



Encinitas Fire Department

Infrastructure Needs



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Encinitas Fire Stations



Station #1

Built 1957



Station #2

Built 2013



Station #3

Built 2009



Station #4

Built 1979



Station 5

Built 2000



Station #6

Privately Owned

Facility Assessment

Between December of 2011 and March of 2012, Jorgensen conducted facility condition assessment data collection at the City of Encinitas, with a re-fresh of the data and select re-inspections conducted in March of 2014.

In March of 2014, the City requested that the Consultant ... re-assess the condition of Fire Station #1

*Facility Condition Assessment
City of Encinitas*



JORGENSEN
FACILITIES SERVICES

Station #6

Difficiencies

- Privately Owned
- Should be in a more strategic location
- Should have a Type 1 Fire Engine with a Captain, Engineer and Firefighter
- Does not allow for Diversity, Equity, and Inclusion Initiatives
- Ultimately does not provide the level of service needed as the highest wildland fire threat to the City of Encinitas.

Infrastructure Needs

- Build a new fire station more centrally located in Olivenhain
- Purchase a Type 1 Fire Engine (\$1.2 Million)
- Cross Staff a Type 3 Fire Engine (Brush Engine) (no cost)
- Provide an Engineer to the current staffing model (



Station # 1

Difficiencies

Site

- Significant Cracking in Concrete Pavement shows lack of structural support

Structure

- The structure exhibits signs of aging and fatigue.
- The hose tower is unreinforced masonry and in poor condition, these defects compromise the integrity of the structure
- Settling at the southeast end of the building may impact the sewage line

Exterior

- Exterior surface finish is deteriorating
- Exterior wood trim displays cavitation, window louvers have rotting frames which allows heavy air and moisture leakage.

Roof

- Roof is recommended to be replaced between 2021 and 2024 Trespassing and
- vandalism problems

