City of Garden Grove

Infrastructure Space Needs Assessment Report

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Thank You!

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Dewberry is a national architecture and engineering firm specializing in the planning and design of Public Safety facilities. The Dewberry Design team includes:

- Structural and Civil Engineering: KPFF
- Mechanical, Electrical, Plumbing, Telecommunication, and Physical Security: P2S,
- Cost Estimator: OCMI, Inc.

Our design team was commissioned by City of Garden Grove in the Summer of 2019 to conduct an updated facility space needs assessment report. The updated report should address the current, as well as future, needs for the Garden Grove Police Department (GGPD). The intention of the report is to help plan for a well-designed Police Department which would enable the staff to operate efficiently and effectively. This report will also help GGPD to further align with their mission.

> *"The mission of the Garden Grove Police Department, through a Community Partnership, is to improve the quality of life in the city and provide a sense of safety and security to the community members."*

The report includes all Police Department facilities on and off-site, which are:

- Main Police Building
- Property and Evidence Annex
- Juvenile Justice Center
- Special Services Annex
- Off-Site Evidence Warehouse

It has been 10 years since the last space needs assessment report, which was performed in 2009 by Griffin Structures, Inc. In addition to updating the previous needs assessment, this report also contains conceptual facility design studies, inclusive of site and parking analysis.

1.2 METHODOLOGY

This two-part needs assessment report was organized into a Programming Phase and a Division Diagramming Phase. From the project kick-off meeting, surveys, interviews, site visits, and meeting, these critical success factors were developed.

Critical Success Factors – Project Goals

- Create an accurate and realistic conceptual level budget at the end of this report, based on information that were provide and developed at a conceptual level.
- The new facility design should meet the Commission on Accreditation for Law Enforcement Agencies (CALEA) standards
- The new facility design should be sustainable and resilient
- The new GGPD should allow for planned phasing of future additions
- Create secure facility for public and staff
- Create a better working environment for staff
- More efficient layout of program spaces:
  - Currently the police division has out grown their existing building and does not allow for current or projected future growth
  - More storage needed for each division as well as personal storage
- Goal for all division to be on same site:
  - GGPD is currently leasing off-site 5,000 square feet warehouse for storage and property evidence
  - Community Liaison Division has 2 satellite locations and leased off-site storage
- Most conference rooms should be flexible and sharable for various uses such as an Emergency Operation Center (EOC).
  - There are limited conference rooms available and only one is flexible
- Create an on-site training facility which doesn't exist today
- Include an on-site Community Room to meet Garden Grove Strategic Plan 2018 for Community Out Reach
- Secure and separated interview rooms
  - Secure interview rooms for Records, Detention, and Youth Services
  - Interview suite for Gang, Special Investigation Unit, and, Administrative Services
  - Need interview rooms to have better acoustical insulation to dampen outside noise

    - More effective technology for audio and visual recording
- Include appropriately sized and more staff lockers with a bigger on-site fitness room
- Parking improvements needed:
    - Need secure parking for staff and more parking stalls to be adjacent to the building to allow for shift change fluctuation
    - Need more parking for City Hall
    - Need more public parking
    - Need more parking for Accessibility

To better understand the goals and needs of GGPD, Dewberry has gathered data through different methods including:

- Survey in the form of questionnaires – 127 surveys were filled out by GGPD staff
- Follow-up on-site interviews with each divisions
- Site visit to physically assess the operation conditions and physical conditions of existing facilities

Then, preliminary space lists and diagrams were developed and reviewed in a series of work sessions with the staff to determine current and future space needs and operational adjacencies. Projections for staff growth were developed based on:

- Population projections
- Crime statistics
- Current trends in police divisions
- Leadership initiatives to keep staff size on appropriate pace with community growth, needs, crime trends, as well as flexibility to allow the implementation of new divisions and growth

A list of spaces and related adjacency diagrams were completed for each division and unit. Subsequently, different building adjacency concept plans were created. Finally, an estimate of probable cost was developed.

This final report consists of the following sections:

1. **Executive Summary** presents an overview of the process used in the report, as well as preliminary findings.
2. **Architectural Assessment**, which includes:
    - Building Planning Criteria discusses the factors that were examined to determine the final recommendations.
    - Existing Site & Facilities documents the existing conditions of the current site and facilities.
    - Facility Space Needs Analysis reviews all the division program spaces developed from the data collected, and the final program document of all schemes.
    - Development of Schemes shows options and schemes generated from workshop, meetings, and design studies.
3. **Site Accessibility Assessment** documents the existing site conditions and requirements for accessibility upgrade.
4. **Structural Assessment** documents the existing building conditions and recommendations for structural upgrades to meet current code and needs of facilities.
5. **Mechanical, Electrical, Plumbing, Telecommunications, and Physical Security Assessment** documents existing building conditions and recommendations for upgrades to meet current code and needs of facilities.
6. **Statement of Probable Project Cost** develops an overview of costs and budgets for the various proposed building components and schemes.
7. **Reference Source** used to developed this report.

1.3 PRELIMINARY FINDING-STAFF:

It is important to understand the current and potential future staff makeup of all the various police divisions as well as any anticipated changes in division organization or operations that may affect the program. Staff growth has been projected out 20 years in the program based on IACP Staffing Models, feedback from the client surveys, and the interviews during the study. In most cases, the 20 year staff projections were built on growth projections based on City of Garden Grove and Orange County current population trends.

A summary of some staff findings include the following:

- For Police, the authorized strength (as of July 2019) was
    - 162 sworn officers + 88 civilian staff = 250 total.
    - 182 sworn officer authorized but only 162 position filled

1.4 BUILDING SAFETY & SECURITY

Most of the existing Police Department buildings in this report were built with code standards and parameters that were based on 1970s requirements. Many of the original planning guidelines need modifications to respond to today's concerns for heightened safety and security measures. Some examples of these security risks include the following:

- There is no secured staff parking lot directly adjacent to the staff entrance.
- Public has direct visual access into staff's office from the public way.
- The current site lacks vehicle barriers for anti-ram.
- The interview suite is not properly separated from the detective areas and lacks a soft interview room and dedicated restroom.
- Building server room in detention area is not secured and usually open due to the need for ventilation.
- Reception in Gang and Special Investigation Unit does not have ballistic protection.
- The existing facility's fire and life safety does not meet today's code. The current buildings lacks the following:
  - Fire sprinkler and firm alarm
  - Proper rated walls and stair for existing

1.5 QUALITY OF WORK ENVIRONMENT:

In the past, a portion of Police Department employees spent little time inside their buildings. This is changing as public safety campus concept and police policies and procedures have evolved. Officers tend to work more indoors for report writing and training. Also, there are a large number of employees, primarily civilian staff, that spend much of their workday inside the building. Therefore, the quality of the work environment should be addressed in the building design to enhance productivity, promote professionalism, and enable the best employees to be recruited and retained.

Furthermore, the current Police Department has already outgrown their existing space with number of sworn officers and civilian staff. Most staff occupies small offices and are often required to store files within their work area. This makes it difficult to accomplish their day-to-day tasks.

1.6 EXISTING FACILITIES & SITE:

The scope of this report reviewed current program spaces used by the police division that total 53,206 sf.

Garden Grove Police Department Existing Facilities

Main Police Building	33,481	SF
Evidence and Property Annex	3,800	SF
Off-Site Evidence Warehouse	5,000	SF
Special Service Annex	6,025	SF
Juvenile Justice Center	4,900	SF
Total	**53,206**	**SF**

Site Information

Acres	**5.38**	**Acres**
Parking		
Secure Parking		
Patrol Vehicles	141 Standards Stalls	
Private Vehicles	85 Standards Stalls / 1 ADA Stall	
Visitor Parking	30 Standards Stalls / 4 ADA Stalls	
Total	**221 Total Parking Stalls**	

1.7 PRELIMINARY FINDINGS:

Building Space Needs

The quantity of current and future building space needs has been carefully assembled for each division.

- It is important to recognize that the major portion of the additional space needs are to provide for current needs. Many of the divisions are working in insufficient space right now.
- The space needs are also based on the accommodations for future staff anticipated to be employed by the City of Garden Grove in the next 20 years.
- The Police Department total program needs projected for 2039 is broken down into 4 schemes:
  - Scheme 1: Renovation and Addition of Existing Facilities
  - Scheme 2: New Construction - Low Cost Option
  - Scheme 3: New Construction - Middle Cost Option
  - Scheme 4: New Construction - Full Build-Out Option

Parking Space Needs

Parking customarily consumes a large portion of any municipal site, especially if it is all surface parking. It is important to understand the quantity and type of parking needed, so that facility planning and design can accommodate these needs.

- Current parking: Staff parking on east side of the facility is limited and not all employees can park in the gated area during their shift. By default, many employees are using the fire exit door instead of intended staff entry on north side of building. Employees have to park down the block and use the parking lot north of Acacia Adult Day Services facility, which can potentially expose the employees to dangers.
- Future parking: The future parking needs for employee and visitor parking have also been determined for a 20 year staff growth projection. However, additional parking needs for City Hall and Community Center Park are still to be determined.
- The Projected parking needs for 2039:
  - Staff Parking = 300 secured stalls
30 ADA parking
  - Patrol Vehicle = 84 secured parking
  - Public Parking = 60 parking stalls
6 ADA parking

Site Space Needs

Depending on the final site selection and building design, site area required area can varies.

- Current Site: The current site is conveniently located within walking distance to City Hall and major public facilities. The GGPD currently has 5.38 acres of site, including the Fire Department but not including the leased off-site storage warehouse.
- Future Site: For this report, the site is designed to 5.24 acres. Further site studies are needed once the site location is selected.

Cost Estimate

The cost estimate section of this report includes conceptual unit pricing budgets based on the program scope defined in Statement of Probable Project Cost Section. These budgets have been broken down into four schemes with anticipated construction start dates between Winter of 2021 and Fall of 2022. For more detail on the preliminary scope of each component or for additional cost breakdowns, see section 6.0 Statement of Probable Project Cost in this report.

Scheme:	Dept. Gross Sqft	Building Cost	Parking Structure Cost	Total Const. Cost	Soft Cost	Total Project Cost
1. Renovation & Addition of Existing Facilities	96,310 sf	$44,128,541	$18,299,778	$62,428,319	$12,485,664	$74,913,983
2. New Construction - Low Cost Option	96,310 sf	$41,976,320	$18,233,233	$60,209,553	$12,041,911	$72,251,464
3. New Construction - Middle Cost Option	102,646 sf	$47,487,179	$18,888,164	$66,375,342	$13,275,068	$79,650,410
4. New Construction - Full Build-Out Option	121,509 sf	$58,054,054	$19,345,351	$77,399,406	$15,479,881	$92,879,287

1.8 CONCLUSIONS / RECOMMENDATIONS:

This report is intended as an initial assessment of the spaces and needs of the Police Department. The information contained within this report can be utilized by the owner and design team as a guide. The goal of this report is to provide a road map for fulfilling the needs of the police and city staff, as well as the community. Also, this report should act as a base from which to produce improved police facilities and civic spaces that are functional, significant, and meaningful to the surrounding community.

Over the course of this report, it has been discovered and documented that the current Police and related facilities are all undersized with inadequate staff and public parking. Many of the areas in each of the current buildings are poorly configured to adequately facilitate the current space needs of staff, as they try to fulfill their duties to effectively and efficiently serve the needs of city residents today and into the future. These functionally outdated buildings also have aged buildings systems nearing the end of their useful life.

To best achieve the long term 2039 goals and improvements for the Police Department as identified in this report, Schemes 3 and 4 are recommended over Schemes 1 and 2.

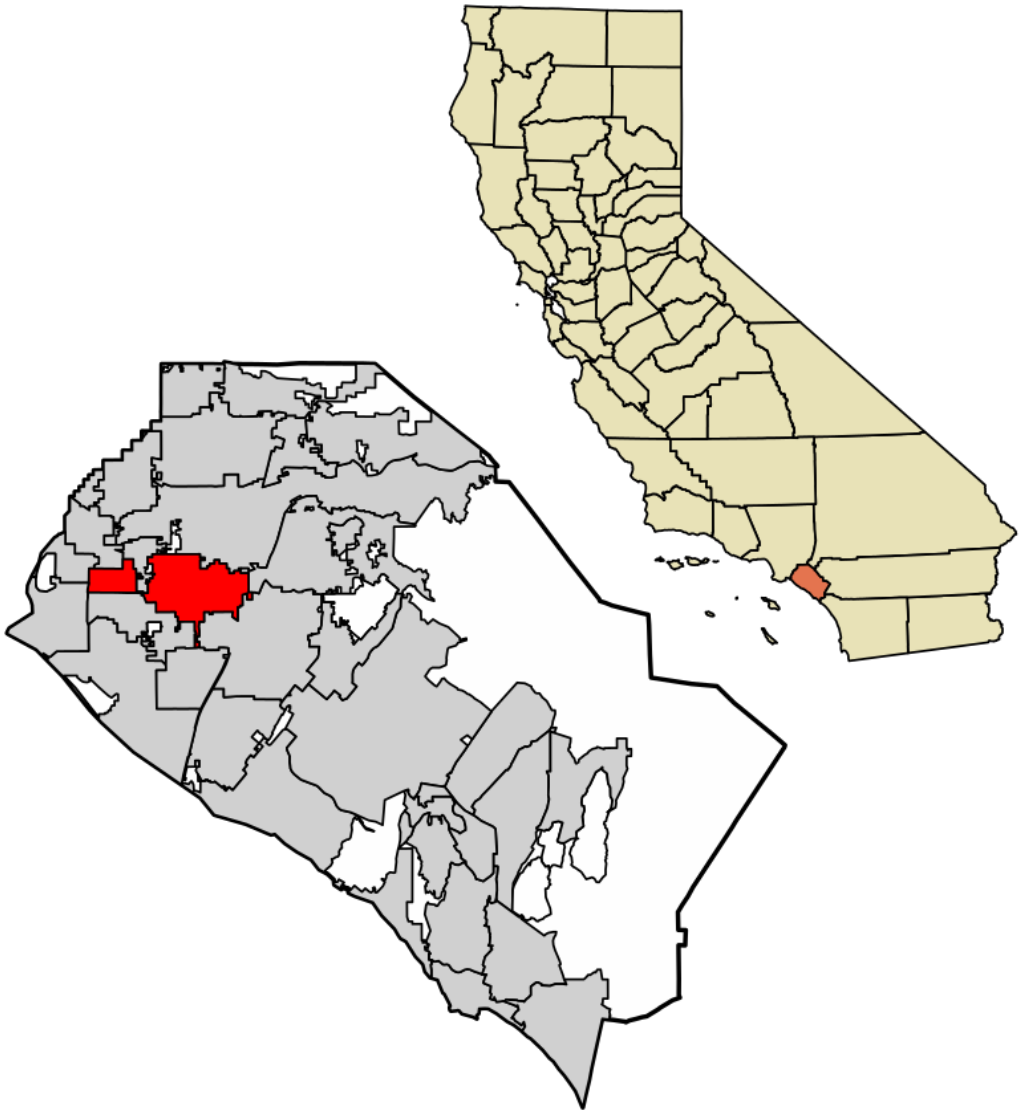
2.0 ARCHITECTURE ASSESSMENTS

2.1 BUILDING PLANNING CRITERIA

Nearly all public buildings are planned based on certain assumptions or clearly defined criteria about current and future needs. It is the intent of this section of the report to consider and document the criteria applicable to this report. Just as these existing municipal facilities were originally planned based on a certain understanding of the type of use, quantity and organization of staff, and community growth, the renovated or new facilities should follow these understandings as well. This section of the report looks at these factors in order to base the building planning on known criteria, agreed by all key decision makers.

Community History and Growth:

City of Garden Grove is one of the 37 cities in Orange County, which is in Southern California region. The City's name, "Garden Grove," was named by the City's founding father, Alonzo Cook. He suggested the name for the surrounding school and village in 1874. Although it didn't fit the open terrain at that time, Cook wanted to make it appropriate and beautiful by planting trees. The area became a farming community in the 20th Century. In 1950s, the area became the fastest growing city in the nation due to World War II. The servicemen would go to California for their training and then come back to the area to settle down.



Location of Garden Grove in California and Orange County

Garden Grove became a City on June 18, 1956, when the residents formally incorporated their town. According to 1960 census, Garden Grove had a population of 44,000. Today, the City has a population over 170,000, which is the fifth largest city in Orange County and 18th largest in the State of California. From the Local Profiles Report 2019, Profile of City of Garden Grove, created by Southern California Association of Government, SCAG, Regional Council, during the last 18 years from 2000 to 2018, the city had a growth rate of 7.1%, while Orange County has growth rate of 13.2%.

Community Demographics:

According to the Local Profiles Report 2019, Profile of City of Garden Grove, as of 2018, there are 46,583 households. During the past 18 years, between 2000 to 2018, households increased 1.7%, while Orange County had a growth rate of 10.9%.

From US Census, see below for demographic breakdown:

Age:

- Under 5 years = 5.3%
- Under 18 years = 21.7%
- 65 Years and over = 13.4%

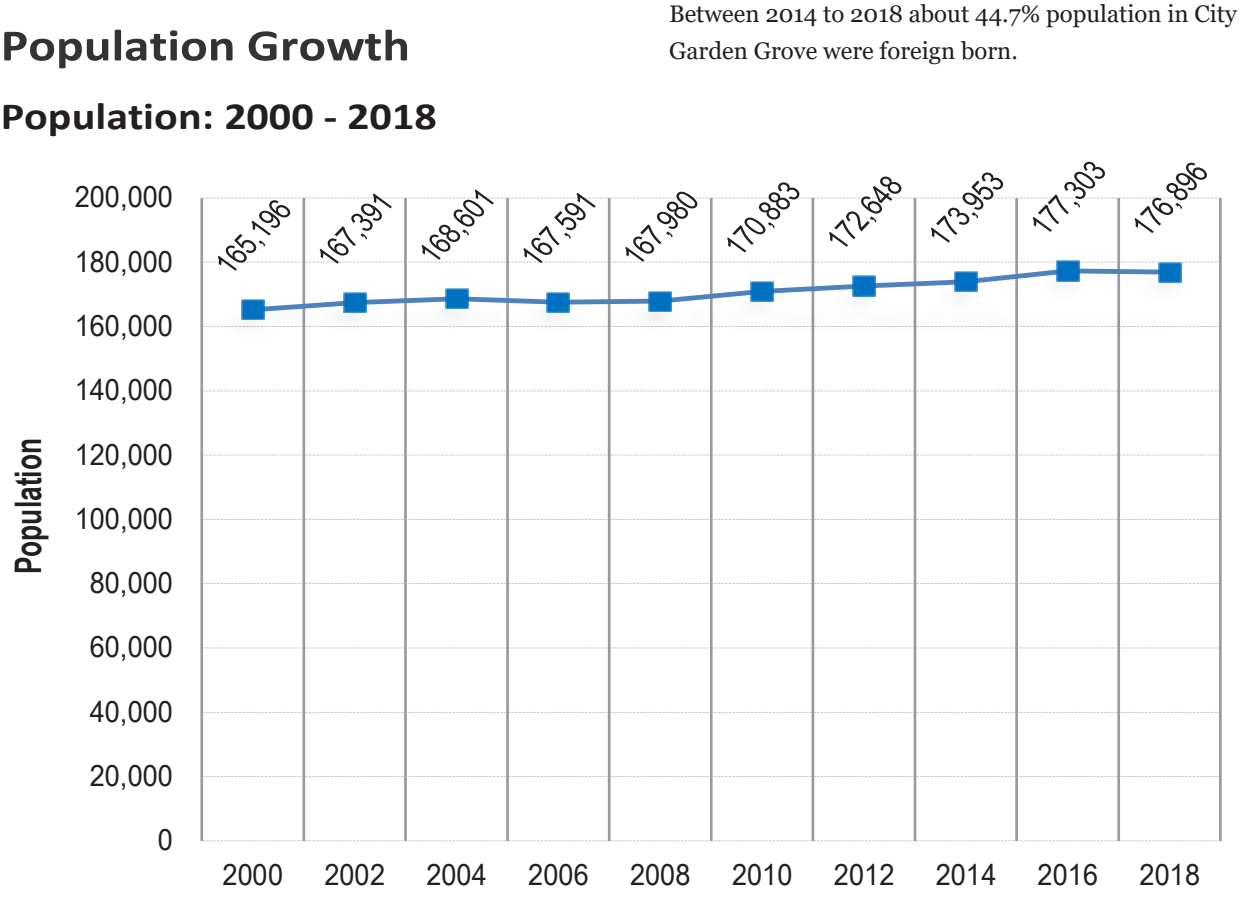
Male vs. Female:

- Female = 50%
- Male = 50%

Race and Origin:

- White = 40%
- Black or African America = 1%
- American Indian and Alaska Native = 0.5%
- Asian = 40.5%
- Native Hawaiian and Other Pacific Islander = 0.2%
- Two or More Races = 2.1%
- Hispanic or Latino = 37%

Between 2014 to 2018 about 44.7% population in City of Garden Grove were foreign born.



Source: California Department of Finance, E-5, 2000-2018

Population Growth Graph from Local Profiles 2019, Profile of the City of Garden Grove by Southern California Association of Government Regional Council

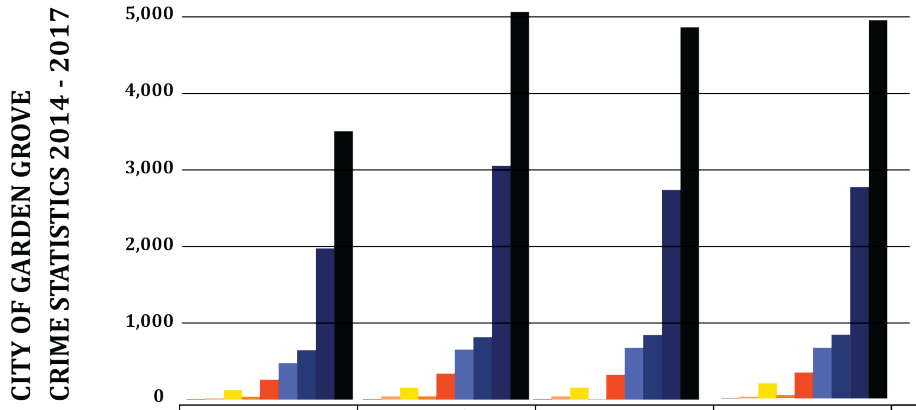
Police Department Growth:

The Police Department is authorized to have 182 sworn positions, but only 162 positions are filled. Based on the 2017 GGPD Annual Report, estimated population of 174,858 people, and for staff per 1,000 population ratio with 167 officers at that time, only 0.96 per capita ratio. Comparing to the 2009 Needs Assessment Report, there hasn't been any major growth in sworn officer count, since the report shows there were 160 sworn officers position filled.

Looking at the GGPD annual report 2017, the Police Department and City did a performance-based approach to determining what the police staffing needs are. It concluded that an additional 59 officers are needed to successfully deliver police services. The crime rate data also supports this finding, where there's an increase of crime. There's a total of 41.5% increase for crime rate from 2014-2017.

According to the FBI Data, based on jurisdiction population of 100,000-200,000, average officer per 10K population should be at 16.1 which is a 1.61 per capita ratio. There is an opportunity to hire more officers to better align with national standard.

The current and future staff organization charts enable planners to configure the correct amount of space for each division in optimum adjacencies to other divisions. Achieving optimum adjacencies enhances communication and job effectiveness. This is an important economic issue because it is more cost conscience to increase the effectiveness of current staff than to hire additional staff. It is important to point out that due to lack of space in the current facilities, staff are forced to compromise their effectiveness. Staffing costs are always large percentages of municipal facility operations budgets. The staffing projections have also been vetted through multiple programming rounds by staff.



	2014	2015	2016	2017	Change 2014 vs 2017
Homicide	6	6	4	5	-16.67%
Forcible Rape	17	42	41	25	47.06%
Robbery	124	153	185	222	79.03%
Arson	24	25	9	22	-8.33%
Felony Assault	260	338	316	357	37.31%
Auto Theft	476	653	680	668	40.34%
Burglary	646	815	859	834	29.10%
Theft	1,976	3,057	2,788	2861	44.79%
TOTALS	3,529	5,089	4,882	4,994	41.51%

Crime Statistics from GGPD 2017 Annual Report

EAST AND WEST DIVISION
CALLS FOR SERVICE
Responses Within Jurisdiction: 69,954

Responses Outside Jurisdiction: 4,263

Total Responses: 74,217

Jurisdiction Population	Average Total Personnel Per 10k Population	Average Officers Per 10k Population	Number of Agencies
50,000-100,000	20.4	15.9	419
100,000-200,000	21.0	16.1	165
200,000-500,000	24.4	18.6	73
500,000+	29.8	23.7	33
All Departments	21.4	16.6	690

SOURCE: Governing *calculations of 2015 FBI UCR data for cities of populations exceeding 50,000.*

FBI Data

City:	Population:	Officers:	Per Capita Ratio:
Garden Grove	174,858	167	0.96
Westminster	89,701	90	1.00
Huntington Beach	200,652	222	1.11
Buena Park	83,156	93	1.12
Cypress	48,906	55	1.12
Fountain Valley	56,528	64	1.13
Santa Ana	334,217	383	1.15
Orange	140,504	167	1.19
Tustin	80,395	96	1.19
Costa Mesa	112,822	136	1.21
Fullerton	140,721	175	1.24
Anaheim	351,043	482	1.37
Seal Beach	24,440	35	1.43
La Palma	15,774	24	1.52
Los Alamitos	11,636	25	2.15

Sworn Officer Per Capita Ratio from GGPD 2017 Annual Report

Staff Growth:

2019-2024: 250 to 324 = 29.6% increase
2024-2029: 324 to 339 = 4.6% increase
2029-2034: 339 to 354 = 4.4% increase
2034-2039: 354 to 367 = 3.7% increase

Largest staff increases expected in next 20yr:

- New Computer Crimes Division
- Special Resource Team is up 175%, from 4 to 11
- Property and Evidence is up 133.3%, from 3 staff to 7
- Community Liaison Division is up 116.7%, from 6 staff to 13
- Traffic Unit is up 66.7%, from 12 to 20
- Intel is up 66.7%, from 3 to 5
- Community Policing overall is up 60.6%, from 127 to 204
  - Community Policing Lieutenants is up 60%, from 5 to 8
  - West Division is up 59.5%, from 37 to 59
  - Special Investigation Unit is up 57.1%, from 7 to 11
  - Gangs Unit is up 46.2%, from 13 to 19
  - East Division is up 46.2%, from 39 to 57
- Administrative Services is up 44.4%, from 9 to 13
- Community Impact Team is up 42.9%, from 7 to 10

DEPARTMENT	CURRENT (2019)	5 YEARS (2024)	10 YEARS (2029)	15 YEARS (2034)	20 YEARS (2039)
Administration	**5**	**5**	**5**	**5**	**6**
Administrative Services	**9**	**10**	**12**	**12**	**13**
Records Division	**32**	**40**	**40**	**40**	**40**
Property & Evidence	**3**	**5**	**6**	**7**	**7**
Communications Division	**20**	**25**	**25**	**25**	**25**
Investigation Division	**41**	**50**	**55**	**58**	**58**
Lieutenants	1	2	2	3	3
Crimes Against Persons (CAP)	13	14	15	15	15
Property Crimes (Beats)	14	16	17	17	17
Youth Services Unit	6	9	9	9	9
Community Impact Team	7	9	9	10	10
Computer Crimes	0	0	3	4	4
Police I.T.	**1**	**1**	**1**	**1**	**1**
Community Policing	**127**	**175**	**182**	**193**	**204**
Lietenants	5	6	7	7	8
Receptionist	1	1	1	1	1
Special Investigations Unit (S.I.U.)	7	9	9	10	11
Traffic Unit	12	16	17	18	20
Gangs Unit	13	16	17	18	19
East Division WC	39	51	52	54	57
West Division WC	37	53	54	56	59
Special Resources Team	4	9	10	11	11
Community Liason Division	6	10	10	13	13
Intel	3	4	5	5	5
Jail-Booking and Holding	**11**	**11**	**11**	**11**	**11**
Training-Firing Range	**0**	**1**	**1**	**1**	**1**
Special Weapons and Tactics	**1**	**1**	**1**	**1**	**1**

Total	**250**	**324**	**339**	**354**	**367**
Sworn Officer	**162**	**196**	**203**	**211**	**221**
Civilian	**88**	**128**	**136**	**143**	**146**

GGPD Staff Growth Projection

2.2 EXISTING FACILITIES AND SITE CONDITION:

The existing Garden Grove Police Facility is located at 11301 Acacia Parkway Garden Grove, California 92840. The Police Station was permitted and constructed in 1970 under jurisdiction of the 1967, Uniform Building Code, UBC code. The existing facility is Type V construction, which the structural elements are made of materials that are permitted by code. The existing buildings are also non-sprinkled and without a Fire Alarm System. There are 5 buildings that make up the Garden Grove Police Facilities campus. They are the Main Police Facility, the Evidence Warehouse which includes a leased off-site Evidence Warehouse, the Juvenile Justice Center and the Special Security Annex. The Facility has undergone multiple additions and alterations since 1970 the following is a list of Alteration Projects identified by the year of the design. While the Garden Grove Fire Department occupies the Western portion of the site, the existing program, building and parking will remain in place.

This section of the report gives an overview of the existing facility locations, sizes, and functions within the scope of the report. The Garden Grove Police Department is undersized which impacts operational efficiencies and creates challenges. The space needs assessment and programming exercise focus on studying program space that's needed for GGPD 20 years projection.

Main Police Facility

Construction and Renovation History

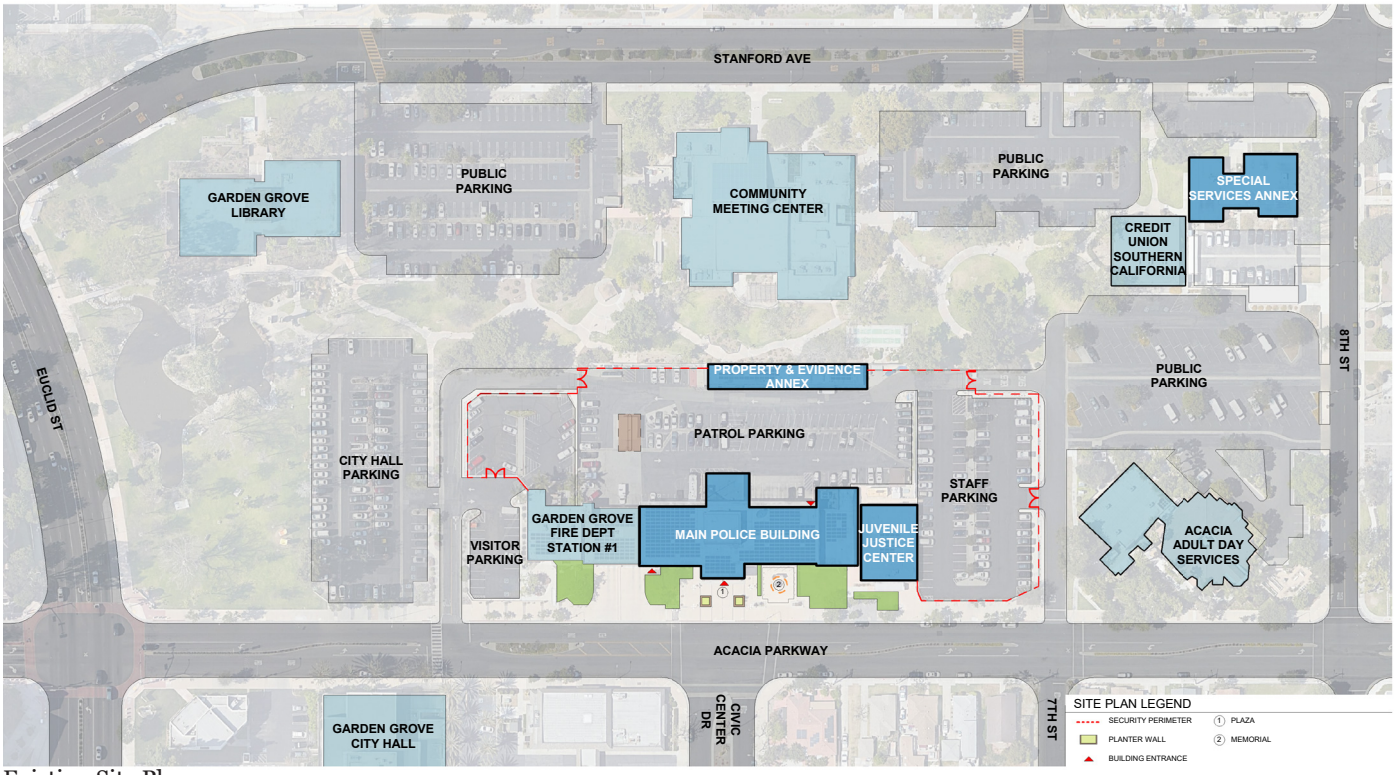
Garden Grove Police Facility	1970
Evidence and Property Annex	1971
Fire Station Addition	1977
GGPD Interior Alterations	1991
GGPD Interior Alterations	1995
GGPD Juvenile Justice Center	1997
GGPD Interior Alterations	1999
GGPD Interior Alterations	2003
GGPD Swat Annex	2004
GGPD Interior Alterations	2007
GGPD Special Vehicle Garage	2008
GGPD Interior Alterations	2017

The Garden Grove Police Department Project Data

Main Police Facility	33,481	SF
Evidence and Property Annex	3,800	SF
Off-Site Evidence Warehouse	5,000	SF
Special Services Annex	6,025	SF
Juvenile Justice Center	4,900	SF
Total	53,206	SF

Site Information

Acres	5.38	Acres
Parking:		
Patrol Vehicles	141 Standards Stalls	
Private Vehicles	85 Standards Stalls / 1 ADA Stall	
Visitor Parking	30 Standards Stalls / 4 ADA Stalls	
Total	221 Total Parking Stalls	



Existing Site Plan

Main Police Facility - first floor

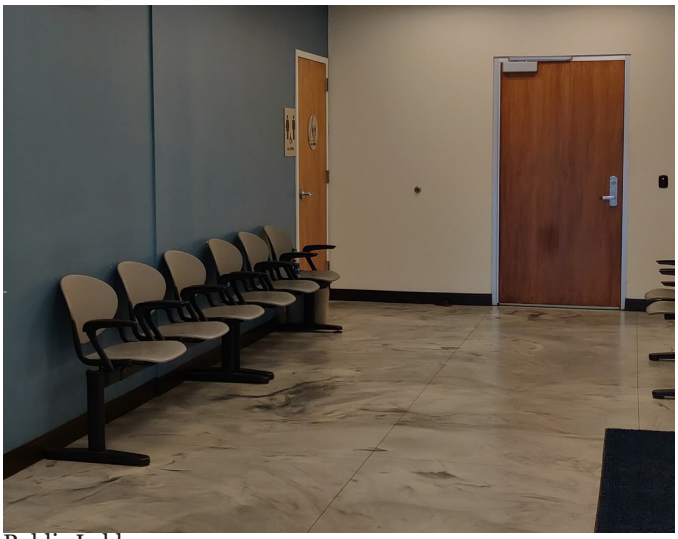
The police station first floor includes approximately 16,680 gross sf which includes the following program spaces:

- Public lobby
- Records
- Community Liaison Division
- Community Policing
- Communication
- Briefing Room
- Locker Rooms
- Armory Storage and Workshop
- Police I.T. Server Room
- Detention Area
- Building Support spaces

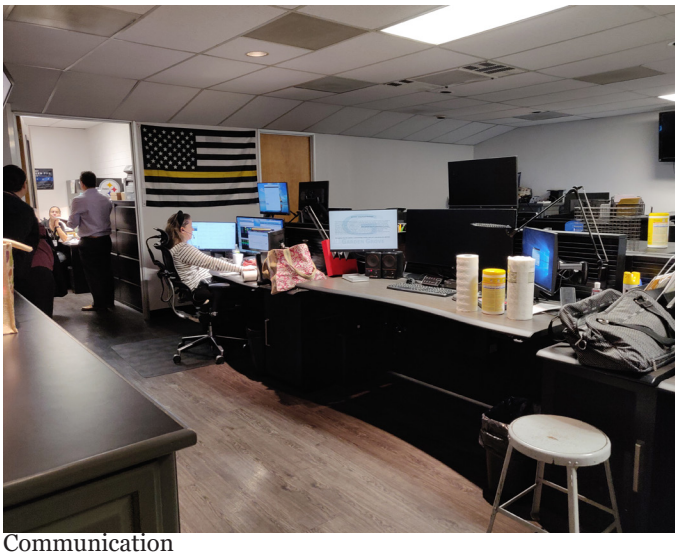
Some of the current first floor challenges and deficiencies include the following:

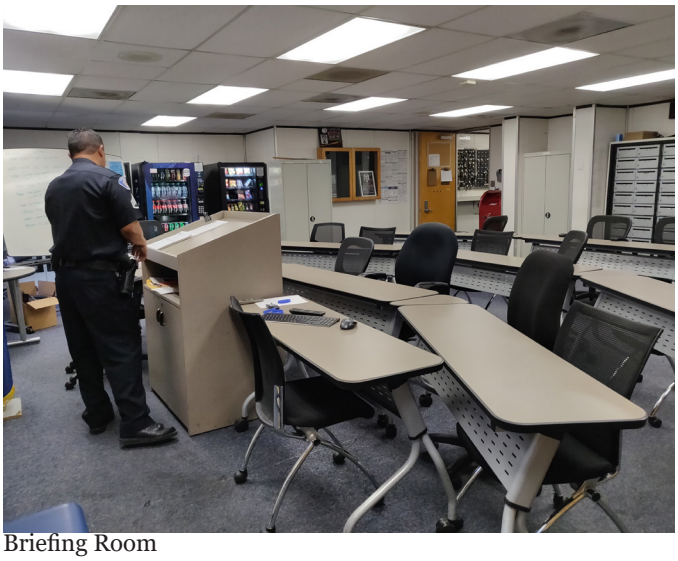
- Inadequate storage spaces and no room for staff growth
- Inadequate office space for staff
- Public Lobby:
  - No ADA accessible elevator from the public lobby to get up to the 2nd floor administration division
  - No ADA Record's counter
  - Do not have waiting area for families or soft interview rooms
- Records:
  - Need larger Record Writing Room, when there are more than one officers or family comes in.

