

Best Practices: Case Study Findings

Although there are only a handful of examples to look to for guidance, there is a pressing national need to identify innovative solutions that preserve businesses and jobs while trying to address the environmental and health issues stemming from the commingling of industrial and residential uses.

The following case studies provide inspiration that the GIAP can bring needed solutions for local auto-repair businesses while migrating them to an appropriately zoned location and reduce their environmental impacts.

- The San Francisco - Selecta Autobody Shop in Bernal Heights serves as **a model for other autobody shops interested in “green” site design and sustainable practices**. The autobody shop is a green, state-of-the-art collision repair facility that aims to use as much modern equipment as possible to achieve its sustainability goals.
- A select group of the Iron Triangle businesses in New York City joined forces and moved from their location in an industrial area of Queens to establish the Sunrise Cooperative (the Co-op). **The Co-op, collectively owned by over 50 business owners was able to lease a 144,000-square-foot building set on a 4.9-acre site in the Hunts Point neighborhood**. Since the site is located in a Federal Empowerment Zone, the Co-op was offered many financial incentives to occupy the building.¹ The Co-op is expected to function as a business incubator in Hunts Point and demonstrates the significance of business co-location.
- **Training and outreach for auto-related shops are keys to improving environmental and occupational health**. The Boston Public Health Commission (BPHC) Safe Shops Project reduced the occupational and environmental health hazards generated by over 400 auto-related shops within the city of Boston, Massachusetts, through trainings and outreach. The Safe Shops program developed trusting relationships within the auto shop community, resulting in changes to purchasing policies, implementation, and pollution prevention strategies.

Conclusions and Recommendations

Our GIAP development feasibility analysis preliminarily confirms the GIAP is economically feasible in today’s regulatory and economic environment. We have a reasonable financing plan with approximately 40% of the financing coming from private sources, and 60% to come from public and philanthropic sources. We have identified a wide variety of federal, state and regional resources that can be further explored to fill the gap.

We recommend the following next steps to further the development of the GIAP:

1. Create a dedicated nonprofit entity with a board composed of the stakeholder partners, inclusive of representatives of the National City government, the auto-repair businesses, the community residents and their advocates, and local stakeholders such as the Chamber of Commerce. Establishing an ownership entity, specifically a nonprofit, will be critical in receiving seed money and government and philanthropic grants for predevelopment

¹ <http://www.nydailynews.com/new-york/queens/willets-bizzes-leave-article-1.1431283>

expenditures. A nonprofit can solicit and receive funding to build, own and operate this project until such time that ownership might be transferred to the auto-repair business occupants.

2. Secure a mix of public and private predevelopment funding sources to further initial project planning and feasibility.
3. The total development costs come to approximately \$6.5 million or \$183/SF. The costs are preliminary estimates and meant to be conservative, meaning there is potential for the budget to go down. The next steps in refining the budget for this particular site would be to meet with a third-party construction cost estimator to get better estimates on the hard costs, and to further develop the financing plan (both construction and permanent sources). This deeper analysis and refinement would entail utilizing a third-party cost estimator that would be a sub-consultant to the financial consultant.
4. Current zoning code requires vehicle, repair, or service shops to have a minimum of 7,500 square feet of lot area. The next step should be to speak with the City Planning Department to determine if a code amendment is feasible.

2. Purpose and Project Context

This section identifies the study's purpose and details the project's context.

Purpose

This report examines the feasibility of developing a Green Industrial Auto Park (GIAP) in National City that would serve as an innovative, environmentally sound and economically viable destination site for auto-repair businesses phasing out of Old Town National City (OTNC), a residential community confronting health impacts resulting from conflicting land uses. The industrial park would be “green” as it would be developed with a strong emphasis on environmentally-friendly facility design, business operations, and practices.

Historically, OTNC was a predominantly single-family residential neighborhood. After World War II, the City Council implemented zoning to attract automotive-related businesses in the burgeoning automotive industry. As a result, OTNC experienced an influx of auto-repair businesses that are now scattered across the neighborhood and operate adjacent to schools, churches, and homes. Consequently, many OTNC residents experience negative health effects from the chemicals, solvents, and paints used in auto-repair operations. The neighborhood currently ranks in the 81st-85th percentile range of [Cal/EPA's CalEnviroScreen tool](#), which identifies communities that are disproportionately burdened by multiple sources of pollution and indicators of social disadvantage.² In other words, National City is one of the most environmentally vulnerable communities in California.

To address residents' concerns over the health effects caused by OTNC's incompatible land uses, the City adopted an Amortization Ordinance in 2006 and approved the Westside Specific Plan (WSP) in 2010. Taken together the 2010 zoning designations and the Amortization Ordinance enable the City of National City to phase out non-conforming uses that pose health risks to residents of the neighborhood.³

In 2008, the National City Community Development Commission (CDC)—the City's Redevelopment Agency—commissioned Economic & Planning Systems, Inc. (EPS) to complete the *Industrial Park Feasibility Study* to evaluate the feasibility of developing a facility that would serve as an alternative site to house the automotive businesses expected to relocate as a result of the Amortization Ordinance. EPS worked with GDeS Architecture and Planning and MMS Design Associates (collectively, the EPS Team) to complete the study. However, many of the fiscal estimates and recommendations do not reflect current funding mechanisms. The purpose of this report is to update the feasibility analysis previously conducted to reflect priorities from OTNC businesses and residents. It identifies funding mechanisms under current policy developments in a post-redevelopment agency era and economic recession.⁴

This update focuses on evaluating the feasibility of developing a GIAP on the former site of the San Diego Wood Preserving Company (SDWPC), a 1.7 acre brownfield property located in National City at

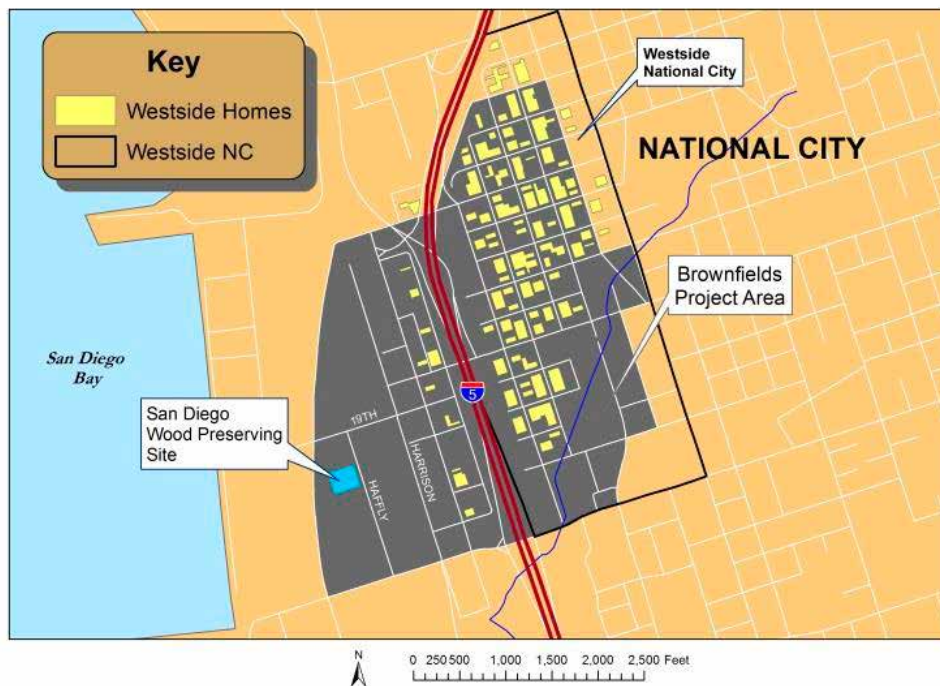
² <http://oehha.ca.gov/ej/ces2.html>

³ <http://www.environmentalhealth.org/index.php/en/where-we-work/local/national-city>

⁴ See Appendix C for a Discussion of Economic and Regulatory Changes Since 2008

2010 Haffley Avenue (Figure 1). The GIAP will incorporate a number of green and sustainable features to minimize or mitigate water and energy use, reduce storm water runoff, recycle waste products, and reduce air emissions.

Figure 1: Location of the San Diego Wood Preserving Company Site



Overview of Previous Report

This report expands upon the scope of the 2008 study by identifying current funding strategies and analyzing the GIAP on a specific receiver site (the SDWPC property on 2010 Haffley Avenue). The EPS team utilized several “theoretical sites” in its analysis. Each theoretical development followed one of two models for the industrial park:

1. Conventional industrial condominiums, a traditional model where each unit is individually owned or leased, and
2. Shared facilities, a non-traditional model where “a single owner or operator leases individual or multiple work bays and offices to users. Other facilities in the space would be shared. These include customer parking, estimating, offices, parts storage, prep and sanding booths, spray booths, detailing, and vehicle storage.”⁵

For each model, the study conceptualized two options: a one-story project and a two-story project. Thus, the following four theoretical development schemes were created:

1. Scheme 1A: Conventional One-Story
2. Scheme 1B: Conventional Two-Story

⁵ National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, page 18.

3. Scheme 2A: Shared Facilities One-Story
4. Scheme 2B: Shared Facilities Two-Story

These schemes ranged in land size (1.4 – 3.2 acres), building size (59,160 – 138,100 sq. ft.), and FAR⁶ (60% - 107%). The number of tenants in the industrial park schemes ranged from 12 to 18.

The 2008 study tested the feasibility of each development scheme using pro forma analyses. Assumptions included using both a “Low Lease Rate Scenario” and “High Lease Rate Scenario,” a capitalization rate on par with current development in the San Diego region, the same construction cost per square foot (regardless of scheme), and accounted for differences between the models (conventional vs. shared facilities) regarding equipment costs and expenses for annual operations and management. The study concluded that “the construction of a one-story industrial complex with shared facilities (Scheme 2A) appears to be the most financially feasible of the prototypes tested in this analysis.”⁷ Figure 2 below from the 2008 study summarizes the results of the scenario analyses.