HVAC

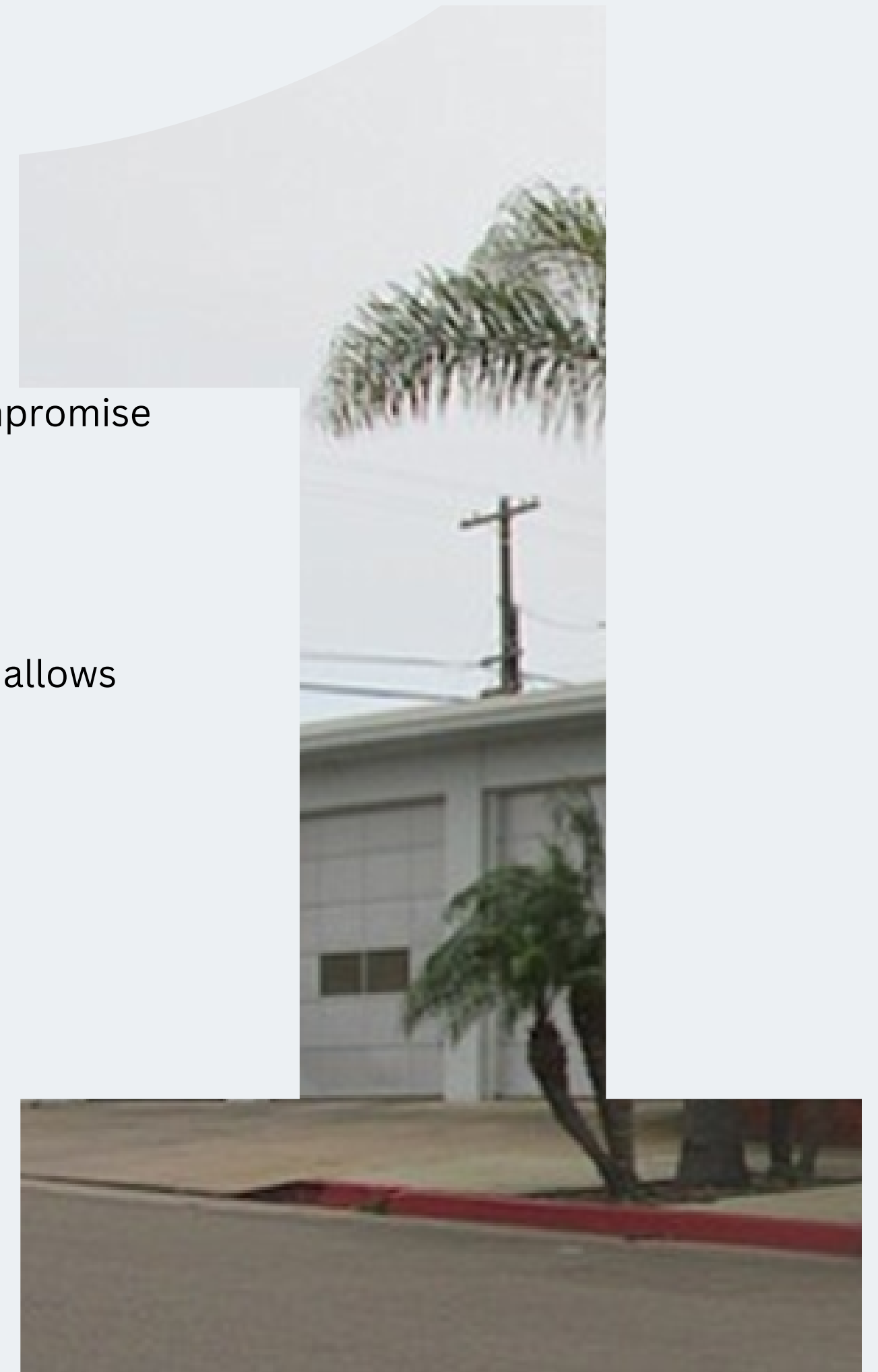
- Is in fair condition

Electrical System

- Electrical system has aged since 1957

Plumbing

1. The outdated under floor system was retrofitted to overhead plumbing. Plumbing throughout the station is old and presents maintenance issues.



Station # 1

Difficiencies

Interior Finishes

- Because of a mold issue the interior was provided a low-cost remodel in the living area and kitchen
- The rest of the station is outdated and has damaged finishes, deteriorated wood, and poor floor surfaces