Public Lobby


Public Lobby


Records Counter


Communication



Briefing Room

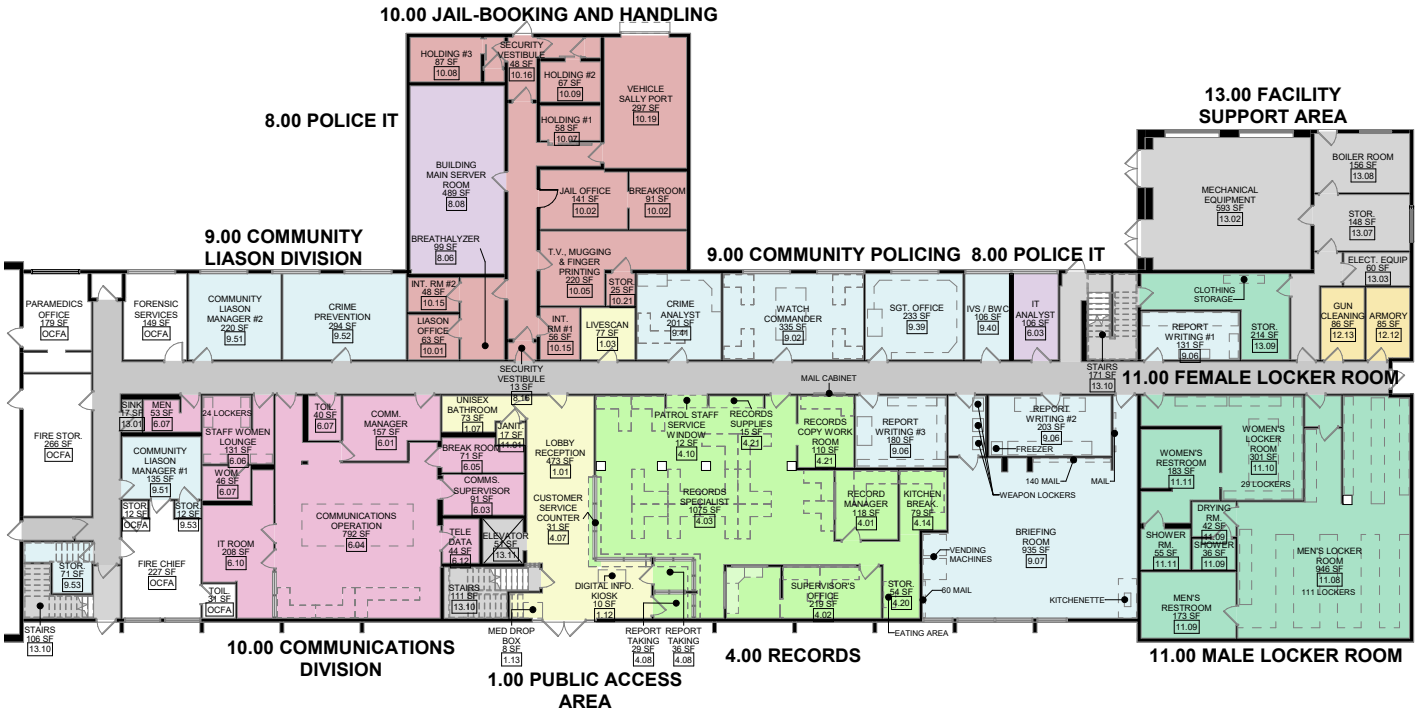
Community Liaison Division Office

Communication Storage

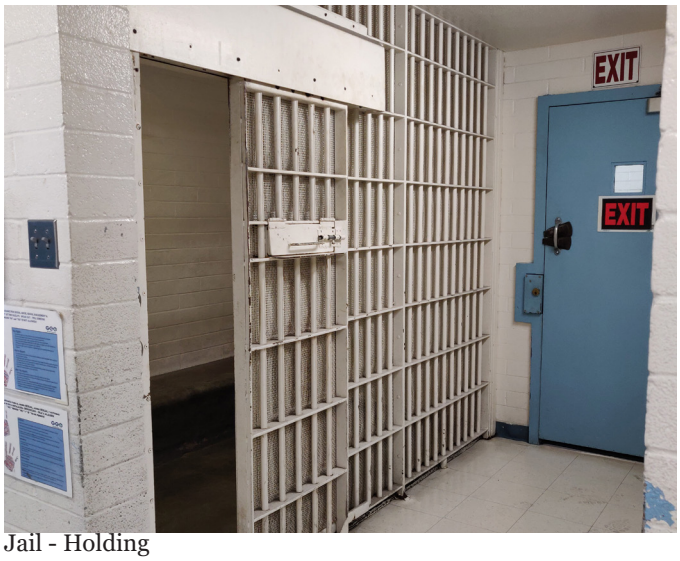
Sergeant Office

Watch Commander Office

- Needs separate access for officers to get to Report Taking Room without going through Records
- Community Liaison Division
  - Not enough office space. Currently have 2 satellite locations
  - Not enough storage. Currently leasing off-site self storage
- Community Policing
  - Not enough report writing space
  - Does not have area for offices supplies and lacks office supplies
- Need bigger briefing room
- Communications:
  - Does not have dedicated restroom and break area
  - Does not have dedicated conference or training room
- Armory Storage and Workshop lacks storage and area to clean gun
- Detention Area:
  - No secure path from interview suite to vehicle for arrestee; currently have to walk through public lobby and across the street
  - Detention holding does not have proper separation
  - Cannot use sallyport as a sallyport. Currently used as storage because of lack of storage space available.
  - Building server room in detention are is not secured. Typically opened due to need for ventilation.
  - Lacks Detox Cell
- Shared Space:
  - Inadequate number of lockers for officers
  - No room to add additional lockers.
  - Inadequate locker size to storage rifle and boots.
  - Lacks locker ventilation and power
  - No dedicated working mothers room and no space to create these rooms
  - Police Department does not have dedicated training room
  - Police Department does not have wellness / sleeping room
  - Lacks Gender Neutral locker and restrooms
  - No dedicated dispatch break area and outdoor space
  - Lacks supplies and supplies storage for most divisions
  - Inadequate meeting room size and number of meeting rooms available for all divisions
  - Not enough mailbox and inefficient mail system
- No area to house K-9 unit or supplies
- No dedicated Police IT Storage or workroom



Existing Main Police Facility - First Floor Plan



Jail - Holding


Building Server Room


Locker


Armory


Female Locker Room

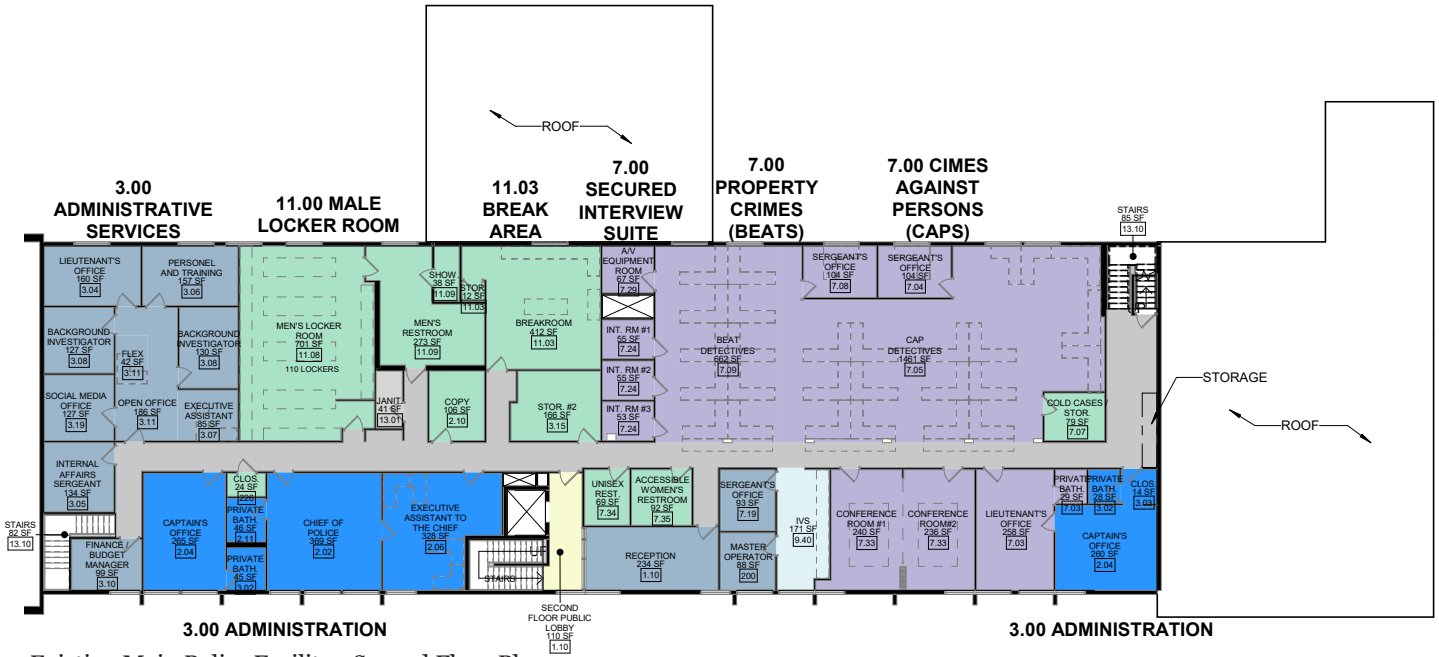
Main Police Facility - second floor

The police station second floor includes approximately 10,951 sf gross sf which includes the following program spaces:

- Administration
- Administrative Services
- Locker Rooms
- Break Room
- Secured Interview Suite
- Investigation Division
- Property Crimes (BEATS)
- Crime Against Persons (CAPS)
- Conference Rooms

Some of the current first floor challenges and deficiencies include the following:

- Inadequate storage spaces and no room for staff growth
- Inadequate office area for staff
- No secure path from interview suite to vehicle for arrestee; currently have to walk through public lobby and across the street.
- Interview rooms picks up outsides noise
- Large windows on second floor offices which creates direct view from outside
- Shared Space
    - Inadequate number of lockers for officers
    - No room to add additional lockers.
    - Inadequate locker size to storage rifle and boots.
    - Lacks locker ventilation and power
    - No dedicated working mothers room and no space to create these rooms.
    - General staff break area on this floor is not adequate for the large number of staff
    - Second floor break room is far for some divisions
    - Lacks Gender Neutral locker and restrooms
    - Only 1 Women restroom
    - Inadequate Meeting Room size and number of meeting rooms available for all divisions



Existing Main Police Facility - Second Floor Plan

Administration Office


Break Room


Detective Cubicle


Administrative Service Office


Locker Room


Conference Room

Juvenile Justice Center

Youth Services and Boy's and Girl's Club Reception

Youth Services Officer Space

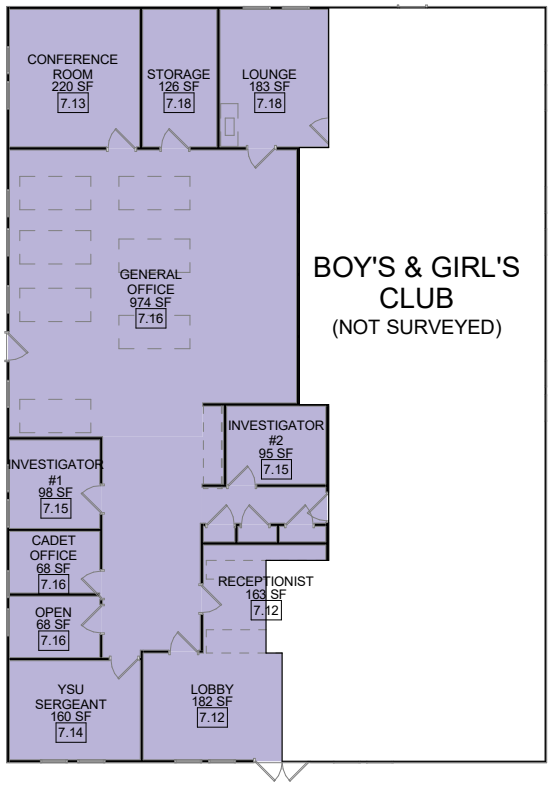
Juvenile Justice Center

The Juvenile Justice Center is approximately 5,028 sf gross sf which includes the following program spaces:

- Youth Services Unit, YSU
- Conference Room
- Boys and Girls Club

Some of the current first floor challenges and deficiencies include the following:

- Inadequate storage spaces
- No room for staff growth
- Lacks interview and program rooms
- Need bigger conference room for School Attendance Review Board Meetings
- Lacks locker and storage in detective offices
- Need separate entrance for Boy's and Girl's Club
- Need to secure YSU area
- Police Department memorial and explorer archive is storage off-site



Existing Youth Services - Floor Plan

Evidence and Property Annex

The Evidence and Property Annex is approximately 4,053 sf gross sf which includes the following program spaces:

- Property Evidence
- Fitness Room
- Duty Bag

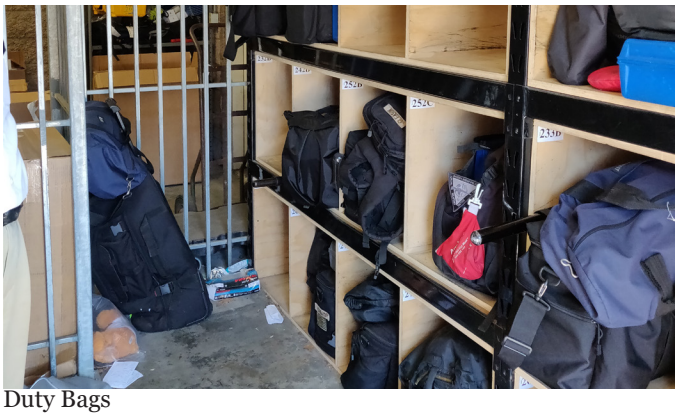
Some of the current first floor challenges and deficiencies include the following:

- Inadequate office and storage spaces
- No room for staff growth
- Inadequate ventilation for narcotic storage
- Inadequate space for evidence processing
- No proper vehicle processing bay separation from other areas
- Fitness room is not adequate for the large number of staff.
- Fitness room needs proper ventilation
- Inadequate number of duty bag shelving for officers and no room to add additional shelving.

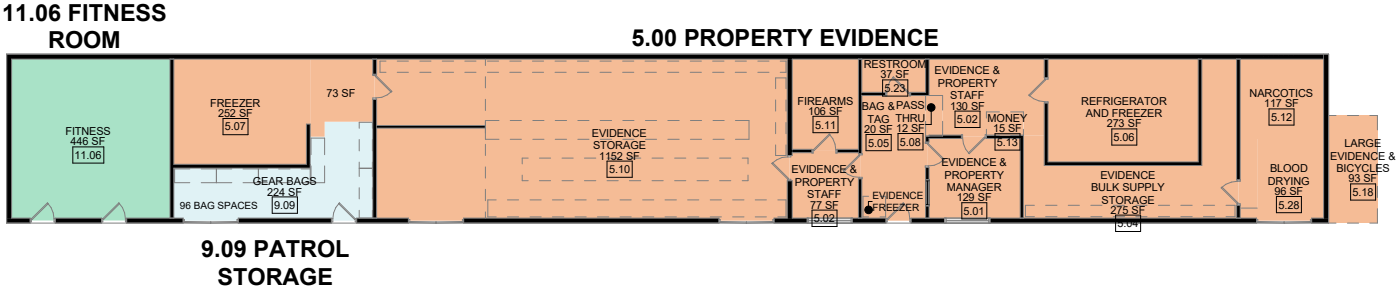
Evidence Warehouse

Fitness Room

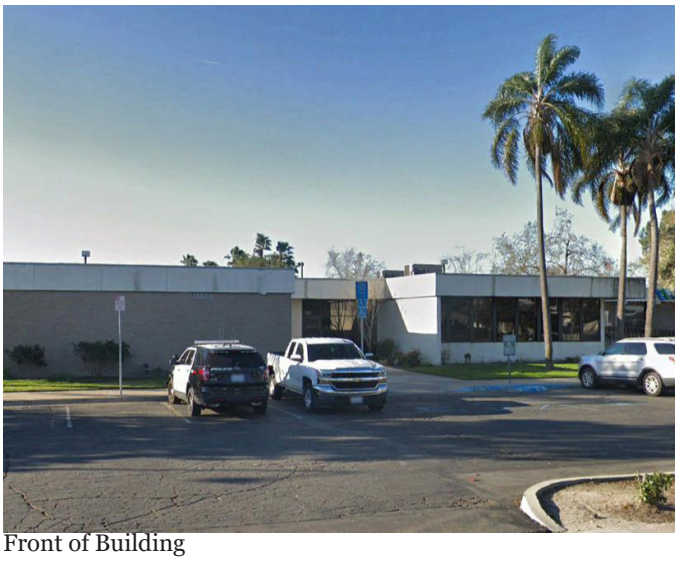
Evidence Storage

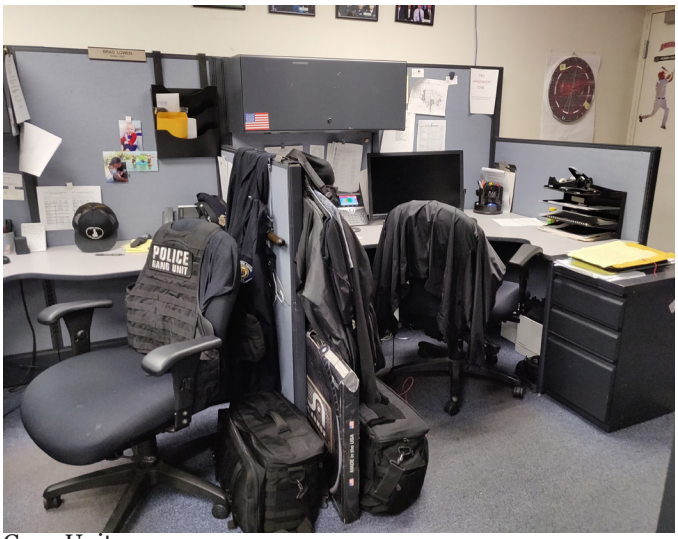


Duty Bags



Existing Evidence Warehouse - Floor Plan


Front of Building



Gang Unit

Traffic Unit Office

Special Services Annex

The Special Services Annex building is approximately 6,020 sf gross sf which includes the following program spaces:

- Special Investigation Unit
- Gang
- Traffic Unit
- Special Weapons and Tactics, SWAT

Some of the current first floor challenges and deficiencies include the following:

- Inadequate office and storage spaces
- No room for staff growth
- Non-secured building
- Non-Secured parking for motorcycle
- Reception in Gang and Special Investigation Unit does not have ballistic protection
- Interview rooms picks up outsides noise and inadequate audio and visual recording
- SWAT equipment is kept in connex box, which is subject to weather
- Lacks secured armory storage with climate control
- Lacks indoor parking for vehicles like, Mine-Resistant Ambush Protected (MRAP), Bear Cub, Command Post, and Suburbans Plus vehicles.
- Lacks rooms for SWAT officers


Motorcycle Storage

Site and Parking

The police facilities site is approximately 5.24 acres which includes the following:

- Public Parking
- Staff Parking
- Patrol Parking
- SWAT Parking
- Storage
- Fuel Station

Some of the current first floor challenges and deficiencies include the following:

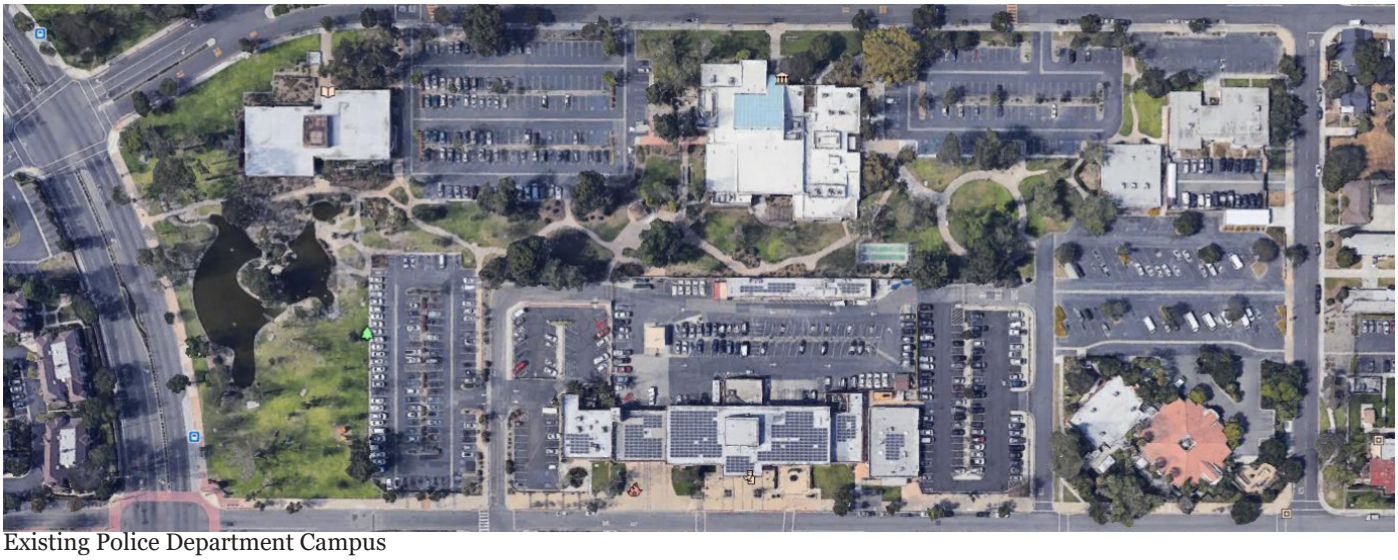
- Not enough staff parking
- Not enough public parking
- Not enough ADA parking stalls
- Staff parking is not secured
- Limited perimeter security
- Lacks indoor garage storage and parking

Sally port

Outdoor Seating

Parking Behind Main Police Building

Staff Parking



Existing Police Department Campus

Off-Site Evidence Warehouse

The police station first floor includes approximately 5,000 sf gross sf which includes the following program spaces:

- Property Evidence
- Storage

Some of the current first floor challenges and deficiencies include the following:

- Inadequate storage spaces
- No room for staff growth
- Building is on lease
- Inefficient use of current volume / height for evidence storage
- Minimally secured facility
- Off-site facility requires vehicular transport
- The warehouse had roof leaks and water damage

Supplies Storage


General Evidence Storage


General Evidence Storage


Mezzanine Storage


General Evidence Storage

Other Building Assessments

Based on the Dewberry, KPFF and P2S reviews included in detail within this report, the 1970 Police Building has outlived its capacity to function as a Police Facility.

Architecture

The lack of rated exit paths and second floors are not code conforming and may present a challenge to upgrade to current standard or to renovate and add to existing facilities. The current size of the building is limiting the Police Department growth to maintain the ability to serve the community effectively.

Structural

The building does not meet the current seismic requirements required by the 2016 CBC. Upgrades to meet current code would be required at each building column connection at the Foundation, Second Floor and Roof framing connections. This would require complete shut down of the facility and extensive renovation to allow for these seismic upgrades to occur. Please see Section 4.0 structural Assessments

Mechanical, Electrical, Plumbing, and Telecommunication

Each of these systems are old and need complete replacement including design and function of each system to comply with current code related elements. The HVAC system is extremely old and lacks smoke/fire dampers throughout the facility. The waste piping connections throughout the facility have outlived their expected lifespan and will soon start causing serious maintenance issues if not replaced.

Physical Security

The existing system that is in place is outdated with the latest security standards. Most of the systems equipment is not currently manufactured but more effective systems are available for complete replacement.

2.3 FACILITY SPACE NEEDS ANALYSIS AND PROGRAM

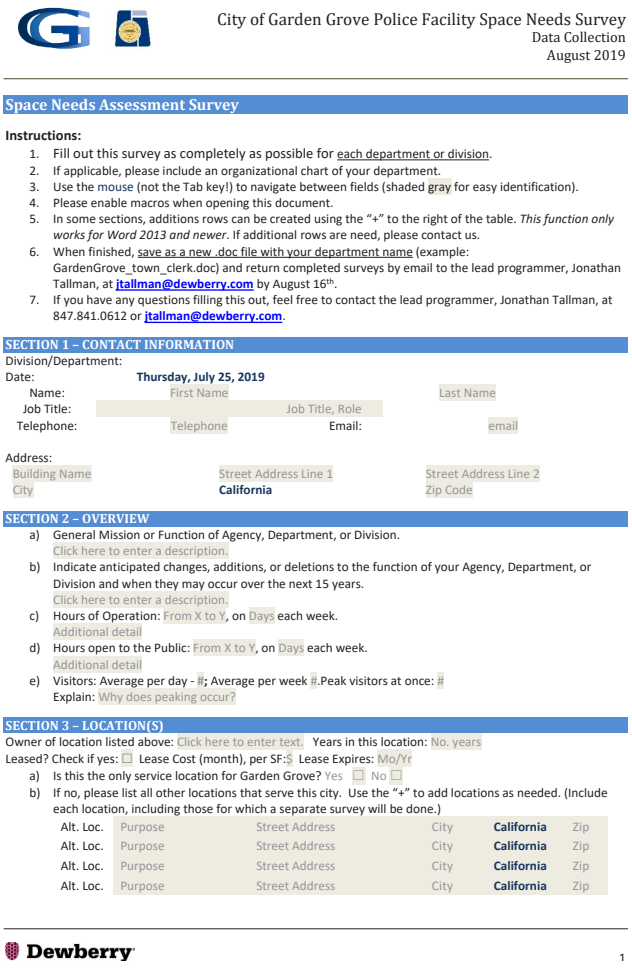
This section analyzes the space required to address both the current space needs, and the space required for future growth. The amount of space needed is arrived at by a "bottom up" process that gathers input from building users in every division and division. This is done with questionnaires and follow up interviews. Dewberry conducted the project kick-off meetings and interviews on September 3-4, 2019. The information contained within those surveys and interviews was thoroughly examined, and was then further reviewed by senior leaders in a "top down" overview in which certain items were adjusted or designated as shared or multi-use spaces.

Program Document

Once the interviews were completed, Dewberry began the process of creating the space program based on projected needs 20 years out. The space program evolved and was fine-tuned over the course of many drafts. The first program draft included all the "wants" from the surveys. Three rounds of discussions with the Police Department and City staff, the most critical needs were identified.

Some technical terms used in this section are:

Net Square Feet (NSF) –This term refers to the space of a room that may be measured from the inside face of the walls of that room. The amount of Net Square Feet allocated for a space is driven by the functions the room is intended to serve.



City of Garden Grove Police Facility Space Needs Survey
Data Collection
August 2019

Space Needs Assessment Survey

Instructions:

1. Fill out this survey as completely as possible for each department or division.
2. If applicable, please include an organizational chart of your department.
3. Use the mouse (not the Tab key!) to navigate between fields (shaded gray for easy identification).
4. Please enable macros when opening this document.
5. In some sections, additions rows can be created using the "+" to the right of the table. *This function only works for Word 2013 and newer*. If additional rows are need, please contact us.
6. When finished, save as a new .doc file with your department name (example: GardenGrove_town_clerk.doc) and return completed surveys by email to the lead programmer, Jonathan Tallman, at jtallman@dewberry.com by August 16th.
7. If you have any questions filling this out, feel free to contact the lead programmer, Jonathan Tallman, at 847.841.0612 or jtallman@dewberry.com.

SECTION 1 – CONTACT INFORMATION

Division/Department:
Date: Thursday, July 25, 2019
Name: First Name Last Name
Job Title: Job Title, Role
Telephone: Telephone Email: email

Address:
Building Name Street Address Line 1 Street Address Line 2
City California Zip Code

SECTION 2 – OVERVIEW

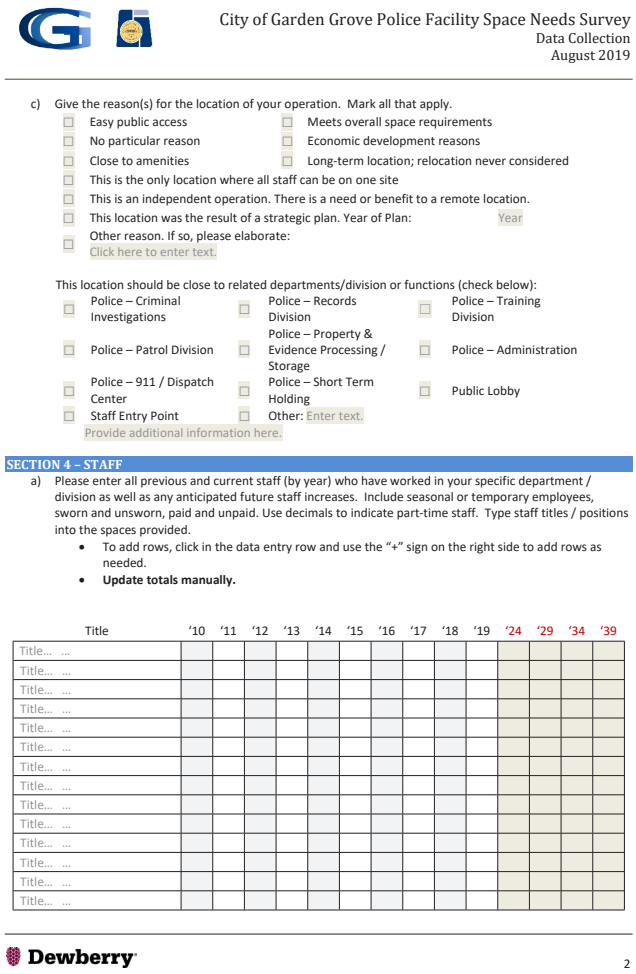
a) General Mission or Function of Agency, Department, or Division.
Click here to enter a description.
b) Indicate anticipated changes, additions, or deletions to the function of your Agency, Department, or Division and when they may occur over the next 15 years.
Click here to enter a description.
c) Hours of Operation: From X to Y, on Days each week.
Additional detail
d) Hours open to the Public: From X to Y, on Days each week.
Additional detail
e) Visitors: Average per day - #; Average per week #.Peak visitors at once: #
Explain: Why does peaking occur?

SECTION 3 – LOCATION(S)

Owner of location listed above: Click here to enter text. Years in this location: No. years
Leased? Check if yes: ☐ Lease Cost (month), per SF:$ Lease Expires: Mo/Yr
a) Is this the only service location for Garden Grove? Yes ☐ No ☐
b) If no, please list all other locations that serve this city. Use the "+" to add locations as needed. (Include each location, including those for which a separate survey will be done.)

Alt. Loc.	Purpose	Street Address	City	California	Zip
Alt. Loc.	Purpose	Street Address	City	California	Zip
Alt. Loc.	Purpose	Street Address	City	California	Zip
Alt. Loc.	Purpose	Street Address	City	California	Zip

Dewberry 1



City of Garden Grove Police Facility Space Needs Survey
Data Collection
August 2019

c) Give the reason(s) for the location of your operation. Mark all that apply.

- ☐ Easy public access
- ☐ Meets overall space requirements
- ☐ No particular reason
- ☐ Economic development reasons
- ☐ Close to amenities
- ☐ Long-term location; relocation never considered
- ☐ This is the only location where all staff can be on one site
- ☐ This is an independent operation. There is a need or benefit to a remote location.
- ☐ This location was the result of a strategic plan. Year of Plan: Year
- ☐ Other reason. If so, please elaborate:
  Click here to enter text.

This location should be close to related departments/division or functions (check below):

- ☐ Police – Criminal Investigations
- ☐ Police – Records Division
- ☐ Police – Training Division
- ☐ Police – Patrol Division
- ☐ Police – Property & Evidence Processing / Storage
- ☐ Police – Administration
- ☐ Police – 911 / Dispatch Center
- ☐ Police – Short Term Holding
- ☐ Public Lobby
- ☐ Staff Entry Point
- ☐ Other: Enter text.

Provide additional information here.

SECTION 4 – STAFF

a) Please enter all previous and current staff (by year) who have worked in your specific department / division as well as any anticipated future staff increases. Include seasonal or temporary employees, sworn and unsworn, paid and unpaid. Use decimals to indicate part-time staff. Type staff titles / positions into the spaces provided.

- To add rows, click in the data entry row and use the "+" sign on the right side to add rows as needed.
- **Update totals manually.**

Title	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'24	'29	'34	'39
Title... ...														
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Dewberry 2

Staff Survey

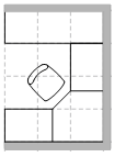
Department Gross Square Feet (DGSF) – This amount of space includes certain spaces in addition to NSF to account for the wall thicknesses and internal walkways between rooms or workstations within a division. This is arrived at by applying a multiplier appropriate to the Net Square Feet of rooms within a division. The multiplier will vary depending on the types of spaces being considered.

Here are some typical grossing multiplier examples:
For more open areas like meeting rooms, lobbies, public spaces, property / evidence storage: 10-15% range
For more office like divisions like Administration, Records, Patrol: 25-30% range
For areas with lots of circulation aisles / work islands like Investigations or Booking/Holding: 40-50% range.

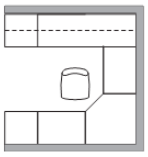
Building Gross Square Feet (BGSF) - This area will encompass the total amount of space needed to build the building. It includes space in addition to the DGSF not directly attributable to any particular division. This includes spaces like main corridors serving multiple divisions, stairways, space for HVAC, electrical and plumbing distribution throughout the building and the thickness of the exterior walls. This number identifies the overall gross building area from the exterior perimeter of the building. This second grossing factor is often in the 6-15% range depending on the size and complexity of the overall building.

Space Standards

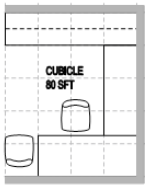
During the needs assessment phase study of the report, the client was shown graphics of industry standard spaces for various office and meeting room layouts to help define their needs as well as to help standardize these spaces across all the various police divisions for the program. Some examples of these space standard graphics are shown on this page.



