



FALLS CHURCH CITY HALL IMPROVEMENTS AND PUBLIC SAFETY CENTER FEASIBILITY STUDY



REPORT 4 – SCHEMATIC DESIGN FINAL REPORT

OCTOBER 2015



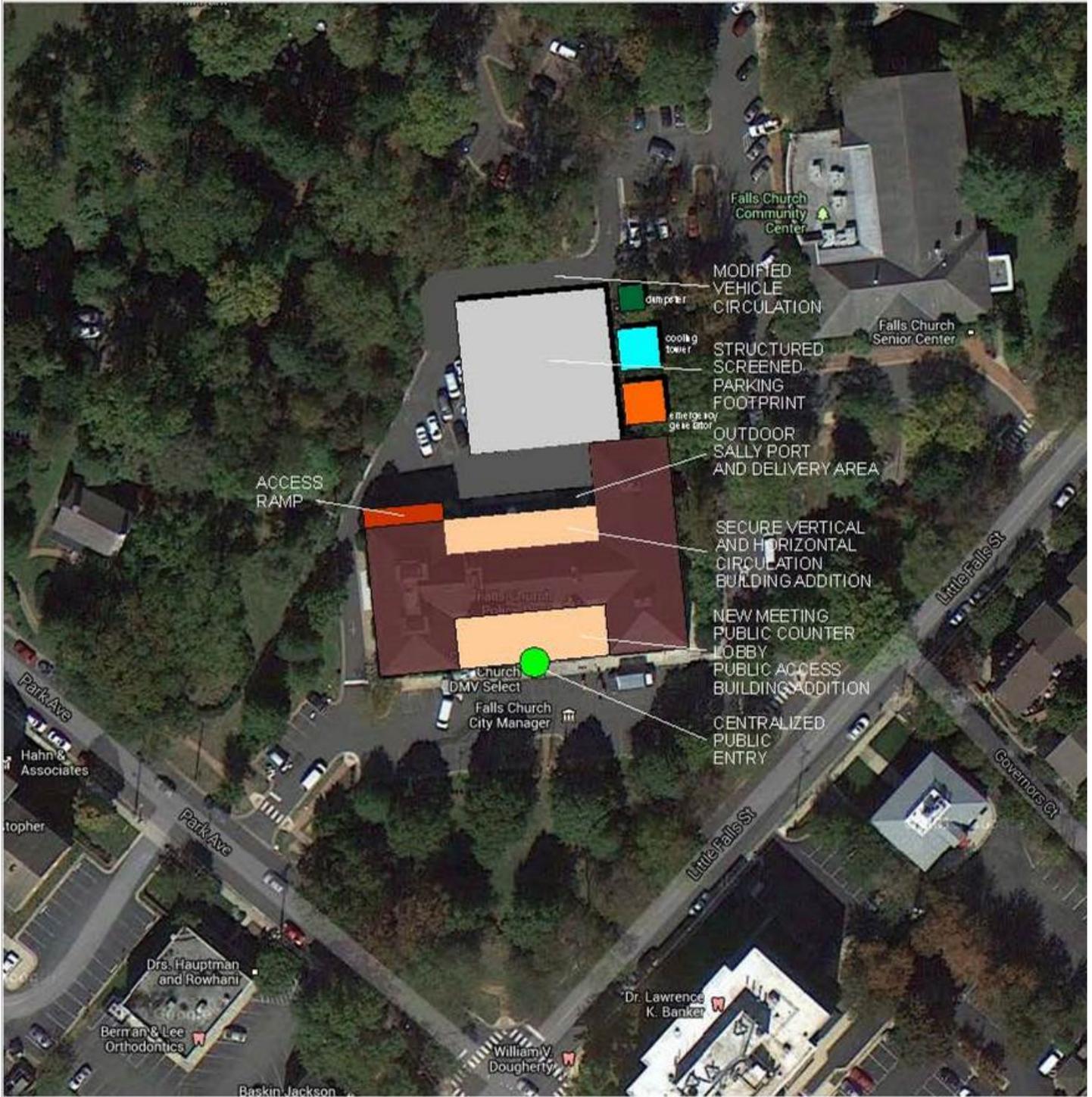




Table of Contents

Section 1 - Overview

A. Study History 1-1
 A1. Reports 1 and 2 1-1
 A2. Report 3 Context, Scope, and Findings 1-2
B. Report 4 Context and Scope 1-4

Section 2 – Facility Evaluation

A. Overview 2-1
B. Architectural Analysis 2-2
 B1. Overview 2-2
 B2. Exterior Analysis 2-3
 B3. Interior Analysis 2-3
 B4. Use Group and Construction Type 2-4
 B5. Building Code 2-4
 B6. Accessibility Code 2-5
 B7. Envelope 2-6
C. Engineering Analysis 2-7
 C1. Mechanical Overview 2-7
 C2. Plumbing and Fire Protection 2-9
 C3. Electrical 2-11
 C4. Emergency Power 2-13
 C5. Lighting 2-15
 C6. Telecommunications, Data, and Security Systems 2-16
 C7. Structural Analysis 2-17
D. Hazardous Materials Analysis 2-19
 D1. Executive Summary 2-19
 D2. Survey Findings 2-19
 D3. Cost Estimates 2-20
E. Elevator Analysis 2-22
 E1. Background 2-22
 E2. Findings 2-22
 E3. Elevator Scope of Work - Renovation Scheme 2-23
 E4. Elevator Scope of Work - Replacement Scheme 2-24
 E5. Recommended - Elevator Scope of Work – Replacement Scheme 2-24



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Table of Contents

Section 3 – Space Needs Required (2015)

A. Modified Building Utilization Plan	3-1
A1. History and Overview	3-1
A2. Building Reuse Strategies	3-2
A3. Summary of Space Needs for Schematic Design	3-3
B. Program of Space Needs Required (2015)	3-9
1.000 Building Entrance	3-9
2.000 Courtroom/Council Chambers/Court Clerk.....	3-11
3.000 Development Services	3-13
4.100 City Administration Shared Areas	3-16
4.200 City Clerk	3-21
4.300 Financial Services.....	3-22
4.400 City Attorney	3-24
5.000 Registrar of Voters.....	3-25
6.000 Tax Administration.....	3-26
7.000 Human Services	3-28
8.100 Law Enforcement Entrance/Lobby.....	3-30
8.200 Sheriff's Department	3-31
8.300 Victim Witness/Interview Area	3-33
8.400 Emergency Operations Center.....	3-34
8.500 Dispatch	3-35
8.600 Police Department	3-36
8.700 Police Evidence Processing and Storage	3-39
8.800 Equipment Room/Armory	3-40
9.000 Inmate Entry and Holding	3-41
10.000 Locker/Shower.....	3-43
11.000 Vehicle Prep and Officer Entrance	3-45
100.000 Building Shared	3-47

Section 4 – Schematic Design

A. Goals and Process	4-1
A1.Security	4-1
A2.Code and Accessibility Compliance	4-1
A3.Public Access.....	4-1
A4.Building Circulation and Functionality	4-1
B. Community Involvement, Project Review, and Project Oversight	4-2
B1.Council Actions	4-2
B2.City Hall/Public Safety Facility Task Force	4-3
C. Preliminary Schemes.....	4-4
C1.Scheme 1 (not selected, but preferred for further development).....	4-4
C2.Scheme 2 (not selected)	4-4
C3.Scheme 3 (not selected)	4-5
C4.Scheme 4 (not selected)	4-5
D. Preferred Scheme - Overview	4-11
D1Floor plate Connection	4-11



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Table of Contents

D2Increased Parking.....	4-23
D3Interior Space Utilization.....	4-24
City Council and Public Meetings	4-25
Adjudication of Court Cases (Courtroom).....	4-27
Professional business related to City Administration	4-28
Development Administration.....	4-29
Law enforcement	4-30
Tax Administration and the Dept of Human Svcs	4-31
D4.Design Considerations	4-32
Form.....	4-32
Structural/Framing	4-32
Proposed HVAC Systems	4-35
Proposed Plumbing/Fire Protection Work	4-38
Proposed Electrical Systems	4-40
 Section 5 – Implementation	
A. Overview of Implementation Planning.....	5-1
B. Phasing and Logistics	5-1
PHASE ONE - NORTH ADDITION/INFILL AND PARKING STRUCTURE	5-2
PHASE TWO – SOUTH ADDITION/INFILL	5-5
PHASE THREE - RENOVATE FIRST FLOOR, EAST WING	5-8
PHASE FOUR - WEST WING RENOVATION, FIRST AND THIRD FLOORS	5-10
PHASE FIVE – CHAMBERS RENOVATION.....	5-12
PHASE SIX - RENOVATE EAST WING, THIRD FLOOR	5-13
C. Site Civil Scope of Work	5-17
C1.Site – Demolition and Preparation	5-17
C2.Site - New structured parking	5-17
C3.Site - East Side	5-17
C4.Site – West Side	5-17
C5.Site – Community Center.....	5-18
C6.Parking.....	5-18



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Table of Contents

Appendices

Appendix A. Geotech Boring Locations.....	A-1
Appendix B. Civil Project Area.....	A-3
Appendix C. Tree Survey	A-5
Appendix D. Preliminary LEED Checklist.....	A-8
Appendix E. Hydrant Test Results.....	A-9
Appendix F. Cost Estimate	A-11



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Table of Contents

List of Tables and Figures

Section 3 – Space Needs Required (2015)

20-Year Summary of Space Needs	3-7
--------------------------------------	-----

Program of Space Needs Tables

1.000 Building Entrance	3-10
2.000 Courtroom/Council Chambers/Court Clerk.....	3-12
3.000 Development Administration Services	3-15
4.100 City Administration Shared Areas	3-20
4.200 City Clerk	3-21
4.300 Financial Services.....	3-23
4.400 City Attorney	3-24
5.000 Registrar of Voters.....	3-25
6.000 Tax Administration.....	3-27
7.000 Human Services	3-29
8.100 Law Enforcement Entrance/Lobby.....	3-30
8.200 Sheriff's Department	3-32
8.300 Victim Witness/Interview Area	3-33
8.400 Emergency Operations Center	3-34
8.500 Dispatch	3-35
8.600 Police Department	3-37
8.700 Police Evidence Processing and Storage	3-39
8.800 Equipment Room/Armory	3-40
9.000 Inmate Entry and Holding	3-42
10.000 Locker/Shower.....	3-44
11.000 Vehicle Prep and Officer Entrance	3-46
100.000 Building Shared	3-48

Section 4 – Schematic Design

Preliminary Schemes

Graphic – Scheme 1	4-7
Graphic – Scheme 2.....	4-8
Graphic – Scheme 3.....	4-9
Graphic – Scheme 4.....	4-10

Recommended Option

Floor Plate Flow Graphic – Desired Paths of Travel.....	4-12
Recommended Option – Circulation Graphics (G3, G2)	4-15
Recommended Option – Circulation Graphics (G, Center Level 1).....	4-16
Recommended Option – Circulation Graphics (Level 1 – East-West, Level 2 East-West)	4-17
Recommended Option – Circulation Graphics (Sections).....	4-18
Recommended Option – Circulation Graphics (Elevator Access Diagram)	4-19
Recommended Option – Circulation Rendering (North Addition/Infill looking South)	4-20



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Table of Contents

Recommended Option – Circulation Rendering (New Lobby/Main Public Entrance -- South Addition/Infill looking North) 4-21

Recommended Option – Circulation Rendering (New Lobby/Main Public Entrance -- South Addition/Infill looking down)..... 4-22

Space Utilization

Figure 1 - City Council and Public Meetings – Main Floor 4-25

Figure 2 - City Council and Public Meetings – G Level 4-26

Figure 3 - Adjudication of Court Cases (Courtroom)..... 4-27

Figure 4 - Professional business related to City Administration 4-28

Figure 5 - Development Administration..... 4-29

Figure 6 - Law enforcement 4-30

Figure 7 - Tax Administration and the Dept of Human Svcs 4-31

Section 5 – Implementation

Implementation Plan – Phasing Diagrams

Figure 1 - PHASE ONE - NORTH ADDITION/INFILL AND PARKING STRUCTURE..... 5-4

Figure 2 - PHASE TWO – SOUTH ADDITION/INFILL 5-7

Figure 3 - PHASE THREE - RENOVATE FIRST FLOOR, EAST WING 5-9

Figure 4 - PHASE FOUR - WEST WING RENOVATION, FIRST AND THIRD FLOORS..... 5-11

Figure 5 - PHASE FIVE – CHAMBERS RENOVATION..... 5-13

Figure 6 - PHASE SIX - RENOVATE EAST WING, THIRD FLOOR..... 5-15

Figure 7 - PHASE SIX E or PHASE 7 – CONSTRUCT PARKING STRUCTURE 5-17



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 1 *Executive Summary*



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

A. Study History

In September 2007, the City of Falls Church hired the Dewberry (formerly PSA-Dewberry) team was hired to explore long-term solutions to growth of the agencies currently housed within the City Hall Building including the General District and Juvenile & Domestic Relations Court, and the Sheriff, Police, and City Hall functions. The Community Center and Mary Riley Styles Library were also included in the study. Between 2007 and 2015 Dewberry completed four phases of effort, summarized in Reports 1, 2, 3, and 4. Reports 1 and 2 identified the current (2008) facility use and conditions and summarized the space needed at each facility. Report 2 began to identify the shortfall by facility, matching space needs with the existing available space and crafting alternatives to meet future needs. Report 3 (2012) updated the information in Reports 1 and 2 and made recommendations to reconcile space shortfalls with operational and security needs, most focused on the City Hall. Report 4 (2015) updated the three prior reports and provides a schematic design for City Hall renovations.

A1. Reports 1 and 2

Report 1 and Report 2 were completed in July 2008. Report 1 identifies the current conditions at each facility and summarized the space needed to bring all components up to best practice standards in a detailed space program for each component. Report 2 began to match the space needs with existing facilities, exploring various configurations and options for co-location to meet future space needs. This second report concluded with three scenarios for implementation, each with revised program of space needs and broad order of magnitude costs over 20 years. The three options were as follows:

- Option 1 – Two-Building Solution – this option develops two separate facilities for General Government and Public Safety (Courts, Sheriff, Police). General Government is relocated to a mixed use facility in the central downtown area, while the existing City Hall site is expanded and renovated to create a Public Safety Center. The library is relocated to a mixed-use facility downtown, and the community center expands on site.
- Option 2 – “One Big Happy Family” – this option maintains both Public Safety (Courts, Sheriff, Police) and General Government on the existing City Hall site. The library is relocated to a mixed-use facility downtown, and the community center expands on site.
- Option 3 – New Police Station – this option constructs a new police station on an off-site location and expands all other City Hall tenants (General Government, Courts, and Sheriff) on the existing City Hall site. The library is relocated to a mixed-use facility downtown, and the community center expands on site.

A preference was given to Option 2, “One Big Happy Family,” with reservations regarding the 20-year cost and implications for the anticipated five-year phased costs. At that point, the



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

project went on hold due to conditions internal to the City, including the concurrent development of the Falls Church City Public Schools Master Plan. The decision was made to hold off on any large allocations of funds until decisions could be made with full information on all necessary capital needs of General Government, public safety, and the schools.

A2. Report 3 Context, Scope, and Findings

Between the conclusion of Reports 1 and 2 (completed in July 2008) and when the study resumed in July 2011, a number of conditions surrounding the agencies and facilities included in this study changed. Those changes included:

- The economy worsened, resulting in staff layoffs and reductions in government operations.
- Several general government components were re-located off-site, releasing space within the City Hall.
 - Court Services Unit (relocated to government-owned space in the Gage House)
 - Water Customer Service (relocated to leased space in the Flower Building)
- A number of renovations and internal shifts occurred within the City Hall, which improved conditions for those departments and which brought their space current with many of the programmed space needs identified in Report 1.
 - The Commissioner of Revenue/DMV and Treasurer (now called Tax Administration) were moved to newly renovated space on the ground floor, east wing (2009).
 - The Registrar of Voters space was renovated to meet the recommended space needs (2009).
 - The Court Services Unit moved to an offsite location (2011).
 - The Housing & Human Services Administration was reorganized and combined with Court Services to create the new Department of Human Services. HHS was also reduced by four staff during the same time period, resulting in a reduction of staff for the new Department of Human Services (2009).

Plans for City Hall were adjusted so that the following areas would not be renovated as part of this overall scope of work:

- Clerk of the Court
- Courtroom/Council Chambers
- Juvenile Holding
- Adult Holding
- Shared spaces, including restrooms, storage, and staff workrooms.

The result of this adjustment in space needs was that the courthouse continued to operate with compromises in the secure circulation for judges and in-custody defendants; that the existing police

Section 1 – Overview



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

holding continued to serve as the total holding available for the building, serving courts and police without complete sight and sound separation available for juveniles and adults, males and females; and that most of the building did not have dedicated restrooms for staff. Storage continued to need to be improvised within work areas and built-ins were required in most offices to accommodate the lack of dedicated storage rooms and/or closets. Staff continued to schedule carefully for use of collaboration and meeting rooms, as those persisted in limited in quantity and locations for shared use.

The remaining space needs were allocated to four projects recommended for implementation in the near future, along with additional structural and building system improvements to bring the building into more efficient and sustainable performance, which form the basis of Report 4.

The summary space shortfall and project areas for the short-term projects were included in Report 3, minus full expansion that was estimated to be needed in Report 1 to accommodate long-term growth, meeting industry standards for all work areas, and all requirements to achieve the desired separation of secure and public operations. This reduced shortfall represented the space shortfall estimated based on current staffing, minimal expansion, and reduced estimates of shared spaces.

Given those changes, a modified phasing plan was developed and recommended for implementation. This report documents that plan in general terms, with details on the first five years of implementation.

A3. Post Report 3 – Next Steps

Following the publication of Report 3 in 2012, a number of these recommended building improvements were made using CIP and other funds. Completed improvements include:

- Elevator conditions study (A study of elevator issues and recommendations for modifications to meet code and provide repairs. This study led to the recommendation that the elevators have met their life expectancy and a better use of funds would be to replace the elevators in alternative locations as part of the overall building upgrades).
- Renovations on the G2 corridor, in line with the facility master plan, to improve storage and building shared areas and to update finishes and remove asbestos in corridor floor.
- Renovations to Police Evidence Storage to shift and expand capacity, and to better secure materials per chain of custody protocols.
- \$1M in Facilities Reinvestment including:
 - **Rebuilt** six chimneys to address brick collapse, plumbing vents and water intrusion into the attic/walls;
 - **Installed** snow rails and replaced all gutters/downspouts to prevent ice damming, large icicles and snow sheeting to address damage and injury risk;
 - **Installed** IT Server Room chemical sprinkler system to remove water sprinklers over major infrastructure equipment;



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

- **Completed** Council/Court Chambers renovation to encapsulate asbestos, remove mildew, and improve appearance and functionality of the room.

B. Report 4 Context and Scope

In 2014, the City of Falls Church embarked on the schematic design phase of work for the expansion and renovation of City Hall. This effort is funded as four separate projects, with a total approved amount of \$16.95M. The initial sum of \$11.7 M, split among the four projects, was approved incrementally in FY 12, 13, and 14 and an additional \$5.25M, split among the four projects, was approved in FY16. Collectively, the improvements are known as the City Hall Public Safety Facility Renovations, as follows:

- City Hall addition on the front (new public entrance, meeting areas, and circulation)
- 2-Floor Parking Garage (including secure parking)
- City Hall addition to the North (new staff expansion, staff circulation between east and west wings, and secure inmate movement of the existing building)
- Interior and as needed exterior renovations of the existing building

These projects included updating the assessment of user space needs and creating a schematic design for presentation to City stakeholders and the public, in order to develop a common vision for the building's expansion.

Changes since the last round of work included the following

- Water Customer Service was sold to Fairfax County (January 3, 2014)
- The DMV office at City Hall was closed (2015)
- Staffing for several General Government groups changed, as the organization of various groups (such as planning) shifted in response to new business practices. (2013-2015)

Prior to embarking on schematic design, the Dewberry Team wanted to establish a solid understanding of issues to be resolved, both user-related and building-related.

To determine those goals, the Dewberry team reviewed the conditions of the City Hall and updated the facility evaluation and recommendations for improvements (Chapter 2). They also conducted a program verification and update process to establish an updated understanding of user groups' space needs. The results of that program update are included in Chapter 3.

Chapter 4 includes the process and recommended vision for the City Hall. That vision was developed through a series of workshops and meetings, including public meetings. The vision was governed by a set of project goals, which are included in Chapter 4.

The four project scopes evolved into the following:

Section 1 – Overview



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

- Interior Renovations to
 - Improve security for this government facility, including creating context-appropriate physical separations between staff and public; between in-custody defendants and other parties to court cases; and between the police and court staff vehicles and public vehicles.
 - Update code compliance to 2014 or later, including ADA, Life-Safety, and other codes which affect ingress/egress, public circulation, public restrooms, sprinklers, and other details related to the building.
 - Maximize building efficiency by recovering corridors usable for other purposes, once fire safety and egress are addressed
- Front Addition to improve public access, circulation, way-finding, and service provision throughout the building.
- Rear Addition to connect the east and west wings along staff circulation, to add office/staff space for general government (to allow re-organization and optimal adjacencies to occur), and for police/secure entry at the rear of the building.
- Parking Garage to increase the capacity for public parking at the City Hall and adjacent facilities (Community Center, Library).

An additional step involved updating the project cost estimates to account for scope adjustments and the inflation which occurred between when the project was initially scoped (2011) and the time of schematic design (2015). The project budget was increased from \$11.7 million to \$16.95 million in April 2015.

This Report 4 includes the documentation for efforts and decisions made during the schematic design process (2013-2014).



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 1 – Overview

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**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

*Section 2
Facility Evaluation*



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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A. Overview

*In September 2007, Dewberry, (formerly PSA-Dewberry - Architectural Analysis), S3E (Engineering Analysis), and Froehling & Robertson, Inc. (Hazardous Materials Analysis) examined the Falls Church City Hall Building and supporting building documentation to determine the condition of the building and its systems and to identify any areas in need of attention. The results of that evaluation were included in Report 1, and are repeated here to provide context for the strategies and costs in Section 3, with additional updates as noted in the 2014 evaluation update. **Updates or amendments to the Report 1 content in this Section are included in italics.** Of particular relevance are the sections on Accessibility Code, Mechanical, and Fire Protection.*

In general, the team found the facility to be reasonably well maintained but in need of modernization in order to bring it into compliance with current codes and to replace building systems which are at the end of their useful life cycle.

This section discusses the existing building condition in terms of building systems. Each of the following aspects of the building is discussed in detail:

- *Architectural*
 1. *Overview*
 2. *Exterior*
 3. *Interior*
 4. *Use Group and Construction Type*
 5. *Building Code*
 6. *Accessibility Code*
 7. *Envelope*
- *Engineering*
 1. *Mechanical Overview*
 2. *Plumbing and Fire Protection*
 3. *Electrical*
 4. *Emergency Power*
 5. *Lighting*
 6. *Telecommunications, Data, and Security Systems*
 7. *Structural Analysis*
- *Hazardous Materials*
- *Elevator Analysis*



B. Architectural Analysis

B1. Overview

The Falls Church City Hall Building was evaluated under Part I of the Virginia Uniform Statewide Building Code, The Virginia Construction Code, 2003 Edition (essentially the IBC 2003), and was evaluated under the standards for new construction. This was done to provide an equivalent comparison to alternatives which provide new facilities; and was also based on the understanding that renovation and addition options for the existing facility will require substantial new construction and that the resulting facility should provide essentially uniform levels of life safety, utility and performance throughout the added and renovated areas.

The Falls Church City Hall Building is a two story brick structure of approximately 12,223 gross square feet (GSF) per floor, for a total of 39,788 RSF¹, which includes basements under the Wings and a crawl space below the G level of the Courtroom/Chambers building. The building is H-shaped, with its predominant length along the latitudinal (east-west) axis, and its main facades facing south to the corner of Park Avenue and Little Falls Street and east to Little Falls Streets. The Falls Church City Hall Building is almost symmetrical about its center, latitudinal (east-west) axis (except for the north end of the East wing which extends approximately 38 feet further north than the west wing) and is traditional in its approach and detail.

The Falls Church City Hall Building was built in two phases: the initial north-south west wing and the (now central) attached east-west Chambers piece in 1956, with the later north-south east wing in 1982 (with renovations to the initial facility at that time). References to “original building” refer to the west wing and center piece. The plan elements of the building are designated West wing, East wing and the connecting Chambers. The upper floor elevations of the East and West wings align, but the floor elevations of the Chambers are offset approximately half a story (+/- 6 feet) to provide higher ceiling clearance for the combined Courtroom and City Council Chambers on its upper level. The roof line of the building aligns across all three wings.

The floor designations for the West wing from the top down are 3rd floor, 1st floor (the west entry level) and G2 floor (the basement level for this wing). The Chambers floor designations from the top down are 2nd floor (the Courtroom/Council Chambers, with entries from grade via monumental exterior stairways on the south side, adjacent to the East and West wings), and G floor (which is mostly below grade on the south façade, but on grade on the north façade with an entry from grade adjacent to the West wing). The floor designations for the East wing from the top down are 3rd floor, 1st floor (the east

¹ RSF = Rentable Square Feet, or area not including exterior wall thicknesses, estimated based on aggregate of RSF (DGSF) on record.



entry level via monumental stairs from grade or accessible ramp from the southeast), G2 floor (the basement level for this wing, which is approximately 9 inches lower than the West Wing's G2 floor with an areaway exit to grade via a landing under the monumental stairs and adjacent stairs up to grade on the east end), and G3 floor (the Sub-Basement). The East wing's north egress stair discharges to the west from the 1st floor via an exterior landing. The G2 floor's police holding area is accessed from grade on the north via an exterior ramp that slopes down to a landing in an exterior areaway.

The East and West wings typically have offset central corridors, running south from the north egress stair past an elevator (in each wing which opens in both front and rear to access the Chambers floors) to the south egress stair. The south egress stairs are interior to each wing, connect to the offset floor levels of the Chambers, and discharge to the east and west respectively via the entry lobbies on the 1st floor (and also via the G2 floor's lobby for the East wing). The Chambers' G floor connects the East and West wings' interior egress stairs and the rear openings of their elevators by an offset corridor along the south (below grade) façade. There is no direct connection of the East and West wings on the 2nd floor except through the Courtroom/Council Chambers (and its west end center corridor) which connect to the East and West wings' interior egress stairs and the rear openings of their elevators. There is no connection of the East and West wings on the 3rd floor.

B2. Exterior Analysis

The Falls Church City Hall Building's walls are red brick construction on concrete masonry unit back-up, in Flemish bond, with grapevine tooled joints, a cove water table below the 2nd floor, brick jack arches (curved brick arches at the Courtroom/Council Chamber) over the windows and with limestone window sills. The main (east, south and west) entries are wood double doors, with half glass lights and with clerestory light above, flanked by painted wood pilaster columns supporting painted wood entablature trim above the doors. The east G2 floor entry is a dark bronze aluminum and glass storefront door with sidelight. The stair egress doors are single leaf wood doors with half glass lights and clerestory lights above. The north egress from the G floor is similar, but a double door. There is a painted wood trim cornice at the roof line, with painted wood modillions. The windows are double-hung, single pane wood units with storm windows in the 1956 portion and double-hung, insulated aluminum units with storm windows in the 1982 addition (*east wing*). The south and east entries have ornamental metal guard rails and hand rails at the entry steps. The roof material is slate on an almost 45 degree sloped, hip roof, with snow guards at the eaves; externally drained, with copper gutters, leader heads, and downspouts. Each of the three wings has two symmetrically arranged chimneys.

B3. Interior Analysis

Finishes are typically 2' by 4' suspended, lay-in, acoustical tile ceilings, painted gypsum board (or plaster) partition walls with carpeted floors. Finishes in the Courtroom/Council



chamber are plaster ceilings over painted wood crown molding, with acoustical panel walls above painted wood paneled wainscot and base. The floors and steps are carpeted. The building's toilets have ceramic mosaic tile floors and ceramic tile walls. The locker and toilet have ceramic mosaic tile floors and ceramic tile walls.

An elevator evaluation was conducted in October 2013 by Vertran Enterprises, which revealed that the two elevators were in "fair operating condition and should be scheduled for a full modernization in the next five years." Both elevator machine rooms had a number of code issues, including lack of fire alarm protections and inadequate HVAC provisions. Based on these findings, the City requested that Dewberry examine alternate solutions which would also improve overall building circulation, including elevator replacement as part of the renovation/addition plan. There is additional discussion in E. Elevator Analysis.

B4. Use Group and Construction Type

The building is a mixed occupancy of Use Groups A-3 (the Courtroom/ Council Chamber) and B Office for the remainder of the facility. The 1982 addition (*east wing*) is separated from the 1956 initial building by 2-hour fire resistance rated construction.

The Construction Type is III (or V) due to the combustible attic framing. The most favorable Construction Type is III-B for a non-separated mixed occupancy. When evaluated under the A-3 criteria, the building exceeded the overall allowable square footage by approximately 1,300 SF. Solutions include:

- Revise the Construction Type to III-A (adding 1-2 hour fire-resistance rated construction to structure, floors and roof).
- Sprinklering the entire building.
- Create two separate buildings on the site (by providing 1 hour fire-resistance rated construction for all openings within 30 feet of the joint between the Chambers and the East wing on both elements).

The recommended approach is to sprinkler the entire building, which should also make implementing any building additions required to satisfy program easier to achieve.

The building's arrangement of offset floor levels in the connecting Chambers creates problems of access, egress and way finding.

B5. Building Code

The following points describe building code violations seen at City Hall:

- Interior stair handrails are typically not in accordance with code for continuity and profile (grasping). Guardrails are typically absent and not in accordance with



code for continuity, profile (grasping), and prevention of the passage of a 4 inch sphere when present.

- Exterior stair handrails are typically not in accordance with code for continuity, profile (grasping) and prevention of the passage of a 4” sphere. Guardrails are typically absent and not in accordance with code when present.
- Two additional draft stops are required to subdivide the Attic of the original 1956 West Wing and Chambers into areas not exceeding 3,000 SF.
- Stairs are typically not in accordance with code for run or rise.
- Egress at exterior exit doors is typically not level across both sides of the door opening and/or the exterior landing is not in accordance with code.
- The West wing’s south stair enclosure and configuration are not in accordance with code.
- The Lobbies lack 1 hour fire-resistance rated construction separation at the levels of discharge at the East wing.
- The Courtroom/Council Chamber lacks handrails on the stairs to the Well and to the Bench, therefore there is no code compliant 2nd means of egress as required.
- Firestopping is missing from penetrations in fire-resistance rated construction.
- Stairs are lacking gates to prevent occupants from continuing to travel down below at the level of exit discharge.

B6. Accessibility Code

The following points address the changes that need to be made to the existing building in order to meet the requirements of the Accessibility Code:

- All public and common use toilets must be accessible. Private toilet rooms shall be adaptable.
- The locker rooms must be accessible.
- All door operating hardware such as handles, pulls and other operating devices on accessible doors must have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs.
- Drinking fountains spout heights and accessibility need to accommodate both individuals in wheelchairs and individuals who have difficulty bending or stooping on a 50%/50% basis. This can be accommodated by the use of a “hi-lo” fountain.
- Two accessible means of egress are required from each of the floors in the Wings and the Chambers of the building. Because the facility is not fully sprinklered, this must include both the elevators (which both require an emergency power source) and the establishment of areas of refuge on each level of the facility above or below the grade entry level.
- All signage for public spaces needs to meet accessibility standards.



- All public service counters need to be accessible.
- Double doors to public spaces in the 1956 portions of the building need to provide a 32” clear opening in at least one leaf.
- Cross slopes at the handicapped parking spaces should not exceed the permitted 2%.
- Curb cuts for the sidewalks should be in accordance with code for edge slopes and tactile differentiation.
- Multiple counters, water coolers, fire extinguishers, etc. should not extend more than 4” from walls.

B7. Envelope

The following points address problems associated with the envelope of City Hall:

- There are water leaks in the G3 floor Janitor Storage Room, in the southeast corner of the Mechanical Room, and in the G2 floor Elevator Pit.
- *There was water intrusion in the Police Department lobby (East wing, lower level) and along that side of the building.*
- Some thin brick had fallen off of the north chimney on the East wing. *(This was subsequently replaced during a chimney repair initiative).*
- The wood-framed, single-pane windows in the 1956 portions of the building have exceeded their expected useful lifespan. *(Per the cost estimator, these windows were removed from the final cost estimate to stay within the project budget. It is recommended that the windows either be replaced incrementally through CIP in the years before and after this construction, or that funding be sought separately for complete replacement).*
- The wood doors in the 1956 portions of the building have exceeded their expected useful lifespan.
- Sidewalks and steps are cracked and settled which creates tripping hazards and is not compliant with ADA standards.



C. Engineering Analysis

C1. Mechanical

Overview

1956 Original Building (west wing and center/Chambers)

The original building's mechanical system (1956) is a two-pipe hydronic system consisting of a cooling tower, chiller and a boiler providing hot water and chilled water to an air handling unit and three pumps (located in the mechanical room) serving interior spaces. In addition there are thirty-six (36) console type fan coil units that are supplied through a two-pipe water distribution system. Over the years, five (5) air-cooled split A/C systems were added for Server Room, Telecommunication Room, Employee Lounge, and Print Room on Level G-2.

The boiler, and all console type fan coil units are originals. The age of the chiller is not certain at this time, but it appears to be original to the building. The cooling tower and air handling unit have been replaced in the past five years. All air-cooled split A/C system equipment is relatively new. The piping system is original.

1982 Renovation and Addition (east wing)

The Renovation and Addition area mechanical system is independent from the 1956 building (*west wing and center/Chambers*) mechanical system. The system consists of a 100-ton cooling tower, a heat exchanger, and a boiler providing system water to water-source heat pumps through a two-pipe water distribution system. This heat pump system provides heating or cooling to the space as needed throughout the year. Over time, the original heating and ventilating unit (HV-1 located in mechanical room) serving Level G-3 was replaced with air-cooled split A/C units and an air-cooled split A/C system was added for the Dispatch Room on Level G-2. Shortly after construction, phase protectors that require manual reset were installed on most HVAC equipment.

The boiler and heat exchanger are original. There are 11 ducted water-source heat pump units and 42 console type water-source heat pump units. Of these, six ducted units and two console type units have been replaced within past five years, as have the cooling tower and several water source heat pumps.

Automatic Temperature Controls

Mechanical system controls are tied to a DDC building automation system (BAS), which the mechanical system controls of the public library are also tied to. Brief description is as follows:

1956 Original Building (west wing and center/Chambers):

- Chiller, boiler, and three (3) pumps in mechanical room are tied to BAS.



- Changeover between heating and cooling modes can be done via BAS.
- Boiler operates per hot water temperature reset schedule.
- Cooling tower is not tied to BAS.
- Console type fan coil units are not tied to BAS.

1982 Renovation and Addition (east wing):

- Console type heat pump units: Unit start/stop can be performed by BAS. Space temperature can be monitored by BAS.
- Eleven (11) ducted heat pump units and two (2) split A/C systems: Unit start/stop can be performed by BAS. Space temperature settings can be adjusted by BAS.
- Boiler is monitored by BAS.
- Cooling tower is not tied to BAS.

Findings

General:

- Power surge occurs often, especially during storm seasons in this area. When it happens, phase protectors cut off power to HVAC equipment, and almost every unit in the building must be visited and manually reset in order to put the unit back to operation.
- Heating and cooling capacity of the systems appear to satisfy the overall load.
- There are some local areas which may need some supplemental heating or cooling. For example, at four (4) workstation areas in the Police Dept. in the 1982 Building Level G-2 (*east wing*), many pieces of heat producing equipment are located in one workstation causing uncomfortable conditions. Contemporary heating and cooling systems have greater flexibility to accommodate this kind of inter-office “micro-climate” through smaller thermostatic zones and a degree of individual control over temperature; balancing the existing system or relocating some equipment (using longer cords) may also be options..