Business Unit Support Equipment

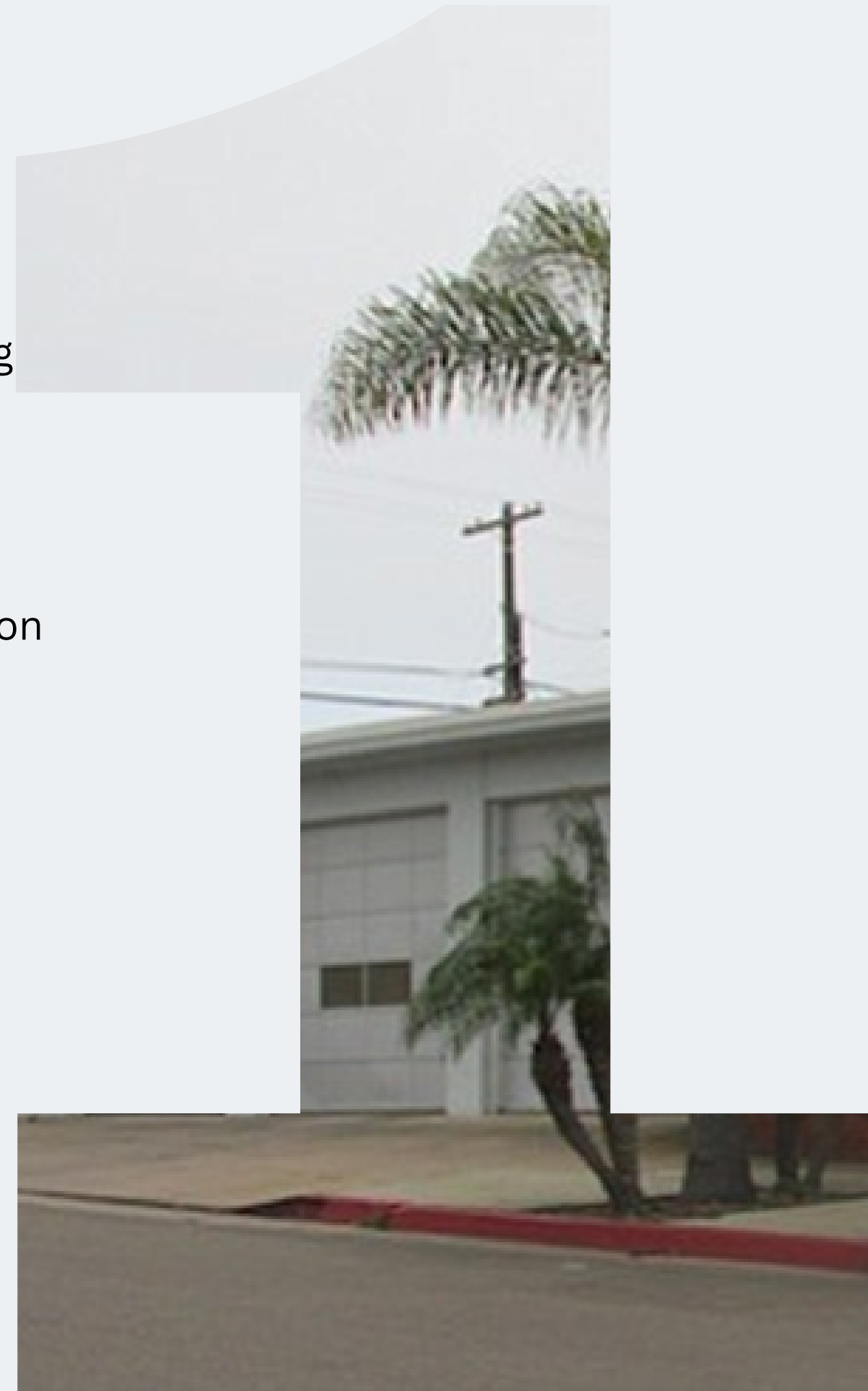
- Station Emergency Alerting System are outdated and will need to be replaced soon
- PlymoVent is old and needs to be replaced
- Kitchen appliances are old and inefficient
- Garage/Bat doors are old and need constant maintenance
- All lights are fluorescent

Diversity, Equity, and Inclusion

- Bathroom and Shower areas are communal

Environmental Impact

- The age of the fire station and its infrastructure does not provide an energy efficient business mode
- Solar Panels, LED lighting, and energy efficient appliances are needed.



Station # 4

Difficiencies

Site

- Minor Concrete Cracking

Structure

- Structure members are old and deteriorating

Exterior

- Siding on the fire house displays significant degradation
- Siding touches concrete slab promoting mold growth from built up moisture

Roof

- Tiles were in need of minor repair in 2014, this is still the case today
- Falling tiles present a hazard
- Replacement of the flat asphalt roof is recommended between 2011 and 2014

