Designing National City

Spring 2015 • CP 700: The Urban Design and Land Use Planning Studio

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Disclaimer

This report represents original student work and recommendations prepared by students in San Diego State University’s Sage Project for the City of National City. Text and images contained in this report may not be used without permission from San Diego State University.

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About The Sage Project

The Sage Project is a partnership between San Diego State University (SDSU) and a city or government entity in the San Diego region. The mission of the program is to engage students from across the University in assisting a local government with projects that address their smart growth, quality of life, and sustainability goals. As part of the Sage Project, students have the opportunity to engage in meaningful real-world projects and make positive contributions to a community in SDSU’s service area. Specifically, the program’s vision is to connect SDSU students and faculty with high-priority, high-need community projects, thereby generating interest and fresh ideas that create momentum and provide a real service to the community. The Sage Project embodies the University’s commitment to serving local students, engaging alumni, and contributing to the public good by focusing thousands of hours of course-based student involvement with high-impact activities. The program is based on the highly successful and award-winning Sustainable City Year Program (SCYP) at the University of Oregon and is a part of the SCYP network. National City, California, is the Sage Project’s partner city for the 2013–14 and 2014–15 academic years. Participating courses come from the following disciplines: Anthropology; Audiology; Child and Family Development; City Planning; Civil Engineering; Communication; Exercise and Nutrition Science; Geography; Graphic Design; Homeland Security; International Security and Conflict Resolution; Marketing; Political Science; Public Administration; Public Health; Recreation and Tourism Management; and Speech, Language, and Hearing Sciences.

About National City

National City is a highly urban community of about 60,000 residents in south San Diego County. It is the second oldest city in the county and boasts a rich history, a diverse community, and is known as one of the most walkable cities in San Diego County. Located just south of downtown San Diego and just north of the US–Mexico border, the city is flanked by freeways and is home to large-scale industries. National City is a mid-size city that faces big city challenges, and, like many municipalities, the city is challenged to meet community needs and new demands of sustainability.
Executive Summary

Five teams of graduate students in the Urban Design and Land Use Planning Studio class at San Diego State University prepared design concepts for various project sites around National City, California. In this project, students and faculty collaborated with city representatives to identify core areas of potential “smart growth” development opportunities within National City. The paper provides a description of existing conditions within National City, including land use and socio–economic conditions. These data were analyzed as part of the design process, along with input from National City personnel and design professionals. The designs generated in this class were intended to provide a vision of what existing areas of the city could look like in the future with funding initiatives and correctly implemented smart growth development techniques. Several key themes emerged while preparing the designs for each site, including the importance of National City’s need for historic preservation of important sites and roadway, a lack of affordable and available housing for all population demographics, a lack of employment opportunities within the city, safety issues associated with auto–dominated roadways and underutilized public transportation, and a lack of parks and green space for residents and visitors.

Ten major design recommendations are provided, based on an analysis of the five groups’ project site designs. These recommendations include the creation of transit–oriented–development sites, affordable housing units, green streets and park spaces, pedestrian corridors, and pedestrian paseos. Similarly, designs advocate for the creation of a lifestyle center, access and activity to civic and historic areas, and redesigns of several roadways and intersections. The designs also stress the importance of natural resource restoration to attract residents and visitors to the city. A brief discussion describes funding mechanisms for smart growth initiatives, and an analysis of existing and underutilized resources within National City. Specific funding alternatives, such as a military private–public partnership, smart growth grants, and Low Income Investment Funds are described. The paper concludes with a section that contains feedback from the design jury panel with their specific recommendations for the student projects and development opportunities within National City.
1.0 Introduction

National City is the second oldest city in San Diego, incorporated in September 1887 and is comprised of approximately 9.1 square miles of both land and water. The city was founded and developed around the burgeoning railroad industry at the turn of the century, largely funded by the Kimball Family. The abundance of resources and investment in infrastructure and city development led to National City becoming arguably the most influential city in the region during the late nineteenth century. The beauty and grandeur of the architectural style currently found in the Heritage Square buildings symbolizes this period of development and economic prosperity during this time.

Unfortunately, the Kimball Family’s generosity was both their greatest strength and the cause of their decline because the people who borrowed money failed to make financial reimbursement from past loans—the family went bankrupt in 1897. While the downtown San Diego area developed around the increased military presence in San Diego under the expansion of the Port area, National City experienced many economic hardships. Specifically, the Great Depression dealt a blow to National City’s economy, from which it was difficult to recover.

In the last thirty years, National City has begun to invest in revitalizing the downtown area, including the neighborhood surrounding Heritage Square, through the improvement of key historic sites. Since that time private investment and bonds have been passed to pay for improvements, as evidenced by current construction. While efforts in the last 10 years have focused on improvements to a safer streetscape of nearby National City Boulevard, improvements are now focused on the 8th Street Corridor and its intersecting streets.
1.1 National City Today

Today, the city is generally home to working-class, low-income residents with a significant military presence due to the nearby base and industrial areas. Of the nearly 17,200 households in National City, the mean income of residents is approximately $41,864, which is the lowest in San Diego County. The National City Housing Element of the General Plan indicates the need for a total of 1,863 housing units in the next 20 years, with specific need for military housing, single-family homes, apartments, and housing for special needs groups. National City has a significant number of overcrowded (18%) and overpaying (53%) households as well, with nearly 60% of renters overpaying for rent. Though projects such as the 8th Street Corridor Improvement Program have developed specific areas for multi-modal (bicycle, public transit, pedestrian) travel, there is still opportunity for further improvement.

Within the last decade, National City has championed smart growth development (described in the following section) to deal with its auto-centric nature, improve public transportation, and renovate existing historical sites.

Site development is an important part of city revitalization efforts, and especially so in a changing and diverse city such as National City. Urban design considers structures and facilities constructed on a site as well as private and public decisions and the interconnectedness of these decisions within the greater community.