1956 Original Building (west wing and center/Chambers):

- Piping system is original, and isolation valves in runout piping to console units may not hold the water when units need be replaced.
- Console type fan coil units exceeded their reasonable life expectancy, and may be found to contain asbestos insulation once opened.
- The two pipe system needs seasonal changeover between heating and cooling modes. Once the system mode is set to a heating or cooling mode, it cannot be changed back to the other mode easily. This causes discomfort condition at the time of changeover depending on the weather.
- It appears that ventilation air is not provided in Print Room on Level G-2 where a dedicated split A/C system is conditioning the space.



1982 Renovation and Addition (east wing):

- Mechanical equipment in general has been maintained well and is in fairly good working condition. Some units have been replaced since the original construction as noted above.
- Ducted air distribution systems are constant volume type, and each system serves multiple rooms. Since each system has a single thermostat to control space temperature, temperatures of individual rooms are not controlled.

The existing systems in the original building (west wing and center) should be replaced with major renovation/addition to a completely new VRF system, to be added at that time. East wing systems can either be updated at that time or delayed until a later date (for cost savings).

C2. Plumbing and Fire Protection

Domestic Water System

Domestic water is supplied to the building by a 3-inch water service that enters the G-2 Level (basement) on the south side of the original building (west wing and center). There is a 2-inch utility company meter located in the basement storage room. Domestic water is distributed from this point to plumbing fixtures located throughout the facility. The 1982 addition (east wing) is fed through the crawl space under the center of the original building. A majority of the piping in the 1956 original building is over 50 years old and is assumed to be in poor condition. The piping in the 1982 addition (east wing) should be in fair condition, if well maintained. Most plumbing fixtures were replaced throughout the building two years ago with low water consumption type fixtures, with the exception of a few fixtures on Level 3 and the stainless steel fixtures in the holding area. Although relatively new, any non-ADA compliant fixtures will need to be replaced concurrent to this renovation.

Domestic Water Heaters

There are two gas fired water heaters serving the facility. One 80,000 BTUH heater is located in the original building G-2 Level mechanical room and the other 200,000 BTUH heater is located in the 1982 addition G-3 Level (sub-basement) mechanical room. Both water heaters are in fairly good condition, however they are not high efficiency type as would typically be specified today.

Storm Water Piping System

There is a duplex sump in the original building mechanical room in the G-2 Level that picks up area drains and possible sub-surface drainage, although there are no drawings available showing the extent of the below slab drainage system. There is another duplex sump pump in the G-3 Level mechanical room in the 1982 addition (east wing) that picks up floor drains in the sub-basement level and area drains on the basement level. The



sub-surface drainage system is also connected to the sump pump. Both sump pumps discharge to the exterior storm water drainage system.

The roof drainage system consists of exterior downspouts that connect to the onsite storm drainage system.

Sanitary Sewer System

There are two sanitary sewer exits from the building; one leaves the original building on the west side below the G-2 Level floor slab and another 5-inch line exits the 1982 addition (east wing) in the northeast corner below the G-3 Level. The condition of the original building sanitary sewer system is not known however judging by the age of the pipe it would be expected to be ready for replacement. The 1982 addition pipe should be in fair condition judging by its age.

Natural Gas System

The gas service enters the building through a utility company meter located in the G-2 Level storage room in the original building. There is one 4-inch gas line that serves the original building and another 4-inch line that traverses the crawl space below the center section of the original building that goes to the G-3 Level mechanical room in the 1982 addition (east wing). It appears the gas service is low pressure judging by the size of the piping.

Fire Protection Sprinkler Systems

The building has a dedicated incoming water service for the sprinkler system and uses city water pressure. The building is partially sprinklered as follows

1956 Original Building (west wing and center/Chambers)

- Level G-2 – most areas are sprinklered.
- Levels 1 and 3 are not sprinklered.

1982 Renovation and Addition (east wing)

- Level G-3 – all areas are sprinklered.
- Level G-2 – only police areas (one third of the floor) and storage rooms are sprinklered.
- Levels 1 – only certain rooms (Clerk of the Court, Customer Service of Public Utility, and storage rooms) are sprinklered.
- Levels 3 – only certain rooms (City Manager's Office glass door, Financial Office's glass door, and storage rooms) are sprinklered.
- Level G (G-Corridor) and Level 2 (Council Chambers) are not sprinklered.

2015 Conditions

- *A new chemical (dry) sprinkler system has been installed for the IT server room in the G2 west wing.*



Findings

The domestic and fire protection piping in the 1956 building (*west wing and center/Chambers*) is original and is at the end of its useful life. The piping in the 1982 addition (*east wing*) is approximately 25 years old and could be expected to last another 15 years if it has been well maintained. If a complete renovation of the building were done, some of the piping in the newer addition may be able to be reused depending on the extent of the renovation. If new *ADA-compliant* plumbing fixtures were installed at new locations throughout the building it may be easier to install new piping and fixtures throughout the building. The scope of the piping replacement will depend on the extent of the renovations. If the facility is renovated, a sprinkler system will have to be installed throughout the entire building.

A number of drainage and storm sewer related improvements are recommended as part of the civil engineering improvements that will be required for the anticipated expansion. These are discussed in Section 4.

C3. Electrical

Normal Power Distribution System

1956 Original Building (*west wing and center/Chambers*)

The original building had a 120/208 V, 3 Phase, 4 Wire, 400 A underground service, with a main fused disconnect switch.

1982 Addition (*east wing*)

The 1982 building addition removed the existing 120/208 V, 3 Phase, 4 Wire service and saved the existing conduit path. The 1982 building addition placed a new 277/480 V, 3 Phase, 4 Wire, 400 A panel (Panel U) where the old 120/208 V, 3 Phase, 4 Wire, 400 A service had been. Panel U then provided power to a transformer which in turn then back-fed the existing panels at 120/208 V. In addition to upgrading the feeder for the original building, the 1982 addition also added a 277/480 V, 3 Phase, 4 Wire, 800 A service with an 800 A main circuit breaker. Feeders travel from the main distribution panel to 277/480 V panels on each floor. The 277/480 V panels serve the lighting and HVAC loads and transformers step down power to serve all of the 120/208 V loads on the floor.

2015 Conditions

*The 2015 electric service to the building is 277/480 volt, 3-phase, 4-wire 1200Amps, underground. The building is being served from a pad mounted utility transformer. The line side service conductors terminate in an 800A current transformer (C/T) cabinet, located in the existing mechanical room on the sub-basement level of the 1982 addition (*east wing*).*



The line side conductors terminate in a wiring trough underneath the C/T cabinet. They are tapped to feed a 277/480V 3 phase 4 wire 800A main distribution panel with an 800A adjustable trip main circuit breaker, a 400A 3 pole fused disconnect switch to feed the older part of the building, and a 100A 3 pole fused main disconnect switch for the building emergency system. The main distribution panel provides power for 277/480V branch circuit panels throughout the newer part of the building and the elevator.

Panel “Z” located in the mechanical room; a 277/480V 3 phase 225A panel that serves the lighting circuits on the sub-basement level, some mechanical equipment, snow melting circuits via a 100A contactor, and a 30 KVA transformer for panel “A”, a 120/208V 3 phase 100A panel for the low voltage circuits on the sub-basement level. Panel “Z1” is a 277/480V 3 phase 225A panel that serves pumps, heaters, cooling tower, and other equipment in the mechanical room.

A 277/480V panel, a transformer, and a 120/208V panel located in the electric rooms serve the lighting, HVAC and low voltage (receptacles, etc.) circuits on each respective floor in the 1982 addition (east wing). The 400A 3 pole fused disconnect switch mentioned above feeds panel “U”, a 400A 277/480V 3 phase panel, located in the electric and telephone room of the 1956 original building. Panel “U” is the distribution panel for the original building. It feeds a 277/480V branch circuit panel on each floor, and provides power for panel “DP2”, a 120/208V distribution panel for low voltage branch panels on each floor. Panel “U” also feeds the old 120/208V 400A panel located in the mechanical room, which was the main service panel when the original building was constructed. The existing main distribution panel, branch panels, disconnect switches, and transformers are all Federal Pacific with the exception of the 400A old service panel, which was manufactured by Square D.

Findings

The existing distribution system is functioning, however the system manufacturer is no longer in business and replacement parts are not available. Through the years, other manufacturer’s circuit breakers were fitted into existing panels. In the event of a complete renovation it is recommended that the power distribution equipment be replaced.



C4. Emergency Power

Overview

1956 Original Building (west wing and center/Chambers)

The original building did not have generator backup for the emergency loads. A portable generator has been provided for emergency power for this portion of the building; it is referred to as the “portable generator.”

1982 Addition (east wing)

The 1982 building renovation has a 277/480 V, 3 Phase, 4 Wire, 60 kW emergency generator feeding Panel EE. Panel EE is a 120/208 V, 3 Phase, 400 A panel that should be a 277/480 V, 3 Phase, 4 Wire, 100 A panel instead. Panel EE currently feeds all of the emergency panels in the 1982 building and Panel EE4 in the original building. It is referred to as the “permanent generator” or “emergency generator.”

2015 Conditions

The building has a 277/480V 3 phase 4 wire 60KW permanent emergency generator located in the areaway outside of the mechanical room on the sub-basement level of the newer part of the building. This emergency generator is manufactured by Katolight. It is equipped with weatherproof housing.

There is also a portable generator, which provides emergency power to the original (1956) portion of the building.

The existing emergency distribution system consists of a 100A 3 pole solid neutral fused main emergency disconnect switch, a 277/480V 3 phase 4 wire main emergency panel, a 100A 3 pole automatic transfer switch, a 9KVA transformer, and a 120/208V 3 phase 4 wire emergency panel, located in the mechanical room on the sub-basement level of the newer part of the building.

A 277/480V branch panel is located in the electric room on each floor of the newer part of the building for the emergency lighting and for providing power to a transformer and a 120/208V branch panel. The 120/208V branch panel and related transformer only exist on the basement floor and upper level electric room of the newer part of the building. *These elements are wired into the generator.*

The main emergency panel also feeds a 277/480V panel in the electric and telephone room of the older part of the building, which provides power for the emergency lighting circuits and a transformer for a 120/208V panel for low voltage emergency equipment. At a later date, a 277/480V portable generator was brought to the site to supplement the existing emergency system. A pedestal and a feeder were installed at the northwest corner of the newer part of the building (on the west wing) for connection of the portable generator.



A 400A 3 phase circuit was installed in the main electric room feeding a 400A panel via a 400A double throw disconnect switch, which serves as a manual transfer switch. Both elevators, Police Department equipment, Command Center equipment on third floor, etc. are connected to this new panel. The Panel and the double throw disconnect switch are manufactured by Cutler-Hammer.

In a case of power failure, the permanent generator must be turned on and loads transferred from utility power to generator power. The portable generator must be connected via the pedestal, started manually, and the double throw switch turned from utility supply to generator supply to power the original 1956 portion of the building. Upon return of utility power, the generators must be turned off, and the loads transferred over to utility power. The building emergency system also serves the fire alarm system, Emergency Operations Center (EOC), and communication equipment.

Findings

The building emergency generator is in working condition. The emergency distribution system (switches, panels, etc.) is all manufactured by Federal Pacific, which is no longer in business, so replacement parts are not available.

In the event of a complete renovation, it is recommended that one new properly sized (larger) permanent generator and distribution equipment be installed for the entire building, replacing both the permanent generator (no longer sufficient to handle emergency functions, and near the end of its useful life) and the portable generator (which was never a good long-term solution), as well as the emergency distribution system.



C5. Lighting

2015 Conditions

The majority of the building is illuminated by recessed or surface mounted fluorescent lighting fixtures. In the corridors, recessed 2' x 4' 2-lamp fluorescent fixtures with acrylic prismatic lens are used. In office areas recessed 2' x 4' 4-lamp fluorescent fixtures with acrylic prismatic lenses are used. In storage and utility areas one or two lamp strip fluorescent fixtures are used.

The fixtures vary; some are the original fixtures from the original construction, some have been replaced due to renovations, and some are newly installed. Because of the different ages of the fixtures the type of lamps used are different. Maintenance has to have five or six different type of lamps in stock for replacement.

In the Council Chambers incandescent pendant chandeliers are used with recessed HID down lights. Due to the long strike up time and even longer re-strike time of the HID fixtures, the room is dark after a power failure for about 10 to 20 minutes. The exit lights are all different. Some of them are incandescent, some are fluorescent and all are different ages. Wall mounted light fixtures at entrance doors accomplish the exterior lighting. No pole lights or other type lighting exist.

Findings

The existing lighting system is outdated and consumes a high amount of energy compared to contemporary systems. It is recommended that instead of replacing existing ballasts or other fixture components, the City provide new energy efficient fixtures with T8 lamps and electronic ballasts. It is also recommended that the existing HID fixtures in the Council Chamber be replaced with compact fluorescent down lights. These replacement systems will consume less energy and will be easier to maintain, due to ease of procuring replacement parts which are readily available, versus parts which are outdated. Consideration should be given to strategies for maintaining fixtures, given the high ceiling.



C6. Telecommunications, Data, and Security Systems

Fire Alarm System

The existing fire alarm system is an analog, non-addressable system and was installed at the time of the 1982 building renovation (east wing).

Communications Systems

The existing telephone service is terminated in the electric and telephone room of the older part of the building. The security and CCTV system is approximately five years old. It was installed and is being monitored and maintained by an independent contractor hired by the City of Falls Church.

Telephone/Data Systems

The existing telephone service is in the main electrical room of the original building and distributes telephone wiring throughout the original building and the 1982 building addition (east wing). The existing data systems are in the IT room of the original building and are distributed throughout the original building and the 1982 building addition.

Cable TV System

The existing cable TV systems are in the original building and are distributed throughout the original building and the 1982 building addition (east wing).

Security System

At the time of the facility evaluation, the SONITROL security system was housed in the 1982 building addition (east wing). *In 2015 a system upgrade was implemented, shifting the facility to a web/IP based system called Avigilon.*



C7. Structural Analysis

Applicable Codes & Design Loads:

- Virginia Uniform Statewide Building Code (IBC International Building Code 2012 edition)
 - Building Classification: Occupancy Category II (per IBC 1604.5)
- Design Live Loads (Section 1607):

Roof Live Load (*)	30 psf (local practice)
Roof Minimum Live Load	20 psf (per 2012 CPSM Fig. 6.1.4.1)
Light Storage	125 psf
Heavy Storage	250 psf
Administrative Areas	50 psf + 20 psf partitions
Toilet Rooms & Lockers	50 psf
Mechanical Rooms	150 psf
Garages (passenger vehicles)	40 psf
Yards/ Terraces, pedestrians	100psf
Vehicle Access Lanes	250psf & H20-44 Loading

* Adjusted to account for snow drifting and sliding.
- Design Snow Loads (Section 1608):

Ground Snow Load	25 psf (per VUSBC 1608.2)
Exposure Factor	1.0 (Exposure B- partially exposed)
Thermal Factor	1.0 (standard)
Importance Factor	1.0 (Category II)
- Design Wind Loads (Section 1609):

Basic Wind Speed	90 mph (3 second gust)
Wind Velocity Pressure	$q_s=20.7$ psf
Importance Factor	1.0 (Category II)

Exposure C (Suburban terrain)
- Design Seismic Loads (Section 1614 thru 1620):

Location: City of Falls Church, Virginia 22046
 $S_s=0.1547$ & $S_1=0.0507$
Seismic Use Group II
Seismic Design Category B
 $S_{DS} = 0.165$; $S_{DS}<0.167g$
 $S_{DI} = 0.081$; $0.067g<S_{DI}<0.133g$
Site Class D (stiff soil profile)
Site Coefficients $F_a=1.6$; $F_v=2.4$
Importance Factor 1.0 (Category II)
Basic Seismic Force Resisting System (tbd)
Ordinary Steel Moment and Braced Frames R = 4.0
Ordinary Reinforced Masonry Shear Walls R = 2.0



Analysis Method: Equivalent Lateral Force

- American Institute for Steel Construction (AISC) Manual of Steel Construction, 9th Edition.
- American Concrete Institute (ACI) Publications 318, 301 and 347, current editions.
- Steel Joist Institute (SJI) Standards, current edition.
- Steel Deck Institute (SDI) Standards, current edition.

Structural Systems

The existing structure was constructed in two parts. The original building was constructed circa 1956 (west wing and center/Chambers). It was a tee shape with floor levels across the western portion of the plan at different levels than the stem section. It was constructed with perimeter masonry walls supporting a wood framed gable roof. The supported floors were constructed using a type of precast form and integral poured -in-place concrete slabs. No drawings are available for the building so the description is based on visual observations in exposed areas. It is anticipated that the building is supported on spread concrete foundations.

An addition was constructed circa 1982 (east wing) creating an H shaped plan from the original T. This portion of the building also has a wood framed gable roof and perimeter masonry walls. The supported floors are constructed with concrete slabs on metal deck supported by steel bar joist and beam framing. Only the upper level elevation matches with the original west wing upper level but they are isolated by the differing elevations of the stem connecting the wings. The building is supported on concrete spread foundations. Available design drawings for this addition indicate the original building basement/foundation walls were shored to allow the addition basement to extend to a lower elevation.



D. Hazardous Materials Analysis

The purpose of the hazardous materials survey was to establish the presence or absence of hazardous materials in City Hall and if present, how the hazardous materials would affect any changes to City Hall's current use.

NOTE: Per a prior study conducted at the City, the presence of asbestos or other hazardous materials does not indicate a risk to the employees currently working in the facility, as long as that asbestos material is contained. Only if the asbestos-containing material (floor tile, paint) is disturbed (through renovation or other process) should it be abated.

D1. Executive Summary

The scope of work for this analysis included inspection and sampling for asbestos and lead based paint and identification of mercury containing and other regulated materials that could affect renovation or demolition activities at City Hall. The inspection was completed by Jay Fowles and Justin Sweitzer of F&R. As the building was occupied and in accordance with the project scope of work, the survey was limited to utilizing non-destructive sampling techniques. Non-destructive sampling techniques included assuming light ballast not labeled "non-PCB Containing" did contain PCBs; gages thermostats, thermocouples and other devices that were not marked as "mercury free" or where measuring fluids could not be observed were assumed to be mercury containing. Other assumptions used for the survey included emergency lighting contained batteries, self-illuminating signs did not contain a radium or radioactive source, there were no hydraulic systems associated with City Hall elevators, and self-cooled water fountains and refrigerators contained CFC/HCFCs. Enclosed columns and piping/ventilation chases within the enclosures or behind walls were not surveyed or assessed.

To prepare the abatement cost estimates, an assumption was made that all hazardous materials and ACM/ACBM noted during this survey would be removed during the renovation activities. Additionally, the cost estimate assumes that the building will not be occupied during abatement activities.

D2. Survey Findings

Prior to conducting the hazardous materials survey at City Hall, F&R reviewed a previously completed asbestos survey for City Hall completed by EI, Inc dated April 2, 2005. During the survey, F&R confirmed the continued presence of the asbestos identified in the EI report with no changes. F&R surveyed the entire City Hall to identify additional asbestos containing materials (ACM) and asbestos containing building materials (ACBM) following Asbestos Hazard Emergency Response Act (AHERA) criteria for inspection and sampling which at the present time is the most stringent protocol excluding destructive sampling. Materials sampled included piping insulation,



pipe fitting insulation, tile adhesive (mastic), ceiling tiles, ceiling plaster (above the drop-in ceiling), and wall joint compound. The following paragraphs summarize our findings:

- F&R verified that the asbestos containing floor tiles identified in the EI, Inc is still present. F&R verified that the asbestos containing insulation board in some of the wall heaters is still present. F&R verified that the asbestos containing duct insulation in the attic of the east wing is still present. F&R verified that the asbestos containing dampening cloth in the east wing attic was still present.
- F&R identified asbestos containing pipe insulation wrap in the west wing boiler room. This pipe wrap can be identified by its black color. Other pipe wrap that is not black was sampled and found to not contain asbestos.
- F&R identified asbestos in a vibration dampening cloth in the west wing basement boiler room.
- F&R sampled additional piping insulation throughout City Hall. With the exceptions noted above, F&R found that the remaining piping was not asbestos containing.
- F&R identified fluorescent lighting and ballasts throughout City Hall. F&R visually inspected ten separate florescent fixtures and noted that none of the fixtures inspected were labeled as “non-PCB containing”. Therefore, F&R assumes that all of the light fixtures within City Hall are PCB containing. The light bulbs are assumed to be mercury containing.
- F&R did identify a limited amount of regulated and/or hazardous materials in City Hall. The majority of these materials were located in the basement in the west wing of City Hall. These items included water treatment chemicals, cleaning (housekeeping) materials and a limited amount of lubricants.
- F&R tested 24 separate surfaces within City Hall for lead-based paint. One surface (the door frame of Door #35) tested positive for lead-based paint above the action limit of 1.

D3. Cost Estimates²

F&R has developed conceptual cost estimates for the renovation of the office areas. F&R is assuming that no work is to be conducted on the roof.

- Floor tile – Approximately 3,500 square feet of asbestos containing floor tile is present throughout City Hall. F&R assumes a cost of \$2.75 per square foot for abatement of the floor tile. Our cost estimate assumes that City Hall will be vacant during the abatement. If City Hall is to be occupied during the abatement, a cost of \$3.00 per square foot is appropriate for estimating purposes.

The asbestos was encapsulated in the Chambers floor in January 2014,

² All costs in this section are 2007 dollars, created with Report 1. Cost estimates in Section 4 of this Report 3 supersede any estimates which were created in 2007.



removed in the East wing stair treads in August 2014, and removed from the G2 corridor floor and G corridor/rear entrance flooring in August 2014.

- Floor tile mastic – Approximately 3,500 square feet of asbestos containing mastic (ACBM) is present throughout City Hall. F&R assumes a cost of \$1.00 per square foot for abatement of the mastic if performed simultaneously with abatement of the asbestos containing floor tile. Our cost estimate assumes that the building will be vacant during the abatement. If the building is occupied during abatement and the mastic is removed simultaneously with the asbestos containing floor tile, an estimated cost of \$1.25 per square foot is appropriate.

The asbestos was encapsulated in the Chambers floor in January 2014, removed in the East wing stair treads in August 2014, and removed from the G2 corridor floor and G corridor/rear entrance flooring in August 2014.

- Boiler room heating duct work – Approximately 4 square feet of dampening cloth associated with heating ductwork containing asbestos (ACM) is present in the west wing attic and 10 square feet of dampening cloth associated with the heating ductwork is present in the boiler room. F&R assumes a cost of \$15.00 per square foot for abatement (removal) of the duct work dampening cloth.
- Piping Insulation – Approximately 80 linear feet of asbestos pipe wrap and four pipe elbows would require abatement. F&R assumes a cost of \$25 per linear foot for abatement of the piping and elbows.
- Lights and ballasts – There are approximately 400 florescent light fixtures in City Hall. F&R assumes a cost of \$8.00 per light fixture for abatement.
- Lead-based paint – F&R assumes that the one door frame that contained lead-based paint above the action limits would be removed intact during any renovation and would not require any special handling or additional costs. However, if the door frame was to be stripped and repainted, precautions would need to be taken. Specifically, if the door frame is to be sanded, abraded or heated to remove the lead-based paint, workers trained in lead-based paint removal should be contracted for the work.

The total estimated cost for abatement of asbestos and other hazardous materials at City Hall is \$18,500. Other costs typically associated with the abatement of these materials would include abatement design, project management, and oversight/monitoring of the work are generally estimated at 25% of the abatement costs. The total estimated costs to abate the asbestos and other hazardous materials at City Hall are \$23,125.

This cost in the summary above included work already been completed or not any longer within the scope of the City Hall renovation. In addition to abatement already completed, the City plans to remove asbestos in the wall HVAC units within the two year timeframe 2015-2017. This abatement will be funded through existing CIP Facilities Reinvestment funds, not as part of the larger City Hall renovation projects. Any remaining abatement costs will require adjustment for reduced scope and inflation over time to be accurate.



E. Elevator Analysis

On September 19, 2013, Elevator and Escalator Consulting Services conducted a site visit and survey of the elevators in the Falls Church Community Center, Library, and City Hall buildings. The complete report is included in the Appendix. The findings of the study for the City Hall are given here.

E1. Background

Vertical transportation is provided by two passenger elevators each designed for simplex operation. There is one elevator on each side of the building but overall way finding in the building is very challenging. They were maintained by Elcon as part of a full maintenance program in effect since 2002.

The elevator on the West side of the building was originally manufactured and installed by Montgomery Elevator in 1983. This elevator serves six landings with four front openings and two rear openings. The total travel of this elevator is approximately 34'. It has a capacity of 3,000 pounds and a speed of 100 feet per minute. The controller is a Montgomery Uniprom and all equipment is original. The entrances are all 3' 6" by 7' 0" single speed side slide openings.

The elevator on the East side of the building was installed in 1991 with ESCO equipment. It serves five landings with three front and two rear openings. With a speed of 100 feet per minute and capacity of 2,500 pounds it has approximately 22 feet of travel. The entrances are 3' 0" by 7' 0" single speed side slide doors.

The required annual safety inspections were completed in accordance with ASME and Code requirements in September of 2012 for the East elevator and in September of 2013 for the West elevator.

The elevators are equipped with Fireman's Service operation and all safety features required at the time of installation. With the exception of some minor modifications, the elevators comply with the minimum requirements as set forth for handicapped accessibility in accordance with the Americans with Disabilities Act (ADA).

E2. Findings

The elevators and associated equipment are in fair operating condition and should be scheduled for a full modernization in the next five years. Included in the proposed scope would be a full renovation of all mechanical equipment including fixtures, cab finishes, and hydraulic cylinders which do not have any PVC protection.

Both elevator machine rooms have a number of different code issues including non-elevator related equipment, lack of proper fire alarm protection, adequate HVAC provisions, and other items.



The elevators should be upgraded to include all required Life Safety features such as Fireman's Service Operation, Smoke Detector Recall, and all minimum requirements for existing elevators as set forth in ASME A17.3 Safety Code for Existing Elevators.

The elevators require the following minor modifications in order to fully comply with the Americans with Disabilities Act.

- *Hands free emergency telephone.*
- *Egress floor that is not below grade for East elevator.*
- *Provide proper Braille identification adjacent to all of the car pushbutton devices.*

The control system and associated components installed are representative of the standard product lines used in similar low rise office buildings throughout the Washington Metropolitan area during the transition from relay based equipment to solid state type equipment in the late 1980-90's. While the equipment is still maintainable equipment of this vintage are deemed candidates for modernizations. This coupled with the condition of the cab interiors and fixtures confirm our recommendation.

The elevator hydraulic cylinders do not appear to be protected with PVC liners. Installation of PVC liners should be addressed and included as part of any future elevator renovation.

E3. Elevator Scope of Work - Renovation Scheme

The elevator system and associated components are nearing the end of their useful life and renovation should be planned or programmed for the near future; however; necessary parts and supplies are available for the ongoing repair and maintenance of the equipment.

A renovation scheme for both elevators would provide the following:

- *Installation of new pumping units, hydraulic control valves, motors and non-proprietary type machine room control panels.*
- *Installation of new hydraulic cylinders and PVC cylinder protection.*
- *Retain and reuse car slings and platforms.*
- *Installation of new door operators and all associated car and hoistway door equipment.*
- *Installation or renovation of the elevator cabs and interiors.*
- *Installation of new hoistway door panels and wrapping of the existing entrance frames with painted metal surfaces.*
- *Installation of new car and hall pushbutton stations and signal fixtures.*
- *Installation of current Fireman's Service Operation and Emergency Power Operation.*
- *Compliance with the Americans with Disabilities Act for existing buildings.*
- *Compliance with all Code requirements as required for existing elevators.*
- *Replacement of all operational, control and security wiring.*



- *All permits and licenses required for renovation.*

A budget price of approximately \$185,000.00 would be required per elevator for the complete modernization of the elevators and associated components. This assumes reuse of the existing jack hole. If the jack holes need to be re-drilled, an additional \$35,000 per elevator would be required.

Whenever a major elevator replacement or modernization is considered or performed there are a number of building work items that must be addressed to ensure that the final installation is in compliance with current Code requirements. The following building upgrades or repairs should be performed in conjunction with the elevator renovation or replacement:

- *Installation of machine room and elevator pit GFCI electrical outlets.*
- *Provide new main line and car lighting disconnects switches.*
- *Installation of machine room air conditioning.*
- *Modifications to the fire alarm systems including adding new devices.*
- *Repair of machine room walls and penetrations.*
- *Removal of all non-elevator related equipment from machine rooms.*
- *Installation of hoistway ventilation.*

E4. Elevator Scope of Work - Replacement Scheme

A re-design and replacement scheme would provide new equipment and a better vertical circulation plan. A replacement design and plan determined that two new elevators could be included in the renovation/expansion plan, and that the cost would be approximately \$240,000 for all associated work, including all pit drilling and equipment removal/replacement.

E5. Recommended Elevator Scope of Work - Replacement Scheme

The final schematic design and cost estimate assume the elevator replacement scheme, rather than the elevator modernization scheme. This scheme was selected based on a concurrent analysis of the circulation paths and future requirements in the building, combined with the estimate of renovation vs. replacement indicated by Vertran.

The full elevator replacement will not replace elevators in their prior locations, but will relocate two public elevators to the new front entrance and lobby of the building, for public and staff use.

One dedicated staff/secure inmate elevator will be added to the north side of the building, as part of the addition there. This elevator will serve as vertical inmate movement to and from the courtroom (keyed controls). On non-court dates and times, this elevator can be used by staff.



*Section 3
Summary of Space Needs 2015*



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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A. Modified Building Utilization Plan

A1 History and Overview

The prior efforts produced three options, described in Report 3. A review process was conducted, which consisted of a presentation to City Council in July 2008 and subsequent meetings with City staff/building occupants. Although at the end of the review process preference was given by all groups (occupants, City Council, and City Manager’s office) to Option 2 – One Big Happy Family, there were concerns about the aggregate 20-year cost of this option, which would force City Hall needs to dominate the City’s expenditures over the next 20 years, possibly to the exclusion of the schools, library, community center, and other facility needs. From a short-term focus, the implications of the proposed cost on the immediate five-year budget cycle were paralyzing, and as the economy worsened in late 2009 and into 2010, it became apparent that those costs rendered that solution non-viable.

In 2010 the study team began a detailed revision of the plan, in order to prioritize the individual steps within each phase, to create a more viable plan which could be implemented within the City’s budgetary constraints in a phased manner. This plan serves both short- and long-term goals, starting on a path of systematic renovations, upgrades, and moves within the City Hall which work toward the ultimate goal of a modernized, safe, and energy efficient facility, with efficient and code compliant spaces for staff and the public. Done in a logical and incremental manner, this plan was able within the budget, while allowing the City to resolve the most serious facility issues immediately. This plan also did not compromise the City’s ability to achieve the best possible long-term organization of components within the building.

The phased plan, developed by City staff, architects from the Falls Church firm Butz & Wilburn, and the Master Plan contractor, Dewberry (k PSA-Dewberry), focused on the most urgent needs in the short term, but encompassed all of the following goals:

1. Improving building security by achieving better separation of functions (daily operations, Council/School Board/Public meetings, entrances, court route, public safety vehicles, police evidence, weapons armory).
2. Creating one front central entrance for improved accessibility, way finding, and circulation from the exterior into all parts of the building.
3. Modernization and maintenance of HVAC/Mechanical Systems (final asbestos mitigation versus costly encapsulation every 5 years, energy efficiency/effectiveness), to bring the building into compliance with modern workplace standards for air quality, including localized temperature controls and fresh air intake.
4. Improving the facility’s overall energy efficiency (doors / windows /insulation /electrical /lighting).



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

5. Necessary roof maintenance and repair (insulation /snow load /entrance safety from sudden snow and ice off-loading).
6. Life-safety improvements – adapting the sprinkler system to a more appropriate design to remedy the non-sprinklered building for the majority of spaces and the inappropriate wet sprinklers over IT server rooms.
7. Working toward better building-wide ADA compliance including an accessible main entrance, access to elevators, and accessible public restrooms in a location accessible from all building areas through interior movement.
8. Improving and expanding space for public safety functions within City Hall.
9. Improving the business and community (boards/commissions) meeting space, as well as legal & mediation facilities which support the courtroom, to complete a space more consistent with modern court sets.
10. Ensuring adequate staff workspace, meeting space, adjacencies, and contiguity for more efficient operations
11. Increasing available on-site parking and creating safer traffic flow through parking lot re-design and expansion.
12. Rectifying current OSHA violations (stairs height and depth).
13. Improving city-wide operational efficiency through strategic collaboration and co-location of specific functional areas (i.e. personnel, payroll, purchasing, accounts payable, IT).

With the final build-out in mind, in 2013 as the schematic design process was launched, a program verification process was conducted to update the user Space Needs Required previously assessed in 2011, documented in Report 1.

This chapter summarizes the program updates and summary of Space Needs Required as defined in 2015, moving into schematic design.

A2 Building Reuse Strategies

The summary of Space Needs began as an ideal program of space needs (Report 1, designed to test replacement as well as renovation). The program verification process reflected here adapted the “ideal” program by incorporating solutions and strategies as methods to meet the programmed needs within the existing City Hall. These solutions included planned resource sharing, re-use of existing space, and anticipated re-assignment of some existing spaces (i.e. program adapted to fit the realities of those spaces).



A3 Summary of Space Needs for Schematic Design

The schematic design process started concurrent to, and as part of, program verification. As the program of needs was finalized, current locations, space needs, and final optimal building placement were taken into consideration to develop a realistic estimate of how much of the solution would be provided by new construction, versus re-use/renovation of existing space. This process also attempted to identify building spaces that would remain largely as-is, with only minor cosmetic touch-ups.

In the Summary of Space Needs table, the tenant analysis on the right side gives details of the results of this analysis, specifically which pieces of the program were anticipated to be addressed through renovation and which were expected to be provided through new construction. This information is presented as a snapshot at the conclusion of the program verification stage. These estimates were used to determine initial cost estimates, to check the program against budgetary goals.

NOTE: For all new spaces (new construction), the program reflects net square footages (NSF) plus department circulation (resulting in departmental gross square feet, or DGSF), plus an additional building grossing factor (BGSF, to account for exterior walls and shared building resources, used to develop construction cost estimates and schematic design purposes). For all renovation spaces (spaces to be provided through renovation), the program reflects only departmental gross square feet (DGSF), or the sum of the individual rooms plus departmental circulation/interior walls.

Summary needs indicated re-use of 10,886 DGSF (existing building grossing factor not included for parity) with little change, renovation of 28,902 DGSF (building grossing factor not included for parity) of the existing facility, and construction of approximately 8,953 DGSF (10,296 BGSF) of new space.

The strategies to meet programmed needs were as follows, by user group:

1.000 Building Entrance

- Total buildout: 4,425 DGSF (building grossing omitted for parity)
- Remain in place, expand function through renovation/repurposing adjacent space + new construction.
- Strategies as follows:
 - Renovate and re-use 1,344 DGSF of existing space.
 - Expand through new construction (3,081 DGSF)

2.000 Courtroom/Council Chambers

- Total buildout: 4,444 DGSF
- Remain in place, expand function through renovation/repurposing adjacent space.
- Strategies as follows:
 - Re-use all existing space (2,813 SF), no change, other than cosmetic touch-ups
 - Renovate and re-use 1,631 DGSF of adjacent space to complete the programmed court set.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

3.000 Development Administration Suite

- Total buildout: 5,969 DGSF
- Relocate to west wing, expand function through renovation/repurposing existing space.
- Strategies as follows:
 - Renovate and re-use 5,969 DGSF of existing building space to create combined suite for efficiency and improved customer access.