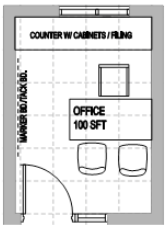
C-1: 48 sf (6' x 8')



C-2: 64 sf (8' x 8')

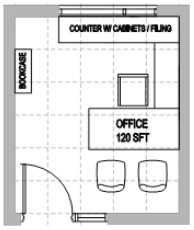


C-3: 80 sf (6' x 10')

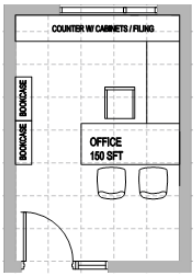


O-1: 100 sf (8'-4" x 12')

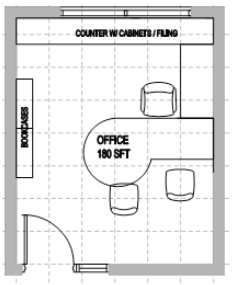
O-2: 100 sf (10' x 10')



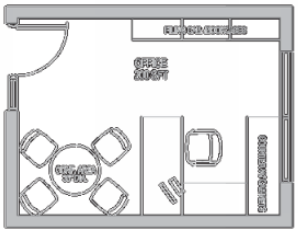
O-3: 120 sf (10' x 12')



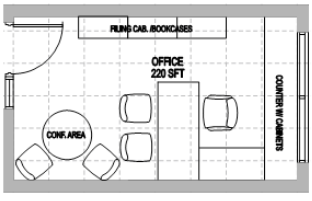
O-4: 150 sf (10' x 15')



O-5: 180 sf (12' x 15')



O-6: 200 sf (16' x 12')



O-7: 220 sf (10' x 15')

Typical Space Standard

Office/Cubicle Layouts

Program Summary:

Below is the Building Program and Parking Needs Summary if built out to the full 20-year space needs projection. The summary is organized into couple of categories:

- Schemes:
  - Scheme 1 - Renovation and Addition to Existing Facility
  - Scheme 2 - New Construction (Low Cost Option)
  - Scheme 3 - New Construction (Middle Cost Option)
  - Scheme 4 - New Construction (Full Build-Out Option)
- Parking:
  - Staff and Patrol
  - Public

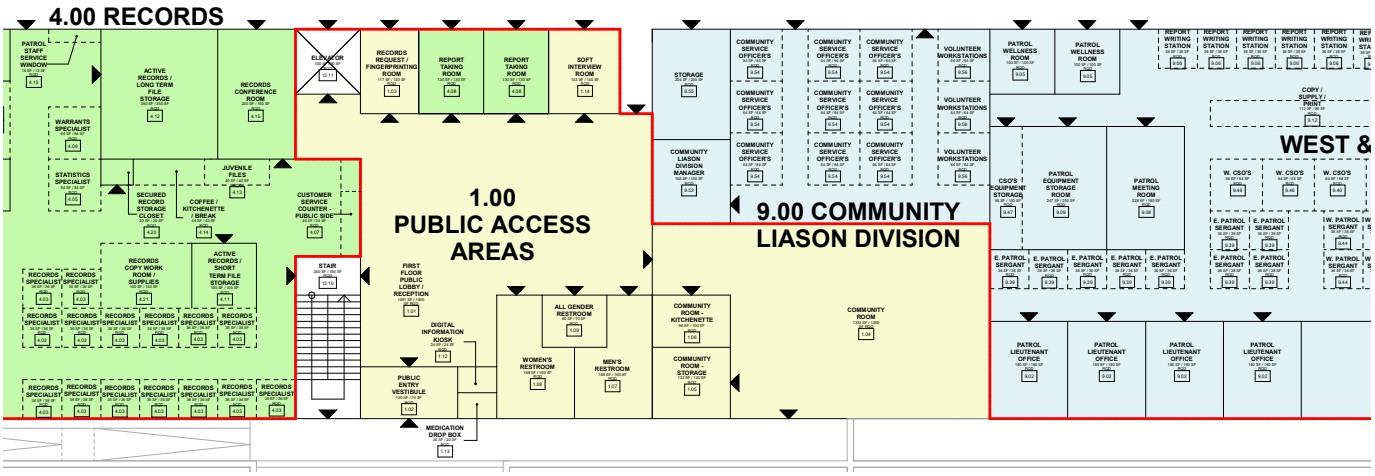
SUMMARY

GARDEN GROVE POLICE DEPARTMENT PROGRAM + PARKING NEEDS SUMMARY							
SPACE NO.	DEPARTMENT OR COMPONENT	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out Cost	Staff / Patrol Parking Needs	Public Parking Needs	remarks / explanations
1.00	PUBLIC ACCESS AREAS	4,030	4,030	4,030	0	60	
2.00	ADMINISTRATION	3,676	3,962	3,962	7	0	
3.00	ADMINISTRATIVE SERVICES	4,355	5,395	5,717	30	0	
4.00	RECORDS	3,161	3,161	3,161	40	0	
5.00	EVIDENCE AND PROPERTY	13,344	13,344	13,594	7	0	
6.00	COMMUNICATIONS DIVISION	3,070	3,387	3,747	25	0	
7.00	INVESTIGATIONS DIVISION	11,968	12,225	13,864	58	0	
8.00	POLICE I.T.	1,336	1,336	1,336	1	0	
9.00	COMMUNITY POLICING	17,116	17,350	18,899	0	0	
10.00	JAIL - BOOKING AND HOLDING	3,630	3,630	3,745	11	0	
11.00	POLICE SHARED STAFF AREAS	12,185	12,185	12,373	0	0	
12.00	TRAINING - FIRING RANGE	0	0	11,170	1	0	
13.00	FACILITY SUPPORT AREAS (INTERIOR MEP & VERTICAL CIRC)	4,001	4,001	4,001	0	0	
14.00	SPECIAL WEAPONS AND TACTICS (SWAT)	1,877	5,252	6,062	1	0	
Sub-total (DGSF)		***83,748***	***89,257***	***105,660***			(only includes interior wall thickness & inner dept corridors)
	Dept Gross to Building Gross Factor	1.15	1.15	1.15			
		12,562.19	***13,388.57***	**15,849**			(area for exterior wall thickness & common bldg corridors)
	Overall Building Gross SF (BGSF)	***96,310***	***102,646***	***121,509***			
	total parking spaces needed between 8am-5pm				***300 / 84***	***60***	

1.00 PUBLIC ACCESS AREAS

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
1.00	**PUBLIC ACCESS AREAS**												
1.01	First Floor Public Lobby/Reception	1					1	1000	1000	1000	1000	473	
1.02	Public Entry Vestibule	0					1	70	70	70	70	0	not currently existing
1.03	Records Request / Fingerprinting Room	0					1	120	120	120	120	77	req. Live scan machine, space for officer and one other
1.04	Community Room	0					1	1300	1300	1300	1300	0	40-50 person room for community meetings, need input from admin, might be too small for officer swearing in, could use larger room that can partitioned
1.05	Community Room - Storage	0					1	120	120	120	120	0	
1.06	Community Room - Kitchenette	0					1	100	100	100	100	0	
1.07	First Floor Public Restroom Men's	1					1	160	160	160	160	73	unisex RR existing
1.08	First Floor Public Restroom Women's	0					1	160	160	160	160	0	
1.09	First Floor Public Restroom All gender	0					1	70	70	70	70		required per CA code
1.10	Stair and elevator - Public Lobby	1					1	150	150	150	150	110	public space needed for public circulation
1.11	Upper Level Public Restrooms	0					1	70	70	70	70	0	unisex
1.12	Digital Information Kiosk	1					1	24	24	24	24	10	space allows for kiosk and assistant
1.13	Medication Drop Box	1					1	20	20	20	20	8	in lobby on left
1.14	Soft Interview Room	0					1	140	140	140	140	0	
	total:												
	public parking spaces needed (8am-5pm):						**60**						
								NET SQUARE FEET	**3,504**	**3,504**	**3,504**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.15**	**1.15**	**1.15**		
								DEPARTMENT GROSS SQUARE FEET	**4,030**	**4,030**	**4,030**		

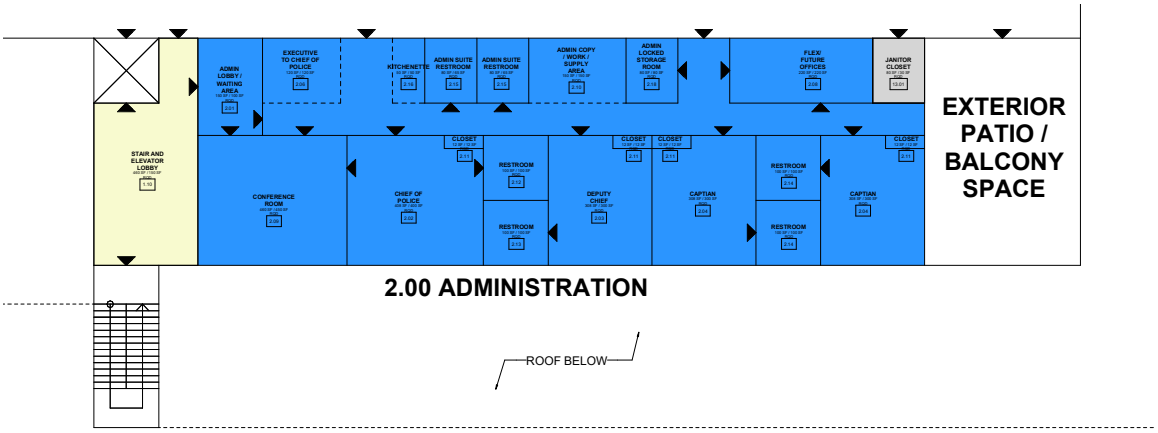


New Construction Conceptual Plan - Public Access Areas

2.00 ADMINISTRATION

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
2.00	**ADMINISTRATION**												
2.01	Admin Lobby / waiting area	0					1	100	100	100	100	0	not currently existing
2.02	Chief of Police	1	1	1	1	1	1	400	400	400	400	369	
2.03	Deputy Chief of Police	0	1	1	1	1	1	300	240	300	300	369	reduce in Scheme 1 & 2
2.04	Captains	3	2	2	2	2	2	300	440	600	600	265	reduce in Scheme 1 & 2
2.05	Administrative Lieutenant	0	0	0	0	0	0	180	0	0	0	265	see Administrative Services
2.06	Executive Assistant to the Chief	1	1	1	1	1	1	120	120	120	120	328	
2.07	CALEA Sergeant	0	0	0	0	0	0	150	0	0	0	0	Lt. in Administrative Services covers CALEA
2.08	Flex / Future Offices	0	0	0	0	1	1	220	220	220	220	0	
2.09	Admin Conference Room	0					1	450	450	450	450	0	18 person conference room w/ credenza
2.10	Admin Copy / Work / Supply Area	1					1	150	150	150	150	106	
2.11	Closets in exec offices	1					4	12	48	48	48	14	Chief, DC, Captains
2.12	Police Chief Restroom	1					1	100	100	100	100	45	restroom w/ shower and changing area
2.13	Deputy Chief of Police Restroom	0					1	100	100	100	100		
2.14	Captains Restroom	1					2	100	200	200	200	45	
2.15	Admin Suite restrooms	0					2	65	130	130	130	0	
2.16	Admin kitchenette	0					1	50	50	50	50	0	
2.17	Admin Library	0					0	140	0	0	0	0	
2.18	Admin Locked Storage Room	0					1	80	80	80	80	0	
	total staff in this suite:	**5**	**5**	**5**	**5**	**6**							
	staff parking spaces needed (8am-5pm):						**7**						
								NET SQUARE FEET	**2,828**	**3,048**	**3,048**		
								NET TO DEPARTMENT GROSS FACTOR	**1.30**	**1.30**	**1.30**		
								DEPARTMENT GROSS SQUARE FEET	**3,676**	**3,962**	**3,962**		

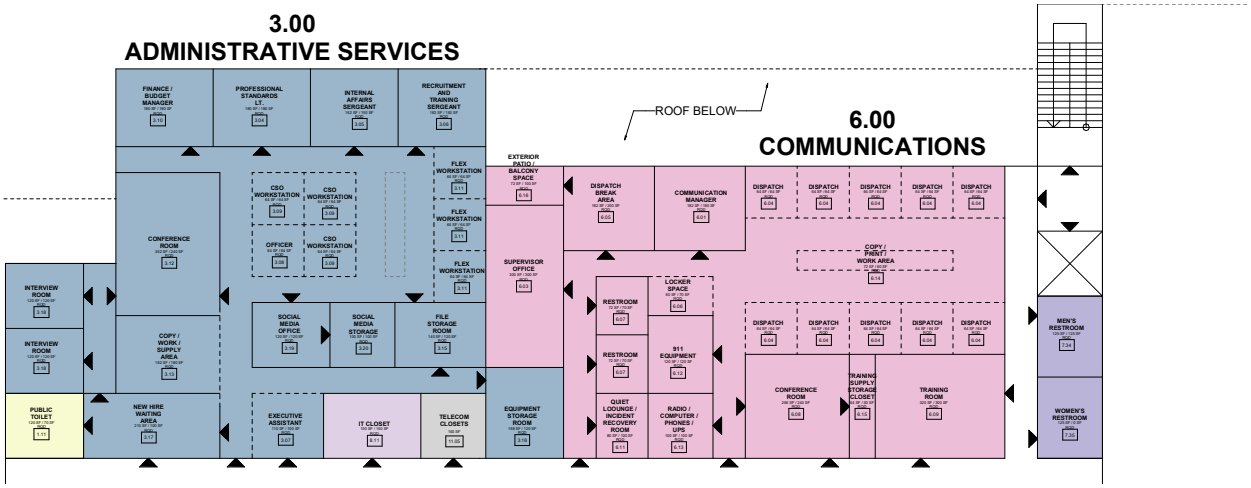


New Construction Conceptual Plan - Administration

3.00 ADMINISTRATION SERVICES

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
3.00	**ADMINISTRATIVE SERVICES**												
3.01	Captain Office	0	0	0	0	0	0	220	0	0	0	265	see Administration
3.02	Captain private Restroom	1					0	70	0	0	0	28 - 45	existing has a restroom; see Administration
3.03	Captain Closet	1					0	12	0	0	0	14	see Administration
3.04	Professional Standards Lt.	1	1	1	1	1	1	180	180	180	180	160	CALEA service
3.05	Internal Affairs Sergeant	1	1	1	1	1	1	150	150	150	150	134	room for 4 people, officers, and attorney
3.06	Recruitment and Training Sergeant	1	1	1	1	1	1	150	150	150	150	157	
3.07	Executive Assistant	1	1	1	1	1	1	100	100	100	100	85	10x10 workstation
3.08	Officer	1	1	1	1	1	1	64	64	64	64	50	8x8 workstation
3.09	CSO workstation	1	2	3	3	3	3	64	128	128	192	50	8x8 workstation, includes MRO; Scheme 1, 2, & 3 reduce (1) CSO workstation
3.10	Finance / Budget Manager	1	1	1	1	1	1	180	180	180	180	99	
3.11	Flex Workstation	1	1	2	2	3	3	64	128	128	192	42	flex / cadets; Scheme 1, 2, & 3 reduce (1) workstation
3.12	Conference Room	0					1	240	240	240	240	0	8 person Conference room
3.13	Copy / Work / Supply Area	0					1	150	150	150	150	0	
3.14	Training Room	0					1	2000	1200	2000	2000	0	and chair storage required?; reduce in Scheme 1 & 2
3.15	File Storage room	0					1	120	120	120	120	0	
3.16	Equipment Storage Room	0					1	120	120	120	120	0	
3.17	New Hire Waiting Area	0					1	100	100	100	100	0	seating for 4
3.18	Interview Room	0					2	120	120	120	240	0	small sized conference room for 4 people; Scheme 1, 2, & 3 reduce(1) interview room
3.19	Social Media Office	1	1	1	1	1	1	120	120	120	120	127	
3.20	Social Media Storage	0					1	100	100	100	100	0	cameras, lighting, backdrops, general camera equipment
	total staff in this suite:	**9**	**10**	**12**	**12**	**13**							
	staff parking spaces needed (8am-5pm):						**13**						
								NET SQUARE FEET	**3,350**	**4,150**	**4,398**		
								NET TO DEPARTMENT GROSS FACTOR	**1.30**	**1.30**	**1.30**		
								DEPARTMENT GROSS SQUARE FEET	**4,355**	**5,395**	**5,717**		

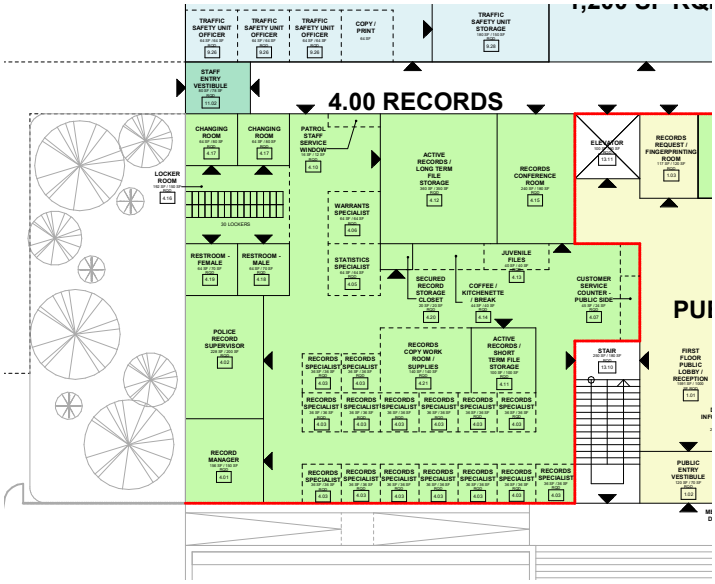


New Construction Conceptual Plan - Administrative Services

4.00 RECORDS

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
4.00	**RECORDS**												**locate on 1st flr near lobby**
4.01	Records Manager	1	1	1	1	1	1	150	150	150	150	118	
4.02	Police Record Supervisor	3	4	4	4	4	4	50	200	200	200	219	2 people share a desk; 10x10 desk space
4.03	Records Specialist	11.5	15	15	15	15	15	36	540	540	540	1075	23 sharing workstations
4.04	Police Light Duty Workstations	0					0	64	0	0	0	0	server at service window
4.05	Statistics Specialist	1	1	1	1	1	1	64	64	64	64	35	
4.06	Warrants Specialist	1	1	1	1	1	1	64	64	64	64	35	
4.07	Customer Service Counter - public side	3	3	3	3	3	3	8	24	24	24	31	3 CSO, 2 cadets current 2 P/T CSO and 1 Cadet
4.08	Report Taking Room	2					2	130	260	260	260	29 - 36	
4.09	Media / Records Review Room	0					0	90	0	0	0	0	
4.10	Patrol Staff Service Window / Officer access	1					1	12	12	12	12	12	
4.11	Active Records / Short term File Strg	0					1	100	100	100	100	0	off site storage
4.12	Archive Record / Long term File Strg	0					1	350	350	350	350	0	off site storage
4.13	Juvenile Files	0					1	40	40	40	40	0	off site storage
4.14	Coffee / kitchenette / Break	1					1	40	40	40	40	79	2-3 at a time
4.15	Records Conference Room	0					1	180	180	180	180	0	4-6 person conference room
4.16	Lockers	0					30	5	150	150	150	0	uniforms
4.17	Changing Room	0					2	80	160	160	160	0	
4.18	Restroom - Male	0					1	70	70	70	70	0	
4.19	Restroom - Female	0					1	70	70	70	70	0	
4.20	Secured Records Storage Closet	1					1	20	20	20	20	54	
4.21	Records copy work room / supplies	1					1	140	140	140	140	110	
4.22	Outside agency office w/ lobby window	0					0	120	0	0	0	0	
	total staff:	**32**	**40**	**40**	**40**	**40**							
	staff parking spaces needed (8am-5pm):						**40**						**shift change # of cars?**
								NET SQUARE FEET	**2,634**	**2,634**	**2,634**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.20**	**1.20**	**1.20**		
								DEPARTMENT GROSS SQUARE FEET	**3,161**	**3,161**	**3,161**		

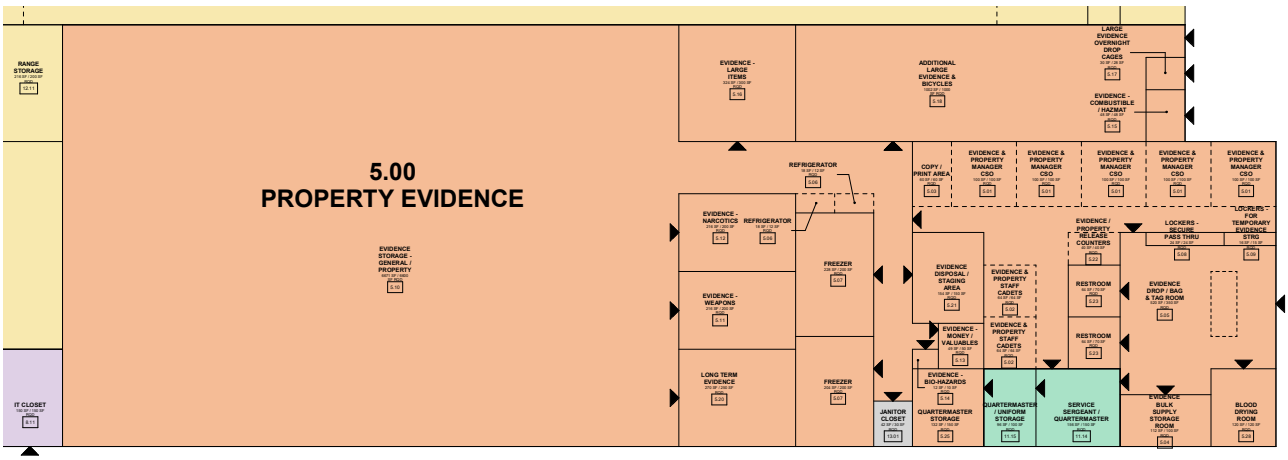


New Construction Conceptual Plan - Records

5.00 EVIDENCE AND PROPERTY

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
5.00	**EVIDENCE AND PROPERTY**												
5.01	Evidence & Property Manager CSO	2	3	4	5	5	5	100	300	300	500	128	10x10 workstations; reduce to 3 workstations in Scheme 1, 2, & 3
5.02	Evidence & Property Staff Cadets	1	2	2	2	2	2	64	128	128	128	77	8x8 workstations
5.03	Copy / Print area	0					1	60	60	60	60	0	
5.04	Evidence Bulk Supply Storage Room	1					1	100	100	100	100	278	
5.05	Evidence Drop / Bag & Tag Area	1					1	350	350	350	350	20	
5.06	Refrigerator	1					2	6	12	12	12	273	
5.07	Freezer	2					2	200	400	400	400	400	
5.08	Lockers - Secure Pass Thru	1					4	6	24	24	24		
5.09	Lockers - for temporary evidence strg	0					1	15	15	15	15	0	
5.10	Evidence Strg - General / Property	1					1	6600	6600	6600	6600	6124	PD has offsite storage unit 5000 SF; Switch to HD storage mobile Shelving vs. Stationary; 3,300 Sf if build to 30' height.
5.11	Evidence Strg - Weapons	1					1	200	200	200	200	119	
5.12	Evidence Strg - Narcotics	1					1	200	200	200	200	116	
5.13	Evidence Strg - Money / Valuables	1					1	50	50	50	50	16	
5.14	Evidence Strg - Bio-Hazards	0					1	10	10	10	10	0	
5.15	Evidence Strg - Combustible / Hazmat	0					1	48	48	48	48	0	
5.16	Evidence Strg - Large Items?	0					1	300	300	300	300	0	can evidence size be reduced after case is prosecuted
5.17	Large evidence overnight drop cages	0					1	28	28	28	28	0	
5.18	Additional Large evidence & bicycles	1					1	1000	1000	1000	1000	1000	
5.19	Evidence Strg - vehicles	0					0	360	0	0	0	0	
5.20	Long term evidence (Homicides)	0					1	250	250	250	250	0	
5.21	Evidence disposal / staging area	0					1	150	150	150	150	0	
5.22	Evidence / Property Release Counters	0					1	40	40	40	40	0	consider large property pass thru options
5.23	Restroom	1					2	70	140	140	140	37	2 - unisex restrooms
5.24	Evidence / Property Viewing Room	0					0	80	0	0	0	0	for Lawyer review of evidence
5.25	Quartermaster Storage	1					1	150	150	150	150	130	
	Evidence Processing												
5.26	Evidence Processing / Crime Scene Lab	0					0	220	0	0	0	0	
5.27	Indoor Vehicle Processing Bay	0					0	600	0	0	0	0	
5.28	Blood Drying Room	1					1	120	120	120	120	96	need space for three cabinets, needs direct exhaust to the exterior.
5.29	Alternate Light Source Room	0					0	80	0	0	0	0	
	total staff:	**3**	**5**	**6**	**7**	**7**							
	staff parking spaces needed (8am-5pm):						**7**						
								NET SQUARE FEET	**10,675**	**10,675**	**10,875**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.25**	**1.25**	**1.25**		
								DEPARTMENT GROSS SQUARE FEET	**13,344**	**13,344**	**13,594**		

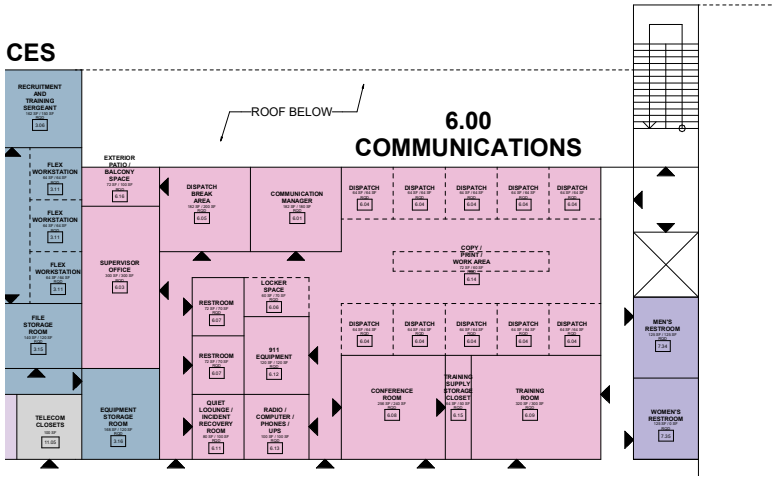


New Construction Conceptual Plan - Property Evidence

6.00 COMMUNICATIONS DIVISION

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
6.00	**COMMUNICATIONS DIVISION**												
6.01	Communications Manager	1	1	1	1	1	1	180	180	180	180	157	
6.02	Assistant Communications Manager	0	0	0	0	0	0	120	0	0	0	0	
6.03	Supervisor Office	0	1	1	1	1	1	300	300	300	300	0	one office Shared by 4 supervisors
6.04	Dispatch (15 current)	7.5	10	10	10	10	10	64	640	640	640	792	10 workstations for 20 dispatchers
6.05	Dispatch Break Area	1					1	200	80	200	200	71	soft lounge seating, calm, soothing environment; reduce in Scheme 1 & 2
6.06	Locker Space	18					24	3	72	72	72	131	
6.07	Dispatch restrooms	0					2	70	140	140	140	0	2 unisex ADA restrooms
6.08	Dispatch Conference Room	0					1	240	240	240	240	0	8 person Conference Room
6.09	Training Room	0					1	300	150	150	300	0	training workstations room; reduced in Scheme 1, 2, & 3
6.10	Computer / IT work area	0					0	200	0	0	0	0	see IT
6.11	Quiet Lounge / Incident Recovery Room	0					1	100	0	0	100	0	eliminate in Scheme 1, 2, & 3
6.12	911 Equipment	1					1	120	120	120	120	44	existing is combined with Radio/Equip
6.13	Radio / Computer / Phones / UPS	1					1	100	100	100	100		
6.14	Copy / Print / work area	0					1	60	60	60	60	0	
6.15	Training Supply Storage Closet	0					1	50	50	50	50	0	
6.16	Exterior patio / balcony space	0					1	100	0	100	100	0	eliminate in Scheme 1 & 2
	total staff per shift:	**20**	**25**	**25**	**25**	**25**							
	staff parking spaces needed (8am-5pm):						**25**						
								NET SQUARE FEET	**2,132**	**2,352**	**2,602**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.44**	**1.44**	**1.44**		
								DEPARTMENT GROSS SQUARE FEET	**3,070**	**3,387**	**3,747**		

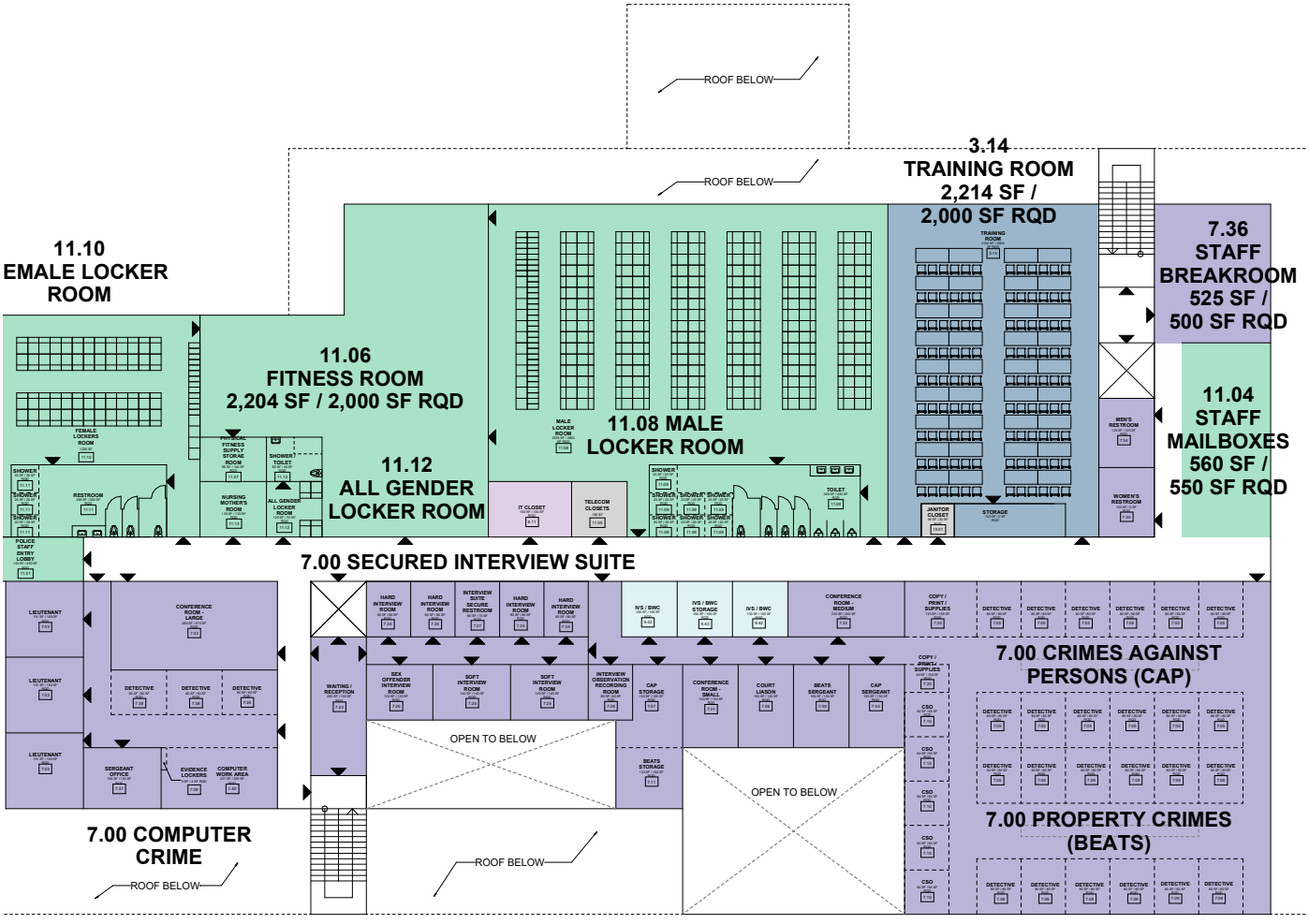


New Construction Conceptual Plan - Communications Division

7.00 INVESTIGATIONS DIVISION

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
7.00	**INVESTIGATIONS DIVISION**												
7.01	Captain Office	1	0	0	0	0	0	220	0	0	0	260	see Administration
7.02	Captain Closet	1	0	0	0	0	0	12	0	0	0	14	see Administration
7.03	Lieutenants	1	2	2	3	3	3	180	180	180	540	258	Scheme 1, 2, & 3 reduce to (1) Lt.
	(CAP) Crimes Against Persons												
7.04	CAP Sergeant	1	1	1	1	1	1	150	150	150	150	104	
7.05	Detectives	11	12	13	13	13	13	80	1040	1040	1040	1461	8x10 workstation with locker at desk
7.06	Court Liaison	1	1	1	1	1	1	120	120	120	120		could go to a workstation
7.07	Storage	1					1	150	150	150	150	79	
	(Beats) Property Crimes												
7.08	Beats Sergeant	1	1	1	1	1	1	150	150	150	150	104	
7.09	Detectives	8	10	11	11	11	11	80	880	880	880	662	8x10 workstation with locker at desk
7.10	CSO's	5	5	5	5	5	5	64	320	320	320		
7.11	Storage	1					1	150	150	150	150	79	shared with CAP
	Youth Services Unit												
7.12	Lobby	1					1	150	150	150	150	182	separate Lobby from Main public Lobby for Youth and Parents
7.13	Conference Room	1					0	450	0	0	0	220	Used for hearings and meetings, will use one of the new conference rooms in the facility for hearings
7.14	YSU Sergeant	1	1	1	1	1	1	150	150	150	150	160	
7.15	Detectives	2	3	3	3	3	3	120	360	360	360	95	
7.16	Officers	3	5	5	5	5	5	64	320	320	320	974	8x8 workstations. Will have juveniles in holding with the officer at their desk.
7.17	Interview Room	1					1	80	80	80	80	68	
7.18	Storage	1					1	150	150	150	150	126	
	Community Impact Team												
7.19	CIT Sergeant	1	1	1	1	1	1	150	150	150	150	121	
7.20	Officers	6	8	8	9	9	9	64	384	384	576	752	Scheme 1, 2, & 3 reduce to (6)
7.21	Conference Room	0					0	180	0	0	0	0	
7.22	Storage	0					1	150	150	150	150	0	
	Secured Interview Suite:												
7.23	Waiting / Reception	0					1	100	100	100	100	0	
7.24	Hard Interview Room	3					4	80	320	320	320	55	
7.25	Soft Interview Room	0					2	140	280	280	280	0	
7.26	Sex Offender Interview Room	0					1	120	120	120	120	0	
7.27	Interview Suite Secure Restroom	0					1	70	70	70	70	0	
7.28	Interview Observation Recording Room	0					1	80	80	80	80	0	
7.29	A/V equipment room	1					0	100	0	0	0	67	see IT room
	Shared Space Investigation Division												
7.30	Copy / Print / Supplies	0					1	150	150	150	150	0	
7.31	Conference Room - small	0					1	180	0	180	180	0	4-6 person conference room; eliminate in Scheme 1, & 2
7.32	Conference Room - medium	0					1	240	240	240	240	0	8 - person Conference Room
7.33	Conference Room - Large	1					1	475	475	475	475	476	room can be divided in to two rooms
7.34	Men's Restrooms	1					4	125	500	500	500	69	existing: (1) Unisex restroom; restroom requirements per floor because of travel distance
7.35	Women's Restrooms	1					4	125	500	500	500	92	existing: (1) Unisex restroom; restroom requirements per floor because of travel distance
7.36	Break Area	1					1	500	500	500	500	388	
	Computer Crimes												
7.37	Sergeant Office	0	0	1	1	1	1	150	0	0	150	0	eliminate in Scheme 1 & 2
7.38	Detectives	0	0	2	3	3	3	80	0	0	240	0	8x10 workstation with locker built into furniture; Scheme 1, 2, & 3 eliminated
7.39	Evidence lockers	0					1	4	0	0	4	0	evidence lockers with power for electronic evidence; Scheme 1, 2 & 3 eliminated
7.40	Computer work area	0					1	200	0	0	200	0	shielded RFID room; Scheme 1, 2, & 3 eliminated
7.41	Storage	0					0	150	0	0	0	0	
	total staff:	**41**	**50**	**55**	**58**	**58**							
	staff parking spaces needed (8am-5pm):						**58**						
								NET SQUARE FEET	**8,369**	**8,549**	**9,695**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.43**	**1.43**	**1.43**		
								DEPARTMENT GROSS SQUARE FEET	**11,968**	**12,225**	**13,864**		

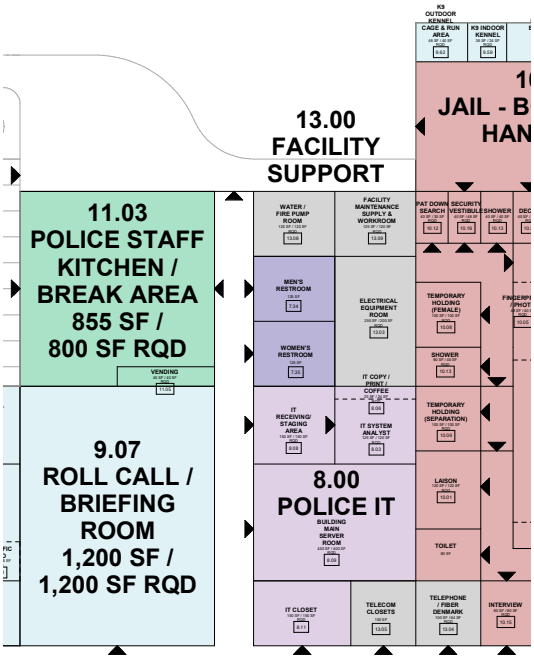


New Construction Conceptual Plan - Investigations Division

8.00 POLICE I.T.

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
8.00	POLICE I.T.												
8.01	IT Waiting Area	0					0	30	0	0	0	0	
8.02	IT Manager	0					0	150	0	0	0	0	
8.03	IT System Analyst	1	1	1	1	1	1	120	120	120	120	106	reports to IT manager at City Hall
8.04	IT Support Specialist / Help Desk	0					0	64	0	0	0	0	
8.05	IT Operator / Clerk Room	0					0	64	0	0	0	0	
8.06	IT Copy / Print / Coffee	0					1	24	24	24	24	0	could be incorporated into office
8.07	IT Workroom / Computer Repair Lab / Strg	0					0	80	0	0	0	0	Shawn will check;
8.08	IT Receiving / Staging Area	0					1	150	150	150	150	0	
8.09	Building Main Server Room	0					1	300	300	300	300	0	
8.10	IT Computer Lab	0					0	525	0	0	0	0	
8.11	IT Closest	0					3	150	450	450	450	0	IT Closet requirements for floor distribution of data and security
	total staff:	**1**	**1**	**1**	**1**	**1**							
	staff parking spaces needed (8am-5pm):						**1**						
								NET SQUARE FEET	**1,044**	**1,044**	**1,044**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.28**	**1.28**	**1.28**		
								DEPARTMENT GROSS SQUARE FEET	**1,336**	**1,336**	**1,336**		



New Construction Conceptual Plan - Police I.T.

