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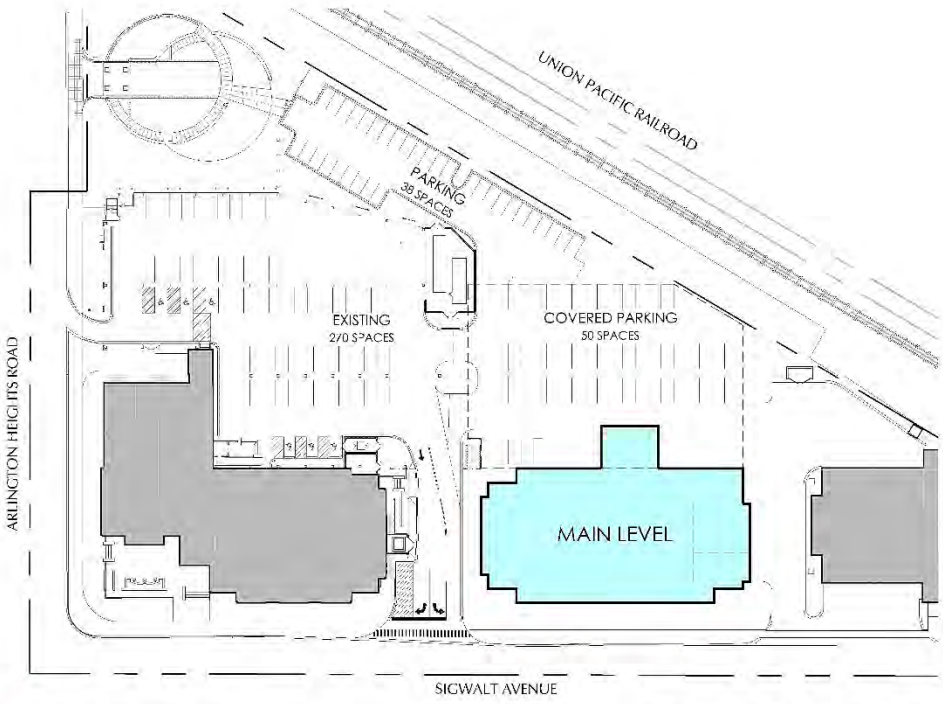


PROS:

- COVERED PARKING POLICE IS ADEQUATE
- FOOTPRINT IS EFFICIENT - ALL FLOORS THE SAME
- PARKING DECK CAN EXPAND TO EAST
- ACCESS TO EVIDENCE GARAGES ON EAST

CONS:

- EVIDENCE SPLIT BETWEEN FLOORS
- FUNCTIONS ON 4 LEVELS

PARKING BREAKDOWN

COVERED POLICE:	50
ON GRADE:	32
EXISTING PARKING GARAGE:	270
EXPAND GARAGE:	68
ACROSS SIGWALT ST.:	54+
TOTAL PARKING:	**474**

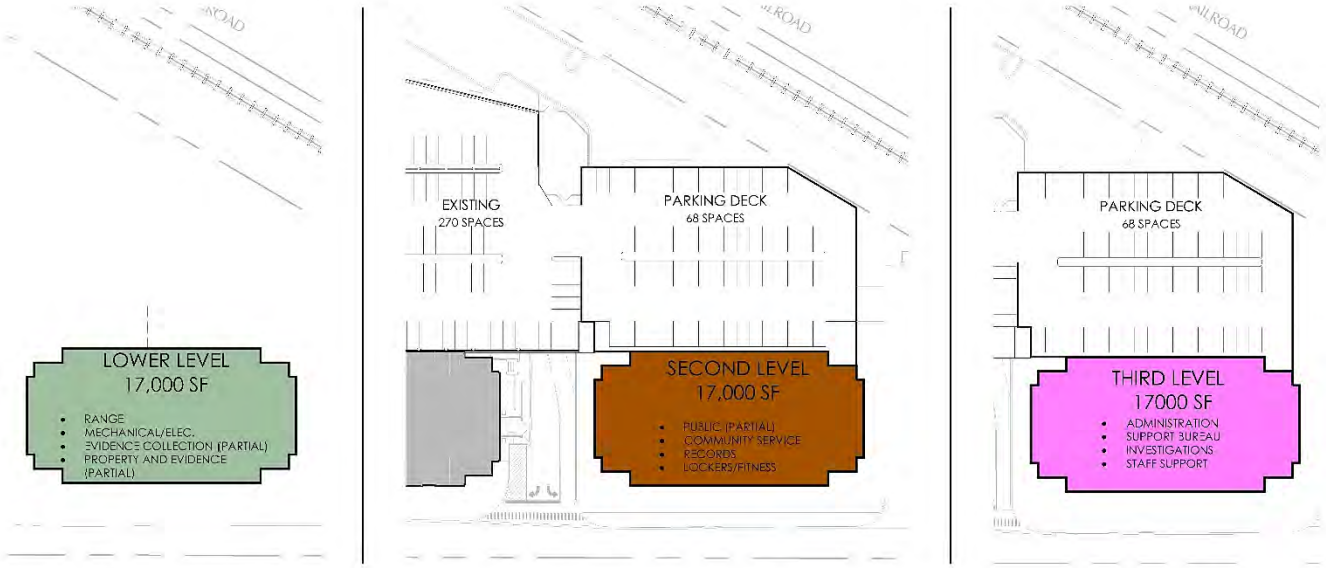
MAIN LEVEL - 18,200 SF

- LOCK UP
- WARM STORAGE
- PUBLIC (PARTIAL)
- PATROL
- TRAFFIC
- FRONT DESK
- EVIDENCE COLLECTION
- PROPERTY AND EVIDENCE

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 5 - THREE STORY + LOWER LEVEL



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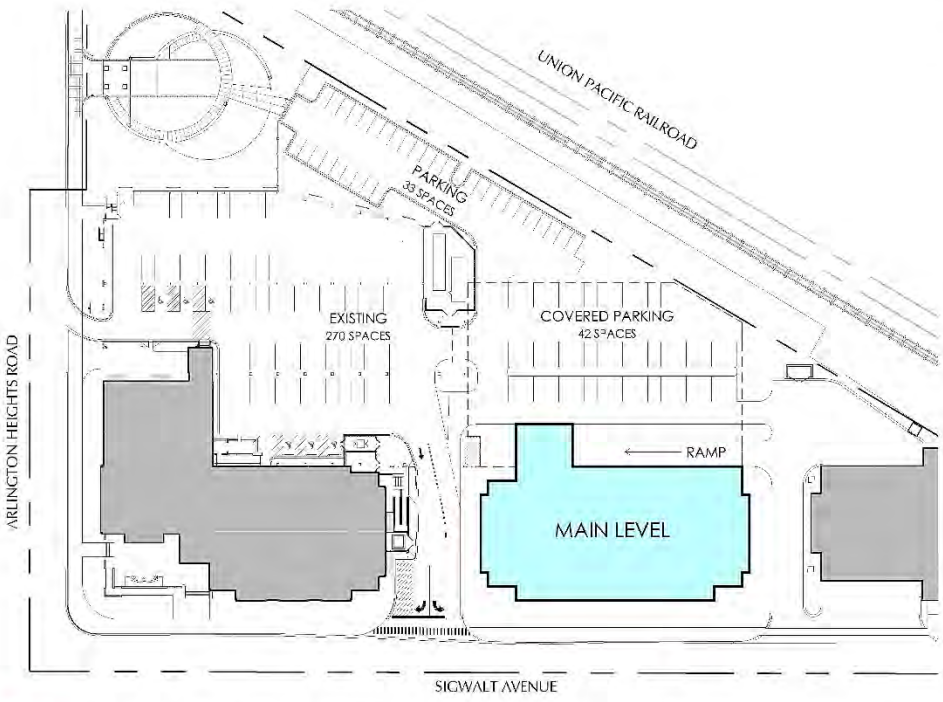
SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 5 - THREE STORY + LOWER LEVEL



PROS:

- UNDERGROUND PARKING FREES UP SITE - NO DECK EXTENSION REQUIRED
- ACCESS TO EVIDENCE GARAGES IS ON EAST
- PARKING DECK CAN EXPAND TO EAST TO CREATE ADDITIONAL COVERED PARKING

CONS:

- FUNCTIONS ARE ON 4 LEVELS

PARKING BREAKDOWN

UNDERGROUND:	52
COVERED POLICE:	42
ON GRADE:	32
EXISTING PARKING GARAGE:	270
EXPAND GARAGE:	68
ACROSS SIGWALT ST.:	54+
TOTAL PARKING:	**518**

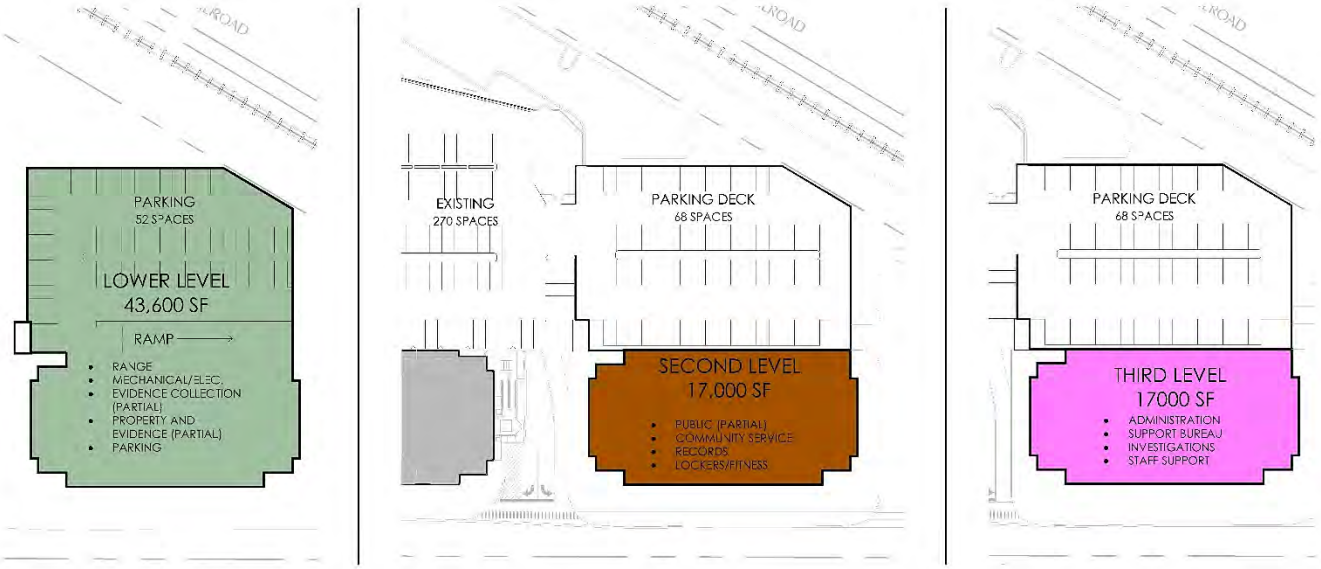
MAIN LEVEL - 18,200 SF

- LOCK UP
- WARM STORAGE
- PUBLIC (PARTIAL)
- PATROL
- TRAFFIC
- FRONT DESK
- EVIDENCE COLLECTION
- PROPERTY AND EVIDENCE

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 6 - THREE STORY + LOWER LEVEL



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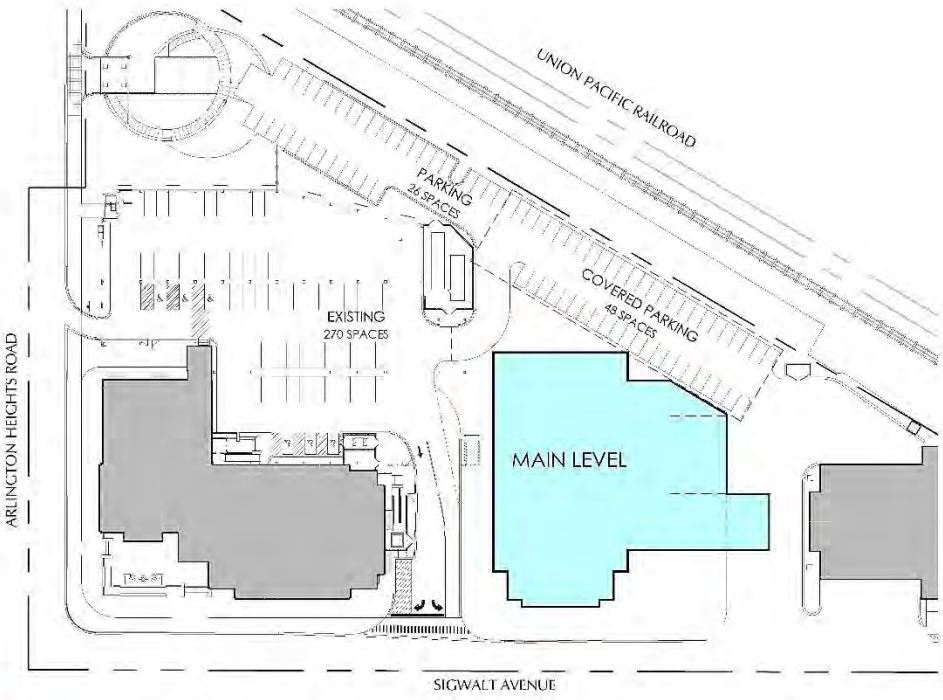
SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 6 - THREE STORY + LOWER LEVEL

FINAL DRAFT COPY



PROS:

- SALLYPORT/LOCKUP ON EAST - GOOD ACCESS FOR BOND OUT
- COVERED PARKING FOR POLICE IS ADEQUATE

CONS:

- FUNCTIONS ARE ON 4 LEVELS
- EVIDENCE IS SPLIT ON 2 LEVELS
- SOME FUNCTIONS REQUIRING PUBLIC ACCESS ARE ON SECOND LEVEL

PARKING BREAKDOWN

COVERED POLICE:	48
ON GRADE:	34
EXISTING PARKING GARAGE:	270
EXPAND GARAGE TO NORTH:	48
ACROSS SIGWALT ST.:	54+
TOTAL PARKING:	**454**

MAIN LEVEL - 24,600 SF

- LOCK UP
- WARM STORAGE
- PUBLIC (PARTIAL)
- PATROL
- TRAFFIC
- FRONT DESK
- RECORDS
- EVIDENCE COLLECTION
- PROPERTY AND EVIDENCE

N

SCALE : 1" =60'-0"

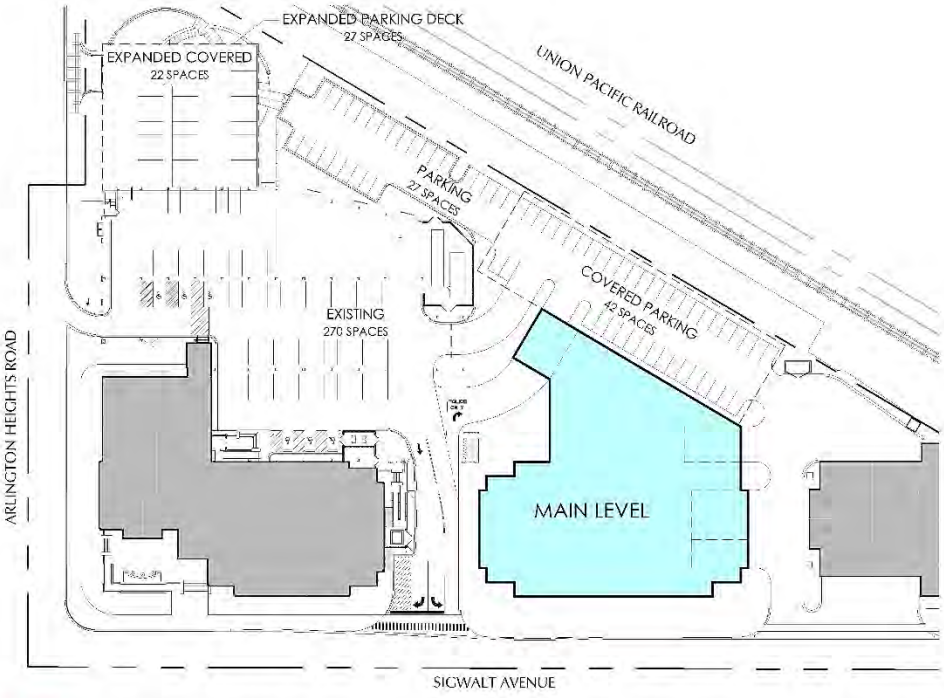
FGM ARCHITECTS CONCEPT 7 - THREE STORY + LOWER LEVEL

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 7 - THREE STORY + LOWER LEVEL

FINAL DRAFT COPY



PROS:

- FUNCTIONS ARE ACCOMMODATED ON 3 LEVELS
- COVERED POLICE PARKING IS ADEQUATE
- EVIDENCE FUNCTIONS ARE ON ONE LEVEL
- PARKING DECK CAN EXPAND WEST

CONS:

- SECOND FLOOR "BRIDGE" BLOCKS WINDOWS OF BILLAGE HALL
- FUNCTIONS REQUIRING PUBLIC ACCESS ARE ON SECOND LEVEL

PARKING BREAKDOWN

COVERED POLICE:	42
ON GRADE: 28 EXIST. + 22 EXPANDED:	49
EXISTING PARKING GARAGE:	270
EXPAND GARAGE TO NORTH:	27
ACROSS SIGWALT ST.:	54+
TOTAL PARKING:	**442**

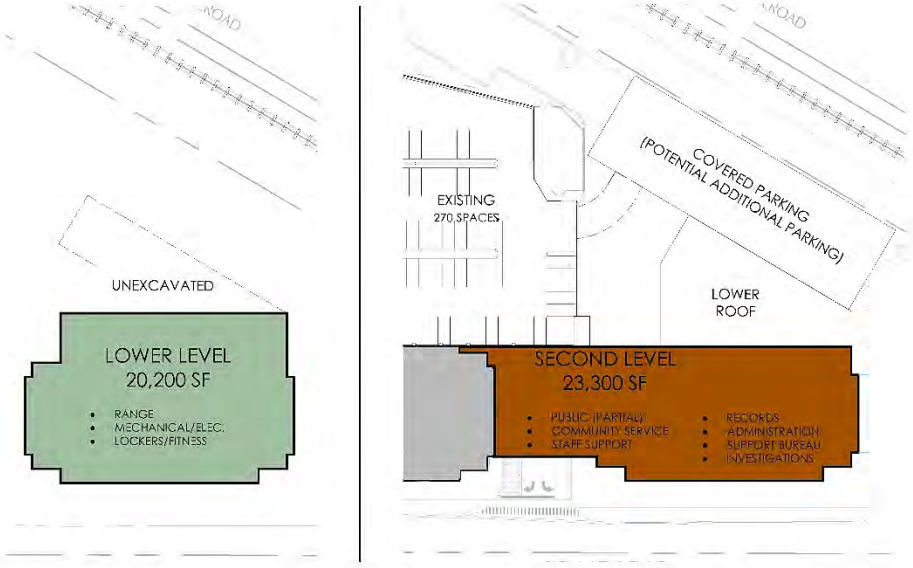
MAIN LEVEL - 26,900 SF

- LOCK UP
- WARM STORAGE
- PUBLIC (PARTIAL)
- PATROL
- TRAFFIC
- FRONT DESK
- EVIDENCE COLLECTION
- PROPERTY AND EVIDENCE

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 8 - TWO STORY + LOWER LEVEL + BRIDGE



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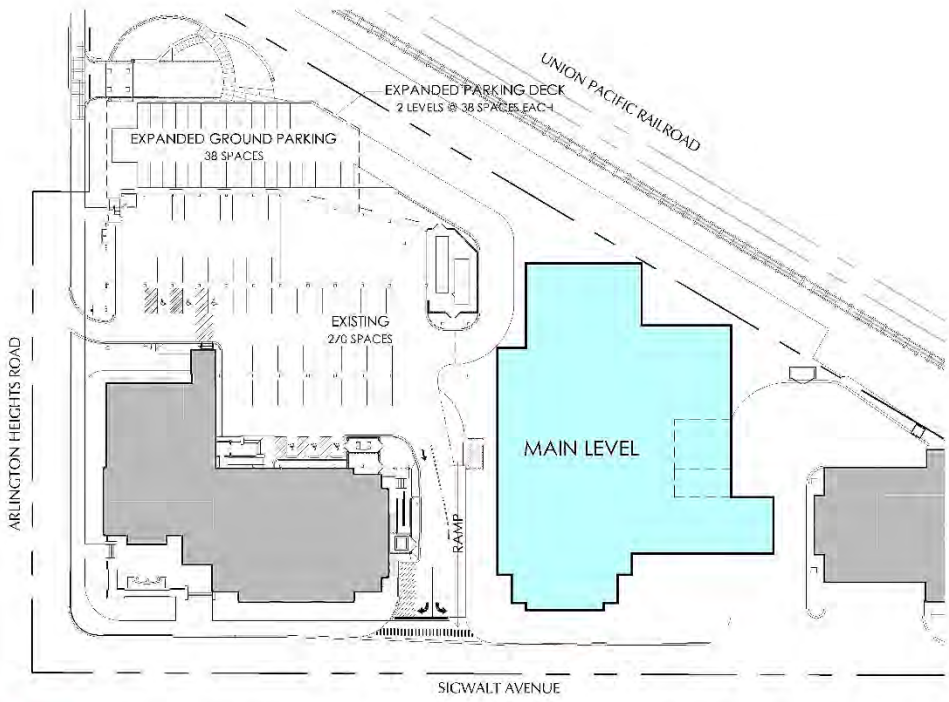
SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 8 - TWO STORY + LOWER LEVEL + BRIDGE



PROS:

- FIRST FLOOR IS MAXIMIZED
- FUNCTIONS REQUIRING PUBLIC ACCESS ARE ON THE MAIN KEVEL
- EVIDENCE FUNCTIONS ARE ON THE MAIN LEVEL
- ADEQUATE COVERED POLICE PARKING IS PROVIDED AT EXISTING DECK

CONS:

- PARKING DECK EXPANSION IS REQUIRED TO THE NORTH
- NEW GARAGE RAMP IS REQUIRED AT SOUTH

PARKING BREAKDOWN

COVERED POLICE W/ EXTENSION:	99
ON GRADE W/ EXTENSION:	38
EXISTING PARKING GARAGE:	209
EXTEND EXIST. DECK OPTION 3:	71
ACROSS SIGWALT ST.:	54+
TOTAL PARKING:	**471**

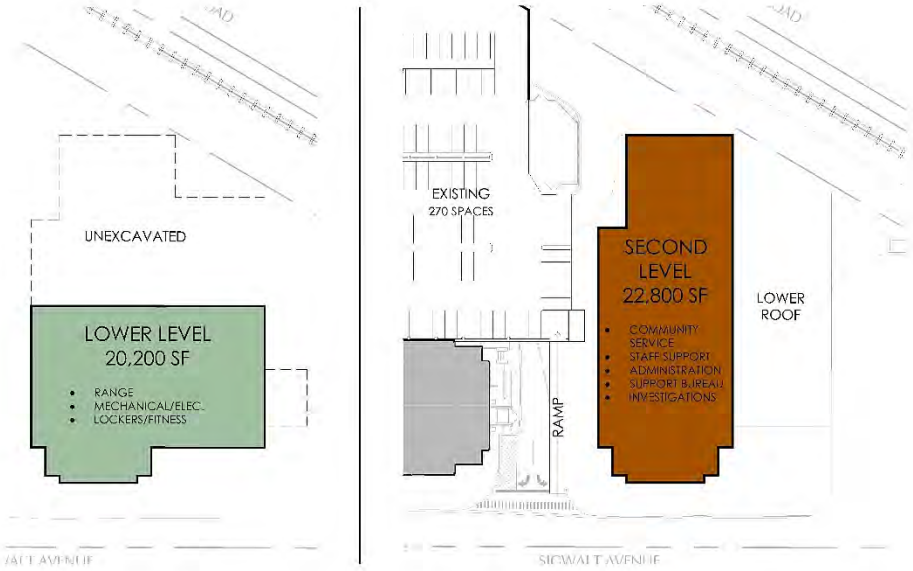
MAIN LEVEL - 36,600 SF

- LOCK UP
- WARM STORAGE
- PUBLIC (PARTIAL)
- PATROL
- TRAFFIC
- FRONT DESK
- RECORDS
- EVIDENCE COLLECTION
- PROPERTY AND EVIDENCE

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 9 - TWO STORY + LOWER LEVEL



N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 9 - TWO STORY + LOWER LEVEL

SECTION 6
INITIAL CONCEPT DEVELOPMENT - REFINED SITE AND BUILDING CONCEPT

Refined Site and Building Concept

Utilizing the feedback from the initial conceptual solutions, FGM began working on a more refined solution.