HVAC

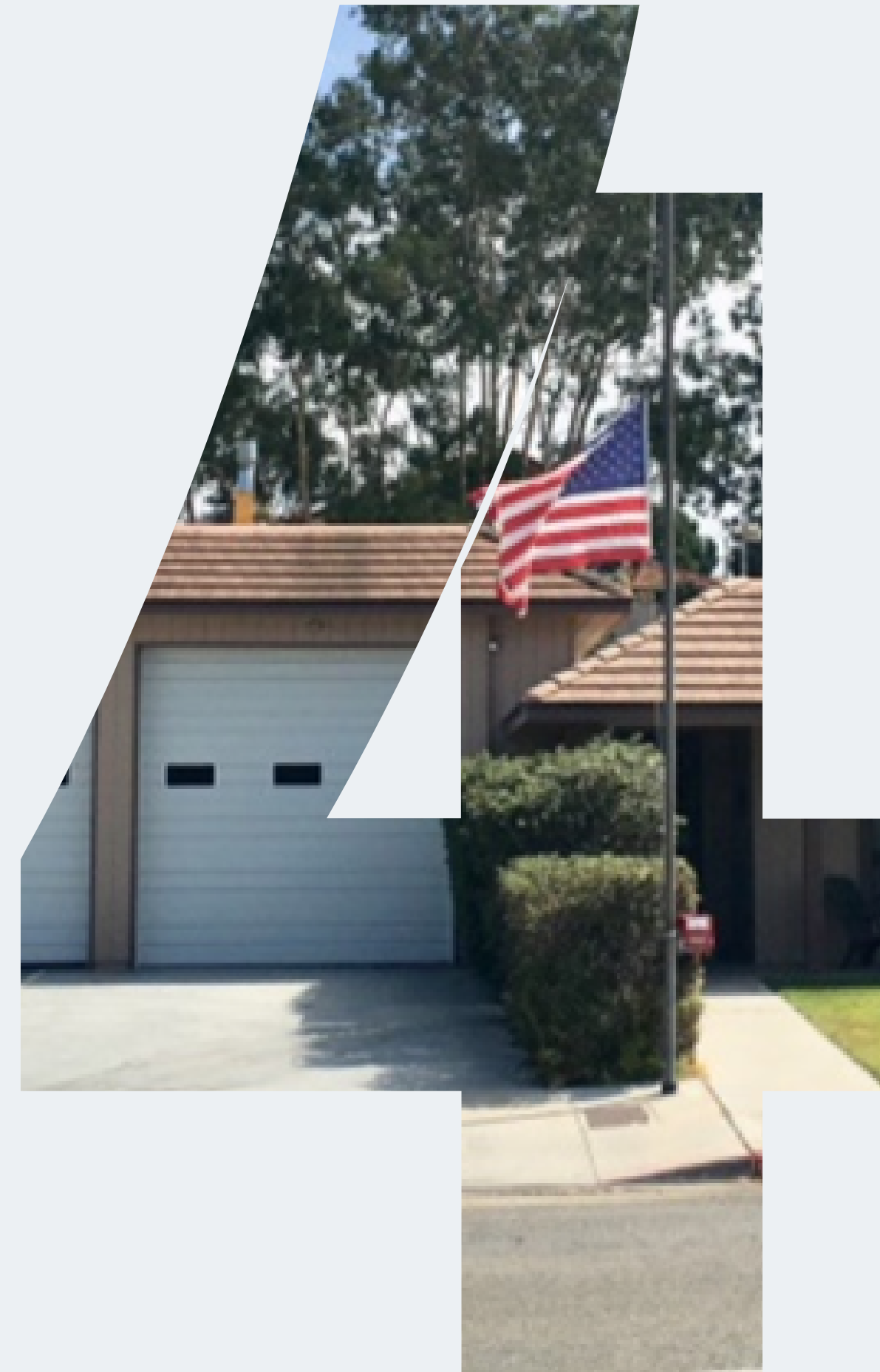
- Due for replacement in 2020

Electrical System

- Electrical system has aged since 1979

Plumbing

- Multiple slab leaks and sewer issues have occurred over the las 10 years



Station # 4

Difficiencies

Interior Finishes

- Finishes are old, deteriorating, and not aesthetically pleasing
- Moisture damage from exterior deterioration, plumbing, and sewer issues have created a mismatch of interior finishes