**Figure 2: National City Harbor District Industrial Park Feasibility Analysis
Summary of High- and Low-Lease rate Scenario Results^{8,9}**

Scheme	Total Lease Rate per Bldg. sq. Ft.	Capitalized Building Value	Estimated Development Cost	Residential Land Value	Subsidy Required To Achieve Desired 10% Return on Cost
Low Lease-Rate Scenario					
1A	\$1.10	\$4,259,022	\$9,692,345	(\$5,433,000)	\$6,402,235
1B	\$1.10	\$4,980,941	\$9,795,554	(\$4,815,000)	\$5,794,555
2A	\$1.09	\$8,707,867	\$12,704,444	(\$3,997,000)	\$5,267,444
2B	\$0.93	\$7,949,887	\$12,106,420	(\$4,157,000)	\$5,367,642
High Lease-Rate Scenario					
1A	\$1.40	\$7,338,663	\$9,692,345	(\$2,354,000)	\$3,323,235
1B	\$1.40	\$8,060,582	\$9,795,554	(\$1,735,000)	\$2,714,555
2A	\$1.37	\$13,038,855	\$12,704,444	\$334,000	\$936,444
2B	\$1.17	\$12,300,948	\$12,106,420	\$195,000	\$1,015,642

Finally, the 2008 study explored gap funding options, including tax increment financing, grant funds, and loan programs at the state and federal levels.

Project Context in Today’s Environment

The dissolution of Redevelopment Agencies in California presented the need to identify other subsidy forms for project implementation. It is being replaced with a variety of new and emerging financing and local taxation tools.

⁶ FAR: Floor Area Ratio, the total square feet of a building divided by the total square feet of the lot the building is located on.

⁷ National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, page 3.

⁸ National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, page 4.

⁹ Please note that market rate rents as of November 3, 2014 are approximately \$0.76-\$0.77 per square foot. More details of this analysis is set forth in the Market Assessment Section.

In response, legislators have explored various policy options for restocking the local financing toolbox. Specifically, the creation of the Cap and Trade funding mechanism at the state level and improvements in infrastructure financing districts (IFDs) provide opportunities to create local financing.

The infrastructure financing district (IFD), enacted in September 2014, enhances the existing mechanism to act more like the old redevelopment system¹⁰. IFDs would act as a financing mechanism for municipalities to pay for large capital projects. This financing mechanism is currently under development. The tool's progress should be monitored to assess if it can be used to finance the GIAP.

In addition to the policy shifts in the economic environment, the automotive industry continues to evolve as businesses consolidate and insurance companies increasingly dictate the direction in which the industry is headed.

The following section discusses the methodology used to conduct this feasibility study.

¹⁰ [SB 628](#) (Beal, D-San Jose), [AB 229](#) (Pérez, D-Los Angeles), [AB 2292](#) (Bonta, D-Oakland), [SB 614](#) (Wolk, D-Davis)

3. Methodology

This study synthesizes information from a wide variety of sources ranging from in-person interviews to governmental sources and industry specific publications. Resident and business owner participation was critical in guiding our research and analysis. All sources were carefully evaluated for veracity and informed our research and recommendations.

Research

- **Interviews:** The consultant team conducted numerous in-depth interviews with proprietors of auto related shops in OTNC. The goal of these interviews was to better understand auto repair-related operations and needs. These interviews typically lasted approximately ninety minutes and were conducted in English or Spanish. Questions addressed issues of location (how it affects a proprietor’s business mix), operations, “green” practices, and participants’ thoughts on the overall industry. The consultant team also explained the concept of the GIAP, and solicited thoughts on its feasibility and potential tenant mix. We also interviewed auto shops in the Los Angeles area, in order to ensure that interview data was consistent with the industry trends at large.

The consultant team interviewed representatives at the San Diego Air Pollution Control District in order to better understand the regulations in place that reduce the environmental impacts of automotive businesses.

- **Governmental Sources:** The consultant team also conducted an in-depth analysis of existing plans that govern the area at the local level. These include the Amortization Ordinance, Westside Specific Plan (WSP), and National City Municipal Code (NCMC).

The consultant team reviewed current and past legislation that may affect the feasibility of the GIAP in the present day. These include: Infrastructure Financing District legislation, the 2014-2015 California Budget Trailer Bill, and the Polanco Redevelopment Act.

Governmental statistical data sources, such as the U.S. Census and San Diego Association of Governments (SANDAG), provided a picture of National City’s current demographics such as ethnicity and current unemployment.

The consultant team also reviewed public agency websites, such as the Boston Public Health Commission and the New York City Development Corporation, to develop “best practice” case studies for green industrial parks and green autobody shops.

- **Industry Specific Publications:** Trade publications such as FenderBender and BodyShop Business provided the consultant team with an overview of issues relevant to the autobody collision repair industry, as well as industry specific facts and statistics, which helped inform the GIAP analysis. The consultant team also reviewed i-CAR publications, an industry specific organization that provides educational materials for the industry.

IBIS World Market Reports provided market research data and a clear picture of global industry trends, suppliers, and supply chains for car body shops and related businesses in the United States. This data helped inform our industry trends research.

Community Engagement and Participation

This study was developed with continuous consultation with the OTNC community. The project focused on gathering perspectives from community residents and business owners so that all parties affected had the opportunity to share their thoughts on the idea of creating a GIAP.

Stakeholder Group Formation and Meetings: In order to produce a report that responds to both resident and auto shop needs, the research team convened a Stakeholder Group composed of the following:

- Community residents, including members of Environmental Health Coalition’s (EHC) Community Action Team
- Auto-related business owners
- National City Chamber of Commerce
- National City planners
- Representatives from local nonprofits, including the San Diego Organizing Project, Paradise Creek Educational Park, and Kimball Elementary School.

Stakeholder meetings were held to create an environment in which community residents and auto-related businesses would feel comfortable talking directly with one another about the potential opportunities and challenges that may arise in the effort to create a GIAP.

On May 28, 2014 the consultant team convened the first Stakeholder Group meeting. There was an introduction of the project and its goals to the stakeholder group and delved into the project scope, outlined the responsibilities of the stakeholder group, and provided a brief overview of “best practices” in industrial parks and autobody shops. Furthermore, the stakeholders were encouraged to suggest additional residents or business owners that should be at the table.



Stakeholders were also given the opportunity to ask questions of the consultant team. Overall, the stakeholder group agreed that a long-term vision that includes both residents and autobody businesses needs to be articulated for the community.

On October 7, 2014 the consultant team convened the second Stakeholder Group meeting. The meeting outlined the real estate development process, provided an overview of two possible design scenarios, and discussed ownership structures. Stakeholders had a discussion on critical project components such as financing the project and attracting tenants. It was agreed between stakeholders that more data validation on what business owners view as feasible monthly rent or mortgage payments was needed. The meeting concluded with stakeholders agreeing to help the consultant group gather more financial information from business owners.



Site Visits: The consultant team conducted extensive outreach in May and June 2014 in OTNC to auto-related businesses. Overall, the consultant team visited several businesses in OTNC, provided autobody shop owners with an overview of the project, and extended an invitation to join the Stakeholder Group. In-depth follow up interviews were scheduled with interested autobody shop owners. The in-depth interviews sought to gather more information about the needs and concerns of those who would be affected or might benefit from the development of a GIAP.



Industry Tour: On July 15, 2014, Environmental Health Coalition facilitated an auto shop industry tour in order to familiarize community members with the industry. The tour consisted of visits to two auto-related businesses – a machinery business and an autobody shop – located in OTNC. The business owners provided tours of their facilities, described their work flow, and explained their business needs and overall views of the industry. For many stakeholder group members, the tour provided the first opportunity to directly interact

with and ask questions of the auto shop representatives. Stakeholders came away with a better understanding of the industry and their needs in National City. The tour concluded with a visit to the SDWPC site.

Site Assessment

This GIAP feasibility study is site specific and focuses on evaluating the feasibility of developing a green industrial auto park on the former site of the San Diego Wood Preserving Company (SDWPC), a 1.7 acre brownfield property located in National City at 2010 Haffley Avenue (Figure 1). The analysis is designed to be transferable and applicable to sites of the same size or larger. The assessment contains a proforma analysis and gap funding study to determine the financial feasibility of the GIAP at the SDWPC. In particular, the proforma analysis places focus on a project design scheme that maximizes available tenant space.

The next section of this report details the community, regulatory, economic, planning, and auto repair environment for the GIAP.

4. Local Community Context

Section 4 provides context on the community, regulatory, economic, and planning environment of the GIAP.

Community Environment

OTNC is bordered to the west by interstate 5, and located near the Port of San Diego and rail facilities that make strong economic contributions to the region. OTNC also has a high concentration of auto dealerships and various auto-related businesses, all of which are critical revenue generators for National City. Autobody shops are mixed throughout OTNC's residential neighborhood and operate adjacent to schools, churches, and homes, creating incompatible land uses that are harmful to residents' health and quality of life. The neighborhood currently ranks in the 81st-85th percentile range of Cal/EPA's *CalEnviroScreen* tool, which identifies communities that are disproportionately burdened by multiple sources of pollution and indicators of social disadvantage.¹¹

Historically, community residents have been deeply engaged in discussions regarding the efforts to phase out autobody shops located in sensitive-use areas, and have played a critical role in securing approval of the Amortization Ordinance. Enacted in 2006, the Ordinance allows the city to require a business engaged in a non-conforming use to phase out that location. Given the impact on businesses and residents, this study places a specific emphasis on gathering an equal amount of information on the perspectives of both community residents and business owners so that all parties affected have the opportunity to share their thoughts on the idea of creating a GIAP.