In designing a Police Station on a site with limited area available, the first floor is the most critical, so establishing a size for the first floor footprint is an important step in creating a functional plan.

In order to develop the most workable plan for the Police Department and fit it onto the existing site, program elements were reviewed with the Police Department and analyzed to determine which functions absolutely had to be located on the first floor for the PD to operate effectively.

First Floor Functions for Effective Operations

• Public Entry / Public Access Areas	948 S.f.
• Operations Support – Front Desk	572 S.f.
• Patrol Bureau	5,260 S.f.
• Evidence Collection	2,731 S.f.
• I.D. / Lockup	5,589 S.f.
• Records Bureau	2,986 S.f.
• Criminal Investigations Division	5,119 S.f.
• Staff Support Areas	120 S.f.
• Loading / Facility Maintenance	175 S.f.
First Floor Sub-Total	23,500 S.f.
Multi-Floor Factor (stairs, elevator, etc.)	1,000 S.f.
Total Recommended First Floor Building Area	**24,500 S.f.**

Functions that could potentially be located off-site were also identified in order to come up with the most compact and efficient building footprint. Functions that were identified as having the potential to be located off-site include Long-Term Evidence Storage, Impound Vehicle Parking, Command Vehicle Parking, Archive Storage, and Traffic & Parking Enforcement Storage.

A Refined Site and Building Concept was developed. The concept diagrams show a two-story plus a basement building with a Police parking garage to the north. The building footprint is approximately 24,000 square feet plus 11,000 square feet for the Parking Garage and 1,150 square feet for the Sally Port. The second floor and basement are each 23,000 square feet, for a total of 84,500 square feet.

The concept utilizes the entire site and makes use of the existing access points.

Current access to the municipal parking garage is maintained. Police vehicle access, which includes the evidence vehicle processing garage, sally port, and squad parking garage is shared with the existing Fire Department access on the east.

On grade parking for additional police vehicles is accessed through the municipal garage. Because of the tight site, there is no east west access to the north.

This concept also includes the potential to address long term parking needs with an addition to the existing municipal parking garage, resulting in parking counts between 473 and 517 for the entire site.

The conceptual floor plan diagrams show a cost effective, efficient structure with equal floor plates "stacked" on top of one another.

Stacking Diagram

Lower Level

First Floor

Second Floor

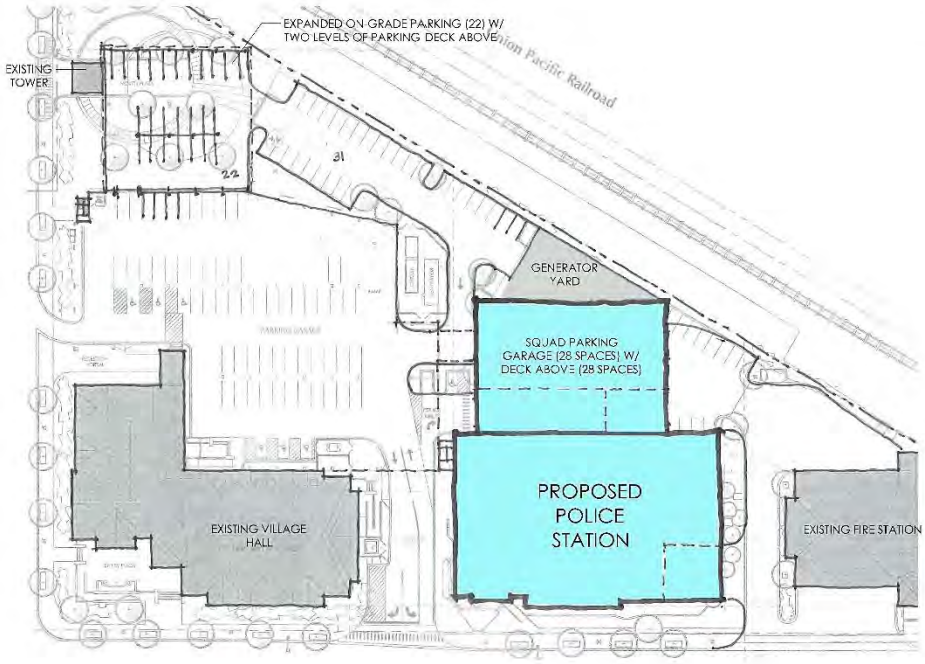
Flow through the building is very efficient and a clear separation of public areas and secure areas is maintained.

The First Floor includes the Public Entry and Lobby off Sigwalt Street, public service functions, such as the front desk, records, public interview rooms, and access to the second floor. Secure functions include Lock up, Evidence Collection, and Patrol areas.

The Second Floor includes a Public Lobby, Community Meeting Room, Administration, Community Services, and secure Staff Support areas.

The Basement level includes Evidence Processing areas, Locker Rooms, and all Training functions, including Firing Range, Defensive Tactic Training Room, and Fire Arms Training Simulator (FATS).

The refined concept diagrams, Concept 10, follows.



BUILDING AREA

• LOWER LEVEL:	24,000 SF
• MAIN LEVEL:	24,000 SF
• SECOND LEVEL:	24,000 SF
TOTAL :	**72,000 SF**

PARKING GARAGE

• INDOOR PARKING GARAGE: (INCLUDES SALLYPORT)	12,512 SF

PARKING BREAKDOWN

POLICE VEHICLES

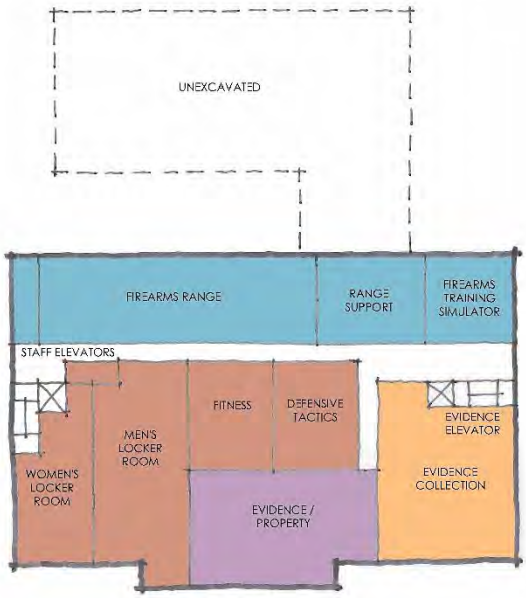
• GARAGE:	28
• SURFACE:	31
• EXPANDED ON GRADE:	22
• NEW DECK:	28
TOTAL POLICE PARKING:	109
• EXISTING PARKING DECK	264
• EXISTING LOTS ON SIGWALT (EXCLUDES CORNER)	54
• EXPANDED DECK (2ND+3RD)	44
TOTAL PARKING:	**471**

SITE DIAGRAM

N

SCALE : 1" =60'-0"

FGM ARCHITECTS CONCEPT 10 - TWO STORY + LOWER LEVEL

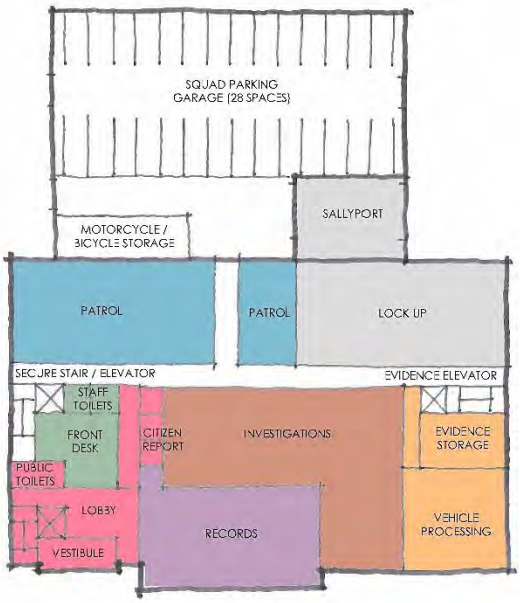


LOWER LEVEL
24,000 SF

N

SCALE : 1' =1/32'

FGM ARCHITECTS CONCEPT 10 - TWO STORY + LOWER LEVEL

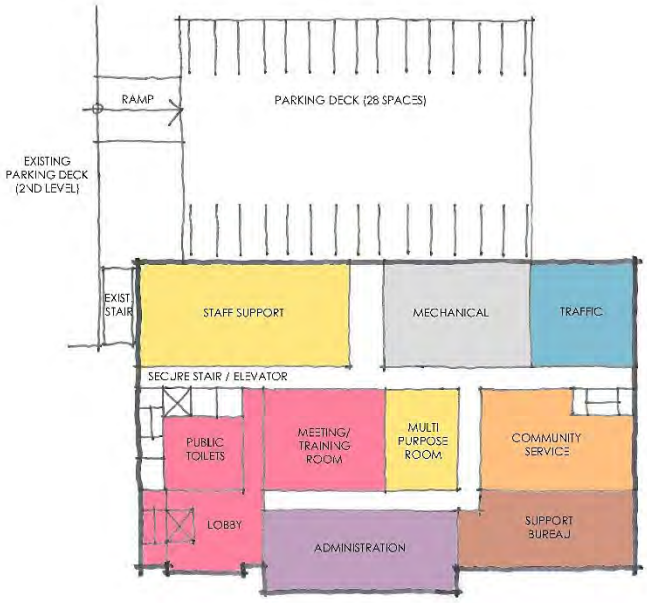


MAIN LEVEL
36,512 SF

N

SCALE : 1' =1/32"

FGM ARCHITECTS CONCEPT 10 - TWO STORY + LOWER LEVEL



SECOND LEVEL
24,000 SF

N

SCALE : 1' =1/32"

FGM ARCHITECTS CONCEPT 10 - TWO STORY + LOWER LEVEL

SECTION 7
FINAL CONCEPTUAL SOLUTIONS

Final Site and Building Concept Development

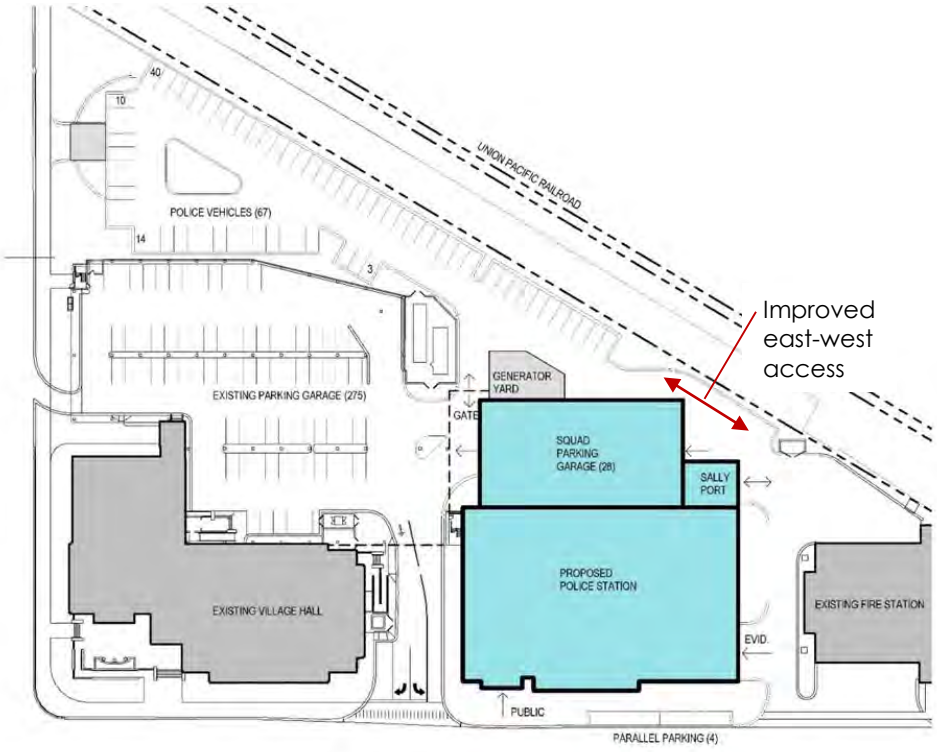
To develop the final concepts, FGM worked with the committee to further refine the layout and look for efficiencies to save space and reduce the budget.

The functional items that dictate the first floor footprint were re-confirmed and the first floor area requirement was determined to be 24,500 square feet, including the Sally Port. The parking garage is an additional 10,360 square feet.

Floor Plan Diagrams and functional relationships of program elements are similar to the previous refined concept with some minor exceptions.

Site Efficiencies

The site was made more efficient by tightening up the Sally Port and making it a back-out in lieu of a pull through. This allowed for east-west access at the north end of the site, greatly improving the flow through the site.



Parking Refinements

The parking solutions were refined. The results of a parking analysis determined that a minimum of 410 spaces are required to serve the needs of the campus, and 430 spaces would be ideal. See Section 4 for additional information.

Parking concepts were refined and some parking options have been incorporated into the final conceptual solutions.

The site plan diagram shows 67 surface parking spaces for police vehicles at the northwest corner of the site. This is a preferred solution because it provides the required number of spaces for police vehicles separate from visitor, commuter, and staff parking. This option provides a total site parking count of 468 spaces, and, requires modifying the existing plaza area, but maintains the existing tower.

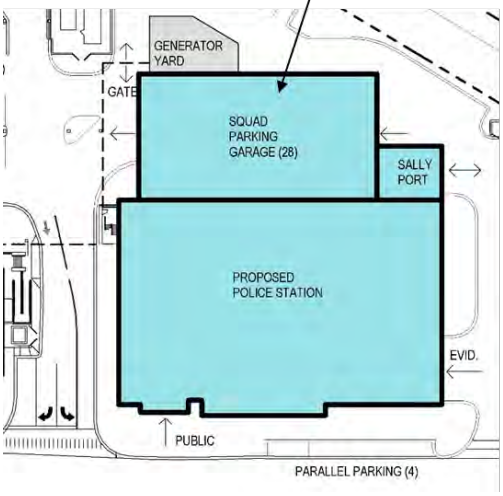
An alternative is to reduce the surface parking to 36 spaces, thereby, reducing the total site parking to 437, but requiring some police vehicles to be intermixed with non-secured parking.
The other optional parking area is the parking deck above the police squad garage which would provide an additional 28 spaces.

Without Additional Surface Parking

With Additional Surface Parking

Options for covered squad parking versus indoor squad parking were also considered. The goal was to provide protected parking for a minimum of 28 patrol vehicles. Given the amount of equipment housed in today's squad vehicles and the need to get out on the street quickly in any weather, it is recommended that an enclosed parking garage be incorporated.

Location of Covered Parking



Partial Site Plan

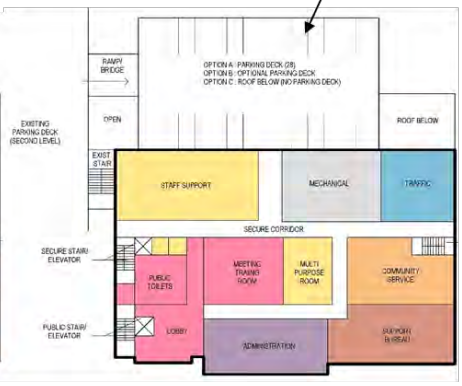
1st Floor Options

- Covered Parking
- Indoor Parking (preferred)

First Floor

2nd Floor Options

- Parking Deck Above Indoor Parking
- Prepare for Future Parking Deck
- No Parking



Second Floor

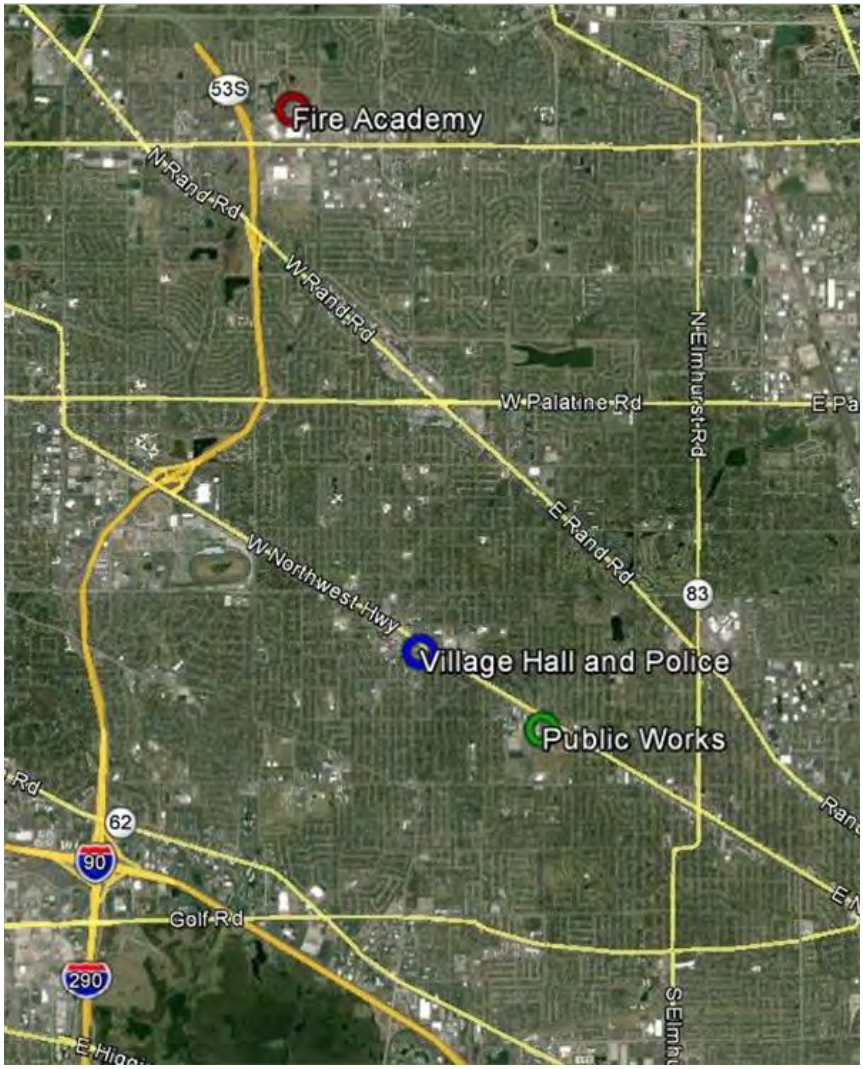
Police staff parking and police visitor parking is accommodated in the existing municipal parking garage and the existing lots on Sigwalt Street.

Off-Site Facilities

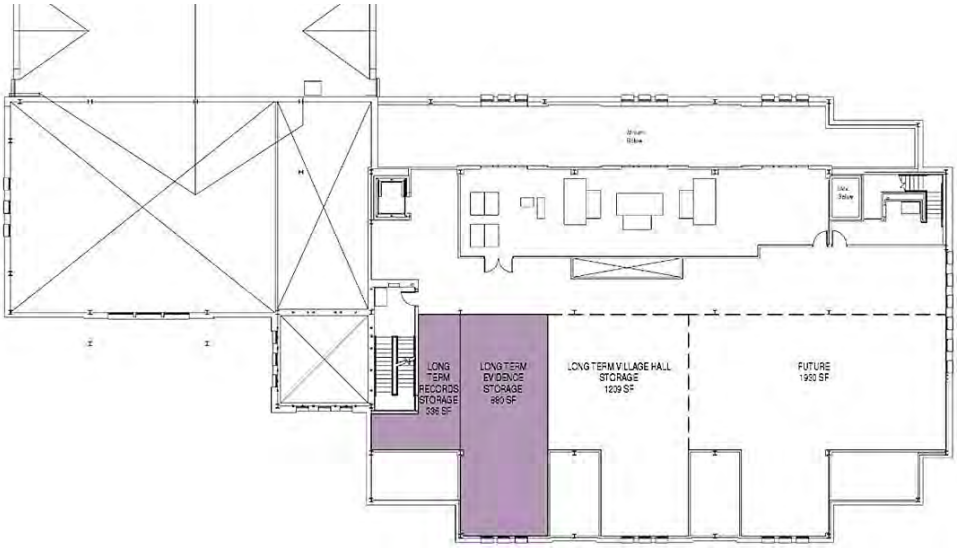
Village owned off- site facilities were identified for potential use by the Police Department. There is approximately 3,600 to 4,000 square feet of space identified in the space needs program that could be relocated to an off-site location that would not significantly impact police operations. By utilizing other Village owned assets, it is possible to reduce the size and cost of the police station.

The off-site facilities evaluated included:

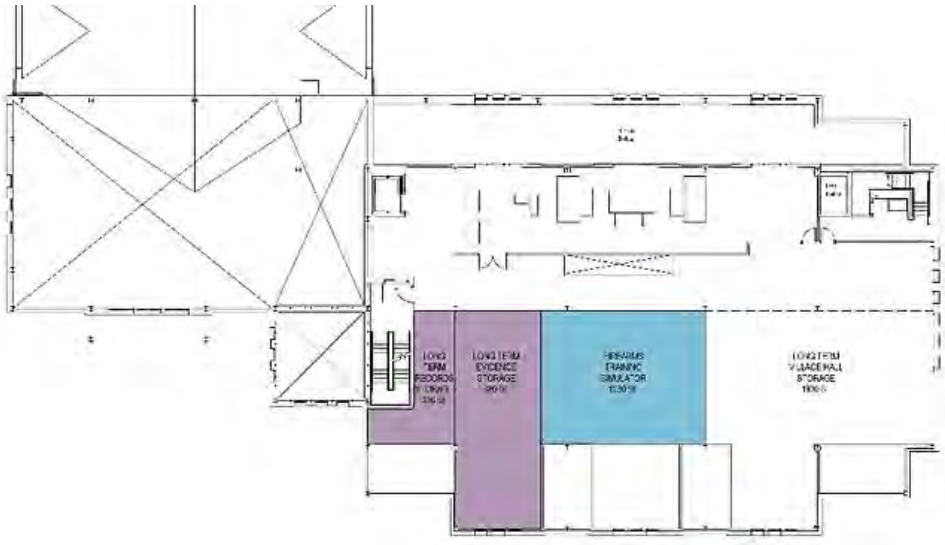
- The 4th Floor of the Village Hall
- Public Works Annex located at Davis and Gregory Streets
- Fire Academy



The fourth floor of the Village Hall was evaluated for even further efficiencies and usage. The fourth floor has approximately 4,500 square feet available. Potential uses included Records Archive storage, Long Term Evidence Storage, and Fire Arms Training Simulator (FATS) which would utilize between 1,200 and 2,200 square feet. Considerations for utilizing this space include access from the police station, noise from training events, and the need for potential future Village Hall growth.