9.00 COMMUNITY POLICING

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
9.00	**COMMUNITY POLICING**												
9.01	Captain office	0	0	0	0	0	0	220	0	0	0		see Administration
9.02	Patrol Lieutenant Offices	5	6	7	7	8	8	180	1080	1080	1440		reduce two Lt. for Conference Rm. For Scheme 1, 2, & 3
9.03	Uniform Patrol Officers	0											see Evidence and Property
9.04	Conference Room	0					2	180	360	360	360		Conference Rm. Space from Lt. Offices
9.05	Patrol Wellness Rooms	0					2	100	200	200	200	0	bunk Style
9.06	Report Writing Stations	10					12	36	432	432	432	514	
9.07	Roll Call/Briefing Room	1					1	1200	1200	1200	1200	935	
9.08	Patrol Meeting Room	0					1	180	0	180	180	0	4-6 person conference room; eliminated in Scheme 1 & 2
9.09	Patrol Equipment Storage Room	1					1	250	250	250	250	224	
9.10	Patrol Duty Bag Lockers	70					84	4	336	336	336	4	stacked 3 high 2x2x3 lockers with doors
9.11	Break area / kitchenette	0					1	250	250	250	250	0	
9.12	Copy / Supply / Print	0					1	80	80	80	80	0	
9.13	Meeting Room	0					2	180	360	360	360	0	meeting room for 4-6 people
9.14	Staff entry vestibule	0					1	48	48	48	48	0	
9.15	Lobby for SIU / Gangs	0					1	80	80	80	80	0	
9.16	Receptionist	1	1	1	1	1	1	80	80	80	80	65	
	Special Investigations Unit												
9.17	SIU Sgt.	1	1	1	1	1	1	150	150	150	150	114	
9.18	Detectives	6	8	8	9	10	10	64	384	384	640	476	Scheme 1, 2, & 3 reduce to (6)
9.19	Interview Room	2					2	80	160	160	160	46	
9.20	Soft Interview Room	0					1	140	140	140	140	0	
9.21	Toilet	0	1	1	1	1	1	80	80	80	80		
9.22	Storage	1					1	100	100	100	100	36	
9.23	Lockers	0					10	5	50	50	50	0	
9.24	Changing Room	0					1	64	64	64	64	0	
	Traffic Unit												
9.25	Traffic Safety Unit Sergeant	1	2	2	2	2	2	120	240	240	240	104	
9.26	Traffic Safety Unit officers	9	12	12	13	15	15	64	768	768	960	528	Scheme 1, 2, & 3 reduce to (12)
9.27	Traffic Safety Unit Interview Room	0					0	80	0	0	0	0	
9.28	Traffic Safety Unit Storage	0					1	150	150	150	150	0	
9.29	Traffic Safety Unit Garage Storage	6					6	80	480	480	480		Semi-covered Motorcycle parking take home bikes
9.30	Traffic CSO	2	2	3	3	3	3	36	108	108	108		
	Gangs Unit												
9.31	Gangs Unit Sergeant	1	1	1	1	1	1	150	150	150	150	90	
9.32	Conference room	0					1	240	240	240	240	0	8 person Conference room
9.33	Gangs Unit Detectives	9	12	12	13	14	14	64	896	896	896	520	8x8 workstations in open office space
9.34	Gangs Unit Probation Officer	1	1	1	1	1	1	80	80	80	80	23	
9.35	Gangs Unit District Attorney	1	1	1	1	1	1	150	150	150	150	23	
9.36	Gangs Unit CSO	1	1	2	2	2	2	36	72	72	72	23	
9.37	Gangs Unit Interview room	2					2	80	160	160	160	50	
9.38	Storage	1					1	100	100	100	100	8	
	East Division WC												
9.39	Patrol Sergeants	6	7	8	9	9	9	36	252	252	324		6x6 workstations; Scheme 1, 2, & 3 reduce to (7)
9.40	Patrol Officers	30	40	40	40	42							
9.41	Crime Analyst	1	2	2	3	4	4	120	240	240	480	210	Scheme 1, 2, & 3 Reduce to (2)
9.42	IVS/BWC	2	2	2	2	2	2	100	200	200	200	106	
9.43	IVS/BWC Storage	0					1	100	100	100	100		
	West Division WC												
9.44	Patrol Sergeants	6	7	7	8	8	8	36	252	252	288		6x6 workstations; Scheme 1, 2, & 3 reduce to (7) Sergeants
9.45	Patrol Officers	28	40	40	40	42							
9.46	CSO's	3	6	7	8	9	8	64	512	512	512		dedicated report writers
9.47	CSO's equipment storage	0					1	120	120	120	120	0	

POLICE

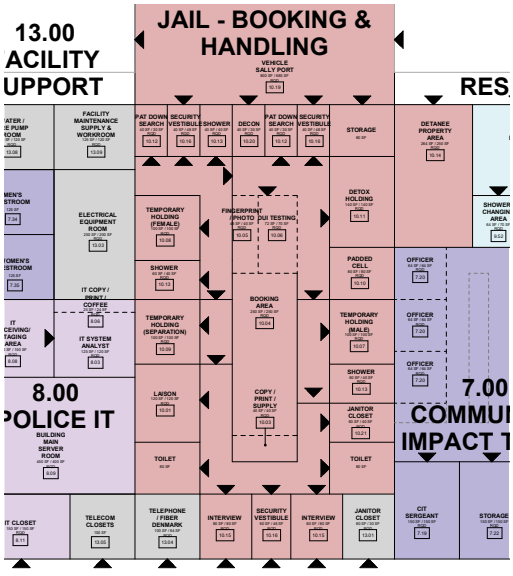
Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
	Special Resource Team												
9.48	Sergeant	0	1	1	1	1	1	120	120	120	120	0	req. office
9.49	Patrol Officers	4	8	9	10	10							
9.50	Mud Room	0					1	150	150	150	150	0	pre-clean area to change and keep contaminates isolated to one area.
9.51	Lockers	0					12	6	72	72	72	0	
9.52	Shower / changing area	0					2	70	140	140	140	0	
	Community Liaison Division												
9.53	Community Liaison Division Manager	1	1	1	1	1	1	120	120	120	120	220	
9.54	Community Service Officer's	4	8	8	9	9	9	64	576	576	576		
9.55	Storage	2					1	200	200	200	200	71	consolidated storage room
9.56	Volunteer workstation	1	1	1	3	3	3	64	192	192	192		
	Intel												
9.57	Intel Sgt.	1	1	1	1	1	1	120	120	120	120		
9.58	K9 Unit staff	2	3	4	4	4	4	36	108	108	144		Scheme 1, 2, & 3 reduce to (3)
9.59	K9 Indoor kennel	0					1	24	24	24	24	0	
9.60	K9 Food & Equipment Storage	0					1	80	80	80	80	0	
9.61	K9 Wash Area	0					1	70	70	70	70	0	
9.62	K9 outdoor kennel cage & run area	0					1	40	40	40	40	0	
	total staff / shift:	127	175	182	193	204							
	staff parking spaces needed at shift change												
								NET SQUARE FEET	13,166	13,346	14,538		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	1.30	1.30	1.30		
								DEPARTMENT GROSS SQUARE FEET	17,116	17,350	18,899		

New Construction Conceptual Plan - Community Policing

10.00 JAIL - BOOKING AND HOLDING

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
10.00	**JAIL - BOOKING AND HOLDING**												
10.01	Liaison	1	1	1	1	1	1	120	120	120	120	63	
10.02	Jail Staff	9.5	9.5	9.5	9.5	9.5						141	
10.03	Copy / Print / supply	0					1	40	40	40	40		
10.04	Booking area	2					1	250	250	250	250	220	work counter w/ computer wrkst for completing paperwork, and processing files. Counter to have clear view of entire area to monitor detainees.
10.05	Fingerprint / Photo	1					1	40	40	40	40	77	accommodates live scan machine, clear space for photos and ceiling mounted Camera, space for ink roll fingerprint machine
10.06	DUI Testing Area	1					1	70	70	70	70	99	Work Counter with sing, Sobriety test pattern on floor, intoxilyzer machine, audio and visual recording capabilities, separated from general booking area.
10.07	Temporary Holding Cell - Male	1					1	100	100	100	100	58	Sight and sound separated - ADA
10.08	Temporary Holding Cell - Female	1					1	100	100	100	100	67	Sight and sound separated - ADA
10.09	Temporary Holding Cell - separation	1					1	100	100	100	100	87	Sight and sound separated - ADA
10.10	Padded Cell	0					1	80	80	80	80		
10.11	Detox Holding	0					1	140	140	140	140		Can hold multiple 4-6, has flushing floor drain
10.12	Pat down search	0					1	30	30	30	30		
10.13	Holding area shower	0					2	40	0	0	80		40sf to meet ADA requirements; Scheme 1, 2, & 3 eliminate
10.14	Detainee property area	0					1	250	250	250	250		separate room accessible from the outside, sized for transient belongings
10.15	Interview Room	2					2	80	160	160	160	56	sound isolation and attenuation for audio and video recording
10.16	Security Vestibules	2					2	48	96	96	96	13	interlocking doors for security
10.17	Bond out transaction counter	0					0	65	0	0	0		
10.18	Release / Property Return Vestibule & Lobby	0					1	190	190	190	190	0	separate release point than the main public lobby
10.19	Vehicle Sally Port	1					1	685	685	685	685	297	accommodates 2 Vehicles Stacked, large enough to accommodate an ambulance
10.20	Decon Area	0					1	30	30	30	30		proposed: eye wash area within Sally Port
10.21	Janitor Closet	1					1	40	40	40	40	25	
	total staff per shift:	11	11	11	11	11							
	staff parking spaces needed (8am-5pm):						11						**# of parking spaces needed at shift change?**
								NET SQUARE FEET	2,521	2,521	2,601		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	1.44	1.44	1.44		
								DEPARTMENT GROSS SQUARE FEET	3,630	3,630	3,745		

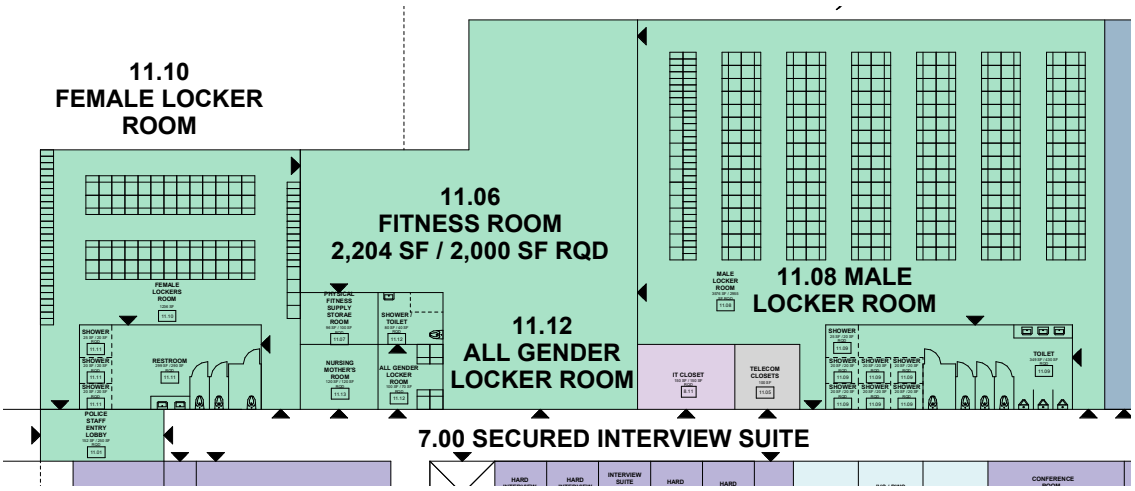


New Construction Conceptual Plan - Jail (Booking and Holding)

11.00 POLICE SHARED STAFF AREAS

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
11.00	**POLICE SHARED STAFF AREAS**												
11.01	Police Staff Entry Lobby	1					1	250	250	250	250		
11.02	Staff Vestibule	0					2	78	156	156	156	0	
11.03	Police Staff Kitchen / Break Area	1					1	800	800	800	800	412	GGPD would like an oven
11.04	Staff Mailboxes	1					1	550	550	550	550		central mail for the building in lieu of mail distribution by cadets
11.05	Vending	1					1	40	40	40	40	40	
11.06	Fitness Room	1					1	2000	2000	2000	2000	446	
11.07	Physical Fitness Supply Storage Rm	0					1	100	100	100	100	0	
	total sworn staff projections: (79%/20%/1%: 208/53/3 split)						**263**						**m/f/ag split goal = 69/30/1; may achieve with flexible locker banks between men & women's locker areas**
11.08	Male Sworn Counts / Lockers / Showers	220	x	x	x	x	**197**	15	2955	2955	2955		proposed: 2x2 lockers w/ bench; uniforms, rain gear, binders/manuals, separate boot storage (powered / vented);
	Temp lockers for civilian staff	0					**40**	8	320	320	320		half size lockers for hoteling
	ADA lockers (no pull out drawer)	0					**11**	13	143	143	143		5% of overall locker count req'd per code
11.09	Male restrooms adjoining locker area						1	430	430	430	430		4 toilets 4 lavs, 3 urinal
	Male Showers						6	20	120	120	120		Showers; 2 lavs for shaving
11.10	Female Sworn Counts / Lockers / Showers	9	x	x	x	x	**51**	15	765	765	765		proposed: 2x2 lockers w/ bench; uniforms, rain gear, binders/manuals, separate boot storage (powered / vented)
	Temp lockers for civilian staff	26					**41**	8	328	328	328		half size lockers for hoteling
	ADA lockers (no pull out drawer)						**3**	17	51	51	51		5% of overall locker count req'd per code
11.11	Female restrooms adjoining locker areas						1	290	290	290	290		3 Toilets; 2 lavs
	Female Showers						3	20	60	60	60		
11.12	All Gender restrooms adjoining locker areas						1	70	70	70	70		
	All Gender Showers						1	40	40	40	40		
	All Gender Lockers	0	x	x	x	x	4	15	60	60	60		
11.13	Nursing Mother's Room	0					1	120	120	120	120		Needs sink, countertop, chair, side table and refrigerator
11.14	Services Sargent / Quartermaster	1	1	1	1	1	1	150	0	0	150		location with Evidence and Property; service on site need closet centrally located; Scheme 1, 2, & 3 eliminate
11.15	Quartermaster / Uniform Storage	1					1	100	100	100	100		location with Evidence and Property; service on site need closet centrally located
	total staff:												
	staff parking spaces needed (8am-5pm):						**0**						
								NET SQUARE FEET	9,748	9,748	9,898		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	1.25	1.25	1.25		
								DEPARTMENT GROSS SQUARE FEET	12,185	12,185	12,373		

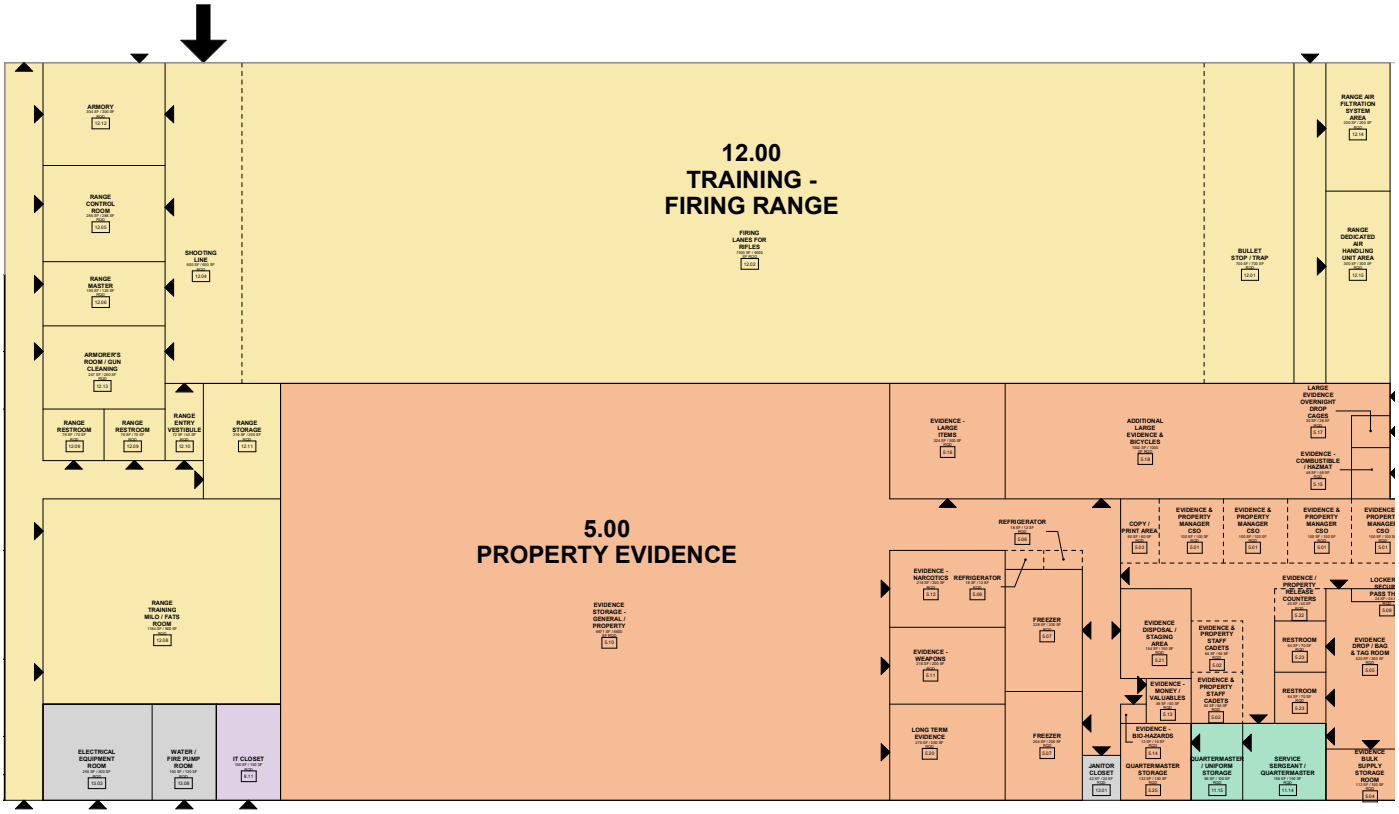


New Construction Conceptual Plan - Police Shared Staff Areas

12.00 TRAINING - FIRING RANGE

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
12.00	**TRAINING - FIRING RANGE**												
12.01	Bullet Stop / Trap						10	70	0	0	700		Steel trap; Scheme 1, 2, & 3 eliminate
12.02	Firing Lanes for rifles (50yrd)						10	600	0	0	6000		stationary turning targets ea lane, running man, charging man ea lane, dynamic range, ability drive vehicle on to range; Scheme 1, 2, & 3 eliminate
12.03	Firing Lanes for hand guns (25yrd)						0	300	0	0	0		
12.04	Shooting line						10	60	0	0	600		Scheme 1, 2, & 3 eliminate
12.05	Range Control Room						1	288	0	0	288		Scheme 1, 2, & 3 eliminate
12.06	Range Master	0	1	1	1	1	1	120	0	0	120		Scheme 1, 2, & 3 eliminate
12.07	Range Officers	0	0	0	0	0	0	120	0	0	0		
12.08	Range Training MILO / FATS room						1	900	0	0	900		Scheme 1, 2, & 3 eliminate
12.09	Range restroom						1	70	0	0	70		Scheme 1, 2, & 3 eliminate
12.10	Range entry vestibule						1	45	0	0	45		Scheme 1, 2, & 3 eliminate
12.11	Range storage						1	200	0	0	200		Scheme 1, 2, & 3 eliminate
12.12	Armory						1	300	0	0	300	85	existing in a storage container; Scheme 1, 2, & 3 eliminate
12.13	Armorer's Room / Gun Cleaning						10	25	0	0	250	86	eliminate
12.14	Range air filtration system area						1	200	0	0	200		air blow; Scheme 1, 2, & 3 eliminate
12.15	Range dedicated air handling unit area						1	300	0	0	300		mechanical unit;Scheme 1, 2, & 3 eliminate
	total staff:	**0**	**1**	**1**	**1**	**1**							
	staff parking spaces needed (8am-5pm):						**1**						
								NET SQUARE FEET	**0**	**0**	**9,973**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.12**	**1.12**	**1.12**		
								DEPARTMENT GROSS SQUARE FEET	**0**	**0**	**11,170**		

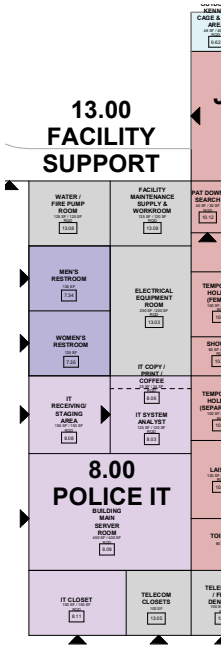


New Construction Conceptual Plan - Training (Firing Range)

13.00 FACILITY SUPPORT AREAS

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
13.00	**FACILITY SUPPORT AREAS (INTERIOR MEP & VERTICAL CIRC)**												
13.01	Janitor Closets						4	30	120	120	120		one per floor plus; one for support facility
13.02	HVAC Equipment						2	300	600	600	600		
13.03	Electrical Equipment Room						2	200	400	400	400		main electrical rooms should be constructed for each building (main building and parking garage building). Each should be 10' x 20'.
13.04	Telephone / Fiber Demark						1	64	64	64	64		
13.05	Telecom closets / hub						5	50	250	250	250		IT distribution for each floor and support facility
13.06	Emergency Generator Enclosure						2	350	700	700	700	148	assumes full building back-up. Each building will require a 1250kW back-up generator in a generator room of minimum size 26 feet by 13.5 feet.
13.07	Emergency Generator Equip & Supply						2	40	80	80	80		one generator for each building
13.08	Water / Fire Pump Room						2	120	240	240	240		one at each building
13.09	Facility Maintenance Supply & Wrkrm						1	160	160	160	160		
13.10	Stairs*						3	180	540	540	540		Number of stairs will vary depending on floor plans
13.11	Elevator *						2	90	180	180	180		
13.12	Elevator machine room						0	80	0	0	0		Not required with machineless room elevators
	total staff:												
	staff parking spaces needed (8am-5pm):												
								NET SQUARE FEET	**3,334**	**3,334**	**3,334**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	**1.20**	**1.20**	**1.20**		
								DEPARTMENT GROSS SQUARE FEET	**4,001**	**4,001**	**4,001**		

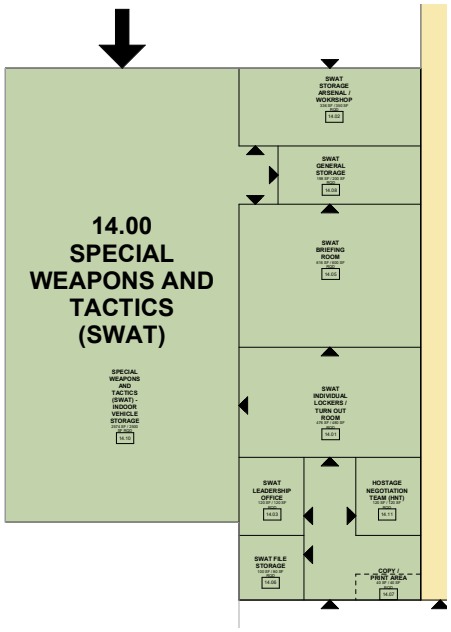


New Construction Conceptual Plan - Facility Support Areas

14.00 SPECIAL WEAPONS AND TACTICS

POLICE

Space #	Spaces	Current (2019)	Future staff +5yr	Future staff +10yr	Future staff +15yr	Future staff +20yr	No. Of Spaces	Space Standard	Scheme 1 Reno & Scheme 2 Low Cost	Scheme 3 Mid Cost	Scheme 4 Full Build-Out	Current sizes	Notes
14.00	**SPECIAL WEAPONS AND TACTICS (SWAT)**												
14.01	SWAT Individual lockers / Turn Out Room	34	36	36	38	40	40	12	480	480	480		currently in a connex box
14.02	SWAT storage arsenal / workshop	1					1	350	350	350	350		currently in a connex box, Armory
14.03	SWAT Leadership office	1	1	1	1	1	1	120	120	120	120		Shared office for records and tactical plans
14.04	SWAT Team Leaders / planners	0					0	192	0	0	0		not needed. GGPD does not foresee full time SWAT officers need
14.05	SWAT briefing room	0					1	600	0	0	600		incorporate into or adjacent to the lockers; Min. Program eliminate
14.06	SWAT file storage	0					1	80	80	80	80		adjacent to SWAT office
14.07	SWAT copy / print area	0					1	40	40	40	40		in office
14.08	SWAT general storage	1					1	200	200	200	200		Equipment storage room
14.09	SWAT decontamination room	0					0	80	0	0	0		
14.10	SWAT indoor vehicle storage	0					1	2,500	0	2500	2500		bearcat, MRAP and Mobile Command
14.11	Hostage Negotiation Team (HNT) Area	0					1	120	120	120	120		for storage and equipment
	total staff:	1	1	1	1	1							
	staff parking spaces needed (8am-5pm):						1						
								NET SQUARE FEET	**1,390**	**3,890**	**4,490**		
								NET TO DEPARTMENT GROSS FACTOR [circulation/walls]	1.35	1.35	1.35		
								DEPARTMENT GROSS SQUARE FEET	**1,877**	**5,252**	**6,062**		



New Construction Conceptual Plan - Special Weapons and Tactics

2.4 DEVELOPMENT OF SCHEMES

During the course of this project, the City and Police Department reviewed a number of building and site configurations design schemes. Of those explored, one scheme was selected as having the most potential to accommodate the current and future land needs of the GGPD.

On October 18, 2019, a workshop was held to explore new building configuration by studying different adjacency options and relationships with each of the divisions. Representatives from the police division and city attended the workshop to provide their insight and input on the design. There were 3 options that were generated for further study. For the workshop, color blocks were used represent each of the divisions. These division blocks were cut proportionally and scaled to the program area.

10/18 Workshop

New Construction Study Options Explored

New Construction Study Option A

This option was generated from the idea of having the public entrance at the southeast corner of building. From the public entry placement, we then look into which divisions need to be adjacent to the public access area. Records and Community Liaison was placed adjacent, then, more divisions were place according to their adjacency needs.

For this option, we looked into new construction. The divisions were divide up between Police Department Building and Support Building. For this option the Police Department Building is layout to have two stories. Large scale plans are located in the Appendix.

Police Department Building:

First Floor:

- Public Access Area
- Records
- Investigations Division
- Police I.T.
- Community Policing
- Jail - Booking and Holding
- Police Shared Staff Areas
- Facility Support Areas

Second Floor:

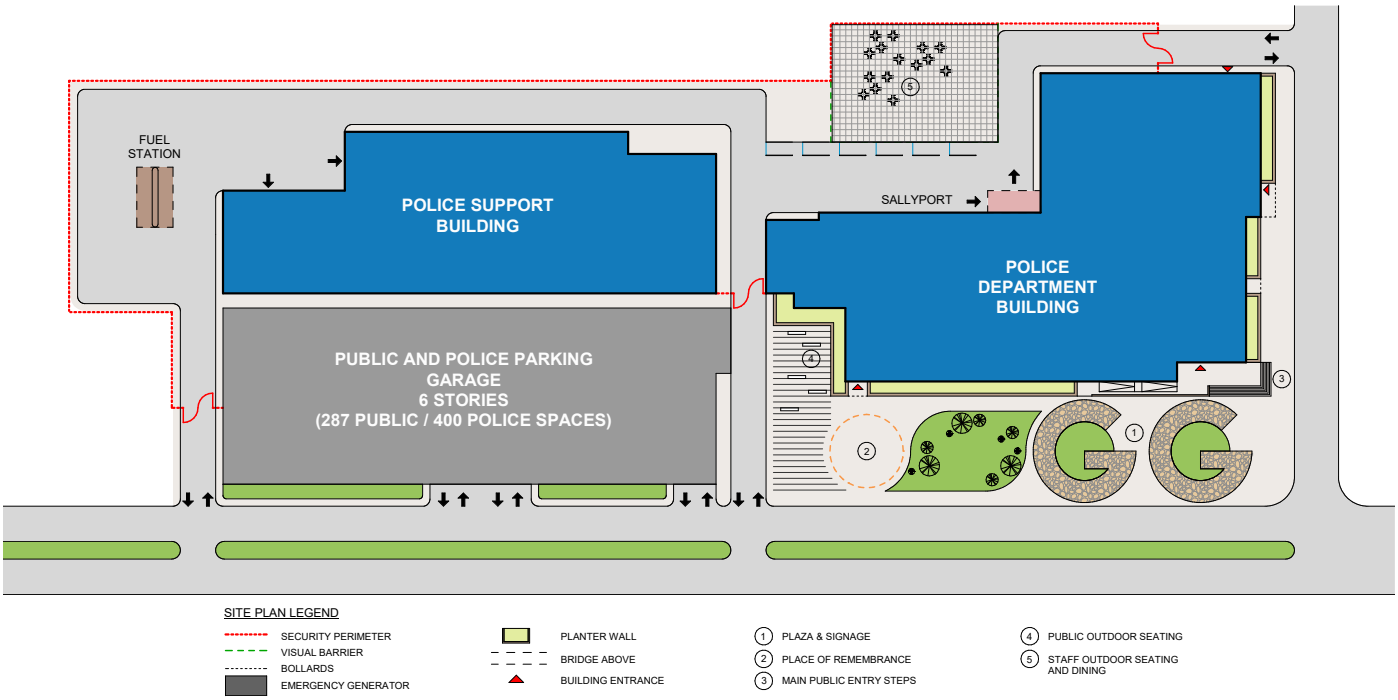
- Administration
- Administrative Services
- Communications Division

Police Support Building:

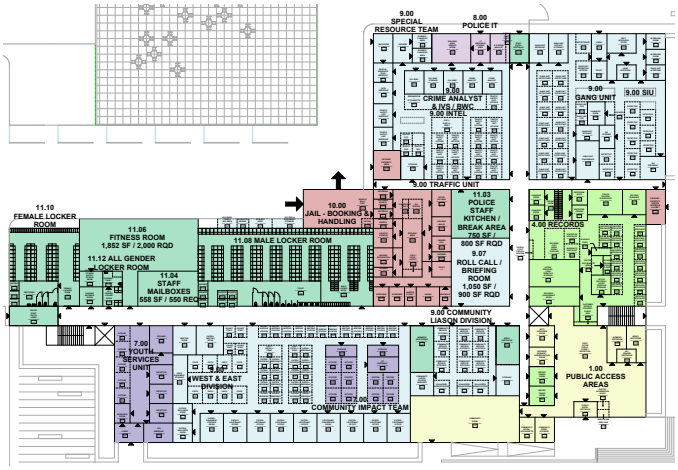
- Evidence and Property
- Training - Firing Range
- Special Weapons and Tactics

Parking:

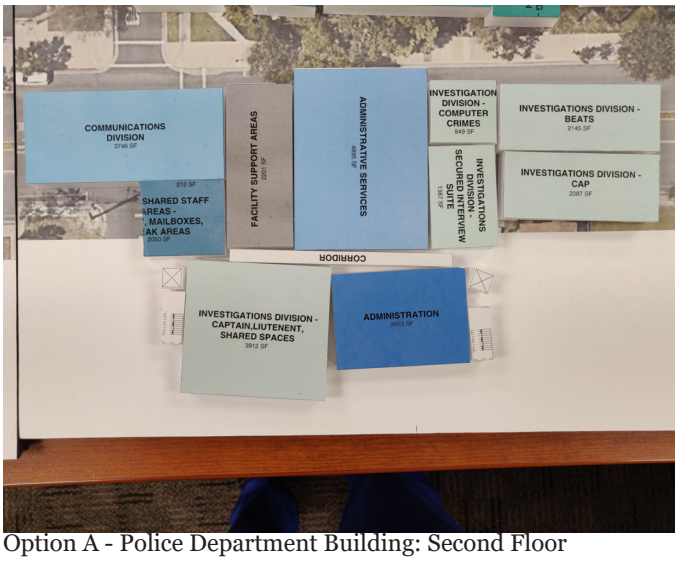
- One Parking Garage for both Public and Staff
- Staff parking to be separated from public by fencing and ramp to create secured perimeter

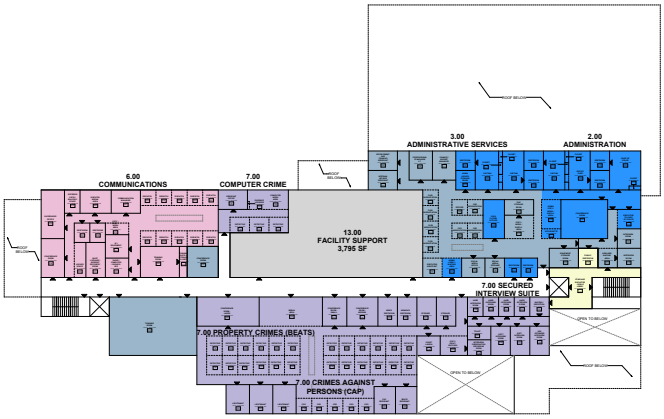


Option A - Conceptual Site Plan

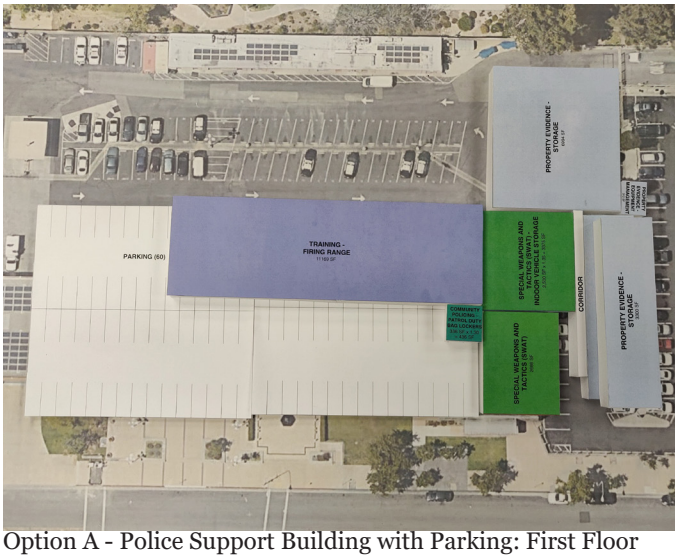


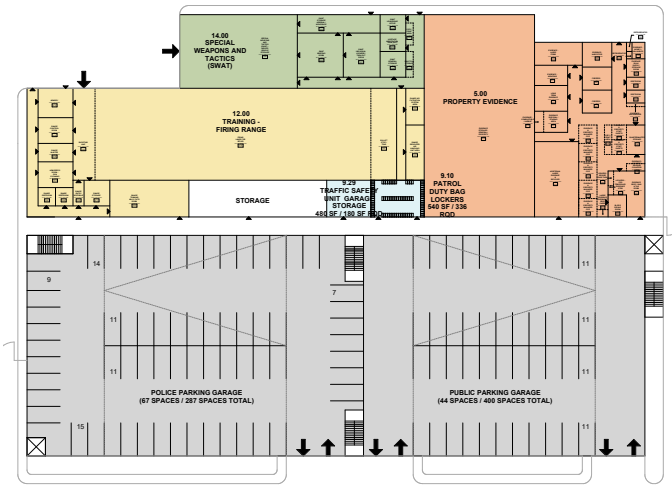
Option A - Police Department Building: First Floor





Option A - Police Department Building: Second Floor





Option A - Police Support Building with Parking: First Floor

New Construction Study Option B

This second option that was generated from the idea of having the public entrance toward the middle of the building and allowing some public parking closer to the facility. From that placement, we then look into which divisions need to be adjacent to the public access area. Records and Community Liaison was placed adjacent, then, more divisions were place according to their adjacency needs.

For this option, we looked into new construction. The divisions were divide up between Police Department Building and Support Building. For this option the Police Department Building is layout to have three stories. Large scale plans are located in the Appendix.