1.2 Smart Growth and New Urbanism

Smart growth design promotes mixed land uses, takes advantage of compact building design, fosters distinct, attractive communities with a strong sense of place, strengthens and directs development toward existing communities, and creates a range of housing opportunities and choices. From a sustainability perspective, smart growth promotes the preservation of open space and critical environmental areas. It also promotes a variety of transportation choices, including public transit, cycling, and walking. Importantly, smart growth encourages a democratic process that involves all stakeholders and where the development decision processes are transparent, predictable, cost effective, and fair to all residents in the community.

“New urbanism” is a design movement developed in the 1970s by planning professionals who sought to develop a new version of the city–country balance and move away from the suburban, car-focused American dream. Whereas smart growth is focused on maximizing investment in existing resources, new urbanism is an aesthetic that focuses on design form but does not concern itself with regional growth plans. Similar to smart growth, new urbanism suggests the restoration of existing urban centers through infill development and makes several specific design practices focused on place-making strategies.
These include the promotion of transit–oriented development, a mix of residential opportunities (of varying densities and building types), intelligent street design, a street and circulation system oriented towards a center, open space resource protection, and establishing urban growth boundaries. The site and buildings should be developed in such a manner as to conserve energy, rather than expend it.

1.3 Project Goals

The city’s goal for the collaboration between its representatives and the San Diego State University (SDSU) City Planning department’s studio design class included the preparation of design plans to assist city staff, community members, and other key stakeholders in identifying opportunities and constraints related to an urban design plan. The city desired an in–depth examination of underutilized resources in the community and how effective urban design could improve social aspects of the city’s development. The designs generated in this class are intended to provide a vision of what existing areas of the city could look like in the future with funding initiatives and correctly implemented smart growth development techniques.

In this project, students and faculty collaborated with city representatives to identify core areas of potential smart growth development opportunities within National City. These areas were selected to maximize existing resources, such as roadways and utilities, and minimize urban sprawl and the destruction of green space. A total of five areas were selected for study within the downtown and waterfront areas in the western part of National City and are described in Section 2.0 of this report. While each project site varied in their location, size, and opportunities and constraints, several common issues emerged during classroom discussions with Brad Raulston regarding site re–development. These issues included:

- National City’s need for historic preservation of important sites and roadways;
- The lack of affordable and available housing for all population demographics;
- A lack of employment opportunities within the city;
- Safety issues associated with auto-dominated roadways and underutilized public transportation; and
- A lack of parks and green space for residents and visitors.

These issues, in addition to several others, were considered during the design proposals created specifically for each project site.
1.4 Site Selection and Analysis

The studio design project sites in National City were selected from potential smart growth locations identified by planning professionals from all jurisdictions in the county as part of the San Diego Association of Government (SANDAG) regional planning process. Site-specific design was created on the basis of smart growth and new urbanism approaches. Students were encouraged to perform site reconnaissance to experience the site as a vehicular driver, public transit user, cyclist, and pedestrian. Site reconnaissance included photographs, written observations, and interviews of both residents and local government representatives. These observations and interviews were considered while preparing recommendations for the final studio project in the form of a design report.

Students were encouraged to review existing community plans and proposed development plans for the area in addition to other pertinent documents prepared for National City to ensure their recommendations were consistent with existing design plans. As part of the final design report, students used land use maps and aerial photographs and created renderings of their proposed designs in the existing location in National City. The renderings were created using design software, such as the geographic information system (GIS) program ArcGIS, Google SketchUp® and InDesign®.

1.5 Document Organization

This document summarizes the content of the student–prepared design reports and is organized into six major sections:

- Section 1.0: Introduction
- Section 2.0: Project Site Descriptions
- Section 3.0: Design Opportunities and Constraints
- Section 4.0: Design Recommendations
- Section 5.0: Discussion
- Section 6.0: Conclusions

Design recommendations were developed by each of the project teams after a thorough assessment of their specific project site needs and deficiencies, opportunities and constraints, and values and priorities. However, design recommendations are presented in this report in a general manner, with specific locations described for each recommendation.
2.0 Project Site Descriptions

The location and a brief description of each project site are summarized in the following section. Land use information and existing conditions are also provided.

2.1 National City Super Smart Block #1: Cody Betts, Sara Toma, Gina Hargrove (CSG)

The National City Super Smart Block (#1) is located within the urbanized zone bordered on the north by 8th Street, to the south by Plaza Boulevard, to the west by National City Boulevard, and to the east by E Avenue as shown in Figure 1. The site is part of the downtown area of National City, which is laid out in a grid pattern with mostly vehicular–oriented streets.

Three major land uses exist in this area: residential, commercial, and mixed–use (commercial below residential units). The residential area begins on 7th Street with areas of residential along 9th Street. Residential units are generally single–family residential along the outer boundaries of downtown.
Commercial properties are located along 8th Street throughout the length of the project area, with businesses, such as McDinis, Niederfrank’s, and Bank of America located in areas north and south of 8th Street.

Mixed-use land use is primarily located along National City Boulevard between 8th Street and Plaza Boulevard. There are currently several crumbling and abandoned buildings, vacant lots, and a lack of parks and open spaces for the residents in the community.

Existing commercial businesses include pawnshops, liquor stores, and auto shops; required services, such as grocery stores with fresh produce, medical facilities, and shopping centers are noticeably lacking in the area. Numerous existing buildings are decaying or abandoned completely and surrounded by chain-link fences and locked gates (shown in Figure 2).

Figure 2
2.2 National City Super Smart Block #2: Marianne Domingo, Chris Stanley, Adrian Zamora

The second National City Super Smart Block project focused on a similar area as the project described in the previous section. However, this project’s boundaries extend to the north to 7th Street, to the south to Plaza Boulevard, to the West to Roosevelt Avenue, and to the east to C Avenue (Figure 3). As described in Section 2.1, many businesses in this area have deteriorating conditions, such as buildings in disrepair with broken windows or that have been vacant for an extended period of time.