Fourth Floor of Village Hall for Storage



Fourth Floor of Village Hall for Storage and Training

The Fire Academy facility which the Village owns, contains just over 2,000 square feet of available space and already has a vehicle storage bay. The remainder of the facility is currently used by the Park District. Potential uses include Command Vehicle Storage, Archive Storage, and Traffic/Parking Enforcement Storage. Considerations for utilizing this space include the fact that a vehicle storage bay already exists in this location, the distance from the Police Station, and that the Park District also uses this site.

Fire Academy Building

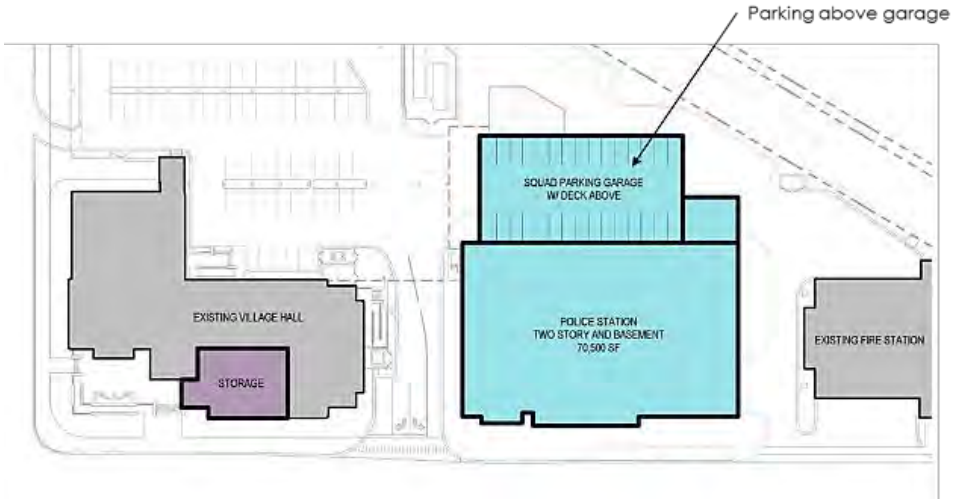
The Public Works Annex site, located at Davis and Gregory was looked at to accommodate a fenced vehicle impound lot large enough for (20) cars. Considerations include site access and security.

Public Works Annex Site

Five Final Site and Building Concepts, Option A through Option E, were developed based on the above efficiencies.

Final Site and Building Concepts

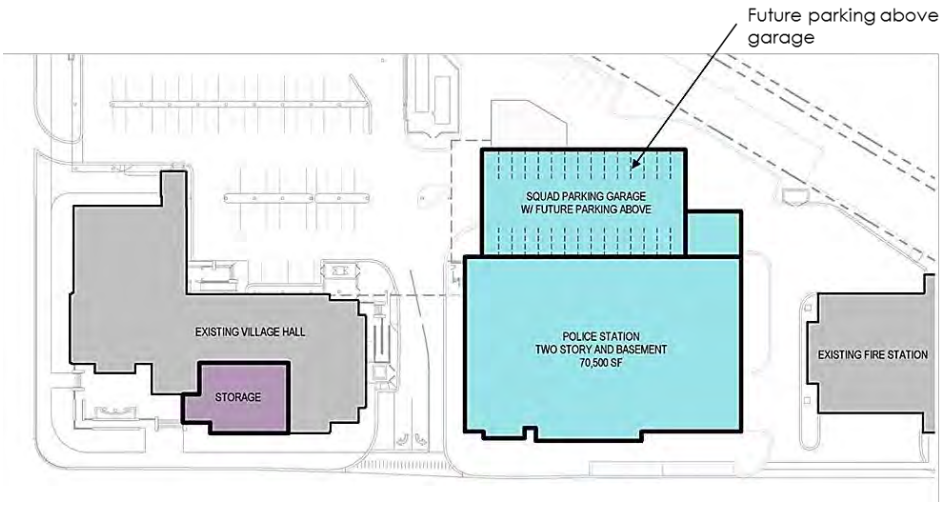
Option A



Option A depicts a 70,500 square foot Police Station which includes a 10, 360 square foot Squad Parking Garage to accommodate (28) vehicles, an open parking deck above the garage for (28) vehicles that would connect to the existing municipal parking deck, use of the 4th floor of the Village Hall for Records Archive Storage and Long Term Evidence Storage. This concept also takes advantage of the Fire Academy facility for Police storage and the Public Works site for the impound lot. Parking for this concept includes between 465 and 496 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

Option A accommodates all the appropriate needs of the Police Department, including all training functions, within the Police Station and takes advantage of other Village assets to accommodate support functions like storage. However, the parking deck above the Squad Parking Garage provides additional parking that is costly and not required to meet the Campus, or Police Department parking needs.

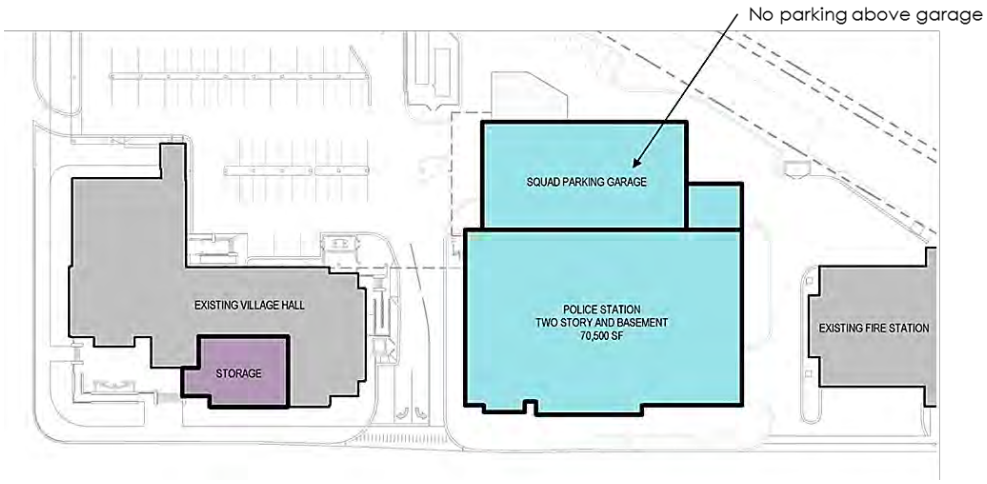
Option B



Option B depicts a 70,500 square foot Police Station which includes a 10, 369 square foot Squad Parking Garage to accommodate (28) vehicles, a **future** open parking deck above the garage for (28) vehicles that would connect to the existing municipal parking deck, use of the 4th floor of the Village Hall for Records Archive Storage and Long Term Evidence Storage. This concept also takes advantage of the Fire Academy facility for Police storage and the Public Works site for the impound lot. Parking for this concept includes between 437 and 468 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

Option B accommodates all the appropriate needs of the Police Department, including all training functions, within the Police Station and takes advantage of other Village assets to accommodate support functions like storage. However, the future parking deck above the Squad Parking Garage adds cost to the project and is not required to meet the Campus, or Police Department parking needs.

Option C (Preferred Option)



Option C is the Committee's preferred and recommended option. It depicts a 70,500 square foot Police Station which includes a 10,369 square foot Squad Parking Garage to accommodate (28) vehicles with **no** parking deck above, use of the 4th floor of the Village Hall for Records Archive Storage and Long Term Evidence Storage. This concept also takes advantage of the Fire Academy facility for Police storage and the Public Works site for the impound lot. Parking for this concept includes between 437 and 468 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

Option C accommodates all the appropriate needs of the Police Department, including all training functions, within the Police Station and takes advantage of other Village assets to accommodate support functions like storage. The solution takes advantage of uniformly stacked floor levels for efficiency of structure and construction. Parking quantities are in line with the established needs for the Campus and the Police Department.

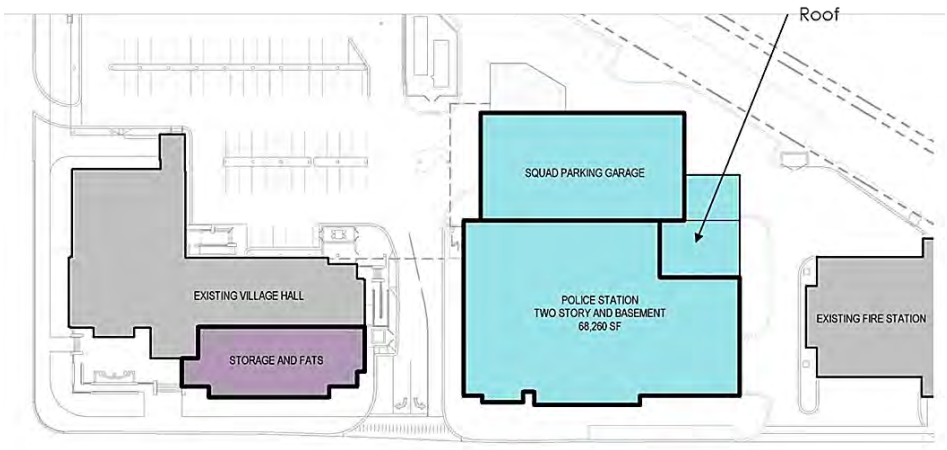
See Section 9 for additional information regarding the recommendation of Option C.

Option D

Option D depicts a 70,500 square foot Police Station, which includes 2,240 square feet of unfinished space for future build-out, a 10, 369 square foot Squad Parking Garage to accommodate (28) vehicles, use of the 4th floor of the Village Hall for Records Archive Storage, Long Term Evidence Storage, and FATS training. This concept also takes advantage of the Fire Academy facility for Police storage and the Public Works site for the impound lot. Parking for this concept includes between 437 and 468 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

Option D accommodates most of the needs of the Police Department, within the Police Station, however, training functions are separated by locating FATS (Fire Arms Training Simulator) in the Village Hall, also creating the potential for noise disruptions to the VH office space below. In order to maintain efficiently stacked floor plates, floor areas that are freed up are designated as unfinished space that can be finished in the future.

Option E



Option E depicts a 68,260 square foot Police Station, which has a reduced second floor area, a 10, 369 square foot Squad Parking Garage to accommodate (28) vehicles, use of the 4th floor of the Village Hall for Records Archive Storage, Long Term Evidence Storage, and FATS training. This concept also takes advantage of the Fire Academy facility for Police storage and at the Public Works site for the impound lot. Parking for this concept includes between 437 and 468 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

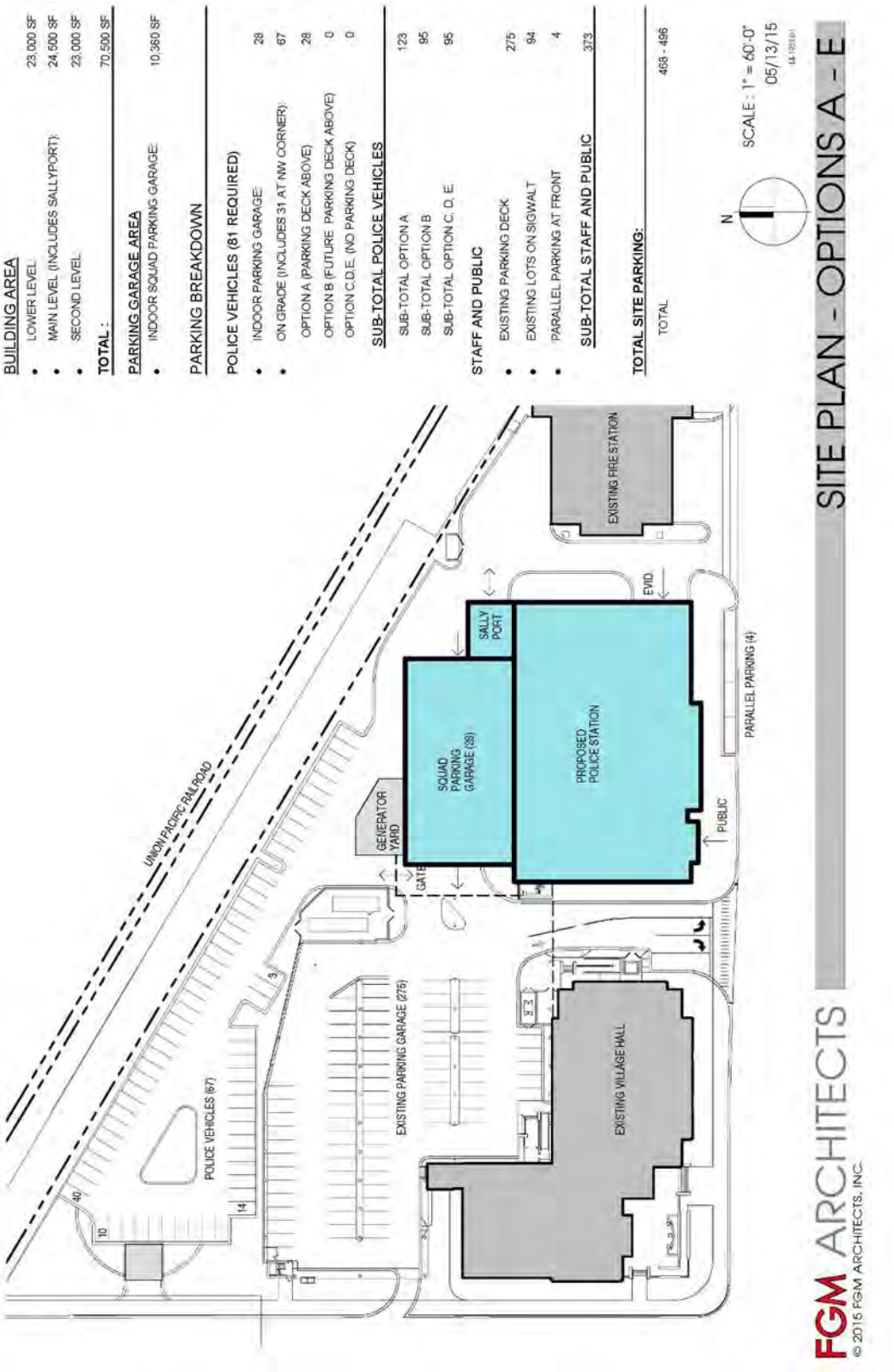
Option E accommodates most of the needs of the Police Department, within the Police Station, however, training functions are separated by locating FATS (Fire Arms Training Simulator) in the Village Hall, also creating the potential for noise disruptions to the VH office space below. Square footage of the building is reduced by, eliminating the freed up areas, however, this minimizes the efficiency of the stacked floor plates.

SECTION 7
FINAL CONCEPTUAL SOLUTIONS - ATTACHMENTS

Following this page are larger scale diagrams for the Final Concepts A-E.

1. Site Plan – Options A-E
2. Main Level Plan – Options A, B, C
3. Second Level Plan – Options A, B, C
4. Lower Level Plan – Options A, B, C
5. Fourth Floor Village Hall Plan – Options A, B, C
6. Main Level Plan – Option D
7. Second Level Plan – Option D
8. Lower Level Plan – Options D
9. Fourth Floor Village Hall Plan – Option D
10. Main Level Plan – Option E
11. Second Level Plan – Option E
12. Lower Level Plan – Options E
13. Fourth Floor Village Hall Plan – Option E
14. Public Works Storage Site Plan
15. Fire Department Training Center Plan

FINAL DRAFT COPY



N

SCALE : 1/32" = 1'-0"
05/13/15

MAIN LEVEL - OPTIONS A,B,C

FGM ARCHITECTS

FINAL DRAFT COPY

SECOND LEVEL - OPTIONS A,B,C,

N

SCALE : 1/32" = 1'-0"
05/13/15

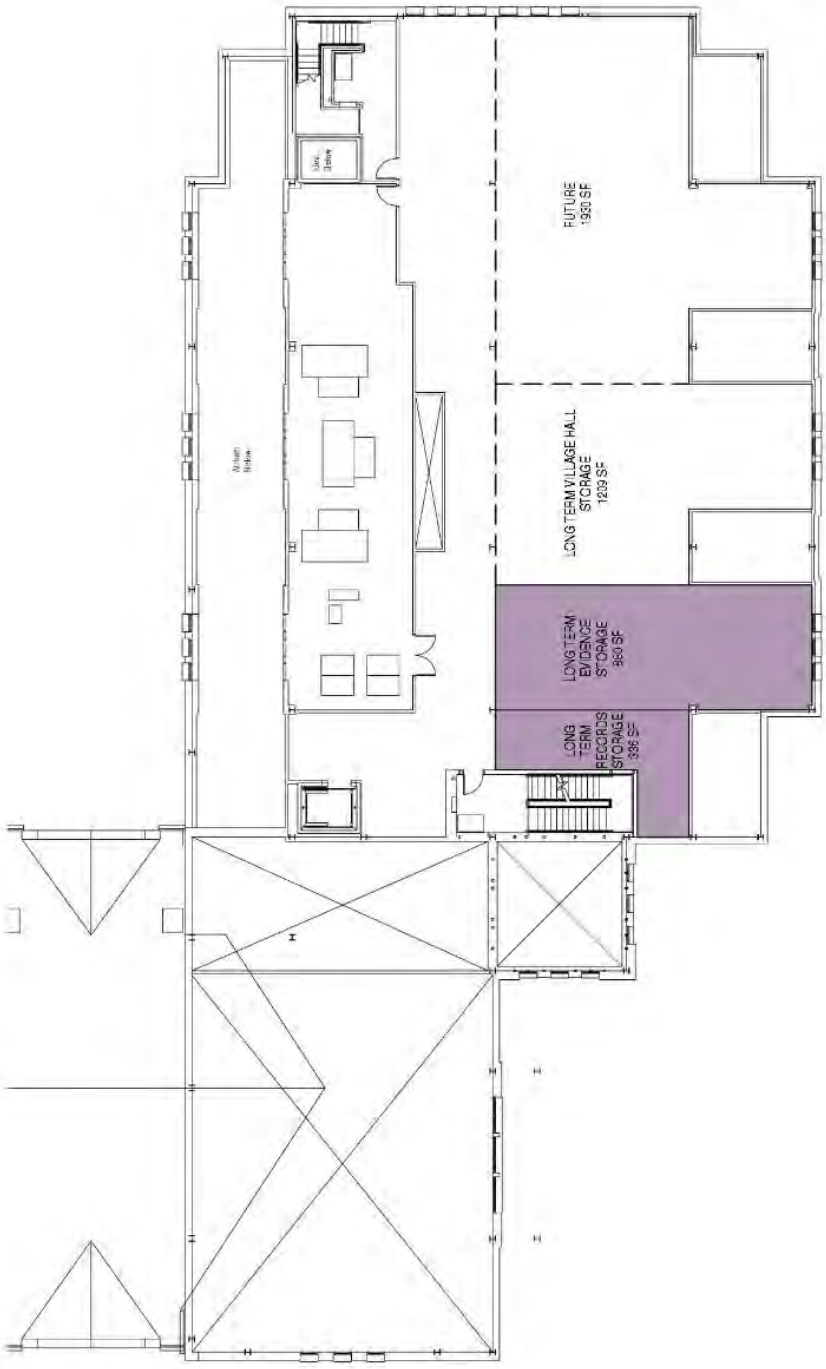
FGM ARCHITECTS

N

SCALE : 1/32" = 1'-0"
05/13/15
14-1933.01

LOWER LEVEL - OPTIONS A,B,C

FGM ARCHITECTS



SCALE : 1/16" = 1'-0"
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FOURTH FLOOR VILLAGE HALL - OPTIONS A,B,C

FGM ARCHITECTS

FINAL DRAFT COPY

N

SCALE : 1/32" = 1'-0"
05/13/15
14-1933.01

MAIN LEVEL - OPTION D

FGM ARCHITECTS

FINAL DRAFT COPY

SECOND LEVEL - OPTION D

N

SCALE : 1/32' = 1'-0"

05/13/15

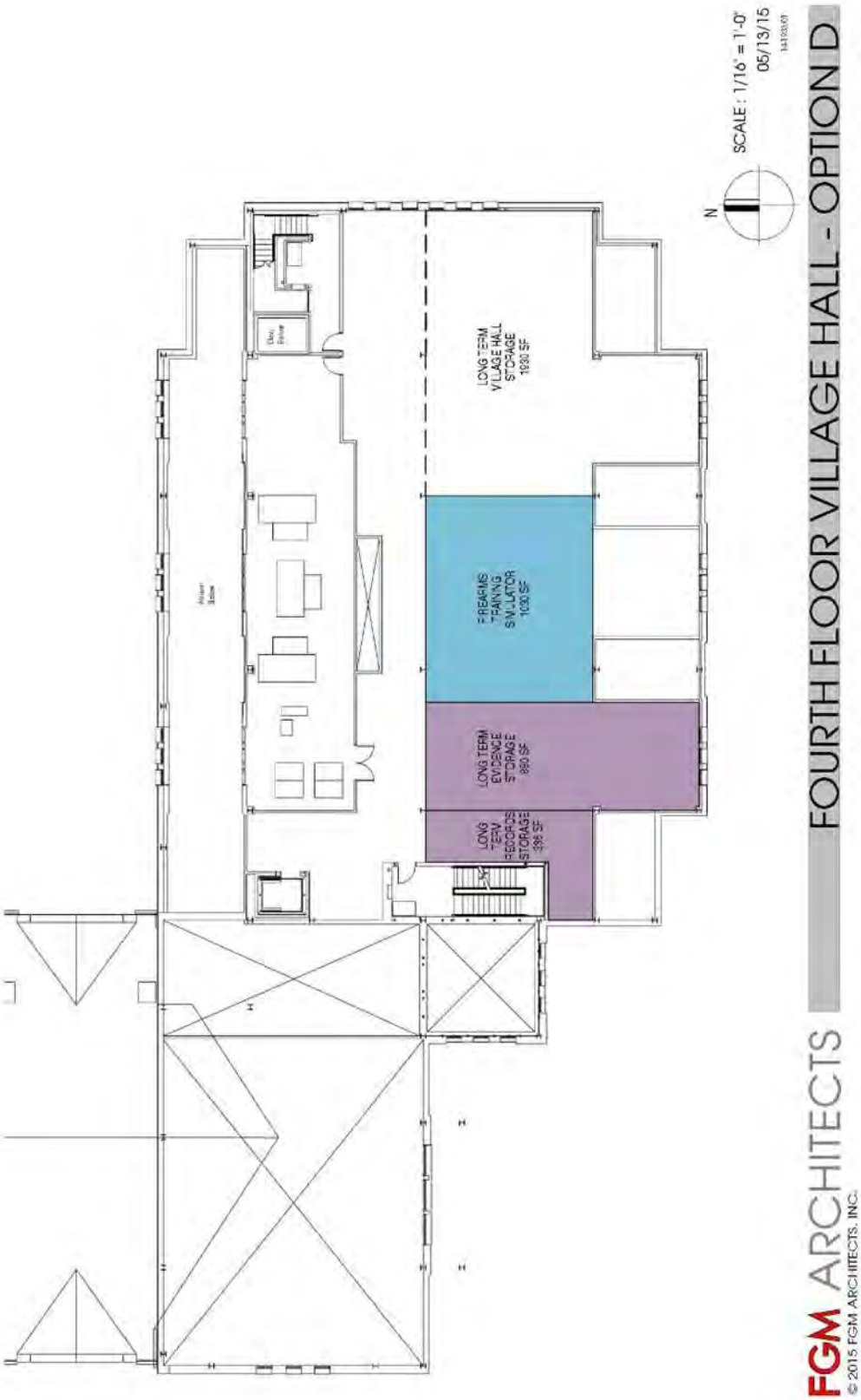
FGM ARCHITECTS

LOWER LEVEL - OPTION D

SCALE : 1/32" = 1'-0"
05/13/15

N

FGM ARCHITECTS


FOURTH FLOOR VILLAGE HALL - OPTION D
SCALE : 1/16' = 1'-0"
05/13/15
N
LONG TERM VILLAGE HALL STORAGE 1930 SF
FIREARMS TRAINING SIMULATOR 1030 SF
LONG TERM EVIDENCE STORAGE 880 SF
LONG TERM RECORDS STORAGE 398 SF
FGM ARCHITECTS
© 2015 FGM ARCHITECTS, INC.