Regulatory Environment

Federal, state, and county regulations guide larger decisions on water quality, air pollution, and hazardous material management, while city-level regulations primarily focus on setting standards for site design. Regulations for autobody repair and collision shops generally fall into three main categories: water pollution prevention, air pollution prevention, and hazardous material management. Federal regulations, especially the Clean Water Act and Clean Air Act, form the core of environmental regulations, particularly those at the state and county levels. This section aims to provide a sampling of the permits and regulations that affect autobody shops in National City.

Federal and State

The Clean Water Act (CWA) and Clean Air Act (CAA) are federal laws aimed at reducing air pollution and water pollution. While both are federal laws, primary oversight and enforcement occur at the state and county levels. As a result of these laws and their implementing regulations, auto-related businesses are required to assess and evaluate their level of activity and impact on the environment and public health in order to operate. The required permits are issued at the regional and local levels and are discussed in the sections that follow.

¹¹ <http://oehha.ca.gov/ej/ces2.html>

Under the Clean Air Act, in 2008 the United States Environmental Protection Agency (US EPA) adopted the 6H Rule¹², which regulates the release of toxic air pollutants from paint stripping and surface coating operations. This rule resulted from the US EPA's Collision Repair Campaign—an effort to lessen the amount of hazardous air pollutants (HAPs) produced by auto related shops. As regulations such as the 6H Rule have become increasingly prevalent and stringent on addressing environmental concerns, auto-repair-related businesses will be required to allocate more resources to compliance activities. Small auto repair-related business in OTNC will likely face financial challenges and market competition from larger auto repair-related businesses. The GIAP will provide an opportunity for OTNC auto-related businesses to transition to new business and safer work practices.

San Diego County

The San Diego County Air Pollution Control District is charged with adopting and enforcing federal and state emissions regulations for air pollutants such as volatile organic compounds (VOCs).¹³ At the county level, regulations enacted require automotive businesses to obtain permits for hazardous material management, air pollution, and wastewater discharge.

Enforcement of federal regulation on the management of hazardous materials, including hazardous waste, is generally carried out at the county level. The Certified Unified Program Agency (CUPA) offers a single point of contact for hazardous material management. The regional CUPA is currently housed within the Hazardous Materials Division of the Department of Environmental Health for San Diego County. Beginning in 2013, facilities that store or use hazardous materials on-site are required to use California Environmental Reporting System (CERS), an online portal to report on environmental compliance. Through CERS, auto-related shops are responsible for reporting on the following:

- Unified Program Facility Permit
- Hazardous Materials Business Plan (HMBP)
- Hazardous Waste
- Hazardous Waste On-site Treatment
- Hazardous Waste Tank Closures
- Remote Waste Consolidation
- Recyclable Materials Reports
- Underground Storage Tanks (UST)
- Aboveground petroleum storage over 1,320 gallons (APSA/SPCC)¹⁴

As businesses that store, use, and dispose of hazardous materials, auto shops are required to obtain a Unified Program Facility Permit through the San Diego County Department of Environmental Health.

¹² Federal EPA rule 40 CFR Part 63, Subpart HHHHHH (6H); <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr;rgn=div6;view=text;node=40%3A15.0.1.1.1.21;idno=40;sid=fd3b12eb6d0178cbf50139f96d7e9fad;cc=ecfr>

¹³ http://www.co.san-diego.ca.us/bos/supporting_docs/063010apo1w.pdf

¹⁴ http://www.sdcounty.ca.gov/deh/hazmat/hmd_automotive.html

Auto repair facilities must meet hazardous materials regulation standards if their hazardous materials exceed:

1. 55 gallons for liquids
2. 500 pounds for solids
3. 200 cubic feet for gases.¹⁵

Auto repair facilities that produce less than a total of 100 Kg (about 221 lbs.) of hazardous waste per month are classified as Conditionally Exempt Small Quantity Generators and are exempt from certain regulatory requirements.¹⁶ However, these facilities are still required to have a Unified Program Facility Permit.¹⁷ Also, regardless of quantity produced, a record of all hazardous waste disposal is required for at least the prior three years.¹⁸

In addition to hazardous materials management, San Diego County adopted the following regulations to reduce smog-forming pollutants.

- **Motor Vehicle and Mobile Equipment Coating Operations (Rule 67.20.1):** The VOC content of paints and solvents used by autobody shops is of primary concern in regulating air pollution. In response to California Air Resources Board's 2005 release of a more stringent Suggested Control Measure for Automotive Coatings,¹⁹ Air Pollution Control District (APCD) of San Diego County updated the Rule 67.20 in June 2010. Rule 67.20.1 sets tighter standards for: the VOC content of paints, coatings, and cleaning materials; the types of equipment that can be used for paint and coating application, and; the procedures that must be carried out during the use of these materials.
- **Cold Solvent Cleaning and Stripping Operations (Rule 67.6.1):** This rule replaces the previous Rule 67.6, and establishes VOC content limits for solvents and parts cleaners used by auto repair shops and standards for workspace operations and procedures.²⁰ Procedures and workplace operation requirements help reduce VOC emissions during usage, and manage emissions while the solvents are in storage.²¹

To carry out requirements of CWA's National Pollutant Discharge Elimination System permit program, the San Diego Regional Water Board requires municipalities to obtain a Municipal Separate Storm Sewer System (MS4) Permit. The MS4 permit allows for specific pollutants to be discharged into the storm drain systems that connect to local streams, coastal lagoons, and the ocean. Under

¹⁵ Margarita Mogollon, San Diego Department of Environmental Health, presentation on Vehicle Service and Repair Overview and Introduction

¹⁶ Margarita Mogollon, San Diego Department of Environmental Health, presentation on Vehicle Service and Repair Overview and Introduction

¹⁷ Margarita Mogollon, San Diego Department of Environmental Health, presentation on Vehicle Service and Repair Overview and Introduction

¹⁸ Margarita Mogollon, San Diego Department of Environmental Health, presentation on Vehicle Service and Repair Overview and Introduction

¹⁹ California Environmental Protection Agency, Air Resources Board. "Suggested Control Measures for Automotive Coatings." <http://www.arb.ca.gov/coatings/autorefin/scm/scm.htm>

²⁰ Eric Luther, San Diego Air Pollution Control District, presentation of Motor Vehicle Service Repair Compliance Workshop

²¹ The rule was updated to reflect advances in cleaning solvent technology and "strengthens the [State Implementation Plan] to largely fulfill the relevant CAA §110 and part D requirements." From: USEPA Region IX Air Division, (2009). "Technical Support Document for EPA's Direct Final Rulemaking for the California State Implementation Plan: San Diego Air Pollution Control District, Rule 67.6.1, Cold Solvent Cleaning and Stripping Operations." County of San Diego Air Pollution Control District, (2007). "Air Quality in San Diego County, 2007 Annual Report." Retrieved from: <http://sandiegohealth.org/air/sdapcd_annual/annual2008.pdf> : 13

this permit, cities must monitor industrial and commercial facilities, such as autobody shops, to ensure that minimum best management practices (BMPs) are implemented.²²

National City

At the local level, National City regulates autobody and repair shops through specific use regulations and a stormwater management ordinance. The specific use regulations for autobody uses were added in May 2011 to provide a detailed and comprehensive set of regulations. Prior to the update, autobody and paint shops were regulated only on hours of operation and work space for specific procedures.²³ Now, auto shops must comply with a set of 29 regulations organized into the following sections:

- General operations and maintenance (3 regulations)
- Air pollution (4)
- Hazardous materials (7)
- Parking and site layout (6)
- Noise (1)
- Vehicle storage (3)
- Security and fencing (2), and
- Pollution prevention (3).

In some cases, rules reinforce existing state and federal standards, such as the 6H rule,²⁴ general permitting requirements,²⁵ and low-VOC content paints²⁶. In other cases, National City builds upon existing regulations, such as the requirement for all new auto repair shops to maintain an Integrated Maintenance and Operational Plan (IMOP) that is in addition to and complementary with the States Injury and Illness Program (IIP).²⁷ There are also rules that National City includes to reflect and address unique, local characteristics. For instance, through community advocacy and organizing,²⁸ the specific use regulations prohibit auto shops from locating less than 500 feet from schools or residential properties.²⁹

Besides specific land use regulations, National City adopted a stormwater management program that requires special protocol for auto repair shops. The National City Storm Water Management and Discharge Control³⁰ section of the NCMC is an example of local policy that builds upon existing state and federal level regulation. At the federal level, the US EPA requires new autobody shops to create and implement Storm Water Pollution Prevention Plan (SWPPP). However, following the adoption of the local stormwater ordinance, these businesses must also ensure consistency of their SWPPP with the local regulation.

The City defines Automotive Repair Shops in its National City Storm Water Management and Discharge Control Ordinance as those businesses that are categorized using one of the following

²² http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/faq.shtml

²³ National City Municipal Code, Specific Use Regulations, 18.30.060

²⁴ National City Municipal Code, Specific Use Regulations, 18.30.350(B)(4)

²⁵ National City Municipal Code, Specific Use Regulations, 18.30.350(B)(3)

²⁶ National City Municipal Code, Specific Use Regulations, 18.30.350(B)(2)

²⁷ National City Municipal Code, Specific Use Regulations, 18.30.350(A)(2)

²⁸ <http://www.environmentalhealth.org/index.php/en/media-center/press-releases/240-environmental-health-coalition-asks-national-city-city-council-to-protect-the-health-of-children-attending-kimball-elementary-school>

²⁹ National City Municipal Code, Specific Use Regulations, 18.30.350(D)(3)

³⁰ National City Municipal Code, Storm Water Management and Discharge Control, Chapter 14.22

Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.³¹ Auto repair shops are considered regulated commercial facilities and therefore required to install, implement, and maintain an additional set of minimum BMPs, which are outlined in the Municipal Code 14.22.110. A sampling of regulations applicable to the auto repair industry can be found in Appendix B.³²

Overall, current regulation on the auto-related industry promotes and guides businesses in the adoption of environmentally sound business practices.

