. 7 and 8. The construction of these wharves improved shipping conditions and further solidified the advance in the harbor development and waterfront activities.⁶

Prior to 1900, the area along Pacific Highway, paralleling the high tide line, included a concentration of shanties, wharves, and businesses. The area was unique to San Diego and played an important role in the flourishing development of New Town. As shown on the illustrations drawn from the Sanborn Fire Map of 1904, the Navy Broadway Complex site included several recorded structures (see Figure 4-64). In addition, photographs from the 1880s through the early 1900s reveal that the concentration of structures was even greater than was shown on the Sanborn Fire Maps (see Figure 4-65).

In 1911, the City of San Diego, along with Los Angeles and Oakland, petitioned the State of California to grant the tidelands within the respective harbors to the cities for development. The bill authorizing this transfer passed, with the provision that the City of San Diego would make improvements (primarily dredging, filling, and the construction of bulkheads) to the tideland areas.⁷ The construction of the new concrete bulkhead and the filling of the tidelands occurred by dredging of the channel along Broadway and the deposition of the dredged material behind the bulkhead.

Based upon photographs of the dredging operation, it appears that the shanties and piers or wharves that were located in the fill area were buried beneath the dredged fill. In 1919, the City of San Diego deeded approximately 1.55 acres to the Navy at the corner of Broadway and Harbor Drive. The remaining Navy Broadway Complex property was subsequently granted to the Navy in several land exchange transactions with the City of San Diego.

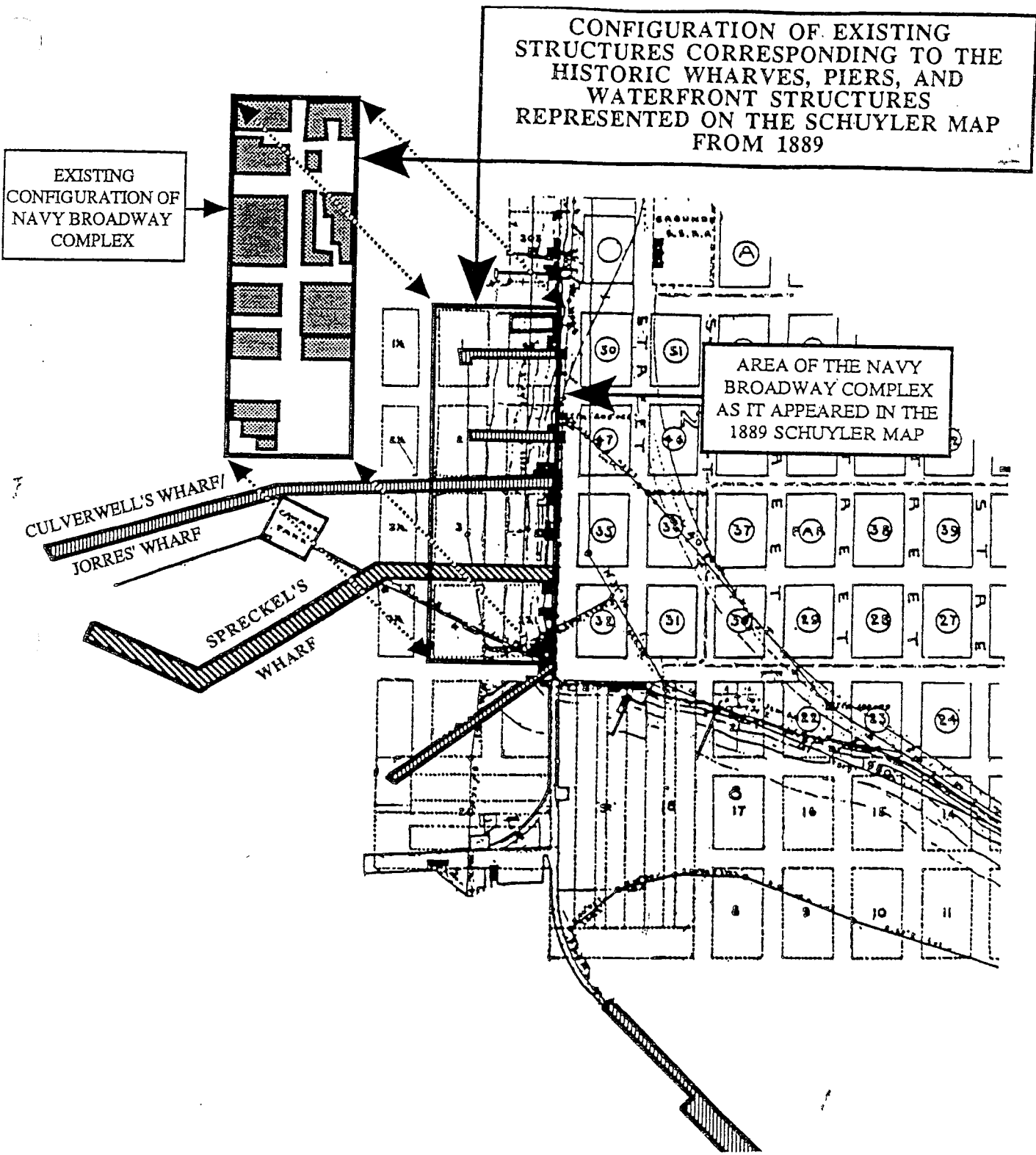


CONFIGURATION OF EXISTING
STRUCTURES CORRESPONDING TO THE
HISTORIC WHARVES, PIERS, AND
WATERFRONT STRUCTURES
REPRESENTED ON THE SCHUYLER MAP
FROM 1889

EXISTING
CONFIGURATION OF
NAVY BROADWAY
COMPLEX

AREA OF THE NAVY
BROADWAY COMPLEX
AS IT APPEARED IN THE
1889 SCHUYLER MAP

CULVERWELL'S WHARF/
JORRES' WHARF
SPRECKEL'S
WHARF



San Diego Bay Waterfront (1889) with Present Day
Navy Broadway Complex Superimposed
Navy Broadway Complex Project

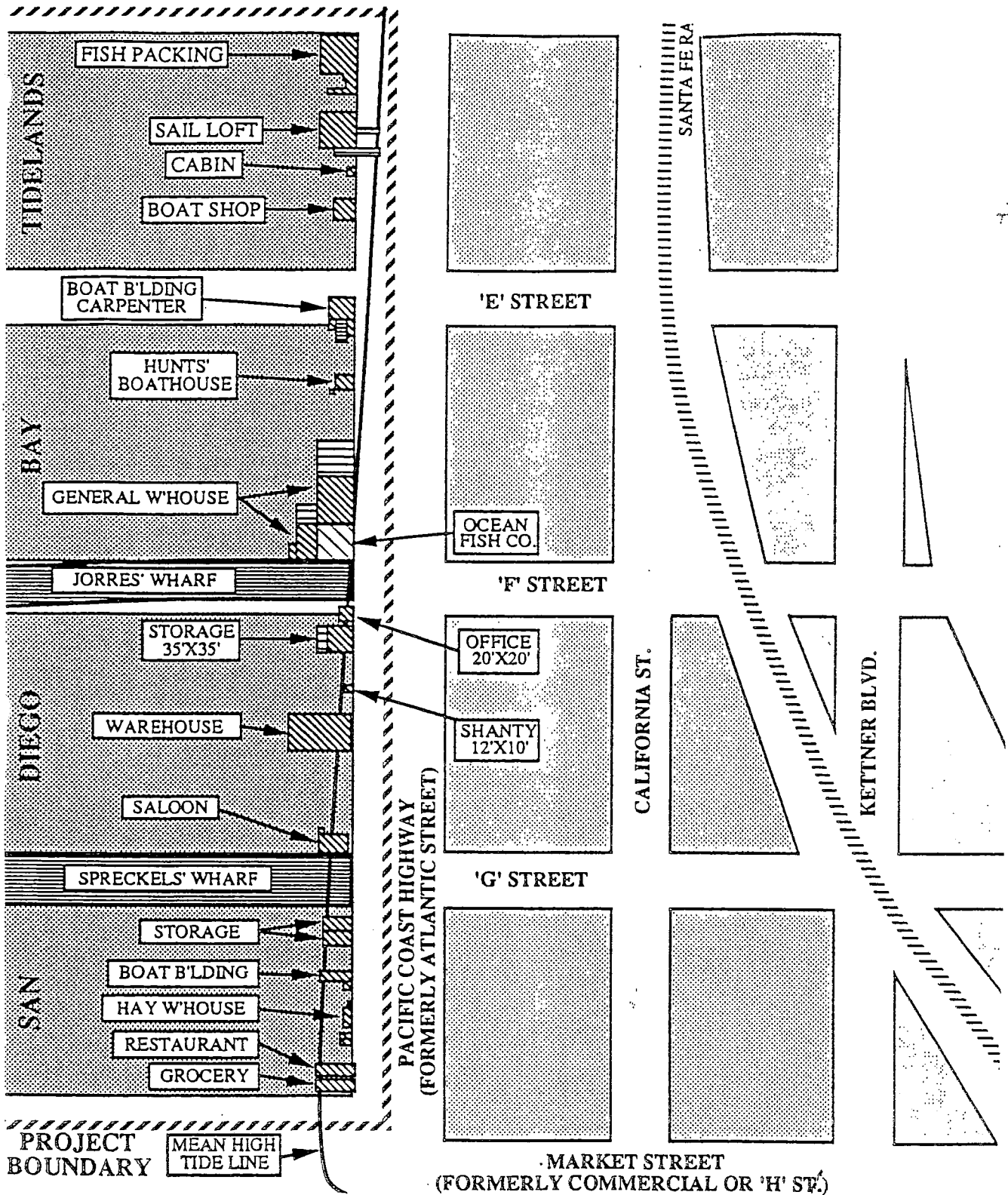
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NO SCALE



NORTH

Figure 4-63



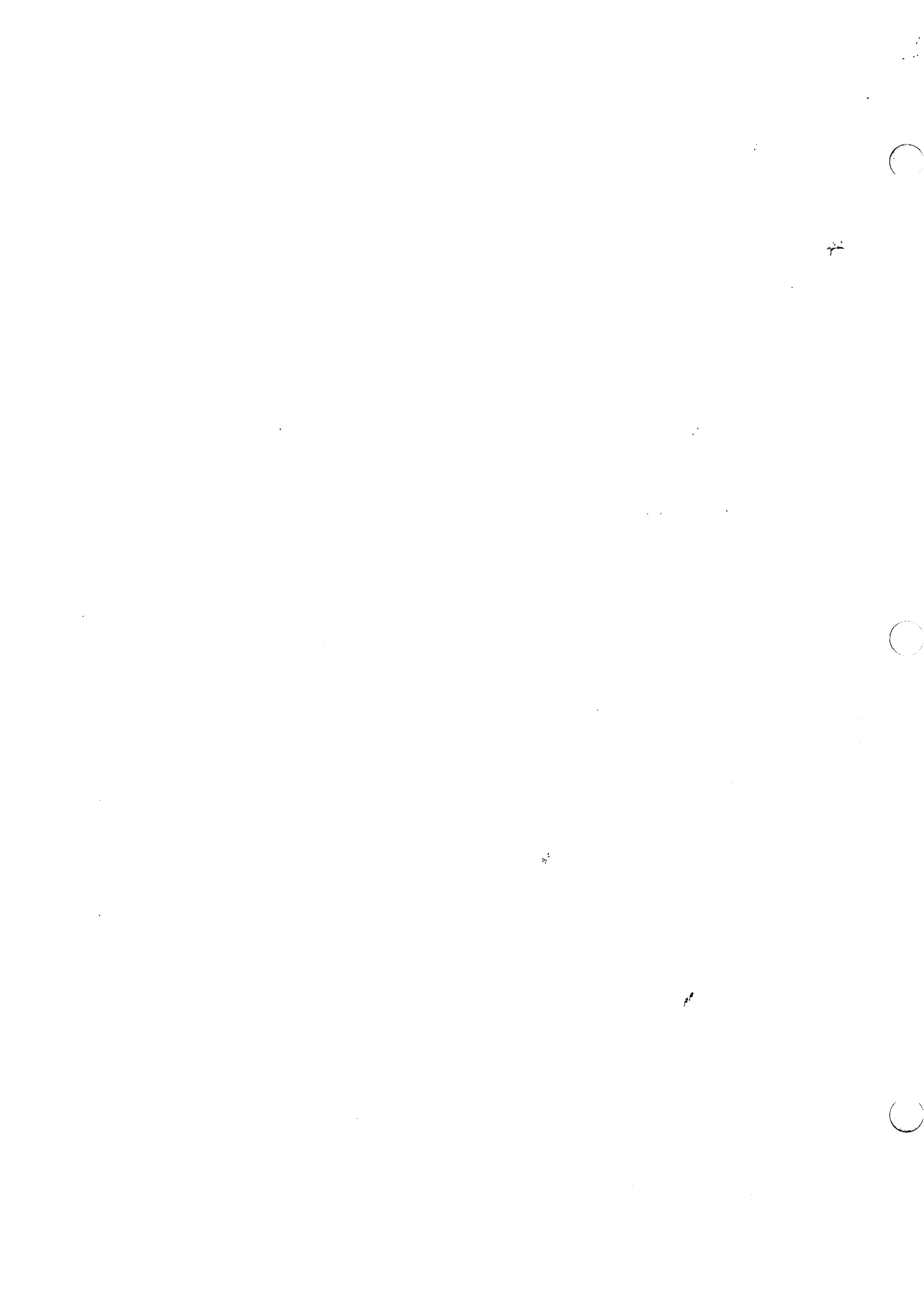


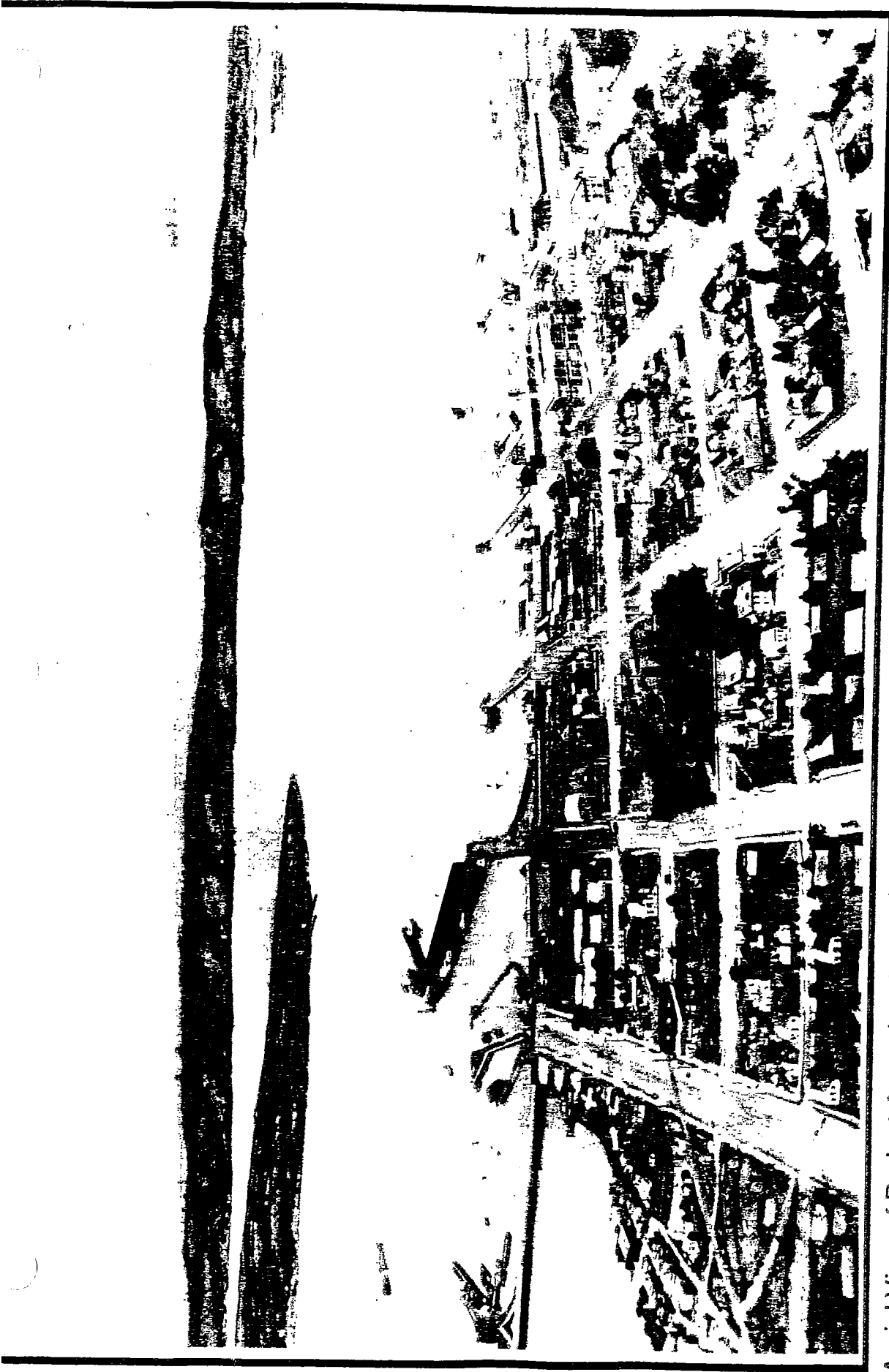
San Diego Town Waterfront Area Map
 (circa 1904)
 Navy Broadway Complex Project

Source: Sanborne Fire Maps
 6640001 1/90



Figure 4-64





Aerial View of Project Area showing along Atlantic Street (now Pacific Highway). Large Wharf in left-center is Spreckels Brothers' Wharf (Photograph circa 1910)

Navy Broadway Complex Project

6640001 1/90

Figure 4-65



Subsurface Investigation of Navy Broadway Complex

A subsurface investigation of the Navy Broadway Complex was conducted to locate the archaeological remains of the variety of commercial activities which occurred along the waterfront, and which might demonstrate the change in these commercial enterprises through time reflecting the maturing of the metropolitan environment in downtown San Diego. For instance, as coal was replaced by oil as the primary fuel for heat, the numerous waterfront companies that had been associated with the Spreckels Brothers' coal importing business had to adapt to the change in this major commercial activity. The subsurface investigation was intended to also find artifacts associated with the commercial wharves and shanties constructed on the project site.

The objective of the investigation was to determine if any extant archaeology would yield information important to the historical record of the waterfront area.

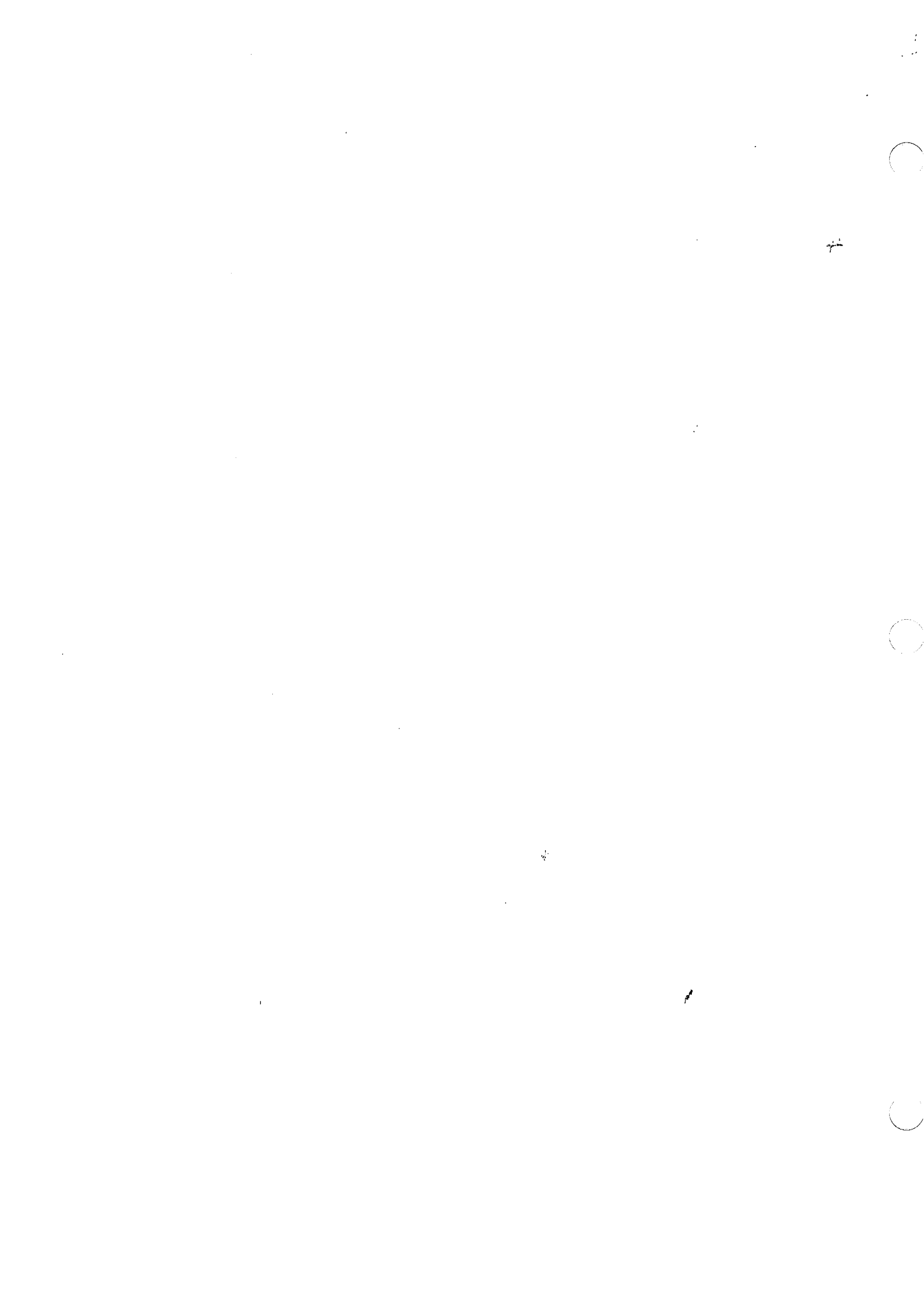
Specific sets of artifacts that were considered to be important to the data and which were expected in the deposit included:

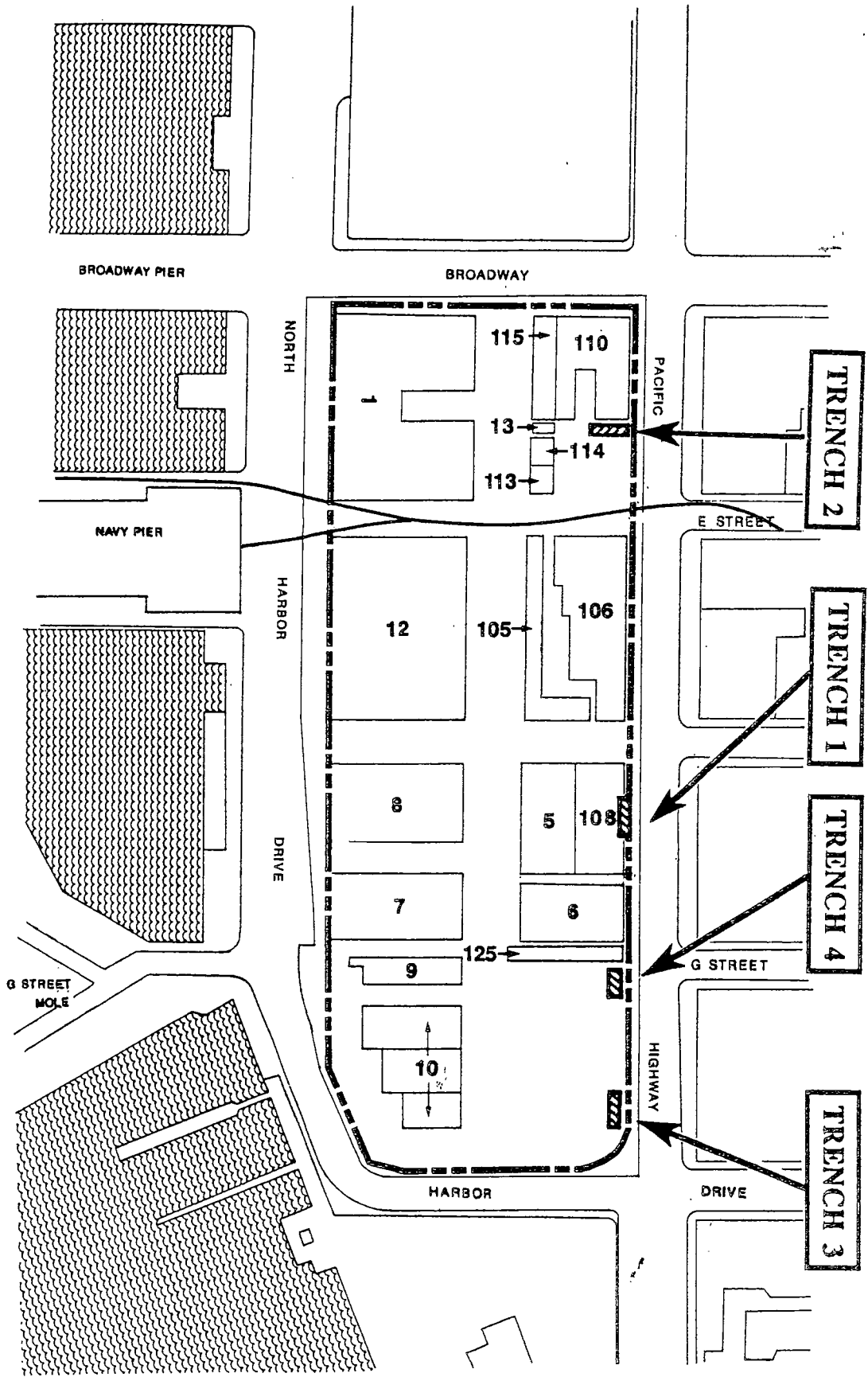
- Faunal materials that would reveal the dietary patterns of the occupants of the area. This information would, in turn, indicate the social/financial status of those occupants, which should have changed through time as the City grew and prospered.
- Items reflecting the variety of commercial activities that occurred along the waterfront. This information would be significant to the understanding of San Diego history because it would reveal the relationship of the waterfront community to the major waterfront business (freight importing) as opposed to the primary local trade (fishing and whaling).
- Artifacts reflecting the freight importing business and the arrival of ships from around the world, significant in what they reveal about how these activities affected the local population.
- Artifacts reflecting the types of materials actually imported, such as coal, cement, wood, building materials or other goods, demonstrating trends in business and merchandising in San Diego during a time when the City was becoming a major urban center.

Four trenches were excavated on the site. A map of the trench locations is shown in Figure 4-66. Only one trench did not produce historic materials. This may have been due to previous disturbance from pipeline installations.

The subsurface investigation found the following:

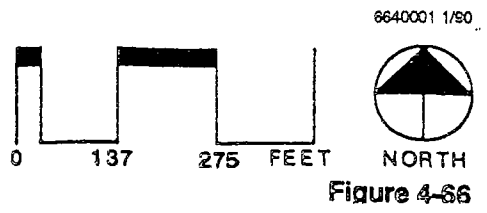
- The target soils contained historic materials in three of the four trenches, indicating that deposits relating to the historic waterfront are present beneath the dredged fill.





- Project Site
- Building Number (Refer to Table 4.2-1)
- Railroad Tracks

Location Map
 Broadway Complex Project





- The preservation of organic materials in the deposit, such as wood, bone, leather, seeds, glass, and ceramics, is excellent, due in part to the encapsulation of the deposit by the dredged fill.
- Although certain intact elements of the wharves and shanties (i.e., the pier pilings) remained, the integrity of the material appeared to be substantially damaged, probably by the dredging operations when the bulkhead was constructed.
- The variety of materials recovered from the trenches reveal the wide range of activities that occurred at the waterfront.

Evaluation of Eligibility of Subsurface Resources

The laboratory analysis of the recovered items documented a wide range of materials; however, while some of the categories were too numerous to count, such as wood fragments or pebble-sized pieces of brick, the majority of the categories included too few items to provide a basis from which to address any important research questions. Food bone was a particular category that included too few specimens to permit valid interpretation. Similarly, bottle glass was present in the recovery, but in quantities too small to permit any meaningful interpretations.

As an adjunct to the laboratory analysis, the presence of fish remains in the collection was reported to the San Diego Unified Port District. This information was considered to be potentially important because the Port District is currently attempting to develop a historical account of the natural resources of the bay. One means by which to identify the fish species in the bay is through the study of historical sites around the bay that include remains of fish taken as part of commercial fishing enterprises and sold in local markets. The size of the sample of fish materials from beneath the project site was too small to supply valuable information.

The recovered artifacts did not provide any indication of the variety of commercial activities that took place within the study area. The research effort using maps and other data provides a useful compilation of businesses located along the waterfront, but the artifact collection from the trenches was too small and the integrity of data was too unclear to support a correlation between the historic research data and the archaeological deposit. The artifact materials also do not definitively demonstrate a shift from shanties or residences in the area to business concerns during the late 1800s. The artifact recovery also did not include any noteworthy data concerning the shipping business, other than the coal importing enterprise of the Spreckels Brothers' Company (represented by pieces of coal in Trenches 3 and 4). It is more likely that data of this type would be found on the west side of the project site, where the ships were moored, rather than on the east side along the historic shoreline, where the trenches were excavated.

The subsurface analysis demonstrated that the historic deposit within the project potentially contains a variety of well-preserved materials to document the socioeconomic conditions of the waterfront population. Because San Diego is a major city that has played a major role in the history of California, the historic waterfront has been documented substantially in maps, photographs, and the literature. While the data beneath the site is interesting in its content, it appears that an understanding of the history of the waterfront can more efficiently be gained by use of existing documentation. Substantial additional excavation would yield larger samples of some materials, but it is not clear that these artifacts would provide new important information which is not already available from other sources.

Determination of Eligibility for Subsurface Resources

Criterion D of the National Register criteria for evaluation (36 CFR 60.4) would be the most likely determinant for the subsurface resources, i.e., that the site "may be likely to yield information important in history." However, based on the investigation of historic documentation, it is evident that substantial data is already available to answer the important questions about San Diego's historic waterfront. Also, the damage to the integrity of the artifacts (caused by historic dredging operations which moved and mixed materials) and the resultant lack of a clear stratigraphy (which hinders the ability to relate artifacts to time and place) diminishes the value of this resource for the National Register. Consequently, the Navy has determined that the subsurface resources do not meet the criteria for inclusion in the National Register. The State Historic Preservation Officer (SHPO) has concurred.

Navy Broadway Complex Buildings

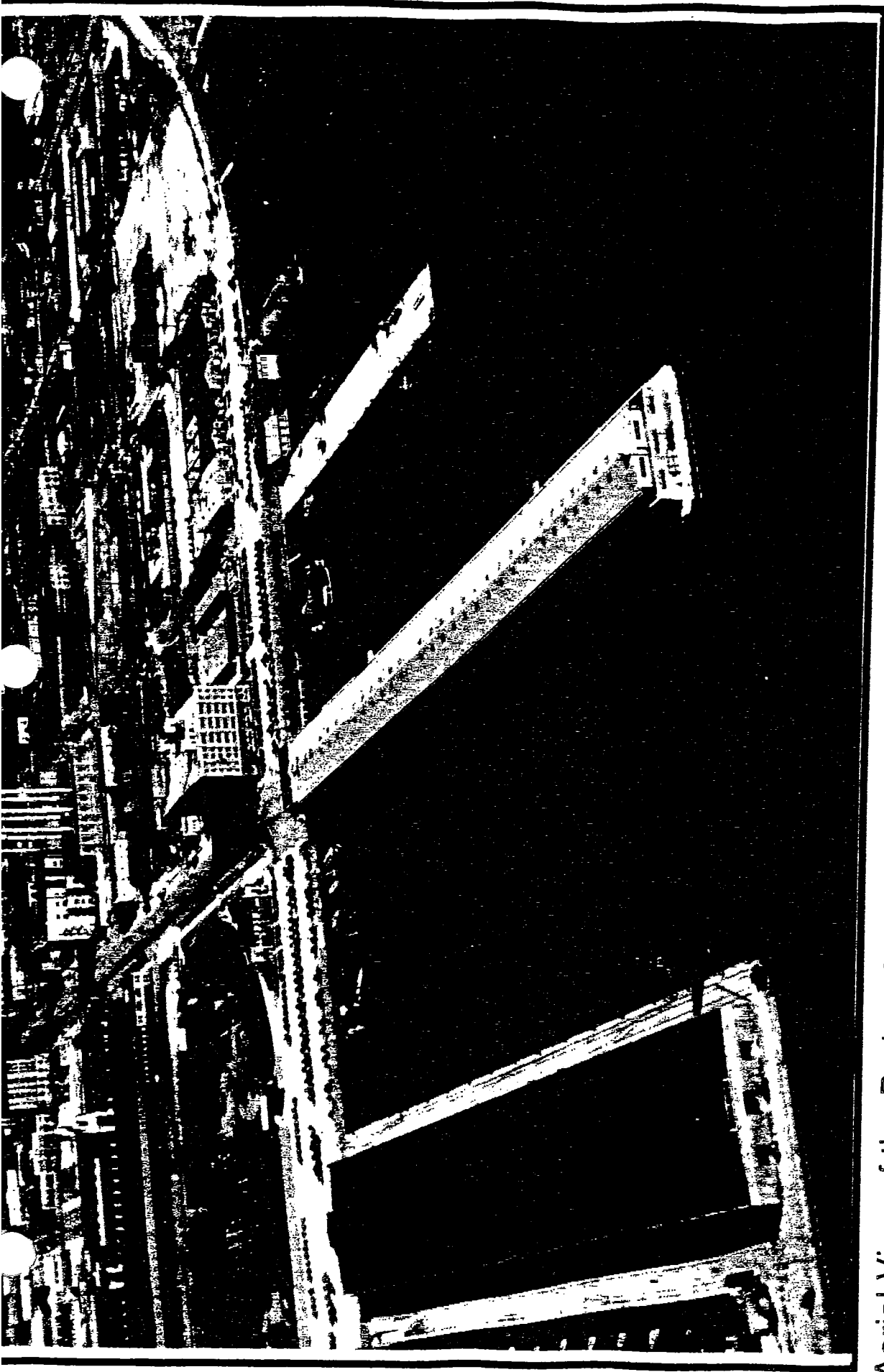
An important part of the Navy presence in San Diego was, and is, the Naval Supply Center (NSC), San Diego, one of the commands located on the Navy Broadway Complex. NSC is one of the four largest supply facilities in the Navy, with annexes at North Island, National City, Point Loma, and Long Beach. As part of the 11th Naval District established in February of 1921, the first unit of the Naval Supply Center--the north wing of Building No. 1--was begun late in 1921. It was completed in May of 1922, officially opened on August 8, 1922, and the first stores arrived on February 1, 1923. This structure (and the later 1938-1939 addition) has served as the headquarters facility for the Naval Supply Center since the base was first opened. In 1926, funds were appropriated for the construction of the Navy Pier across Harbor Drive from the future site of Building No. 12. Figure 4-67 provides an aerial view of the project area as seen in 1932. In the 1930s and 1940s, construction was completed on the remainder of the buildings on the Navy Broadway Complex, including the largest structure, Building No. 12. The expansion of the Naval Supply Center facilities was necessitated by World War II.

Today, the Naval Supply Center continues to serve as the supply headquarters facility. The majority of buildings have, however, been altered (interior and/or exterior) to accommodate changing needs and storage requirements.

Field Survey and Building Inventory

A field survey of the existing buildings on the Navy Broadway Complex was conducted to determine the age, architectural status, present condition, and historical status of the buildings on the site. All major structural and architectural features were photographed. Table 4.10-1 lists the buildings, their units, and dates of construction. In addition, a reconnaissance of the project site for evidence of historic deposits or other cultural resources was conducted.

The aboveground structures were each constructed in one of three major developmental phases, and not as part of a unified development plan. As a result, they were built in a number of generally industrial styles utilizing a wide variety of construction materials. The majority of buildings on the Navy Broadway Complex do not, therefore, appear to qualify for either individual or district listing on the National Register. Despite this, Buildings No. 1 and No. 12 onsite--along with the Navy Pier adjacent to the site--present an historical and architectural presence



Aerial View of the Project Area
(February 2, 1932)
Navy Broadway Complex Project

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Figure 4-67

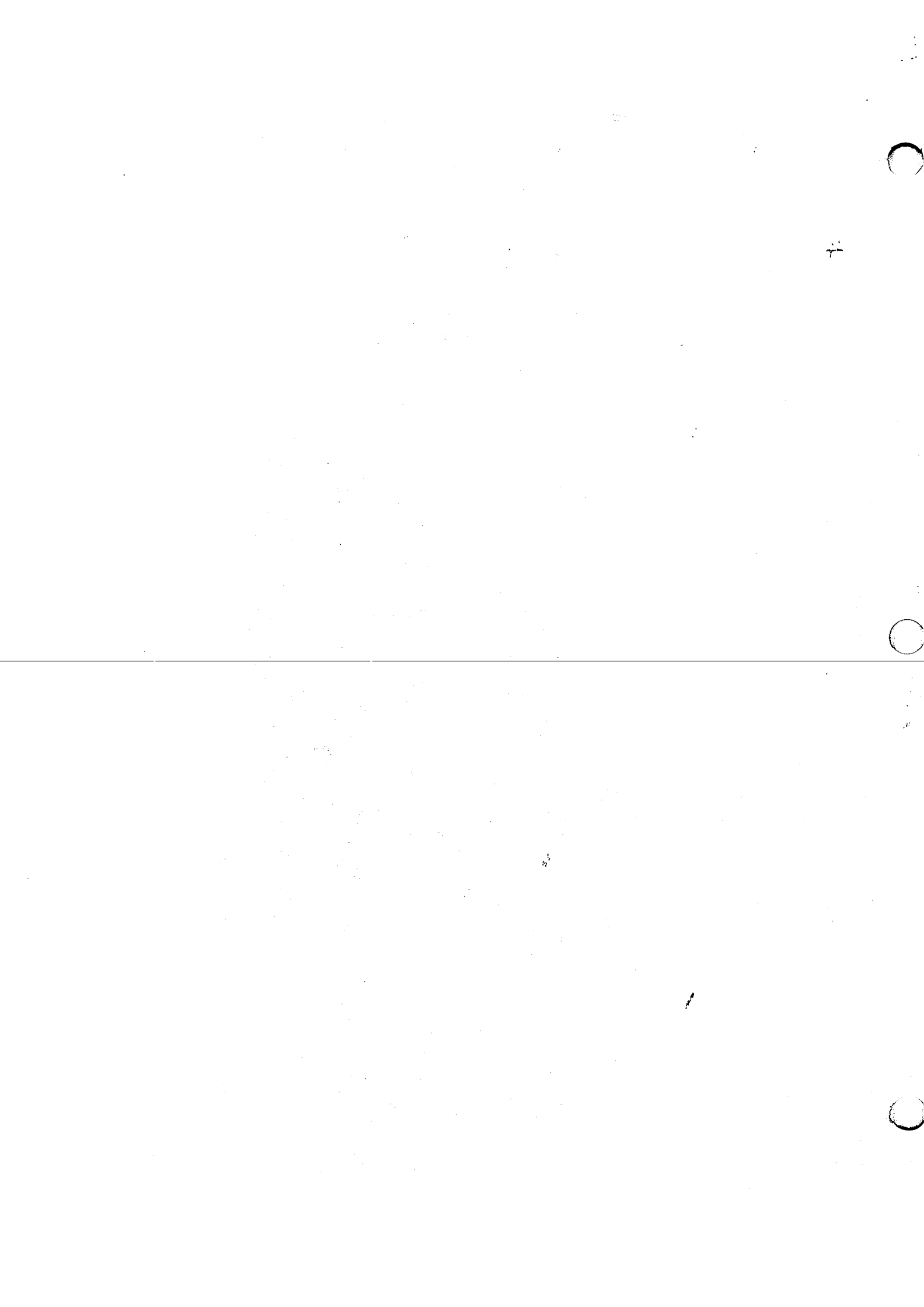


TABLE 4.10-1

INVENTORY OF EXISTING STRUCTURES AT THE
NAVY BROADWAY COMPLEX

Building No.1

Original Name/Use:	Storehouse
Current Name/Use:	Administration building, administration offices, general warehouse
Construction Date:	1921-1922, 1938-1939 (two phases)
Size:	357,577 square feet
Architect:	U. S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Major addition of a seven-story south wing in 1938, modifications to the window and doorway openings, and numerous interior remodelings

Building No. 5

Original Name/Use:	Bulger Building
Current Name/Use:	Transit shed, training space, administration building
Construction Date:	1935
Size:	15,219 square feet
Architect:	Unknown (presumably U. S. Navy Public Works)
Builder:	Unknown
Condition:	Good
Alterations:	Altered in accordance with plans drawn in 1939, and undergone numerous minor modification to the window and doorway openings.

Building No. 6

Original Name/Use:	Storehouse
Current Name/Use:	Packing shed, warehouse
Construction Date:	1938-1939
Size:	30,688 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Unaltered exterior

TABLE 4.10-1 (continued)

Building No. 7

Original Name/Use:	Storehouse
Current Name/Use:	Cold storage warehouse
Construction Date:	1938-1939
Size:	313,539 cubic feet, 25,913 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by the enclosure of both window and doorway openings, and by the addition of Building No. 9

Building No. 8

Original Name/Use:	Storehouse
Current Name/Use:	Flammables storehouse
Construction Date:	1938-1939
Size:	22,090 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by the enclosure of the original doorway opening and the removal of the original concrete steps

Building No. 9

Original Name/Use:	Gas and cylinder storage building
Current Name/Use:	Cold Storage, administration building, and battery shop
Construction Date:	1940-1941
Size:	4,855 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Minor modifications to several window and doorway openings

TABLE 4.10-1 (continued)

Building No. 10

Original Name/Use:	Storehouse for bulk storage
Current Name/Use:	General warehouse
Construction Date:	1940-1941
Size:	30,277 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Minor modifications to window and doorway openings

Building No. 11

Original Name/Use:	Pier and transit shed
Current Name/Use:	Transit shed, general warehouse, pier
Construction Date:	1941-1942
Size:	297,775 square feet (not including attached supply pier)
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Substantially unaltered

Building No. 12

Original Name/Use:	Unknown
Current Name/Use:	General warehouse, administration building
Construction Date:	1944
Size:	427,041 square feet
Architect:	Unknown
Builder:	Unknown
Condition:	Good
Alterations:	Connected to Building No. 1 at the third story level by an overpass

TABLE 4.10-1 (continued)

Building No. 13

Original Name/Use:	Unknown
Current Name/Use:	Substation (presumably an electrical transformer room)
Construction Date:	1942
Size:	Approximately 100 square feet
Architect:	Unknown
Builder:	Unknown
Condition:	Good
Alterations:	None

Building No. 19

Original Name/Use:	Sentry house
Current Name/Use:	Gatehouse
Construction Date:	1956
Size:	12 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	None

Building No. 105

Original Name/Use:	Garage and shed
Current Name/Use:	Public Works shops, administration offices
Construction Date:	1931-1932
Size:	11,000 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by many modifications to window and doorway openings by considerable interior remodeling, and by the removal of a structure from the central courtyard

TABLE 4.10-1 (continued)

Building No. 106

Original Name/Use:	Temporary storage building
Current Name/Use:	Public Works shops, cafeteria
Construction Date:	1935
Size:	20,067 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by many modifications to window and doorway openings, by considerable interior remodeling, and by the removal of a structure from the central courtyard

Building No. 108

Original Name/Use:	Storehouse
Current Name/Use:	Transit Shed
Construction Date:	1936
Size:	12,960 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Virtually unaltered

Building No. 110

Original Name/Use:	Medical storage building
Current Name/Use:	Administration building, education center, post office, conference room
Construction Date:	1942-1943
Size:	40,856 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by many minor modifications to the window openings and extensive interior remodeling and conversion of use

TABLE 4.10-1 (continued)

Building No. 113

Original Name/Use:	Storage building for fire fighting equipment
Current Name/Use:	Fire station, guard locker room
Construction Date:	1942-1943
Size:	2,304 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Virtually unaltered

Building No. 114

Original Name/Use:	Temporary warehouse, labor force temporary lockers, toilet building
Current Name/Use:	Credit union/labor lobby
Construction Date:	1943
Size:	1,440 square feet
Architect:	U.S. Navy Public Works
Builder:	Unknown
Condition:	Good
Alterations:	Altered by minor modifications to the window and doorway openings

Building No. 115

Original Name/Use:	Fish market
Current Name/Use:	Dispensary
Construction Date:	1928-1929
Size:	3,856 square feet
Architect:	Navy acquired long after it was built
Builder:	Unknown
Condition:	Good
Alterations:	Substantially altered by window enclosures, doorway alterations, and by conversion of use and interior remodeling

(see Figures 4-68 and 4-69). Building No. 1 contains a north wing built in 1922, and a south wing built in 1938 and 1939. The pier and Building No. 11 (see Figure 4-70) were built between 1932 and 1942, and Building No. 12 was built in 1944. These buildings also form an architectural unit, and are tied together both in terms of general form (design) and function. In effect, although the entire Navy Broadway Complex does not appear to qualify as an architectural district, these three units would appear to qualify for the National Register listing as a single architectural and/or historical group. (Note: Building No. 11, the Navy Pier, is not within the boundaries of the defined project site, but is part of a potentially significant grouping of three structures.)

Evaluation of Eligibility of the Structures

Based upon Criterion C of 36 CFR 60.4, Buildings 1, 11, and 12 appear to meet National Register Criteria as a single architectural and historical group. They represent the entire development history of the Navy Broadway Complex, and are the principal architectural components of the facility. They are all designed in compatible utilitarian/industrial styles, and retain a high degree of integrity in consideration of the fact that the major alteration (the south wing addition to Building No. 1) is 50 years old. Building No. 12 (1944) is less than 50 years old, but it represents the largest structure on the Navy Broadway Complex and is a dominant architectural feature. These three structures are primary contributing features to the overall architectural character of this area of the San Diego waterfront.

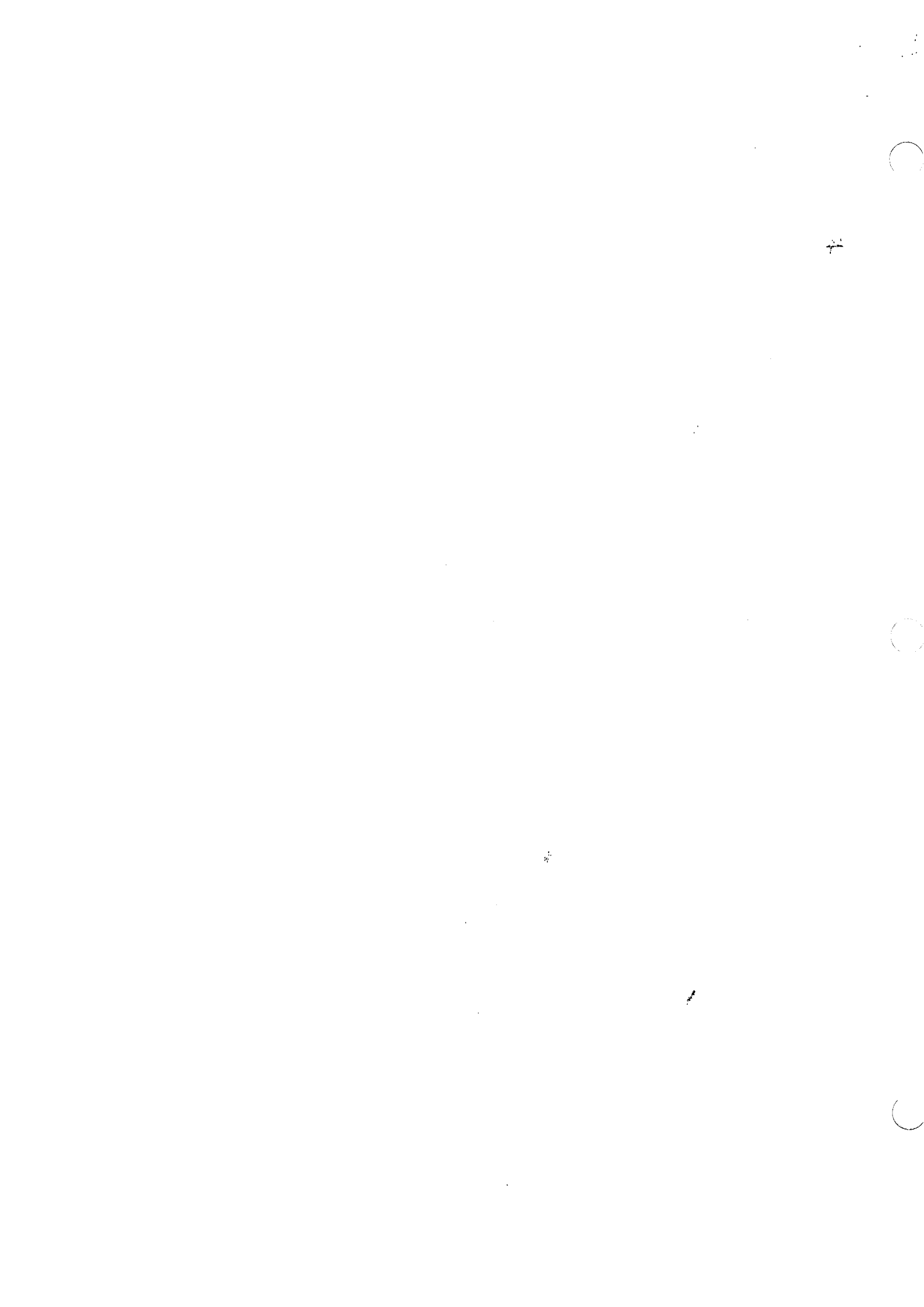
None of the other buildings on the Navy Broadway Complex appear eligible for nomination to the National Register, based upon the following factors:

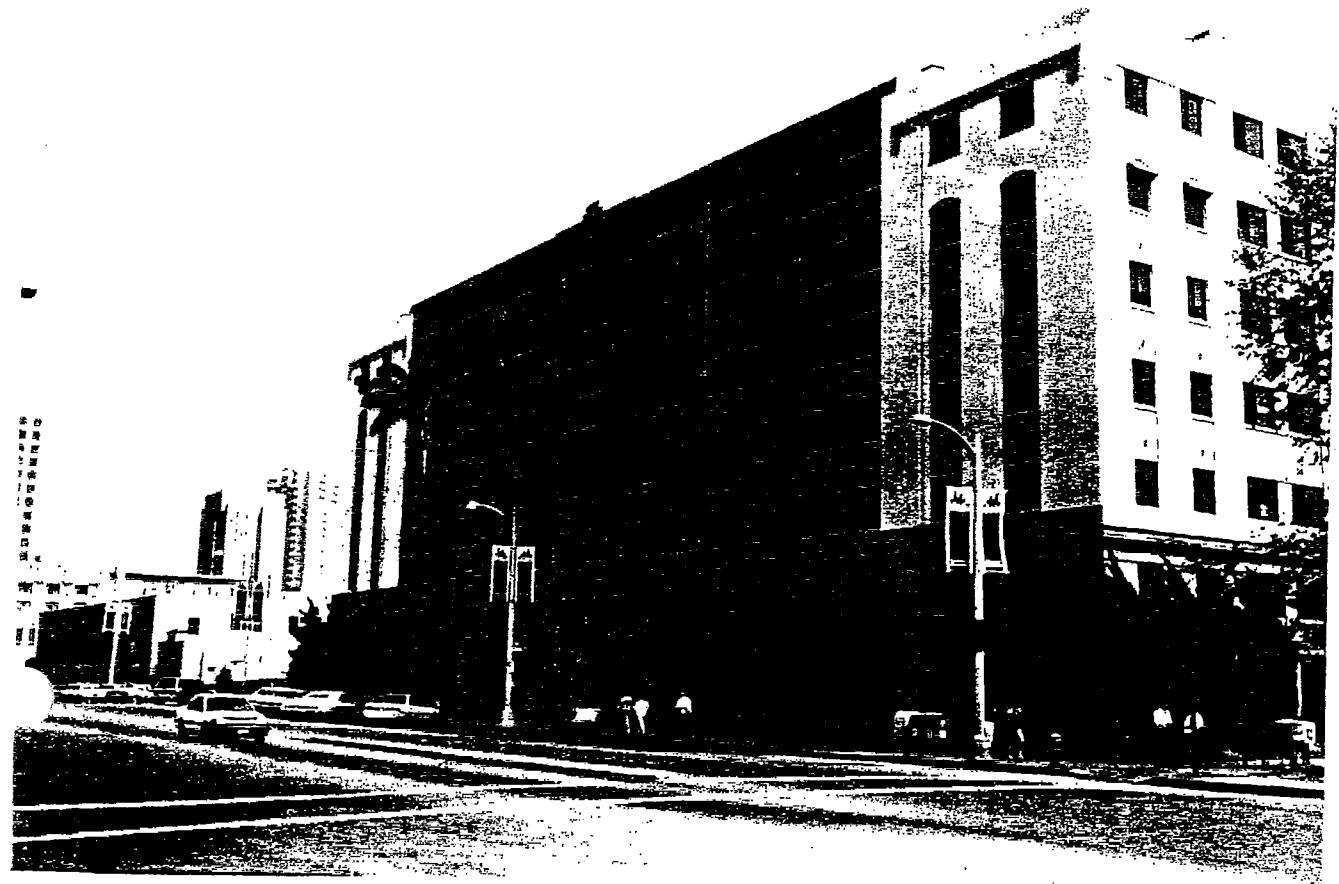
- Alterations (form and/or function)
- Lack of distinguishing features
- Level of original historical or functional importance to base operations

Each of the non-eligible buildings clearly played a role in the development and operational history of the base, but the relative level of importance of each of these buildings is clearly less significant than the three buildings listed as potentially eligible for nomination to the National Register. The non-eligible buildings are most appropriately seen as architecturally associated features related to the three primary structures. The architectural associations are, however, relatively weak, as the numerous associated buildings are carried out in a number of differing styles and construction materials. None of the other buildings on the site would appear to qualify as individually eligible for listing.

In addition, because the majority of the buildings within the Navy Broadway Complex were not constructed as part of a planned development; are not of any unified design, type, or method of construction; and have been substantially modified both through physical alteration and/or range of use, it is suggested that the entire building complex as a whole or unified district not be considered to be eligible for nomination to the National Register.

The fact that these buildings serve as a functional supply unit on a single property does not appear to justify a level of historical significance sufficient to include, within a single district, buildings which are architecturally incompatible, altered, and/or representative of differing periods of development. Specifically, although this facility is the headquarters complex, annexes are located at North Island, National City, Point Loma, and Long Beach. Most appropriately, any consideration of district eligibility, as justified on a functional or purely historical/developmental

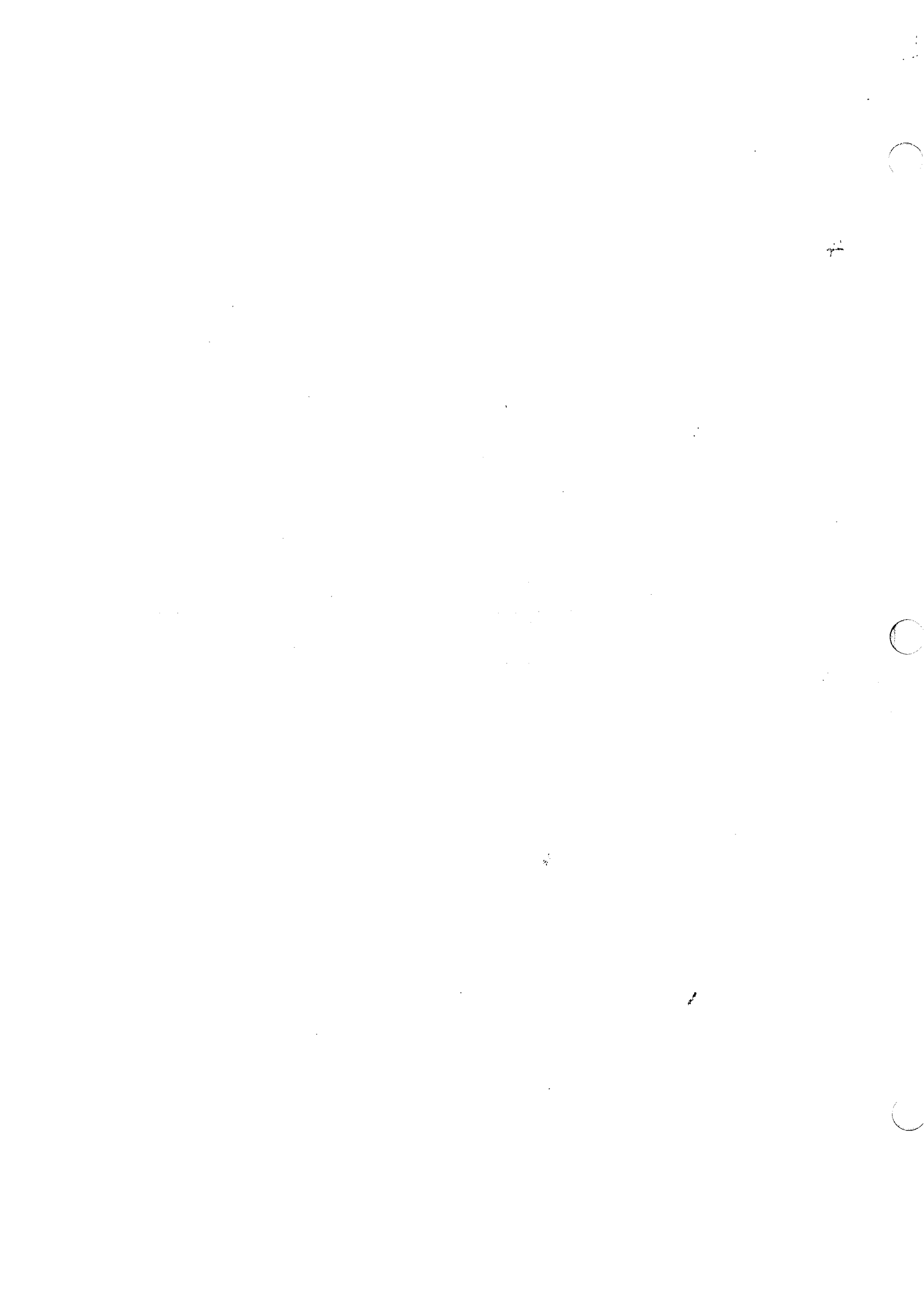


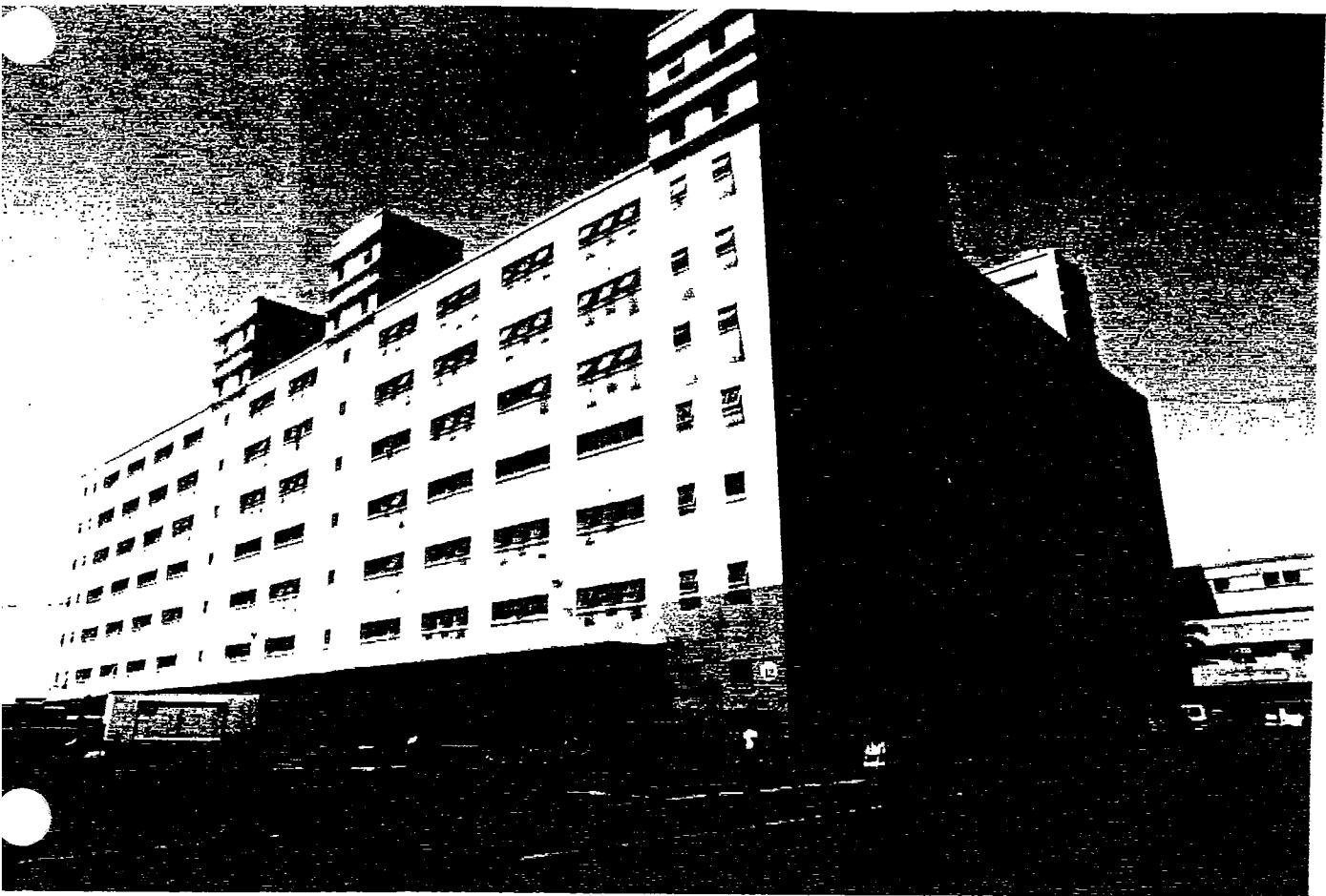


View of Building 1
Navy Broadway Complex Project

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Figure 4-68





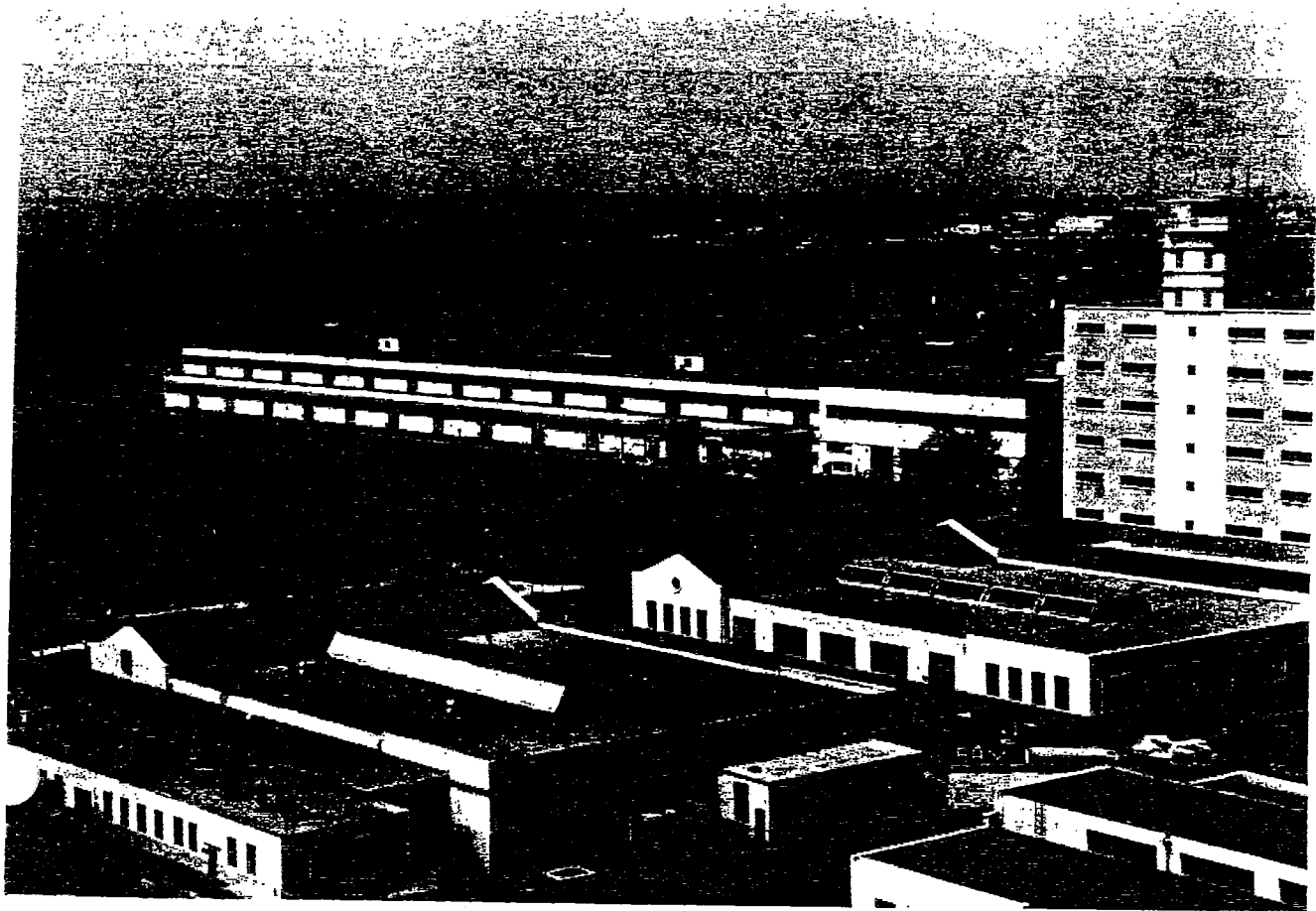
View of Building 12
Navy Broadway Complex Project

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Figure 4-69



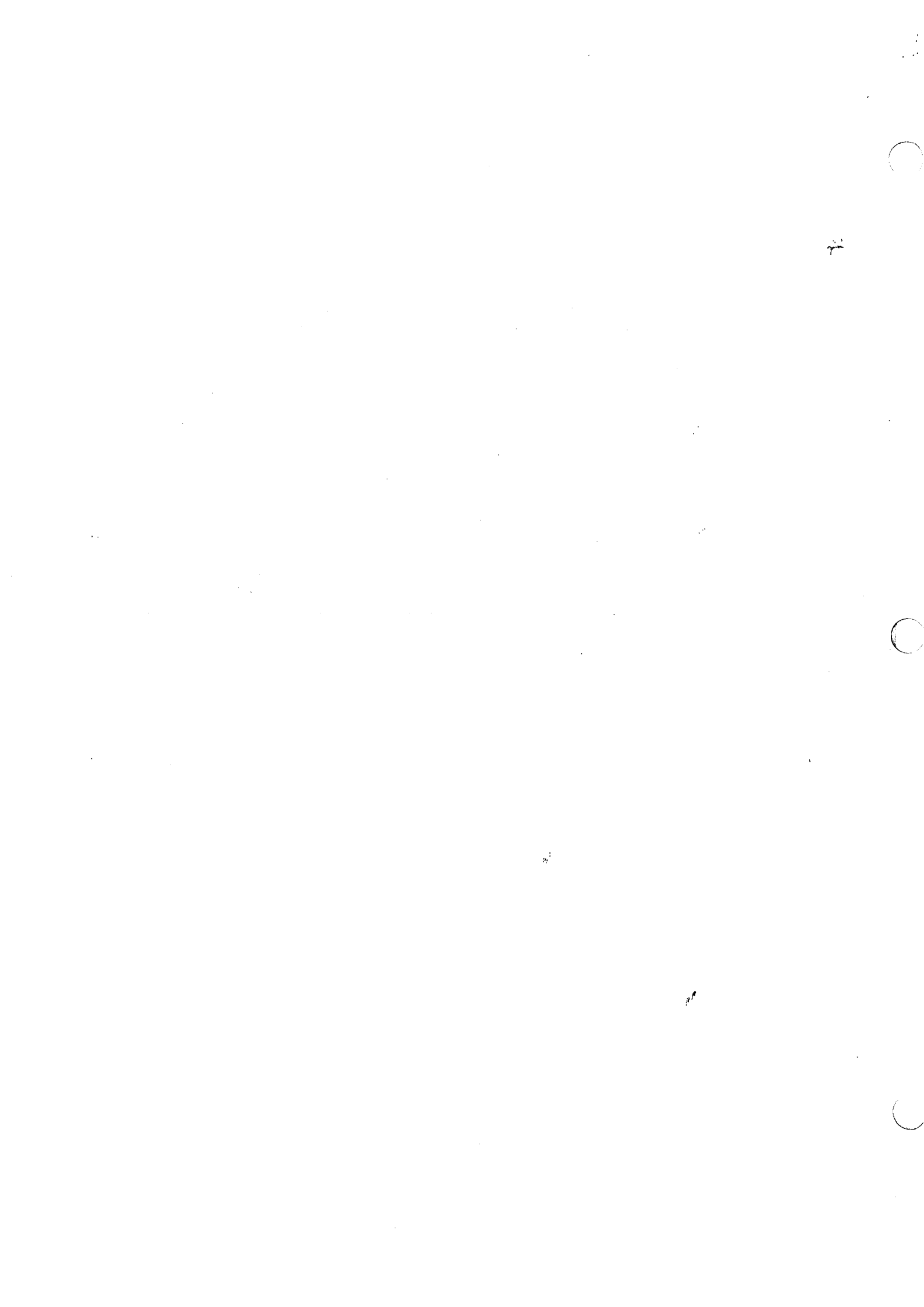


View of Offsite Building 11
(and Navy Pier)
Navy Broadway Complex Project

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Figure 4-70



basis, would have to include these annexes. The possibility of making a positive finding for such a district determination of eligibility is extremely remote, and it is again suggested that consideration of a district for the Navy Broadway Complex is inappropriate.

Determination of Eligibility for the Structures

Building Nos. 1 and 12 clearly represent a district architectural entity in conjunction with the Navy Pier. They further represent a recognizable type of construction, and represent every major period of base development. As such, the Navy believes these structures qualify as eligible under Criterion C: Distinctive Characteristics for listing on the National Register. It is not suggested here that these buildings would each qualify as individually eligible, but rather as a unit. Other buildings on the site do not appear to qualify either individually or as a unit. SHPO has concurred with this finding.

Cultural Resources in the Vicinity of the Project

As an element of the Section 106 process, all cultural resources within the vicinity of the project must be considered because of possible adverse consequences from the project. In order to determine the extent of cultural resources within a three-block radius of the project, various sources were consulted and an on-foot reconnaissance was conducted.

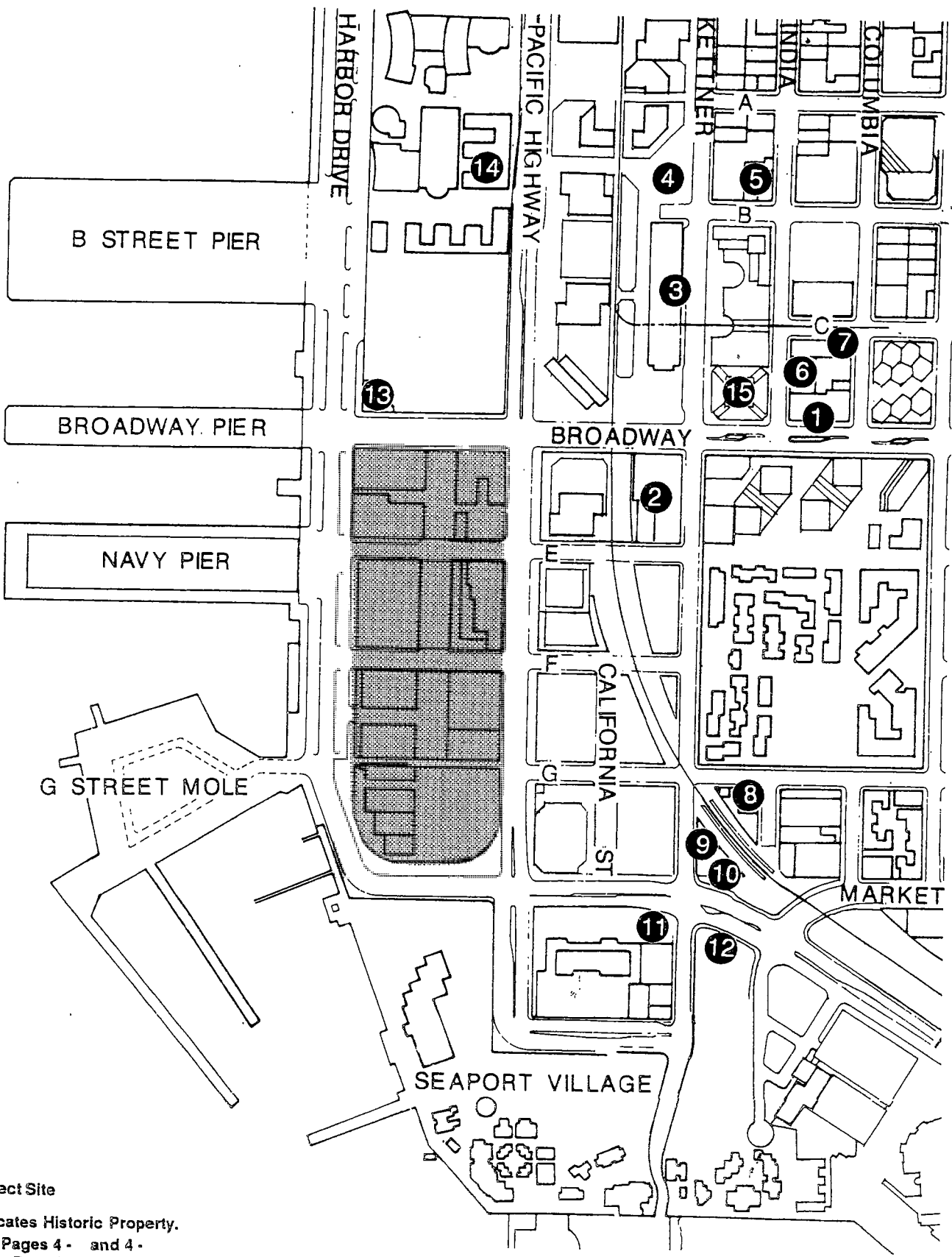
The files of the San Diego Museum of Man and the South Coastal Information Center at San Diego State University were consulted for records of previously recorded sites. The records did not indicate that any sites are known to exist in the study area.

The search for historic resources was completed by researching listings of historic properties. The sources consulted included the National Register of Historic Places, the California Historical Landmarks Register, and the City of San Diego's Historic Sites Register. All of the structures listed on the registers within the study area were reviewed from the viewpoint of potential eligibility for nomination to the National Register. Lastly, the entire surrounding area was surveyed on foot to visually inspect the area for any historic sites that could be potentially eligible, but not previously identified or evaluated. In all of the facets of this survey, no in-depth evaluations or research pertaining to individual properties was conducted--the review of the area was sufficient only to determine potential for eligibility.

The following list provides the names of structures that are currently listed, determined to be eligible, or are potentially eligible for inclusion in the National Register of Historic Places within three blocks of the Navy Broadway Complex. Each location is keyed to Figure 4-71.

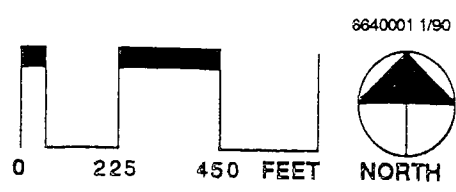
1. Armed Services YMCA, 500 West Broadway. Eligible.
2. SDG&E Power Generating Plant (Station B) 1911 Kettner Street. Eligible.
3. Santa Fe Depot, 1050 Kettner Street. Listed (June 26, 1972).
4. McClintock Storage Company, 1202 Kettner Street. Listed (October 3, 1980).
5. Wetmore's Garage, 1200 India Street. Potentially eligible.
6. American Youth Hostel "AYH," affiliated with the Armed Services YMCA, 031 India Street. Potentially eligible.
7. Retail and office building, 1061 India Street. Potentially eligible.
8. Warehouse Ltd., 654 India Street. Potentially eligible.
9. Building at 633 Kettner Street. Potentially eligible.
10. Kansas City Barbeque, 610 West Market Street. Potentially eligible.





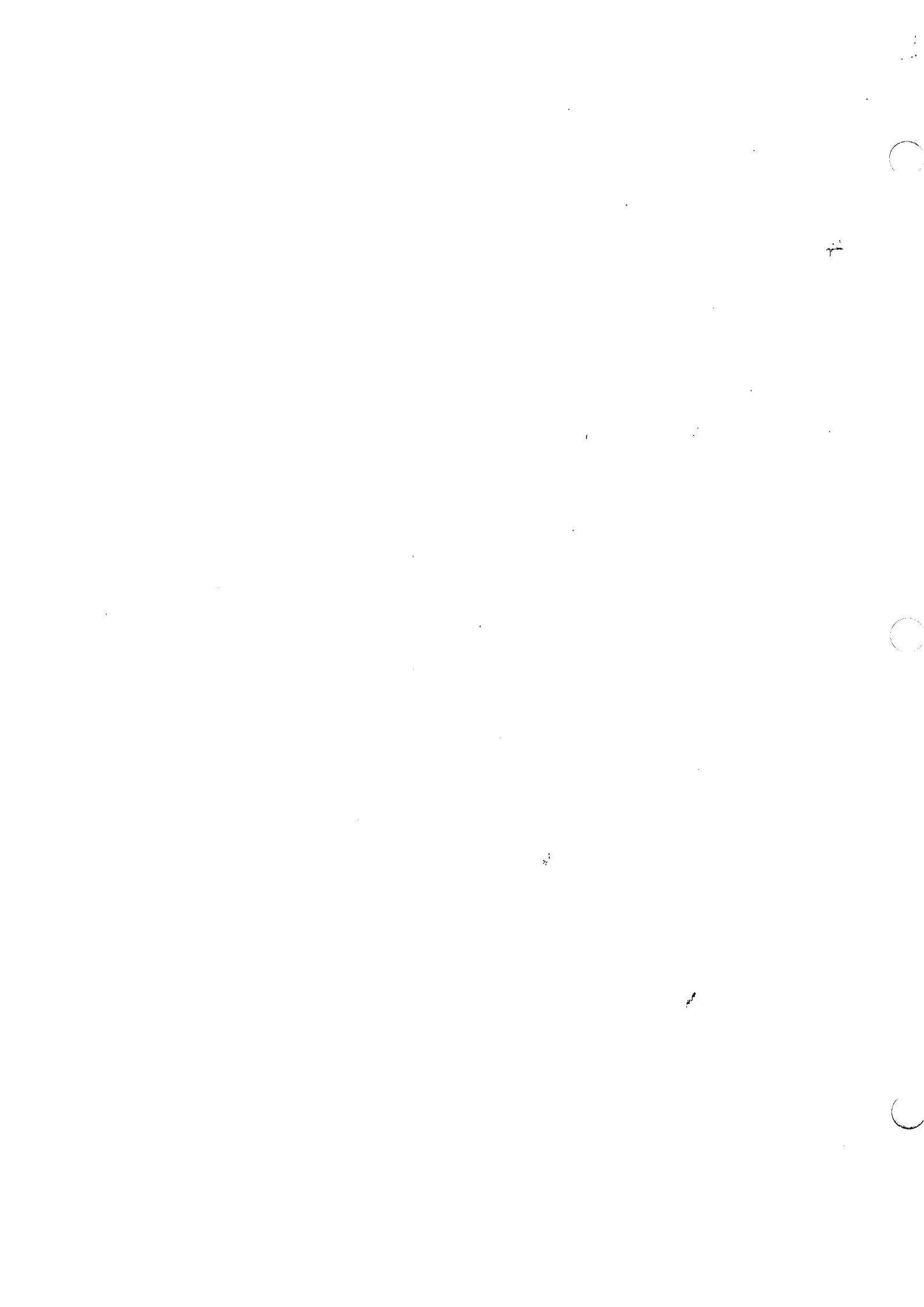
nd
 Project Site
 Indicates Historic Property.
 See Pages 4 - and 4 -
 For a Description of Each
 Property

Historic Properties in
 Project Vicinity
 Navy Broadway Complex Project



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Figure 4-2



11. Old San Diego Police Headquarters Building, 700 block of West Market Street. Eligible.
12. San Diego Marine Hardware, 505 West G Street. Potentially eligible.
13. Ship's Galley Restaurant, northeast corner of Broadway and Harbor Drive. This was the Harbormaster's Office. Potentially eligible.
14. Naval Facilities Engineering Command, Western Region, 1220 Pacific Highway. Potentially eligible.
15. The Tower Bowling Alley has been determined to be eligible but has been demolished by Center City Development Corp. as part of the redevelopment program.

These structures, along with a few adjoining ones, represent an era of harborside commerce dating to the 1920s and 1930s. The historic structures in the vicinity are separated from the historic Gaslamp District (circa 1880s), Little Italy (circa 1910), and Old Town (circa 1840s) areas by redevelopment and commercial/residential zones. The most important of the listed and eligible structures are the Santa Fe Depot, the Armed Services YMCA, the San Diego Gas and Electric Power Generating Plant (Station B), and the McClintock Storage Company Building. The remaining structures on the list are smaller, but have architectural and/or cultural significance as elements of a harborside community.

4.10.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

The findings of the investigations presented in the previous section represent three separate impact issues. The first issue concerns the historic structures (Buildings No. 1, No. 11, and No. 12) and the determination that these be considered eligible for listing on the National Register of Historic Places. The second issue involves the presence of historic archaeology below the layer of dredged fill. This archaeological material does not appear to meet the criteria for listing on the National Register. The third resource consists of offsite historic resources represented by various structures that are or may be eligible for nomination to the National Register, are actually listed on the National Register, or are listed on other state or local landmarks registers. The evaluation of the effect of the project and the various alternatives upon cultural resources that are listed on or eligible for nomination to the National Register has been summarized in Table 4.10-2.

Impacts to Subsurface Resources

The impact evaluation for the subsurface archaeological deposits indicated the alternatives requiring deep excavations for footings and below-grade construction would most likely destroy these resources. However, this impact is not considered to be significant because the archaeology is not likely to yield any important information about the history or prehistory of the area. The plans for Alternatives A, B, C, D, and F would include the excavation of subterranean parking structures and foundations for the larger structures that would disrupt the historic deposits, so an adverse impact would occur. The historic deposits lie approximately 6 to 8 feet below the current ground surface, and the construction excavations would reach as deep as 20 to 30 feet, thus disturbing the deposits wherever the construction would require the removal of soil for subterranean structures. At the present time, it is impossible to quantify the exact area of the deposits that would be affected by these alternatives, since the dimensions of the subsurface deposits are not fully known, nor is the extent of the construction for subterranean structures precisely drawn. However, the key factor for assessing the significance of the impact to subsurface

TABLE 4.10-2

ENVIRONMENTAL CONSEQUENCES ON CULTURAL RESOURCES

Navy Broadway Complex Alternatives	Cultural Resources		
	Subsurface Deposits Significant Impact	Historic Buildings Significant Impact	Offsite Resources Significant Impact
A	No	Yes	No
B	No	Yes	No
C	No	Yes	No
D	No	Yes	No
E	No	Yes	No
F	No	Yes	No
G	No	No	No

resources is the importance of the resource. Based on the determination that the subsurface deposits are not eligible for the National Register, their disturbance by subgrade construction is not a significant impact.

Alternatives E and G would not affect the historic archaeological deposits because they do not include disturbance of the subsurface soils in which the archaeology is located.

Because it is possible that construction activity (including offsite infrastructure construction) could expose important buried archaeological features not anticipated from previous investigations, such discoveries will be addressed in accordance with the regulations for implementing Section 106: "discovering properties during the implementation of an undertaking" (36 CFR 800.11).

Impacts to Historic Structures

The impact evaluation for the historic buildings which appear to qualify for the National Register (Buildings 1, 11, and 12) resulted in the conclusion that Alternatives A, B, C, D, E, and F would have a significant impact on cultural resources. In each of these alternatives, the impacts would result from the removal or substantial renovation (modification of the exterior and interior components) of portions of Buildings No. 1 and No. 12. Building 11 is beyond the project limits and would not be affected by the proposed project. The removal or substantial alteration of these structures would constitute an effect that would be "adverse" as defined by the Criteria for Effect

and Adverse Effect (36 CFR 800.9). Alternative G (no action) would not have an impact on the buildings as they would be retained in their current configuration.

Offsite Cultural Resources

Offsite historic resources would not be affected by the development, either directly or indirectly. The majority of the structures are situated at least one to two blocks from the project, with the exceptions being the old harbormaster's headquarters at the northeast corner of Broadway and Harbor Drive, the San Diego Gas and Electric Substation B at 1911 Kettner Street, and the old San Diego Police Headquarters in the 700 block of West Market Street. The historic sites that are located beyond one block of the project would not be affected by the project. None of the alternatives have features that would remove or otherwise significantly alter the use or integrity of these offsite resources.