4.000 City Administration Suite

- Total buildout: 8,674 DGSF (building grossing omitted for parity), in two locations
- Remain in place, expand function through renovation/repurposing adjacent space + new construction to create a full and complete suite for all functions under 4.000 (City Manager, Communications, Human Resources, Economic Development, City Clerk, Financial Services, and the City Attorney) within an addition on the north side of City Hall, with dedicated staff access, one public reception point and shared spaces (conference room, work room, file storage) within the suite..
- Strategies as follows:
 - Renovate and reuse existing 5,448 DGSF allocated to the City Manager and related functions on the 3rd floor, east wing
 - Expand 3rd floor suite through new construction of 1,815 DGSF on the north side of the building (building grossing left off for parity)
 - Construct new IT staff area (also part of 4.000) in 1,411 DGSF of space on G level (part of new north addition, G level).

5.000 Registrar of Voters

- Total buildout: 631 DGSF (building grossing omitted for parity)
- Relocate to be within 1.000 Main Entrance/Lobby for easy public access/voting.
- Strategies as follows:
 - New construction of 631 DGSF as part of new facility main entrance (building grossing omitted for parity).

6.000 Tax Administration

- Total buildout: 1,443 DGSF
- Remain in place, no change, other than minor cosmetic touch-ups
- Strategies as follows:
 - Re-use existing 1,443 DGSF

7.000 Department of Human Services

- Total buildout: 1,969 DGSF (building grossing omitted for parity)
- Remain in place, expand function through renovation/repurposing existing suite plus adjacent space formerly occupied by Registrar of Voters (631 DGSF) to create dedicated office suite for DHS staff, including Court Services staff, currently located off site at the Gage House.
- Strategies as follows:
 - Renovate/repurpose existing 1,850 SF, including former Registrar of Voters (631 DGSF).



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

- Expand office suite through new construction of 119 DGSF (building grossing omitted for parity)

8.000 Law Enforcement

- Total buildout 12,030 DGSF (building grossing omitted for parity)
- Remain in place, expand function through renovation/repurposing adjacent space + new construction
- Strategies as follows:
 - Re-use 1,211 DGSF of existing space as-is, with minor cosmetic touch-ups, including 200 DGSF inside the existing east wing G-level entrance, 400 DGSF of miscellaneous Police Department space, plus the recently renovated 8.700 Police Evidence Processing & Storage (361 DGSF) and 8.800 Equipment Room/Armory (250 DGSF).
 - Renovate/repurpose approximately 9,630 DGSF of adjacent existing space to create improved Law Enforcement Entrance/Lobby, victim/witness interview areas, a purpose-designed EOC/Briefing Room, improved Dispatch facilities, as well as staff areas for Sheriff's Department and the majority of the space needs required for 8.600 Police Department, all on G or G2 levels of the building, with secure separation from public areas.
 - Expand through new construction of 1,189 DGSF (building grossing omitted for parity) to complete the balance of space needs for 8.600 Police Department.

9.000 Inmate Entry and Holding

- Total buildout: 921 DGSF
- Remain in place
- Strategies as follows:
 - Re-use existing holding largely as-is, with requisite cosmetic touch-ups
 - Renovate circulation to provide direct inmate access to new vertical circulation path (elevator) and new sallyport entrance to the north of the holding area, to allow for dedicated inmate movement between transport vehicles, holding, and the courtroom.

10.00 Locker/Shower

- Total buildout: 1,168 DGSF (needs were assessed lower, at 1,106 DGSF)
- Remain in place, no change
- Strategies as follow:
 - Re-use 1,168 SF as is, with minor touch-ups to finishes.

11.00 Vehicle Prep/Office Entrance

- Total Buildout: 1,196 DGSF of exterior space inside parking structure
- New construction, new function, parts of which can be outdoor (non-conditioned) space
- Strategies as follows:
 - Construct new vehicle prep/officer entrance as part of north infill/addition and / or parking structure (SF not included in new construction total for building; included in Parking Structure project scope and budget.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

100.00 Building Shared

- Total buildout: 3,788 DGSF
- Remain in place, expand function through renovation/repurposing adjacent space + new construction
- Strategies as follows:
 - Renovate 3,031 DGSF of existing space dedicated to building shared functions to meet long-term program of space needs for Mail Delivery and Storage, IT Server and Related, Remote Building Storage, and other items under 100.000.
 - Expand through new construction of 757 DGSF (building grossing omitted for parity) to meet full program needs for 100.000.

Additional line items in the summary table (see next page) identify space existing in the building which was not allocated to any future purpose, due to one or more of the following reasons:

- a) Space is part of the former Utility Staff and was in transition at the time of the study to its final purpose, so was not available for other assignment (1,277 DGSF).
- b) Space is a part of horizontal building circulation between groups, and will not change, nor can it be re-assigned for non-circulation purpose. (796 DGSF of horizontal corridors were reclaimed as assignable SF due to proposed renovations; 2,427 DGSF of horizontal circulation will remain).
- c) Space is internal to a group and part of department circulation, so cannot be separated for other assignment, but also cannot count against the group's functional space needs. (2,008 DGSF)
- d) Space is part of essential building core, is not assignable, and will not change. (3,000 DGSF of space formerly considered essential building core were identified for renovation and re-assignment; 1,331 DGSF of unchangeable core areas remain.)

Total existing building space with no change totals 10,886 DGSF. Existing DGSF to be renovated is 28,902 DGSF. The sum of those areas is 39,788 DGSF, which is the approximate total usable area (also called RSF, or DGSF) in the City Hall. The program and strategy propose to add another 8,953 DGSF (plus the building grossing required for exterior walls, etc., estimated at 15% - which yields an addition of 10,926 BGSF of new construction as shown in the cost estimate) for a total usable area, after additions, of 48,741 DGSF.

NOTE: No calculation of total BGSF has been computed, because the actual BGSF of the existing building was not determined through any master planning efforts.

The areas by user group proposed for no change, renovation, and new construction are shown, with details, on the following pages. Adjustments and refinements developed in Schematic Design will be discussed in Section 4, and revised cost estimates are included in Section 5.



Falls Church City Hall Improvements and
Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

20-YEAR SUMMARY OF SPACE NEEDS - FALLS CHURCH CITY HALL											
No.	Space Name	Existing 2013 DGSF	Future Space Needs - 2034				Est. NSF Shortfall	City Hall/Public Safety Master Plan By Tenant			Total MP Space (check)
			Est. 2033 Staff	NSF	Circulation / Grossing	DGSF (RSF)		Existing DGSF No Change	Existing DGSF to be Renovated	New DGSF	
1.000	Building Entrance & Public Mtg Spaces	1,344	0	3,540	885	4,425	-3,081	-	1,344	3,081	4,425
2.000	Courtroom/Council Chambers/Court Clerk	2,813	5	3,555	889	4,444	-1,631	2,813	1,631	-	4,444
	2.010 Court Set	1,800	1	2,060							
	2.020 Judicial Chambers/Council Support	226	1	675							
	2.030 Clerk of the Court	787	4	820							
	2.040 City Council/Administrative Mtg Suite	-	0	-							
3.000	Development Administration Suite	3,785	36	4,775	1,194	5,969	-2,184	-	5,969	-	5,969
	3.010 Shared Suite Entrance		0	240							
	3.020 Department of Development Services		15	1,685							
	3.040 Public Works		17	1,465							
	3.060 Staff Shared		0	1,385							
4.000	City Administration Suite	5,448	45	6,899	1,725	8,624	-3,176	-	5,448	3,176	8,624
	4.100 City Manager, Suite Entrance, and Staff Shared		26	4,379							
	4.110 Suite Entrance & Staff Shared	700	1	670							
	4.120 City Manager		3	535							
	4.130 Communications		4	300							
	4.140 Human Resources		3	360							
	4.160 Economic Development	1344	3	315							
	4.170 Information Technology		12	1411							
	4.180 Staff Shared		0	788							
	4.200 City Clerk		3	425							
	4.300 Financial Services	1,000	14	1,615							
	4.310 Finance Staff	700	9	1,040							
	4.320 Real Estate		5	575							
	4.400 City Attorney	288	2	480							
5.000	Registrar of Voters	501	3	505	126	631	-	-	-	631	631
6.000	Tax Administration	1,498	15	1,255	188	1,443	-	1,498	-	-	1,498
	6.010 Shared Suite Entrance		0	80							
	6.110 COR		9	670							
	6.120 Treasurer		6	425							
	6.130 Shared staff areas		0	80							



Falls Church City Hall Improvements and
Public Safety Center Feasibility Study

Report 4
Section 3 –Space Needs Required (2015)

20-YEAR SUMMARY OF SPACE NEEDS - FALLS CHURCH CITY HALL											
No.	Space Name	Existing 2013 DGSF	Future Space Needs - 2034				Est. NSF Shortfall	City Hall/Public Safety Master Plan By Tenant			Total MP Space (check)
			Est. 2033 Staff	NSF	Circulation / Grossing	DGSF (RSF)		Existing DGSF No Change	Existing DGSF to be Renovated	New DGSF	
7.000	Human Services	1,219	11	1,575	394	1,969	-750	-	1,850	119	1,969
	7.010 Shared Suite Entrance		0	365							
	7.020 Human Services Admin		6	540							
	7.030 Court Services Unit		5	430							
	7.040 Shared Staff Areas		0	240							
8.000	Law Enforcement	7,201	100	9,608	2,422	12,030	-4,829	1,211	9,630	1,189	12,030
	8.100 Law Enforcement Entrance/Lobby	536	0	405				200	336	-	
	8.200 Sheriff's Department Staff Areas	1,000	32	985				-	1,231	-	
	8.300 Victim/Witness/Interview Area	-	0	460				-	575	-	
	8.400 EOC/Briefing Room	-	0	1,955				-	2,444	-	
	8.500 Dispatch	230	2	355				-	444	-	
	8.600 Police Department	4,824	66	4,836				400	4,600	1,045	
	8.610 Police Administration		4	710							
	8.620 Records	233	3	518							
	8.630 Operations		15	1150							
	8.640 Communications		7	260							
	8.650 Staff Shared		0	300							
	8.670 Police Criminal Investigations Division	770	17	1,464							
	8.660 Police Report Writing	424	20	434							
	8.700 Police Evidence Processing & Storage	361	0	360				361	-	-	
	8.800 Equipment Room/Armory	250	0	252				250	-	-	
9.000	Inmate Entry and Holding	941	0	635	286	921	-	941	-	-	941
10.000	Locker/Shower	1,168	0	962	144	1,106	-	1,168	-	-	1,168
11.000	Vehicle Prep/Officer Entrance	-	0	1,040	156	1,196	-	-	-	-	PKNG
100.000	Building Shared	3,031	0	3,030	758	3,788	-757	-	3,031	757	3,788
	100.010 Mail Delivery & Processing	870	0	260							
	100.020 Remote Storage	250	0	930							
	100.030 IT Server and Related	218	0	1,090							
	100.030 Other Building Shared	1,693	0	750							
	Former Utility Staff (space in transition)	1,277	0	-	-	-	1,277	-	-	-	0
	Horizontal Building Circulation	3,223	0	-	-	796	2,427	796	-	-	796
	Departmental Circulation (non-separable)	2,008	0	-	(2,008)	-	2,008	-	-	-	0
	Core Spaces (not assignable, little change)	4,331	0	-	-	3,000	1,331	2,459	-	-	2,459
TOTALS		39,788	215	37,379	7,158	50,341	10,553	10,886	28,902	8,953	48,741
								With 15% Building Grossing		10,296	



B. Program of Space Needs Required (2015)

1.000 Building Entrance

Overview/Function

The main entrance of a public facility is its public “face” to the community. It must be welcoming and accessible, but current best practices and security dictate that it also offer security to prevent risk to those working and conducting business inside, particularly when the building includes a courtroom (where heightened emotions are typical). In today’s civic facilities, it is also typical to offer meeting spaces which can be made available in the evening for public events, while restricting the public to just those areas. The lobby of any building is typically an information hub, with way finding and directional assistance helping visitors quickly locate and do their business.

Current and Historical Location/Operational Conditions

The existing City Hall has ten building entrances:

- Three on the west wing (one of which is public),
- Three off of the center Chambers piece (one of which is public, referred to as the “Court Entrance”), and
- Four on the east wing (one of which is the main public entrance to the east wing, and another of which is the main public entrance for the Police Department).

The purpose each entrance serves is not clear from the exterior. Two of the entrances now used as public access points were originally constructed as secondary entrances, on the east and west faces of those respective wings. The court entrance is, from a visual perspective, the closest to a main entrance in the facility, as it faces the visitor parking at the front of the facility and is immediately obvious as a door; however, this entrance is only open to the public on court days.

None of these entrances has a proper lobby area, and way finding within the building is confusing. Visitors frequently enter through a door closest to their parking spot, only to discover they must transit the entire building to reach their destination or worse yet, to go outside and reenter through another wing of the building. This configuration is confusing and frustrating for able-bodied visitors and is near-impossible for mobility or visibility-impaired visitors. Customer service is hampered by the lack of clear way finding, and there is no ability to separate public and staff circulation.

Court is held two days per week in the City Council Chambers room in City Hall. There is no lobby – the public enters into what amounts to a small stairway landing on the second floor through the Court Entrance. The stairs and landing at the Court Entrance are not covered. The entrance door is fitted with an extra-wide ADA-accessible magnetometer, but there is no room for an x-ray machine, and the doorway itself is not handicapped accessible. Once screened, the public has access to the stairwells and throughout the east wing, creating a security risk. (The



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

accessible public door into the City Hall is on the east wing, and is not equipped with any security screening equipment. It would be a simple matter to enter the building through another public door, without screening, and blend with the crowd waiting to enter court through the non-secure stairwells). Once inside the Court Entrance, there are two benches outside the courtroom. The public, witnesses, and prisoners pass through the same set of double doors to enter the courtroom, leading to security risks related to mixed circulation.

Since there is no waiting area, once court opens everyone waits in the courtroom until their case is heard. Closed hearings, which often occur on juvenile court days, require everyone to leave the courtroom, forcing all parties into the landing, the east wing, or outside the building, where there is no covered area to protect people from the elements as they wait to be screened for re-entry.

Space Needs Required/Operational Improvements Sought

The proposed new building entrance and lobby will serve as the main entrance to the building and the main security control point for those entering the courthouse. The public will enter through an optional (staffed for court days) security station with magnetometer and x-ray machine. The central security control station should face onto the lobby, but in a position where it can be used or not used without blocking access. The design of this area should convey a sense of dignity and civic presence that is both inspiring and representative of the values of Falls Church, and will include a main public entrance facing onto the intersection of Park and Little Falls Streets.

In addition to being the main entrance, this entrance will serve as the central hub for public circulation within City Hall. The public space includes training/meeting rooms for meetings which may occur after hours, signage and circulation (elevators) to facilitate way finding, plus public services such as restrooms and vending machines. The community/training rooms will be frequently used by the public, and will consist of one large room and two smaller rooms which can be combined into one, as needed. A small galley/kitchenette will be located nearby. Providing these rooms in public space will help ensure security of staff space during non-business hours.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
1.000 Building Entrance & Public Mtg Spaces							
1.001	Lobby			1	800	800	
1.002	Building Mgt/Security Office			1	180	180	Anunciator panel, security staff
1.003	Security Screening			1	200	200	One magnetometer, one x-ray, 2 staff
1.004	Elevator Lobby			2	60	120	Elevator and space in front of doors
1.005	Public Restrooms			2	300	600	SIZE PER CODE FOR FINAL DESIGN
1.006	Conference Room(s)			2	500	1,000	Movable divider, counter/wet bar, press feed
1.007	Hearing/Mediation Rm (Magnolia)			1	400	400	Small groups, contract mediator
1.008	Small Conference/Breakout Rm			1	150	150	Adj. to Mediation Room, shared
1.009	Galley Kitchenette			1	45	45	Microwave, sink, cabinets, mini fridge
1.010	Vending			-	6	-	2 machines, drinks & snacks, in grossing
1.011	Janitor's Closet			1	45	45	Adjacent to kitchenette
	Subtotal		0			3,540	
			Departmental Grossing		25%	885	
Total (DGSF)						4,425	

Section 3 – Space Needs Required (2015)



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

2.000 Courtroom/Council Chambers/Court Clerk

Overview/Function

The Falls Church General District and Juvenile and Domestic Relations (J&DR) Courts are unique court jurisdictions within the Commonwealth of Virginia. Cases are heard in Falls Church by assigned judges shared with Arlington. There are four General District Judges and two Juvenile and Domestic Relations Judges, all of whom have full-time chambers in Arlington, but each of whom also hears cases in Falls Church on specific days. Court is held two days per week – one day for J&DR and one day for General District.

The City Council Chambers room doubles as a courtroom on court days. On other days, it is used by Council, School Board, and/or Planning Commission as a meeting room.

The Clerk of the Court keeps the court's records and collects fees associated with the courts. Clerks within the office also assist the Judges on court days.

Current and Historical Location/Operational Conditions

The room used as courtroom and Council Chambers is the City Council Chambers room. This room has a raised bench and is of sufficient size to handle court cases, but does not have the adjacent supporting spaces to function properly. There is no secure staff circulation; the Sheriff's office behind the bench becomes temporary chambers when court is in session. The courtroom is one of the only large meeting spaces available in the City, so it is also used by the School Board and other organizations when court is not in session.

The office of the Clerk of the Court is currently located on the first floor of the East Wing of City Hall. There are currently several service windows for the public with two cash registers for Clerks to process fees. The Clerk of the Court has a private office. The three Deputy Clerks have workstations near the service windows. The Deputy Clerks have regular work they complete at their desk and when people walk up to the service window, one of the Clerks will leave their workstation to tend to the person. There is no privacy and the public can hear confidential matters easily. On court days, one Deputy Clerk works with the Judge(s) throughout the day.

Space Needs Required/Operational Improvements Sought

The court program that follows was developed in accordance with the Commonwealth of Virginia Trial Court Standards. The most notable shortfalls in space for the court set include waiting outside the public entrance to the courtroom (to prevent overcrowding in the courtroom and to permit parties to be separated while waiting), courtroom holding/dedicated circulation for defendants, and dedicated chambers/circulation for judicial officers.

The Sheriff's Department will continue to provide security for the building and court in the future, but new Sheriff's space (refer to 8.000 for details) will be provided to allow the judicial chambers to be dedicated to the judges. Judges should have secure parking and a secure path to



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

their chambers and to the courtroom. In-custody defendants and witnesses should have separate circulation from the public.

In the Clerk of Court’s space, more space is needed around the two registers for processing of associated court fees for workers and customers, as well as public access terminals and space for the lawyers to review cases. The staff also should have access to shared staff conference space, staff restrooms, and break area.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
2.000 Courtroom/Council Chambers/Court Clerk						2,060	
2.010	Court Set						
2.001	Soundlock Vestibule			1	40	40	
2.002	Attorney/Witness Rooms			2	80	160	Adjacent to Courtroom entrance
2.003	Courtroom			1	1,800	1,800	
2.004	Prisoner elevator			1	60	60	Includes vestibule
2.020 Judicial Chambers/Council Support						675	
2.021	Equipment Closet			1	80	80	Closet off of courtroom for equipment
2.022	Court Holding			1	50	50	Two single holding cells
2.023	Secure Interview Room			-	80	-	Two sides, one adj. to public access
2.024	Hearing/Mediation Room			-	400	-	Contract Mediator, use shared conf. room
2.025	Small Conference/Breakout Rm			1	150	150	
2.026	Judge's Chambers	1		1	350	350	Includes private restroom
2.027	Supply Storage Closet			1	45	45	Along staff secure corridor
2.030 Clerk of the Court						820	
2.031	Waiting/Queuing Area	0		-	180	-	Included in circulation
2.032	Service Windows	0	1	4	25	100	Cashier-ready, walk-up; Security glazing
2.033	Public Access Terminal	0		1	15	15	In waiting/queuing area
2.034	Secure Service Counter/Room	0		-	120	-	Use HHS interview room in adj. suite
2.035	Deputy Clerks	3	1	3	80	240	Large workstations
2.036	Clerk of the Court	1	1	1	140	140	Seating for 4-6 in office
2.037	Archived File Storage	0		1	100	100	Inactive Files, ideally in the work suite
2.038	File Storage Area	0		1	80	80	Active Files, High Density Files
2.039	Staff Conference Room	0	20	1	15	-	Shared with other groups
2.040	Staff Work/Copy Area	0		1	80	80	Large photocopier, table for layout
2.042	Supply Closet	0		1	65	65	Doubles as state server lockable room
2.041	Server Room	0		-	110	-	Independent cooling, vertically stacked
2.043	Beverage Station	0		-	10	-	Shared with other groups
2.040 City Council/Administrative Mtg Suite						-	
2.041	Reception/Waiting	0	-	-	120	-	Use public lobby
2.042	Council Meeting Room	0	-	-	1,800	-	(Included in court set)
2.043	Large Meeting Room	0	-	-	400	-	Delete if shared with courtrooms
2.044	Storage Closet	0	-	-	120	-	(Included in court set)
2.045	Photocopy Alcove	0	-	-	40	-	In City Mgr Shared Suite
2.046	Beverage Station	0	-	-	10	-	Can be shared
2.047	Staff Restroom (Unisex)	0	-	-	80	-	Shared
	Subtotal	5				3,555	
					25%	889	Departmental Grossing
Total (DGSF)						4,444	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

3.000 Development Administration Services

Overview/Function

Development Administration Services is comprised of the Department of Development Services (DDS), the Building Inspector, and the Department of Public Works (DPW).

Department of Development Services reviews site plans for commercial and residential projects, with input from DPW. The Department also develops and implements the Comprehensive Plan and the Zoning Ordinance that are used as guidance while reviewing site plans. These documents publicly define the goals for Falls Church in order to guide future development towards those goals. They also work closely with the Board of Zoning Appeals, Architectural Advisory Board, and the Building Inspector.

The Department of Public Works is involved with the maintenance of streets, traffic signals, water distribution, sewer collection and disposal, snow and ice removal, and leaf and waste collection. They enforce the Flood Plain Ordinance for the City of Falls Church, deal with the engineering and management of the stormwater and sewer systems, manage capital improvement plans, issue permits, handle engineering plan revision and inspections, and deal with environmental issues such as recycling, solid waste management, and erosion and sediment control.

Current Location

The Department of Development Services and the Building Inspector are located on the third floor of the west wing of City Hall. The Department of Public Works is primarily located on the first floor of the west wing with staff suites on the third floor west wing and G corridor of the Chambers section.

On the third floor west wing, the Building Inspector work area is comprised of workstations, with a private office for the Building Official. The front counter is staffed by permits personnel from the Engineering and Construction Division of the Department of Development Services. DDS Inspections personnel are in the back of the office suite. Separate office suites on the floor hold Planning staff. The Department of Public Works has a small suite of two offices with the Contracts Manager and the Grants Administrator functions.

The first floor West Wing holds the main Department of Public Works suite. There is a front counter here as well, staffed by Administrative Assistants. The rest of the staff – engineers, arborist, GIS analyst, and solid waste coordinator occupy the suite.

The G level holds the Construction Management/inspection functions of the Department of Public Works. A small suite holds the construction manager and DPW inspectors.

Most of the staff in this suite review plans as part of their regular duties. From the Department of Public Works, Engineers, Construction Manager, Inspectors, and the Arborist all review plans as



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

part of their regular duties. The Building Inspector also reviews residential walk-through permits.

Due to the office's document retention and storage needs, there is currently not sufficient space available for storage. There is some storage that is off-site and several stacks of drawings that are being stored in the hallway.

Space Needs Required/Operational Improvements Sought

The Department of Development Services, Building Inspector, and Dept of Public Works functions have been re-organized since the first round of programming in 2008 and 2012 to enhance efficiency.

A shared drawing layout/work area will be included for the laying out and discussion of drawings. A copy/work area will include standard printers and a plotter. A conference room will be included within the office suite for shared use by all Development Services staff.

The entrance to the suite should include a waiting area with seating for several people. There should be four service windows so that four customers can be assisted at a time. These areas need to be larger than a typical service window in order to have sufficient space for laying out drawings, if necessary. In addition to the four service windows, there should be two lower (accessible) counter areas specifically designed for staff and clients to sit and review plans together. All six service areas should have some separation between them so that multiple conversations can occur at once. There will be two staff assigned to the front counter, with workstations near the counter so that they can address customers as they arrive. There should be ample storage for frequently used plans near the lower service counters to facilitate customer service. There should also be bookshelves under the counter for current code books.

There should be a conference room within this office suite that can double as additional space for laying out plans. This conference room should be near the service windows so that the public can easily access this room for meetings. There should be several shared tables within the main work area for laying out drawings as well.

There is a large need for storage in this department. Historical files could be kept outside of the office suite in a place that is still easily accessible and secure. There should be ample space for storage of current drawings within the office. This space should include flat file storage as well as storage for rolled drawings. The plotter, scanner, and other necessary equipment should be located within the office suite in an area that is easily accessible by all staff. The Environmental Specialist needs storage for brochures and large maps at their workstation, and uses a storage room on the G2 corridor for large items and special event equipment. Additional brochures can be kept at the service window.

The office suite will also include a shared beverage station, staff restrooms, supply closet, and equipment room.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
3.000	Development Administration Suite						
3.010	Shared Suite Entrance					240	
3.011	Reception/Waiting Area	0	1	1	120	120	Use corridor or lobby area
3.012	Customer Service Stations	0	1	4	10	40	Wide high service counter areas
3.013	Customer Service Layout Areas	0	1	2	10	20	Lower counter, broad layout surface
3.014	Cashier Stations	0	1	6	10	60	
3.020	Department of Development Services					1,685	
3.021	Administrative Assistant	1	1	1	65	65	
3.022	Architect/Planning Specialist	1	1	1	80	80	Large Workstation
3.023	Principal Planners	4	1	4	80	320	Large Workstation
3.024	Senior Planner	1	1	1	110	110	Private Office
3.025	GIS Technician	1	1	1	110	110	Private Office
3.026	Department Director	1	1	1	140	140	Seating for 2-4 in private office
3.027	Planning Specialist	1	1	1	80	80	Large Workstation
3.028	Zoning Director	1	1	1	110	110	Private Office
3.029	Inspectors - Zoning, Bldg, Elect.	3	1	3	80	240	Large Workstation
3.030	Building Official	1	1	1	110	110	Seating for 2-4 in office
3.031	Dev. Svcs. Insp - Tech	1	1	1	80	80	Large Workstation
3.032	Plans Review Staff	3	1	3	80	240	Large Workstation
3.040	Public Works					1,465	
3.041	Admin. Assistant Administration	2	1	2	65	130	Typical Workstation
3.042	Contract Manager	1	1	1	110	110	Private Office
3.043	Supervisory Civil Engineer	2	1	2	110	220	Private Office
3.044	Civil Engineer	1	1	1	80	80	Large Workstations
3.045	Environmental Specialist	1	1	1	80	80	Large Workstation
3.046	Construction Mgt Supervisor	1	1	1	110	110	Private Office
3.047	Director	1	1	1	140	140	Seating for 2-4 in office
3.048	Staff	1	1	1	65	65	Typical Workstation
3.049	Arborist	1	1	1	80	80	Large Workstation
3.050	Engineer, CIP Engineer Mgr	2	1	2	80	160	Large Workstation
3.051	Engineer/Technician	1	1	1	80	80	Large Workstation
3.052	Engineering Assistant	1	1	1	80	80	Large Workstation
3.053	E&S Inspector	2	1	2	65	130	Large Workstation
3.054	Utilities Inspectors (off-site)	0	-	-	65	-	Shared Workstation
3.060	Staff Shared					1,385	
3.061	Drawing Storage Area	0	-	1	100	100	Rolled drawings, flat files, code books
3.062	File Storage Area	0	-	1	150	150	Fixed shelving, room or area
3.063	Conference/Plans Review Rm	0	20	1	15	300	Shared
3.064	Staff Work/Copy Area	0	-	1	250	250	Includes 50SF for plotter
3.065	Plan Review Table	0	-	1	65	65	Table/Layout Area
3.066	Expansion Workstations	0	1	2	65	130	Workstation
3.067	Dev Admin File Storage Area	0	-	1	150	150	Lockable
3.068	Inspector File Storage Area	0	-	1	150	150	Lockable
3.069	Equipment Room	0	-	-	110	-	Independent cooling, vertically stacked
3.070	Dev Admin Supply Closet	0	-	1	45	45	
3.071	Inspector Supply Closet	0	-	1	45	45	
3.072	Beverage Station	0	-	-	10	-	Can be shared
3.073	Staff Restrooms	0	-	-	150	-	To be shared for total of one M, one F
	Subtotal	36				4,775	
					25%	1,194	
	Total (DGSF)					5,969	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

4.100 City Administration Shared Areas

Overview/Function

The City Manager's Administrative Assistant functions as receptionist for a somewhat improvised shared office suite housing the City Manager, Communications, and the City Clerk. The City Attorney is outside this suite along the same public corridor.

The City Manager is responsible for the operation of the City of Falls Church. This role includes supervising all City departments, providing information on various aspects of Falls Church to the citizens and City Council, and enforcing the laws and ordinances of Falls Church. The City Manager is hired by the City Council. Both the Mayor and City Council frequently utilize the space within this office suite for meetings.

The Communications office handles all media relations for the City of Falls Church. This includes but is not limited to development of newsletters, overseeing contests, and maintaining information on the Falls Church website. This office has some visitors on an average day but the majority of visitors come around meeting times and during contests. Staff work closely with the City Manager to disseminate regular publications and provide information on behalf of the City Manager.

The Human Resources office provides employee support and services for the City of Falls Church. The office provides training, new employee orientation, benefits administration and other services to employees of Falls Church.

The office of Economic Development focuses on improving the well-being of the City of Falls Church and its citizens by supporting economic growth. This includes, but is not limited to, reviewing development proposals with a focus on public benefit, identifying opportunities for future growth and development, and identifying and implementing a development strategy for Falls Church. The office of Economic Development meets with and reports directly to the City Manager.

Information Technology oversees the needs of and addresses problems with the information technology of the City of Falls Church. The server is located in the G2 corridor of the west wing of City Hall, and will not move..

These functions are not currently co-located, but the future vision of the building has them in a combined office suite, where the smaller groups can benefit from shared resources such as receptionist/suite entrance, photocopy/workroom, and staff conference room.

Current and Historical Location/Operational Conditions

The City Manager's office is currently located on the third floor of the East Wing of City Hall. The office consists of a suite that is shared with the City Clerk, City Attorney, and the



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

Communications office. The City Manager's office shares a copy/break room and an Administrative Assistant with the office suite.

When the City Manager's Administrative Assistant is not at her desk, other people within the office must watch for visitors, who are infrequent but who typically arrive in groups. Other staff shared areas are either outside the suite and used by multiple other groups, are too small, or are non-existent. The configuration of the office suite makes it difficult to see the waiting area from areas other than the receptionist station, resulting in visitors walking in and wandering through the office to find assistance. The space design creates security risks.

The conference room used by this office and adjacent staff is outside the suite, and also serves double-purpose as the Emergency Operations Center (EOC) for the Police Department. This room is undersized for an EOC function, and the resulting equipment (which should be secured from public access) is stored in a room that is frequently used for public meetings. This dual purpose is not ideal and should be discontinued in the future.

A small multipurpose room within this suite serves as break room, photocopy room, and supply storage room. This room is also shared with all other staff in the suite, including the Economic Development, IT, City Attorney, City Clerk, Communications, and City Manager.

The Communications office shares the same office suite, including sharing the copy machine. Because the Communications and City Clerk's functions produce a large volume of publication materials, the shared multi-purpose workroom/staff break room is frequently congested and over utilized.

Currently, some files and documents are stored off-site due to lack of space or because the documents do not need to be accessed regularly. Documents that are completed but not yet distributed are kept in boxes throughout the office due to the lack of storage space; hence there is a need for bulk material storage.

The office of Economic Development is located on the third floor of the East Wing in City Hall. This office does not frequently have visitors, but there is a small waiting area with pamphlets and information about the City of Falls Church and the Director has a private office with a conference table that seats three to four people. Visitors meet in that office, as there is no conference room. There is also a print/copy area within the office, but there is currently no supply storage space.

The Human Resources office is located on the first floor of the West Wing in City Hall. The Human Resources office is required to have their own copier/fax machine for privacy reasons, but can share separate machine with other departments on the first floor. This office also has a need for significant amounts of file storage. The main files are stored in the office while the remaining files are currently stored elsewhere.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

Accessibility is an issue with the current Human Resources office location. Although the office is near a building entrance, this office is not accessible, because the entrance and interior pathways are not accessible nor are the public restrooms. The only accessible entrance is on the East Wing which is on the complete opposite end of the building, and which does not connect to this area via accessible pathways.

There is currently one Chief Technology Officer in the Information Technology (IT) and eight support and services personnel located in the first floor of the east wing. The server room is located in the G2 corridor of the West Wing. The server is maintained by staff from the IT suite in the east wing; workstations exist within the server room for needed work space to configure and install equipment. The phone closet is separate from the server room on the same west wing corridor.

Space Needs Required/Operational Improvements Sought

A professional office suite should be created, with professional entrance/reception for City Administration functions such as the City Manager, City Attorney, Economic Development, Human Resources, and Communications. (IT will be located elsewhere). The reception area, conference room, beverage station, and staff restrooms should be shared by these groups, each of whom should have dedicated staff space within the suite. A shared work/copy area, lockable file storage, equipment room, and supply closets will also be included within the office suite.

The City Manager's Executive Secretary requires a large workstation outside the City Manager's office. The City Manager and Assistant City Manager should have private offices that are not visible from the reception/waiting area. Two additional workstations are needed for intermittent staff, interns and elected officials, such as the Mayor and Vice Mayor, who occasionally visit City Hall to conduct business. These workstations can be shared.

Communications should continue to be co-located with the City Administration suite. The Communications Specialists can have workstations at the rear of the office area, and the Manager / Supervisor can have a private office nearby. The Communications office should have a layout area for production of publication materials, separate from the day-to-day work/copy room used by the other staff in this suite.

Human resources will continue to have a director, two staff, and an administrative assistant. The administrative assistant can have a workstation within the suite's shared reception/waiting area. All other staff require offices.

This suite should be adequate to host developers and business representatives seeking to work with the City of Falls Church who come to visit Economic Development. The Business Development Manager and Director should both have private offices with space to meet with several people at once. This group requires a dedicated lockable file storage area and a supply closet, but can share other staff areas.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

A shared conference room for larger meetings, beverage station, and staff restrooms can also be shared with adjacent groups within the City Administration suite.

Shared use of the suite's conference room, work/copy area, lockable file storage area, equipment room, supply closet, beverage station, and staff restrooms will be required.

Information Technology, which will not be located inside the City Administration suite, will require work space for 12 in-house personnel with noted growth space needs below. The Chief Technology Officer will have a private office, while the support staff will have a large workstations with an 8-area shared powered work benches (two larger than the other six). Information Technology will also have a lockable file storage area, equipment room, and supply closet, in addition to current server and IT storage space in G2 west wing.