Economic Environment

Incorporated in 1887, National City is the second oldest city in San Diego County.³³ Median household income is well below the state average (\$38,798 vs. \$61,400 for 2008-2012);³⁴ conversely, the City's unemployment rate is significantly higher than the state rate (13.0% vs. 7.8% in July 2014).³⁵ The median income level for a four-person household is the lowest in the County.³⁶

In terms of taxable sales, Motor Vehicle and Parts dealers are the primary tax generators in National City. More specifically, according to the California State Board of Equalization, Motor Vehicle and Parts Dealers accounted for \$137,207,000 in taxable transactions in the second quarter of 2013 (Figure 2). This is the highest retail tax generator in National City, followed by Clothing and Clothing Accessories Stores with \$36,816,000, and Food Services and Drinking Places with \$34,280,000. The auto-related industry is the City's largest tax generator, thus it is important to preserve the auto-related businesses in the City.

³¹ https://library.municode.com/HTML/16516/level3/SUHITA_TIT14WASE_CH14.22STWAMADICO.html

³² https://library.municode.com/HTML/16516/level3/SUHITA_TIT14WASE_CH14.22STWAMADICO.html

³³ <http://visitnationalcity.com/>

³⁴ <http://quickfacts.census.gov/qfd/states/06/0650398.html>

³⁵ <http://www.homefacts.com/unemployment/California/San-Diego-County/National-City.html>

³⁶ <http://www.utsandiego.com/news/2013/jan/22/national-city-affordable-housing/>

Figure 3: Taxable Sales in National City, Second Quarter 2013³⁷

Type of Business	Permits	Taxable Transactions (in thousands of \$)
Retail and Food Services		
Motor Vehicle and Parts Dealers	99	137,207
Home Furnishings and Appliance Stores	67	5,660
Bldg. Matrl. and Garden Equip. and Supplies	32	6,770
Food and Beverage Stores	78	8,833
Gasoline Stations	13	21,387
Clothing and Clothing Accessories Stores	201	36,816
General Merchandise Stores	29	34,047
Food Services and Drinking Places	198	34,280
Other Retail Group	578	14,424
Total Retail and Food Services	1,295	299,426
All Other Outlets	429	43,125
Total All Outlets	1,724	342,551

As evidenced by Figure 3, economic activity in OTNC relies heavily on the automotive industry, including the City's service and repair shops and its well-known Mile of Cars. The Mile of Cars is a concentration of over 20 new and used car dealerships and auto-related businesses located on a stretch of National City Boulevard that runs along the eastern border of OTNC. This concentration of dealerships and related businesses has distinguished National City as a center for auto-related work in San Diego County. While the Mile of Cars stands as the City's top tax revenue generator, only a small percentage of residents of OTNC are employed in these facilities.³⁸

Auto-related businesses are scattered throughout OTNC due to post-WWII rezoning, which allowed the siting of commercial and auto-related uses adjacent to residential uses. Current zoning regulations, however, are designed to untangle these adjacent, incompatible land uses and to phase out pollution-generating activities near residential development and community amenities. Developing the GIAP would help preserve OTNC auto-related businesses and its economic vitality for the City while supporting efforts to address land use incompatibility.

³⁷ <http://www.boe.ca.gov/news/tsalescont13.htm>

³⁸ http://www.nationalcitychamber.org/wp-content/uploads/2010/06/FINAL4_ONLINE_NC-News-Summer-20111.pdf

Planning Environment

In the 1950s, City leaders implemented zoning regulations that permitted the development of industrial/manufacturing uses in residential neighborhoods. As a result, automotive-related businesses that often generate hazardous emissions are situated next to housing. Predominant land uses in OTNC are residential (25%), auto-related and business commercial (6%), and industrial auto-related (7%).³⁹ It is estimated that approximately 32 million pounds of regulated hazardous substances and 870,000 cubic feet of toxic gases are present in the City.⁴⁰ In comparison, 3,850,000 pounds of hazardous substances are found in the La Jolla community of the City of San Diego.⁴¹ According to the City's General Plan,⁴² children under 17 within OTNC's 91950 zip code suffer disproportionately from asthma symptoms when compared to the rest of the County. To address the negative impacts of automotive-related business activities on residents in the area, the City has taken several steps as set forth in Figure 4, below.

Figure 4: Timeline of Major Planning Milestones in National City

Year	Event
August 2006	<p>City Enacts Amortization Ordinance</p> <p>The City implements zoning changes to the Land Use Code. Properties with uses no longer allowed under the new zones are classified as “non-conforming.” Amortization establishes a reasonable period of time for the operator of a non-conforming land use to recoup their investment before the non-conforming use must be phased out.</p>
March 2010	<p>City Adopts the Westside Specific Plan</p> <p>The WSP was drafted at the request of the community to help OTNC achieve its goal of becoming a more thriving, healthy, and vibrant community. The central vision of the WSP is to:</p> <ol style="list-style-type: none"> 1. Respect and encourage single-family homes and small residential development 2. Improve environmental health conditions for residents of the area 3. Limit uses adjacent to Paradise Creek to restoration, passive recreation, and open space 4. Enhance pedestrian safety and promote walkability of the community
August 2010	<p>City Passes the Westside Specific Plan Implementation Ordinance</p> <p>The Ordinance amends the City's Land Use Code by rezoning the area from Light Manufacturing/Residential to residential friendly uses in order to “reestablish the Westside as a safe, healthy, vibrant neighborhood.”⁴³ The amortization then calls for the phasing out of non-conforming industrial uses out of OTNC as part of the Westside Specific Plan implementation.</p>

³⁹ <http://www.nationalcityca.gov/index.aspx?page=498>

⁴⁰ <http://www.environmentalhealth.org/index.php/en/where-we-work/local/national-city>

⁴¹ <http://www.environmentalhealth.org/index.php/en/who-we-are/mission/environmental-justice>

⁴² <http://www.nationalcityca.gov/index.aspx?page=549>, data updated with Department of Environmental Health in 2012.

⁴³ <http://www.ci.national-city.ca.us/index.aspx?page=498>

Amortization Ordinance

In 2006 National City adopted Ordinance 2006-2286, the Amortization Ordinance, which created what is now Section 18.11.100(D)⁴⁴ entitled “Affirmative Termination by Amortization” in the NCMC. The Ordinance is designed to legally authorize City Council to implement the new specific plan visions and discontinue legal non-conforming uses by phasing out industrial uses situated next to housing, schools, and community centers.

Following the zone change, National City’s non-conforming uses are grandfathered in and permitted to continue operating.⁴⁵ However, existing sites face restrictions related to physical expansion, substituting uses, and signage.^{46, 47} The Amortization Ordinance creates a mechanism for the City Council to discontinue the operation of a harmful, non-conforming use through an affirmative termination.⁴⁸ The amortization establishes a reasonable period of time for the operator of a non-conforming land use to recoup their investment before the non-conforming use must be terminated. A non-conforming land use is a land use that is inconsistent with the zoning for the area e.g. an industrial use within a residentially zoned area.

A reasonable period of time for each business depends on the consideration of many factors outlined in the amortization ordinance. These factors include the total cost of the land and improvements; the length of the time the use has existed; adaptability of the land and improvements to a currently permitted use; whether the use is significantly non-conforming; the possible threat to public health, safety, or welfare, and any other relevant factors.

In order to exercise this Ordinance and close a non-conforming business, the City Council must approve a recommendation made by the Planning Commission;⁴⁹ ten days following the notice, the Planning Commission must hold a public hearing. If approved by the City Council, the business at issue is given a minimum of one-year before the termination date. The time allowance for termination will vary based on the considerations noted before, with particular focus on the economic aspects. While the ordinance aims to separate harmful and non-conforming uses such as autobody shops located next to homes and schools, it does make allowances for businesses to mitigate losses and recoup investments.⁵⁰

Westside Specific Plan (WSP)

The WSP focuses on improving OTNC and was drafted at the request of the community to help OTNC achieve its goal of becoming a more thriving, healthy, and vibrant community. As a result of public concern associated with the proximity of pollution-generating businesses near public areas, traffic, parking, noise, and air quality issues, the City began working on the WSP in 2005. The central vision of the WSP focuses on four guiding principles:

⁴⁴ The original Amortization Ordinance, Ordinance No. 2006-2286, added Section 18.108.230 to Chapter 18.108 of the NCMC. A 2012 ordinance, Ordinance No. 2012-2372, restructured Title 18 of the NCMC. As a result of Ordinance No. 2012-2372, the amortization ordinance language is now in Section 18.11.100 (D).

⁴⁵ NCMC § 18.11.020

⁴⁶ NCMC § 18.11.030 and § 18.11.040

⁴⁷ As of 2010, these general permissions vary for non-conforming uses in the Westside Specific Plan. See the Westside Specific Plan in this section of the report for more information or see § 18.11.030 (A) (4) and § 18.11.040 (B) of the NCMC for exact language.

⁴⁸ Amortization Ordinance cannot be applied to homes that are considered non-conforming uses. NCMC § 18.11.100 (D) (1).

⁴⁹ The planning commission considers land use, land value, public health, and historical use in forming its recommendations.