Police Department Building:

First Floor:

- Public Access Area
- Records
- Police I.T.
- Community Policing
- Jail - Booking and Holding
- Police Shared Staff Areas
- Facility Support Areas

Second Floor:

- Investigations Division
- Police Shared Staff Areas

Third Floor:

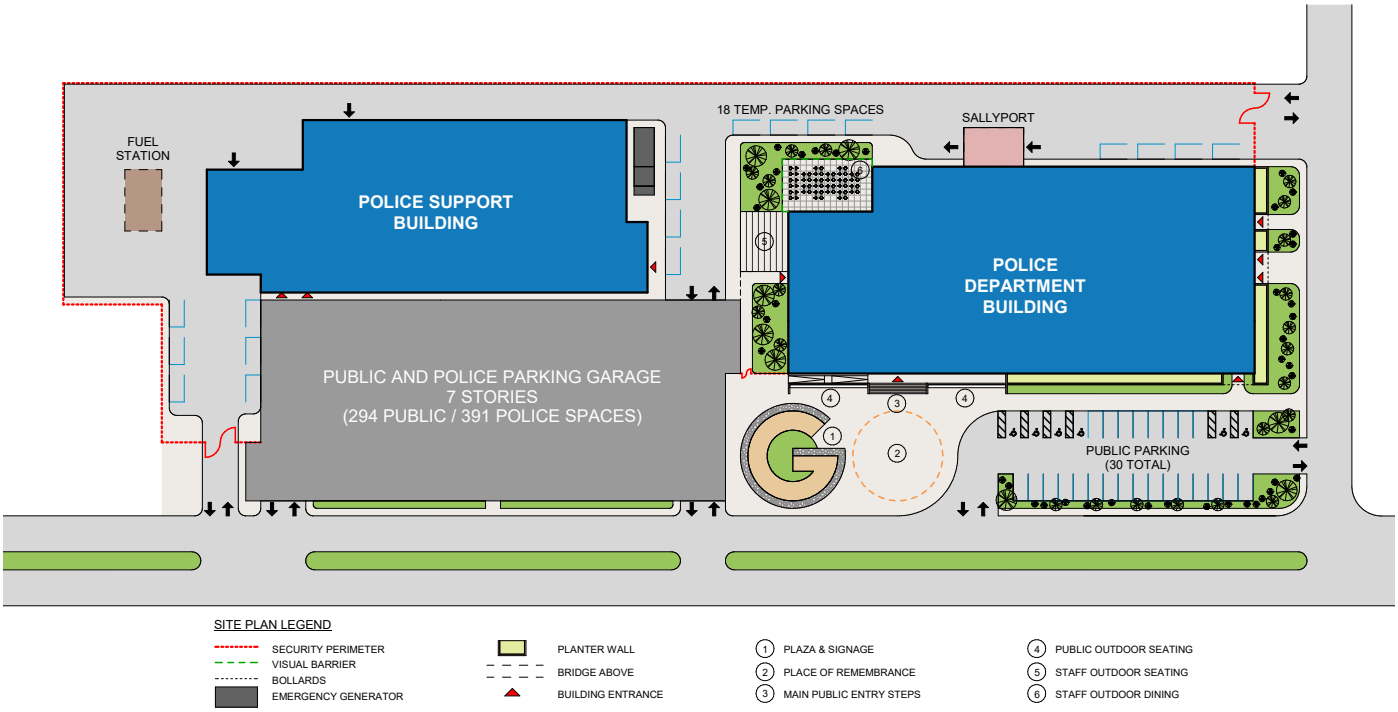
- Administration
- Administrative Services
- Communications Division

Police Support Building:

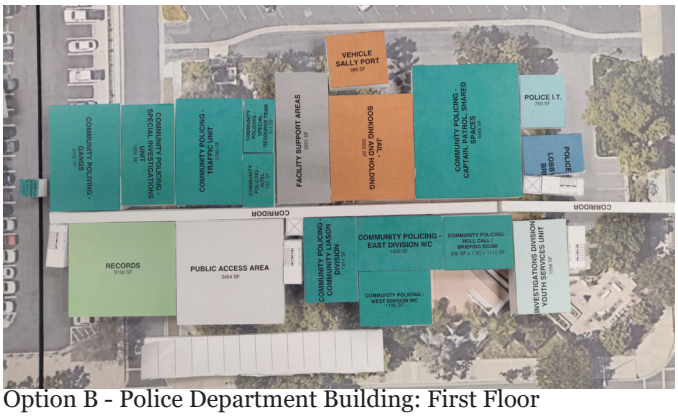
- Evidence and Property
- Training - Firing Range
- Special Weapons and Tactics

Parking:

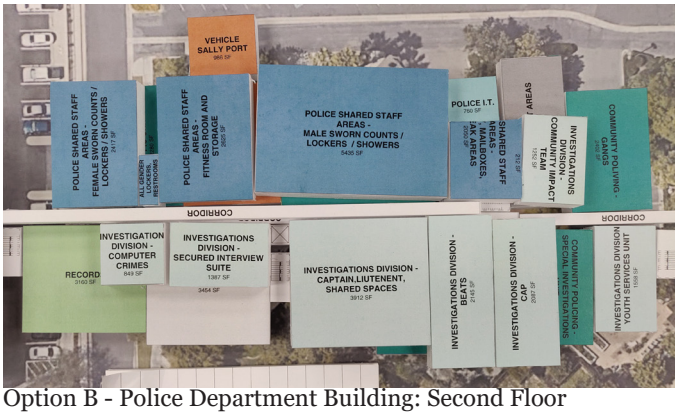
- One Parking Garage for both Public and Staff
- Staff parking to be separated from public by fencing and ramp to create secured perimeter
- Surface parking for public and accessibility needs near building entrance

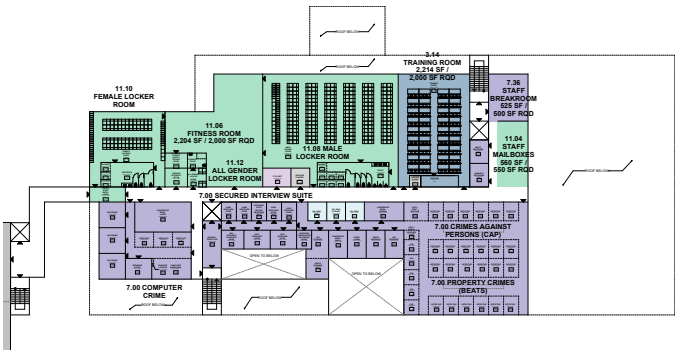


Option B - Conceptual Site Plan

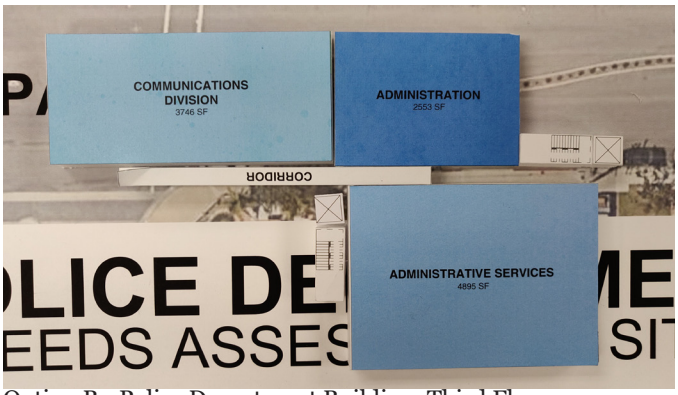


Option B - Police Department Building: First Floor

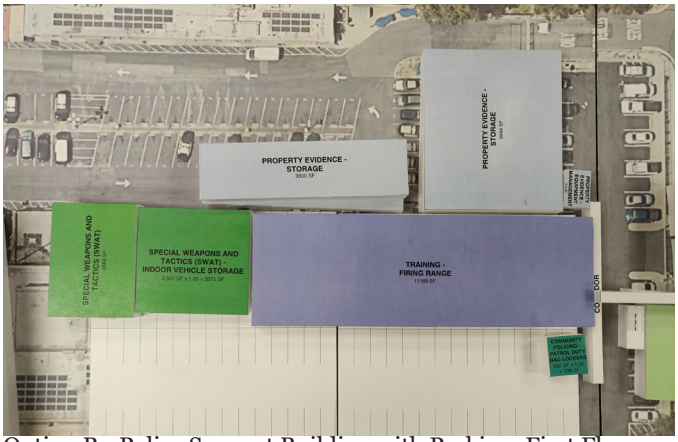




Option B - Police Department Building: Second Floor



Option B - Police Department Building: Third Floor



Option B - Police Support Building with Parking: First Floor

New Construction Study Option C

This third option that was generated from the idea of rotating the block diagram layout generated from option B to explore different site design option.

For this option, we looked into new construction. The divisions were divide up between Police Department Building and Support Building. For this option the Police Department Building is layout to have three stories. Large scale plans are located in the Appendix.

Police Department Building:

First Floor:

- Public Access Area
- Records
- Police I.T.
- Community Policing
- Jail - Booking and Holding
- Police Shared Staff Areas
- Facility Support Areas

Second Floor:

- Investigations Division
- Police Shared Staff Areas

Third Floor:

- Administration
- Administrative Services
- Communications Division

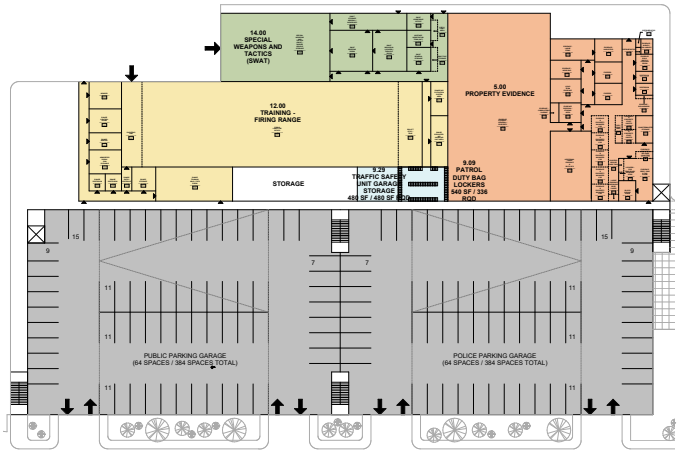
Police Support Building:

- Evidence and Property
- Training - Firing Range
- Special Weapons and Tactics

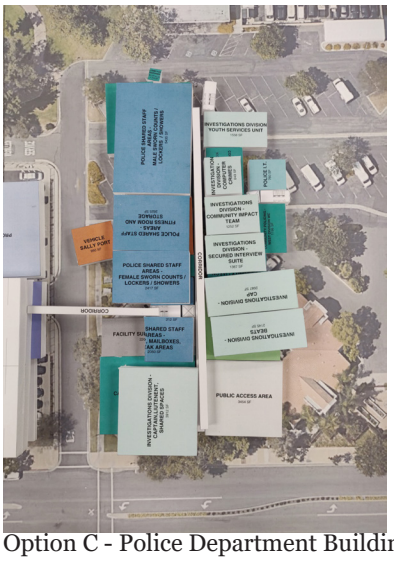
Parking:

- One Parking Garage for both Public and Staff
- Staff parking to be separated from public by fencing and ramp to create secured perimeter
- Surface parking for public and accessibility needs near building entrance

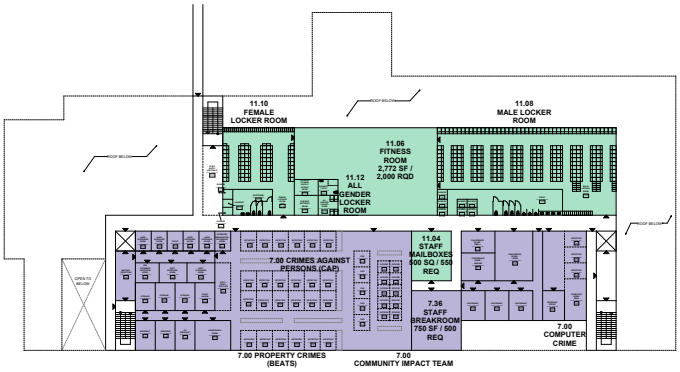
Option C - Conceptual Site Plan

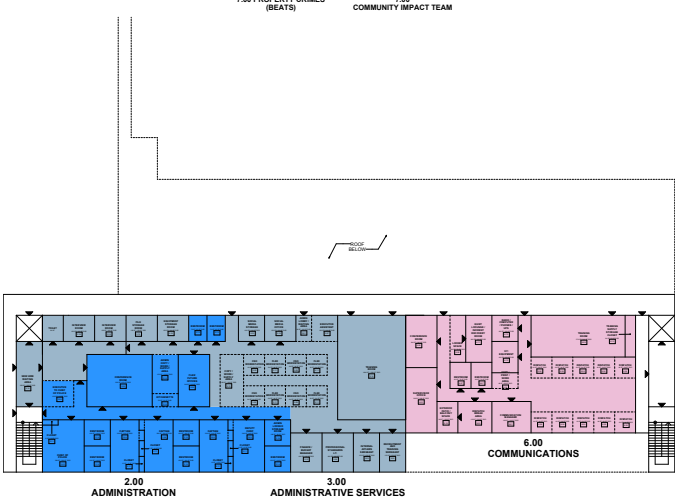


Option C - Police Department and Support Building: First Floor



Option C - Police Department Building: Second Floor





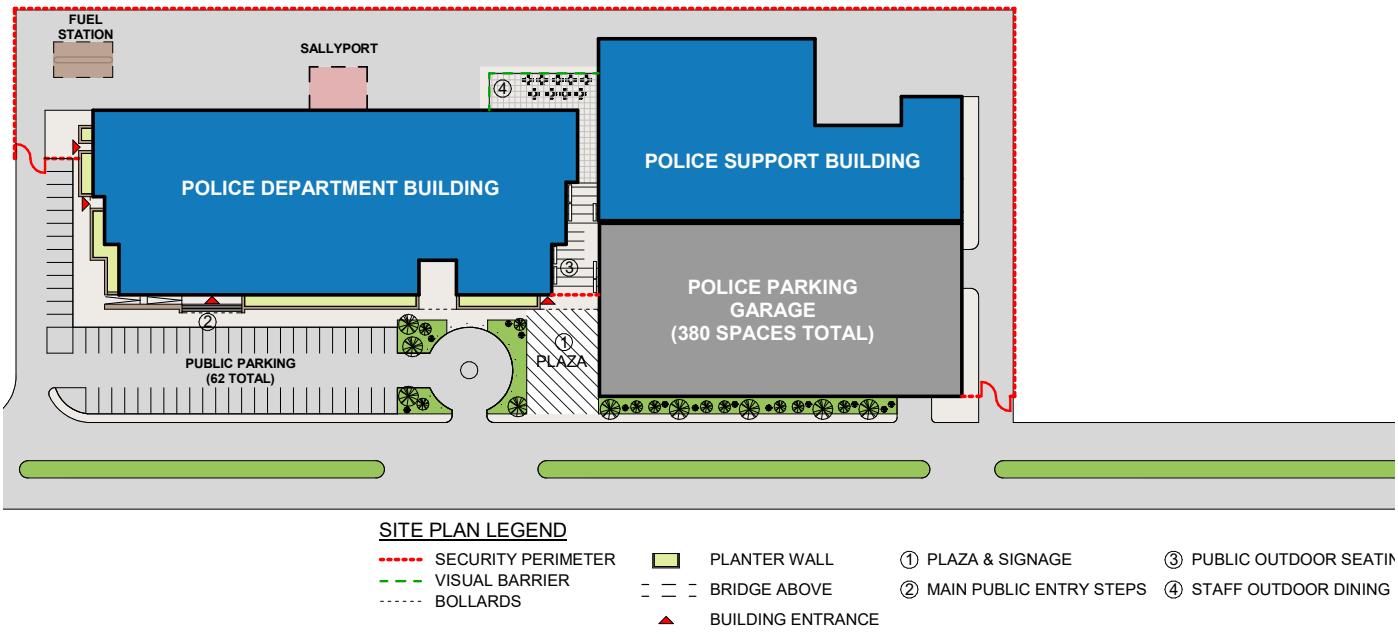
Option C - Police Department Building: Third Floor

Alternate Site Study Options

During the workshop, there were a couple of other options explored for potential site design and parking studies. However, none of these options were or pursued since GGPD and the City didn't see the potential of these options needing to be further developed. These options would required high construction cost and is less effective in meeting the Police Department's needs.

Replace Existing Facility with New Construction

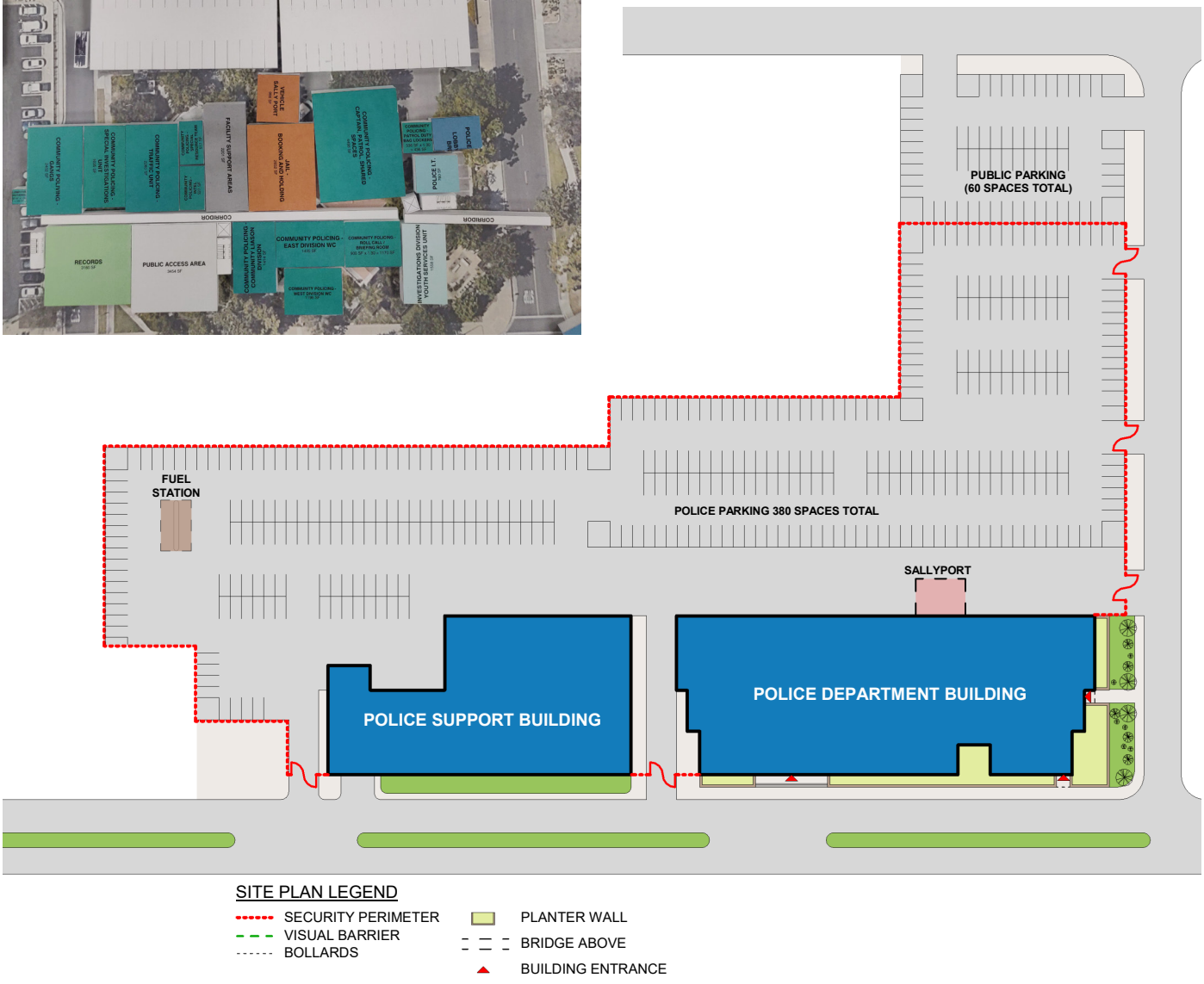
Below is an image of option explored with the idea of replacing the existing police facilities at it's current location. The design team have decided not to further pursue this design option due to the difficulty of construction phasing and the potential of multiple staff, equipment, and property evidence relocation. Large scale plans are located in the Appendix.



Other Option: Replacing Existing Police Facility with New Construction

New Construction with All Surface Parking

For this design option, the design team looked into how much land it'll take to provide all surface parking for staff and public instead of providing parking garage. This design option was not further investigated due to large surface area it requires for parking. Large scale plans are located in the Appendix.



Other Option: All Surface Parking

Summary

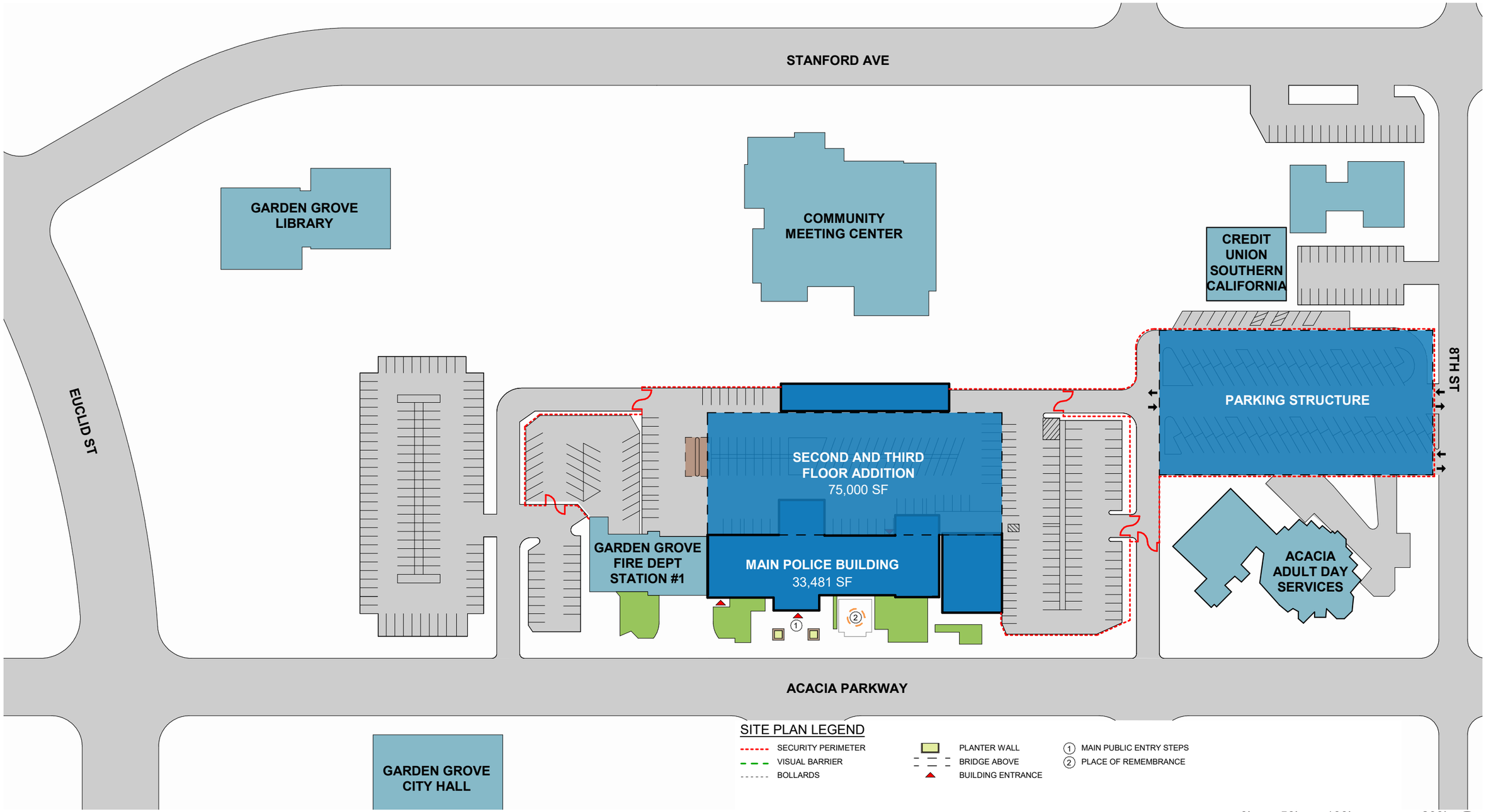
After exploring all design schemes, Option B was selected for further development and to be consider as full program build-out. Here are the final schemes that were selected for this report.

- Scheme 1 - Renovation and Addition to Existing Facility:
  - Use existing facilities as shell to renovate and reorganize division for better efficiency
- Scheme 2 - New Construction (Low Cost Option)
  - Reduce program area based on Option B building configuration and site design
- Scheme 3 - New Construction (Middle Cost Option)
  - Reduce program area based on Option B building configuration and site design
- Scheme 4 - New Construction (Full Build-Out Option)
  - Option B building configuration and site design

Further design studies will be needed once site location is selected.

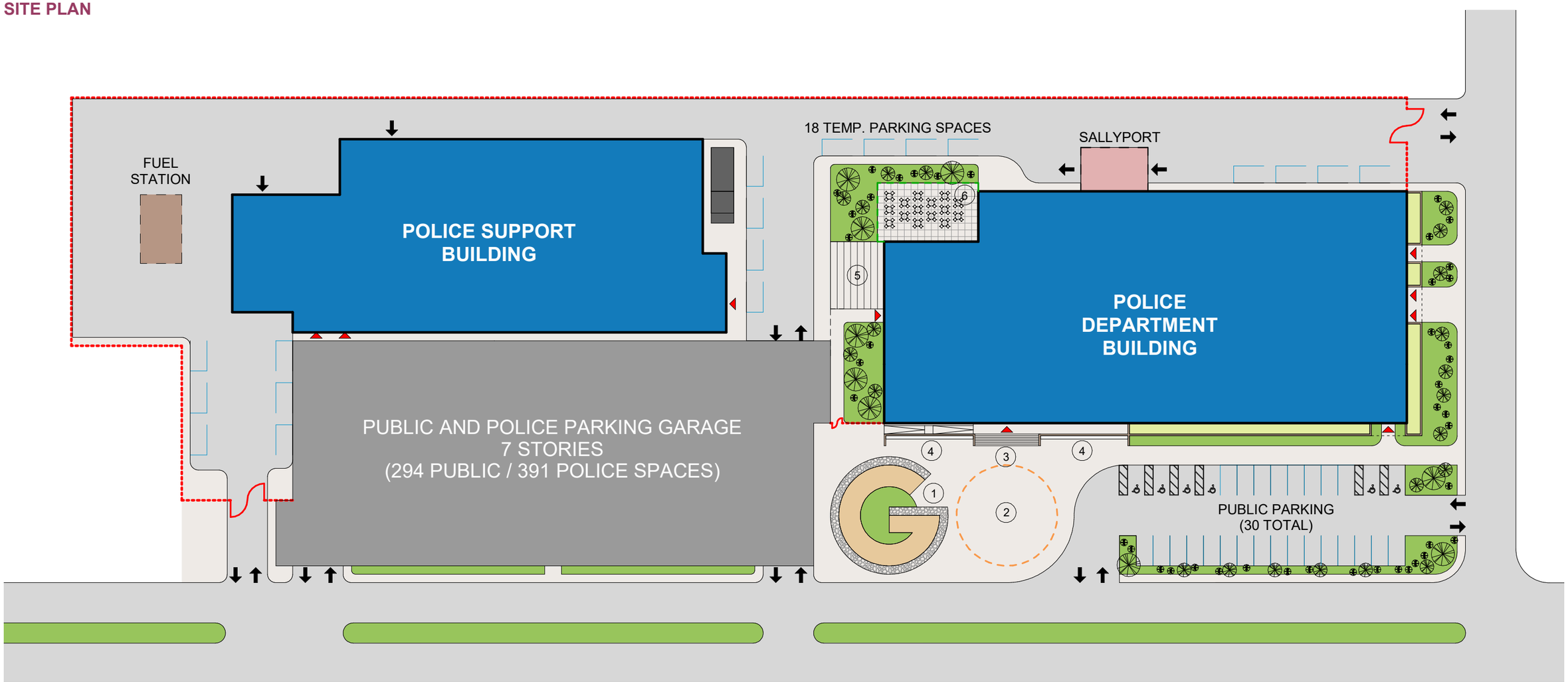
RENOVATION AND ADDITION OF EXISTING FACILITY CONCEPTUAL PLAN

SITE PLAN



NEW CONSTRUCTION CONCEPTUAL PLAN

SITE PLAN



SITE PLAN LEGEND

- SECURITY PERIMETER
- VISUAL BARRIER
- BOLLARDS
- EMERGENCY GENERATOR
- PLANTER WALL
- BRIDGE ABOVE
- BUILDING ENTRANCE
- (1) PLAZA & SIGNAGE
- (2) PLACE OF REMEMBRANCE
- (3) MAIN PUBLIC ENTRY STEPS
- (4) PUBLIC OUTDOOR SEATING
- (5) STAFF OUTDOOR SEATING
- (6) STAFF OUTDOOR DINING

0’ 25’ 50’ 100’

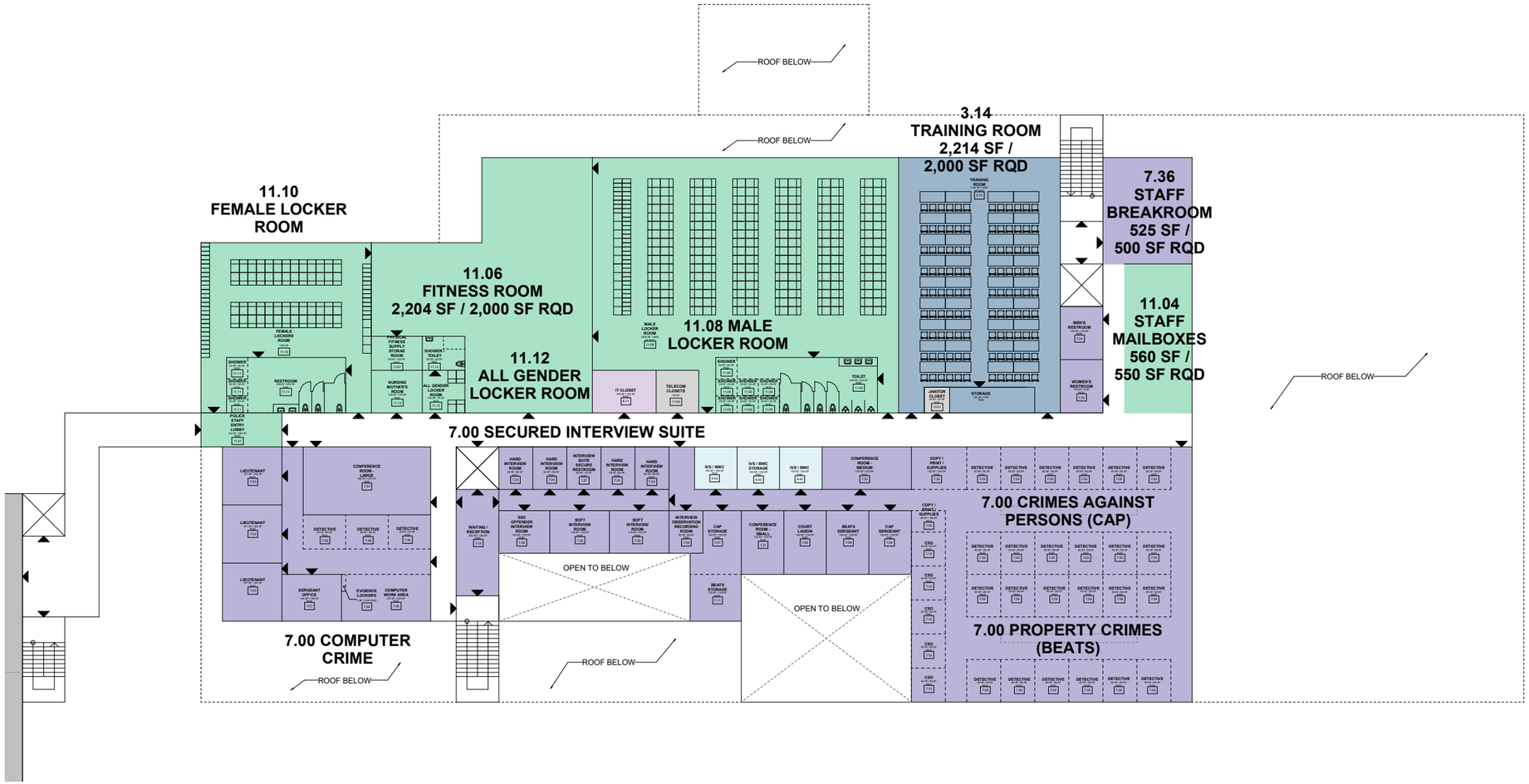
NEW CONSTRUCTION CONCEPTUAL PLAN

MAIN POLICE BUILDING - FIRST FLOOR

0’ 15’ 30’ 60’

NEW CONSTRUCTION CONCEPTUAL PLAN

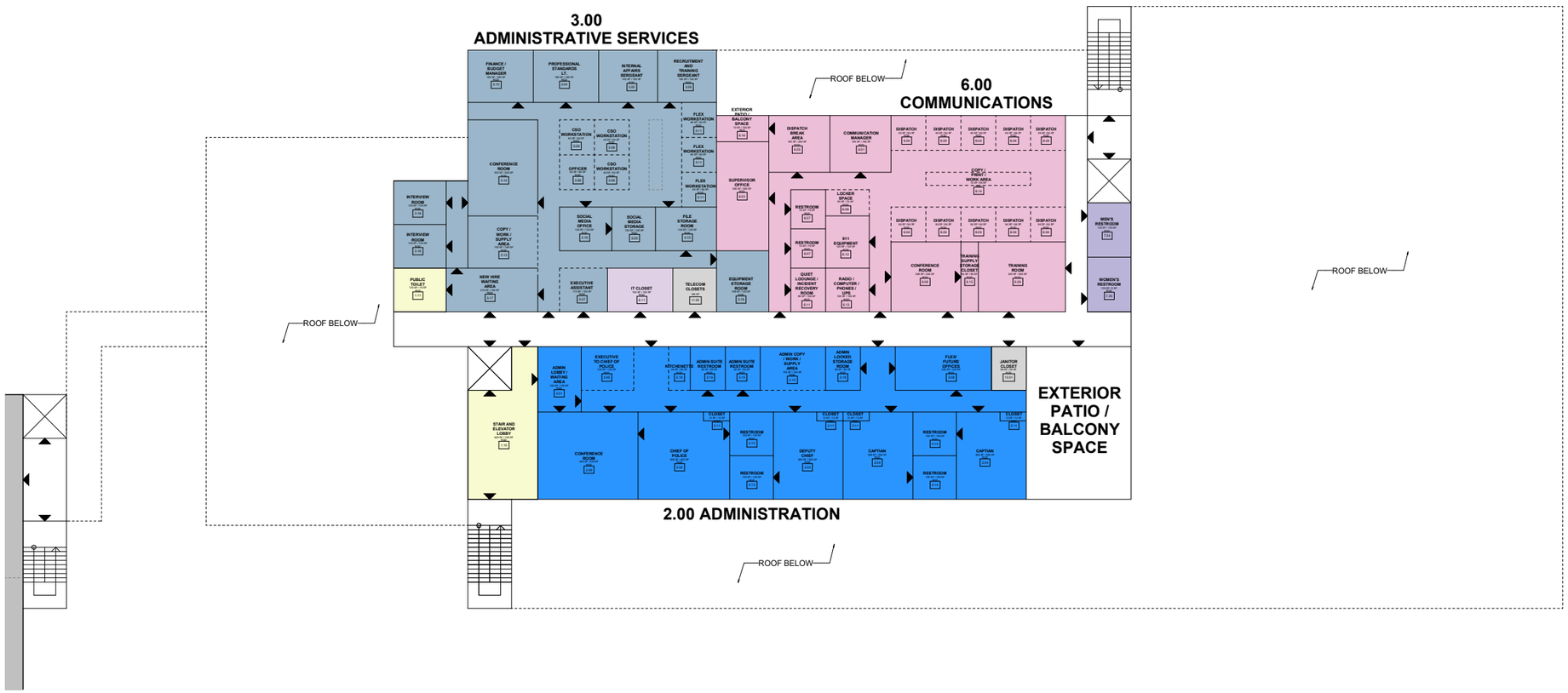
MAIN POLICE BUILDING - SECOND FLOOR



0’ 15’ 30’ 60’