Cumulative Impacts to Cultural Resources

The consideration of cumulative impacts to cultural resources was not an issue for this project. The resources are site specific, with the exception of historic buildings adjacent to the project. No historic districts have been identified in this area that would be affected through the loss of resources within the project.

4.10.3 MITIGATION MEASURES

The environmental consequences section of this study delineated potential impacts to subsurface historic archaeological resources and significant adverse effects to Buildings Nos. 1 and 12, which appear to qualify for inclusion in the National Register of Historic Places. In order to determine appropriate steps to mitigate the impacts to these cultural resources, the Navy has initiated consultation with the California SHPO and the Advisory Council on Historic Preservation. The Navy is proposing a program for recording Buildings 1 and 12 pursuant to Section 110(b) of the National Historic Preservation Act and will monitor excavations to ensure that no significant archaeology is inadvertently lost. SHPO has concurred with the basic findings of this analysis and is consulting with the Navy on mitigation. The Section 106 process will lead to mitigation that reduces project impacts to a level that is not significant.

ENDNOTES:

- 1 County Recorder, Deed Book B.
- 2 Rolle 1968.
- 3 Brandes et al. 1985.
- 4 MacMullen 1969.
- 5 Ibid.
- 6 Heilbron 1936.
- 7 Ibid.
- 8 U.S. Congress 1916.

4.11 PUBLIC HEALTH AND SAFETY

Two issues of potential concern are associated with public health and safety: (1) the potential for hazardous waste to be located on the site or in groundwater beneath the site and (2) the proximity of the site to the Lindbergh Field Airport and North Island Naval Air Station.

4.11.1 AFFECTED ENVIRONMENT

Hazardous Materials

Methodology

An assessment was completed by Woodward-Clyde Consultants in January 1988, as part of the Hirsch and Company report,¹ to detect possible contamination and any threats to human health from ongoing and previous activities on the Navy Broadway Complex. The investigation focused on the possible presence of fuel products and EPA priority pollutants in the soil and groundwater. Petroleum hydrocarbons associated with fuel products, metals, and PCBs (from electrical transformers) were identified as the most probable potential contaminants on the project site, given the history of project operations. In addition, the site was investigated for the presence of asbestos, a hazardous material with previous widespread use in building construction. Because a precise location for the offsite location of Navy offices for Alternative D has not been established, a study on hazardous materials for the offsite component was not conducted.

The field investigations included visual reconnaissance, test borings, groundwater and soil sampling, and soil gas surveys. The visual reconnaissance helped identify areas with the greatest likelihood of contamination. Soil and groundwater sampling was conducted using methodologies that maximize the possibility of discovering hazardous substances. Tests focused on areas where underground and surface storage tanks have been located, and where long-term industrial activities have occurred.

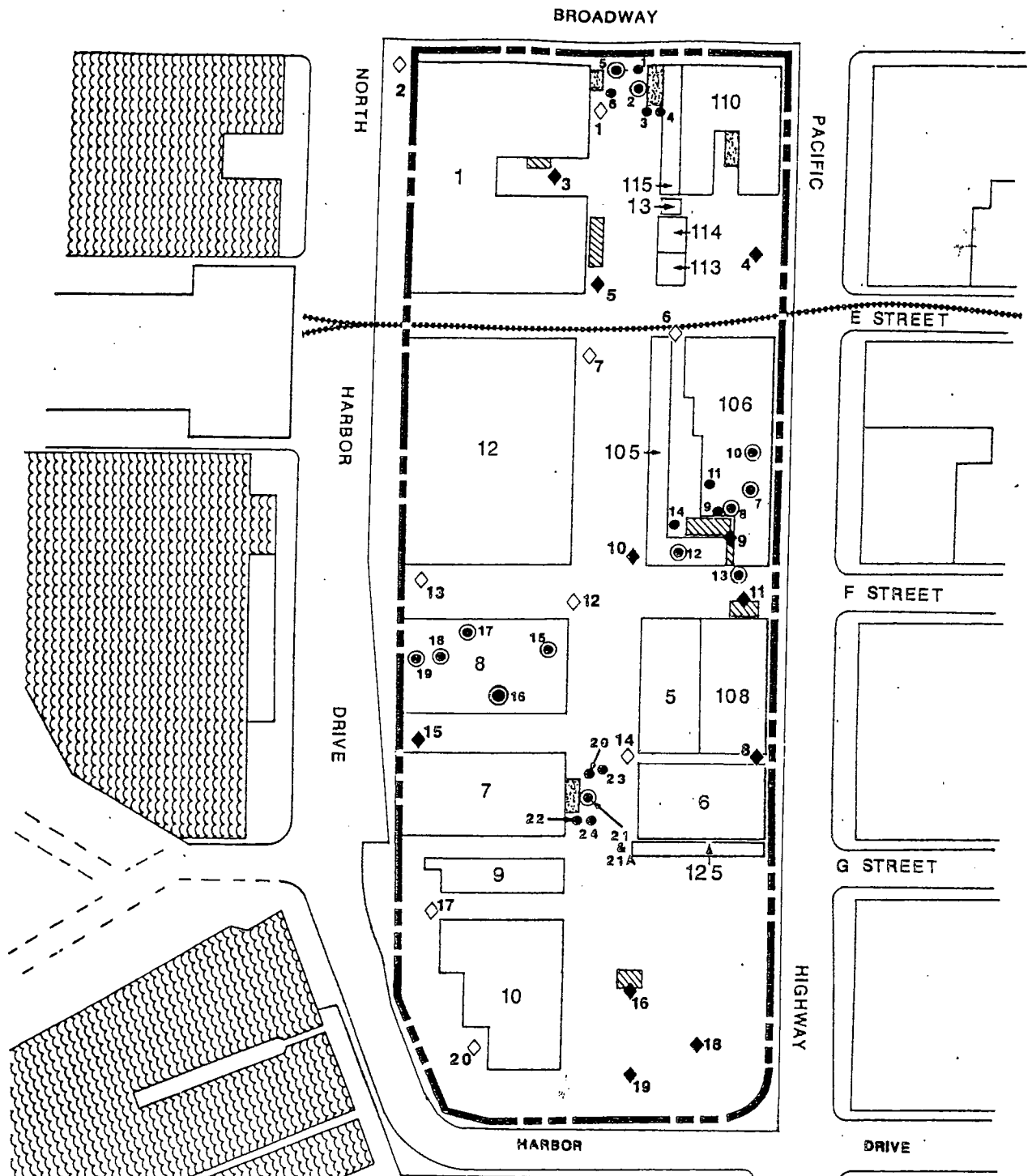
Twenty borings were conducted throughout the site. Monitoring wells were installed in 10 of these boring wells. Soil samples were taken from above the water table, which is 8 to 10 feet below grade, and were analyzed for PCBs, priority pollutant metals, and petroleum hydrocarbons. In addition to the test bores, 24 hand-augured bores were drilled in the upper 3 feet of soil. During hand auguring, a soil gas analysis was conducted to identify the presence of volatile organics. Figure 4-72 depicts the locations where samples were taken.

Materials Found Onsite

Table 4.11-1 describes the presence of hazardous materials and asbestos at or near each of the onsite buildings.

Petroleum Hydrocarbons/EPA Priority Pollutants

Laboratory analysis found no detectable hydrocarbon concentrations in the groundwater in the 10 monitoring wells dug on the site. Generally 2 or 3 soil samples were taken from each of the 20 test borings, at depths of 1 to 8 feet. Petroleum hydrocarbons were detected in only one boring, No. 19-1 (Figure 4-72). The action level for hydrocarbon cleanup, as established by the State Water Quality Control Board (SWQCB), is 1,000 parts per million (ppm). At 2 feet below surface in this boring, 19 ppm of total hydrocarbons were detected. The source of the



INDICATES APPROXIMATE LOCATION OF TEST BORING



INDICATES APPROXIMATE LOCATION OF FUEL TANK

INDICATES APPROXIMATE LOCATION OF MONITORING WELL



INDICATES APPROXIMATE LOCATION OF ELECTRICAL TRANSFORMER OR TRANSFER STATION

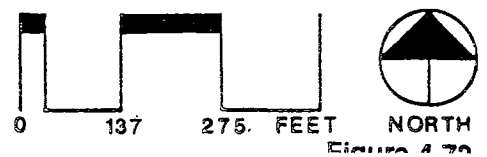
INDICATES APPROXIMATE LOCATION OF HAND AUGERED BORING



1 INDICATES NAVY DESIGNATED BUILDING NUMBER

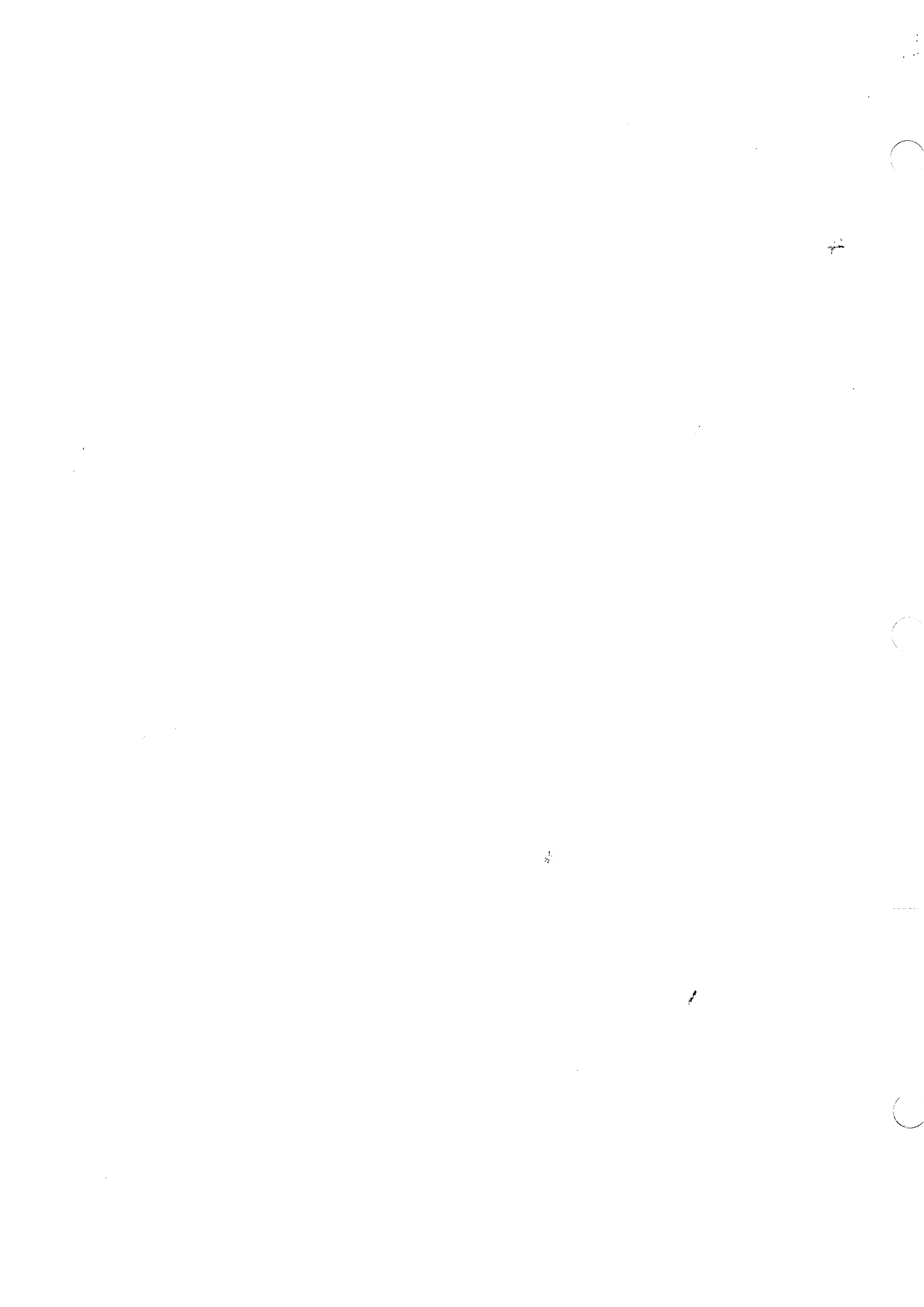
INDICATES APPROXIMATE LOCATION OF HAND AUGERED BORING WITH SOIL GAS PROBE

Location of Soil Sample Borings by Broadway Complex Project



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Figure 4.70



hydrocarbon traces is not certain; however, 19 ppm is well below the threshold that generally requires remediation.

TABLE 4.11-1

PRESENCE OF ASBESTOS AND HAZARDOUS MATERIALS

Bldg. No.	Building Use	Asbestos Present	Hazardous Materials Present
1	Administration Offices	Yes	Yes
5	Warehouse and Administration	Yes	No
6	Warehouse	Yes	No
7	Cold Storage Warehouse	Yes	Yes
8	Warehouse	Yes	No
9	Offices	Yes	No
10	Warehouse	No	No
12	Warehouse and Offices	Yes	Yes
13	Substation	No	No
105	PW Shops	Yes	Yes
106	Cafeteria and Shops	Yes	Yes
108	Warehouse	No	No
110	Administration	Yes	No
113	Fire Station and Office	Yes	No
114	Administration Office	Yes	No
115	Administration	Yes	No
125	Warehouse and Offices	Yes	Yes

Note: Hazardous materials include sulfuric acid batteries, freon, sulfuric acid, cleaning chemicals, propane, and paints. All buildings contained fluorescent lighting ballast and some buildings contained electrical transformers. These apparatuses contain PCBs in sealed structures.

Source: Hirsch and Company 1988.

An oily surface spill with surface staining was apparent outside Building 106 in the vicinity of a forklift maintenance and drum storage area. Concrete and asphalt surface in this location may be limiting the migration of this contamination into the soil. Hand-augured drillings Nos. 8 and 10 at Building 106 found high acidity as a result of sulfuric acid being previously stored in this building. The source is assumed to be battery acid used for batteries in fork lifts and vehicles. It was determined that the metals concentrations associated with the acid were below any action levels that would require remediation.

No petroleum hydrocarbons were found in any of the 24 hand-augured samples with the exception of boring HA-21 adjacent to Building 7, which contained 390 ppm total petrohydrocarbons in

some discolored soil near some fuel tanks. This contamination is below the SWQCB threshold that generally requires remediation. However, the extent of this contamination has not been identified, and could be greater than tested.

No PCBs were found in any of the 15 soil samples analyzed, even in the vicinity of three large transformer units that contain oil laden with PCBs. No leakage was reported to have occurred in any of the transformers or other electronic units located on the site.

Twelve soil samples were analyzed for EPA priority pollutant metals. Samples HA-7 and HA-9 showed higher than normal levels of some priority pollutant metals. However, the samples do not exceed threshold levels that would require remediation.

Field readings from an organic vapor meter showed concentrations of 0 to 4 ppm in soil gas analysis, an almost undetectable quantity of volatile organics. No significant areas of contamination were identified.

Asbestos

In an encased or non-friable form (i.e., not peeling or cracking) asbestos does not pose a significant health risk factor. However, friable asbestos can enter the air stream and become a human health hazard. As shown in Table 4.11-1, some form of asbestos was found in all but three buildings onsite. None of the buildings with asbestos were found to pose an imminent health threat.

Asbestos-containing materials (ACM) found in Building 1 include pipe insulation, floor tile adhesive, corrugated paneling, and sprayed-on ceiling material. Approximately 270,000 square feet of ACM was detected in this building.

Building 12 contains approximately 32,000 square feet of ACMs, including pipe insulation, blown-on fire-proofing material, and flooring. Building 115 contains ACM mainly in pipe insulation and flooring materials. Approximately 3,000 square feet of ACM was found in this building.

Approximately 800 square feet of ACM was found in Building 114 in the form of painted wall paneling. Approximately 900 square feet of vinyl floor tile and adhesive containing 5 percent asbestos was found in Building 113. Flooring materials, covering approximately 24,000 square feet of Building 110, contained asbestos. Approximately 14 square feet and 100 linear feet of ACM were detected in Building 7.

Building 8 contained 400 square feet of ACM in the form of vinyl floor tile and adhesive. In Building 9, about 2,800 square feet of flooring contains ACM along with 200 linear feet of pipe insulation. Approximately 1,000 square feet of flooring containing 3 percent asbestos was found in Building 5.

Building No. 106 contains approximately 26,000 square feet of ACM. A significant portion of that area is flooring that contains 1 to 3 percent asbestos. More than 8,000 square feet of ACM and two asbestos-containing waste containers were also found in Building 106.

Conclusion of Site Investigation

Investigations conducted by Woodward-Clyde Consultants (as part of the Hirsch and Company report) found that groundwater at the Navy Broadway Complex appears to be free of contamination. Soil contamination by hydrocarbons occurs in isolated areas, but only in substantial quantities in the vicinity of the forklift maintenance area (at Building 106), where soil removal and disposal would be recommended prior to future development on the site.

Although PCB-containing sources were found onsite (fluorescent lighting ballasts and electrical transformers), no contamination from PCBs was detected on the project site. Thus, PCBs are well contained within their storage sources.

The Woodward-Clyde study also indicated several areas that would require further investigation to determine the type and extent of any hazardous waste and the potential need for additional remediation. These areas include:

- A source of black, hydrocarbon-discolored soil encountered in hand-augured borings HA-21, HA-21A, and HA-24 near Building 7.
- A former hazardous waste storage area located in Building 8. The results of a soil gas survey indicate that further investigation would be needed to determine if there is spillage beneath or around this building.
- The soil around the forklift area should be evaluated for acid levels, and remediated if the pH is less than 5. At lower pH levels, heavy metals have a propensity to migrate.
- Oil within fluorescent lighting ballasts and transformers should be tested to identify PCB concentrations. If sufficiently high concentrations are found, remediation would be recommended to reduce the probability of future onsite soils contamination.

Asbestos is present in all buildings except two warehouses and the substation building. Although not posing an imminent health threat, asbestos has the potential to become a health threat over time. Asbestos has the potential to be friable and become a human health hazard. This hazard would be increased if demolition of buildings occurred, thus potentially releasing asbestos into the local air stream.

Agency Consultation on Hazardous Substances

The California Department of Health Services (DHS), Regional Water Quality Control Board (RWQCB) and the Environmental Protection Agency (EPA) were consulted to determine if there were any reports of hazardous substances at the Navy Broadway Complex. No hazardous substance releases or underground storage tank leaks at the Navy Broadway Complex have been reported.^{2,3,4} However, RWQCB did express concern with respect to leaking underground storage tanks in the Centre City area outside the project boundaries, especially with regard to a known plume of contaminated groundwater southwest of the site.⁵ This is discussed below.

Regional Groundwater Contamination--A plume of contaminated groundwater was discovered in 1986 approximately 1/3 mile east of the site in the area of Market Street and Front Street (see

Figure 4-73). The plume contains concentrations of hydrocarbons in the form of gasoline and diesel.⁶ The gradient of the plume is to the southwest,⁷ which would result in normal migration south of and away from the Navy Broadway Complex. The IT Corporation conducted a detailed characterization and remediation study in 1988.

The study found that the Convention Center project, located southeast of the Navy Broadway Complex and south of the plume, may have promoted migration of the plume towards the Convention Center site through a groundwater dewatering program that was removing over 800,000 (and up to 1.3 million) gallons of groundwater per day in 1987 and 1988.⁸

The RWQCB expressed concern that there may be plumes of contaminated groundwater in other areas of Centre City.⁹

Airport Hazards

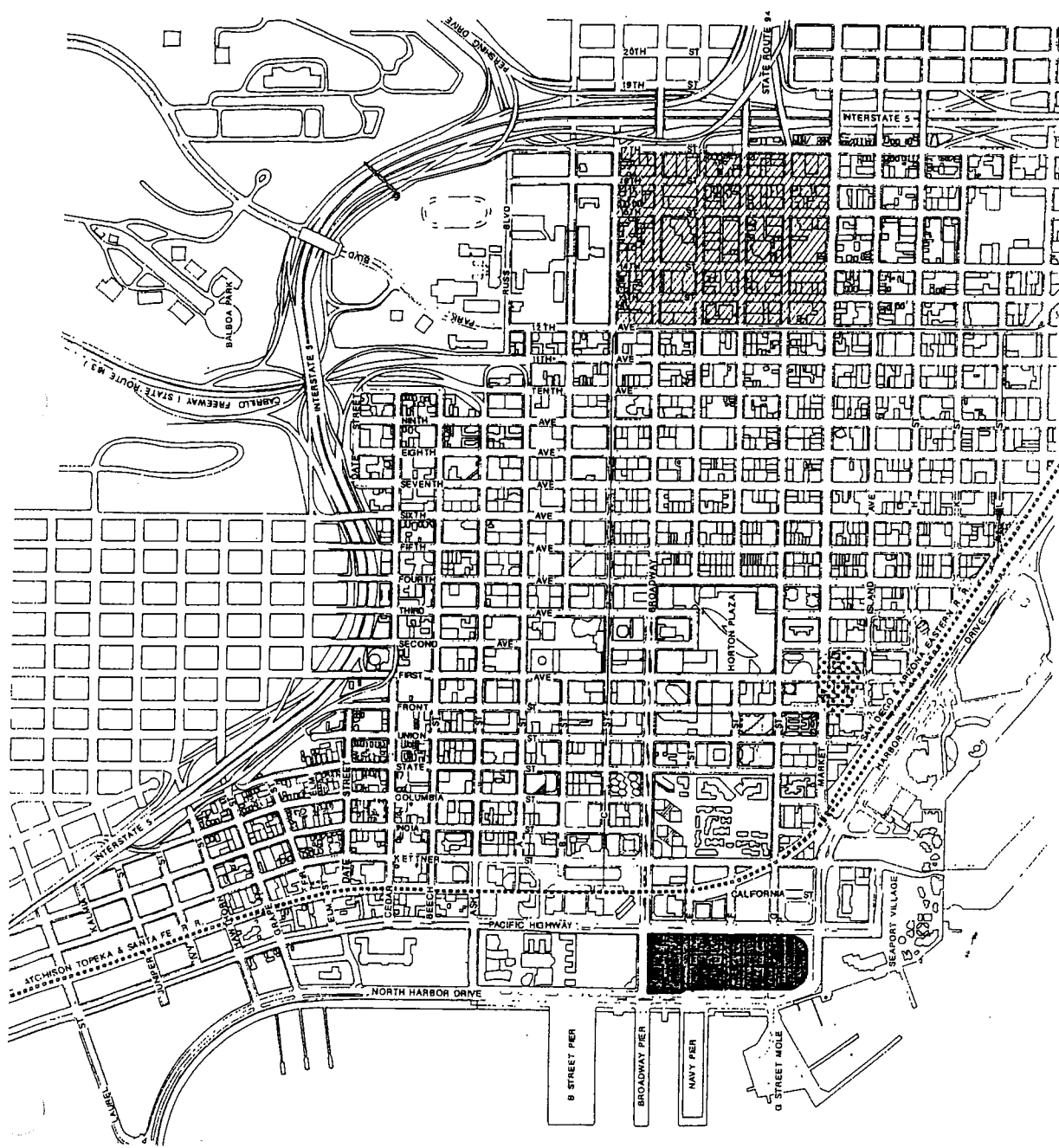
Regional Setting




The project site is located in the vicinity of both Lindbergh Field and the Naval Air Station, North Island. Guidelines that require consideration of structure height to prevent hazards to navigable airspace have been defined in an "Airport Approach Overlay Zone" for the areas around these facilities. In 1986, the City of San Diego adopted the Airport Approach Overlay Zone (Ordinance No. 0-16556) for Lindbergh Field. The purpose of the ordinance is to establish a procedure by which a proposed structure is evaluated for compliance with the zone's height limitation, prior to the issuance of a building permit for the structure. This is consistent with the FAA's procedures for determining potential hazards, as specified in Federal Aviation Regulations Part 77. The height limitations are not absolute restrictions; rather they signify the threshold that, once exceeded, would require an evaluation by the FAA to determine if a hazard to air navigation would result, and if so what remedial measures should be imposed to avoid the hazard. Buildings, structures, or uses not exceeding 30 feet in height would be exempt from the procedures of the Overlay Zone.¹⁰ The Overlay Zone encompasses an irregular area surrounding Lindbergh Field that continues outward and upward from the airport along aircraft approach paths up to an elevation of 500-foot mean sea level (msl).

The Naval Air Station (NAS), North Island has identified height limitations (imaginary surfaces) through Federal Aviation Regulations Part 77 designed to protect its navigable airspace. Areas to the north and east of the air station are within both the Overlay Zone and air station height limitations.

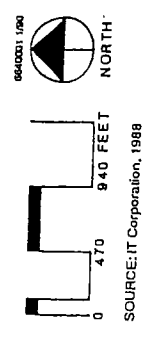
Project Site

The Navy Broadway Complex is within imaginary height surfaces associated with Lindbergh Field and NAS, North Island. The site is not within any safety hazard zones or beneath any flight tracks, as defined by the Aircraft Installation Compatibility Use Zone (AICUZ) study for NAS, North Island, and is not within any clear zones or other high safety hazard zones associated with Lindbergh Field. A non-operational Part 77 imaginary surface from Lindbergh Field (the horizontal surface) crosses over the site at 165 feet above mean sea level (msl). Structures above this height would require submittal of a Notice of Proposed Construction or Alteration to the FAA. The lowest imaginary surface that crosses the site from NAS, North Island, above which a Notice of Proposed Construction or Alteration must be filed with the FAA, is of 391 feet msl associated with the conical surface, which is approximately 381 feet above Block 1. Imaginary

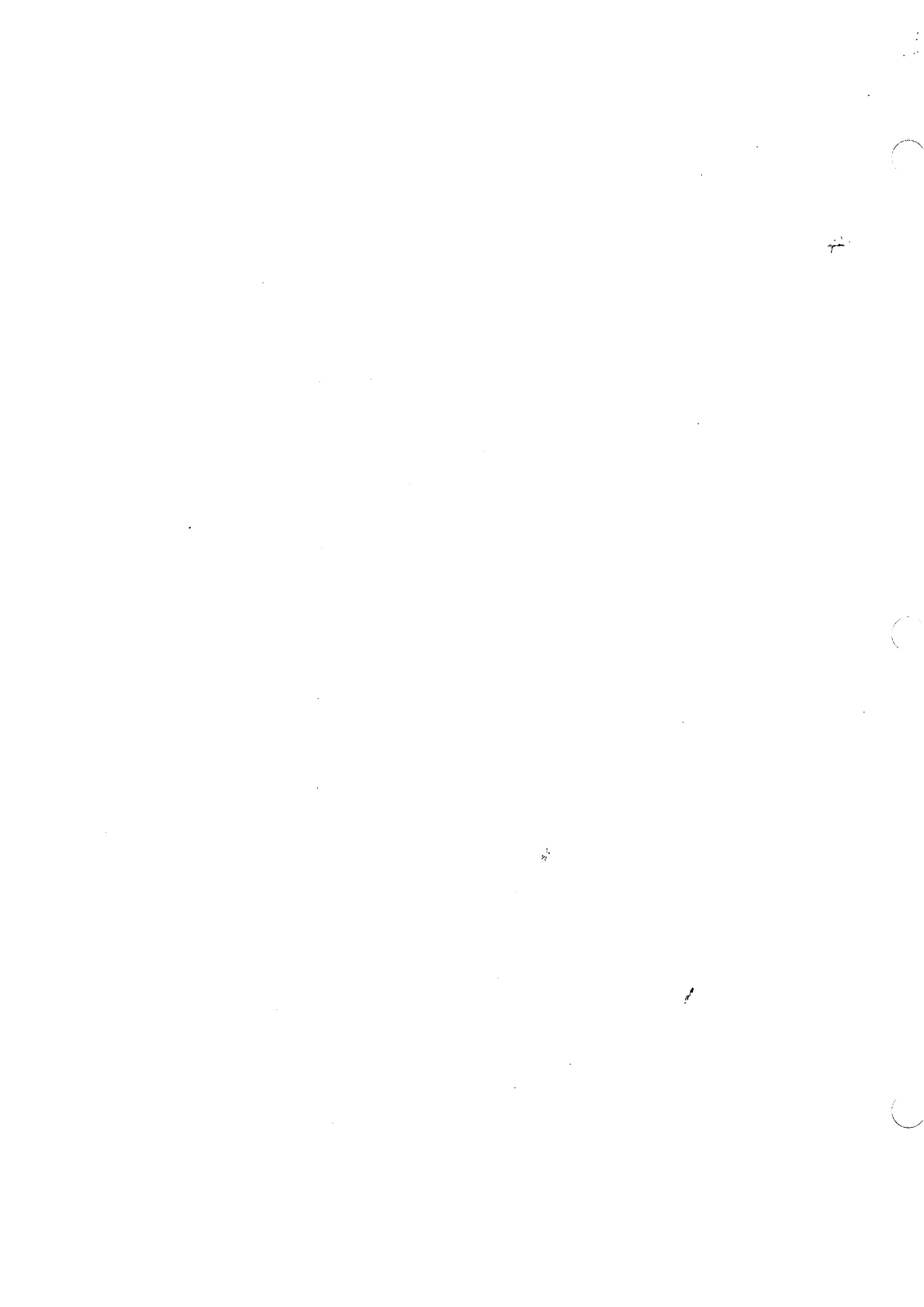


- Legend**
-  Project Site
 -  Approximate Location of Plume
 -  Location of possible Navy Office for Alternative D (With Encompass 2 Blocks)
- Figure 4-73**

Contaminated Plume Location



Navy Broadway Complex Project



surfaces that extend over other areas of the site (Blocks 2, 3, and 4) associated with NAS, North Island are at approximately the same height. The lowest operational imaginary surfaces that are located over the site are at 500 feet msl. These surfaces are associated with a circling area for missed approaches to Lindbergh Field, and extend over the length of the site and a large part of the Centre City area.

4.11.2 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

Effects From Hazardous Materials

Soils Contamination

Health hazards are associated with the presence of substantial quantities of hazardous substances, so hazardous substances identified on the project site would have a similar effect on each of the alternatives. No action-level (i.e., clean-up level) concentrations of hazardous substances were found in the investigation, no study is thorough enough to preclude the detection of all substances that might be present on the site. Several areas of contamination or potential contamination were identified on the site that could adversely affect the health of personnel on the site, especially during construction activities that uncover soils.

The area beneath and surrounding Building 8 may contain hazardous substances. If these materials exist and are exposed, they could cause significant health impacts. If the integrity of any units that store PCB-laden oil is compromised, contamination with this material could occur, also a significant health concern. Acid levels in soils near Building 106 could cause metals in the soils to become more mobile. It is not presently known if the acid levels are sufficient to cause this to occur, but from a conservative consideration, this would be considered a significant adverse effect. The oily surface residue in the vicinity of Buildings 7 and 106 may contain residues of concern with regard to health. From a conservative consideration, this would be considered a significant adverse effect.

If Alternative D is adopted, the location of the offsite Navy offices would need to be inspected to determine if there is a potential health risk at that site associated with hazardous materials in soils.

Effects Related to Asbestos

Development in accordance with Alternatives A through F would pose significant health exposure risks associated with demolition of buildings that contain asbestos. During demolition, asbestos fibers could become airborne, thereby providing a pathway to enter the human system. Asbestos exposure is considered a human health risk, and building demolition in accordance with any of these alternatives would be considered a significant safety impact.

If Alternative D is adopted, the offsite Navy office location would need to be inspected to determine if there are any existing facilities that require removal and contain asbestos that could pose a health risk.

Alternative G would not involve the demolition of any structures, so the risk of exposure to airborne asbestos would be substantially reduced. There is no eminent health risk associated with existing asbestos on the site.

Effects Related to Regional Groundwater Contamination

Alternatives A, B, C, D, and F include subsurface parking and would likely include subsurface foundation components. Groundwater is located at approximately 7 to 11 feet below the ground surface of the site. Subsurface construction would encounter substantial quantities of groundwater, and a temporary groundwater dewatering program would be required during construction. Following construction, a permanent groundwater dewatering program would be required to avoid flooding of subsurface facilities. Dewatered groundwater would be released either to storm drains for disposal to the bay, or to the sanitary sewer system, where it would be conveyed to the Point Loma Wastewater Treatment Plant (PLWTP) and released to the bay.

Ongoing studies have shown the hydrocarbon-contaminated groundwater plume to be 1/3 of a mile east of the Navy Broadway Complex, with a gradient to the southwest, away from the site. Tests of groundwater beneath the site have found no presence of hydrocarbons. Given the distance to a known contaminated source and the gradient of flow away from the Navy Broadway Complex, it is unlikely that any contaminated groundwater would be encountered during temporary or permanent dewatering activities. However, it was found that the dewatering program associated with the Convention Center may have promoted migration of the contaminated plume in the direction of that project. It is, therefore, conceivable that groundwater dewatering associated with any of these alternatives could cause migration of the plume, or of a currently unknown source of contaminated groundwater, towards the Navy Broadway Complex.

If the discharge of groundwater occurred, a National Pollution Discharge Elimination System (NPDES) permit application would need to be filed with the RWQCB. The RWQCB would review the permit application and determine if an NPDES permit is necessary. The RWQCB has indicated, given the uncertainty associated with groundwater quality in the Centre City area, that an NPDES permit would likely be required for the discharge of groundwater directly into the storm drain system and to the bay. The RWQCB expressed uncertainty regarding the need for a permit if dewatered groundwater is discharged into the sanitary sewer, where it would be conveyed to PLWTP for advanced primary treatment prior to release to the bay. The RWQCB would determine that an NPDES permit is needed if it is felt that the dewatered groundwater could adversely affect the water quality of the bay. If a permit is required, it would include quality standards for discharge that would protect water quality. Thus, compliance of the project with any NPDES permit conditions, if it is determined a permit is needed, would avoid adverse impacts to water quality from discharged groundwater.¹¹

The offsite Navy offices associated with Alternative D would be located in the Centre City East area, well away from the contaminated groundwater plume. Although subsurface parking would be constructed at the offsite location with this alternative, it is probable that groundwater in this area is sufficiently deep to not require an extensive dewatering program. Therefore, this component of Alternative D would not result in a significant impact to water quality.

Alternatives E and G would not include the construction of subsurface facilities. Therefore, no dewatering would be associated with either of these alternatives, and no impacts associated with water quality would result.

Effects Associated With Airport Hazards

Alternatives A, B, C, D, and F include building heights that approach the imaginary surfaces associated with Lindbergh Field and NAS, North Island designed to protect navigable airspace. However, the site is not within any safety hazard zones as defined by the AICUZ for NAS, North Island, and is not within any clear zones or other high safety hazard zones associated with Lindbergh Field. Each of these alternatives has 250-foot-high buildings on Block 3, which is 260 feet msl and is above the horizontal surface from Lindbergh Field. In addition, Alternative A has a building height of 400 feet (410 feet msl) on Block 1, which is above the 391-foot msl imaginary conical surface from NAS, North Island. Neither the horizontal surface from Lindbergh Field nor the conical surface from NAS, North Island, are surfaces that affect the operations of either airfield, and the exceedance of these surfaces means only that notification to the FAA is required. The Navy has notified the FAA of the proposed development of Alternative A. In response, the FAA has prepared a Determination of No Hazard to Air Navigation and has indicated the project would not have a significant effect on the safe and efficient utilization of navigable airspace. Proposed structures on Block 1 and the easterly halves of Blocks 2 and 3 would need to be obstruction lighted in accordance with FAA Advisory Circular AC 70/7460-1G.¹²

Alternative F includes a 500-foot-high building (510 feet msl) on Block 2, which would be the only building in any alternative that exceeds an operational imaginary surface, which is the 500-foot msl circling area for missed approaches at Lindbergh Field. Alternative F has the potential to adversely affect air navigation. However, the FAA has previously approved structures for as high as 500 feet (msl) on blocks in the vicinity of the project. Therefore, it is unlikely that the FAA would consider any of the alternatives a hazard to air navigation.

The offsite Navy office component of Alternative D would be a maximum of 350 feet high. The entire area in which this site would be located has imaginary surfaces associated with Lindbergh Field and the NAS, North Island in excess of 500 feet. Therefore, the offsite component of this alternative would not result in adverse effects to air navigation.

Alternatives E, with buildings proposed as high as 150 feet, and G, with existing buildings as high as 100 feet, do not include any buildings that approach the imaginary surfaces associated with Lindbergh Field or the North Island Naval Air Station. Therefore, these alternatives do not have the potential to adversely affect air navigation.

4.11.3 MITIGATION MEASURES

Hazardous Materials

The EPA has requested inclusion of the following mitigation measures for Alternatives A through F:¹³

- If any underground storage tanks on the site are found to be leaking, such leaks will be cleaned up by the Navy in accordance with the Resource Conservation and Recovery Act (RCRA) and any other applicable state or City of San Diego regulations, with clean up being initiated upon discovery of any leaks.
- If the Navy discovers evidence of substantial hazardous substances contamination in the future, it will promptly notify the EPA and comply with all applicable requirements of the Comprehensive Emergency Response Compensation and

Liability Act and the Superfund Amendment and Reauthorization Act (CERCLA/SARA) and the National Contingency Plan (NCP).

- If CERCLA hazardous substances are discovered, no construction will occur until the requirements of CERCLA/SARA and the NCP have been fully satisfied by the Navy. CERCLA/SARA/NCP activities would take priority over new construction until CERCLA/SARA compliance has been achieved.

The following additional measures are applicable to Alternatives A through F and would reduce impacts associated with exposure to hazardous materials to a level that is less than significant:

- The area beneath Building 8 will be further investigated by the Navy, prior to construction in this area, for the presence of hazardous materials in the soils. The tests will include soils sampling and testing in accordance with accepted professional standards. If any contaminated soils are found, they will be cleaned up in accordance with the regulations specified by the EPA.
- The fluid in transformers and other electrical units will be tested by the Navy prior to onsite construction to determine if such fluid contains PCBs. If PCBs are found, the fluid and the units will be disposed of by the Navy at an approved waste disposal facility.^a
- The soil in the vicinity of the forklift maintenance area at Building 106 will be tested for acidity by the Navy prior to development in this area. If the pH of the soil is less than 5, the pH will be adjusted so that it is greater than 5.
- The oily residue-stained soil and paving materials in the vicinities of Buildings 7 and 106 will be removed by the Navy to the satisfaction of the EPA prior to development in this area and disposed of in an approved waste disposal facility.^a
- Demolition of buildings containing asbestos on the Navy Broadway Complex will be conducted by the Navy in accordance with commonly accepted practices and in compliance with the Federal Clean Air Act. Asbestos-containing materials will be disposed of by the Navy in a landfill or other such facility that is permitted to accept such waste.

The following mitigation measure is applicable to the offsite Navy office component of Alternative D, if that alternative is selected, and would reduce to a level that is below significance any potential impacts associated with hazardous materials:

- A visual and historic land use survey of the offsite location will be conducted by the Navy prior to final purchase of the location to determine if there are any evident hazardous materials requiring remediation, or if there is the potential for such. If it is found that there may be hazardous materials at the offsite location, a remediation program will be designed and implemented.

The following mitigation measure is applicable to Alternatives A, B, C, D, and F and would reduce to a level that is less than significant any potential impacts associated with groundwater dewatering:

- A National Pollution Discharge Elimination System (NPDES) permit application will be filed with the Regional Water Quality Control Board (RWQCB). The project developer will comply with any conditions expressed by the RWQCB.

Airport Hazards

The FAA has reviewed the Notice of Proposed Construction or Alteration for Alternative A. Based on that review, the following measure has been required:

- Buildings on Block 1 and the easterly halves of Blocks 2 and 3 will be red obstruction lighted in accordance with the provisions of FAA Advisory Circular AC 70/7460-1G, Obstruction Marking and Lighting.

The following mitigation measure is applicable to Alternatives B, C, D, and F.

- A Notice of Proposed Construction or Alteration has been filed with the FAA. Any conditions that the FAA imposes on the site (e.g., lighting, striping, poles, etc.) will be followed.

ENDNOTES:

- 1 Woodward-Clyde Consultants, 1988 and Hirsch and Company, 1988.
- 2 Foley, California Department of Health Services, personal communication, 1989.
- 3 Posthumous, Regional Water Quality Control Board-San Diego Region, personal communication, 1989.
- 4 Region 9 Federal Facility Hazardous Waste Information Docket, July 1989.
- 5 Posthumous, op. cit.
- 6 Owen Geotechnical, 1989.
- 7 Ibid.
- 8 IT Corporation, 1988.
- 9 Posthumous, op. cit.
- 10 City of San Diego, 1986.
- 11 Posthumous, op. cit.
- 12 Federal Aviation Administration, 1990.
- 13 Tomsavic, Environmental Protection Agency, personal communication, 1989.

4.12 ENERGY AND CONSERVATION

4.12.1 NATURAL GAS

AFFECTED ENVIRONMENT

The San Diego Gas & Electric Company (SDG&E) provides natural gas service to the project area. The primary gas supplier to SDG&E is the Southern California Gas Company.

Natural gas facilities in the project area include a 2-inch main in Harbor Drive; 1-inch, 1.5-inch, and 4-inch mains in Pacific Highway; a 2-inch main in Broadway; and a 1-inch main in Market Street (Figure 4-74). These facilities are operating within their capacity.¹

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

As depicted in Table 4.12-1, Alternatives A, B, C, D, and F would consume over 10 million therms of natural gas per year. This is a substantial increase over that consumed by the existing onsite uses (i.e., Alternative G). The uses proposed by Alternative E would consume approximately 70,000 therms on an annual basis, also a large increase over current consumption. Nevertheless, SDG&E can provide gas service associated with any of these alternatives without adversely affecting the ability to provide natural gas to SDG&E's service area.

The existing natural gas facilities serving the project area are operating well within their capacity. A preliminary study of surrounding gas facilities suggests that the natural gas lines serving the project vicinity may be sufficient to supply any of the proposed alternatives with natural gas. Therefore, significant impacts to natural gas distribution are not anticipated with implementation of the land uses proposed by Alternatives A through F, or perpetuation of the existing uses under Alternative G.

MITIGATION MEASURES




Private development associated with Alternatives A through D and Alternative F would be required to meet State of California Title 24 energy conservation standards. No other mitigation measures are necessary.

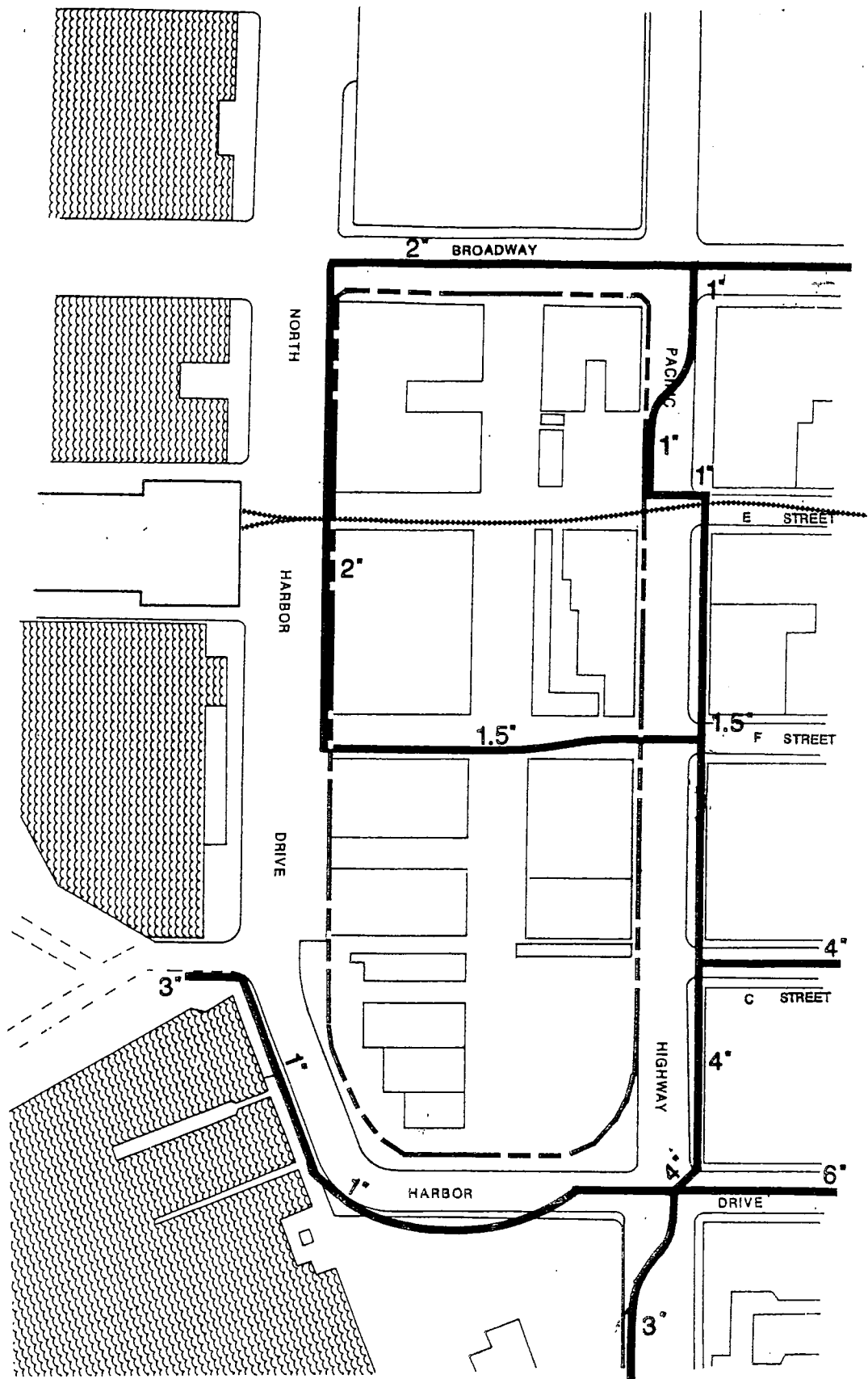
4.12.2 ELECTRICITY

AFFECTED ENVIRONMENT

San Diego Gas and Electric provides electrical service to the project area. San Diego Gas and Electric has a substation, Station B, located one block east of the project site, on Kettner Boulevard between E Street and F Street. The capacity of Station B will be upgraded from 75 megawatts to 100 megawatts in the first quarter of 1990. The peak demand of Station B is approximately 63 megawatts.²

SDG&E currently provides 12-kilovolt electrical service to the project site.³ The location of electrical infrastructure serving the site is shown on Figure 4-75. The primary distribution line facility is located along Broadway.

-  GAS LINE/ SIZE
-  RAILROAD TRACKS
-  PROJECT SITE

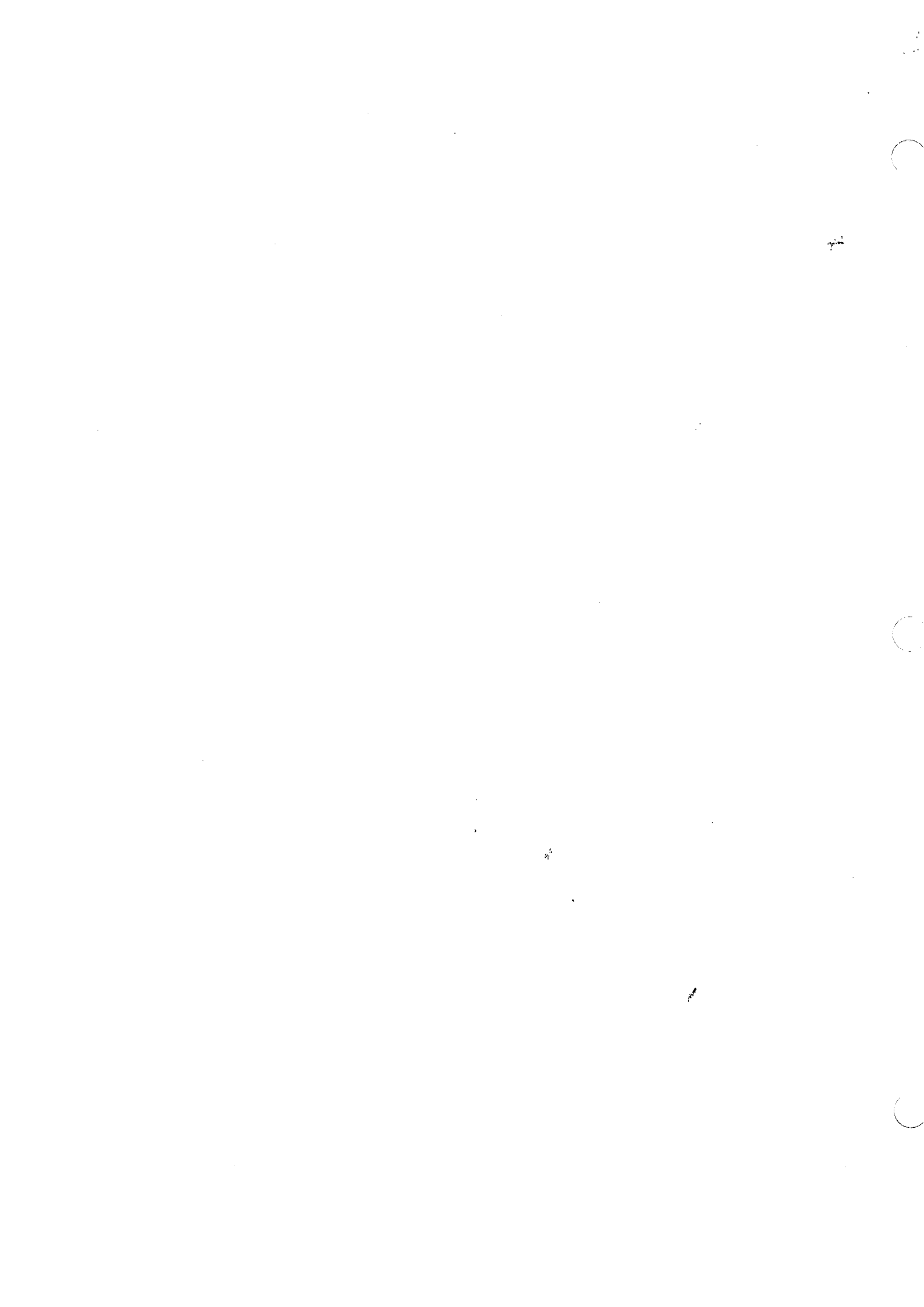


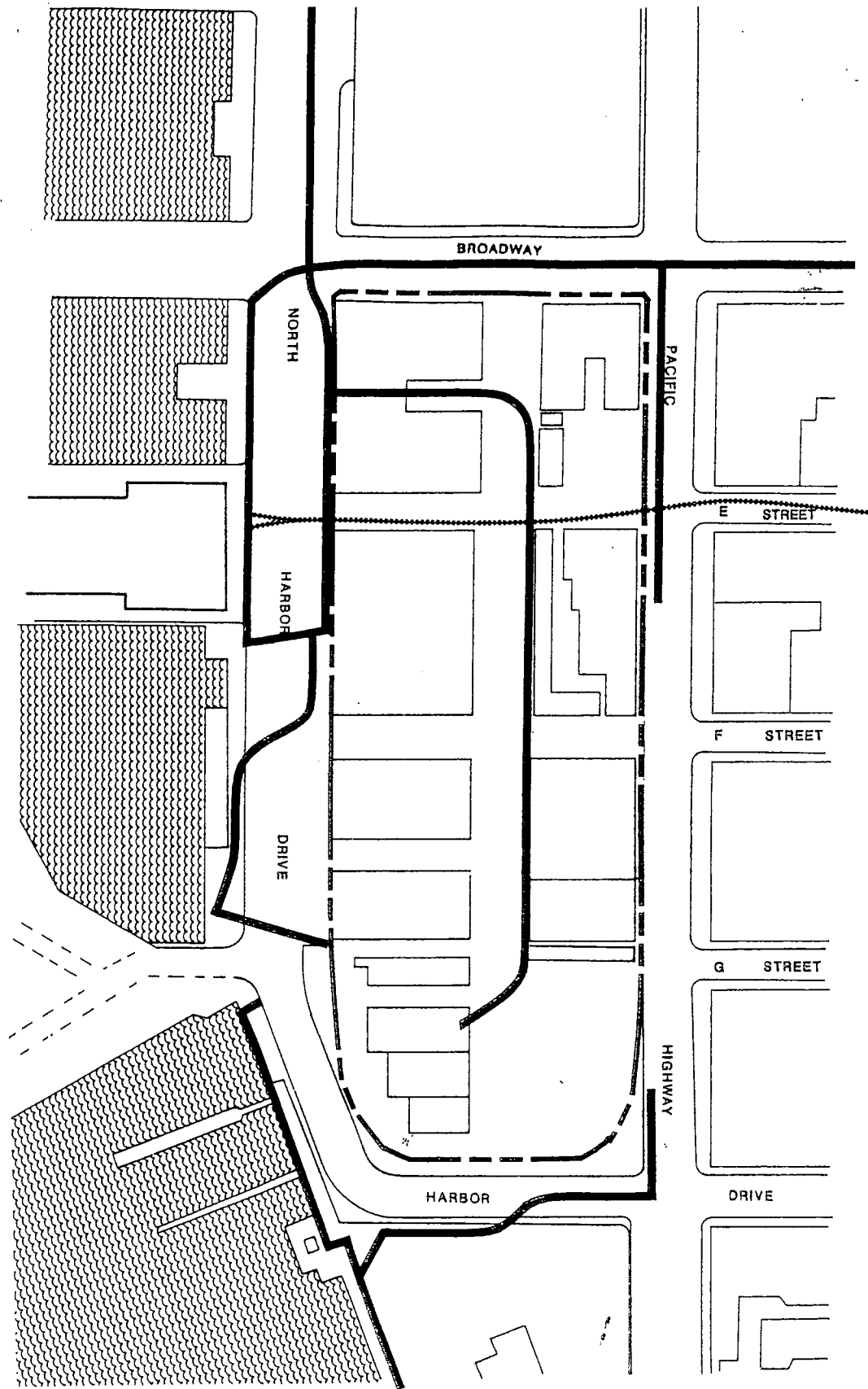
Natural Gas Facilities
 Navy Broadway Complex Project

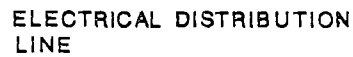

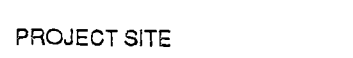


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Figure A-7A

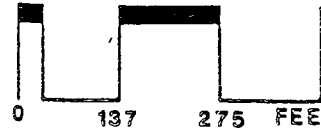





- 
 ELECTRICAL DISTRIBUTION LINE
- 
 RAILROAD TRACKS
- 
 PROJECT SITE

Electrical Facilities
 Navy Broadway Complex Project

6640001 1/90

0 137 275 FEET NORTH

FIGURE 4-75



TABLE 4.12-1

NATURAL GAS CONSUMPTION FOR THE PROPOSED ALTERNATIVES
(Net Increase)

Alternative	Land Use	Consumption (Therms/Year) ^b
A	1,249,247 SF office ^a	159,597
	1,245,000 SF hotel	<u>10,012,600</u>
	Total	10,172,197
B	1,549,247 SF office ^a	195,063
	1,245,000 SF hotel	<u>10,012,600</u>
	Total	10,207,663
C	594,247 SF office ^a	70,932
	1,245,000 SF hotel	<u>10,012,600</u>
	Total	10,083,532
D	2,024,247 SF office ^a	248,262
	1,445,000 SF hotel	<u>11,574,566</u>
	Total	11,822,828
E	594,247 SF office ^a	<u>70,932</u>
	Total	70,932
F	1,249,247 SF office ^a	159,597
	1,245,000 SF hotel	<u>10,012,600</u>
	Total	10,172,197
G	No new uses	<u>0^c</u>
	Total	0

a Existing office uses on the site are subtracted from proposed uses to arrive at net office uses. Industrial uses currently on the site consume a minor amount of natural gas annually (less than 3,500 therms), so are not considered in the analysis.

b Generation rates provided by San Diego Gas & Electric.

c There would be no net increases in natural gas usage because no new uses are proposed.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ALTERNATIVES

When compared to Alternative G, the no action alternative, redevelopment of the project site with Alternatives A, B, D, and F would result in an increase in electricity consumption, whereas implementation of Alternative E would result in a decreased demand for electricity.

Table 4.12-2 lists the anticipated electricity requirements of the proposed alternatives. Alternatives A, B, C, D, and F would all substantially increase the demand for electricity over existing consumption (Alternative G). The uses proposed by Alternative E would actually reduce the amount of electricity that would be consumed on the site.

According to the preliminary public utilities assessment by Cash and Associates, a looped 12 kV system would be required to serve the new or rehabilitated structures associated with Alternatives A through F. The loop system could be constructed in conjunction with the phased development of these alternatives.

Development of the 12 kV system, as well as the underutilized capacity of Station B, would provide sufficient electrical service to the project site. No significant impacts are expected from implementation of any of the alternatives.

MITIGATION MEASURES

The following measures should be incorporated into the project design to reduce potential adverse effects on consumption and distribution of electricity to the project site:

- A looped 12 kV system will be constructed by the developer in phases to provide adequate electricity to the various individual structures within the Navy Broadway Complex as they are developed.
- Coordination by project developers will occur with SDG&E regarding recommendations on energy conservation measures. All private development will be constructed in accordance with Title 24 of the California Administrative Code, which provides energy conservation measures.

TABLE 4.12-2
ELECTRICITY CONSUMPTION FOR THE PROPOSED ALTERNATIVES
(Net Increase)

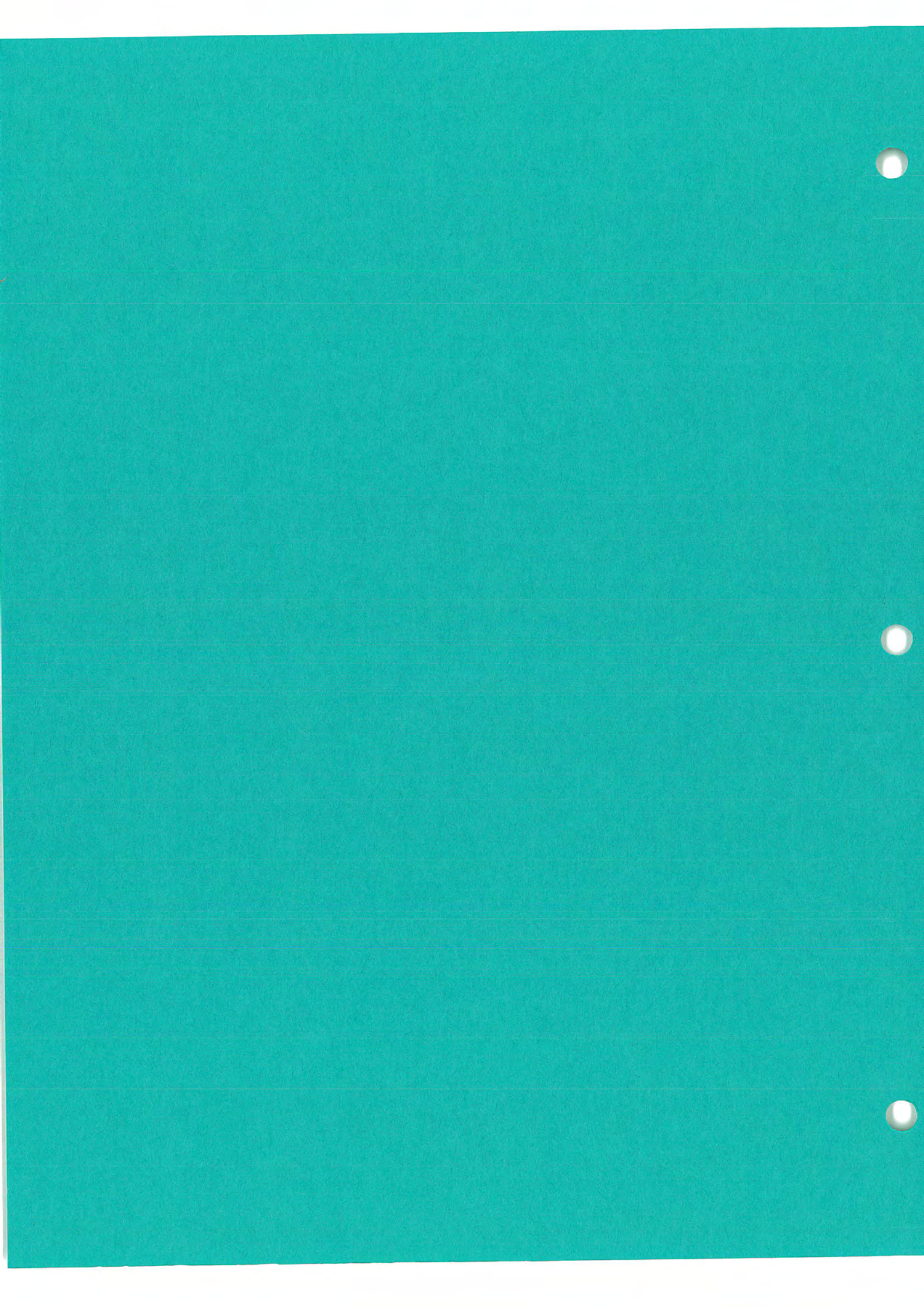
Alternative	Net Land Use	Consumption ^b kWh/Year
A	1,249,247 SF office ^a	19,156,797
	1,245,000 SF hotel	11,787,425
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	14,137,982
B	1,549,247 SF office ^a	23,413,863
	1,245,000 SF hotel	11,787,425
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	18,395,048
C	594,247 SF office ^a	8,514,132
	1,245,000 SF hotel	11,787,425
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	3,495,317
D	2,024,247 SF office ^a	28,339,458
	1,445,000 SF hotel	21,285,330
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	32,818,548
E	594,247 SF office ^a	8,514,132
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	-8,292,108
F	1,249,247 SF office ^a	19,156,797
	1,245,000 SF hotel	11,787,425
	(601,276 SF industrial)	<u>(16,806,240)^c</u>
	Total	14,137,982
G		<u>0^d</u>
	Total	0

- a Net increase in proposed office uses over existing office uses that would be removed.
- b Consumption factors were provided by San Diego Gas & Electric.
- c Existing industrial uses that would be removed by Alternatives A through F.
- d No net increases in electricity consumption would occur because no new uses are proposed.

ENDNOTES:

- 1 Cash and Associates, 1988.
- 2 Ables, San Diego Gas and Electric, personal communications, 1989.
- 3 Cash and Associates, op. cit.





SECTION 5

CUMULATIVE IMPACTS

The Navy Broadway Complex is located in an area of San Diego that is undergoing substantial development. As shown in Table 4.1-2, page 4-7, and Figure 4-3, page 4-8, major projects with over 6.5 million SF of office, 600,000 SF of commercial-retail, 4,000 hotel rooms, nearly 2,000 residential units, and a convention center are proposed to be completed in the project vicinity between 1989 and 2010. Attendant with this level of development would be cumulative impacts to many of the environmental systems in the project area.

Due to the relatively long buildout period of the alternatives, with completion of all but Alternative E and Alternative G (no action) not expected until 2003, many of the impacts of the proposed project were considered in Section 4 along with cumulative development. Provided herein is a qualitative discussion of the potential cumulative impacts of the proposed alternatives, with references to quantitative discussions in Section 4, where appropriate. Cumulative impacts are generally regional impacts associated with several developments to which the project may contribute.

5.1 LAND USE AND APPLICABLE PLANS

Section 4.1.1, page 4-12, discusses the impacts of the proposed alternatives on existing and proposed surrounding land uses. As indicated in that discussion, none of the alternatives introduce incompatibilities to the existing and future land uses in the project area.

The ability of the Navy Broadway Complex to provide waterfront access is a site-specific issue that would be unaffected by cumulative development in the project vicinity. Nonetheless, to the extent that the development of either of Alternatives A through F would provide new pedestrian linkages from the downtown core to the waterfront, the following mitigation measure should be considered:

- New development along Broadway, E Street, F Street, G Street, and Market Street in the vicinity of the Navy Broadway Complex should be designed to facilitate and encourage pedestrian flow.

5.2 TRANSPORTATION/CIRCULATION

Section 4.2.2 (page 4-47) addressed two traffic impact scenarios: a short-term scenario that addressed the impacts of the first phase of the project on the circulation system that would be in place in 1995, and a long-term scenario that addressed the impacts of buildout of the project alternatives with buildout of cumulative development. As indicated in Section 4.2.2 (page 4-47), several of the alternatives would contribute incrementally to cumulatively significant impacts at the following intersections:

- Grape/Pacific Highway (Alternatives A through F)
- Broadway/Harbor (Alternatives B, C, and E)
- Broadway/Pacific Highway (Alternatives A through F)
- Broadway/Front (Alternatives A through F)

Several alternatives also contribute incrementally to cumulatively significant impacts at the following roadway segments:

- Pacific Highway south of Broadway (Alternatives A, B, C, E, and F)
- First Avenue south of Ash (Alternatives A, B, C, E, and F)

Mitigation measures, listed in Section 4.2.3, page 4-65, would reduce the traffic contributions of the alternatives to all intersections and road segments to a level that is below significance.

5.3 AESTHETICS AND VIEWSHED

The aesthetics and viewshed analysis in Section 4.3.2, page 4-108, includes visual simulations of Alternatives A and F. Included in those simulations were simulations of cumulative development. As indicated in Section 4.3.2, page 4-108, the alternatives would fill in the skyline of downtown San Diego. Only Alternative F, at some selected street-end views, would adversely affect the aesthetic character of the skyline.

5.4 PUBLIC SERVICES AND UTILITIES

Section 4.4 (page 4-115) discusses the impacts of the proposed alternatives on police protection, fire protection, recreation facilities, water, wastewater, and solid waste. Impacts created by project demand for these services and utilities would be mitigated to a level that is less than significant. The suppliers of these services and utilities did not indicate that cumulative development would adversely affect their ability to provide services. As discussed in Section 4.4, page 4-115, the project alternatives that include private development (Alternatives A, B, C, D, and F) would contribute incrementally to a cumulatively significant impact to schools. Measures to mitigate project impacts would reduce to less than significant the project's contribution to this effect.

5.5 SOCIOECONOMICS

The San Diego Association of Governments (SANDAG) provides projections of population, housing, and employment growth based on growth trends, land use patterns, and general plan land use designations. The SANDAG projections are cumulative in nature. The SANDAG growth projections for the site have been based on mixed-use development of the site, as designated by the City of San Diego General Plan. Development of any of the proposed alternatives, which would fall within the parameters of a mixed-use development, would be consistent with regional growth projections for the site. Therefore, the project would not adversely affect cumulative socioeconomic projections.

5.6 PHYSICAL ENVIRONMENT

5.6.1 GEOLOGY AND SEISMICITY

Geology and seismicity impacts are site-specific, and would not be affected by, nor would contribute to, cumulative impacts.

5.6.2 EXTRACTABLE RESOURCES

Impacts to extractable resources are site-specific. Therefore, the proposed project would not contribute cumulatively to impacts on extractable resources.

5.6.3 HYDROLOGY

Other development in the project vicinity would be located primarily on sites that already have some form of urban development. Therefore, redevelopment with the new uses would not add substantial areas of impervious material to the area. As such, no cumulative impacts on hydrology would occur.

5.7 BIOLOGICAL RESOURCES

As discussed in Section 4.7.2, page 4-151, the proposed alternatives would not adversely affect biological resources in the project vicinity. Therefore, development of the alternatives would not contribute to cumulative impacts on biological resources.

5.8 AIR QUALITY

The air quality analysis in Section 4.8.2, page 4-161, considers the impact of each of the alternatives on the air quality in the project vicinity and in the San Diego Air Basin. The San Diego Air Basin is a non-attainment area for ozone, nitrogen dioxide, and carbon monoxide. The proposed alternatives would include transportation demand management measures (TDM) that would substantially reduce the potential air quality impacts of the project. Incorporation of the TDM would, according to the California Air Resources Board, demonstrate consistency with the State Implementation Plan.

The Regional Air Quality Strategy establishes a goal of maintaining a Level of Service (LOS) C or better to reduce idling times and vehicular emissions. Cumulative development in the project vicinity would create congestion (LOS D or below) at six intersections. The proposed project would contribute a substantial increment to this congestion at one or two of these intersections. City of San Diego standards provide that this incremental contribution to the region's non-attainment of ozone and carbon monoxide standards is a cumulatively significant unmitigated impact.

5.9 NOISE

The noise analysis in Section 4.9.2, page 4-175, considers the impacts of each of the alternatives on buildout of the project vicinity. No significant noise impacts in the project vicinity would result.

5.10 CULTURAL RESOURCES

Unless the proposed alternatives would affect a historic district, cultural resource impacts from Navy Broadway Complex development are considered site-specific. As discussed in Section 4.10.1, page 4-207, the area surrounding the site is not in a historic district; therefore, development on the site would not create cumulative cultural resource impacts.

5.11 PUBLIC HEALTH AND SAFETY

Public health (i.e., hazardous waste) and safety (i.e., proximity to an airport) impacts are site-specific and would, therefore, not be affected by other development.

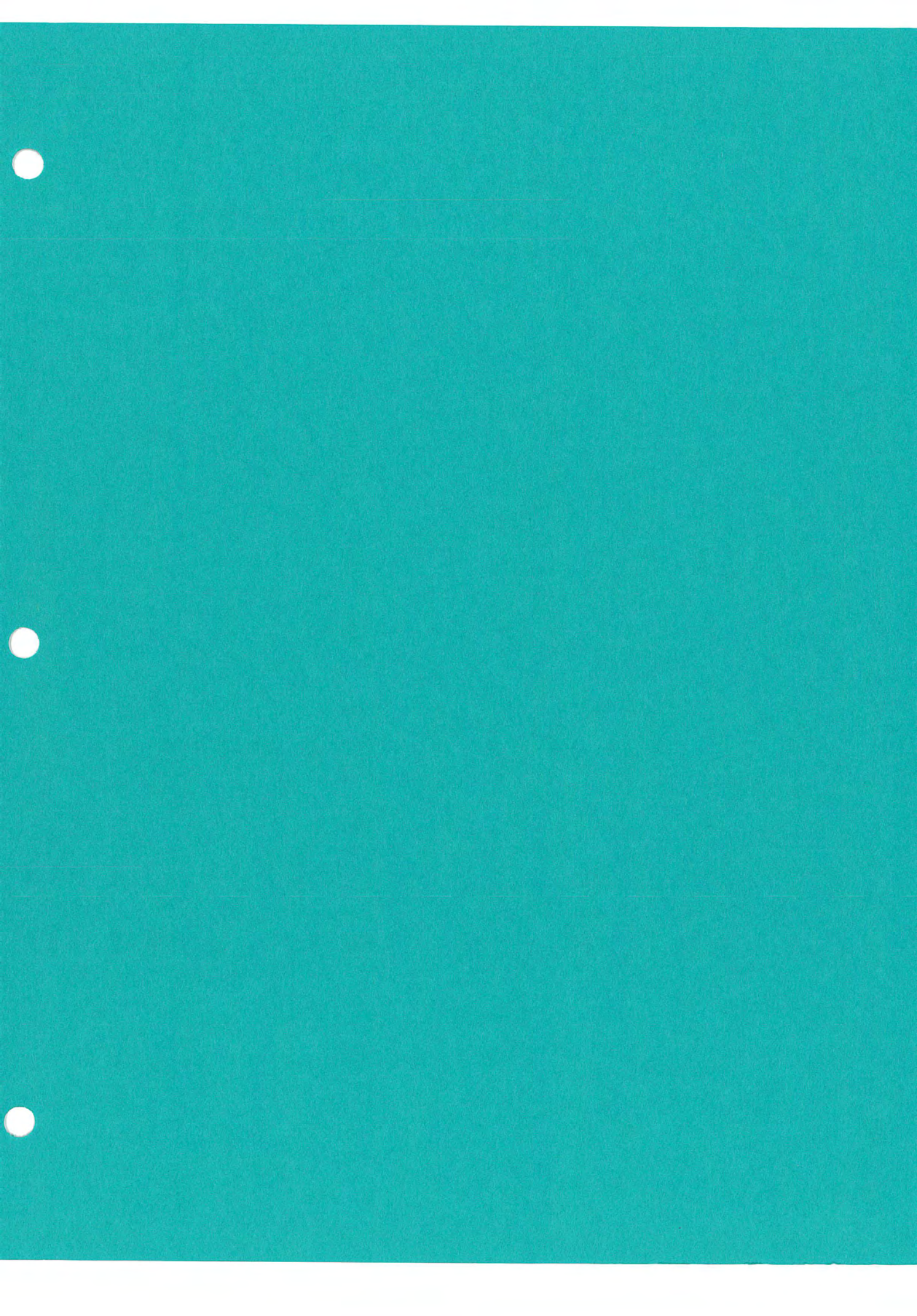
5.12 ENERGY AND CONSERVATION

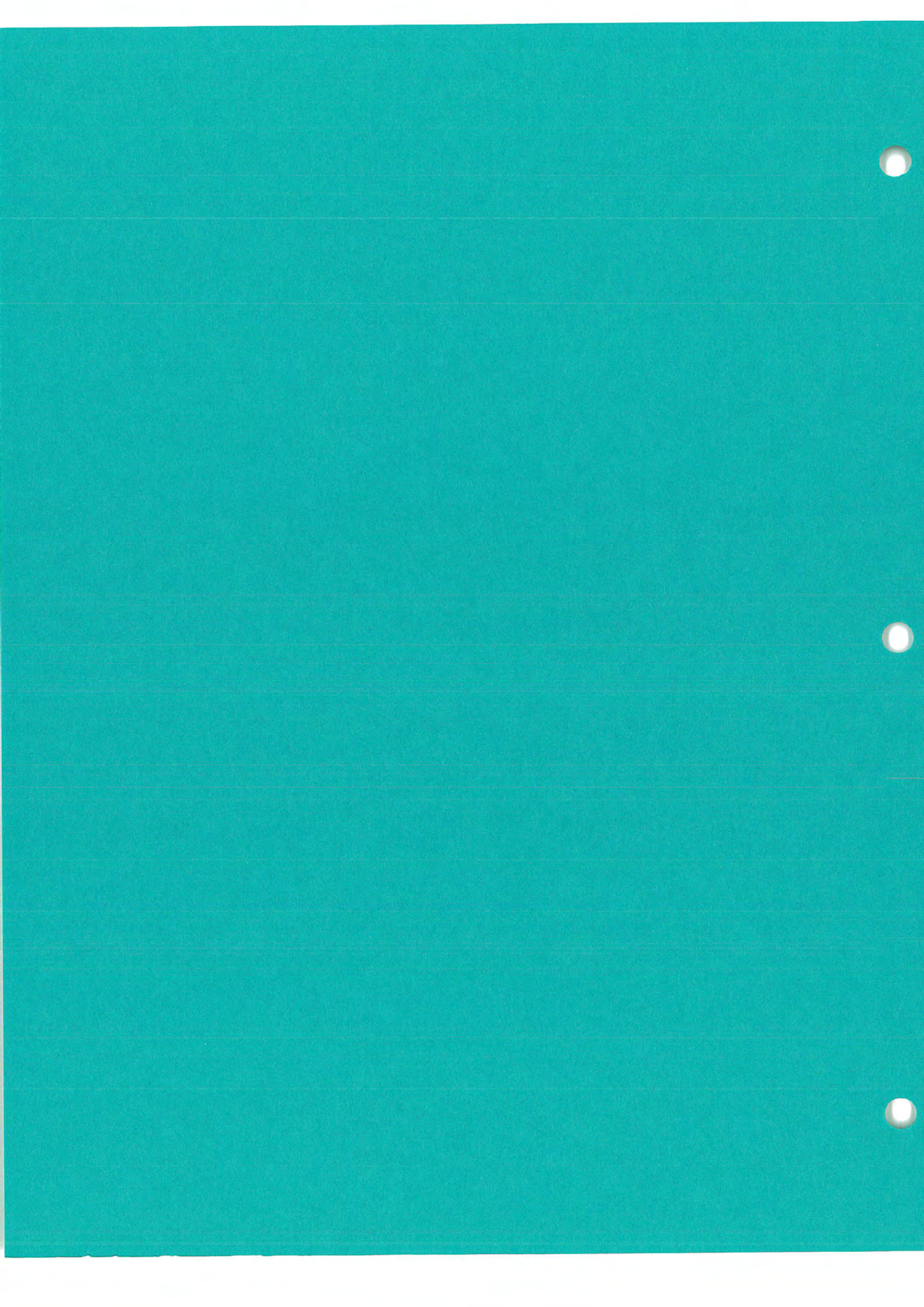
5.12.1 NATURAL GAS

The San Diego Gas & Electric Company (SDG&E) has sufficient capacity to supply natural gas to other development in the Centre City without adversely affecting its ability to continue providing existing services.

5.12.2 ELECTRICITY

SDG&E has indicated that a new substation may be needed to service the electrical needs of cumulative development in Centre City. Development of any of the proposed alternatives, except Alternatives C and E (both of which would provide a net reduction in onsite electricity use), and Alternative G, would contribute to this need.





SECTION 6

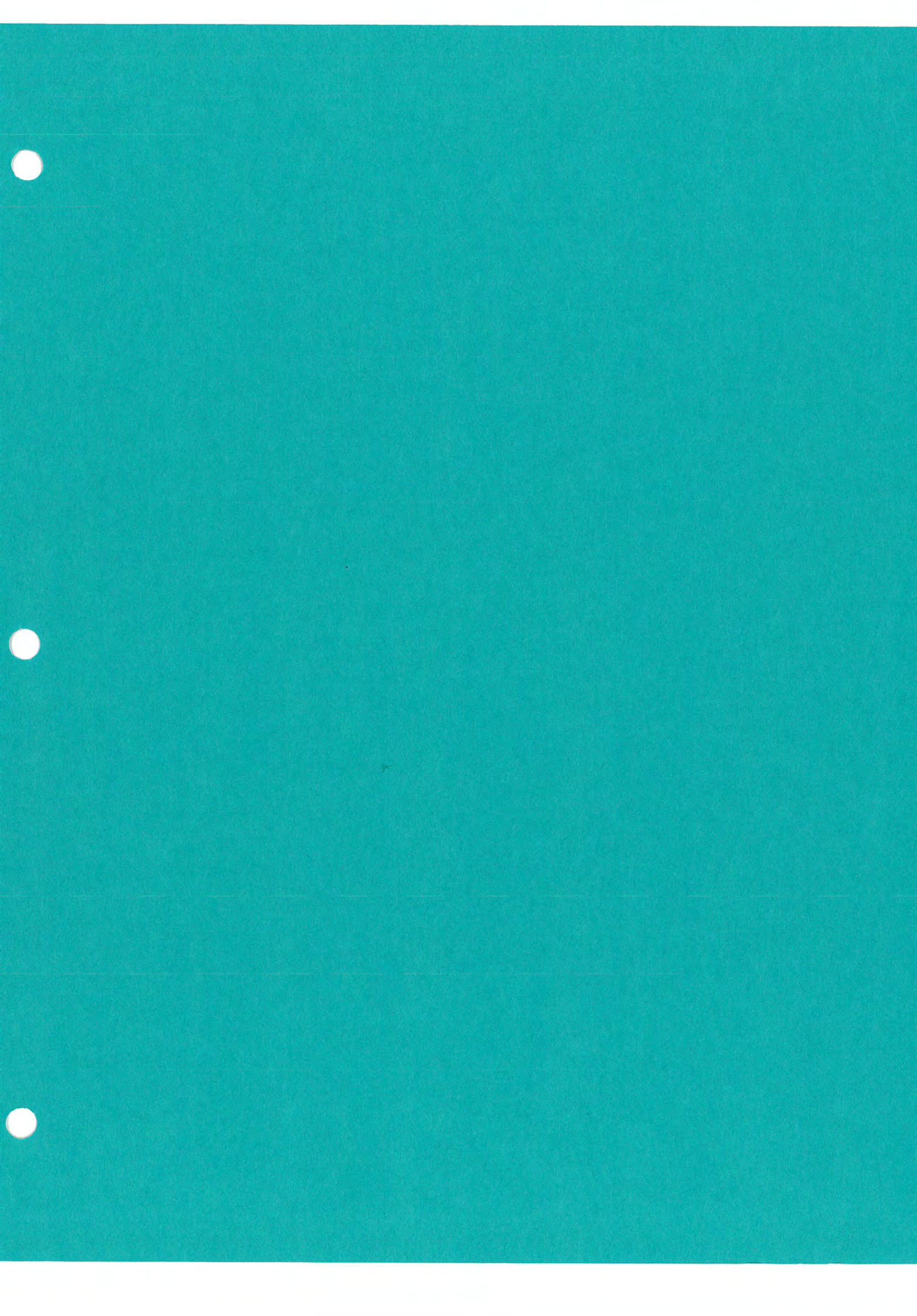
GROWTH-INDUCING IMPACTS

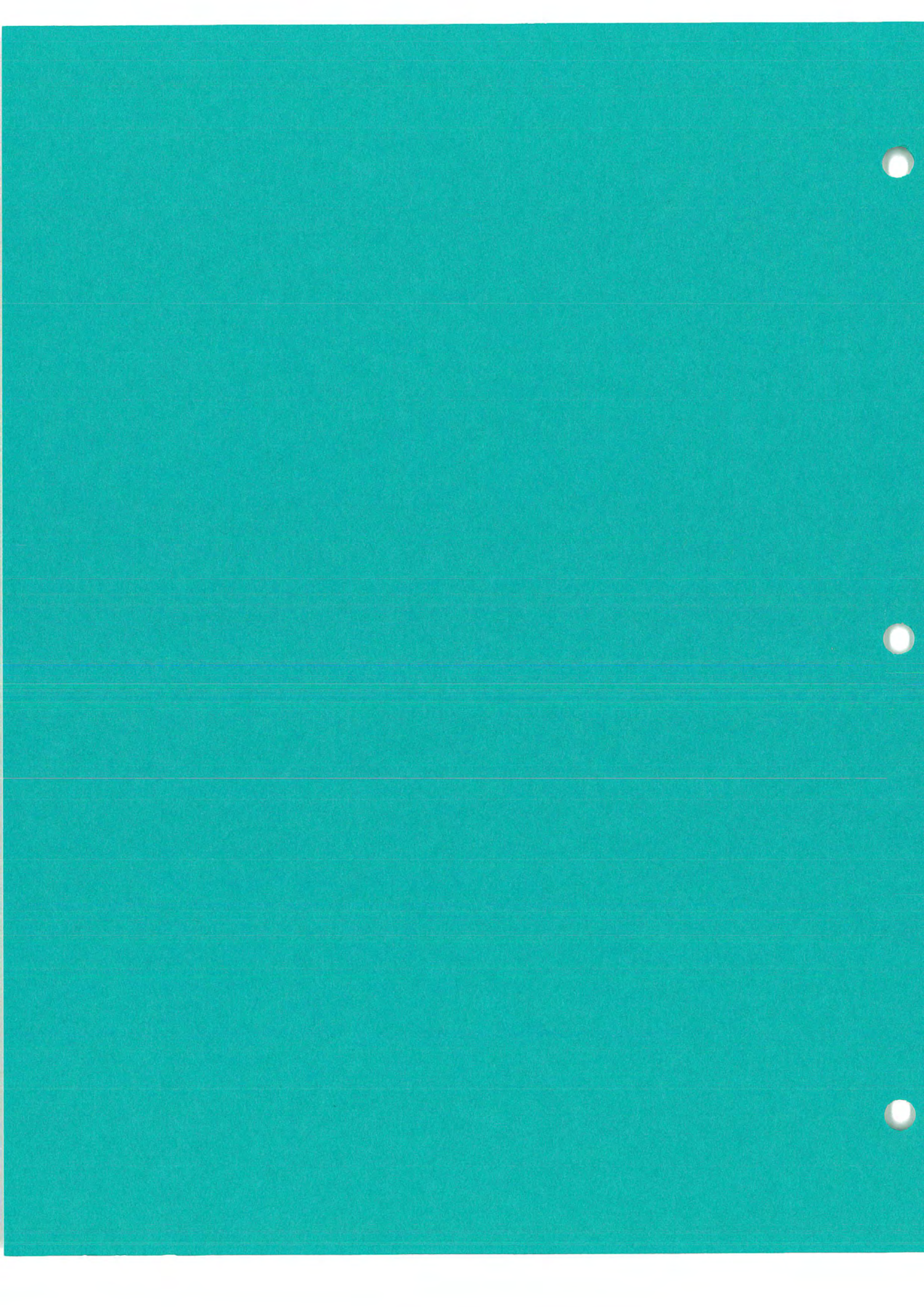
The project site is located in a dynamic area of San Diego that is undergoing substantial development. A number of major office, hotel, and commercial developments are proposed, under construction, or have been recently completed in the vicinity of the project site.