The server room (which will remain in the G2 corridor) should utilize overhead racks for the network cables and should remain on a lower level. The phone closet could be included within the server room in the future, or can remain in its location adjacent to the server room.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
4.000 City Administration Suite							
4.100 City Manager, Suite Entrance, and Staff Shared							
4.110 Suite Entrance & Staff Shared						670	
4.111	Reception/Waiting	0	8	1	25	200	Shared, for up to 8 people to wait
4.112	Receptionist/Suite Entrance	1	1	1	65	65	duress alarm, camera, barrier to staff areas
4.113	Staff Conference Room	0	20	1	15	300	Shared, off of reception
4.114	Beverage Station	0	-	1	10	10	Shared, off of reception
4.115	City Council Photography Alcove	0	-		40	-	In grossing
4.116	Coat Closet	0	-	1	15	15	Shared by all staff and meeting guests
4.117	Restroom (Unisex)	0	-	1	80	80	Near conference room
4.120 City Manager						535	
4.121	Executive Secretary	1	1	1	80	80	Large Workstation
4.122	City Manager	1	1	1	250	250	Seating for 4-6 in office
4.123	Assistant City Manager	1	1	1	140	140	Seating for 2-4 in office
4.124	Temporary Staff/Intern	0	1	1	65	65	Also used by Mayor and Vice Mayor
4.130 Communications						300	
4.131	Communications Specialist	3	1	2	80	160	Large Workstation
4.132	Manager/Supervisor	1	1	1	140	140	Seating for 2-4 in office
4.133	Printer Stand	0	-	-	10	-	to be located in a room in design
4.140 Human Resources						360	
4.141	HR Administrative Assistant	0	-	-	65	-	May be shared receptionist
4.142	HR Analyst	1	1	1	110	110	Private Office
4.143	HR Generalist	1	1	1	110	110	Private Office
4.144	HR Director	1	1	1	140	140	Seating for 2-4 in office
4.160 Economic Development						315	
4.161	Reception/Waiting	0	-	-	120	-	Shared
4.162	Administrative Assistant	1	1	1	65	65	Typical Workstation
4.163	Business Development Manager	1	1	1	110	110	Private Office
4.164	Director	1	1	1	140	140	Seating for 2-4 in office
4.170 Information Technology						1,411	
4.171	IT Server Room/Telephone closet	0	-	-	350	-	Included in Building Shared, G2
4.172	IT Work/repair room	0	-	-	180	-	Included in Building Shared, G2
4.173	IT Chief Technology Officer	1	1	1	140	140	Private Office
4.174	IT Manager	0	-	-	110	-	Private Office
4.175	IT Network Specialist	1	1	1	65	65	Large Workstation/Workbench
4.176	IT Support Staff	9	1	9	65	585	Large Workstation/Workbench
4.177	Communications Specialist	1	1	1	65	65	Large Workstation
4.178	Swing Station (contract staff)	0	-	-	80	-	Large Workstation
4.179	Staging Area/Cabinets	0	-	-	150	-	open alcove in IT suite, secureable
4.180	Workbench Surface	0	1	9	44	396	Along open sides of workstations
4.181	File Storage Area	0	-	1	80	80	Lockable, can be in shared area
4.182	Supply Closet	0	-	1	80	80	Closet for toner, small equipment, en suite
4.180 Staff Shared						788	
4.115	File Storage - Clerk, Atty, Fin.	0	-	1	150	150	Secure, for city clerk, atty, finance
4.116	File Storage - City Mgr	0	-	1	80	80	File cabinets, lockable
4.165	File Storage - Ec. Dev.	0	-	1	80	80	Lockable cabinets, in suite or shared rm
4.145	File Storage - HR	0	-	1	80	80	Lockable cabinets, in suite or shared rm
4.134	File Storage - Comm.	0	-	1	80	80	Lockable
4.141	File Storage - Real Estate	0	-	1	100	100	Lockable, hanging files
4.142	Staff Work/Copy Area	0	-	1	188	188	Shared
4.143	Supply Closets	0	-	-	20	-	Shared by all staff, in work room
4.144	Comm. Supply Closet	0	-	3	10	30	Dedicated cabinets (3) in workroom
	Subtotal	26				4,379	
					25%	1,095	Departmental Grossing
Total (DGSF)						5,474	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

4.200 City Clerk

Overview/Function

The City Clerk keeps records for Falls Church and serves as the office for the City Council and the Mayor of Falls Church within City Hall. The City Clerk is appointed by the City Council. There are seven members of the City Council including the Mayor.

Current and Historical Location/Operational Conditions

The City Clerk has very little dedicated space in the City Hall. The office of the City Clerk is located on the third floor of the East Wing. The City Clerk shares an office suite with the City Manager, City Attorney, and the Communications office. The multipurpose break room/photocopy room/supply storage room is also shared by the City Clerk, as is the Oak conference/EOC room.

The City Clerk’s office staff consists of a Deputy Clerk and a Clerk. The Clerk has a private office. The Deputy Clerk is in a large workstation whose location also results in being the receptionist. This group has a need for file storage, but does not have sufficient space; therefore a stairwell had at one point been converted for several fire rated lateral file cabinets. This area was deemed a fire hazard by the Building Official, and the approximately 80 NSF of file storage was moved to another building location.

City Council uses the courtroom for public meetings and the Dogwood Conference Room/training room on the lower level for work sessions. The Mayor of Falls Church works full time and uses the shared 3rd floor conference room in City Hall for meetings when necessary.

Space Needs Required/Operational Improvements Sought

The City Clerk’s office will continue to have two staff into the future. One expansion workstation has been included to provide for the possibility of an administrative assistant, intern, or other additional staff in the future. The Deputy Clerk should have a large workstation, while the City Clerk should have a private office.

This office should continue to be co-located with the City Manager’s Office, the City Attorney, and with Communications inside the City Administration suite. Additional locked storage is required. Access to a shared conference room, equipment room, beverage station, and staff restrooms is also required.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
4.000 City Administration Suite							
4.200 City Clerk							
4.201	Deputy Clerk	1	1	1	110	110	Large Workstation, quiet, private area
4.202	City Clerk	1	1	1	250	250	Seating for 4-6 in private office
4.203	Future Growth Workstation	1	1	1	65	65	Typical Workstation
4.204	Supply Closet	0	-		45	-	In grossing, can be cabinet
	Subtotal	3				425	
			Departmental Grossing		25%	106	
Total (DGSF)						531	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

4.300 Financial Services

Overview/Function

Financial Services (formerly Administrative Services) used to include Information Technology, Finance, Utility Customer Service, and Real Estate Assessment. Information Technology is now under the City Manager, and Utility Customer Service was dissolved with the transfer of the water customer service to Fairfax County.

The Financial Services Division has a lot of contact with the public. The Administrative Services Director/Chief Financial Officer is collocated with the Finance Division while Real Estate Assessment is located separately. Future plans combine these two groups in one office suite.

The Real Estate Assessor's office assesses and maintains information on all properties within the City of Falls Church. The information for each parcel includes ownership records, deed and plat references, and specific characteristics of any building(s) on the parcel. This information is then used by realtors, attorneys, title search personnel, property buyers, property sellers, private appraisers, and surveyors. The goal of the Real Estate Assessor's office is to ensure that the property owner pays their fair share of the real property tax and that property information is maintained and updated.

Current and Historical Location/Operational Conditions

Within Financial Services is a Director who oversees operations of the group. The Finance office is adjacent to the Economic Development office. The Chief Financial Officer, procurement staff, accounts payable staff, and two accounting staff have private offices while the two payroll personnel have workstations in an open area of the office. Payroll personnel have no space for guest seating if staff come in to speak to them. There are also privacy issues with the current configuration since personal information is discussed in an open office environment.

The Real Estate Assessment office is located on the first floor of the West Wing, near the Human Resources office. There are three personnel in this office. Each person has a workstation within the room. There are approximately 100 boxes that are being stored off-site due to the lack of storage space elsewhere. This office shares one copier with the Human Resources office.

Space Needs Required/Operational Improvements Sought

Real Estate and Finance are combined to create Financial Services, with the former Real Estate administrative assistant in a workstation in the reception/waiting area, along with workstations for the two appraisers to handle walk-in traffic.

In the staff area of the suite are offices for the Division Director and the Senior Commercial Appraiser, each with a small conference table for up to four people. The Director of this group should also have a private office.



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

Procurement personnel should each have small private offices close to the suite entry, with storage for files, receipt of RFP bids and guest seating or walk-in traffic. Payroll personnel and accounts payable staff should have private offices in a quiet part of the office due to the sensitive information they discuss with staff.

The office suite should include space for several safes for storage of petty cash, a layout area, printer/copy area, and access to staff restrooms, shared conference room, and standard office supply storage.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
4.000 City Administration Suite							
4.300 Financial Services							
4.310 Finance Staff							
4.311	Reception/Waiting Area	0	-	-	120	-	Shared, seating for 2
4.312	FIN Director / CFO	1	1	1	140	140	Includes conference table for 4
4.313	FIN Deputy Chief Financial Officer	1	1	1	120	120	Private Office
4.314	FIN Procurement	2	1	2	110	220	Private Office
4.315	FIN Payroll	2	1	2	110	220	Private Office; secure materials
4.316	FIN Accounting	2	1	2	110	220	Private Office
4.317	FIN Accounts Payable	1	1	1	110	110	Includes safes for petty cash
4.318	Printer Station	0	-	1	10	10	Centrally located
4.320 Real Estate							
4.321	Administrative Assistant	1	1	1	65	65	Typical Workstation
4.322	Director of Real Estate Assess.	1	1	1	140	140	Seating for 2-4 in office
4.323	Senior Commercial Appraiser	1	1	1	110	110	Includes small conference table
4.324	Appraisers	2	1	2	80	160	Large Workstation
4.325	Layout Area	0	-	1	100	100	Open area with layout table(s)
	Subtotal	14				1,615	
						Departmental Grossing	
					25%	404	
Total (DGSF)						2,019	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

4.400 City Attorney

Overview/Function

The City Attorney is the legal advisor for various city boards, commissions, departments, the City Council, City Manager, and School Board. The City Attorney cannot advise private citizens, but is responsible for drafting and reviewing ordinances and contracts that involve the City of Falls Church.

Current and Historical Location/Operational Conditions

The City Attorney is located on the third floor of the East Wing of City Hall. Current staff consists of one full-time City Attorney and a paralegal. The City Attorney has a private office with a small law library and a small conference area while the Paralegal has a workstation in the reception area. This office is part of an office suite that houses the City Manager, Communications, and the City Clerk. The City Attorney also has a separate entrance directly across the hall from the Administrative Conference Room.

Space Needs Required/Operational Improvements Sought

Future growth is anticipated, due to the increase in both residential and commercial development. Future staff may conceivably include a full-time attorney for prosecutorial duties, and a full-time attorney for general office and supervision duties. With three full-time attorneys, this office would maintain both a full-time Receptionist and a full-time Paralegal.

The City Attorney can share the large conference room, beverage station, and staff restrooms with other functions within the City Administration suite.

No.	Space Name	No. of Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
4.000 City Administration Suite							
4.400 City Attorney							
4.401	Reception/Waiting	0	-	-	150	-	Shared reception; camera, barrier to suite
4.402	Paralegal	1	1	1	110	110	Private office, lockable files
4.403	Contract Attorneys	0	1	1	120	120	Private office, shared
4.404	City Attorney	1	1	1	250	250	Private office with library, conf table
4.405	Supply Closet	0	-	-	45	-	In grossing, can be cabinet
	Subtotal	2				480	
			Departmental Grossing		25%	120	
Total (DGSF)						600	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

5.000 Registrar of Voters

Overview/Function

The Registrar of Voters provides voter registration for the citizens of Falls Church by mail and from their office in City Hall. There are four precincts in Falls Church including the absentee precinct. Absentee voting can be done by mailing in the ballots or by voting from the booth in the Registrar’s office. The busiest time for this office is Election Day, when members of the Election Board and the press come in and out of the office.

Current and Historical Location/Operational Conditions

The Registrar of Voters was originally located on the first floor of the East Wing, adjacent to the former Utilities Customer Service Division. The East Wing underwent renovations began in 2007 to relocate the Registrar of Voters to what the former Treasurer’s office. The renovation addressed ADA issues by adding accessible counters and accessible entrance, as well as more space.

Staff include a supervisor and an assistant in an open office setting with two additional work stations for temporary poll workers and the three appointed members of the Election Board. There is a service area and associated files storage, plus storage for most voting supplies. During absentee voting, a voting booth and control equipment are set up in the office. Voting booths are stored off-site in a secured 5000SF climate controlled storage unit.

Before and during elections, this group requires a non-publicly accessible, flat counter area to collate mailings, voting materials, and returned ballots.

Space Needs Required/Operational Improvements Sought

The renovation/expansion of City Hall will permit this group to be located near the building’s new front entrance and lobby. Once relocated near the public entrance, the lobby could serve as peak queuing space. If square footage exists in City Hall, on-site storage of voting equipment would save the costs of leasing storage space. A building shared conference room meets this group’s needs.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
5.000 Registrar of Voters							
5.001	Waiting/Queuing Area	0	10	1	8	80	Space inside lobby
5.002	Customer Service Stations	0	-	2	25	50	
5.003	Supervisor	1	1	1	140	140	Private office with file storage
5.004	Assistants	2	1	2	65	130	Workstations with adjacent file storage
5.005	Voting Booth Area	0	-	-	80	-	Space for temporary voting booth setup
5.006	Temporary Staff	0	1	1	65	65	Workstation for Election Day staff
5.007	Staff Conference Room	0	-	-	300	-	Shared
5.008	Staff Work/Copy Area	0	-	-	200	-	
5.009	Secure File Storage Area	0	-	1	40	40	Lockable
5.010	Equipment Room	0	-	-	110	-	Independent cooling, vertically stacked
5.011	Supply Closet	0	-	-	45	-	
5.012	Beverage Station	0	-	-	10	-	Can be shared
5.013	Staff Restrooms	0	-	-	45	-	To be shared for total of one M, one F
	Subtotal	3				505	
			Departmental Grossing		25%	126	
Total (DGSF)						631	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

6.000 Tax Administration

Overview/Function

The Commissioner of Revenue (COR) is a position that is elected by the citizens of Falls Church every four years but is not employed by the City. The office processes certain taxes for Falls Church residents and processes business licenses. This location has also served as a Department of Motor Vehicles (DMV) Select office in the past, but that function has recently been relocated outside of the City Hall as part of the DMV 2 Go mobile DMV function.

The Treasurer for the City of Falls Church is an elected position that serves the citizens of Falls Church but is not employed by the city. Like the COR, the Treasurer is partially funded by the Commonwealth of Virginia while their space and equipment is provided by the city. The Treasurer serves the citizens by collecting and processing all City funds.

Current and Historical Location/Operational Conditions

The Commissioner of Revenue's office was originally located on one end of the first floor of the East Wing of City Hall. The East Wing underwent renovations in 2013 to rearrange the first floor so that the Commissioner of Revenue's office was moved to space previously occupied by the Utilities Customer Service office. The Treasurer's Office was also moved so that it continues to be adjacent to the Commissioner of Revenue's office. The renovation provided workstations for six employees, a private office for the Commissioner of Revenue and the Business License Auditor, a storage room, and a larger service counter. The renovated Treasurer's office provides workstations for employees, a private office for the Treasurer, a safe, and a secure place to count cash. The Treasurer's office produces monthly binders that are eventually stored in locked storage rooms, along with other financial files.

The renovated offices are more visible from the East Wing entrance foyer and the two offices are assisting more citizens and vendors in finding their destinations within City Hall.

Space Needs Required/Operational Improvements Sought

Before 2027, the Commissioner of Revenue's office anticipates adding several Revenue Assistants and one more Business License Auditor. The COR will continue to work with the DMV to schedule the DMV 2 Go mobile visits to City Hall but does not require on-site staffing.

The Treasurer's staff is expected to increase as the population of Falls Church increases, as legislation and operations change, and as funding sources change. Within the next few years a second Treasurer's Assistant will be added, with a third being added between 2017 and 2027. The Treasurer's office is centered on customer service, must be easily accessible to the public. The office should remain on the main level, adjacent to the Commissioner of Revenue due to the high volume of traffic that visits both of these offices.

These offices can share a conference room, in addition to a waiting/queuing area, beverage station, and staff restrooms. Virginia law states that the Treasurer's office must have access that



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

is separate from all city functions; therefore, a shared conference room is feasible, but it must have separate entrances for each user group, with controlled access.

Because the renovation was completed to the 2011 program, space is anticipated to be consistent with the needs below, unless improvements are possible (such as better public access) during the renovation/expansion of City Hall.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
6.000 Tax Administration							
6.010 Shared Suite Entrance						80	
6.111	Waiting/Queueing Area	0	8	1	10	80	Public Side of customer service counter
6.110 COR						670	
6.111	Customer Service Stations	0	1	4	5	20	
6.111	Revenue Assistants	5	1	5	45	225	Typical Workstation
6.112	Seasonal Help/Intern	0	1	-	45	-	Typical Workstation
6.113	Business License Auditor	1	1	1	110	110	Private Office
6.114	Assist. Bus. License Auditor	1	1	1	65	65	Typical Workstation
6.115	Dep. Commissioner of Revenue	1	1	1	110	110	Seating for 2-4 in office
6.116	Commissioner Of Revenue	1	1	1	140	140	Seating for 4-6 in office
6.120 Treasurer						425	
6.121	Treasurer Cashier Stations	0	1	2	5	10	Staffed by Assistants
6.122	Treas Customer Service Stations	0	1	2	5	10	
6.123	Chief Deputy Treasurer	1	1	1	65	65	Typical Workstation
6.124	Deputy Treasurer	1	1	1	65	65	Typical Workstation
6.125	Treasurer's Assistants	3	1	3	45	135	Typical Workstation
6.126	Treasurer	1	1	1	140	140	Seating for 4-6 in office
6.127	File Storage Area	0	-	-	80	-	Lockable, in circulation area
6.130 Shared staff areas						80	
6.131	Staff Conference Room	0	20	1	15	-	Shared
6.132	Staff Work/Copy Area	0	-	-	100	-	Shared - in circulation area
6.133	File Storage Area	0	-	1	80	80	Lockable
	Subtotal	15				1,255	
			Departmental Grossing			188	
Total (DGSF)						1,443	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

7.000 Human Services

Overview/Function

The primary focus of Human Services is to provide critical human services to at-risk populations. This office provides and oversees the following services: public assistance, property tax relief, Fairfax-Falls Church Community Services Board, the Health Department, and community college programs, as well as court-ordered supervision through the Court Services Unit. The office also works with the Police Department concerning victim services, and they work with the Senior Center.

Current and Historical Location/Operational Conditions

The Human Services office is located on the G corridor near the west wing exterior entrance. Access to the office is problematic for handicapped and elderly visitors since the west wing entrance is not ADA compliant, and access through the ADA compliant east wing entrance relies on an elevator which regularly breaks down. There is a small waiting area adjacent to the service window. The waiting area seating is too close to the service window to allow for private conversations to take place between visitors and staff. Adjacent to the waiting area is a small conference room that seats three to four people. This room doubles as a storage and break room. On the opposite side of the waiting area is an entrance to a small office suite that includes two offices. This additional area is connected to the Human Services office suite through staff circulation, and houses the Director and the intern.

Some staff have private offices if there is a need for staff/client privacy. At times, there is also an intern who works part-time from a typical workstation. Active files are stored in file cabinets at workstations and throughout the office suite with no room for expansion.

There is currently no space available for staff meetings; therefore, staff meetings take place in the middle of the office. If visitors come to the service window during the staff meeting, someone gets up to help them. The waiting area is separate from the staff area but conversations during the staff meeting can be heard from the waiting area.

Court Services has an office suite located outside of the City Hall main building, in the Gage House.

Space Needs Required/Operational Improvements Sought

The Human Services office has no adjacency requirements as long as they remain near other City of Falls Church departments in the City Hall. The office should be located on a lower level of the building near an accessible entrance. The waiting area should be large enough to include seating for a number of simultaneous visitors including those with mobility impairment using walkers or wheelchairs. The seating area should not be immediately adjacent to the receptionist, due to privacy concerns. If near a compatible adjacent area (such as the Clerk of Court), Human Services can share the waiting area, small meeting room, and receptionist with another group. If this solution occurs, the waiting area must be sized to meet peak needs for both groups.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 3 –Space Needs Required (2015)

Two interview rooms (four people each) should be attached to the waiting area, with a separate entrance for staff; require two means of egress for security. These rooms will be used for meetings with clients and can be shared with an adjacent group, if compatible (Clerk of Court).

Staff who require it for privacy should have private offices, with other staff in workstations. The new configuration includes space for vertical files, lateral files, and supply cabinets. Supplies and active files that need to be easily accessible should be stored in a central area. Archived files can be stored remotely.

Shared staff areas include an equipment room and a work/copy area, and can be shared if compatible with the adjacent group. Shared staff conference facilities in the building will meet this group’s needs.

The Court Service Unit, currently at the Gage House (on City Hall campus), will move back into City Hall with the renovations/reconfigurations. Those staff will utilize the suite’s shared interview rooms and other shared work areas, but also require a dedicated urinalysis restroom.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
7.000	Human Services						
7.010	Shared Suite Entrance						
7.011	Waiting/Queueing Area	0	-	1	120	120	For peak of 4 visitors with ample space
7.012	Interview Rooms	0	1	1	80	80	
7.013	Urinalysis Restroom	0	-	1	45	45	Pass-through to staff area
7.014	Small Meeting Room	0	8	1	15	120	
7.015	Receptionist Station	0	-	-	65	-	Staffed by HHS Admin (below)
7.020	Human Services Admin						
7.021	Housing Specialist	2	1	2	80	160	Large Workstation
7.022	Development Specialist	0	-	-	110	-	Small Private Office (could be shared)
7.023	Program Analyst	0	-	-	110	-	Private Office
7.024	Administrative Assistant	1	1	1	65	65	Serves as receptionist
7.025	Intern	0	1	1	65	65	Typical Workstation
7.026	Human Services Specialist	2	1	1	110	110	Private Office
7.027	Director	1	1	1	140	140	Seating for 2-4 in office
7.030	Court Services Unit						
7.031	Probation Officers	3	1	3	80	240	
7.032	Administrative Assistant	1	1	1	80	80	Large Workstation
7.033	Supervisor	1	1	1	110	110	
7.040	Shared Staff Areas						
7.041	Conference Room	0	-	1	300	-	Shared
7.042	Staff Work/Copy Area	0	1	1	120	120	
7.043	File Storage Area	0	-	1	120	120	Lockable
7.044	Supply Closet	0	-	-	45	-	Counter/cabinet storage in work/copy area
	Subtotal	11				1,575	
			Departmental Grossing		25%	394	
	Total (DGSF)					1,969	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

8.100 Law Enforcement Entrance/Lobby

Overview/Function

The law enforcement lobby is the means by which the public accesses the law enforcement’s public-facing services. This area is important because it offers law enforcement level of control to the functions managed by those groups.

Current and Historical Location/Operational Conditions

The Police Department is currently located on the G-2 and G-3 (basement) levels of the East Wing of City Hall. The east wing entrance on the G-2 level is the public face of the Police Department. There is a waiting area with several chairs, two service windows, racks for brochures. One of the service windows is for records and information and is only open during regular business hours. This service window contains clear glazing with blinds with ballistic glass installed in early-2015. The other window is hardened and has tinted glazing with an intercom system for communication with the personnel inside. The emergency dispatchers have workstations on the opposite side of this window.

Space Needs Required/Operational Improvements Sought

The law enforcement lobby should serve as the main control point for those doing business with the police or Sheriff’s Department. As such, the central control station also functions as both reception area and security screening. The law enforcement lobby includes some public services such as restrooms, vending machines, and a water fountain, which are highly used by visitors to this group and must be located close to this lobby. New vertical circulation will connect this lobby to the new main public entrance to City Hall. A dedicated receptionist will likely be required, and can work within the space identified as “Reception/Waiting.”

If possible, the community/training room should be located near to this area for easy public access to both spaces. A second entrance off of this lobby should lead into the secure portion of the Police Department, so that further screening can take place out of view of the public, if necessary.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.000	Law Enforcement						
8.100	Law Enforcement Entrance/Lobby					405	
8.101	Reception/Waiting	0	0	1	180	180	4-6 chairs, brochures, water fountain
8.102	Elevator/Vestibule	0	0	1	40	40	(East Wing Elevator)
8.103	Central Control	0	0	0	0	-	(Remote monitoring from Dispatch)
8.104	Records/Recept.	0	0	0	0	-	(records clerks serve this function)
8.105	NCIC Workstation	0	0	1	25	25	Lockable movable cart within 1.002
8.106	Restroom - Unisex	0	0	2	80	160	One toilet, one sink
	Subtotal	0				405	
							Departmental Grossing
					30%	122	
	Total (DGSF)					527	



8.200 Sheriff's Department

Overview/Function

The Sheriff for the City of Falls Church is a position that is elected by the citizens of Falls Church. The Sheriff's Department provides security and prisoner transportation from holding to the courtroom, and also manages security screening of visitors on court days. The City of Falls Church does not have a jail, so prisoners are transported from jails in neighboring jurisdictions (Arlington County and City of Alexandria, primarily) for court, and are transferred from their vehicles to holding cells, and then up to the courtroom. The process is reversed on return. The Sheriff's Department has custody between the holding cells and the courtroom.

The Sheriff's Department also serves civil warrants and legal notices. The Sheriff's Department works closely with the Police Department and assists them on an as-needed basis.

Current and Historical Location/Operational Conditions

The Sheriff's Department is located on the second floor of the West Wing behind the judge's bench/City Council Chambers. The entrance to the building on this floor is restricted to only the Sheriff's Department. Staff include the Sheriff, a Chief Deputy Sheriff, four full-time Deputy Sheriffs, eighteen volunteer Deputy Sheriffs, and one Administrative Assistant. The Sheriff has a private office. The Administrative Assistant and the four full-time Deputy Sheriffs share an office across the hall. The full-time Deputy Sheriffs rotate ten hour shifts; volunteer Deputy Sheriffs work during special events, perhaps several days each month.

On court days, the Sheriff's office is used as the Judge's Chambers, and the Sheriff works elsewhere.

Courtroom holding includes the sallyport and four holding cells, which are located within the Police Department on one of the lower levels of the East Wing of City Hall. When the prisoner needs to be in the courtroom, the Sheriff's Department has exclusive use of the elevator. The prisoner is transported to the second floor, crosses the space that serves as the main courtroom lobby, and enters through the main public courtroom entrance. A bench at the front of the courtroom is equipped with floor rings for ankle restraints, and defendants are staged from that bench. The public enters the building through an entrance used only on court days, which is equipped with a magnetometer, and then proceed to the courtroom through the same public courtroom entrance.

Space Needs Required/Operational Improvements Sought

The Sheriff's Department will continue to add more Deputy Sheriffs in the future. Depending on how building security screening will be implemented, the number of full-time Deputy Sheriffs could increase to accommodate that function. The program proposes a solution where Deputy Sheriffs complete paperwork in the Roll Call Room on shared computer carrels, allowing for expansion without space increase over time. The Sheriff and the Chief Deputy Sheriff have private offices within a nearby office suite, with the administrative assistant as receptionist.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

This suite should include a work/copy area, lockable file storage area, property storage, and beverage station. Locker rooms will be provided in the building, and should accommodate the Sheriff’s Department as well as the Police Department. During the renovation design process, it should be ensured that there are dedicated staff restrooms near the work areas.

The Sheriff’s Department can share the intake area with the Police Department.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.200 Sheriff's Department Staff Areas							
8.201	Reception/Waiting area	0	1	-	80	-	Shared with Police
8.202	Administrative Assistant	1	1	1	65	65	
8.203	Sheriff	1	1	1	140	140	Seating for 2-4 in office
8.204	Chief Deputy Sheriff	1	1	1	140	140	Private Office
8.205	Operations Supervisor	1	1	1	110	110	Private Office
8.206	Permanent Deputy Sheriffs	8	-	2	65	130	Shared workstations
8.207	Part Time Deputy Sheriffs	20	-	-	-	-	Will work in the courtroom and holding
8.208	Roll Call Room	0	18	1	15	-	Use adjacent EOC
8.209	Beverage Station	0	1	1	10	10	
8.210	Staff Work/Copy Area	0	1	1	120	120	
8.211	Supply Storage area	0	1	-	45	-	Cabinets in work area
8.212	File Storage Area	0	0	1	120	120	Open area, lockable cabinets, near admin
8.213	Male Locker Room	0	25	-	12	-	Shared with Police, use existing
8.214	Female Locker Room	0	12	-	12	-	Shared with Police, use existing
8.215	Male Restroom/Shower	0	1	-	250	-	Shared with Police, use existing
8.216	Female Restroom/Shower	0	1	-	250	-	Shared with Police, use existing
8.217	Fitness Room	0	-	-	800	-	Shared community access to local gyms
8.218	Property Storage	0	0	1	150	150	Shelving, safe, large and small bags
	Subtotal	32				985	
							Departmental Grossing
					25%	246	
Total (DGSF)						1,231	



8.300 Victim Witness/Interview Area

Overview/Function

Victims and witnesses are protected throughout the criminal justice system. At the front end, when emotions are still running high, offering a secure place for victims of crimes or witnesses to crimes is critical to encouraging their collaboration. As such, secure interview rooms are used which serve both to record the proceedings and to keep these vulnerable parties safe. For victims, particularly children, these rooms do not require the same hard finishes as suspect interview rooms. When custodial parents bring children along, provisions should be made for the children to wait within direct view of the parents (in an adjacent room with one-way window), without the ability to hear the parents’ testimony.

Current and Historical Location/Operational Conditions

There are currently several interview rooms within the Police Department used for victims and witnesses waiting to testify in court, or to give depositions. The rooms are equipped with audio and visual recording equipment. Those being interviewed must enter the main public police entrance and be escorted in past the secure doors, through a staff area. There is currently no softer room for children to wait for parents or for child victim/witnesses.

Space Needs Required/Operational Improvements Sought

To maintain separation of public and staff areas, the interview rooms and softer children’s play/interview room should ideally be arranged in a row on the corridor leading from the public entrance, so that witnesses and other interviewees can be brought directly to the rooms from the law enforcement entrance. The victim/witness/interview area consists of two parent interview rooms with one children’s play room/interview room between them. A fingerprint room is adjacent to these rooms for victim/witness and public fingerprint services, also offered to the public.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.300 Victim/Witness/Interview Area							
8.301	Children's Play Room	0	0	1	100	100	One way mirror from interview room
8.302	Interview Rooms	0	0	2	110	220	Window to play room w/blinds, wired
8.303	Fingerprint Room	0	0	1	60	60	One LiveScan machine; alcove on hallway
8.304	Equipment/Data Feed Room	0	0	1	80	80	Feed from interview; open to staff side.
	Subtotal	0				460	
		Departmental Grossing			25%	115	
Total (DGSF)						575	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

8.400 Emergency Operations Center

Overview/Function

An Emergency Operations Center is the hub of communications during any kind of jurisdictional crisis. Leaders from key first responder agencies, plus municipal leadership, convene and deploy responses from this location. As such, the EOC must be “stood up” quickly, and can remain in operation around the clock for the duration of the given crisis. Key staff eat, sleep, and work in this area, so provisions ideally provide for that. In the event of a crisis at the EOC, staff require two means of egress to safely exit.

Current and Historical Location/Operational Conditions

The conference room on the 3rd floor, east wing of City Hall is equipped with all of the requisite materials to convert (as needed) to an EOC. This room is not sufficiently large, nor is the equipment optimally arranged in this room, which is off of a public corridor outside the City Manager’s office and with only one way in or out. There are no break-out rooms nearby, nor is there a galley.

Space Needs Required/Operational Improvements Sought

A dedicated EOC/Briefing room is included in the program, with the intention of serving as a briefing/roll call room on a regular basis, thus limiting use to law enforcement (i.e. limited public access) to ensure crucial equipment is protected and ready for use in an emergency. An adjacent galley/kitchenette and storage room (for overnight supplies for emergency staff) are important features.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.400 EOC/Briefing Room							
8.401	EOC/Briefing Room	0	100	1	12	1,200	Divides into two rooms, ample floor outlets. Adjacent to Dispatch.
8.402	Toilet	0	0	1	65	65	Shared with Dispatch
8.403	Equipment/Storage Closet	0	0	1	80	80	Fixed shelving, TV cart, one side of divider
8.404	Equipment Room	0	0	1	200	200	
8.405	Galley/Kitchenette	0	0	1	180	180	Full kitchen wired for residential oven/stove/hood, two refrigerators, table, chairs, cabinets. Pantry. Shared w/dispatch
8.406	Storage Closet	0	0	1	150	150	Long, thin storage closet for chairs/tables
8.407	Extra Closet	0	0	1	80	80	For storing items overnight, one side of rm
	Subtotal	0				1,955	
			Departmental Grossing		25%	489	
Total (DGSF)						2,444	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

8.500 Dispatch

Overview/Function

Dispatch is the location where 911 calls are received and routed to the appropriate first responder. This high-stress job requires tremendous concentration, and a lack of disruptions. All calls are recorded, so this space requires the technological infrastructure to do so (raised floor, equipment room). Staff are typically discouraged from leaving the dispatch room while on dispatch duty, so an internal office is included for staff discussions or telephone calls out of earshot of working dispatchers, and a nearby staff restroom is necessary. Dispatchers work long shifts, including overnight. When on break, dispatch staff leave the dispatch room and should have access to a calm, relaxing area where they can eat a meal and clear their minds.

Current and Historical Location/Operational Conditions

The dispatch function is handled out of the Police Department. The staff who handle dispatch currently also receive public foot traffic in the small alcove which serves as a lobby for the Police Department, responding via electronic communicator and one-way window. The dispatch room includes workstations shared on a shift basis, plus one office/private room off of the dispatch floor.

Space Needs Required/Operational Improvements Sought

The dispatch room is not expected to change or grow. Communications staff workstations are included inside Police Administration, and any increases will be experienced there.

A shared secure restroom will be provided near the EOC. The location of this restroom should be placed so that dispatch staff can share, without travelling far from the dispatch room. This room is included in the EOC program.

Dispatch is a high stress job. This area can benefit from location where windows give views to nature, in a quiet location with few interruptions.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.500 Dispatch							
8.501	Dispatch Floor	2	1	3	42	126	floor cabling, cameras to LE lobby
8.502	Office	0	0	1	100	100	shared, sound barrier to dispatch floor
8.503	Equipment/Video Room	0	0	1	60	60	For taping, IT wiring, etc.
8.504	Galley/Kitchenette	0	0	-	-	-	Full kitchen, shared w/EOC
8.505	Dispatch lockers	0	0	6	4	24	1' full length lockers, for personal items
8.506	Storage Closet	0	0	1	20	20	Long, thin storage closet for chairs/tables
8.507	Extra Closet	0	0	1	25	25	For storing items overnight, one side of rm
	Subtotal	2				355	
		Departmental Grossing			25%	89	
Total (DGSF)						444	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

8.600 Police Department

Overview/Function

The Police Department is the headquarters and hub of activity for the Falls Church City Police Department staff and operations.

Current and Historical Location/Operational Conditions

The Police Department is located on the G-2 and G-3 floors of City Hall. There is no reception/waiting area or dedicated conference room inside of the secure area. Administrative meetings generally take place in private offices, the break/roll call room on G-3, or one of the conference rooms that is available in City Hall. The Criminal Investigations Division currently has space on both the G-2 and G-3 floors of City Hall. Dispatch (communications) is inside a dedicated dispatch room just inside the G-2 entrance, which also serves as the police reception. Four computers, a printer, and a copier are set up in the break/roll call room on the G-3 level of City Hall for report writing. There are several copiers and printers within this room as well as lockable file storage.

The police space has a number of operational issues – there is inadequate separation between secure and public functions, so public visitors often transit the secure staff space. Officers share building conference rooms, so police business can be overheard by general government staff or building visitors. Adjacencies are not optimal and some functions lack sufficient space, so that incompatible functions (such as staff break room and evidence processing) occur in the same space.

Space Needs Required/Operational Improvements Sought

The Administrative area is the heart of the Police Department's daily business activities. This area will house the offices for police administration staff, records, communications (dispatch) staff, operations staff, and criminal investigations staff, as well as report writing space for patrol officers. Police Administration plus designated Operations and Criminal Investigations Division (formerly the Services Division) staff require private offices due to privacy concerns. The remainder of the staff have workstations. The emergency communications technicians who cover dispatch will share several workstations in this area, in addition to their duty stations (also shared) inside Dispatch.