NEW CONSTRUCTION CONCEPTUAL PLAN

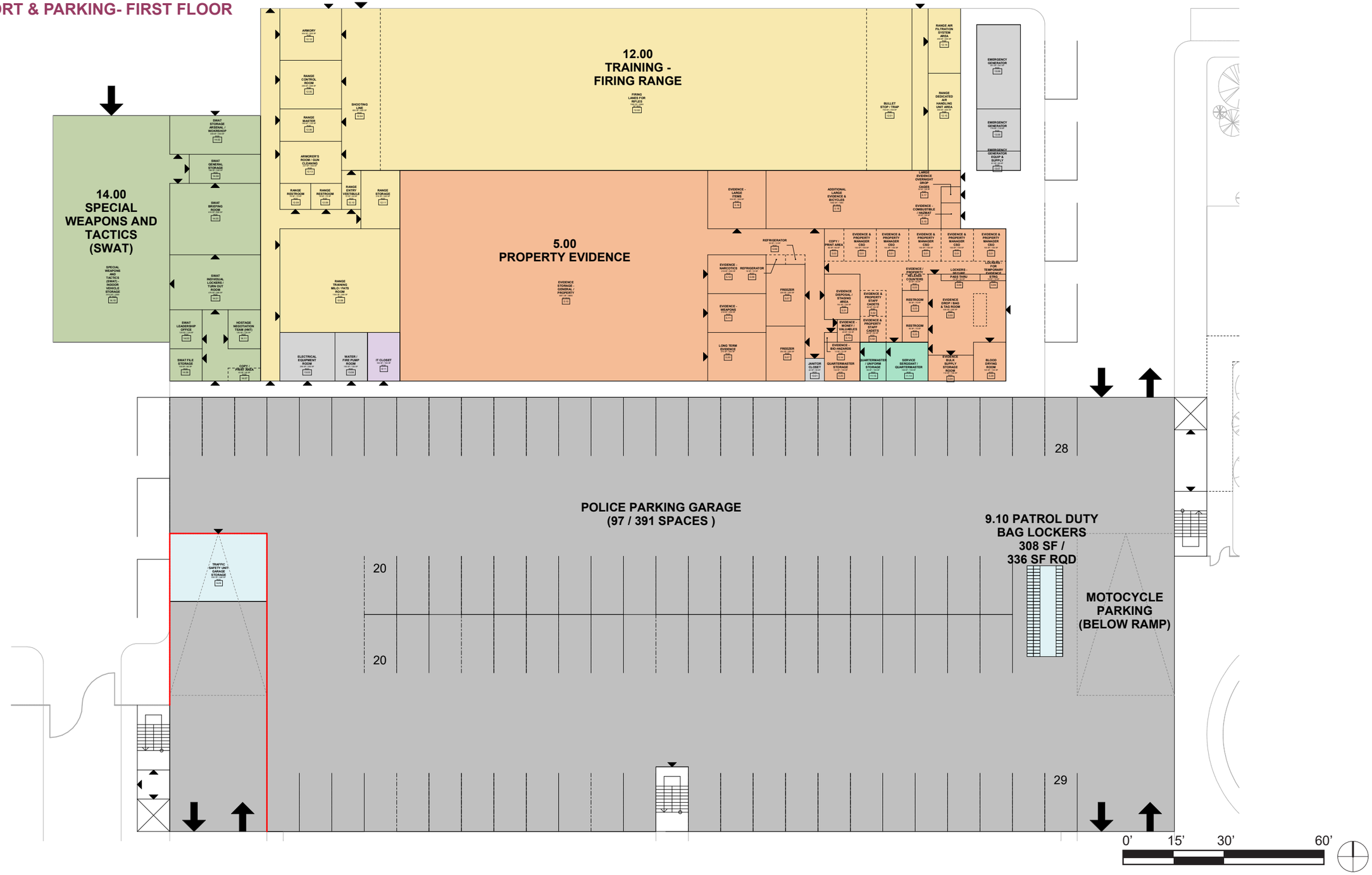
MAIN POLICE BUILDING - THIRD FLOOR



0’ 15’ 30’ 60’

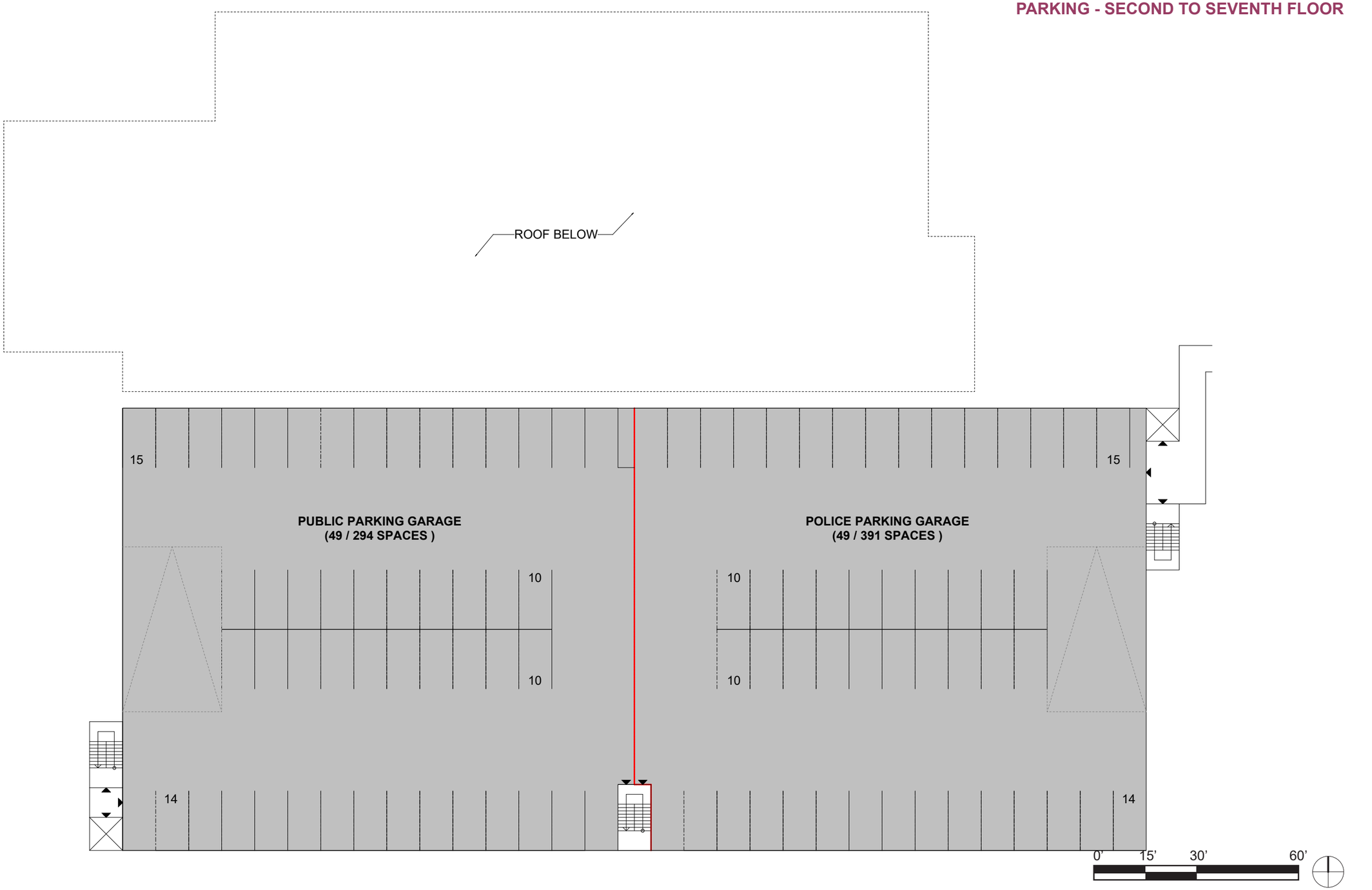
NEW CONSTRUCTION CONCEPTUAL PLAN

POLICE SUPPORT & PARKING- FIRST FLOOR



NEW CONSTRUCTION CONCEPTUAL PLAN

PARKING - SECOND TO SEVENTH FLOOR



3.0 SITE ACCESSIBILITY ASSESSMENTS

3.1 EXECUTIVE SUMMARY

Founded in 1960, KPFF Consulting Engineers is one of the largest civil and structural engineering firms on the West Coast. We successfully leverage the resources of our firm while maintaining the personal contact we view as essential. With over 1,000 employees nationwide, our offices are located in Seattle, Tacoma, Lacey, Portland, Eugene, San Francisco, Sacramento, Los Angeles, Long Beach, Irvine, San Diego, Boise, Salt Lake City, St. Louis, Chicago, Louisville, Des Moines, New York, and Washington, D.C.

KPFF provides civil engineering services on a wide variety of project types namely commercial, retail, automotive facilities, hospitality, healthcare, military, K12, higher education, civic, community & sports parks, recreational facilities, theme parks, and transportation (roadways, rail, water & air). The scope of civil engineering services may include due diligence (site assessment) study, master planning, infrastructure study & design, entitlement, grading & drainage design, hydrology study, implementation of storm water quality & quantity, SWPPP (QSP & QSD), site accessibility (ADA) study & upgrades, sustainability (LEED) design, parking lots and trails. In addition our civil engineering group serves as a prime consultant to private and government clients for management and design of private, transportation, airports, waterfront, site improvements and major utility projects. Our project size ranges from few thousand square feet to several hundred acres.

KPFF's accessibility assessment evaluated the existing parking lots associated with the Garden Grove Police Department for compliance with the 2019 California Building Code and American Disability Act (ADA) Standards. The following areas were observed: Parking lots and ramps associated with the Main Police Building, Property and Evidence Annex, the Juvenile Justice Center, and the Special Services Annex.

Six separate parking lots were evaluated. There are a total of 5 ADA standard parking stalls; 2 are located in the visitor parking lot to the west of the Fire Department, 1 is located in the staff parking lot east of the Juvenile Justice Center, and 2 are located in the public parking lot north of the Special Services Annex. Parking lots located north of the Main Police Building, south of the Special Services Annex, and north of the Fire Department have no ADA stalls. No van accessible stalls have been provided at any location. See summary table below for parking tabulation.

PARKING TABULATION SUMMARY TABLE				
Parking Lot	**Number of Parking Stalls Provided**	**ADA Parking Stalls Provided**	**ADA Parking Stalls Required**	**Van Accessible Parking Stalls Required**
Main Police Building/ Property and Evidence Patrol Parking	98	0 Standard 0 Van	4	1
Main Police Additional Parking (NW of building)	25	0 Standard 0 Van	1	1
Fire Dept. Visitor Parking	16	2 Standard 0 Van	1	1
Juvenile Justice Staff Parking	84	1 Standard 0 Van	4	1
Special Services Annex Staff Parking (south lot)	24	0 Standard 0 Van	1	1
Special Services Annex Public Parking (north lot)	14	1 Standard 1 Van	1	1

The number of required ADA parking stalls is based on the total number of parking stalls provided and the 2019 California Building Code Table 11B-208.2 as shown below.

TABLE *11B*-208.2
PARKING SPACES

TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

The site evaluation was based on visual observation, tape measurements, and the use of a digital leveler to measure site slopes. The main ADA issues observed were the lack of ADA parking stalls and van accessible stalls, non-compliant pedestrian walkways/ramps; non-compliant curb ramps; non-compliant concrete and asphalt surface slopes; non-compliant ADA parking stall dimensions, and non-compliant signage.

A detailed accessibility assessment with a reference map and photos of each observed areas is provided below.

3.2 KEY MAP


Walkway 2
Public Parking
2 Ex. ADA Stalls
Special Services Annex
Property and Evidence Annex
Staff Parking
Staff Parking
Patrol Parking
Staff Parking
Walkway 1
Ramp 4
Main Police Building
Visitor Parking
Ramp 2
1 Ex. ADA Stall
Fire Department
Juvenile Justice Center
2 Ex. ADA Stalls
Ramp 1
Ramp 3
Gate
NORTH

3.3 SITE ACCESSIBILTY ASSESSMENT

Item No.	Location	Location Description	Picture Ref.	Issue	2019 CBC Ref.	Remarks/ Recommendation
1	Main Police Building	Accessible Ramp #2	1	Top section of ramp running slope is 9%. Ramps shall have a running slope not greater than 1:12 (8.33%).	CBC 11B-405.2	Reconstruct to a code compliant ramp.
2	Main Police Building	Entire Parking Lot	N/A	There are no ADA parking stalls present or path of travel in the parking lot north of the building.	CBC 11B-208	Provide a total of 4 accessible parking stalls which includes 1 van accessible stall. Provide accessible path of travel which may include accessible walkways, ramps, and curb ramps.
3	Property and Evidence Annex	Entire Parking Lot	N/A	An accessible path of travel between the Main Police Building and the Property and Evidence Annex is not provided. No ADA stalls are provided for the shared parking lot between the main police building and the Property and Evidence Annex. (See Item No. 2)	CBC 11B-208	Provide accessible parking stalls in Item 2 above and path of travel to comply which may include accessible walkways, ramps, and curb ramps.
4	Fire Dept	Ramp #1	2	Running slope is 8.8%. Ramps shall have a running slope not greater than 1:12 (8.33%).	CBC 11B-405.2	Regrade Slope.
5	Public South West Parking Lot	Accessible Parking Space (1)	3-4,6	Existing accessible stall on the north side of the access aisle is not designated as van accessible. For every six or fraction of six accessible stalls required, at least one shall be van accessible. Existing identification sign is not code compliant. Gutter slope is 9%.	CBC 11B-208.2.4, 11B-502.6 11B-502.4	Provide 1 van accessible parking stall and path of travel to comply which may include accessible walkways, ramps, and curb ramps.
6	Public South West Parking Lot	Accessible Parking Space (2)	7-8	No identification sign present. Striping is faded. Gutter slope is 9%. Stripping on the side is on the gutter and needs to be located on the asphalt.	CBC 11B-208.2.4, 11B-502.6 11B-502.4	Provide accessible signage and path of travel to comply which may include accessible walkways, ramps, and curb ramps. Regrade slopes.
7	Public South West Parking Lot	Curb Ramp	5	Running slope is 8.4%. Curb ramp segments shall not have a slope greater than 1:12 (8.33%).	CBC 11B-406.3.1	Regrade Slope
8	Juvenile Justice Center	Accessible Parking Space	9-12	For every six or fraction of six accessible stalls required, at least one shall be van accessible. Length of striping is 16 ft 4 inches. The concrete gutter shall not be included in the code required length of the stall. No van accessible sign is present. Existing sign does not reflect current code. The cross slope of the stall is greater than 2%. Accessible ramp is encroaching into the access aisle.	CBC 11B-208.2.4, 11B-502.2, 11B-502.6 11B-502.4	Provide a total of 4 accessible parking stalls which includes 1 van accessible stall. Extend striping to 18 ft and replace sign. Regrade parking stall slope. Relocated existing ramp outside the access aisle.
9	Juvenile Justice Center	Accessible Ramp #4	11,13	Truncated domes are not provided at the bottom of the ramp. The running slope of ramp is 8.9%. Ramps shall have a running slope not greater than 1:12 (8.33%). The handrail extends 7 inches past the ramp. Handrails shall extend horizontally above the landing for 12 inches minimum beyond the top and bottom of ramp runs. Handrail height is 40 inches above walking surface. Top of gripping surfaces of handrails shall be 38 inches maximum vertically above walking surfaces.	CBC 11B-705.1 11B-405.2 11B-505.10.1, 11B-505.4	Provide code compliant accessible ramp.
10	Juvenile Justice Center	Pedestrian Walkways on the north and west sides of the building	14-15	The cross slope of the existing walkway is 3%. The cross slope of walking surfaces shall not be greater than 1:48 (2.08%).	CBC 11B-502.4	Reconstruct existing walkways.
11	Juvenile Justice Center	Door on west side of building	16	Existing threshold is 2 inches. Code allowable maximum threshold is 0.5 inches.	CBC 11B-404.2.5 11B-302,303	Reconstruct existing walkway and replace threshold.
12	Special Services Annex	Parking Lot on the south side of building	N/A	There are no ADA parking stalls present or path of travel in the parking lot south of the building.	CBC 11B-208	Provide 1 van accessible parking stall and path of travel to comply which may include accessible walkways, ramps, and curb ramps. .
13	Special Services Annex	North Parking Lot Accessible Parking Space (both parking spaces)	17-18	Existing striping is faded. Existing asphalt pavement is in poor condition.	CBC 11B-108	Remove and replace asphalt pavement and restripe.
14	Special Services Annex	North Parking Lot Accessible Parking Space (both parking spaces)	18-19	Existing accessible identification signs are not code compliant. Existing sign for the stall to the west is not at code required height.	CBC 11B-502.6 11B-502.8.2	Replace Signs.
16	Special Services Annex	North Parking Lot Existing Curb Ramp	18	Code required truncated domes are not provided.	CBC 11B-705.1	Install truncated domes.
17	Special Services Annex	Pedestrian Walkway from Stanford Avenue to Building	20-21	Slope of the walkway south of Stanford Avenue sidewalk is greater than 5%. Few sections of the existing walkway are lifted.	CBC 11B-405.2	Reconstruct existing walkway.

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

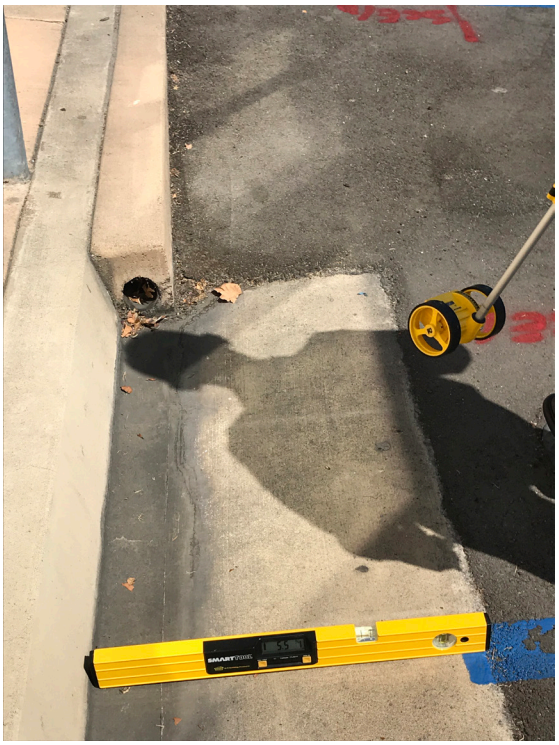


Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

Photo 17

Photo 18

Photo 19

Photo 20

4.0 STRUCTURAL ASSESSMENTS

4.1 EXECUTIVE SUMMARY

KPFF is pleased to provide initial results and recommendations of our seismic evaluation of various buildings of the existing Garden Grove Police Facility, located at 11301 Acacia Parkway, Garden Grove, California. The evaluation consists of a Tier 1 Screening of the lateral systems in the various facility buildings following the guidelines prescribed in ASCE41-13 "Seismic Evaluation and Retrofit of Existing Buildings"[1] and conducted for either the "Life Safety (LS)" or "Immediate Occupancy (IO)" Performance Levels as noted in Figure 1.

The Garden Grove Police Facilities consists of five separate buildings as indicated in Figure 1; the Main Police Building, the Property and Evidence Annex, the Juvenile Justice Center, the Special Services Annex, and an Off-Site Evidence Warehouse (not shown in Figure 1). Of the five facilities only three were evaluated. Structural as-built drawings were not available for the Special Services Annex and the Off-Site Evidence Warehouse, therefore, these buildings could not be evaluated.

4.2 INTRODUCTION

Founded in 1960, KPFF Consulting Engineers is one of the largest civil and structural engineering firms on the West Coast. We successfully leverage the resources of our firm while maintaining the personal contact we view as essential. With over 1,000 employees nationwide, our offices are located in Seattle, Tacoma, Lacey, Portland, Eugene, San Francisco, Sacramento, Los Angeles, Long Beach, Irvine, San Diego, Boise, Salt Lake City, St. Louis, Chicago, Louisville, Des Moines, New York, and Washington, D.C.

Firm-wide, KPFF has designed over 500 Essential Facilities (those facilities are a part of a community's infrastructure that must remain operational or can be restored quickly after an earthquake for a community to respond effectively). These projects include fire and police stations; emergency vehicle shelters and garages; government communication centers and emergency response facilities; hospital and other medical facilities having surgery and emergency treatment areas; and standby power-generating equipment for essential facilities.

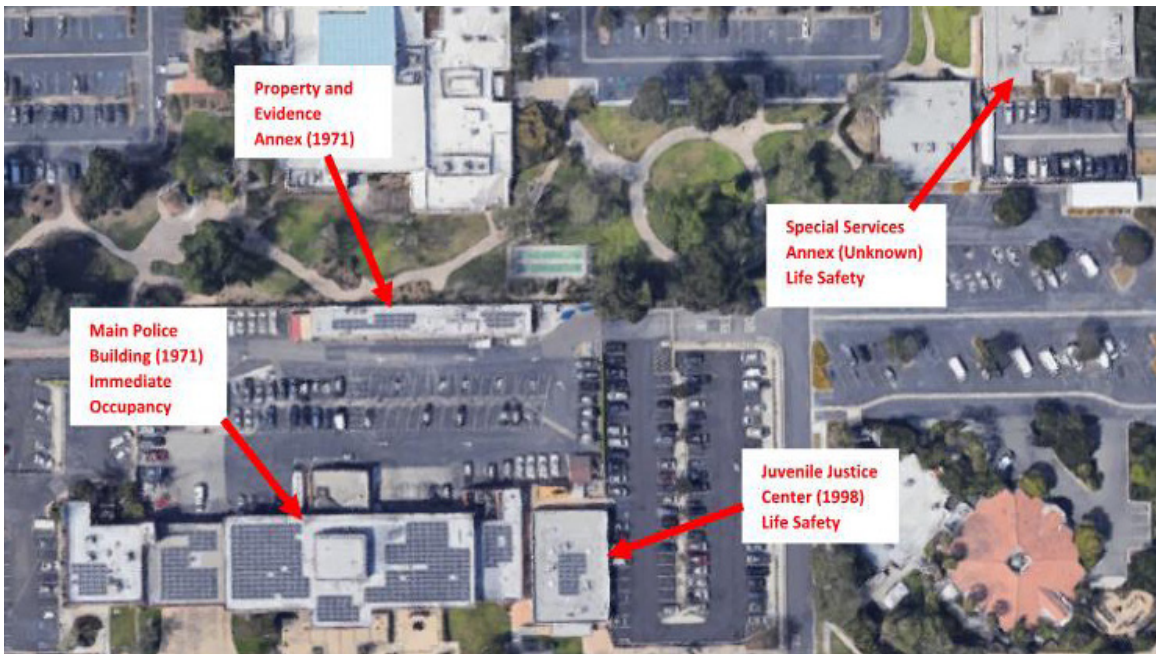


Figure 1- Garden Grove Police Facilities overall layout, not including the Off-Site Evidence Warehouse.

1 ASCE41-13 "Seismic Evaluation and Retrofit of Existing Buildings" specifies and outlines nationally applicable provisions for the seismic evaluation and retrofit of buildings, and is published by the American Association of Civil Engineers.

KPFF strives to provide structural systems, which are not only cost-effective, flexible, and durable, but can meet the many varied program needs of an Essential Facility, which require increased seismic resistance capacities. The cost differential for this added capacity is not great and provides the balance of the city and emergency functions with the same differential for post-earthquake operational capability.

Intent:

The intent of this evaluation was to perform a seismic evaluation on various buildings of the Garden Grove Police Department Facility located at 11301 Acacia Parkway, Garden Grove, California and provide possible strengthening options as required to meet the desired Performance Objectives.[2] The evaluation consisted of a Tier 1 Screening of the buildings' lateral force resisting systems following the guidelines prescribed in ASCE 41-13 "Seismic Evaluation and Retrofit of Existing Buildings."

Scope of Work:

KPFF's scope of work for this evaluation consisted of the following:

- Review the available structural drawings of the Main Police Building, the Property and Evidence Annex, and the Juvenile Justice Center.
- Visit the site to determine if the subject buildings were generally constructed per the existing structural drawings and to confirm no major alterations to the gravity and lateral load resisting systems had occurred since the original construction.
- Provide Tier 1 Screening of the structural components based on criteria in ASCE 41-13. A Tier 2 or Tier 3 analysis is beyond the scope of this evaluation. A Tier 2 or Tier 3 analysis would look more in-depth at the items that were noted as deficient per the Tier 1 analysis by providing exhaustive analysis.
- A detailed evaluation of the non-structural components was not performed.

4.3 SEISMIC EVALUATION CRITERIA

Data Collection:

Various building information was required in order to perform our seismic hazard analysis and investigation. Our data collection was based on the following sources of information:

- Existing structural drawings provided by the City of Garden Grove for the Main Police Building, the Property and Evidence Annex, and the Juvenile Justice Center. Please note that the existing structural drawing sets available for review were limited, and existing structural drawing were not available for the addition to the Property and Evidence Annex or the Special Services Annex.
- United States Geological Survey (USGS) Seismic Design Parameters.
- The project teams site visit on September 4, 2019 to observe existing conditions.

Evaluation Criteria:

Our analysis of the buildings was based on the criteria in ASCE 41-13 "Seismic Evaluation and Retrofit of Existing Buildings." Based on our discussions with the project team, which includes the City of Garden Grove, the Garden Grove Police Department, Dewberry, and P2S, the Performance Levels selected for these evaluations were "Life Safety (LS)"[3] for the Property and Evidence Annex and Juvenile Justice Center as defined in Section 2.3.1.3 and "Immediate Occupancy (IO)"[4] for the Main Police Building as defined in Section 2.3.1.1 of ASCE 41-13. A Tier 1 Screening analysis was performed to

2 Performance Objectives are how the ASCE41-13 define the building objectives post-earthquake. Performance Objectives are described based on the safety afforded to the building occupants during and after a seismic event, the cost and feasibility of restoring the building to its pre-earthquake condition, the length of time that the building is removed from service for repairs, and the economic, architectural, and historic effects on the community.

3 ASCE 41-13 Section 2.3.1.3 defines Life Safety as the structural performance where post-earthquake, the structure "has damaged components, but retains a margin against the onset of partial or total collapse." This allows the structure to be evacuated, however, the structure is not expected to be operational following a severe earthquake.

4 ASCE41-13 Section 2.3.1.1 defines Immediate Occupancy as the structural performance where post-earthquake, the structure "remains safe to occupy and essentially retains its pre-earthquake strength and stiffness." This structure is expected to be operational following a severe earthquake.

identify key structural components of the building as one of the following:

- Compliant (C)
- Non-Compliant (NC)
- Not Applicable (N/A)
- Unknown (U)

Items that were identified as being "Compliant" were acceptable according to the criteria of ASCE 41-13. Items that were identified as being "Non-Compliant" or "Unknown" are identified in Section 4.0. "Non-Compliant" or "Unknown" items identified in the evaluation are those structural items of concern that potentially do not meet the Life Safety or Immediate Occupancy Performance Objective.

It is possible that the amount of the "Non-Compliant" items could be reduced or rectified entirely by conducting a more extensive building analysis (Tier 2 and/or Tier 3 evaluation). As an alternative, the "Non-Compliant" items could be resolved through structural strengthening. However, a further building analysis would be required to determine the overall magnitude of the strengthening that would be required.

4.4 EXISTING CONDITIONS

Main Police Building Information:

The Main Police Building is a two-story structure with multiple adjacent low-roofs. The Main Police Building is approximately 33,500 square feet (sf). The building was constructed in the 1970's and designed under the current edition of the Uniform Building Code at the time. Multiple tenant improvements have been done since the original construction, however, none have made any visible modifications to the building's primary structural systems. A single-story mechanical Penthouse is located on the high roof area of the Main Police Building and is original to the building.

The Main Police Building consists of precast, pre-tensioned concrete floor and roof panels with a reinforced concrete topping slab acting as the diaphragm. The concrete panels are supported by steel framing on the interior and reinforced CMU[5] block walls at the exterior. The exterior CMU walls, as well as the CMU walls on gridline C & F, are fully grouted and presumed to be shear walls, comprising the lateral force resisting system. See Figure 2 for the Main Police Building second floor framing plan. The Penthouse is constructed of steel beams and columns with an un-filled metal deck diaphragm. The Penthouse lateral system consists of tension rod bracing in each direction. The foundation system of the Main Police Building consists of continuous concrete footings at the CMU walls and shallow concrete isolated foundations at the steel columns with a slab-on-grade.

Property and Evidence Annex Building Information:

The one-story Property and Evidence Annex is located on the north side of the Main Police Building and is approximately 3,800 sf. Limited structural drawings of the Property and Evidence Annex were available at the time of review. Based on the drawings available, the Property and Evidence Annex was constructed in the 1970's. It appears that an addition of approximately 46'-0" by 22'-4" was made to the west side of the Property and Evidence Annex sometime after the original construction in 1970's, however drawings for the addition are not available. It is assumed that the addition was done with similar construction and detailing methods to the existing structure.

The roof of the Property and Evidence Annex is constructed of plywood sheathing on 2x[6] wood joists framing into CMU walls.

5 CMU is concrete masonry block. The CMU used at the Main Police Building is 8"x4"x16" block.

6 2x is a reference to the size of wood joist (i.e. 2x10). A 2x represents the nominal width of the wood member; the actual width is 1 ½".

The CMU walls are partially grouted at the location of the horizontal and vertical reinforcement. The foundation system consists of continuous concrete footings at the CMU walls and a slab-on-grade. See Figure 3 for the Evidence Annex Framing plan.

Juvenile Justice Center Building Information:

The Juvenile Justice Center is located to the east of the Main Police Building. The Juvenile Justice Center is one-story and approximately 5,040 sf. The building was constructed in the 1990's and consists of modular wood construction. The original drawings, as well as the original modular building submittal drawings, were available for the review.

The modules are constructed of 2x wood joists framing into glulam beams with plywood sheathing at the roof diaphragm. See Figure 4 for the roof framing plan from the original modular building shop drawings. The floor diaphragm consists of 2x joists framing into steel channel beams with plywood sheathing. The channels are supported by concrete piers on concrete spread footings. The exterior walls are wood framed shear walls bearing on steel channel beams to a continuous concrete footing.

4.5 SEISMIC EVALUATION

Structural Deficiencies- Main Police Building:

The Main Police Building has a number of structural deficiencies listed below. Several deficiencies noted were from a lack of information available. It is possible that some of these deficiencies could be eliminated with a more in-depth analysis. Figure 2 indicates several areas where deficiencies occur in the Main Police Building. See Appendix E for the Main Police Building Structural Checklist.

Noncompliant

- Geometry – The net change in shearwall length in each direction from the second floor to the first floor is more than 30%, not including the firehouse bay. Geometric irregularities affect the response of the structure during a seismic event and may lead to unexpected load concentrations and higher seismic demands. The effects of the higher seismic demands would need to be taken into account and would likely require that the existing exterior shear walls be strengthened with either shotcrete or carbon fiber.
- Liquefaction Susceptible – Per the Garden Grove General Plan 2030, the site falls within a liquefaction zone (see Appendix H). Note that no geotechnical report was provided for KPFF's review. This nonconforming item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not liquefaction susceptible. If the soils are liquefiable, this would need to be mitigated with the addition of helical piers (or other deep foundation systems) at all of the foundations or grout injection of the soils.
- Shear Stress Check – The 2nd floor walls exceed the allowable shear stress. The shear stress in the walls from the quick check is approximately 126 psi, which is greater than the 70 psi allowed. This nonconforming item could potentially be eliminated with a more in depth analysis of the lateral force resisting system. If this additional analysis did not eliminate this deficiency, the walls could be strengthened with either shotcrete or carbon fiber.
- Openings at Shear Walls – The length of the openings at the roof hatch and stair #3 exceed 15% of the adjacent shear wall length. This could be eliminated with the repairs noted previously.
- Openings at Exterior Masonry Shear Walls - The length of the openings at the roof hatch and stair #3 exceeds 4'-0". This could be eliminated with the repairs noted previously.
- Plan Irregularities – No additional reinforcement at reentrant corners is shown on the drawings. Possible solution would be to add carbon fiber on the slab in both directions at the reentrant corners.

Unknown

- Load Path – It is unclear how the precast concrete panels connect to the CMU shear walls at the second floor. The drawings state that the connection is per the concrete panel shop drawings which were not available for review. The drawings do show a hook from the CMU wall to the topping slab at the roof level. A possible solution would be to add carbon fiber at the slab-to-wall joint at the second floor.
- Wall Anchorage – It is unclear how the precast concrete panels connect to the CMU shear walls at the second floor. This could be resolved with thru-bolts epoxied into the wall and panels.

- Surface Fault Rupture – Per USGS Fault Maps no faults are shown immediately adjacent to site. However, no geotechnical report was provided for this study. This unknown item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not subject to fault rupture.
- Transfer to Shear Walls – It is unclear how the precast concrete panels connect to the CMU shear walls at the second floor. See Load Path above.
- Topping Slab to Walls or Frames – It is unclear what the connection is between the topping slab and the CMU walls at the second floor diaphragm. Dowels do occur at the roof diaphragm from the topping slab to the CMU walls. See Load Path above.

Penthouse

- Brace Axial Stress Check – The axial stress in the braces exceeds the allowable limit. This nonconforming item could be eliminated with a more in depth analysis. A possible solution would be to add additional braces in each direction.
- Steel Columns – The steel columns are anchored to the concrete curb. It is unclear if the concrete curb is doweled into the roof concrete topping slab and the roof topping slab is only 2" thick.
- Transfer to Steel Frames – It is unclear how the metal deck connects to the steel beams. This unknown item could potentially be eliminated with further invasive observation of the penthouse.
- Redundancy – There is an insufficient number of brace bays in each direction. A possible solution would be to add additional braces in each direction.
- Connection Strength – It is unclear what the connection is between the tension rod and the gusset plate. This unknown item could potentially be eliminated with further invasive observation of the penthouse.

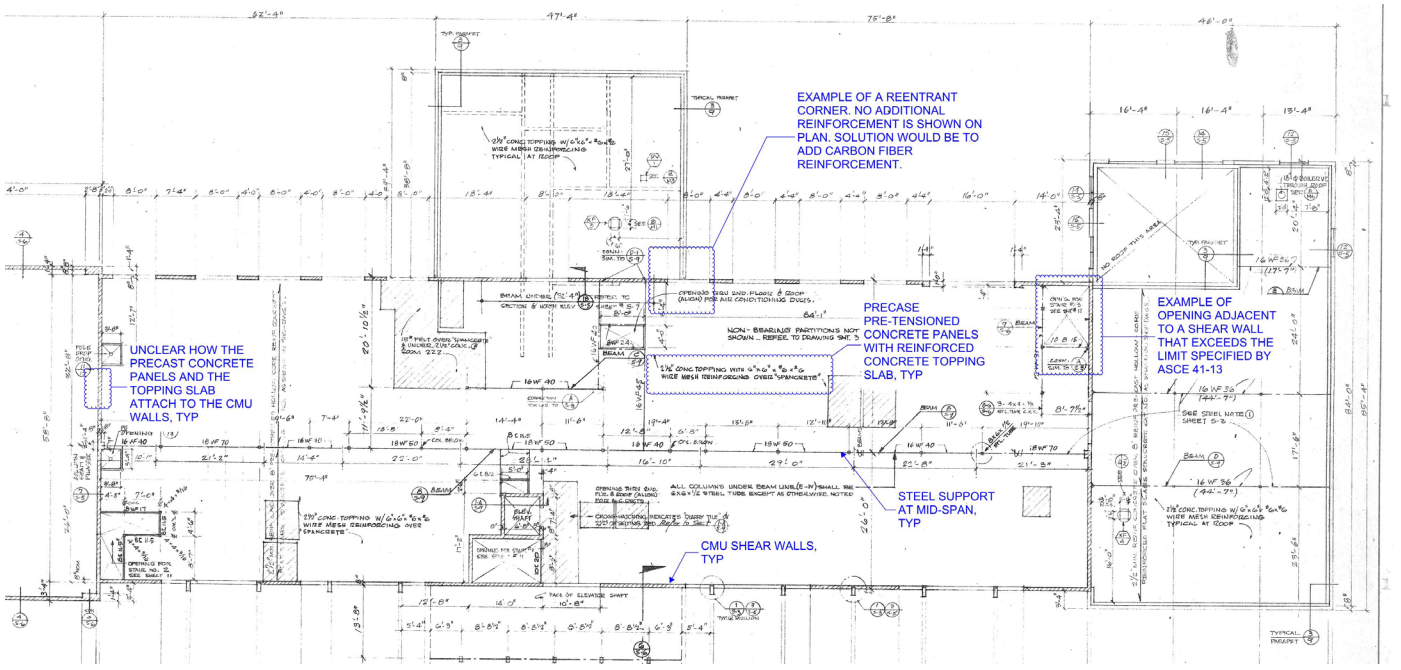


Figure 2- Main Police Building Second Floor Framing Plan indicating non-compliant items

Structural Deficiencies- Property and Evidence Annex:

The Property and Evidence Annex has a number of structural deficiencies listed below. Several deficiencies noted were from a lack of information available. It is possible that some of these deficiencies could be eliminated with a more in depth analysis. Figure 3 indicates several areas where deficiencies occur in the Property and Evidence Annex. See Appendix F for the Property and Evidence Annex Structural Checklist.

Noncompliant

- Wall Anchorage – No out-of-plane wall anchors are shown on the drawings. Out-of-plane anchors could be added to meet the requirements.
- Liquefaction Susceptible – Per the Garden Grove General Plan 2030, the site falls within a liquefaction zone (see Appendix H). Note that no geotechnical report was provided for KPFF's review. This nonconforming item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not liquefaction susceptible. If the soils are liquefiable, this would need to be mitigated with the addition of helical piers (or other deep foundation systems) at all of the foundations or grout injection of the soils.
- Cross Ties – No continuous cross ties between diaphragm chords are indicated on the drawings. A possible solution would be to add continuous straps at the chord locations on the diaphragm and sub-diaphragm.

Unknown

- Surface Fault Rupture – Per USGS Fault Maps no faults are shown immediately adjacent to site. However, no geotechnical report was provided for this study. This unknown item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not subject to fault rupture.

Structural Deficiencies- Juvenile Justice Center:

The Juvenile Justice Center has a number of structural deficiencies listed below. Several deficiencies noted were from a lack of information available. It is possible that some of these deficiencies could be eliminated with a more in depth analysis. Figure 4 indicates several areas where deficiencies occur in the Juvenile Justice Center. See Appendix G for the Juvenile Center Structural Checklist.