Business Unit Support Equipment

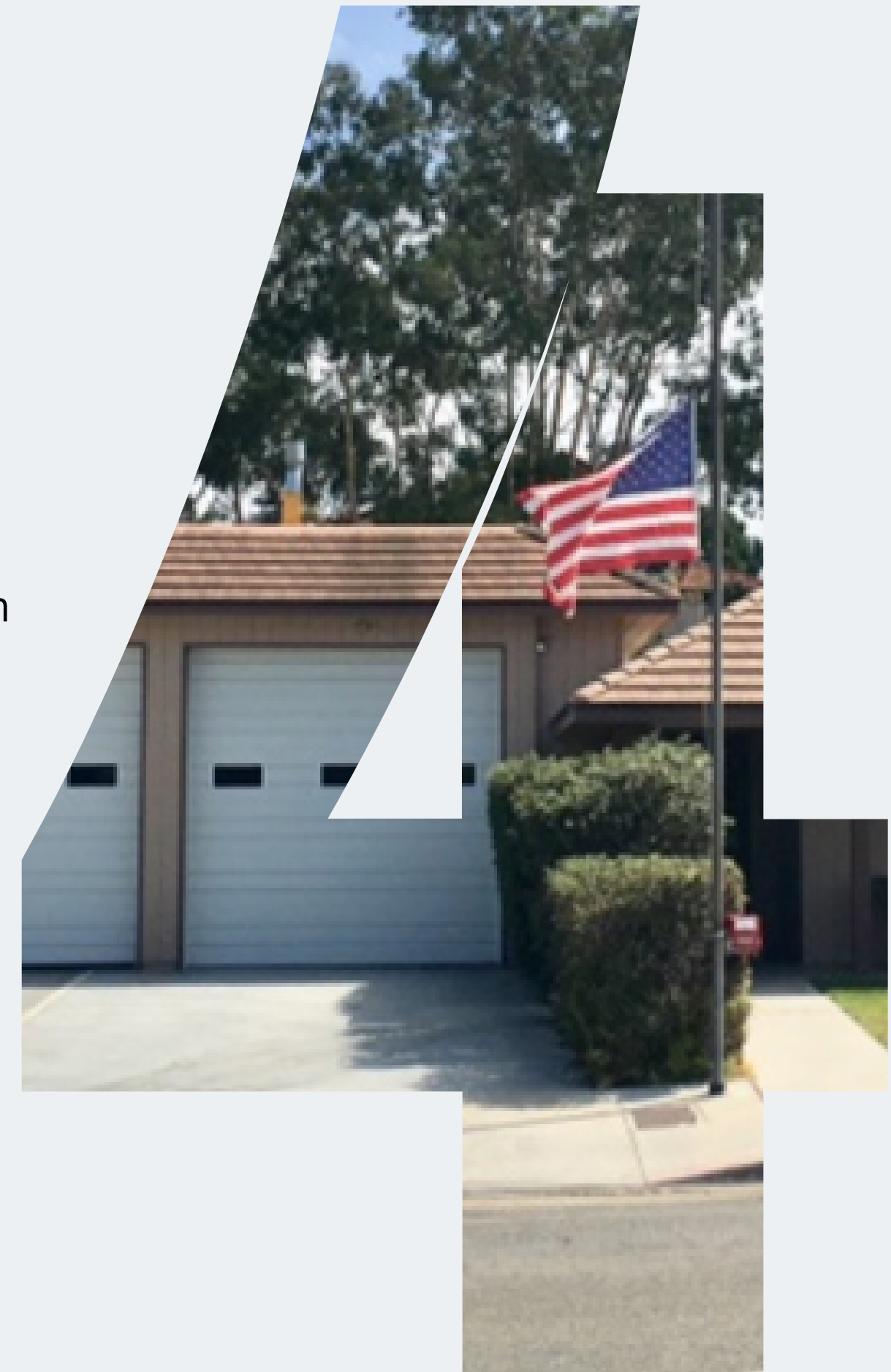
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Diversity - Equity - Inclusion

Replacing an old fire station with a new one presents an opportunity to promote diversity, equity, and inclusion (DEI) within the fire department and the broader community. A new fire station can be designed to prioritize DEI principles by incorporating inclusive spaces, facilities, and practices.

Gender Neutral

facilities to accommodate firefighters of all genders

ADA

accessible infrastructure for individuals with disabilities

Community

culturally sensitive spaces that celebrate the diverse backgrounds and experiences of firefighters and community members

Recruitment

allows for intentional outreach and recruitment efforts to attract a diverse pool of firefighters, creating a department that better represents and understands the community it serves

Environment - Sustainability - Responsibility

Replacing an old fire station with a new one offers significant opportunities to improve energy efficiency. Modern fire stations can be designed with energy-efficient features such as insulation, efficient lighting systems, smart controls for heating and cooling, and energy-saving appliances.