⁵⁰ NCMC § 18.11.100 (D)

1. Respect and encourage single-family homes and small residential development
2. Improve environmental health conditions for residents of the area
3. Limit uses adjacent to Paradise Creek to restoration, passive recreation, and open space
4. Enhance pedestrian safety and promote walkability of the community

Westside Specific Plan Implementation Ordinance

The existing uses in OTNC that are no long permitted under the WSP's updated zoning are considered "non-conforming." In the Implementation Ordinance, the language most relevant to the presence of autobody shops in OTNC amends Sections 18.11.030 and 18.11.040 of the current municipal code.⁵¹

Section 18.11.030 of the NCMC prohibits non-conforming uses from expanding and altering the building and property, unless it has obtained a CUP to substitute an existing non-conforming use in OTNC.⁵² Substitutions consistent with Section 18.11.040 are permitted to expand or alter up to 20 percent of the existing footprint and structure.⁵³ Outside of OTNC, if a non-conforming use is substituted for another, the new use would not be permitted to expand as it is still misaligned with underlying zoning. The restriction on expansion remains intact for existing non-conforming uses that continue to operate in OTNC.

Neighborhood Impact Score

In 2011, National City's Council adopted a ranking process to create a priority list by which non-conforming uses will face the amortization process. The ranking was prepared by Vita Nuova LLC⁵⁴ for the US EPA's Office of Solid Waste and Emergency Response and the Office of Brownfields and Land Revitalization. The ranking process⁵⁵ is designed to rank multiple non-conforming properties in relationship to one another. It incorporates factors consistent with the criteria outlined in the Amortization Ordinance and provides a simple, reproducible process that can be easily understood by business owners and other stakeholders. In 2012, the City finalized the first ranking of over 100 auto-related businesses and the city is now in the process of implementing the first two amortization cases. Stakeholders are currently seeking ways to bring about a GIAP that can house businesses relocated by amortization.

⁵¹ In the original ordinance language, the amendment was made to sections 18.108.030 and 18.108.100 of the National City Municipal Code. The Code was reorganized in February 2012 following the enactment of Ordinance 2012-2372.

⁵² NCMC § 18.11.030 (A) (4)

⁵³ NCMC § 18.11.030 (A) (4)

⁵⁴ <http://www.vitanuova.net/>

⁵⁵

<http://nepis.epa.gov/Exe/ZyNET.exe/P100B57T.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2011+Thru+2015&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C11thru15%5CTxt%5C00000001%5CP100B57T.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C- &MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>

Auto Repair Industry Environment

General Industry Trends

Current trends in the automotive industry indicate that the industry is changing. Improvements in vehicle technology (e.g. crash-avoidance technologies) have and will continue to reduce collisions. Changes in vehicle technology and increases in vehicle complexity will also call for continued training of the workforce to keep pace with the use of new materials, equipment, and processes. At both the state and federal levels, there is a trend of increased standardization in materials, parts, and practices of autobody shops.⁵⁶ In the past 15 years, the number of automotive shops has dropped by 12 percent nationally—from 46,427 shops in 1998 to 40,488 in 2013.⁵⁷ Some industry experts believe that current demand for auto shop services could be managed by approximately 20,000-25,000 businesses.⁵⁸ Consolidation is a growing trend, with small shop owners selling to chains and multiple shop operators (MSOs).⁵⁹

There is general agreement among the business owners interviewed that insurance companies dictate many of the changes occurring in the auto repair industry. Many of these changes affect the profitability of small, independent body shops. In addition to the economy and an increasingly strict regulatory environment, insurers also significantly influence auto shops as they place cost pressures on businesses to reduce labor rates and provide insufficient reimbursement for complying with customer preferences in the repair.⁶⁰ This could result in cost-cutting measures such as poor management of environmental hazards and conditions by the autobody shop.



Views of industry trends by National City business owners interviewed as part of this report are somewhat mixed as part of this report. Several business owners believe that it will become increasingly difficult for smaller body repair shops to survive as the industry continues to consolidate. Some point to the need for deeper pockets to keep pace with technological advances. Investments in staff training such as automotive service excellence (ASE) certifications and Inter-Industry Conference on Auto Collision Repair (I-CAR) certifications can be a double-edged sword, according to some owners. On one hand, certifications may allow a business to advertise industry-approved credentials as a method of attracting or retaining customers. On the other hand, by requiring businesses to acquire such certifications, insurance companies could potentially transfer liability to the repair shop. For example, if a repair performed by a certified technician requires

⁵⁶ IBIS World. Car Body Shops in the US. May 2014.

⁵⁷ http://www.i-car.com/pdf/education_foundation/2013_snapshot_full.pdf

⁵⁸ Benckart, Greg. "State of the Industry 2013-2014." BodyShop Business.

⁵⁹ Evans, Bryce. "A Shifting Landscape." Fender Bender Magazine. February 2014.

⁶⁰ 2013 Industry Profile, "Insurer-Repairer Relations." BodyShop Business, May 2013

additional repairs due to incorrect or incomplete work done during the initial repair, insurance companies may refuse to cover the costs of the additional repairs on the basis that a certified technician would have performed the repair work accurately and completely the first time around.

A few business owners stated that the future prospects of smaller, independently owned auto-repair businesses in Southern California were viable, if not healthy. One owner believed that big auto companies, including domestic, European, and Asian brands, will continue to rely on small, independent shops for innovation, especially in the after-market specialty niches. Another owner pointed to a growing market in restoration and maintenance of higher end brands and models.

The recent recession greatly affected auto shops as consumers chose to forego having paintwork and small repairs done. Now, as the economy begins to improve, the industry has been showing signs of growth.⁶¹

Local Industry Demographics

Staffing Size

All of the businesses interviewed in National City reported downsized staffing as a result of the economic downturn that started in 2008. Many businesses currently operate with less than half the number of employees relative to the mid-2000s; one business operates as a one-person shop – the business owner alone. As the economy continues to recover and employees are added to the payroll to meet increasing customer demand, growth prospects for auto-repair businesses in OTNC may be encumbered by their current locations, as recently enacted zoning changes (previously discussed in *Regulatory Environment*) restrict the expansion of non-conforming uses.



⁶¹ Ibis World. Car Body Shops in the US. May 2014.

Business Base

The customer base of the business owners interviewed ranged depending on business type, and even within business type. One autobody shop relied heavily on referrals from insurance companies (up to 80% of business); another shop had a significant share of referrals from dealerships on the Mile of Cars (e.g., 40% of business). These two businesses were larger independent shops that had contracts with insurance companies via a Direct Repair Program (DRP).⁶² Nationally in 2013 almost eight out of ten autobody shops participated in at least one Direct Repair Program (DRP)⁶³. The perceived benefit to participating in a DRP has decreased in general. The highest satisfaction rate was in 2002, when 92% of those surveyed believe that their business was “better off” due to the DRP. A low for satisfaction was in 2006 at 65%, and recently at 72% in 2012.⁶⁴

The customer base for other automotive repair-relative businesses interviewed showed even greater variation. These business types included transmission repair, machinery, and performance tuning. This group relies much more heavily on referrals and repeat business from individuals (up to 80%), and draws from geographic areas that include the entire San Diego metropolitan statistical area (MSA)⁶⁵ and north to Bakersfield and south to Mexico City. Some of these businesses, due to their provision of specialty services, report little (e.g., closest competitor is 30 minutes away) to no local, and in some cases even regional, competition.

Operational Requirements and Needs

Location and Proximity Needs

In general, when asked where they would prefer to relocate, business owners expressed that a heavy industrial area such as west of the I-5 would be practical because it is within National City, close to other auto-related businesses, and away from residential zones. Enterprises relied almost exclusively on referrals from insurance companies and major dealerships on the Mile of Cars and very little on referrals from individual customers. Highly specialized market niches also did not find location was a critical factor for their customer base.

Regarding proximity, business owners spoke primarily of what they did not want nearby. They indicated that they did not wish to be located near direct competitors, as price shopping by prospective customers and potential poaching by competitors were major concerns. The mixing of “quality tiers” was also problematic. Business owners of larger autobody repair shops with DRPs stated a strong aversion to co-location with any autobody repair shop in a lower “quality tier” due to fear that customers may perceive a lower standard of quality bleeding from one shop to the other.

Businesses that provided identical services were willing to be located close to each other if their customer bases were not similar to opposing businesses. For example, mechanic shops could be

⁶² A **direct repair program (DRP)** is a contract between an auto insurance company and a collision shop for the collision shop to provide repairs for the insurance company’s claimants. (Source: www.wisegeek.com)

⁶³ 2013 Industry Profile, “Multi-Shop Operations.” BodyShop Business, May 2013

⁶⁴ 2013 Industry Profile, “Operations Profile.” BodyShop Business, May 2013

⁶⁵ The general concept of a **metropolitan statistical area (MSA)** is that of a large population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. Metropolitan areas comprise one or more entire counties, except in New England, where cities and towns are the basic geographic units. (Source: http://quickfacts.census.gov/qfd/meta/long_metro.htm)

immediate neighbors if each serviced a different make of vehicle (e.g., European brands vs. domestic brands vs. Asian brands). Similarly, larger autobody repair shops could be immediate neighbors if each had DRPs with different insurance companies. However, autobody shops with DRPs may balk at co-locating due to the potential revocation of the DRP by the insurance company.

In addition to concerns over co-location with direct competitors, interviewees also stated limitations regarding a more varied mix of business types. Certain types of businesses do not want to be located near autobody repair shops for various reasons. For example, the dust created by paint preparation processes such as sanding is especially troublesome to mechanic shops and performance tuning shops. Other business owners stated a preference to not be located near a performance tuning shop, which can be noisy due to the constant revving of engines. Several interviewees stated that if certain non-compatible businesses were to be co-located, some form of physical barrier should be in place to separate these businesses, and environmental elements such as wind direction must be taken into account. While these adverse conditions strongly impact perceptions of co-location today, it is assumed that in an autobody shop utilizing “green” practices that these conditions will improve.