Though sidewalks in this area are accessible and walkable, they are incompatible with pedestrian activity. For example, the furniture stores, appliance centers, and auction housing along 8th Street Corridor suggest a vehicle be present in the event of a large purchase. Businesses encouraging pedestrian activity, such as retail stores or grocery shopping, are largely absent from this corridor.
2.3 National City Depot Village: Neda Bourojerdi

The National City Depot Village is an approximately 23.5 acre project site that includes the historical Santa Fe Rail Depot. The project site is bordered to the north by West 19th Street, to the east by McKinley Avenue, to the south by Bay Marina Drive, and to the west by railroad tracks (see Figure 4). The project site also includes the corridor connecting this site from Bay Marina Drive to Pier 32 Marina from the southern perimeter of the site. Cleveland Avenue runs in the north–south direction and nearly bisects the site into equal halves. It is a wide street with no clear traffic lanes, no bike lanes, and crumbling sidewalk (Figure 5). Remnants of an unusable and disconnected rail track exist in the middle of the street.

There are four structures in National City on the National Register of Historic Places (NRHP) and are considered significant by the State of California. One of these structures, the National City Rail Depot, is located at the corner of Bay Marina Drive and Marina Way within the project site. The National City Rail Depot building, now home to a museum, is the location of the first terminus of transcontinental rail travel in the San Diego area. The building was constructed in 1882 and is considered the oldest railroad–related structure that is still standing in San Diego County in its original location. A restoration job in 1998 restored the woodwork and other interior details to its original historic glory.
2.4 Paradise Center and 18th Street Corridor: Steven Bossi and Tara Lieberman

This project area is located in the Old Town area within the existing Westside Specific Plan of National City. The project area is bounded by 16th Street and National City Boulevard to the north, 18th Street to the south, I–5 to the west, and 18th Street and West Avenue to the east (Figure 6).

The site is currently zoned for light manufacturing–residential land use and is the site of auto repair shops, paint and body shops, steel fabrication shops, plating, warehouses, and intermixed with single–family and multi–family residential properties. An example of the auto–servicing businesses in this area is shown in Figure 7.
The land east of Hoover Avenue is dominated by larger underutilized single-story buildings, which are set back from the street and surrounded by surface parking, as depicted in Figure 8.

Paradise Creek is a dominant feature as a remnant tidal channel associated with San Diego Bay and runs diagonally through the southern portion of the Westside Plan area. The creek cuts through the project site area between Hoover Avenue and National City Boulevard. The area is located within the 100-year floodplain and is subject to significant flooding during major storm events due to debris located within storm pipes and street level grating, as shown in Figure 9. Sidewalks in the project area are generally five feet wide and have large sections in disrepair with cracking and concrete spalling. Many of the park rows lack suitable trees and plantings due to insufficient irrigation. Pedestrian lighting and wayfinding signage is largely absent from the area.

Figure 8

Figure 9
2.5 8th Street Transit Center (US Navy Joint Public-Private Venture): Meghan Cedeño, Chris Duddy, and Travis Helm

The project site is located nearby the western terminus of 8th Avenue in National City. The project site has a footprint of approximately 17.8 acres (as measured on aerial images on Google Maps) and is bounded by East Harbor Drive to the west, Interstate 5 (I–5) to the east, West 8th Street to the South, and the Seventh Street Channel waterway to the north. The area north of the project site includes military housing with several ancillary buildings and outdoor recreational facilities including baseball fields, an outdoor track, and tennis courts. Several buildings exist south of the site that are similar military–owned warehouse facilities.

The land underlying the project site is considered United States Military property and is owned and operated by the Navy; however, the San Diego Metropolitan Transit System operates the Blue Line (trolley) through a public right–of–way that transects the site in the north–south direction. Several buses also connect and operate within this station. The land west of the 8th Street Transit Center is currently used as a parking lot and has metal fencing with barbed wire on all sides.

The area east of the 8th Street Transit Center contains a large building, which is home to the west coast office of the Navy Exchange Services (NEX) commissary facilities and warehouse. The building is surrounded by metal fencing approximately 8 feet tall and is inaccessible to the civilian public. Aerial photography from Google Earth and Microsoft Bing maps indicate the majority of the site is paved, with minimal landscaping along the edges of the site.

3.0 Design Opportunities And Constraints

3.1 Opportunities

Transportation Access

The San Diego Metropolitan Transit System operates several bus routes and the Blue Line of the trolley within National City. These bus routes service communities within the City of San Diego to the north and east and connect National City to Chula Vista and the border communities of San Ysidro and Imperial Beach to the south. The Blue Line trolley operates in the north–south direction through National City. Bus and trolley services connect at the recently improved 8th Street Trolley Station. Improvements include ADA–compliant surfaces, overhead shade structures and benches, long–term bicycle parking, improved bus service, and additional vehicular parking for the station, with the goal of increasing overall ridership. The proposed Bayshore Bike-way Project would connect the roadways of National City to San Diego and beyond through safe and reliable bicycle pathways.
Enhanced Streetscape
The traditional grid system within the downtown portion of National City east of Interstate 5 provides an easily walkable urban environment. The topography of National City is generally flat with an elevation of approximately 10 feet above mean sea level. There is opportunity for streetscape enhancements, such as wayfinding signage, street furniture, and art installations to beautify the pedestrian experience. Many streets within National City are wide and have ample room for their development into a “complete street” with bicycle lanes, pedestrian traffic, and other transportation modes. Similarly, alleyways exist between the developed streets that are underutilized as circulation corridors and access ways.