Certain technical rooms such as a polygraph room (in CID) are also included in the program. The suite should also include lockable file storage, open file storage, shared photocopy/workroom with open table and equipment, a small kitchenette with bar sink for staff use

The report writing room is used by officers during and after their shifts, to document activity. This room must contain sufficient carrels to accommodate shift overlap, plus printers and photocopiers that these officers can use (on a shared basis), plus the dedicated CAD PC and the Video PC (used for processing, editing, viewing, and processing taped interviews and evidentiary videos). One storage closet in this area will be required for forms and evidence bags;



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

another storage closet near the Video PC will be used solely for video archiving and storage. This area should be located close to the evidence processing lab and evidence storage.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.600	Police Department						
8.610	Police Administration						
8.611	Suite Entrance/Vestibule	0	0	0	40	-	Included in Law Enforcement Lobby
8.612	Office of the Chief of Police	1	1	1	350	350	Private Office
8.613	Deputy Chief	1	1	1	240	240	Private Office
8.614	Service Lieutenant (Comm.)	1	1	1	120	120	Private Office
8.615	Chaplain	1	1	0	64	-	(no space needed)
8.620	Records						
8.621	Admin. Assist./Locked Files	1	1	1	120	120	Lockable room with workstation and files
8.622	Records Unit Admin. Assistants	2	1	2	64	128	Workstations
8.623	File Room	0	0	1	120	120	Storage for active case files
8.624	Copy/Workroom	0	0	1	150	150	Copier, materials storage, fax
8.630	Operations						
8.631	Operations Lieutenant	1	1	1	120	120	Private Office
8.632	Officer Workstations - Patrol	6	1	4	45	180	Includes K9, bike. Shared workstations
8.633	Sergeant/Corporal A Platoon	2	2	1	80	160	Private Office, Shared, can be grouped
8.634	Sergeant/Corporal B Platoon	2	2	1	80	160	Private Office, Shared, can be grouped
8.635	Sergeant/Corporal C Platoon	2	2	1	80	160	Private Office, Shared, can be grouped
8.636	Sergeant/Corporal D Platoon	2	2	1	80	160	Private Office, Shared, can be grouped
8.637	Copy/Fax/Printer Area	0	1	1	150	150	PC, printers, fax, lg copier, work table.
8.638	Supply Storage Closet	0	1	1	60	60	
8.639	Bike Patrol Equipment Room	0	-	-	-	-	Included in Vehicle Preparation Bay
8.640	Outdoor Kennel/Run Area	0	0	1	40	-	Included in Building Shared Spaces
8.640	Communications						
8.641	Administrative Assistant	1	1	1	65	65	
8.642	Emergency Comm. Technicians	6	3	1	65	195	Shared workstation; incl. in dispatch
8.650	Staff Shared						
8.651	Staff Restrooms	0	1	2	45	90	Locate inside or near ECT dispatch area.
8.633	Indoor Kennel Area	0	0	3	20	60	Three crating/kennel slots for large dogs
8.652	Copy/Fax/Printer Area	0	1	1	150	150	PC, printers, fax, large copier, work table.
8.653	Storage Closet	0	1	0	60	-	In grossing, on wall or in cabinet
8.660	Police Report Writing						
8.661	PC Work Carrels	20	0	10	20	200	Shared workstations; 2 per 3 officers
8.662	Printer Station	0	0	7	4	28	Printer stands, one per two PC's
8.663	Copier	0	0	1	6	6	Large, high volume copier
8.664	CAD PC's	0	0	2	20	40	Two carrels with CAD PC's
8.665	Video PC	0	0	1	20	20	One video equipped PC
8.666	Video Storage Room	0	0	1	80	80	Shelving with storage drawers
8.667	Storage Closet	0	0	1	60	60	Closet with shelving



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

8.670 Police Criminal Investigations Division							
8.671	Criminal Investigations Sergeant	1	1	1	80	80	In bull-pen setting
8.672	General Assignment Detectives	4	1	4	80	320	In bull-pen setting
8.673	Swing Workstation	0	1	1	80	80	In bull-pen setting, for FBI, other police
8.674	Gang Task Force Detective	1	1	0	110	-	Off-Site
8.675	Services Lieutenant	1	1	1	150	150	Private Office
8.676	Community Services Officer	1	1	1	100	100	Office or Workstation
8.677	Em. Mgmt. Coord./Fire Marshal	1	1	1	150	150	Private Office
8.678	Crossing Guards	5	-	-	-	-	Shared PC Access in Report Room
8.679	School Resource Officer	1	1	0	80	-	Off-Site
8.680	Parking Enforcement Officers	1	1	1	64	64	Workstations, shared
8.681	Animal Control Officer	1	1	1	100	100	Private office or workstation
8.682	Animal Control Interior Storage	0	0	1	80	80	Closet or room for cages, food, etc.
8.683	Polygraph Room	0	1	1	110	110	Desk, printer, three chairs, video capable
8.684	Equipment Room	0	0	1	80	80	Adjacent to Polygraph, recording, etc.
8.685	Copy/Fax/Printer Area	0	1	1	150	150	PC, printers, fax, large copier, work table.
8.686	Animal Control Outside Storage	0	0	0	100	-	Included in Vehicle Prep area
8.687	School Resource Officer Closet	0	0	1	60	-	
	Subtotal	66				4,871	
					25%	1,218	
Total (DGSF)						6,089	



8.700 Police Evidence Processing and Storage

Overview/Function

In the course of investigating crimes, police inevitably collect evidence, some of which requires lab processing. Only the largest police agencies have internal labs; most small jurisdictions, like the City of Falls Church, contract lab processing out. Chain of custody protocols governing evidence handling are strict, and can have a significant impact on the outcome of a court case, so proper space to secure the evidence is critical. There are several types of evidence stored by police, including large or bulky items, computers, and item which require storage in a safe (such as guns or drugs), as well as small items which can be stored on a shelf in an envelope. Each evidence type has a requisite processing method and storage strategy to maintain proper chain of custody.

Current and Historical Location/Operational Conditions

Evidence requiring lab services is prepared and bagged within the Police Department, then sent out. Evidence packaging supplies were historically kept in the break/roll call room and evidence processing occurred there, despite the fact that this room lacked proper ventilation and food was often prepared on the same counter.

At the outset of the schematic design process, evidence storage was in a room on the G-3 level of City Hall adjacent to the officer locker rooms, at some distance from the report writing area. This area had inadequate space and a lack of shelving, nor did it have proper ventilation in the drug lockers, so materials were stacked on one another and the entire room smelled like drugs.

A renovation occurred concurrent to schematic design to move the evidence room to a new, larger location in the building. Completed in fall 2014, this renovation provided an evidence receiving area with a roll window and one two-sided slam locker at the entrance to the evidence room, and a drying unit for wet items. The new evidence processing room is a dedicated room with two work spaces and an adjacent biohazard disposal area, located next to evidence storage and as close as possible to report writing. The new evidence storage room includes fixed shelving and two safes, one for drugs and another for cash. .

Space Needs Required/Operational Improvements Sought

No changes required; renovations are complete.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
8.700 Police Evidence Processing & Storage							
8.710 Evidence Processing							
8.711	Lab	0	2	0	120	-	Vented hood, negative airflow
8.712	Biohazard Disposal	0	1	0	100	-	Sharps/biohaz., refrig. for biocontam. mats.
8.720 Evidence Storage							
8.721	Evidence Receiving	0	1	1	120	120	Roll window, "slam" lockers
8.722	Evidence Room	0	0	1	120	120	Lockable room with fixed shelving
8.723	Computer Evidence Storage	0	0	1	120	120	Fixed shelv., table/counter, AC, ventilation
8.724	Drug/Cash Safe	0	0	2	20	-	one for money, one for drugs. Inside room.
	Subtotal	0				360	
			Departmental Grossing		25%	90	
Total (DGSF)						450	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

Section 3 –Space Needs Required (2015)

8.800 Equipment Room/Armory

Overview/Function

The armory contains the equipment and weaponry used by special task forces which operate out of the Police Department. These areas must be strategically located within the facility, and must be kept exclusively within law enforcement access and control.

Current and Historical Location/Operational Conditions

The armory is currently located on the G-3 level of City Hall near the locker rooms. This room is not near an entrance. The room is hardened per specifications.

Space Needs Required/Operational Improvements Sought

The equipment room must be located close to the staff entrance to the facility, but out of sight from the staff door, so that access can be maintained even if the staff entrance is compromised. The gun cleaning area and firearm storage areas should open off of the inside of the equipment room.

The equipment room and special equipment area should have a communicating door, but both should also have direct access onto the main corridor from the staff entrance. The equipment room/armory is the weapons cache for the facility, including the equipment room, the special equipment area, a gun cleaning area, firing barrel, and shotgun/rifle storage.

A satisfactory design alternative to providing one large room containing all of these elements is to put the firing barrel at the staff entrance (in circulation space), and to store special equipment on fixed shelving in a wide corridor (circulation) or storage room, apart from the armory/gun cleaning area. Using circulation space in this manner allows for the armory to be a smaller room dedicated to weapon cleaning and storage of guns/ammunition.

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments	
8.800 Equipment Room/Armory								
8.801	Equipment Room/Armory	0	70	1	1	70	Storage room for tubs and duffel bags, wooden shelving. Three stacked cubes per 10 sf area. Total staff/3 shifts with 10% peaking.	
8.802	Special Equipment Area	0	1	1	80	80	Additional storage space for special teams and their equipment	
8.803	Gun Cleaning Area	0	1	1	20	20	Alcove for gun cleaning	
8.804	Firing Barrel	0	1	1	2	2	Weapons testing area	
8.805	Shotguns/Rifles	0	1	1	80	80	Lockable storage area with rifle, handgun, and ammunition storage. Out of direct line of sight of back door.	
	Subtotal	0				252		
		Departmental Grossing				25%	63	
Total (DGSF)						315		



9.000 Inmate Entry and Holding

Overview/Function

Inmate holding in City Hall is needed for those in custody who are appearing in court, or (less frequently) for individuals who have just been taken into custody, pending transfer to the jail in Arlington County. Stopping at the facility may not always be necessary, but should be an option to permit officers to log evidence, make reports, do some computer investigation and verify identity (fingerprinting and photography) before transporting the alleged perpetrator to the jail.

It is typical for in-custody individuals to use dedicated, hardened circulation into and through a building, whether it is a law enforcement or a court facility. Any intake or processing, or holding activities occur along this route, in hardened space. All circulation should be handicapped accessible.

Current and Historical Location/Operational Conditions

There currently is no vehicular sallyport, so in-custody individuals are escorted by an officer from the non-secure parking to a rear door. From there, they go down a non-accessible set of stairs to the holding area on the G-2 level of City Hall, where there are four cells. Three of the cells open onto a small day room. The remaining cell is separate but adjacent to the other three. Processing activities occur in various circulation areas, such as the corridor, or in offices near holding.

Space Needs Required/Operational Improvements Sought

Future needs include a drive-up sallyport for secure transfer of those in custody from the officer's vehicle to the building, leading to a new secure elevator for moving in-custody individuals up to court or down to the intake/holding area. These areas will be added as part of the garage addition to the north.

Minimal holding is required – the existing cells will be re-used, as-is. The existing restroom should be designated as the in-custody restroom, and a staff restroom should be added in the nearby law enforcement staff space. The magistrate/arraignment area will also be used as-is.

Ideally, the inmate processing area should be located near an exterior wall of the facility, along the secure staff (police) side of the facility, so that minimal movement is required to get from the law enforcement vehicle to this area. Internally, this area should be located so that entering from the officer side of the space (such as officers or attorneys) can reach the area with minimal traffic through the facility. The intake/processing area should be equipped with benches, a photography spot, and a fingerprint area plus two attorney interview rooms and an adjacent drug testing toilet/drug testing waiting area.

These long-term needs are reflected in the program, but the plan is for these existing spaces to remain as-is, without renovations at this time.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
9.000 Inmate Entry and Holding							
9.001	Sallyport	0	0	0	600	-	Exterior, pull-in/back-out, for one car/van. Clear and free of all equipment.
9.002	Intake/Fingerprint Area	0	0	1	200	200	Open are w/benches, counter, & camera
9.003	Polygraph Room	0	0	1	65	65	
9.004	Deputy Station/Fingerprint & ID	0	0	0	40	-	Included in Intake Area
9.005	Drug Testing Holding / Waiting	0	0	0	40	-	Included in Intake Area
9.006	Drug Testing Toilet	0	0	1	50	50	
9.007	Single Cells	0	1	2	50	100	One for women or juveniles (wet)
9.008	Dayroom	0	0	0	0	-	Included in circulation outside cells
9.009	Group Holding	0	2	2	25	100	Two group holding cells for 4-8 each (wet)
9.010	Staff Restroom	0	0	0	65	-	Included in CORE
9.011	Attorney Interview Area	0	1	0	100	-	One way mirror to camera area in Detectives' multi-purpose room; table, chairs
9.012	Magistrate/Arraignment Area	0	1	1	120	120	Window to intake area; video equipped for remote hearings.
	Subtotal	0				635	
			Departmental Grossing			45%	286
Total (DGSF)						921	



10.000 Locker/Shower

Overview/Function

Physical fitness is an important part of first responder readiness, as is the uniform. Both the Police and Sheriff require a locker/shower area for male and female law enforcement to change before and/or after their shifts. Because it is used for shift preparation activities, this room is one of the first points of entry for officers between shifts. A fitness room is also typical in most law enforcement stations.

Ideally, the locker room should be close to the law enforcement entrance with direct access from both (male and female) locker rooms directly into the main staff corridor, and direct connectivity between the toilet room, shower room, and locker rooms for each gender. If included, any emergency storage/bunk room should be connected to the male and female locker rooms and to the roll call room, so that in the event of an emergency, those bunking in that room have easy access to the areas they will need to deploy.

Current and Historical Location/Operational Conditions

At one time the Police Department had a weight room on the G-3 level of City Hall. Over time, the weight room was renovated to create workstations for officers. The weight room was never replaced, as ample community opportunities exist for law enforcement with the City of Falls Church. The locker room, staff restrooms, and showers are near the former weight room on G3. A small room on G3 is used for emergency storage.

Space Needs Required/Operational Improvements Sought

The renovation plan for City Hall does not include renovation of these spaces; however, long-term plans include providing equal female lockers, toilets, and female showers are included to account for shift peaking and future changes in females on staff. Staff ideally prefer the 2' wide (large enough to store vests and personal equipment) lockers, with boot shelves, forced ventilation, and electricity for charging equipment within them.

A shared fitness room was not included, even long-term, because of the proximity to the Community Center and the use of nearby private gyms.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
10.000 Locker/Shower							
10.010 Officer Locker/Shower							
10.011	Male Locker Room	0	-	46	8	368	2' wide, attached bench, circ. (+10%)
10.012	Female Locker Room	0	-	30	8	240	2' wide, attached bench, circ. (+10%)
10.013	Male Shower Room	0	-	1	45	45	1:10, max shift + 35% peak
10.014	Female Shower Room	0	-	1	45	45	1:8, max shift + 35% peak
10.015	Male Equip. Maint. Area	0	-	1	12	12	Alcove in locker room w/bench, boot grip
10.016	Female Equip. Maint. Area	0	-	1	12	12	Alcove in locker room w/bench, boot grip
10.017	Male Toilet Area	0	-	1	45	45	1:8 per shift, opens to hall & locker rm.
10.018	Female Toilet Area	0	-	1	45	45	1:3 per shift, opens to hall & locker rm
10.019	Emergency Storage/Bunks	0	-	1	150	150	Recliners & emerg. supplies; quiet loc.
10.020	Fitness Room	0	-	-	800	-	Rubber flooring, phone, intercom; acoustical barriers to other areas
	Subtotal	0				962	
					15%	144	
	Total (DGSF)					1,106	



11.000 Vehicle Prep and Officer Entrance

Overview/Function

The officer entrance to a law enforcement station should be out of sight of the public, screened through design. The entrance itself should include wide double doors (for entry carrying bikes or gear), an awning or roof over the door, and a mud-room inside the door with benches and floor faucets/drains for washing off muddy boots. Electronic security measures should be in place at this door.

The vehicle prep bay is a drive-through space out of the weather adjacent to the officer entrance, where officers can change the oil, put chains on their tires, change fuses, and examine the car for minor issues. This area is usually sized for one vehicle at a time and is not climate controlled. This bay should have a garage door for cars and wide automatic-opening pedestrian doors that can accommodate a person walking a bicycle or carrying gear. A storage room/shed is needed inside the bay for traffic cones, oil, tires, tools, inner tubes, and other supplies needed to maintain officer vehicles and bicycles. This prep bay cannot double with the in-custody sally-port, which must remain clear of all equipment and gear.

Current and Historical Location/Operational Conditions

There currently is no dedicated law enforcement entrance at City Hall. Officers can enter through the secure door down the ramp on the northwest side of the building (near staff parking), or through the public entrance to the Police Station (on the east wing). Limited on-site resources are provided for vehicle maintenance and preparation, or for weatherization.

Space Needs Required/Operational Improvements Sought

The rear expansion and secure parking and addition to the north of the City Hall will provide the majority of the program space needs for this component, as well as a new secure entry for in-custody defendants arriving for court (included in 9.000). The existing in-custody door will be connected to a new, secure elevator between this entrance, holding on G2, and the courtroom level above to allow vertical movement of detainees from holding up to the courtroom without entering public space. This space is included in the parking structure cost estimate.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
11.000 Vehicle Prep/Officer Entrance							
11.010 Vehicle Prep							
11.011	Vehicle Bay	0	-	1	600	600	Wide bay, lift, garage doors, wide bike entry
11.012	Bike Storage Area	0	-	1	100	100	for 6 bikes, hanging wall hooks
11.013	Equipment/Bike repair	0	-	1	40	40	Stand for easy tire changes.
11.014	Outdoor K9 Kennel Area	0	-	1	40	40	Three runs for large dogs with shelters
11.015	Vehicle Storage Room	0	-	1	100	100	Shelving & racks for flares, cones, salt, oil, chains. Portable jack.
11.016	Animal Control Storage	0	-	1	100	100	Area off of bay. Ventilated. Refrigerator
11.017	Officer/Judge Entrance	0	-	-	100	-	Staff secured entrance from secure parking. Camera monitor to central control/dispatch.
11.018	Mud Room	0	-	1	60	60	Wide corridor with floor drains and sprayers, benches and rubber mats.
	Subtotal	0				1,040	
			Departmental Grossing			15%	156
Total (DGFSF)						1,196	



100.000 Building Shared

Overview/Function

Building shared areas are those behind-the-scenes spaces which are necessary to allow the building to function. Sometimes included in the building grossing, at other times these areas are specified in the program. The building shared areas which were explored in detail during the course of the renovation planning and schematic design are called out separately from the building grossing here, to ensure their operational demands are met. These include a mechanical room, loading dock/staging area, janitorial closets, general building storage, forms/equipment storage, and staff restrooms.

Current and Historical Location/Operational Conditions

Some of the programmed spaces already exist, but in non-optimal locations or inadequate sizes. For example, the Police Department has several storage room on the G-2 and G-3 levels, which may be adequate or which may be repurposed. Staff restrooms are included within the locker/shower rooms on the G-3 level, plus the G-2 level has additional staff restrooms, but the latter are not in staff-secure space. The server room has undergone recent upgrades (such as absorbing space formerly used for the print shop, no longer needed), and may already be in the optimal location. Existing spaces like these should be taken into account during renovation, to attempt to re-use as much existing infrastructure as possible.

Space Needs Required/Operational Improvements Sought

Adequate increases in mechanical and shared spaces are required to bring the building conditions up to code. Shared infrastructure, such as mail room and electronic data/cabling capacity are needed to support a modern city government operation. New space needs also include building storage, janitorial storage, equipment/forms storage, and loading dock/staging area for deliveries. Placeholder sizes have been included for areas of unknown size to ensure they are included in the budget and will be included in design. Exterior spaces are listed, but no SF is included.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 3 –Space Needs Required (2015)

No.	Space Name	2033 Staff	Users per Space	No. of Spaces	Standard (NSF)	Total SF	Comments
100.000 Building Shared							
100.010 Mail Delivery & Processing						260	
100.011	Mail Room	0	0	1	180	180	Exterior corner, blast-resist. construction
100.012	Screening Equipment	0	0	1	50	50	x-ray with conveyor belt
100.013	Mailbag Storage	0	0	1	10	10	Under mail slot, in mail room
100.014	Mail Sorting Table	0	0	1	20	20	Table or counter area
100.015	Mailbox Wall	0	0		20	-	Thick wall, inset boxes, metal roll guard.
100.020 Remote Storage						930	
100.021	Registrar of Voters Storage	0	0	1	180	180	Storage for infrequently used items
100.022	Treasurer / COR Storage	0	0	1	100	100	Locked
100.023	Building Storage	0	0	1	500	500	Caged or locked storage for bulky items
100.023	Janitorial Storage	0	0	1	150	150	Floor sink, drain, fixed shelves, mixing area
100.030 IT Server and Related						1,090	
100.031	Server Room	0	0	1	350	350	Independently cooled
100.032	Work/Repair Room	0	0	1	180	180	Adjacent to 20.008; counter, workstation
100.033	Cabling/Computer Wiring Room	0	0	4	120	480	One per floor
100.034	Telephone Wiring Room	0	0	1	80	80	Closet for telephone switchboard and wiring
100.030 Other Building Shared						750	
100.035	Mechanical Room	0	0	-	800	-	on the roof
100.036	Loading Dock	0	0		600	-	Exterior space
100.037	Staging area	0	0	1	150	150	Inventory computer, sink, eyewash station
100.038	Staff Lounge	0	0	1	240	240	Refrigerator, table, sink, cabinets
100.039	Janitor's Closets	0	0	8	45	360	Near restrooms- FINAL COUNT IN DESIGN
100.040	Dumpster	0	0	-	150	-	Two dumpsters (exterior)
100.041	Recycling Area	0	0	-	150	-	Two dumpsters (exterior)
	Subtotal	0				3,030	
					25%	758	
Total (DGSF)						3,788	



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

Report 4

*Section 4
Schematic Design*



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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A. Goals and Process

The schematic design process involved a number of meetings and workshops with City leadership, stakeholders, user groups, and citizens. The various input received in the prior efforts, plus additional priorities which emerged during the meetings and workshops, resulted in the following list of goals and parameters which governed the schematic design. These priorities are not listed in any particular order.

Four broad schemes were developed and explored, presented, discussed, and narrowed to one. Design of the preferred option was carried forward through the schematic design stage, to allow for updated construction costs to be developed and a solid working operational plan to be crafted.

A1. Security

- Improve City Hall Security, including creating context-appropriate physical separations between:
 - Staff and public.
 - In-custody defendants and other parties to court cases.
 - Police and court staff vehicles and public vehicles (secure garage).

A2. Code and Accessibility Compliance

- Update code compliance to 2015 or later, including ADA, Life-Safety, and other codes which affect ingress/egress, public circulation, public restrooms, sprinklers, and other details related to the building.
- Craft a structured accessible parking solution to increase the capacity for public parking at the City Hall Campus.

A1. Public Access

- Maintain the sense of public accessibility and civic-mindedness which has characterized the City Hall for generations, preserving the capacity for on-grounds activities such as the Farmer's Market and summer festivals.
- Re-design a new, welcoming, main front addition to update the building's public face and to improve public access, circulation, way-finding, and service provision throughout the building, including after-hours meeting spaces.

A2. Building Circulation and Functionality

- Maximize building's operational efficiency by recovering corridors usable for other purposes, once fire safety and egress are addressed, and improving way-finding for the public.
- Creating circulation connectivity between the central Chambers piece of the building and the two existing wings (east and west) via horizontal and vertical circulation elements (ramps, stairs, and elevators)



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

- Design a rear addition to increase the size of work areas for staff, provide contiguity between departments and services, and to improve efficiency of dedicated staff circulation between east and west wings. This addition will also enhance secure circulation for in-custody defendants and law enforcement.
- Improve (to the greatest degree possible) the operational costs and wear and tear of the facility by focusing public traffic at the front of the facility, by improving the quality of the building envelope, and by replacing outdated building systems with new systems designed to reduce water/energy use.
- Improve building envelope and systems by replacing west wing HVAC and completing other as-needed MEP repairs or improvements; identifying and repairing water infiltration and insulation issues; and completing elevator replacement/upgrade.

B. Community Involvement, Project Review, and Project Oversight

Throughout the Design process, all exhibits and documentation were developed to keep the Board, City Council, and City Hall Public Safety Taskforce informed, and ultimately the City of Falls Church Community. The community is very involved in keeping informed about all of the various developments, both private and public. Along with the City Hall Safety Renovations are to be vetted in a series of community sessions to gain additional insight from constituents and those who are actively engaged in the City of Falls Church.

Community input this far for schematic design included:

1. B1 City Council - City Council meetings were held on 7/21/2014 and 8/11/2014 with direction from Council to proceed with schematic design.
2. B2 City Hall Public Safety Taskforce - Taskforce meetings were held on 10/21/14 and 11/13/14 to provide a recommendation to Council, presented on 11/24/14.
3. FY2015 CIP was adopted in April 2014 to allocate funding for additional scope items.
4. Dewberry and staff input were given throughout the process, including helping develop the scope for the four add-on options identified below, which were subsequently incorporated into the project.

The result of that involvement brings us to the current schematic design.

B1. Council Actions

In August 2014 the City Council heard a presentation of Dewberry's 20% progress on the schematic design. Council directed Dewberry to proceed with the recommended plan, including a combination renovation/expansion plan on the existing site.

In April 2015 Council reviewed the four add-on options (see below) and approved the FY 16-20 CIP adding an additional \$5.25M to the project budget to include all four "add-on options" as recommended by the City Hall Task Force.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

B2. City Hall/Public Safety Facility Task Force

A City Hall/Public Safety Facility Task Force was created in October 2014. This task force was comprised of representation from the Police Department, Sheriff’s Department, judiciary, school board, City Council, Planning Commission, Fairfax Disability Services Board, Employee Advisory Committee, Recreation and Parks Advisory Board, Library Board of Trustees, City of Arts, Theater, Culture, History (CATCH), Chamber of Commerce, and Commissioner of Revenue. The Task Force existed for the goal of ensuring a “safe, secure, accessible and code compliant facility for operations and public safety functions in the Harry Wells Municipal Building for a 20-year planning horizon.”

This task force met three times during October and November, 2014, and presented their findings in a memo to City Council at the end of November. This memorandum is available on the City website (<http://www.fallschurchva.gov/1485/City-HallPublic-Safety-Facility-Task-For>) and recommended that four add-on options be added to the \$11.7 million concept (a modified version of C1. Scheme 1, in C. Preliminary Schemes), which was already in development.

These four add-on options as identified and incorporated during schematic design were as follows:

1. Renovate West Wing HVAC System (\$1.25 M). The existing West Wing HVAC system is aging and past its expected operating life. The system components will require increased upkeep costs and eventually need replacement. Existing window HVAC units have asbestos and will require removal and replacement in the near future. The project provides an opportunity to the City to gain efficiencies in design and installation costs and the ability to integrate the HVAC system and building designs.
2. 2nd Story Addition to Parking Garage (\$750K). A two story garage would add 44 spaces to the parking supply at City Hall. This parking would be used for staff parking and City vehicles and would alleviate parking demands on the City Hall Campus including Community Center, Courts, and Library parking needs.
3. Additional Existing Building Renovation (\$1.75 M) A preliminary survey by Dewberry found approximately 4,000 square feet of core and circulation spaces could be renovated to an open floor concept in order to maximize the City Hall floor plate – increasing space for useful office functions, ensure future flexibility in office space configuration options, and improve circulation throughout. This “full gut” renovation would allow the City Hall to change and grow with the City’s future needs.
4. North Side Expanded Addition (\$1.5 M). The proposed North side addition will add approximately 4,000 SF to the rear of City Hall at approximate cost of (\$375/SF), and will address additional public security needs such as a fully enclosed sally port and a deliveries/mail room located on an outer wall. The addition will also include an employee lounge, dedicated employee circulation and accessibility, and improved space functionality, including the option to place a public counter for Court Clerk closer to Courts for increased public accessibility and way-finding.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

The total estimated costs of the add-on options, including architectural and engineering design, construction, project and construction management, and contingency total \$5,250,000 (2014 dollars).

The Council re-established the Taskforce in July 2015 to continue providing stakeholder input into the City Hall project and process, and to review these additional options.

C. Preliminary Schemes

Four building schemes were developed and explored. Each of these concepts offered pros and cons, and the merits of all were discussed to ensure the optimal final scheme was crafted to move forward.

C1. Scheme 1 - Front and Rear Additions (not selected, but preferred for further development)

Overview

Scheme 1 included a large front addition, with underground parking, secure police and judge entrance, and flag plaza all on the front to establish a stronger visual relationship between City Hall and the streetscape. Space would remain in front for the City of Falls Church farmer's market and other public activities including an outdoor grass amphitheater. Parking in the rear would be largely unaffected by the changes. This scheme concentrated the majority of the construction on the front of the building, but also added new staff space in an east-west infill on the rear of the building.

Advantages

In terms of meeting the goals for the facility, Scheme 1 provided all the upgrades for accessibility and life safety which were recommended by the master plan. This option also encapsulates significant portion of the exterior envelope on the north and south insets of the existing building with the addition, allowing for reduced energy utilization. Renovations to the existing building for code and master plan upgrades were consistent with the other options. The addition to the north was able to completely mitigate the east-west movement of staff, giving a staff-dedicated pathway between the east and west wings.

Drawbacks

Scheme 1 required significant excavation on the north and south, as well as considerable construction cost to create the underground parking on the south side (front) of the building. The result would limit access to the parking in front of the building to one ingress/egress, plus considerable storm management costs to mitigate the increased impervious area.

C2. Scheme 2 - Front Addition Only (not selected)

Overview

Scheme 2 took Scheme 1 to an extreme, and focused all construction in front of the building, with no new infill in the rear. Internally, the implication is that all police expansion occurs



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

below grade, as part of the front addition. As in Scheme 1, below-grade parking is included for judges and police underneath the addition.

Advantages

Scheme 2 reduces disruption at the rear of the building, limiting construction to just the front. This solution minimizes the excavation required, but also reduces the replacement of building envelope to the rear.

Drawbacks

Operationally, this solution does not achieve the optimal adjacencies for all functions, because the only new space for staff is in the same addition which provides the new, accessible public circulation. Security is a challenge, due to the inability to establish complete separation between public, police (secure), and staff areas of the building. Because work to the north is limited, this solution does not completely mitigate envelope or water intrusion issues.

C3. Scheme 3 - Demolish and Replace Chambers Section (not selected)

Overview

This scheme tackles the issue of elevation between east and west wings by replacing the middle section (Board Chambers/Courtroom) with a more efficient, purpose-designed center section, together with a new main building entrance.

Advantages

As with Schemes 1 and 2, this option provides a new, outward facing, accessible public entrance to the facility with underground parking and police expansion below grade in the front. This option also provides additional staff space in the middle, together with a purpose built new Chambers/Courtroom near the new public entrance. All space and code issues are mitigated, and the building envelope is replaced through the center.

Drawbacks

The biggest downfall of this option would be the loss of the historic center portion of the City Hall, including sunk costs already spent to renovate Chambers and encapsulate asbestos (which would now require abatement during demolition). Although troublesome from a circulation perspective between wings, this space is undoubtedly the most significant portion of the facility to retain/restore. That element alone made this an unappealing solution. The disruption and loss of Chambers during construction was another negative.

C4. Scheme 4 – Tear-Down Scheme (not selected)

Overview

A fourth scheme was proposed for a total replacement of the City Hall, utilizing the green space on the corner of the existing lot to construct a new facility. This scheme was developed to the point where it was discarded due to extremely high cost relative to the approved project budget of \$16M. At \$400/SF, a new 57,000 BGSF facility would cost at least \$22.8M, not including the



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

parking solution or civil/stormwater work required – almost double the estimate for the modified Option 1.

Advantages

This solution provides a completely new, custom designed City Hall, with all new building systems, the energy savings of a highly efficient new structure, and simple phasing.

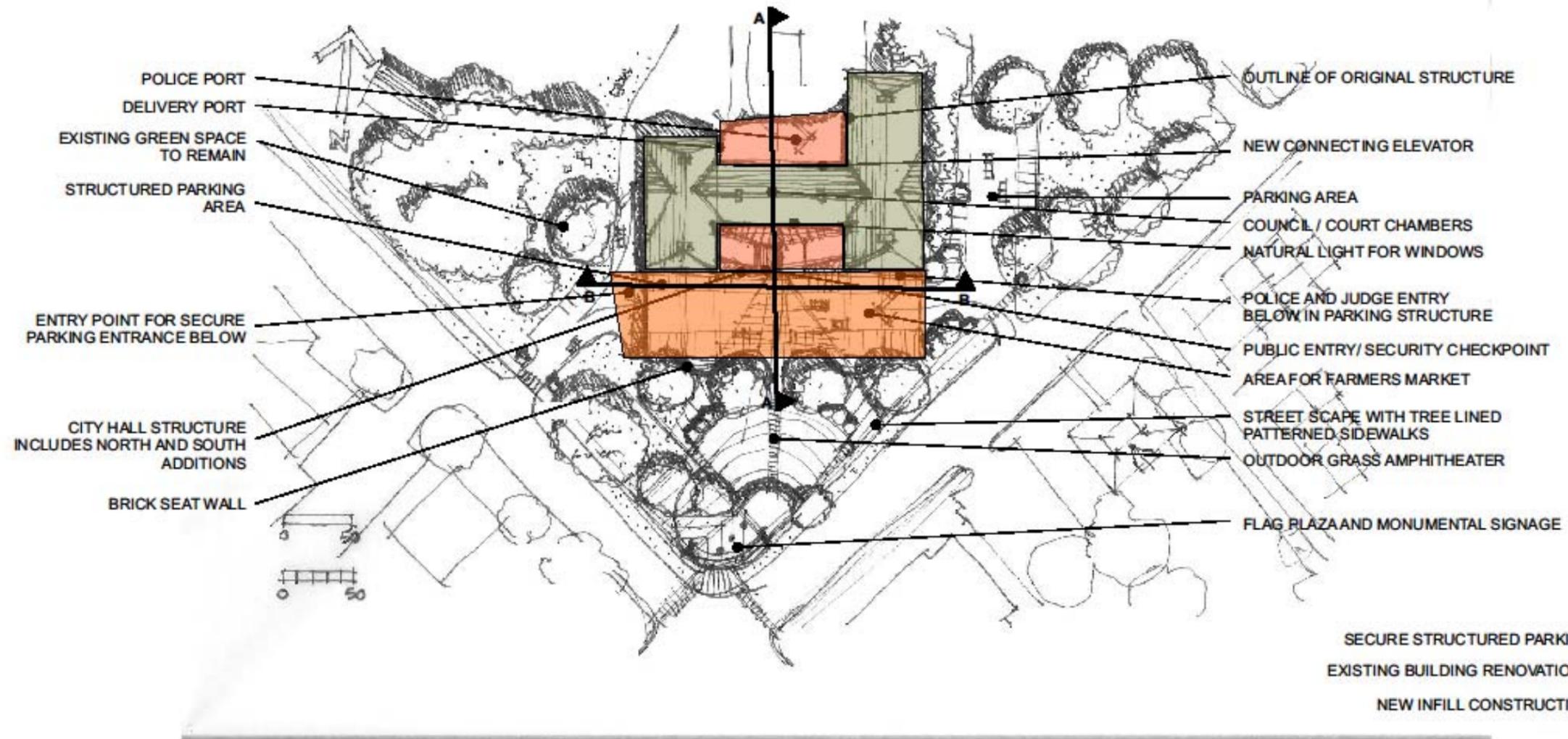
Drawbacks

The limited site size forced the new facility to occupy the site up to the sidewalk, per set-backs in City Code, changing the relationship between City Hall and the streetscape to a much more urban feel. Open space and parking would be created behind this structure once the existing City Hall was demolished.