Energy Costs

a new fire station can reduce energy consumption and lower operating costs

Environmental Impact

renewable energy sources, such as solar panels, can further enhance the station's energy efficiency and decrease reliance on traditional power grids

Sustainability

With improved energy efficiency, fire stations can allocate more resources to critical operations and public safety initiatives, while also reducing their environmental footprint and contributing to sustainability efforts.

Responsibility

This commitment to environmental responsibility not only benefits the immediate surroundings but also sets a positive example for the community, promoting awareness and inspiring others to adopt sustainable practices

Firefighter Health and Wellness

By prioritizing the health and wellness of firefighters through the design and facilities of a new fire station, fire departments can support their physical and mental well-being. This, in turn, contributes to their ability to perform their duties effectively, maintain a high level of job satisfaction, and promote long-term career longevity.

Ergonomic Design

an ergonomic work environment supports firefighters' physical well-being and reduces the likelihood of occupational health problems

Cancer Prevention

improved ventilation systems, dedicated decontamination areas, cancer decontamination units (CDU's), and other resources reduces the likelihood of firefighters developing cancer

Mental Health

Firefighters often work long hours and face unpredictable schedules. A new fire station can include dedicated rest and recovery areas where firefighters can take breaks, recharge, and prioritize self-care

Physical Fitness

Firefighters need to maintain a high level of physical fitness to perform their demanding duties effectively. New fire stations can include dedicated fitness facilities equipped with exercise equipment, weightlifting areas, and space for cardiovascular workouts

Public Safety

Building a new fire station contributes to public safety by improving emergency response times, expanding coverage, upgrading facilities and equipment, offering specialized services, engaging the community, and increasing operational efficiency. These factors work together to enhance the fire department's ability to protect lives, minimize property damage, and ensure the safety and well-being of the community they serve.

Upgraded Facilities and Equipment

By building a new fire station, you can incorporate modern infrastructure, state-of-the-art equipment, and advanced technologies reducing response times

Specialization

new fire station can be designed to accommodate specialized services based on the specific needs of the community

Alerting and Radio Systems

improve communication, coordination, and response capabilities enables firefighters to receive timely and accurate information, effectively collaborate with other agencies, and make informed decisions during emergency situations

Operational Efficiency

By streamlining operational processes and reducing response times within the fire station, firefighters can allocate more time and resources to actual emergency response, ultimately improving public safety outcomes.

Training Tower

Training Towers in North County -

1. Rancho Santa Fe ~ 30 minute travel time
2. Carlsbad ~ 25 minute travel time (limited availability)
3. Oceanside ~ 30 minute travel time
4. San Marcos ~ 35 minute travel time (limited Availability)
5. Vista ~ unavailable to outside departments
6. Escondido ~ 40 minute travel time
7. Camp Pendleton ~ 35 minute travel time
8. Pala ~ 55 minute travel time



Training Tower

Training Towers in North County -

- A training tower is a specialized structure used in firefighting training to simulate various emergency scenarios and provide practical training for firefighters. Several firefighting training activities that commonly require a training tower include:
- Fire Behavior Training: Training towers are equipped with burn rooms or burn props where controlled fires can be set. Firefighters learn about fire behavior, fire dynamics, and techniques for fire suppression and ventilation in a controlled environment.
- Search and Rescue: Firefighters practice search and rescue operations in training towers, simulating scenarios where they need to navigate through dark, smoke-filled environments to locate and evacuate victims.



Training Tower

Training Towers in North County -

- Hose Line Advancement: Firefighters practice advancing hose lines up stairwells or through different levels of the training tower, simulating the challenges they may face during actual firefighting operations in multi-story buildings.
- Ventilation Techniques: Training towers often have structures that mimic roofs, allowing firefighters to practice ventilation techniques such as vertical ventilation or horizontal ventilation to control fire spread and improve visibility.
- Ladder Operations: Firefighters practice ladder operations, including raising, extending, and securing ladders to access upper levels of the training tower and perform rescue operations or gain access to the roof.