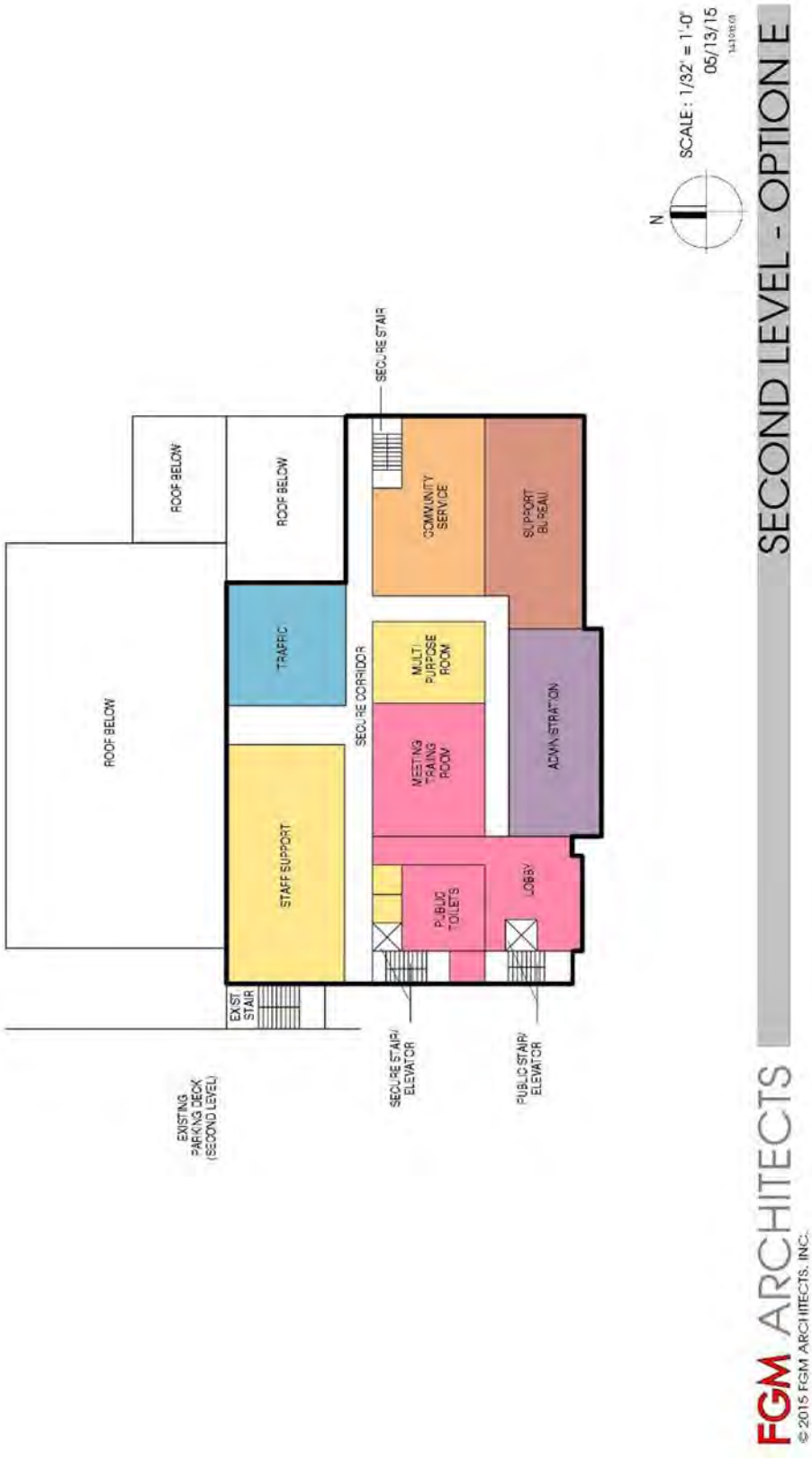
MAIN LEVEL - OPTION E

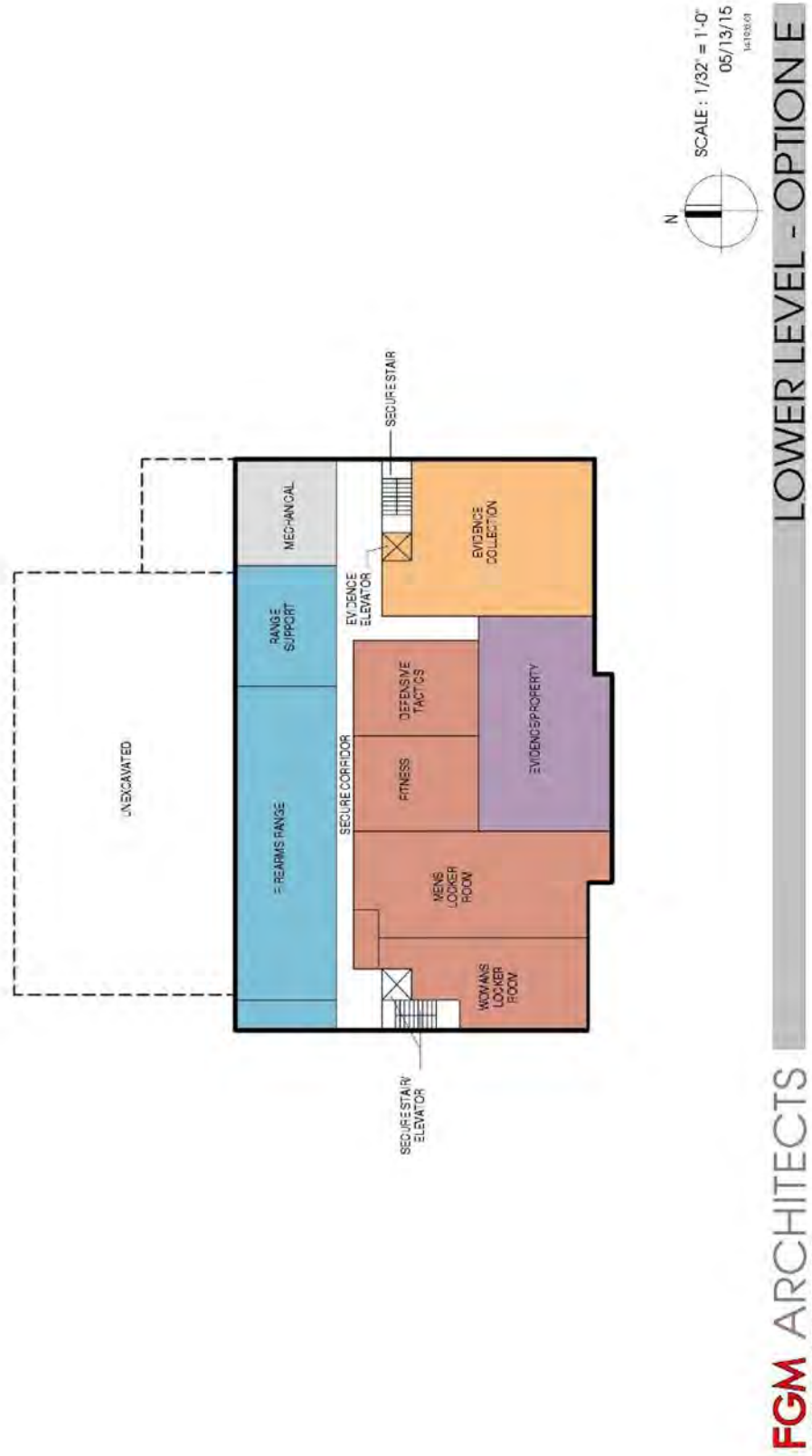
SCALE : 1/32" = 1'-0"
05/13/15

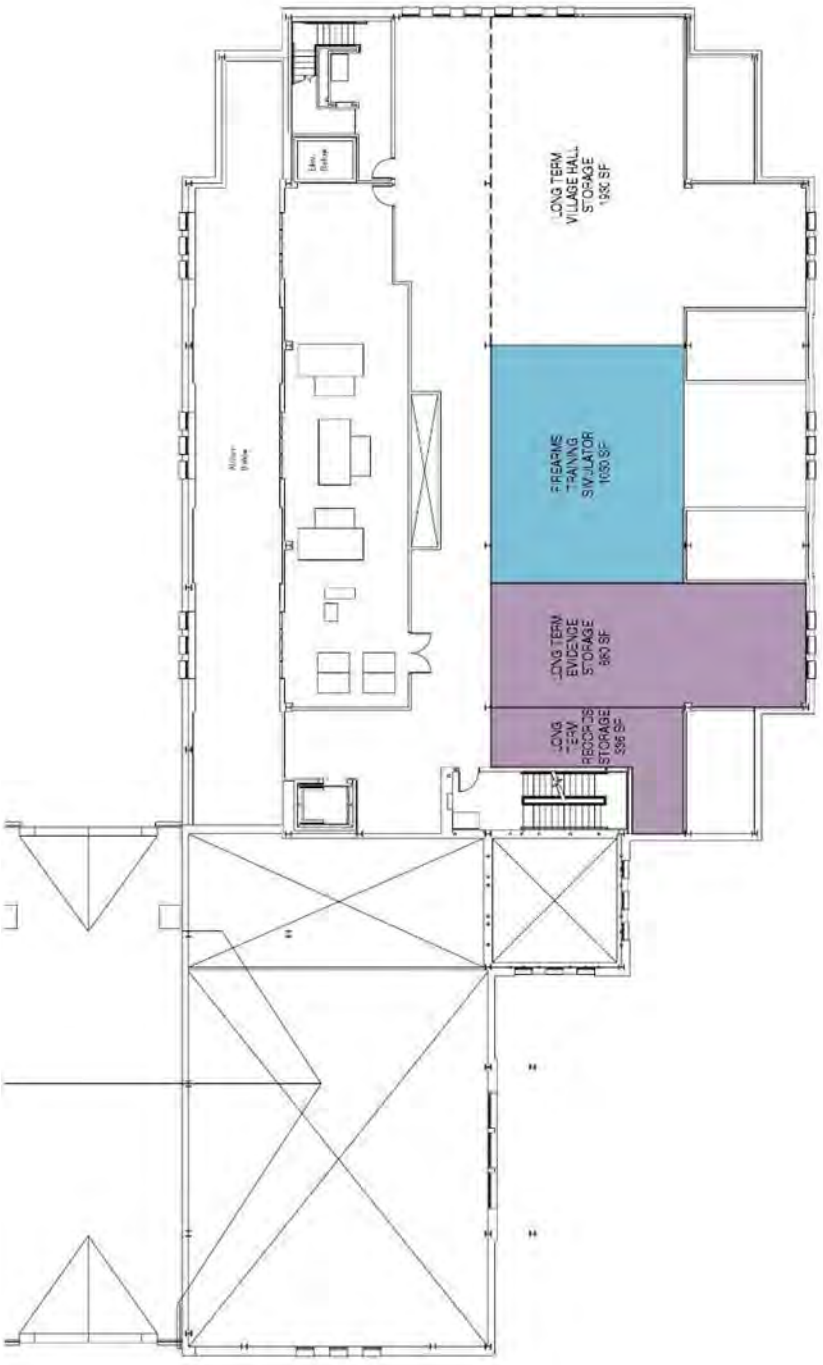
N

FGM ARCHITECTS

FINAL DRAFT COPY




LOWER LEVEL - OPTION E
SCALE : 1/32" = 1'-0"
05/13/15
N
SECURE STAIR
MEP-HVAC
RANGE SUPPORT
EVIDENCE ELEVATOR
EVIDENCE COLLECTION
DEFENSIVE TACTICS
FITNESS
SECURE CORRIDOR
EVIDENCE/PROPERTY
UNEXCAVATED
FIREARMS RANGE
MENS LOCKER ROOM
WOMANS LOCKER ROOM
SECURE STAIR/ ELEVATOR
FGM ARCHITECTS
© 2015 FGM ARCHITECTS, INC.



SCALE : 1/16' = 1'-0"
05/13/15

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FOURTH FLOOR VILLAGE HALL - OPTION E

FGM ARCHITECTS

05/13/15
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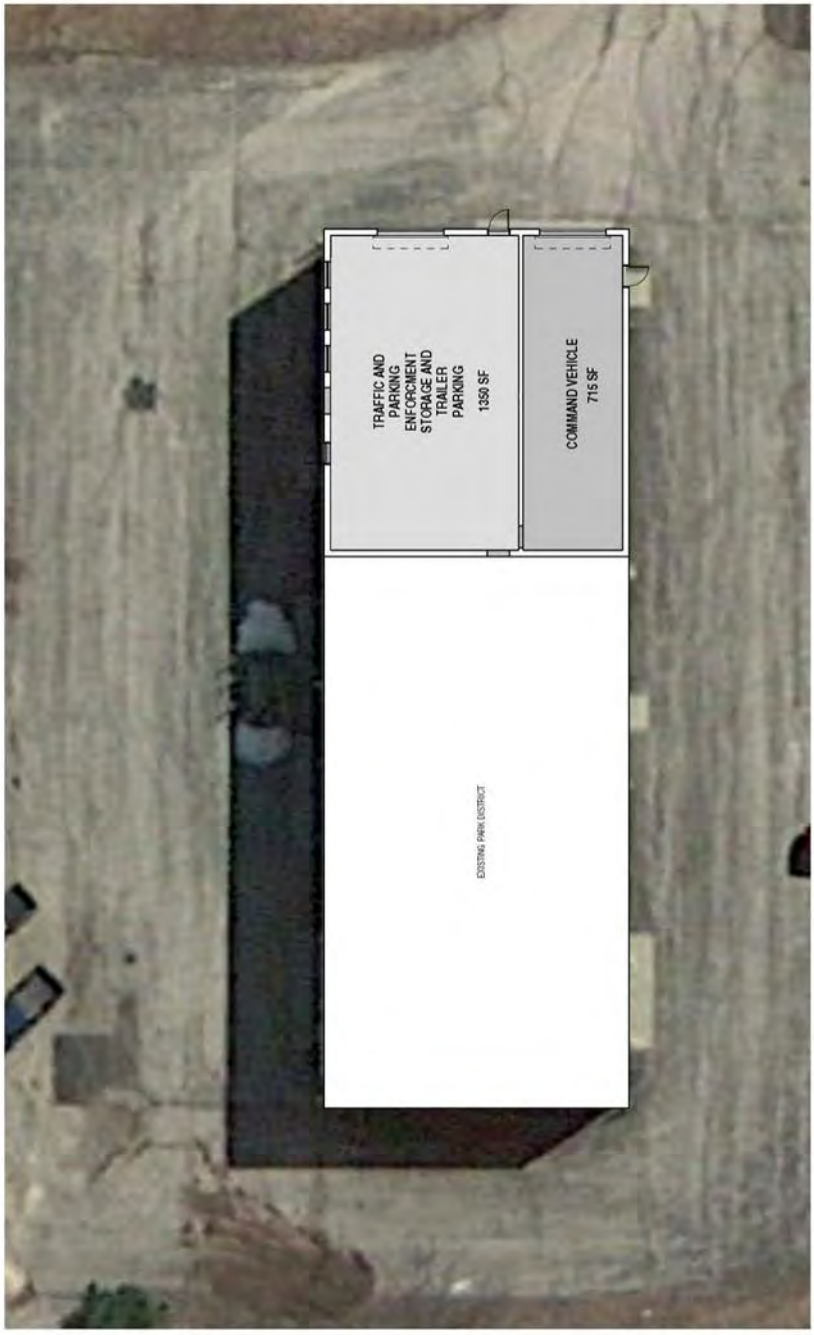
PUBLIC WORKS STORAGE SITE

FGM ARCHITECTS


TRAFFIC AND PARKING ENFORCMENT STORAGE AND TRAILER PARKING
1350 SF
COMMAND VEHICLE
715 SF
EXISTING PARK DISTRICT
N
SCALE : 1/16" = 1'-0"
05/13/15
14-1920.01
FIRE DEPARTMENT TRAINING CENTER
FGM ARCHITECTS
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SECTION 8
PROJECT BUDGETS

Introduction

As part of this study, FGM has provided conceptual budgets for implementation of the project. Costs are based on a good quality municipal structure subject to 365/24/7 use with an appearance that will be complementary to the other buildings on the Municipal Campus without being "overdone" as identified in the project goals.

Budgets for Utilizing Village Owner Assets

In the project goals, the Village is seeking to take advantage of other Village owned assets, i.e.: utilize spaces in the Village Hall for police functions. We reviewed available Village Assets including the Village Hall, Public Works Annex and Fire Academy Building to see how they can be utilized by the Police Department. This is described further in Section 7.

As part of this process, FGM developed budgets to evaluate if converting existing spaces for police use is less costly than building space as part of the new police station. In all proposed concepts, it is less costly to convert the space than to build new space, thus reducing the size of the proposed new police station to be built.

Project Budgets

FGM has an extensive database of cost information and utilized cost per square foot estimates as the budgeting methodology for the conceptual budgets.

Budgets were provided for the following:

- New Police Station on the Municipal Campus (three options)
- Covered Police Vehicle Parking (four options)
- Utilizing the 4th Floor of the Village Hall for Police Functions (three options)
- Police Impound Lot
- Utilizing the Fire Academy for Police Functions
- Costs for a Temporary Police Facility

Costs are based on a Spring 2017 construction start. After Spring 2017, budgets will need to be escalated annually for inflation. Low-High cost ranges have been provided since no actual design work has yet been completed.

For more details, see the Budgets attached to this section.

SECTION 8
PROJECT BUDGETS – BUDGET SUMMARY

Budget Summary

Budgets are provided for the five concepts described in Section 7. A low-high budget range was provided since no actual design work has yet been completed. Utilizing the low-high averages for each option, the conceptual construction budgets varied from $26,492,423 to $28,167,366.

As identified in Section 7, Option C is the recommended option. This concept provides a highly functional facility while taking advantage of utilizing other Village owned assets to reduce the overall construction costs. The low-high average cost for Option C is in the middle of the construction budget cost range for all concepts provided at $27,207,605.

The following is a summation of the construction budgets for each Concept.

Construction Budget Summary

OPTION A	OPTION B	OPTION C Preferred Option	OPTION D	OPTION E
70,500 s.f. Police Station	70,500 s.f. Police Station	70,500 s.f. Police Station	70,500 s.f. Police Station (2,240 s.f. Unfinished)	68,260 s.f. Police Station
10,360 s.f. Indoor Parking w/ Parking Deck Above	10,360 s.f. Indoor Parking w/ Future Parking Above	10,360 s.f. Indoor Parking Garage	10,360 s.f. Indoor Parking Garage	10,360 s.f. Indoor Parking Garage
4th Floor Village Hall for Storage	4th Floor Village Hall for Storage	4th Floor Village Hall for Storage	4th Floor Village Hall for Storage and FATS	4th Floor Village Hall for Storage and FATS
Off-Site Impound Lot	Off-Site Impound Lot	Off-Site Impound Lot	Off-Site Impound Lot	Off-Site Impound Lot
Fire Academy for Police Storage	Fire Academy for Police Storage	Fire Academy for Police Storage	Fire Academy for Police Storage	Fire Academy for Police Storage
CONSTRUCTION BUDGET	**CONSTRUCTION BUDGET**	**CONSTRUCTION BUDGET**	**CONSTRUCTION BUDGET**	**CONSTRUCTION BUDGET**
Low High	Low High	Low High	Low High	Low High
$27,477,057 $29,260,707	$27,301,698 $29,069,299	$26,430,475 $27,984,735	$26,336,103 $27,897,622	$25,731,807 $27,253,040
Average Construction Budget	**Average Construction Budget**	**Average Construction Budget**	**Average Construction Budget**	**Average Construction Budget**
$28,368,882	$28,185,499	$27,207,605	$27,116,862	$26,492,423

SECTION 8
PROJECT BUDGETS – OTHER COSTS

To the construction budgets, other costs need to be incorporated for a projected Total Project Budget. These costs include furniture, fixtures & equipment, moving costs, design fees and contingency funds. Allowances for these costs are as follows:

Other Costs Budget Summary

OPTION A		OPTION B		OPTION C Preferred Option		OPTION D		OPTION E	
Owner Furnished Items (FFE)		**Owner Furnished Items (FFE)**		**Owner Furnished Items (FFE)**		**Owner Furnished Items (FFE)**		**Owner Furnished Items (FFE)**	
Low	High	Low	High	Low	High	Low	High	Low	High
$1,051,000	$1,252,500	$1,051,000	$1,252,500	$1,051,000	$1,252,500	$1,052,000	$1,254,000	$1,052,000	$1,254,000
Fees, Soft Costs, Owner Contingency		**Fees, Soft Costs, Owner Contingency**		**Fees, Soft Costs, Owner Contingency**		**Fees, Soft Costs, Owner Contingency**		**Fees, Soft Costs, Owner Contingency**	
Low	High	Low	High	Low	High	Low	High	Low	High
$2,551,023	$2,793,216	$2,539,169	$2,780,277	$2,488,737	$2,716,337	$2,484,954	$2,712,639	$2,436,761	$2,661,233
Temporary Facility Costs		**Temporary Facility Costs**		**Temporary Facility Costs**		**Temporary Facility Costs**		**Temporary Facility Costs**	
Low	High	Low	High	Low	High	Low	High	Low	High
$1,298,000	$1,534,500	$1,298,000	$1,534,500	$1,298,000	$1,534,500	$1,298,000	$1,534,500	$1,298,000	$1,534,500

SECTION 8
PROJECT BUDGETS - BUDGET COMPARISONS TO OTHER POLICE STATIONS

The Village has a goal of ensuring the new Police Station is not "overdone" and that the project costs are reasonable. One verification method is to compare the estimated construction costs to other police stations with similar size departments. While no two projects are the same, this comparison allows the Village to view how anticipated project costs compare to their peers. To perform this comparison, we utilized published data from construction industry sources to establish inflation multipliers so construction costs can be compared fairly.

Construction Cost Comparison

Project	Bid Date	Construction Cost	Inflation Multiplier	Adjusted Cost	Notes
Palatine Police Station ***	May-10	$18,840,955	27%	**$23,928,013**	70,524 s.f. with 20,160 s.f. garage
Hoffman Estates Police Station	Sep-08	$21,477,503	29%	**$27,705,979**	64,105 s.f. with 15,000 s.f. garage
Elk Grove Police Station	Oct-07	$21,200,000	37%	**$29,044,000**	85,535 with 23,000 s.f. garage
Glenview Police Station	Aug-04	$19,359,315	58%	**$30,587,718**	84,152 s.f. with 19,400 s.f. garage
Skokie Police Station (renovation)	May-09	$21,756,486	26%	**$27,413,172**	79,318 s.f. with 12,600 s.f. garage
Arlington Heights Police Station	2017			**$27,207,605**	70,500 s.f. with 10,360 s.f. garage

Notes

***Bid in the height of the recession, construction cost was extremely low due to bidding climate

Construction Inflation Multipliers were derived from data published by Engineering News Record, Mortenson Construction and Gilbane Building Co.

Project Budgets are based on a Spring 2017 construction start date.

This analysis shows the conceptual construction budget for the proposed Arlington Heights Police Station is very much in line with the cost of other police stations constructed in the area.

SECTION 8
PROJECT BUDGETS - BUDGET COMPARISON TO 2009 STUDY

A project goal that was established by the Village is the project cost needs to be lower than the project identified in 2010. The budgets established for the police station in 2010 are as follows:

Conceptual low-high budget range for the project presented in 2010:	$33,515,284 - $39,573,781
The low-high average of the budget range adjusted for inflation - 2010 – 2017 (± 3% per year):	**$45,090,321**

The 2010 budgets included a parking deck at a cost range of $1,981,000 - $2,330,000, but did not include the police impound lot.