Noncompliant

- Liquefaction Susceptible – Per the Garden Grove General Plan 2030, the site falls within a liquefaction zone (see Appendix H). Note that no geotechnical report was provided for KPFF's review. This nonconforming item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not liquefaction susceptible. If the soils are liquefiable, this would need to be mitigated with the addition of helical piers (or other deep foundation systems) at all of the foundations or grout injection of the soils.
- Roof Chord Continuity – No details were given for the top of wall connection in the original submittal drawings. It is assumed that there is no chord continuity at the diaphragm chords. A possible solution would be to add continuous strap at the chord locations on the diaphragm.
- Wood Sill Bolts – The bolts at the steel channel to the foundation exceed the minimum edge distance. The capacity of the bolts with the assumed edge distance was checked versus the lateral demands. Type 1 & 3 walls were acceptable as is, wall Type 2 exceeded the capacity of the bolt for concrete breakout. Wall Type 2 occurs only on the west side of the building. Possible strengthening options would be to shotcrete the stem wall to increase the edge distance, or apply a steel plate on both faces of the stem

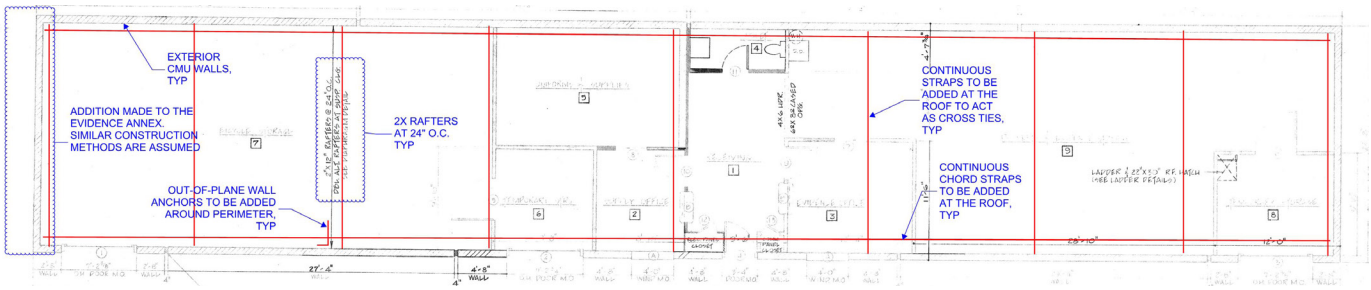


Figure 3 - Property and Evidence Annex Framing Plan indicating non-compliant items.

Unknown

- Load Path – No details were given for the top of wall connection in the submittal drawings. This unknown could potentially be eliminated with further observation of the structure.
- Surface Fault Rupture – Per USGS Fault Maps no faults are shown immediately adjacent to site. However, no geotechnical report was provided for this study. This unknown item could be eliminated if a site specific geotechnical report was completed and the report indicated that the site was not subject to fault rupture.

Please note, all the recommended strengthening is conceptual and there may be other viable strengthening options for the building. The intent of this memo is to identify conceptual strengthening measures for discussion with the City of Garden Grove. Our objective is to tailor the seismic strengthening to satisfy the re-occupancy and budget goals of the City of Garden Grove and the Police Department after a major earthquake. In addition, the proposed concepts consider the requirements that the police station remain operational and that impacts to the police facility's operations during construction are minimal where possible.

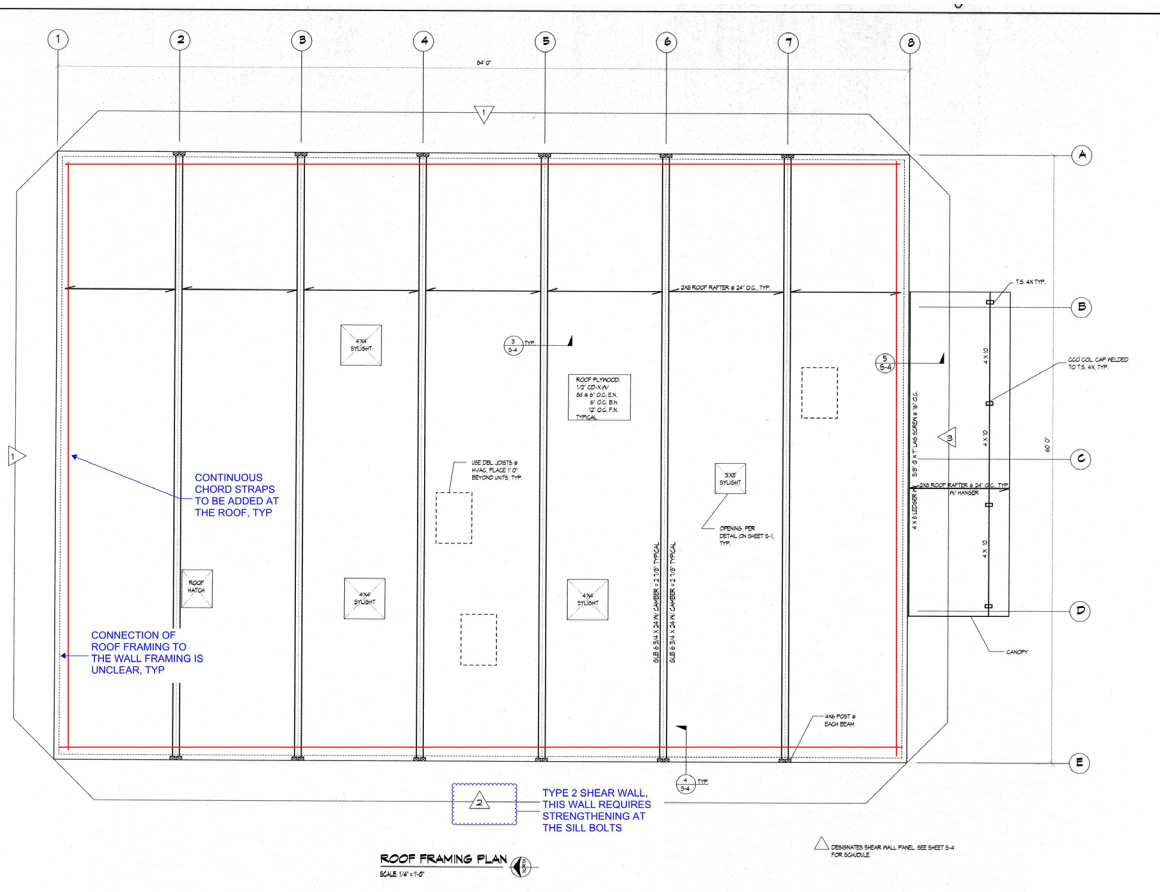


Figure 4 - Juvenile Justice Center Framing Plan indicating non-compliant items.

4.6 CONCLUSIONS

Main Police Building Findings:

The Main Police Building had several critical seismic deficiencies identified in the Tier 1 Analysis that would require further analysis of the existing structure and/or strengthening of the structure. Items that would most likely require strengthening would be the exterior CMU walls, the second floor and roof slabs around large opening and corners, and the connection between the second floor slab and the exterior walls. Depending on the findings of a geotechnical report, the foundations could also require strengthening. Since the strengthening to the structure would be extensive, it would be very disruptive to day to day operations of the police station.

An example of possible strengthening that would occur would be adding shotcrete to the exterior masonry walls. This would require removing all the finishes along the walls to be strengthened, anchoring new reinforcement into the existing wall, and applying the shotcrete. Another likely strengthening outcome would be the need to apply carbon fiber reinforcement at the second floor slab to the CMU walls along the full extents of the perimeter walls. This would also require removing finishes and partition walls where the strengthening occurs.

If a geotechnical report is completed for the site and the soils are found to be liquefiable (which means that under earthquake forces the soil will being to behave more like a liquid), then the foundation system would need to be modified. As previously mentioned, this would require adding helical piers or grout injections at the foundations around the entire building.

At our current level of understanding of the building without doing any further analysis, the Main Police Building will require extensive strengthening to essential portions of the structural system in order to be brought up to meet current seismic codes requirements.

Property and Evidence Annex Findings:

The Property and Evidence Annex had several seismic deficiencies identified in the Tier 1 Analysis, however the solution to most of these deficiencies in less extensive than the Main Police Building. The primary deficiencies identified in the analysis were a lack of out of plane anchors at the exterior walls to the roof, no continuous cross ties at the roof, and the foundations potentially being susceptible to liquefiable soils.

Similarly with the Main Police Building, if a geotechnical report were to find the soils to be liquefiable, then a system such as helical piers or grout injection would need to be implemented at the foundations. Because the Property and Evidence Annex is substantially smaller than the Main Police Building, the scope of work here would be less, however the work would still be disruptive to the operations of the Property and Evidence Annex.

The other two primary deficiencies would be easier to address and would be less disruptive to the operations of the building. Out-of-plane wall anchors could be installed along the perimeter walls of the Property and Evidence Annex at the required spacing. This would only require selective demo at the designated locations and the anchors could be installed relatively quickly. To address the continuous cross-ties, straps could be applied at the roof. This would require removing roofing material to install the straps, however all the work would be on the roof so the disruption to the space below would be limited.

Overall, the Property and Evidence Annex requires minimal strengthening to address the deficiencies identified in this report.

Juvenile Justice Center Findings:

The Juvenile Justice Center had several seismic deficiencies identified in the Tier 1 Analysis, however, similarly to the Evidence Annex, most of these deficiencies are easily addressed. The primary deficiencies identified were not meeting minimum edge distance requirements on the anchor bolts, a lack of chord continuity, and potentially a lack of sufficient load path at the roof to wall connection. The foundations at the Juvenile Justice Center are also potentially susceptible to liquefaction.

Similarly with the Main Police Building, if a geotechnical report were to find the soils to be liquefiable, then a system such as helical piers or grout injection would need to be implemented at the foundations. Because the Juvenile Justice Center is substantially smaller than the Main Police Building, the scope of work here would be less, however the work would still be disruptive to the operations of the Juvenile Justice Center.

The lack of a sufficient load path could potentially be eliminated as a deficiency with further selective demo and investigation. Similarly to the Evidence Annex, to address the roof chord continuity, straps could be applied to the roof. This would just require removing the roofing at select locations to install the straps. Rectifying the sill bolt edge distance at the required locations will be the most extensive fix. This would require digging around the foundation to expose the stem wall, then either applying shotcrete to the stem wall or installing a steel plate that is thru-bolted through the stem wall at a designated spacing.

Overall, the Juvenile Justice Center requires moderate strengthening to address the deficiencies identified in this report.

The opinions and conclusions developed by this observation are based on engineering judgment constrained by the scope of work noted above and consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in Southern California under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended.

5.0 MECHANICAL ELECTRICAL, TELECOMMUNICATIONS AND PHYSICAL SECURITY ASSESSMENTS

5.1 EXECUTIVE SUMMARY

Background

The Garden Grove Police Department is currently planning for their future facility related needs due in response to future growth projections and reported deficiencies with their existing facilities. The existing police department, including Off-site Evidence Warehouse, occupies approximately 50,000 sf of space, and actual space required is approximately double that amount based on programming study. The department will need to expand existing facilities or build new facilities to accommodate all programmed needs.

The P2S team reviewed the existing building systems and concluded most of the mechanical, electrical, plumbing, and telecommunications (MEPT) systems will need to be replaced or updated to support the expansion of existing facilities. Upgrades are needed to provide additional capacity, resiliency, security, and department needs for a modern facility. A replacement building will need to meet similar requirements as expanded/updated buildings.
Recommendations

There are many common findings for the 4 on-site department buildings reviewed in this assessment. Generally, the existing MEPT systems are serviceable but aging, and do not meet some major department requirements for utilities infrastructure. Existing equipment will not be able to expand to serve twice the building area, therefore equipment will need to be replaced with larger capacity equipment or new equipment will be added to service new build-out areas. Below are highlight of common observations and recommendations across the facilities. Details for each building is included in the sections to follow.

HVAC

- Increase capacity to service all required spaces and include proper zone controls.
- Include redundant features into mechanical equipment.
- Add dedicated HVAC to IT and Server room spaces.
- Separate ventilation systems serving all evidence storage areas. Narcotics evidence storage areas shall have separate system from general evidence storage areas.
- Upgrade equipment to meet current energy efficiency standards.
- Include central controls system capable of monitoring system serving all departments.
- New HVAC equipment, including redundant equipment, will require structural support and anchorage. Equipment required for emergency operations will also need to be connected to emergency generator.

Electrical

- Existing lighting fixtures are mostly fluorescent. Replace fixtures with LED to meet current energy efficiency standards as part of any major renovation or new building design.
- Upgrade existing manual indoor and outdoor lighting controls to automatic code compliant control system.
- Back-up generator capacity will need to be upgraded to service the additional building expansion or new buildings.
- Evidence storage freezers need back-up power.
- Several panelboards and distribution boards are in poor condition and obsolete, and several do not have code compliant clearances. Replace panels and provide clearances for these areas.
- Any lighting fixtures required for emergency operations and egress, which are not currently connected to emergency power, will need to be added to emergency generator circuits.

Plumbing

- Upgrade plumbing fixtures to water efficient fixtures.
- Replace all plumbing piping in each building if they are being renovated and the buildings are expected to operate for another 30+ years. Main Police Building and Evidence Annex piping is at end of useful life at almost 50 years old and other buildings' piping is at least 30 years old.

- Domestic Hot Water system in several buildings are at end of useful life. Replace water heaters.

Telecommunications

- Increase the HVAC system capacity serving the server room. The room exceeds required space temperatures.
- Enhance wireless coverage throughout the buildings with additional wireless access points.
- Increase network bandwidth and speeds between Main Police Building Server Room and the other buildings by installing single mode backbone fiber to each building to replace multi-mode fiber.
- Build dedicated IDF rooms for the Special Services and Evidence Annex buildings.

Physical Security

- Replace existing physical access control system (PACS) with enterprise level system. System should utilize dual authentication for high security areas.
- Replace existing early generation video surveillance system (VSS). Replacement system should include high resolution/low light cameras, enterprise class video management system, and enhanced perimeter and interior coverage as required by CALEA.
- Install an intrusion detection system (IDS) to include motion detection, glass break detection, and duress/panic personal protective devices.

5.2 BACKGROUND

Garden Grove Police Department (GGPD) is planning to further develop its existing facilities to meet current and future space needs. The department is currently located at the Civic Center across the street from the City Hall and adjacent to the Community Meeting Center and Library. The department is currently spread across 5 separate buildings. To enhance department operations, the overall GGPD feasibility study is reviewing opportunities to consolidate the facility and create room for future expansion to meet they City's growth projections.

The GGPD existing buildings include:

	Building	GSF	Year Built	Rating	Remarks
1	Main Police Building	33,481	1970	Immediate Occupancy	
2	Property and Evidence Annex	3,800	1972	Life Safety	
3	Juvenile Justice Center	4,900	1998	Life Safety	
4	Special Services Annex	6,025	1980	Life Safety	Remodeled in 2005
5	Off-Site Evidence Warehouse	5,000	-	Life Safety	Off-site Lease (not reviewed) 60,000 cu. ft. storage
	Total	53,206			

The preliminary architectural programming study indicate GGPD future facility space requirement will be over double the current facility size.

The expansion or replacement facility will need to meet several design criteria and requirements. Below are the main criteria considered for the building systems analysis:

1. Seismic Safety Requirements
2. CALEA (Commission on Accreditation of Law Enforcement Agencies) design guidelines
3. POST (Police Officer's Standards and Training) design guidelines.
4. California Building Codes

The preliminary structural findings indicate the Main Police Building has several deficiencies with shear and column stresses that may be very costly and intrusive to strengthen to immediate occupancy requirements. Therefore, replacement of the Main Police Building is a possibility instead of retrofitting due to extensive displacement of staff to temporary facilities needed to support retrofit construction.

This assessment reviews the existing condition, requirements, and recommendations for each building system. Recommendations for each building may generally be applied to a new or consolidated facility. This assessment includes the following systems for the (4) City owned buildings:

- HVAC
- Electrical
- Plumbing
- Telecommunications
- Physical Security

5.3 HVAC ASSESSMENT

Main Police Building

Existing Conditions

The HVAC system consists of:

- (2) Trane 41-ton air-cooled chillers in mechanical yard at eastern end of building
- 1750 mbh input hydronic heating boiler in boiler room.
- 27,000 cfm built-up dual-duct air handling unit in penthouse mechanical room. Return fan sized to 22,000 cfm. Total 82 tons cooling capacity to match the chilled water system capacity.
- (33) dual duct mixing boxes for zone temperature control (18 for 1st Floor, 15 for 2nd Floor)

The following conditions are noted:

1. Heating hot water boiler serving this building also serves the unit heaters in the fire department apparatus bay. Continuation of services to fire department will be required if Main Police Building will be renovated or replaced.
2. Duct penetrations through rated walls and enclosures are protected by fire dampers. Newer construction requires combination fire/smoke dampers.
3. Fan systems and hydronic systems all appear to be constant volume. Energy efficiency can be significantly improved with variable speed systems.
4. Over time various tenant improvements have been made in the building, including creating larger rooms from smaller rooms, changing occupancy, adjusting storage areas and creating separate women's locker room. Besides the larger 2007 tenant improvements, only a minority of improvement projects have record drawing evidence that HVAC modifications were completed to match to altered spaces. Even with the larger improvements, the quantity and locations of mixing boxes has not changed since the original construction. There is a good change some of the system zoning do not meet the needs of the spaces they serve.
5. There is currently no redundancy for any of the HVAC systems serving this building. All systems are central, and failure of one motor, fan, or pump may significantly impact the ability of the HVAC system to continue condition and ventilating the building.
6. Although not typical yet in law enforcement building, consider the need for protective HVAC filters to guard against chemical/biological agents from entering the building.
7. Some IT spaces do not have HVAC, while others do not have 24/7 and redundant HVAC.

Department Needs

1. Space zone controls to adequately serve each area's heating, cooling, and ventilation needs.
2. Efficient equipment to minimize utility costs.
3. HVAC system redundancy for the most critical building spaces. For central systems, consideration of N+1 equipment to provide redundancy to entire building. For 24/7 spaces, consider dedicated smaller system for after-hours use and to serve as redundant system.
4. Further explore desire for special filtration systems for emergency use.
5. HVAC systems shall be situated so they are not accessible by unauthorized personnel.

Recommendations

1. Review zoning and cooling heating requirements of each space. Include adequate zone controls to ensure thermal comfort.
2. Update fire dampers as necessary at all protected wall/ceiling openings.
3. Increase size of chilled water plant to accommodate any expansion or additions. Plant shall have redundant features such as multiple stage compressors with separate circuits, redundant pumps, and a connection for temporary chiller connection.
4. Provide 24/7 dedicated units for IT and Server Room spaces. These units may cool the spaces afterhours and serve as back-up during normal occupied hours.
5. Upgrade HVAC controls so all relevant control and sensor points are available in GUI for quick monitoring.
6. Provide separate ventilation and air conditioning system for evidence storage areas. Consider temperature and humidity requirements for different evidence rooms.
7. If replacing/upsizing air handling system, consider using multiple fan configuration inside unit to achieve some level of redundancy. Consider if any spaces require special filtration for chemical/biological agents. This item will

require temporary air conditioning services while the unit is being replaced.

Evidence Annex

Existing Conditions

The HVAC system consists of:

- (1) packaged rooftop gas/electric air conditioning unit serving the central office and evidence rooms. Exact capacity of unit is not currently known; however, it can be estimated to be approximately 5-8 tons based on building size and electrical demand.
- (2) exhaust fans; one serving the restroom and one serving the supply room.

The following conditions are noted:

1. No economizer capability for air conditioning unit.
2. Further analysis is needed to determine if there is adequate airflow serving the evidence storage and temporary storage areas.
3. Office and temporary storage/supplies areas are served by the same HVAC system.

Department Needs

1. POST recommends minimum 6 air changes for evidence storage areas. The HVAC system should also be separate from general building HVAC.
2. Storage for narcotics evidence should have separate HVAC system from general evidence storage areas.
3. These needs are also relevant for the Off-site Evidence Warehouse that may be included into a new on-site building.
4. Evidence storage HVAC should have redundancy and back-up power.

Recommendations

1. Provide separate HVAC systems for evidence storage and narcotics evidence storage areas. Where required, provide humidity controls.
2. Coordinate to include evidence storage HVAC equipment on emergency generator backup.
3. Consider redundant features in HVAC system, i.e. dual fans or pumps in certain areas. Adding redundant features to any existing equipment will require staging of work to minimize shutdown.

Juvenile Justice Center

Existing Conditions

The HVAC system consists of:

- (2) 5-ton rooftop gas/electric packaged air conditioning units serving the northwestern and southwestern portions of building.
- (1) 3- ton rooftop gas/electric packaged air conditioning units serving the eastern portion of building.
- (3) ceiling exhaust fans serving men's and women's restrooms and janitor's closet.

The following conditions are noted:

1. No economizer capability for air condition system. This feature is a current California Energy Code requirement for this type of unit 4.5 tons and larger.
2. Existing units are constant volume. Modern variable volume systems can significantly improve energy efficiency, especially during part load conditions.
3. Besides an electric zone damper for the classroom, there is no provision for separate zone space temperature control beyond one zone per unit inherent in the installation. The 3-ton unit serves 5 separate spaces with three different exposures, while the 5-ton units each serve 7 and 15 separate spaces respectively. Each unit serves spaces with two different exposures. Limiting zones to 3-4 spaces of similar exposure and occupancy patterns will significantly improve thermal comfort of each space.
4. The Boys and Girls Club classroom space should have demand control ventilation controls to limit the amount of ventilation required when classroom is not occupied to design occupancy.
5. There is currently no redundancy built into the HVAC system serving this building.

Department Needs

1. Space zone controls to adequately serve each area's heating, cooling, and ventilation needs.
2. Efficient equipment to minimize utility costs.
3. HVAC system redundancy for the most critical building spaces. For central systems, consideration of N+1 equipment to provide redundancy to entire building.
4. Further explore desire for special filtration systems for emergency use.

Recommendations

1. Review zoning and cooling heating requirements of each space. Include adequate zone controls to ensure thermal comfort.
2. Provide 24/7 dedicated units for any IT spaces/cabinets.
3. Upgrade HVAC controls so all relevant control and sensor points are available in central GUI for quick monitoring.
4. Replacement HVAC to include all modern energy efficiency features including variable speed fans, economizer and demand control ventilation in high occupancy spaces. Replacement of rooftop air conditioning units can be completed over weekends,

Special Services Annex

Existing Conditions

The HVAC system consists of:

- (4) 5-ton rooftop packaged gas/electric AC units, with (2) serving the west wing and (2) serving the east wing. Each zone is approximately 1,500-2,000 sf.
- (3) ceiling exhaust fans serving men's and women's restrooms and janitor's closet.

The following conditions are noted:

1. The rooftop packaged units do have economizer sections with relief openings at the unit. Although there is no powered exhaust at the unit, the economizer may be sufficient due to relatively short duct runs. The economizer controls are likely using only enthalpy, which is no longer allowed in California due the humidity sensors frequent need for calibration.
2. Existing units are constant volume. Modern variable volume systems can significantly improve energy efficiency, especially during part load conditions.
3. Zone controls in this building is relatively better than other buildings on site, with each unit serving 5-7 spaces. The conference room does have a separate zone damper that only changes airflow. This zone damper controls 27% of the AC unit's airflow, so damper modulation to accommodate conference room load changes will likely cause airflow to fluctuate in other rooms of this constant volume system.
4. The CCTV electronic equipment room is served by rooftop unit. This is a 24/7 load and a separate smaller unit may be considered for after-hours use so larger AC unit may shut down.
5. There is currently no redundancy built into the HVAC system serving this building.

Department Needs

1. Space zone controls to adequately serve each areas heating, cooling, and ventilation needs.
2. Efficient equipment to minimize utility costs.
3. HVAC system redundancy for the most critical building spaces. For central systems, consideration of N+1 equipment to provide redundancy to entire building.
4. Further explore desire for special filtration systems for emergency use.

Recommendations

1. Consider centralized HVAC equipment to serve this department. Centralized equipment to allow easier redundancy and back-up options.
2. Review zoning and cooling heating requirements of each space. Include adequate zone controls to ensure thermal comfort.
3. Provide 24/7 dedicated units for any IT spaces/cabinets.
4. Upgrade HVAC controls so all relevant control and sensor points are available in central GUI for quick monitoring.
5. Replacement HVAC to include all modern energy efficiency features including variable speed fans, economizer and demand control ventilation in high occupancy spaces.

5.4 ELECTRICAL ASSESSMENT

Main Police Building

Existing Conditions

The electrical distribution system consists of:

- Main building electrical service: (1) 1000 amp, 480/277 volt meter-main and distribution board
- Distributed 480/277 volt panelboards for lighting and power loads
- (1) 150kVA, 480-208/120 volt step-down transformers serving a 600 amp, 208/120 volt distribution board
- Distributed 208/120 volt panelboards for receptacle loads
- (1) 1200 amp back-up generator and transfer switch
- (1) Solar panel inverter connecting the solar arrays on the roof to the main electrical bus

The following conditions are noted:

1. The existing meter-main and distribution boards was made by General Electric and is in poor condition. The date of manufacture was not readily identified, but the electrical equipment appears to be nearing the end of useful life.
2. The various distributed panelboards were made by General Electric and are in poor condition. The date of manufacture was not readily identified, but the electrical equipment appears to be nearing the end of useful life.
3. The back-up generator is showing signs of rust on the exterior sound enclosure and, while no standing puddles were observed at the time of our assessment, there is evidence that fuel may be leaking from the subbase fuel tank.
4. The interior lighting consists mostly of 2x4 recessed fluorescent troffers in the office spaces, and surface mounted fluorescent wraps in utility areas. It appears the existing interior lighting has been retrofitted with LED kits and/or LED replacement tubes and bulbs.
5. The interior lighting controls are mostly manual, with time-clock control of exterior lighting.

Department Needs

1. New high-efficiency LED lighting and Title 24 compliant automatic lighting controls throughout all workspaces
2. Power source redundancy to enable full function of all workspaces during utility outages
3. Reliable power distribution systems

Recommendations

1. Replace existing interior and exterior lighting with high-efficiency LED fixtures.
2. Replace manual interior and exterior time-clock lighting controls with Title 24 compliant digital automatic lighting controls.
3. Evaluate adequacy and serviceability of existing back-up generator to provide power to all workspaces in the event of utility outage.
4. Replace existing electrical distribution equipment, including the meter-main and distribution board, distributed panelboards, and transformers

Evidence Annex

Existing Conditions

The electrical distribution system consists of:

- (1) 225 amp, 480/277 volt panelboard with a 50 amp main breaker for lighting loads
- (1) 15kVA, 480-208/120 volt step-down transformer
- (1) 125 amp, 208/120 volt panelboard with a 50 amp main breaker for receptacle loads, HVAC, and miscellaneous power loads

The following conditions are noted:

1. The existing panelboards are made by Zinsco. This manufacturer is no longer in business and replacement parts are not available. The electrical equipment appears to be in fair condition.
2. Both panels are located in an electrical closet and do not have 36” of working clearance as required by the Electrical Code.
3. The interior lighting consists mostly of 2x4 recessed fluorescent troffers in the office spaces, and surface mounted fluorescent wraps in utility areas. The existing interior lighting has been retrofitted with LED kits and/or LED replacement tubes and bulbs.
4. The interior lighting controls are mostly manual, with time-clock control of exterior lighting.
5. The exterior lighting appears to have been retrofitted with LED kits.

Department Needs

1. New high-efficiency LED lighting and Title 24 compliant automatic lighting controls throughout all workspaces
2. Power source redundancy to enable full function of all workspaces during utility outages
3. Provide back-up power to evidence refrigerators/freezers
4. Reliable power distribution systems

Recommendations

1. Replace any remaining fluorescent or LED tube interior and exterior lighting with high-efficiency LED fixtures.
2. Replace manual interior and exterior time-clock lighting controls with Title 24 compliant digital automatic lighting controls.
3. Evaluate adequacy and serviceability of existing back-up generator to provide power to all workspaces in the event of utility outage and uninterrupted power to evidence refrigerators/freezers
4. Replace existing electrical distribution equipment panelboards, and transformers while providing code-required working clearance.

Juvenile Justice Center

Existing Conditions

This building is currently being served by the electrical service in the Main Police Building

- (1) 225 amp, 480/277 volt panelboard with 150 amp main breaker for lighting and HVAC loads
- (1) 225 amp, 208/120 volt panelboard with 150 amp main breaker for receptacle loads

The following conditions are noted:

1. The existing panelboards are new and in good condition.
2. The interior lighting consists mostly of 2x4 recessed fluorescent troffers in the office spaces, and surface mounted fluorescent wraps in utility areas. At the time of our assessment, we were unable to determine if the existing interior lighting had been retrofitted with LED kits and/or LED replacement tubes and bulbs.
3. The interior lighting controls are mostly manual, with time-clock control of exterior lighting.

Department Needs

1. New high-efficiency LED lighting and Title 24 compliant automatic lighting controls throughout all workspaces
2. Power source redundancy to enable full function of all workspaces during utility outages

Recommendations

1. New high-efficiency LED lighting and Title 24 compliant automatic lighting controls throughout all workspaces
2. Power source redundancy to enable full function of all workspaces during utility outages

Special Services Annex

Existing Conditions

This standalone single-story building is served by (1) 400 amp 240/120 volt meter-main and distribution board.

- (2) 225 amp, 240/120 volt panelboards for lighting, power, and receptacle loads
- (1) 150 amp, 240/120 volt panelboard for HVAC loads
- (1) 100 amp, 240/120 volt panelboard for data room loads

The following conditions are noted:

1. The 400 amp meter-main and distribution board was made by Square D and is in poor condition. The date of manufacture was not readily identified, but the electrical equipment appears to be nearing the end of useful life.
2. The existing 225 amp panelboards were made by Eaton in 2005 and are in good condition.
3. The existing 150 amp panelboard was made by ITE and is in fair condition. The date of manufacture was not readily identified.
4. The existing 100 amp panelboard was made by Eaton in 2005 and is in good condition.
5. The interior lighting consists mostly of 2x4 recessed fluorescent troffers in the office spaces, and surface mounted fluorescent wraps in utility areas. The existing interior lighting has been retrofitted with LED kits and/or LED replacement tubes and bulbs.
6. The interior lighting controls are mostly manual, with time-clock control of exterior lighting.

Department Needs

1. New high-efficiency LED lighting and Title 24 compliant automatic lighting controls throughout all workspaces
2. Power source redundancy to enable full function of all

workspaces during utility outages
3. Reliable power distribution systems

Recommendations

1. Replace any remaining fluorescent or LED tube interior and exterior lighting with high-efficiency LED fixtures.
2. Replace manual interior and exterior time-clock lighting controls with Title 24 compliant digital automatic lighting controls.
3. Install back-up generator to provide power to all workspaces in the event of utility outage.
4. Replace existing electrical meter-main and distribution board.

5.5 PLUMBING ASSESSMENT

Main Police Building

The Main Police Building is a two-story structure with multiple adjacent low-roofs. The Main Police Building is approximately 33,500 square feet (sf). The building was constructed in the 1970's. It appears that the existing piping are original with the building. There was some evidence that there was short section of copper piping were replaced probably due to some minor leakage.

Existing Conditions

- The building consists of the following plumbing system:
  - Domestic water system
  - Domestic water system is serving plumbing fixtures in restrooms, showers, drinking fountains, etc.
  - Domestic hot water consist of boiler and storage tank serves as central water heating for restrooms, sinks and showers. Based on serial number, the boiler was installed on 2014.
  - Piping material is copper.
- Sanitary drainage systems
  - Sanitary drainage system is serving plumbing fixtures in restrooms, showers, drinking fountains, etc.
  - Piping material is cast iron.
- Storm drains system
  - Storm drainage system is serving roof drains on roof.
  - Piping material is cast iron.
- Natural gas system
  - Natural gas system is serving domestic hot water system and space heating boiler.
  - Piping material is steel.

The following conditions are noted:

1. Plumbing fixtures were not water efficient.
2. Existing piping is 50 years old and has reached end of life expectancy.
3. No trap primer to floor drains.

Recommendations

1. Replace all plumbing fixtures.
   a. Current Regulation (CAL Green) mandatory measures to have the following maximum flow characteristics:
      i. 1) Water Closet: 1.28 Gallons/flush (Flush valve).
      ii. 2) Urinals: 0. 125 Gallons/flush (Flush valve).
      iii. 3) Lavatory Faucet: 0.5 GPM.
      iv. 4) Shower: 2 GPM
   b. It is our recommendation to replace all plumbing fixtures to comply with current code requirements.
2. If the City is planning a major renovation, we recommend replacing all plumbing system in its entirety if it is planned to be used for another 30 years.

Evidence Annex

Existing Conditions

The plumbing for this building is only for one unisex restroom consisting of water closet, lavatory and a service sink. A 12 gallons storage type electric water heater provides hot water to service sink and lavatory.

The following conditions are noted:

- Plumbing fixtures were not water efficient.
- Existing piping is 50 years old and has reached end of life expectancy.

Recommendations

1. Replace all plumbing fixtures.
   a. Current Regulation (CAL Green) mandatory measures to have the following maximum flow characteristics:
      i. 1) Water Closet: 1.28 Gallon/flush (Flush valve).
      ii. Urinals: 0. 125 Gallons/flush (Flush valve).
      iii. Lavatory Faucet: 0.5 GPM.
      iv. Shower: 2 GPM
   b. It is our recommendation to replace all plumbing fixtures to comply with current code requirements.
2. Replace all plumbing piping.

Juvenile Justice Center

Existing Conditions

The Plumbing systems are generally in good condition and operational. Most of the plumbing fixtures appear to have been replaced within the last 20 years. Domestic water heating is being served by 10 gallon storage type water heaters located at custodian room above service sink. Recommendations for plumbing fixtures replacement are for water efficiency and not condition.

The following conditions are noted:

1. Plumbing fixtures were not water efficient.
2. Water heater is at the end of its service life of 12-15 years.
3. There is no hot water recirculation on hot water system.

Recommendations

1. Replace all plumbing fixtures.
    a. Current Regulation (CAL Green) mandatory measures to have the following maximum flow characteristics:
        i. Water Closet: 1.28 Gallon/flush (Flush valve).
        ii. Urinals: 0. 125 Gallons/flush (Flush valve).
        iii. Lavatory Faucet: 0.5 GPM.
        iv. Shower: 2 GPM
    b. It is our recommendation to replace all plumbing fixtures to comply with current code requirements.
2. If the City is planning a major renovation, we recommend replacing all plumbing system in its entirety if it is planned to be used for another 30 years.
3. Replace water heater with gas fired high eff heater or a heat pump type heater since the demand is intermittent.

Special Services Annex

Existing Conditions

The Plumbing systems are generally in good condition and operational. Most of the plumbing fixtures and domestic water heater appear to have been replaced within the last 15 years. Domestic water heating is being serve by 40 gallons storage type water heaters located at laundry room. Recommendations for plumbing fixtures replacement are for water efficiency and not condition.

The following conditions are noted:

1. Plumbing fixtures were not water efficient.
2. Water heater is at the end of its service life of 12-15 years

Recommendations

1. Replace all plumbing fixtures.
    a. Current Regulation (CAL Green) mandatory measures to have the following maximum flow characteristics:
        i. Water Closet: 1.28 Gallon/flush (Flush valve).
        ii. Urinals: 0.125 Gallon/flush (Flush valve).
        iii. Lavatory Faucet: 0.5 GPM.
2. Replace water heater with gas fired high eff heater or a heat pump type heater since the demand is intermittent.

5.6 TELECOMMUNICATIONS ASSESSMENT

The Garden Grove Police Department complex buildings were reviewed to evaluate and confirm the existing telecommunications infrastructure, communications cabling and building spaces that support these installations and the existing voice and data systems. The following sections provide a summary of the findings for the telecommunications installations.

Main Police Building

Existing Conditions

The telecommunications installations include the following existing conditions:

- Telecom Rooms
    - MPOE/Server Room – The Police Building includes a combined (Minimum Point of Entry) MPOE and server room installation on the 1st level of the building. The room houses service provider (AT&T) equipment and incoming cabling connectivity. Service provider installations include analog lines, T1 lines, data lines and Internet services.

      The room includes 2 and 4-post IT rack installations with dedicated network, server and voice equipment that supports Police voice and data services. The room also provides distribution of workstation outlet cabling that provides connectivity at Level 1 offices and spaces.

      It was noted that the server room does not have adequate cooling and the door is often propped open to provide air flow with the use of portable fans.

However, dedicated cooling equipment, UPS and emergency generator provide cooling and power to support ongoing operations.

Auxiliary equipment such as, Fire Alarm and Security systems equipment is also installed within the Server Room space.

The room in currently is somewhat poor condition and does not have proper clearance around equipment and rack installations. The room also appears to be used as storage.