Training Tower

Training Towers in North County -

- Rappelling and Rope Rescue: Some training towers are equipped with rappelling stations, enabling firefighters to practice rope rescue techniques, such as rappelling down the side of the tower to simulate rescuing people from tall buildings.
- High-Rise Firefighting: Training towers can be designed to simulate high-rise buildings, allowing firefighters to practice high-rise firefighting techniques, including fire attack, evacuation, and coordination of operations on multiple floors.
- Training towers provide a controlled and safe environment for firefighters to develop and refine their skills in a realistic setting, preparing them for the challenges they may face during actual firefighting operations.



FUTURE OUTLOOK

Partial List of Approved or planned Development within Encinitas

- 1967 Vulcan Ave. - 72 Apts ~ 187 people
- 1950 N Coast Hwy Approved 94 apts ~ 244.4 people
 - commercial space, and a hotel with 30 rooms
- Piraeus x Plato Piraeus Point Apts - 149 apts ~ 387.4 people
- 1150 Quail Gardens - 197 apts ~ 512.2 people
 - 53 condos ~ 137.8 people
 - Commercial Space
- 556 Union St - 199 Apts ~ 517.4 people
- 185 Quail Gardens Quail Meadows - 485 apts ~ 1,261 people
- 155 Quail Gardens - 40 apts ~ 364 people
- 05550 Encinitas Blvd - 209 apts ~ 543.4 People
- 2220 Encinitas Bl - 250 apts ~ 650 people
- 1800 block of S El Camino Real - 145 apts ~ 377 people
- 3459 Manchester Ave - 61 apts ~ 158.6 people

Not listed but significant

3111 Manchester Ave Senior Living Facility Approved
preparing plans for construction
200 units with 8 SFD w/ADU's

777 N El Camino Real Medical Office Building Under
construction

Approximate Population Increase based on Average
Household population

~ 4,684.8

FUTURE OUTLOOK

Approved or planned Development within Encinitas Effects on Fire Department Operations

Current Population with Development Population Increase =	$62,140 + 4,684 = 66,824$
Current Call Volume by Unit Responses (2022) =	14,292
Call Volume by Unit Responses Per Capita =	$14,292 / 62,140 = 0.23$
Call Volume Per Capita with Development Population Increase =	$66,824 \times .23 = 15,369$

Response Increase of 1,077 Responses

FUTURE OUTLOOK

Approved or planned Development within Encinitas Effects on Fire Department Operations - Staffing

Current Fire Department Standard Operational Guidelines are designed to address emergency response to structures that are no higher than three stories.

The addition of structures that are four stories or higher will require the fire department to add additional Full Time Employees. A fourth firefighter would need to be added on the Fire Truck to provide the needed personnel to ensure highrise emergency operations can be

\$53,000,000

NEW FIRE STATIONS

The cost building a new fire station falls between \$13 Million and \$20 Million. Fire Station 6, Fire Station 4, and Fire Station 1 need to be built to provide the highest level of service to the community.

Financial Impact

\$1,200,000

TYPE 1 FIRE ENGINE

A type 1 Fire Engine would be required to be staffed at Station 6 (Olivenhain) to provide Wildland Urban Interface Firefighting abilities.

\$428,281

FULL TIME EMPLOYEES

The addition of three Fire Engineers to staff the Type 1 fire engine at Station 6 as well the addition of three firefighters to the Fire Truck are need to ensure the fire department keeps up with the infrastructure growth throughout the city of Encinitas.

Total Cost of Infrastructure Needed (not including Full Time Employee Additions)

\$55,200,000

\$1,000,000

TRAINING TOWER

Providing a training tower will increase operational readiness and decrease response times. The goal is to build a shared training tower/facility with the Sheriff's Department in the future.