Growth-inducing impacts are those direct or indirect effects of a project that could result in economic or population growth, or the need for new housing. Section 4.5 (page 4-129), Socioeconomics, discusses the population and housing growth potential associated with the project. It is not anticipated that the proposed project would cause or encourage the intensification of any surrounding land uses, because surrounding land uses have long been responding to dynamic market forces that have already resulted in substantial growth, without apparent regard to the proposed redevelopment of the Navy Broadway Complex. Infrastructure in the project vicinity is already in place, and has not been a primary constraint to development of the surrounding area. Therefore, project development would not result in the introduction to the project area of new infrastructure that would remove constraints to the development of surrounding properties.

Alternatives A, B, C, D, and F would result in substantial increased usage of the waterfront. This would occur because major pathways between the Centre City core and the waterfront, such as E, F, and G Streets would be opened and enhanced for public use. In addition, pedestrian-encouraging treatments along Harbor Drive and the provision of ground-level retail on the site would serve to increase pedestrian use of this area. In turn, patronage of other waterfront establishments, such as Seaport Village, would be expected to increase, which is a growth-inducing effect of the project.







SECTION 7

ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSED ACTION BE IMPLEMENTED

Section 4, beginning on page 4-1, addressed the potential environmental consequences of the proposed action, and included measures to mitigate significant environmental consequences to the extent feasible. After mitigation, certain of the proposed alternatives would still cause significant adverse environmental effects, as discussed below. Please refer to Section 4 for a complete discussion of the potential impacts and mitigation measures.

7.1 LAND USE AND PLANNING

Alternatives C and E would not implement City of San Diego urban design goals that specify a pedestrian orientation along Broadway and would not be consistent with City or regional goals for providing a plaza at the foot of Broadway.

7.2 TRANSPORTATION/CIRCULATION

No significant unavoidable impacts associated with traffic would result from development of any of the alternatives.

7.3 AESTHETICS AND VIEWSHED

Development of Alternative F would significantly affect street-end views, such as from Pantoja Park down F Street, because this alternative would contrast substantially with the skyline from this distance. Even so, it is recognized that visual resource impacts are highly subjective, and development of this alternative may be considered aesthetically appropriate, even if its building height is out of character with the scale of nearby development.

7.4 PUBLIC SERVICES AND UTILITIES

No significant unavoidable impacts associated with public services and utilities would result from development of any of the alternatives.

7.5 SOCIOECONOMICS

No significant unavoidable impacts associated with socioeconomics would result from development of any of the alternatives.

7.6 PHYSICAL ENVIRONMENT

No significant unavoidable impacts associated with physical environmental resources would result from development of any of the alternatives.

7.7 BIOLOGICAL RESOURCES

No significant unavoidable impacts associated with biological resources would result from development of any of the alternatives.

7.8 AIR QUALITY

Development of Alternatives A through F would result in increased emissions of air pollutants. The project region is located in a nonattainment area for the achievement of air quality standards, so any increase in emissions is considered a significant environmental effect. However, substantial reductions in emissions would result from the proposed mitigation measures, so development of Alternatives A through F would not result in significant project-related unavoidable effects to air quality. The project would contribute an increment to cumulatively significant air quality impacts. This increment is considered significant under City of San Diego guidelines (see Section 5.8, page 5-3).

7.9 NOISE

No significant unavoidable impacts associated with noise would result from development of any of the alternatives.

7.10 CULTURAL RESOURCES

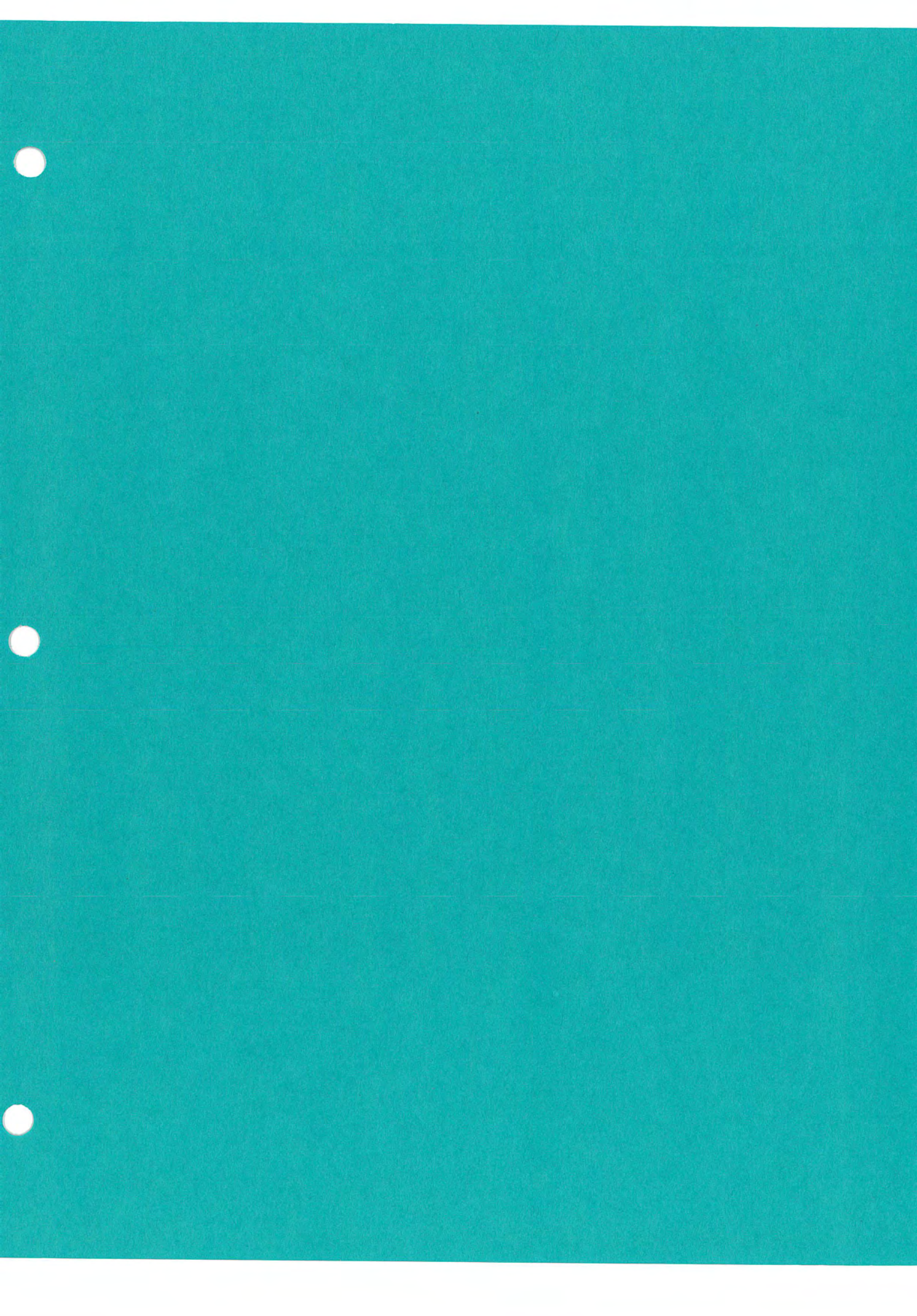
No significant unavoidable impacts associated with cultural resources would result from development of any of the alternatives.

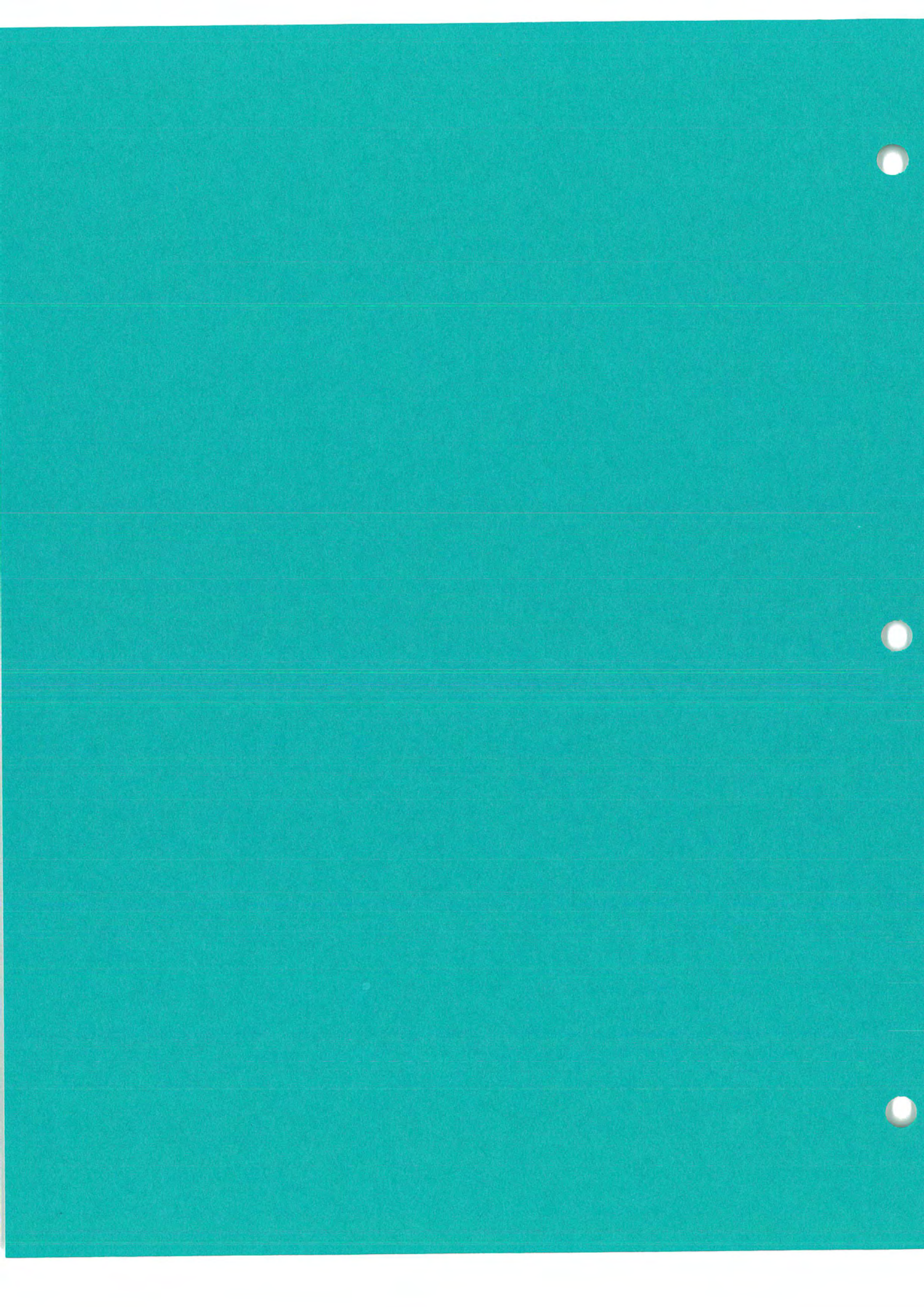
7.11 PUBLIC HEALTH AND SAFETY

No significant unavoidable impacts associated with public health and safety would result from development of any of the alternatives.

7.12 ENERGY AND CONSERVATION

No significant unavoidable impacts associated with energy and conservation would result from development of any of the alternatives.





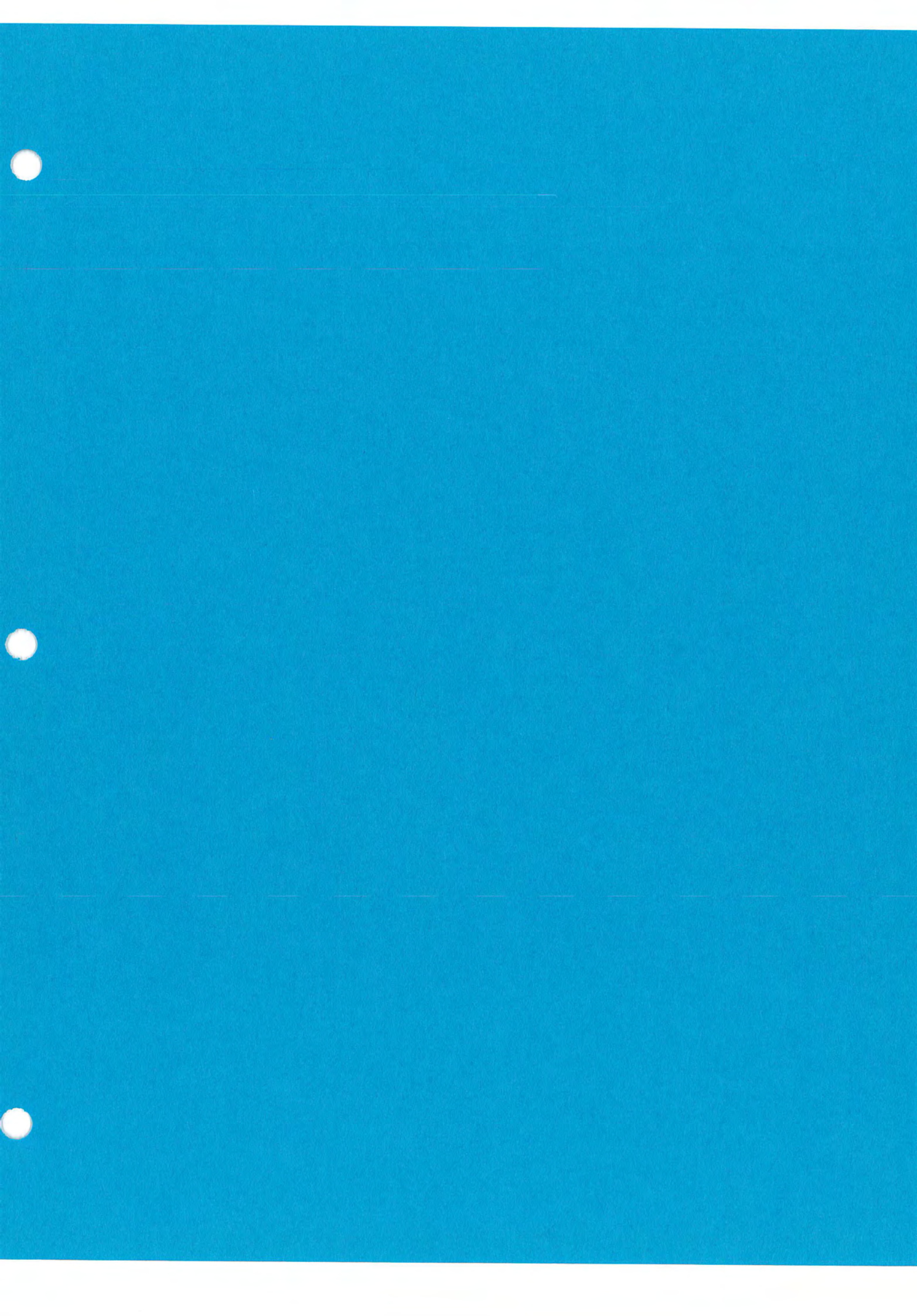
SECTION 8

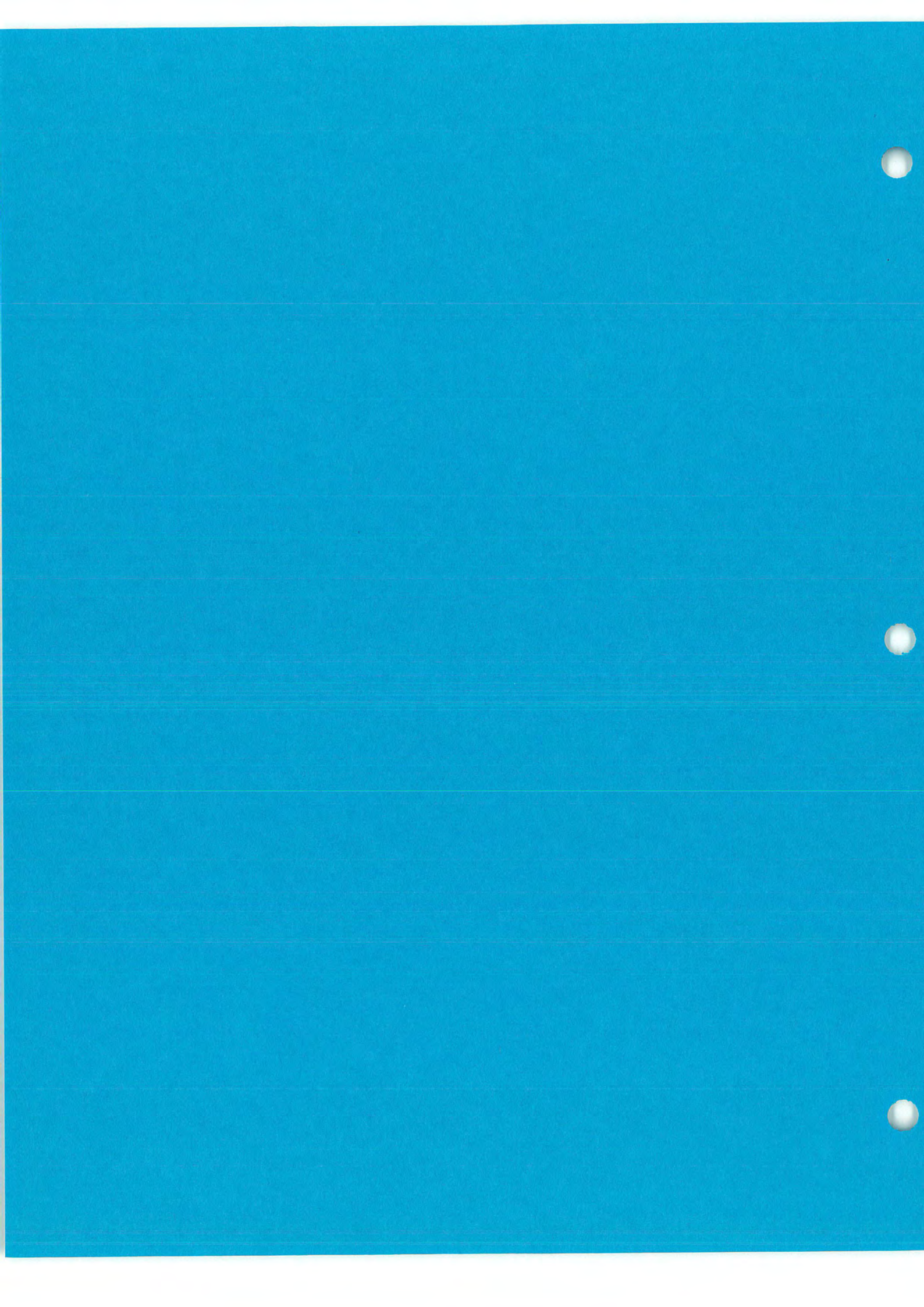
ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION IF IMPLEMENTED

The Navy Broadway Complex is located in the urbanized downtown area of the City of San Diego. Redevelopment of the site with any of the proposed alternatives would not commit new land or sensitive environmental resources to urban uses.

As with any urban development, nonrenewable resources and resources used to manufacture construction materials will be used during both the construction and operational phases of the project. Such resources include oil and gas, sand and gravel, and other construction materials. This represents an irreversible commitment of resources.





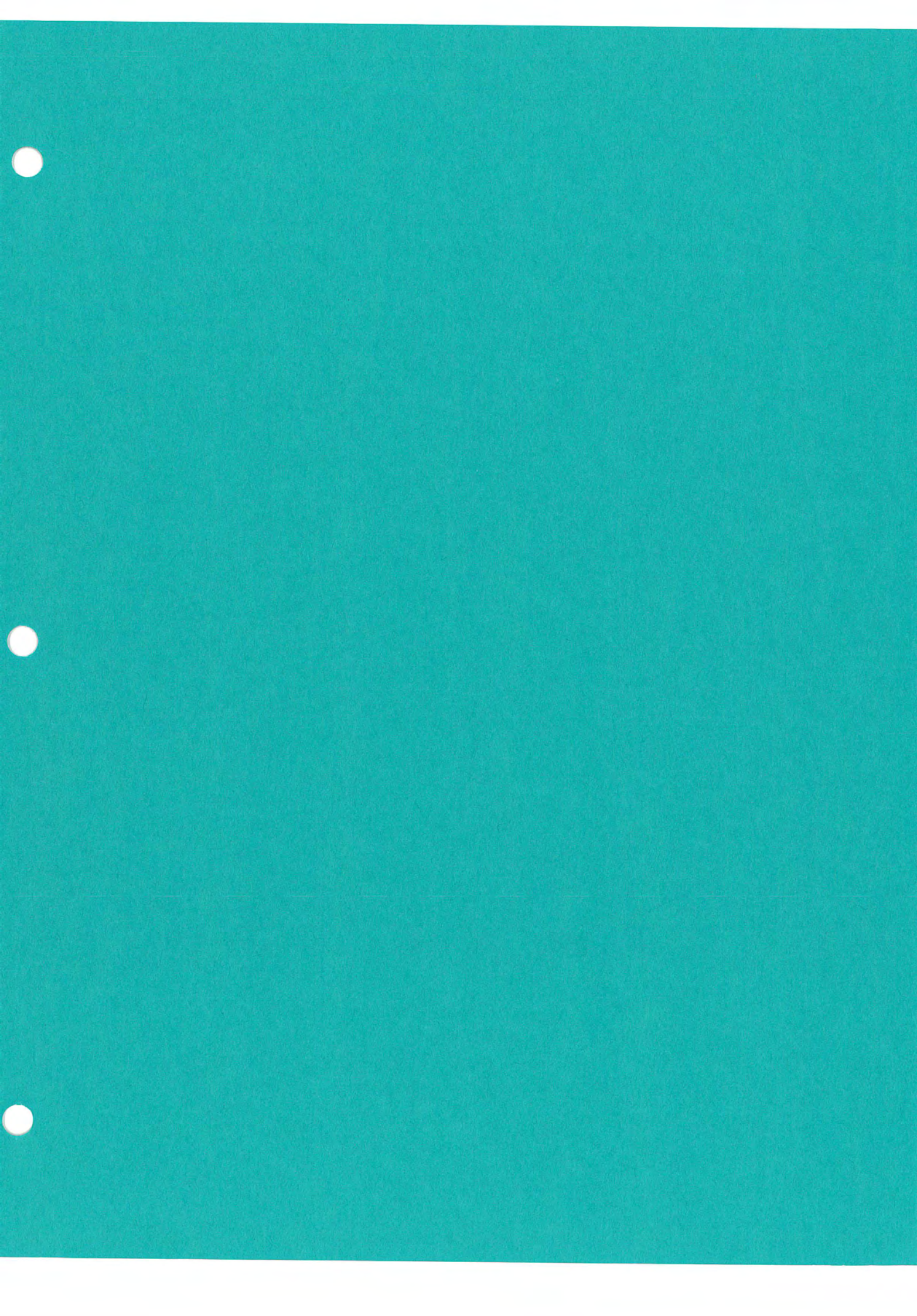


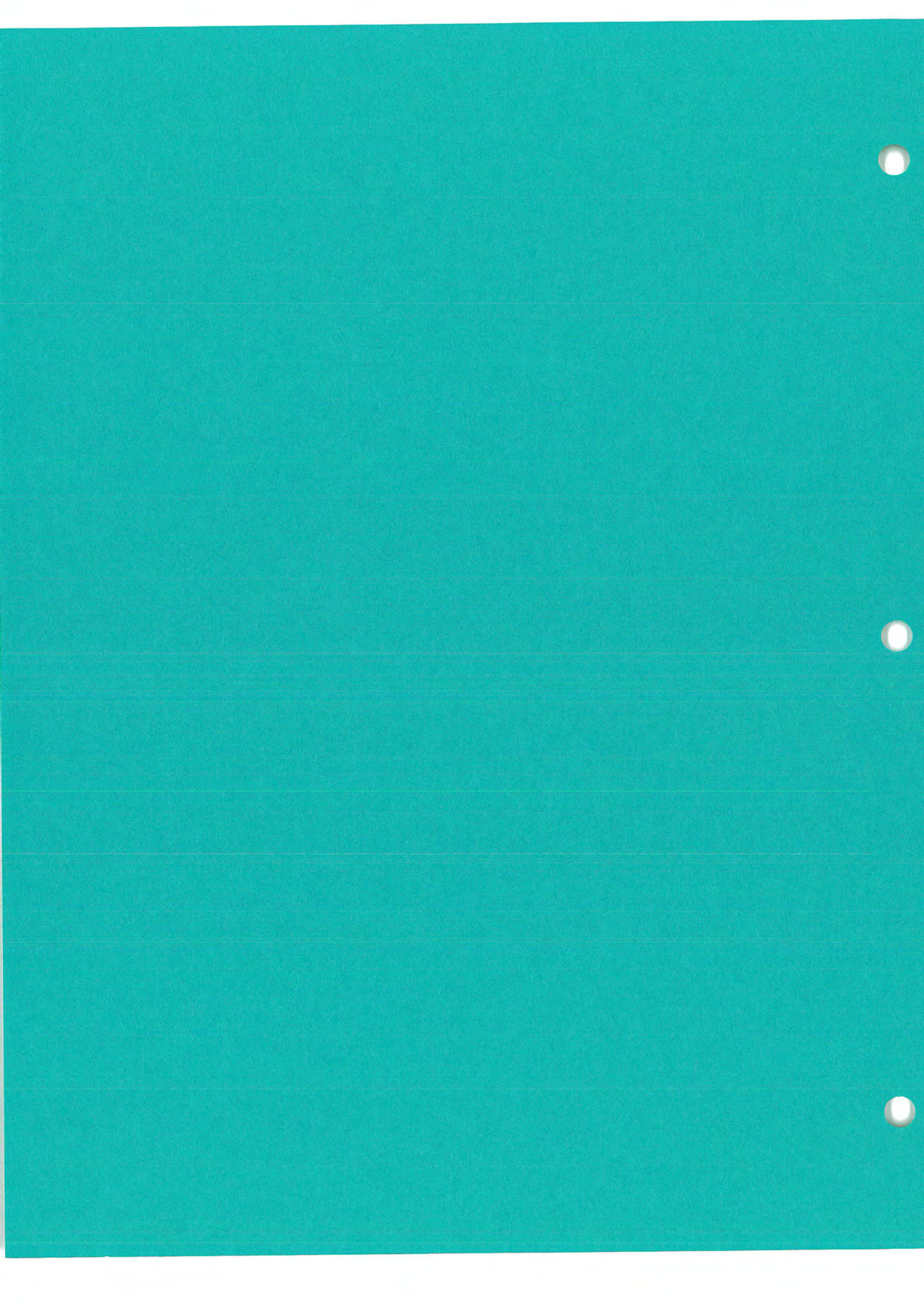
SECTION 9

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Development of the Navy Broadway Complex with the proposed uses would provide a continuation of the urban uses on the project site. In the short term, noise, traffic, and air pollution would be generated as old structures are removed or renovated and new facilities are constructed. No sensitive environmental resources would be used in the short term.

The project site is located in a highly urbanized area, and land use plans indicate a long-term commitment to highly urbanized uses, such as high-rise office and hotel uses. The proposed uses would represent a continuation of this long-term commitment to urban uses. The proposed uses would enhance the long-term productivity of the site. Each of the alternatives, except Alternative G, would create view corridors to the waterfront along E, F, and G Streets. Alternatives A and F would provide significant open space uses at the foot of Broadway, and Alternatives B and D would provide smaller pedestrian plazas at the foot of Broadway. Other urban amenities would be provided by redevelopment of the site with the proposed alternatives.





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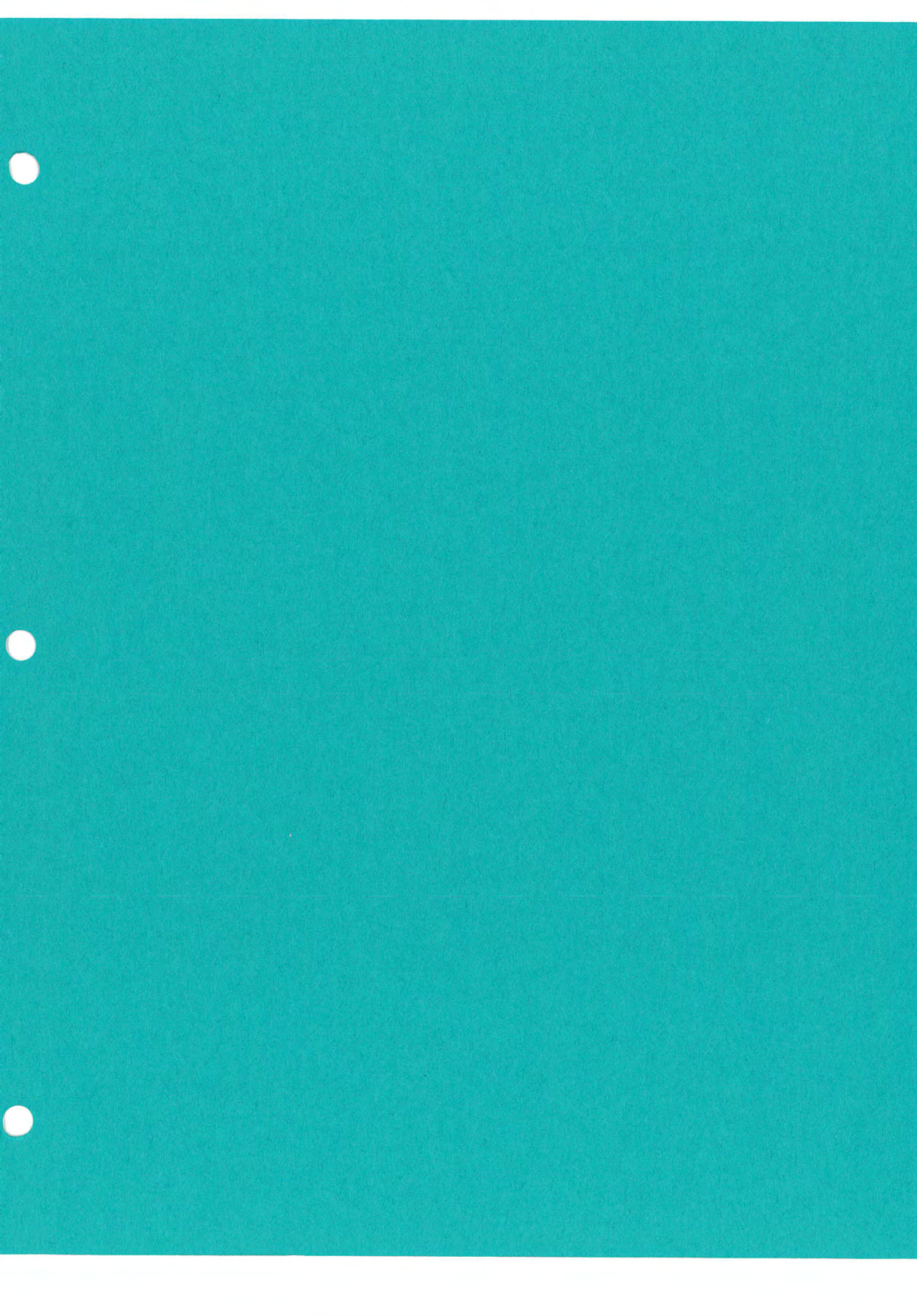
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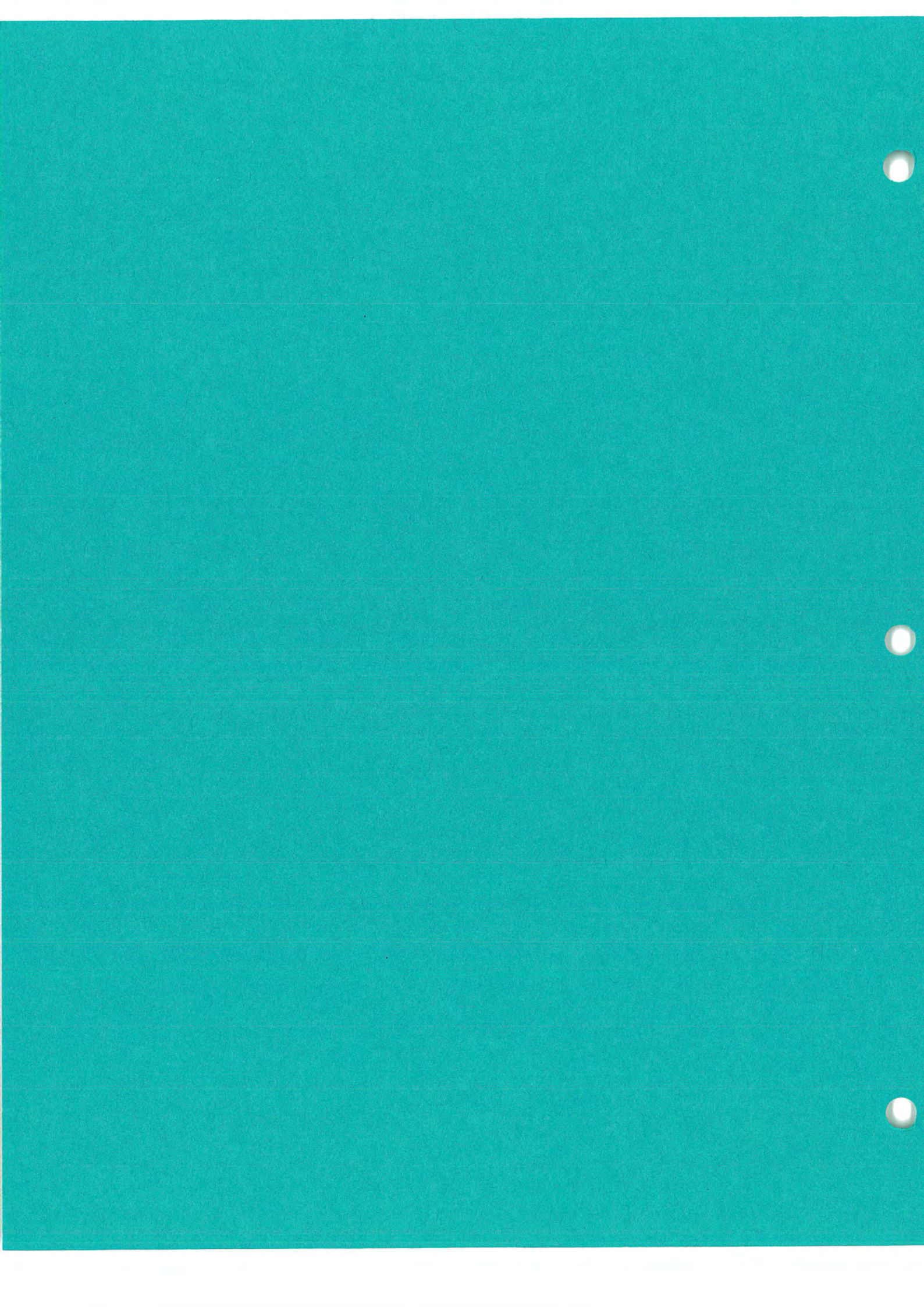
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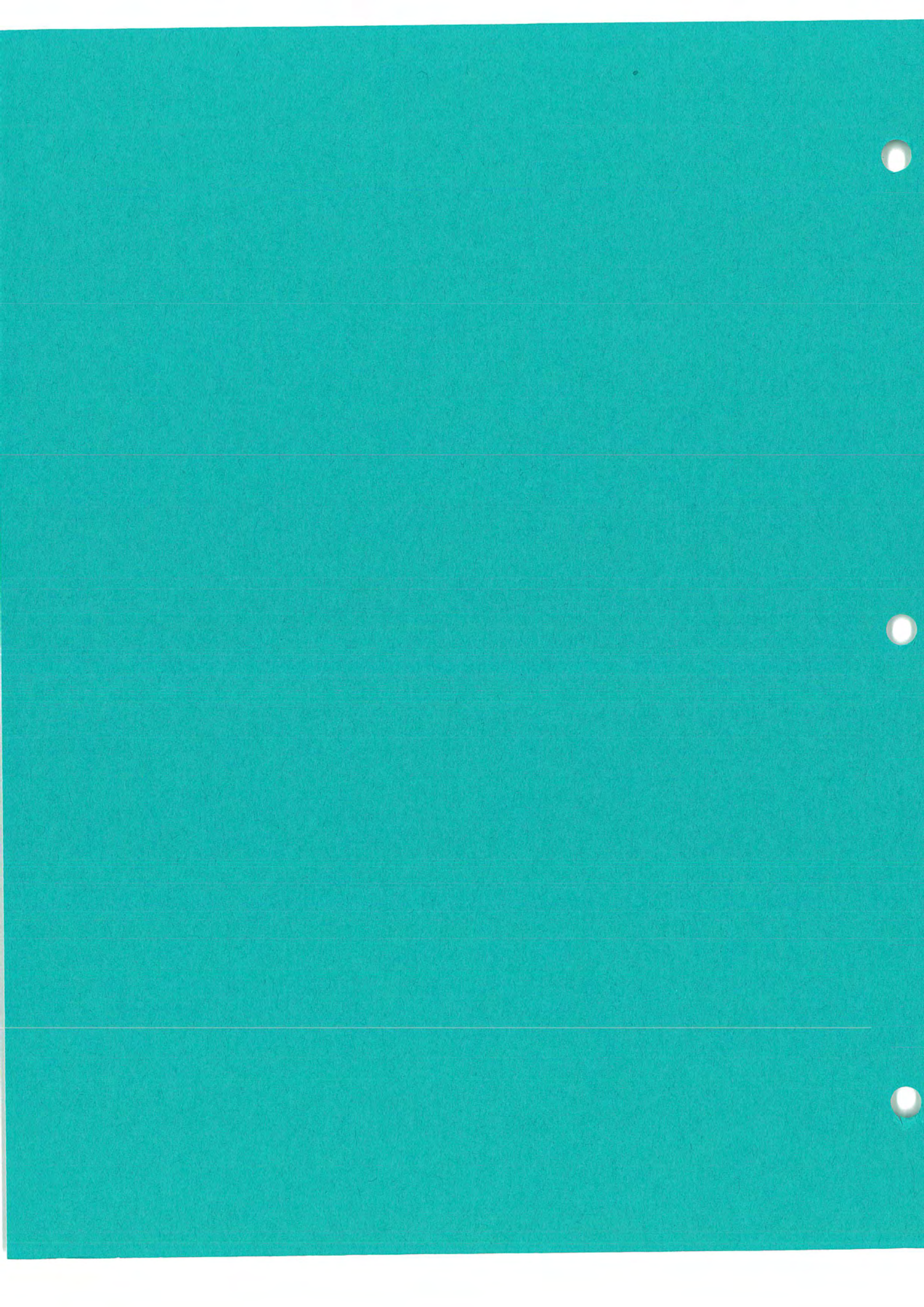
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Fire Department
Division Chief George George

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Assistant Director Pat Zoller
Property Management Assistant Annette Cherry

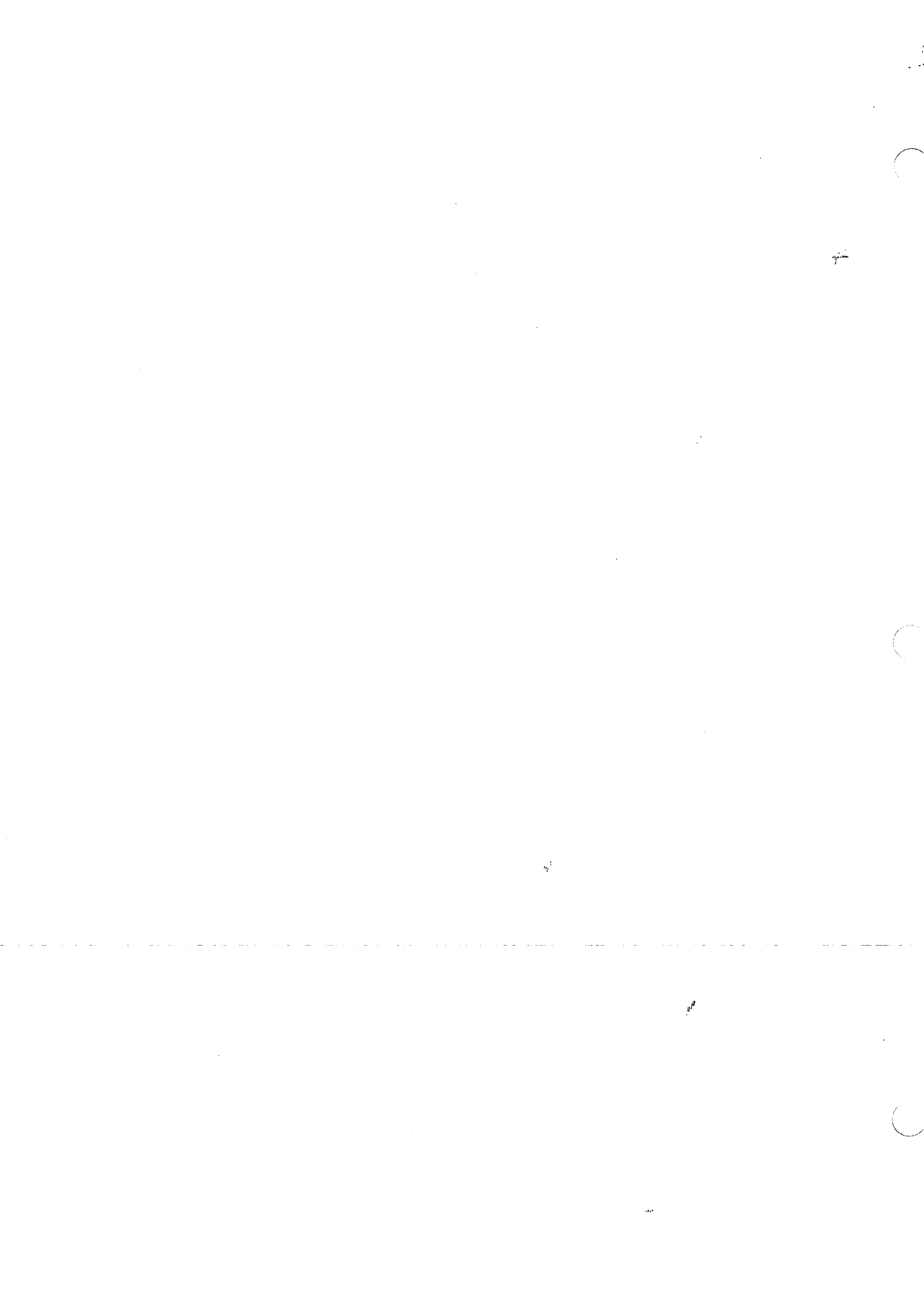
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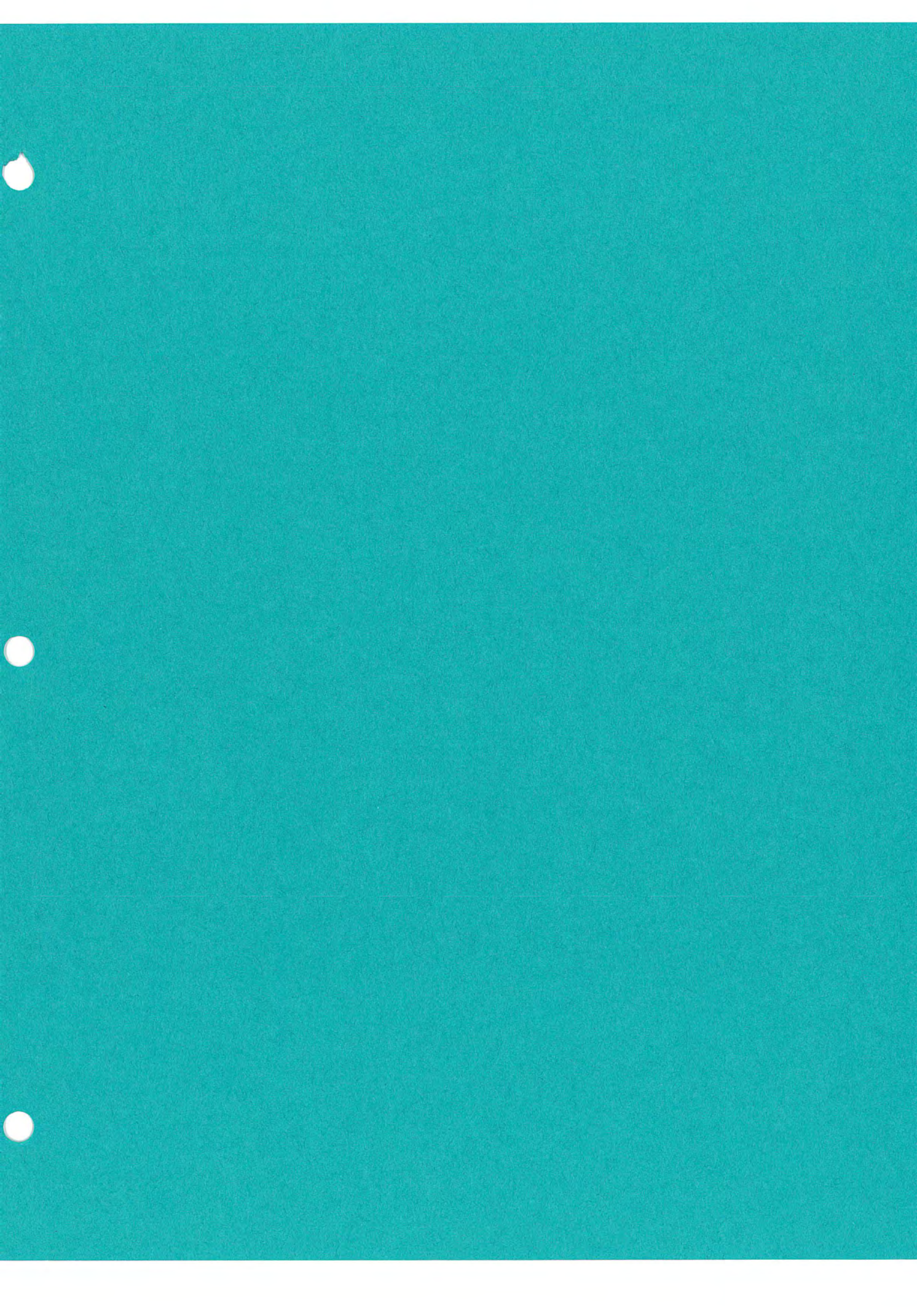
San Diego Gas and Electric
Service Planner Marion E. Stille
Senior Project Coordinator Kirk Romag
Engineer Mark Ables

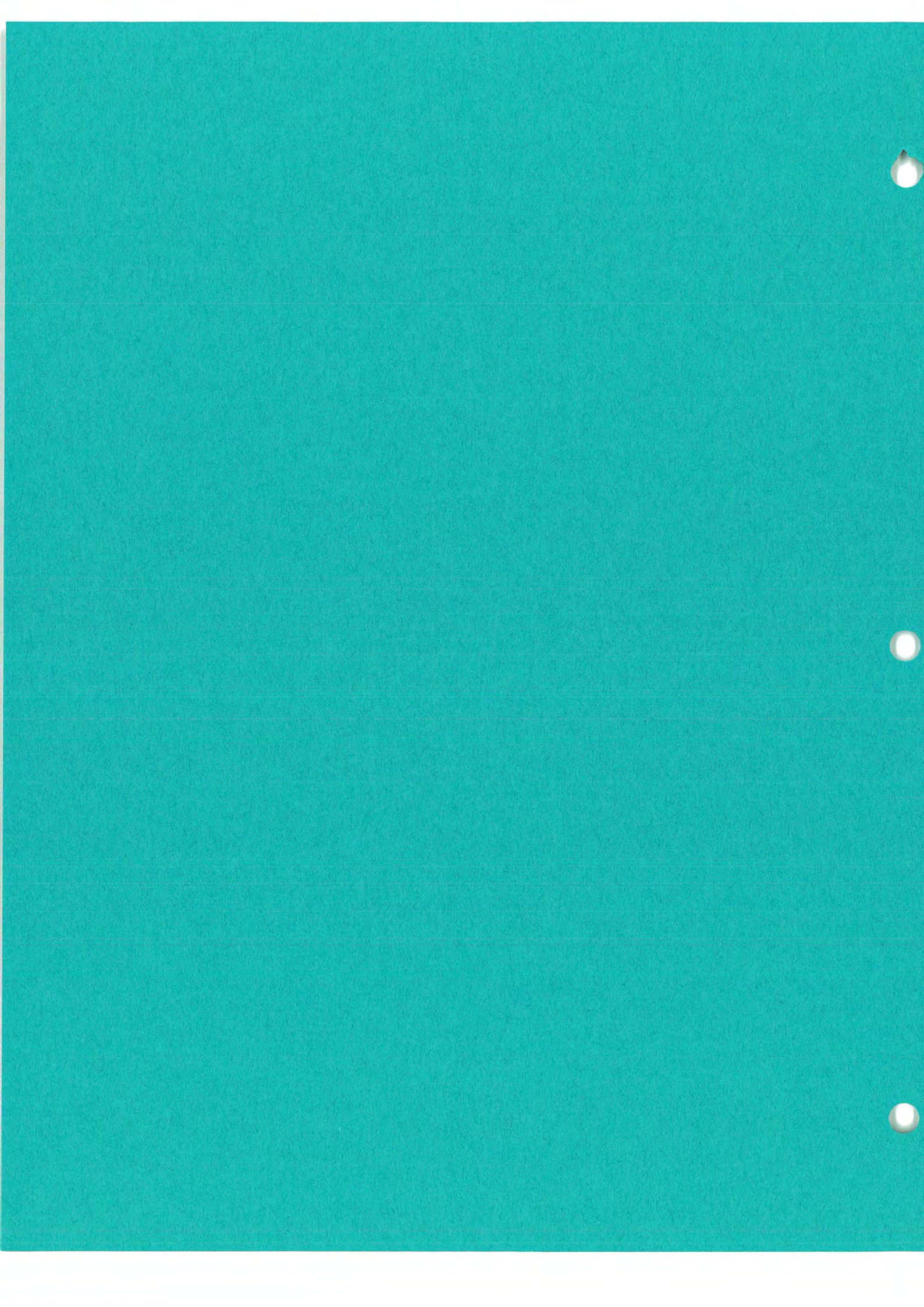
Emerald Shapery Center Development
Director of Public Relations Craig Collins

Starboard
Executive Vice President Tom Sullivan

Cabot, Cabot & Forbes
Clerk Lynn Fleming







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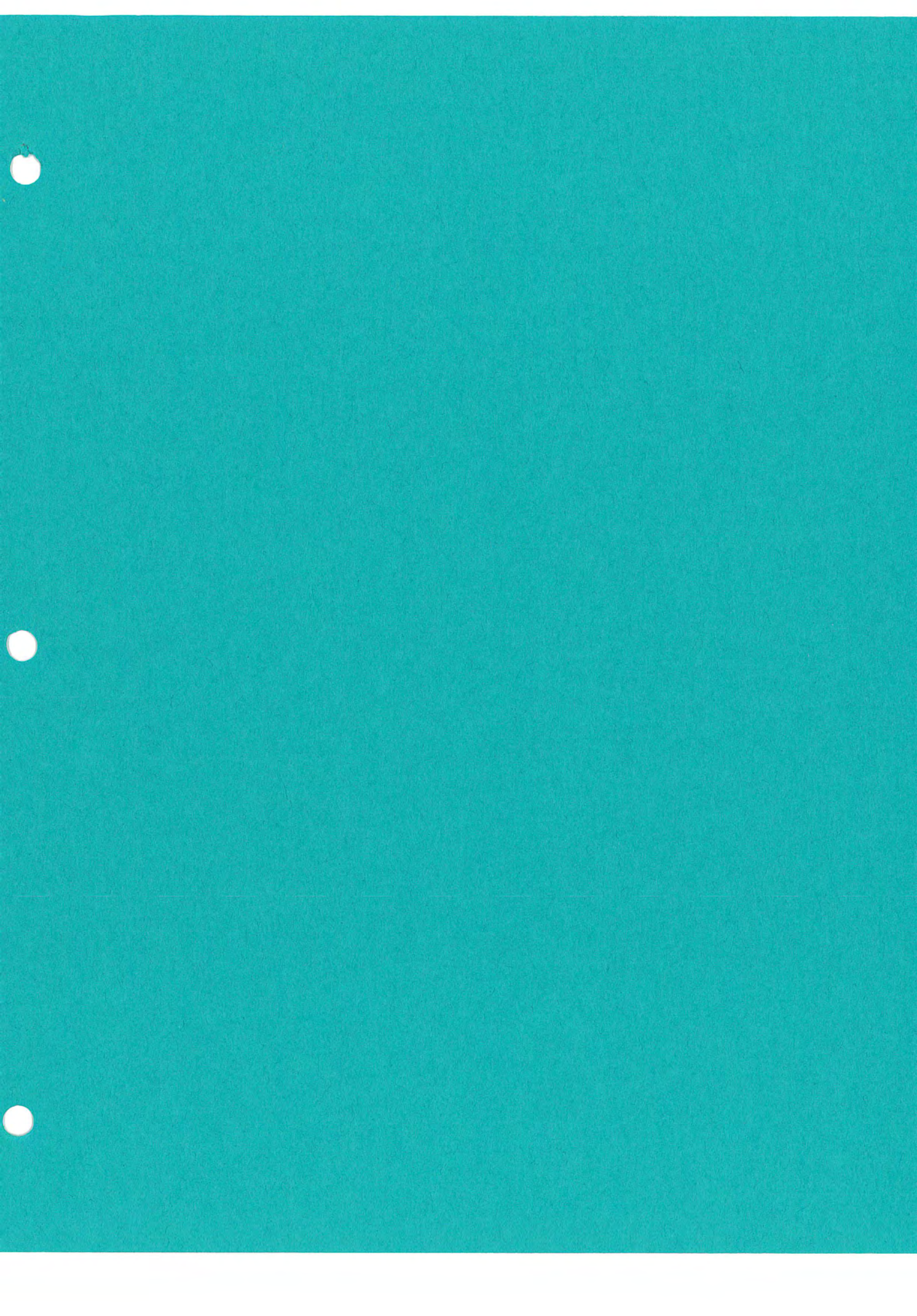
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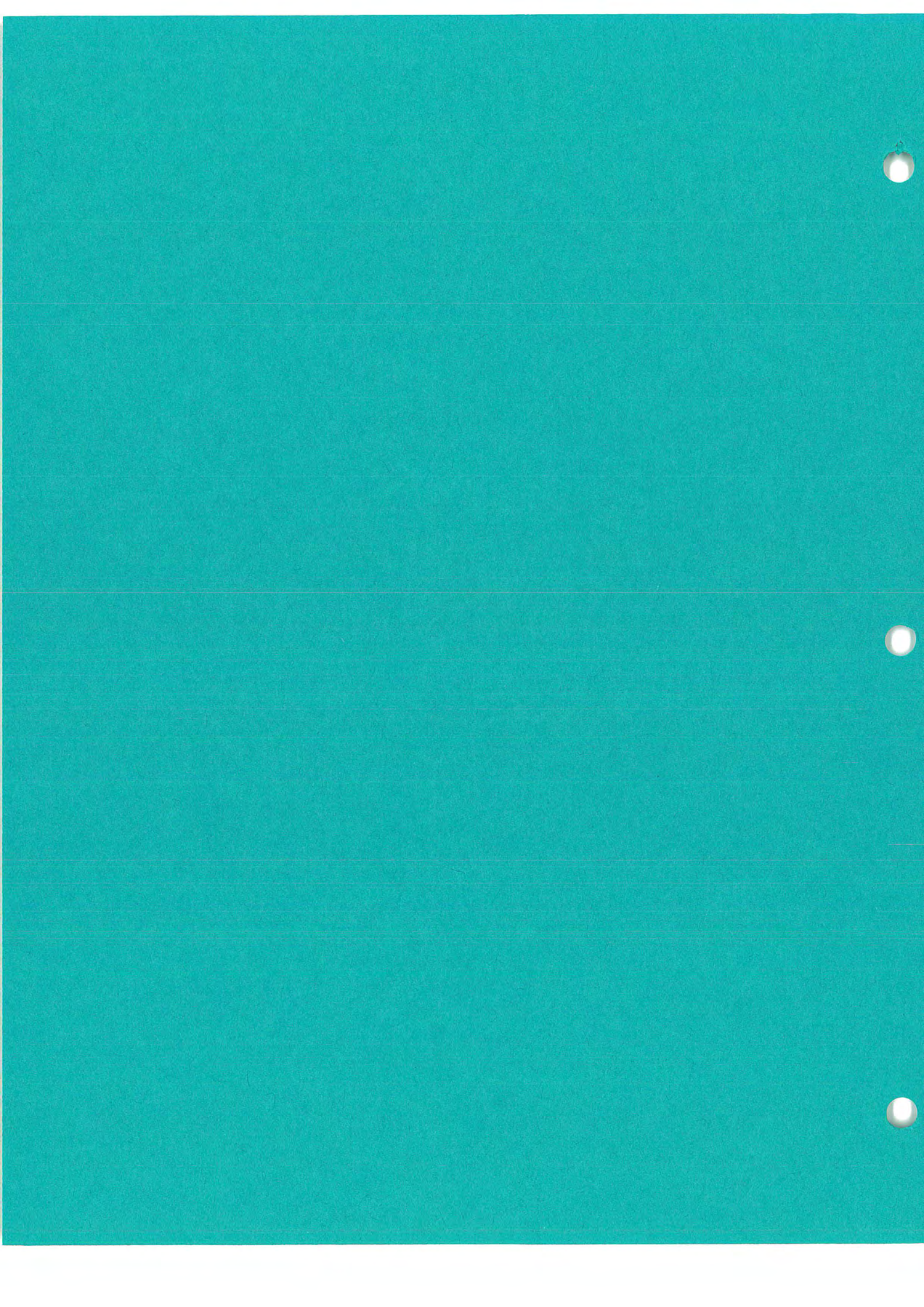
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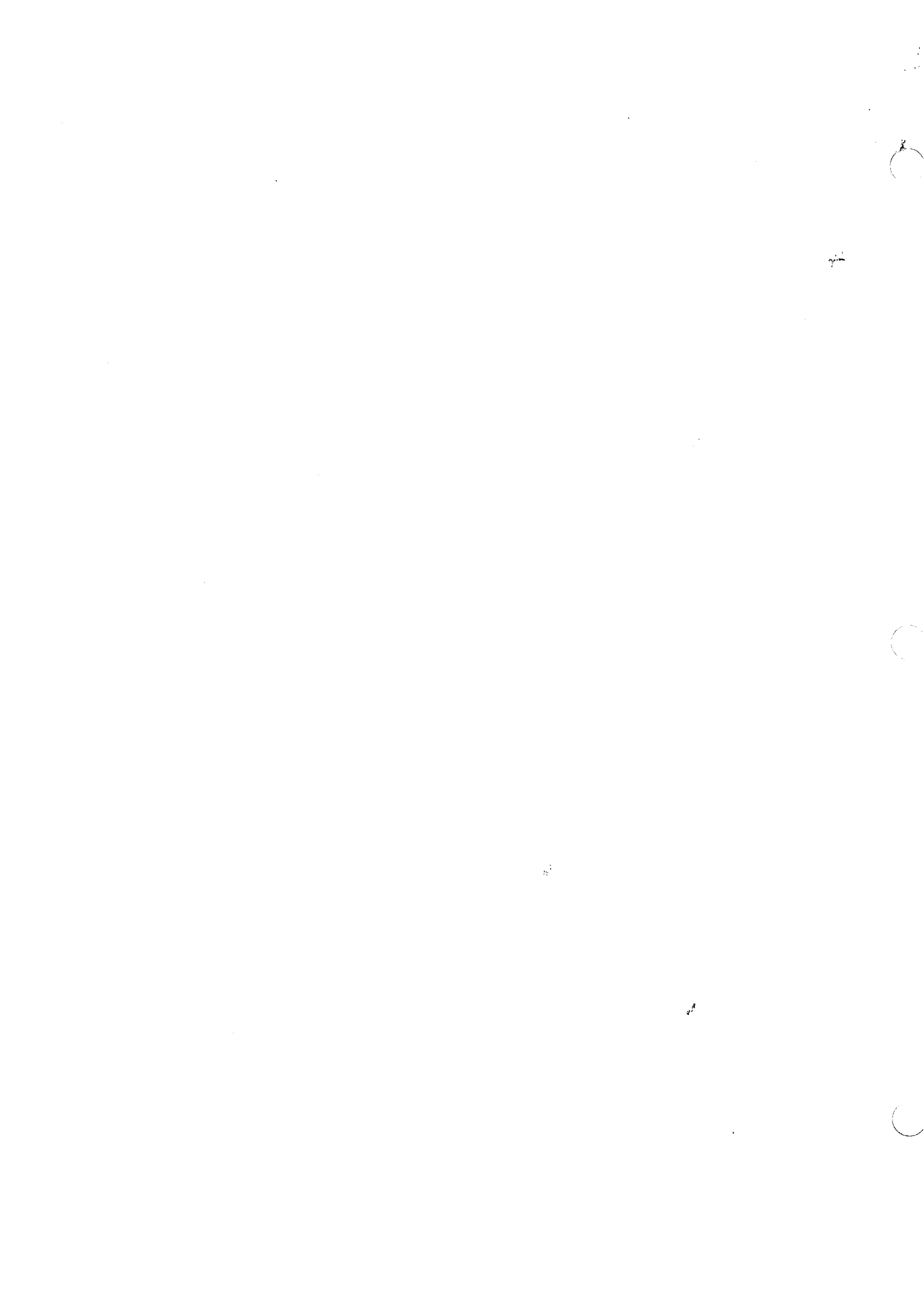
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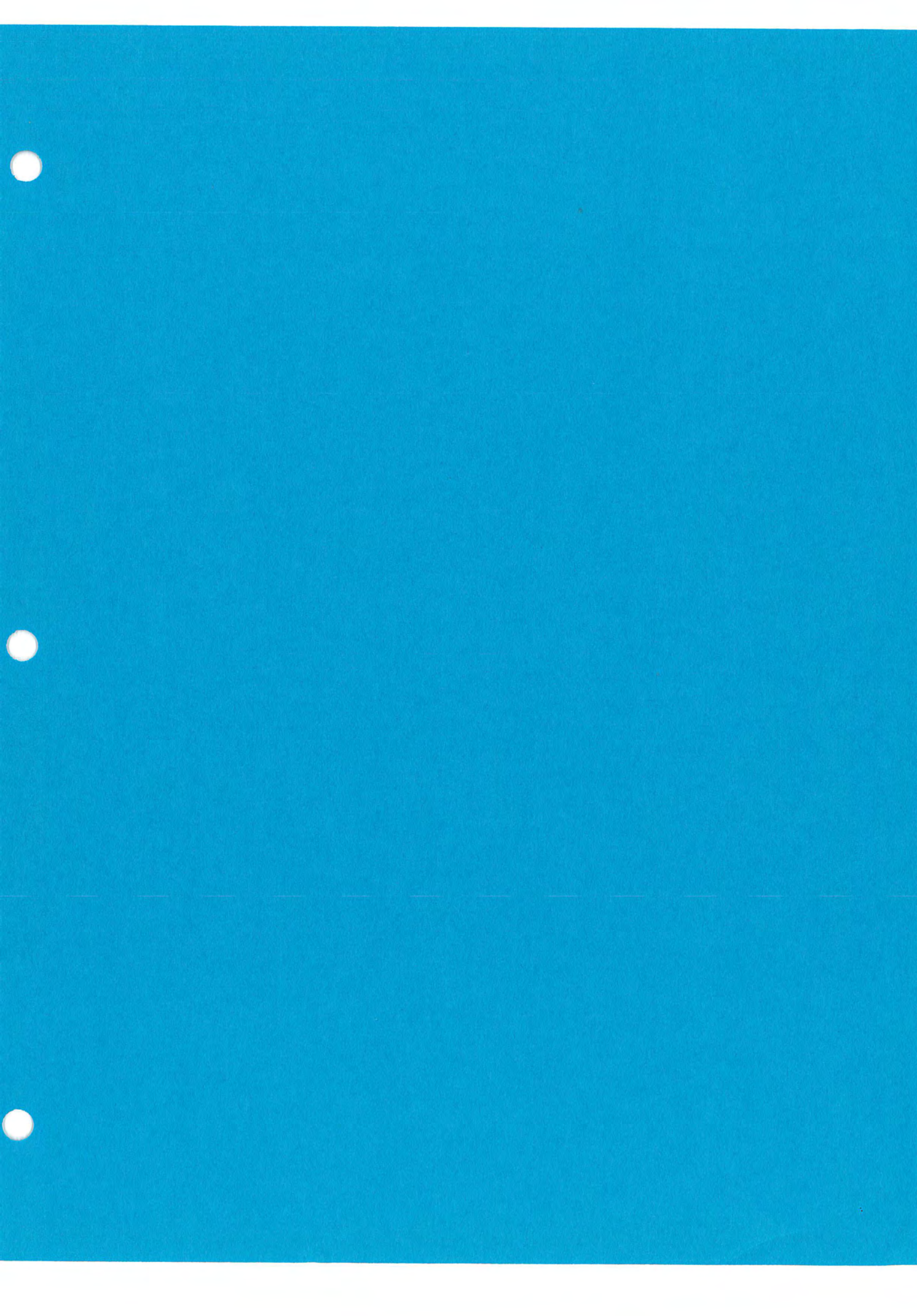


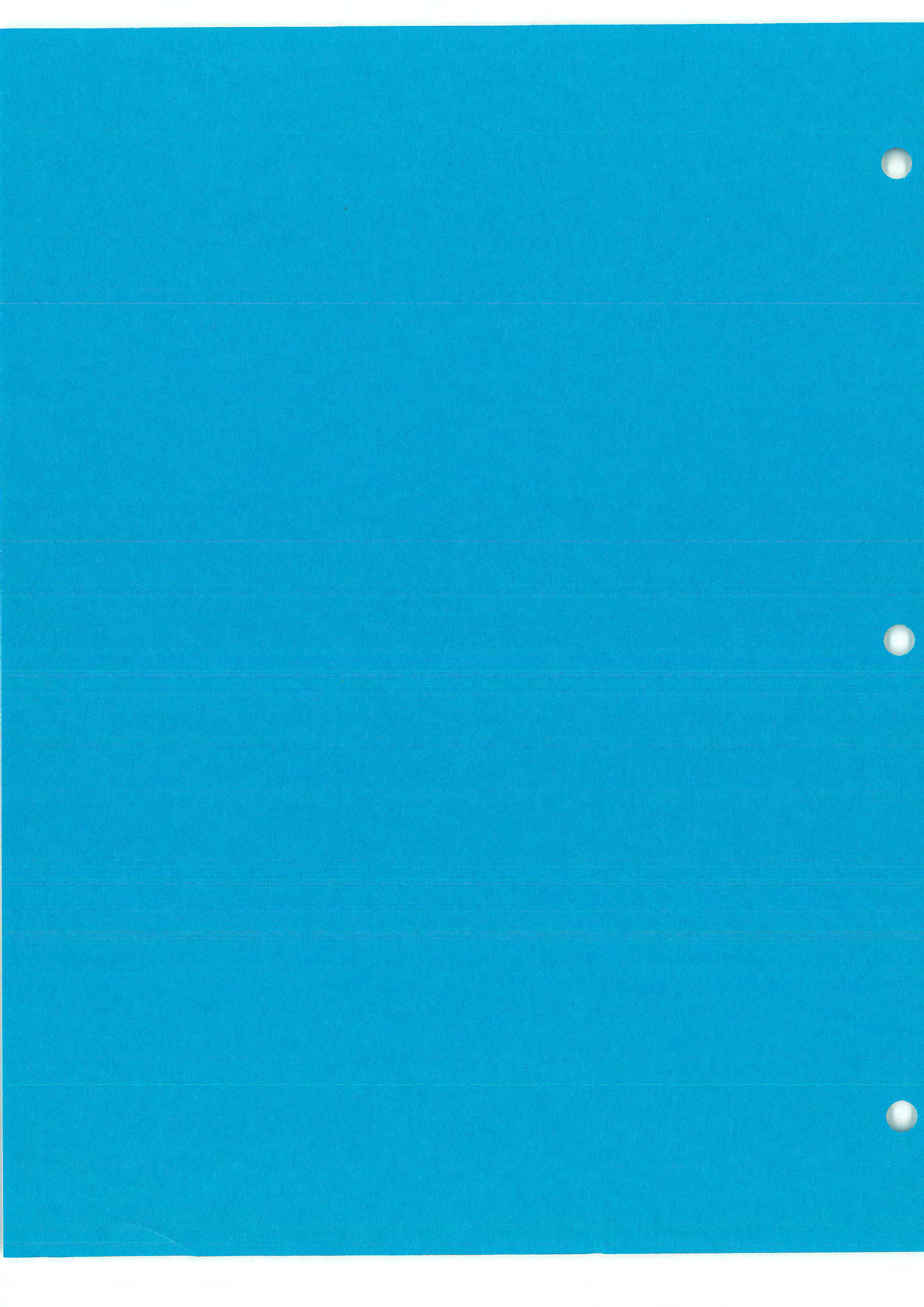
Technical Appendices



A. Public Law 99-661







LEGISLATION AUTHORIZING REDEVELOPMENT OF
BROADWAY COMPLEX, SAN DIEGO, CALIFORNIA
National Defense Authorization Act for FY 1987 (P.L.99-661)

SEC. 2732. LEASE AND DEVELOPMENT OF CERTAIN REAL PROPERTY, SAN DIEGO,
CALIFORNIA

(a) IN GENERAL.--Subject to subsections (b) through (g), the Secretary of the Navy may--

(1) enter into long-term leases of real property located within the Broadway Complex of the Department of the Navy, San Diego, California; and

(2) assist any lessee of such real property in financing the construction of any facility on such real property.

(b) CONSIDERATION.--(1)(A) In consideration for leasing the real property described in subsection (a), the Secretary shall obtain, without compensation or at substantially below market value, facilities or the use of facilities, or both, constructed on such real property by the lessees. (B) The Secretary shall provide that the value of the facilities or the use of facilities, or both, obtained under subparagraph (A) (minus the amount of any compensation paid by the Secretary for the facilities or use of them) shall be at least equal to the value of the use of the real property leased under subsection (a), as determined by the Secretary.

(2) In consideration for assisting a lessee in financing the construction of any facility on such real property, the Secretary shall obtain an ownership interest in such facility that is at least equal in value to the amount of the financing provided by the Secretary.

(c) CONDITIONS.--(1) The Secretary shall provide that any real property leased under this section shall be developed in accordance with detailed plans and terms of development which have been duly formulated by the Secretary and the San Diego community through the San Diego Association of Governments' Broadway Complex Coordinating Group.

(2) A lease may not be entered into under this section until 21 days after the Secretary submits a plan for the development of the real property described in subsection (a) to the Committees of the Armed Services of the Senate and the House of Representatives, including a justification of how this plan is more advantageous to the United States than developing the real property with Federal funds.

(d) COMPETITIVE PROCEDURES.--Each lease entered into under subsection (a) shall be awarded through the use of competitive procedures.

(e) RIGHT TO ACQUIRE.--The Secretary may provide that the United States shall have the right of first refusal to acquire all right, title, and interest in and to any facility constructed on the real property subject to such lease.

(f) ADDITIONAL TERMS.--(1) A lease entered into by the Secretary under this section under which a facility is constructed by a private developer and leased to the Department of the Navy may provide for the operation and maintenance of such facility by the private developer.

(2) The Secretary may require such additional terms and conditions in connection with the leases authorized by this section as the Secretary considers appropriate to protect the interest of the United States.

(g) LIMITATION.--The Secretary may obligate or expend amounts for--

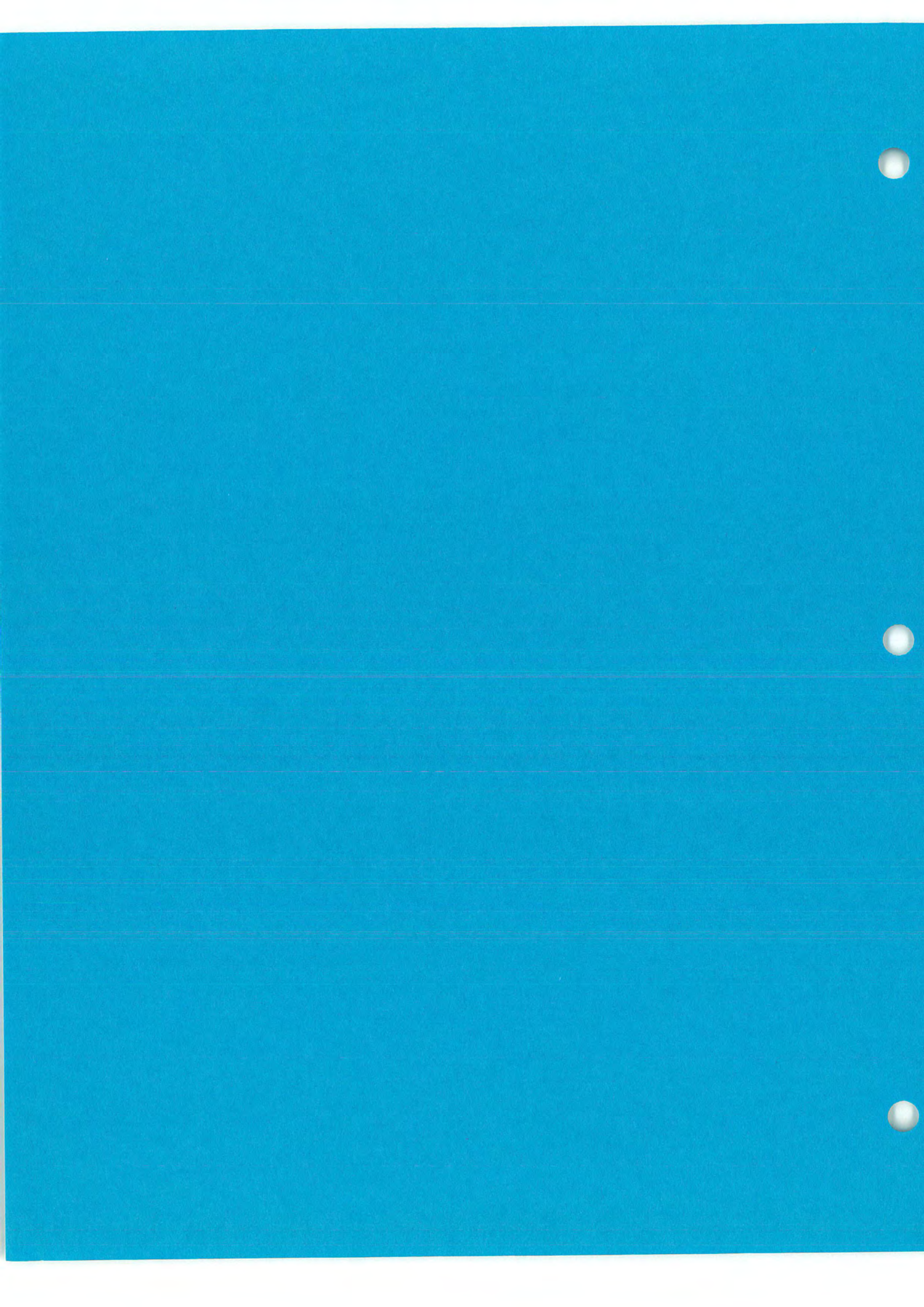
(1) assisting in financing under subsection (a)(2);

(2) obtaining facilities or the use of facilities under (b)(1)(A);

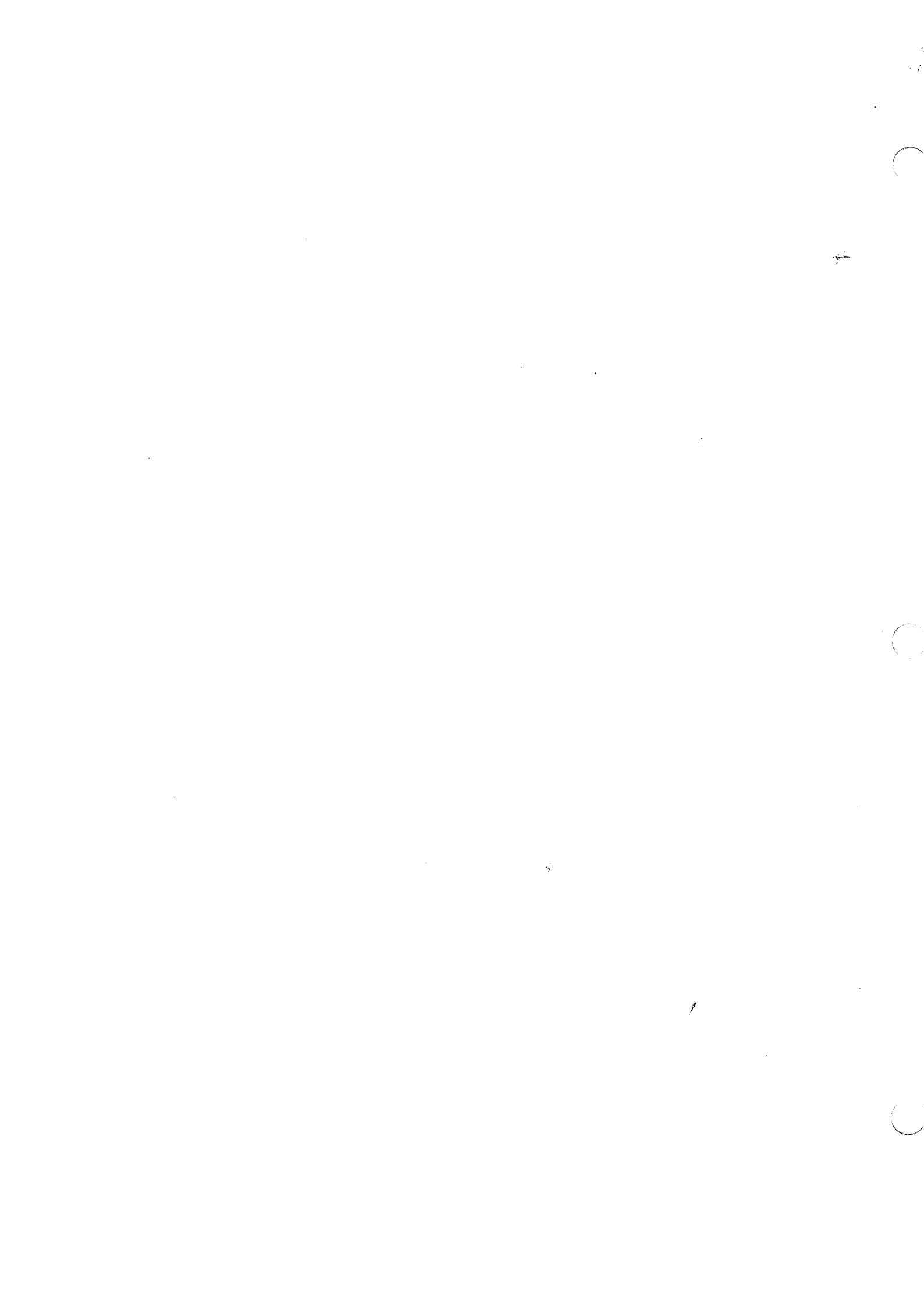
(3) acquiring interest in a facility under subsection (e), only to the extent funds have been appropriated for such purpose.







B. Memorandum of Understanding



COPY

DOCUMENT NO. RR-26845!

FILED JUN 1 1987
OFFICE OF THE CITY CLERK
SAN DIEGO, CALIFORNIA

Page One

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF SAN DIEGO
AND THE U. S. NAVY.

This Memorandum of Understanding is made on the 1st day of June,
1987 by and between the City of San Diego, hereinafter called the City,
and the Navy, with respect to the following:

Whereas the Navy owns or controls approximately 16 acres of waterfront
land commonly referred to as the Broadway property in downtown San
Diego;

Whereas the Navy is interested in encouraging joint public/private
sector use on said land;

Whereas the Navy is interested in obtaining approximately 1 million
square feet of office space;

Whereas Congress authorized the Secretary of the Navy to develop the
Broadway property through a plan to be formulated with the San Diego
community;

Whereas the City of San Diego will represent the San Diego community in the development of the property;

Whereas both parties recognize and agree that it would be to their mutual benefit to have the City participate in the development of the property; and

Whereas the parties agree the most appropriate means to implement this agreement is pursuant to a development agreement which will be entered into and binding upon both the Navy and the City and which will be adopted by the City by ordinance pursuant to California state law.

Now, therefore be it agreed between the parties that:

1. The Navy in consultation with the City shall prepare a development plan, and urban design guidelines (i.e., land uses, density, viewscales, building heights, open space, etc.) which will define the nature of development occurring on the Broadway property. The development plan and urban design guidelines shall consider the economic, environmental and community issues regarding this critical site. The development plan and urban design guidelines shall consider parking management alternatives and other means of encouraging mass

transit usage as well as alternatives for funding of necessary infrastructure improvements.

2. The Navy shall in coordination with the City prepare appropriate environmental documentation for the project to ensure all federal, state and local requirements are satisfied. Environmental documentation shall be based on the development plan and urban design guidelines. Navy shall be responsible for compliance with the National Environmental Policy Act. The City shall be responsible for compliance with the California Environmental Quality Act.

3. The Navy and the City shall enter into a development agreement. The development agreement shall be adopted by the City in accordance with applicable state law. The development agreement shall define the responsibilities of the City, the Navy and the developer(s) with respect to the development of property. Specifically, the development agreement shall address but not be limited to the following:

a. The Navy and the City shall adopt the development plan and design guidelines prepared as provided in this agreement.

b. Any development (including the construction, maintenance and use) on the property shall be in compliance with the development plan and design guidelines as defined in the development agreement. The agreement shall set forth the responsibilities for the enforcement of these guidelines (i.e., granting of building permits and the application of all applicable City municipal ordinance, codes and formal policies including, planning, building, fire and safety).

c. The agreement shall set forth how the City will apply its police powers and regulatory authorities.

d. The City shall be responsible for the provision of all municipal services (i.e., police, fire, sanitation) to the development site.

e. The provision of public amenities including streets, sidewalks, parks, water, sewer, and open space for the development and the funding of these public amenities including any City funding shall be described.

f. The City shall assume administration, and control of all public improvements or amenities constructed on the site.


g. The Navy shall solicit for and select the developer(s).

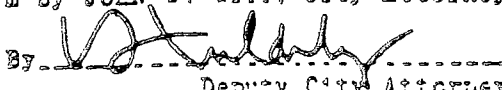
h. The Navy shall require in any leasing agreements relative to the development of the property that the developer(s) comply with the development agreement.

4. The execution of the proposed development agreement as described herein shall be contingent upon future approval of all the terms and conditions of the development agreement by the Navy and the City Council of the City.

5. This Memorandum of Understanding is entered into for the sole purpose of providing guidelines for the planning and preparation of documents including the proposed development agreement.


TO THE CITY MANAGER
CITY OF SAN DIEGO, CALIFORNIA


COMMANDER
NAVAL BASE, SAN DIEGO,
CALIFORNIA

APPROVED as
to form by JOHN W. HITT, City Attorney
By 
Deputy City Attorney


RESOLUTION NUMBER R- 268155

ADOPTED ON JUN 1 1987

BE IT RESOLVED, by the Council of The City of San Diego, t
the City Manager is hereby authorized and empowered to execute
for and on behalf of The City of San Diego, a Memorandum of
Understanding with the UNITED STATES NAVY for the redevelopmen
of the Broadway Complex, a copy of which Memorandum of
Understanding is on file in the office of the City Clerk as
Document No. RR- 268155.

BE IT FURTHER RESOLVED, that the City Manager is authorize
to proceed with negotiations for a development agreement for t
Broadway Complex Project.

APPROVED: JOHN W. WITT, City Attorney

By 
Harold O. Valderhaug
Deputy City Attorney

HOV:ps
05/12/87
Or.Dept:Mgr.
R-87-2357
Form=r.none

Passed and adopted by the Council of The City of San Diego on

JUN 1 1987

by the following vote:

YEAS: Wolfsheimer, McColl, Jones, Struiksmas, Gotch, McCarty,

Ballesteros.

NAYS: None.

NOT PRESENT: Cleator, O'Connor.