Development near the Civic Use Cluster – Community Serving Corridor
Numerous government buildings and resident service buildings are located in downtown National City, including the City Hall, Police and Fire Departments, Southwestern Community College, Kimball School, and the National City Public Library. These buildings attract a variety of different users at different times throughout the day, yet a common public space between these areas does not exist for people to relax during non-working times.

While there are isolated benches and businesses located outside, there is opportunity for development of an outdoor public space to serve this population of workers and non-workers.

Affordable Housing
Residents of National City should be provided with a diverse arrangement of housing options, including developments of varying housing densities, types, and affordability.

Undeveloped or underutilized land parcels
While many areas are densely developed, there are a variety of underutilized parcels in addition to vacant parcels surrounding developed sites. An example of underutilized parcels are surface parking areas dedicated to specific businesses during the daytime hours but vacant at evening and nighttime hours and much of the weekend. Opportunity exists for infill development in these parcels and to determine creative utilization over the non-dedicated usage times. These parcels may also provide transition between open space and developed parcels.
Public Space
Space for the public to gather outside of government buildings is vital for the health of the community and its residents. The San Diego climate allows for outdoor activities nearly the entire year. National City lacks much needed public gathering spaces that can also serve as unifying forces in the community. Public space can be created in large open spaces, smaller gathering spaces, areas between buildings, or areas along the roadways.

Existing Waterways
National City is bordered to the west by the Pacific Ocean, to the south by Sweetwater River, and crossed by Paradise Creek and the Seventh Street Channel Waterway. Though development along Sweetwater River includes public spaces, such as Pepper Park and a dedicated bicycle pathway, much of the waterfront area is overtaken by privately-owned parking lots, private harbor slips, and highway interchanges. This area could be developed as a green corridor with, not only a bicycle path, but also exercise facilities, parks, and other improvements, such as public art installations that showcase the uniqueness of National City. Paradise Creek is a remnant tidal channel associated with the San Diego Bay that runs through National City. Throughout the development of National City, the creek has been buried underground and diverted through subsurface conduits but allowed to daylight in in the West Side Plan area. The Seventh Street Channel waterway flows from northeast to southwest, emptying into the Pacific Ocean and providing drainage to the upstream watershed. Potential development opportunities are abundant for both of these waterways and included in several of the design recommendations.

3.2 Constraints

Auto Serving Uses
Several areas in National City include auto services that produce excess car and truck traffic, noise, parking, and safety concerns. The abundance of auto--serving uses has precluded other projects from developing people–based services, such as green spaces, schools, residential, and even commercial businesses. These businesses bring pedestrian traffic, in comparison with auto–serving uses, the latter of which generally brings people by vehicles.

Incompatible Land Use
Many project sites throughout National City are located near other land uses (namely heavy industrial facilities) that may be incompatible with land use, such as residential or open space. While railroad corridors provide access to areas of the city, they may also prohibit development around the tracks due to right–of–way issues. Previous land uses may have involved businesses that are known to have used carcinogenic chem-
icals (dry cleaners, automotive repair shops, ship–building docks) may not have been
tracked because it is government land. This land may require significant environmental
testing to rule out the presence of these chemicals in the soil and groundwater.

Deteriorating pedestrian infrastructure
A walk audit conducted by Walk San Diego in 2005 indicated an interest in walking
to transit, school, church, and shopping. However, due to the condition of the side-
walks and lack of landscaping to improve the walking experience, the desire to walk
lessened. National City has since made great strides with grants awarded by the Safe
Routes to School Program and improvements surrounding Kimball Elementary School,
but there is room for additional improvement throughout the city. While sidewalks
along the major roadways, such as National City Boulevard and 8th Avenue have been
improved and developed in recent projects, sidewalks along collector and local streets
are deteriorated or unavailable. These sidewalks lack American with Disabilities (ADA)
compliant facilities, such as curb cuts at traffic signals, smooth pavement, and accept-
able inclines at driveways and business entrances and exits.

Environmental pollution
Many industrial businesses in the area, such as body work and auto paint facilities,
metal shops, construction, and manufacturing operations use and store hazardous
materials. Therefore, there is potential for hazardous materials contamination based on
historic and existing land use activity. The soil and groundwater must be tested prior
to development to ensure negligible concentrations of hazardous compounds. If these
hazardous compounds are present, the site should be remediated prior to develop-
ment, or developed with restricted land usage.

Lot consolidation
Project sites, such as the one located in Paradise Center and 18th Street Corridor
(described in Section 2.4), within the downtown area are located on several smaller
parcels of land that would need to be consolidated prior to development. Lot consoli-
dation would be necessary to minimize right–of–way issues during site development.

3.3 Program Goals and Objectives
Each student design program detailed the design program’s goals and objectives
before proposing a design solution. To create these goals and objectives, the teams
considered the existing conditions of the city, the opportunity and constraints pre-
sented at each project site, and the needs of the residents and visitors to National
City. Students examined the values and priorities for development, including the
importance of the city’s military history, its historical significance in San Diego, envi-
ronmental sustainability, social equity, economic development, and the development
of housing and commercial businesses.
3.4 Targeted Strategies

The targeted strategies address the design goals set forth in the beginning of the semester and discussions with Brad Raulston and other design professionals. The strategies acted as guidelines intended to direct the projects to achieve the goals set forth during brainstorming sessions with National City representatives.

- Create an economically viable environment that serves to attract and retain businesses and industries providing for employment opportunities and stimulate redevelopment and revitalization.

- Encourage mixed-use development of storefronts along major corridors, such as 8th Street. Sites should be developed in consistency with principles of sustainable communities and smart growth development.

- Integrate and connect project sites to developing areas to enrich National City’s sense of place and community within development sites.

- Activate waterfront areas along Paradise Creek and the Seventh Street Waterway Channel with pedestrian pathways, well-lit signage, and safety features.

- Increase the availability and affordability of safe housing for all income levels, including providing adequate housing for households with special needs, such as the elderly, persons with disabilities, large families, single-parent households, and military personnel.