Comparison to Option C Budget

When the 2010 project is compared to the recommended Option C Budget, we find that there is a significant cost savings.

	Low	High
Option C Construction Budget:	$26,430,475	$27,984,735
Other Costs necessary for the Total Project Budget for Option C:	$4,837,737	$5,503,337

Summary of Cost Saving Measures

The project goal of reducing the costs for the project has been achieved, even taking into account construction inflation that has occurred since the 2010 study was completed. There were many factors that led to the cost reductions. They include many adjustments by the Police Department for increased space requirement efficiencies, and seeking alternative solutions such as utilizing other Village owned assets to reduce costs. A summation of cost saving measures includes:

1. Size of Police Station was reduced by 3,810 s.f.
   - Use of more shared spaces
   - Reorganized Departments
2. Able to use the existing site – no land acquisition required
3. By conducting a through parking analysis, it was determined that we can utilize the existing available parking
4. Efficient building design – simple stacking of floor levels
5. Utilize other Village owned assets which can be remodeled at a lower cost than new construction
   - 4th Floor of Village Hall
   - Fire Academy
   - Public Works Site at Davis and Gregory

SECTION 8
PROJECT BUDGET ATTACHMENTS – NEW POLICE STATION

Following this page are the conceptual project budgets for the proposed new police station and covered/indoor parking options

Police Station

1. Conceptual Budget for New 70,500 S.f. Police Station on Municipal Campus OPTIONS A, B & C — Pages 1-2

2. Conceptual Budget for New 68,260 S.f. Police Station with 2,240 S.f. Unfinished Space OPTION D — Pages 1-2

3. Conceptual Budget for New 68,260 S.f. Police Station on Municipal Campus OPTIONS E — Pages 1-2

Covered/Indoor Parking

1. Conceptual Budgets - Covered/Indoor Parking Options — Pages 1-2

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

Conceptual Budget for New 70,500 Sq. Ft. Police Station on Municipal Campus - OPTION A, B & C

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**POLICE STATION**							
2	**Site Preparation**							
3	Environmental Abatement		s.f.	allow	allow	$ 95,000	$ 105,000	Asbestos and lead abatement
4	Building Demolition	37,435	s.f.	$ 6.50	$ 7.50	$ 243,328	$ 280,763	Demolish building complete including foundations
5	**Site Preparation Sub-Total**					$ 338,328	$ 385,763	
6	**Construction**							
7	New Police Station Construction	70,500	s.f.	$ 285	$ 300	$ 20,092,500	$ 21,150,000	Includes Security and Audio Visual Systems
8	**Construction Sub-Total**					**$ 20,430,828**	**$ 21,535,763**	
9	**Escalation (9%)**					$ 1,838,774	$ 1,938,219	Assume construction beginning in Spring 2017
10	**Total Police Station Construction Costs**					**$ 22,269,602**	**$ 23,473,981**	
11	**Design and Pricing Contingency (5%)**					$ 1,113,480	$ 1,173,699	
12	**Construction Contingency (5%)**					$ 1,113,480	$ 1,173,699	
13	**Total Police Station Construction Budget**					**$ 24,496,562**	**$ 25,821,379**	
14	**Allowances for Items to be Purchased by the Village**							
15	Furniture and Equipment					$ 700,000	$ 800,000	Includes window treatments
16	Training Equipment					$ -	$ -	Provided by Owner
17	Computer Systems					$ 150,000	$ 200,000	
18	Wireless Network System					$ 30,000	$ 40,000	
19	Maintenance/Janitorial Equipment					$ 8,000	$ 10,000	
20	Telephone System					$ 60,000	$ 75,000	
21	Wireless Telephone Boosters/Amplifiers					$ 50,000	$ 60,000	
22	Miscellaneous Equipment and Furnishings					$ 10,000	$ 15,000	For items such as art, plants, bond safe, etc.
23	**Total Allowances for Items to be Purchased by the Village**					$ 1,008,000	$ 1,200,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees (7.25%)					$ 1,776,001	$ 1,872,050	Incl. civil, security and landscape design
26	Furnishings Design Fee					$ 50,000	$ 60,000	Design, bidding and project management
27	Surveys & Soil Investigations					$ 15,000	$ 20,000	
28	Material Testing During Construction					$ 25,000	$ 30,000	
29	Building Commissioning					$ 30,000	$ 40,000	
30	Printing Costs					$ 20,000	$ 25,000	
31	Utility Company Charges (Electric, Gas, Telephone)					$ 30,000	$ 40,000	
32	Moving Costs					$ 40,000	$ 50,000	Moving from temporary facility

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

Conceptual Budget for New 70,500 Sq. Ft. Police Station on Municipal Campus - OPTION A, B & C

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
33	Utility costs during construction					$ 15,000	$ 20,000	
34	**Total Allowances for Fees and Soft Costs**					$ 2,001,001	$ 2,157,050	
35	**Owner's Contingency**					$ 300,900	$ 335,705	10% of Allowances
36	**TOTAL POLICE STATION BUDGET**					**$ 28,919,943**	**$ 30,687,833**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 06.24.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for New 70,500 Sq. Ft. Police Station with 2,240 Sq. Ft. Unfinished Space - OPTION D

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**POLICE STATION**							
2	**Site Preparation**							
3	Environmental Abatement		s.f.	allow	allow	$ 95,000	$ 105,000	Asbestos and lead abatement
4	Building Demolition	37,435	s.f.	$ 6.50	$ 7.50	$ 243,328	$ 280,763	Demolish building complete including foundations
5	**Site Preparation Sub-Total**					$ 338,328	$ 385,763	
6	**Construction**							
7	New Police Station Construction	68,260	s.f.	$ 285	$ 300	$ 19,454,100	$ 20,478,000	Includes Security and Audio Visual Systems
	Shell Space	2,240	s.f.	$ 225	$ 240	$ 504,000	$ 537,600	Provide shell space for future build-out on 2nd Floor
	Construction Sub-Total					$ 19,958,100	$ 21,015,600	
8	**Construction Sub-Total**					**$ 20,296,428**	**$ 21,401,363**	
9	**Escalation (9%)**					$ 1,826,678	$ 1,926,123	Assume construction beginning in Spring 2016
10	**Total Police Station Construction Costs**					**$ 22,123,106**	**$ 23,327,485**	
11	**Design and Pricing Contingency (5%)**					$ 1,106,155	$ 1,166,374	
12	**Construction Contingency (5%)**					$ 1,106,155	$ 1,166,374	
13	**Total Police Station Construction Budget**					**$ 24,335,417**	**$ 25,660,234**	
14	**Allowances for Items to be Purchased by the Village**							
15	Furniture and Equipment					$ 700,000	$ 800,000	Includes window treatments
16	Training Equipment					$ -	$ -	Provided by Owner
17	Computer Systems					$ 150,000	$ 200,000	
18	Wireless Network System					$ 30,000	$ 40,000	
19	Maintenance/Janitorial Equipment					$ 8,000	$ 10,000	
20	Telephone System					$ 60,000	$ 75,000	
21	Wireless Telephone Boosters/Amplifiers					$ 50,000	$ 60,000	
22	Miscellaneous Equipment and Furnishings					$ 10,000	$ 15,000	For items such as art, plants, bond safe, etc.
23	**Total Allowances for Items to be Purchased by the Village**					$ 1,008,000	$ 1,200,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees (7.25%)					$ 1,764,318	$ 1,860,367	Incl. civil, security and landscape design
26	Furnishings Design Fee					$ 50,000	$ 60,000	Design, bidding and project management
27	Surveys & Soil Investigations					$ 15,000	$ 20,000	
28	Material Testing During Construction					$ 25,000	$ 30,000	
29	Building Commissioning					$ 30,000	$ 40,000	
30	Printing Costs					$ 20,000	$ 25,000	

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for New 70,500 Sq. Ft. Police Station with 2,240 Sq. Ft. Unfinished Space - OPTION D

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
31	Utility Company Charges (Electric, Gas, Telephone)					$ 30,000	$ 40,000	
32	Moving Costs					$ 40,000	$ 50,000	Moving from temporary facility
33	Utility costs during construction					$ 15,000	$ 20,000	
34	**Total Allowances for Fees and Soft Costs**					$ 1,989,318	$ 2,145,367	
35	**Owner's Contingency**					$ 299,732	$ 334,537	10% of Allowances
36	**TOTAL POLICE STATION BUDGET**					**$ 27,632,466**	**$ 29,340,137**	
37	**LEED SILVER CERTIFICATION OPTION**							
38	Additional Construction Costs	68,260	s.f.	$ 9	$ 11	$ 614,340	$ 750,860	
39	LEED Certification Fees					$ 4,000	$ 4,000	
40	Architectural and Engineering Fees					$ 65,000	$ 75,000	
41	Energy Modeling Fees					$ 22,000	$ 25,000	
42	Enhanced Commissioning Fee Increase					$ 35,000	$ 40,000	
43	Contingency (10%)					$ 74,034	$ 89,486	
44	**LEED Silver Certification Option**					**$ 814,374**	**$ 984,346**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.

Project Budgets are based on a Spring 2017 construction start date.

Project Budgets do not include legal fees or financing costs.

Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 06.24.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

Conceptual Budget for New 68,260 Sq. Ft. Police Station on Municipal Campus - OPTION E

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**POLICE STATION**							
2	**Site Preparation**							
3	Environmental Abatement		s.f.	allow	allow	$ 95,000	$ 105,000	Asbestos and lead abatement
4	Building Demolition	37,435	s.f.	$ 6.50	$ 7.50	$ 243,328	$ 280,763	Demolish building complete including foundations
5	**Site Preparation Sub-Total**					$ 338,328	$ 385,763	
6	**Construction**							
7	New Police Station Construction	68,260	s.f.	$ 285	$ 300	$ 19,454,100	$ 20,478,000	Includes Security and Audio Visual Systems
8	**Construction Sub-Total**					**$ 19,792,428**	**$ 20,863,763**	
9	**Escalation (9%)**					$ 1,781,318	$ 1,877,739	Assume construction beginning in Spring 2016
10	**Total Police Station Construction Costs**					**$ 21,573,746**	**$ 22,741,501**	
11	**Design and Pricing Contingency (5%)**					$ 1,078,687	$ 1,137,075	
12	**Construction Contingency (5%)**					$ 1,078,687	$ 1,137,075	
13	**Total Police Station Construction Budget**					**$ 23,731,121**	**$ 25,015,651**	
14	**Allowances for Items to be Purchased by the Village**							
15	Furniture and Equipment					$ 700,000	$ 800,000	Includes window treatments
16	Training Equipment					$ -	$ -	Provided by Owner
17	Computer Systems					$ 150,000	$ 200,000	
18	Wireless Network System					$ 30,000	$ 40,000	
19	Maintenance/Janitorial Equipment					$ 8,000	$ 10,000	
20	Telephone System					$ 60,000	$ 75,000	
21	Wireless Telephone Boosters/Amplifiers					$ 50,000	$ 60,000	
22	Miscellaneous Equipment and Furnishings					$ 10,000	$ 15,000	For items such as art, plants, bond safe, etc.
23	**Total Allowances for Items to be Purchased by the Village**					$ 1,008,000	$ 1,200,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees (7.25%)					$ 1,720,506	$ 1,813,635	Incl. civil, security and landscape design
26	Furnishings Design Fee					$ 50,000	$ 60,000	Design, bidding and project management
27	Surveys & Soil Investigations					$ 15,000	$ 20,000	
28	Material Testing During Construction					$ 25,000	$ 30,000	
29	Building Commissioning					$ 30,000	$ 40,000	
30	Printing Costs					$ 20,000	$ 25,000	
31	Utility Company Charges (Electric, Gas, Telephone)					$ 30,000	$ 40,000	
32	Moving Costs					$ 40,000	$ 50,000	Moving from temporary facility

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

Conceptual Budget for New 68,260 Sq. Ft. Police Station on Municipal Campus - OPTION E

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
33	Utility costs during construction					$ 15,000	$ 20,000	
34	**Total Allowances for Fees and Soft Costs**					$ 1,945,506	$ 2,098,635	
35	**Owner's Contingency**					$ 295,351	$ 329,863	10% of Allowances
36	**TOTAL POLICE STATION BUDGET**					**$ 26,979,977**	**$ 28,644,149**	
37	**LEED SILVER CERTIFICATION OPTION**							
38	Additional Construction Costs	68,260	s.f.	$ 9	$ 11	$ 614,340	$ 750,860	
39	LEED Certification Fees					$ 4,000	$ 4,000	
40	Architectural and Engineering Fees					$ 65,000	$ 75,000	
41	Energy Modeling Fees					$ 22,000	$ 25,000	
42	Enhanced Commissioning Fee Increase					$ 35,000	$ 40,000	
43	Contingency (10%)					$ 74,034	$ 89,486	
44	**LEED Silver Certification Option**					**$ 814,374**	**$ 984,346**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 06.24.15

Village of Arlington Heights
Police Department

Conceptual Budgets - Covered/Indoor Parking Options

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit		Construction Cost		Remarks
				Low	High	Low	High	
1	**INDOOR PARKING OPTIONS**							
2	**COVERED PARKING OPTION**							
3	Covered Parking	10,360	s.f.	$ 53	$ 68	$ 549,080	$ 704,480	
4	Escalation (9%)					$ 49,417	$ 63,403	
5	Construction Cost					$ 598,497	$ 767,883	
6	Design and Pricing Contingency (10%)					$ 59,850	$ 76,788	
7	Total Construction Budget					**$ 658,347**	**$ 844,672**	
8	Architectural and Engineering Fees (7.25%)					$ 49,376	$ 63,350	
9	**Covered Parking Option**					**$ 707,723**	**$ 908,022**	
10	**INDOOR PARKING GARAGE OPTION**							
11	Parking Garage	10,360	s.f.	$ 139	$ 154	$ 1,440,040	$ 1,595,440	
12	Escalation (9%)					$ 129,604	$ 143,590	
13	Construction Cost					$ 1,569,644	$ 1,739,030	
14	Design and Pricing Contingency (10%)					$ 156,964	$ 173,903	
15	Total Construction Budget					**$ 1,726,608**	**$ 1,912,933**	
16	Architectural and Engineering Fees (7.25%)					$ 125,179	$ 138,688	
17	**Indoor Parking Garage Option**					**$ 1,851,787**	**$ 2,051,620**	
18	**INDOOR PARKING GARAGE WITH PARKING DECK OPTION**							
19	Enclosed Parking Garage	10,360	s.f.	$ 139	$ 154	$ 1,440,040	$ 1,595,440	
20	Open Parking Above Garage	10,360	s.f.	$ 58	$ 73	$ 600,880	$ 756,280	Additional costs for parking deck above garage
21	Connection to Existing Parking Deck	832	s.f.	$ 139	$ 154	$ 115,648	$ 128,128	
22	Sub-Total					$ 2,156,568	$ 2,479,848	
23	Escalation (9%)					$ 194,091	$ 223,186	
24	Construction Cost					$ 2,350,659	$ 2,703,034	
25	Design and Pricing Contingency (10%)					$ 235,066	$ 270,303	
26	Total Construction Budget					**$ 2,585,725**	**$ 2,973,338**	
27	Architectural and Engineering Fees (7.25%)					$ 187,465	$ 215,567	
28	**Indoor Parking Garage with Parking Deck Option**					**$ 2,773,190**	**$ 3,188,905**	
29	**INDOOR PARKING GARAGE PREPARED FOR FUTURE PARKING DECK ABOVE OPTION**							
30	Enclosed Parking Garage	10,360	s.f.	$ 139	$ 154	$ 1,440,040	$ 1,595,440	
31	Open Parking Above Garage	10,360	s.f.	$ 56	$ 71	$ 580,160	$ 735,560	Costs for parking deck above without lighting
32	Sub-Total					$ 2,020,200	$ 2,331,000	
33	Escalation (9%)					$ 181,818	$ 209,790	
34	Construction Cost					$ 2,202,018	$ 2,540,790	
35	Design and Pricing Contingency (10%)					$ 220,202	$ 254,079	
36	Total Construction Budget					**$ 2,422,220**	**$ 2,794,869**	

Arlington Heights Police Station Conceptual Budget

Page 1 of 2

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Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

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Conceptual Budgets - Covered/Indoor Parking Options

	Item	Quantity	Unit	Cost/Unit		Construction Cost		Remarks
				Low	High	Low	High	
37	Architectural and Engineering Fees (7.25%)					$ 175,611	$ 202,628	
38	**Indoor Parking Garage with Parking Deck Option**					**$ 2,597,831**	**$ 2,997,497**	
	Notes:							
	Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.							
	Project Budgets are preliminary and are based on historical square foot cost information.							
	Project Budgets are based on a Spring 2017 construction start date.							
	Project Budgets do not include legal fees or financing costs.							
	Construction Costs are based utilizing a Construction Management project delivery method.							
	Arlington Heights Police Conceptual Budget 04.15.15							

Arlington Heights Police Station Conceptual Budget

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SECTION 8
PROJECT BUDGET ATTACHMENTS – VILLAGE OWNED ASSETS

Following this page are the conceptual project budgets for converting other Village owned assets for police department use.

Village Hall - 4th Floor

1. Conceptual Budget for 4th Floor
   Village Hall Buildout
   OPTIONS A, B & C — Page 1

2. Conceptual Budget 4th Floor
   Village Hall Buildout
   OPTIONS D & E — Page 1

Public Works Annex

1. Conceptual Budget for Police Impound Lot
   at Davis Street and Gregory Street — Page 1

Fire Academy Building

1. Conceptual Budget for Adapting Fire Academy
   for Police Department Storage — Page 1

Village of Arlington Heights
Police Department

FGM ARCHITECTS

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Conceptual Budget for 4th Floor Village Hall Buildout - OPTIONS A, B & C

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Village Hall - 4th Floor Buildout - A&B**							
2	**Construction**							
3	Build-Out	1,220	s.f.	$ 25	$ 30	$ 30,500	$ 36,600	
4	**Construction Sub-Total**					**$ 30,500**	**$ 36,600**	
5	**Escalation (9%)**					$ 2,745	$ 3,294	Assume construction beginning in Spring 2017
6	**Total Construction Costs Village Hall - 4th Floor Buildout**					**$ 33,245**	**$ 39,894**	
7	**Design and Pricing Contingency (10%)**					$ 3,325	$ 3,989	
8	**Construction Contingency (10%)**					$ 3,325	$ 3,989	
9	**Total Construction Budget Village Hall - 4th Floor Buildout**					**$ 39,894**	**$ 47,873**	
10	**Allowances for Items to be Purchased by the Village**							
11	Furniture and Equipment					$ 30,000	$ 35,000	Storage shelving
12	Training Equipment					$ -	$ -	Provided by Owner
13	Wireless Network System					$ -	$ -	Provided by Owner
14	Telephone System					$ 1,000	$ 1,500	
15	Wireless Telephone Boosters/Amplifiers					$ -	$ -	Provided by Owner
16	**Total Allowances for Items to be Purchased by the Village**					$ 31,000	$ 36,500	
17	**Allowances for Items Fees and Soft Costs**							
18	Architectural and Engineering Fees					$ 7,979	$ 9,575	
19	Printing Costs					$ 2,000	$ 4,000	
20	Moving Costs					$ 5,000	$ 10,000	
21	**Total Allowances for Fees and Soft Costs**					$ 14,979	$ 23,575	
22	**Owner's Contingency**					$ 6,897	$ 9,011	15% of Allowances
23	**TOTAL PROJECT BUDGET**					**$ 92,770**	**$ 116,959**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2016 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

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Conceptual Budget 4th Floor Village Hall Buildout - OPTIONS D & E

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Village Hall - 4th Floor Buildout - D&E**							
2	**Construction**							
3	Build-Out	2,330	s.f.	$ 35	$ 40	$ 81,550	$ 93,200	
4	**Construction Sub-Total**					**$ 81,550**	**$ 93,200**	
5	**Escalation (9%)**					$ 7,340	$ 8,388	Assume construction beginning in Spring 2017
6	**Total Construction Costs Village Hall - 4th Floor Buildout**					**$ 88,890**	**$ 101,588**	
7	**Design and Pricing Contingency (10%)**					$ 8,889	$ 10,159	
8	**Construction Contingency (10%)**					$ 8,889	$ 10,159	
9	**Total Construction Budget Village Hall - 4th Floor Buildout**					**$ 106,667**	**$ 121,906**	
10	**Allowances for Items to be Purchased by the Village**							
11	Furniture and Equipment					$ 30,000	$ 35,000	Storage shelving
12	Training Equipment					$ -	$ -	Provided by Owner
13	Wireless Network System					$ -	$ -	Provided by Owner
14	Telephone System					$ 2,000	$ 3,000	
15	Wireless Telephone Boosters/Amplifiers					$ -	$ -	Provided by Owner
16	**Total Allowances for Items to be Purchased by the Village**					$ 32,000	$ 38,000	
17	**Allowances for Items Fees and Soft Costs**							
18	Architectural and Engineering Fees					$ 7,733	$ 8,838	
19	Printing Costs					$ 5,000	$ 7,500	
20	Moving Costs					$ 10,000	$ 15,000	
21	**Total Allowances for Fees and Soft Costs**					$ 22,733	$ 31,338	
22	**Owner's Contingency**					$ 8,210	$ 10,401	15% of Allowances
23	**TOTAL PROJECT BUDGET**					**$ 169,611**	**$ 201,644**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2016 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Police Impound Lot at Davis Street and Gregory Street

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Police Impound Lot**							
2	**Construction**							
3	Gravel Parking Lot	12,000	s.f.	$ 5	$ 6	$ 60,000	$ 72,000	with geo-synthetic fabric
4	Security Fencing and Manual Gate	520	l.f.	$ 40	$ 50	$ 20,800	$ 26,000	8' high chain link fence
5	Lighting	2	ea	$ 8,000	$ 9,000	$ 16,000	$ 18,000	
6	**Construction Sub-Total**					**$ 96,800**	**$ 116,000**	
7	**Escalation (9%)**					$ 8,712	$ 10,440	Assume construction beginning in Spring 2016
8	**Total Construction Costs Impound Lot**					**$ 105,512**	**$ 126,440**	
9	**Design and Pricing Contingency (10%)**					$ 10,551	$ 12,644	
10	**Construction Contingency (10%)**					$ 10,551	$ 12,644	
11	**Total Construction Budget Police Impound Lot**					**$ 126,614**	**$ 151,728**	
12	**Allowances for Items to be Purchased by the Village**							
15	Security Cameras					$ 6,000	$ 8,000	Tie into existing system
23	**Total Allowances for Items to be Purchased by the Village**					$ 6,000	$ 8,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees					$ 18,992	$ 22,759	
30	Printing Costs					$ 2,000	$ 4,000	
34	**Total Allowances for Fees and Soft Costs**					$ 20,992	$ 26,759	
35	**Owner's Contingency**					$ 5,398	$ 6,952	20% of Allowances
36	**TOTAL PROJECT BUDGET**					**$ 159,005**	**$ 193,439**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Adapting Fire Academy for Police Department Storage

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Construction Costs**							
2	**Construction**							
3	New Overhead Coiling Door	1	ea	$25,000	$30,000	$ 20,000	$ 25,000	Cut in new door, includes concrete apron
4	Change Ceilings to Moisture Resistant	1,065	s.f.	$ 6	$ 7	$ 6,390	$ 7,455	
5	Damp-Listed Lighting	8	ea	$ 600	$ 800	$ 4,800	$ 6,400	
6	Miscellaneous Physical Security Upgrades			allow	allow	$ 7,500	$ 10,000	Protect or fill in existing openings
7	**Construction Sub-Total**					**$ 31,190**	**$ 38,855**	
8	**Escalation (9%)**					$ 2,807	$ 3,497	Assume construction beginning in Spring 2016
9	**Total Construction Costs**					**$ 33,997**	**$ 42,352**	
10	**Design and Pricing Contingency (10%)**					$ 3,400	$ 4,235	
11	**Construction Contingency (10%)**					$ 3,400	$ 4,235	
12	**Total Construction Budget**					**$ 40,797**	**$ 50,822**	
13	**Allowances for Items to be Purchased by the Village**							
14	Security System					$ 6,000	$ 8,000	
15	**Total Allowances for Items to be Purchased by the Village**					$ 6,000	$ 8,000	
16	**Allowances for Items Fees and Soft Costs**							
17	Architectural and Engineering Fees					$ 8,159	$ 10,164	
18	Printing Costs					$ 2,000	$ 4,000	
19	**Total Allowances for Fees and Soft Costs**					$ 10,159	$ 14,164	
20	**Owner's Contingency**					$ 3,232	$ 4,433	20% of Allowances
21	**TOTAL PROJECT BUDGET**					**$ 60,188**	**$ 77,420**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

SECTION 8
PROJECT BUDGET ATTACHMENTS – TEMPORARY FACILITY

Following this page are the conceptual project budgets for providing a temporary police facility for the Police Department during construction.