AUTHENTICATED BY:

MAUREEN O'CONNOR

Mayor of The City of San Diego, California

CHARLES G. ABDELNOUR

City Clerk of The City of San Deigo, California

By June A. Blacknell

Deputy

I HEREBY CERTIFY that the above and foregoing is a full, true
and correct copy of RESOLUTION NO. R- 268.158 passed and

adopted by the Council of The City of San Deigo, California, on

JUN 1 1987

CHARLES G. ABDELNOUR

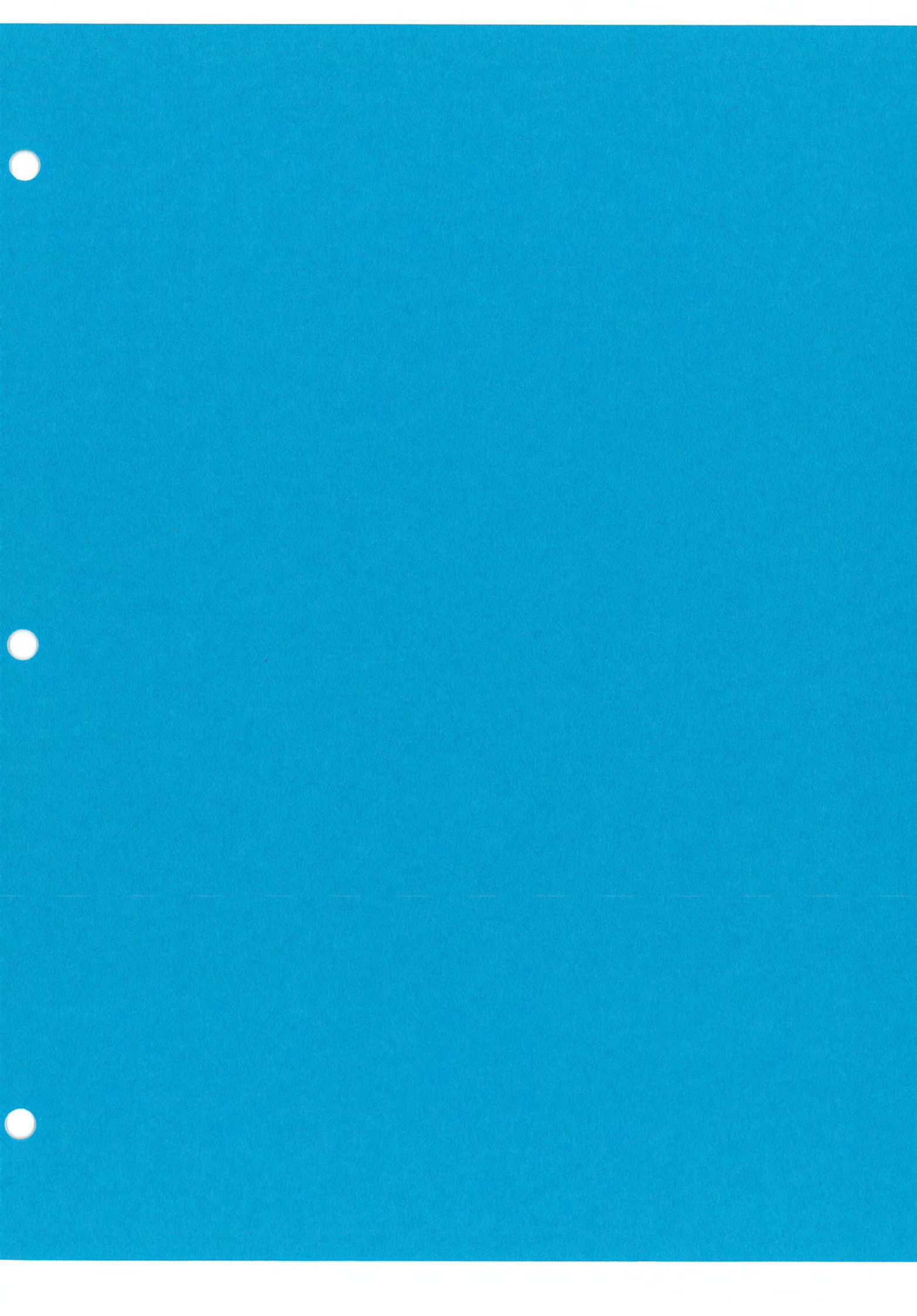
City Clerk of The City of San Deigo, California

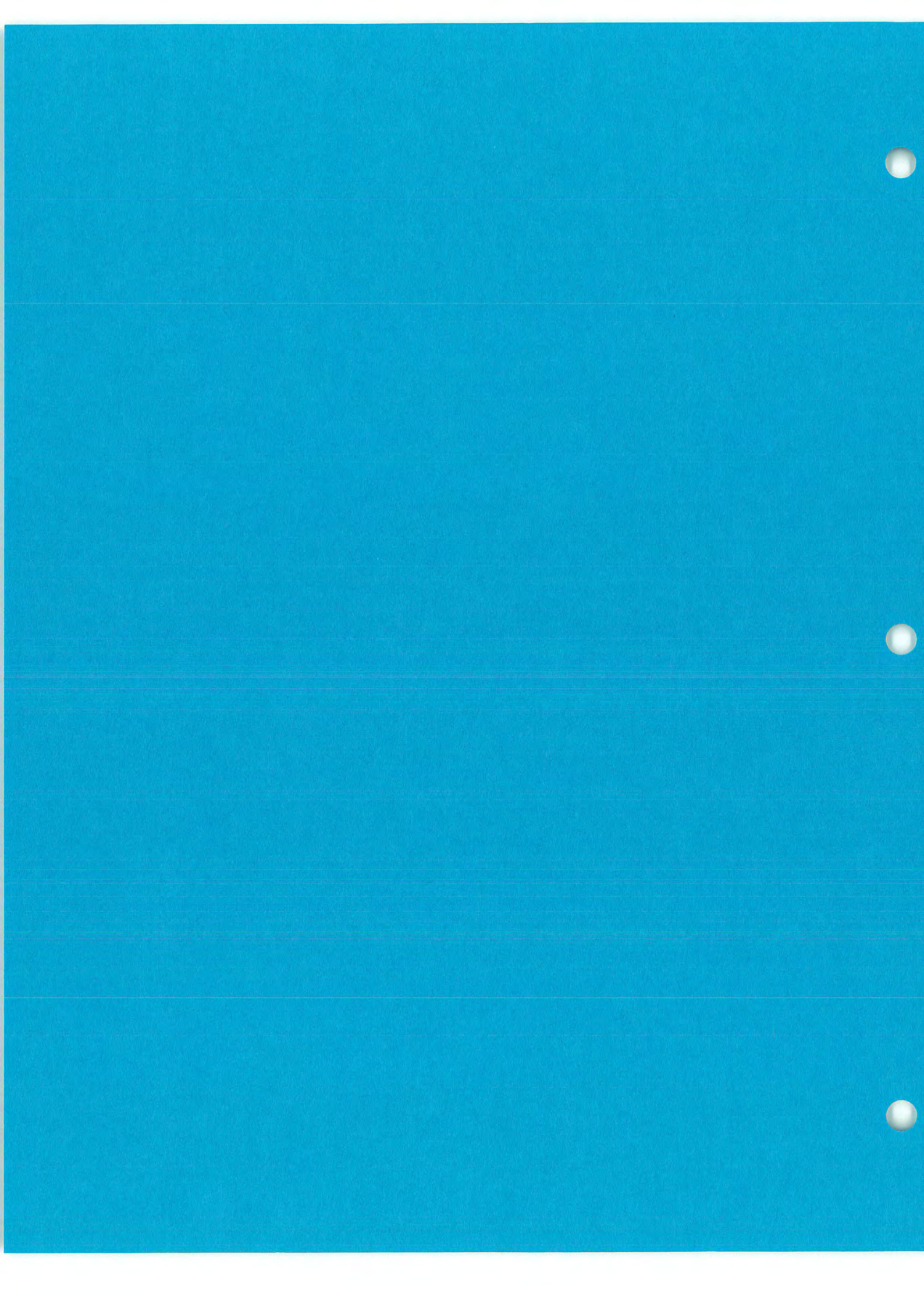
By *June A. Blacknell*

Deputy

(SEAL)







C. Notice of Intent/Notice of Preparation



Notice of Intent to Prepare an Environmental Impact Statement for Proposed
Redevelopment of Navy Land Known as the Broadway Complex, San Diego, California

Pursuant to the procedural provisions of the Council on Environmental Quality regulations (40 CFR Parts 1500-1508) implementing the National Environmental Policy Act (NEPA), the Department of the Navy gives notice that an Environmental Impact Statement (EIS) is being prepared, in coordination with the City of San Diego, for proposed redevelopment of Navy land known as the Broadway Complex, San Diego, California.

The project site is located on approximately sixteen acres in downtown San Diego adjacent to the San Diego Bay waterfront. The site consists of eight city blocks that are bounded by Harbor Drive on the west, Market Street on the south, Pacific Highway on the east, and Broadway on the north. The site is currently improved with a series of sixteen miscellaneous office and warehouse buildings containing approximately one million square feet of gross floor area. The buildings were constructed between 1922 and 1945.

The Navy is proposing to consolidate in modern facilities the general regional administrative activities of the naval shore establishment in the San Diego area. These facilities are to be central to the San Diego naval commands, the commuting work force of the San Diego area, and regional transportation systems. The Navy's objective is to redevelop this site through a public/private partnership designed to meet the Navy's regional administrative office space needs in a manner that will compliment San Diego's bayfront redevelopment. Approximately one million square feet of Navy office space is contemplated to be developed on the site by a private developer(s) for use by the Navy. Additional mixed-use (e.g., office, hotel, specialty retail) private development on the site will be allowed which is intended to offset the cost of the Navy-occupied space, thereby reducing cost to the taxpayer.

A conceptual master plan and urban design guidelines will be prepared in coordination with the San Diego community through the City of San Diego to guide the development of the site. It is proposed that the Navy and the City will enter into a development agreement as the mechanism for approval and control of the site's development.

It is our understanding that the City of San Diego will prepare an Environmental Impact Report (EIR) for its proposed actions in compliance with the California Environmental Quality Act (CEQA). Because of issues common to both and to facilitate administration, joint hearings and meetings will be conducted for the NEPA and CEQA processes.

The EIS will be a full scope document that will cover all matters of potential environmental concern. The environmental analysis will address, but not be limited to, traffic and circulation, land used and planning, waterfront access, aesthetics and view corridors, public services and utilities, socioeconomics, geology and seismicity, extractable resources, hydrology and drainage, biology, endangered species and critical habitat, air quality, noise, cultural resources, coastal zone management, public health and safety, and energy conservation.

Alternatives that are being considered include variations of private and Navy development on the Broadway Complex site, Navy-only development of the site, development of an alternative site in downtown San Diego, and no action.

The Department of the Navy is requesting any comments you may have regarding the scope of the environmental analysis in the EIS. Please submit comments and/or questions to the address given below no later than December 16, 1988:

Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
1220 Pacific Highway
San Diego, California 92132-5190
Attn: Captain Wayne Goodermote, CEC, USN

Telephone inquiries may be directed to Mr. Anthony Principi, General Counsel, Broadway Complex Project Office, at (619) 532-3291.

Joint public scoping meetings will be held to receive written and oral testimony from governmental agencies and the public about issues and concerns that should be addressed in the Navy EIS and the City EIR. A morning session has been scheduled for agency representatives and an evening session for members of the public. Both meetings will be open to the general public at the times and locations given below. The evening session will adjourn at 11:30 p.m. or earlier, if all comments have been received. The scoping meetings will be conducted by Captain Wayne Goodermote, the Officer in Charge of the Broadway Complex Project Office. The meetings will be informal. Individual speakers will be requested to limit their statements to five minutes. Written statements will be accepted at the meetings or they may be mailed to the address given above. All comments must be received on or before December 16, 1988.

Morning Session

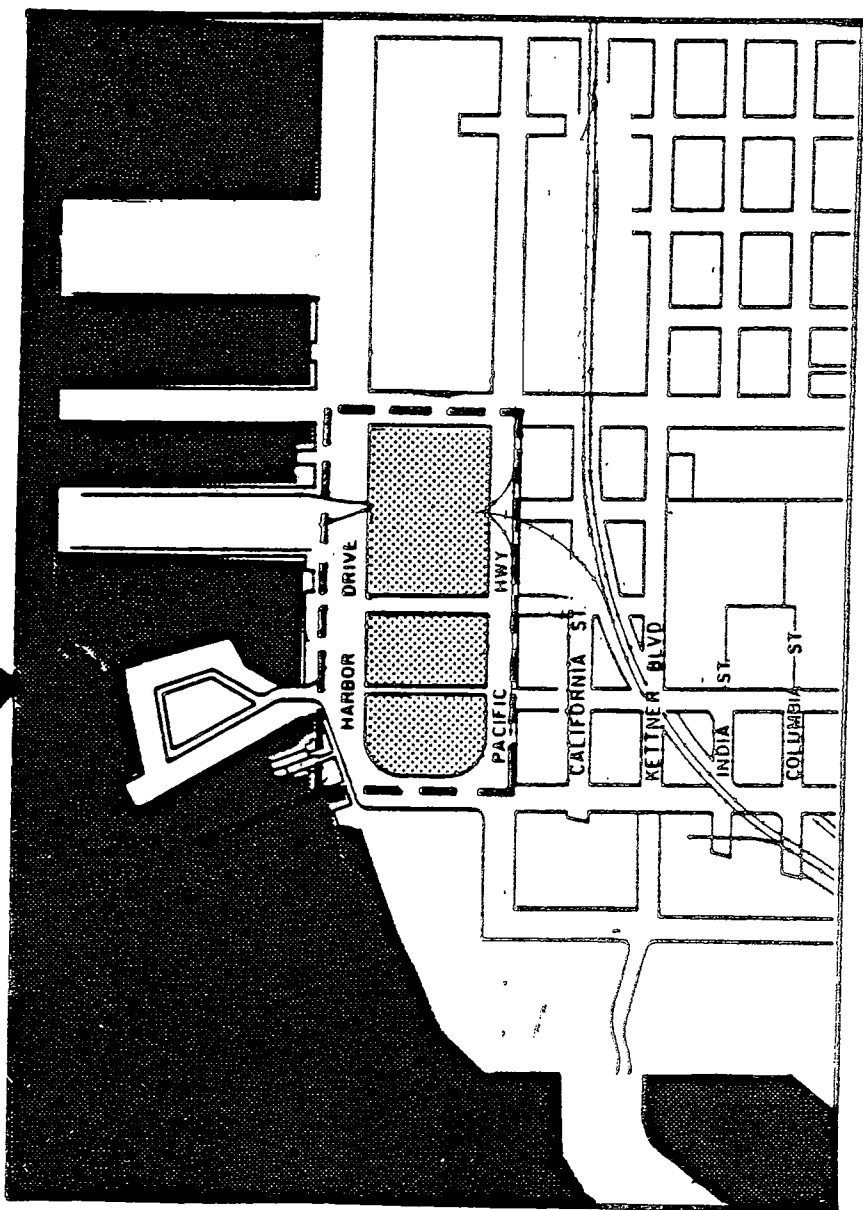
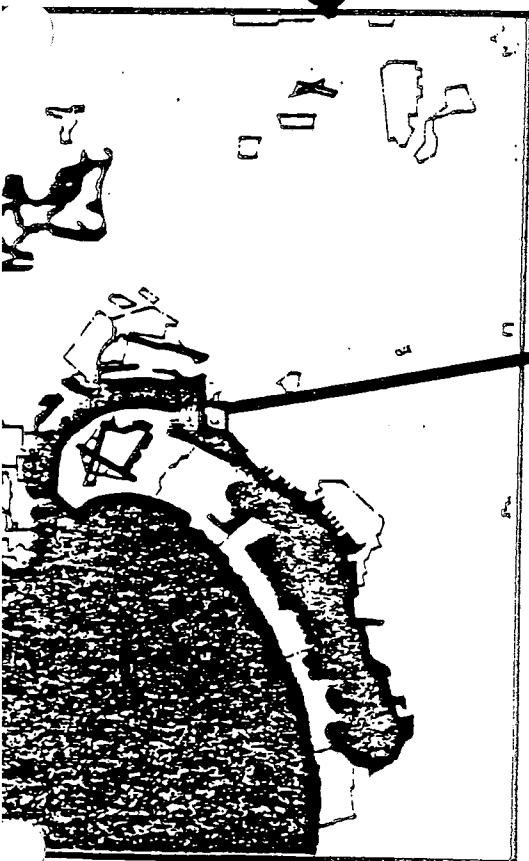
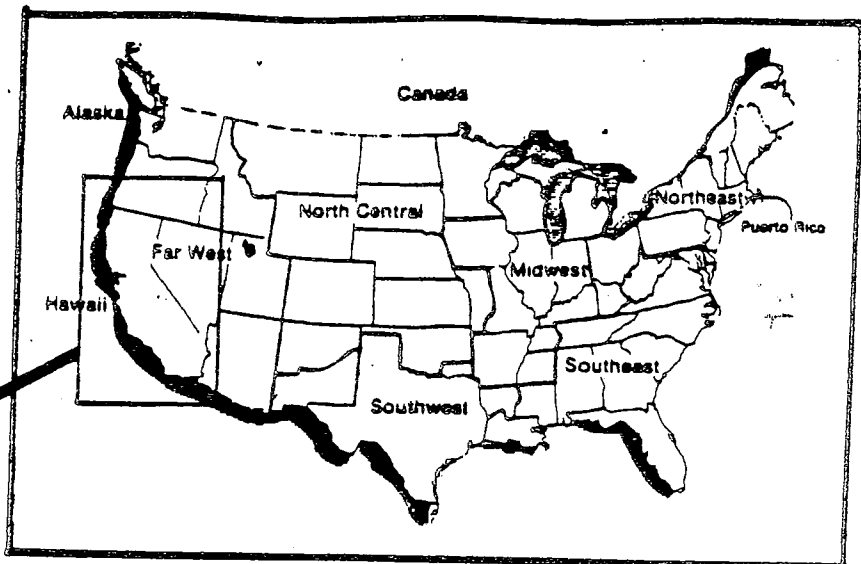
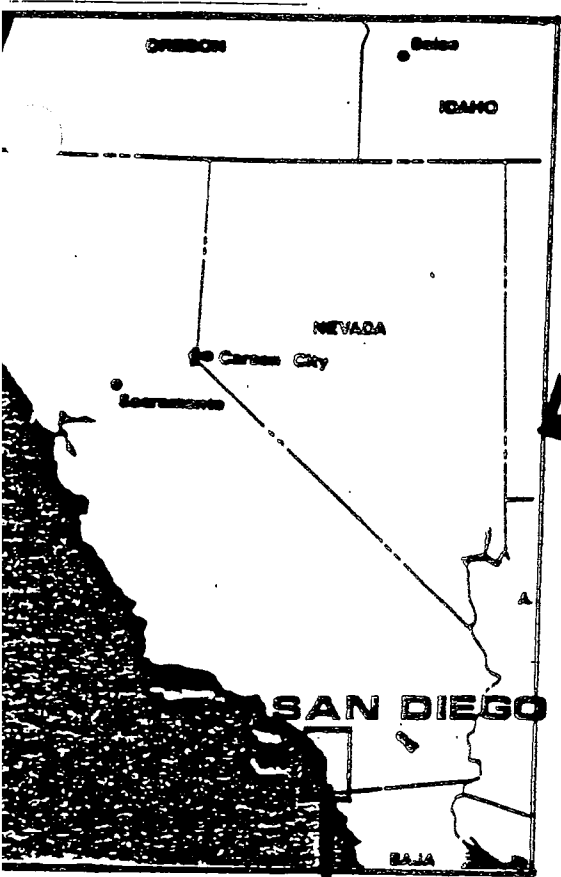
November 14, 1988 - 9:00 a.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

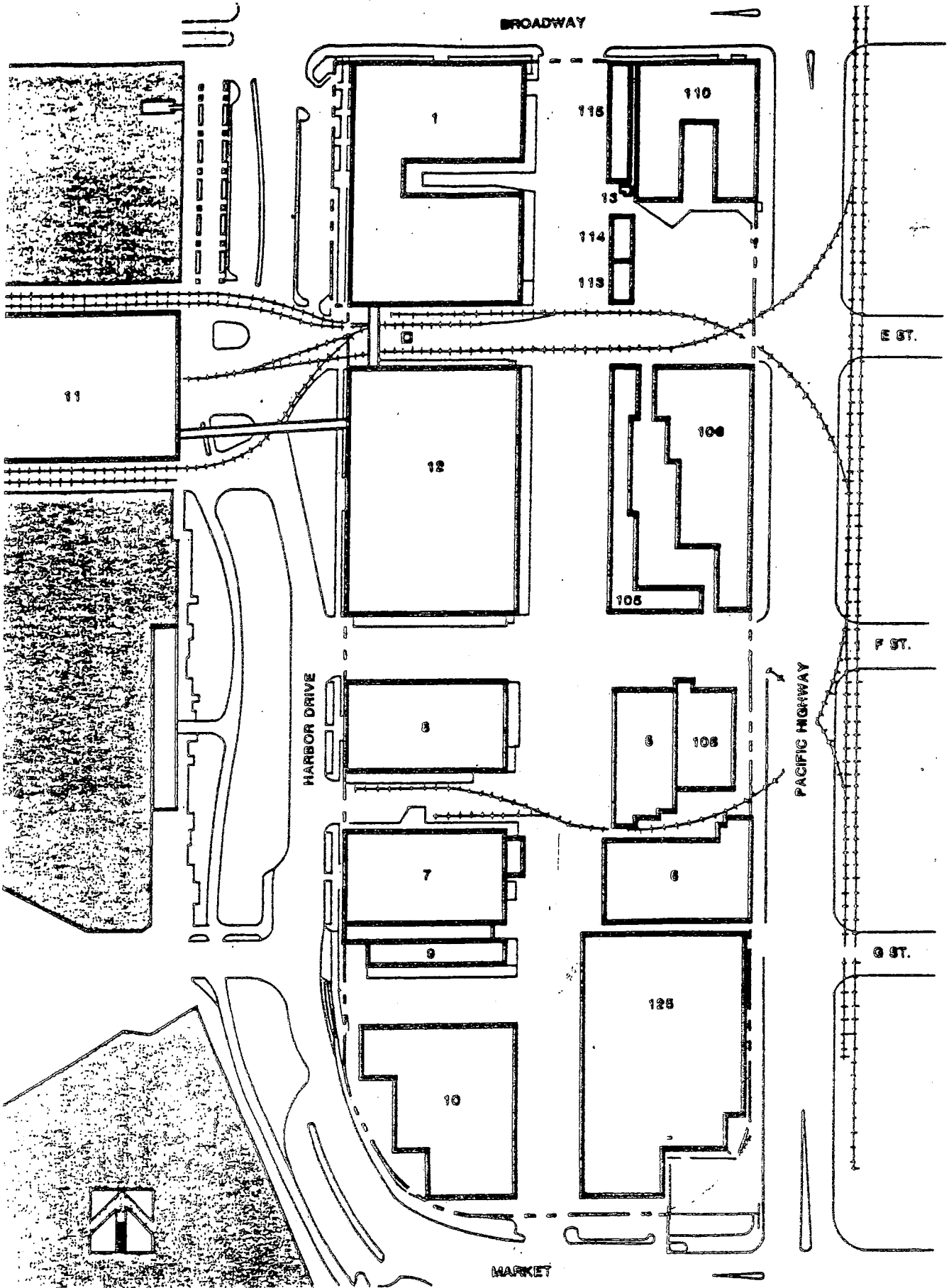
Evening Session

November 14, 1988 - 7:00 p.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101



**MIDWAY COMPLEX,
SAN DIEGO, CALIFORNIA**



**ROADWAY COMPLEX,
SAN DIEGO, CALIFORNIA**

SITE MAP

EXHIBIT

NOTICE OF PREPARATION (NOP) FOR A
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
DRAFT ENVIRONMENTAL IMPACT REPORT

LEAD AGENCY:

The City of San Diego, California

PROPOSED ACTION:

The Department of the Navy, in coordination with the City of San Diego, is proposing to redevelop its land known as the Navy Broadway Complex. The project site is located on approximately sixteen acres in downtown San Diego adjacent to the San Diego Bay waterfront and consists of eight city blocks that are bounded by Harbor Drive on the west, Market Street on the south, Pacific Highway on the east, and Broadway on the north (see Exhibits 1 and 2). The site is currently improved with a series of sixteen miscellaneous office and warehouse buildings containing in excess of one million square feet of gross floor area. The buildings were constructed between 1922 and 1945.

The Navy is proposing to consolidate in modern facilities the general regional administrative activities of the naval shore establishment in the San Diego area. These facilities are to be central to the San Diego naval commands, the population of the San Diego area and regional transportation systems. The Navy's objective is to redevelop this site through a public/private partnership designed to meet the Navy's regional administrative office space needs in a manner that will compliment San Diego's bayfront redevelopment. Approximately one million square feet of Navy office space is contemplated to be developed on the site by a private developer(s) for use by the Navy. Additional mixed-use (e.g. office, hotel, specialty retail) private development on the site will be allowed which is intended to offset the cost of the Navy-occupied space thereby reducing cost to the taxpayer.

A conceptual master plan and urban design guidelines will be prepared in coordination with the San Diego community through the City of San Diego to guide the development of the site. It is proposed that the Navy and the City will enter into a development agreement as the mechanism for approval and control of the site's development.

ENVIRONMENTAL CONSIDERATIONS

Prior to entering into such a development agreement, the City of San Diego is required to prepare an Environmental Impact Report (EIR) in compliance with the CEQA. The Navy will also be preparing an Environmental Impact Statement (EIS) for its proposed actions in compliance with the National Environmental Policy Act (NEPA). Because of issues common to both and to facilitate administration, joint hearings and meetings will be conducted for the NEPA and CEQA processes.

The EIR will be a full scope document that will cover all matters of potential environmental concern (an initial study is not attached to this NOP). The environmental analysis will address, but not be limited to, traffic and circulation, land use and planning, waterfront access, aesthetics and view

corridors, public services and utilities, socioeconomics, geology and seismicity, extractable resources, hydrology and drainage, biology, endangered species and critical habitat, air quality, noise, cultural resources, coastal zone management, public health and safety, and energy conservation.

Alternatives that are being considered include variations of private and Navy development on the Broadway Complex site, Navy-only development of the site, development of an alternative site in downtown San Diego, and no action.

COMMENTS ON THE SCOPE OF THE EIR:

The City of San Diego is requesting any comments you may have regarding the scope of the environmental analysis in the EIR. Because of issues common to both the Navy's environmental review and this process and to facilitate administration, the Navy is designated to collect and disseminate questions and comments regarding this process to the City of San Diego for response. Please submit comments, in writing, to the address provided below:

Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
1220 Pacific Highway
San Diego, California 92132-5190
Attn: Captain Wayne Goodermote, CEC, USN

Questions should be addressed to the same address or telephone inquiries can be directed to Anthony Principi, General Counsel, Broadway Complex Project Office, at (619) 532-3291. Written comments must be submitted by December 16, 1988.

In addition, joint public scoping meetings will be held to receive written and oral testimony from governmental agencies and the public about issues that should be addressed in the EIS/EIR. A morning session has been scheduled for agency representatives and an evening session for members of the public. The evening session will adjourn at 11:30 P.M. or earlier, if all comments have been received. The scoping meetings will be conducted by Captain Wayne Goodermote, the Officer in Charge of the Broadway Complex Project Office. The meetings will be informal. Individual speakers will be requested to limit their statements to five minutes. Written statements will be accepted at the meetings or they may be mailed to the address given above.

Both meetings will be open to the general public at the times and locations indicated below:

Morning Session

November 14, 1988 - 9:00 a.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

Evening Session

November 14, 1988 - 7:00 p.m.

City Administration Building
12th Floor
202 'C' Street
San Diego, CA 92101

D. Draft Urban Design Guidelines



DRAFT
URBAN DESIGN GUIDELINES

The following Guidelines are intended as recommendations that will ensure high quality design of the Broadway Complex Development ("the Development") consistent with the City's current policies in the Centre City area. The following Urban Design Guidelines are illustrated in Attachment 1 to the Exhibit.

Architectural Standards

The architecture of the development shall establish a high quality of design. While it is not the intent for the entire Development to represent a single architectural solution, it is desirable to establish a compatible vocabulary of forms and materials to create a visually harmonious grouping of buildings.

Street-Level Design: Harbor Drive/Open Space/Broadway Frontage

- a) Upon the demolition of "Building 1", an open space of at least 1.9 acres shall be reserved at the foot of Broadway. This space shall be configured to allow for aggregation with adjacent land for the creation of a larger open space at the foot of Broadway.
- b) Harbor Drive, Broadway and the frontage adjacent to the proposed open space are envisioned as highly active pedestrian spaces with a strong orientation to the Bay. At least 75 percent of the linear frontage shall be developed in uses including retail, restaurants, and other public-oriented activities that will promote pedestrian activity.
- c) Along Broadway, buildings shall be set back from the property line to create a plaza depth of 75 feet. Along Harbor Drive on Block 3, above-grade development shall be built to the property line. Along Harbor Drive on Block 4, buildings shall be set back from the property line between 0 and 14 feet to create a consistent sidewalk depth of 25 feet, from the existing curb line.
- d) Ground-level facades shall be substantially transparent to maximize the sense of contact between indoor and outdoor activities. Colorful awnings and/or arcades shall be incorporated into the facade design to reinforce the pedestrian environment.
- e) Broadway's historic street wall of 50 to 100 feet shall be maintained and extended to the frontage adjacent to the proposed open space to reinforce the spatial experience of the street and open space.

Street-Level Design: Pacific Highway Frontage

- a) The Pacific Highway frontage shall be designed to reinforce the street's role as a major landscaped gateway boulevard within the Centre City, and as the downtown "face" of the Broadway Complex development.

- b) Along Pacific Highway above-grade development shall be set back from the property lines in the following ways to create a consistent sidewalk depth of approximately 20 feet from the existing curb line.

Block 1: 10 feet
Block 2: 10 feet
Block 3: 8 feet
Block 4: 7 feet

- c) In order to emphasize the landscape character of the street, development fronting Pacific Highway shall not exceed a street-wall height of 50 feet. Taller elements shall be stepped back by at least 15 feet. Between G Street and Harbor Drive, an exception may be made to this step-back to allow for a landmark element that will provide diversity and interest along the street.

Street-Level Design: The East-West Streets (E, F and G Streets)

- a) The prolongations of E, F and G Streets shall be opened to allow for continuous vehicular and pedestrian access between Pacific Highway and Harbor Drive. The design of the streets shall emphasize pedestrian access through wide sidewalks and continuous landscaping.
- b) A 75-foot wide right-of-way shall be maintained along E and F Streets to provide for this access and to maximize inland views to the Bayfront. Approximately 35 feet of this right-of-way shall be dedicated to pedestrian walkways and landscaping.
- c) A 120-foot wide right-of-way shall be maintained along G Street. Approximately 60 feet of this right-of-way shall be developed in pedestrian walkways, leading from the Marina Neighborhood to the G Street Mole.

Street-Level Design: North-South Passage

- a) A continuous north-south movement through a series of public and quasi-public spaces shall be created through the development, linking the open space at the foot of Broadway with Seaport Village. This should be designed as an interesting sequence of spaces with a diversity of activities and spatial experiences (e.g., galleries, courts, exterior plazas, etc.).

Architectural Form and Scale

- a) Towers shall be designed to minimize view obstructions from inland areas, and to create a well-composed skyline compatible with existing and planned development.
- b) Facades shall be articulated to create variety and interest; large areas of curtain wall glazing (vision glass or spandrel construction) shall be discouraged. Reflective glass should be avoided.
- c) Low-rise elements shall be articulated to create interest and variety and to promote the pedestrian scale of the street. Articulation of the first

two floors with architectural detailing, storefront design, arcades and awnings shall be encouraged. Special treatment and detailing of the cornice of street-wall buildings shall also be encouraged.

- d) Building materials shall be light in color and of a high quality. A palette of colors and materials shall be developed for the Broadway Complex project to ensure harmonious treatment.
- e) Towers shall be designed with distinctive roof forms that create a pleasing skyline profile. A compatible vocabulary of forms (e.g., domes, vaults, pyramids, etc.) shall be developed to encourage a "family" of buildings within the complex.
- f) Mechanical equipment, appurtenances and penthouses located on rooftops shall be architecturally screened and enclosed, and incorporated as an integral part of the architectural design. Efforts will also be made to integrate/screen Navy rooftop communication equipment to the maximum extent possible.

Access

- a) Curb cuts shall be avoided along Broadway, Pacific Highway and Harbor Drive, and shall be situated along the east-west streets (E, F, and G Streets). They shall not be located closer than 50 feet from intersections with Pacific Highway or Harbor Drive.
- b) Access to parking and loading areas shall be screened from predominant view, and designed to allow vehicles to maneuver on site without obstructing public pedestrian or vehicular circulation.

Parking Treatment

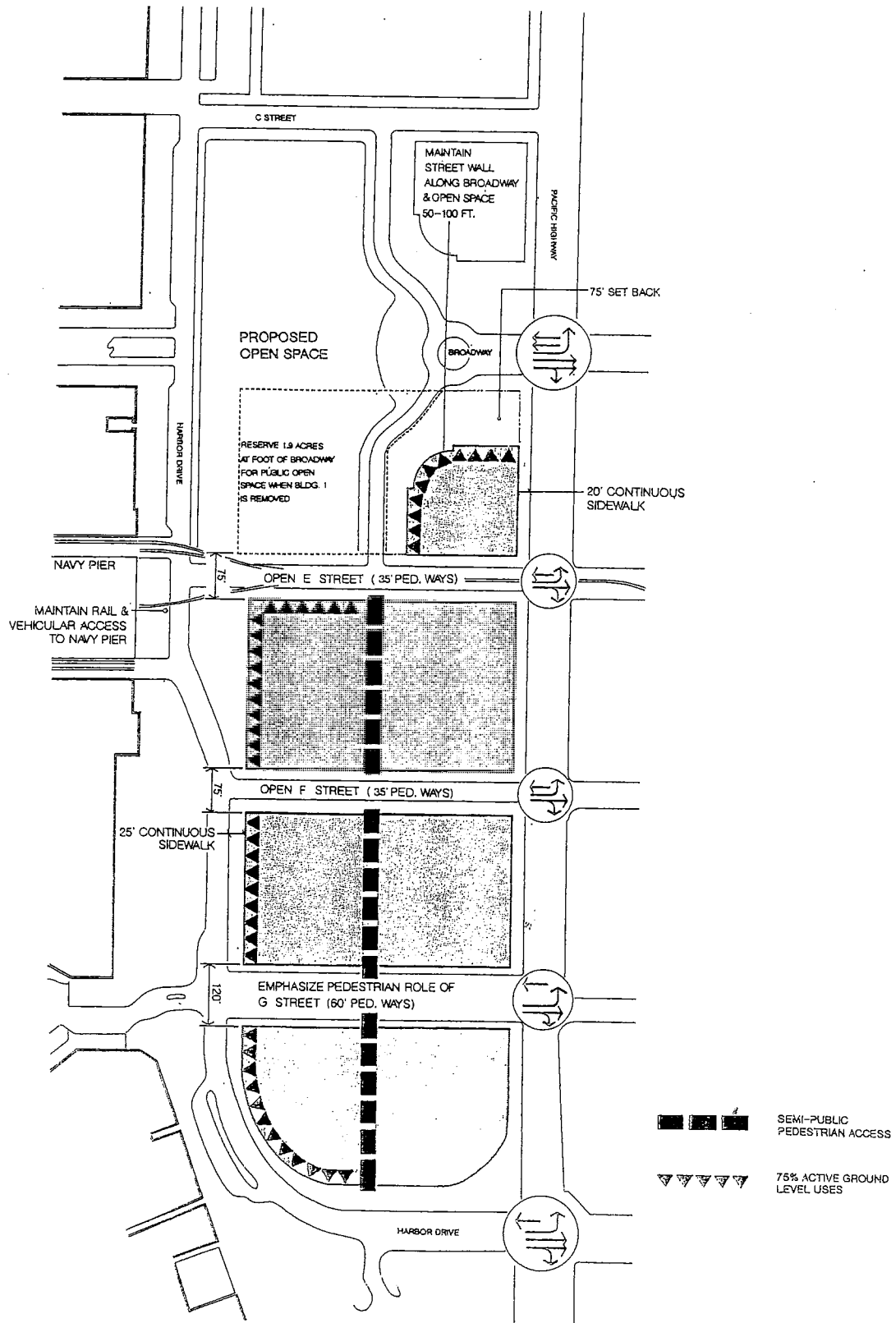
- a) Every reasonable effort should be made to provide two levels of below-grade parking prior to the provision of above-grade parking.
- b) Above-grade parking shall be encapsulated within development so that it appears as an integral part of the building design. Active uses shall screen above-grade parking from predominant public view along the Pacific Highway and Harbor Drive frontages. Along the east-west streets, above-grade parking shall be designed to appear as an integral part of the building facade.
- c) Surface parking shall be permitted on an interim basis; such parking shall be well screened from public street views with temporary perimeter landscaping.

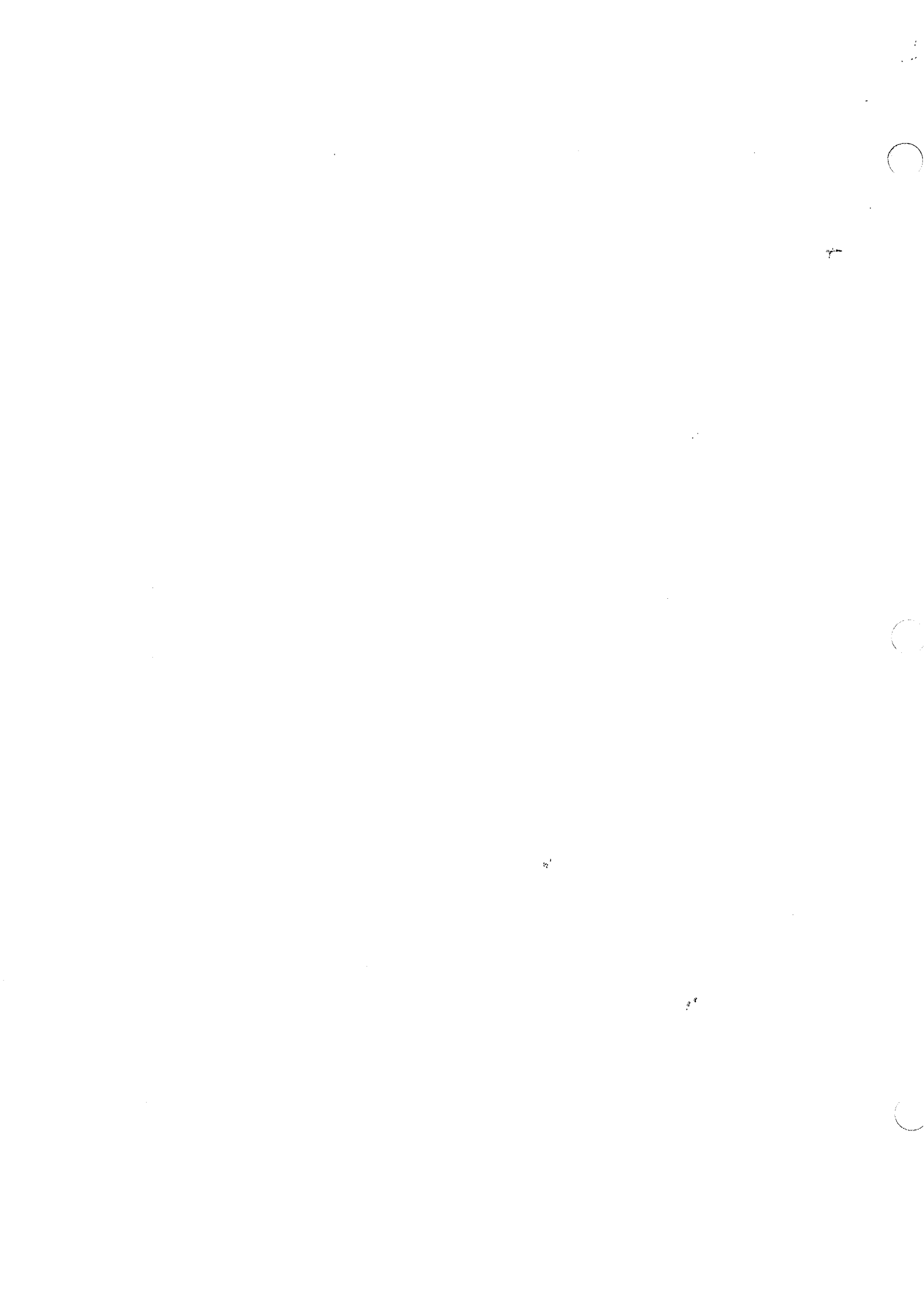
Landscape Treatment

- a) The landscape of the development shall establish a high quality of design and promote a comfortable and attractive pedestrian environment. An understandable hierarchy of streetscape treatment shall be established within and along the perimeter of the development.

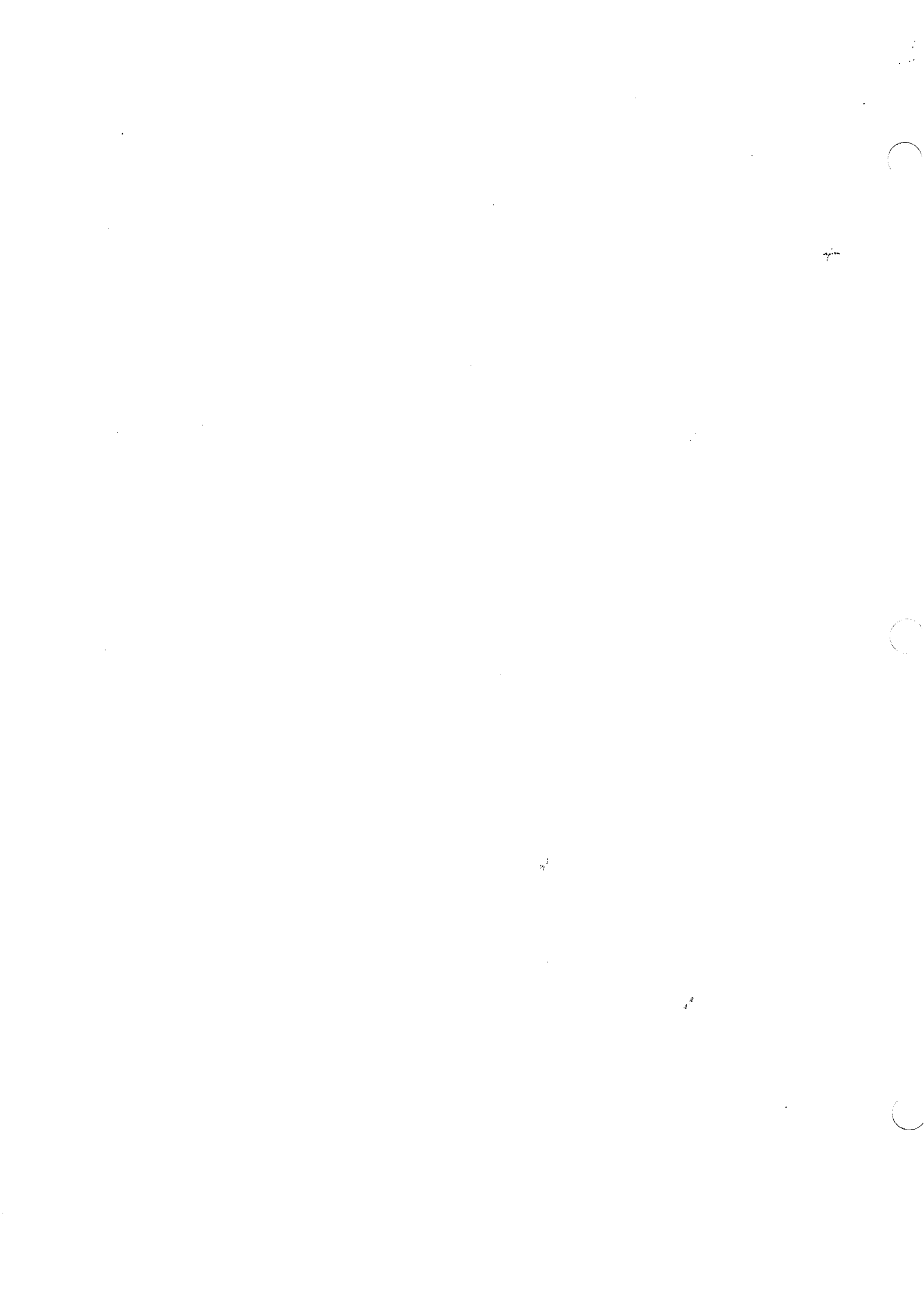
- b) The design of the Pacific Highway frontage shall reinforce its designation as a major gateway street, with tall palms and ornamental lighting, as currently recommended by the City Planning Department.
- c) Harbor Drive should be reinforced as an informal waterfront parkway for pedestrians and automobiles; additional sidewalk planting shall extend the canopy of existing trees to the edge of the project.
- d) G Street shall be developed as a visually strong promenade in the spirit of the proposed linear park along Harbor Drive. Colorful planting beds, water features, sculpture, benches and distinctive vertical plantings shall be encouraged.
- e) E and F Streets shall be designed as secondary east-west streets, with regularly planted street trees along each sidewalk.

Urban Design Guidelines





E. Air Quality Data



CONSTRUCTION EMISSIONS
Emission Factors for Heavy-Duty
Diesel-Powered Construction Equipment^{a)}

Type Of Equipment	POLLUTANT (gm/hr)					
	Carbon Monoxide	Exhaust Hydrocarbons	Nitrogen Oxides	Sulfur Oxides	Particulates	
Tracktype Tractor	157.01	55.06	570.70	62.3	50.7	
Wheeled Tractor	1622.77	85.25	575.84	40.9	61.5	
Wheeled ^{b)} Dozer	--	--	--	158	75	
Scraper	568.19	128.15	1740.74	210	184	
Motor Grader	68.46	18.07	24.43	39	27.7	
Wheeled Loader	259.58	113.17	858.19	82.5	77.7	
Tracktype Loader	91.15	44.55	375.22	34.4	26.6	
Off-Highway Truck	816.81	86.84	1889.16	206	116	
Roller	137.97	30.58	392.9	30.5	22.7	
Miscellaneous	306.37	69.35	767.3	64.7	63.2	

a) Source: EPA-AP-42, Volume II, September 1985

b) The wheeled dozer HC/CO/NOx emissions are included in the off-highway truck category.

Emission Factors for Heavy-Duty
Gasoline-Powered Construction Equipment

Type of Equipment	POLLUTANT (gm/hr)						
	Carbon Mono-oxide	Exhaust Hydro-carbons	Evapo-rative Hydro-carbons	Crank-case Hydro-carbons	Nitrogen Oxides	Sulfur Dioxide	Particulates
Wheeled Tractor	4320	164	30.9	32.6	195	7.03	10.9
Motor Grader	5490	186	30.0	37.1	145	7.59	9.4
Wheeled Loader	7060	241	29.7	48.2	235	10.6	13.5
Roller	6080	277	28.2	55.5	164	8.38	11.8
Miscellaneous	7720	254	25.4	50.7	187	10.6	11.7

Dust Emissions

1.2 tons per acre are of construction per month of activity, or 110 lbs. per acre per working day.

Source for all above data: EPA-AP-42, Volume II, September 1985

Alternative 4
11-Jul-99

Use	Count	Elect. Factor	Gas Factor	Daily Elec. Consumption	Daily Gas Consumption	Electricity Emissions (tco)					Gas Emissions (tco)					Total Emissions (tco)					
						CO	NOx	SOx	Part.	HC	CO	NOx	SOx	Part.	HC	CO	NOx	SOx	Part.	HC	
Office (private)	17.10	2.00	17.10	42,333	30,500	0.00422	0.02424	0.00233	0.00084	0.00001	0.00000	0.00240	0.00000	0.00000	0.00016	0.00482	0.02364	0.00233	0.00084	0.00001	0.00000
Office (Navv)	17.10	2.00	17.10	46,349	36,667	0.00468	0.02694	0.00231	0.00094	0.00001	0.00000	0.00267	0.00000	0.00001	0.00018	0.00535	0.02761	0.00231	0.00094	0.00001	0.00000
Hotel	30.00	13.60	39,041	215,333	115,333	0.00370	0.02245	0.00234	0.00078	0.00000	0.00000	0.00215	0.00000	0.00002	0.00004	0.00406	0.02106	0.00234	0.00080	0.00000	0.00000
Retail	25000.00	17.10	2.00	1171	1,667	0.00012	0.00067	0.00007	0.00002	0.00000	0.00000	0.00007	0.00000	0.00000	0.00003	0.00074	0.00007	0.00002	0.00000	0.00000	0.00000
TOTAL				117,814	117,860	0.01175	0.07437	0.00795	0.00228	0.00000	0.00000	0.00327	0.01008	0.00000	0.00002	0.00087	0.01501	0.08065	0.00775	0.00227	0.00145

Alternative 3
11-Jul-99

Use	Count	Elect. Factor	Gas Factor	Daily Elec. Consumption	Daily Gas Consumption	Electricity Emissions (tco)					Gas Emissions (tco)					Total Emissions (tco)					
						CO	NOx	SOx	Part.	HC	CO	NOx	SOx	Part.	HC	CO	NOx	SOx	Part.	HC	
Office (private)	17.10	2.00	17.10	42,333	30,500	0.00422	0.02424	0.00233	0.00084	0.00001	0.00000	0.00240	0.00000	0.00000	0.00016	0.00482	0.02364	0.00233	0.00084	0.00001	0.00000
Office (Navv)	17.10	2.00	17.10	46,349	36,667	0.00468	0.02694	0.00231	0.00094	0.00001	0.00000	0.00267	0.00000	0.00001	0.00018	0.00535	0.02761	0.00231	0.00094	0.00001	0.00000
Hotel	30.00	13.60	39,041	215,333	115,333	0.00370	0.02245	0.00234	0.00078	0.00000	0.00000	0.00215	0.00000	0.00002	0.00004	0.00406	0.02106	0.00234	0.00080	0.00000	0.00000
Retail	25000.00	17.10	2.00	1171	1,667	0.00012	0.00067	0.00007	0.00002	0.00000	0.00000	0.00007	0.00000	0.00000	0.00003	0.00074	0.00007	0.00002	0.00000	0.00000	0.00000
TOTAL				129,226	143,667	0.01292	0.07430	0.00775	0.00228	0.00000	0.00000	0.00344	0.01375	0.00000	0.00003	0.00091	0.01636	0.08805	0.00775	0.00221	0.00156

Alternative F
14-Jul-89

Use	Count	Elect. Factor	Gas Factor	Daily Elec. Consumption	Daily Gas Consumption	Electricity Emissions (tpd)					Gas Emissions (tpd)					Total Emissions (tpd)					
						CO	NOX	SOX	Part.	HC	CO	NOX	SOX	Part.	HC	CO	NOX	SOX	Part.	HC	
Ice	11111111	17.10	2.30	42,184	67,000	0.00422	0.02454	0.00253	0.00084	0.00021	0.00060	0.00240	0.00000	0.00000	0.00016	0.00482	0.02664	0.00253	0.00084	0.00021	0.00060
Ice-Mgmt	11111111	17.10	2.30	46,849	68,667	0.00468	0.02594	0.00281	0.00094	0.00023	0.00067	0.00267	0.00000	0.00001	0.00018	0.00535	0.02761	0.00281	0.00094	0.00023	0.00067
Ice	25000.00	17.10	2.30	1171	1,367	0.00012	0.00067	0.00007	0.00002	0.00001	0.00002	0.00007	0.00000	0.00000	0.00000	0.00013	0.00074	0.00007	0.00002	0.00001	0.00002
TOTAL				129,224	197,034	0.01292	0.07439	0.00773	0.00258	0.00045	0.00144	0.00507	0.00000	0.00001	0.00034	0.03805	0.03775	0.00241	0.00085	0.00023	0.00069

Alternative F
14-Jul-89

Use	Count	Elect. Factor	Gas Factor	Daily Elec. Consumption	Daily Gas Consumption	Electricity Emissions (tpd)					Gas Emissions (tpd)					Total Emissions (tpd)					
						CO	NOX	SOX	Part.	HC	CO	NOX	SOX	Part.	HC	CO	NOX	SOX	Part.	HC	
Ice-Mgmt	11111111	17.10	2.30	20,428	29,067	0.00204	0.01175	0.00123	0.00041	0.00010	0.00027	0.00116	0.00000	0.00000	0.00008	0.00233	0.01291	0.00123	0.00041	0.00010	0.00027
Ice	11111111	28.20	4.40	46,455	68,187	0.00465	0.02571	0.00279	0.00093	0.00023	0.00088	0.00333	0.00000	0.00001	0.00023	0.00553	0.03024	0.00277	0.00094	0.00023	0.00088
TOTAL				66,883	97,254	0.00669	0.03846	0.00402	0.00134	0.00033	0.00115	0.00449	0.00000	0.00001	0.00031	0.00786	0.04315	0.00401	0.00134	0.00033	

Caline 4 Variables

	VARIABLE	TYPE	UNITS	SUGGESTED/MANDATORY LIMITS
Surface Roughness	Z0	real	cm	$3 \leq Z0 \leq 400$ cm
Wind Bearing	BRG	real	deg	$0' \leq BRG \leq 360'$
Standard Deviation of Wind Bearing	SIGTH	real	deg	$5' \leq SIGTH \leq 60'$
Wind Speed	U	real	m/s	$U \geq 0.5$ m/s
Settling Velocity	VS	real	cm/s	$VS \geq 0$
Deposition Velocity	VD	real	cm/s	$VD \geq 0$
Ambient Concentration	AMB	real	ppm	
Mixing Height	MIXH	real	m	$MIXH \geq 5$ m
Temperature	TEMP	real	'C	
Vehicles per Hour	VPH	integer		
Emission Factor	EF	real	gm/v-mile	
Roadway Width	W	real		$W \geq 10$ m
Left Mixing Width	MIXWL	real		$MIXWL \geq W/2$
Right Mixing Width	MIXWR	real		$MIXWR \geq W/2$
Source Height	H	real		$-10 \leq H \leq 10$ m

SOURCE:

California Department of Transportation report (FHWA/CA/TL-84/15).
Caline 4 - A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways.

REPORT FOR FILE : mark1

1. Site Variables

U= 1.0 M/S
 BRG= 225.0 DEGREES
 CLASS= F STABILITY
 MIXH= 1000.0 M
 SIGTH= 20.0 DEGREES
 ZO= 321.0 CM
 VD= 0.0 CM/S
 VS= 0.0 CM/S
 AMB= 0.0 PPM
 TEMP= 18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* *	X1	LINK COORDINATES (M) Y1	X2	Y2	* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1		0	0	-72	0		AG	1200	13.6	0.0	18.0
B. 2		0	0	72	0		AG	1750	13.6	0.0	32.0
C. 3		0	0	0	72		AG	1110	13.6	0.0	37.0
D. 4		0	0	0	-72		AG	1350	13.6	0.0	37.0

LINK	* *	L (M)	R (M)	MIXW (M)	STPL (SEC)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR 1		15	15	1.3
RECEPTOR 2		30	30	1.3
RECEPTOR 3		-15	15	1.3
RECEPTOR 4		-30	30	1.3

REPORT FOR FILE : mark3

1. Site Variables

U= 1.0 M/S
 BRG= 225.0 DEGREES
 CLASS= F STABILITY
 MIXH= 1000.0 M
 SIGTH= 20.0 DEGREES
 ZO= 321.0 CM
 VD= 0.0 CM/S
 VS= 0.0 CM/S
 AMB= 0.0 PPM
 TEMP= 18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* *	X1	LINK COORDINATES (M) Y1	X2	Y2	* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1		0	0	-72	0		AG	3320	7.3	0.0	18.0
B. 2		0	0	72	0		AG	3850	7.3	0.0	32.0
C. 3		0	0	0	72		AG	2260	7.3	0.0	37.0
D. 4		0	0	0	-72		AG	1180	7.3	0.0	37.0

LINK	* *	L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2
A.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR 1		15	15	1.3
RECEPTOR 2		30	30	1.3
RECEPTOR 3		-15	15	1.3
RECEPTOR 4		-30	30	1.3

REPORT FOR FILE : mark4

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	2790	7.3	0.0	18.0	
B. 2	0	0	72	0	AG	3840	7.3	0.0	32.0	
C. 3	0	0	0	72	AG	2620	7.3	0.0	37.0	
D. 4	0	0	0	-72	AG	1280	7.3	0.0	37.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
RECEPTOR 1	15	15	1.3
RECEPTOR 2	30	30	1.3
RECEPTOR 3	-15	15	1.3
RECEPTOR 4	-30	30	1.3

REPORT FOR FILE : mark5
 1 Site Variables

U= 1.0 M/S
 BRG= 225.0 DEGREES
 CLASS= F STABILITY
 MIXH= 1000.0 M
 SIGTH= 20.0 DEGREES
 ZO= 321.0 CM
 VD= 0.0 CM/S
 VS= 0.0 CM/S
 AMB= 0.0 PPM
 TEMP= 18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	2490	7.3	0.0	18.0
2	0	0	72	0	AG	3440	7.3	0.0	32.0
3	0	0	0	72	AG	2010	7.3	0.0	37.0
4	0	0	0	-72	AG	1250	7.3	0.0	37.0

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	15	15	1.3
2	30	30	1.3
3	-15	15	1.3
4	-30	30	1.3

REPORT FOR FILE : mark6

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	2790	7.3	0.0	18.0	
B. 2	0	0	72	0	AG	3840	7.3	0.0	32.0	
C. 3	0	0	0	72	AG	2620	7.3	0.0	37.0	
D. 4	0	0	0	-72	AG	1280	7.3	0.0	37.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	15	15	1.3	
RECEPTOR 2	30	30	1.3	
RECEPTOR 3	-15	15	1.3	
RECEPTOR 4	-30	30	1.3	

REPORT FOR FILE : mark7

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	3320	7.3	0.0	18.0
2	0	0	72	0	AG	3850	7.3	0.0	32.0
3	0	0	0	72	AG	2260	7.3	0.0	37.0
4	0	0	0	-72	AG	1180	7.3	0.0	37.0

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR	1	15	15	1.3
RECEPTOR	2	30	30	1.3
RECEPTOR	3	-15	15	1.3
RECEPTOR	4	-30	30	1.3

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* *	X1	LINK COORDINATES (M) Y1	X2	Y2	* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1		0	0	-72	0		AG	1830	7.3	0.0	18.0
B. 2		0	0	72	0		AG	3500	7.3	0.0	32.0
C. 3		0	0	0	72		AG	1500	7.3	0.0	37.0
D. 4		0	0	0	-72		AG	730	7.3	0.0	37.0

LINK	* *	L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR 1	1	15	15	1.3
RECEPTOR 2	2	30	30	1.3
RECEPTOR 3	3	-15	15	1.3
RECEPTOR 4	4	-30	30	1.3

REPORT FOR FILE : front1

1. Site Variables

U= 1.0 M/S
 BRG= 180.0 DEGREES
 CLASS= F STABILITY
 MIXH= 1000.0 M
 SIGTH= 20.0 DEGREES
 ZO= 321.0 CM
 VD= 0.0 CM/S
 VS= 0.0 CM/S
 AMB= 0.0 PPM
 TEMP= 18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* *	X1	LINK COORDINATES (M) Y1	X2	Y2	* *	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1		0	0	-44	0		AG	1750	13.6	0.0	32.0
2		0	0	44	0		AG	1750	13.6	0.0	32.0
3		0	0	0	44		AG	846	13.6	0.0	22.0
4		0	0	0	-44		AG	846	13.6	0.0	22.0

LINK	* *	MIXW L (M)	R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
		0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
1		15	15	1.3
2		30	30	1.3
3		-15	15	1.3
4		-30	30	1.3
5		15	-15	1.3
6		30	-30	1.3

REPORT FOR FILE : front2

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-44	0	AG	3970	7.3	0.0	32.0
B. 2	0	0	44	0	AG	3970	7.3	0.0	32.0
C. 3	0	0	0	44	AG	1404	7.3	0.0	22.0
D. 4	0	0	0	-44	AG	1404	7.3	0.0	22.0

LINK	* L (M)	* R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR 1		15	15	1.3
RECEPTOR 2		30	30	1.3
RECEPTOR 3		-15	15	1.3
RECEPTOR 4		-30	30	1.3
RECEPTOR 5		15	-15	1.3
RECEPTOR 6		30	-30	1.3

REPORT FOR FILE : front3

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-44	0	AG	3850	7.3	0.0	32.0	
2	0	0	44	0	AG	3850	7.3	0.0	32.0	
3	0	0	0	44	AG	1320	7.3	0.0	22.0	
4	0	0	0	-44	AG	1320	7.3	0.0	22.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NDCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	15	15	1.3	
RECEPTOR 2	30	30	1.3	
RECEPTOR 3	-15	15	1.3	
RECEPTOR 4	-30	30	1.3	
RECEPTOR 5	15	-15	1.3	
RECEPTOR 6	30	-30	1.3	

REPORT FOR FILE : front5

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK	* DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	1	0	0	-44	0	AG	3440	7.3	0.0	32.0	
B.	2	0	0	44	0	AG	3440	7.3	0.0	32.0	
C.	3	0	0	0	44	AG	1302	7.3	0.0	22.0	
D.	4	0	0	0	-44	AG	1302	7.3	0.0	22.0	

LINK	* L (M)	* R (M)	MIXW	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0	
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0	
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0	
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0	

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	15	15	1.3	
RECEPTOR 2	30	30	1.3	
RECEPTOR 3	-15	15	1.3	
RECEPTOR 4	-30	30	1.3	
RECEPTOR 5	15	-15	1.3	
RECEPTOR 6	30	-30	1.3	

REPORT FOR FILE : front6

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-44	0	AG	3840	7.3	0.0	32.0
2	0	0	44	0	AG	3840	7.3	0.0	32.0
3	0	0	0	44	AG	1386	7.3	0.0	22.0
4	0	0	0	-44	AG	1386	7.3	0.0	22.0

LINK	* L (M)	* R (M)	MIXW	STPL (SEC)	DCLT (SEC)	ACCT (MPH)	SPD	NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2
A.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	15	15	1.3
2	30	30	1.3
3	-15	15	1.3
4	-30	30	1.3
5	15	-15	1.3
6	30	-30	1.3

REPORT FOR FILE : front7

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-44	0	AG	3850	7.3	0.0	32.0
B. 2	0	0	44	0	AG	3850	7.3	0.0	32.0
C. 3	0	0	0	44	AG	1320	7.3	0.0	22.0
D. 4	0	0	0	-44	AG	1320	7.3	0.0	22.0

LINK	* L (M)	* R (M)	MIXW	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD	NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
RECEPTOR 1	15	15	1.3
RECEPTOR 2	30	30	1.3
RECEPTOR 3	-15	15	1.3
RECEPTOR 4	-30	30	1.3
RECEPTOR 5	15	-15	1.3
RECEPTOR 6	30	-30	1.3

REPORT FOR FILE : front8

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	180.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-44	0	AG	3500	7.3	0.0	32.0	
2	0	0	44	0	AG	3500	7.3	0.0	32.0	
3	0	0	0	44	AG	1308	7.3	0.0	22.0	
4	0	0	0	-44	AG	1308	7.3	0.0	22.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NDCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	15	15	1.3
2	30	30	1.3
3	-15	15	1.3
4	-30	30	1.3
5	15	-15	1.3
6	30	-30	1.3

MODEL RESULTS FOR FILE mark1

RECEPTOR	* PRED * CONC * (PPM)	* WIND * * BRG * *(DEG)*	COCN/LINK (PPM)	A	B	C	D
RECPT 1	* 1.5	* 201		0.1	0.8	0.2	0.5
RECPT 2	* 1.0	* 225		0.2	0.3	0.2	0.2
RECPT 3	* 1.4	* 129		0.3	0.5	0.3	0.3
RECPT 4	* 0.9	* 135		0.2	0.3	0.2	0.2

MODEL RESULTS FOR FILE mark2

RECEPTOR	* PRED * CONC * (PPM)	* WIND * * BRG * *(DEG)*	COCN/LINK (PPM)	A	B	C	D
RECPT 1	* 1.5	* 248		0.6	0.3	0.5	0.0
RECPT 2	* 1.0	* 225		0.2	0.4	0.2	0.1
RECPT 3	* 1.5	* 129		0.4	0.6	0.4	0.1
RECPT 4	* 1.0	* 123		0.1	0.5	0.3	0.1

MODEL RESULTS FOR FILE mark3

RECEPTOR	* PRED * CONC * (PPM)	* WIND * * BRG * *(DEG)*	COCN/LINK (PPM)	A	B	C	D
RECPT 1	* 1.5	* 248		0.7	0.3	0.4	0.0
RECPT 2	* 1.0	* 225		0.3	0.4	0.2	0.1
RECPT 3	* 1.4	* 129		0.4	0.6	0.3	0.1
RECPT 4	* 1.0	* 123		0.1	0.4	0.3	0.1

MODEL RESULTS FOR FILE mark4

RECEPTOR	* PRED * CONC * (PPM)	* WIND * * BRG * *(DEG)*	COCN/LINK (PPM)	A	B	C	D
RECPT 1	* 1.5	* 249		0.6	0.3	0.5	0.0
RECPT 2	* 1.0	* 225		0.2	0.4	0.3	0.1
RECPT 3	* 1.5	* 112		0.1	0.8	0.5	0.0
RECPT 4	* 1.0	* 123		0.1	0.4	0.4	0.1

MODEL RESULTS FOR FILE mark5

RECEPTOR	* PRED * CONC * (PPM)	* WIND * * BRG * *(DEG)*	COCN/LINK (PPM)	A	B	C	D
RECPT 1	* 1.3	* 201		0.1	0.8	0.2	0.3
RECPT 2	* 0.9	* 225		0.2	0.3	0.2	0.1
RECPT 3	* 1.3	* 129		0.3	0.5	0.3	0.1
RECPT 4	* 0.8	* 123		0.1	0.4	0.3	0.1

MODEL RESULTS FOR FILE mark6

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG *(DEG)*	* * *	A	COCN/LINK (PPM) B	C	D
RECPT 1	* 1.5	* 249	* *	0.6	0.3	0.5	0.0
RECPT 2	* 1.0	* 225	* *	0.2	0.4	0.3	0.1
RECPT 3	* 1.5	* 112	* *	0.1	0.8	0.5	0.0
RECPT 4	* 1.0	* 123	* *	0.1	0.4	0.4	0.1

MODEL RESULTS FOR FILE mark7

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG *(DEG)*	* * *	A	COCN/LINK (PPM) B	C	D
RECPT 1	* 1.5	* 248	* *	0.7	0.3	0.4	0.0
RECPT 2	* 1.0	* 225	* *	0.3	0.4	0.2	0.1
RECPT 3	* 1.4	* 129	* *	0.4	0.6	0.3	0.1
RECPT 4	* 1.0	* 123	* *	0.1	0.4	0.3	0.1

MODEL RESULTS FOR FILE mark8

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG *(DEG)*	* * *	A	COCN/LINK (PPM) B	C	D
RECPT 1	* 1.1	* 196	* *	0.0	0.8	0.1	0.1
RECPT 2	* 0.7	* 211	* *	0.1	0.5	0.1	0.1
RECPT 3	* 1.1	* 112	* *	0.1	0.7	0.3	0.0
RECPT 4	* 0.7	* 123	* *	0.1	0.4	0.2	0.0

MODEL RESULTS FOR FILE front1

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG *(DEG)*	* * *	A	COCN/LINK (PPM) B	C	D
RECPT 1	* 1.3	* 221	* *	0.4	0.5	0.2	0.2
RECPT 2	* 0.9	* 221	* *	0.2	0.4	0.1	0.1
RECPT 3	* 1.3	* 139	* *	0.5	0.4	0.2	0.2
RECPT 4	* 0.9	* 139	* *	0.4	0.2	0.1	0.1
RECPT 5	* 1.3	* 319	* *	0.4	0.5	0.2	0.2
RECPT 6	* 0.9	* 319	* *	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front2

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG *(DEG)*	* * *	A	COCN/LINK (PPM) B	C	D
RECPT 1	* 1.5	* 221	* *	0.5	0.6	0.2	0.2
RECPT 2	* 0.9	* 221	* *	0.3	0.4	0.1	0.1
RECPT 3	* 1.5	* 139	* *	0.6	0.5	0.2	0.2
RECPT 4	* 0.9	* 139	* *	0.4	0.3	0.1	0.1
RECPT 5	* 1.5	* 319	* *	0.5	0.6	0.2	0.2
RECPT 6	* 0.9	* 319	* *	0.3	0.4	0.1	0.1

MODEL RESULTS FOR FILE front3

RECEPTOR		* (PPM)	*(DEG)*		A	B	C	D
RECPT 1	*	1.4	* 221 *	*	0.4	0.6	0.2	0.2
RECPT 2	*	0.9	* 221 *	*	0.2	0.4	0.1	0.1
RECPT 3	*	1.4	* 139 *	*	0.6	0.4	0.2	0.2
RECPT 4	*	0.9	* 139 *	*	0.4	0.2	0.1	0.1
RECPT 5	*	1.4	* 319 *	*	0.4	0.6	0.2	0.2
RECPT 6	*	0.9	* 319 *	*	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front4

RECEPTOR		* PRED * CONC * (PPM)	*WIND * * BRG * *(DEG)*		A	B	C	D
RECPT 1	*	1.4	* 221 *	*	0.4	0.6	0.2	0.2
RECPT 2	*	0.9	* 221 *	*	0.2	0.4	0.1	0.1
RECPT 3	*	1.4	* 139 *	*	0.6	0.4	0.2	0.2
RECPT 4	*	0.9	* 139 *	*	0.4	0.2	0.1	0.1
RECPT 5	*	1.4	* 319 *	*	0.4	0.6	0.2	0.2
RECPT 6	*	0.9	* 319 *	*	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front5

RECEPTOR		* PRED * CONC * (PPM)	*WIND * * BRG * *(DEG)*		A	B	C	D
RECPT 1	*	1.3	* 221 *	*	0.4	0.5	0.2	0.2
RECPT 2	*	0.8	* 221 *	*	0.2	0.4	0.1	0.1
RECPT 3	*	1.3	* 139 *	*	0.5	0.4	0.2	0.2
RECPT 4	*	0.8	* 139 *	*	0.4	0.2	0.1	0.1
RECPT 5	*	1.3	* 319 *	*	0.4	0.5	0.2	0.2
RECPT 6	*	0.8	* 319 *	*	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front6

RECEPTOR		* PRED * CONC * (PPM)	*WIND * * BRG * *(DEG)*		A	B	C	D
RECPT 1	*	1.4	* 221 *	*	0.4	0.6	0.2	0.2
RECPT 2	*	0.9	* 221 *	*	0.2	0.4	0.1	0.1
RECPT 3	*	1.4	* 139 *	*	0.6	0.4	0.2	0.2
RECPT 4	*	0.9	* 139 *	*	0.4	0.2	0.1	0.1
RECPT 5	*	1.4	* 319 *	*	0.4	0.6	0.2	0.2
RECPT 6	*	0.9	* 319 *	*	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front7

RECEPTOR		* PRED * CONC * (PPM)	*WIND * * BRG * *(DEG)*		A	B	C	D
RECPT 1	*	1.4	* 221 *	*	0.4	0.6	0.2	0.2
RECPT 2	*	0.9	* 221 *	*	0.2	0.4	0.1	0.1
RECPT 3	*	1.4	* 139 *	*	0.6	0.4	0.2	0.2
RECPT 4	*	0.9	* 139 *	*	0.4	0.2	0.1	0.1
RECPT 5	*	1.4	* 319 *	*	0.4	0.6	0.2	0.2
RECPT 6	*	0.9	* 319 *	*	0.2	0.4	0.1	0.1

MODEL RESULTS FOR FILE front8

RECEPTOR		* PRED	* WIND *	A	COCN/LINK					
		* CONC	* BRG *		(PPM)					
		* (PPM)	* (DEG)*		B	C	D			
RECPT	1	*	1.3	*	221	*	0.4	0.5	0.2	0.2
RECPT	2	*	0.8	*	221	*	0.2	0.4	0.1	0.1
RECPT	3	*	1.3	*	139	*	0.5	0.4	0.2	0.2
RECPT	4	*	0.8	*	139	*	0.4	0.2	0.1	0.1
RECPT	5	*	1.3	*	319	*	0.4	0.5	0.2	0.2
RECPT	6	*	0.8	*	319	*	0.2	0.4	0.1	0.1

REPORT FOR FILE : pch2

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	1589	7.3	0.0	32.0	
2	0	0	72	0	AG	1589	7.3	0.0	32.0	
3	0	0	0	158	AG	3752	7.3	0.0	37.0	
4	0	0	0	-158	AG	2410	7.3	0.0	37.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	-15	-15	1.3
2	-30	-30	1.3
3	15	-15	1.3
4	30	-30	1.3

REPORT FOR FILE : pch3

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	1617	7.3	0.0	32.0	
B. 2	0	0	72	0	AG	1617	7.3	0.0	32.0	
C. 3	0	0	0	158	AG	3832	7.3	0.0	37.0	
D. 4	0	0	0	-158	AG	2260	7.3	0.0	37.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
RECEPTOR 1	-15	-15	1.3
RECEPTOR 2	-30	-30	1.3
RECEPTOR 3	15	-15	1.3
RECEPTOR 4	30	-30	1.3

REPORT FOR FILE : pch4

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	1561	7.3	0.0	32.0	
2	0	0	72	0	AG	1561	7.3	0.0	32.0	
3	0	0	0	158	AG	3544	7.3	0.0	37.0	
4	0	0	0	-158	AG	2620	7.3	0.0	37.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	1	-15	-15	1.3
RECEPTOR 2	2	-30	-30	1.3
RECEPTOR 3	3	15	-15	1.3
RECEPTOR 4	4	30	-30	1.3

REPORT FOR FILE : pch5

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	1540	7.3	0.0	32.0
B. 2	0	0	72	0	AG	1540	7.3	0.0	32.0
C. 3	0	0	0	158	AG	3240	7.3	0.0	37.0
D. 4	0	0	0	-158	AG	2010	7.3	0.0	37.0

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	1	-15	-15	1.3
RECEPTOR 2	2	-30	-30	1.3
RECEPTOR 3	3	15	-15	1.3
RECEPTOR 4	4	30	-30	1.3

REPORT FOR FILE : pch6

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	1561	7.3	0.0	32.0
2	0	0	72	0	AG	1561	7.3	0.0	32.0
3	0	0	0	158	AG	3544	7.3	0.0	37.0
4	0	0	0	-158	AG	2620	7.3	0.0	37.0

LINK	* L (M)	* R (M)	* STPL (M)	* DCLT (SEC)	* ACCT (MPH)	* SPD NCYC	* NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	1	-15	-15	1.3
RECEPTOR 2	2	-30	-30	1.3
RECEPTOR 3	3	15	-15	1.3
RECEPTOR 4	4	30	-30	1.3

REPORT FOR FILE : pch7

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	90.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	1617	7.3	0.0	32.0
B. 2	0	0	72	0	AG	1617	7.3	0.0	32.0
C. 3	0	0	0	158	AG	3832	7.3	0.0	37.0
D. 4	0	0	0	-158	AG	2260	7.3	0.0	37.0

LINK	* L (M)	* R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	-15	-15	1.3
2	-30	-30	1.3
3	15	-15	1.3
4	30	-30	1.3

REPORT FOR FILE : ket1

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	990	13.6	0.0	22.0
2	0	0	115	0	AG	990	13.6	0.0	22.0
3	0	0	0	72	AG	315	13.6	0.0	22.0
4	0	0	0	-72	AG	504	13.6	0.0	22.0

LINK	* L (M)	* R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
1	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
2	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
4	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	15	15	1.3
2	30	30	1.3

REPORT FOR FILE : ket2

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* * X1	LINK COORDINATES (M) Y1	X2	Y2	* * TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	2230	7.3	0.0	22.0
B. 2	0	0	115	0	AG	2230	7.3	0.0	22.0
C. 3	0	0	0	72	AG	1674	7.3	0.0	22.0
D. 4	0	0	0	-72	AG	1791	7.3	0.0	22.0

LINK	* * L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR	1	15	15	1.3
RECEPTOR	2	30	30	1.3

REPORT FOR FILE : ket3

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	2240	7.3	0.0	22.0	
2	0	0	115	0	AG	2240	7.3	0.0	22.0	
3	0	0	0	72	AG	1701	7.3	0.0	22.0	
4	0	0	0	-72	AG	1710	7.3	0.0	22.0	

LINK	* L (M)	R (M)	MIXW	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
RECEPTOR 1	15	15	1.3
RECEPTOR 2	30	30	1.3

REPORT FOR FILE : ket4

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK	*	LINK COORDINATES (M)				*	EF	H	W	
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	VPH	(G/MI)	(M)	(M)
A. 1		0	0	-72	0	AG	2200	7.3	0.0	22.0
B. 2		0	0	115	0	AG	2200	7.3	0.0	22.0
C. 3		0	0	0	72	AG	1692	7.3	0.0	22.0
D. 4		0	0	0	-72	AG	1764	7.3	0.0	22.0

		* MIXW								EFI	IDT1	IDT2	
LINK	*	L	R	STPL	DCLT	ACCT	SPD	NCYC	NDLA	VPHO	(G/MIN)	(SEC)	(SEC)
	*	(M)	(M)	(M)	(SEC)	(SEC)	(MPH)						
A.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR		X	Y	Z
RECEPTOR 1		15	15	1.3
RECEPTOR 2		30	30	1.3

REPORT FOR FILE : ket5

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	2170	7.3	0.0	22.0
2	0	0	115	0	AG	2170	7.3	0.0	22.0
3	0	0	0	72	AG	1377	7.3	0.0	22.0
4	0	0	0	-72	AG	1296	7.3	0.0	22.0

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR	1	15	15	1.3
RECEPTOR	2	30	30	1.3

REPORT FOR FILE : ket6

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1	0	0	-72	0	AG	2200	7.3	0.0	22.0	
B. 2	0	0	115	0	AG	2200	7.3	0.0	22.0	
C. 3	0	0	0	72	AG	1692	7.3	0.0	22.0	
D. 4	0	0	0	-72	AG	1764	7.3	0.0	22.0	

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
RECEPTOR 1	15	15	1.3
RECEPTOR 2	30	30	1.3

REPORT FOR FILE : ket7

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
1	0	0	-72	0	AG	2240	7.3	0.0	22.0
2	0	0	115	0	AG	2240	7.3	0.0	22.0
3	0	0	0	72	AG	1701	7.3	0.0	22.0
4	0	0	0	-72	AG	1710	7.3	0.0	22.0

LINK	* L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	X	Y	Z
1	15	15	1.3
2	30	30	1.3

REPORT FOR FILE : ket8

1. Site Variables

U=	1.0 M/S	ZO=	321.0 CM
BRG=	225.0 DEGREES	VD=	0.0 CM/S
CLASS=	F STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	20.0 DEGREES	TEMP=	18.0 DEGREE (C)

2. Link Description

LINK DESCRIPTION	* * X1	LINK COORDINATES (M)	Y1	X2	Y2	* * TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. 1		0	0	-72	0	AG	1960	7.3	0.0	22.0
B. 2		0	0	115	0	AG	1960	7.3	0.0	22.0
C. 3		0	0	0	72	AG	1620	7.3	0.0	22.0
D. 4		0	0	0	-72	AG	1746	7.3	0.0	22.0

LINK	* * L (M)	MIXW R (M)	STPL (M)	DCLT (SEC)	ACCT (MPH)	SPD NCYC	NDLA	VPHO (G/MIN)	EFI (SEC)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

RECEPTOR	1	X	Y	Z
RECEPTOR 1	1	15	15	1.3
RECEPTOR 2	2	30	30	1.3

MODEL RESULTS FOR FILE pch1

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	B	C	D
RECPT 1	* 1.1	* 12	0.3	0.0	0.6	0.2
RECPT 2	* 0.7	* 24	0.2	0.0	0.4	0.1
RECPT 3	* 1.1	* 348	0.0	0.3	0.6	0.2
RECPT 4	* 0.7	* 336	0.0	0.2	0.4	0.1

MODEL RESULTS FOR FILE pch2

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	B	C	D
RECPT 1	* 1.5	* 12	0.4	0.0	0.9	0.2
RECPT 2	* 0.9	* 23	0.2	0.0	0.6	0.1
RECPT 3	* 1.5	* 348	0.0	0.4	0.9	0.2
RECPT 4	* 0.9	* 337	0.0	0.2	0.6	0.1

MODEL RESULTS FOR FILE pch3

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	B	C	D
RECPT 1	* 1.5	* 12	0.4	0.0	0.9	0.2
RECPT 2	* 0.9	* 23	0.2	0.0	0.6	0.1
RECPT 3	* 1.5	* 348	0.0	0.4	0.9	0.2
RECPT 4	* 0.9	* 337	0.0	0.2	0.6	0.1

MODEL RESULTS FOR FILE pch4

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	B	C	D
RECPT 1	* 1.5	* 12	0.4	0.0	0.9	0.2
RECPT 2	* 0.9	* 24	0.2	0.0	0.5	0.1
RECPT 3	* 1.5	* 348	0.0	0.4	0.9	0.2
RECPT 4	* 0.9	* 336	0.0	0.2	0.5	0.1

MODEL RESULTS FOR FILE pch5

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	B	C	D
RECPT 1	* 1.3	* 12	0.4	0.0	0.8	0.2
RECPT 2	* 0.8	* 23	0.2	0.0	0.5	0.1
RECPT 3	* 1.3	* 348	0.0	0.4	0.8	0.2
RECPT 4	* 0.8	* 337	0.0	0.2	0.5	0.1

MODEL RESULTS FOR FILE pch6

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 1.5	* 12	0.4	0.0	0.9		0.2
RECPT 2	* 0.9	* 24	0.2	0.0	0.5		0.1
RECPT 3	* 1.5	* 348	0.0	0.4	0.9		0.2
RECPT 4	* 0.9	* 336	0.0	0.2	0.5		0.1

MODEL RESULTS FOR FILE pch7

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 1.5	* 12	0.4	0.0	0.9		0.2
RECPT 2	* 0.9	* 23	0.2	0.0	0.6		0.1
RECPT 3	* 1.5	* 348	0.0	0.4	0.9		0.2
RECPT 4	* 0.9	* 337	0.0	0.2	0.6		0.1

MODEL RESULTS FOR FILE pch8

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 1.4	* 11	0.3	0.0	0.9		0.1
RECPT 2	* 0.9	* 22	0.2	0.0	0.6		0.1
RECPT 3	* 1.4	* 349	0.0	0.3	0.9		0.1
RECPT 4	* 0.9	* 338	0.0	0.2	0.6		0.1

MODEL RESULTS FOR FILE ket1

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 0.8	* 209	0.1	0.4	0.1		0.2
RECPT 2	* 0.5	* 225	0.2	0.2	0.1		0.1

MODEL RESULTS FOR FILE ket2

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 1.1	* 209	0.1	0.5	0.2		0.4
RECPT 2	* 0.7	* 225	0.2	0.2	0.2		0.1

MODEL RESULTS FOR FILE ket3

RECEPTOR	* PRED * CONC * (PPM)	* WIND * BRG * (DEG)*	A	COCN/LINK (PPM)			D
				B	C		
RECPT 1	* 1.1	* 241	0.4	0.2	0.4		0.1
RECPT 2	* 0.7	* 225	0.2	0.2	0.2		0.1

MODEL RESULTS FOR FILE ket4

RECEPTOR	* PRED	* WIND *	COCN/LINK			
	* CONC	* BRG *	(PPM)			
	* (PPM)	* (DEG)*	A	B	C	D
RECPT 1	* 1.1	* 241 *	0.4	0.2	0.4	0.1
RECPT 2	* 0.7	* 225 *	0.2	0.2	0.2	0.1

MODEL RESULTS FOR FILE ket5

RECEPTOR	* PRED	* WIND *	COCN/LINK			
	* CONC	* BRG *	(PPM)			
	* (PPM)	* (DEG)*	A	B	C	D
RECPT 1	* 1.0	* 241 *	0.4	0.2	0.3	0.1
RECPT 2	* 0.6	* 225 *	0.2	0.2	0.1	0.1