- Provide a supportive transportation network to the land use of the site that provides opportunities for transportation choices and the use of alternative modes serving the neighborhood and businesses.

- Develop complementary infrastructure for bicycle and pedestrian facilities to provide a diverse range of transportation choices for residents and visitors.

- Encourage community input from all stakeholders in the process through a well-organized public participation process.

4.0 Design Recommendations

Design recommendations were developed for each of the five project teams; however, the recommendations are presented in a general manner for National City. Each recommendation is summarized and includes a description of the proposed location of the improvements.
4.1 Design Recommendation #1: Create affordable housing units

The first major topic in the design program focuses on the increasingly expensive housing market, which is unaffordable for many residents of San Diego County, especially in National City. The lack of affordable, quality housing prevents the younger generation from affording homes in the neighborhood, and therefore, from investing in its future. Likewise, senior citizens on a fixed income may be unable to afford basic care and necessities due to lack of social services and must move away. This generation is a link to the city’s history, and their values cannot be passed to the next generation if they are relocating outside of National City, which would damage the city’s link to its cultural history and character. To change this trend, affordable housing must be created to attract potential new residents and retain its existing ones. Affordable housing units are proposed in the following locations:

- 9th Street: Approximately 35 housing units over a small bistro and café at the property. Housing units would be approximately 780 square feet of either studio-lofts or two-bedroom flats with tuck-under parking.

- 12th Street: Housing units could be constructed in a style similar to the Centro development across the street.

- Cleveland Avenue: Between 19th Street and Bay Marina Drive; paths, marketplaces, and other people-oriented amenities could be integrated within these housing areas, as shown in Figure 10.

- Within mixed-use development buildings in the proposed 8th Street Transit Center development project: These units would be located above retail services, such as grocery stores, small businesses, and restaurants. An example of mixed-use development storefronts, as viewed at the street level, is shown in Figure 11.
4.2 Design Recommendation #2: Create green streets and park spaces

Storm water runoff is a major cause of water pollution in urban areas, such as National City. In most urban areas, stormwater is drained through engineered collection systems and discharged into nearby water bodies. The stormwater carries trash, bacteria, heavy metals, and other pollutants from the urban landscape, degrading the quality of the receiving waters. A “green street” is a transportation corridor that incorporates low-impact design elements and promotes non-vehicular forms of transportation. These design elements use an array of products, technologies, and natural systems or engineered systems that mimic natural processes to enhance overall environmental quality and provide utility services.

A green street program may include parking lots with pervious pavements, vegetated streets and alleys, and bio-swales separating pedestrian from vehicular areas. In addition to providing an aesthetic appeal to the area, they may reduce polluted stormwater from entering Paradise Creek and the San Diego Bay, divert stormwater from the sewer system and reduce flooding, backups and combined sewer outflows, reduce impervious surfaces so stormwater can infiltrate to recharge groundwater and surface water, and improve air quality and reduce air temperatures.

Parks and other green spaces should be created to enhance the visual aesthetics of the city and promote active transportation opportunities. In coordination with bicycle and pedestrian trails, the green spaces will encourage visitors to linger in areas around the city. These park spaces may be created in a variety of forms, including linear parks, pocket parks, fitness parks, educational parks, bio-swales, play set parks, public plazas, and general open space parks. Green space is proposed in the following locations:

- 18th Street, between Hoover Avenue and National City Boulevard: Traffic calming amenities that also incorporate street trees, bio-swales, pervious pavement, and decorative lighting will encourage walking in the community to the transit station and Kimball Park.

- A Avenue, between 11th Street and 12th Street: A linear open space park is recommended due to multifamily housing on the east side of the street, and similar proposed housing on the west side of the street.

- The northeast corner lot of 8th Street and C Avenue. The roadway in this area is wide enough to accommodate several types of parks, including linear parks, fitness areas, and play areas for children. Bio-swales are proposed between 9th Street and the park areas as a buffer zone between pedestrian and vehicular traffic areas.
• 8th Street and C Avenue: A pocket park plaza is recommended for the area currently occupied by a large parking area. Distinct seating and shaded areas are proposed to promote socialization and a viewing area intended to supervise play. Many of the benches and other seating arrangements are planned to promote a more vibrant pedestrian environment along the busy 8th Street corridor.

4.3 Design Recommendation #3: Develop *paseos* on A Avenue and 9th Street

*A paseo* is a plaza or walkway for strolling and references a leisurely walk or stroll taken in the evening in Spain or Spanish–speaking communities. The concept of creating a paseo creates opportunities for residents to walk, mingle, and enjoy San Diego’s warm climate and to experience the city during the night time in safe pedestrian areas. The creation of *paseos* will incorporate the parks and bio–swales and create linkages to important civic resources. It is recommended that they be constructed with distinct surface treatments, special paint, and incorporating street furniture, such as benches and overhead shade structures.

• A Avenue: A *paseo* along A Avenue would create pedestrian linkages from Kimball Park to the Super Smart Block and would be characterized by an extension of the winding streetscape between 9th Street and 11th Street, extending south to the entrance of Kimball Park. The signature paving and wide sidewalks of Heritage Square would be continued southward across 12th Street to the entrance of Kimball Park, as shown in Figure 12. This *paseo* would incorporate linear open space and the educational and historical area of Brick Row and Heritage Square. It is at this location where it joins with the proposed 9th Street paseo.

![Figure 12](image_url)
• The 9th Street: This roadway would function as a “greenway” in the downtown area and serve to link users to the educational complex at 9th Street and National City Boulevard and the new plaza and public art. The paseo would function as the residential core of the neighborhood and a road diet will ensure one lane in each direction, 6–foot sidewalks, a 3–foot bicycle lane of colored smooth concrete, and sections of permeable pavement. It will be vegetated with bio–swales around existing historical trees, retention basins, and cisterns to provide grey water for uses where potable water is not necessary. A rendering of this paseo is shown in Figure 13.