Temporary Facility

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Temporary Facility

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**TEMPORARY FACILITY**							
2	Build-Out Office Space	20,000	s.f.	15	20	$ 300,000	$ 400,000	
3	Lease Costs - assume two years	20,000	s.f.	36	40	$ 720,000	$ 800,000	$18 - $20/year, does not include utility costs
4	IT and Phones			allow	allow	$ 80,000	$ 100,000	Relocate existing equipment
5	Moving Costs			allow	allow	$ 60,000	$ 70,000	Relocate existing furniture
6	**Temporary Facility Sub-Total**					**$ 1,160,000**	**$ 1,370,000**	
7	**Architectural and Engineering Fees**			allow	allow	$ 20,000	$ 25,000	Design assistance as required
8	**Contingency (10%)**					$ 118,000	$ 139,500	
9	**TOTAL TEMPORARY FACILITY COSTS**					**$ 1,298,000**	**$ 1,534,500**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.
Actual Costs will depend on prevailing lease rates.
Project Budgets are based on a Winter 2016/2017 construction start date.
Project Budgets do not include legal fees or financing costs.

Arlington Heights Police Conceptual Budget 04.09.15

SECTION 9 RECOMMENDATION

Recommendation

Based upon the findings of this study, we recommend the Village of Arlington Heights pursue a project to construct a new police station on the existing Municipal Campus based on Option C as identified in Section 7.

Through this study we have shown that the police station will fit on the Municipal Campus with no new land acquisition required.

Remodeling and expanding the existing Police Station is not recommended because a new building will allow for a more functional layout and will have a significantly smaller footprint which maximizes the capabilities of the site.

Option C includes the following:

- 70,500 square foot Police Station
- 2-Story + Basement
- 10,360 s.f. Indoor Parking Garage (No Parking Deck above)
- Parking Totals of 437-468
- 4th Floor of Village Hall for Storage
- Fire Academy for Police Storage
- Off-Site Impound Lot

Option C

Option C is the Committee's preferred and recommended option. It depicts a 70,500 square foot Police Station which includes a 10,369 square foot Squad Parking Garage to accommodate (28) vehicles with **no** parking deck above, use of the 4th floor of the Village Hall for Records Archive Storage and Long Term Evidence Storage. This concept also takes advantage of the Fire Academy facility for Police storage and the Public Works site for the impound lot. Parking for this concept includes between 437 and 468 parking spaces, depending on the amount of on-grade police vehicle parking that is desired at the northwest corner of the site.

Option C meets all of the pertinent goals established by the Village for this project. The project can be developed on the Municipal Campus with few compromises, and takes full advantage of the site and other Village assets. The concept design is highly functional, secure and provides all of the functional spaces required for modern day policing.

Option C was identified by the Committee as the preferred concept for several reasons:

1. All the appropriate needs of the Police Department are incorporated within the Police Station.
2. Parking quantities are in line with the established needs of the site.

3. All Training Functions, including FATS, remain together in the Police Station to optimize their use.
4. The concern of noise from training being disruptive to Village staff offices is eliminated by not utilizing the 4th Floor for FATS.
5. Storage needs accommodated at the Village Hall and at the Fire Academy will not affect the day to day operation of the Department by being located off-site.
6. Uniform stacked floor levels for efficiency of structure and construction are incorporated.

In addition, this recommendation is based on the following:

1. The project cost is significantly less than what was projected in the 2010 study.
2. The new police station design will complement the existing architecture of the Municipal Campus.
3. The solution utilizes existing Village Assets, taking full advantage of what is available.
4. The solution accommodates secure covered parking for police vehicles.
5. The solution provides required parking without the costly necessity of increasing the size of the parking deck.
6. The solution provides the greatest flexibility in the future as a new police station will be designed to incorporate future staffing requirements and be adaptable to change.

Option C Budget Summary
Option C is the recommended Option. This concept provides a highly functional facility while taking advantage of utilizing other Village owned assets to reduce the overall construction costs. The low-high average cost for Option C is in the middle of the construction budget cost range for all concepts developed at $27,207,605.

To the construction budgets, other costs need to be incorporated for a projected total project budget. These costs include furniture, fixtures & equipment, moving costs, design fees and contingency funds.

The following is a summation of the construction budgets for Option C:

CONSTRUCTION BUDGET	Low	High
Police Station	$24,496,562	$25,821,379
Indoor Parking Garage	$1,726,608	$1,912,933
4th Floor Village Hall	$39,894	$47,873
Impound Lot	$126,614	$151,728
Fire Academy	$40,797	$50,822
TOTAL	**$26,430,475**	**$27,984,735**

Average Construction Budget
$27,207,605

OTHER COSTS BUDGET SUMMARY

Owner Furnished Items (FFE)	Low	High
Police Station	$1,008,000	$1,200,000
4th Floor Village Hall	$31,000	$36,500
Impound Lot	$6,000	$8,000
Fire Academy	$6,000	$8,000
TOTAL	**$1,051,000**	**$1,252,500**

Fees, Soft Costs, Owner Contingency	Low	High
Police Station	$2,301,901	$2,492,755
Indoor Parking Garage	$125,179	$138,688
4th Floor Village Hall	$21,876	$32,586
Impound Lot	$26,391	$33,711
Fire Academy	$13,391	$18,597
TOTAL	**$2,488,737**	**$2,716,337**

Temporary Facility Costs	Low	High
	$1,298,000	$1,534,500

See budget summaries for Option C attached to this section.

This study is to be utilized as a starting point and is intended to provide the Village of Arlington Heights with the necessary information to make an informed decision on which direction they should take to address the space needs issues of the Police Department. It is in no way intended to be a final design or budget for the Arlington Heights Police Station.

SECTION 9
RECOMMENDATION ATTACHMENTS

Following this page are larger scale diagrams for the Recommended Option C.

1. Site Plan – Options C
2. Main Level Plan – Option C
3. Second Level Plan – Option C
4. Lower Level Plan – Option C
5. Fourth Floor Village Hall Plan – Option C
6. Public Works Storage Site Plan
7. Fire Department Training Center Plan

Conceptual Budgets for Option C:

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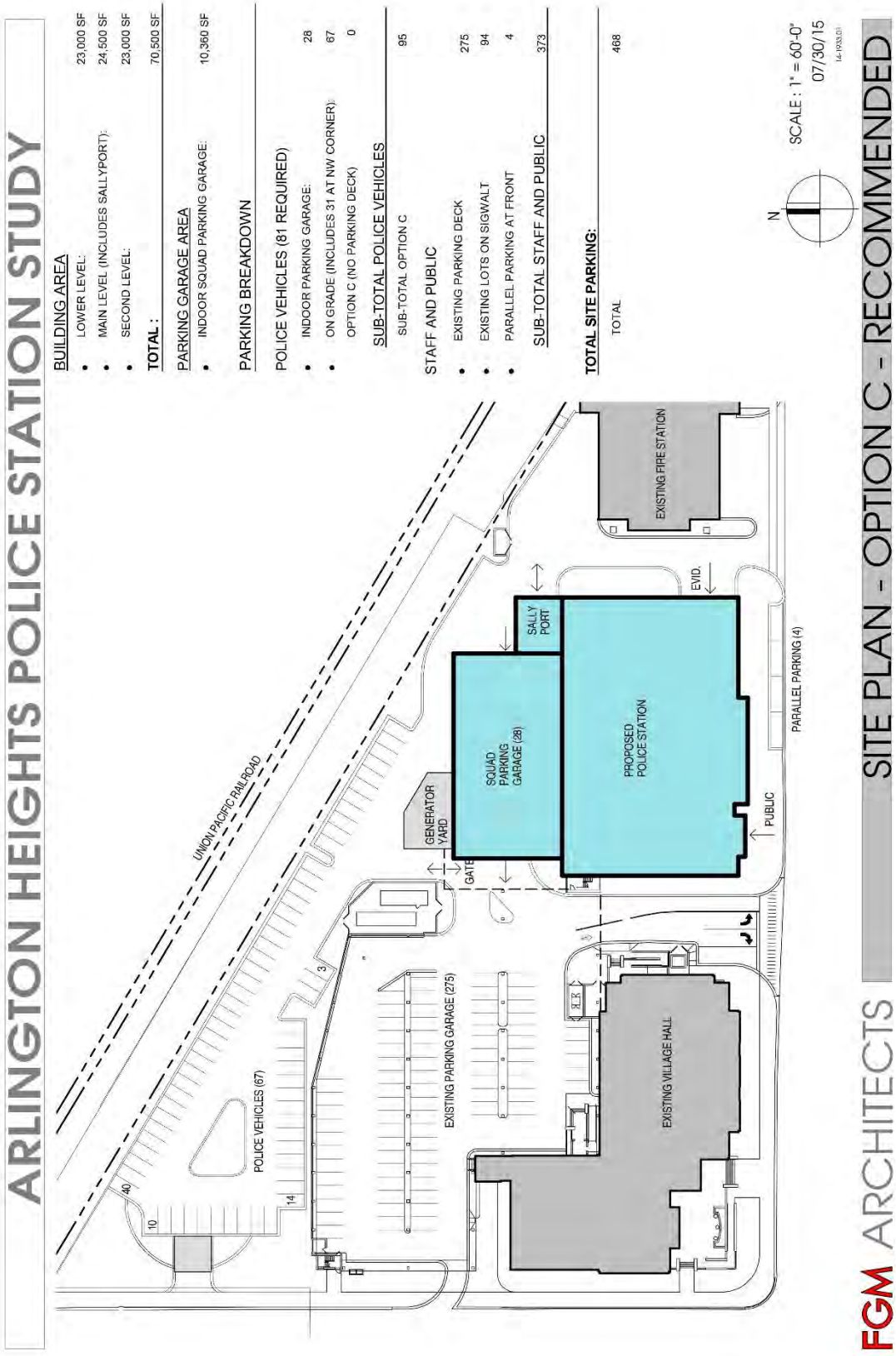

ARLINGTON HEIGHTS POLICE STATION STUDY

MAIN LEVEL - OPTION C - RECOMMENDED

N

SCALE : 1/32" = 1'-0"
07/30/15
14-1933.01

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ARLINGTON HEIGHTS POLICE STATION STUDY
SECOND LEVEL - OPTION C - RECOMMENDED
SCALE : 1/32" = 1'-0"
07/30/15
14-1933.01
N
SECURE STAIR
ROOF BELOW
TRAFFIC
COMMUNITY SERVICE
SUPPORT BUREAU
MECHANICAL
MULTI PURPOSE ROOM
SECURE CORRIDOR
MEETING TRAINING ROOM
ADMINISTRATION
OPTION A : PARKING DECK (2B)
OPTION B : FUTURE PARKING DECK
OPTION C : ROOF BELOW (NO PARKING DECK)
STAFF SUPPORT
PUBLIC TOILETS
LOBBY
RAMP/ BRIDGE
OPEN
EXIST. STAIR
EXISTING PARKING DECK (SECOND LEVEL)
SECURE STAIR/ ELEVATOR
PUBLIC STAIR/ ELEVATOR
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ARLINGTON HEIGHTS POLICE STATION STUDY

N

SCALE : 1/32" = 1'-0"
07/30/15
14-1933.01

LOWER LEVEL - OPTION C - RECOMMENDED

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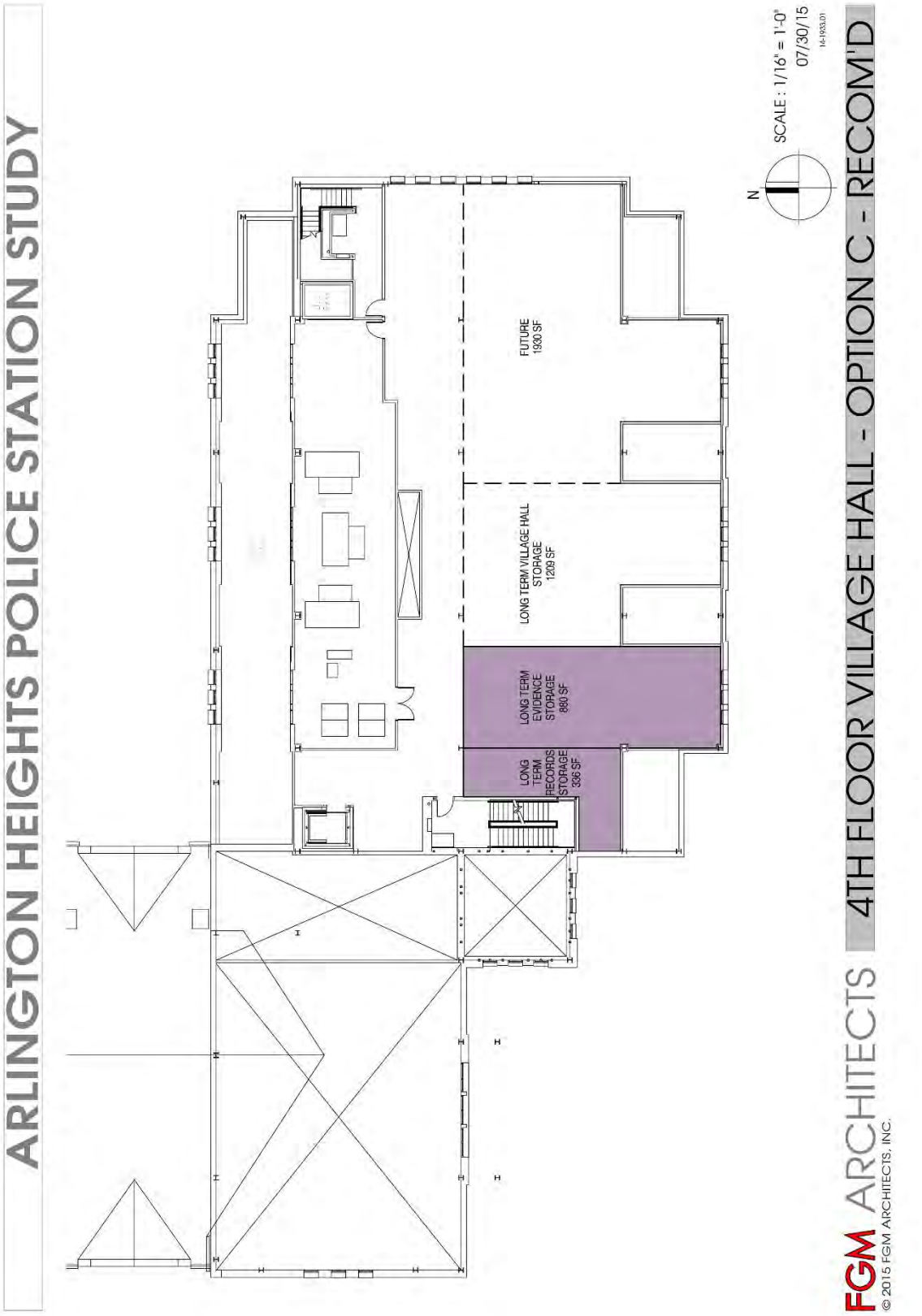
ARLINGTON HEIGHTS POLICE STATION STUDY
SCALE : 1/16" = 1'-0"
07/30/15
14-1933.01
N
FUTURE
1930 SF
LONG TERM VILLAGE HALL
STORAGE
1209 SF
LONG TERM
EVIDENCE
STORAGE
880 SF
LONG
TERM
RECORDS
STORAGE
336 SF
4TH FLOOR VILLAGE HALL - OPTION C - RECOM'D
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ARLINGTON HEIGHTS POLICE STATION STUDY

07/30/15
14-1933.01

PUBLIC WORKS STORAGE SITE

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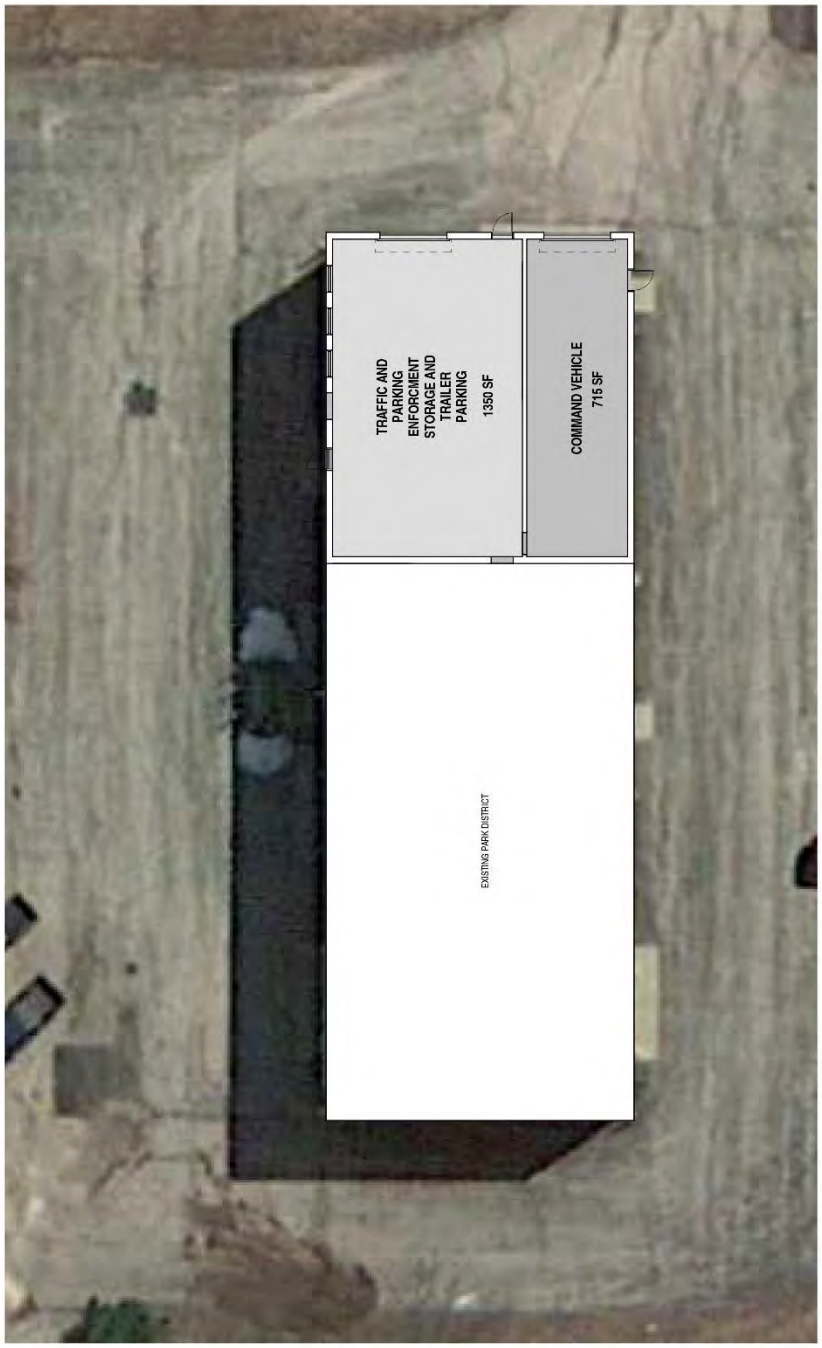
ARLINGTON HEIGHTS POLICE STATION STUDY



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SCALE : 1/16" = 1'-0"
07/30/15
14-1933.01

FIRE DEPARTMENT TRAINING CENTER

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Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for New 70,500 Sq. Ft. Police Station on Municipal Campus - OPTION C

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**POLICE STATION**							
2	**Site Preparation**							
3	Environmental Abatement		s.f.	allow	allow	$ 95,000	$ 105,000	Asbestos and lead abatement
4	Building Demolition	37,435	s.f.	$ 6.50	$ 7.50	$ 243,328	$ 280,763	Demolish building complete including foundations
5	**Site Preparation Sub-Total**					$ 338,328	$ 385,763	
6	**Construction**							
7	New Police Station Construction	70,500	s.f.	$ 285	$ 300	$ 20,092,500	$ 21,150,000	Includes Security and Audio Visual Systems
8	**Construction Sub-Total**					**$ 20,430,828**	**$ 21,535,763**	
9	**Escalation (9%)**					$ 1,838,774	$ 1,938,219	Assume construction beginning in Spring 2017
10	**Total Police Station Construction Costs**					**$ 22,269,602**	**$ 23,473,981**	
11	**Design and Pricing Contingency (5%)**					$ 1,113,480	$ 1,173,699	
12	**Construction Contingency (5%)**					$ 1,113,480	$ 1,173,699	
13	**Total Police Station Construction Budget**					**$ 24,496,562**	**$ 25,821,379**	
14	**Allowances for Items to be Purchased by the Village**							
15	Furniture and Equipment					$ 700,000	$ 800,000	Includes window treatments
16	Training Equipment					$ -	$ -	Provided by Owner
17	Computer Systems					$ 150,000	$ 200,000	
18	Wireless Network System					$ 30,000	$ 40,000	
19	Maintenance/Janitorial Equipment					$ 8,000	$ 10,000	
20	Telephone System					$ 60,000	$ 75,000	
21	Wireless Telephone Boosters/Amplifiers					$ 50,000	$ 60,000	
22	Miscellaneous Equipment and Furnishings					$ 10,000	$ 15,000	For items such as art, plants, bond safe, etc.
23	**Total Allowances for Items to be Purchased by the Village**					$ 1,008,000	$ 1,200,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees (7.25%)					$ 1,776,001	$ 1,872,050	Incl. civil, security and landscape design
26	Furnishings Design Fee					$ 50,000	$ 60,000	Design, bidding and project management
27	Surveys & Soil Investigations					$ 15,000	$ 20,000	
28	Material Testing During Construction					$ 25,000	$ 30,000	
29	Building Commissioning					$ 30,000	$ 40,000	
30	Printing Costs					$ 20,000	$ 25,000	
31	Utility Company Charges (Electric, Gas, Telephone)					$ 30,000	$ 40,000	
32	Moving Costs					$ 40,000	$ 50,000	Moving from temporary facility

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

Conceptual Budget for New 70,500 Sq. Ft. Police Station on Municipal Campus - OPTION C

FGM#: 14-1933.01

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
33	Utility costs during construction					$ 15,000	$ 20,000	
34	**Total Allowances for Fees and Soft Costs**					$ 2,001,001	$ 2,157,050	
35	**Owner's Contingency**					$ 300,900	$ 335,705	10% of Allowances
36	**TOTAL POLICE STATION BUDGET**					**$ 28,919,943**	**$ 30,687,833**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 06.24.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budgets for Indoor Parking - Option C

	Item	Quantity	Unit	Cost/Unit		Construction Cost		Remarks
				Low	High	Low	High	
10	**INDOOR PARKING GARAGE OPTION**							
11	Parking Garage	10,360	s.f.	$ 139	$ 154	$ 1,440,040	$ 1,595,440	
12	Escalation (9%)					$ 129,604	$ 143,590	
13	Construction Cost					$ 1,569,644	$ 1,739,030	
14	Design and Pricing Contingency (10%)					$ 156,964	$ 173,903	
15	Total Construction Budget					**$ 1,726,608**	**$ 1,912,933**	
16	Architectural and Engineering Fees (7.25%)					$ 125,179	$ 138,688	
17	**Indoor Parking Garage Option**					**$ 1,851,787**	**$ 2,051,620**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.