One interviewee suggested that the receiver site should be larger and include multiple blocks west of the I-5 in order to accommodate more OTNC businesses. A larger site would house an array of auto-repair related businesses of multiple “quality tiers.” Further explanation on the receiver site is given in Section 6: Site Opportunities and Section 8: Development Analysis and Recommendations.

Equipment, Ingress/Egress, Space Configuration

When asked about the operational needs of their businesses, interviewees identified parking as the foremost consideration. Each business needs to have a sufficient number of private parking spaces. Business owners expressed little willingness to share parking spaces with other businesses, with the loss of control over workflow management being a primary impediment. Owners of business types that serviced higher end cars, often for longer cycle times, expressed a desire for covered parking.

Several interviewees also stressed the importance of adequate options for ingress and egress. Entrances and exits to an auto-repair business site should be large and wide enough to accommodate multiple cars side-by-side to reduce the chance of congestion. Another option is to have multiple points of ingress and egress. One interviewee pointed to a neighboring auto-repair strip mall with a single narrow entrance, and how one inefficiently parked car often lowers the productivity of all the businesses (and raises the ire of all the business owners).

In addition to learning of the parking needs of different businesses, we also found that autobody repair shops with DRPs tend to be larger. One interviewee stated that the requirements for obtaining a DRP, such as having a compliant paint booth or separate “clean room” for aluminum repair, required larger shops. Another type of business that required larger space (in this case more storage per repair bay) was a customization/restoration shop due to long cycle times.

Opportunities and Constraints

Interviewees identified various environmental opportunities and constraints when discussing efforts to promote green practices within automotive businesses. They spoke of education as a critical component to the success of businesses in adopting green practices. One business owner stated that non-compliant business operators may not realize the damage of their business activities on the community. Another business owner suggested that training on environmentally responsible practices should be required for businesses and employees located at the GIAP. This owner believes that practices would change as non-compliant shops see competitors adopting green practices, which would result in institutionalization by peer pressure.

It should be noted that a couple of business owners interviewed were not particularly interested in implementing green practices beyond the regulatory minimums. For these owners, the green aspects of the GIAP may not be immediately attractive; however, this mindset may change as regulations become increasingly stringent.

Interviewees also spoke of the lack of awareness among City officials and staff who may not know of advancements in technology in the automotive industry. Several interviewees mentioned dubious practices and egregious violations by some shops. Based on our interviews, increase enforcement by the City targeting these violators would result in “huge improvements” for the community.

Economic

Feedback from the interviews revealed several considerations from an economic perspective. Several interviewees were both business owners and property owners and would consider relocating to the GIAP only if a purchase option was available. One such interviewee believed that any purchase price would require subsidies to be economically viable.

Many interviewees stressed the challenges with the relocation process itself. The loading and transport of large and/or heavy equipment poses both logistical and financial burdens. For certain equipment there are additional costs of disassembly and reassembly; in the case of paint booths, City codes dictate the installation of certain types of wiring and piping and generate additional expense. Business owners who were also property owners expressed concern over the potential reduction in the asset value of their parcels due to rezoning.

A few interviewees suggested that the scope of this project be expanded to include the assembly of a “relocation package” (in addition to development of a GIAP on the selected receiver site). Such a relocation package could include: the sourcing of financial assistance for relocation from various state, federal, and philanthropic programs; buy-out assistance for property owners; expedited permit processing or temporary easing of local regulatory requirements by the City; incentives for sender sites to allow “Moved To” signage; and other features. Some of these features, such as expedited permit processing or temporary relief from code, could be applied to the GIAP.

As currently envisioned, the GIAP creates both marketing opportunities and challenges. On one hand, the receiver site is not directly off US Interstate 5, so signage would need to be even more prominent; on the other hand, the overall marketing plan for the GIAP may mitigate the need for prominent signage of individual shops.

Economic benefits from economies of scale prove to be far more elusive. Interviews revealed a very limited menu of resource sharing opportunities between auto-repair businesses. Business owners are potentially willing to share:

- Reception/Waiting Room
- Restrooms for customers
- Hazardous Waste Disposal (between businesses other than autobody shops)
- Trash Disposal (between businesses other than autobody shops)

Even then, interviewees raised concerns that the sharing of these facilities would require businesses to conform to some level of standards, and the hiring of and sharing of expenses for a third party to maintain the shared spaces (e.g., cleaning staff for waiting room).

Interviewees were unanimous about particular resources they were not willing to share. These non-sharable resources include:

- Equipment and tools,
- Workflow parking,
- Restroom for employees (each shop must be responsible for its own level of cleanliness),
- Office space, and
- Trash disposal between autobody shops and other types of businesses

The next section of this report further develops the context for the GIAP by detailing best practices across the country on green autobody shops.

5. Best Practices

A review of literature on best practices for developing green industrial parks and environmentally responsible operations for autobody shops will inform the feasibility of developing a green auto repair industrial park in the City. Literature on green operations in autobody shops focuses on equipment used, business practices within autobody shops, and training for owners and workers alike.

Air Quality and the Case for Green Industrial Auto Park

Air Quality Impacts of Autobody Shops

All types of automotive maintenance and repair shops use hazardous materials and generate air emissions. Autobody shops are of particular concern because automotive paints and coatings are used and are applied by spraying. The California Air Resources Board (CARB) regards autobody shops as potential sources of air toxics “hot spots” pollution and has included these businesses among the facilities that must be evaluated as potential hot spots.

CARB developed generic health risk assessment methodology for autobody shops, so that air districts could conduct simplified hot spots assessments for these types of facilities. (Available from ARB online at: <http://www.arb.ca.gov/ab2588/RRAP-IWRA/AutBody.pdf>)

Appendix C of this CARB document lists these toxic air contaminants that are most likely to be emitted by autobody shops in California:

- Cadmium and compounds
- Chromium (Hexavalent)
- Copper and compounds
- Ethylbenzene
- Ethylene glycols
- Isopropanol
- Lead and compounds
- Methanol
- Methylene chloride
- Methyl ethyl ketone
- Methyl isobutyl ketone
- Nickel and compounds
- Propylene glycol monomethyl ether
- Styrene
- Toluene
- Xylenes
- Zinc and compounds

The document includes a sample risk assessment using typical autobody shop emission parameters for stack height and velocity and typical formulas for paints and coatings. This exercise indicates that cancer and noncancerous health risks could be significant in some scenarios:

Figure 5: Summary of Maximum Results of Generic Risk Assessment for a Generic Auto Bodyshop (Rural Basis)

	Exit Scenario		
	Stack	Stack with Raincap	No Booth
Individual Excess Cancer Risk per million	18	270	3400
Chronic Health Hazard Index	0.07	1.0	12
Acute Health Hazard Index	0.01	0.01	2.0

Cancer risks over 10 per million are considered significant in California. Risks are highest for shops without a paint booth. **However, cancer risks are significant in all scenarios.**

Noncancerous health risks to cardiovascular, central and peripheral nerve, immune, reproductive, and respiratory systems are included in the analysis. Chronic and acute health hazard indexes over 1.0 are considered significant. **In this analysis, both chronic and acute health hazards are significant in the No Booth scenario.**

This work dates to the mid-1990's, and auto paint formulas may have changed in ways that lower the risks to people downwind. At the same time, it should be noted that the modeling was done using receptor points from 10 meters to 1000 meters from the source (p. 21). In a neighborhood such as OTNC, homes and sidewalks may be closer than 10 meters (about 33 feet) from industrial emission sources. This is particularly important for exposure to fugitive emissions, which have their peak emission rates within 10 meters of the source.

Health and Air Quality Benefits of Relocation to a Green Industrial Park

First, having a building that is in compliance with regulations means that all spray coating applications occur within a paint booth. As seen from the CARB analysis of a generic autobody shop, cancer and noncancerous risks are higher in shops without paint booths. Spray booths equipped with filters reduce emissions. Emissions from a stack are more evenly dispersed than fugitive emissions.

Second, relocation allows for an increased distance from the nearest residential downwind receptors. In the CARB modeling, increasing the distance to the nearest receptor by a factor of 5, such as from 10 to 50 meters, reduced the risk by 3 to 9 times (depending on which dispersion model is used and whether urban or rural location is assumed).

Additional Benefits that Apply to All Automotive Shops, Not Just Autobody Shops

Relocation to a green industrial park would entail adoption of best management practices and pollution prevention practices that are not required by environmental regulations but would reduce the air emissions and water quality impacts of automotive repair work. Methods such as the following are recommended for auto related businesses and could be required for businesses moving into the new industrial park:

- Use of aqueous cleaners rather than solvent-based cleaners
- Floor cleaning methods such as nonporous floor coatings and hydrophobic mops

Green Autobody Shops

Green business practices focus on using the most up-to-date equipment to minimize the environmental effects of businesses. If any type of public financing is used in the construction of the GIAP, then regulatory covenants would likely be put in place that would require businesses located in the GIAP to employ environmentally friendly business practices.

Selecta Autobody Shop (Bernal Heights, San Francisco)

Selecta Autobody Shop in Bernal Heights, San Francisco, is a green, state-of-the-art collision repair facility that aims to use as much modern equipment as possible to achieve its sustainability goals. The shop's sustainable features serve as a model for other autobody shops interested in developing a "green" site design and engaging in sustainable practices.