MODEL RESULTS FOR FILE ket6

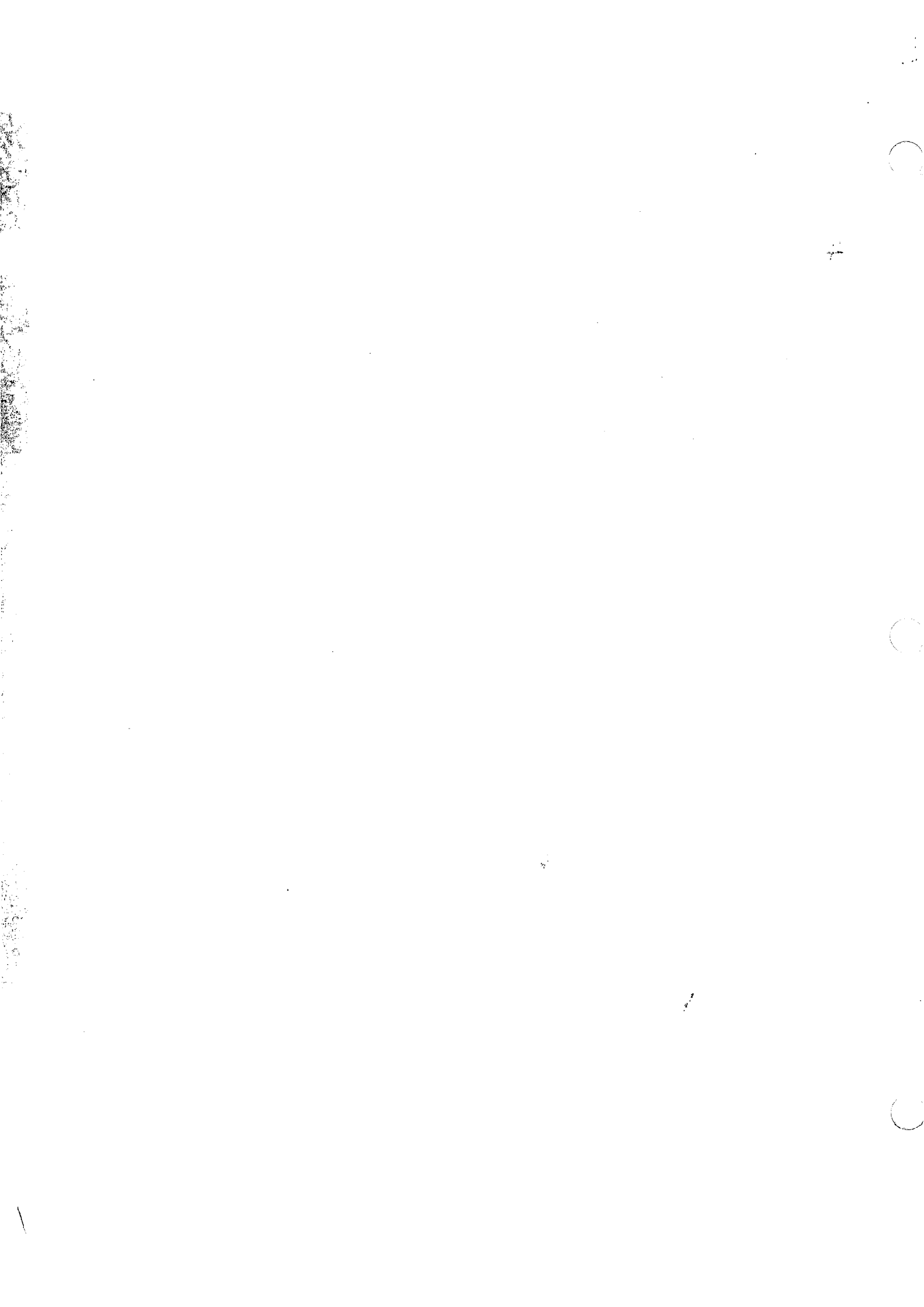
RECEPTOR	* PRED	* WIND *	COCN/LINK			
	* CONC	* BRG *	(PPM)			
	* (PPM)	* (DEG)*	A	B	C	D
RECPT 1	* 1.1	* 241 *	0.4	0.2	0.4	0.1
RECPT 2	* 0.7	* 225 *	0.2	0.2	0.2	0.1

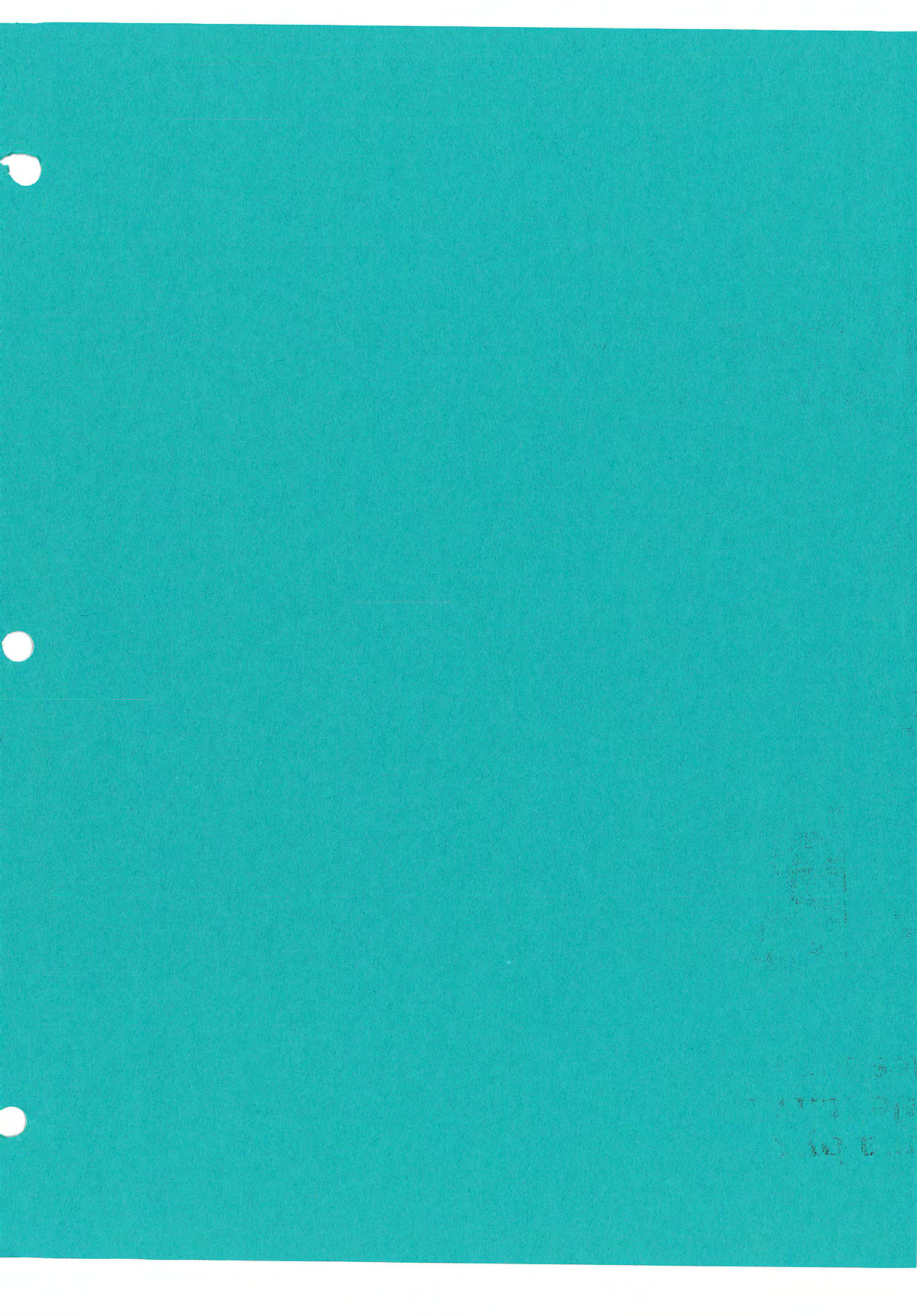
MODEL RESULTS FOR FILE ket7

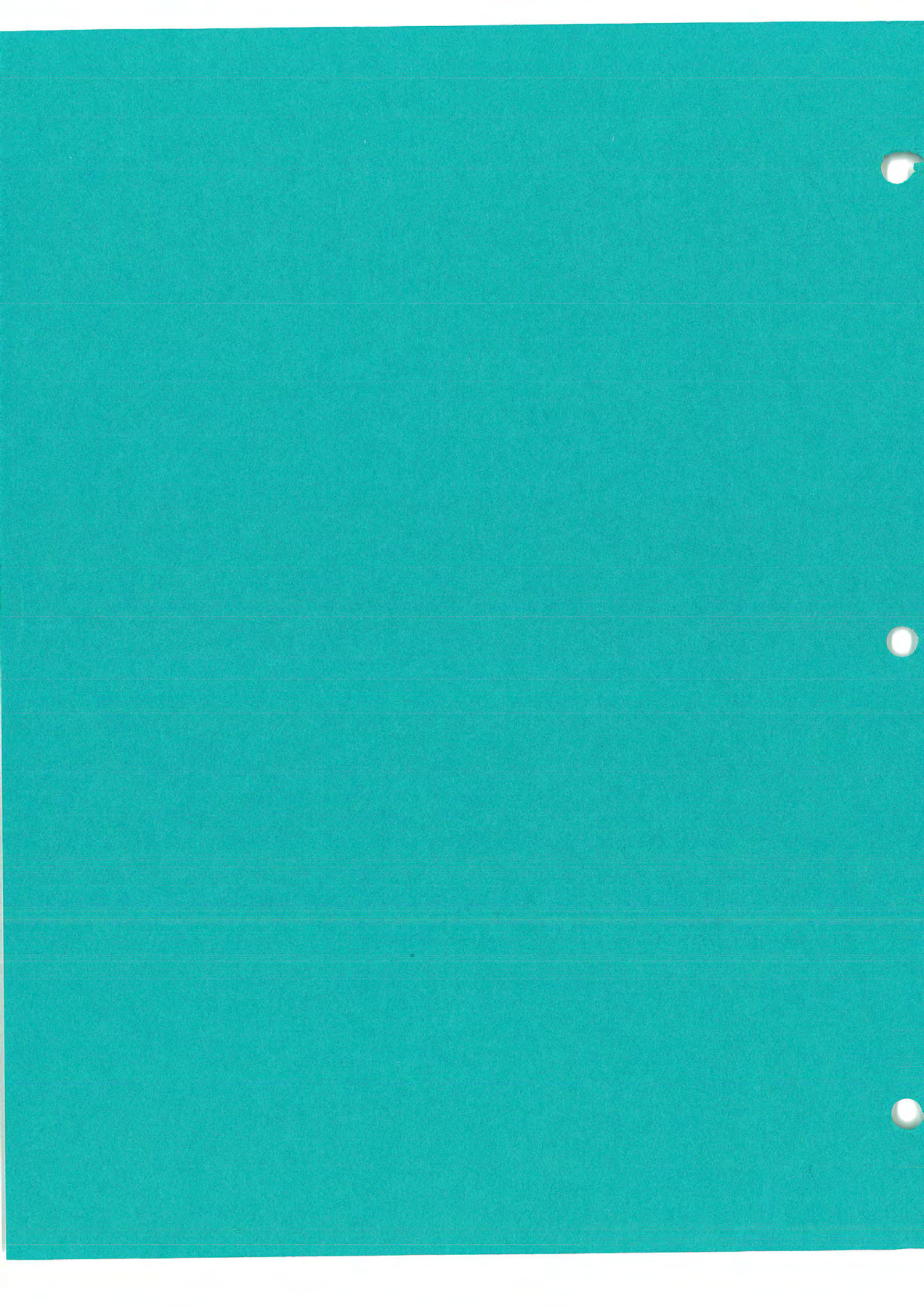
RECEPTOR	* PRED	* WIND *	COCN/LINK			
	* CONC	* BRG *	(PPM)			
	* (PPM)	* (DEG)*	A	B	C	D
RECPT 1	* 1.1	* 241 *	0.4	0.2	0.4	0.1
RECPT 2	* 0.7	* 225 *	0.2	0.2	0.2	0.1

MODEL RESULTS FOR FILE ket8

RECEPTOR	* PRED	* WIND *	COCN/LINK			
	* CONC	* BRG *	(PPM)			
	* (PPM)	* (DEG)*	A	B	C	D
RECPT 1	* 1.0	* 209 *	0.1	0.4	0.2	0.4
RECPT 2	* 0.7	* 225 *	0.2	0.2	0.2	0.1







APPENDIX F
RESPONSE TO COMMENTS
ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE
NAVY BROADWAY COMPLEX PROJECT

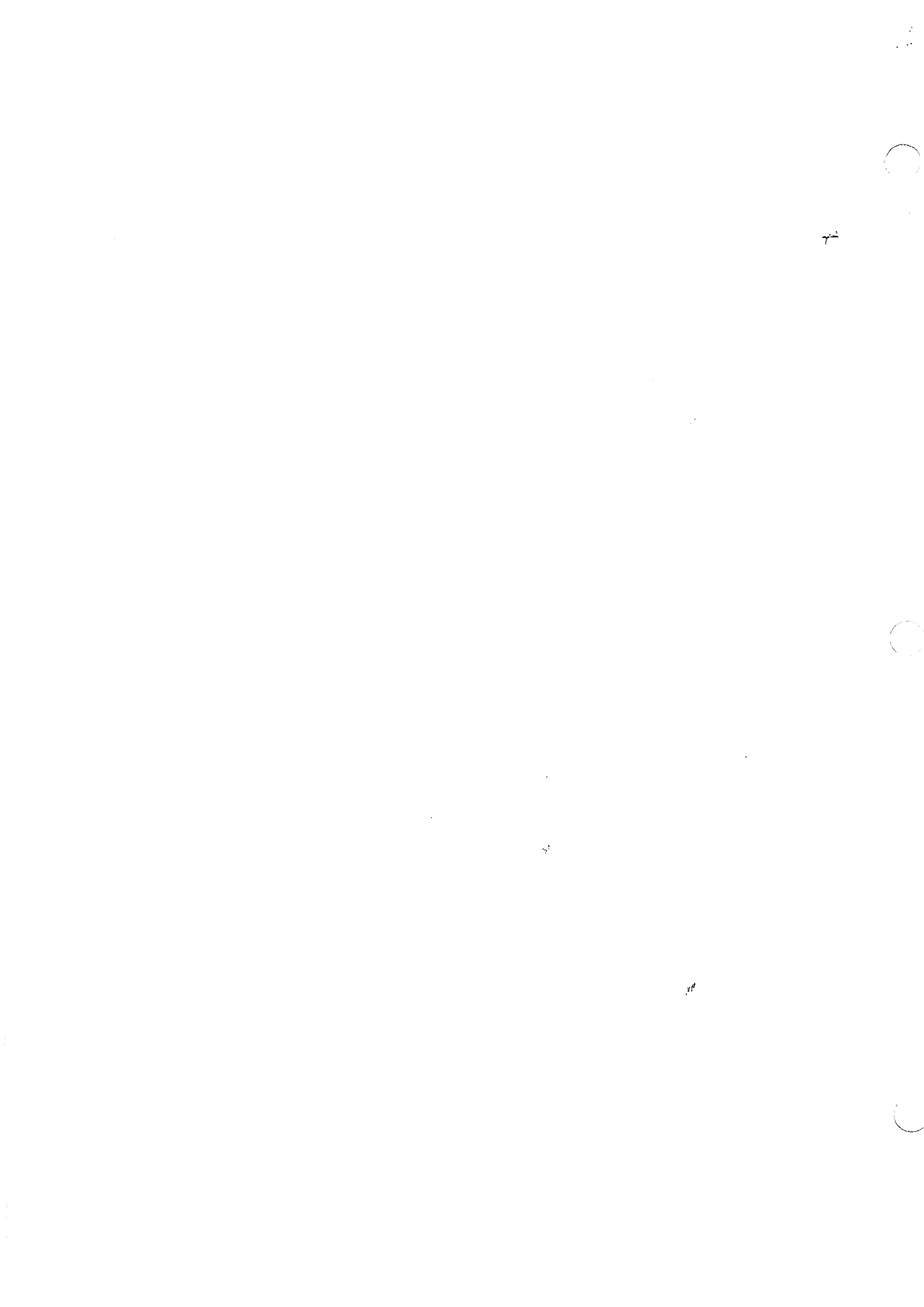


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5	ADDITIONAL RECIPIENTS OF THE DRAFT AND FINAL ENVIRONMENTAL IMPACT STATEMENTS	5-1
6	ADDITIONAL REFERENCES	6-1



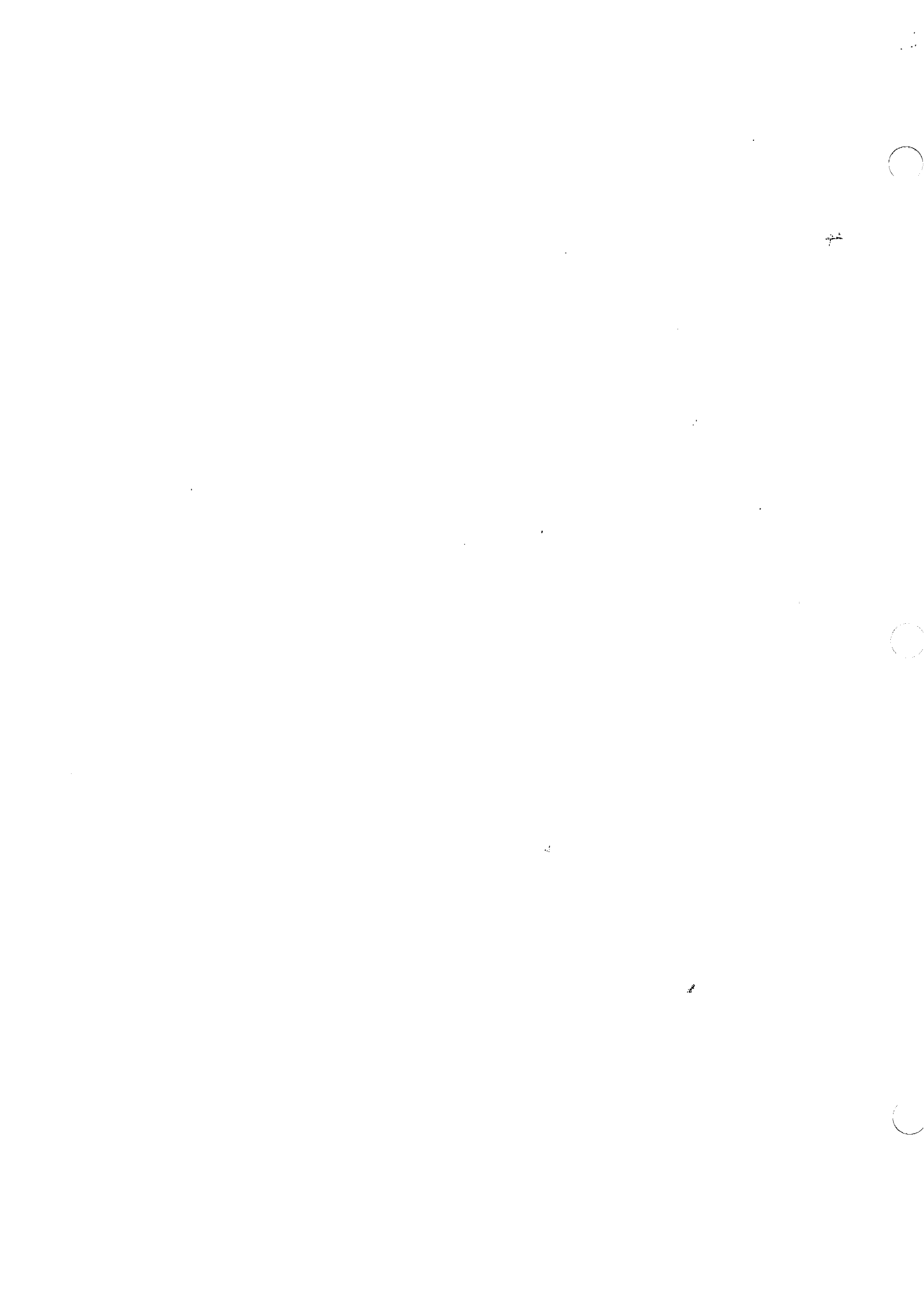
SECTION 1

INTRODUCTION

On April 13, 1990 the Department of the Navy and the City of San Diego distributed to public agencies and the general public the draft environmental impact statement (DEIS) and the draft environmental impact report (DEIR) for the Navy Broadway Complex project in San Diego, California. In accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), a 45-day public review period for the documents was provided, and it ended June 4, 1990. A number of written comments were received. In addition, a public hearing was held in San Diego on May 16, 1990 to receive oral comments.

All comments on the DEIS and the DEIR, and the responses thereto, are presented in this document. Section 2 provides all the comments on the documents, and Section 3 presents responses to significant environmental points raised in the comments. A number and letter (eg., "B-3") is placed adjacent to each comment in Section 2. Each comment is keyed to a response in Section 3 using this notation.

This document, together with the DEIS, constitutes the final EIS (FEIS). Where a comment results in a change in the EIS text, a notation is made in the comment indicating that the text is hereby revised. The final EIR (FEIR), prepared in accordance with CEQA, is being circulated to the public by the City of San Diego simultaneously with this document. The final EIR incorporates by reference this document.



SECTION 2

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

2.1 LIST OF COMMENTATORS

All comments on the DEIS are listed below with the letter designation assigned for cross-referencing purposes. This list represents all comments received as of June 4, 1990. The verbatim comment letters and a verbatim transcript of the public hearing are presented in Section 2.2.

2.1.1 WRITTEN COMMENTS

- A. Robert S. Joe, United States Department of Army, Corps of Engineers, May 22, 1990
- B. Kenneth W. Holt, M.S.E.H., United States Department of Health and Human Services, May 24, 1990
- C. Montague D. Griffin, May 25, 1990
- D. Don L. Nay, Port of San Diego, May 31, 1990
- E. James T. Cheshire, State of California, Department of Transportation, June 1, 1990
- F. Michael J. Stepner, City Of San Diego, City Architect, May 31, 1990
- G. Craig Adams, June 3, 1990
- H. Dwight E. Sanders, State of California, State Lands Commission, June 4, 1990
- I. Harry E. Wilson, June 1, 1990
- J. Norman W. Hickey, County of San Diego Chief Administrative Office, June 1, 1990
- K. Frederick M. Marks, Citizens Coordinate for Century 3, June 4, 1990
- L. Robert P. Martinez, State of California, Office of Planning and Research, June 4, 1990
- M. Gordon F. Snow, Ph.D., State of California Resources Agency, June 4, 1990
- N. Dennis J. O'Bryant, State of California, Department of Conservation, May 24, 1990
- O. Peter M. Douglas, California Coastal Commission, June 8, 1990
- P. Max Schmidt, Centre City Development Corporation, June 13, 1990
- Q. Deanna M. Wieman, United States Environmental Protection Agency, June 15, 1990

2.1.2 ORAL COMMENTS RECEIVED AT MAY 16, 1990 PUBLIC HEARING

- HA. Colleen Cronin, National Safety Associates
- HB. Don Wood, C-3 and the Bayfront Coalition



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2721

May 22, 1990

00000001

REPLY TO
ATTENTION OF

Office of the Chief
Environmental Resources Branch

Mr. L.D. Misko
Director of Planning
Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-1937

Dear Mr. Misko:

We have reviewed the Draft Environmental Impact Statement from your office, and the Draft Environmental Impact Report from the City of San Diego for the Navy Broadway Complex Project, as requested in a letter from your office, dated April 13, 1990.

Work in waters of the United States might require a permit under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. Please give our Regulatory Branch documentation that clearly describes the area and extent of any proposed work in watercourses and adjacent wetlands to help us make that determination.


A-1

If the proposed project involves any Federal assistance through funding or permits, compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f) and implementing regulations, 36 CFR 800, will be required.

A-2

Thank you for the opportunity to review and comment on this document.

Sincerely,


Robert S. Joe
Chief, Planning Division



0000002

Centers for Disease Control
Atlanta GA 30333

May 24, 1990

Officer in Charge
Western Division Naval Facilities Engineering
Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937

Dear Sir:

We have completed our review of the Draft Environmental Impact Statement (DEIS) for the Navy Broadway Complex Project, San Diego, California. We are responding on behalf of the U.S. Public Health Service.

We note that existing onsite contaminants, particularly asbestos and PCB's, have been investigated and does not pose imminent health threats. If any demolition occurs, the Navy will use acceptable practices in compliance with the Clean Air Act, and other Federal and State requirements to minimize potential exposures. Also, we note that several areas with questionable contamination will require further investigation, and remedial action to remove and properly dispose of any hazardous waste found onsite will occur to ensure protection of public health. We believe this DEIS has adequately addressed potential adverse impacts and appropriate mitigative measures, and we do not anticipate any significant public health impacts from the proposed action.

B-1

Thank you for the opportunity to review this DEIS. Please ensure that we are included on your mailing list to receive the Final EIS for this project and future DEIS's developed under the National Environmental Policy Act (NEPA).

Sincerely yours,

Kenneth W. Holt, M.S.E.H.
Environmental Health Scientist
Center for Environmental Health
and Injury Control

0000003

MONTAGUE D. GRIFFIN
2034 UPAS STREET
SAN DIEGO CA 92104
MAY 25, 1990

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT:
NAVY BROADWAY COMPLEX PROJECT, SAN DIEGO, CALIFORNIA

1. General Comments

None of the seven Alternatives best serves the public interest of the citizens of San Diego. All have substantial liabilities, including increased impacts on fire and police protection, traffic, circulation and parking, schools, recreation, air quality, viewscapes and aesthetics, and the Bayfront overall. All are growth-inducing.

C-1

Granted the validity of the CNO's determination that the Navy requires one million square feet of Navy office space, the most appropriate alternative is for the Navy to follow the Military Construction Appropriation process, justify the development scale and costs to Congress, and fund the construction from Federal funds, construct the approved project wholly on Block 2, and lease the other three blocks of the site to the City of San Diego for purposes of Bayfront park and open space. Only this approach will truly minimize the development impacts and maximize the public benefit.

C-2

The DEIR does not address the economic risk of the proposed public-private development venture process. Developing more major hotels downtown is a risky business. There is no guarantee of success. The entire project as proposed is based upon three tenuous hypotheses: (1) that private development can be undertaken within the Navy's required time frame, (2) that the private portion of the project will be financially viable, and (3) that the ultimate cost to taxpayers will be less. There is a substantial probability that the project will cost the taxpayers more, not less, as a result of the Navy's approach.

C-3

Given the opportunity, I believe most San Diegans would prefer to see a clean-cut, out-in-the-open financing for a project consisting of exactly what the Navy requires for its administrative facility on the Bayfront, no less and no more, and dedicate the remainder of its frontage for the public good. C-4

2. Specific Comments

(a) Page 1-3, Para. 1.2.1

Only an alternative such as that suggested in paragraph 1. above would provide significant downtown Bayfront open space, access, and view corridors. C-5

(b) Page 1-12, Alternative E

Alternative E is fatally marred by its exorbitant use of the entire site. It is an ill-conceived and inappropriate implementation of the correct concept for the project. C-6

(c) Page 1-12, Alternative F

Alternative F is a distant second choice for the project, but certainly, on balance, preferable to Alternative A because of the greater potential for a foot-of-Broadway park. C-7

(d) Page 4-74 et seq., Para. 4.3 Aesthetics and Viewsheds

Viewed from any aspect, the preferred Alternative A and several of the others are seriously detrimental to Bayfront aesthetics. C-8

(e) Page 4-111, Effects of Shadows

10 am and 2 pm shadowgrams do not with any realism portray the extraordinary effects of sunlight blockage by highrise buildings. One can only laugh at the unwarranted and unsupported statements within the last paragraph of page 4-111. C-9

(f) Page 4-122, Table 4.4-3

In view of the serious efforts to reduce water usage, the daily consumptive water use data should be revised downward. C-10

000003

MONTAGUE D. GRIFFIN
BROADWAY COMPLEX

(g) Page 4-126, Para. 4.4.7

This section should identify for the proposed project any on-site toxic and hazardous materials usage and storage.

C-11

(h) Page 4-144, Geology and Seismicity

The DEIR does not provide an adequate discussion of site geology, seismicity, identification of the fracture zone, or liquification potential. Core sample depth (44 feet) appears inadequate. Discussion of mitigations appear to be absent.

C-12

(i) Page 4-151, Biological Resources

While it is possible that the very limited discussion of biological resources adequately describes the potential impacts to the biological resources of the Bayfront, there is a conspicuous absence of any positive contribution by the project to enhancement of the zoological (especially avian) environment.

C-13

(j) Page 4-154, Meteorology

Wind rose and mean speed statistics are not an adequate basis upon which to evaluate building profiles and orientations, or glass exposure. Wind speed distribution functions should be given as a function of building heights.

C-14

(k) Page 7-1, Para. 7.3, Aesthetics and Viewsheds

This paragraph seriously misstates the consequences of the proposed project.

C-15

3. Typographical Errors

(a) Page 4-142

Within the first "bullet", second sentence, replace "F" by "G".

] C-16

(b) Page 4-208

Within the legend, the page citations are missing.

] C-17



Port of San Diego

and Lindbergh Field Air Terminal

(619) 291-3900 • P.O. Box 488, San Diego, California 92112

0068004

May 31, 1990

Officer in Charge
Western Division Naval Facilities Engineering
Command Detachment, Broadway Complex
555 West Beech Street, Suite 101
San Diego, CA 92101-2937

Subject: Navy Broadway Complex Project EIS/EIR

Dear Sir:

Our review of this document has prompted the identification of areas where it is felt that there is a deficiency in the information provided. These matters deal with: (1) the ability of the project to stand on its own merits without shifting development costs to other entities, (2) encroachments into the Lindbergh Field flight path, (3) curtailment of direct access by the closure of Broadway from downtown, and (4) a continuation of a serious deficit in the provision of on-site parking facilities.

The project should be evaluated so that it would stand on its own merits rather than to continue the efforts to use adjacent properties not owned or controlled by the Navy to add amenities. The District retains planning jurisdiction for its area, and has not assumed responsibility to carry forward the Navy's general proposals on Port lands. In particular, the public cost created by this development plan should be documented for the cost of suggested off-site open space, street closures, and new street systems. Public subsidies necessary for the museum operations proposed in the project should also be identified in the EIS.

The Navy's plan proposes a 400 foot tall building which is a 100 foot encroachment into the aircraft flight path at the foot of Broadway. The EIS should discuss the cumulative impacts of flight path height clearance encroachments by individual buildings in this area.

The closure of Broadway to direct vehicular traffic will curtail access from downtown to Harbor Drive and the adjacent shoreline. In the area between Ash Street and Market, which consists of a six block length,

D-1

D-2

D-3

Officer in Charge
 Western Division Naval Facilities Engineering
 Command Detachment, Broadway Complex
 May 31, 1990
 Page 2

Broadway is the only street at present which links downtown to the shoreline. The District's current planning policies encourage retention of Broadway as well as a new street to serve B Street Pier which would run across Port properties on an alignment close to B Street extended. The streets proposed by the Navy's plan for C Street and the linkage from C to Broadway are not consistent with our planned development. The Navy's illustration also shows C Street severing Port property in a way which would cause a diminution in value. The EIS should not assume that C Street and its proposed link to Broadway will be built, and under those circumstances, draw conclusions as to the impact of traffic on the intersections in the area.

D-3

All of the Navy's proposed development alternatives contain severe deficiencies in on-site parking supply. Since the proposals only provide from 50 to 55 percent of the total on-site parking demand, an unusually heavy reliance is placed upon transportation demand management techniques and on adjacent areas to fully meet the parking demand generated by the proposed development. The Navy appears to be providing only about 21 percent of its total on-site parking demand, which has placed undue competition for available parking spaces in the surrounding streets, adjacent parking areas, and in those areas allocated for commercial activities at G Street Mole, Seaport Village, and Lane Field. In the future, it is not anticipated that these areas will be available to meet the parking demand of Navy property development. The project tends to continue the adverse impact of inadequate parking facilities on Navy property, both at the proposed Broadway Complex development and at the Engineering Facilities Command on Pacific Highway.

D-4

Corrections to the contents of the EIS are suggested. On page 3-6, the report states, "...provision of open space outside of the project boundaries is not part of this project..." yet numerous illustrations show a dependent interface with a proposed open space area outside the project (Figures 3-4, 3-5, 3-6, 3-9, 3-14, and 4-4). The referenced maps should be corrected to reflect the current status of the adjacent area as shown in Figures 3-10, 3-11, 3-12, and 3-15. On page 4-11, the illustration of pedestrian oriented streets, walkways, and plazas, should be corrected to show the planning policies of the Port Master Plan if this document (the EIS) insists on covering those areas outside of the jurisdiction of the military. As presented, the representation seems to imply official sanction where none exists.

D-5

D-6

The discussion on page 4-20 dealing with the Port's planning jurisdiction and review by the California Coastal Commission should

D-7

0000004

Officer in Charge
Western Division Naval Facilities Engineering
Command Detachment, Broadway Complex
May 31, 1990
Page 3

be revised. The California Coastal Commission would only review a project already identified in the Port Master Plan if it falls within the definition of an appealable development in the California Coastal Act. If a development is determined not to be consistent with the Port Master Plan, then the project could not proceed or a plan amendment would be filed for review and certification by the California Coastal Commission.

D-7

Very truly yours,



DON L. NAY
Port Director

DLN:jr

DEPARTMENT OF TRANSPORTATION
DISTRICT 11, P.O. BOX 85406, SAN DIEGO 92186-5406

0000005



June 1, 1990

11-SD-005
(SD-Centre City)

Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
555 W. Beech Street, Suite 101
San Diego, CA 92101-2937

Attention L. D. Misko, Director of Planning

Dear Mr. Misko:

DEIS/DEIR for the Navy Broadway
Complex Project, San Diego, CA

Caltrans District 11 comments are as follows:

Page 4-47: These highway improvements have not been programmed by Caltrans. Page 4-73 indicates that they are based on 1986 SANDAG information.

E-1

The Navy and the City of San Diego should provide financing for a southbound direct connection from Interstate Route 5 to Pacific Highway. That mitigation would help to provide additional capacity for the increased traffic in the Centre City area.

E-2

Our contact person for Interstate 5 is Jim Linthicum, Project Manager, Project Studies Branch "B", (619) 237-6952. For information on Transportation Demand Management (TDM) strategies contact Manuel Demetre, Chief, Regional Ridesharing Branch, (619) 237-POOL.

Sincerely,

JESUS M. GARCIA
District Director

BY *M. Owen*

JAMES T. CHESHIRE, Chief
Environmental Planning Branch

MO:ec



THE CITY OF

SAN DIEGO

525 "B" STREET • SUITE 2002 • SAN DIEGO, CALIFORNIA 92101 - 4411

0000006

PLANNING
DEPARTMENT
OFFICE OF THE
CITY ARCHITECT
533-4500

May 31, 1990

Mr. L. D. Misko
Director of Planning
c/o Officer in Charge
Broadway Complex
555 W. Beech Street, Suite 101
San Diego, CA 92101-2937

Subject: Broadway Complex Draft EIR/EIS

Dear Mr. Misko:

This is in response to your request for written comments on the above referenced document. As you are aware, the City Architect's Office has been included in negotiations which will culminate in a development agreement between the U.S. Navy and the City of San Diego for development of this sixteen-acre site. We are also aware that the City of San Diego is the lead agency on this EIR/EIS. Because of our role in the development agreement and our responsibility to relate to projects of this magnitude from both a planning and urban design perspective, we felt it appropriate to forward these comments for your consideration.

As part of this development agreement process, the City Architect has provided considerable input into the evolution of the preferred alternative for this project (Alternative A). In addition, the Broadway Complex Coordinating Committee (BCCG) and the Centre City Planning Committee (CCPC) have provided considerable direction to the Navy for development of this site and others on the Central Bayfront.

This direction has resulted in the Navy's use throughout Alternative A of those planning objectives recommended as part of both the BCCG and CCPC recommendations. Alternatives B-F may achieve some level of conformance with these recommendations; but, because they may vary in some way from both Alternative A and each other, none of these alternatives achieves the same consistency with the stated objectives of these plans.

F-1

Mr. L. D. Misko
May 31, 1990
Page 2

Two areas which we feel warrant further clarification are: 1) the expressed need in Alternative A for 800 above-grade parking spaces (depicted as 800 spaces in a five to six floor, 300,000 SF encapsulated above-grade structure), and 2) the mitigation of regional air quality degradation as a result of the proposed increase in vehicle traffic in the area as a result of this project.

F-2

In the case of the above-grade parking, the stated objective of both the BCCG and CCPC plans is to restrict above-grade parking facilities throughout Centre City and, in particular, the Central Bayfront. We feel that this alternative should be developed further, either eliminating some of these spaces, undergrounding them, or positioning them in other underground facilities spread throughout the sixteen-acre site.

F-3

Mitigation of regional air quality impacts requires a more elusive remedy and may ultimately result in a provision or requirement for alternative modes of transportation rather than reliance on providing the amount of proposed on-site parking.

F-4

In summary, we find the proposals in Alternative A to be in substantial conformance with both existing and proposed Centre City Planning. The two (2) items referenced above are significant in both their impact on the urban form of the city and the region's air quality, and should be evaluated in subsequent responses to comments on the EIR/EIS.

F-5

Questions regarding this letter should be addressed to Lawrence C. Monserrate, Principal Planner (619-533-4516).

Sincerely


Michael J. Stepner
City Architect

MS:LM:cyc

- cc: Maureen Stapleton, Deputy City Manager
- Ernest W. Hahn, Chairman, CCPC
- Pam Hamilton, Executive Vice President, CCDC
- Ann Hix, Development and Environmental Planning

CRAIG ADAMS

0000007

125 Arbor Drive, San Diego, CA 92103—619/293-3649

June 3, 1990

U U 4 2 2 4

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937

JUN 4 4 40 PM '90

Subject: Comments On the Draft Environmental Impact Statement (EIS), Navy Broadway Complex Project, San Diego, California

Attention: Officer in Charge

The following review comments are offered to assist the United States Navy in its planning and deliberation concerning its future plans for the Broadway Complex site in San Diego and to aid public officials, such as members of the San Diego City Council, who will represent the citizens of this community in negotiations concerning this matter.

The author of these comments has closely followed developments relating to Centre City planning in San Diego over the last year and one-half — including attendance during this period of nearly all the meetings of the Broadway Complex Coordination Group and the Centre City Planning Committee. The author has training in planning, a masters degree in Metropolitan Studies from Syracuse University plus an MBA from the University of Wisconsin and professional planning experience as the Deputy Director and Director of the Wisconsin State Planning and Energy Office. These comments are offered on my own behalf as an interested citizen and do not represent any organized group.

The remarks are presented in three sections: 1) summary of comments; 2) elaboration of comments on major points; and 3) more technical comments concerning specific sections of the EIR. To simplify matters, except where there are references to specific alternatives, such as Alternative F, all the remarks are directed to the EIR's treatment of Alternative A, the Navy's preferred alternative.

Although these comments raise some concerns about the completeness of the EIR analysis in specific respects, the Navy should be commended for the general breadth of scope and thoroughness of the EIR. Of special note is the provision of the paired photographs and visual simulations which depict panoramic views of the proposed site development and the surrounding areas. This material should prove very helpful to decision makers in evaluating the aesthetics and viewshed. The EIR is well organized and provides a generally comprehensive and clear basis for public discussion and public official action. The following comments are intended to enhance its completeness and usefulness.

SUMMARY COMMENTS

- 1) The underlying policy issue involves the appropriateness of applying the "co-location" concept, whereby a new Navy office facility would be developed at no- or low-cost to the general taxpayers by revenues gained from private development on the site. Because the Draft EIS severely limits its discussion of alternatives that do not maximize the co-location objective, it is difficult for citizens and policy makers to assess the relative advantages — or disadvantages — of the co-location approach.

G-1

Page 2 - Comments on Broadway Complex EIR
By Craig Adams

2) The alternative, which explores potential reuse of the site under a traditional funding approach, should be refined — or an additional alternative developed which can test the relative benefits and costs of a reduced emphasis on the no-taxpayer-cost, co-location approach. The construction of an alternative which emphasizes surface parking does not present a reasonable comparison.

G-2

3) Depending on interpretation, there are a number of instances where the recommended project alternative might be in conflict with planning policies established by the State and the City. Specifically, these include the City's policy supporting a concentrated office and commercial core and stepped intensity and scale of development toward the waterfront and the State's management of tidelands which stresses the use of this scarce resource for directly ocean-related uses. In some cases the EIS overlooks these issues; in others it supplies its own conclusions based on limited technical information which do not address the range of trade-offs or some key areas of policy judgement.

G-3

4) The EIS does not highlight the fact that office development located literally on the waterfront is a break with previous planning policies in San Diego. Under present State and City policies it is not likely that high-rise, general commercial offices could be developed in the tidelands area, except as the jurisdictions of these two entities are superseded by federal authority. Policy makers should have more information than is presented on the implications of this type of development for other areas of the core and with respect to the utilization of a very scarce resource — waterfront land.

G-4

5) Previous transportation studies have concluded there was the potential for significant congestion on Centre City freeways and freeway ramps as the result of planned development in the Centre City. The Broadway Complex Project would increase the previously analysed development level. However the EIS does not systematically address potential impacts on the freeway and freeway ramp system.

G-5

AREAS OF CONCERN REGARDING THE EIS

Treatment of the Co-location Concept The underlying public policy issue facing both federal and local decision makers concerning the Broadway Complex facility involves the Navy's proposal to offset the cost of development of a new San Diego Regional Administrative Office by means of a ground lease and private development on a large proportion of the present Navy site. The proposed co-location approach involves potential trade-offs between the cost savings to the nation's general taxpayer and potential benefits that might be gained by alternative uses for the Broadway Complex site other than those necessary to accomplish the no-cost objective for new Navy office development. These types of trade-offs are not discussed nor, as argued in the following point, is adequate information provided about alternatives to weigh these considerations.

G-6

The need for, priority of and location for a new Navy regional office facility is best addressed by weighing the proposed project against others in the established Defense Department and Congressional budgetary process. Focusing on the cost-to-taxpayer reductions made possible because of the fortuitous location of the present facility on what has become valuable property is a questionable resource allocation and commitment procedure.

Adequacy of Alternatives To appropriately assess the co-location option, there should be a base of comparison against an alternative approach — in this case, development of a Navy office facility under traditional authorization

G-7

Page 3 - Comments on Broadway Complex EIR
By Craig Adams

and appropriation procedures and the reuse, under established procedures, of the portions of the site not needed for the office facility.

The EIS provides a very restricted set of information to assist in this type of evaluation. Alternative E, which is intended to provide a point of comparison involving traditional funding for Navy office development on the site, is especially uncreative and does not reflect alternative benefits which would be possible with traditional development of a new Navy office facility. The implication that the only alternative use for much of the site — if a new Navy office were developed from traditional funding sources — would be for surface parking is either unimaginative or less than straightforward.

G-7

As an example of the type of alternative that would be possible, I would direct the Navy's and other interested parties' attention to the design concept which was developed by an architectural team headed by Rob Quigley in a design competition for the G Street Mole which immediately adjoins the Broadway Complex property. Quigley's G Street Mole Embarcadero proposal included a mix of uses some serving the commercial fishing industry, an urban amphitheater plus community and visitor facilities, including an aquarium, information center, fishing museum, theater and retail activities.

In effect, the Navy is indicating that much of the present Navy Broadway Complex facility is surplus to its direct mission needs. This perspective is especially interesting in light of the fact that the Broadway Complex properties have been deeded to the Federal Government by the City of San Diego — presumably for use in the direct exercise of federal government activities.

There are well established procedures for the disposal of surplus federal property. The EIS does not acknowledge this option nor does it identify the types of reuse, and the associated benefits, possible under such a scenario — specifically the potential for lower-scale and lower-density development immediately adjacent to the Bay and the potential for a larger commitment to public open space. In addition, the options do not explore the trade-offs that might be possible by partial use of the co-location concept to offset a portion of the cost of a new Navy office facility. It may be up to local community interests to formulate this type of alternative.

G-8

PLANNING and LAND USE CONSISTENCY

Until the Broadway Complex development was proposed by the Navy, there was little formal local planning consideration of the proposed site — apparently the various local planning entities assumed the property would continue in direct Navy use for maritime-related activities. Neither the Port's Embarcadero Plan nor the present Centre City Community Plan (adopted in 1976) address this area of the waterfront in terms of desired uses. The recommendations of the Broadway Complex Coordinating Committee, which directly considered the Broadway Complex proposal, are at this stage advisory; they have not received public discussion outside the Centre City Planning Committee process nor consideration and action by elected officials.

G-9

However, the community has experienced extensive public discussion and debate concerning the nature, particularly the scale, of development in the immediate vicinity of the waterfront — especially south of Harbor — Drive with strong concerns expressed that a "walling-off of the Bay" has occurred. The primary issues have involved the adequacy of public open space along the Bay; the compatibility of nearby high-rise development with public areas along the water; and physical and visual access to the Bay. The EIS makes no acknowledgement of these

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By Craig Adams

conflicts and debates. Also, because of the limited nature of the alternatives that are examined (discussed in "Adequacy of Alternatives" above), there is no detailed evaluation of the underlying potential conflicts and trade-offs.

G-9

As indicated in the EIS, the Draft Centre City Community Plan highlights that the Waterfront is to "serve as its (the City's) major open space, its park and its playground." While the EIS clearly establishes the improvements that will be made in pedestrian access through to the Bay when compared to the existing Navy facility, it does not address the impacts on pedestrian uses along the waterfront nor does it identify what more extensive public-oriented uses might be made of the portions of the property not directly needed for Navy administrative offices. Plans for the Centre City have stressed the objective of a "concentrated urban core" of office and commercial activities. The preferred Broadway Complex proposal will further extend the limits of the office district which is now expanding westward along Broadway. The important point is that this waterfront-related office development has implications for other areas in the Centre City. The EIS should address the likelihood that the favored Bayside location of the proposed commercial office developments on the Broadway Complex site will be at the expense of the originally defined core area — and that this weakening of the office core will impact on commercial redevelopment potentials, especially in the Core and Centre City East.

G-10

G-11

The Draft Centre City Plan also supports the concept of "stepped intensity and scale" of development. While there are varying interpretations of what this concept means and how it should be applied — particularly whether it should extend to the water in all directions from the existing core or only to the north and to the south from a roadway "spine" — its significance should be acknowledged and the possible impacts of the proposed Broadway Complex development evaluated. One thing is clear. The "stepped intensity and scale" concept, as it has been discussed, was not forwarded as a project-level design concept; it was intended to provide guidance to the general urban form of the Centre City, extending over the area of many blocks.

G-12

Waterfront Commercial Office Development

Prior to the Navy proposal for co-location development of the Broadway Complex, there are no indications in the history of planning for San Diego's Centre City area that high-rise, private office development was considered an appropriate use on properties directly adjoining the waterfront.

With the exception of federal property, control of the tidelands within the City of San Diego is the responsibility of the San Diego Unified Port District. The Port District was established in 1962 by the State Legislature with the authority to act as trustee for the people of California in promoting commerce, navigation, recreation and fisheries on the state tide and submerged lands around the periphery of San Diego Bay. Under its State enabling provisions, the Port is prohibited from developing office uses within the tidelands area, except as they may be directly related to the administration of Bay-related activities.

G-13

This state legislative restriction is apparently based on the conclusion that the tidelands are a "scarce resource" that are to be managed in support of uses directly related to the Bay. It also implies that there is sufficient land available away from the waterfront to accommodate general office development. This conclusion has been confirmed by the work of the Centre City Planning Committee which has concluded that, at present and expected absorption rates, there is sufficient land available in the core area to accommodate office development for upwards of ninety-nine years".

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By Criag Adams

The Navy Broadway Complex preferred alternative, which provides for the development of 650,000 square feet of commercial office space, stands in striking contrast to the State policy for management of these tidelands. Development of general office facilities on the Broadway Complex site would be permitted only because of federal jurisdiction over this property. If the land were declared surplus for federal needs, its ownership and control would logically revert to the jurisdiction of the Unified Port District which would be restricted from developing it for general office use.

G-13

It is worthy of note that a recent Urban Land Institute report on Centre City San Diego recommended that the Navy limit its presence in the project area to uses requiring an oceanside location.

Transportation/Circulation

The 1985 Centre City Transportation Action Program (CCTAP), prepared for the City of San Diego by PRC Engineering, identified a series of traffic capacity and circulation problems projected for the Centre City area. Prominent among these problems were capacity deficiencies on the freeways and for several of the freeway ramps serving the Centre City. For the set of growth assumptions that in retrospect seem most realistic, SR-163, I-5 north of the Centre City and SR-94 were projected to be over-capacity by about the year 2000. Also, capacity deficiencies were identified for a number of freeway ramps, especially those which most directly serve the western portions of the Centre City including I-5 northbound at Elm; SR-163 northbound at Eleventh; I-5 southbound at Fifth and I-5 southbound at First.

G-14

The CCTAP report concluded these deficiencies would be particularly hard to remedy not just because of fiscal resource limitations but also because there were underlying physical and political constraints to adding freeway and freeway ramp capacity. Since these projections were made, the planned development density for the Centre City area has increased; the proposed Broadway Complex development would further increase development and traffic loadings.

The traffic analysis prepared as part of the Broadway Complex EIS does not address the incremental or cumulative impact of the project on freeway congestion. Information is presented with respect to projected traffic volume on some of the freeway ramps but the ramps examined are selective and do not represent those identified as the major problems in the CCTAP analysis. These potential impacts deserve focused technical attention.

The underlying question of whether traffic is better accommodated (less negative impacts) with office development in the traditional core area versus the extension of office development to the west, along Broadway is not addressed.

G-15

COMMENTS ON EIS SPECIFICS

Following are comments on specific sections of the EIS document:

1.1 Introduction (Pg. 1-3 concerning the Memorandum of Understanding with the City of San Diego) The presentation implies that the City, through the Memorandum of Understanding, has made a commitment to support the Broadway Complex development. While the precise nature of the City's commitment is subject to legal interpretation, the EIR should give recognition to the fact that the Memorandum indicates that it "is entered into

G-16

Page 6 - Comments on Broadway Complex EIR
By Criag Adams

for the sole purpose of providing guidelines for the planning and preparation of documents including the proposed development agreement." (July 1, 1987 Memorandum of Understanding Between the City of San Diego and the U. S. Navy; Resolution Number R-268458) The City's formal position relative to the Broadway Complex proposal should be presented as clearly as possible; the conditional nature of the City's participation under the Memorandum should be highlighted in the EIS.

G-16

3.2 Alternatives (Pg. 3-5 concerning Residential Alternative) The option of developing the site for housing is summarily dismissed. The trade-offs of the potential benefits of housing development against those of hotel and office development and the Navy's financial objectives should be explicitly addressed.

G-17

3.2.1 Alternative A (Pg. 3-8 concerning FAR calculation) The floor area ratio (FAR) of 5.45 for the preferred alternative is apparently calculated based on the acreage shown on the Project Blocks illustration, Figure 3-3. This calculation seems to include the portion of the site which is planned to be dedicated for the extension of G street through the redeveloped property. If it has not already been, the area of the planned G Street dedication should be excluded from the calculation of the FAR. This procedure is consistent with the approach which is now used by the San Diego Planning Department in dealing with "superblocks" and will establish comparability with the City's plans for the surrounding area.

G-18

3.2.5 Alternative E (Pg. 3-23 concerning a new Navy office complex funded using traditional federal budget mechanisms) The alternative presented here is particularly constrained and uninspired. Certainly new Navy office facilities could be accommodated on the site while permitting uses other than surface parking. This proposed alternative would be clear conflict with City policy which discourages waterfront use of land for surface parking. And specifically, why is an new office building cited on Block 3 when its location on either Blocks 1 or 2 would serve to free waterfront acreage for more directly waterfront-related use?

G-19

4.1.1 Land Use Compatibility (Pg. 4-12 concerning the land use Environmental Consequences of the Proposed Alternatives) The discussion here is limited to "compatibility" of land uses. No discussion is presented of the fact that the commitment of the very scarce waterfront land use to office, hotel and retail development would preclude its availability for other uses.

G-20

4.1.1 Land Use Compatibility (Pg. 4-12 concerning stepping down). The discussion highlights the proposal that the project design would provide a "step down" of buildings to the waterfront within the project boundaries. It should be clear that this "step down" concept, which in the case of the east-west dimension is within a single block, is at a different scale than the "stepped intensity and scale" concept discussed as part of the Centre City planning process.

G-21

4.1.5 City of San Diego Plans and Policies (Pg. 4-29 Concerning the CCPC Concept Plan) The EIS refers to the Concept Plan which was distributed in August, 1988. This document has been superseded by the draft Preliminary Centre City San Diego Community Plan, dated February, 1990. It would be appropriate for the EIS to note that the Centre City Planning Committee has supported the Broadway Complex project as compatible with its work in developing a new Centre City Community Plan - and to note that the work of this group is advisory to the Planning Commission and the City Council.

G-22

4.2.2 Transportation Environmental Consequences of the Proposed Alternatives (Pg. 4-53 concerning Long-

G-23

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By Craig Adams

Term Roadway Conditions) As indicated earlier, the EIS analysis fails to address the situation of the freeways in the vicinity of the Centre City and the freeway ramp situations where studies have previously identified potential problems. The conclusion on Pg. 4-54 that "(t)raffic projections at the four freeway interchanges serving the Centre City area indicate that there is adequate capacity to serve anticipated demand under the long-term scenario" seem inconsistent with the conclusions in the Centre City Transportation Action Program. The proposed Broadway Complex development is likely to contribute to the cumulative impact of planned office developments in the West Broadway area. Past analyses of the situation projected on the freeways and the freeway ramps suggests that it may not be possible to mitigate this congestion. A similar finding may be necessary in the case of the Broadway Complex project.

G-23

4.2.2 Transportation Environmental Consequences (Pg. 4-60 through 4-64 concerning Long Term Parking Conditions. The Parking Needs Assessment indicates that a substantial portion of parking needs for the development is expected to be met by the application of a Transportation Demand Management (TDM) plan — in the case of office-related parking, 24% of the need is projected to be accommodated by a TDM plan. The information that is provided regarding the nature or provisions of the TDM plan is merely a list. Without more specific documentation, the evaluation reflect a "goal statement" and cannot be the basis for assessing possible impacts. These same concerns about the probable effectiveness of TDM extends to the discussion in 4.8.2 Air Quality Environmental Consequences, Pg. 4-172 which is also based on TDM assumptions.

G-24

4.3.1 Aesthetics and Viewshed - Affected Environment (Pg. 4-74 through 4-111) The EIS gives exceptionally thorough treatment to a number of aesthetic and view considerations. However, it does not explore the potential impacts of the project on public views from along the waterfront Embarcadero, including from the G Street Mole, and from the Bay to the South and immediately to the West. This is an especially important consideration since planning policy identifies the waterfront as the City's "major open space, its park and playground". Part of the "waterfront experience" is the visual ability to relate the waters edge to the City's "core" and to other topographic features which give it a physical definition. My casual assessment suggests that views back to the City, especially from the G Street Mole will be negatively impacted by the development proposal. Also, the potential impacts of views from the water to the coastal rim which defines the northwest edge of the Centre City area should also be evaluated.

G-25

4.5.1 Socioeconomics - Affected Environment (Pg. 4-139 concerning the Fiscal Impact Assessment) The use of per capita and per acre methodologies to calculate the operating public costs of servicing the project, while popular because of their simplicity, seem, at best, to be crude approximations. The area under evaluation has a relatively unique set of public service needs when compared with the City in general. At the least, the EIS should indicate a relatively low level of statistical confidence in the results of this work, particularly on the cost side of the equation.

G-26

4.5.1 Socioeconomics - Affected Environment (Pg. 4-142 concerning net and cumulative fiscal impact) In a discussion with your office I raised a question concerning the accuracy of the net and cumulative fiscal impact statistics - specifically as related to the "business taxes" projections in the Williams & Kuebelbeck Technical Report (Table 16). The magnitude of the numbers seem inconsistent with present City-wide revenues in these categories and with the general scope of the planned development. I have not heard back on this issue. Although I share the EIS's conclusion that the fiscal effects of the proposed project are likely to be positive, it isn't all clear that these will provide a net benefit to the City — since this same level of development, with similar project-level

G-27

0000007

Page 8 - Comments on Broadway Complex EIR
By Craig Adams

Fiscal benefits is likely to occur even in the absence of the proposed project.

I hope these comments will be useful to the Navy in its continuing work on the Broadway Complex Project and that it will assist citizens and public officials in their discussions and evaluations of this important matter.

G-27

Respectfully,



Craig Adams
293-3649

c. Office of the City Architect
Office of Councilman Bob Filner
Office of Councilman Ron Roberts

0000008

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, Governor

STATE LANDS COMMISSION

LEO T. McCARTHY, Lieutenant Governor
GRAY DAVIS, Controller
JESSE R. HUFF, Director of Finance

EXECUTIVE OFFICE
1807 - 13th Street
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CHARLES WARREN
Executive Officer
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File Ref: G-10-07
G-10-08
W 24323

June 4, 1990

Officer in Charge
Western Division
Naval Facilities Engineering
Command Detachment
Broadway Complex
555 West Beach Street, Suite 101
San Diego, CA 92101-2937

ATTENTION: Captain Wayne Goodermote, CEC United States Navy

Dear Captain Goodermote:

Staff of the State Lands Commission has reviewed the Draft EIS (DEIS) for the proposed redevelopment of the Navy Broadway Complex. We have also reviewed a copy of the document which is represented as a Draft EIR (DEIR) circulated by the City of San Diego for this project. We do not understand why this format was chosen for a document of such import. In our view, the document should have been an EIR/EIS, one document which incorporates the requirements of the CEQA and the NEPA; such a format is specifically provided for within the State EIR Guidelines. As constituted, the documents and format are disjointed and confusing. Furthermore, we do not believe the incorporation of the DEIS into the DEIR conforms to the requirements of Section 15150 of the State EIR Guidelines which states, in part:

"(c) Where an EIR or Negative Declaration uses incorporation by reference, the incorporated part of the referenced document shall be briefly summarized where possible or briefly described if the data or information cannot be summarized. The relationship between the incorporated part of the referenced document and the EIR shall be described."

H-1

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CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 2

For this and additional reasons which are discussed below, we contend that the document(s), as presently constituted and circulated, are wholly deficient and inadequate under the requirements and standards set forth in the CEQA, the NEPA, and related case law. Our comments, while referencing the DEIS, are equally applicable to the DEIR and should, therefore, be regarded as comments on said document.

H-2

GENERAL COMMENTS

(1) Our initial comments on this project as reflected in our December 22, 1988 letter to you in response to the NOI/NOP for this project have not been addressed in the DEIS. The State of California has claimed a potential reversionary interest by virtue of the Public Trust Doctrine in the filled tidelands comprising the Broadway Complex. The Navy has not resolved the issue of this claim.

Specifically, our comments indicate the problems associated with the title to the property vis-a-vis the nature of the title to the Public Trust lands conveyed to the United States for certain limited purposes; i.e., "public defense", "military purposes", and "piers, landing and structures to be used by the United States Navy Department for a supply base and for landing purposes."

H-3

The uses authorized for the State's property appear, as provided for in Alternatives A, B, C, D, E and F of the DEIS, to be in direct conflict with the uses proposed for the property. Other than the 1 million square feet of naval office space proposed for the area - the other proposed uses are non-military. Clearly, up to 1.4 million square feet of private office space, 1.44 million square feet of hotel, and 25,000 square feet of retail do not constitute military purposes.

(2) The DEIS, for various project alternatives (i.e. pg. 1-9), identifies the need for substantial offsetting "local government" financial contributions for certain public infrastructure improvements. The document fails to identify and detail the specifications of the necessary infrastructural improvements, the estimate of the cost, and the source of those "local government" financial contributions.

We are informed that the estimates of the Center City Development Corporation's Public Improvement Cost Allocation (dated 5/10/90) for the Site Improvement Cost of the Navy Broadway Complex Project (dated July 28, 1989) related to the project which is referenced in the Summary of Alternatives §1.22 (pg. 9) of the Draft EIS and elsewhere in the text and as incorporated by reference in the Draft EIR, total over \$25 million and provide over \$20 million in proposed expenditures by the San Diego Unified Port District.

H-4

CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 3

The SDUPD is limited in its ability to expend tidelands trust funds on property not owned or controlled by the Port. The Port does own some of the streets within the Navy Broadway Complex Project site; these, however, are presently under lease to the Navy. Any infrastructure, demolition, landscaping or similar costs associated with this project cannot be financed with tideland trust funds unless they are on Port-owned or controlled lands. The Port may only expend tidelands trust funds on lands or projects if such expenditure provides some substantial and direct benefit to the tidelands trust under their control. The substantial sums identified for expenditure by the Port do not qualify under the above stated criteria.

H-4

Further, because the DEIS identifies the need for local public funds for this proposed federal/private development, but fails to provide specificity as to costs and sources of funds, the social economic impacts and legality of those required expenditures are potentially significant, unresolved impacts.

H-5

(3) The mitigation measures within the DEIS can be characterized respectively as unspecific, prospective, nonexistent, or inappropriately characterized.

As an example, the mitigation for aesthetic impacts for specified alternatives, as listed on page 4-114, is indicated to be compliance with draft urban design guidelines as specified in Appendix D of the DEIS. Will these impacts still be mitigated if the guidelines are changed in any way?

H-6

As an additional example, on page 4-211, under Mitigation Measures, the DEIS states that the State SHPO "is consulting with the Navy on mitigation."

H-7

On page 4-147, compliance with building codes is characterized as mitigation for geologic hazards in direct contradiction of the principle that compliance with existing law or regulations does not constitute mitigation.

H-8

Lastly, mitigation measures are not analyzed, as required by the CEQA, for their effectiveness in reducing significant impacts to a level of insignificance. The document assumes effectiveness and asks that we accept its conclusions without any supporting evidence.

H-9

(4) On page 5-1, Cumulative Impacts, the DEIS states, "The Navy Broadway Complex is located in an area of San Diego that is undergoing substantial development....Cumulative impacts are generally regional impacts associated with several developments to which the project may contribute." Unfortunately, the discussion which follows and which precedes it in Section 4 is not consistent with such statements. The project is discussed only in relationship to itself or its own alternatives, not in relationship to related projects such as Seaport Village, the Hyatt Hotel, among others.

H-10

CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 4

(5) We believe the designation of Alternative A, the project, as the environmentally superior alternative is not supportable under the provisions of Section 15126(d)(2) of the State EIR Guidelines. Since Alternative A, "The Navy's preferred alternative" (page 1-4), is the project and "the no-action alternative, is the environmentally superior alternative," the correct interpretation of the above section dictates the designation of an environmentally superior alternative which is revealed as a result of the environmental analysis and which is separate and distinct from either "the project" or the "no-action alternative."

H-11

(6) We do not believe that each of the alternative configurations of the Navy's preferred alternative, the project, is discussed to the same level of detail as required by the NEPA. The document does not enable decision-makers to, without additional analyses, consider any of them in place of the project.

H-12

SPECIFIC COMMENTS

Pages 1-16-18,
Section 1.4.1:

It would be helpful for reviewers if the responses to the NOI/NOP were included in the document as an appendix and the comments therein referenced to those portions of the document in which the response to each comment is located.

H-13

Page 1-91,
Section 1.5:

This "summary table" does not contain a summary of mitigation measures as stated. Furthermore, this section should contain a discussion of significance criteria used to rank the impacts discussed within the document.

H-14

Page 4-60, Long-
Term Parking
Conditions:

The entire issue of parking impacts related to the project appears unresolved and unmitigated. At page 4-60, the document states that "The City of San Diego has no minimum or maximum parking requirements for development in the Centre City area...The development of a parking management plan for the Centre City area is the primary objective of the ongoing Parking Management Study for the Centre City and Balboa Park areas" (emphasis added). The determination of impacts, their

H-15

CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 5

significance and appropriate mitigation again appears to be a moving target. Even under this circumstance, the project would not provide sufficient parking, with attendant, speculative adverse impacts on existing parking. Furthermore, such impact is to be mitigated by a "Long-Term Travel Demand Management (TDM) Program" which could include a number listed measures (see general comments on speculative nature of mitigation).

H-15

Page 4-61, "Uses": What is the demand rate for residential uses?

H-16

*Page 4-108,
Section 4.3.2:*

The document states that, "The draft design guidelines are provided in Appendix D and are subject to minor refinement between the Navy and the City. Alternatives A, B, and the onsite component of Alternative D are all generally consistent with the draft guidelines. Alternatives C and F are partially consistent. Alternatives E and G are not consistent" (emphasis added). In spite of these statements, the conclusion reached on page 4-114 is that compliance with such guidelines would mitigate aesthetic impacts of the project and Alternatives B, C, D and F. This conclusion is: 1) unsupported, as are all other statements regarding mitigation (see general comment 3); and 2) at best dependent on a modifier "if the project and its alternatives are modified (needs to be described) and if the guidelines remain substantially unchanged."

H-17

*Page 4-115,
Section 4.4.1
Environmental
Consequences:*

What is the basis for the statement "The existing police facilities, manpower, and available equipment are adequate to provide the project site and surrounding area with a sufficient level of police protection in cases of "emergency"? What is the definition of "sufficient"? What of everyday protection in comparison to "in cases of emergency"? Would the project site overtax police services, etc. when considered with other related area projects (see general comment 4)?

H-18

CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 6

Page 4-118,
Mitigation
Measures:

The documents states that the private development within the project has the potential to cause regional immigration. This is growth inducing impact which is not discussed in Section 6 (page 6-1).

H-19

Page 4-121,
Environmental
Consequences:

While the proposed project and alternatives "would not adversely affect existing water facilities," it is not clear, considering the state of the drought, that there will be sufficient water available to be put within the existing facilities for project needs. What effect will the project have, in conjunction with other projects, on water supply? Which other uses may have to be limited in order to supply the project, etc.?

H-20

Page 4-126:

Despite the statements in the first paragraph which depreciate the impacts of the project on the City's wastewater problem, the building of the project will still exacerbate the City's existing violation of water quality compliance standards. This is a significant adverse impact that must be addressed.

H-21

Page 4-126,
Mitigation
Measures:

The "measures" listed are actually "impacts" caused by the project, i.e. facilities will need to be upgraded because of it. Further, these upgrades will only allow material to get to the plant; they will not mitigate for the increase load on the plant which presently, and for the foreseeable future, is in violation of compliance orders.

H-22

Page 4-126,
Section 4.4.7:

Although the project, etc. would decrease the life expectancy of existing landfills (1995), the document concludes there are no significant impacts, presumably because the City is in the process of identifying a replacement landfill site. This conclusion is unacceptable and does not free the applicant from the requirement to either analyze other feasible alternatives or provide mitigation.

H-23

CAPTAIN WAYNE GOODERMOTE

June 4, 1990

Page 7

Page 4-143,

Section 4.5.3:

Does the first statement of this section consider required expenditures of either the City or the Port? What will be the level of adverse impacts to Port finances as a result of the project, etc., e.g. monies (sales, transient occupancy and property taxes) will accrue to the City, yet the City would have the Port pay the majority share of the costs of the necessary infrastructure and improvements?

H-24

Page 4-144,

Section 4.6.1:

Does the available information indicate that the area soils are able to support the proposed facilities as designed, including underground parking? If so, what is the basis for such a conclusion; if not, what are the related adverse impacts on the parking issue - supply, etc.? Will perpetual de-watering of the site be required-impacts?

H-25

Page 4-147,

Mitigation

Measures:

We have already indicated our concern with the adequacy of the last statement in this section (see general comment 3). The effectiveness of the building codes to mitigate geologic hazards, particularly liquefaction in the instant case, must be examined in light of the recent experience of San Francisco's Marina District. If one presumes that the majority of buildings in that area were in compliance with that City's building code, the document's assumption provides little comfort.

H-26

Page 4-186,

Section 4.9.3:

Why is not the design mitigation for hotels also being applied to onsite office structures? This would also seem important since the occupancy of such buildings would coincide more with the times of highest noise generating traffic.

H-27

Page 4-229,

Section 4.12.2:

Although it is not specifically stated, one assumes that all required electrical power will be supplied by the existing grid. What will be the cumulative impact on the grid from these additional uses and need of power?

H-28

Pages 6-1, 7-1:

Each of these sections should be revised in light of the comments herein.

H-29

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CAPTAIN WAYNE GOODERMOTE

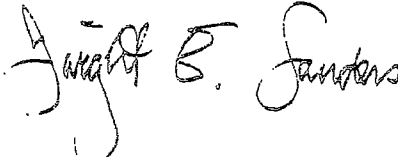
June 4, 1990

Page 8

In conclusion, based on the comments presented, we believe that both the process and document are deficient in their compliance with the CEQA and the NEPA and that substantial revisions are necessary. Should you have any questions regarding these comments, please contact Curtis Fossum, Senior Staff Counsel (916-322-2277) with regard to the State's claim and related matters and me (916-322-7827) with regard to environmental issues.

H-30

Sincerely,



DWIGHT E. SANDERS, Chief
Division of Research
and Planning

DES:maa

cc: Charles Warren, Executive Officer
James F. Trout, Assistant Executive Officer
Robert C. Hight, Chief Counsel
Curtis Fossum, Senior Staff Counsel
Jamee Jordan Patterson, Deputy Attorney General
Maureen A. Stapleton, Deputy City Manager, City of San Diego
Linda Fuller, Office of Planning and Research

0000009

Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908
June 1, 1990

Officer In Charge
Western Division Naval Facilities Engineering Command
Detachment
Broadway Complex
555 W Beech St
Suite 101
San Diego, CA 92101-2937

Dear Sir

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Navy Broadway Complex Project, San Diego, California.

I concur that Alternative A should be the preferred alternative.

] I-1

On Figures 3-3, 4-7, and 4-62 the rail line to be retained should be shown to help orient the plan.

] I-2

Page 4-38, Public Transit/Transportation, more emphasis should be placed on use of mass transit. With all the parking spaces being provided, will it increase single occupancy vehicle use? I realize that some of the spaces are need for fleet (motor pool) vehicles in the Navy parking areas.

] I-3

Page 4-116, section 4.4.2, Fire Protection, why is the time for the Navy Fire Department to travel 3.7 miles (6 minutes) almost the same for the City Fire Department to travel 0.5 miles (4-6 minutes)?

] I-4

Page 4-126, section 4.4.7, Solid Waste, what percentage of the figures include recycling? Why is nothing mentioned about recycling to help cut down on solid waste? What percent will be recycled by the Navy?

] I-5

Page 4-131, Table 4.5-1, what is the correct number of employees for the service occupation?

] I-6

0000009

Harry E Wilson
June 1, 1990
Page 2 of 2

Page 4-134, section 4.5.2 and page 4-118, section 4.4.3, what the percentage of private development will be from private companies moving their offices from other San Diego locations vs new companies moving in from out of the area into the new complex?

I-7

Page 4-146, effects on soil and erosion, what will be the effect of all the soil removed for underground parking, seeing that it will be located in the ground water table? Will leak proof trucks haul it or regular trucks? How wet is the soil? Where will the soil be disposed of?

I-8

Page 4-148, Groundwater, para 2, it states that no long term increases in runoff would occur since the Navy Broadway Complex site is already fully developed with impervious surfaces. In block 1 there should be some decrease of runoff due to the open space (park). Depending on design of the hotels there should also be open space (lawns).

I-9

Page 4-220, how will it be determined where the dewatered groundwater goes during construction?

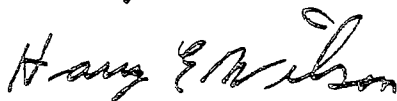
I-10

When will the noise and air pollution during construction be considered?

I-11

Thank you for your time and consideration.

Sincerely



Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908



0000010

County of San Diego

NORMAN W. HICKEY
CHIEF ADMINISTRATIVE OFFICER
(619) 531-8228
(Location Code 730)

CHIEF ADMINISTRATIVE OFFICE

1800 PACIFIC HIGHWAY, SAN DIEGO, CALIFORNIA 92101-2472

June 1, 1990

Officer in Charge
Western Division Naval Facilities Engineering Command
Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, CA 92101-2937

ATTENTION: Captain Wayne Goodermote, CEC, USN

DRAFT ENVIRONMENTAL IMPACT STATEMENT: NAVY BROADWAY COMPLEX PROJECT

Dear Captain Goodermote:

We appreciate the opportunity to comment on the draft Environmental Impact Statement (EIS) for the Navy Broadway Complex project.

The County's concern as expressed in our initial comments regarding this project is that the use of off-site, peripheral parking should be utilized by the major water waterfront property owners including the Navy, the County and the Port District to minimize the need for waterfront parking.

The Parking Management Plan for the City of San Diego calls for the establishment of parking interceptor sites located on the periphery of Centre City. The use of such a peripheral structure could provide additional mitigation for traffic and parking impacts generated by the Navy, Santa Fe and other large developments. In addition, it would help to reduce the Navy's parking ratio of 1.23 spaces per 1000 square feet of office space, to the 1.0 spaces per 1000 square feet recommended in the draft Centre City Community Plan.

J-1

J-2

0333010

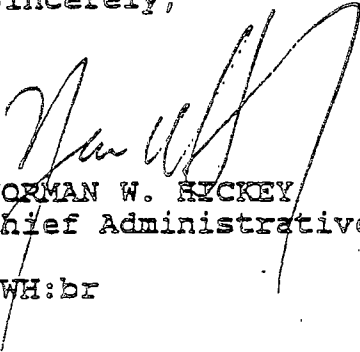
- 2 -

We appreciate the other measures, including a proposed transportation demand management (TDM) program, which the Navy has incorporated in the project as a means to reduce downtown congestion.

J-3

If you have any questions on our comments, please contact Rich Robinson, Director of the Office of Special Projects at 531-4848.

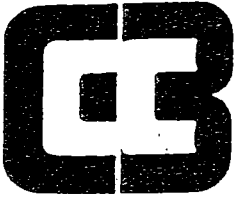
Sincerely,



NORMAN W. HICKEY
Chief Administrative Officer

NWH:br

BC-EIR.NWH



Citizens Coordinate
for
Century 3
1549 El Prado, Rm. 4
San Diego, CA 92101
Tel: (619) 232-7196

0000011

June 4, 1990

Daniel Allen
Wayne Buss
Nico Calavia
Susan A. Carter
Jim Coatsworth
Judith Collins
Diane Barlow Coombs
Charles Cooper
Bruce Dammann
Emily Durbin
Lois Fong-Sakai
Monte Griffin
Bob Hartman
James Hubbell
Michael Jenkins
Elmer Keen
Mariene Kobrak
Carol Landsman
Bob Leffler
Angeles Leira
Marie Burke Lia
Fred Marks
Hamilton Marston
Linda Michael
Kimball Moore
Kathy N. Schwarz
Philip R. Pryde
Dunham Reilly
Roger Revelle
Karen Scarborough
Max Schmidt
Andrew Spurlock
Judy Swink
Joyce Urban
Connie Willens
Don Wood

Captain Wayne K. Goodermote, CEC, USN
Western Division Naval Facilities
Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, CA 92101-2937

Re: EIR/EIS

Dear Captain Goodermote:

C3 is in receipt of the Draft Environmental Impact Report and Statement dated April, 1990 for the Navy Broadway Complex project in San Diego.

Our review of this material together with our participation in the Broadway Complex Coordinating Group has given us a unique opportunity to evaluate the process taken in the development of planning alternatives. While we have been and remain in full support of the Navy's steps to involve professional advisors and the general community in the creation of this project, we are not in agreement with the Navy's preferred alternative (Alternative A) and feel that the EIS has failed to address certain issues that are critical to evaluating the appropriateness of the site.

It is C3's opinion that the City of San Diego may be viewed quite differently today compared with its status in 1983, when the Navy Broadway Complex was first considered. Its increase in population and recognition on an international scale has given the city strategic importance within the United States. As the city has matured, so has its downtown to where private redevelopment has a momentum of its own leaving open space and view corridors in relationship to the bayfront in a vulnerable position. In light of this change, C3 feels that the Navy should not proceed with its proposed public-private venture to the extent that over three million square feet is built on blocks one through four. We believe that funding the approximate one million square feet needed for new Navy office space through Military Construction (MILCON) appropriations is in the best interest of the taxpayer and that minimal privatization should be considered to compliment the site's primary use.

K-1

K-2

Captain Goodermote
June 4, 1990
Page 2

The fact that approximately 16 acres of under utilized federal land exists at the terminus of the central business district is very fortunate. In context to our nation's capital, this property presents a similar potential in architecture and landscape design that was available to L'Enfant when Washington, D.C. was first layed out beside the Potomac River. Its highest and best use will be obtained by retaining the open space resource and not giving it up for high intensity, income producing development that presents a financial risk to the public and draws demand away from other more suitably placed commercial projects that provide tax increment funds and developer fees to the city of San Diego.

K-3

The Environmental Impact Statement draws the conclusion that Alternative A will "maximize community objectives and provide for a number of beneficial uses." Unfortunately, it reaches this opinion without providing an economic feasibility study. Why, for instance, is a residential use not possible? Will the Port of San Diego require compensation in exchange for providing park space? Moreover, what is the projected total budget for U.S. military construction through the year 2003 compared with the cost of erecting approximately one million square feet of building using the urban design guidelines for Centre City?

K-4

K-5

K-6

C3's basic concern is that the EIS is not objective enough. Ultimately, it should challenge more of the parameters and principles set down by the Navy. We are hopeful that this will follow.

K-7

C3 wishes to thank you for allowing us to comment on the proposed Broadway Complex.

Respectfully,



Frederick M. Marks, Chairman
Centre City Committee

FMM/lgs

- | | | |
|------------------|-------------------|--------------------|
| cc: Pete Wilson | Jim Bates | Duncan Hunter |
| Bill Lowery | Brian Bilbray | Maureen O'Connor |
| Abbe Wolfsheimer | Ron Roberts | John Hartley |
| H. Wes Pratt | Linda Bernhardt | J. Bruce Henderson |
| Judy McCarty | Bob Filner | Mike Stepner |
| Larry Monserrate | Maureen Stapleton | John Davies |
| Ernest Hahn | Don Nay | |



State of California

0000012

GOVERNOR'S OFFICE
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO 95814

GEORGE DEUKMEJIAN
GOVERNOR

(916) 323-7480

DATE: June 4, 1990

TO: U. S. Department of the Navy
Western Division
Naval Facilities Engineering Command
ATTN: Officer in Charge, Broadway Complex
555 West Beach Street, Suite 101
San Diego, CA 92101-2937

FROM: Office of Planning and Research
State Clearinghouse

RE: Draft Environmental Impact Report/Statement for the Navy
Broadway Complex Project, San Diego County
(SCH 88110208)

As the designated California Single Point of Contact, pursuant to Executive Order 12372, the Office of Planning and Research transmits attached comments as the State Process Recommendation.

This recommendation is a consensus; no opposing comments have been received. Initiation of the "accommodate or explain" response by-your agency is, therefore, in effect.

L-1

Sincerely,

Robert P. Martinez
Director

Attachment

cc: Applicant

Resources Building
1416 Ninth Street
95814

(916) 445-5656
TDD (916) 324-0804

California Conservation Corps
Department of Boating and Waterways
Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Parks and Recreation
Department of Water Resources

GEORGE DEUKMEJIAN
GOVERNOR OF
CALIFORNIA

0000012



THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

Air Resources Board
California Coastal Commission
California Tahoe Conservancy
California Waste Management
Board
Colorado River Board
Energy Resources Conservation
And Development Commission
San Francisco Bay Conservation
and Development Commission
State Coastal Conservancy
State Lands Division
State Reclamation Board
State Water Resources Control
Board
Regional Water Quality
Control Boards

U. S. Department of the Navy
Western Division
Naval Facilities Engineering Command
ATTN: Officer in Charge, Broadway Complex
555 West Beech Street, Suite 101
San Diego, CA 92101-2937

June 4, 1990

Dear Sir:

The State has reviewed the Draft Environmental Impact Report/
Statement for the Navy Broadway Complex Project, San Diego
County, submitted through the Office of Planning and Research.

We coordinated review of this document with the California
Coastal, State Lands Commissions, the Air Resources Board, the
San Diego Regional Water Quality Control Boards, and the
Departments of Fish and Game, Parks and Recreation, and
Transportation.

The Department of Conservation has provided the attached comments
for your consideration.

The State Lands Commission responded directly in correspondence
dated June 4, 1990. After contacting the Officer in Charge, the
California Coastal Commission states they will be commenting
directly.

The San Diego Regional Water Quality Control Board states that
they are currently working with the Navy on this project.

Thank you for providing an opportunity to review this project.

Sincerely,

Gordon F. Snow
Gordon F. Snow, Ph.D.
Assistant Secretary for Resources

Attachment

cc: (See attached list.)

0000012

U. S. Department of the Navy -2-

June 4, 1990

cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCH 88110208)

Memorandum

To : Dr. Gordon F. Snow
Assistant Secretary for Resources

Date : May 24, 1990

Capt. Wayne Goodernote
City of San Diego & U.S. Dept. of the Navy
555 West Beech Street, Suite 101
San Diego, CA 92101-2937

Subject: Draft Environmental
Impact Statement for
the Navy Broadway
Complex,
SCH# 88110208

From : Department of Conservation—Office of the Director

The Department of Conservation's Division of Mines and Geology (DMG) has reviewed the Draft Environmental Impact Statement (EIS) for the Navy's Broadway Complex, located in the City of San Diego, California. This Draft EIS is intended to fulfill the requirement of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The Draft EIS analyses the impacts from the redevelopment of approximately 15.6 acres in downtown San Diego, near the waterfront. The proposed redevelopment will include up to 1 million square feet of Navy administrative offices and 2.145 million square feet of mixed private office, commercial and retail uses. The following report was reviewed by DMG:

- o Draft Environmental Impact Statement, Navy Broadway Complex Project, San Diego, California, April 1990, SCH# 88110208.

Based on our review of this report, we offer the following comments:

1. The Draft EIS has not adequately described the extent and the mitigative measures for the geologic and seismic hazards affecting the project. No geotechnical data is provided to demonstrate that sufficient analysis of the project's geologic or seismic setting has been performed to assess the potential for ground shaking, surface rupture, liquefaction, lateral spreading, inundation, or settlement from seismic events on nearby faults. The Draft EIS references a geotechnical study by Hirsch and Associates, 1988, but the report is not appended. Although the Draft EIS summarizes the results of the geotechnical study, no site-specific methods are given for mitigating the geologic and seismic hazards at the project site.

Therefore, site-specific studies to determine the methods of mitigation for seismic or geologic hazards should be done as a part of the NEPA process, and should be included in the Final EIS. All technical data should be appended to the Final EIS.

N-1

0003012

Dr. Snow/Capt. Goodermote
May 24, 1990
Page Two

2. No data is presented in the Draft EIS on the level of ground shaking expected at the project site. The project site is located adjacent to the Rose Canyon Fault. This Fault is considered active, having maximum credible earthquakes (MCE) of magnitude 7.0 (Wesnousky, 1986; Anderson, et al, 1989). Earthquakes on other active faults, such as the Coronado Banks and Elsinore Faults, may also affect the project site. A recent evaluation indicates that the Coronado Banks Fault has a MCE of magnitude 7-3/4 (Anderson, et al, 1989).

Therefore, additional data is needed on the potential impacts and proposed mitigation measures from ground shaking due to large earthquakes on nearby active faults. The Final EIS should provide estimates of potential strong ground motion at the site, surface rupture, liquefaction, seismic-induced settlement, and failure from shaking of dock facilities and retaining walls. Data on the expected ground motion parameters should include, peak ground acceleration, duration of strong shaking, and site period. Data to support the analysis should be included in the Final EIS. If methods of mitigation are needed, they should be developed for inclusion in the Final EIS so that they can be reviewed.

N-2

3. The Draft EIS does not adequately address the potential for liquefaction at the project site. The Draft EIS states only that the project site has a potential for liquefaction. The soils underlying the site apparently consist of hydraulic fill over bay mud, which typically have a moderate to high potential for liquefaction. No site-specific methods are given for mitigating liquefaction. The only mitigation given is the statement that the project site is at the same risk from liquefaction as the rest of San Diego Bay.

Therefore, additional information should be developed on the potential for liquefaction, lateral spreading, seismic and differential settlement at the project. Site-specific geotechnical data is needed to properly evaluate the potential for liquefaction at the project site. In particular, information on any soil intervals expected to liquefy and the areal extent of these liquefiable soils should be included in the Final EIS. Site-specific methods of mitigation should be proposed within the context of this new information.

N-3

4. The Draft EIS does not address the impacts to the project from inundation due to a tsunami or seiche. The San Diego City Seismic Safety Element indicates that the project site

N-4

0000612

Dr. Snow/Capt. Goodermote
May 24, 1990
Page Three

may lie within the inundation area from a tsunami or seiche, and may also be impacted by strong currents. The Final EIS should address the potential impacts to the proposed project from a tsunami, seiche, and strong currents. Methods of mitigating should be addressed.

N-4

If you have any questions regarding these comments, please contact Zoe McCrea, Division of Mines and Geology Environmental Review Officer, at (916) 322-2562.



Dennis J. O'Bryant
Environmental Program Coordinator

DJO:KC:skk

-: Zoe McCrea, Division of Mines and Geology
Kit Custis, Division of Mines and Geology

References:

Anderson, J.G., Rockwell, T.K., and Agnew, C., 1989, Past and Possible Future Earthquakes of Significance to the San Diego Region, Earthquake Spectra, vol. 5, no. 2, pgs. 299-335.

Wesnousky, S.G., 1986, Earthquakes, Quaternary Faults, and Seismic Hazard in California, Journal of Geophysical Research, vol. 91, no. B12, pgs. 12,587-12,631.

CALIFORNIA COASTAL COMMISSION

631 HOWARD STREET, 4TH FLOOR
 SAN FRANCISCO, CA 94105-3973
 (415) 543-8553

Hearing Impaired/TDD (415) 896-1825

June 8, 1990



Captain W. K. Goodermote
 Department of the Navy
 Naval Facilities Engineering Command Detachment
 Broadway Complex
 555 W. Beech Street, Suite 101
 San Diego, CA 92101-2937

RE: Comments on Draft Environmental Impact Statement (EIS) and draft consistency determination for the Broadway Complex Project, City of San Diego

Dear Captain Goodermote:

Thank you for submitting the Draft EIS and consistency determination for the Broadway Complex project in advance of the official submittal of the consistency determination for that project. We have reviewed both of those draft documents and are generally pleased with the the concept of developing the site for Navy uses provided that the project includes provisions for public use of the area. The Commission staff supports those alternatives (alternatives A and F) that include large open-space areas, because we believe that creating a shoreline park should be a high priority for developing this site. Even though all of the alternatives would improve public use of the site, the Commission staff has some concerns about the project's consistency with the California Coastal Management Program (CCMP).