Project Budgets are preliminary and are based on historical square foot cost information.

Project Budgets are based on a Spring 2017 construction start date.

Project Budgets do not include legal fees or financing costs.

Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 062415

Arlington Heights Police Station Conceptual Budget

Page 1 of 1

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for 4th Floor Village Hall Buildout - OPTION C

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Village Hall - 4th Floor Buildout - A&B**							
2	**Construction**							
3	Build-Out	1,220	s.f.	$ 25	$ 30	$ 30,500	$ 36,600	
4	**Construction Sub-Total**					**$ 30,500**	**$ 36,600**	
5	**Escalation (9%)**					$ 2,745	$ 3,294	Assume construction beginning in Spring 2017
6	**Total Construction Costs Village Hall - 4th Floor Buildout**					**$ 33,245**	**$ 39,894**	
7	**Design and Pricing Contingency (10%)**					$ 3,325	$ 3,989	
8	**Construction Contingency (10%)**					$ 3,325	$ 3,989	
9	**Total Construction Budget Village Hall - 4th Floor Buildout**					**$ 39,894**	**$ 47,873**	
10	**Allowances for Items to be Purchased by the Village**							
11	Furniture and Equipment					$ 30,000	$ 35,000	Storage shelving
12	Training Equipment					$ -	$ -	Provided by Owner
13	Wireless Network System					$ -	$ -	Provided by Owner
14	Telephone System					$ 1,000	$ 1,500	
15	Wireless Telephone Boosters/Amplifiers					$ -	$ -	Provided by Owner
16	**Total Allowances for Items to be Purchased by the Village**					$ 31,000	$ 36,500	
17	**Allowances for Items Fees and Soft Costs**							
18	Architectural and Engineering Fees					$ 7,979	$ 9,575	
19	Printing Costs					$ 2,000	$ 4,000	
20	Moving Costs					$ 5,000	$ 10,000	
21	**Total Allowances for Fees and Soft Costs**					$ 14,979	$ 23,575	
22	**Owner's Contingency**					$ 6,897	$ 9,011	15% of Allowances
23	**TOTAL PROJECT BUDGET**					**$ 92,770**	**$ 116,959**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2016 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Police Impound Lot at Davis Street and Gregory Street

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Police Impound Lot**							
2	**Construction**							
3	Gravel Parking Lot	12,000	s.f.	$ 5	$ 6	$ 60,000	$ 72,000	with geo-synthetic fabric
4	Security Fencing and Manual Gate	520	l.f.	$ 40	$ 50	$ 20,800	$ 26,000	8' high chain link fence
5	Lighting	2	ea	$ 8,000	$ 9,000	$ 16,000	$ 18,000	
6	**Construction Sub-Total**					**$ 96,800**	**$ 116,000**	
7	**Escalation (9%)**					$ 8,712	$ 10,440	Assume construction beginning in Spring 2016
8	**Total Construction Costs Impound Lot**					**$ 105,512**	**$ 126,440**	
9	**Design and Pricing Contingency (10%)**					$ 10,551	$ 12,644	
10	**Construction Contingency (10%)**					$ 10,551	$ 12,644	
11	**Total Construction Budget Police Impound Lot**					**$ 126,614**	**$ 151,728**	
12	**Allowances for Items to be Purchased by the Village**							
15	Security Cameras					$ 6,000	$ 8,000	Tie into existing system
23	**Total Allowances for Items to be Purchased by the Village**					$ 6,000	$ 8,000	
24	**Allowances for Items Fees and Soft Costs**							
25	Architectural and Engineering Fees					$ 18,992	$ 22,759	
30	Printing Costs					$ 2,000	$ 4,000	
34	**Total Allowances for Fees and Soft Costs**					$ 20,992	$ 26,759	
35	**Owner's Contingency**					$ 5,398	$ 6,952	20% of Allowances
36	**TOTAL PROJECT BUDGET**					**$ 159,005**	**$ 193,439**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Adapting Fire Academy for Police Department Storage

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**Construction Costs**							
2	**Construction**							
3	New Overhead Coiling Door	1	ea	$25,000	$30,000	$ 20,000	$ 25,000	Cut in new door, includes concrete apron
4	Change Ceilings to Moisture Resistant	1,065	s.f.	$ 6	$ 7	$ 6,390	$ 7,455	
5	Damp Listed Lighting	8	ea	$ 600	$ 800	$ 4,800	$ 6,400	
6	Miscellaneous Physical Security Upgrades			allow	allow	$ 7,500	$ 10,000	Protect or fill in existing openings
7	**Construction Sub-Total**					**$ 31,190**	**$ 38,855**	
8	**Escalation (9%)**					$ 2,807	$ 3,497	Assume construction beginning in Spring 2016
9	**Total Construction Costs**					**$ 33,997**	**$ 42,352**	
10	**Design and Pricing Contingency (10%)**					$ 3,400	$ 4,235	
11	**Construction Contingency (10%)**					$ 3,400	$ 4,235	
12	**Total Construction Budget**					**$ 40,797**	**$ 50,822**	
13	**Allowances for Items to be Purchased by the Village**							
14	Security System					$ 6,000	$ 8,000	
15	**Total Allowances for Items to be Purchased by the Village**					$ 6,000	$ 8,000	
16	**Allowances for Items Fees and Soft Costs**							
17	Architectural and Engineering Fees					$ 8,159	$ 10,164	
18	Printing Costs					$ 2,000	$ 4,000	
19	**Total Allowances for Fees and Soft Costs**					$ 10,159	$ 14,164	
20	**Owner's Contingency**					$ 3,232	$ 4,433	20% of Allowances
21	**TOTAL PROJECT BUDGET**					**$ 60,188**	**$ 77,420**	

Notes:

Project Budgets assume the design and construction work will be performed in conjunction with the design and construction of the Police Station.
Project Budgets are preliminary and are based on historical square foot cost information.
Project Budgets are based on a Spring 2017 construction start date.
Project Budgets do not include legal fees or financing costs.
Construction Costs are based utilizing a Construction Management project delivery method.

Arlington Heights Police Conceptual Budget 04.15.15

Village of Arlington Heights
Police Department

FGM ARCHITECTS

June 24, 2015

FGM#: 14-1933.01

Conceptual Budget for Temporary Facility

	Item	Quantity	Unit	Cost/Unit Low	Cost/Unit High	Construction Cost Low	Construction Cost High	Remarks
1	**TEMPORARY FACILITY**							
2	Build-Out Office Space	20,000	s.f.	15	20	$ 300,000	$ 400,000	
3	Lease Costs - assume two years	20,000	s.f.	36	40	$ 720,000	$ 800,000	$18 - $20/year, does not include utility costs
4	IT and Phones			allow	allow	$ 80,000	$ 100,000	Relocate existing equipment
5	Moving Costs			allow	allow	$ 60,000	$ 70,000	Relocate existing furniture
6	**Temporary Facility Sub-Total**					**$ 1,160,000**	**$ 1,370,000**	
7	**Architectural and Engineering Fees**			allow	allow	$ 20,000	$ 25,000	Design assistance as required
8	**Contingency (10%)**					$ 118,000	$ 139,500	
9	**TOTAL TEMPORARY FACILITY COSTS**					**$ 1,298,000**	**$ 1,534,500**	

Notes:

Project Budgets are preliminary and are based on historical square foot cost information.
Actual Costs will depend on prevailing lease rates.
Project Budgets are based on a Winter 2016/2017 construction start date.
Project Budgets do not include legal fees or financing costs.

Arlington Heights Police Conceptual Budget 04.09.15

SECTION 10
Appendix

Index

Geotechnical Investigation by SMC Consultants, Inc. dated March 12, 2015.

SOIL AND MATERIAL CONSULTANTS, INC.

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fax:1-847-870-0661
www.soilandmaterialconsultants.com
us@soilandmaterialconsultants.com

March 13, 2015
File No. 21926

Mr. Bill Enright
Village of Arlington Heights
33 S. Arlington Heights Road
Arlington Heights, IL 60005

Re: Geotechnical Investigation
Police Station & Parking Garage
200 E. Sigwalt Street
Arlington Heights, Illinois

Dear Mr. Enright:

The following is our report of findings for the geotechnical investigation completed for the proposed police station and expansion of the parking garage in the Village of Arlington Heights, Illinois.

The investigation was requested to determine current subsurface soil and water conditions at select boring locations. The findings of the field investigation and the results of laboratory testing are intended to assist in the planning, design and construction of proposed site improvements.

PROPOSED IMPROVEMENTS

We understand that it is proposed to construct a 2-story police station supported on shallow depth foundations in the area of borings 1 through 5. The interior is expected to have a full or partial basement area as well as areas with slabs supported on prepared subgrade soils. Improvements exterior to the building are expected to include a new squad car parking area, sidewalks and related underground improvements. Additionally, the existing parking garage is proposed to be expanded to the north in the area of soil borings 6 and 7.

SCOPE OF THE INVESTIGATION

The field investigation included obtaining 7 borings at the locations requested and as indicated on the enclosed location sketch. The boring locations were established using field taping methods and accuracy. Surface elevations were determined using the temporary benchmark indicated on the location sketch.

We auger drilled the 7 borings to depths of 20.0 feet below existing surface elevations. Soil samples were obtained using a split barrel sampler advanced utilizing an automatic SPT hammer. Soil profiles were determined in the field and soil samples returned to our laboratory for additional testing including determination of moisture content. Cohesive soils obtained by split barrel sampling were tested further to determine dry unit weight and unconfined compressive strength. The results of all field determinations and laboratory testing are included in summary with this report.

RESULTS OF THE INVESTIGATION

Enclosed are boring logs indicating the soil conditions encountered at each location. Site surface conditions include existing structures, pavement materials, vegetation, topsoil and fill soil conditions. The topsoil is classified as dark brown to black silt/clay mixtures with traces of roots usually present.

Uncontrolled fill soil conditions were encountered at each of the boring locations. Composition of the fill includes the presence of clay/silt, silt, silt/gravel, silt/sand/gravel, sand/gravel, sand/gravel/clay/silt, and brick/cinders mixtures extending to depths of 2.0 feet to 6.5 feet at these locations. The limits of fill placement were not determined within the scope of this investigation. The fill soil conditions are found to overlie the apparent natural topsoil at borings 6 and 7, and a concrete slab at borings 3 and 5.

Underlying soil conditions include the presence of cohesive soils. These are classified as tough to hard clay/silt mixtures with lesser portions of sand and gravel. Non-cohesive soils were also encountered as indicated at each boring. These include very loose to medium dense silt, silt/sand/clay, silt/clay, sand, sand/gravel, and sand/silt mixtures. The non-cohesive granular soils are often in a very damp to saturated condition. Cobbles and boulders may be present within the site soils at any elevation, although none were encountered while drilling.

The following table summarizes depth ranges below existing grade, the magnitude of soil strength within these ranges and other information:

Re: Police Station & Parking Garage
200 E. Sigwalt Street
Arlington Heights, Illinois

Boring	Surface Elevation (feet)	Depth Range Below Existing Surface (feet)	Soil Strength (lbs./sq.ft.)	Recorded Water Levels, W.D./A.D. (feet)
Police Station				
1	99.5	0.5 to 2.5	*2,000	15.0/16.0
		2.5 to 5.5	5,000	
		5.5 to 7.5	6,000	
		7.5 to 11.5	4,000	
		11.5 to 17.0	3,000	
2	98.4	0.5 to 7.5	*2,000	13.5/13.5
		7.5 to 12.0	4,000	
		12.0 to 17.0	3,000	
3	99.7	0.5 to 8.0	*2,000	14.5/16.0
		8.0 to 10.0	3,000	
		10.0 to 13.5	4,000	
		13.5 to 17.0	3,000	
4	98.9	0.5 to 3.0	*500	16.0/16.0
		3.0 to 8.0	4,000	
		8.0 to 14.0	2,000	
		14.0 to 17.0	3,000	
5	98.4	0.5 to 6.5	*500	16.0/16.0
		6.5 to 10.5	4,000	
		10.5 to 14.5	5,000	
		14.5 to 17.0	4,000	
Parking Garage				
6	104.1	4.0 to 8.0	2,000	8.5/8.0
		8.0 to 9.5	3,000	
		9.5 to 15.0	6,000	
		15.0 to 17.0	4,000	
7	103.2	4.0 to 9.0	2,000	dry/dry
		9.0 to 17.0	6,000	

* Not recommended for support of foundations. Deeper foundation depths or foundations supported on coarse crushed stone fill will be needed to reduce the magnitude of long-term total and differential settlement.

It is expected that foundations can be supported on undisturbed natural soils located at any elevation within the depth ranges indicated in the above table, except as noted. Above these depth ranges the soils are not considered able to support foundations, even at reduced design bearing values, due to long-term settlement considerations.

SUBSURFACE WATER

The boring logs and the above table indicate the depth at which subsurface water was encountered in the bore holes at the time of the drilling operations and during the period of these readings. It is expected that fluctuations from the water levels recorded will occur over a period of time due to variations in rainfall, temperature, subsurface soil conditions, soil permeability and other factors not evident at the time of the water level measurements.

FOUNDATIONS

Based on the results of this investigation for borings 1 through 5, it is our opinion that continuous and isolated footing foundations may be considered for support of building loads. These foundations can be supported on undisturbed natural soils located below all topsoil, debris, existing fill soils, low strength soils and other unsuitable conditions which may be encountered. Soil strength values and the depths at which they are expected to be encountered at these boring locations are indicated in the above table. A net allowable bearing value of 3,000 lbs./sq.ft. is available for design of the police station foundation. A net allowable bearing value of 2,000 lbs./sq.ft. is available for design of the parking garage addition. These values can be used to size foundations for support of structure dead and live loads. Increased bearing values may be available at some locations and elevations. The feasibility of using a higher value is best determined after our review of proposed foundation details and elevations.

All exterior foundations should extend at least 42.0 inches below exposed surface elevations to provide adequate protection against uplift due to freezing of the supporting soils. Foundations for unprotected improvements should extend at least 48.0 inches below exposed surface elevations. We recommend providing adequate reinforcing steel in foundation walls and piers to minimize the effects of long-term differential settlement.

Weak soil conditions may be discovered locally at design foundation elevations and may require extending the foundation to a deeper elevation. Alternately, removal of the weak soil followed by replacement with properly compacted coarse crushed granular fill (CA01) may be feasible. When removal is approved by the Soil Engineer, the removal of the weak soil should also extend beyond the face of footings and/or piers to a distance at least equal to the depth of fill that will be present beneath the footings and/or piers. A capping layer of finer crushed granular fill (CA06) can be utilized to establish a working surface.

FLOOR SLABS

Floor slabs planned for support on the existing soil conditions are expected to undergo some degree of long-term settlement as the soils consolidate under loading and as they shrink due to desiccation. Slabs may be considered for support on suitable natural soils or on properly placed and compacted fill soils. This is feasible when the soils supporting the slabs are prepared in accordance with the recommendations for Subgrade Soil Preparation.

DEWATERING

Shallow excavations may require dewatering due to subsurface water seepage and/or surface precipitation. This water can likely be removed to depths of several feet by standard sump and pump operations. Soils exposed at foundation, slab or undercut elevations should not be permitted to become saturated. Loss of bearing strength and stability may occur, requiring additional soil excavation.

Aggressive dewatering efforts may be necessary for deeper excavations extending to the saturated sand and sand/gravel soils. Well-points or deep sumps can be utilized to collect the water for pumping in an effort to lower the water level below the bottom elevation of proposed excavations. The dewatering should be accomplished prior to soil excavation when possible.

The contractor should be made responsible for designing and constructing stable temporary excavations. Also, the contractor should shore, slope, bench or restrain the sides of the excavations as required to maintain stability of both the excavation sides and bottom. In no case, should the slope, slope heights, or excavation depth exceed those in the local, state, and federal safety regulations.

Permanent dewatering of basement, crawl space and other below grade areas is necessary. The dewatering system should include the provision for peripheral drain tile adjacent to the footings of foundation walls exposed to the interior of the building. Drain tile runs should also be provided below basement floor slabs. We recommend damp-proofing or possibly water-proofing exterior foundation walls exposed to the interior of the building. Water stop may be necessary in concrete cold joints such as the footing/wall interface.

The presence of saturated sand and sand/gravel soils at or near basement foundation elevations may result in significant volumes of water being continually channeled to the drainage system. Water removal will likely be required on a frequent basis. This condition is often undesirable and can be minimized by locating the basement footings at least 2.5 feet above anticipated long-term water levels.

SUBGRADE SOIL PREPARATION

Subgrade soil preparation should be accomplished where needed within building areas prior to excavation for foundations. The procedure in all areas of subgrade supported improvements should include the removal of unsuitable surface conditions including vegetation, topsoil, pavement materials, unsuitable fill soils, significant debris, weak or unstable soils, and other deleterious conditions which may be encountered. Above grade areas should be cut to design subgrade elevations. Exposed subgrade soils should be leveled, compacted and proof-rolled in the presence of the Soil Engineer.

Proof-rolling may reveal areas of unstable soil conditions. Discing and aeration of high moisture content soils can be effective to depths of up to 1.0 foot, depending upon the equipment utilized. Removal of unstable soils may be necessary if high moisture content conditions extend to depths greater than the effective depth of discing. If the depth of undercut appears to be significant, it may be economical to limit the depth of undercut to that needed to establish

adequate support of slabs and remediate weak soil conditions at foundation elevations at the time of foundation construction.

Structural fill can be placed on soils prepared to the satisfaction of the Soil Engineer. The fill should be placed in lifts not to exceed 8.0 inches when uncompacted. Each lift should exceed minimum compaction requirements prior to placement of the next lift. We recommend a minimum of 95% compaction based on the modified Proctor test, ASTM D-1557, be achieved within building areas. A minimum of 90% compaction should be achieved beneath exterior improvements such as pavements and sidewalks. Compaction requirements also apply to backfill placement around foundations and within trench excavations located below subgrade supported improvements.

PAVEMENT AREAS

A remedial subgrade soil preparation procedure can be considered in pavement areas. Unsuitable surfaces can be removed and the exposed subgrade proof-rolled. Soft or unstable soil conditions can be undercut or bridged by use of an effective depth of crushed granular material. This procedure would limit undercuts to the shallow depths needed to remove debris, surface topsoil and other problem surface conditions. The uncontrolled fill soils would remain below the new subgrade. Their continued presence may reduce pavement life and result in earlier maintenance or replacement of the pavement surface. The placement of the crushed granular bridging material, possibly in conjunction with the use of an appropriate geotextile fabric, should only proceed after review of the proof-roll conditions by the Soil Engineer. For design purposes we recommend that consideration be given to a 12 inch undercut, placement of a woven geotextile fabric and 12 inches of CA01 or CA06 crushed aggregate.

FILL SOURCES

The onsite non-organic soils are generally suitable for reuse as fill. Offsite sources may also be used provided they are approved in advance by the Soil Engineer. Aeration may be necessary to reduce soil moisture content prior to compaction. Soil borrowed from near the surface where seasonal fluctuations in soil moisture content occur may require particular attention. The moisture content of fill soils should be within approximately 3.0% of optimum moisture content as determined by the modified Proctor test for the soils to meet or exceed minimum compaction requirements.

CONCLUSION

The information within this report is intended to provide initial information concerning subsurface soil and water conditions on the site. Variations in subsurface conditions are expected to be present between boring locations due to naturally changing soil and filled soil conditions.

Our understanding of the proposed improvements is based on very limited information available to us at the writing of this report. The findings of the investigation and the recommendations presented are not considered applicable to significant changes in the scope of the improvements or applicable to alternate site uses. We recommend that proposed foundation, pavement and grading plans be reviewed by our office to determine if additional considerations

are necessary to address anticipated subsurface conditions. Obtaining additional soil borings may be warranted to further define the depth and limits of restrictive subsurface conditions.

The soils exposed in soil undercut areas should be evaluated for suitability prior to placement of structural fill, as previously indicated in this report. Soils and aggregates placed as structural fill should be tested as the work progresses to verify that minimum compaction requirements have been met. We recommend that soil conditions encountered at foundation elevations be tested to verify the presence of design soil strength prior to concrete placement.

If you have any questions concerning the findings or recommendations presented in this report, please let me know.

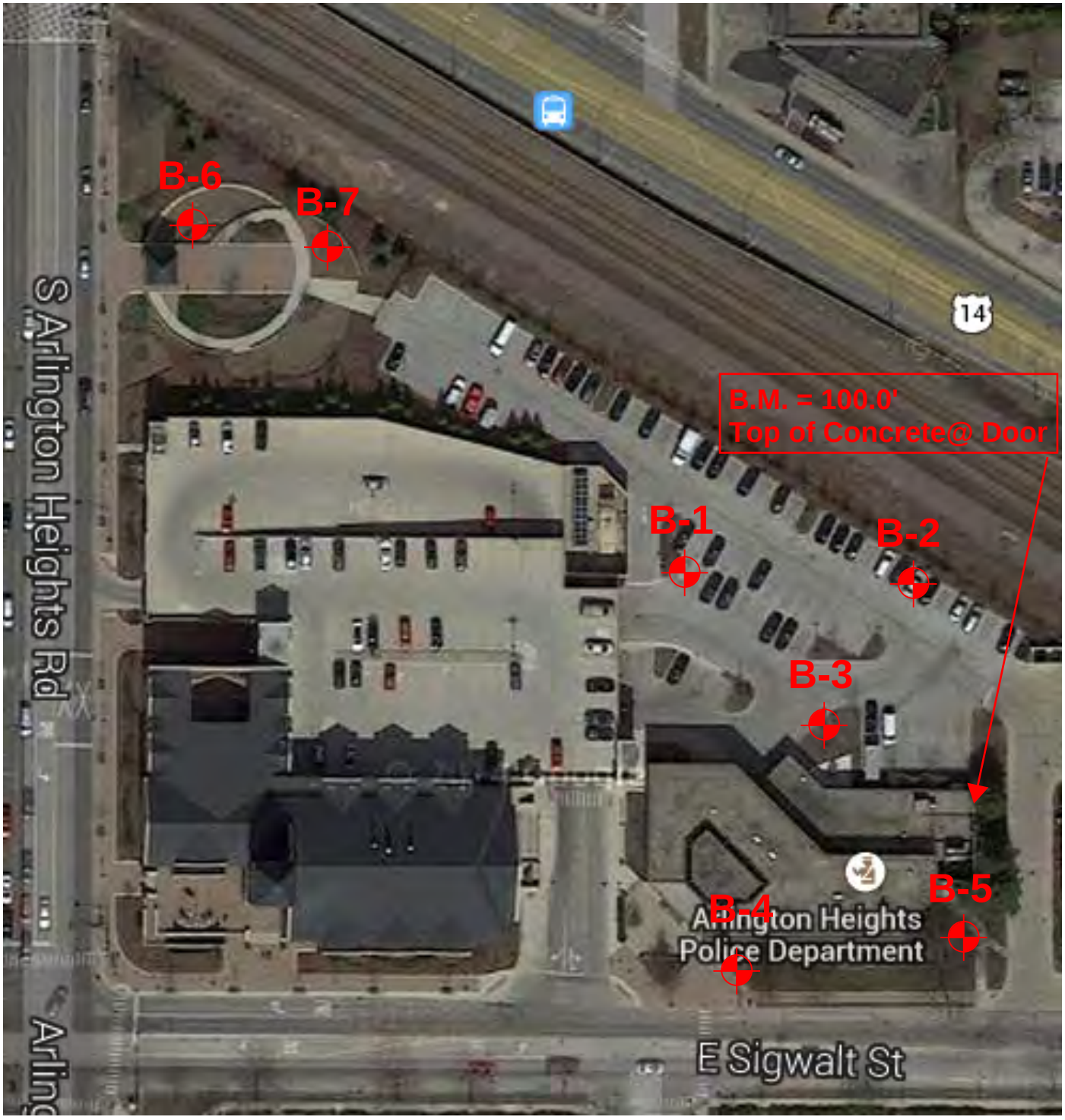
Very truly yours,

SOIL AND MATERIAL CONSULTANTS, INC.