The overall cost of this project alone made it non-viable. Staging for the new construction would need to be in the parking lot, separated from the new building by the existing City Hall. The new parking structure would have to be built last, on the site of the existing City Hall, leaving the new building (and the old one) with no parking during construction.

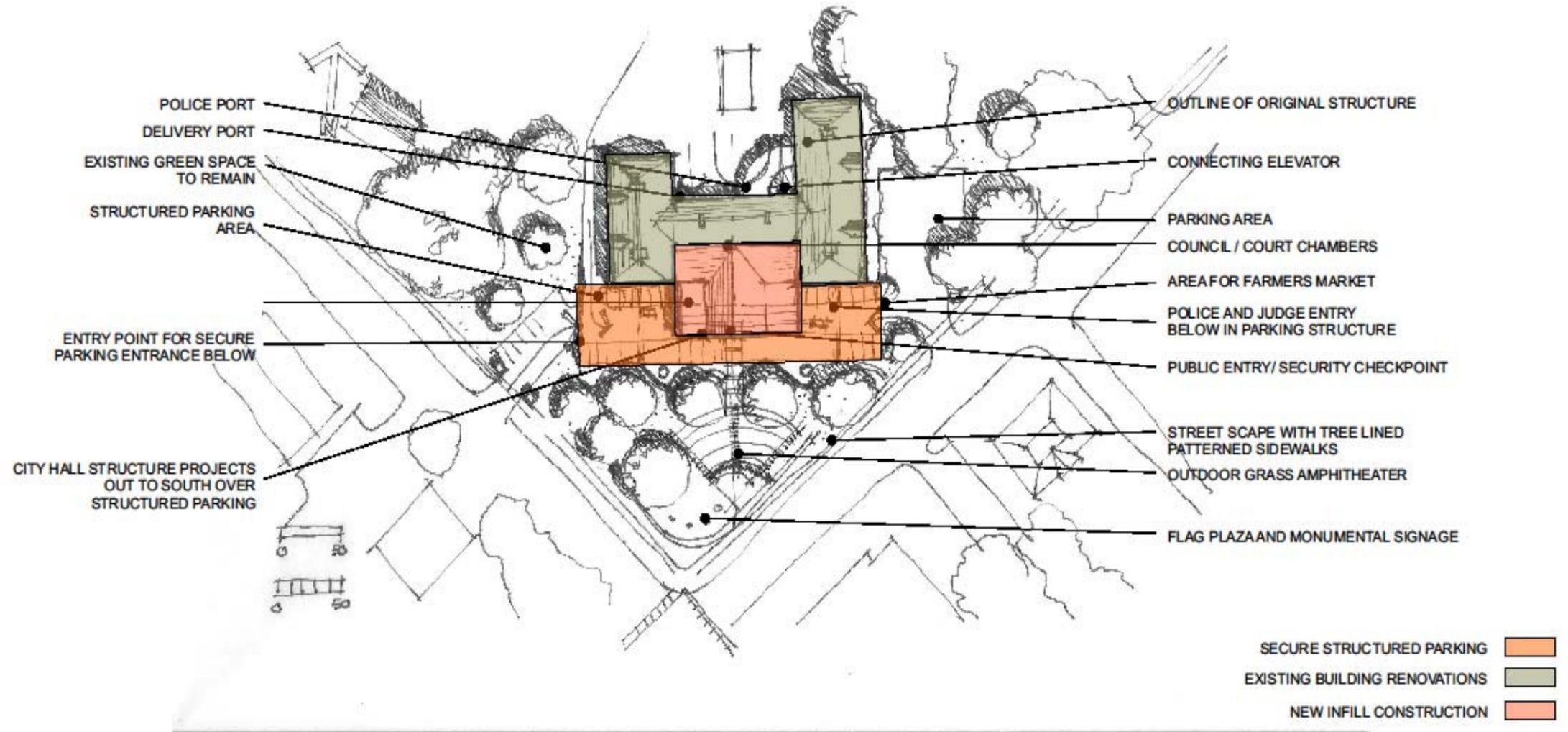


Graphic – Scheme 1





Graphic – Scheme 2



CITY OF FALLS CHURCH CITY HALL

MASTER PLANNING SCHEMES

SCHEME TWO

DEWBERRY ARCHITECTS

CITY HALL ADDITION PROJECTS TO THE SOUTH

1.2014 jpl



Graphic – Scheme 3



CITY OF FALLS CHURCH CITY HALL

MASTER PLANNING SCHEMES

CITY HALL ADDITION REPLACES CENTER SECTION

SCHEME THREE

DEWBERRY ARCHITECTS

1.2014 jpl



Graphic – Scheme 4



CITY OF FALLS CHURCH CITY HALL | MASTER PLANNING SCHEMES

SCHEME FOUR
DEWBERRY ARCHITECTS

PLAN AT CORNER OF PROPERTY

1.2014 jpl



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

D. Preferred Scheme - Overview

The option selected to move forward was a modified Scheme 1, with expansions to the north and south, but with a modified, more cost effective surface/above ground parking solution for the judges and police on the north, in lieu of the underground parking previously proposed on the south side of the building.

The scenario that was recommended by Dewberry based on Taskforce recommendations, Council response, and staff input included a new infill lobby addition to the south, encapsulating existing exterior walls of the existing building, while housing the security checkpoint for public access to the building, public interaction activities like voter registration and zoning planning construction desk activities, and flexible public meeting space. Below would be additional conferencing areas for administrative and public meetings.

The north infill would incorporate administrative offices for the City, Service areas for mail and package delivery, as well as a sally port area for suspect transfer from vehicle to booking.

A new location for an above-ground secure structured parking was developed north of the existing City Hall building, with equal opportunities for secure travel by Police and Justice Personnel to and from the City Hall to the parking areas.

Below-grade structured parking, as discussed in previous schemes, was considered; however, design requirements and issues drove the projected cost of the parking structure to higher-than-anticipated levels. In addition to providing secure parking, the structure would need to redirect stormwater flows around the perimeter of the adjacent site, withstand the point loads of Farmer's Market activities, and accommodate emergency vehicle access including fire trucks (which are very tall). Refer to Schemes A, B, C, and D for additional insights.

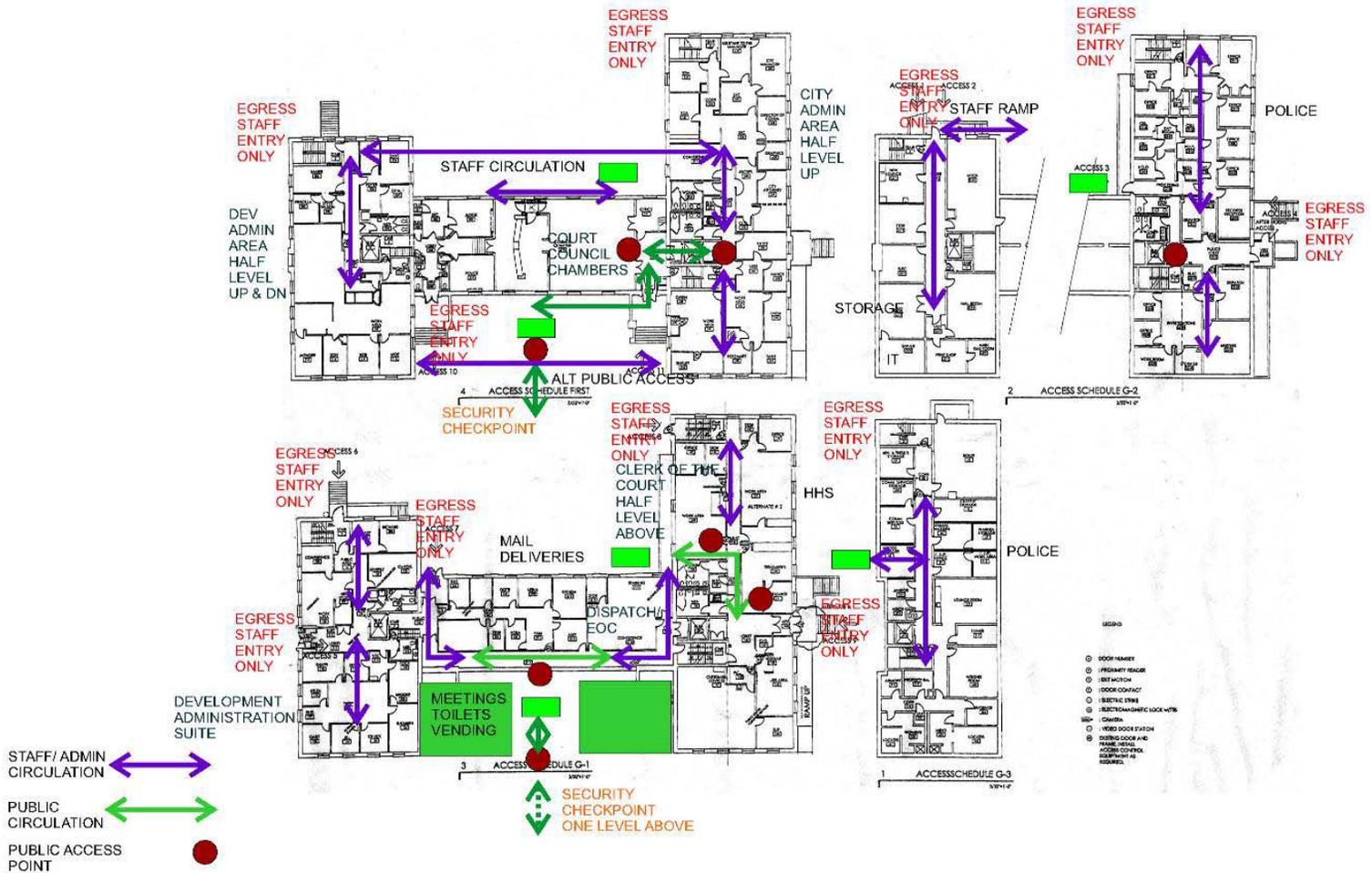
D1. Floor plate Connection

The original building configuration and subsequent East Wing addition has always presented circulation issues for staff and administration and police/courts/detainee transfer. Because of the half levels that are present between the east and west wings and the chambers piece in the center, the only interior east-west indoor connection is through the basement, or by transiting the Chambers/Sheriff's Department space. This connection is shared by staff, the public, and law enforcement. There has been no dedicated staff connection between the east and west wings, resulting in a fragmented feeling between departments and confusing way finding.



The illustration shows how circulation works in the existing structure, with some arrows on vacant space (ex. purple arrow, rear of building) to show desired movement which does not exist.

Floor Plate Flow Graphic – Desired Paths of Travel



During development of the preferred option, a great deal of focus was placed on improving internal circulation inside the building to create three distinct zones: public, staff, and secure (police/Sheriff/judiciary). The different elevations at the east and west wings and in the central section, coupled with different elevations for the new public entrance and proposed rear police entrance resulted in a confusing mesh of levels to be matched and analyzed for three different user groups.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

A series of detailed circulation drawings and a final building section (with additions) were completed to illustrate the desired circulation after buildout. Improvements were centered around three strategies:

1. A new accessible elevator in the lobby addition to the south, combined with horizontal connections to the east and west wings at ground and second floor levels, presents an elegant solution to public circulation between the east and west wings. This solution requires abandoning future upgrades to existing elevators and taking them out of use.
2. The proposed infill/addition to the north presents the opportunity to improve circulation between the east and west wings for staff.
3. A new secure elevator to the rear offers the secure vertical circulation required by law enforcement, judiciary, and in-custody defendants to and from court. When not in use for moving in-custody individuals, this elevator offers an accessible vertical path of circulation between floors for staff.

The graphics show how improved circulation will be accomplished through the proposed additions.

As illustrated in these graphics, secure circulation is created on the north infill/addition for law enforcement [**orange arrows**], judiciary [**fuchsia arrows**], and in-custody defendants [**red arrows**], making use of the new elevator [**purple**] for vertical movement.

Public circulation [**green paths and arrows**] is resolved using the new main entrance and lobby to the south. Public visitors can transit between east and west wings or into Chambers/courtroom via the proposed new lobby at the ground floor level, with a new security checkpoint and magnetometer which can be staffed as needed. Vertically, the public can move between floors using a new double sided elevator off of the lobby or the new monumental stair, either to the G2 level (for meeting rooms) or up to the second floor (for second floor government services). All public functions are focused around these vertical and horizontal paths of public circulation, resulting in a tight organization of counters and customer service staff facing onto this public pathway at the front of the building, and greatly improving way finding and customer service to citizens.

Staff circulation [**turquoise arrows**] is achieved the rear of the building on the second floor, where the east and west wings are physically connected horizontally with an infill/addition. The width of the addition is sufficient to permit floor height variances from east to west to be accommodated in opportune places along the floor plate via subtle ramping. Additional staff office space on the top floor of the north infill will allow for general government groups to expand and re-organize to optimize adjacencies, and it will



also give a smooth, open staff connection on the top level of the building between the east and west wings.

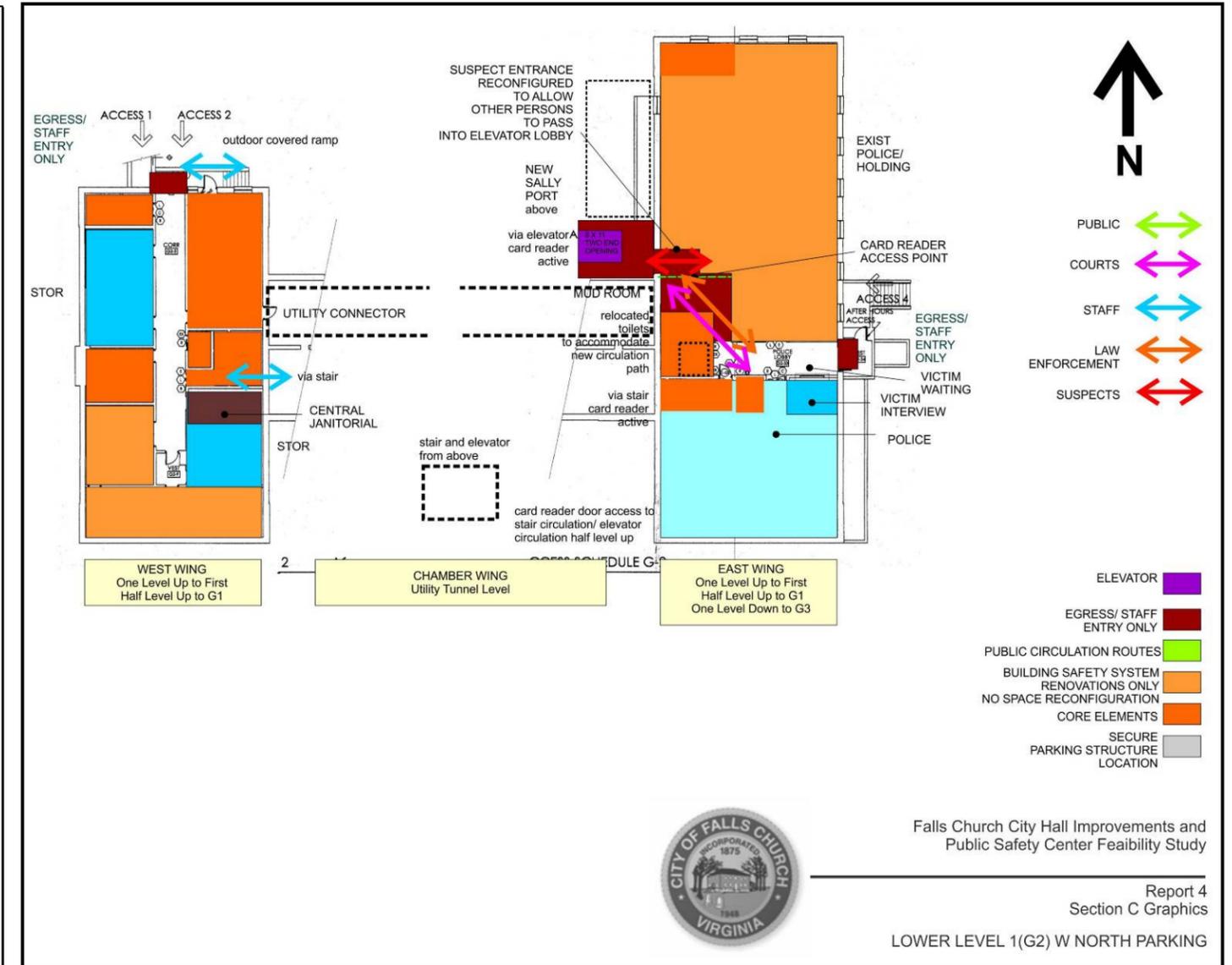
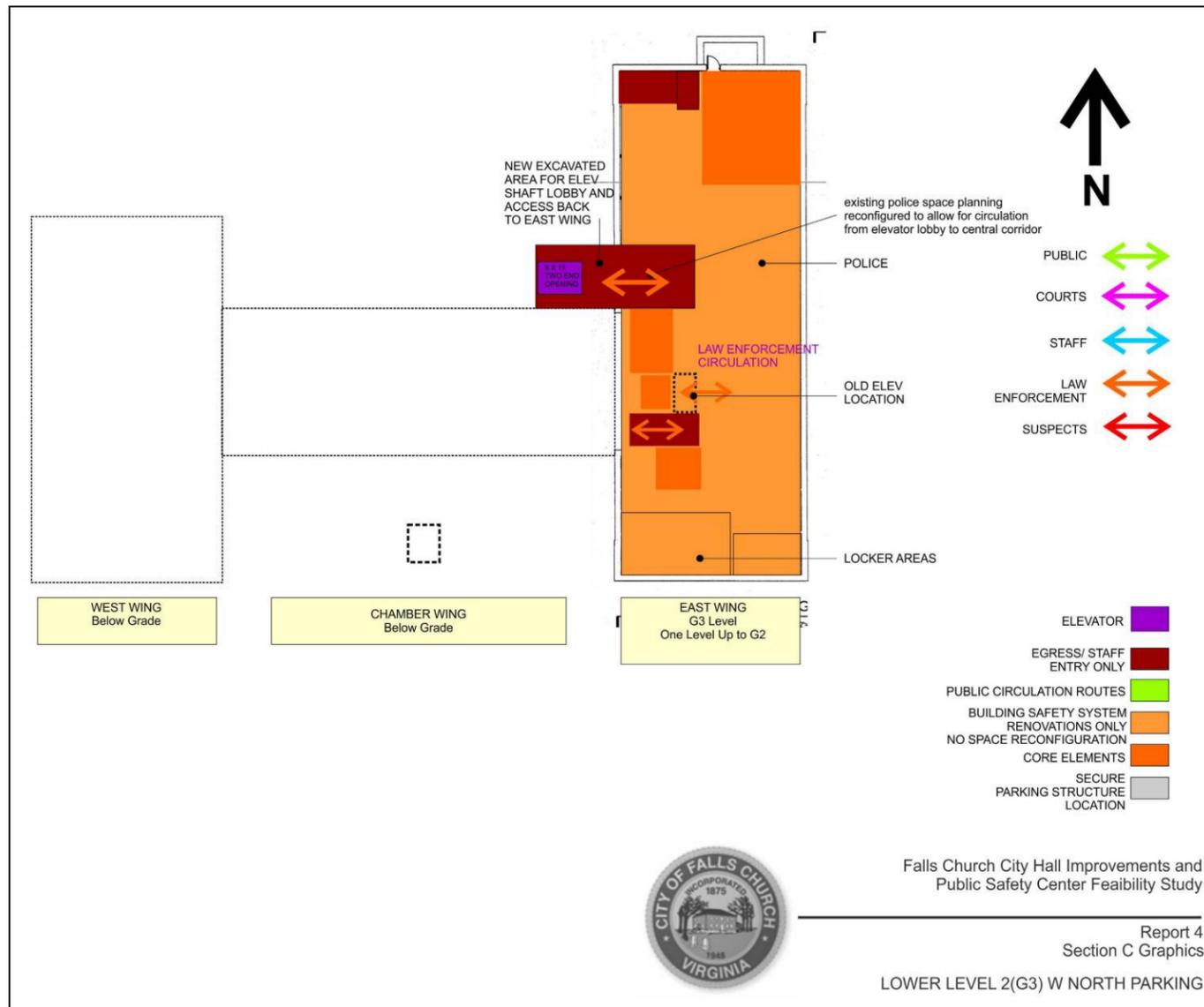
Vertically, a new secure elevator [purple] in the new staff addition will connect staff spaces with the rear of the Chambers/courtroom, the court clerk level on the east wing, the new EOC/Emergency Management/Sheriff space (G1), and the police / holding (G2). This elevator will be controllable, to allow law enforcement to lock it as they transport defendants to and from court, and leaving it open for staff use at all other times.

Additional staff connectivity can be achieved via the new public walkways along the south addition.

The following sections illustrate connectivity and stacking within the building.

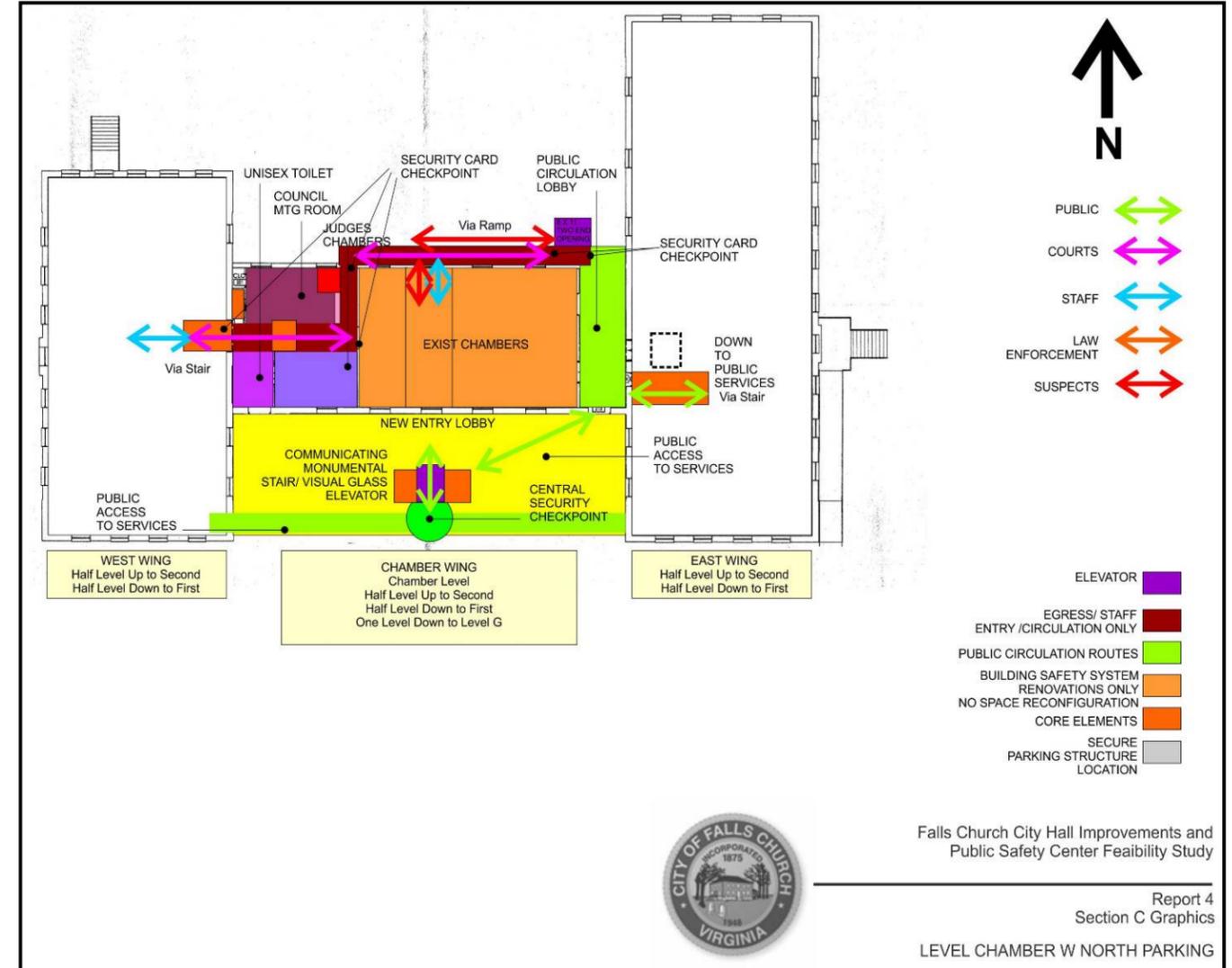
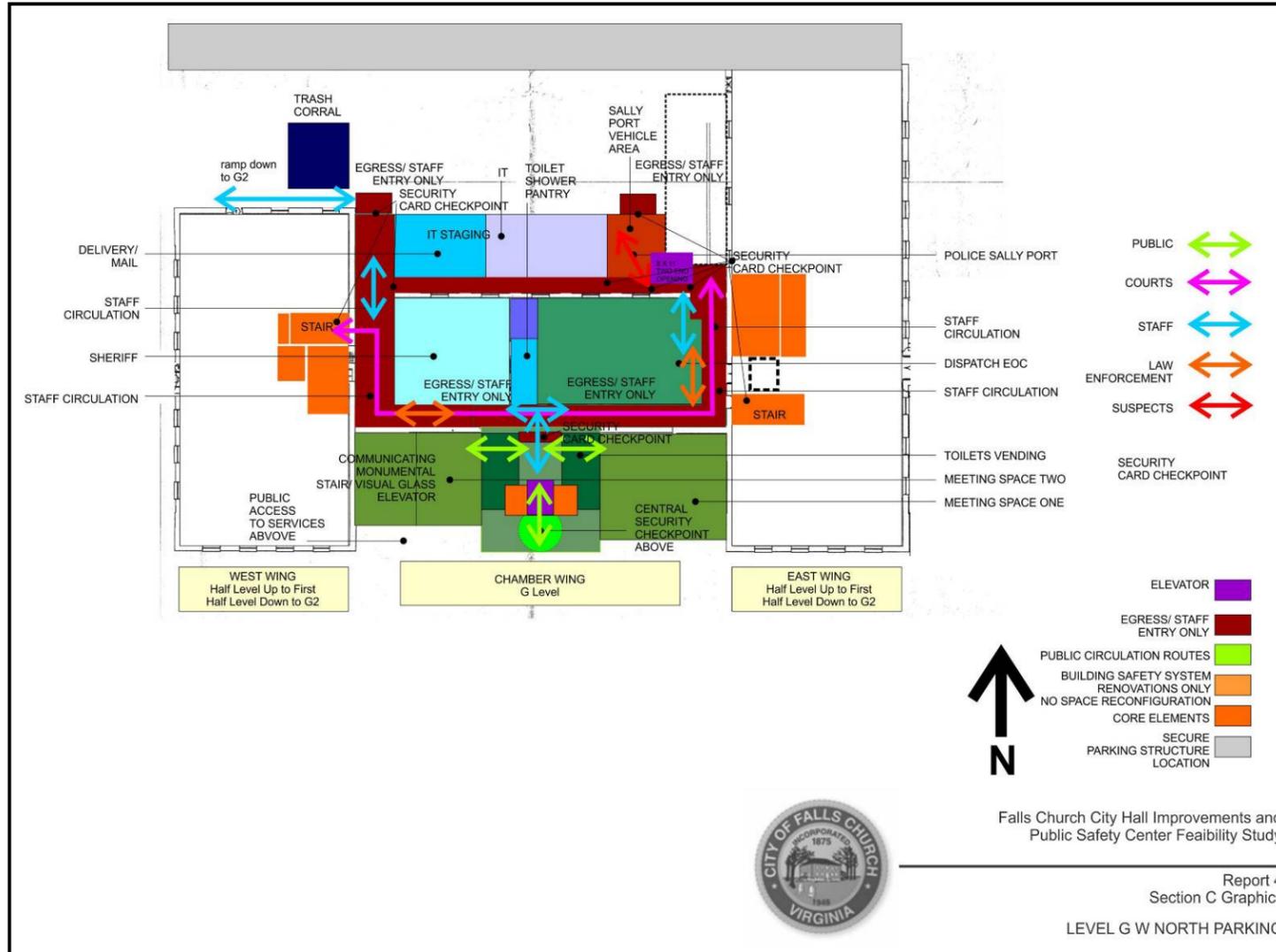


Recommended Option – Circulation Graphics (G3, G2)





Recommended Option – Circulation Graphics (G, Center Level 1)



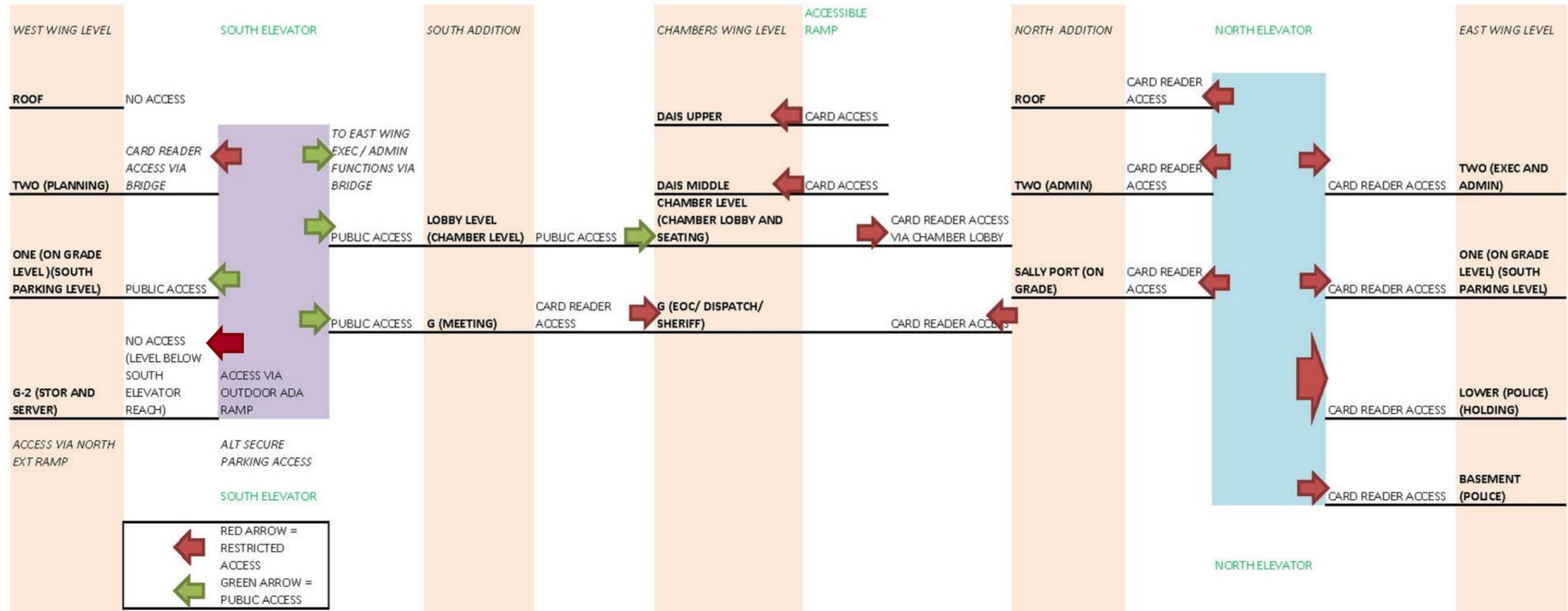


Recommended Option – Circulation Graphics (Elevator Access Diagram)

CITY OF FALLS CHURCH

ELEVATOR ACCESS DIAGRAM

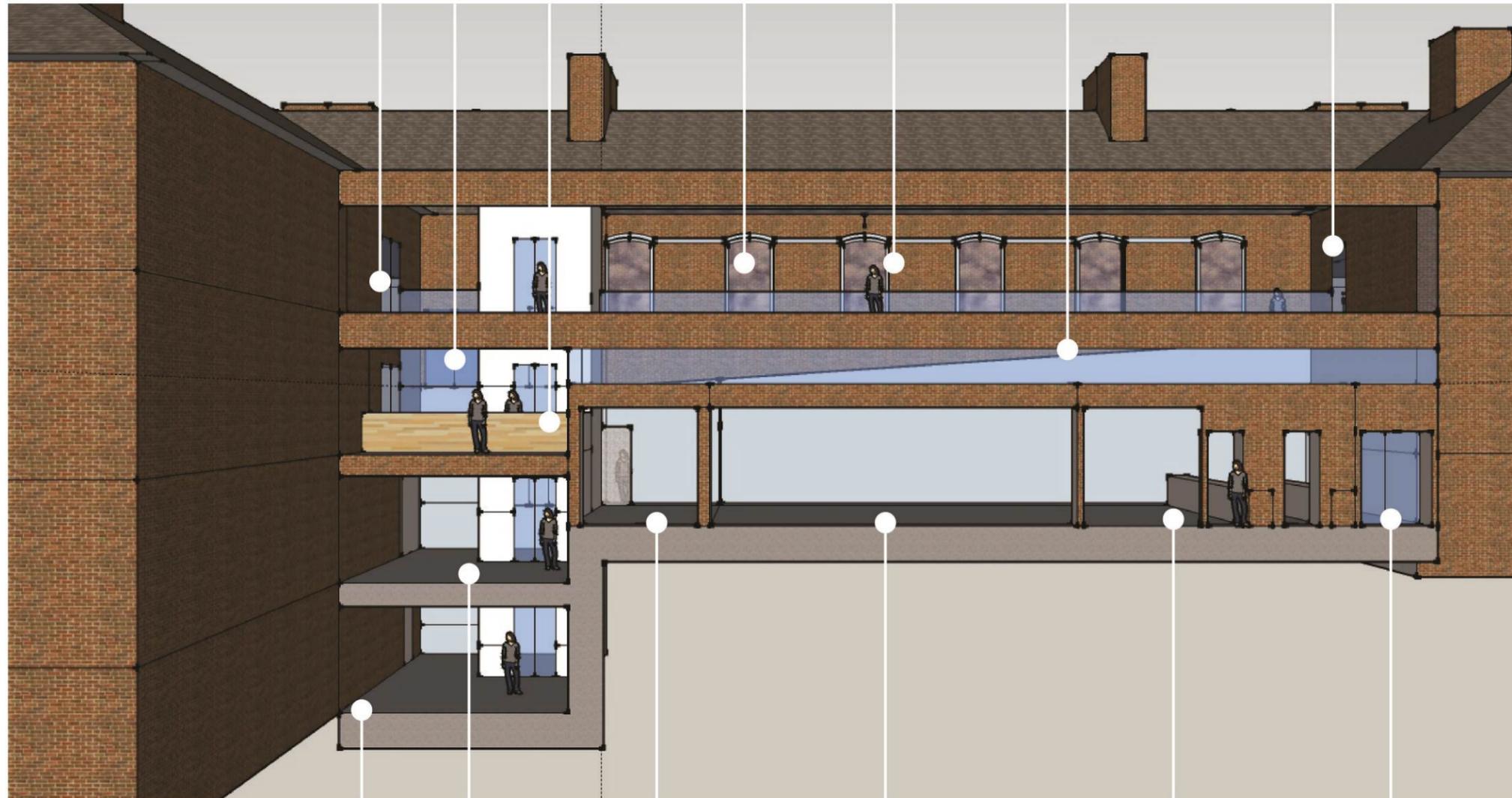
TWO ELEVATOR SCENARIO





Recommended Option – Circulation Rendering (North Addition/Infill looking South)