  - IDF Room – An IDF Room is located at the second level and supports network and voice system installations along with distribution of workstation cabling to second level areas. The space is a very small area located within a two door closet. A single 2-post rack is installed for equipment and cabling terminations. The space does not allow for proper clearance and does not appear to have 24/7 cooling.

- Backbone Cabling – Backbone cabling consists of multimode fiber and multipair copper cabling to provide the extension of voice and data services from the Main Police Building server room to the building IDF and to each additional building in the Police complex (Evidence Annex, Juvenile Justice Center and the Special Services Annex). The cabling includes both 50 and 62.5 multimode optical fiber types and multipair copper cabling. The cabling is in decent condition but does not currently allow for increased backbone data transmission speeds of 10 Gigabit or higher.
- Horizontal Cabling – Horizontal cabling that extends from the telecom rooms to voice/data outlet locations consists of Cat 5e and Cat 6 cabling. There appears to be multiple generations of cabling with the newer Cat 6 cabling installed in areas of the building that have been recently remodeled. Cable pathways consist mainly of j-hook supports located above accessible ceiling areas.

Department Needs

1. Enhanced wireless coverage throughout building.
2. Enhanced network backbone bandwidth.
3. Revised cooling and UPS at Server Room.

Recommendations

4. Installation of wireless access points with Cat 6A cabling to support increased wireless capacity and bandwidth.
5. Installation of single mode backbone fiber to allow for increased bandwidth speeds between Police Building complex server room and Special Services Annex.
6. Server Room upgrades including installation of adequate and redundant 24/7 cooling systems, upgraded server room UPS equipment and remove existing stored material unrelated to server room functions.

Evidence Annex

Existing Conditions

The telecommunications installations include the following existing conditions:

- Telecom Room
  - IDF Space – The voice and data equipment and cabling installations are located is a very small closet above an electrical panel. There is an extremely small amount of space that is nearly inaccessible. There is no dedicated cooling or air flow for the space.
- Backbone Cabling – Backbone cabling consists of 62.5 multimode fiber and multi-pair copper cabling extended from the adjacent Park building.
- Horizontal Cabling – Horizontal cabling consists of Cat 5e cabling that extends from the telecom space to voice/data outlets throughout the building.

Department Needs

1. Enhanced wireless coverage throughout building.
2. Enhanced network backbone bandwidth.
3. Dedicated telecom room.

Recommendations

1. Installation of wireless access points with Cat 6A cabling to support increased wireless capacity and bandwidth.
2. Installation of single mode backbone fiber to allow for increased bandwidth speeds between Police Building complex server room and Special Services Annex.
3. Build a dedicated IDF room with 24/7 AC to house network equipment and cabling terminations.

Juvenile Justice Center

Existing Conditions

The telecommunications installations include the following existing conditions:

- Telecom Rooms
  - BDF/IDF Room – The Juvenile Justice Center has a single telecom room that includes backbone cabling installations extended from the Main Police Building and a free standing 2-post IT rack that houses equipment and cabling terminations. The room is a shared storage room in addition to housing telecom installations. The room appears to have house AC only rather than dedicated 24/7 cooling.

    Miscellaneous materials and equipment being stored in the space is blocking access to the telecom rack and equipment.

- Backbone Cabling – Backbone cabling consists of multimode fiber and multipair copper cabling to provide the extension of voice and data services from the Main Police Building server room. The cabling includes 62.5 multimode optical fiber and multipair copper cabling. The cabling is in decent condition but does not currently allow for increased backbone data transmission speeds of 10 Gigabit or higher.
- Horizontal Cabling – Horizontal cabling that extends from the telecom rooms to voice/data outlet locations consists of Cat 5e and Cat 6 cabling. Cable pathways consist mainly of j-hook supports located above accessible ceiling areas.

Department Needs

1. Enhanced wireless coverage throughout building.
2. Enhanced network backbone bandwidth.
3. Dedicated telecom room.

Recommendations

1. Installation of wireless access points with Cat 6A cabling to support increased wireless capacity and bandwidth.
2. Installation of single mode backbone fiber to allow for increased bandwidth speeds between Police Building complex server room and Juvenile Justice Center.
3. Build a dedicated IDF room with 24/7 AC to house network equipment and cabling terminations.

Special Services Annex

Existing Conditions

The telecommunications installations include the following existing conditions:

- Telecom Rooms
  - BDF/IDF – The Special Services Annex has a dedicated telecommunications room which is accessed from the exterior of the building. The room is approximately 120 square feet in size and provides space for 2 -post IT rack installations with dedicated network and voice equipment that supports services within the building. The room also provides distribution of workstation outlet cabling that provides connectivity for all offices and spaces.

    The room has dedicated cooling and the equipment is backed up by UPS power. Auxiliary equipment such as Fire Alarm and Security systems equipment is also installed within the space.

    The room in decent condition and has proper clearance around equipment and rack installations.

- Backbone Cabling – Backbone cabling consists of multimode fiber and multipair copper cabling to provide the extension of voice and data services from the Main Police Building server room. The cabling includes 62.5 multimode optical fiber and multipair copper cabling. The cabling is in decent condition but does not currently allow for increased backbone data transmission speeds of 10 Gigabit or higher.
- Horizontal Cabling – Horizontal cabling that extends from the telecom rooms to voice/data outlet locations consists of Cat 5e and Cat 6 cabling. Cable pathways consist mainly of j-hook supports located above accessible ceiling areas.

Department Needs

1. Enhanced wireless coverage throughout building.
2. Enhanced network backbone bandwidth.

Recommendations

1. Installation of wireless access points with Cat 6A cabling to support increased wireless capacity and bandwidth.
2. Installation of single mode backbone fiber to allow for

increased bandwidth speeds between Police Building complex server room and Special Services Annex.

5.7 PHYSICAL SECURITY ASSESSMENT

Main Police Building

Existing Conditions

The physical security systems consist of:

- Physical Access Control System (PACS)
- Video Surveillance System (VSS)
- Intrusion Detection System (IDS)

The following conditions are noted:

1. The existing PACS is by Keri Systems. This is a proprietary system. The system is outdated and limited in integration capabilities.
2. The existing VSS is a first generation IP video system. Cameras are low resolution and have poor lighting performance. Storage period is unknown as the video recorder is a "black box" type without the diagnostic and performance tracking capabilities of an enterprise level VSS.
3. There is no operable IDS observed.
4. There is no integration between systems, and the existing technology would preclude all but the most basic of relay driven interaction.
5. There are cameras cabled with sub-standard work quality, including non-rated outdoor cabling not in conduit.

Department Needs

1. Complete perimeter and interior physical access control, with secure areas called out per best practices as well as CALEA guidelines, in order to control access to secure areas of the facility.
2. Video surveillance of key areas as called out by both best practices as well as CALEA design guidelines in order to maintain proper levels of domain awareness as well as to document access to secure areas of the facility.
3. Intrusion detection facility-wide in order to provide notification of unauthorized access into controlled spaces as well as to allow for the provision of panic / duress buttons in designated areas.
4. Integration between systems to allow for meta-data tagging of video related to access control or intrusion detection events such as forced door.

Recommendations

1. Physical Access Control System
2. Replace existing PACS with enterprise level system.
3. Enable dual-authentication for high security areas such as evidence rooms, where both a credential as well as a Personal Identification Number (PIN) must be utilized to gain access.
4. Install IDS as a sub-system of the PACS.
5. Integrate PACS with Video Surveillance System (VSS) to enable autonomous recording and tagging of security related events allowing for rapid and efficient forensic review.
6. Migrate credential / reader technology to iClass
7. Install card readers with integral keypad for dual authentication
8. Video Surveillance System (VSS)
9. Replace existing DVR with enterprise class Video Management System (VMS)
10. Install video storage to allow for 1-year retention
11. Replace all existing cameras with high resolution / low light cameras
12. Integrate VSS with PACS
13. Provide complete exterior perimeter coverage
14. Provide interior coverage where required
15. Intrusion Detection System (IDS)
16. Install IDS as a sub-system of PACS
17. Provide motion detection and glass break detection where called out by best practices
18. Provide Duress / panic personal protective devices where required

Evidence Annex

Existing Conditions

The physical security systems consist of:

Physical Access Control System (PACS)

- Video Surveillance System (VSS)
- Intrusion Detection System (IDS)

The following conditions are noted:

1. The existing PACS is by Keri Systems. This is a proprietary system. The system is outdated and limited in integration

capabilities.
2. The existing VSS is a first generation IP video system. Cameras are low resolution and have poor lighting performance. Storage period is unknown as the video recorder is a "black box" type without the diagnostic and performance tracking capabilities of an enterprise level VSS.
3. There is no operable IDS observed.
4. There is no integration between systems, and the existing technology would preclude all but the most basic of relay driven interaction.
5. There are cameras cabled with sub-standard work quality, including non-rated outdoor cabling not in conduit.

Department Needs

1. Complete perimeter and interior physical access control, with secure areas called out per best practices as well as CALEA guidelines, in order to control access to secure areas of the facility.
2. Video surveillance of key areas as called out by both best practices as well as CALEA design guidelines in order to maintain proper levels of domain awareness as well as to document access to secure areas of the facility.
3. Intrusion detection facility-wide in order to provide notification of unauthorized access into controlled spaces as well as to allow for the provision of panic / duress buttons in designated areas.
4. Integration between systems to allow for meta-data tagging of video related to access control or intrusion detection events such as forced door.

Recommendations

1. Physical Access Control System
2. Replace existing PACS with enterprise level system.
3. Enable dual-authentication for high security areas such as evidence rooms, where both a credential as well as a Personal Identification Number (PIN) must be utilized to gain access.
4. Install IDS as a sub-system of the PACS.
5. Integrate PACS with Video Surveillance System (VSS) to enable autonomous recording and tagging of security related events allowing for rapid and efficient forensic review.
6. Migrate credential / reader technology to iClass
7. Install card readers with integral keypad for dual authentication
8. Video Surveillance System (VSS)
9. Replace existing DVR with enterprise class Video Management System (VMS)
10. Install video storage to allow for 1-year retention
11. Replace all existing cameras with high resolution / low light cameras
12. Integrate VSS with PACS
13. Provide complete exterior perimeter coverage
14. Provide interior coverage where specifically required by CALEA required guidelines regarding evidentiary facilities
15. Intrusion Detection System (IDS)
16. Install IDS as a sub-system of PACS
17. Provide motion detection and glass break detection where called out by best practices and where specifically required by CALEA required guidelines regarding evidentiary facilities
18. Provide Duress / panic personal protective devices where required

Juvenile Justice Center

Existing Conditions

The physical security systems consist of:

- Physical Access Control System (PACS)
- Video Surveillance System (VSS)
- Intrusion Detection System (IDS)

The following conditions are noted:

1. The existing PACS is by Keri Systems. This is a proprietary system. The system is outdated and limited in integration capabilities.
2. The existing VSS is a first generation IP video system. Cameras are low resolution and have poor lighting performance. Storage period is unknown as the video recorder is a "black box" type without the diagnostic and performance tracking capabilities of an enterprise level VSS.
3. There is no operable IDS observed.
4. There is no integration between systems, and the existing technology would preclude all but the most basic of relay driven interaction.

Department Needs

1. Complete perimeter and interior physical access control, with secure areas called out per best practices as well as

CALEA guidelines, in order to control access to secure areas of the facility.
2. Video surveillance of key areas as called out by both best practices as well as CALEA design guidelines in order to maintain proper levels of domain awareness as well as to document access to secure areas of the facility.
3. Intrusion detection facility-wide in order to provide notification of unauthorized access into controlled spaces as well as to allow for the provision of panic / duress buttons in designated areas.
4. Integration between systems to allow for meta-data tagging of video related to access control or intrusion detection events such as forced door.

Recommendations

1. Physical Access Control System
   - Replace existing PACS with enterprise level system.
   - Enable dual-authentication for high security areas such as evidence rooms, where both a credential as well as a Personal Identification Number (PIN) must be utilized to gain access.
   - Install IDS as a sub-system of the PACS.
   - Integrate PACS with Video Surveillance System (VSS) to enable autonomous recording and tagging of security related events allowing for rapid and efficient forensic review.
   - Migrate credential / reader technology to iClass
   - Install card readers with integral keypad for dual authentication
2. Video Surveillance System (VSS)
   - Replace existing DVR with enterprise class Video Management System (VMS)
   - Install video storage to allow for 1-year retention
   - Replace all existing cameras with high resolution / low light cameras
   - Integrate VSS with PACS
   - Provide complete exterior perimeter coverage
   - Provide interior coverage where required
3. Intrusion Detection System (IDS)
   - Install IDS as a sub-system of PACS
   - Provide motion detection and glass break detection where called out by best practices
   - Provide Duress / panic personal protective devices where required

Special Services Annex

Existing Conditions

The physical security systems consist of:

- Physical Access Control System (PACS)
- Video Surveillance System (VSS)
- Intrusion Detection System (IDS)

The following conditions are noted:

1. The existing PACS is by Keri Systems. This is a proprietary system. The system is outdated and limited in integration capabilities.
2. The existing VSS is a first generation IP video system. Cameras are low resolution and have poor lighting performance. Storage period is unknown as the video recorder is a “black box” type without the diagnostic and performance tracking capabilities of an enterprise level VSS.
3. There is no operable IDS observed.
4. There is no integration between systems, and the existing technology would preclude all but the most basic of relay driven interaction.

Department Needs

1. Complete perimeter and interior physical access control, with secure areas called out per best practices as well as CALEA guidelines, in order to control access to secure areas of the facility.
2. Video surveillance of key areas as called out by both best practices as well as CALEA design guidelines in order to maintain proper levels of domain awareness as well as to document access to secure areas of the facility.
3. Intrusion detection facility-wide in order to provide notification of unauthorized access into controlled spaces as well as to allow for the provision of panic / duress buttons in designated areas.
4. Integration between systems to allow for meta-data tagging of video related to access control or intrusion detection events such as forced door.

Recommendations

1. Physical Access Control System
   - Replace existing PACS with enterprise level system.
   - Enable dual-authentication for high security areas such as evidence rooms, where both a credential as

well as a Personal Identification Number (PIN) must be utilized to gain access.
    - Install IDS as a sub-system of the PACS.
    - Integrate PACS with Video Surveillance System (VSS) to enable autonomous recording and tagging of security related events allowing for rapid and efficient forensic review.
    - Migrate credential / reader technology to iClass
    - Install card readers with integral keypad for dual authentication
2. Video Surveillance System (VSS)
    - Replace existing DVR with enterprise class Video Management System (VMS)
    - Install video storage to allow for 1-year retention
    - Replace all existing cameras with high resolution / low light cameras
    - Integrate VSS with PACS
    - Provide complete exterior perimeter coverage
    - Provide interior coverage where required
3. Intrusion Detection System (IDS)
    - Install IDS as a sub-system of PACS
    - Provide motion detection and glass break detection where called out by best practices
    - Provide Duress / panic personal protective devices where required

5.8 CONCLUSION

While the existing systems serving GGPD facilities are basic by today's standards, they have served the department well in the past decades. The systems are nearing or are at end of useful life, and any major expansion or upgrades to the facilities should consider system upgrades or replacements. The upgrades are required not only meet existing needs and future capacity, but also to improve efficiency and resiliency to further support GGPD's mission to "improve the quality of life in the city and provide a sense of safety and security to the community members".

Upgrades should include the main equipment, such as HVAC units and electrical distribution boards, as well as the infrastructure, such as piping, wiring, and even ductwork. Discrete pieces of equipment can be more easily replaced, but items such as piping and wiring can be much more intrusive to replacement, especially where they are inside walls or below grade. While this infrastructure is still generally functional, their age significant increases that liklihood failures will continue in the indefinite future. This condition is not consistent with a resilient facility set to operate for the next decades.

Any intrusive infrastructure replacements and upgrades should be completed together with any seismic upgrades while staff are temporarily relocated. Options to replace the existing facility should be seriously considered due to the high cost of the equipment and infrastructure upgrades and inconvenience to staff.

6.0 STATEMENT OF PROBABLE PROJECT COSTS

6.1 COST ESTIMATE

The Probable Cost of Construction for the various schemes in this estimate was created by O'Connor Construction Management, Inc., out of Irvine, CA. Costs for parking garage and shooting range development are shown separate from building costs and have been itemized by a quantity take-off unit pricing. Building and parking garage costs represent the anticipated amount when bids are received for construction.

Construction estimate is based on the following:

- It is based on the space needs program in this report as well as a combination of local construction market factors.
- This estimate is based on a Construction Manager at Risk delivery method.

Other project costs have also been included in the estimates. The category of "soft" costs is included new building furniture and equipment. Finally, these following fee have been excluded from this report:

- Fees and costs associated with land purchase
- Professional Fees
- Building Permits
- Inspections and Test
- Installation of owner furnished equipment
- Construction change order contingency
- Hazardous material abatement / removal

Below is a pricing matrix that summarize all schemes.

Garden Grove Police Department Pricing Matrix

Schemes	Exterior Skin Police Department	MEP	Parking Structure	VE Elements	Finishes	Building Cost	Parking Structure Cost	Total Construction Cost	Soft Cost	Total Project Cost
1. Renovation of Existing Facility (96,310 sf)	Exterior to match existing building	Single generator just meets CBC exit lighting, HVAC smaller package units units. **Security** full card access throughout exterior doors and separation public vs police doors	Exterior finish painted concrete	Shooting Range out, limited landscape no site enhancements,	Lower grade carpet thoughout, VCT tile at corridors, lower grade Ceiling tiles, Commercial finishes at toilet rooms, Plain utilitarian conference rooms	$44,128,541	$18,299,778	$62,428,319	$12,485,664	$74,913,983
2. New Construction - Low Cost Option (96,310 sf)	Exterior Stucco on metal stud framing with Punched Windows	Single generator just meets CBC exit lighting, HVAC smaller package units units. **Security** full card access throughout exterior doors and separation public vs police doors	Exterior finish painted concrete	Shooting Range out, limited landscape no site enhancements,	Lower grade carpet thoughout, VCT tile at corridors, lower grade Ceiling tiles, Commercial finishes at toilet rooms, Plain utilitarian conference rooms	$41,976,320	$18,233,233	$60,209,553	$12,041,911	$72,251,464
3. New Construction - Middle Cost Option (102,646 sf)	Curtainwall with high performance glass and medium cost panel system (metal or ?) at above ceiling to 42" window sills	Dual Generators, paralleling switchgear, **Security** full card access throughout exterior doors and separation public vs police doors Middle of the road mechanical units	Full parking structure with some exterior finish upgrade low cost maybe just planters and grow screens	Shooting Range shell only	Nicer cooridor finishes, maybe polished concrete floors	$47,487,179	$18,888,164	$66,375,342	$13,275,068	$79,650,410
4. New Construction - Full Build-Out Option (121,509 sf)	High performance exterior glass & stone panelized system	2 Generators with paralleling switchgear multiple split units cooling tower, **Security** full card access throughout exterior doors and separation public vs police doors, full central plant	Full buildout, including upgraded facade to resemble Police Department building	None	Granite floor at Lobby, Terrazo at corridors, upgraded carpet thoughout	$58,054,054	$19,345,351	$77,399,406	$15,479,881	$92,879,287

Scheme 1 - Renovation to Existing Facility

Police Department Building cost estimating criteria:

1. The program gross SF is 96,310 sf but the cost estimate is based on 95,000 sf.
2. Renovation of existing main building +/- 25,000 sf, which includes upgrade of all mechanical and electrical system
3. Expansion of 70,000 sf of office space on existing site
4. Two story slab-on-grade building with steel frame construction.
5. This building is being planned for 100% generator backup power.
6. Building includes the following areas:
    - 1.00 Public Access Areas (4,030 sf)
    - 2.00 Administration (3,676 sf)
    - 3.00 Administrative Services (4,355 sf)
    - 4.00 Records (3,161 sf)
    - 6.00 Communications Division (3,070 sf)
    - 7.00 Investigations Division (11,968 sf)
    - 8.00 Police I.T. (1,336 sf)
    - 9.00 Community Policing (17,116 sf)
    - 10.00 Jail - Booking and Holding (3,630 sf)
    - 11.00 Police Shared Staff Areas (12,185 sf)
    - 13.00 Facility Support Areas (4,001 sf)

Police Support Building cost estimating criteria:

1. One story slab-on-grade pre-engineered metal building with exterior finishes complementing the main building design.
2. Interior ceilings to be 10 feet minimum or exposed structure.
3. This building is also being planned for 100% generator backup power.
4. Building includes the following areas:
    - 5.00 Evidence and Property (13,344 sf)
    - 14.00 Special Weapons and Tactics (1,877 sf)

Site cost estimating criteria:

1. The majority of site development costs including:
    - Landscaping
    - Driveways
    - 700 Parking Garage:
        - Staff Parking:
            - 300 staff parking spaces
            - 84 patrol parking spaces
            - 30 ADA parking spaces
        - Public Parking:
            - 60 public parking spaces
            - 6 ADA parking spaces
        - City Hall Parking (Need City's confirmation on number of parking spaces required. Not included in program)
            - 198 staff and visitor parking spaces
            - 22 ADA parking spaces

Other cost estimating criteria:

1. Construction cost estimates are based on a single phase project starting construction the Winter of 2021. If construction begins at a later date, higher costs should be anticipated as a percent increase per year. Bidding and construction contingencies are also included in the construction cost estimate.
2. Construction duration based on 22 months
3. Exterior facade to match existing building
4. Temporary relocation/swing space for GGPD = $1.62 M (30,000 sf of office rental space for 18 months)
5. This cost estimate does not include:
    - Additional construction phasing

PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$44,128,541	95,000	$464.51
02. PARKING STRUCTURE	$18,299,778		
TOTAL CONSTRUCTION COST	**$62,428,319**		

DETAILED PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$27,187,628	95,000	$286.19
02. PARKING STRUCTURE	$11,274,507		
TOTAL NET DIRECT COST	**$38,462,135**		

GENERAL MARKUPS

DESIGN CONTINGENCY	15.00%	$5,769,320
ESCALATION TO MIDPOINT 11/2022	14.58%	$6,450,421
CONTRACTOR CONTINGENCY	5.00%	$2,534,094
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$4,789,437
CM FEE	5.00%	$2,900,270
INSURANCE & BONDS	2.50%	$1,522,642
TOTAL CONSTRUCTION COST		**$62,428,319**

BUILDING SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
A SUBSTRUCTURE		$1,264,720	$13.31
B SHELL		$7,093,862	$74.67
C INTERIORS		$5,481,851	$57.70
D SERVICES		$10,400,103	$109.47
E EQUIPMENT AND FURNISHINGS		$617,500	$6.50
F OTHER BUILDING CONSTRUCTION		$1,822,500	$19.18
G BUILDING SITEWORK		$507,092	$5.34
NET DIRECT BUILDING COST		$27,187,628	$286.19
DESIGN CONTINGENCY	15.00%	$4,078,144	$42.93
SUBTOTAL		$31,265,772	$329.11
ESCALATION TO MIDPOINT 11/2022	14.58%	$4,559,592	$48.00
SUBTOTAL		$35,825,364	$377.11
CONTRACTOR CONTINGENCY	5.00%	$1,791,268	$18.86
SUBTOTAL		$37,616,632	$395.96
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$3,385,497	$35.64
SUBTOTAL		$41,002,129	$431.60
CM FEE	5.00%	$2,050,106	$21.58
SUBTOTAL		$43,052,236	$453.18
INSURANCE & BONDS	2.50%	$1,076,306	$11.33
TOTAL BUILDING COST		**$44,128,541**	**$464.51**

GROSS FLOOR AREA: 95,000 SF

Scheme 2 - New Construction (Low Cost Option)

Police Department Building cost estimating criteria:

1. The program gross SF is 96,310 sf but the cost estimate is based on 92,000 sf.
2. Two story slab-on-grade building with steel frame construction.
3. This building is being planned for 100% generator backup power.
4. Building includes the following areas:
    - 1.00 Public Access Areas (4,030 sf)
    - 2.00 Administration (3,676 sf)
    - 3.00 Administrative Services (4,355 sf)
    - 4.00 Records (3,161 sf)
    - 6.00 Communications Division (3,070 sf)
    - 7.00 Investigations Division (11,968 sf)
    - 8.00 Police I.T. (1,336 sf)
    - 9.00 Community Policing (17,116 sf)
    - 10.00 Jail - Booking and Holding (3,630 sf)
    - 11.00 Police Shared Staff Areas (12,185 sf)
    - 13.00 Facility Support Areas (4,001 sf)

Police Support Building cost estimating criteria:

1. One story slab-on-grade pre-engineered metal building with exterior finishes complementing the main building design.
2. Interior ceilings to be 10 feet minimum or exposed structure.
3. This building is also being planned for 100% generator backup power.
4. Building includes the following areas:
    - 5.00 Evidence and Property (13,344 sf)
    - 14.00 Special Weapons and Tactics (1,877 sf)

Site cost estimating criteria:

1. The majority of site development costs including:
    - Landscaping
    - Driveways
    - 700 Parking Garage:
        - Staff Parking:
            - 300 staff parking spaces
            - 84 patrol parking spaces
            - 30 ADA parking spaces
        - Public Parking
            - 60 public parking spaces
            - 6 ADA parking spaces
        - City Hall Parking (Need City's confirmation on number of parking spaces required. Not included in program)
            - 198 staff and visitor parking spaces
            - 22 ADA parking spaces

Other cost estimating criteria:

1. Construction cost estimates are based on a single phase project starting construction the Fall of 2022. If construction begins at a later date, higher costs should be anticipated as a percent increase per year. Bidding and construction contingencies are also included in the construction cost estimate.
2. Construction duration based on 20 months
3. DX Cooling System with additional small packaged units
4. Single generator
5. Interior Finishes:
    - Carpet in the offices
    - Vinyl composition tile, VCT, in the corridors
    - Acoustical and Gypsum Board Ceiling

PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$41,976,320	92,000	$456.26
02. PARKING STRUCTURE	$18,233,233		
TOTAL CONSTRUCTION COST	**$60,209,553**		

DETAILED PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$25,956,028	92,000	$282.13
02. PARKING STRUCTURE	$11,274,507		
TOTAL NET DIRECT COST	**$37,230,535**		

GENERAL MARKUPS

DESIGN CONTINGENCY	15.00%	$5,584,580
ESCALATION TO MIDPOINT 10/2022	14.17%	$6,065,475
CONTRACTOR CONTINGENCY	5.00%	$2,444,029
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$4,619,216
CM FEE	5.00%	$2,797,192
INSURANCE & BONDS	2.50%	$1,468,526
TOTAL CONSTRUCTION COST		**$60,209,553**

BUILDING SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
A SUBSTRUCTURE		$1,537,909	$16.72
B SHELL		$7,357,591	$79.97
C INTERIORS		$5,119,789	$55.65
D SERVICES		$10,088,205	$109.65
E EQUIPMENT AND FURNISHINGS		$598,000	$6.50
F OTHER BUILDING CONSTRUCTION		$565,748	$6.15
G BUILDING SITEWORK		$688,786	$7.49
NET DIRECT BUILDING COST		$25,956,028	$282.13
DESIGN CONTINGENCY	15.00%	$3,893,404	$42.32
SUBTOTAL		$29,849,432	$324.45
ESCALATION TO MIDPOINT 10/2022	14.17%	$4,228,670	$45.96
SUBTOTAL		$34,078,102	$370.41
CONTRACTOR CONTINGENCY	5.00%	$1,703,905	$18.52
SUBTOTAL		$35,782,007	$388.93
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$3,220,381	$35.00
SUBTOTAL		$39,002,387	$423.94
CM FEE	5.00%	$1,950,119	$21.20
SUBTOTAL		$40,952,507	$445.14
INSURANCE & BONDS	2.50%	$1,023,813	$11.13
TOTAL BUILDING COST		**$41,976,320**	**$456.26**

GROSS FLOOR AREA: 92,000 SF

Scheme 3 - New Construction (Middle Cost Option)

Police Department Building cost estimating criteria:

1. The program gross SF is 102,646 sf but the cost estimate is based on 98,500 sf.
2. Two story slab-on-grade building with steel frame construction.
3. This building is being planned for 100% generator backup power.
4. Building includes the following areas:
    - 1.00 Public Access Areas (4,030 sf)
    - 2.00 Administration (3,962 sf)
    - 3.00 Administrative Services (5,395 sf)
    - 4.00 Records (3,161 sf)
    - 6.00 Communications Division (3,387 sf)
    - 7.00 Investigations Division (12,225 sf)
    - 8.00 Police I.T. (1,336 sf)
    - 9.00 Community Policing (17,350 sf)
    - 10.00 Jail - Booking and Holding (3,630 sf)
    - 11.00 Police Shared Staff Areas (12,185 sf)
    - 13.00 Facility Support Areas (4,001 sf)

Police Support Building cost estimating criteria:

1. One story slab-on-grade with exterior finishes complementing the main building design.
2. Interior ceilings to be 10 feet minimum or exposed structure.
3. This building is also being planned for 100% generator backup power.
4. Building includes the following areas:
    - 5.00 Evidence and Property (13,344 sf)
    - 14.00 Special Weapons and Tactics (5,252 sf)

Site cost estimating criteria:

1. The majority of site development costs including:
    - Landscaping
    - Driveways
    - 700 Parking Garage:
        - Staff Parking:
            - 300 staff parking spaces
            - 84 patrol parking spaces
            - 30 ADA parking spaces
        - Public Parking
            - 60 public parking spaces
            - 6 ADA parking spaces
        - City Hall Parking (Need City's confirmation on number of parking spaces required. Not included in program)
            - 198 staff and visitor parking spaces
            - 22 ADA parking spaces

Other cost estimating criteria:

1. Construction cost estimates are based on a single phase project starting construction the Fall of 2022. If construction begins at a later date, higher costs should be anticipated as a percent increase per year. Bidding and construction contingencies are also included in the construction cost estimate.
2. Construction duration based on 22 months
3. DX Cooling System with additional small packaged units
4. Dual generator with parallel switcher
5. Exterior facade to include:
    - Metal wall panel
    - Curtain wall with high performance glass
6. Interior Finishes:
    - Carpet in the offices
    - Polished concrete in the corridors
    - Acoustical and Gypsum Board Ceiling

PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$47,487,179	98,500	$482.10
02. PARKING STRUCTURE	$18,888,164		
TOTAL CONSTRUCTION COST	**$66,375,342**		

DETAILED PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. BUILDING	$29,256,887	98,500	$297.02
02. PARKING STRUCTURE	$11,637,012		
TOTAL NET DIRECT COST	**$40,893,899**		

GENERAL MARKUPS

DESIGN CONTINGENCY	15.00%	$6,134,085
ESCALATION TO MIDPOINT 11/2022	14.58%	$6,858,248
CONTRACTOR CONTINGENCY	5.00%	$2,694,312
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$5,092,249
CM FEE	5.00%	$3,083,640
INSURANCE & BONDS	2.50%	$1,618,911

BUILDING SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
A SUBSTRUCTURE		$1,644,213	$16.69
B SHELL		$9,117,622	$92.56
C INTERIORS		$5,703,460	$57.90
D SERVICES		$10,872,934	$110.39
E EQUIPMENT AND FURNISHINGS		$640,250	$6.50
F OTHER BUILDING CONSTRUCTION		$565,748	$5.74
G BUILDING SITEWORK		$712,660	$7.24
NET DIRECT BUILDING COST		$29,256,887	$297.02
DESIGN CONTINGENCY	15.00%	$4,388,533	$44.55
SUBTOTAL		$33,645,420	$341.58
ESCALATION TO MIDPOINT 11/2022	14.58%	$4,906,624	$49.81
SUBTOTAL		$38,552,044	$391.39
CONTRACTOR CONTINGENCY	5.00%	$1,927,602	$19.57
SUBTOTAL		$40,479,646	$410.96
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$3,643,168	$36.99
SUBTOTAL		$44,122,814	$447.95
CM FEE	5.00%	$2,206,141	$22.40
SUBTOTAL		$46,328,955	$470.34
INSURANCE & BONDS	2.50%	$1,158,224	$11.76
TOTAL BUILDING COST		**$47,487,179**	**$482.10**

GROSS FLOOR AREA: 98,500 SF

Scheme 4 - New Construction (Full Build-Out Cost Option)

Police Department Building cost estimating criteria:

1. The program gross SF is 121,509 sf but the cost estimate is based on 114,000 sf.
2. Two story slab-on-grade building with steel frame construction.
3. This building is being planned for 100% generator backup power.
4. Building includes the following areas:
    - 1.00 Public Access Areas (4,030 sf)
    - 2.00 Administration (3,962 sf)
    - 3.00 Administrative Services (5,717 sf)
    - 4.00 Records (3,161 sf)
    - 6.00 Communications Division (3,747 sf)
    - 7.00 Investigations Division (13,864 sf)
    - 8.00 Police I.T. (1,336 sf)
    - 9.00 Community Policing (18,889 sf)
    - 10.00 Jail - Booking and Holding (3,745 sf)
    - 11.00 Police Shared Staff Areas (12,373 sf)
    - 13.00 Facility Support Areas (4,001 sf)

Police Support Building cost estimating criteria:

1. One story slab-on-grade pre-engineered metal building with exterior finishes complementing the main building design.
2. Interior ceilings to be 10 feet minimum or exposed structure.
3. This building is also being planned for 100% generator backup power.
4. Building includes the following areas:
    - 5.00 Evidence and Property (13,594 sf)
    - 12.00 Training - Firing Range (11,170 sf)
    - 14.00 Special Weapons and Tactics (6,062 sf)

Site cost estimating criteria:

1. The majority of site development costs including:
    - Landscaping
    - Driveways
    - 700 Parking Garage:
        - Staff Parking:
            - 300 staff parking spaces
            - 84 patrol parking spaces
            - 30 ADA parking spaces
        - Public Parking
            - 60 public parking spaces
            - 6 ADA parking spaces
        - City Hall Parking (Need City's confirmation on number of parking spaces required. Not included in program)
            - 198 staff and visitor parking spaces
            - 22 ADA parking spaces

Other cost estimating criteria:

1. Construction cost estimates are based on a single phase project starting construction the Fall of 2022. If construction begins at a later date, higher costs should be anticipated as a percent increase per year. Bidding and construction contingencies are also included in the construction cost estimate.
2. Construction duration based on 24 months
3. Multiple split units with cooling tower
4. Dual generator with parallel switch gear
5. Exterior Finish:
    - Stone penalized system
    - Curtain wall with high performance glass
6. Interior Finishes:
    - Carpet in the offices
    - Terrazzo in the corridors
    - Granite flooring in the lobby area
    - Acoustical and Gypsum Board Ceiling

PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. POLICE BUILDING	$53,776,387	102,000	$527.22
02. SHOOTING RANGE	$4,277,667	12,000	$356.47
03. PARKING STRUCTURE	$19,345,351		
TOTAL CONSTRUCTION COST	**$77,399,406**		

DETAILED PROJECT SUMMARY

ELEMENT	TOTAL COST	GFA	$/SF AREA
01. POLICE BUILDING AND SHOOTING RANGE	$33,011,631	102,000	$323.64
02. SHOOTING RANGE	$2,625,925	12,000	$218.83
03. PARKING STRUCTURE	$11,875,502		
TOTAL NET DIRECT COST	**$47,513,058**		

GENERAL MARKUPS

DESIGN CONTINGENCY	15.00%	$7,126,959
ESCALATION TO MIDPOINT 12/2022	15.00%	$8,196,003
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$5,938,004
CM FEE	5.00%	$3,595,791
INSURANCE & BONDS	2.50%	$1,887,790

BUILDING SUMMARY

ELEMENT		TOTAL COST	$/SF AREA
A SUBSTRUCTURE		$1,897,640	$16.65
B SHELL		$11,138,112	$97.70
C INTERIORS		$7,494,411	$65.74
D SERVICES		$13,031,057	$114.31
E EQUIPMENT AND FURNISHINGS		$741,000	$6.50
F OTHER BUILDING CONSTRUCTION		$565,748	$4.96
G BUILDING SITEWORK		$769,588	$6.75
NET DIRECT BUILDING COST		$35,637,556	$312.61
DESIGN CONTINGENCY	15.00%	$5,345,633	$46.89
SUBTOTAL		$40,983,189	$359.50
ESCALATION TO MIDPOINT 12/2022	15.00%	$6,147,478	$53.93
SUBTOTAL		$49,487,201	$434.10
GENERAL CONDITIONS/REQUIREMENTS	9.00%	$4,453,848	$39.07
SUBTOTAL		$53,941,049	$473.17
CM FEE	5.00%	$2,697,052	$23.66
SUBTOTAL		$56,638,102	$496.83
INSURANCE & BONDS	2.50%	$1,415,953	$12.42
TOTAL BUILDING COST		**$58,054,054**	**$509.25**

GROSS FLOOR AREA: 114,000 SF

7.0 REFERENCE

7.1 REFERENCE RESOURCE

- Annual Report 2017 By City Of Garden Grove Police Department
- City Of Garden Grove Needs Assessment 2009 By Griffin Structures, Inc.
- Economic Development Strategic Plan Garden Grove 2018 By City Of Garden Grove
- “How Many Police Officers Does A City Need?” By Mike Maciag - Governing.com
- Local Profiles Report 2019, Profile Of The City Of Garden Grove By Southern California Association Of Governments (SCAG)