![Figure 13](image)

4.4 Design Recommendation #4: Define and enhance pedestrian corridors

National City should focus on providing pathways and connections between residential areas and commercial businesses to bring pedestrians into its downtown areas. Increased pedestrian traffic encourages people to gather, linger, and utilize services provided in the downtown area, such as libraries, schools, restaurants, small business, and other public spaces. Enhanced pedestrian access improves the abilities of residents and visitors to access vital services within the city. Pedestrian corridors in the area may be improved along street sidewalks and incorporating existing alleyways into the plan. An image of an existing alleyway is shown in Figure 14. Pedestrian improvements include large zebra striping on the sidewalks, flashing beacons, and painted crosswalks.
8th Avenue: The newly constructed 8th Street Transit Center project will connect the transit center to downtown with sidewalks and enhanced pedestrian route. Street furniture and lighting could enhance the pedestrian experience and could be duplicated on the north–south streets intersecting from the main corridor.

Between Cleveland Avenue and Pier 32 Marina: Harrison Avenue currently terminates in a dead end just prior to intersecting with North Marina Way. This roadway terminus could be reconstructed to promote a connected bicycle and pedestrian corridor. It is recommended that this corridor be restricted to non–vehicular traffic only.

Alleyways between major roadways: Attractions, such as food vendors, green walls, street furniture, music, and safety lighting are recommended in the alleyways to achieve this goal. A rendering of proposed alleyway improvements, including green walls, vendors, and back entrances to businesses is shown in Figure 15.
4.5 Design Recommendation #5: Create greater access and generate activity to civic and historic areas

- Between A Avenue and Plaza Boulevard Access: Access to Kimball Park could be improved through the construction of traffic-calming measures and a safe pedestrian crosswalk. We recommend installing the cross walks with striping and illuminators on the street surface and signage for vehicular traffic to observe pedestrian traffic.

4.6 Design Recommendation #6: Create a lifestyle center.

The city lacks a much needed public gathering space adjacent to natural environmental features, such as Paradise Creek. An open space could host a diverse array of activities, including outdoor farmer’s markets, music festivals, and cultural celebrations, and nearby businesses could provide goods and services to the community. Public space can serve as a unifying force in the community and bring residents together from surrounding neighborhoods. While the area in question currently attracts workers, students, and visitors, there is a limited variety of services available. A local, service-oriented commercial and retail project would increase the quality and variety of services in the area. An image of the proposed lifestyle center, with buildings oriented towards the creek and tuck-under as well as street-level parking spaces, is shown in the rendering Figure 16.

Figure 16
The lifestyle center is proposed at the location within the city block bounded by 16th Street to the north, 18th Street to the south, Hoover Avenue to the west, and National City Boulevard Street to the east, as shown in the rendering Figure 17.

![Figure 17](image1)

West Avenue, which currently bisects the project site in the northwest to the southeast direction, is recommended for closure as part of this plan. Traffic may be diverted to the nearby National City Boulevard with minimal impact to the surrounding vicinity. The proposal for this lifestyle center is modeled from similar centers, such as The Grove in Los Angeles, California, Arlington Highlands in Arlington, Texas and The Transit Housing Concept Plan for National City, located to the south of the project site. Before and after renderings of locations within the proposed lifestyle center project site are provided as Figure 18 and Figure 19.

![Figure 18](image2)
Outdoor “living room” spaces are also recommended on a smaller scale, such as a location within an existing plaza or underutilized parking area. For example, the Fountain Plaza Promenade is located at the intersection of National City Boulevard between 7th Street and 12th Street; though a fountain was proposed with the initial construction of Fountain Plaza, it was never completed due to financial constraints. An image of Fountain Plaza is shown in Figure 20.
It is recommended that this outdoor gathering space be extended into the Union Bank parking lot to promote activities, such as weekly farmer’s markets and street fairs. The eventual addition of this fountain is recommended so that people can gather and enjoy the water feature. The outdoor living room would be a place where residents can congregate and enjoy the newly created green space, which would fully incorporate the plaza area and connect to the nearby civic center uses. A proposed rendering of an outdoor living room gathering space is shown in Figure 21.

Figure 21

4.7 Design Recommendation #7: Develop abandoned and underutilized properties

The purpose of this goal is to catalyze future development and assist abandoned and “underachieving” land uses. The targeted approach includes taking advantage of existing buildings and opportunities for infill development. The location for this recommendation includes:

- Cleveland Avenue: Properties along this roadway should be developed and zoned for mixed-use buildings consisting of street-level retail under two to three-story residential development.
Residential properties could include recreational areas, such as grass fields and a health center to promote business within the community. One of the green recreational areas could be created behind the residential buildings and next to the Historical Santa Fe museum to direct residents’ attention to the currently isolated location.

- 8th Street: Mixed-use development is recommended to promote both housing opportunities in the area and businesses compatible for residential needs. Offices and stores to serve residents’ needs should be constructed so the downtown is both functional and aesthetically pleasing.

4.8 Design Recommendation #8: Redesign Cleveland Avenue

Cleveland Avenue is currently 56 feet from curb to curb, with a 10-foot sidewalk located on either side of the street. Two distinct roadway redesigns are proposed for this roadway and the cross section of each roadway are shown in Figure 22.
• The first alternative for the reconstruction of Cleveland Avenue includes one travel lane in each direction and separated bike lanes protected by a vegetated traffic island. Parking could be available on both sides of the street, though near intersections, a turning lane could replace parking spaces.

• The second alternative includes one travel lane in each direction and separated bicycle lanes as the first plan, but narrower sidewalks, a center turn lane, and no vegetated traffic median.

• Deep bulb-outs would extend into each intersection, with illuminated signage and traffic-calming mechanisms throughout the street to ensure safe pedestrian crossing.