Reid T. Steinbach, E.I.T
Project Engineer

Thomas P. Johnson, P.E.
President

RTS/TPJ:ek
Enc.
cc: Mr. Ryan L. Rathman, FGM Architects



N

SMC	SOIL AND MATERIAL CONSULTANTS, INC.	LOCATION SKETCH
Client:	VILLAGE OF ARLINGTON HEIGHTS	
Project:	200 E. SIGWALT STREET	
Location:	ARLINGTON HEIGHTS, ILLINOIS	
File No. 21926	Date: 02-26-15	Scale: NONE

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 1

Logged By: DA **Page:** 1 of 1

Client: Village of Arlington Heights

File No. 21926 **Date Drilled:** 2/26/15

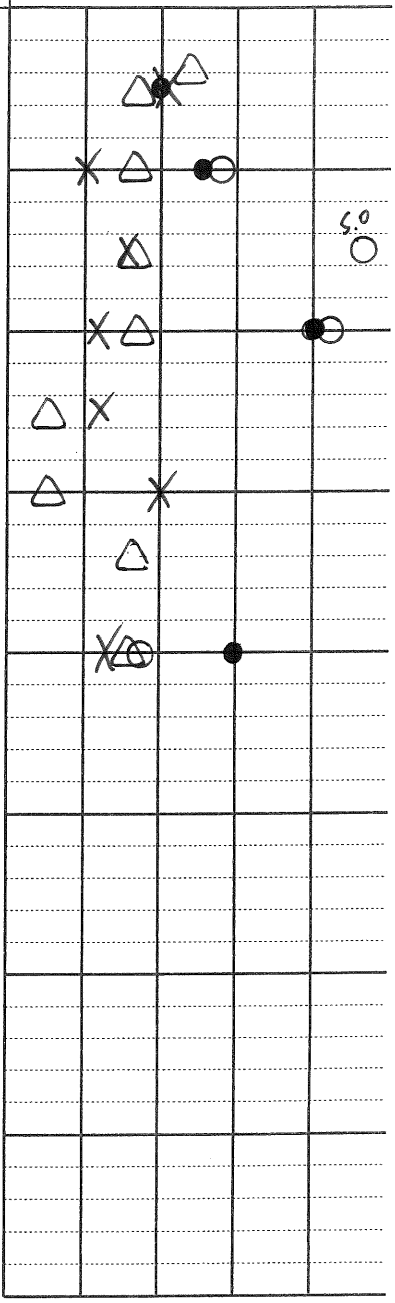
Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 99.5' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	(a,b,c) see below				
	Brown clay,some silt,trace sand & gravel, damp,very tough to hard	21	23.4 18.4		
5		10	17.0	110.9	2.9
		15	17.0	114.0	5.0
10		12	17.7	114.0	4.2
	Brown fine-medium sand,trace coarse sand & gravel,damp,medium dense	12	5.3		
15	▽	20	4.6		
	Gray fine sand,very damp-saturated		15.9		
	Gray clay,some silt,trace sand & gravel, damp,tough				
20		13	16.3	120.8	1.8
	End of Boring				
25	(a) Bituminous concrete - 3.5" (b) Limestone,damp (frozen) - 12.5" (c) Dark brown-black clay & silt,some sand & gravel,damp (frozen) - Fill				
30					
35					
40					

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0
× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at 15.0 feet during drilling operations (W.D.).
Water recorded at 16.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.

Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 2

Logged By: DA Page: 1 of 1

Client: Village of Arlington Heights

File No. 21926 Date Drilled: 2/26/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

Comments:

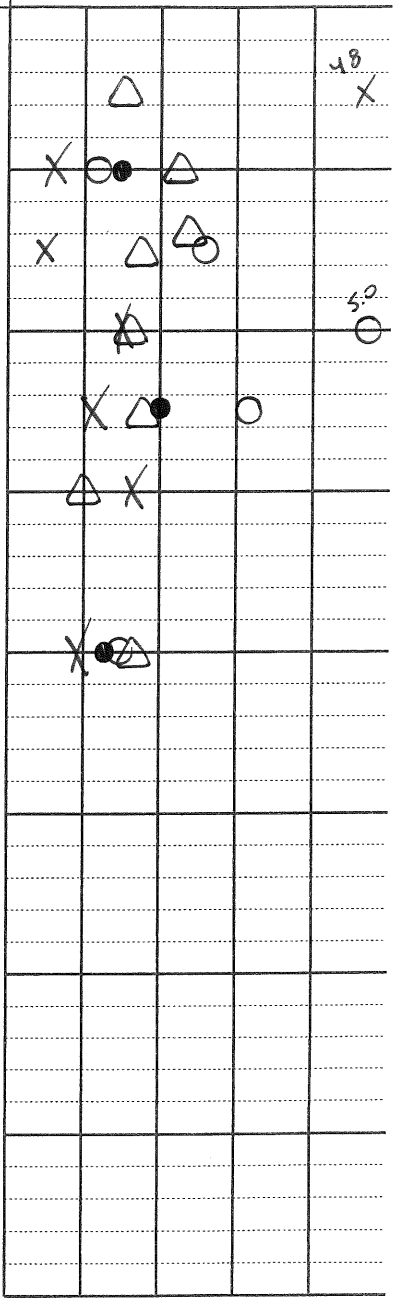
Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 98.4' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ϒ	unconfined compressive strength ○
	(a & b) see below				
	(c) see below	48	15.4		
5	Brown clay, some silt, trace sand & gravel, damp, tough	6	21.8	101.1	1.1
	(d) see below	5	22.9 19.0	111.6	2.5
	Brown clay, some silt, trace sand & gravel, damp, very tough				
10	Gray clay, some silt, trace sand & gravel, damp, very tough to hard	15	16.3	120.1	5.0
	▽	11	18.9	114.0	3.1
	Brown fine-medium sand, trace coarse sand & gravel, damp-saturated, medium dense				
15		16	9.6		
	Gray clay, some silt, trace sand & gravel, damp, tough				
20	End of Boring	9	16.8	125.1	1.4

(a) Bituminous concrete - 4.0"
(b) Limestone, damp (frozen) - 16.0"
(c) Dark brown-brown-black clay & silt, trace sand, gravel, brick & concrete, - damp (frozen to 2.5') - Fill
(d) Brown silt, trace fine sand & clay, damp-very damp, very loose

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at 13.5 feet during drilling operations (W.D.).
Water recorded at 13.5 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.

Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 3

Logged By: DA **Page:** 1 of 1

Client: Village of Arlington Heights

File No. 21926 **Date Drilled:** 2/26/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

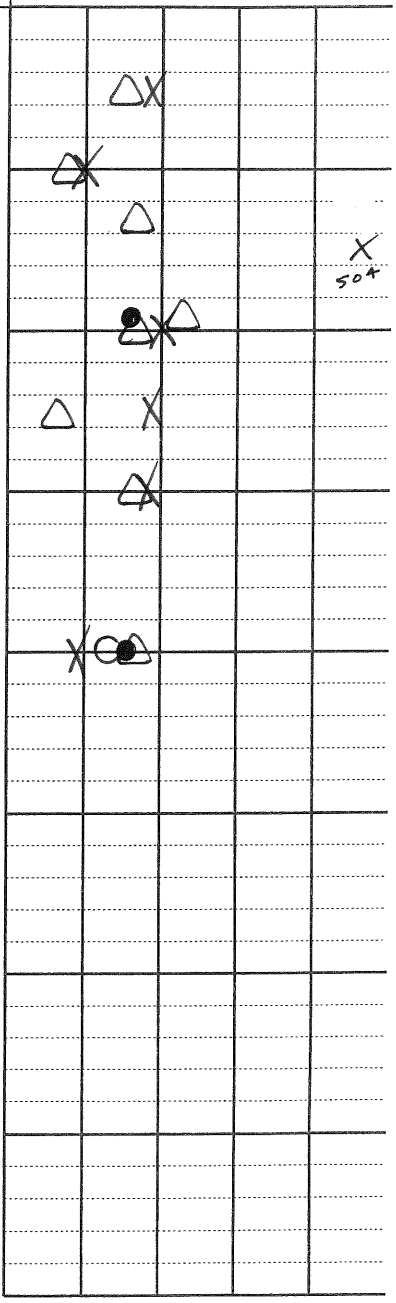
Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 99.7' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	Dark brown-black silt & gravel, some clay & silt, trace limestone, concrete & cinders, damp, medium dense (frozen to 2.0') Fill	19	15.2		
5		10	8.5		
	Concrete (possible slab) very dense	50+	17.4		
	Brown clay, some silt, trace sand & gravel, damp, tough		22.1		
10	Brown fine-medium sand, trace coarse sand & gravel, damp, medium dense	20	15.8		
		19	6.7		
	Brown to gray fine sand, damp-saturated, medium dense	18	16.8		
15					
	Gray clay, some silt, trace sand & gravel, damp, tough				
20		9	15.9	125.6	1.3
	End of Boring				
25					
30					
35					
40					

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at 14.5 feet during drilling operations (W.D.).
Water recorded at 16.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 4

Logged By: DA **Page:** 1 of 1

Client: Village of Arlington Heights **File No.** 21926 **Date Drilled:** 2/26/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 98.9' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ϑ	unconfined compressive strength ○
	Black-dark brown silt, some sand & gravel, trace clay, damp, loose - Fill		31.8		
		5	20.7		
	Brown clay & silt, trace sand & gravel, damp, very tough	11	15.5		
5	Brown clay, some silt, trace sand & gravel, damp, hard	12	15.5	119.9	4.6
		15	17.1	112.8	6.0
10	Brown fine-medium sand, trace coarse sand & gravel, damp, medium dense		8.4		
	Gray clay & silt, trace fine sand, damp, tough	9	22.3	108.6	1.2
	Brown to gray fine sand, damp, medium dense				
15	▽	12	10.4		
	Gray fine-medium sand, some coarse sand & gravel, very damp-saturated				
			14.1		
	Gray silt, some clay, trace fine sand, very damp, loose	9	20.5		
20	End of Boring				
25					
30					
35					
40					

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40

Water encountered at 16.0 feet during drilling operations (W.D.).
Water recorded at 16.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 5

Logged By: DA **Page:** 1 of 1

Client: Village of Arlington Heights **File No.** 21926 **Date Drilled:** 2/26/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

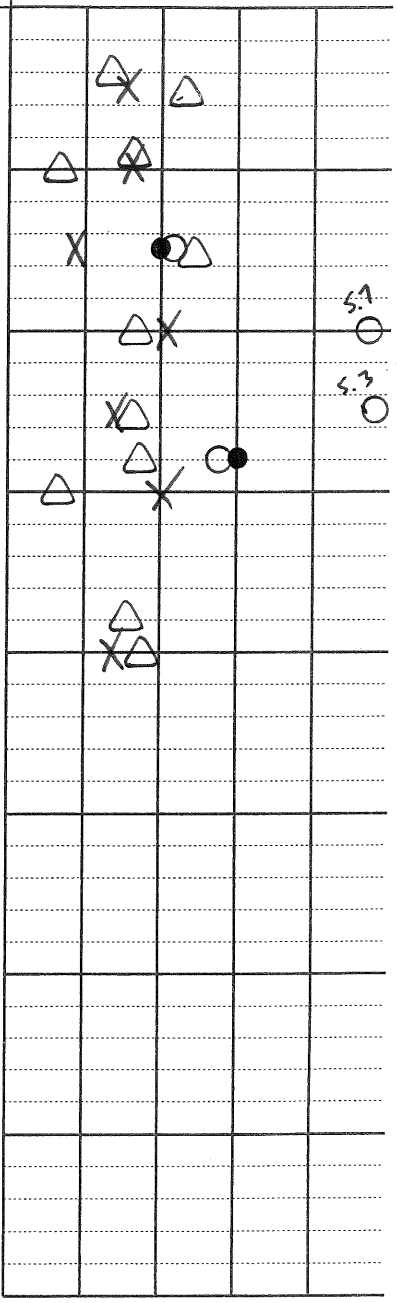
Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 98.4' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	Dark brown-brown sand & gravel, some clay & silt, trace roots, damp (frozen) Fill		12.5		
	(a) see below	15	21.5		
5	(b) see below	16	16.5 7.4		
	Concrete (possible slab)				
	Brown clay, some silt, trace sand & gravel, damp, very tough to hard	9	24.4	100.4	2.1
10		21	16.7	114.6	5.7
	Gray clay, some silt, trace sand & gravel, damp, very tough	14	16.5	116.5	5.3
			19.4	112.5	2.8
15	Brown fine-medium sand, trace coarse sand & gravel, damp, medium dense	20	6.1		
	Gray fine sand, very damp-saturated, medium dense				
			15.4		
20	(c) see below	14	19.4		
	End of Boring				
25	(a) Dark brown-brown-black silt, some clay trace sand, gravel & roots, damp, medium dense - Fill (b) Brown-dark brown sand & gravel, damp, medium dense - Fill (c) Gray silt, some clay, trace fine sand, damp, medium dense				
30					
35					
40					

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at 16.0 feet during drilling operations (W.D.).
Water recorded at 16.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 6

Logged By: DA **Page:** 1 of 1

Client: Village of Arlington Heights

File No. 21926 **Date Drilled:** 2/27/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

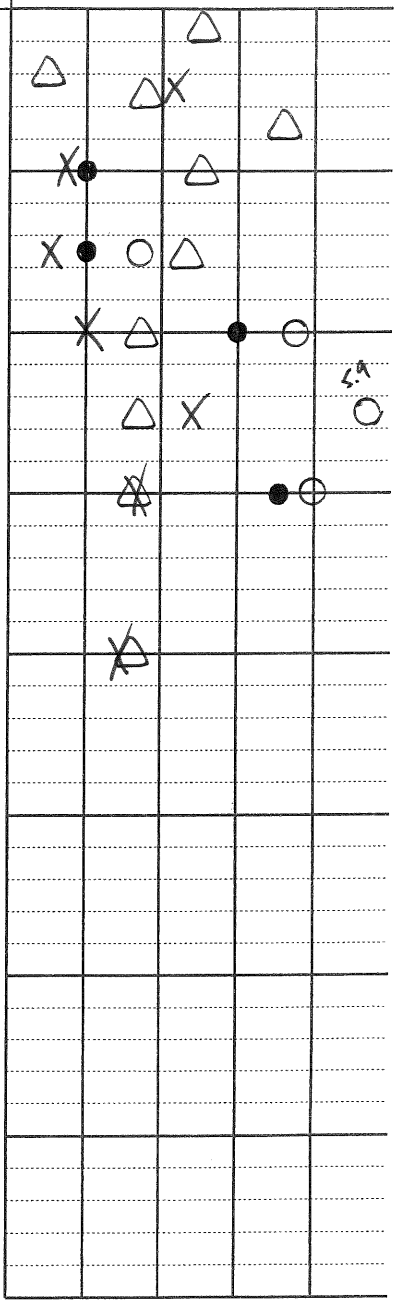
Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

depth, ft.	CLASSIFICATION Elevation 104.1' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ϒ	unconfined compressive strength ○
	(a) see below		25.2		
	(b) see below		4.3		
	(c) see below	22	19.3		
	(d) see below		36.4		
5	Green-brown to brown clay,some silt,trace sand,damp,tough	7	25.0		
	▽ ▼	6	22.5	104.7	1.7
10	Brown clay,some silt,trace sand & gravel, damp,very tough to hard	10	18.3	114.9	3.8
		24	17.7	118.0	5.9
15	Gray clay,some silt,trace sand & gravel, damp,hard	17	17.1	120.4	4.0
	(e) see below				
20		14	15.6		
	End of Boring				
25	(a) Black silt,some clay,trace sand & roots,damp (topsoil) (frozen) - Fill (b) Brown fine-medium sand & gravel,some coarse sand,damp (frozen) - Fill (c) Brick & cinders,damp,medium dense - Fill (d) Black silt,some clay,trace sand,damp (topsoil)				
30	(e) Gray fine sand,trace medium-coarse sand & gravel,very damp-saturated, medium dense				
35					
40					

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at 8.5 feet during drilling operations (W.D.).
Water recorded at 8.0 feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.
Arlington Heights, Illinois (847) 870-0544

SOIL BORING LOG 7

Logged By: DA Page: 1 of 1

Client: Village of Arlington Heights File No. 21926 Date Drilled: 2/27/15

Reference: Police Station
200 E. Sigwalt St.
Arlington Heights, IL

Comments:

Equipment: ☒ CME 45B ☐ CME 55 ☐ Hand Auger ☐ Other

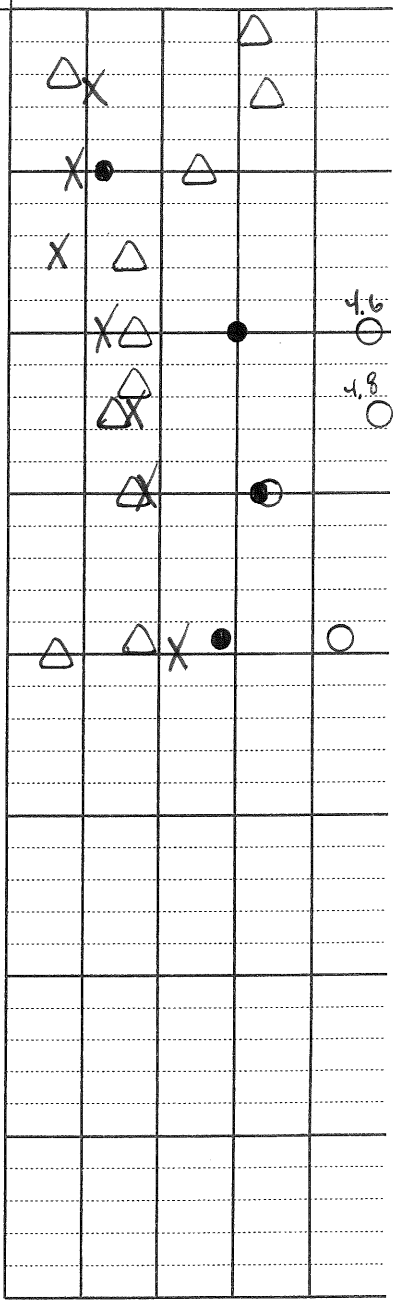
depth, ft.	CLASSIFICATION Elevation 103.2' Existing Surface	standard penetration ×	moisture content △	dry unit weight lbs./cu.ft. ɣ	unconfined compressive strength ○
	(a) see below		30.9		
	(b) see below		8.2		
	Black silt, some clay, trace sand, damp, medium dense (topsoil)	11	32.6		
5	Brown clay & silt, trace sand & gravel, damp, tough	8	24.5		
	Brown sand & silt, some gravel, damp, loose	7	16.2		
	Brown clay, some silt, trace sand & gravel, damp, hard	13	16.6	117.0	4.6
10	Brown silt, some clay & sand, trace gravel, damp, medium dense		15.7		
	(c) see below	16	14.4	123.6	4.8
	Gray clay, some silt, trace sand & gravel,				
15	damp, very tough to hard	17	15.8	119.2	3.4
			18.8	112.9	4.3
20	(d) see below	23	7.0		
	End of Boring				

(a) Black silt, some clay, trace sand & roots, damp (topsoil) (frozen) - Fill
(b) Dark brown-brown silt, some sand & gravel, trace clay, damp (frozen) - Fill
(c) Brown clay, some silt, trace sand & gravel, damp, hard
(d) Brown fine-medium sand, some coarse sand & gravel, very damp, medium dense

25
30
35
40

○ unconfined compressive strength, tons/sq.ft.
● penetrometer reading, tons/sq.ft.
1.0 2.0 3.0 4.0

× standard penetration "N", blows/ft.
△ moisture content, %
10 20 30 40



Water encountered at dry feet during drilling operations (W.D.).
Water recorded at dry feet on completion of drilling operations (A.D.).
Water recorded at feet hours after completion of drilling operations (A.D.).

SOIL AND MATERIAL CONSULTANTS, INC.

General Notes

SAMPLE CLASSIFICATION

Soil sample classification is based on the Unified Soil Classification System, the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), ASTM D-2488, the Standard Test Method for Classification of Soils for Engineering Purposes, ASTM D-2487(when applicable), and the modifiers noted below.

CONSISTENCY OF COHESIVE SOILS

Term	Qu -tons/sq. ft.	N (unreliable)
Very Soft	0.00 - 0.25	0 - 2
Soft	0.26 - 0.49	3 - 4
Stiff	0.50 - 0.99	5 - 8
Tough	1.00 - 1.99	9 - 15
Very Tough	2.00 - 3.99	16 - 30
Hard	4.00 - 7.99	30 +
Very Hard	8.00 +	

RELATIVE DENSITY OF GRANULAR SOILS

Term	N - blows/foot
Very Loose	0 - 4
Loose	5 - 9
Medium Dense	10 - 29
Dense	30 - 49
Very Dense	50 +

IDENTIFICATION AND TERMINOLOGY

Term		Size Range
Boulder		over 8 in.
Cobble		3 in. to 8 in.
Gravel	-coarse	1 in. to 3 in.
	-medium	3/8 in. to 1 in.
	-fine	#4 sieve to 3/8 in.
Sand	-coarse	#10 sieve to #4 sieve
	-medium	#40 sieve to #10 sieve
	-fine	#200 sieve to #40 sieve
Silt		0.002 mm to #200 sieve
Clay		smaller than 0.002 mm

Modifying Term	Percent by Weight
Trace	1 - 10
Little	11 - 20
Some	21 - 35
And	36 - 50

Moisture Condition

Dry
Damp
Very Damp
Saturated

DRILLING, SAMPLING & SOIL PROPERTY SYMBOLS

CF - Continuous Flight Auger
HS - Hollow Stem Auger
HA - Hand Auger
RD - Rotary Drilling
AX - Rock Core, 1-3/16 in. diameter
BX - Rock Core, 1-5/8 in. diameter
NX - Rock Core, 2-1/8 in. diameter
S - Sample Number
T - Type of Sample
J - Jar
AS - Auger Sample
SS - Split-spoon (2 in. O.D. with 1-3/8 in. I.D.)
ST - Shelby Tube (2 in. O.D. with 1-7/8 in. I.D.)
R - Recovery Length, in.
B - Blows/ 6 in. interval, Standard Penetration Test (SPT)
N - Blows/ foot to drive 2 in. O.D. split-spoon sampler with 140 lb. hammer falling 30 in., (STP)
Pen. - Pocket Penetrometer reading, tons/ sq. ft.
W - Water Content, % of dry weight
Uw - Dry Unit Weight of soil, lbs./ cu. ft.
Qu - Unconfined Compressive Strength, tons/ sq. ft.
Str - % Strain at Qu.
WL - Water Level
WD - While Drilling
AD - After Drilling
DCI - Dry Cave-in
WCI - Wet Cave-in
LL - Liquid Limit, %
PL - Plastic limit, %
PI - Plasticity Index (LL-PL)
LI - Liquidity Index [(W-PL)/PI]