O-1

PUBLIC TRUST

Neither the draft EIS nor the draft consistency determination discuss the relationship between the proposed project and the public trust. The proposed project would be located on historic tidelands. These tidelands may have a public trust easement attached to them. This easement would require the land to be used to support only limited uses, such as navigation, commerce, or fishing. The Commission has adopted policy guidance for projects involving lands that may have a public trust easement attached to them. The Commission's Public Trust guidelines, adopted May 3, 1977, state that "development proposals that may involve present or historic tidelands, submerged lands, and public trust lands should be permitted only if consistent with the public trust." Therefore, in order for the Commission to evaluate the project's consistency with the CCMP, the status of the public trust easement on the Broadway Complex property must be resolved. If there is a public trust easement attached to the property, the Commission staff is concerned that the construction of commercial office space could be inconsistent with that easement. The Navy should coordinate with the State Lands Commission to resolve this issue.

O-2

RECREATIONAL RESOURCES

The proposed project is located adjacent to San Diego Bay. Section 30221 of the Coastal Act promotes recreational use of oceanfront land. That section

O-3

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JUNE 8, 1990

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

In the draft consistency determination, the Navy concludes that Section 30221 of the Coastal Act does not apply because the property is not oceanfront land. The Commission staff disagrees with this conclusion. The project site is located 200 feet from the bay on historic tidelands. Only a road exists between the project site and the bay. In reviewing past projects, the Commission has not limited oceanfront land to areas immediately adjacent to the shoreline. Therefore, the Commission staff believes that the project site should be considered as oceanfront and the Navy must evaluate the project for consistency with Section 30221 of the Coastal Act.

O-3

The Commission staff believes that the project should be designed to improve public use of the site by maximizing the amount of open space. Two of the alternatives considered in the EIS, alternatives A and F, include significant amount of open space. Even though the Commission staff recognizes that most of the alternatives would open up the site for public use, the construction of high rises on this site may conflict with the need to protect the property for recreational uses. However, the development of a large open-space area may mitigate the impact of development of the site for non-recreational uses. The staff would consider recommending that the Commission concur with a consistency determination that includes non-recreational development, if the Navy demonstrates that present and future demand for coastal recreation is already adequately provided for in the area or would be provided by the proposed recreational uses of the property.

O-4

Finally, on page 4-119 of the EIS, the Navy concludes that park facilities in the area would not be affected by the project, because it does not include any residential units. The Commission staff disagrees with this conclusion. Since the proposed project would replace an existing office building and warehouse with two high-rise office buildings and two high-rise hotels, the project would increase the number of people visiting this part of San Diego Bay. It is reasonable to assume that these people would use existing recreational facilities in the area during their visit. Thus, the project would place an additional burden on existing recreational facilities in the area.

O-5

COASTAL-DEPENDENT ACTIVITIES

Section 30255 of the Coastal Act identifies coastal-dependent and coastal-related development as priority uses of oceanfront land. The section provides that:

O-6

PAGE 3
JUNE 8, 1990

Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.

Section 30101 provides that:

"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.

Section 30101.3 provides that:

"Coastal-related development" means any use that is dependent on a coastal-dependent development or use.

The two alternatives considered in the consistency determination include the construction of two office buildings and two hotels. Since the hotels are visitor-serving uses, they provide some recreational benefit. Thus, they may be considered a high priority use. However, the Commission staff is concerned that both the Naval and private office buildings are not coastal-dependent or coastal-related, and thus they may not be high priority uses for this property. In order for the Commission to find that these office buildings are consistent with the CCMP, the Navy must demonstrate that those uses are either coastal-dependent or coastal-related (see Sections 30101 and 30101.3 of the Coastal Act for definitions of coastal-dependent and coastal-related developments). Since it is unlikely that either of these buildings can be defined as coastal-dependent, the Navy must demonstrate that both of these buildings are coastal-related. If the Navy cannot demonstrate that those uses are coastal-related, the proposed uses may still be consistent with the Coastal Act if the Navy can show that there are no appropriate coastal-dependent or coastal-related uses for this property.

ALTERNATIVES

The Broadway Complex project has been designed to allow for the construction of Naval Office space at little or no cost to the Navy. In order to accomplish this goal, the Navy would lease the property to a private developer to construct the two hotels, the private office building, and the Navy office building. The economic return from the hotels and the private office building would enable the developer to construct the Naval office building at little or no cost to the Navy. This method of construction appears to encourage a density of development that is higher than necessary to support military activities. The Commission staff is concerned that this project may be a precedent for high density military/private development on urban waterfronts.

The Commission staff believes that the Navy should consider reducing the density of the development in order to emphasize recreational uses in a manner

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GE 4

JUNE 8, 1990

that is consistent with surrounding development. The Navy should evaluate a scaled down alternative that includes some private development and a greater contribution of federal funds by the Navy. That alternative would still allow the Navy to have its office space at less than full cost and would improve recreational uses of the area.

O-8

If the range of alternatives is limited to those that have been identified in the draft EIS, then the Commission staff believes that the Navy should give additional consideration to alternative F. The alternatives evaluated in the consistency determination are limited to alternative A, which includes 1.9 acres of open space, and alternative B, which includes 0.5 acre of open space. However, alternative F, as described in the EIS, includes 3.5 acres of open space. That alternative would allow for more open space by reducing the number of high-rises from four buildings to three. That alternative would maintain the same amount of square footage as alternative A because the height of the remaining buildings would be increased.

O-9

As described above, the Coastal Act encourages the maximum amount of public recreational use of the waterfront areas. Alternative F would create a large shoreline park, and thus increase the amount of recreational opportunities provided by the project. It appears that alternative F was not chosen as the preferred alternative, because the increased height of three remaining buildings would increase the visual impact of the project. The Commission staff believes that the Navy should reconsider that alternative because the increase in height and greater visual impact may be mitigated by the reduction in the number of buildings. In addition, that alternative does not include a building devoted entirely to commercial office use, and thus that alternative may have less conflicts with the public trust easement and Sections 30221 and 30255 of the Coastal Act.

COST

As described above, the purpose of the two hotels and the private office space is to allow the construction of Naval office space at little or no cost to the Navy. In the coastal-dependent section of the Navy's consistency determination, the Navy argues that the private office space is consistent with that section of the CCMP because it is integral to the project's financial feasibility. In order for the Commission staff to evaluate this conclusion, the Navy needs to produce evidence to support that conclusion. The Navy should include, as part of the consistency determination, an economic analysis that discusses the following issues:

O-10

1. Demonstrate that the two hotels and the private office space are necessary to fund the Navy office space.
2. Can the Navy contribute federal funds to reduce the intensity of development or eliminate the non-priority uses?
3. Will the project remain feasible if the private office building is not constructed?

O-11

3. Will the project remain feasible if the private office building is not constructed?
4. Is there sufficient demand for the proposed private development in the San Diego area?
5. If the City of San Diego does not contribute money to the project, can the Navy still develop alternative A or F and consider the increase in cost as mitigation for intensity and non-priority development issues?

O-11

ESTUARINE RESOURCES

On page 4-151 of the EIS, the Navy states that:

The project site contributes urban runoff to this area through storm water flows that exit the site via storm drains that empty into the bay. Although not conclusive, it can be assumed that runoff from the site does not substantially affect the marine habitat of San Diego Bay because the habitat value in this area is considered rich and diverse.

O-12

If the estuarine habitat in the area is considered rich and diverse, why does the Navy assume that the urban runoff would not be significant? The Commission staff does not believe that the Navy should make this assumption. If the proposed project would increase urban runoff in a manner that significantly affects the estuarine habitat, then the Navy should mitigate that impact.

LOCAL COASTAL PROGRAM

The Local Coastal Program (LCP) for the City of San Diego has been incorporated into the CCMP. While Chapter 3 of the Coastal Act remains the substantive standard for evaluating federal projects, the LCP provides guidance for interpreting Chapter 3 policies in light of local circumstances. Therefore, the Navy's consistency determination should include an analysis of the project's consistency with the relevant portions of the LCP. The Commission staff is particularly concerned about the project's consistency with the transportation policies of the LCP. In its consistency determination, the Navy should include an analysis of the project's individual and cumulative traffic impacts and their consistency with the Centre City segment of the City of San Diego's LCP.

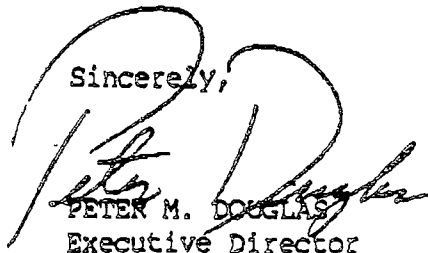
O-13

PAGE 6
JUNE 8, 1990

0000013

Once again thank you for the opportunity to comment on the draft EIS and consistency determination for the proposed project. If you have any questions, please contact Jim Raives the Commission staff.

Sincerely,



PETER M. DOUGLAS
Executive Director

cc: Deborah Lee.

JRR/PMD
0001p

225 Broadway
Suite 1100
San Diego, California 92101-5074
619/236-7101

**Centre City
Development
Corporation**

John G. Davies
PRESIDENT
Gil R. Ontai
VICE PRESIDENT
Phillip C. Blair
SECRETARY
Janay P. Kruger
TREASURER

DIRECTORS
Thomas F. Carter
Patrick Krueger
Henri S. Lagatella

Pamela M. Hamilton
EXECUTIVE VICE PRESIDENT

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June 13, 1990

Mr. Louis Misko
Director of Planning
Officer in Charge
BROADWAY/NAVY COMPLEX
555 West Beech Street, #101
San Diego, CA 92101

Subject: Intersection Configurations - Pacific Highway

Dear Mr. Misko:

My understanding of the preferred configuration of the streets intersecting Pacific Highway, including "E", Broadway and "C" street as illustrated on page 4-67, is that no double left-hand turn movements from Pacific Highway onto intersecting streets have been recommended. Conversely, in the event that a full two block plaza is created at the terminus of Broadway, double left-turn lanes are recommended at the intersection of Broadway and "C" streets as illustrated on page 4-68.

P-1

With respect to northbound traffic on Pacific Highway, I recommend against a right-hand turn at the intersection of Broadway. I also question the need to provide a double left-hand turn from Broadway, southbound onto Pacific Highway.

These recommendations will negatively impact the design of off-site improvements adjoining the proposed development of the Santa Fe Center on the south side of Broadway and the future development of the Santa Fe Properties located on the north side of Broadway.

In addition, the implementation of right-of-way improvements at Broadway and Pacific Highway may be regarded as a standard for other intersections between Market and Grape streets. Which if followed, will reduce the quality of Pacific Highway as a landscaped boulevard.

P-2

Louis Misko
June 13, 1990
Page 2

LLLLL
LLLLL
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For this reason, I am anxious that the circulation improvements balance the traffic needs of the City and adjoining development with the street as an important landscaped entrance to the City and waterfront area.

P-3

I would appreciate your response to my concerns in the review of the draft EIR for the Broadway Complex.

Max

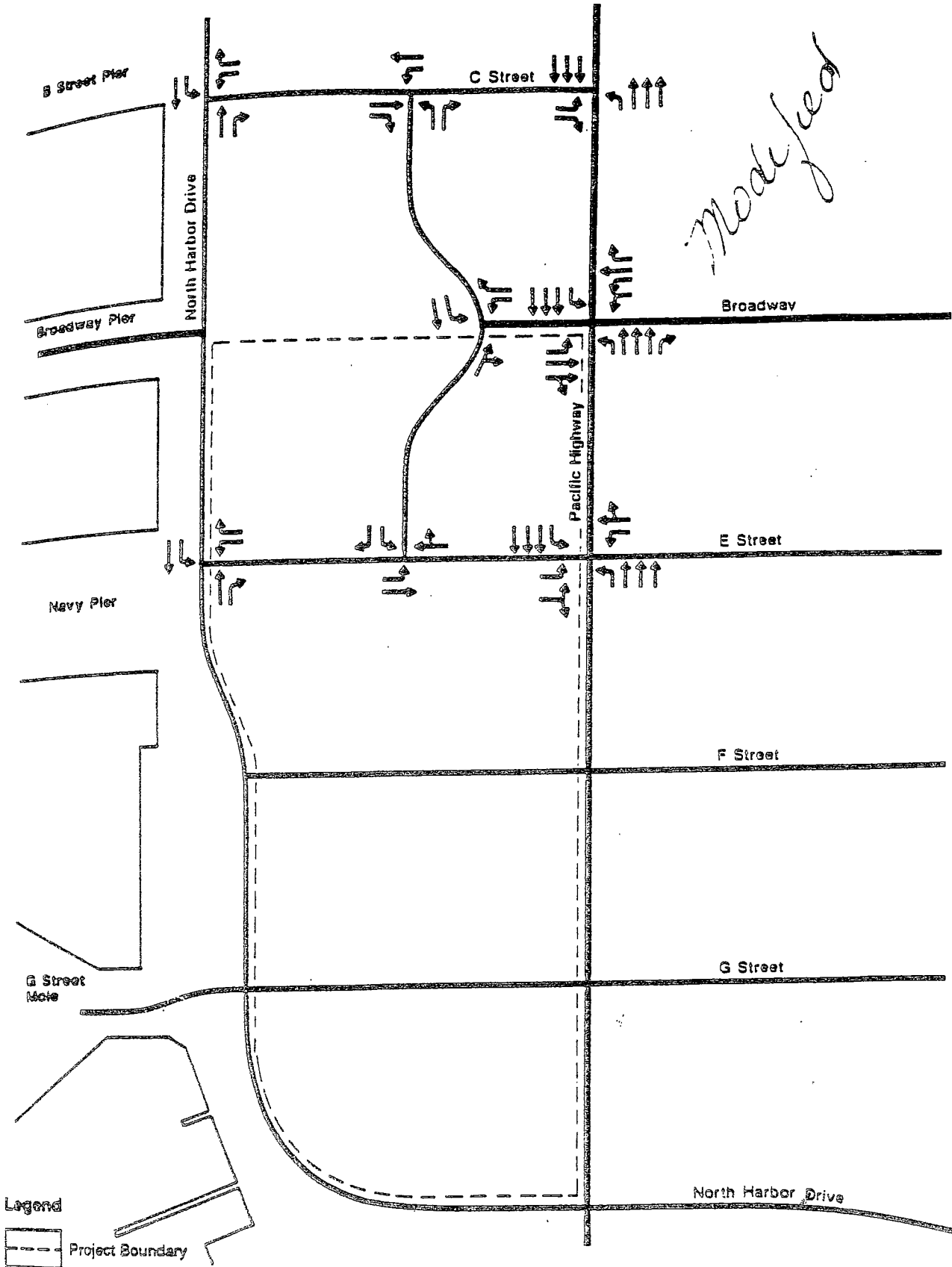
MAX SCHMIDT
ASSISTANT VICE PRESIDENT

enc.

/jf

cc: Mike Stepner
Allan Holden

Modified



Future Intersection Configurations
 Alternative A
 Navy Broadway Complex Project

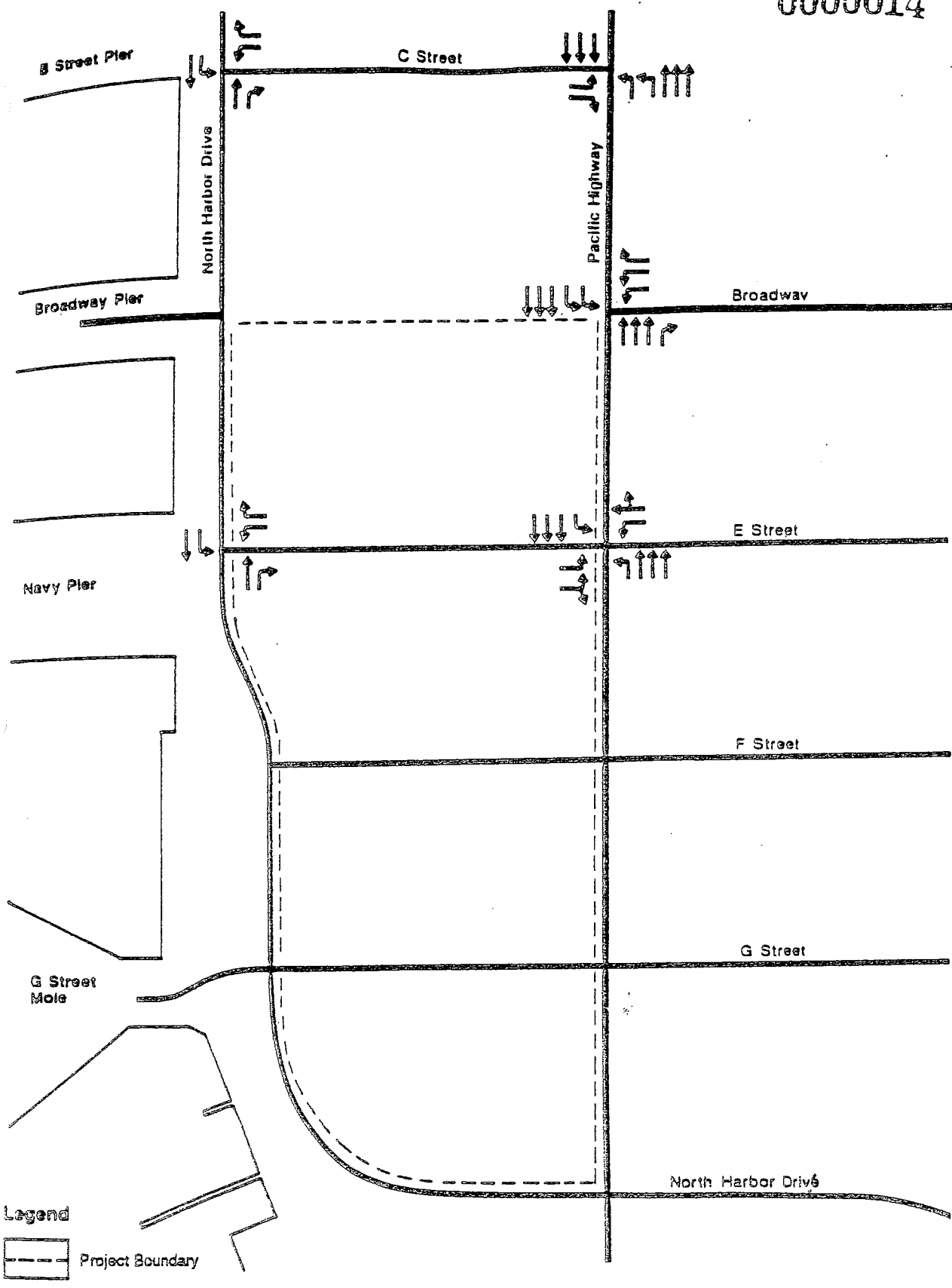
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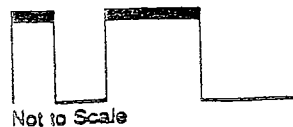
NORTH

Figure 4-13

0000014



Future Intersection Configurations
 Alternative F
 Navy Broadway Complex Project




6640001 1/80



NORTH

Figure 4-19

0000015



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
1235 MISSION STREET
SAN FRANCISCO, CA 94103

15 JUN 1990

Captain W. K. Goodermote, CEC, USN
Office in Charge - Navy Broadway Project
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
555 W. Beech Street - Suite 101
San Diego, CA 92101-2937

Dear Captain Goodermote:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) titled NAVY BROADWAY COMPLEX PROJECT, City and County of San Diego, California. The City of San Diego has issued a Draft Environmental Impact Report (DEIR) which incorporates by reference the Navy's Broadway DEIS. Our comments on the DEIS/DEIR are provided pursuant to the National Environmental Policy Act, Section 309 of the Clean Air Act, and the Council on Environmental Quality's Regulations for Implementing NEPA (40 CFR 1500-1508).

The proposed Broadway project would centralize and consolidate the Navy's administrative activities for the San Diego region at a new facility on approximately 15.6 acres in downtown San Diego near the waterfront. The site is proposed for redevelopment through a public/private partnership. The Navy requires approximately one million square feet of office space. Additional multi-use private development (hotel, office, retail) onsite would be included to offset the cost of the Navy-occupied site, thereby reducing the cost to the taxpayer. The Navy and the City of San Diego intend to conclude a development agreement as the mechanism for approval and control of the site's development.

Q-1

We have rated this DEIS as Category EC-1, Environmental Concerns - Adequate (please see Enclosure 1, "Summary of Rating Definitions and Follow-up Actions"). We encourage the adoption of water conservation and solid waste recycling measures and measures to protect air quality. We also request that the Final Environmental Impact Statement (FEIS) contain additional information and mitigation measures on several project features regulated under the Resource Conservation and Recovery Act (RCRA), as amended by the 1984 RCRA amendments; the Comprehensive Environ

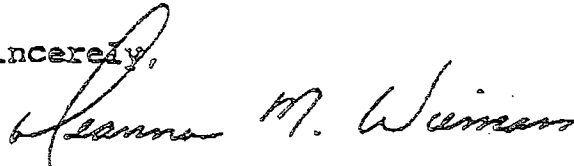
15 JUN 1990

mental Response, Compensation and Liability Act (CERCLA), as amended in 1986; and the Toxic Substances Control Act (TSCA). Detailed comments are provided in Enclosure 2.

Q-1

We appreciate the opportunity to comment on this DEIS. Please send us three copies of the FEIS when it is officially filed with the EPA's Washington, D.C. office. If you have any questions, please call me at 415-556-6383 or have your staff contact Mr. David Tomsovic at 415-556-5098.

Sincerely,



Deanna M. Wieman, Director
Office of External Affairs

Enclosures: 2 (EIS comments; EIS rating sheet)

cc: San Diego Air Pollution Control District
Regional Water Quality Control Board
City of San Diego Planning Department

15 JUN 1990

Environmental Impact of the Action

Enclosure 1

IO—Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC—Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO—Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU—Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1—Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2—Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3—Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1040, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

Adopted by EPA, Oct. 1984

GENERAL COMMENTS - WATER CONSERVATION

15 JUN 1990

The DEIS states that "None of the alternatives would significantly affect the ability of the City to provide water service; therefore, no mitigation measures are necessary" (DEIS, page 4-121). We urge the Navy and the City of San Diego to use this opportunity to develop a facility that is a model for water conservation. We recommend you consider adopting a broad range of mitigation measures to reduce the amount of water which the proposed project would consume, especially for its operational phase. Examples of water conservation measures include:

Q-2

- * installation of water-saving shower heads or flow restrictors in the hotel rooms,
- * installation of water conservation features on toilets,
- * periodic checks for leaks in pipes, hoses, faucets and couplings,
- * planting drought-resistant trees and plants for landscaping features,
- * use of efficient sprinklers or drip systems rather than hand watering of lawns, trees and plants,
- * use of "gray water" to water lawns, plants and shrubs, and
- * watering vegetation after dusk or before sunrise to reduce evaporation, especially during hot months.

AIR QUALITY - CLEAN AIR ACT

As the DEIS notes, the San Diego Air Basin is designated as a nonattainment area for several pollutants. "The western half of the Basin is designated as nonattainment of state and national carbon monoxide standards and state nitrogen dioxide standards" (DEIS, page 4-156). Because of this, the Navy and the City should undertake every feasible effort to ensure that proposed project activities do not result in further deterioration of air quality in the air basin under both the Federal and State Clean Air Acts.

We support the adoption of the two mitigation measures to reduce the project's air quality impacts: fugitive dust control during construction and long-term air emissions reduction through a Travel Demand Management (TDM) program (DEIS, pages 4-172 and 4-173). We encourage the Navy and the City to commit to adoption of all the TDM elements identified in the DEIS, including "improved transit use through better service and accessibility, increased ridesharing through provision of reserved carpool spaces, and development of shared parking through a mix of land uses" (DEIS, page 4-61). We encourage the Navy and the City to work closely with the San Diego Air Pollution Control District for the life of the project (construction/operation) to ensure that it does not contribute to deterioration of San Diego's air quality.

Q-3

HAZARDOUS SUBSTANCES - COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT, AS AMENDED BY SUPERFUND AMEND-
MENTS AND REAUTHORIZATION ACT (CERCLA/SARA)

15 JUN 1990

EPA's December 1988 scoping letter to the Navy requested that the DEIS identify potential toxics contamination and contain toxics mitigation. We appreciate the chapter that discusses potential toxics contamination and the mitigation which the Navy will adopt to reduce/eliminate impacts to public health and the environment. We request that the toxics mitigation identified in the DEIS be adopted in full by the Navy in its FEIS and Record of Decision.

Q-4

It appears likely from several statements that CERCLA hazardous substances, pollutants or contaminants are present onsite. Examples include the "oily surface spill" outside Building 106; "high acidity" due to sulfuric acid previously stored in Building 106; and "higher than normal levels of some priority pollutant metals" in soil samples (DEIS, pages 4-214 and 4-215). The FEIS should clarify whether any such materials are present. If they are present, the selection of a remedy by the Navy would need to follow the process set forth in CERCLA and the National Contingency Plan (NCP), including a remedial investigation to determine the extent of CERCLA hazardous substances contamination, a risk assessment and an ecological assessment.

Q-5

We agree with the conclusion in the DEIS that several areas require more investigation to determine the extent of toxics contamination and to identify appropriate remedial work (DEIS, page 4-216). At least four areas have been identified:

- * a source of black, hydrocarbon-discolored soil encountered in three hand-augured borings near Building 7,
- * a former hazardous waste storage area located in Building 8,
- * soil around the forklift area, and
- * oil with lighting ballasts and transformers with potential PCB concentrations. If high concentrations are found, remediation would be recommended to reduce future onsite soils contamination (page 4-216).

Q-6

We request that the Navy closely coordinate its Broadway developments with the California Department of Health Services, the Regional Water Quality Control Board and local health and environmental agencies to ensure that the proposed project is not in conflict with Federal or State environmental restoration requirements.

RESOURCE CONSERVATION AND RECOVERY ACT - RCRA

1. Hazardous Waste Volume. We were unable to find any discussion concerning the types and quantities of hazardous materials or hazardous wastes as defined under the Federal RCRA and/or State of California law, which the Broadway Project may use or generate. The project's construction may generate a variety of hazardous wastes (e.g., ignitable paint wastes and spent solvents). Hazardous wastes may be generated during the project's operational phase from hotel laundromat/dry cleaning

Q-7

DEPARTMENT OF THE NAVY

In Re:

NAVY BROADWAY COMPLEX PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

San Diego City Administration Building
12th Floor Committee Room
202 "C" Street
San Diego, California 92101

Wednesday,
May 16, 1990
7:00 p.m.

15 JUN 1990

operations and other actions such as landscaping operations (pesticides). We request that the FEIS identify the types and estimated quantities of hazardous waste which may be generated during construction and operation.

Q-7

2. Hazardous Waste Minimization. We encourage the Navy and the City to make hazardous waste minimization, as required by the 1984 RCRA amendments, an integral component of the Broadway Project in both construction and operation. Hazardous waste minimization should be included as a mitigation measure in the FEIS and ROD.

Q-8

3. Recycling. The DEIS states that, "As no significant impacts to solid waste would result from any of the alternatives, no mitigation measures are necessary" (page 4-128). EPA is very concerned with the nation's solid waste problem, including the problems associated with siting new sanitary landfills and/or permitting alternatives such as incinerators. Recycling reduces the need for raw materials and helps to conserve natural resources. It helps to minimize landfill use and extend the expected life of existing sanitary landfills. We thus encourage the Navy and the City to vigorously pursue a program to recycle solid wastes, especially paper, glass, plastics and aluminum cans. We recommend that a solid waste recycling program be included as a mitigation measure in the FEIS and ROD.

Q-9

4. Solid Waste Management Units (SWMUs)/Corrective Action.

The FEIS should discuss whether any RCRA SWMUs are located onsite. Various sources of contamination may constitute RCRA SWMUs (e.g., Building 8 hazardous waste storage area, the forklift/drum storage area, contaminated soil near Building 7). If the Navy determines that RCRA SWMUs are onsite, the FEIS should discuss whether the proposed project could affect RCRA corrective actions onsite or at adjacent areas.

Q-10

TOXIC SUBSTANCES CONTROL ACT - TSCA

The DEIS (page 4-222) notes that fluids in transformers and other electrical units will be tested by the Navy prior to construction to determine if the fluids contain PCBs. If PCBs are found, the Navy will dispose of the fluids and the units at an approved waste disposal facility. We request that the FEIS address the PCB spill cleanup policy requirements under 40 CFR 761.120 of the PCB regulations, developed under authority of the TSCA. The FEIS should note that the removal and disposal of PCB-contaminated materials is governed under the TSCA.

Q-11

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PANEL MEMBERS

CAPTAIN WAYNE GOODERMOTE
Officer in Charge, Western Division
Naval Facilities Engineering Command Detachment,
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937

W.M. ROBINSON, JR.
Executive Director
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CURTIS E. ALLING, AICP
Vice President, Environmental Services
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Santa Ana, California 92705

LIEUTENANT COMMANDER JAMES C. HAUG, CEC, USN
Assistant Officer in Charge
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LOUIS MISKO, Director of Planning
Officer in Charge, Western Division
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1 ATTENDEES:

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11 San Diego Tribune
12 350 Camino De La Reina
13 San Diego, California 92110

14 DANIEL JACOBS
15 Albert C. Martin & Associates
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17 Los Angeles, California 90017

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19 City of San Diego, Planning Department
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21 San Diego, California 92101

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25 San Diego, California 92101

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La Mesa, California 92041

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1 ATTENDEES: (cont'd.)

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8 San Diego, California 92111

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14 Michael Brandman Associates
15 2530 Red Hill Avenue
16 Santa Ana, California 92705

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18 Naval Supply Center
19 937 North Harbor Drive
20 San Diego, California 92107

21 GARY SIMON
22 4476 Granger Street
23 San Diego, California 92107

24 WILLIAM UMSCHIED
25 Bill Umscheid & Associates
4220 La Tiera Drive
Oceanside, California 92056

Note: Provided below is public testimony commenting on the Draft EIS.²²
The Navy's presentation of the project elements, pages 5 through 21 of
this transcript, repeats the contents of the Draft EIS, so is not included
here.

Our first speaker will be Colleen Cronin.

PRESENTATION BY MS. COLLEEN CRONIN

NATIONAL SAFETY ASSOCIATES

MS. CRONIN: Good evening ladies and gentlemen, my
name is Colleen Cronin; I'm a sales coordinator with a
company called National Safety Associates. We're located at
7710 Balboa, Suite 216E, San Diego, California 92111.

Our primary focus is environmental products,
specifically water and air filtration systems. As you are
probably aware, there is a growing concern about the quality
of our indoor air.

We offer a solution to this problem. We have an air
unit which removes 95 percent of these indoor contaminants
down to 0.1 microns.

This includes smoke, pollen, dust, spores, gases,
odors, about half of all known viruses and all bacteria.

Areas of application might be rooms with blueprint
machines, computer rooms, lounges, poorly ventilated rooms,
and areas with high concentrations of employees.

Our units are very energy efficient costing only
pennies a day to operate. Most importantly, our units have
an unprecedented three year warranty.

If used properly, these filters should greatly reduce
your employee absenteeism due to illnesses contacted at the

HA-1

1 work place, better known as, sick building syndrome.

2 We also offer a variety of water filtration systems
3 designed to remove chlorine and chlorine compounds. Our
4 units consist of a granular activated carbon filter which is
5 impregnated with silver to prevent bacteria from growing
6 within the unit.

7 Approximately one third of all Californians are
8 drinking bottled water and are paying anywhere from 25 cents
9 to \$1.50 per gallon. We offer bottle quality water for only
10 three cents a gallon.

11 One of our newest editions is our bottle less water
12 cooler; it has a lease-to-own option, which most companies
13 do not offer. At the end of three years, based on the HA-1
14 number of coolers needed, you could literally save thousands
15 of dollars in this area alone.

16 Additional hidden costs with other companies include
17 bottle storage, loss of employee time to change bottles, and
18 interruptions from bottle delivery. Our system alleviates
19 these problems.

20 I want to thank you for the opportunity to present our
21 products to you, and we look forward to working with you.
22 Thank you.

23 CAPT. GOODERMOTE: Thank you very much.

24 Mr. Wood.

25 //

1 PRESENTATION BY MR. DON WOOD

2 C-3 AND THE BAYFRONT COALITION

3 MR. WOOD: My name is Don Wood; we've been working
4 together for I don't know how many years now on this, here
5 at the original public charrettes that the Navy held when
6 Bruce Boland was the Admiral.

7 We've been involved in the waterfront for a long time;
8 C-3 is represented on the Broadway Complex Coordinating
9 Group, and also has representation on the Center City
10 Planning Committee.

11 We're going to be providing written comments, but I
12 thought I want to get a few onto the record, especially if
13 this turns out to be the only public hearing associated with
14 the EIR.

HB-1

15 We applaud the Navy for an active effort to involve
16 the community, get community input, and provide public
17 review of this project. I'm sorry we don't have more people
18 down here tonight. It's certainly a breath of fresh air
19 compared to the Navy Hospital fiasco in Balboa Park. I
20 think its been a mere opposite to that, and I want to thank
21 Wayne and a lot of his staff for that behavior.

22 We applaud that the proposals having to do with
23 opening of the east to west streets through the site,
24 waterfront, E, F and G Streets.

25 We think that's very positive and we certainly support

1 the park proposal to put Broadway included in I believe
2 alternative F.

HB-1

3 We have some concerns I'd like to see addressed in the
4 final EIR. We support what you're trying to do so far.
5 We're still wrestling with, how does this project set a
6 precedent for the land between Pacific Highway and Harbor
7 Drive.

8 How do we support this proposal, and some of the
9 heights proposed on some of the buildings here, and yet then
10 refuse to support or oppose Port projects being proposed on
11 sites on tidelands property north of Broadway.

HB-2

12 We're trying to set up some equity and we're realizing
13 this is a precedent, and so we want to work with the Navy
14 and other interested parties to try and get some clear
15 agreement on how this is going to be, especially since the
16 Port has not agreed to abide by the BCCG proposals, or the
17 design standards.

18 What is the potential impacts on the site related to
19 the recently reported in the paper the Mission Bay fault,
20 which runs down runway 31 at Lindbergh Field, through it
21 looks like the Solar site, the County Administration Center
22 and the Santa Fe site.

HB-3

23 Does that fault run under or near this site? What are
24 the potential impacts of an earthquake along the fault?
25 What would the impact on this site be? What steps are being

1 taken to identify those potential impacts due to the
2 potential earthquake? What mitigations propose to avoid or
3 lessen these impacts?] HB-3

4 Third point I'd like to make is how this project
5 relates to Pacific Highway. We've seen a lot of photos, or
6 a lot of overheads of the building from the west, I'd like
7 to see a schematic or an illustration, or a concept drawing
8 showing the east side front of the project, and trying, if
9 this is possible, to relate it to projects on the west side
10 of the Pacific Highway.] HB-4

11 And I realize that the Navy doesn't have a crystal
12 ball about what CCDC and the City is going to allow on the
13 east side. We would like to see how this complex relates to
14 what is conceptually a major public promenade running along
15 Pacific Highway north and south, and how the east side of
16 the project relates to that.] HB-5

17 And those are the three concerns we have at this
18 point, other concerns will be brought up in our written
19 comments. And we thank you for your time and your
20 cooperation and help on the project.

21 CAPT. GOODERMOTE: Thank you. I appreciate your
22 cooperation and support, and your patience in working with
23 us.

24 One comment on your comment, if I may. Really I think
25 that the purpose of that four year process with the Broadway

1 Complex Coordinating Group under SANDAG was to really work
2 out the interface of our project with surrounding projects.

3 And really I think that was the intent in the plan
4 that came out in the form of the Central Bayfront Design
5 Guidelines, that came forth on the 22nd of September of last
6 year.

7 Thank you very much. Anybody else that has any
8 comments?

9 Well, this concludes the public hearing on the Draft
10 Environmental Impact Statement for the Navy Broadway Complex
11 project. I thank each of you for attending this evening. I
12 know it's somewhat of a hardship to come out at this hour of
13 night, but I do appreciate your attendance very much.

14 Thank you and have a good evening.

15 (Whereupon, at 7:35 p.m., the above-entitled matter
16 was concluded.)



SECTION 3

RESPONSES TO COMMENTS

In accordance with both the NEPA and the CEQA, responses are provided to each substantive comment raised on the contents of the DEIS (and, by reference, the DEIR). Responses need not be provided to comments that strictly state the opinion of the commentator on the merits of the project or to comments that do not address the specific contents of the DEIS.

3.1 TOPICAL RESPONSES

A number of issues were raised by several commentators. Provided herein are responses to those comments. Wherever the subject is raised by an individual commentator, the response is referenced to the appropriate topical response. Topical responses, are identified as "TR", followed by the appropriate number.

TR-1: Military Construction Financing and Design Constraints

A number of comments were raised on the military construction alternative (DEIS Alternative E) focusing on two primary issues:

1. Why is the project not being constructed with traditional Congressionally appropriated military construction funding?

Why can't the military construction alternative concentrate the development on one or two blocks and allow the rest of the site to be developed with other community uses?

Military Construction Funding

In 1987, the United States Congress passed Public Law 99-661 (see Appendix A of the DEIS). By passing this legislation, Congress established the objective of obtaining Navy office space at the Navy Broadway Complex and to do so utilizing the value of the Navy land through a public/private venture. The current five-year defense program contains no project to accomplish the consolidation or co-location of Navy administrative facilities in the San Diego area by military construction. In view of current federal budget reductions and the likelihood of even more severe constraints in the future, Congress has acknowledged that direct funding is not available for this project by authorizing the project through a public/private venture.

The Navy Broadway Complex is not "surplus" property. Retention of the Navy Broadway Complex site reflects a national defense requirement to maintain a mobilization capability directly adjacent the Navy Pier, which has a direct rail connection. During periods of national emergency, the mobilization and demobilization of supplies, heavy equipment and weapons platforms with accompanying personnel becomes a critical factor. The hotel, commercial office, and open space envisioned for the redevelopment of the Navy Broadway Complex could be used to augment Navy space during these periods. These complementary uses provide convertible space adjacent to the pier, which will remain as a strategic location for staging of support personnel and equipment with the key rail/waterfront linkage.

Military Construction Alternative Design

Even though military construction (MILCON) funding of the project is not available, the alternative of MILCON funding was considered in the DEIS (as Alternative E) to provide decision-makers one measure by which to compare the impacts of the project. P.L. 99-661 requires that the public/private venture development be more advantageous, i.e. less costly, to the United States than the most economical military construction. As such, Alternative E accurately reflects the standard of development achievable if appropriated funds were available for use.

Buildings 1 and 12, the two largest buildings currently located on the Navy Broadway Complex, are retained and rehabilitated in this alternative to provide the maximum feasible square footage. This would leave an unmet need for 148,000 square feet of office to reach the necessary 1 million square feet. Thus, an additional office building would be developed. As shown on DEIS Figure 3-13, these three buildings would use approximately 1/2 of three blocks each, or approximately 5.2 acres of the 15.6-acre site. This would leave 10.4 acres for parking and other uses.

One million square feet of office would create a need for 1,230 parking spaces (at 1.23 spaces per 1,000 square feet of Navy office). Using NAVFAC Manual P-80 "Facility Planning Criteria for Navy and Marine Corps Shore Installations" (October 1982), a "multilevel parking garage may be planned...only where justified by land restrictions and economic considerations. Allow (360 square feet) for each passenger vehicle." Using these standards, 10.2 acres would be required to provide surface parking onsite. With 10.4 acres not dedicated to building uses, there would be sufficient area to provide necessary surface parking on Federal property. As there would be no land restrictions or other economic factors (cost) inhibiting surface parking, a multi-level parking garage would not be justified. Virtually the entire site would therefore be devoted to buildings and surface parking.

TR-2: Project Economics/Financing

As discussed in topical response TR-1, funding for the project is not included within the five year defense program, and, given current and likely future federal budget reductions, Congress (with the passage of Public Law 99-661) has acknowledged that the only funding source available for this project is a public/private venture. The public/private venture concept requires that development of the Navy Broadway Complex include compatible private land uses sufficient to offset the cost of development of the necessary Navy office space. The process of formulating alternatives for the type and intensity of development on the site, therefore, integrated consideration of compatibility with surrounding development, specific environmental issues and the financial feasibility of potential alternatives.

To evaluate the economic requirements of the public/private venture, the Navy engaged the firm of Williams Kuebelbeck & Associates (WK&A) to make an independent financial feasibility analysis. A market assessment was performed to determine the potential types of uses which could be developed on the site without adversely affecting the absorption of similar development planned in the Centre City San Diego. The marketable development program was refined from a City planning perspective, considering urban design guidelines, massing, viewsheds, access and traffic, and significantly reduced in total scope. The reduced density was further analyzed on a financial pro forma basis to determine the overall return from the commercial land uses and the residual cash flow and present value attributable to the long term ground lease provided to the developer by the Navy. The financial analysis tested these cash flows and values against the estimated construction cost of Navy office space and the value of the leased land. The financial

tests confirmed the amount of development and mix of uses, including commercial office, necessary to feasibly implement the Navy's objectives in a manner consistent with Congressional authorization.

The enabling federal legislation mandates the selection of the developer for the redevelopment through a competitive process. The financial analysis performed by WK&A forms the basis of the government estimate to be used in the evaluation of competitive proposals submitted for award of the redevelopment. The WK&A study is therefore proprietary solicitation information which, in accordance with federal procurement regulations, cannot be published in order to protect the integrity and competitiveness of the selection process. The selected developer, the WK&A financial feasibility study, and the actual financial proposal from the developer are subject to review by the Congress, prior to award, in accordance with the authorizing legislation.

Alternative B meets many of the community planning objectives in terms of density, massing, urban design, and viewsheds and includes open space. The City of San Diego, however, desires a larger public open space at Broadway than would be provided by Alternative B. This larger area could be combined with adjacent lands owned by the Port District to create the significant open space envisioned in the Central Bayfront Design Principles and incorporated into the Preliminary Centre City Plan and Interim Development and Design Ordinance. The City has proposed that the Port District cooperate in making this additional land available and in the improvement of the open space. The estimated current cost of the open space improvements including road realignments and existing building demolition is approximately \$7.1 million.

The Port District has not agreed to make available the land or fund any of these improvements. However, on December 5, 1989, the Board of Commissioners of the Port District adopted a Memorandum of Understanding (MOU) with the City which provides:

"Port and City agree to cooperate in design of improvements and identification of resources needed to develop the significant public plaza area at the foot of Broadway.

The parties to this Memorandum agree that it is a common objective to create a significant public plaza at the foot of Broadway. The public plaza should consist of lands made available by the Navy, by the Port, and reduction in the width of Harbor Drive and closing of Broadway (subject to appropriate studies and required public hearing).

Port and City recognize that Navy may require assistance to compensate for loss of Building 1 area as a contribution to the public plaza. Port and City agree to cooperate in negotiations with Navy to identify acceptable assistance to offset this loss."

In order to obtain this larger open space, as shown in Alternative A, the City has undertaken the identification of funds for infrastructure (road and landscaping) improvements associated with the Navy Broadway Complex Project to offset the reduction in density and commensurate revenue loss. The current estimated cost of improvements to Pacific Highway, Harbor Drive, and the E, F, and G Street rights-of-way is \$8.1 million. This is additional to the open space improvement costs described above.

The Navy Broadway Complex now generates no property or other taxes for the City. The property tax increment derived from the private portion of the redevelopment will more than offset the total cost of both the open space and infrastructure improvements as reflected in the

fiscal analysis (see DEIS pages 4-141 and 4-142, as revised by response to comment G-27). In accordance with California redevelopment laws, the property tax increment from the project is available to the Redevelopment Agency of the City of San Diego for expenditure in connection with projects of this type. The staff of Centre City Development Corporation (CCDC) (an advisory body to the Redevelopment Agency) has suggested that the Port District participate in the improvements to Harbor Drive and E, F, and G Streets because the Port District owns land underlying Harbor Drive, E, and F Streets and because of the favorable impact of the opening of these streets on adjoining Port District waterfront properties, especially the G Street Mole. The Port District has not agreed to such participation.

TR-3: Parking Supply and Transportation Demand Management (TDM)

The provision of on-site parking for the Navy Broadway Complex was addressed in the DEIS (Section 4.2) and in the supporting Transportation Study for the Navy Broadway Complex. The analysis of current parking demand in the surrounding blocks used an industry standard indicating facilities are effectively at capacity at 90 percent occupancy levels. Off-street lots and structures within 15 minutes' walking time from the project site average 74 percent occupancy, while on-street spaces average 83 percent occupancy. The study acknowledges that one of the largest off-street public parking lot facilities in this area, adjacent to the Santa Fe Station, will be removed upon its development in 1992. Therefore the long-term parking conditions scenario (at build-out) focuses on provision of an adequate on-site supply and accommodation of a portion of demand in alternative transportation modes.

Standard estimation techniques were used to forecast parking demand for the project. The parking demand totals, without TDM, were based on demand rates that do not consider the increased use of alternative transportation modes (transit, carpooling, shared parking, etc.) that occurs in urbanized downtown areas. The parking supply rates for the project were based on surveys conducted by Wilbur Smith and Associates for typical supply levels provided in recent Centre City projects.

Table 14 of the Transportation Study addresses the proportion of on-site demand that is projected to be satisfied by on-site parking, and by diversion of single-occupant auto trips to other modes. Without a TDM program, Alternative A, provides that 80 percent of parking demand will be accommodated onsite assuming a 15 percent transit mode share; 20 percent of spaces would be provided offsite. The transit share is a reasonable assumption given that the current average proportion of employees in the Centre City who take transit to work is 15 percent, according to surveys by Commuter Computer, San Diego. This may be a conservative estimate for the project given the availability of two LRT lines in the vicinity of the project.

The addition of a TDM program to the seven project alternatives provides a scenario where the full parking needs of the project are provided onsite, based on the diversion of a proportion of trips by alternative modes. For Alternative A, 24 percent of office workers were projected to commute by alternative modes. For hotel workers and retail workers, 15 percent of demand would be diverted due to alternative mode use. This is also a reasonable assumption of the proportion of employee trips that would be diverted to alternative modes based on current travel patterns. According to Commuter Computer, approximately 24 percent of all Centre City employees carpool or arrive by alternative modes. An additional 15 percent take transit. Since office workplaces are among the easiest to implement ridesharing programs, the full existing percentage was used to estimate project ridesharing for office. Much lower percentages were assumed for hotel and retail, reflecting the nature of these workplaces.

Statewide experience shows that federal, state, and local employees achieved ridesharing rates of 30 percent or more. For example, survey data for County of San Diego Courthouse employees show that less than half drive alone (48 percent); more than half rideshare or take transit, and the transit ridership is very high at 39 percent. The above data is consistent with rates seen statewide and summarized in the Metropolitan Transportation Commission's "Commute Alternatives Program Evaluation" study (January 1984), which evaluated ridesharing programs in six northern California counties. The study indicated that standard employer coordination and minimal benefits resulted in ridesharing levels of up to 31 percent for Contra Costa County employers.

The projected mode splits with TDM are intended to provide a reasonable forecast of commuter modes and the resulting parking needs for typical Centre City uses. In all cases, the mode splits with TDM are comparable with existing patterns in San Diego and the Central Business Districts of other major metropolitan areas in California.

Therefore, the assumption of parking demand reductions due to TDM are reasonable. They do not represent a statement of goals for the project, but a reasonable estimate of TDM-related parking demand reductions expected for a project of this size, given standard TDM program measures that are commonly implemented by employers in the Centre City area, according to the regional ridesharing agency. The listed TDM measures approximate the types of employee TDM program measures implemented by Centre City employers. An actual program should be tailored to the employee population and is expected to be coordinated onsite.

TR-4: Project Planning in the Context of the Central Bayfront and Centre City

Comments on the EIS which assert the project is not consistent with the City's planning direction for the waterfront do not appear to recognize the most recent community plan. Since the release of the Draft EIS in April 1990, the Centre City Planning Committee (CCPC), appointed by the City Council, has completed the Preliminary Centre City San Diego Community Plan and Interim Development and Design Ordinance, both dated July 1990. The plan incorporates the Central Bayfront Design Principles that were adopted by the Broadway Complex Coordinating Group (BCCG) in September 1989. The community plan updates the city's land use and development policy for the Centre City. The CCPC, Centre City Development Corporation, and Planning Commission recommended adoption of the plan and ordinance to the City Council. The City Council concurred and recently adopted the plan and ordinance (first reading).

The project site is located within the Commercial/Office District of the plan where professional office, retail, restaurant, hotel, motel, and multifamily or single-room residential uses are emphasized. Inclusion in this district is important to note, because it recognizes the appropriateness of the office, hotel, and retail uses proposed for the Navy Broadway Complex. The designation as a commercial/office district reflects the importance of the project site as a complementary part of the downtown core, rather than a location of unplanned competition for development opportunity with the downtown. (This is also confirmed by the market analysis prepared for the project. Please see Response TR-2.)

Guidance for the intensity of uses and principles for the urban design of development have been unified in the preliminary community plan. Intensity is governed by maximum floor area ratios (FAR) designated for each city block with the highest intensities in the downtown core and along the Broadway spine. For the Navy Broadway Complex the FAR designations are highest next to Broadway (7.0 on Block 1) and diminish to the south (6.5 on Block 2 and 5.5 on Blocks 3 and 4).

The urban design guidance in the waterfront area consists of the Central Bayfront Design Principles prepared by the BCCG. The principles include objectives for stepped down intensity and scale from the most intense along the Broadway corridor to lesser intensities north and south of Broadway, and toward the waterfront. A mixed-use bayfront is encouraged. Important public spaces are recommended for the bayfront, including one at the foot of Broadway. Recommended street improvements include the enhancement of Pacific Highway as the primary vehicular route in the Central Bayfront and extension of the street grid through the site for E, F, and G, Streets.

The Navy Broadway Complex Project's preferred Alternative A was developed in coordination with the formulation of the Central Bayfront Design Principles and the preliminary community plan. It is consistent with the FAR designations for building intensity and with the urban design guidance for the bayfront with its opening of streets, scaled down building heights to the west and south, and inclusion of the 1.9 acre open space at the foot of Broadway. The project is a mixed-use development as directed by the plan. The 1.9 acres on Block 1 would substantially contribute to the large open space desired at the foot of Broadway. The continuous esplanade and extension of the street system could be accomplished, as needed on the project site. The community plan specifically indicates that it encourages the development of the Navy Broadway Complex with proposed commercial office and hotel uses (page 84 of the plan). The Navy conducted a planning process for the project and participated extensively in the Centre City planning activities specifically to formulate a development concept that would reflect the City's objectives for the Central Bayfront area. The planning process was conducted with substantial opportunity for public input and numerous discussions with local residents, groups, and agencies.

TR-5: Tidelands Trust

Representatives of the Office of the State Attorney General and counsel for the State Lands Commission have claimed that language in the deeds from the City of San Diego to the United States conveying the several parcels constituting the Navy Broadway Complex restrict the use of that property to those uses that can be generally described as "military in nature." They have also claimed that the property is subject to the tidelands trust and cannot be used for purposes that are inconsistent with general tidelands trust theories. Attorneys for the Navy and the U.S. Department of Justice disagree with the State's contentions.

The Navy asserts that: (1) The restrictions of the tidelands trust were removed by action of the California Legislature in 1929; (2) the deeds from the City of San Diego to the United States contain no language of reversion and, therefore, do not limit the Navy's use of the property; and (3) since the proposed commercial development of the Navy Broadway Complex is to be undertaken solely for the purpose of providing the means whereby the Navy will obtain office space, the entire development is consistent with the deed restrictions the State claims exist.

Since the State Lands Commission letter of December 22, 1988, was written, there has been a considerable amount of correspondence between representatives of the State and the Navy, as well as a number of meetings, in an effort to arrive at a mutually satisfactory resolution of the conflicting views. Several proposals for settlement of the dispute have been made. All proposals

contemplate that the Navy Broadway Complex project would proceed as planned. The latest proposal of the State Lands Commission staff communicated to the Navy by the California Attorney General would require the Navy to relinquish a parcel of property it uses under long-term lease from the San Diego Unified Port District in return for, among other matters, the termination of the tidelands trust claimed by the State to exist on those parcels within the Navy Broadway Complex to be used for commercial office space. This proposal was unacceptable to the Navy because it presently makes intensive use of the leased land.

If the Navy and the State are unable to conclude a mutually acceptable settlement of this legal dispute, any adverse title claims of the State will be extinguished by appropriate court action which the Navy has initiated by request to the United States Department of Justice. However, the evaluation of alternatives on an environmental basis need not await final resolution of the legal issues.

A. Robert S. Joe, United States Department of Army, Corps of Engineers, May 22, 1990

A-1. Section 3 of the DEIS describes all of the alternatives being considered for development. As discussed and shown in a number of figures (see for example, Figure 3-4 on page 3-7), no elements of the project are proposed to encroach on San Diego Bay. No other waters of the United States are on or near the site. See, also, page 4-152 of the DEIS for a discussion of biological resource impacts of the proposed alternatives.

A-2. Compliance with Section 106 of the National Historic Preservation Act has been vigorously pursued throughout the planning and environmental process for the Navy Broadway Complex Project. The Navy has determined that Buildings 1, 11, and 12 together are eligible for the National Register of Historic Places as a district under Criterion C. Other structures and archaeological resources have been determined to not be eligible for the National Register. The State Historic Preservation Officer (SHPO) concurred with these determinations in a letter dated October 3, 1989.

As described in the EIS, the proposed project would have an adverse effect on the eligible resources, so a mitigation approach was prepared and submitted to SHPO, with advisement to the Advisory Council on Historic Preservation, as the basis for a two-party Memorandum of Agreement (MOA). The MOA was signed by SHPO on August 14, 1990 and accepted by the Advisory Council on Historic Preservation on August 28, 1990. The MOA between the Navy and SHPO requires that historic information from the affected buildings be recorded according to the standards of the Historic American Buildings Survey as mitigation for their alteration or demolition.

B. **Kenneth W. Holt, M.S.E.H., United States Department of Health and Human Services, May 24, 1990**

B-1. The commentator agrees with the findings and conclusions of the DEIS. No response is necessary.

C. **Montague D. Griffin, May 25, 1990**

- C-1. The commentator's opinion that each of the alternatives considered in the DEIS has substantial liabilities is noted. These "liabilities" have been evaluated in the DEIS as environmental impacts.
- C-2. Please see topical response TR-1.
- C-3. The financial feasibility of the project has been thoroughly considered. (See TR-2.) However, execution of the project will be based on competitive proposals from developers. If the proposals indicate that the project is not feasible, that the development will not meet the necessary timeframes, or that the undertaking is not as cost-effective as military construction, then the development will not be undertaken. The assertion that the project will cost the taxpayers more than with MILCON funding is inconsistent with the DEIS, and lacks sufficient specificity to warrant further response.
- C-4. The commentator's opinion is noted. Please see topical response TR-1.
- C-5. The commentator's opinion is noted. Please see topical response TR-1.
- C-6. The commentator's opinion is noted. Please see topical response TR-1.
- C-7. The commentator's preference for Alternative F over Alternative A is noted. No further response is warranted.
- C-8. The DEIS contains extensive analytical material related to the project's impact on aesthetics and viewshed. Please see pages 4-74 through 4-114 of the DEIS. The conclusionary comment that the project alternatives are detrimental to Bayfront aesthetics fails to suggest that either the methodology or analysis of the DEIS on this issue is inadequate.
- C-9. The shadows depicted in Figures 4-52 (page 4-112) and 4-53 (page 4-113) accurately describe the shadowing effect of the project, based on sun angles at the specific times noted. The commentator's disagreement with the conclusions on page 4-114 with respect to shading are noted.
- C-10. The water consumption estimates shown on page 4-122 of the DEIS are based on water consumption rates typical for the uses proposed, as provided by the City of San Diego Water Utilities Department. Nevertheless, in view of the generally constrained water supply throughout California, the following is added to page 4-121 under "Mitigation Measures":
- "Although the project would not significantly affect the ability of the City of San Diego to supply water service, the following design features will be incorporated into the proposed project:
- Low-flow shower and faucet fixtures will be provided in all buildings.

- Drought-tolerant landscaping will be used on all areas of the site except where grass-intensive uses (such as in open space areas) are located.

C-11. The only "toxic" or "hazardous materials" that would be used on site are those that are associated with normal operations of hotels and office buildings. The Navy and project site lessees would be required to comply with all laws and regulations that establish the methods and procedures for the use, storage, and disposal of toxic or hazardous materials.

C-12. An evaluation of site geology and geologic hazards was made in the previous geotechnical investigation by Woodward-Clyde Consultants (1988) (which is included in the Hirsch and Company report referenced in the draft EIS). Supplemental information regarding site geology, seismicity, evaluation of faulting, and liquefaction is presented in the report entitled "Additional Geologic, Seismic, and Geotechnical Studies. Navy Broadway Complex, San Diego, California," dated September 5, 1990 and prepared by Woodward-Clyde Consultants. This report is included in this appendix as Section 4. Additional test borings extending below proposed foundation depths will be required for design level geotechnical investigations, but the current borings are adequate for the current planning and environmental level investigations.

C-13. While it is true that open space uses may attract and be beneficial to certain bird species, the intent of the DEIS is to identify substantial adverse impacts of the proposed action and provide mitigation measures and alternatives to avoid these impacts.

C-14. In areas characterized by long rows of tall buildings and in areas of already high wind speed (e.g., Chicago), a wind tunnel effect can be created whereby wind is directed through narrow passageways and somewhat accelerated. The project area is not characterized by these conditions, especially with respect to wind speeds. As shown on page 4-155 of the DEIS, the mean wind speed in the project area is 6.6 miles per hour (mph), and wind speeds exceed 12 mph only 10 percent of the time. The site is adjacent to San Diego Bay, with no major structures between it and the bay to accelerate the relatively moderate winds that do traverse the site. The project would have the effect of moderately blocking bay breezes to areas immediately adjacent to the inland side of buildings, but normal wind flow would return rapidly, such that it is approximately the prevailing speed within a block of the site. The project would not have the effect of substantially reducing breezes to residential areas east of Kettner Street.

C-15. This comment reiterates comment C-8. Please see response to comment C-8.

C-16. The second sentence on page 4-142 is hereby revised to read as follows:

"Alternatives E and G do not generate tax revenues to the city, as they include only Navy facilities."

C-17. The legend on page 4-208 of the DEIS is hereby revised to indicate that the description of each identified property is found on pages 4-207 and 4-209 of the DEIS.

D. Don L. Nay, Port of San Diego, May 31, 1990

- D-1. Please see topical response TR-2 concerning the economics and financing of the proposed project, as well as possible financing alternatives for infrastructure improvements. The financing alternatives discussed therein are not inclusive of all potential financing options that may be considered in the implementation of the project. The EIS assumes that financing for necessary infrastructure improvements will occur. Note that the intent of the EIS is to evaluate the environmental impacts of the proposed project. The financing of the project is not a factor in the extent and type of impacts that the project would create. If various infrastructure improvements can not be financed, and the lack of such improvements result in environmental impacts, then the findings of the EIS would need to be changed, with such changes disclosed in environmental documents circulated to the public.

With respect to the museum, as noted on page 3-6 of the DEIS, up to 55,000 square feet of unimproved space would be made available to a community-sponsored organization for a museum. The draft development agreement with the City of San Diego provides that the organization's qualifications are to include reasonable initial capital and operating reserve requirements. Public subsidies, if any, would be minimized. The agreement further provides that if no such organization is willing or able to undertake such a venture, the space would be utilized by the Navy or publicly-oriented commercial uses. The cost of providing the museum has not been determined, but the cost would not alter the potential environmental impacts of the project.

- D-2. The Navy notified the Federal Aviation Administration (FAA) that it proposed to construct buildings that would encroach into FAA-determined imaginary surfaces. It is the FAA's responsibility to review plans for each new development and to determine if there would be a hazard to air navigation. The FAA considers a number of factors when making this determination, including existing and proposed (that the FAA has considered) buildings that are in the area.

As discussed on page 4-221 of the DEIS, the FAA reviewed the plans for Alternative A. The FAA issued a Determination of No Hazard to Air Navigation and indicated the alternative would not adversely affect air navigation. Any future building in the overlay zone would undergo the same evaluation by the FAA, including an evaluation of cumulative impacts.

- D-3. The seven study alternatives provide a range of scenarios that allow for the identification of impacts both with and without the closure of Broadway between Pacific Highway and Harbor Drive. The potential closure of Broadway is discussed in both the DEIS (Section 4.5) and the supporting Transportation Study. Through these documents, the DEIS provides a comprehensive discussion of the impacts both with and without the street closure.

The development of open space at the foot of Broadway, as identified in Alternatives A and F, could result in a closure of Broadway between Pacific Highway and Harbor Drive, if adjoining lands are made available for open space. Alternative A provides an internal route through the open space that would connect the intersection of Broadway/Pacific Highway to Harbor Drive via a new connection to Harbor Drive

north of Broadway (i.e., B Street or C Street) and E Street, and would require a partial vacation of Broadway. The open space shown in Alternative F is bounded by Pacific Highway, E Street, Harbor Drive, and the new connection to Harbor Drive north of Broadway (i.e., B Street or C Street). The resulting alignments and traffic diversions were shown in Figures 4-18 and 4-19 of the DEIS.

The draft EIS and Transportation Study indicates that either the B Street or C Street alignment could be used to provide a connection between Pacific Highway and Harbor Drive to the north of Broadway. Finally, it should be noted that the project would result in an increased level of access from the core area to Harbor Drive and the adjacent shoreline by providing through links at E, F, and G Streets.

D-4. Please see topical response TR-3.

D-5. The figures shown in the DEIS are illustrative and show a concept that could be developed in conjunction with the proposed project. It is not the intent of the Navy to dictate the land uses outside of the boundaries of the Navy Broadway Complex. Clear project boundaries are shown in each of these figures.

It is further clarified that the proposed project covers the area located within the boundaries shown on several figures in the EIS (see particularly Figure 3-3 on page 3-4). Any proposed open space or other uses outside the boundaries of the Navy Broadway Complex are conceptual and are shown for illustrative purposes. The actual uses outside of these boundaries are subject to proposals and approvals of agencies other than the Navy. Also, please see topical response TR-2.

D-6. The comment refers to a figure that is replicated from the CCDC's Urban Design Plan for the Centre City. This figure is discussed on pages 4-9 and 4-12. The figure does not imply Navy jurisdiction, and is referenced to the City of San Diego (see page 4-11). Figure 4-5a, which is replicated from the Port of San Diego's Master Plan, is included in response to this comment. This figure depicts planned port facilities in the vicinity of the project site. A "park/plaza" is shown along Harbor Drive along the frontage of the project site and extending to Grape Street, approximately 1/2 mile to the north. The Precise Plan within the Master Plan describes this as a landscaped promenade. The project (Alternative A) would allow for development of a 25-foot-wide sidewalk along the project frontage, which is sufficient area to accommodate the port's plans.

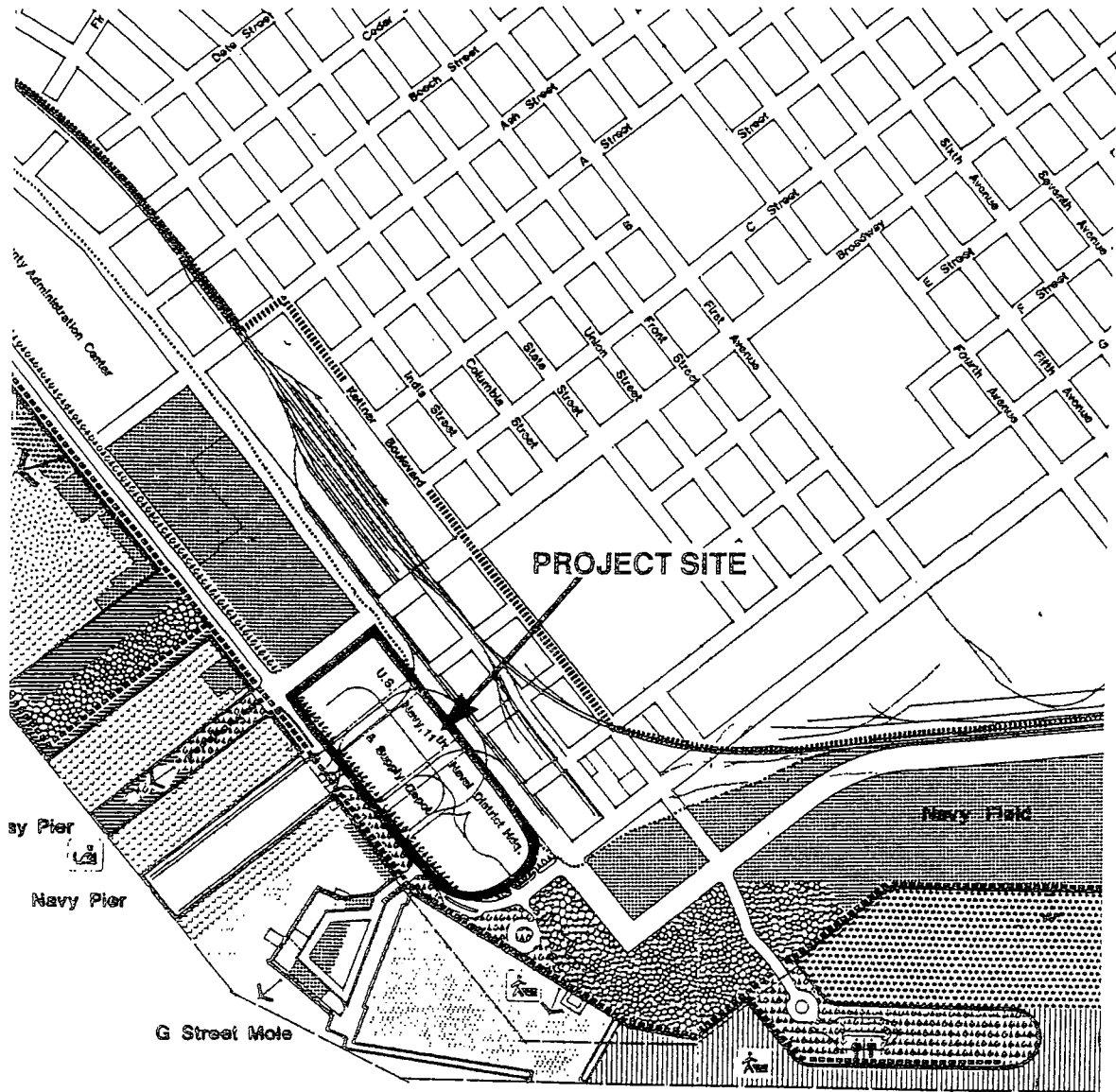
D-7. The commentator's clarification of the California Coastal Commission's review responsibilities within the Port of San Diego jurisdiction is acknowledged. The commentator's description more accurately reflects the commission's role than the Draft EIS discussion on page 4-20, first paragraph.

E. **James T. Cheshire, State of California, Department of Transportation, June 1, 1990**

E-1. The programmed improvements along I-5, SR 163, and I-8 that are cited on page 4-47 of the DEIS are based on a list of projects identified in SANDAG's 1987 "Five-Year Regional Transportation Improvement Program". This plan cited a number of planned improvements on the state highway system that were included in Caltrans' 1987 PSTIP (proposed State Transportation Improvement Program). Based on conversations with Caltrans, these projects were subsequently rejected for consideration in the STIP. As such, the first paragraph on page 4-47 of the DEIS is hereby omitted.

E-2. The DEIS (page 4-54) and the accompanying Transportation Study evaluate the long-term conditions at four interchanges serving the Centre City. The conclusion of the analysis is that "there is adequate capacity to serve anticipated demand under the long-term scenario". The assessment included a review of future operating conditions at the ramp junction of I-5 with Front/Second and Hawthorn that serve the Pacific Highway corridor in the northwest quadrant of the Centre City.

The discussion of ramp conditions is documented on page 4-54 of the DEIS and pages 25 through 31 in the Transportation Study. Peak hour volumes and service levels are shown for the four ramp junctions that were studied in Table 9 (page 30) of the Transportation Study. As the analysis presented in the DEIS concludes that there is no significant impact from the additional traffic generated by either the project or cumulative development at the I-5 ramps adjacent to Pacific Highway, no mitigation measures are required.



Legend

Public Recreation

PARK/PLAZA

PROMENADE

OPEN SPACE

PUBLIC ACCESS

VISTA AREA

HISTORIC FEATURE

OPEN BAY

PUBLIC FISHING PIER

6640001- July 1990



NORTH

Figure 4-5a

San Diego Port District
 Master Plan
Navy Broadway Complex Project



F. Michael J. Stepner, City Of San Diego, City Architect, May 31, 1990

1. This comment is consistent with the discussions in Sections 4.1.4 and 4.1.5 of the DEIS.
- F-2. Above-grade parking is discussed in response to comment F-3. Air quality mitigation measures are discussed in response to comment F-4.
- F-3. The commentator's desire to reduce the amount of above-grade parking is noted. The Navy, in developing the project design, utilized the Central Bayfront Design Principles (referenced to BCCG in the comment). Page 5 of the design principles states that "(T)wo levels of parking must be accommodated below-grade prior to accommodating parking above-grade." Parking is provided below-grade on all four blocks of the project site. Only Block 2 includes above-grade parking, but only after the requisite 2 below-grade levels are provided. Thus, the project is consistent with the objectives of the referenced BCCG plans.

Please see topical response TR-4 with respect to the relationship between the BCCG plans and Central City Planning Committee (CCPC) plans. As discussed in that response, Central Bayfront Design Principles have been included in the Preliminary Centre City Community Plan Interim Development and Design Ordinance, which states:

- "1. All parking spaces shall be enclosed in a structure. All such parking structures shall be architecturally integrated and incapsulated into the development and shall conform to all other requirements of the Preliminary Centre City San Diego Community Plan and Interim Centre City San Diego Development and Design Ordinance.
2. Two levels of parking must be accommodated below grade prior to accommodating parking above grade with the following exceptions:
 - a. For parcels of 10,000 square feet or less, below grade parking is not required. All other parking requirements apply.
 - b. For development infilled on sites or blocks which contain designated historic sites, an exception to below grade parking requirements may be permitted by the City Architect. All other parking requirements apply.
 - c. For development on sites proven to be significantly impacted by the water table, the provision of below grade parking may constitute unnecessary hardship upon the property owner. However, where parking is permitted above grade, special attention shall be given to its architectural treatment and encapsulation. All other parking requirements apply."

The proposed parking is therefore consistent with the standards now proposed for the Centre City.

- F-4. The Navy concurs that simply limiting the number of onsite parking spaces is not a sufficient means by which to mitigate air quality impacts. The Navy will be adopting an extensive transportation demand management (TDM) plan, which will include

utilizing alternative modes of transportation, as part of the project. Please see page 4-60 of the DEIS, as well as topical response TR-3 for more details on the TDM program.

F-5. Please see responses to comments F-3 and F-4.

G. Craig Adams, June 3, 1990

G-1. The DEIS necessarily limits the alternatives discussions to those that focus on the collocation concept funded through a public/private venture. Section 2 of the EIS discusses the purpose and need for the collocation of Navy activities. The objective of the proposed action, to accomplish the acquisition of facilities through a public/private venture at the Navy Broadway Complex, was established by the authorizing legislation. The DEIS necessarily discusses alternatives having the minimum financially feasible commercial development required to achieve the project objective, as well as military construction and no action alternatives. Please also see the topical responses TR-1 and TR-2 for further discussions of the military construction alternative, the project economics, and the continuing military contingency requirements for retention of the entire site.

G-2. Please see topical responses TR-1 and TR-2.

G-3. The Navy's preferred Alternative A has been developed in coordination with the formulation of the Central Bayfront Design Principles, adopted by the Broadway Complex Coordinating Group in September 1989, and the Preliminary Centre City San Diego Community Plan. It is consistent with the types and intensities of uses included in those local planning documents. Please see Topical Response TR-4.

The Navy is required by the Federal Coastal Zone Management Act to conduct its activities "in a manner which is, to the maximum extent practicable, consistent with approved state management programs." The Navy has determined that Alternative A is consistent with California's approved coastal management program, i.e. the California Coastal Act. The evaluation supporting this coastal consistency determination examined applicable coastal resources management policies in detail. It has been submitted to the California Coastal Commission for its review and is available for examination at the Navy Broadway Complex Project office.

Regarding the influence of State land use planning policies on Federal property, such as the Navy Broadway Complex, it should be noted that strict adherence to State coastal land use policies, to the extent that they dictate specific uses of Federal property, is not required for two reasons. First, those policies are limited in their application to the land in the coastal zone (and the Navy Broadway Complex is not with the coastal zone). Second, even if the site was within the coastal zone, the basic land use planning decision underlying the redevelopment of the Navy Broadway Complex has already been made by Congress. The Property Clause of the Constitution provides that "Congress shall have Power to make all needful Rules and Regulations respecting...Property belonging to the United States." (U.S. Const., Art. IV, Section 3, Clause 2). When Congress enacts legislation respecting such property pursuant to the Property Clause, such as P.L. 99-661, the legislation necessarily overrides conflicting State laws under the Supremacy Clause. Consequently, the State coastal management policies directing land use decisions cannot override Federal land use decisions. Please also see Topical Response TR-6 regarding the State tidelands trust.

Notwithstanding this issue regarding Federal land use planning decisions, the Navy's coastal consistency evaluation indicated that the project is a master planned, multi-use development of high priority coastal uses that is consistent with coastal

management program policies. The high priority coastal uses of the project consist of commercial recreation (hotels, specialty retail, restaurants, and museum), public access and recreation features (opening of E, F, and G Streets; pedestrian facilities, gallerias, and open space), and coastal-related Navy uses (office support for the supply function of the Navy Pier and mobilization assets in the office and hotel/restaurant uses adjacent to a transshipment point at the pier). These high priority, coastal uses constitute over 90 percent of the ground-level use area of the project. The non-priority, commercial office use is a financially essential component of the overall master planned project.

The coastal uses along the Central Bayfront that are in State-approved local land use plans emphasize public and commercial recreation opportunity. The proportion of ground-level use area (74 percent) devoted in Alternative A to public and commercial recreation uses, both of which are given priority for a coastal location, exceeds the proportion of land area (54 percent) devoted to these purposes in the land use plan for the surrounding waterfront, the Centre City/Embarcadero Precise Plan of the Port Master Plan, a plan which has been certified by the California Coastal Commission as complying with the California Coastal Act. Consequently, the allocation of uses by the Navy Broadway Complex Project would appear to be consistent with the coastal planning decisions made by local and State agencies for the Central Bayfront. The Navy's Coastal Consistency Determination also addresses this issue in more detail.

- G-4. The issues raised in this comment are similar to the topics in Comment G-3. Please see Response G-3, and Topical Responses TR-4 and TR-5.
- G-5. The DEIS and supporting Transportation Study systematically address the potential impacts on the freeway ramp system to the downtown area. This includes an analysis of the following on-ramps and off-ramps that provide direct access to the western portions of the Centre City.

Off-ramps:

- Interstate 5 at Front/2nd (southbound)
- Interstate 5 at J Street (northbound)
- State Route 94 (westbound)
- State Route 163 (southbound)

On-ramps:

- Interstate 5 at Hawthorn (northbound)
- Interstate 5 at J Street (southbound)
- State Route 94 (eastbound)
- State Route 163 (northbound)

A discussion of the future conditions on these ramps is provided on page 4-54 of the DEIS and pages 25 through 31 in the Transportation Study. Peak hour volumes and service levels are shown for the four ramp junctions that were studied in Table 9 (page 30) of the Transportation Study.

The following analysis of the freeway system serving the Centre City is provided as a basis for identifying potential impacts. This includes a discussion of the following freeway segments based on forecasts from the City's CCTAP model for the various project alternatives. The projected pm peak hour volumes and volume/capacity ratios are provided in the following table, which is hereby added as Table 4.2-7b of the EIS. A review of the volume/capacity ratios at the five freeway locations indicate that there would be no significant impact generated by any of the six project alternatives, in comparison to the no-build scenario (Alternative G).

TABLE 4.2-7b of the EIS

FREEWAY MAINLINE VOLUME/CAPACITY (V/C) ANALYSIS
PM Peak Hour - Peak Direction

<u>Location</u>	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. D</u>	<u>Alt. E</u>	<u>Alt. F</u>	<u>Alt. G</u>
SR 94 east of I-5							
Volumes	9,330	9,060	9,340	9,160	9,340	9,330	9,040
V/C ^a	1.30	1.26	1.30	1.27	1.30	1.30	1.26
SR 163 north of I-5							
Volumes	4,460	4,500	4,400	4,430	4,400	4,460	4,370
V/C ^a	1.24	1.25	1.22	1.23	1.22	1.24	1.21
5 near Laurel							
Volumes	7,970	7,840	7,790	7,570	7,790	7,970	7,470
V/C ^a	.89	.87	.87	.84	.87	.89	.83
I-5 near Imperial							
Volumes	6,300	6,350	6,290	6,160	6,290	6,300	6,060
V/C ^a	.70	.71	.70	.68	.70	.70	.67
I-5 northbound on-ramps							
Elm/First	34,000	32,600	32,200	31,300	32,300	34,000	34,900
V/C ^a	1.70	1.63	1.61	1.57	1.62	1.70	1.75

^a Volume to capacity (V/C) where 1.00 is full capacity.

The freeway segments along SR 94 and SR 163 would exceed capacity in the peak direction during the peak hour under the cumulative build-out scenario, as discussed in the 1985 Centre City Transportation Action Program (CCTAP) report. The CCTAP report notes that these volumes "may be interpreted such that heavy traffic will prevail for well in excess of one hour, and that the peak period will likely "spread" on these facilities." This extension of the peak hour on freeway facilities is typical of urbanized downtown areas. The project's increase would not be significant (as evidenced by comparisons between Alternative G (no-build) and the other alternatives).

- G-6. Please see response to comment G-1. Note that it is implicit that the project was "weighed" along with other projects, and was determined to be of sufficient priority to warrant specific Congressional legislation authorizing pursuit of the project. With over 400,000 SF of existing office space onsite and a continuing military contingency requirement, Alternative G accurately reflects the use of the property if collocation is not achieved through a public/private venture. A new EIS would be required to evaluate the relocation of some or all of these activities and alternative land uses if the proposed project is not undertaken and a future military construction project is pursued in lieu thereof.
- G-7. Please see topical response TR-1.
- G-8. This comment inaccurately portrays the site as "surplus" to the Navy's needs. Retention of the Navy Broadway Complex reflects a national defense requirement to maintain a mobilization capability directly adjacent to the Navy Pier, which has a direct rail connection to the waterfront. During periods of national emergency, the mobilization and demobilization of heavy equipment and weapons platforms with accompanying personnel becomes a critical factor. Please see topical response TR-1.
- The need of the project is well established, as discussed in response to comment G-1. The only current means by which it could be developed is through the proposed public/private venture contemplated in the EIS. Please see topical response TR-2 concerning project economics and financing. Alternative D provides the onsite development level necessary to support moving nearly the entirety of the Navy office uses off the Navy Broadway Complex. Alternative C provides a lower density alternative that can still meet financial requirements for development of the site. Substantial economic and financial analysis performed for this project (see topical response TR-2) has shown that the tradeoff in providing additional open space in a lower density development would render the proposed Navy offices financially infeasible.
- G-9. The issues raised in this comment are similar to the topics introduced in Comment G-3. Please see Response G-3 and Topical Response TR-4.
- G-10. The Navy's preferred Alternative A includes approximately 5 acres of ground-level uses devoted to public open space, including the 1.9-acre open space on Block 1, pedestrian facilities, and galleries. This area is 32 percent of the total ground-level use area of the project site. By comparison, the surrounding waterfront is planned to provide 17 percent of land area devoted to these types of public recreation uses (40.4 acres of the total 231.8 acres in the Centre City/Embarcadero Precise Plan of the Port Master Plan). It is apparent from this information that the proposed project would not only provide sufficient public space for its own employees and visitors, but also would enhance the availability of such space for the broader Central Bayfront. Please see Response G-3 and Topical Response TR-4.
- G-11. The issues raised in this comment are similar to the topics introduced in Comment G-3. Please see Response G-3 and Topical Response TR-4.
- G-12. Please see Response G-21 and Topical Response TR-4.

- G-13. The issues raised in this comment are similar to the topics introduced in Comment G-3. Please see Response G-3, and Topical Responses TR-4 and TR-5.
- G-14. Please see response to comment G-4.
- G-15. From a transportation planning standpoint, the fact that a site is located within a given area designated as the central core of the downtown does not guarantee that it is the most appropriate location for a high density project. Proximity to major transit lines such as the Bayfront LRT line, San Diego Transit Corporation (SDTC) bus lines, AMTRAK, and commuter rail lines are more meaningful criteria in determining whether a specific project is compatible with the overall development goals of the Centre City. The Navy Broadway Complex is located within one block of the Bayfront LRT line and the AMTRAK terminal at the Santa Fe station. In addition, a total of ten SDTC bus lines provide access to within two blocks of the project site. As such, the size of the project appears to be compatible with the concept of developing large scale projects near the major transit corridors within the downtown area.
- G-16. This comment is noted. Page 1-3 of the DEIS states only that the City and the Navy will enter into a development agreement for the future development of the project site. The actual development is not specified in the referenced memorandum, and the DEIS makes no presumption that a specific development plan has been already approved. Nowhere does the DEIS indicate prior approval by the City of San Diego of a specific development.
- G-17. Please see topical response TR-2 regarding the disclosure of the financial analysis utilized to define the type and level of development. In addition, note that a residential development alternatives was also undesirable in view of the contingency requirement for the property. Unlike commercial office and hotel uses, residential uses are not readily convertible to high priority military uses in the event of mobilization. Please see response to comment G-8.
- G-18. The floor area ratios (FAR) described in the EIS are based upon land area held by the Navy in fee. This is a standard methodology for calculating FARs. If the FAR for the preferred alternative were calculated without the G Street right-of-way (approximately 0.9 acre) as the commentator suggests, the FAR of the preferred alternative would be approximately 5.8, rather than the 5.45 described in the document. It should be noted, however, that under either calculation, the amount of density indicated in the preferred alternative (3.25 million square feet) is less than the overall density of 3.4 million square feet that would be allowed for the property under the density provisions set forth in the BCCG Central Bayfront Design Principles plan and the Preliminary Centre City San Diego Community Plan.
- G-19. Please see topical response TR-1.
- G-20. Please see Responses G-3, M-5, M-8, and Topical Responses TR-4 and TR-5.
- G-21. The commentator's interpretation of the "step-down" concept recommended in the Centre City Community Plan differs from the interpretation in the EIS. The preliminary community plan and Central Bayfront Design Principles indicate that the concept of "stepped intensity and scale" will be implemented through floor area ratios

(FAR) and building heights will be controlled through Federal Aviation Administration (FAA) regulations. The FARs designated for the site in the draft plan are 7.0 for Block 1, 6.5 for Block 2, and 5.5 for Blocks 3 and 4 (as shown in Figure 14 of the plan). The lowest operational imaginary surface relevant to FAA regulations is 500 feet mean sea level (msl) for a circling area for missed approaches from Lindbergh Field. Non-operational imaginary surfaces cross at lower heights (see pages 4-217 and 219 in the Draft EIS).

With the exception of Alternative F with its 500-foot tower on Block 2, the project alternatives are consistent with the overall FAR designations of the preliminary community plan, which reflects the stepping down of building heights to the south from the block adjacent to the Broadway spine. Building heights are also designed to step down from the landward (east) to the bayward (west) side of the project site. Again with the exception of 500-foot tower in Alternative F (which would reach 510 feet msl, or 10 feet above the 500-foot surface), none of the buildings in the project alternatives encroach into the operational imaginary surfaces for aviation safety, which is consistent with the building height control guidelines of the plan. While encroachment into non-operational surfaces occurs with Alternatives A, B, C, and D, the FAA has issued a Determination of No Hazard for Alternative A, with a 400-foot tower on Block 1 indicating that compliance with FAA regulations can be achieved. Consequently, the project alternatives, except Alternative F, appear to be consistent with the step-down concept and building height controls envisioned in the preliminary Centre City San Diego Community Plan.

- G-22. The commentator's request to note the updated Centre City Community Plan is acknowledged. The now current version of the plan (as of August 1990), is the July 1990 preliminary Centre City San Diego Community Plan. The plan supports the Navy Broadway Complex Project as being compatible. The City Council recently adopted the plan and ordinance (first reading).
- G-23. Please see response to comment G-5.
- G-24. Please see topical response TR-3.
- G-25. The views included for analysis within the DEIS (Section 4.3) depict key public views and vistas that would be affected by the project. Views from the G Street Mole back to the downtown would not be negatively affected by the proposed project. Rather, views directly east to the downtown would be enhanced by removing existing onsite Building 9 and the opening up of G Street and the creation of a 120-foot-wide landscaped open space and street. Currently, downtown views from the Mole to the northeast are significantly obstructed by Buildings 1 and 12 within the Navy property. Development of the property per Alternative A would not significantly change these views because of the foreground dominance of Building 12 which is proposed for possible retention. The view to the northeast would be marginally improved by the removal of Building 1 for the creation of a major open space.