4.9 Design Recommendation #9: Redesign major intersections to accommodate bicycle and pedestrian travel modes

The use of Dutch bikeway design, shown in Figure 23, promotes the safety of vehicular drivers, cyclists, and pedestrians equally. In this design, cyclists remain to the right of the car at all times and travel within their own colored lane. This design creates an extra curb to connect the bike lanes on the intersecting street of the main roadway and facilitates a safe left turn through the intersection. It also creates the required roadway width for a protected traffic island pathway for pedestrians. Vehicles turning right must stop before the white lane and have a clear view of both cyclists and pedestrians in the traffic circle.

Figure 23
Zebra pedestrian lanes are painted on all four legs of the intersection for maximum visibility, as shown in Figure 24.

This intersection design is recommended for major intersections in National City and specifically in the following locations:

- Cleveland Avenue;
- Bay Marina Drive and Harrison Avenue.
4.10 Design Recommendation #10: Restore natural water features to attract residents and visitors

Paradise Creek is located next to several auto-serving uses, such as maintenance buildings, warehouses, and repair shops, causing direct infiltration of oil-based chemicals into the water during storm events. Portions of the creek are degraded due to polluted runoff, sedimentation, trash, and invasive, non-native species. Similar observations were made about the Seventh Street Waterway, which is located between the military housing and recreation complex north of 8th Street and the Transit Center and NEX Warehouse buildings. The following actions are recommended for these two natural waterways to maximize their benefit to users in the community:

- Make Paradise Creek a community amenity by allowing it to daylight between 16th and 18th Street between Hoover Avenue and Roosevelt Avenue. Planners could consider allowing the creek to follow its natural course through adjacent project sites to allow continuity of the creek through the city. Restoration efforts would include environmental cleanup, water quality testing, and inclusion of pathways and seating to promote users along the waterfront.

- Restore walkways along the 7th Street Channel waterfront to promote usage by existing military personnel and promote further development along the waterfront on both sides of the channel. Future development along waterways should enhance these areas and not create unnatural underground stream diversion programs.

5.0 Discussion

5.1 Funding Analysis

A preliminary financial analysis was performed for each project using a return on investment (ROI) spreadsheet developed in collaboration with Envision Tomorrow™ and Fregonese Associates. The spreadsheet evaluates the total cost of the project based on inputs such as site square footage, landscaping, parking, development costs, and percentage of land use planned for the site.

The project sites in this study are located on military land, public right-of-way areas, and privately owned land parcels. Many of the projects would require the city to purchase rights or right-of-way for development in these areas. The cost of land purchase was estimated in most cases for the purpose of analysis. However, it should be noted that the price of land acquisition is a significant unknown in the financial analysis and is based on a myriad of variables, such as the current market forces, permitting processes, and other development fees.
5.2 Underutilized Resources

Transit Station

The 8th Street Transit Station is situated between I–5 and Harbor Drive along 8th Street, in close proximity to downtown National City and military and industrial facilities along the coast. This station is located at a pivotal location within a quarter mile radius of several businesses and schools. Per local planning code, new development projects located within a quarter mile radius may benefit from a potential significant parking space requirement reduction because it encourages businesses and employees to utilize nearby public transportation. The required number of parking spaces may be further reduced with the addition of SmartCars, ridesharing programs, and motorcycle allowances. Fewer parking spaces could translate to maximization of available land within a project site, lesser traffic impact of new projects on local roadways and interstates, and potential cost-savings for parking space and structure construction in the development fees.

Military Relationships

National City has enjoyed a longstanding relationship with the Navy, with nearly 9% of the city’s land use dedicated to military facilities, such as housing, recreation, and training grounds. National City is encouraged to pursue development projects that would create smaller communities through off-base military housing for soldiers. Sites developed with a transit–oriented development focus could provide the population, demand, and consumers to support local businesses. These developments could help strengthen the relationship between the city and military.

The military often has needs that cannot be met due to existing funding requirements. Examples of these needs are housing, food and shopping amenities, and other services. The military has often employed the Joint Public–Private Venture Program to meet some of these needs. In these ventures, the military enters an agreement with a private developer; the military cedes control of a piece of land to the developer (usually a fifty–year lease agreement) and the developer improves the land and uses it as specified in the agreement. There are inherent incentive–based reasons for such agreements. The developer has very limited investment into the environmental planning costs, often zero costs for land acquisition or rental, and they enjoy a ready population that will use the newly built facilities. The military gets the uses required by their population, incurs little to no construction costs, and gets to partner with the surrounding communities. The sidebar explains a potential development process working in conjunction with the Navy for military–owned land, such as the 8th Street Transit Center project site.
The Military Private–Public Venture process is best described through a seven–step process and is illustrated in Figure 25. Information on this process was collected in an interview with Navy personnel.

Figure 25
1. The Navy develops the concept with National City and submits a feasibility request for approval; this goes all the way to the Navy Facilities Command for approval.

2. The Navy initiates the site master planning stages; the site is analyzed based on a fairly detailed concept design and undergoes the public participation process. Because the Federal Government requires all major federal land development to undergo an environmental analysis, the public may comment on potential environmental impacts identified during the concept design. The site plan may evolve based on input from the community and other feasibility concerns.

3. The Navy drafts a Request for Proposals (RFP), solicits bids from developers, and selects a developer.

4. Before construction can begin, the final plan and budget have to be submitted through the Navy all the way to the Congressional level for final funding approval to proceed. Only after this approval is received can construction commence.

5. Prior to construction, a Private–Navy Partnership is formed to oversee the life of the project. The goal is to ensure that both construction and the use are in accordance with the Master Plan. The project team recommends that National City request to be a part of this partnership to ensure the project complies with the goals of the city’s General Plan.