Selecta Autobody Shop has adopted the following green features and business practices to make its autobody work more eco-friendly and sustainable:



Interior of Selecta Auto Body with Plants to Maintain Air Quality
Source: <http://www.selectautobody.com/new/>

- **Spray Booth:** The shop's spray booth includes a heating system designed to recirculate heated air. The shop has also adopted the use of water-based paints, as required by the city of San Francisco.
- **Air System:** The air turnover system exceeds by 100 percent the requirements implemented by the city of San Francisco to protect those in and around the shop.
- **Detail Shop:** The detail shop uses sustainable products with little or zero VOCs (volatile organic compounds) and contains a drainage system that filters oil and sediment to prevent groundwater contamination.

- **Repair Shop:** The shop uses an advanced dust extraction system by Festool to decrease byproducts from the sanding process. The shop is looking to install solar panels to re-charge battery-operated equipment.
- **Hazardous Material:** The shop utilizes leak-proof containers for storage and disposal of hazardous materials.
- **Lighting:** All window fronts in the shop are made of glass panes to invite as much natural lighting into the shop as possible. Lights within the shop are automatic and motion-sensored to save energy.
- **Electrical System:** The shop updated its electrical system to prevent the overloading of circuits.
- **Plants:** The shop has installed a number of plants throughout the facility to help scrub the carbon dioxide and chemical air pollutants generated by normal business operations.⁶⁶



Selecta Auto Body

Source: <http://www.selectaautobody.com/new/>

⁶⁶ <http://www.selectaautobody.com/new/>

New York City Case Study: Iron Triangle to Sunrise Cooperative

Since the 1950s, a 12-block, 48-acre site of the 60-acre neighborhood of the Willets Point industrial area of the Queens borough of New York City has been home to over 200 automotive related businesses, waste management facilities, and warehouses.⁶⁷ These businesses employ approximately 1,200 people and provide services for every part of a car and all stages of a car's life cycle. This industrial site is known as the Iron Triangle. Here businesses sell, service, or demolish cars and provide many automotive services—including key cutting, glass installation, and chassis alignment. The Iron Triangle has also housed warehouses, waste processing sites, and House of Spices - a restaurant with the largest employment base in the area.

A redevelopment effort launched by the city of New York and the New York City Economic Development Corporation (NYCEDC) is currently in the process of revitalizing the Willets Point neighborhood, including the Iron Triangle. The city has been and currently is in the process of transforming the area for large-scale redevelopment purposes.

In their relocation efforts, many tenants of the Iron Triangle joined forces to establish the Sunrise Cooperative (the Co-op). The Co-op is collectively owned by a group of over 50 business owners who previously occupied the Iron Triangle and whose goal was to identify a new site in which they could reposition themselves together.

The Co-op leased a 144,000-square-foot building set on a 4.9-acre site in the Hunts Point neighborhood of the Bronx borough, with more than 85 percent of the building serving as warehouse space and 15 percent as office space.⁶⁸ Because the site is located in a Federal Empowerment Zone, the Co-op was offered many financial incentives to occupy the building.⁶⁹ A study of the Iron Triangle refers to the business community as a thriving and “unique regional destination” of automotive related businesses.⁷⁰

Key Takeaways

- The Iron Triangle is an example of a place where automotive related businesses were concentrated in one location as a business community situated away from schools, residential areas, and other sensitive uses. Most of the businesses located in the Iron Triangle were renters.
- Often perceived as unappealing, contaminated and blighted, the Iron Triangle was also a very creative space. Businesses often reused old materials to assemble and create various art pieces throughout the site, such as the use of car lights to create a red mosaic.
- Most of the businesses in the Iron Triangle are small (less than 1,000 square feet) and occupied by Spanish-speaking renters.
- The Co-op is expected to function as a business incubator in Hunts Point. The group's willingness and desire to work collectively to find a new location in which they could situate themselves in close proximity to one another demonstrates the significance of the business community that existed in the Iron Triangle.

⁶⁷ <http://www.nydailynews.com/archives/boroughs/city-plans-triangle-article-1.619821>

⁶⁸ <http://www.prweb.com/releases/2014/05/prweb11833464.htm>

⁶⁹ <http://www.nydailynews.com/new-york/queens/willets-bizzes-leave-article-1.1431283>

⁷⁰ <http://www.hunteruap.org/>

- A number of auto-related businesses located in the Iron Triangle were constructed from shipping containers, which are a viable option for keeping development costs low for these types of uses.⁷¹



Aerial View of Iron Triangle

Source: http://www.timesledger.com/stories/2014/3/willetspt_tl_2014_01_17_q.html



Exterior of Shop Made of Shipping Container

Source: <http://www.scoutingny.com/visiting-the-apocalypse-in-queens/>

⁷¹ http://www.slate.com/blogs/the_eye/2013/11/15/willets_point_queens_iron_triangle_autobody_shops_new_york_city_neighborhood.html

Safe Shops Project (Boston, Massachusetts)

In 2005, the Boston Public Health Commission (BPHC) launched the Safe Shops Project to reduce the occupational and environmental health hazards generated by over 400 auto-related shops within the city of Boston, Massachusetts. A high percentage of these businesses are located in low-income communities of color. As part of this effort, the BPHC collaborated with other organizations and businesses to conduct inspections, in-shop-trainings, outreach, and technical and financial assistance to help businesses comply with regulations, engage in safer practices and use alternative products. In an 18-month period, workers received training to become more knowledgeable of safe practices in auto-related businesses. The project included 132 trainings intended to train 710 workers in the automotive industry. Through trainings and outreach, Safe Shops developed trusting relationships within the auto shop community, resulting in changes to purchasing policies, implementation, and pollution prevention strategies. To share and disseminate information regarding safe and green practices within automotive businesses, BPHC created a Safe Shops Tool Box for Auto Shops (see Appendix E), newsletters, an online [safe shops tool kit for communities](#), and a training video.⁷²

Key Takeaways

- A post-training curriculum survey showed improvement in work practices after automotive business owners participated in the Safe Shops Project. Survey metrics included measuring the difference in shop cleanliness, parts storage, and proper labeling of hazardous and waste materials.
- The curriculum led to significant changes in adopting green practices in the workforce and increasing compliance among workers in the automotive industry.
- Changes are occurring at the individual level, but networking among shop owners is leading to community change, as many are interested in the training curriculum for their shops.
- Networking was a strong contributor to the success of the program and the proximity of shops to one another may encourage and facilitate the implementation of safe and green practices for other businesses that wish to implement the Safe Shops Project training curriculum.
- The project found that autobody shop owners are more willing to try and continue to use new chemicals when there is an initial subsidy provided to purchase these chemicals.
- Funding from an Environmental Protection Agency (EPA) grant made it possible for the Boston Public Health Commission to spearhead this project.⁷³

In conclusion, Selecta Autobody Shop provides insight on the ways to successfully green auto-related businesses. Further, the Sunrise Cooperative highlights that establishing a cooperative and business cluster bolsters the business' capacity to survive in a competitive market. Finally, the Safe Shops Project in Boston demonstrates that education is key in maintaining safe and clean work practices. Based on the community context and best practices identified in Sections 4 and 5, the following section of this report describes the site opportunities for the GIAP at 2010 Haffley Avenue.

⁷² <http://www.bphc.org/whatwedo/healthy-homes-environment/safe-shops/Pages/Safe-Shops-Tool-Box-for-Auto-Shops.aspx>

⁷³ http://www.cdc.gov/nceh/ehs/capacitybuilding/Docs/Boston_Safe_Shops_Project.pdf

6. Site Opportunities

Section 6 details the current site conditions of the site as well as the current real estate market.

San Diego Wood Preserving Company

Our feasibility analysis focuses on developing a GIAP on the former site of the SDWPC site, a 1.7 acre or 74,487 square foot industrial brownfield property located at 2010 Haffley Avenue in National City. It should be noted that while this study is site specific, the findings of this study can be utilized as a base study for other sites.

According to an environmental site assessment report produced by E2 ManageTech for the City of National City in 2012, the site was previously tidelands until sometime between 1944 and 1954 when fill material was imported to build the harbor to the west of the site. The site was vacant until the San Diego Wood Preserving Company (SDWPC), a wood-treatment facility, opened in 1978. SDWPC services included treating lumber for lumber companies and power poles for utility companies such as SDG&E and Pacific Bell (now owned by AT&T). The facility was classified as a small quantity generator of hazardous waste.⁷⁴

The wood-treatment facility was owned and operated by SDWPC until it formally ceased operations in 2007. Since

2007, the site has been unoccupied, though many SDWPC operational features and facilities are still present, including a wood-preserving process facility of approximately 3,000 square feet. Former SDWPC operations have been removed from the site.⁷⁵



2010 Haffley Avenue Aerial
Source: Google Earth

Current Ownership

⁷⁴ E2 ManageTech, *Phase I Environmental Site Assessment*, May 23, 2012.

⁷⁵ E2 ManageTech, *Phase I Environmental Site Assessment*, May 23, 2012.

The site is currently owned by Mr. Gerald Baker, owner and former operator of SDWPC. Mr. Baker is involved with site cleanup alongside the Department of Toxic Substances Control (DTSC).⁷⁶ As of October 20, 2014, DTSC is waiting for a draft closure plan to complete its remediation review. SDWPC is closing the drip pads currently on the site. Groundwater monitoring will also be a part of the long term operation and maintenance plan for the site. Following the public notice and approval of the Closure Plan, a Remedial Design document will be submitted to DTSC for review and approval. The site is expected to be for commercial/industrial use only.⁷⁷ Mr. Baker intends to sell the property once the site has been cleaned. It should be noted that estimating remediation costs is beyond the scope of this report.

Current Uses of Adjacent Properties

The current uses of adjacent properties at the time of publication are presented in Figure 6, below. Based on the current uses of adjacent properties, it appears that developing the GIAP would be compatible with the area's neighboring uses. While Caliber Collision, an autobody repair shop, is located directly across the street from the site, there is no significant competition for other auto-related businesses. Based on our interviews, a competition free site is preferred by tenants.