Views north and south along the waterfront Embarcadero would not be negatively affected by the proposed project. Again, Building 1 and 12 and the existing warehouse structures to the south currently create a strong eastern edge to the Embarcadero corridor. The view from the south from the vicinity of Seaport Village to the north

would continue to be framed on the east by Building 12 and new development of a similar height proposed to the south. The removal of Building 1 would introduce additional open space along the corridor and would alter this southern view marginally. Views from the north from the vicinity of the B Street Pier to the south along the Embarcadero would be opened up considerably by the removal of Building 1 and the introduction of open space, but the retention of Building 12 and the introduction of new development to the south would maintain the strong edge condition that currently exists along this view corridor.

- G-26. It is noted that, as with many cities, the costs of providing police and fire protection comprise the two largest expenditures in the General Fund Budget for the City of San Diego. The police department's methodology for allocating and projecting current and future expenditures has historically relied upon both: (1) calls for service, and (2) estimated costs per capita. Recently, however, the department has been estimating its cost requirements based primarily upon per capita multipliers, utilizing population projections provided by the San Diego Association of Governments (SANDAG). Moreover, both the police and fire department staffs have indicated that the existing facilities, manpower, and equipment are anticipated to be adequate to provide the project site and surrounding area with a sufficient level of protection services, if any of the alternatives are developed. Nevertheless, an analysis of this nature must necessarily account for the incremental costs of providing service to the subject site under the respective development alternatives. For purposes of this study, both departments indicated that a per capita approach (based upon current daytime population figures) provides a conservative, yet reasonable, estimate of cost requirements appropriate for this level of analysis.

Other categories of ongoing City operating revenues and expenditures were allocated to those land uses which generate them, based on a calculation of average per acre multipliers. General government costs (public services and city support services) were averaged across all land uses, assuming each contributes its "share" to these costs.

While this provides a relatively simplistic approach to estimating the public service costs, the unique set of public service needs of the proposed project were considered and discussed with city staff and incorporated in the analysis where appropriate. Moreover, based on our review of the reliability, accuracy, data availability, and resources required to conduct various methods of fiscal impact assessment, it was determined that the methodology used in this study provides a sufficient level of statistical accuracy upon which to base current public policy decisions.

- G-27. There was an error in the presentation of the "business taxes" on Tables 13 through 20 of the technical fiscal report. While the balance of the figures on these tables was stated in thousands of dollars, the projections of business tax revenues were in actual dollars, which subsequently resulted in an overstatement of the net annual and cumulative fiscal benefits to the City. A revised and corrected technical report has been placed on file at the Naval Facilities Engineering Command Detachment, Broadway Complex, 555 West Beech Street, Suite 101, San Diego, CA 92101-2937.

It should be noted that the basic findings of the analysis remain unchanged, in that Alternatives A, B, C, D, and F are still projected to generate net annual operating surpluses to the City by the year 1994 and would generate significant cumulative surpluses by the end of the 30-year projection period. In addition to the technical report, Table 4.5-8 on page 4-142 of the EIS is revised as shown on the following page.

Also, the first paragraph on the page 4-143 of the EIS is revised to read as follows:

- By the year 30 of the proposed project (2021), Alternatives A, B, C, D, and F would generate cumulative surpluses to the City of San Diego of \$268.0 million, \$325.2 million, \$302.7 million, \$425.2 million, and \$325.3 million, respectively. Conversely, Alternatives E and G would yield cumulative deficits of \$72.4 million and \$25.6 million, respectively.

TABLE 4.5-8 of the EIS

PROJECTED NET AND CUMULATIVE FISCAL IMPACTS OF PROJECT
(in Thousands of Dollars)

Development Alternative	Net Annual Fiscal Impact in 2005 ^a	Cumulative Fiscal Impact in 2005 ^a	Net Annual Fiscal Impact in Year 20	Cumulative 30-Year Fiscal Impact
A	\$9,365	\$46,072	\$18,867	\$268,042
B	11,722	66,619	21,062	325,239
C	10,697	56,297	20,659	302,650
D	15,041	96,253	26,627	425,235
E	-2,138	-19,325	-4,667	-72,435
F	11,314	72,539	20,771	325,355
G	-697	-8,248	-1,521	-25,554

a At full development stabilized occupancy.

Source: Williams-Kuebelbeck & Associates, Inc., 1990.

H. **Dwight E. Sanders, State of California, State Lands Commission, June 4, 1990**

- H-1. The commentator's preference that the EIS and EIR be one document instead of two is noted. The two documents were physically circulated together (in the same envelope) so that they could be reviewed together. The DEIR incorporates the DEIS by reference (see DEIR Preface). The DEIR presents a summary of the conclusions of the DEIS. This complies with the intent of Section 15150 of the State CEQA Guidelines. In addition, Section 15221 of the State CEQA Guidelines clearly allows an EIS to be used in place of an EIR, so long as it complies with the provisions of the CEQA guidelines. The EIS does this. Thus, even if the EIS was not incorporated by reference into an EIR, CEQA clearly allows the EIS to be used in place of an EIR. That both an EIS and an EIR incorporating the EIS are provided together simply means that the basic requirements of CEQA were met and exceeded.

Additional summarization or other characterization of the EIS, given that it constitutes the EIR, would be inappropriate and would be inconsistent with the general policy to reduce the size of EIRs.

- H-2. Please see response to comment H-1.

- H-3. Please see response to comment G-8 and topical response TR-5.

- H-4. Please see topical response TR-2 and EIS Table 4.5-8 (revised by response to comment G-27) which indicates cumulative fiscal surpluses to the City of San Diego ranging from \$258 to \$125 million for the various public/private venture alternatives. Note that, irrespective of who pays for infrastructure improvements, the cost of improvements and the party that pays for them is not an environmental issue. This is described in Section 15131 of the State CEQA Guidelines, which states in part that the "(E)conomic and social effects of a project shall not be treated as significant effects on the environment." The only environmental issue in this respect is whether mitigation measures are implemented. If infrastructural improvements cannot be financed, the findings of the EIS with respect to the level of significance for certain impacts would be changed and the EIS would be recirculated for public review. It is noted that the cost figures referenced in this comment differ from the current dollar cost figures discussed in topical response TR-2, possibly reflecting an escalation in this comment to future years/dollars with additional contingency.

- H-5. Please see response to comment H-4.

- H-6. The "draft" urban design guidelines for the project are drafts because they have not been adopted by the City of San Diego and would not be adopted prior to project approval. However, the guidelines were created to conform with the objectives of the Central Bayfront Design Principles (see topical response TR-4) and staff of the City has agreed to the draft guidelines.

The guidelines are not expected to be substantially changed during project approval, if the project is approved. However, as with any other component of this or any other project under NEPA and CEQA, if changes are made by decision makers that would create significant impacts not previously addressed in the EIS, then the EIS would need to be revised to address these impacts.

- H-7. The Federal environmental process requires consultation with the State Historic Preservation Officer during the development of cultural resources mitigation measures. Specifically, the consultation process determines the actions necessary to mitigate the adverse impact on the cultural resources that are eligible for the National Register of Historic Places. Consultation conducted to satisfy the specific requirements of Section 106 leads to mandatory mitigation of the significant cultural resources impacts described in the EIS. As described in response to comment A-2, this process has been completed and a Memorandum of Agreement between the Navy and SHPO stipulating mitigation has been signed.
- H-8. Establishing standards for construction of buildings in earthquake-prone regions is appropriate and necessary for hazard mitigation, yet building codes generally provide minimum standards and do not necessarily ensure building integrity from damaging earthquakes or other geologic hazards. However, buildings designed according to modern building codes generally have fared well during strong earthquakes (Housner and Jennings 1982). Furthermore, The City of San Diego Municipal Code requires evaluation of geologic hazards and liquefaction potential. Although the code is not applicable to the rehabilitation and expansion of Building 12, the Navy will require the developer to perform such an evaluation for all development at the Navy Broadway Complex. Measures to mitigate geologic/seismic hazards are discussed in Section 4 of this appendix. More specifically, all new or rehabilitated buildings constructed on the site will be designed in accordance with Uniform Building Code Seismic Zone 4 criteria, which are in excess of current City of San Diego building code requirements.
- H-9. Please see response to comments H-6, H-7, and H-8 regarding the effectiveness of specific mitigation measures identified as inadequate by the commentator. The commentator does not provide any other mitigation measures that may be ineffective, so no other response is warranted.
- H-10. Section 5 describes specific cumulative impacts to which the project contributes. Page 5-1 refers to Table 4.1-2 (page 4-7) and Figure 4-3 (page 4-8) for a description of the projects considered cumulatively with the proposed project including the Seaport Village expansion and the Hyatt Hotel. The commentator is referred to pages 5-1 through 5-4 of the DEIS for a complete discussion of cumulative impacts.
- H-11. The commentator misinterprets Section 15126(d) of the State CEQA Guidelines. In particular, Section 15126(d)(2) states, in full:

The specific alternative of "no project" shall also be evaluated along with the impact. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

The guidelines do not indicate that the proposed alternative cannot be the environmentally superior alternative among the other alternatives. In fact, it is the intent of CEQA to provide for the least environmentally-damaging development, if development is to occur. CEQA encourages that projects are designed to minimize environmental harm. The DEIS examines seven alternatives, including the proposed project and the no project alternative. Of the seven alternatives, Alternatives A (the

proposed project), B, and D, are environmentally superior development alternatives. Alternative G, the no project, is the environmentally superior alternative, but it meets none of the basic project objectives. Alternative A includes a substantially larger open space area at the foot of Broadway than Alternatives B and D. This is an environmentally superior component of this alternative because it more closely (than Alternatives B and D) meets the goals of recently adopted plans intended to guide development in the area. There are three environmentally superior alternatives. Alternative A is superior among the three.

It is noted that there are no alternatives capable of meeting the basic objectives of the project while avoiding the significant impact to cumulative air quality associated with Alternative A (and the other five development alternatives). This is the only unmitigated significant impact of Alternative A, so an environmentally superior alternative (to Alternative A) capable of meeting project objectives is not possible.

H-12. The commentator's opinion that the DEIS does not analyze all alternatives to the same level of detail is noted. The commentator does not substantiate this comment, so no response can be provided. The DEIS evaluates each of the seven alternatives, fully identifies the impacts of each, and provides mitigation measures pertinent to each.

H-13. The intent of the notice of intent (NOI) and the notice of preparation (NOP) is for responsible agencies and interested individuals to identify at an early time in the process potentially significant environmental impacts, mitigation measures, and alternatives that should be addressed in the EIS and EIR. Direct responses to NOI/NOP comments Pages 1-15 through 1-18 of the DEIS summarize the NOI/NOP comments by topical area in which they are addressed in the EIS. Please refer to this discussion. A copy of all NOI/NOP comments has been provided to the commentator.

H-14. Measures to mitigate significant environmental impacts are discussed along with the mitigation measure in the summary table. Each significant impact for which there are mitigation measures is identified as "(S/M)" in the table, (see pages 1-20 through 1-48 of the DEIS).

With regard to placing "significance criteria used to rank the impacts" in the summary section, the specific analysis is presented in the non-summary sections of the DEIS, particularly Section 4. The summary section is not intended to repeat the analysis of environmental impacts, but instead is intended to summarize the environmental impacts of the project. Thus, the "significance criteria" and other details pertinent to determining the project's environmental impacts are not repeated in the summary.

H-15. Please see topical response TR-3.

H-16. No residential uses are proposed with this project; therefore, residential parking demand rates are not relevant to this project.

H-17. Please see response to comment H-6. Also, regarding the statement that the conclusions regarding design guideline compliance are not supported, the commentator is referred, particularly, to figures 4-23, 4-26, 4-29, 4-32, 4-35, 4-38, 4-41, 4-44, 4-47, and 4-50 in the DEIS. These ten figures depict simulated views of Alternative A from ten viewpoints. Alternative A is consistent with the draft design guidelines. The

conclusion that compliance with the guidelines would mitigate aesthetic impacts is based on the evidence shown in these figures and discussed on pages 4-108 through 4-111 of the DEIS. Aside from actually constructing the project and then evaluating its aesthetic impacts, the DEIS relies on the best possible evidence available to draw its conclusions.

H-18. The City of San Diego Police Department was consulted to determine if the proposed alternatives would in any way adversely affect police service, including every day situations and emergency circumstances. The department indicated that the project would not have an adverse effect. Page 5-2 of the DEIS indicates that this public agency would not be adversely affected by cumulative development. The opinion of the affected agency would appear to be the best possible evidence one could draw on for this conclusion. It is noted that the proposed project would provide long-term fiscal surpluses to the City of San Diego. This conclusion considers police department costs. (Please see response to comments G-26 and G-27.) Thus, even if it was found that the project did significantly affect police resources (although no adverse effect was found), sufficient revenues would be available associated with the project to offset those costs.

H-19. Page 6-1 of the DEIS refers to Section 4.5 of the DEIS for a discussion of growth associated with the project (including regional immigration). Please refer to that discussion.

H-20. The availability of water is a concern of statewide significance, especially in light of the ongoing drought that has affected several areas of the state, some more substantially (e.g., Santa Barbara) than others. The water situation in San Diego, as a result of the drought, is not nearly as severe as other areas of the state, and sufficient regular and emergency supplies are available. Nevertheless, San Diego has requested voluntary water use reductions and has seen an approximate 10 percent reduction in use compared with last year. Water conservation measures are not yet mandatory, but may become so if the drought persists for another year. According to the City of San Diego Water Utilities Department, the proposed project, if completed today, is not of sufficient magnitude to cause an acceleration of the need to impose any water conservation measures in the city. Further, the City has no plans now, or in the foreseeable future, to restrict water hookups in the project area (Wageman, pers. comm. 1990). The proposed project is within the densities planned on the project site and is consistent with regional growth projections used to plan for long-term water usage. Also, please see comment C-10.

The first phase of the proposed development is currently planned to be completed in 1994. If drought conditions persisted up to that time, water availability in San Diego and throughout the state could be severely restricted. The likelihood that the drought would persist even another year or two, or that current water shortages would persist, is statistically remote. If drought conditions do persist, the results in large areas of California could be severe. Development in areas of California still affected by drought would likely be reexamined. However, consideration and analysis of such a remote possibility, with implications much more far-reaching than the proposed project, is highly speculative and is beyond the purview of an EIS examining the potential impacts of a mixed-use urban development.

- H-21. The commentator disagrees on the significance of the project with the opinions of the City of San Diego Water Utilities Department, the Regional Water Quality Control Board, and the Environmental Protection Agency, whose opinions are based on estimates of project wastewater generation. The commentator provides no evidence to substantiate this disagreement. Nevertheless, this difference of opinion is noted.
- H-22. Page 4-126 of the DEIS indicates that the project would significantly affect sewer conveyance facilities. Without mitigation, local sewer lines would have insufficient capacity. This could result in health implications as well as cause poor sewage conveyance. Correcting this problem by installing greater conveyance capacity would avoid this potentially significant impact. Thus, it is a mitigation measure. Please see response to comment H-21 regarding wastewater treatment impacts.
- H-23. Landfill capacity constraints are regional problems that have surfaced throughout the state, and they require regional solutions that are beyond the control of any individual project. San Diego County is currently in the process of pursuing new landfill areas to accommodate regional needs. The project would not significantly reduce the life of any landfill and would therefore not have a significant environmental impact. Nevertheless, in recognition of the statewide solid waste problems, the following mitigation measure is added to page 4-128 of the EIS:
- Receptacles will be provided within each office building to allow for the separation of all recyclable paper material. The lease for each office building will require that white paper and computer paper recycling receptacles are provided, and that the lessee will participate to the maximum extent applicable in any local ordinance-implemented recycling program for other recyclable materials.
- H-24. Please see response to comment H-4. Also, it is noted that the Port, if it decides to contribute funding, would do so to the extent such expenditures are consistent with its legal and financial activities.
- H-25. The geotechnical investigation performed by Woodward-Clyde Consultants (1988) indicates the area soils are able to support properly designed foundations. The previous geotechnical investigation also indicates that below ground construction for underground parking is feasible. Construction of two-levels of underground parking will require: construction dewatering, pile foundations, and a structural floor system to support building loads. Because permanent dewatering systems with discharges to San Diego Bay are no longer allowed (please see the 1990 Woodward-Clyde report in Section 4 of this appendix, particularly 4.2 and 4.3), the floor and walls below the water table will have to be designed to resist water pressures and will have to be waterproofed. Authorization for construction dewatering will require application to the Regional Water Quality Control Board. The project dewatering will be required to comply with specific discharge limitations.
- H-26. The bay deposits and hydraulic fill underlying the site are considered potentially liquefiable, and the previous geotechnical investigation by Woodward-Clyde Consultants indicates that potential effects from liquefaction should be considered for project design. The City of San Diego Building Code requires that an evaluation be made for areas identified on the Seismic Safety Element of the General Plan as being susceptible to liquefaction. There is a range of possible measures to reduce potential

liquefaction-related damage to existing and new facilities. Some of those measures are listed in Sections 3.3 and 3.3.1 of the 1990 Woodward-Clyde report, in Section 4 of this appendix.

H-27. Page 4-176 of the DEIS provides City of San Diego noise/land use compatibility criteria. As shown, hotels are considered compatible in areas up to 65dB CNEL and offices are considered compatible in areas up to 70 dB CNEL. As discussed on pages 4-181 through 4-186, the 65 dB CNEL would extend onto the site, which would have an adverse effect on hotels. Thus, mitigation is necessary to provide for sufficient interior noise level reductions.

The 70 dB CNEL would only encroach on the edges of the site along Broadway, Harbor Drive, and Pacific Highway where offices are proposed. Normal sound attenuation provided by building materials (with windows open) is 12 to 15 dBA. Through the use of standard building materials, no additional attenuation would be necessary to reduce noise levels to office buildings to a less than significant level.

H-28. As indicated on page 5-4 of the DEIS, a new substation would be required to serve cumulative development in the project area.

H-29. The comments presented above (comments H-1 through H-28) do not change any of the findings of the EIS with respect to growth-inducing impacts or unavoidable impacts. Therefore, no revisions to the respective discussions of these issues is made.

H-30. This comment is noted. Please see response to comments H-1 through H-29.

I. Harry E. Wilson, June 1, 1990

- I-1. The commentator's preference for Alternative A is noted. The comment is not specific to the environmental impacts of the project, so no other response is warranted.
- I-2. While adding the rail lines to these subject figures may help orient the plan, the lines are shown in a sufficient number of figures (e.g., figures 3-5, 3-9, 3-10, 3-11, etc.) to be able to cross reference. No environmental information presented in the EIS would be changed by adding the rail lines to these figures.
- I-3. Please see topical response TR-3. Note that the number of parking spaces proposed onsite is restricted below normal demand rates to encourage the use of mass transit, car pools, etc.
- I-4. The response time provided is based on estimates provided by the individual fire stations.
- I-5. Please see response to comment H-23. It is not known how much recycling the Navy would be able to achieve through this program.
- I-6. The correct number of service occupation employees in San Diego County is 211,100. Table 4.5-1 on page 4-131 of the EIS is hereby revised to reflect this number.
- I-7. It is not known how many personnel would immigrate to the San Diego area as a result of the proposed project. Because the number of non-military employment opportunities created by the proposed project would be small in comparison to the region (less than 1.5 percent of the city and less than 1 percent of the county) and in comparison with regional growth estimates, the associated immigration would be easily absorbed and was therefore not calculated.
- I-8. A properly designed temporary dewatering system will allow excavation of soil below the water table for below grade construction. The dewatered soils (which are composed primarily of sands) should not be in a very wet condition and should not require special trucks. Soils could be exported from the site to other grading projects. Any soils considered contaminated with petroleum products or other potential contaminants would require special treatment.
- I-9. This comment is noted. The conclusions of the DEIS with respect to runoff would not be altered by this comment.
- I-10. Dewatered groundwater during construction will require authorization from the Regional Water Quality Control Board (please see Section 4 of this appendix, particularly 4.2 and 4.3 thereof), and if application conditions are met, it may be possible to discharge to storm drains.
- I-11. Pages 4-162 through 4-165 of the DEIS considers air quality effects during construction, and page 4-181 of the DEIS considers noise effects during construction. Please refer to these discussions.

J. Norman W. Hickey, County of San Diego Chief Administrative Office, June 1, 1990

- J-1. The proposed project would provide sufficient onsite parking to satisfy the needs of the project, and there would be no need for related offsite parking. Please see topical response TR-4 for a detailed discussion of parking.
- J-2. The Navy would only utilize one space for 1,000 square feet of Navy office for active employee parking. The additional 0.23 spaces per 1,000 square feet that would be provided are for the parking of Navy official vehicles.
- J-3. This comment is noted. No other response is necessary.

K. Frederick M. Marks, Citizens Coordinate for Century 3, June 4, 1990

- K-1. This comment lacks sufficient specificity to allow formulation of a specific response. Please see topical responses TR-1 and TR-2.
- K-2. Please see topical responses TR-1 and TR-2.
- K-3. Please see topical responses TR-1 and TR-2.
- K-4. Please see topical response TR-2 regarding project financing. Please see response to comment G-17 for additional discussion concerning residential uses.
- K-5. Please see response to comments H-4 and H-24. Also, please see page 3-6 of the DEIS. As described therein, the provision of open space outside the boundaries of the project site is not a part of the proposed project.
- K-6. Please see topical response TR-1. Irrespective of the cost of the proposed project in comparison to the U.S. Military Construction budget, the proposed project is not currently included in Military Construction budgets, so it would not proceed without the proposed public/private venture financing alternative.
- K-7. The comment that the DEIS is not sufficiently objective is noted. Without greater specificity, however, no further response is possible.

L. **Robert P. Martinez, State of California, Office of Planning and Research, June 4, 1990**

L-1. This comment is not specific to the contents of the DEIS, so no response is necessary.

M. Gordon F. Snow, Ph.D., State of California Resources Agency, June 4, 1990

M-1. It is noted that the Resources Agency coordinated review with the referenced agencies. The Department of Transportation commented in comment letter E. The State Lands Commission commented in comment letter H. The California Coastal Commission commented in comment letter M. The California Air Resources Board, Department of Fish and Game, the Department of Parks and Recreation, and the San Diego Regional Water Quality Control Board did not comment on the DEIS or DEIR.

- N. **Dennis J. O'Bryant, State of California, Department of Conservation, May 24, 1990**
- N-1. As described in response to comment C-12, a supplemental study of the potential geotechnical hazards at the project site was conducted by Woodward-Clyde Consultants, and is included herein as Section 4 of this appendix. Please refer to that section. A copy of the geotechnical report prepared by Woodward-Clyde Consultants (1988) for Hirsch and Company has been provided to the commentator.
- N-2. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.2 and 3.2.1 thereof.
- N-3. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.3 and 3.3.1 thereof.
- N-4. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.4 and 3.4.1 thereof.

O. Peter M. Douglas, California Coastal Commission, June 8, 1990

- O-1. The commentator indicates that Commission staff is generally pleased with the concept of development of the site for Navy uses provided that provisions for public use of the area are made. The Commission staff supports Alternatives A and F which include "large open space areas". These comments are noted and no response is needed.
- O-2. Please see topical response TR-5.
- O-3. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. Although the Navy disagrees that the Navy Broadway Complex is "oceanfront land," discussion about the consistency of the project with Section 30221 has been elaborated in the CCD (Section 4.1.2). The discussion indicates that present and future recreational needs are fulfilled in the Central Bayfront area around the Navy Broadway Complex and that the project contributes important additional public and commercial recreation opportunity which is specifically designed to complement its Central Bayfront setting. As a result, the Navy has determined that the project is consistent with this coastal policy. Please refer to Response O-4.
- O-4. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. Although the comment is not directed to the EIS, a response is provided to explain how present and future recreation demand is accommodated in the Central Bayfront vicinity of the project and how the project contributes to coastal recreation opportunity.

Accommodation of Present and Future Demand For Recreation

The Central Bayfront area of Centre City San Diego contains a very substantial concentration of existing and planned public and commercial recreational opportunities. These opportunities are extremely varied and emphasize the role of the bayfront as a primary visitor destination and recreation area for both visitors and city residents. Existing recreational opportunities within the vicinity of the Navy Broadway Complex (from north to south within approximately 0.5 mile) include the following:

<u>Recreation Opportunity</u>	<u>Type of Use</u>
Embarcadero (North of Broadway)	Pedestrian Promenade
County Administrative Center West Lawn	Public Open Space
Maritime Museum	Public Museum
Holiday Inn/Restaurants	Commercial Recreation
B Street Pier	Recreational Cruises, Pedestrian Areas
Broadway Pier	Plaza, Viewing Areas
Harbor Excursion Boats	Bay Cruising and Dining
Harbor Promenade (South of Navy Pier)	Landscaped Promenade
G Street Mole	Park, Viewing Area, Restaurant

Seaport Village	Commercial Recreation, Specialty Shopping, Street Entertainment, Promenade, Viewing Areas
Embassy Suites	Commercial Recreation
Marina Linear Park	Park, Trail, Fishing Pier
Embarcadero Marina Park	Park, Picnic Area
Embarcadero Marina	Commercial Recreational Marina
Marriott Hotel	Commercial Recreation
Convention Center	Major Visitor Destination

Local coastal planning has fulfilled the demand for commercial and public recreational activity in the allocation of substantial land resources to restaurants, hotels, shopping, attractions, promenades, plaza areas, and open space. Table 1 (page 3-40) describes the allocation of land use in the Centre City Embarcadero Precise Plan of the Port Master Plan. The majority (54 percent) of the land area is devoted to either commercial or public recreation area. (Additionally, a number of developments adjacent to the coastal zone also provide commercial recreation opportunities that support visitation to the Central Bayfront.) Excluding streets, which account for 21 percent of the land, non-recreation land uses constitute 25 percent of the plan area.

The Port Master Plan is an approved local coastal plan, so its allocation of land to recreation opportunity has been approved by the California Coastal Commission, recognizing the presence of the Navy Broadway Complex as non-recreational, Federal land proximate to the waterfront. In consideration of the variety of recreation opportunities, the amount of land area devoted to recreation in the Centre City Embarcadero Precise Plan around the project site, and the prior Commission approval of the Port Master Plan containing the precise plan, it is evident that present and foreseeable demand for public and commercial recreation have been accommodated in the area of the waterfront near the Navy Broadway Complex.

Project Contribution to Public and Commercial Recreation

The project, as defined by the Navy's preferred Alternative A, contributes important additional public and commercial recreation resources that have been specifically designed to complement its Central Bayfront setting. Commercial recreation opportunity would be provided in the hotels, specialty retail, and attendant uses on the southern blocks (3 and 4) where they can best support visitation to the nearby Seaport Village. Wide pedestrian facilities along E, F, and G Streets provide public recreation opportunity and connection to important waterfront open space areas along the promenade and G Street Mole. The maritime museum would establish a recreation destination in the project that complements the character of the waterfront. The 1.9-acre open space at the foot of Broadway would serve as a prominent recreation use area with excellent association with and vistas to the bay.

TABLE 1
ALLOCATION OF LAND FOR RECREATION OPPORTUNITY

Type of Use	Centre City/ Embarcadero Precise Plan		Navy Broadway Complex Project	
	<u>Acres</u>	<u>%</u>	<u>Acres</u>	<u>%</u>
Commercial Recreation	85.7 ^a	37%	6.56 ^b	42%
Public Recreation	40.4 ^c	17%	4.97 ^d	32%
Total Recreation Area	<u>126.1</u>	<u>54%</u>	<u>11.53</u>	<u>74%</u>
Streets	47.6	21%	1.89	12%
Other Non-Recreation Land Uses	58.1	25%	2.19	14%
Total Non-Recreation Land Area	<u>105.7</u>	<u>46%</u>	<u>4.08</u>	<u>26%</u>
TOTAL LAND AREA	231.8	100%	15.62 ^e	100%

^a Includes Commercial Recreation and Specialty Shopping (page 82, Port Master Plan, San Diego Unified Port District, 1980).

^b Includes hotel, restaurant, retail, and museum uses (with service, parking, and support areas).

^c Includes Park/Plaza, Promenade, and Open Space (page 82, Port Master Plan, San Diego Unified Port District, 1980).

^d Includes pedestrian facilities, gallerias, and open space.

^e This area constitutes the land held in fee and leased by the Navy (15.62 acres). Acreage of uses for the project is based on ground-level use.

The original concept for the project was to develop sufficient square footage of commercial space to support the Navy office space with no financial assistance and to accommodate the demand for open space and recreation opportunity generated by the project. As a result, a concept that included 3,500,000 SF of mixed-use development (including commercial recreation) and 0.5 acre of open space at the foot of Broadway was formulated. Local officials requested that a larger area of the site be devoted to open space, instead of commercial development, to serve the needs of a broader area of the waterfront. The current project was designed to address this request by increasing the size of the open space at the foot of Broadway to 1.9 acres and diminishing the commercial development by 250,000 SF.

The proportion of land area, based on ground-level uses, devoted to recreation by the Navy Broadway Complex Project exceeds that allocated in the Centre City/Embarcadero Precise Plan area of the Port Master Plan, as shown in Table 1. Total recreation area constitutes 74 percent of the project's ground-level uses compared to 54 percent of the Port's precise plan land area. The proportion of commercial recreation land and public recreation land in the Navy Broadway Complex Project both exceed that allocated in the Port's precise plan area. This demonstrates that not only is the project meeting the demand for its own recreation needs, but it also is enhancing the opportunities for public and commercial recreation for the greater Central Bayfront. In addition, the table also demonstrates that the ground-level use area designated for non-recreation, commercial use in the project represents a very small proportion of land along the waterfront (less than one percent), considering the total area of the Centre City/Embarcadero Precise Plan area and Navy Broadway Complex.

Open space and recreation area objectives of the Centre City San Diego Community Plan focus on providing a ceremonial open space as a "grand public place" at the foot of Broadway and a system of small open spaces, such as vest pocket parks, in the downtown area. The specific need for the latter is identified as six new, vest pocket parks in the Centre City (on page 77 of the plan). This identified need is limited and reflects, among other things, that the open space and recreation area in parts of the Centre City, including the waterfront, already accommodates the needs of the area. The design of the project is tailored to contribute to the major objective of the ceremonial open space at the foot of Broadway, so it is consistent with the latest community planning for open space and recreation areas in Centre City.

In conclusion, the project provides substantial public and commercial recreational facilities on the majority of the site (i.e., part of Block 1, pedestrian ways along new streets, and Blocks 3 and 4), and present and foreseeable demand for coastal recreation use is accommodated in the immediate vicinity. With the accommodation of recreation demand by current and future development, the small ground-level use area proposed for non-recreation uses (office) on the Navy Broadway Complex can be provided in a manner that is consistent with coastal policy.

- O-5. The commentator is correct in that the proposed office and hotel uses would increase the employee and visitor population of the area, creating additional demand for use of recreation facilities along the waterfront. The preliminary Centre City Community Plan (page 77) indicates the need for 0.7 to 8.4 acres of additional, open space improvements in six vest pocket parks to satisfy the requirements for the buildout of the Centre City. The Navy Broadway Complex Project alone, in Alternative A, would

provide an open space of 1.9 acres at the foot of Broadway (as well as other pedestrian facilities). The demand for recreation use of the waterfront would involve activities, such as strolling, jogging, bay viewing, and use of open space or plaza areas. As indicated in Response O-4, the project would provide substantial additional recreation opportunity in a greater proportion (based on ground-level uses) than allocated in land area within the Centre City/Embarcadero Precise Plan of the Port Master Plan, the approved coastal land use plan for the surrounding waterfront. The proposed recreational facilities (i.e., pedestrianways, open space on Block 1, waterfront museum, restaurants, and other commercial recreation) would accommodate the waterfront recreation use from the project's employees and visitors, and would contribute recreational resources over and above the project's requirements.

- O-6. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. The issue of priority uses in the coastal zone has been discussed in the CCD (Section 4.1.5) and also presented herein as a response to this comment.

Section 30255 is intended to direct land use planning decisions in the coastal zone to ensure that certain uses are given priority. It is important to emphasize that the project is not within the State coastal zone and that land use planning policies of the State coastal management program cannot override Federal land use decisions. Therefore, consistency with Section 30255 is not required; however, an evaluation of the project confirms that it would be consistent with this policy, as discussed below.

Master Planned Development of High Priority Coastal Uses

The proposed project is predicated on providing a mix of coastal-related and visitor-serving uses with a complement of other uses that support the project as a whole. The majority of the ground-level uses in Alternative A are devoted to public or commercial recreation uses, both visitor serving, which are high priority for a coastal location.

The Navy Pier adjacent to the project is a coastal-dependent facility that is essential for the Navy's supply activities in San Diego Bay. It is also essential to the national security as a mobilization asset for the Navy. The supply function of the Navy Pier is dependent on the presence of supporting administrative office space, so the Navy office use proposed for the project is coastal-related. Also, the mobilization function of the pier relies on adjacent space to process supplies and personnel for transshipment. Consequently, the hotels and restaurants, which would support personnel preparing for departure, and the offices, which support mobilization processing, are also coastal-related in the event of mobilization. These coastal-related functions of the project are unique because the property is adjacent to the pier and would remain in Navy ownership. This further reinforces the fact that the project is an integrated development of high priority, coastal uses.

Commercial office use is not considered a coastal-related (except to the extent that maritime businesses occupy it) or visitor-serving use, but it is integral to the project's financial feasibility (discussed below) and completes a unified master plan of development that provides substantial coastal benefits. It is emphasized that if the project is not financially feasible, it would not proceed and the substantial open space, access, and recreation benefits described above would not be available to the public.

Because the mix of uses determines the project's viability, the commercial office component is essential to the success of the whole project. Since the large majority of the ground-level use area (90 percent) in Alternative A supports high priority uses, the primary concept of the project involves a master planned, multi-use high priority coastal development. This concept for the whole development would be consistent with coastal policy accommodating coastal-related developments within reasonable proximity to the coastal-dependent uses they support. The presence of (non-priority) commercial office use would not conflict with this policy in light of the facts that it is financially essential for the success of the public/private venture authorized by Congress and will not adversely affect this policy or land uses within the coastal zone.

Essential Financial Role of the Multi-Use Approach

The five-year defense program contains no appropriations to accomplish the consolidation and collocation of Navy administrative facilities in the San Diego area with military construction funds. In view of current Federal budget reductions and the likelihood of even more severe constraints in the future, Congress has acknowledged that direct funding is not available for this project by authorizing redevelopment of the Navy Broadway Complex through a public/private venture in P.L. 99-661.

The public/private venture concept requires that development of the Navy Broadway Complex include compatible private land uses sufficient to offset the cost of development of the necessary Navy office space. The process of formulating alternatives for the type and intensity of development on the site, therefore, integrated consideration of compatibility with surrounding development, specific environmental issues, and the financial feasibility of potential alternatives.

To evaluate the economic requirements of the public/private venture, the Navy engaged the firm of Williams Kuebelbeck & Associates (WK&A) to make an independent financial feasibility analysis. A market assessment was performed to determine the potential types of uses which could be developed on the site without adversely affecting the absorption of similar development planned in the Centre City San Diego. The marketable development program was refined from a City planning perspective, considering urban design guidelines, massing, viewsheds, access and traffic, and significantly reduced in total scope. The reduced density was further analyzed on a financial pro forma basis to determine the overall return from the non-Federal land uses and the residual cash flow and present value attributable to the long term ground lease provided to the developer by the Navy. The financial analysis tested these cash flows and values against the estimated construction cost of Navy office space and the value of the leased land. The financial tests confirmed the amount of development and mix of uses, including commercial office, necessary to feasibly implement the Navy's objectives in a manner consistent with Congressional authorization.

The enabling federal legislation mandates the selection of the developer for the redevelopment through a competitive process. The financial analysis performed by WK&A forms the basis of the government estimate to be used in the evaluation of competitive proposals submitted for award of the redevelopment. The WK&A study is therefore proprietary solicitation information which, in accordance with Federal procurement regulations, cannot be published so as to protect the integrity and

competitiveness of the selection process. The selected developer, the WK&A financial feasibility study, and the actual financial proposal from the developer are subject to review by the Congress, prior to award, in accordance with the legislation.

No Appropriate Coastal-Dependent Uses for the Property

Although it is the Navy's position that the project is consistent with the policies related to placement of high priority uses near the waterfront, it is also important to understand that there are no other appropriate coastal-dependent uses for the property. The Port Master Plan certified by the Commission has distributed coastal-dependent uses along the San Diego Bay waterfront portion of the coastal zone. The Centre City/Embarcadero Precise Plan addressing the waterfront around the Navy Broadway Complex focuses on coastal-related, primarily visitor-serving and recreational uses for the land area of the plan. No major coastal-dependent uses are designated for the land in the vicinity of the Navy Broadway Complex, except for the existing piers. The arrangement of land uses in the plan demonstrates that there is no unmet need for additional land to be allocated to coastal-dependent uses along this part of the waterfront, because such a large proportion is designated for other, non-coastal-dependent uses. The majority of coastal-dependent uses in the port's coastal zone is located in the maritime industry areas around the Tenth Avenue Marine Terminal and National City Bayfront, as would be expected. The character of the Central Bayfront from the Convention Center to the north end of the promenade is oriented to public and commercial recreation uses, rather than coastal-dependent development. Therefore, incorporating coastal-dependent uses in the Navy Broadway Complex would not be needed or appropriate.

Coastal-Related Uses Are Fully Accommodated

The emphasis for coastal-related uses in the Centre City Embarcadero area is placed on public and commercial recreation opportunity. It has been explained previously in Response O-4 that the present and foreseeable need for public and commercial recreation in this part of the waterfront is accommodated, in part by the Navy Broadway Complex Project. In addition, the market study commissioned by the Navy identified the mix of uses that could be supported by the forecasted demand and found that commercial recreation use beyond that already planned by others and included in the project could not be supported during the buildout period of the project. Essentially, the Navy Broadway Complex Project, in an effort to meet financial requirements of the public/private venture and be consistent with the policies of the California Coastal Act maximized the amount of commercial recreation (i.e. hotel, restaurant, and retail) space that could be feasibly developed. Therefore, the addition of still more coastal-related, commercial recreation area, instead of the financially necessary commercial office space, would not be appropriate. Recognizing this market reality, the commercial office space proposed for the project is an appropriate, as well as necessary, use.

- O-7. The intensity of development and mix of uses proposed for the Navy Broadway Complex are necessary to achieve the Congressional mandate of providing the Navy office space "without compensation or at substantially below market value" (P.L.99-661), which has been interpreted by recent Office of Management and Budget directives to mean obtaining the space at no cost. The five-year defense program

contains no project to accomplish the collocation of Navy administrative facilities with military construction funds, so additional Federal funding is not available. In view of the current Federal budget reductions and the likelihood of even more severe constraints, the prospect of future appropriations is extremely remote. Therefore, generation of sufficient revenue stream and equity from the public/private venture concept is necessary for the feasibility of the project. Please see Response O-6 for a discussion of the financial analysis conducted for the project.

The density of the Navy Broadway Complex Project was considered in the development of the preliminary Centre City San Diego Community Plan recently adopted by the City Council. The Navy's preferred alternative is consistent with the overall floor area ratios designated by the plan for the project site and with the step-down design approach described in the plan. Therefore, the density of the proposed action appears to be appropriate for the city's concept of development along the Central Bayfront. (Please also see Response O-4 for a discussion of consistency with coastal land use planning in the Central Bayfront area).

- O-8. The reduced density alternative suggested by the commentator would not yield sufficient residual cash flow to support the objectives of the Congressional mandate. The financial analyses performed by the Navy have confirmed that the amount and mix of development necessary for financial feasibility is represented in Alternative B, assuming no local government financial support. (Alternative A's reduced density relies on local government financial assistance for certain infrastructure improvements.) Consequently, a substantially reduced density alternative would not be feasible. See Responses O-4 and O-6 for discussions of the relationship of local coastal plans and the financial feasibility requirements of the project.

The proportion of ground-level use area in the Navy's preferred Alternative A devoted to commercial and public recreational use already exceeds the proportion of land area so designated in the approved Port Master Plan for the surrounding waterfront, so a reduced density alternative emphasizing recreation use would not be needed to maintain the planned allocations of land to these uses. This issue is discussed in detail in Response O-4.

- O-9. The commentator's explanation of support for Alternative F is noted. Please refer to Responses O-4 and O-7 for discussion of how Alternative A meets the needs for public and recreation opportunity in the Central Bayfront and proposes the mix of uses necessary to meet the objectives of the project.

- O-10. Please see topical response TR-2.

- O-11. Please see topical response TR-2 concerning project economics and market demand. Note that the proposed project was determined after review of a variety of land use combinations, including combinations that included no commercial office development. Concerning Navy funding contributions, topical response TR-1 addresses the prospect of providing Military Construction funding for this project.

- O-12. The statement identified by the commentator is an explanation of the existing setting of the project site. The site is currently, and for many years has been, fully covered with impervious surfaces. The development of the alternatives reduce the extent of

impervious surface, and attendant runoff, with the implementation of landscaped open space. Therefore, no increase in urban runoff would occur with any of the alternatives, and a decrease would occur with alternatives that include open space (Alternatives A, B, D, and F.)

- O-13. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. The issue of relationship between local coastal plans and the project has been discussed in the CCD (Section 4.2.2) and in Response O-4. Consistency of the project with local plans for transportation and parking is discussed in Section 4.2 of the EIS.

P. Max Schmidt, Centre City Development Corporation, June 13, 1990

P-1. Section 4.5 of the DEIS identifies the potential impact of cumulative and project traffic and suggests improvement programs to mitigate those impacts. The DEIS suggests a combination of traffic reduction measures (e.g., TDM program) and physical roadway improvements that would mitigate the long-term traffic conditions. The northbound right turn lane and second westbound left turn lane are needed to mitigate the impacts of project and cumulative traffic at the Broadway/Pacific intersection. It should be noted that the open space plan and streetscape requirements established in the draft urban design guidelines for the Navy Broadway Complex provide a substantial increase in landscaping and amenities for pedestrians in the study area.

P-2. The suggested improvements at study area intersections along the Pacific Highway corridor are necessary to mitigate the impacts of project and cumulative traffic. In all cases, the mitigation measures that are suggested in the EIS are at intersections that are the junction of major intersections based on traffic projects and do not necessarily establish a precedent for the widening of crossings of Pacific Highway by minor streets located between these junctions. As such, it would appear that many of the landscaping improvements suggested for the corridor between major intersections could be accommodated.

P-3. Please see response to comments N-1 and N-2. Note that the proposed Urban Design Guidelines, in conjunction with a major 1.9-acre open space plaza at the foot of Broadway, were developed to meet a longstanding City goal of making Broadway the waterfront entrance to the City of San Diego.

Q. Deanna M. Wieman, United States Environmental Protection Agency, June 15, 1990

- Q-1. Comment Q-1 is a summary of agency concerns that are presented elsewhere in more detail and the determination of the rating of the EIS as "Adequate". Responses to the environmental concerns are provided below where the more detailed comments are discussed. The rating of the EIS as adequate is noted.
- Q-2. Incorporation of appropriate water conservation measures into the project is a valid suggestion. The requirement to include water conservation features will be stated in the request for development proposals. The specific list of measures will be presented in the development bids and will include the water-saving devices mentioned in the comment for showers, toilets, plumbing maintenance, landscaping, and irrigation.
- Q-3. The Navy will commit to the implementation of the air quality mitigation measures recommended by the EPA and discussed in the EIS Section 4.8.3 as part of the Record of Decision.
- Q-4. The Navy will adopt the hazardous materials mitigation measures discussed in the EIS Section 4.11.3 as part of the Record of Decision.
- Q-5. The hazardous materials investigation conducted for the project, including soil borings, identified the potential for contamination. This information is presented in the Draft EIS. Estimates of specific types and quantities of hazardous substances to be remediated would be made as part of remedial investigations prior to site development. As described in the mitigation discussion in Section 4.11.3 of the EIS, all applicable requirements of the Comprehensive Emergency Response Compensation and Liability Act (CERCLA) will be implemented if hazardous materials regulated by it are found. Commitment is also made to follow the process required by CERCLA and the National Contingency Plan, if remediation of hazardous waste is determined to be needed.
- Q-6. The measures recommended by the EPA are consistent with the mitigation presented in the EIS, Section 4.11.3. These measures will be adopted as part of the Record of Decision.
- Q-7. As a commercial office, hotel, and retail development, the Navy Broadway Complex Project would not be expected to use or generate substantial amounts of hazardous materials or wastes. As an example, a dry cleaning operation is not anticipated as part of the retail or hotel uses within the project. Landscape maintenance could use pesticides, so storage of small quantities on site may occur. Other activities normally found in office buildings, retail shops, and hotels that may use hazardous substances have not been conceived at this time. Consequently, although it is possible to conceptualize that limited use and generation of hazardous substances would occur, it is premature to estimate the specific potential types and quantities. Specific uses will be defined when the development bids are received following completion of the EIS. All tenants of the project will follow regulations regarding the generation, use, handling, disposal, and disclosure of hazardous materials in full compliance with the law.

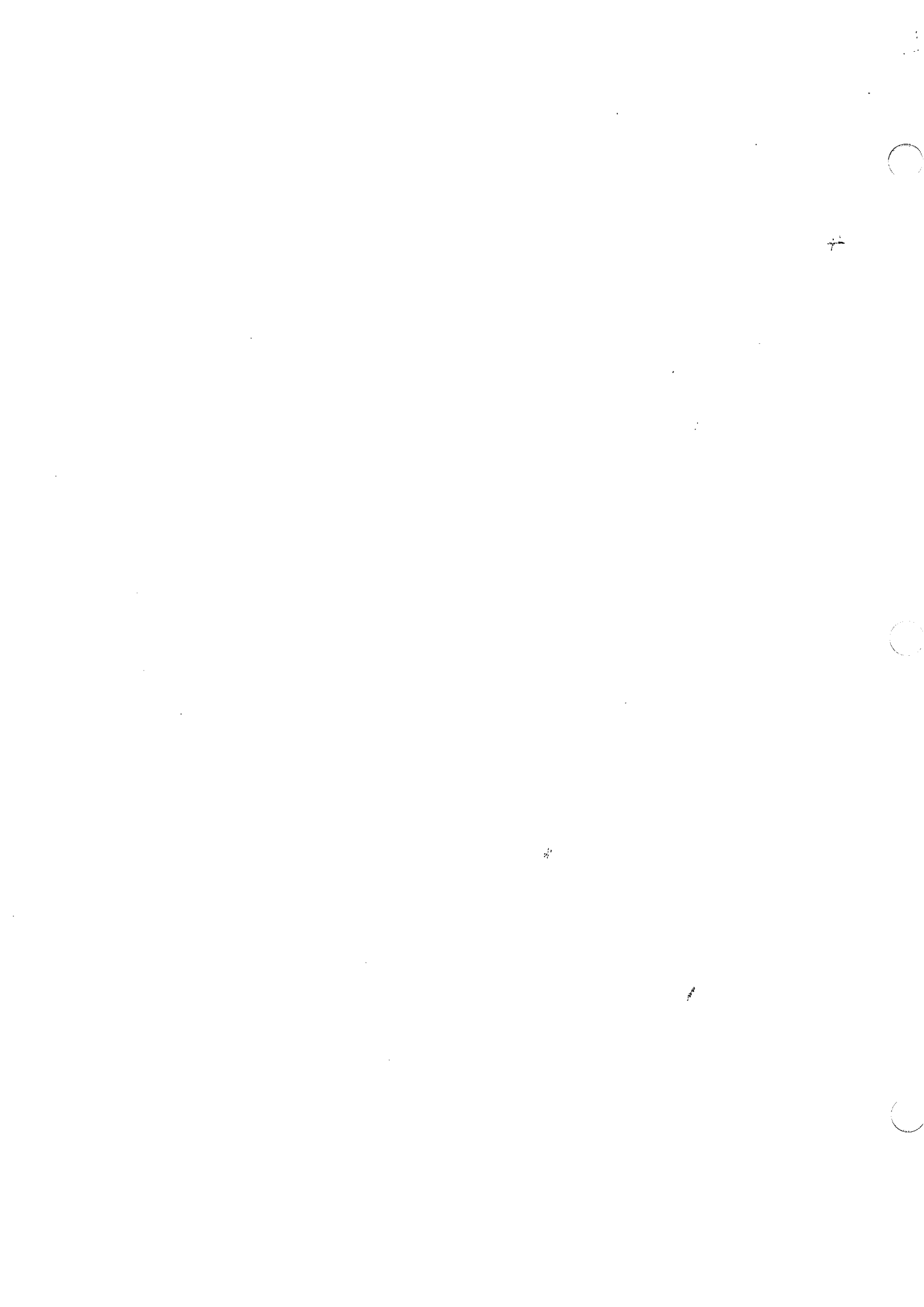
- Q-8. The comment suggests an appropriate mitigation measure to incorporate into the project. The following measure is added to Section 4.11.3 of the EIS:
- Waste minimization practices, as required by the 1984 RCRA amendments, will be incorporated into the project construction and operation.
- Q-9. The Navy accepts the EPA's recommendation to include the implementation of a solid waste recycling program in the Record of Decision. Please also refer to Response H-23.
- Q-10. Based on the investigation of potential hazardous waste on the Navy Broadway Complex conducted by the Navy for the EIS, there are no SWMU's on the site. Consequently, RCRA corrective actions are not anticipated.
- Q-11. The comment stating that the removal of PCB's is governed by the Toxic Substance Control Act (TSCA) is noted. The Navy has an ongoing PCB removal program for the site, and other facilities in the San Diego naval complex, which is conducted in full compliance with Federal regulations.

HA. Colleen Cronin, National Safety Associates, May 16, 1990 (Public Hearing)

HA-1. This comment does not address the contents of the DEIS. No response is necessary.

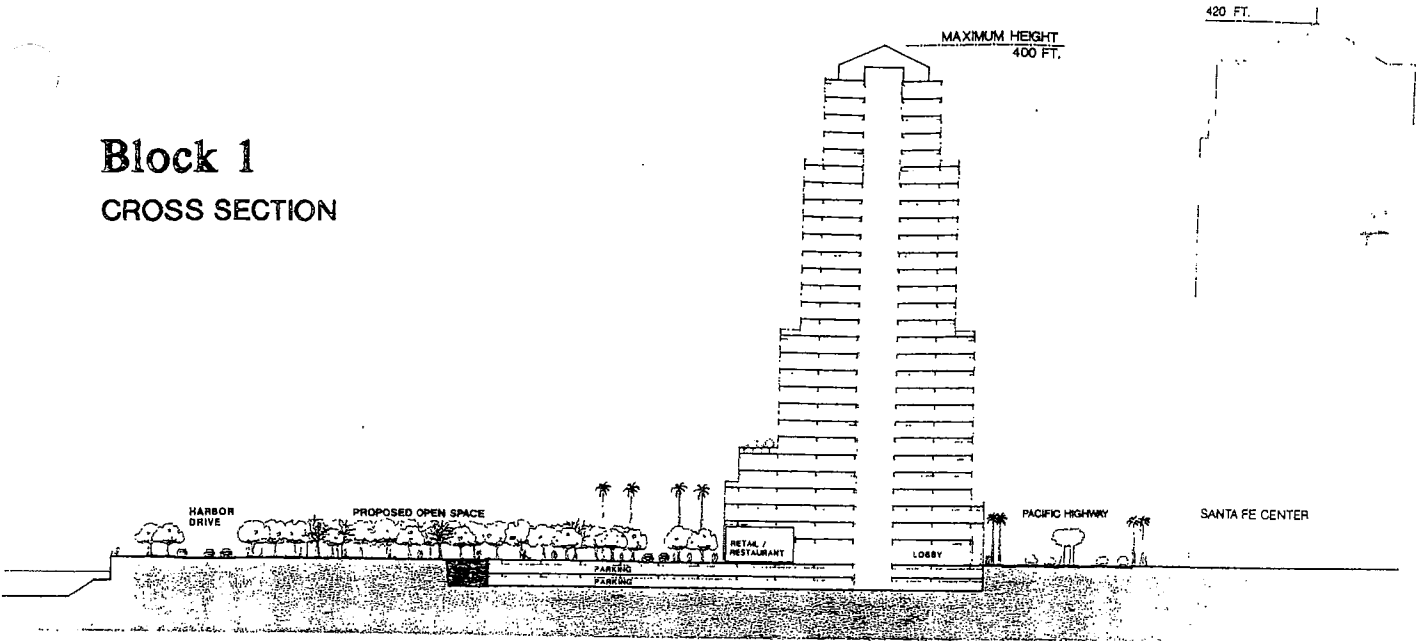
HB. Don Wood, C-3 and the Bayfront Coalition, May 16, 1990 (Public Hearing)

- HB-1. The commentator's support for certain features of the project and for open space included in Alternative F is noted. The comments are not specific to the environmental impacts of the project, so no other response is provided.
- HB-2. The commentator's concern that this project may set a development intensity precedent for the area between Pacific Highway and Harbor Drive is noted. The proposed project was designed to be consistent with the Central Bayfront Design Principles, which provide standards for other development in a broader area to the north and south. The proposed project fits within the context of development intended to be provided along the project area. Whether the San Diego Unified Port District complies in its developments with these same guidelines is beyond the control of the Navy.
- HB-3. The Mission Bay fault is considered a strand of the Rose Canyon Fault Zone. Like several faults in this zone, the Mission Bay Fault is often projected southwards towards San Diego Bay and downtown San Diego (please see the 1990 Woodward-Clyde report in Section 4 of this appendix, particularly 2.3). The faults suspected to extend into the downtown area (Kennedy 1975) are typically mapped as "inferred or concealed," hence their specific location is not known. Based on previous fault investigations in the west part of downtown San Diego by Woodward-Clyde Consultants (Schug 1989) and others, it appears unlikely that a significant fault like the Mission Bay fault extends under or near this site.
- HB-4. In response to this comment, Figures 3-8b and 3-8c have been developed to show the relationship between existing/proposed development on the east side of Pacific Highway and the proposed project on the west side of Pacific Highway. As shown, the project is visually consistent with the proposed or existing adjacent development, stepping down from the east at Blocks 1, 2, and 4, and rising before stepping down to the waterfront at Block 3. Future development at Block 2 reflects FARs for that area.
- HB-5. Figure 3-6 of the DEIS (page 3-10) depicts design guidelines for the project. As shown, buildings would be set back along Pacific Highway to provide a minimum 17-foot-wide sidewalk.



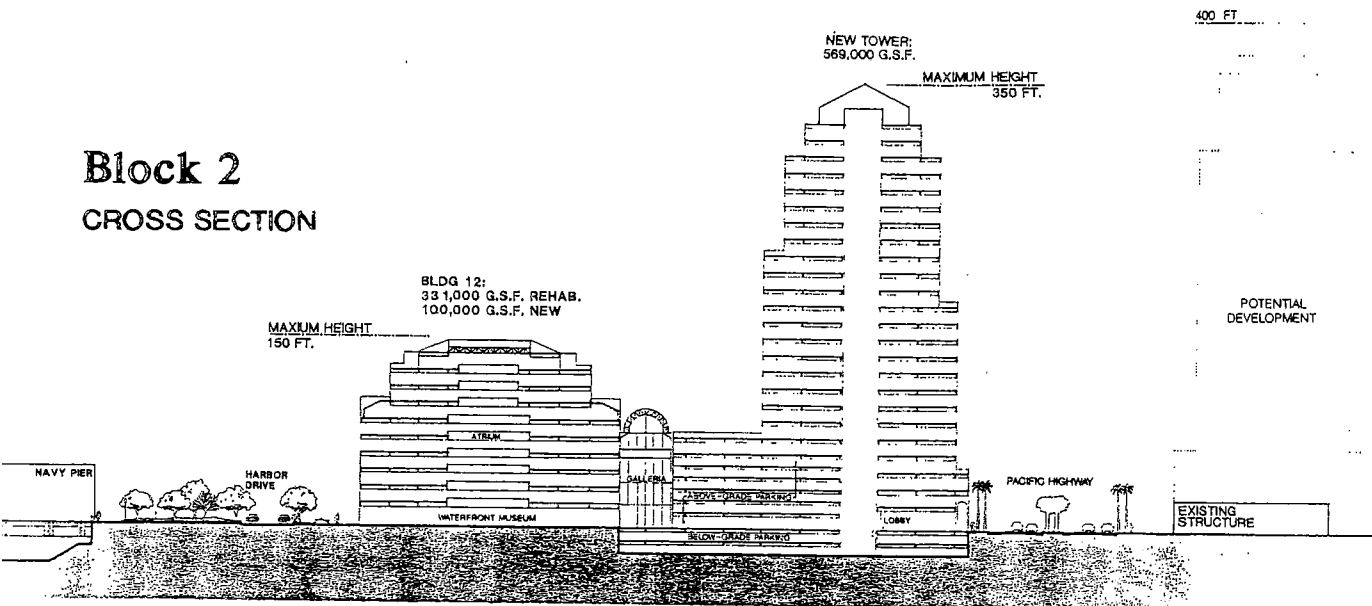
NOTE: BUILDING DESIGNS INDICATED ARE FOR ILLUSTRATIVE PURPOSES AND REPRESENT ONLY ONE POSSIBLE SOLUTION.

Block 1 CROSS SECTION

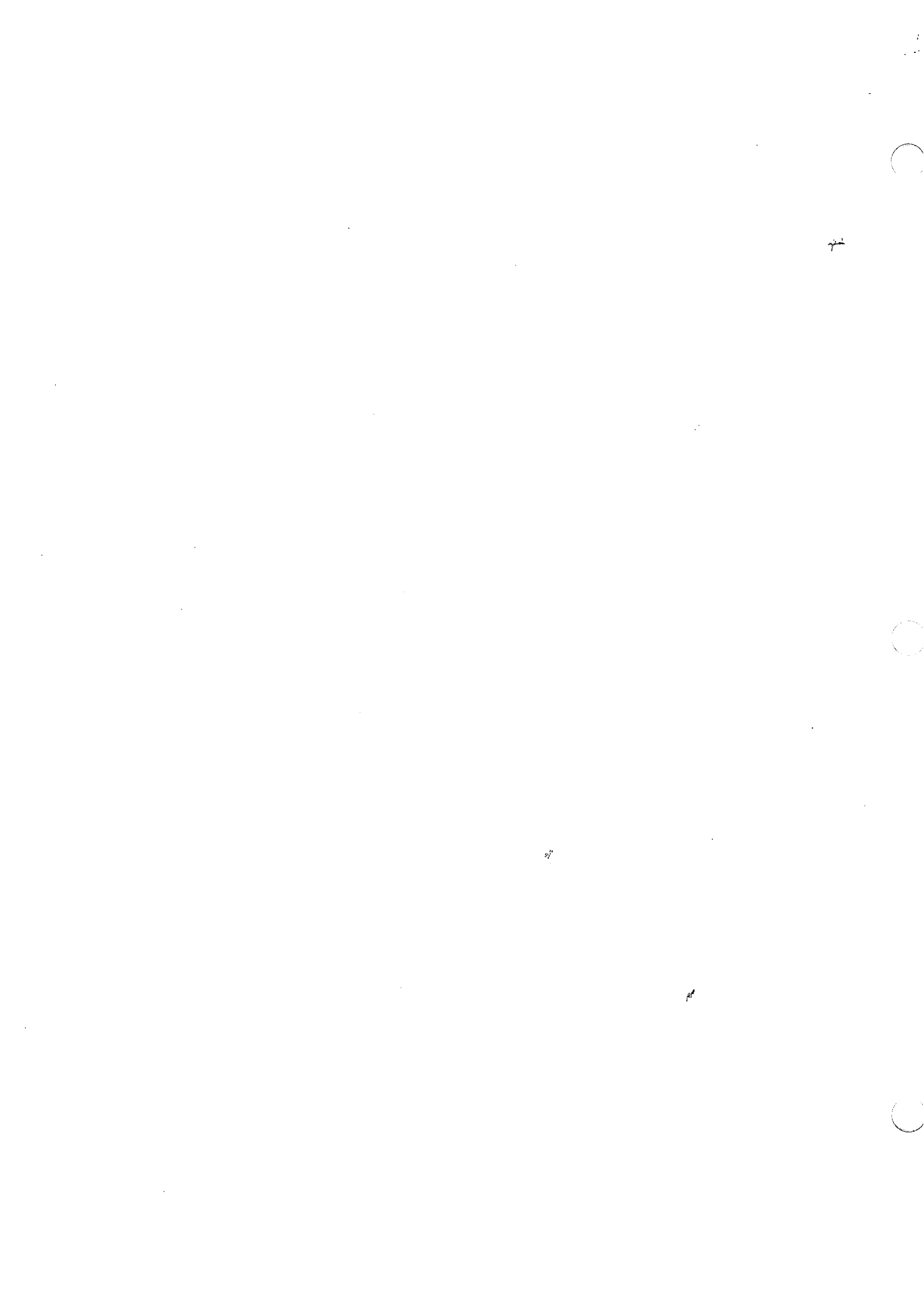


BLOCK 1 : OFFICE 650,000 G.S.F.

Block 2 CROSS SECTION

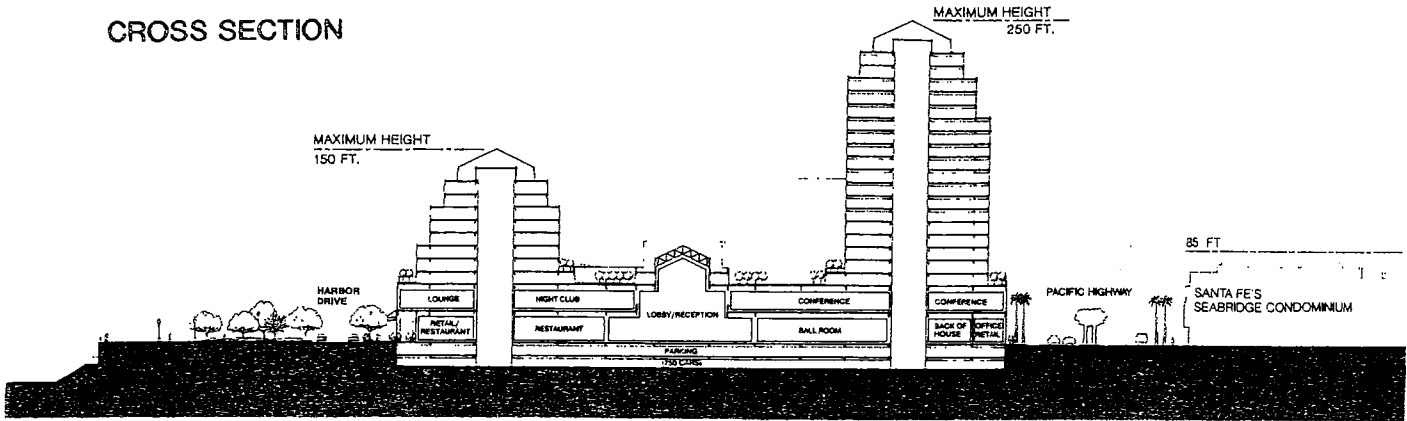


BLOCK 2 : OFFICE 1,000,000 G.S.F.
WATERFRONT MUSEUM 55,000 G.S.F.



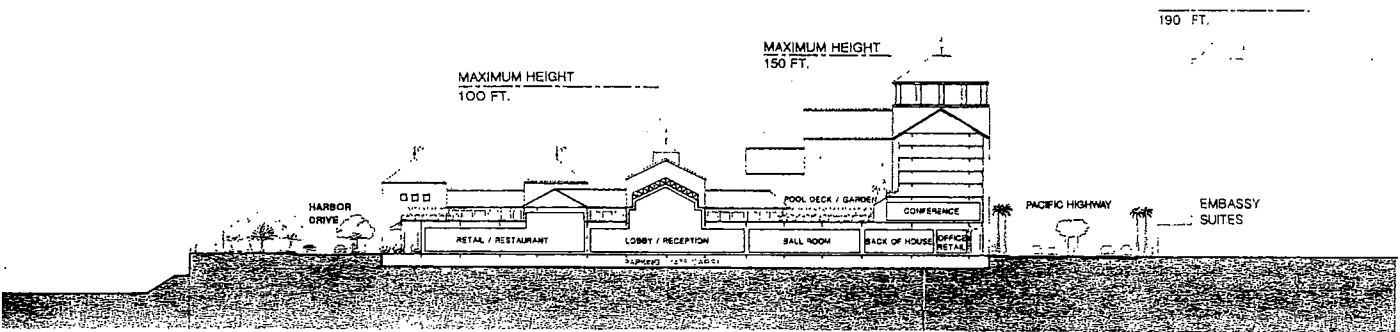
NOTE: BUILDING DESIGNS INDICATED ARE FOR ILLUSTRATIVE PURPOSES AND REPRESENT ONLY ONE POSSIBLE SOLUTION.

Block 3 CROSS SECTION

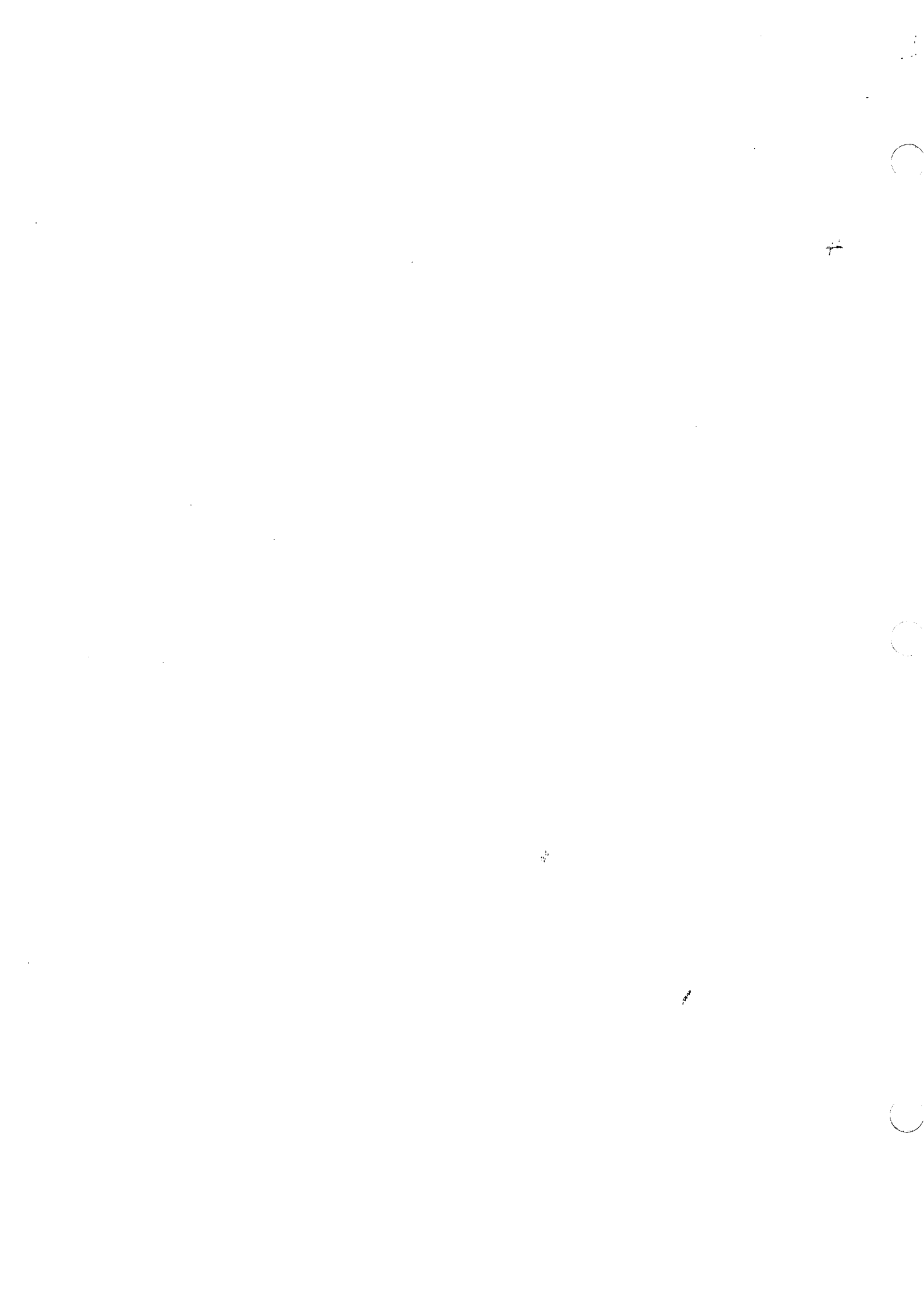


BLOCK 3: BUSINESS HOTEL 745,000 G.S.F./1,000 ROOMS

Block 4 CROSS SECTION

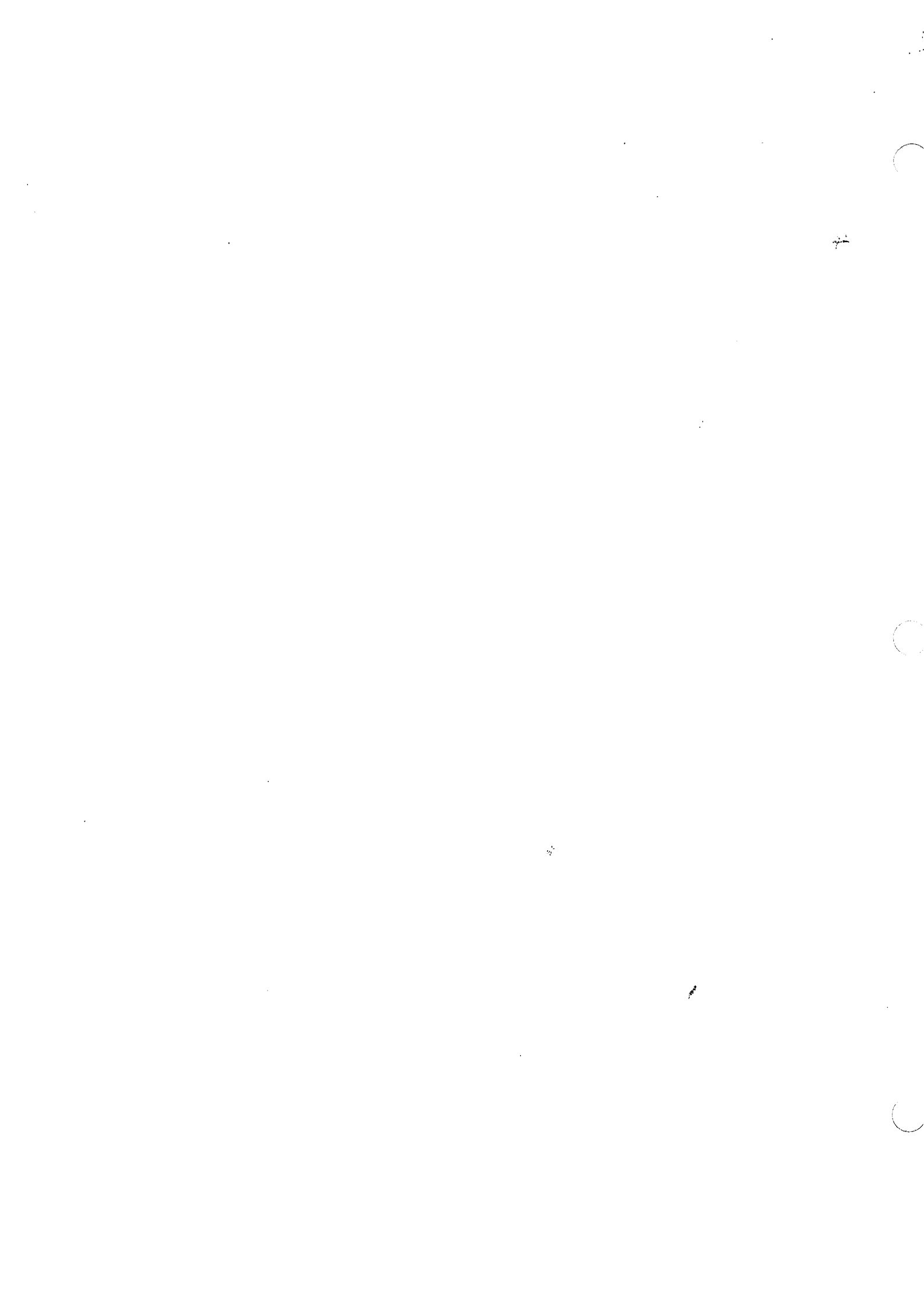


BLOCK 4: LUXURY HOTEL 475,000 G.S.F./500 ROOMS
RETAIL/RESTAURANT 25,000 G.S.F.



SECTION 4
SEISMIC STUDY

In response to comments on the geologic analysis in the draft EIS, Woodward-Clyde Consultants prepared "Additional Geologic, Seismic, and Geotechnical Studies. Navy Broadway Complex, San Diego, California." This report is presented in its entirety as Section 4 of this appendix.



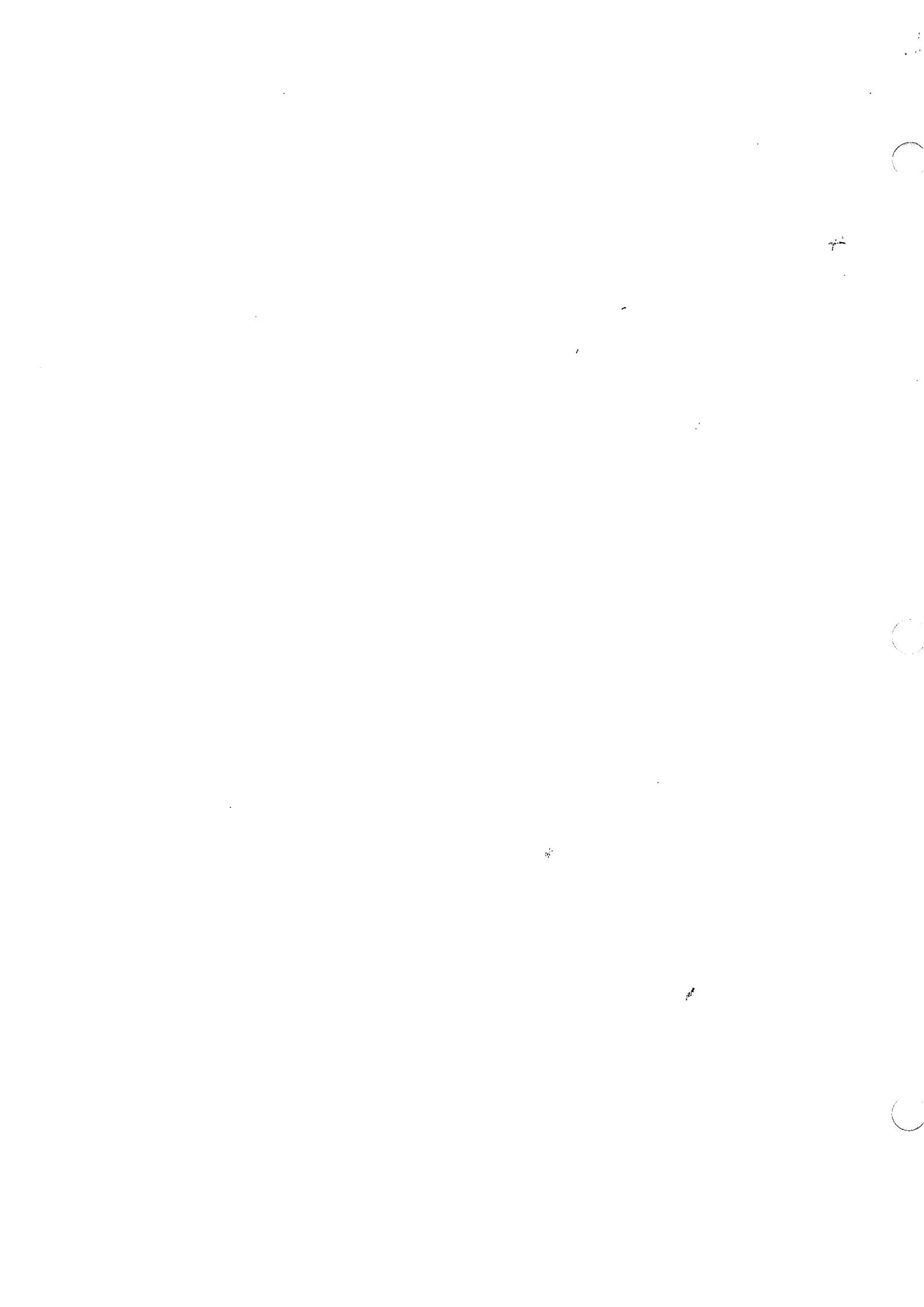
Project No. 9051207D-GE01

Woodward-Clyde Consultants

**ADDITIONAL GEOLOGIC, SEISMIC
AND GEOTECHNICAL STUDIES
NAVY BROADWAY COMPLEX
SAN DIEGO, CALIFORNIA**

Prepared for:

**Roma Design Group
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Woodward-Clyde Consultants

September 5, 1990
Project No. 9051207D-GE01

Roma Design Group
1420 Sutter Street
San Francisco, California 94109

Attention: Mr. Jim Adams

ADDITIONAL GEOLOGIC, SEISMIC
AND GEOTECHNICAL STUDIES
NAVY BROADWAY COMPLEX
SAN DIEGO, CALIFORNIA

Gentlemen:

Woodward-Clyde Consultants is pleased to provide the accompanying report, which presents the results of our geotechnical investigation for the project. This study was performed in accordance with our proposal dated July 11, 1990 and the Government Scope of Work dated July 16, 1990.

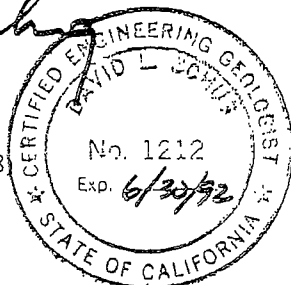
This report presents our additional geologic/geotechnical studies for the Navy Broadway Complex. The geologic and seismic information presented in this report is intended to supplement the DEIS/DEIR as well as to address review comments that concern geological issues and dewatering.

If you have any questions or if we can be of further service, please give us a call.

Very truly yours,

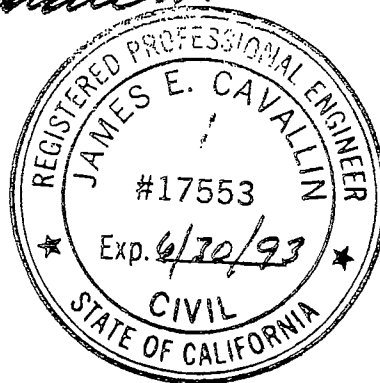
WOODWARD-CLYDE CONSULTANTS

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Consulting Engineers, Geologists
and Environmental Scientists

Offices in Other Principal Cities



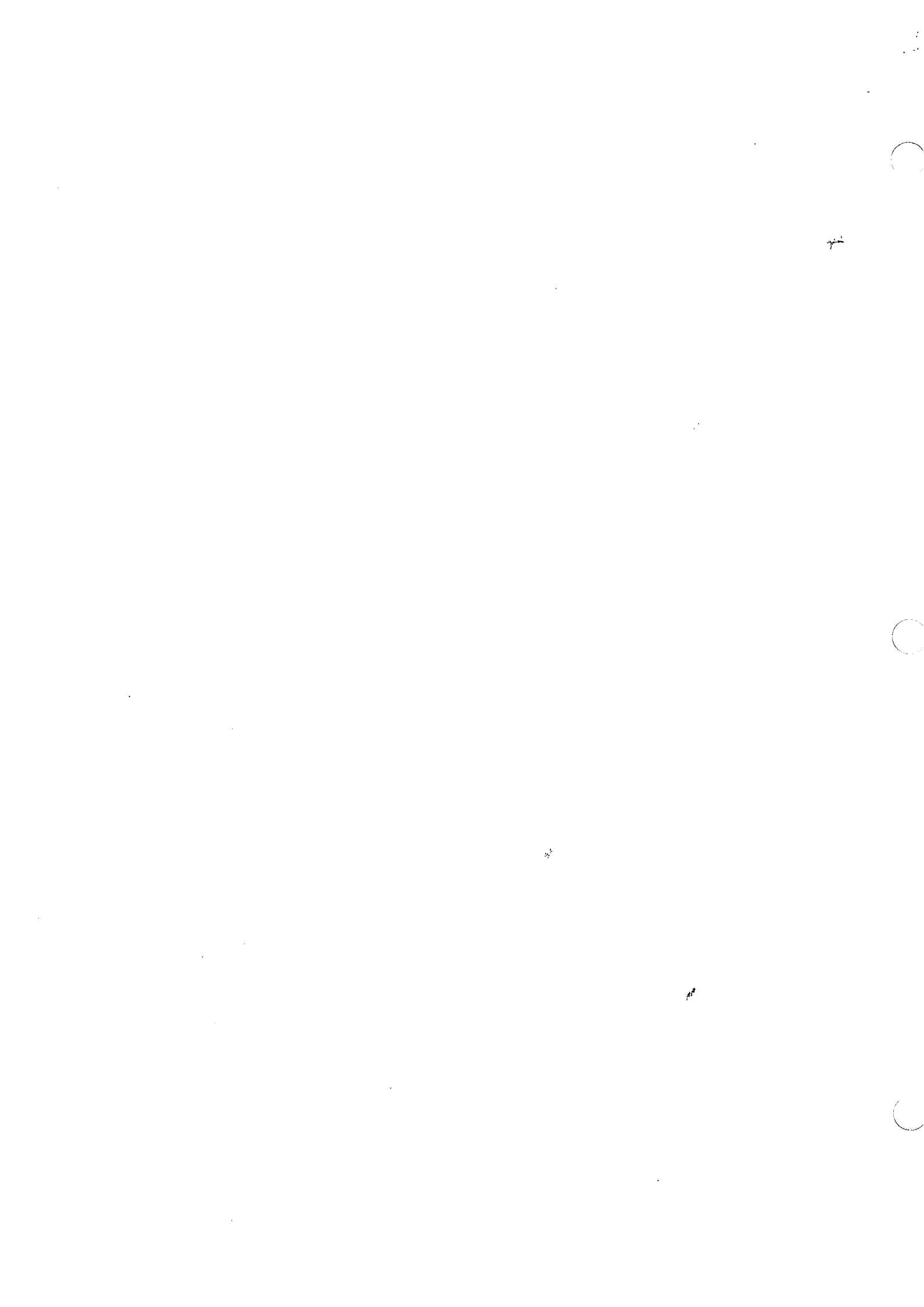
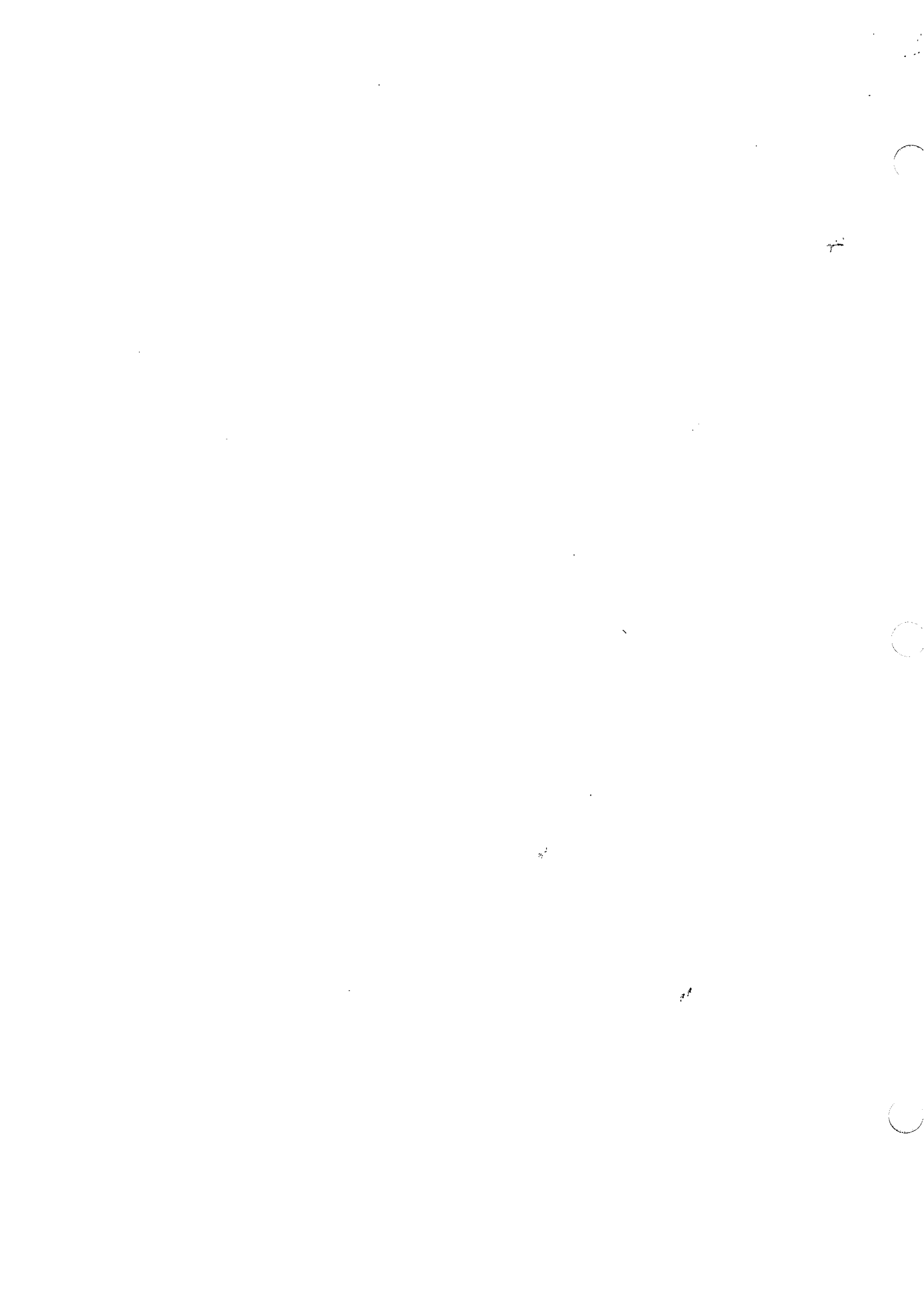


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ADDITIONAL GEOLOGIC, SEISMIC AND GEOTECHNICAL STUDIES
NAVY BROADWAY COMPLEX
SAN DIEGO, CALIFORNIA

1.0 INTRODUCTION AND PURPOSE

This report presents the results of Woodward-Clyde Consultants' (WCC) additional geologic/geotechnical studies for the Navy Broadway Complex. The purpose of this study is to provide additional geologic and seismic hazards information to supplement the project DEIS/DEIR as well as to address review comments that concern geological issues and dewatering. We have also been asked to provide an updated discussion of site dewatering for use of a hydrostatic resistant mat-type foundation for subsurface construction.