6. The developer completes the 100% design of the project, with input from the partnership representatives, including military and National City government representatives. It is important to ensure that the project is in compliance with the goals of the city.

7. Finally, the developer will conduct the physical construction of the project. Normally, this would involve applying for several building permits for construction. However, since it is on military land, no such permits or other additional fees, such as development impact or in–lieu fees, are required. This is another major incentive for developers.

From start to finish, the project can take three to six years to complete. The largest constraint to the planning process is approval from the Navy, which can occur quickly or not. It is important that the project proves beneficial to the military, the developer, and the surrounding community in the long term.
National City is encouraged to promote incentive–based development with benefits for the Navy, National City, its residents, and developers. It is uncertain at this time whether the military–owned land in questions would be sold or leased to the city; however, a partnership is recommended to creatively utilize this land, regardless of ownership.

If the land is developed by the military, federally–owned land presents a variety of opportunities and benefits to the city; minimal construction, land acquisition, and permitting cost would be borne by the city, but the benefits would be available to the public. Cooperative projects could begin on a smaller, site–specific scale to build a stronger relationship for the long–term financial and economic health of the city.

5.3 Program Funding

5.3.1 Smart Growth Grants

A number of funding programs exist in San Diego for smart growth development projects, and they are administered through the San Diego Association of Governments (SANDAG). One such program is the TransNet Smart Growth Incentive Program (SGIP) and the TransNet Smart Growth and Active Transportation Grant Program (ATGP). Each of these programs funds mixed–use development around public transit that would increase bicycle and pedestrian growth in the region.

5.3.2 Low Income Investment Fund

The Low Income Investment Fund (LIIF) is a statewide grant program available to low–income families through public and private dollars and New Markets Tax Credits. This program considers the relationship of the home and work locations, and evaluates the “cost” of the commute in a family’s total expenses. Therefore, the grant provides money for families to live closer to central business districts (in typically cost–prohibitive areas for working–class families). In San Diego, this funding is used for the Mission Apartments adjacent to the Washington Street Trolley Station. A similar program could be employed around the 8th Street Transit Station or similar future public transit locations in National City.

Many other grants are available in the form of sustainability grants and from other programs similar to those listed above. It is anticipated that, in the future, more grant and funding programs will be available for this type of development project. National City should take advantage of federal, state, and local programs.

5.4 Feedback from Jury Panel

At the conclusion of the design course, students presented their final design to a jury panel at a public location within National City. The jury panel was comprised of planning professionals, educators, and members of the National City community who provided immediate feedback to each of the design teams and overall comments to
the studio design course. The jury panel review was a significant benefit to the pro-
gram because the professional–level critique provided a level of realism not otherwise
available in a typical classroom environment. While the jury praised the unique design
concepts and attributes of each project, they also critiqued the students’ approaches
and designs. Students were required to respond in real time to the questions and
explain the rationale behind their design decisions. The major design critiques are
summarized in the following points:

1. **Analyze the project site within the greater context of community.**
   This approach will ensure appropriate connections between the site and its
   surroundings are available so the project site is not isolated or segregated
   from the neighborhood. Planners should consider the connectivity
   and harmony of the site to ensure movement to the site, through the site,
   and from the site to the surrounding vicinity.

2. **Be aware of existing plans and use opportunities in the redevelopment
   planning process to avoid conflicts.** Planners should seek out a city’s
   General Plan and other applicable Specific Plans to design a space in confor-
   mance with the character of the area. This step is also important to mini-
   mize future development conflicts in a community and ensure that a design
   is in line with the community’s vision of the neighborhood.

3. **Maximize the placement of buildings and other structures according
   to their use.** One project included a parking structure in the middle of the
   site, rather than next to the interstate overpass. The jury panel explained
   that designers should examine the parking structure in a greater context;
   that element should be placed next to the interstate rather than in the mid-
   dle of the site to block noise from the nearby interstate and maximize
   potential green space.

4. **Consider sustainability as a vital component of a design program.**
   Natural resources are an important commodity and their usage should not
   be wasted on unnecessary design elements. For example, several design
   projects included water features, despite a nearly 10–year drought in
   Southern California and restriction on existing water features in San Diego
   County. The jury panel explained that, because this region’s water future
   is not secure, those design elements are wasteful to natural resources
   and should not be included without further consideration. If water features
   are included, they should be incorporated as part of recycled water projects
   or another conservation element.
5. **Go beyond simple beautification elements to draw people into an environment.** Projects that include alley redevelopment may be beneficial to an urban environment, but simply beautifying alleyways does not attract visitors. Designs should be go beyond aesthetic improvements to include attractors, such as food carts. To accomplish this goal, restrictions on food vendors that exist within the National City zoning code need to be reviewed on a case–by–case basis so vendors are in compliance with local regulations.

6. **Consider the movement of goods and services in a business district.** While it is important to plan for pedestrian activity within a downtown business district, it is also important for planners to consider the movement of vehicular traffic making deliveries to supply these businesses. Large trucks must supply food and other goods through weekly or daily delivery, and it is important to consider the truck entrance and exit locations.

### 6.0 Conclusion

National City is a city full of promising growth potential and development opportunities in San Diego County. The projects presented in this report represent a small cross section of potential smart growth development opportunities that could be implemented in varying forms throughout the city to form a connected network of corridors, plazas, and city centers for residents and visitors to enjoy. As a medium-sized city, one of National City’s great strengths is its ability to complete projects in a cost-efficient and timely manner. There are many recent construction activities in the city, including the National City Capital Improvement Project, the safety package near Kimball school, 8th Street Improvements, Safe Routes to School, 4th Street Improvements, the proposed D Avenue roundabout, and initiatives for bicycle and pedestrian safety. National City must learn to embrace its historic roots, yet strive to build a community that will bring the city into the 21st Century and beyond. Planners should embrace the city’s identity as an urban environment while working to build small, interconnected neighborhoods within its boundaries.