Figure 6: Current Uses of Adjacent Properties

Direction from Site	Address	Tenant Company	Notes
North	1010 W. 19 th Street	Q.E.D. Systems	Engineering/IT Services Firm
South	2100 Haffley Avenue	Univar	Chemical Distribution Company
East	2013 Haffley Avenue	Caliber Collision	Autobody Repair
West	-	-	Railroad Tracks and Tidelands Avenue

⁷⁶ E2 ManageTech, Phase I Environmental Site Assessment, May 23, 2012.

⁷⁷ Violeta Mislang, Department of Toxic Substances Control, October 20, 2014.



Current Uses of Adjacent Properties
Source: Google Earth

Estimated Market Value

Based on local area sale comparables (Figure 7), we estimate that the fair market value for 2010 Haffley Avenue is approximately \$1,042,818 or \$14 per square foot of land. This is under the assumption that the site is ready for new construction activity. Specifically, the valuation assumes that the site is clean, free of equipment, and any other conditions that would require demolition and clearance activity (e.g., removal of concrete basins).

Figure 7: Summary of Industrial Sale Comparables in National City as of October 2014⁷⁸

Address	Sale Date	Building SF	Land Area	Sale Price	Price/SF (Building)	Land Price	Price/SF (Land)
1010 W. 19 th Street	8/15/2013	40,000	98,881	\$3,000,000	\$75	\$1,321,586	\$13
2011-2013 Haffley Avenue	12/28/2011	146,700	267,023	\$14,500,000	\$99	\$2,365,416	\$9
2300 Haffley Avenue	11/29/2007	27,113	89,734	\$4,000,000	\$148	\$1,941,748	\$22
2011-2013 Haffley Avenue	4/1/2005	146,700	267,023	\$11,625,000	\$79	\$1,896,411	\$7

Infrastructure Requirements

Required infrastructure for developing the GIAP should be consistent with general light industrial properties. Water, electricity, data, and sanitary sewer are the primary infrastructure requirements, while storm sewer capacity is less important because of the environmental requirements of treating all waste water on site and then directing it to the sanitary sewer. Roadway widths also need to be sufficient to accommodate tow truck maneuvering and truck deliveries. Due to prior use of the site, we assume that the site contains the necessary infrastructure required for development.

Market Assessment

Lease Rates

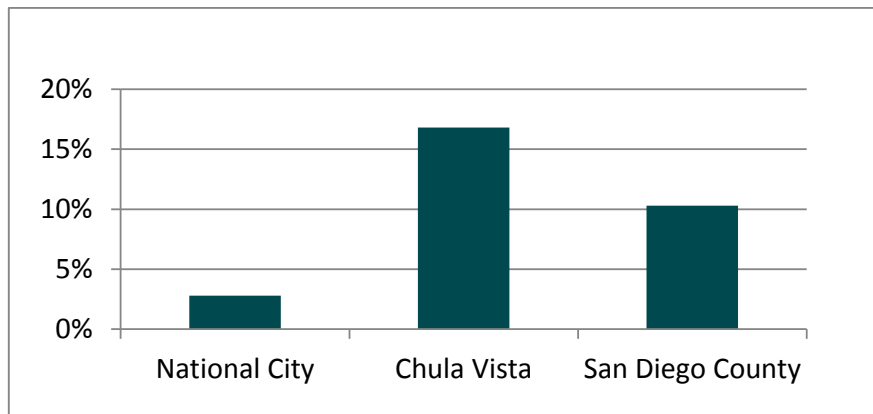
Industrial building lease rates in National City vary significantly based on the location, size, age, and quality of space. As shown in Figure 8, lease rates for industrial spaces used for auto purposes range from \$0.59 to \$0.72 per square foot in National City. Lease rates for general industrial warehouse and distribution use range on average from \$0.76 to \$0.77 per square foot. It should be noted that there is space currently vacant across the street from the receiver site at 2011 Haffley Avenue. This space is 22,195 square feet with an asking rate of \$0.68 per square foot or \$15,093 a month.

⁷⁸ CoStar Group, Cassidy Turley

Figure 8: Summary of Industrial Lease Rates in National City as of October 2014⁷⁹

Address	Leasable SF	Price/SF	Monthly Rent	Notes
1339 Hoover Avenue	3,000 SF	\$0.72	\$2,750	Industrial – Auto
1640 Hoover Avenue	4,000 SF	\$0.65	\$2,600	Industrial – Auto
1616 West Avenue	12,000 SF	\$0.59	\$7,080	Industrial – Auto
2011 Haffley Avenue	22,195 SF	\$0.68	\$15,093	Industrial – Auto. Across the street from receiver site
CoStar Group Market Report	Various	\$0.76	-	Industrial – Warehouse & Distribution Users
Cassidy Turley Market Report	Various	\$0.77	-	Industrial – Warehouse & Distribution Users

Overall, National City’s industrial space availability is limited. As shown in Figure 9, the availability rate in National City as of 3Q14 is 2.8%. This is beneficial for the GIAP because a vacancy or availability rate of 5% or less is considered a good developer and operator market. In other words, there is a limited supply of available space, making the GIAP a valued product for tenants in search of space in National City. In comparison, the availability rates in Chula Vista and San Diego County are 16.8% and 10.3%, respectively.⁸⁰ The next section of this report uses the real estate data highlighted within this section to develop site assumptions for the GIAP.

Figure 9: Industrial Space Availability as of 3Q14⁸¹

⁷⁹ CoStar Group, Cassidy Turley

⁸⁰ CoStar Group, Cassidy Turley

⁸¹ CoStar Group, Cassidy Turley

7. Scheme Definitions

Section 7 details the proposed site design schemes.

Site and Entitlement Analysis

Figure 10, below, highlights the pertinent site and zoning information for the project.

Figure 10: Site and Entitlement Analysis⁸²

Site and Entitlement Analysis Overview	
Site Address	2010 Haffley Avenue, National City, CA 91950
APN/Parcel ID	559-040-51-00
Census Tract	115001049
Site Dimensions	243'x307'
Square Footage (SF)	74,488
Site Acreage	1.71
Zoning	MM-CZ, Industrial Medium (IM) Zone The IM Medium Industrial zone is designed to provide for the development of medium manufacturing and industrial uses that operate without excessive noise, dust, odor or other nuisances and yet may be objectionable to other non-industrial uses
Minimum Lot Area Per Facility	7,500 SF
Minimum Street Frontage	100'
Minimum Setbacks	Street: 10' Other: 0
Parking	1 space per 500 square feet of floor area
Maximum Height	60' and 4 stories
Maximum Floor Area Ratio	2
Maximum Lot Coverage	80%
City Planning Contacts	Mike Fellows, Planning Technician National City, Planning Department mfellows@nationalcityca.gov 619.336.4421 Martin Reeder, Principal Planner National City, Planning Department mreeder@nationalcityca.gov 619.336.4313

⁸² National City Municipal Code §18.22.030, 18.25.040

Revisiting Schemes from the 2008 Study

As highlighted in Section 2, the EPS team conceptualized four non-site specific auto industrial facilities that are based on two operational types. The first operational type is a traditional lease and ownership structure in which all tenants maintain and upgrade their own space. The second operational type is characterized by a cooperative enterprise in which an operator leases work bays in a large managed facility and shares other facilities on site such as prep booths, spray booths, and parts storage.⁸³ Furthermore, the EPS team also tested layout schemes for both single and multiple story facilities. Figure 11 outlines the four design schemes from the study. Overall, the study found that Scheme 2A would be the most feasible out of the four design scenarios on the basis that it would require the least amount of gap funding and allow the developer to earn a 10 percent return on costs.⁸⁴ Site design illustrations from the 2008 study can be found in Appendix F.

Figure 11: National City Harbor District – Summary of Design Schemes⁸⁵

Scenario	Land SF	Gross Building SF	Leasable Shop Space	# of Tenant Spaces	SF per User
Scheme 1A Conventional 1-Story	104,400	63,121	58,177	12	4,848
Scheme 1B Conventional 2-Story	59,160	63,121	58,177	12	4,848
Scheme 2A Shared Facilities 1-Story	138,100	87,662	87,662	18	4,870
Scheme 2B Shared Facilities 2-Story	101,504	102,751	102,751	18	5,708

⁸³ *National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, page 14.*

⁸⁴ *National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, page 28.*

⁸⁵ *National City Industrial Park Feasibility Analysis, Final Report, June 19, 2008, Appendix – A2*

Revised Schemes

To build upon the 2008 study, we created two design schemes for the GIAP that are scaled to fit and follow 2010 Haffley Avenue's site dimensions and zoning requirements. The following two design schemes are described further below. The financial feasibility of each scheme is discussed in Section 8 – Development Analysis and Recommendations.

Scheme 1: No Shared Customer Space

Scheme 1 is based on a traditional industrial multi-tenant design standard in which each operator owns or leases their own space and does not share any customer space or common area between businesses. This design scheme is consistent with many existing auto repair and maintenance facilities on the OTNC.

The overall site is 74,448 square feet with 29,400 square feet of tenant space. Under our proposed design, there are six tenant spaces, with a larger tenant space of 9,800 square feet fronting Haffley Avenue. Smaller tenant spaces ranging from 2,450 square feet to 4,900 square feet are placed on the back of the site. Each work bay is 35 feet wide and 35 feet deep, which allows for the storage of three cars wide (see Figure 12).

Based on our interviews, we strategically designed the site to promote business compatibility. Specifically, based on wind direction, we placed debris-producing auto businesses (e.g., body repair shops) in front of the site facing Haffley Avenue to prevent disturbances between other businesses.