1.1 Background

The project area encompasses four blocks in west downtown San Diego between North Harbor, Broadway and Pacific Highway (Figure 1). Current plans for the Navy Broadway Complex are generally as described in "Alternative A" in the DEIS/DEIR prepared by Michael Brandman Associates. Woodward-Clyde Consultants conducted a preliminary geotechnical investigation for the site; a copy of our report entitled "Geotechnical Investigation for the Proposed Navy Broadway Complex, San Diego, California," prepared for Hirsch Company, dated February 4, 1988 is on file at the Navy Broadway Complex Detachment.

We have been provided with and have reviewed the memorandum dated May 24, 1990 prepared by California Division of Mines and Geology (CDMG). We have also addressed specific comments from other agencies and individuals. Responses to comments are being provided in a separate document.

1.2 Scope of Study

Our studies have been based upon review of published geologic information and review of our previous geotechnical investigations for the site and other sites in the vicinity of the

Navy Broadway Complex. Additional geotechnical analyses were performed utilizing information from our previous test borings and geotechnical laboratory analyses. No new subsurface explorations were performed for this study.

We have organized the following sections of this report as follows:

- Section 2 & 3: Responses to CDMG Comments
- Section 4: Geotechnical Considerations

2.0 SEISMICITY

The following paragraphs present an overview of site seismicity and local/regional faults.

2.1 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-trending 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 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-trending faults to the west including the Elsinore Fault, Rose Canyon fault, San Miguel fault, Agua Blanca fault, and offshore faults including the Coronado Bank, San Diego Trough, and San Clemente fault zones. Major regional faults of tectonic significance are shown on Figure 2.

2.2 Historical Seismicity

The locations of earthquakes in the vicinity of San Diego are shown on Figure 3. The historical pattern of seismicity in coastal San Diego (since about the 1930s) has generally been characterized as a broad scattering of small earthquakes; whereas the surrounding regions of Southern California, northern Baja California and the nearby offshore regions are characterized by a high rate of seismicity, where many moderate to large earthquakes (magnitudes up to 6.5) have occurred during the past 50 years or so (Simons, 1977; Anderson and others, 1989). The record of historical earthquakes (magnitude 6 or larger earthquakes) available for San Diego is probably as complete as any other region in California dating back to the early mission days in the late 1700s (Anderson and others, 1989). San Diego has not had a local damaging earthquake since becoming a major population center.

San Diego has experienced strong shaking and minor damage from several local and distant earthquakes, but none have been very destructive (Agnew, 1979; Topozada 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 felt intensities in the downtown area. The location of the 1800 earthquake (which is estimated to have Modified Mercalli intensity VII¹ in San Diego) is thought to have been somewhere between San Juan Capistrano and San Diego because of the damage it caused at both missions (Topozada and others, 1981). Anderson and others (1989) suggest that the 1862 earthquake seems to have produced the strongest shaking and to have been located closer to the San Diego metropolitan area than other earthquakes (see Figure 4). During the 1862 earthquake, shaking of an estimated intensity of VI to VII on the Modified Mercalli scale 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; based on an evaluation of felt reports by Topozada and others (1981), it is

¹ Prior to the installation of seismographs in California in the early 1900's and the development of the Richter magnitude scale, earthquakes were described based upon their ground shaking effects on man-made structures and natural features and felt reports. These descriptions were incorporated into an intensity scale which the present version most commonly used is the Modified Mercalli (MM) (Table 1).

suggested the event could have been in or near San Diego Bay. Topozada and others estimated the magnitude of the 1862 earthquake at M 5.9. The 1892 earthquake is believed to have been located in northern Baja California, Mexico, about 100 to 150 km east from San Diego (Strand, 1980). This earthquake caused widespread minor damage in San Diego; shaking intensity VI to VII is estimated for downtown San Diego (Anderson and others, 1989).

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 centered generally within about 0.6 miles (1.0 km) south of the San Diego - Coronado Bay Bridge. A similar series of small earthquakes in 1964 was also generally located beneath southern San Diego Bay. In July, 1986 a M = 5.3 earthquake ("Oceanside Earthquake") occurred about 40 miles (70 km) offshore and northwest of San Diego; the area offshore from Oceanside has experienced an abundance of small aftershocks since 1986. Although the 1986 Oceanside earthquake was felt strongly in many areas of San Diego, it did not cause significant damage in downtown San Diego. The recent increase in seismicity offshore from Oceanside and in San Diego Bay is considered significant by some researchers compared to the relative seismic quiescence over the past several decades. Heaton (1989) compares the increase in earthquake activity in San Diego to other areas of California, where increases in seismic activity has preceded large earthquakes; although Heaton also points out there are also many examples of large earthquakes for which seismicity increases did not occur.

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 the historical record is typically very short compared to the average interval, or return period between large, potentially damaging earthquakes. Therefore, based only on the historical record of earthquake activity, seismic hazard in San Diego is, in our opinion, difficult to quantify.

2.3 Significant Faults

The Rose Canyon fault zone is the closest major fault zone to the downtown San Diego area and the project site; it extends on land from La Jolla generally through parts of the downtown area, to San Diego Bay, and beyond to the south (see Figure 5). The zone is complex and is comprised of many related fault segments and associated folds. In the offshore areas near San Diego Bay, Holocene age sediments are displaced by faults associated with the Rose Canyon fault zone (Kennedy, 1975, 1980); whereas onshore, localized evidence also exists for Holocene faulting (Patterson and others, 1986; Rockwell, 1989). The locations of significant strands of the Rose Canyon fault zone are not well documented in many areas of downtown San Diego, largely because of the extensive early urban development.

In the vicinity of San Diego Bay and the project site, the Rose Canyon fault zone has been mapped (Kennedy, 1975) as being comprised of several fault strands which include: the Old Town fault, Spanish Bight fault, Coronado fault and Silver Strand fault. The Mission Bay fault is also considered a strand of the Rose Canyon fault zone and, like several faults in the zone, the Mission Bay fault is often projected southwards towards San Diego Bay and the downtown San Diego area. The faults suspected to extend into the downtown area (e.g., Kennedy, 1975) are typically mapped as "inferred" or "concealed" hence their specific location is not known. Because of the uncertainty in regard to fault locations, the project site is considered to be located about 0.5 to 1.0 miles from significant strands of the Rose Canyon fault zone. Collectively, the main faults comprising the Rose Canyon fault zone are considered capable of a maximum M7 earthquake (Woodward-Clyde Consultants, 1986).

The eastern-most branch of the Rose Canyon fault zone is considered to be the Old Town fault. The Old Town fault displaces late Pleistocene sedimentary deposits near Mission Valley. Southeast of the Old Town area, the location and characteristics of the Old Town fault are not known with confidence; however, it is suspected by Kennedy and others (1975) to extend into the downtown area. The Old Town fault is located about 2 miles north-northwest of the project site.

The Spanish Bight fault is another important strand of the Rose Canyon fault zone that is mapped about 1 mile (1.6 km) west of the site in San Diego Bay (Figure 6). Based on marine geophysical studies in and around the Bay, the Spanish Bight fault is believed to displace Holocene sediments (Kennedy and Welday, 1980). Prior to dredging and the hydraulic filling operations, the Spanish Bight fault had prominent expression across North Island and may have partly created the channel (Spanish Bight) that formerly separated North Island and Coronado.

The Coronado fault is mapped as extending northerly across the Bay where it appears to project on land about 0.5 mile to the east of the project area (see Figure 6). Although the fault is suspected to extend beyond the Bay onland (Treiman, 1984) its location in the downtown area (east of the site) is not known.

The Silver Strand fault extends from Coronado south to the offshore area west of the U.S./Mexico International Border (Kennedy and Welday, 1980). Based on marine geophysical profiling, the Silver Strand fault is located about 2 miles south of the project area where it appears to die out in San Diego Bay.

2.4 Distant Seismic Sources

The La Nacion fault is mapped about five miles to the east of the downtown area; it extends from Mission Valley south to Otay Mesa (Figure 2). The Coronado Bank fault zone extends roughly parallel to the coastline about 14 miles offshore from downtown. The Elsinore fault zone is about 42 miles northeast of downtown. Each of the above mentioned fault zones, as well as more distant fault zones further to the east, offshore and in Baja California, are considered capable of producing large ($M > 6 \frac{1}{2}$) earthquakes (Woodward-Clyde Consultants, 1986)

3.0 GEOLOGIC AND SEISMIC HAZARDS

3.1 Fault Surface Rupture

The project site, like all of the downtown area, is considered to generally lie within the Rose Canyon fault zone. Some fault strands within this zone are considered active (WCC, 1985, 1986; Rockwell, 1989), and therefore present surface rupture hazards. Although portions of the Rose Canyon fault zone are being evaluated by the State Geologist and are to be included in an Alquist-Priolo Special Studies Zone², the west downtown San Diego area (and the project site) is not currently being considered for zonation. The City of San Diego Municipal Code includes a geologic hazards ordinance which requires geologic hazards investigations for new buildings over two stories in height in all of downtown San Diego.

The southern reach of the Rose Canyon fault zone appears to widen and become more complex in the vicinity of San Diego Bay. Within the Bay, and in the immediate offshore areas, the Rose Canyon fault zone has been interpreted to be comprised of several subparallel strands which include the Spanish Bight, Coronado, and Silver Strand faults (Kennedy and Welday, 1980). However, the eastern extent of the Rose Canyon Fault Zone on land through the downtown area is not well-defined. Reconnaissance geologic logging during the excavation of an east-west, mile-long sewer interceptor (WCC, 1981) that extended west on Broadway to the intersection of Kettner and "E" Streets encountered a single fault in the vicinity of Front and First Streets about 0.5 mile east of the site. This fault is not considered active. Most often, interpretations of possible locations of faults within downtown areas have either projected the Old Town fault to the southeast (e.g., Kennedy, 1975), or have been landward projections of offshore faults.

The faults shown on Figure 6 that are located in San Diego Bay were mapped (Kennedy and Welday, 1980) by marine geophysical surveys that included traverses located generally parallel to the bay margins. These marine geophysical surveys conducted to date have not identified significant faults in the bay that appear to project through the Broadway Complex

² Alquist-Priolo Zones are established by the State Geologist along active faults and regulates certain development within the zone (CDMG Special Publication 42).

area. Kennedy and Welday (1980) mapped a short, apparently discontinuous fault extending generally between Coronado and the Broadway Pier (location "A" on Figure 6). This feature was not considered to be prominent on their subbottom reflection profiles and it apparently dies out in the bay and does not extend on land into the Broadway Complex area.

Other portions of the Rose Canyon fault zone are suspected to extend into the downtown area on land (Kennedy, 1975). In addition to the geologic logging of the sewer interceptor excavation along Broadway (ending at Kettner and "E" streets), WCC conducted site-specific fault investigation for several downtown blocks east of the Broadway Complex along Pacific Highway and several blocks to the east. Previous geologic investigations by Woodward-Clyde Consultants and others at these nearby sites immediately east of the Broadway Complex did not encounter significant faults. Therefore, it is believed that previously unrecognized, major active faults do not appear to extend through the west downtown area (Schug, 1989).

Based on previous geologic investigation conducted in San Diego Bay (Kennedy and Welday, 1980 and others) and land areas near the Broadway Complex, it appears unlikely that the site is traversed by a fault that would present a significant fault rupture hazard. Although it is our opinion that it is unlikely the site is traversed by a significant fault, the possibility of on-site faulting cannot be precluded based on the available geologic information.

3.1.1 Remedial Measures

The project site area is underlain by hydraulic fill soils placed over natural bay deposits. The geologically recent bay deposits extend down to elevations below Mean Sea Level (MSL), whereas groundwater typically occurs within several feet above MSL in the project area. Therefore, site subsurface and groundwater conditions generally preclude using typical geologic exploration methods such as trench excavations to evaluate possible faults. Other geologic investigative techniques are possible (such as geophysical profiling and/or deep, closely spaced test borings) which have been used to evaluate suspected faults at nearby project sites and adjacent areas of the bay. However, these methods are somewhat

indirect and can be inconclusive. Also, at other nearby sites it has been possible to make confirmational geologic observations in the several story deep basement excavations (which extended into Pleistocene materials).

As indicated in our previous geotechnical investigation for the Navy Broadway Complex, the floor level for a two-story basement will be in bay deposits. Without being able to directly observe Pleistocene (Bay Point Formation) materials in below ground excavations, it is unlikely that a fault will be discovered on the site during construction. If a fault were observed in construction excavations or discovered during future investigations, it will be necessary to evaluate its recency of past displacements and surface rupture potential. If evaluation of the fault indicates a significant likelihood for renewed movement within the expected project lifetime, and in particular, if the fault was considered "active"³ it would be inconsistent with current engineering and geologic practice to site structures directly across the fault. Therefore, development options would likely include relocating structures so that they are not sited across the fault.

3.2 Seismic Ground Shaking

Southern California is a seismically active region and the potential that local strong ground shaking could occur in the San Diego area as a result of an earthquake on the Rose Canyon or other nearby fault system has been recognized for many years. Thus, significant ground shaking in response to nearby or distant earthquakes should be anticipated during the typical design life of structures. Earthquake ground motions are possible from a number of active fault zones, including the Rose Canyon, fault zones in northern Baja California, areas offshore from San Diego, and the Imperial Valley. Table 2 includes a summary of

³ An "active fault", as defined by the California Division of Mines and Geology, is a fault that has "had surface displacement within Holocene time (about the last 11,000 years)" (California Division of Mines and Geology Special Publication 42). "Potentially active" faults are defined as those that have evidence of activity during the Pleistocene (last 2 to 3 million years but not within the last 11,000 years).

For planning and siting purposes, the potential for surface fault rupture is generally considered to exist along "active" and, to a lesser degree, along "potentially active" faults. Those faults that have been most recently active, and particularly those faults that have been repeatedly active during the Holocene, are considered to have the greatest potential for future displacements.

significant local and regional seismic sources, their estimated maximum magnitudes and distance from the site.

Because of its proximity, and recognized potential to produce a large earthquake, the Rose Canyon fault zone is considered a significant seismic hazard to downtown San Diego. Estimates of the maximum earthquake for the Rose Canyon fault zone range from M 6 1/2 to 7 1/4 (Woodward-Clyde Consultants, 1986) with a maximum M 7 earthquake typically considered in local seismic hazard evaluations. A maximum M7 earthquake on the Rose Canyon fault zone is also generally consistent with studies by others including Wesnousky, 1986. The maximum earthquake (or "maximum credible earthquake") is generally considered to be the largest earthquake which may ever be expected at the site within the known geologic framework. An earthquake of M7 on the Rose Canyon fault occurring at an approximate distance on the order of 0.5 to 1.0 miles from the study area can be considered the maximum earthquake for this site. Based on attenuation relationships such as Joyner and Boore, 1988, this maximum earthquake could result in peak ground accelerations in the Navy Broadway Complex area ranging from 0.45 g to 0.60 g. This estimate is in general agreement with peak ground accelerations reported by Mualchin and Jones (1987).

It is important to note that the estimated maximum earthquake generally represents a rare seismic event with a very low probability of occurrence. Because the site is close to an active fault, it is generally considered unrealistic to design for seismic events considered to have a very low probability of occurrence (such as the maximum earthquake occurring on the closest reach of the fault). For a local seismic source such as the Rose Canyon or La Nacion fault zones, there is an approximate probability of occurrence of the maximum earthquake of 1 to 2 percent within a 50-year period (WCC, 1986 and on-going in-house studies).

Regional studies have included probabilistic evaluation of seismic hazards in San Diego. For example, Anderson and others (1989) report that peak accelerations of 0.10 to 0.20 g are "expected about once every 100 years". Earthquake resistant design of important or critical structures in settings such as downtown San Diego more commonly considers results of site-specific probabilistic seismic hazard analysis. For sites near downtown San

Diego (and within about 1 mile from the Rose Canyon fault zone) current studies for sites near the Broadway Complex indicate that there is about a 10% probability that an earthquake will occur in a 50-year period that will generate peak ground accelerations that exceed about 0.35 g. This estimate includes the combined contributions of the Rose Canyon, La Nacion, Coronado Bank and Elsinore faults and for all earthquakes of M5 and greater. In our opinion, this estimate can generally be considered the "maximum probable earthquake" for this site.

The estimates of seismic ground shaking discussed above are intended to provide a general assessment of the site seismic hazard and are not intended for design purposes.

3.2.1 Remedial Measures

The coastal zone of San Diego, including the downtown area, is currently assigned to UBC Seismic Zone 3. Based on our recent conversations with the Structural Engineers Association of San Diego, strong consideration is being given to changing coastal San Diego from Zone 3 to Zone 4. The U.S. Navy has historically considered San Diego to be Zone 4.

The maximum earthquake on the Rose Canyon or other nearby fault, if it were to occur, would likely result in strong ground shaking, in excess of local building codes, over much of coastal San Diego. However, buildings designed and built in accordance with modern building codes typically have greater earthquake resistance than indicated by the code design and typically have fared well under relatively strong ground shaking conditions (Housner and Jennings, 1982).

Like any other important structure in downtown San Diego, design studies for future projects should consider the likelihood of strong seismic shaking within the design life of structures. Earthquake resistant design, utilizing results of site-specific seismic hazard analyses (typically including seismic ground motion information, seismic response spectra, and characteristic site period), would reduce potential damage from earthquakes. Even so, it is generally considered economically unfeasible to build a totally earthquake-resistant project; therefore it is possible that a large or nearby earthquake could cause damage at the

site. In this regard, the seismic hazard associated with the Navy Broadway Complex project is not considered appreciably different than nearby areas of downtown San Diego and most of coastal San Diego County.

3.3 Liquefaction

Seismically induced liquefaction is a phenomenon in which loose, saturated granular materials develop high porewater pressure and lose strength due to ground vibrations induced by earthquakes. Soil liquefaction can result in ground settlements and increased lateral and uplift pressures on underground structures. Buildings supported on soils that have liquefied often settle and tilt; light-weight structures may float upwards to the ground surface and foundations may displace laterally causing structural failure.

The City of San Diego Municipal Code requires an evaluation of liquefaction potential for building sites that lie within areas identified on the City of San Diego Seismic Safety Study as being susceptible to liquefaction. The City of San Diego Building Code (Section 91.02.2905) includes the criteria for a liquefaction evaluation. The Broadway Complex site lies within Geologic Hazard Category No. 31 (as identified on the City Seismic Safety Study) in which potential ground failure associated with liquefaction is considered "relatively high", and therefore a liquefaction evaluation is required by the Code.

Using information from our previous geotechnical investigation, we have made a preliminary evaluation of liquefaction susceptibility based on penetration resistance blow counts of the sampler on the technique outlined by Seed and Idriss (1982), and Section 91.02.2905 of the City of San Diego Building Code. We have converted the blow counts obtained by a Modified California Sampler to corrected blow count values $(N_1)_{60}$ by using the appropriate correction factors for the type of sampler used, the influence of overburden pressure, drill rod length, and grain size. The Seed and Idriss analysis method evaluates susceptibility to liquefaction using empirical relationships between the corrected blow count values and the stress conditions for a design peak ground acceleration and earthquake magnitude. Section 91.02.2905 (g) in the Building Code specifies that liquefaction susceptibility analyses be performed using a minimum Magnitude 6 earthquake with a peak ground acceleration of approximately 0.19 g and 0.23 g for structures with occupancy

importance factors⁴ of 1.0 and 1.25, respectively. For this evaluation, it was assumed that either occupancy importance factor may apply to the site.

The results of our analysis are presented in Figure 7. Blow counts for the hydraulic fill soils above the water table at the time of drilling are not presented. Critical blow count values $(N_1)_{60}$ falling to the left of lines of calculated critical values $(N_1)_c$ for peak ground accelerations of 0.19 g and 0.23 g indicate soils that are potentially liquefiable under the assumed conditions. Figure 7 indicates that approximately 45 percent of the granular hydraulic fill, bay deposits and Bay Point formation between elevations of approximately +3 feet and -30 feet MSL are equal to or smaller than the $(N_1)_c$ values for a peak ground acceleration of 0.19 g. It is our opinion that the relatively denser and/or more cohesive soils of the Bay Point Formation below -15 feet have a low potential for liquefaction, so as not to constitute a potential liquefaction hazard.

The potentially liquefiable bay deposits underlie the entire site with a general thickening of the layer to the south. The consequences of liquefaction, should it occur at this site, probably would be manifested in the form of localized sand boils, differential ground settlements and increased lateral earth pressures on retaining structures. Based on the analyses by Tokimatsu and Seed (1987), we estimate that the total and differential settlements on the order of perhaps 2 to 7 inches could occur during the seismic ground shaking associated with the San Diego Building Code. A more severe earthquake could produce more extensive liquefaction.

3.3.1 Remedial Measures

Because of the potential for liquefaction at the site, we recommend that deep pile foundations, or structural mats designed for the anticipated settlements, be used to mitigate or reduce potential structural damages to buildings.

⁴ Occupancy importance factors are defined in the Uniform Building Code. Any building where the primary occupancy is for assembly use for more than 300 persons (in one room) has an importance factor of 1.25; all others are 1.0 except for essential facilities which are 1.5.

Quay wall failure in the event of liquefaction is possible. The effects of a failure would be lateral spreading and settlement of the soil contained behind the existing quay wall which would result in disruption of local street and rail traffic and damage to below ground utilities. The zone of impact could extend for several hundred feet behind the quay wall. To mitigate the potential damages due to quay wall failure, the quay wall design should be reviewed and modified or reconstructed as necessary to withstand effects of liquefaction and ground motion associated with a design earthquake.

3.4 Tsunamis/Seiches

A tsunami is a sea wave generated by a submarine earthquake, landslide or volcanic action which travels over the ocean. Earthquakes generated either locally or at great distances are considered to be the primary mechanisms capable of generating a tsunami. A seiche is an earthquake-induced wave in a confined body of water such as San Diego Bay. Hazards from tsunami and seiche inundation in the San Diego Bay area are difficult to assess because of the relatively short historical record and the lack of detailed studies in the subject area.

Tsunamis travel across the ocean as a powerful wave up to 50 miles long, 1 to 2 feet high, and at speeds up to 500 mile per hour. As the tsunami waves approach the coastline, the shallow bottom topography and configuration of the coastline can transform the waves into very high and potentially damaging waves and strong currents. Most damaging tsunamis are associated with vertical tectonic displacements and earthquakes with a magnitude of 6.4 or greater (Iida, 1963). The threat to San Diego of tsunamis generated from remote earthquakes appears to be minor since the offshore topography of Southern California would act as a diffuser and reflector (Joy, 1968). The primary horizontal movement of the local offshore faults minimizes the potential for a locally generated tsunami. Houston and Garcia (1978) predicted that the inner San Diego Bay would be protected by the shoaling effect of the local coastline. The San Diego Coast Regional Commission (1974) presented an opposing view by stating that the offshore area is insufficiently studied to make statements on the configuration of the bay.

Historical data from the past 170 years indicates that wave heights and run-up elevations experienced along the Southern California coast as a result of distant tsunamis have fallen within the normal range of the tides (Joy, 1968). Five of the greatest tsunamis representing all of the major generating zones of the Pacific produced minimal or no damage along the San Diego coastline. Only two or three tsunamis generated off of Southern California have been recorded and all were barely noticeable in San Diego. The largest recorded tsunami to reach San Diego was caused by the 1960 earthquake in Southern Chile and measured at 4.6 feet in height. Recorded tsunamis that produced waves at San Diego greater than one foot is presented in Table 3. Houston and Garcia (1974) estimate the 100-year and 500-year runup from tsunamis as being 7.4 feet and 14.5 feet (above Mean Sea Level), respectively, for the San Diego Bay area near the Broadway Complex.

There has been no reported occurrence of significant seiches within the San Diego area. Strong, local earthquakes on the Rose Canyon fault or Coronado Bank fault zone could produce a seiche with significant run-up and unusually high water levels.

3.4.1 Remedial Measures

The hazard from tsunamis and seiches in San Diego Bay is considered low. To our knowledge, coastal structures in and around San Diego Bay do not include design considerations for tsunamis nor seiches. An extreme tsunami or seiche resulting from a strong local earthquake could damage existing coastal facilities and also result in strong currents and/or waves overtopping quay walls with some associated flooding. However, these possible events are not likely to produce substantial damage to facilities located several hundred feet back from the shoreline. Therefore, special design considerations for tsunamis or seiches do not appear warranted for the Navy Broadway Complex.

4.0 GEOTECHNICAL CONSIDERATIONS

Preliminary foundation alternatives were evaluated in our previous geotechnical investigation for the Broadway Complex. In the following paragraphs we present an updated discussion of possible foundation types and dewatering.

4.1 Soil Conditions and Subsurface Construction Options

The existing ground surface at the site is relatively flat with surface elevations +9 to +12 feet (MSL). The groundwater levels at the site are tidally influenced, but typically are in the elevation range of 1/2 to 2 1/2 feet above MSL Datum. The soil profile typically consists of fill over bay deposits over Pleistocene marine terrace materials. The Pleistocene materials are competent bearing material for deep foundations or shallow footings. This bearing strata is typically encountered at elevation of -10 to -15 feet MSL. The overlying materials are potentially liquefiable and moderately compressible, but have and are supporting one- and two-story structures.

Construction of a single level below grade can probably be accomplished with little or no dewatering, with support of the buildings on pilings and use of a structural floor system. Construction of two levels below grade will require construction dewatering, pile foundations and structural floor system to support building loads and to resist uplift water forces on the order of 7 to 10 feet. Waterproofing of floors and walls will be required. It will probably take a 3 level below grade structure to completely penetrate all loose compressible and liquefiable soil. At this depth and at greater depths, dewatering will be needed during construction and a very strong mat or structural floor system will be required to resist 16 to 20 feet of uplift force. Waterproofing of walls and floor will be required.

We have prepared an order-of-magnitude estimate relative to cost differences for various foundation treatments. At depths of one and two levels below grade, the pile foundations and structural floor slab costs are probably roughly equivalent to a hydrostatic mat (assuming a five or six level structure and basement floor slab good for 500 psf loading). At a depth of three levels below grade (where bearing capacity of the soils is sufficient to support the structure on spread footings and could permit use of a 6-inch thick, unreinforced floor slab) the hydrostatic mat is on the order of 6 to 7 times more expensive than the cost of spread footings, a floor slab, and the capital cost of installing a permanent dewatering system.

4.2 Dewatering

As discussed above, construction of two levels below grade will require dewatering for construction purposes. However, permanent dewatering systems with discharges to San Diego Bay are no longer allowable. Temporary dewatering for construction purposes could also potentially impact adjacent off-site areas. Therefore the effects of construction dewatering should be limited to on-site areas as closely as possible. Based on our experience on previous projects along and near the bay, the following are general considerations and possible options for construction dewatering:

- Deep wells have been used on similar sites to do construction dewatering and appear feasible for the Broadway Complex site.
- It may be possible to use well points and ground sumps and/or pumps for localized areas which could reduce potential off-site impacts.
- Some groundwater contamination is known at nearby areas. Any encountered contaminated groundwater would require treatment of water removed.
- A perimeter cutoff with slurry wall would significantly reduce inflow to dewatering system. It appears possible to use sheetpile to shore excavations and to provide perimeter cutoff of groundwater on a temporary basis (i.e. during construction). The sheetpiles need to be driven deep and the interlocks grouted.
- Reinjection wells to put groundwater back into ground and maintain groundwater levels around the outside of the construction area was only marginally successful at other sites along the bayfront. If this method is proposed to mitigate potential consolidation settlement at nearby sites, the design, construction and generation of reinjection wells needs careful attention and special expertise.

4.3 Permitting

4.3.1 Dewatering Discharge During Construction

On April 23, 1990 the Regional Water Quality Control Board - San Diego Section (RWQCB) adopted Order Number 90-31 (Order). This Order defines the general requirements for groundwater dewatering discharges to San Diego Bay (and its tributaries). This Order also establishes a ban on all new permanent dewatering systems which would discharge to San Diego Bay. However, the Order does not prohibit construction dewatering provided specific guidelines and requirements of the Order are complied with.

New construction projects which require dewatering will be required to submit an application to the RWQCB requesting authorization for discharge under authority of the National Pollution Discharge Elimination System (NPDES) Permit No. CA0108707. The application is to be prepared in the form of a letter, specifically addressing each item presented in RWQCB Order No. 90-31. In brief, the Order requires the applicant to comply with the following:

- Acknowledgement that the specific discharge prohibitions will be complied with;
- Development of a treatment system, or adequately demonstrate compliance with specific discharge effluent limitations;
- Adequate justification supporting compliance with limitations (water quality objectives) on impact and affect to receiving waters;
- Acknowledgment of specific provisions in the Order with a statement of compliance to achieve those provisions (i.e., by-pass conditions, upset conditions, documentation, etc.);
- A program to fulfill specified monitoring and reporting requirements; and

- A letter signed by a licensed engineer certifying the adequacy of the treatment system to achieve compliance with the Order, including required manuals, contingency plans, and monitoring programs.

Subsequent to submittal of the above described applications, RWQCB staff will review the information for its completeness relative to the Order and if satisfactory, staff will issue a letter authorizing discharge of groundwater for a specific construction period. Factors important to receipt of the authorization letter include the following:

- Maximum groundwater discharge flowrate;
- Accurate estimate of dewatering period (length of time);
- Certification that contaminant mass loads⁵ will comply with the Ocean Plan and the San Diego Basin Plan; and
- Reasonable, practicable contingency plans.

Based on Woodward-Clyde Consultant's experience (San Diego Convention Center), a project of this size (approximately 16 acres) and proximity to the bayfront may require at or near 250 gallons per minute of groundwater discharge for each of the 4 city blocks to adequately dewater the area during construction.

4.3.2 Soil Removal

Excavation and removal of soil could be addressed by the excavation contractor in two phases. As necessary, Phase I would address those areas contaminated with hazardous and/or petroleum hydrocarbon waste material. If soil is found at this site contaminated with hazardous materials (i.e., RCRA listed or characteristic waste material as defined in the Code of Federal Regulations, Chapter 40, Subpart C & D and/or California Waste identified in the California Code of Regulations, Title 22), the soil must be treated to meet

⁵ A contaminant mass load is equivalent to the actual cumulative mass of contaminant being discharged per unit time (i.e., pounds of petroleum hydrocarbons per 24 hours).

current Federal and State and disposal requirements and disposed of at an appropriately licensed landfill. If the soil is contaminated with petroleum hydrocarbons, the excavation contractor may select one of several alternatives, including the following:

- Bioremediate the petroleum hydrocarbon contamination under approval from the County Department of Health Services (CDOHS) and dispose off-site at a landfill whose operator has been informed of the nature of the contamination and the resultant characteristics of the treated soil;
- Arrange for other suitable CDOHS approved on-site treatment and off-site disposal;
- Contract for off-site treatment and disposal with a licensed treatment facility.

Phase II soil removal would address non-contaminated soil. The excavation contractor would be required to identify off-site users of excavated soils and arrange for processing (spreading out the material for sun-drying, mechanical discing and/or other appropriate soil processing techniques) prior to alternative use. Phase II may not require CDPHS approval, rather it is dependant on the requirements of those parties purchasing and/or accepting the fill material.

5.0 REFERENCES

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TABLE 1

ABRIDGED MODIFIED MERCALLI INTENSITY SCALE
INTENSITY VALUE AND DESCRIPTION*

- I) Not felt except by a few under especially favorable circumstances. (I Rossi-Forel Scale).
- II) Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. (I to II Rossi-Forel Scale).
- III) Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel Scale).
- IV) During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably. (IV to V Rossi-Forel Scale).
- V) Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (I Rossi-Forel Scale).
- VI) Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster and damaged chimneys. Damage slight. (VI to VII Rossi-Forel Scale).
- VII) Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars. (VIII Rossi-Forel Scale).
- VIII) Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. (VIII+ to IX Rossi-Forel Scale).
- IX) Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX+ Rossi-Forel Scale).

* Wood and Neumann, 1931.

- X) Some well built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks. (X Rossi-Forel Scale).
- XI) Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
- XII) Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into the air.

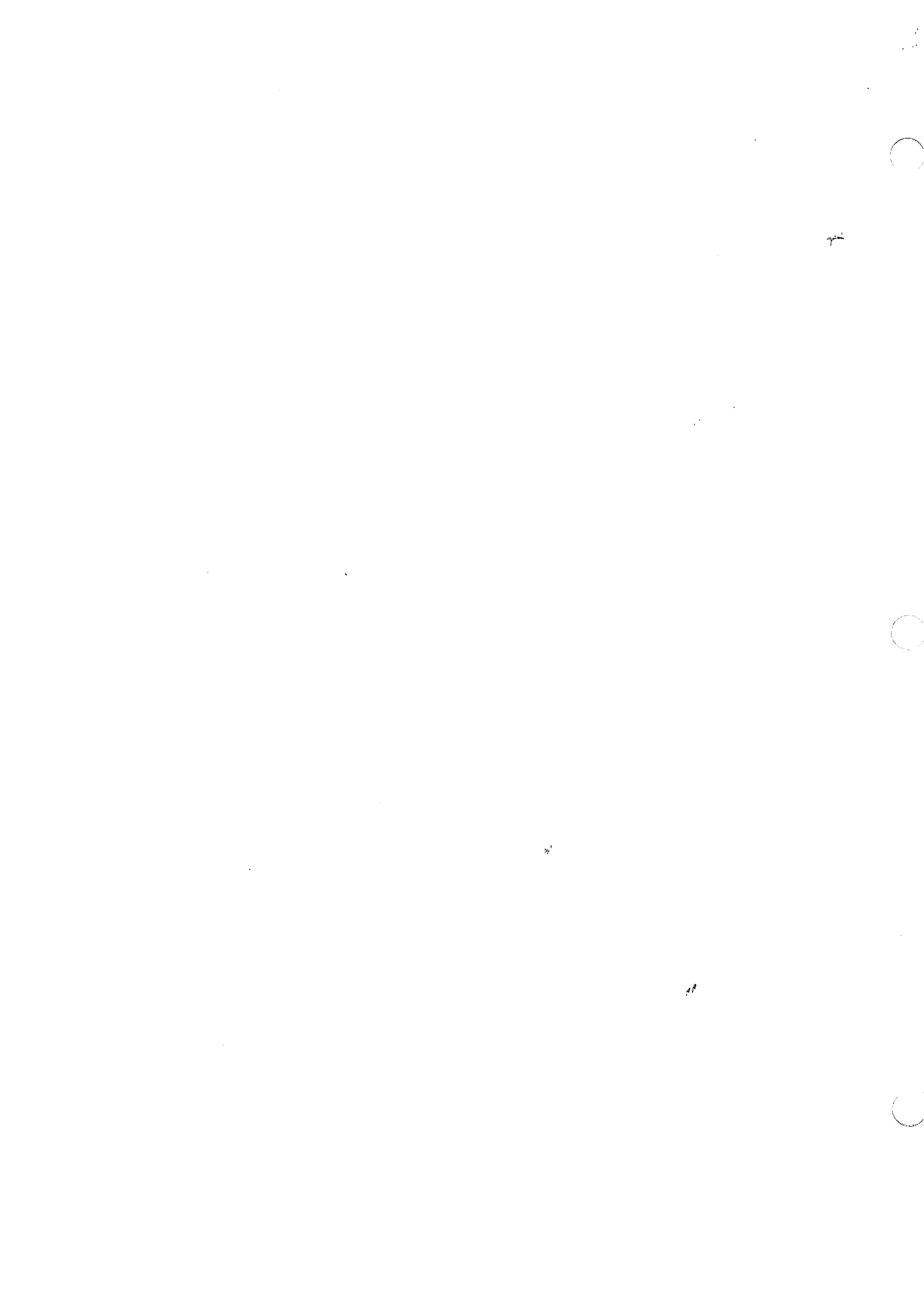
TABLE 2
SEISMIC SOURCES SUMMARY

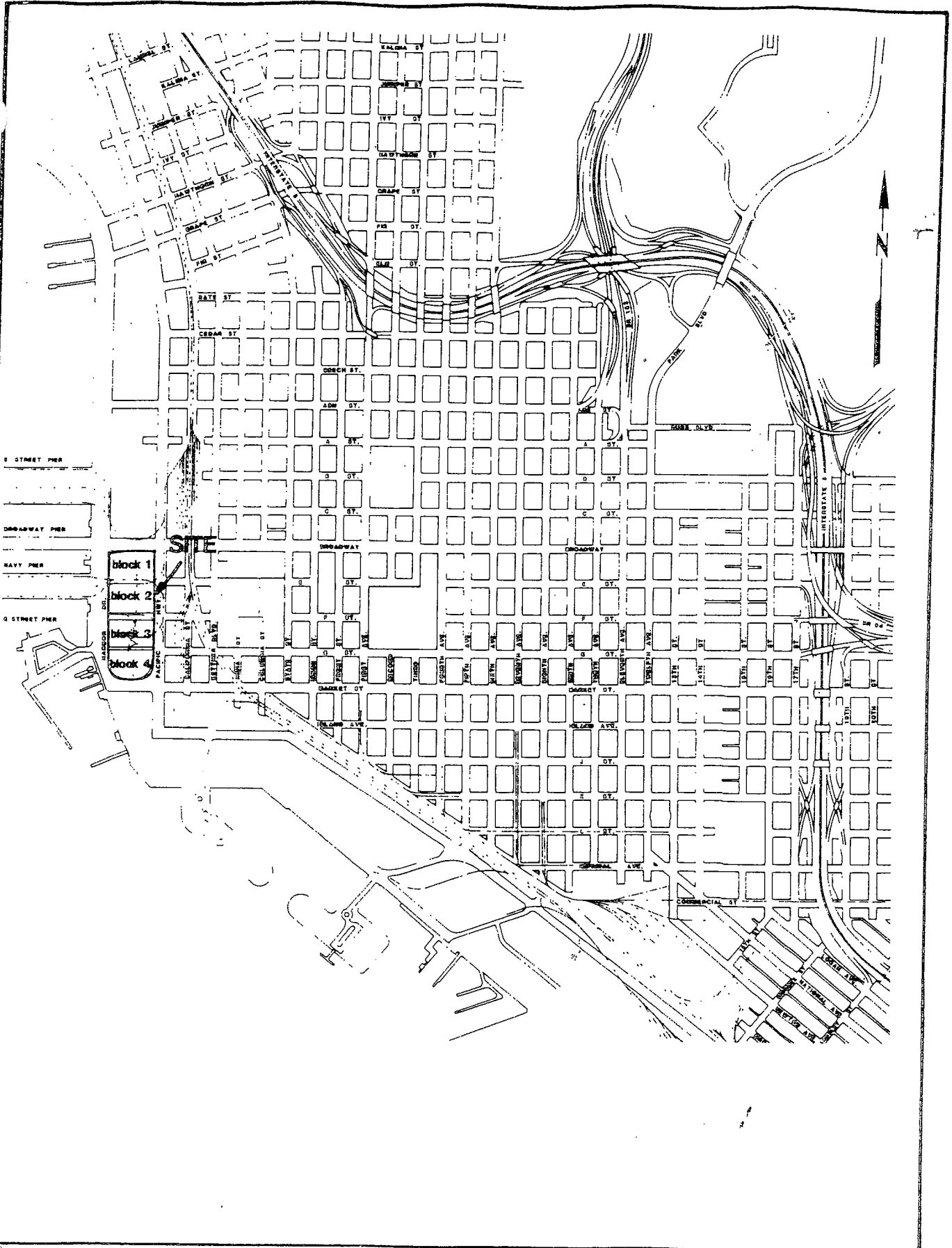
Source Name	Primary Displacement	Estimated Length, miles	Closest Distance From Site, miles	Slip Rate mm/yr	Estimated Maximum Magnitude
Rose Canyon	Strike-Slip and Oblique	50	0.5 - 1.0	1.2-1.9	7
La Nacion	Normal	16	7	0.05	6 1/2
Coronado Bank	Strike-Slip	156	13	3.0	7 3/4
San Diego Trough	Strike-Slip	156	24	1.0	7 1/2
SCOZD	Strike-Slip	43		0.5	7
Elsinore	Strike-Slip	194	41	5.0	7 1/2
San Jacinto	Stike-Slip	160	60	8.0	7 1/2
San Andreas (South Segment)	Strike-Slip	>200	90	25.0	8
Agua Blanca	Strike-Slip	90	60	4.0-6.0	7 1/2
San Miguel	Strike-Slip	60	90	0.5-2.0	7

TABLE 3
TSUNAMIS RECORDED AT SAN DIEGO

Earthquake Magnitude	Date	Epicenter	Approximate Height at San Diego
(?)	Aug. 13, 1868	N. Chile; So. Peru	1.0 ft.
8.3	Nov. 10, 1922	Atacama, No. Chile	1.3 ft.
8.3	Feb. 4, 1923	Kamchatka	1.3 ft.
7.4	Apr. 1, 1946	Aleutian Islands	1.3 ft.
8.25	Nov. 5, 1952	Kamchatka	2.3 ft.
8.0-8.5	Mar. 9, 1957	Aleutian Islands	1.5 ft.
8.25-8.5	May 22, 1960	So. Chile	4.6 ft.
8.4	Mar. 27, 1964	Alaska	3.7 ft.

Source: Joy, 1968





VICINITY MAP
 NAVY BROADWAY COMPLEX

DRAWN BY: *dm*

CHECKED BY: *ds*

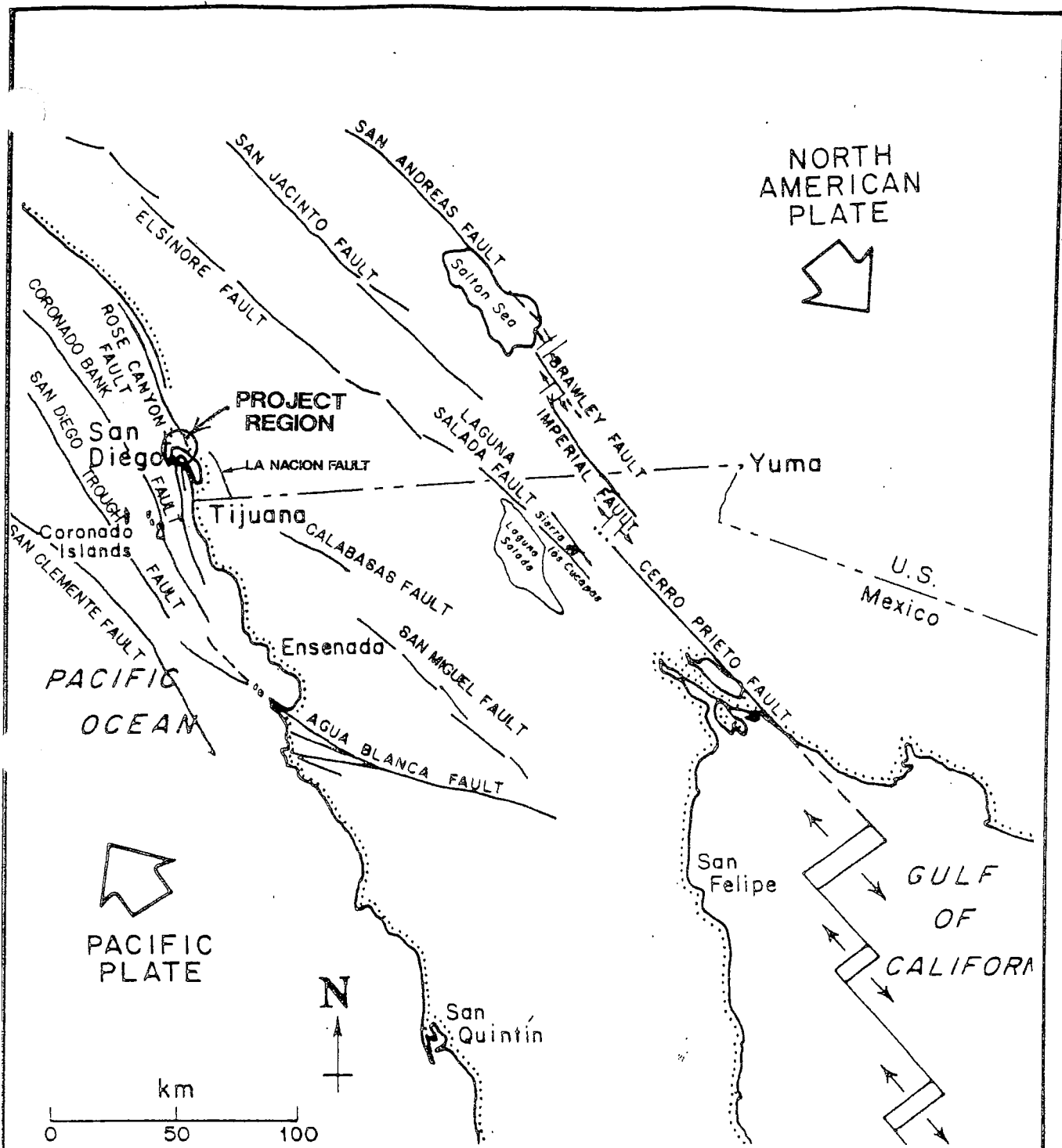
PROJECT NO: 9051207D-GE01

DATE: 8-24-90

FIGURE NO: 1

WOODWARD-CLYDE CONSULTANTS



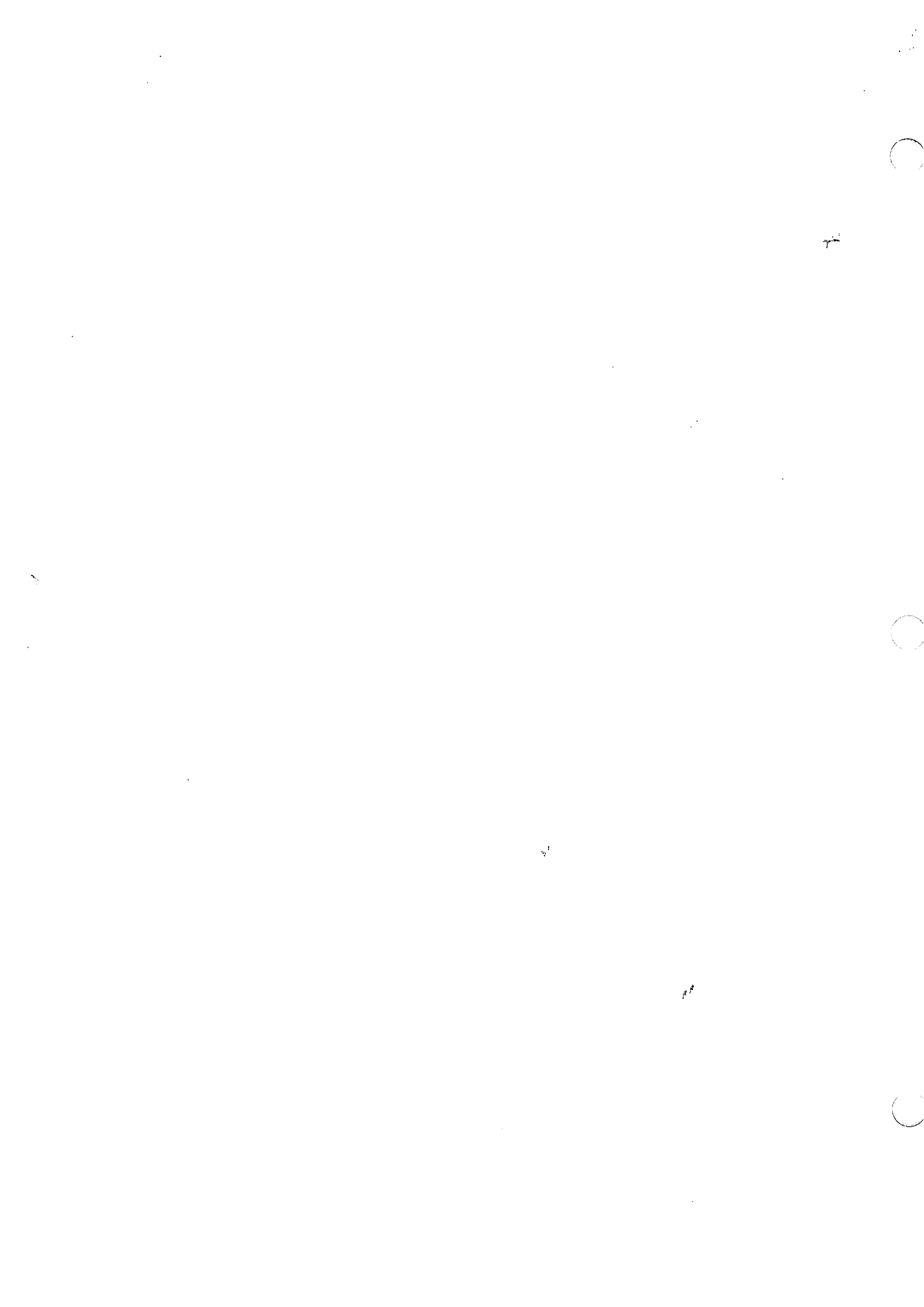


(Modified after Brune and Simons, 1979)

**GENERALIZED REGIONAL FAULT MAP
NAVY BROADWAY COMPLEX**

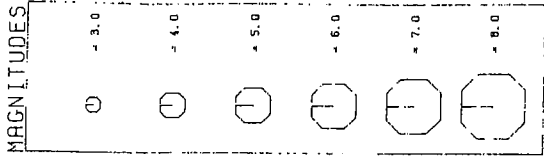
DRAWN BY: cb	CHECKED BY: LA	PROJECT NO. 9051207D-GE01	DATE: 8-24-90	FIGURE NO: 2
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WOODWARD-CLYDE CONSULTANTS



The earthquake data are from California Division of Mines and Geology Pre-1900 and 1900-1974 files and California Institute of Technology 1975-June 1985 file. Base fault map compiled by CDMG and UCSD (1984)

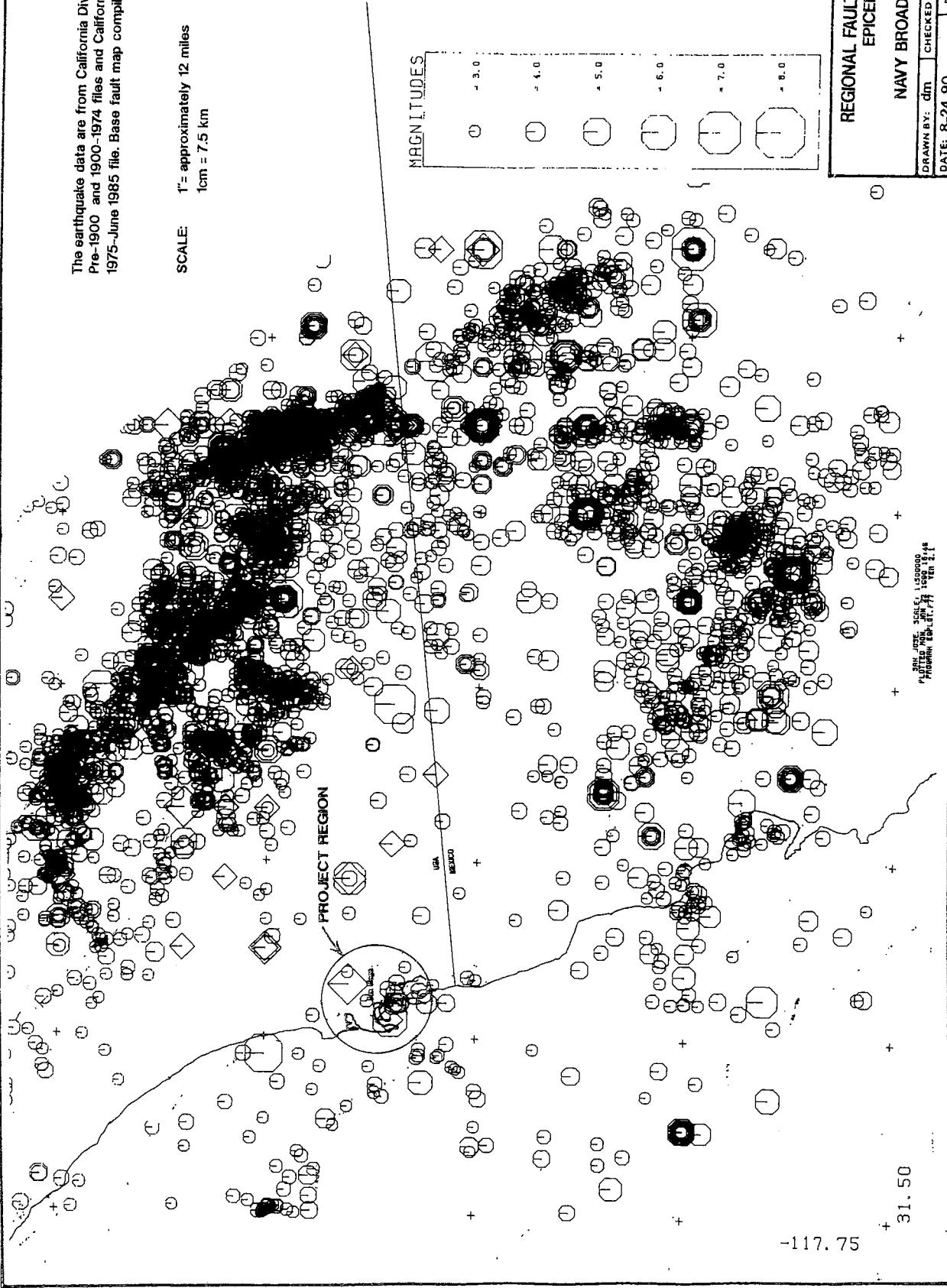
SCALE: 1" = approximately 12 miles
1cm = 7.5 km



REGIONAL FAULT AND EARTHQUAKE
EPICENTER MAP
NAVY BROADWAY COMPLEX

DRAWN BY: dmm CHECKED BY: d/s FIGURE NO: 3
DATE: 8-24-90 PROJECT NO: 9051207D-GEO1

WOODWARD-CLYDE CONSULTANTS

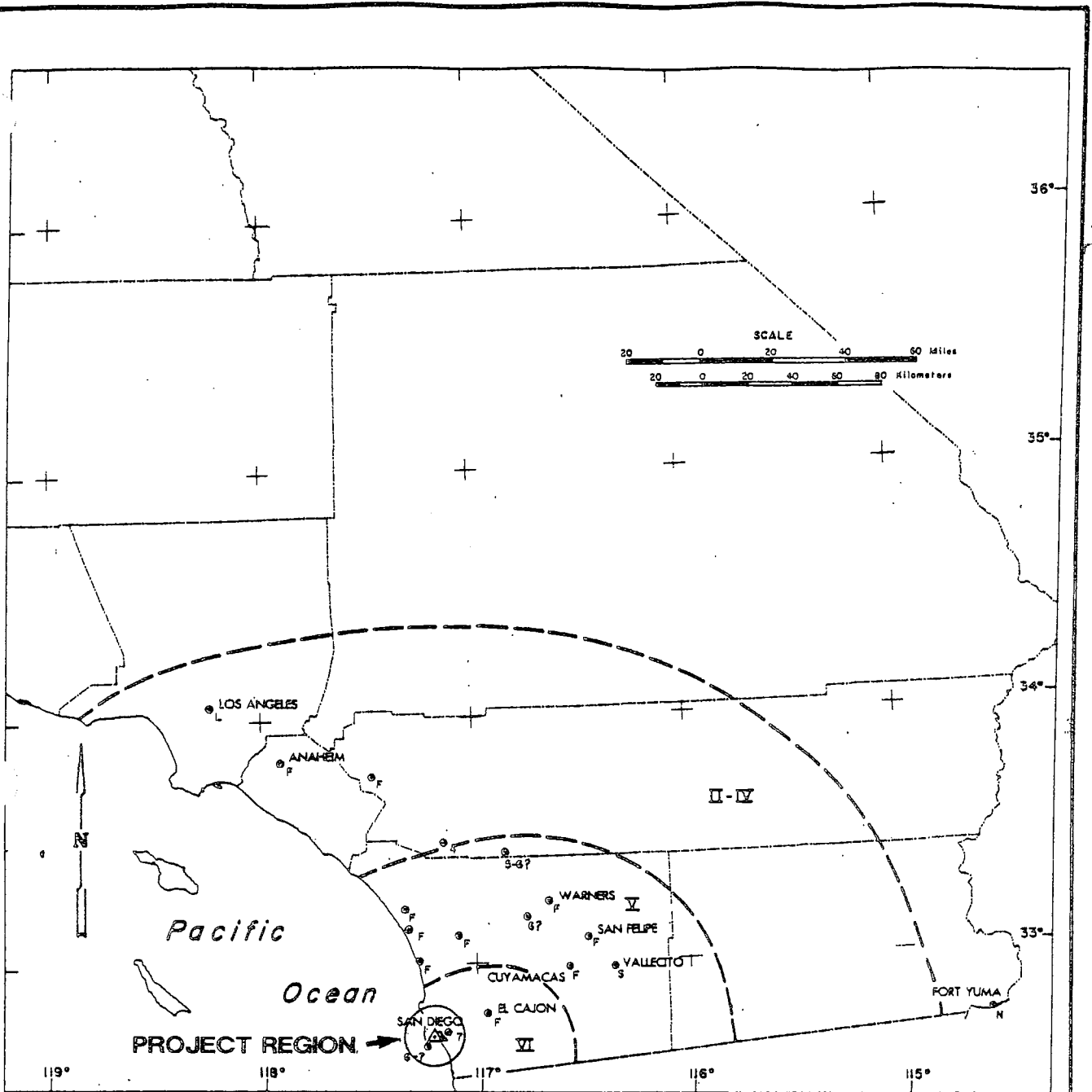


SCALE: 1" = 12 MILES
1:50,000
PROJ. SYST.: UTM
MERIDIAN: 117° W

-117.75

+ 31.50





- ₅ Site reporting intensity 5 effects
 - _N Reported not felt
 - Y Zone of intensity 5 effects
 - △ Estimated epicenter
 - _F Felt
 - _L Light
 - _H Heavy
 - _S Severe
- } Indeterminate intensity
- Smoothed isoseismal line, dashed where data is lacking

From: Topozada and others, 1981

**MODIFIED MERCALLI ISOSEISMAL MAP
1862 EARTHQUAKE
NAVY BROADWAY COMPLEX**

DRAWN BY: cb CHECKED BY: PROJECT NO: 9051207D-GE01 DATE: 8-20-90 FIGURE NO: 4

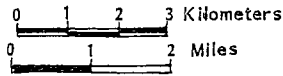
WOODWARD-CLYDE CONSULTANTS



LEGEND:

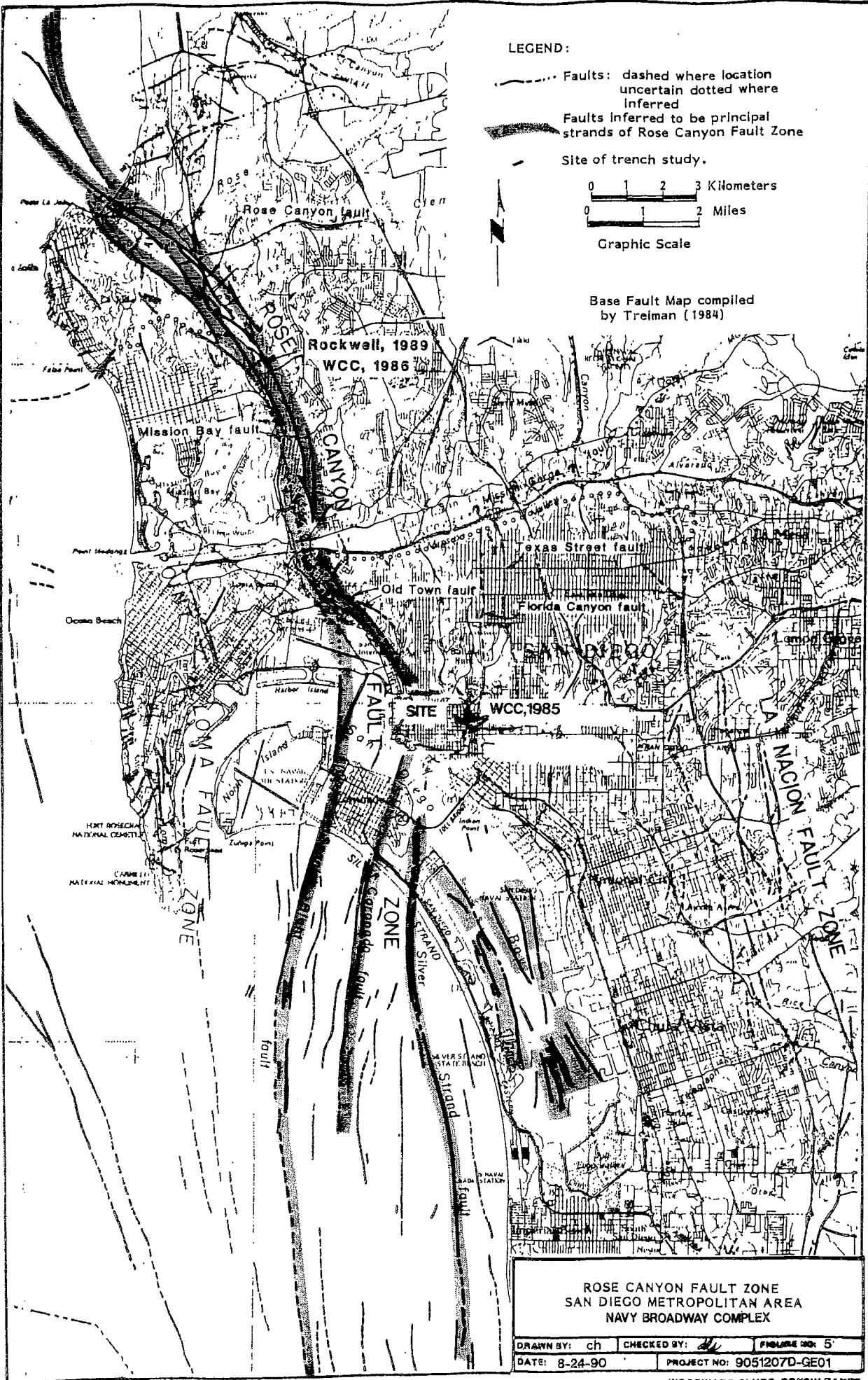
- - - - - Faults: dashed where location uncertain dotted where inferred
- Faults inferred to be principal strands of Rose Canyon Fault Zone

Site of trench study.



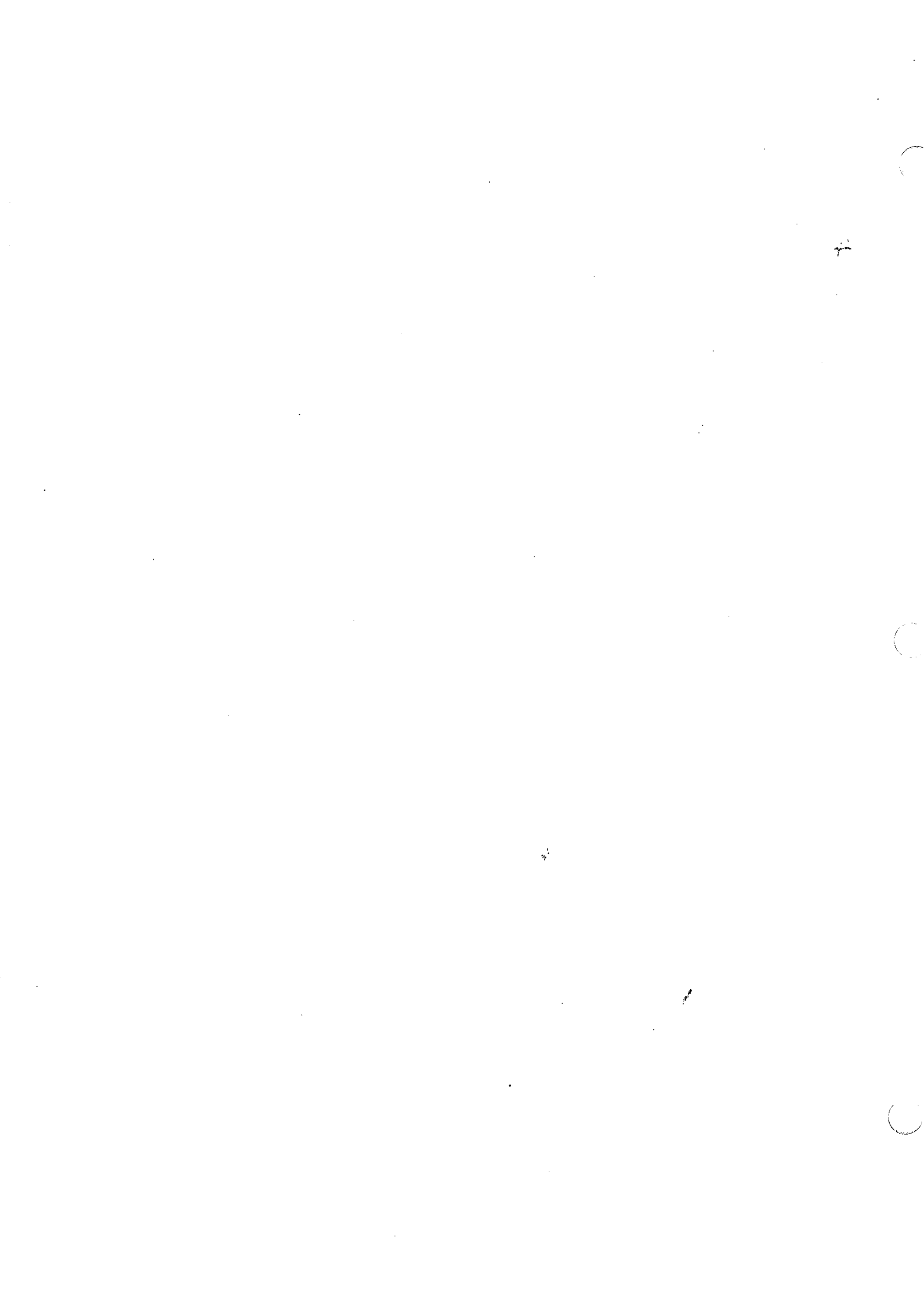
Graphic Scale

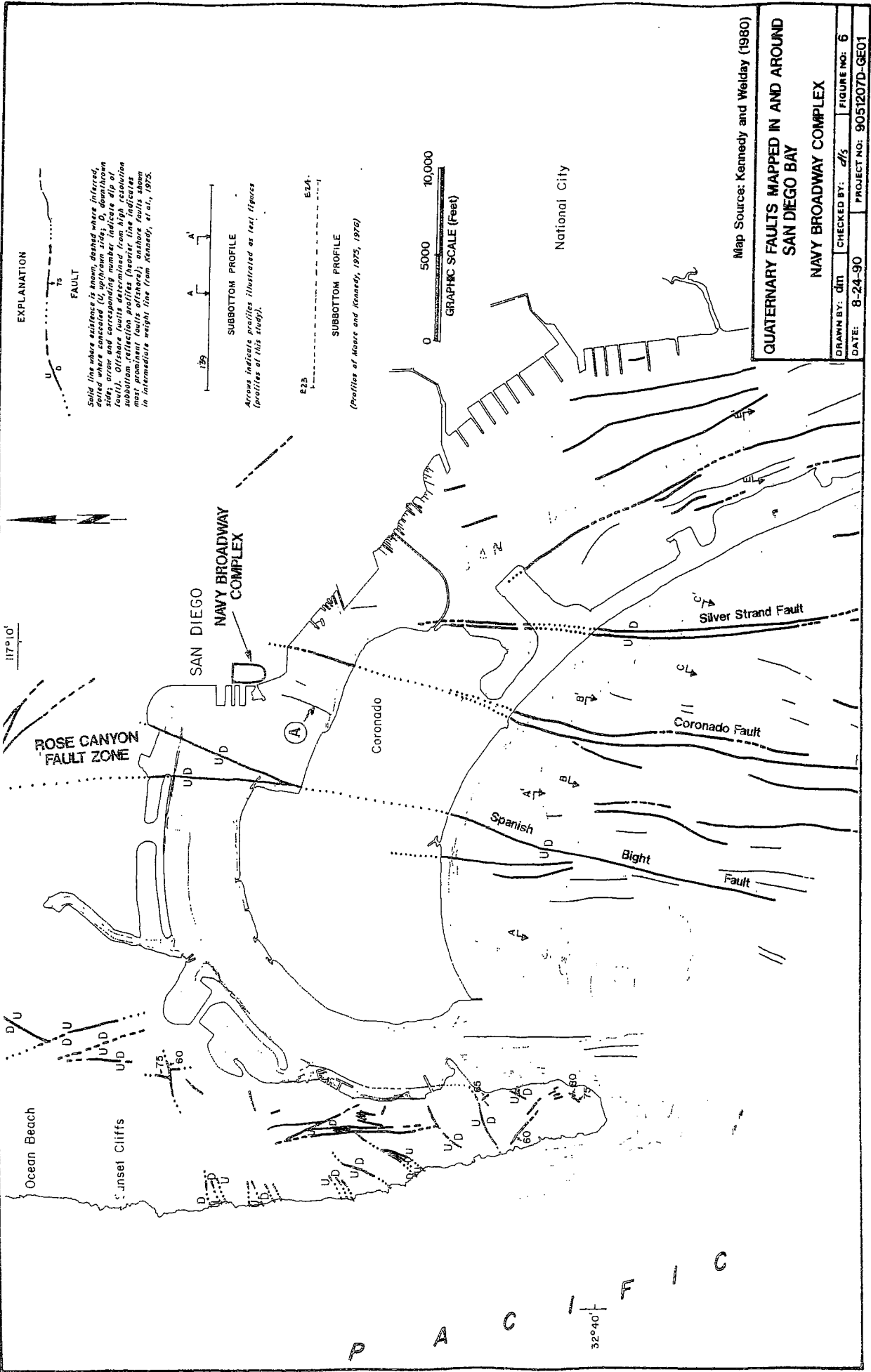
Base Fault Map compiled by Treiman (1984)



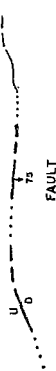
**ROSE CANYON FAULT ZONE
SAN DIEGO METROPOLITAN AREA
NAVY BROADWAY COMPLEX**

DRAWN BY: ch	CHECKED BY: <i>[Signature]</i>	FIGURE NO: 5	
DATE: 8-24-90	PROJECT NO: 9051207D-GE01		



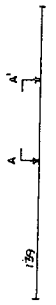


EXPLANATION



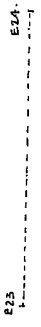
FAULT

Solid line where existence is known, dashed where inferred, arrow where concave (U, upthrown side; D, downthrown side) and corresponding number, indicate dip of fault. Offshore (refraction profiles) (heavy line) and onshore (refraction profiles) (light line) indicate most prominent faults offshore; onshore faults shown in intermediate weight line (from Kennedy, et al., 1975).



SUBBOTTOM PROFILE

Arrows indicate profiles illustrated as text figures (locations at this study).



SUBBOTTOM PROFILE

(Profiles of Moore and Kennedy, 1975, 1976)

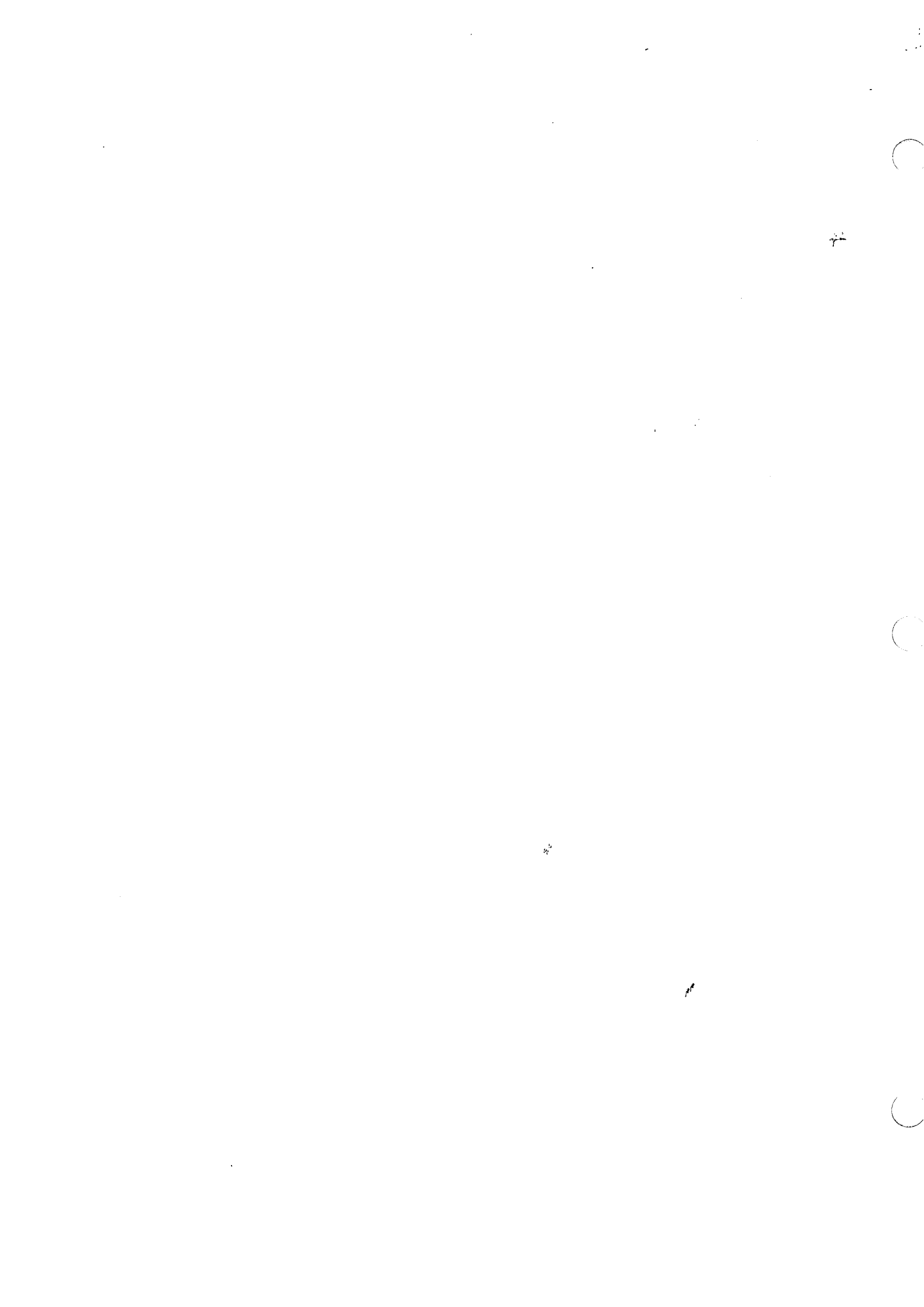


Map Source: Kennedy and Weiday (1980)

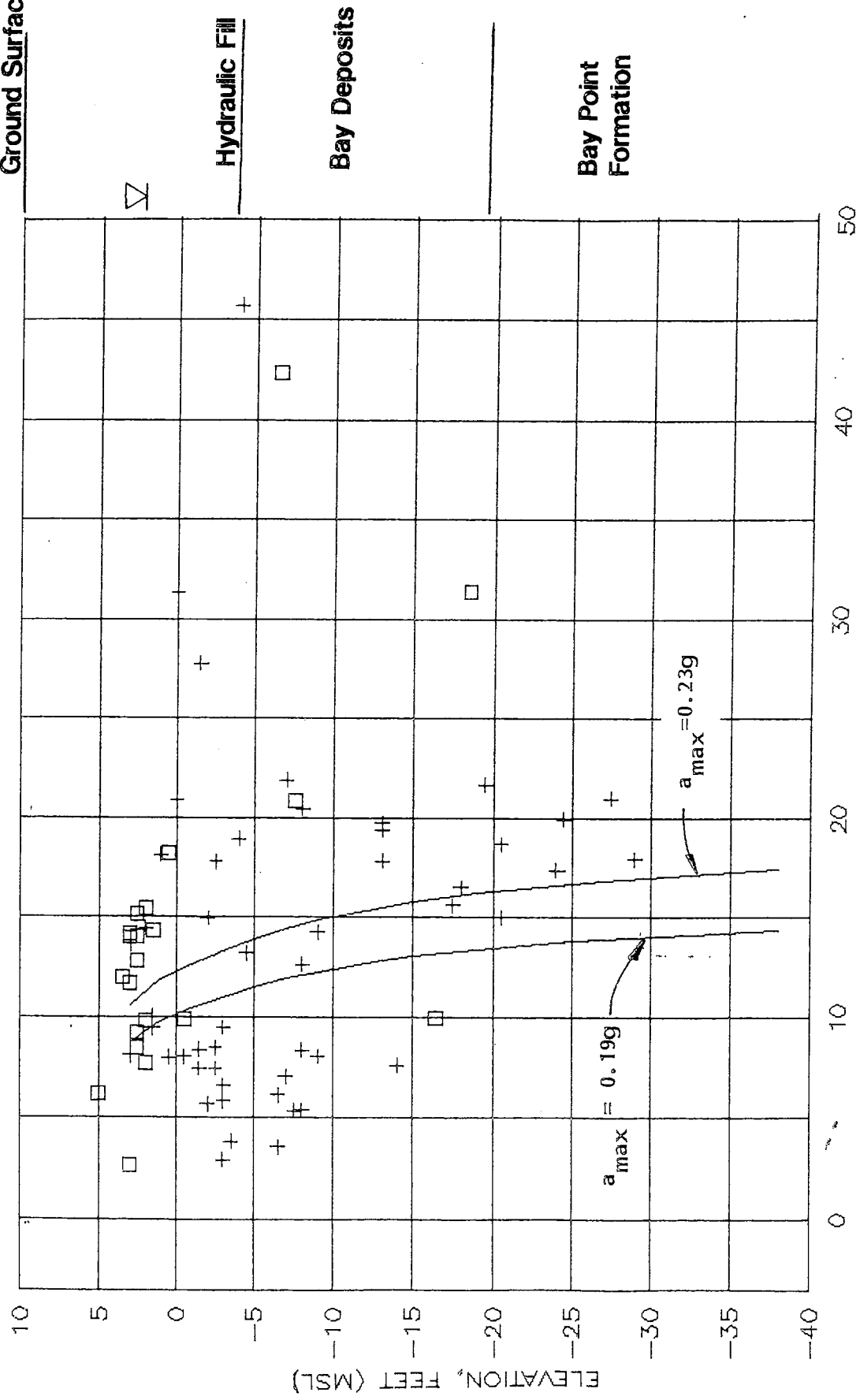
**QUATERNARY FAULTS MAPPED IN AND AROUND
SAN DIEGO BAY
NAVY BROADWAY COMPLEX**

DRAWN BY: dmt	CHECKED BY: J/S	FIGURE NO: 6
DATE: 8-24-90	PROJECT NO: 9051207D-GE01	

WOODWARD-CLYDE CONSULTANTS



TYPICAL GEOLC
PROFILE
Ground Surface



CORRECTED BLOW COUNT, (N1)

LEGEND:

SOIL TYPES

- SP, SP-SM
- + SM, SW, ML, SM-ML

(Data from geotechnical investigation by WCC, 1988)

SUMMARY OF EVALUATION OF LIQUEFACTION POTENTIAL
NAVY BROADWAY COMPLEX

DRAWN BY: cb CHECKED BY: [Signature] PROJECT NO: 9051207D-GE01 DATE: 8-17-90 FIGURE NO: 7



SECTION 5

ADDITIONAL RECIPIENTS OF THE DRAFT AND
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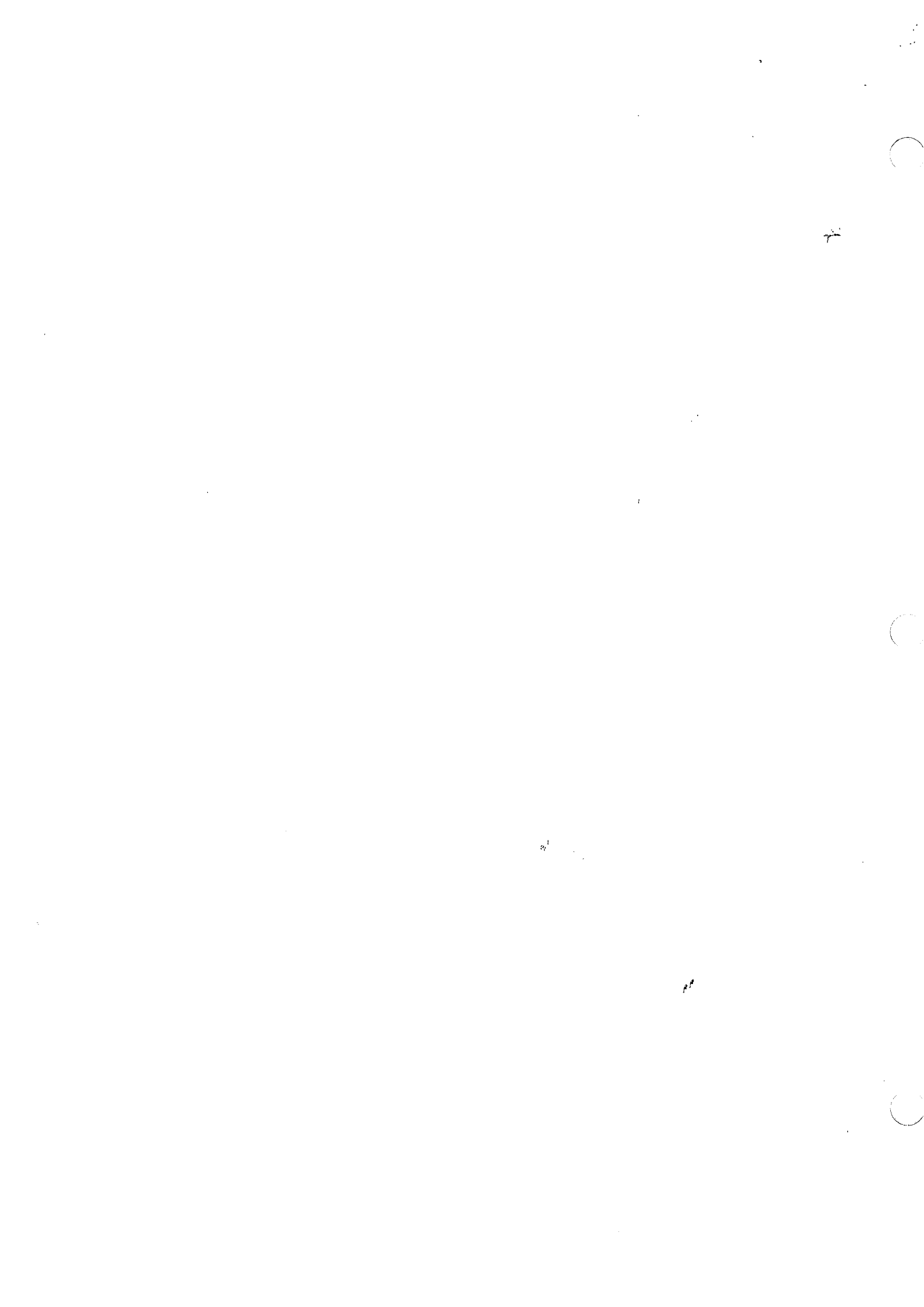
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SECTION 6
ADDITIONAL REFERENCES

Section 4 of the appendix provides references used to prepare the additional geologic, seismic, and geotechnical studies for the project. In addition to those references, the following references were used in preparation of this appendix:

San Diego, City of. 1990. Interim Centre City San Diego Development and Design Ordinance.

San Diego, City of. 1990. Preliminary Centre City San Diego Community Plan.