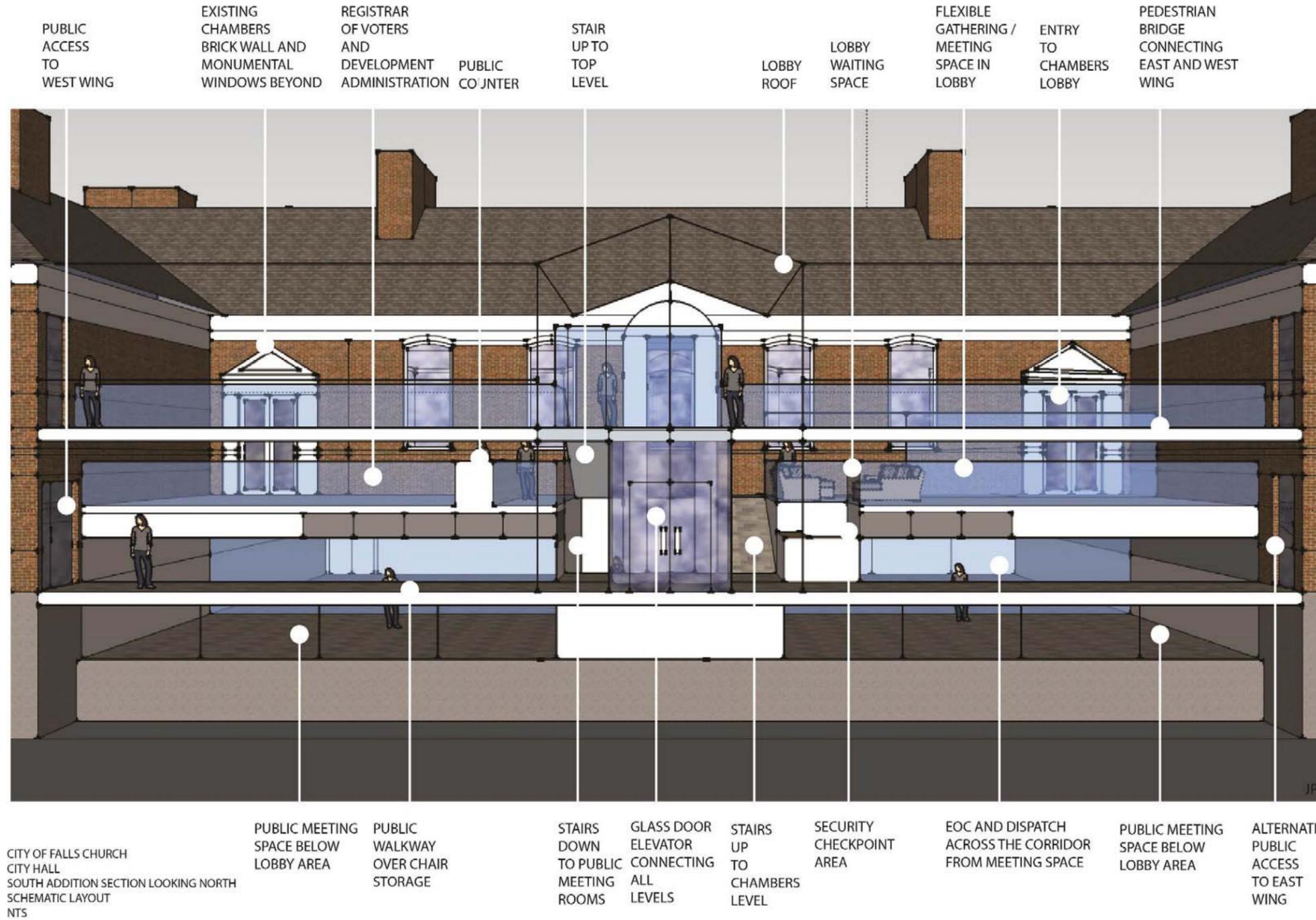
EAST WING STAFF ACCESS	CHAMBERS LOBBY BEYOND	CLERK OF THE COURT COUNTER LEVEL	EXISTING CHAMBERS BRICK WALL AND MONUMENTAL WINDOWS BEYOND	CITY ADMINISTRATION WORK AREAS	ACCESSIBLE RAMP BEYOND TO CHAMBERS / FUNCTIONS	WEST WING STAFF ACCESS
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CITY OF FALLS CHURCH CITY HALL NORTH ADDITION SECTION LOOKING SOUTH SCHEMATIC LAYOUT	POLICE LEVEL ELEVATOR ACCESS	INMATE ENTRY AND HOLDING ELEVATOR ACCESS	SALLY PORT LEVEL ELEVATOR ACCESS	IT WORK AREA	MAIL DELIVERY AND PROCESSING WORK AREA	SECURE STAFF ENTRY
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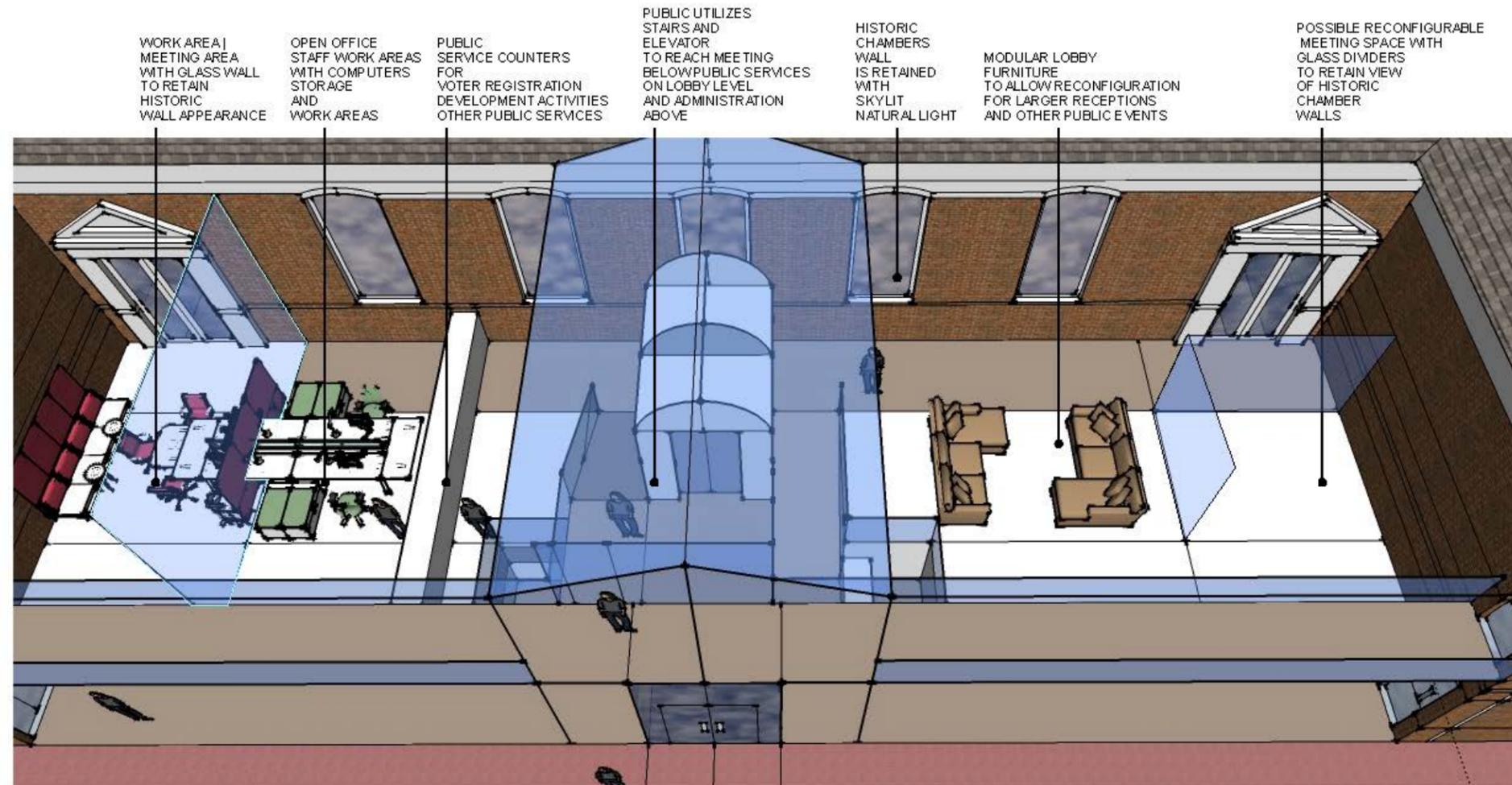


Recommended Option – Circulation Rendering (New Lobby/Main Public Entrance -- South Addition/Infill looking North)





Recommended Option – Circulation Rendering (New Lobby/Main Public Entrance -- South Addition/Infill looking down from above)



CITY OF FALLS CHURCH CITY HALL SAFETY RECONFIGURATION | TWO ELEVATOR SCENARIO

DEWBERRY ARCHITECTS



D2.Increased Parking

Parking for staff and visitors is limited on the site, and is shared between the City Hall, Cherry Hill Park and Farmhouse, the Library (through the park), the Community Center, and Gage House. One of the priorities of this City Hall expansion was to improve parking not only for City Hall, but for all staff and visitors who park here. Separating secure parking for the police and judges was also a priority.

The four preliminary schemes at the beginning of Section 4 included underground parking beneath the proposed front addition, to create a secure law enforcement entrance and service entrance under the public lobby, out of sight. As the schemes were developed, this solution emerged as having a disproportionately high cost, complexities associated with stormwater management, and phasing issues related to the required new construction. As such, an alternative parking solution was developed.

The recommended solution involves structured parking deck at the north of the building, over what is currently restricted law enforcement parking, as a component of the north addition/infill for staff and police. This two-level solution provides dedicated parking for police and justice staff in the card accessed, secured, ground level parking area with visual shielding for the sally port and mail/ delivery areas from direct public scrutiny. Outdoor evidence storage areas will be created for oversized evidence in restricted-access portions of this law enforcement parking area, and access to the holding/secure elevator is out of public view for in-custody transfers.

The second-level of the parking deck will connect to pedestrian circulation in the new staff areas on the second floor of the north infill/addition, allowing staff a dedicated rear entrance away from public view and/or public circulation.

The entire surface parking lot (currently utilized by both staff and the public) will be available for public use. Recommended improvements in paved surfaces (see Section 5 Implementation) for stormwater management will also benefit circulation, adding a public entrance behind the Community Center and re-configuring the circle in front of the Community Center for better/easier public access, as well as improved stormwater management. These improvements are recommended as part of the site work associated with the addition on the front of the building and should be included if the budget permits.

This parking solution leaves the option open to develop a pilot solar panel array project as a parking shading device on the second level of parking.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

D3. Interior Space Utilization

The revised building will concentrate activity around one of six activity groups, each of which will engage a certain cadre of staff and a certain type of public interface.

The primary types of activity in the building will be as follows:

1. City Council, School Board, Planning Commission, and public meeting activities, in Council Chambers or the community meeting rooms
2. Adjudication of court cases in the Courtroom (Council Chambers)
3. Professional business related to the City Administration, such as visiting the Economic Development Office, City Attorney, or Human Resources.
4. Permitting and processing of documents related to the Department of Development Services or the Department of Public Works.
5. Law enforcement, either by Police or Sheriff, including building security, report writing/evidence processing, and transfer of in-custody defendants between vehicles and holding or between holding and the courtroom.
6. Professional business with one of the following high-volume groups:
 - a. Voter Registration, voting, or other business related to elections
 - b. The Treasurer, including tax related business
 - c. The Department of Human Services

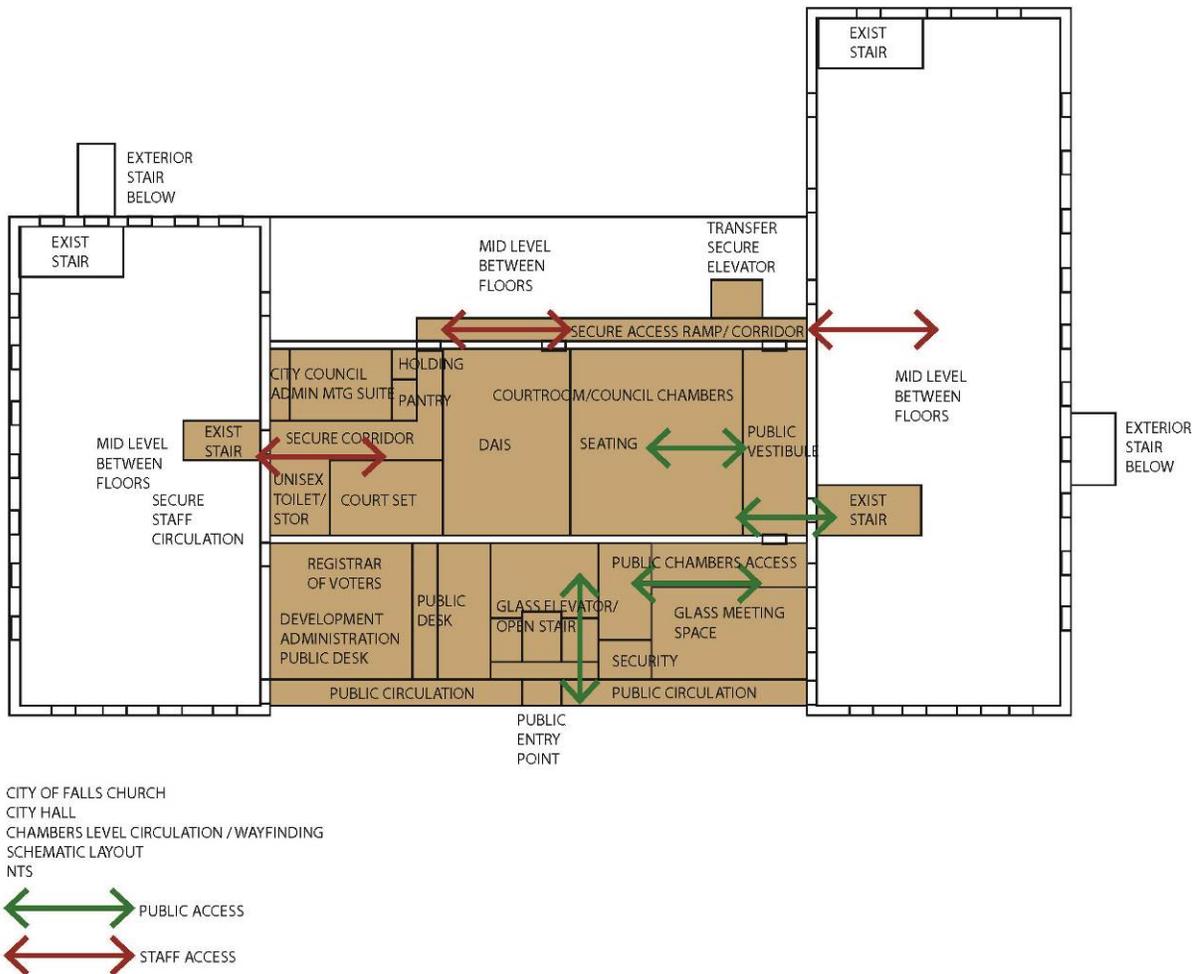


City Council and Public Meetings

The front of the building will be designed for public access and circulation, with a handicapped accessible front entrance and elevators/monumental stairs leading to the higher and lower floors in both east and west wings. The Council Chambers is connected to this lobby, a half level up, allowing easy flow of citizens in and out of the public entrance (at the east end of the room) via the monumental stair or new public elevator.

Staff/Council access to the Council Chambers will be via dedicated staff-secure pathways, entering Chambers from the west side (left, on this diagram). Note that this path of travel is completely distinct from the public circulation, accomplishing the goal of separating public and staff access in this historic space.

Figure 1 – City Council and Public Meetings – Main Floor



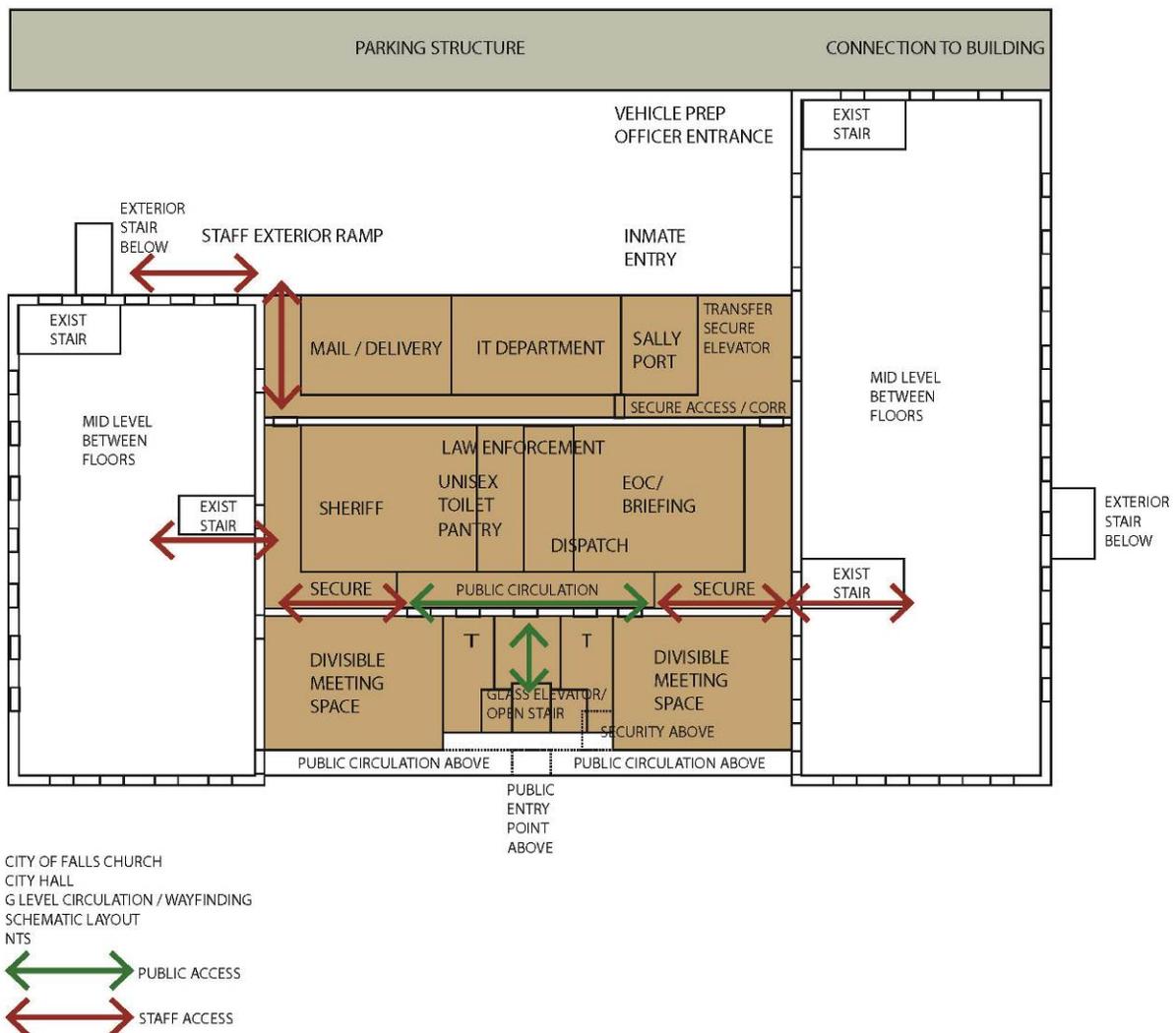


Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Community meeting rooms are located on the G level, directly below the new lobby. Rooms will be designed around the new elevator and stairs, with security checkpoints (which can be staffed or not) at the building entry and on the G level. Circulation for the public will go directly into one of two meeting rooms, one of which can be subdivided into two smaller rooms. A demising wall and security doors will be used between this publicly accessible portion of the building and the staff-secure portion to restrict the public to the desired portion of the building.

Figure 2 – City Council and Public Meetings – G Level





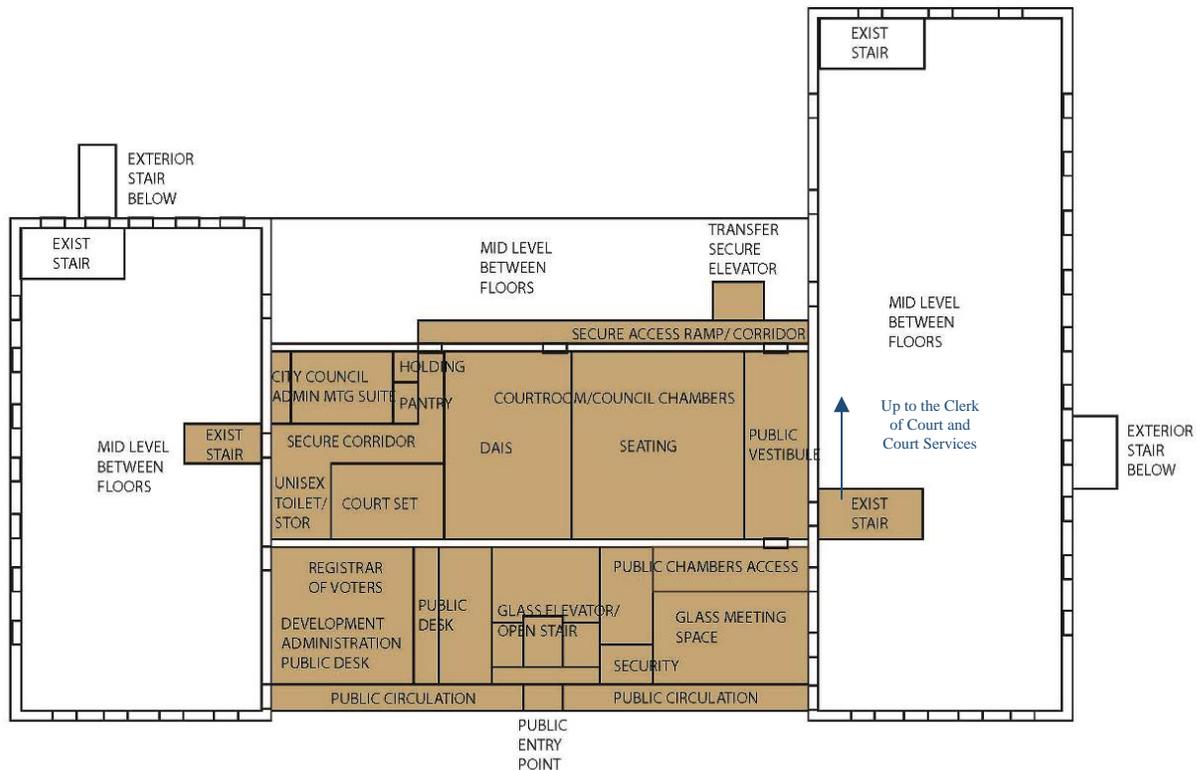
Adjudication of Court Cases (Courtroom)

Similar to the functioning of the Council Chambers, when Council Chambers is in use as a courtroom, security screening can be completed at the building entrance. The public lobby doubles as court waiting and the public will enter the courtroom via the east end (right, in this diagram). Judges will enter the room from judicial chambers and staff secure circulation to the west (left, in this graphic). In-custody defendants will be brought up via prisoner elevator.

The Clerk of Court and Court Services Unit are located on grade with the new lobby, and will be configured for easy public access from the lobby. The Clerk of Court’s office will expand above the new sallyport and secure elevator to allow direct clerk access to the courtroom, and direct public egress for payments.

The Registrar of Voters is located in the main lobby, for easy access and customer service.

Figure 3 – Adjudication of Court Cases



CITY OF FALLS CHURCH
CITY HALL
CHAMBERS LEVEL
SCHEMATIC LAYOUT
NTS



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

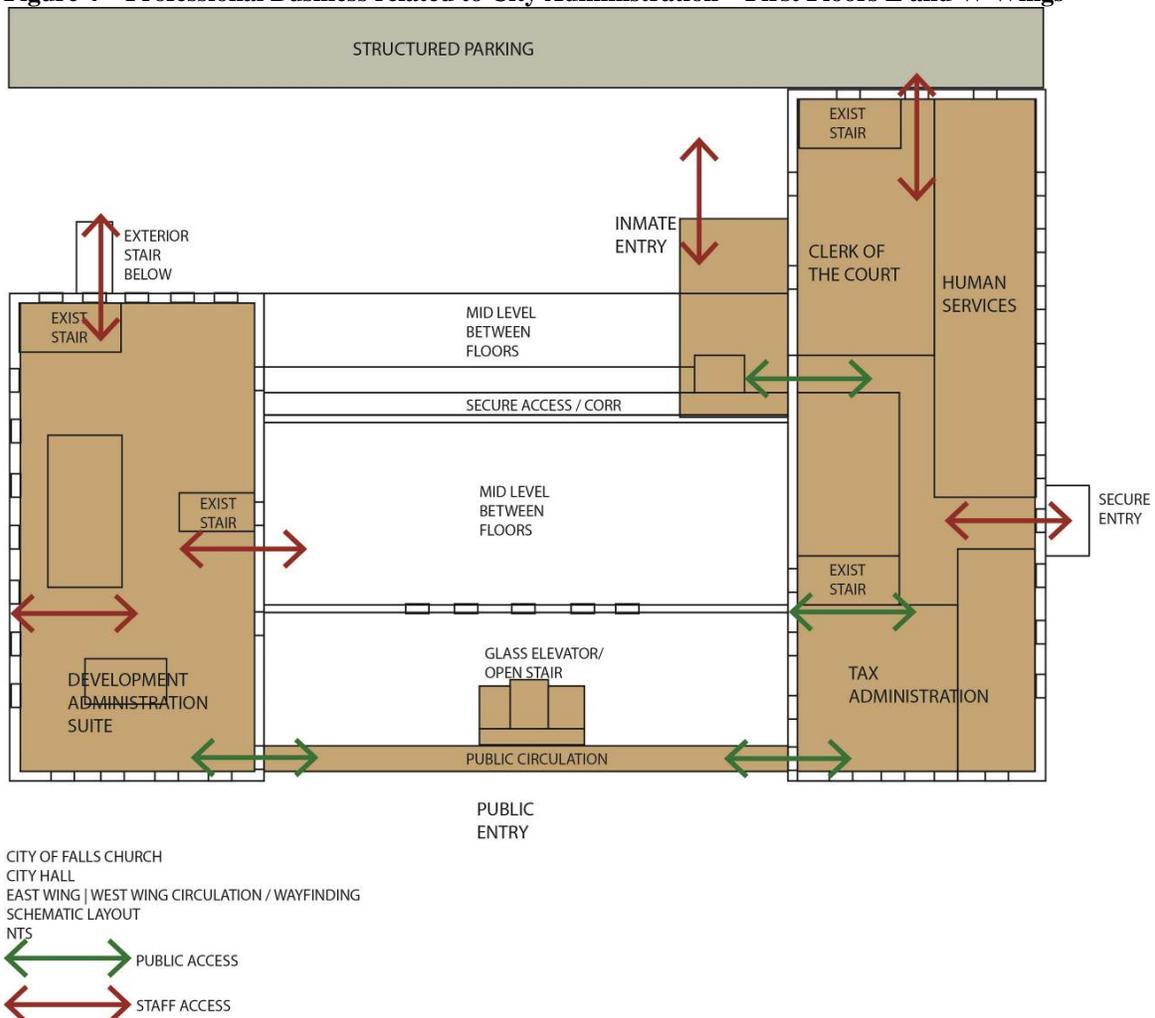
Report 4 Section 4 – Schematic Design

Professional business related to City Administration

The City Administration Suite will provide a professional, collegial office suite for the City Manager, Communications, Finance, Real Estate, Human Resources, the City Attorney, and Economic Development - groups which are currently housed in pockets of space in City Hall, many along the 3rd floor, east wing corridor and 1st floor west wing. These groups, once co-located, can share a photocopy/workroom, supply storage, staff break room, and a large conference room.

This suite will utilize the entire third floor, east wing, in a renovation plan designed to recapture the existing central corridor and convert it to usable office space. This efficiency will allow more functions to fit into the existing footprint, and will allow for a shared central reception area off of the public circulation close to the new lobby/entrance, with staff dedicated areas in the rear of the suite.

Figure 4 – Professional Business related to City Administration – First Floors E and W Wings





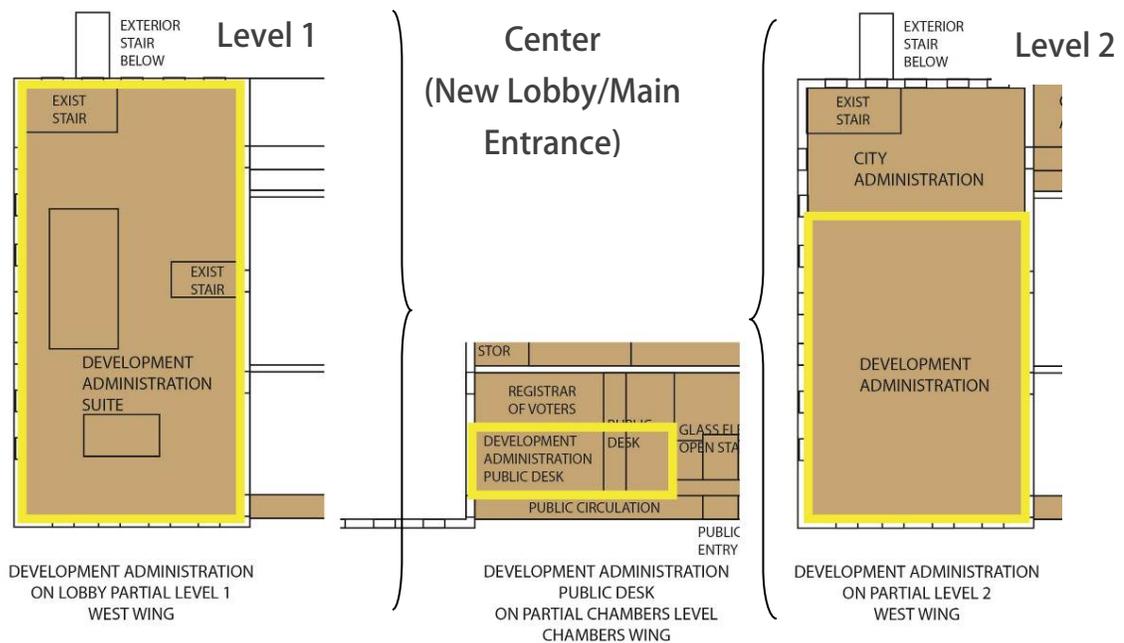
The staff dedicated areas at the rear of this suite will be completed through new space provided by the infill/addition to the rear (top, in this graphic). This infill will link the 3rd floor east wing with the new addition to the north, and will offer a secure staff corridor to the parking structure. On lower floors, this same addition will provide additional usable space on the first floor and basement (G) levels, in addition to the 3rd floor space.

Development Administration

Permitting and processing of documents related to the Department of Development Services or the Department of Public Works is another main hub of activity. Reorganization of Development Administration is already in the works, with recent CIP and other renovations working to concentrate all future occupants of the suite in the west wing, but full renovations are required as part of this project to make the space functional according to the operational vision for this group. A secure “back of house” connection to the staff corridor on the third floor will allow staff to access parking or to move through other staff areas to the east wing, all without entering public space.

The final renovation buildout for this group will produce a two-story suite in the west wing with a public permits counter connected to the new lobby, on grade with the lobby. The main public counter (off of the lobby) will be staffed by rotating personnel who will be able to handle a range of frequently services, or who can call for support from other staff. The graphic here shows all three levels of the Development Administration Suite.

Figure 5 – Development Administration





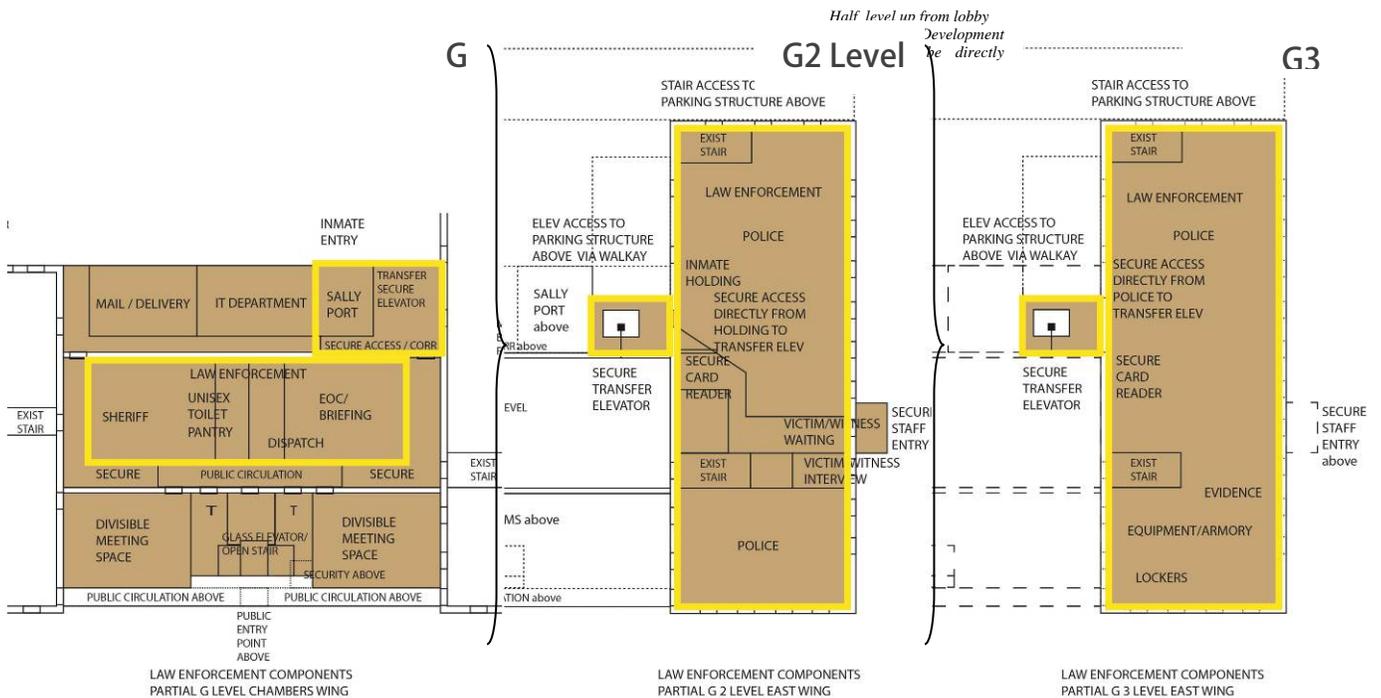
Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Law enforcement

The law enforcement component is one with a function that is interwoven with almost all other activities in City Hall. The Sheriff's Department secures the building and provides bailiff services in the courtroom, as well as ensuring safety of the judge. The Police Department manages dispatch, the holding area, and typical police functions (such as report writing, evidence processing and storage, and muster/roll call). Both agencies require locker/shower rooms on site and a dedicated entrance with technical and tactical components. The rear (top, in these graphics) of the facility will be the main entrance for all law enforcement, with the majority of functions located on G, G2 and G3 of the east wing.

Figure 6 – Law Enforcement



The parking structure on the rear of the building will have a lower level (G2) dedicated to law enforcement staff, and will serve as the main law enforcement entrance. The parking area will include space for vehicles, but will also include some evidence storage, vehicle maintenance equipment, and other storage. An addition will include a new inmate (secure) elevator and sally port to facilitate movement of in-custody detainees from vehicles to holding out of public view, plus vertical circulation up to the court. From the parking, law enforcement will enter the east wing and move down to either G2 (Police, holding and interview) or G3 (lockers and roll call/muster). The east entrance will be restricted to just police.

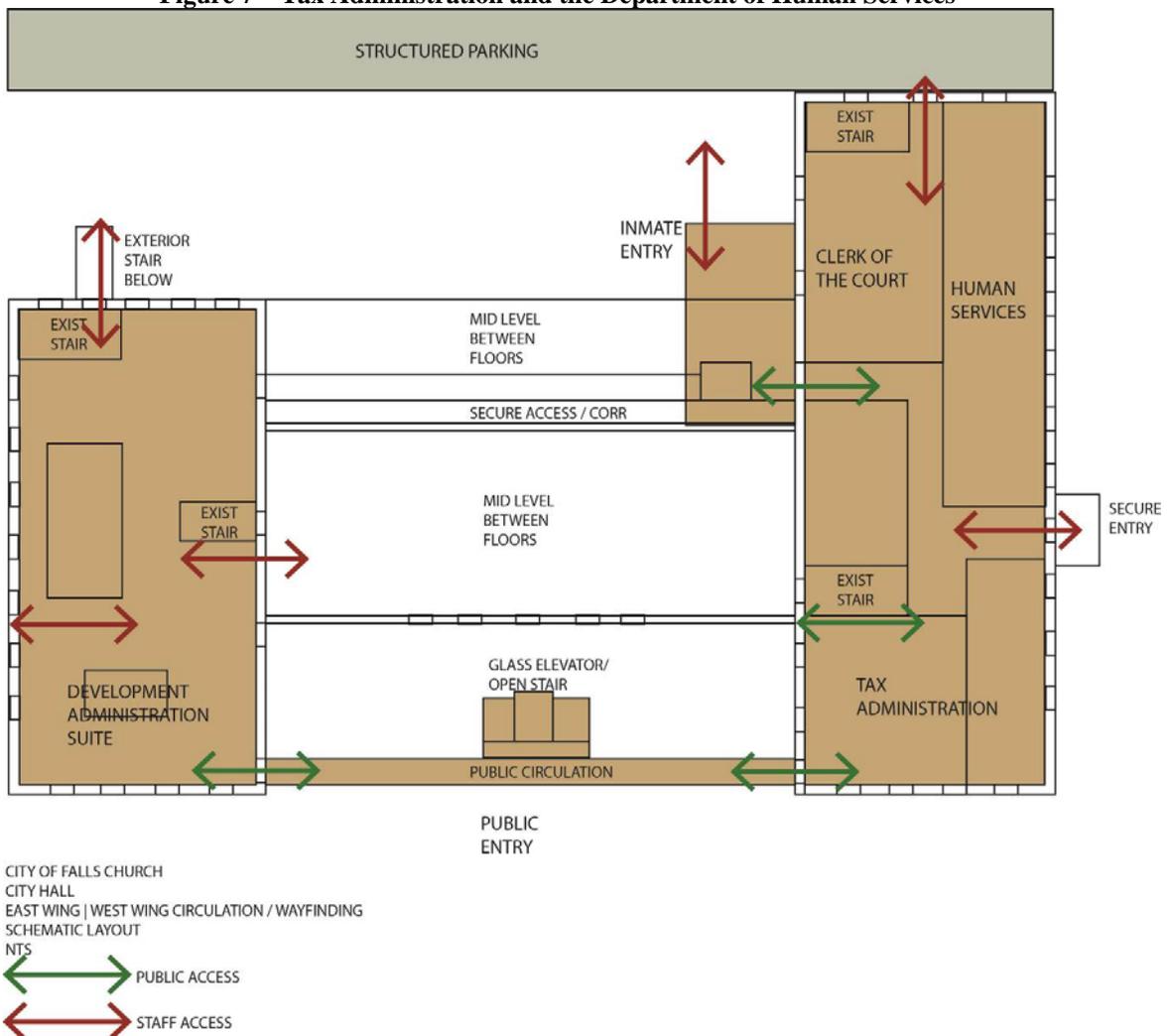


The balance of the law enforcement program, primarily the Emergency Operations Center, will be located on the G level of the existing structure. A staff corridor on the G level will allow law enforcement to move horizontally from the east to west wing. The new secure elevator will facilitate movement up to the second floor, where dedicated staff circulation offers an alternate means of moving from east to west, without entering public space.

Tax Administration and the Department of Human Services

The remainder of the functions within City Hall will be located as close to the main entrance as possible, within remaining space. The Department of Human Services and Tax Administration are located in the east wing, first floor, directly off of the new lobby via the monumental stair.

Figure 7 – Tax Administration and the Department of Human Services





Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

D4. Design Considerations

Although the architectural elements remain to be determined after further stakeholder engagement, some design considerations emerged which should be carried through into Design Development. These considerations are all focused around the concept of a front addition/infill (south) and a rear addition/infill (north), with structured parking behind and underneath the rear infill to the north.

Form

The north addition will infill the space between the existing east and west wings north of the central Chambers (the physical connector between those wings). This addition is planned to be two stories high and in addition provide access to the lowest basement of the east wing. The roof will be flat reflective single ply composition and a portion will support the new addition mechanical equipment.

The south addition will infill the space between the existing wings south of the connector. This area, smaller than the north addition, will have a roof configuration that will include skylights/ clerestory natural light to wash the existing exterior brick wall (outside the Council Chambers) and the adjacent east and west wing brick walls. This infill addition will include glass walls to act as the main entrance element.

Remaining architectural elements will be determined after stakeholder engagement.

Structural/Framing

Anticipated structural framing and systems for each of the wings is noted below.

Superstructure

North Addition/Infill

The roof framing for the north addition/infill will be flat (low sloped) and include steel bar joists, wide flange steel girders, and metal deck. Joist spacing will range from four to five feet on centers. The depth of these joists may range from 10 to 18 inches depending on the spans. The roof platform will be a 1½ inch deep, galvanized, 20 gage metal roof deck spanning the steel joists. Wide flange steel girders (16 to 18 inches deep) will support the joists and transfer loads to steel columns. The steel columns will be spaced in regular bays. Anticipated W10x sections are expected for the columns. The beams and columns will be designed/connected as lateral frames. These welded frames will be designed to accept the anticipated wind and seismic forces applied to the building. A portion of the roof will be set aside to support mechanical roof top units (RTUs) and other equipment. At these locations a reinforced 3 inch thick concrete slab on metal will replace the metal roof deck to reduce sound transmissions.



The supported floor framing will include a reinforced concrete slab on composite metal deck spanning wide flange steel beams and girders. A 5¼ inch (total thickness) lightweight concrete slab with an integral 2 inch galvanized, 20 gage composite metal deck will span the 10 feet beam spacing. The slab will be connected to the steel framing with ¾ inch diameter shear studs spaced about 12 inches on centers. The beams and girders will range from 10 to 21 inches deep depending on the spans.

South Addition/Infill

The roof framing for the south addition/infill will be flat (low sloped) and include steel bar joists, wide flange steel girders, and metal deck. Joist spacing will range from four to five feet on centers. The depth of these joists may range from 10 to 16 inches depending on the spans. The roof platform will be a 1½ in deep, galvanized, 20 gage metal roof deck spanning the steel joists. Wide flange steel girders (16 to 18 inches deep) will support the joists and transfer loads to steel columns. These columns will be square tube shapes (6 to 8 inches) and exposed to view. The beams and columns will be designed/connected as lateral frames. These welded frames will be designed to accept the anticipated wind and seismic forces applied to the building. A portion of the roof will be set aside to support mechanical roof top units (RTUs) and other equipment. At these locations a reinforced, 3 inch thick concrete slab on metal will replace the metal roof deck to reduce sound transmissions.

The supported floor framing will include a reinforced concrete slab on composite metal deck spanning wide flange steel beams and girders. A 5¼ inch (total thickness) lightweight concrete slab with an integral 2 inch galvanized, 20 gage composite metal deck will span the 10 feet beam spacing. The slab will be connected to the steel framing with ¾ inch diameter shear studs spaced about 12 inches on centers. The beams and girders will range from 10 to 16 inches deep depending on the spans.

Parking Garage

There are multiple options for construction of the on grade parking structure.

1. The first would be a traditional poured in place flat slab structure with traditional concrete columns spaced in 30 +- ft bays.
2. The second scenario would be to utilize a combination of steel superstructure with a poured concrete deck/ slab construction.
3. The third, and believed to be the most cost effective, would be a precast wall panel/column and double tee slab construction.

Depending on the arrangement of major support elements, this system would provide column free space for flexible layout, both now and for future needs.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Foundations:

The foundations for the additions will be similar to the existing building construction and include shallow, spread concrete footings with continuous strip footings supporting the perimeter walls. The anticipated safe bearing design load capacity is 3000 pounds per square foot (psf) based on the original construction drawings. A new geotechnical analysis will verify the design values. The bottom of footing will be set at or below the frost line of 30 inches below finish grade.

The lowest floor areas will be concrete slabs-on-grade. Thicknesses will vary with a 6” slab in any areas with vehicle access or heavy storage and 5 to 6 inches in all other areas. Thicker slabs will include two layers of rebar mesh while the thinner slabs will be reinforced with welded wire fabric (wwf). Slabs will be sloped/warped as required to control and direct water flow to drains. A sealer/hardener will be applied to floor surface at the maintenance bays and storage area slabs.

Materials:

Materials used in the construction of this project will be those readily available in the local area and familiar to local contractors. Efforts will be made to utilize the 500 mile supply radius for eco sensitive construction practices.

Structural Steel shall conform to ASTM 992, Grade 50, and ASTM A36M for shapes and plates. Tubes and pipe sections shall conform to ASTM A501 and A500 respectively. Steel bar joists shall conform to Steel Joist Institute (SJI) standards. Steel roof deck shall be galvanized and meet Steel Deck Institute (SDI) standards.

Connections will include both welding and bolting. Framing bolts shall conform to ASTM A325 bearing type bolts. Welding shall conform to the American Welding Society Standard D1.1 using E70XX welds.

Concrete shall be based on ACI criteria. Concrete strengths and weights shall vary with building function. Foundations shall be normal weight concrete and achieve a minimum 3000 PSI compressive strength at 28 days. Slabs-on-grade shall be normal weight concrete and achieve a minimum 4000 PSI compressive strength at 28 days. Supported slabs will be light weight concrete and achieve a minimum 4000 PSI compressive strength at 28 days. Concrete exposed to freeze/thaw cycles shall be air entrained. Sealers compatible with maintenance requirements and/or finishes will be used on concrete floors.

Concrete masonry units shall have a unit compressive strength of 1900 psi to achieve a design prism strength of 1500 psi. The mortar shall be Type M or S. Grout shall be concrete with pea gravel and achieve a minimum 3000 PSI compressive strength at 28 days.



Reinforcing for concrete and masonry wall construction shall be deformed bars in accordance with ASTM A615 specifications, grade 60. The welded wire fabric shall conform to ASTM A185 requirements. Detailing, fabrication, and installation of the reinforcement shall comply with the “Design Handbook of the CRSI” (Concrete Reinforcing Steel Institute) and the “Manual of Standard Practice” of the American Concrete Institute (ACI).

Metal decks shall meet the requirements of the Steel Deck Institute (SDI). The decks shall be galvanized and conform to ASTM 446 with a zinc coating ASTM 525, G90.

Proposed HVAC Systems

HVAC System Design Criteria

Outdoor Design Temperatures

- Summer - 94°F DB / 75°F WB
- Winter - 10°F DB

Indoor Design Temperatures

- Occupied Areas
 - Summer - 75°F DB / 50% RH
 - Winter - 70°F DB / (no humidification provided)
- Mechanical Equipment Rooms (heating only)
 - Winter - 68°F DB

Codes and Standards:

- International Building Code – 2012
- International Mechanical Code – 2012
- International Energy Conservation Code – 2012
- ASHRAE - American Society of Heating, Refrigeration, and Air Conditioning Engineers Inc.
- SMACNA - Sheet Metal and Air Conditioning Contractors’ National Association Inc.

Based on an understanding of the project conditions up to this point, two options were proposed for the building HVAC systems.

Based on the age of the original building system (the two-pipe system), one alternate is that the existing system be completely demolished and a new system be provided; however, the renovation and addition HVAC system (the water source heat pump system) is newer and appears to function adequately. In addition, some spaces served by this system have been recently renovated and will not be renovated during this project.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Another alternate is to use a hybrid solution, using variable refrigerant flow (VRF) system for the new additions and areas in the original building currently served by the 2-pipe fan coil system. The existing water source heat pump system will continue to serve the areas currently supplied by that system (east wing). Future upgrades could include changing the east wing over to integrate into the VRF system. This alternate is recommended by Dewberry and is included in the cost estimate.

The alternates are described in detail below.

Alternate 1 - Proposed HVAC Systems-Option 1 (VRF and water source heat pump system)

South Addition

The South Addition (public entrance, meeting spaces and police area) will be served new a new VRF system with a dedicated outdoor air system (DOAS) located on the roof. The VRF system will use cassette fan coil units to serve the police offices on the G-2 Level and vertical fan coil units to supply the public entrance and meeting spaces on the G-1 Level. The rooftop unit will be 7.5 ton 100% outdoor air type with a gas heating section, hot gas reheat coil, energy recovery wheel, MERV-13 filters and the manufacturer's DDC controls. Ventilation air will be ducted to the fan coil units serving the G-1 Level and police offices on the G-2 Level. Exhaust air will be returned to the rooftop unit via a ducted system. The condensing units for the VRF system will be located on the roof of the addition. It is estimated that the capacity of the VRF system will be approximately 12 tons.

North Addition

The North Addition will be served new a new VRF system with a dedicated outdoor air system (DOAS) located on the roof. The VRF system will generally use cassette fan coil units to serve the office spaces. The rooftop unit will be a 15 ton 100% outside air type with a gas heating section, hot gas reheat coil, energy recovery wheel, MERV-13 filters and the manufacturer's DDC controls. Ventilation air will be ducted to the cassette units and exhaust air will be returned to the rooftop unit via a ducted system. The condensing units for the VRF system will be located on the roof of the addition. It is estimated that the capacity of the VRF system to serve the addition will be approximately 25 tons.

West Wing-Original Building

Demolish all HVAC equipment in the main mechanical room on the G-2 Level. Remove the 2-pipe fan coils and associated piping and controls on the upper two levels of the wing and the split systems serving the G-2 Level.

Install new a VRF system to serve all three floors of the West Wing. The estimated capacity of the VRF system to serve the west wing is approximately 30 tons. Ventilation air for the West Wing will be provided a 15 ton 100% outdoor air unit, similar the unit



serving the South and North additions, and will be located on the North Wing Addition Roof.

Original Center Wing and 1982 East Wing Addition

These areas are served by water source heat pumps. Install new water source heat pumps and ductwork in all areas to be renovated. Replace the central equipment in the main mechanical including pumps, boilers, heat exchanger and controls.

Proposed New Parking Garage

Exhaust ventilation will be provided in the walled secure ground level of the parking structure. The ventilation system will include wall mounted propeller fans and fresh air intake louvers.

Alternate 2 - Proposed HVAC Systems-Option 2 (VRF for entire facility)

This option proposes using a variable refrigerant flow (VRF) system for the entire building. **This option was priced in the cost estimate.**

South Addition

Same as above for Alternate 1

North Addition

Same as above for Alternate 1

West Wing-Original Building

Same as above for Alternate 1

Original Center Wing and 1982 East Wing Addition

Install new VRF system and ductwork to serve the renovated areas. Replace the existing water source heat pumps with VRF units and reuse existing ductwork in office areas and council chambers that are not being renovated. Install a 15 ton dedicated outdoor air system similar to Option 1 to serve renovated areas. The estimated capacity for the VRF system to serve these areas is 40 tons. The new VRF condensing units will be located on the North Wing Addition roof.

Demolish the central equipment in the main mechanical room and cooling tower located on grade after changing over to the VRF system.

Proposed New Parking Garage

Same as above for Alternate 1



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Proposed Plumbing/Fire Protection Work

Codes and Standards:

- International Plumbing Code – 2012
- International Fuel Gas Code – 2012 International Energy Conservation Code
- International Energy Conservation Code 2012
- NFPA 13-Standard for Installation of Sprinkler Systems
- NFPA 20-Standard for Installation of Fire Pumps

Domestic Water System

The existing 3-inch water service is adequate to serve the renovated areas and new additions. All new domestic water hot, cold and recirculation piping should be replaced in the areas that are being renovated. These areas include the following:

1956 Original Building (west wing and center piece)

- Replace all domestic hot, cold and recirculation piping on all floors including piping in the crawl space. Connect new 3-inch pipe in crawl space to existing line serving the G-3 and G-2 Levels that are not being renovated.

1982 Addition (east wing)

- G-3 Level-Remains as is except work in the mechanical room as required for HVAC system modifications.
- G-2 Level-No work is anticipated unless core bathrooms are upgraded
- G-1 Level-Provide all new piping for core toilet rooms and any other areas with plumbing fixtures.
- First Level-Provide all new piping as required for core toilet renovations

Domestic water piping for the new North and South additions plumbing fixtures will be connected to the new 3-inch main in the crawl space. Cold water will be supplied to the hose bibs in the parking garage through the new south addition.

Domestic Water Heaters

The water heaters and recirculation pumps in the original building and 1982 addition will be replaced with new high efficiency heaters to match the size of the existing heaters. Hot water for the new plumbing fixtures in the North addition will be supplied from the new water heater in the G-3 Level mechanical room or by a separate electric instantaneous heater depending on the location of the fixtures requiring hot water. (RECOMMENDED, BUT NOT INCLUDED IN COST ESTIMATE.)

Plumbing Fixtures

All new low flow plumbing fixtures will be provided in the areas being renovated and new additions as shown on the architectural plans, with rooms designed for full ADA compliance. The new toilet fixtures will have automatic flush valves and the lavatory sinks will have sensor operated faucets. All new toilets will be wall mounted flush valve type. All toilet rooms with floor drains will have trap primers. Hand washing sinks will have mixing valves to maintain the maximum water temperature at 95°F. New high/low



drinking fountains will be provided as shown on the architectural plans. Fixtures, domestic water service, tile work, and restroom partitions are included in the cost estimate for 10 (ten) toilet rooms, to be allocated throughout the building in design.

The only fixtures that will remain will be those in unrenovated restrooms in the building – specifically, in the holding area and the toilet recommended for inmate use on the G level, police area.

The new parking garage will be equipped with heat traced hose bibs mounted 75 feet on center.

Storm Water Piping System

The new additions with flat roof areas will have interior roof drains with separate emergency overflow drains. The overflow roof drains will be piped separately to the outside of the building to a location that is noticeable above grade. The new roof drainage system will be connected to the existing on-site storm water system. The existing exterior downspouts where the new additions occur will discharge onto the new flat roof areas. Some consideration should be given to collecting roof storm water drainage into cistern/ rain barrel equipment for use in landscaping endeavors around the facility.

New north and south infill additions will also alleviate any storm water backups within the recessed courtyard areas north and south as the new construction will “seal” existing walls/ facades and infill any below grade accesses that currently flood.

Floor drains will be provided in the new parking garage to collect road salts and moisture from parked vehicles which will discharge through an oil/sand interceptor.

The existing sump pumps in the original building and 1982 addition will be replaced with new duplex pumps. A new sump pump and pumped discharge will be required for the garage drainage system in order to meet the invert elevations.

Sanitary Sewer System

The above grade sanitary sewer waste and vent system in the original building will be completely replaced. It is recommended to hire the services of a company to visually inspect the below grade piping in the original building with a camera to verify its condition. If the piping is in poor condition it should be replaced when the building is renovated.

The sanitary waste and vent piping in the areas that are being renovated in the 1982 addition will be replaced with new. The new piping will be connected to the existing piping to remain.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Natural Gas System

The existing natural gas system will be extended to the new rooftop equipment serving the North and South additions. The boilers may be eliminated depending on the selected HVAC system concept. If a VRF system is selected the boilers and associated gas piping serving the boilers will be demolished. The gas piping serving the new domestic water heaters will remain in operation.

Fire Protection Sprinkler Systems

The original building, 1982 addition and new additions will be fully sprinklered. All of the existing sprinkler piping will be demolished and replaced with new. A recently conducted fire flow test indicated that a fire pump will be required to serve the fully sprinklered facility.

The existing 4-inch fire service line (not the same as the domestic service line) that currently feeds the building will have to be replaced with a 6-inch line to meet the requirements for the fire pump minimum suction size. A new 2-hour rated room will be provided, at the current location of the fire service entrance, to house the new fire pump. It is anticipated that a 500 GPM, 40 HP fire pump will be required to serve the facility.

Proposed Electrical Systems

Codes and Standards:

- 2012 Virginia Construction Code (IBC 2012)
- International Energy Conservation Code (IECC 2012)
- National Electrical Code 2008 (NFPA 70)
- 2012 Virginia Fire Prevention Code (IFC 2012)

Normal Power

1956 Original Building

- Replace 277/480 V, 3 Phase, 4 Wire, 400 A MLO Panel U with a new 400A MLO Panel.
- Replace 75 kVA transformer and associated wiring and reuse Panels 2DP and F.
- Replace 400 A, 3 Phase, 4 Wire, 400 A fused safety switch feeding Panels B3A and B3B with a new 120/208 V, 3 Phase, 4 Wire, 400 A MCB panel.
- Replace Panels B3A and B3B with 120/208 V, 3 Phase, 4 Wire, 225 A Panels.
- Panel L1 in the kitchen area will remain.
- Panel IT in IT room will remain.
- Replace 277/480 V, 3 Phase, 4 Wire, 100 A recessed Panels T and S.
- Replace Panels G and H.

1982 Addition

- 600 V, 3 Phase, 4 Wire, 400 A fused safety switch and associated wiring feeding Building 1956 is to remain.



- Panels Z, Z1, A and E are to remain.
- Replace 120/208 V, 3 Phase, 4 Wire Panel EE with a new 277/480 V, 3 Phase, 4 Wire, 400A MLO panel.
- Panels B, Y, X, C, V, D, EE1, E1, EE2, E2 and EE3 are to remain.
- Transformers T2, ET2 and ET3 are to remain.
- Replace 45 kVA transformers T3 and T4.

Emergency Power

1956 Original Building

- Recommend replacing Panel EE4 and feeder with a minimum 100 A feeder.
- The 45 kVA transformers feeding Panels E2 and E3 are to remain. Recommend replacing with 75 kVA transformer and associated wiring and reusing Panel E2 and Panel E3.
- Provide power to new elevator.

1982 Addition

- Replace Panel EE with 277/480 V, 3 Phase, 4 Wire, 400A MLO panel.

Whole Building

- The entire building's emergency power needs should be provided by one new diesel 250 KW emergency generator with an ATS, which could be installed on the pad at the rear of the building, or on another location to be determined in design. This new larger generator would allow all occupants and critical systems to be powered consistently (including the EOC) using one emergency power system.

Lighting

Remove all 2x4 lay-in lighting fixtures/ ballasts, controls and receptacles in renovated area and provide new LED direct/indirect lighting fixtures throughout.

Exterior LED lighting will double as decorative and security lighting.

Fire Alarm System

Provide a new digital, addressable fire alarm system for all existing and new additions with new annunciator panel at the new entrance.

Communications System

Provide all rough-in conduits, back boxes and pull-in lines. Provide power for all associated equipment.

Telephone/Data Systems

Provide all rough-in conduits, back boxes and pull-in lines. Provide power for all associated equipment.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 4 – Schematic Design

Cable TV System

Provide all rough-in conduits, back boxes and pull-in lines. Provide power for all associated equipment.

Security System

Provide all rough-in conduits, back boxes and pull-in lines. Provide power for all associated equipment. Power over Ethernet (POE) card access readers, and the associated infrastructure, will be required throughout.

Exterior

- Replace all building mounted exterior lights and controls.
- Relocate underground power company pole on west wing serving house and barn to accommodate drive thru.
- Remove (2) post mounted lights in the front of the courtyard.
- Remove an underground 4" EC in front of east wing.
- Provide additional new building mounted LED security lights and controls as needed.
- Provide new LED landscape lights and controls, and curtesy dusk to dawn controlled holiday lighting receptacles at trees and shrubs.
- Replace existing pole mounted lights in front of the building with aesthetically pleasing LED system.
- Provide electrical outlet and lights at the flagpole, as appropriate.

South Addition

- Provide new lighting, receptacles and power to the mechanical equipment and fire alarm devices.

North Addition

- Provide lighting, receptacles and power to mechanical equipment and fire alarm devices.
- Provide new 120/208 V, 3 Phase, 4 Wire, 100A Panel.
- Provide power to new elevator.

Parking Addition

- Provide new surface mounted LED lights and controls in secure ground level.
- Provide new "good neighbor" cut off shielded LED pole fixtures on second level exposed to the neighborhood. Integrate with future solar array supports and assemblies.
- Provide new fire alarm devices with zone and device extender panels.

Mechanical Systems

- Remove all branch circuits and provide new wire and conduit to new mechanical equipment.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Section 5 Implementation Plan



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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A. Overview of Implementation Planning

The logistics of renovating an occupied building, including additions and re-allocations of existing space, is a complex process. Phasing of the project will require meticulous planning to minimize each department's move. The implementation plan included here includes a preliminary phasing plan, with some logistical strategies for materials, entry, and movement during construction.

As part of the implementation planning portion of schematic design, Dewberry civil engineers were brought to evaluate the parking, drainage and sewer situation, to determine appropriate remedies to existing problems that could be implemented along with the proposed expansion. A tree survey previously conducted by the City was taken into account, since many of the campus trees are specimen trees. A preliminary LEED checklist was completed. These investigations and information led to a proposed phasing and implementation plan, which is described here.

B. Phasing and Logistics

The phasing for the City Hall complex will be intricate during the execution of multiple phases of completion.

- New additions will need to be completed to provide needed swing space for various departments to co-locate while renovations of existing building wings are completed. These additions also provide upgraded accessibility components and vertical circulation connectivity with the now disjointed access to existing public services. Careful consideration of current and temporary egress paths for occupants of the existing wings will allow existing building functions to remain in place during the new additions construction phase. Zoned equipment supporting the new additions will allow the existing building systems to remain supporting the occupants. As always concerning construction on site with existing facilities, special care should be taken for pedestrian and vehicle safety, as well as minimized exposure to sound, vibration, and construction dust for existing occupants.
- Next, existing building wings (east and west) must then be renovated to accommodate the updated programming needs for city administration and services. Building systems would be retrofitted and renovated per the plan as each of the phases is enacted. The careful balance of replacing large support machinery/ equipment that does not impact great portions of the entire existing building must be accommodated, such as continuing the use of the cooling tower components, until the last existing building phase is begun.
- Finally, the Parking Structure and Grounds / Roadway enhancements will begin on land that is currently occupied by the above mentioned HVAC / Transformer / Generator equipment and Police/ Sheriff/ Courts Staff Parking. Temporary Parking for either Police and Sheriff/Courts Staff or the public will need to be accommodated elsewhere on the City Hall property or nearby leased space; leasing for the public would allow Police and Sheriff Staff to remain close to their departmental areas for quick access and response when required.

The next series of diagrams graphically presents the various proposed phased execution of the entire project. Variations on these proposed project phases are possible, to be determined in design.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 5 – Implementation

PHASE ONE - NORTH ADDITION/INFILL AND PARKING STRUCTURE

This phase of effort will provide an addition/infill occupying a 4,800 SF footprint to the rear (north) of the existing building, between the east and west wings. On the 3rd floor, this addition will offer approximately 4,000 DGSF of office space for the program areas identified. On the lower floors (1st, G, G2) this addition will serve the needs of law enforcement (Police and Sheriff), providing a secure entrance, sallyport, inmate movement (vertical and horizontal), and other program areas.

The parking structure is also recommended at this time, to mitigate anticipated disruption as other construction occurs, to offer staff an alternate path of travel during construction times, and to provide augmented staging for construction materials.

Phase 1 A. Construct north addition/infill, including finished occupant-ready space on the 3rd floor and parking structure

The construction of the north wing will create swing space that will be utilized to facilitate the east wing renovation. This addition will also provide the horizontal east-west connection at the staff levels which will facilitate continued operations during construction of the new public lobby and renovations of existing staff areas. This addition will also expose the foundation of the existing structure, so that water intrusion issues can be addressed.

This area should have a public access pathway created through the existing 3rd floor conference room, to be utilized in Phase 3 (after new conferencing space has been constructed during Phase 2). This public access pathway will allow the new office space to function as swing space for groups with public interface requirements, but will later become staff-secure space once buildout is complete.

Upon completion, Human Services will be the first swing occupant, relocating temporarily from the 1st floor, east wing into this space (move to occur during Phase 2), thereby vacating that area for renovation in Phase 3.

Phase 1 B. Add new secure elevator between north addition/infill and existing center/east wing to connect vertical circulation for staff and law enforcement

The installation of the secure transfer elevator will alleviate the connectivity issues plaguing the current existing wings, and will complete the staff circulation pathways to facilitate continued operations during construction/renovation elsewhere in the building.

Phase 1 C. Complete new secure police areas on first, G, and G2 floors.

In conjunction with the secure transfer elevator, the lobby connector to the holding area (G2) will provide direct access between vehicle parking and holding facilities. On the first floor level, this addition will connect the elevator to the vehicle sallyport. Other first floor exterior/covered police areas included in the program will be constructed at this time, including a secure law



enforcement staff entrance near the sallyport and secure elevator. On the G level, police areas to be built include the new dispatch and new EOC spaces. These core functions are configured in the center space just below the Chambers area, connected to the north addition/infill.

Phase 1 D. Move new Building Shared areas to new location in north addition/infill.

Several building shared areas are to be relocated into the north addition/infill at the G level. These include mail delivery and processing, the shared staff lounge/vending area, a loading/unloading area for building deliveries, plus some portions of the remote storage for various building occupants.

Phase 1 E. Ramp to Council Chambers and first floor

The creation of an accessible and secure ramp system just north of the Chambers wall will provide access for Justice and Sheriff personnel to circulate outside the events being held in the Chambers area, while remaining in staff secure space. Additionally, this circulation offers a second secure, accessible path of movement for victims/witnesses or defendants to court proceedings, when needed. Work should be completed on non-court days or in the evening.

Phase 1 F. Install new HVAC system to support north addition/infill, and eventually the entire building at this time.

The new zoned HVAC system will allow portions of the building to be added by phases, as renovation occurs. Installing that system and connecting it to the north addition/infill will allow the new construction to be operational as other renovations occur. Equipment is anticipated to be positioned on the roof of the north addition/infill, with additional ground units remotely placed as required throughout the process.

Some conditions are required during this phase:

- KEEP EXISTING MEANS OF EGRESS STAIRS IN OPERATION

In all phases, means of egress out of the building (at the ends of east and west wings) will be maintained, no matter what section of the building is under renovation. (An exception is the rear G-level door, which will now exit into the parking area, and which will be preserved in its new format from this phase forward).

- ALL POLICE FUNCTIONS AND SHERIFF FUNCTIONS MUST REMAIN OPERATIONAL DURING CONSTRUCTION

All law enforcement activities are vital functions and must be maintained; therefore, construction is likely to require some night work or additional careful staging.

- ALL COURTS AND CITY HALL FUNCTIONS MUST REMAIN OPERATIONAL DURING CONSTRUCTION

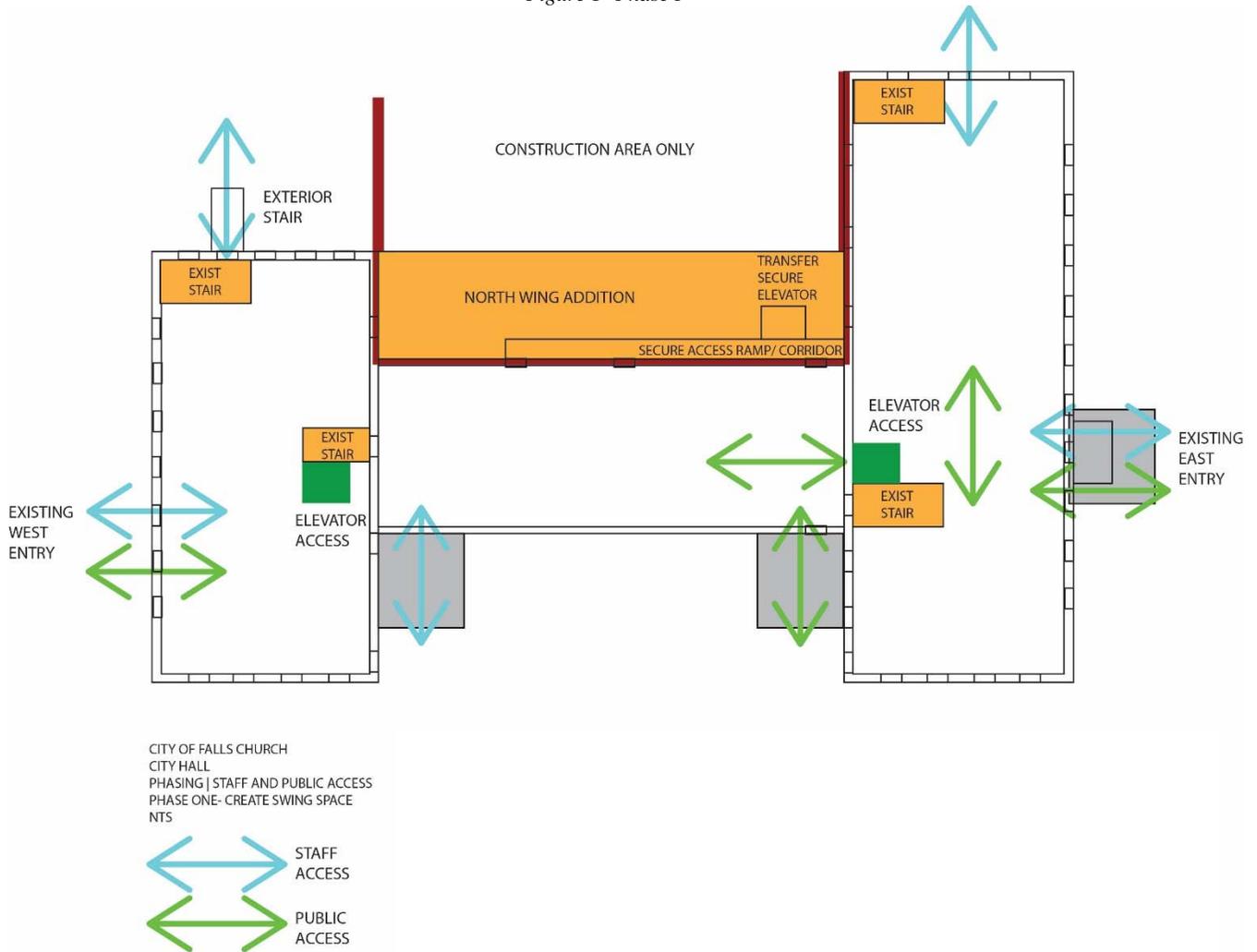
These special functions of City Government must function during all phases. Any efforts that might be disruptive to the court should be scheduled on non-court days or in the evening.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 5 – Implementation

Figure 1- Phase I





PHASE TWO – SOUTH ADDITION/INFILL

This addition establishes the new public entrance and hub of public circulation that will create an iconic entry into City Hall. It also provides a permanent location for the Registrar of Voters and portions of Development Services, and completes public portions of separated circulation to the courthouse, as well as creating a means of access to the east wing. The “sky bridge” at the front of the addition, plus the new public elevators in the center, will give easy public access to all floors, both wings, as well as circulation between them.

During construction of the South Addition/Infill, public access on court days will be shifted to the east wing entrance, which also serves as the main entrance for the Registrar, Human Services, City Administration (including the City Manager and other groups on the 3rd floor, east wing), and Tax Administration. This shift is likely to create significant congestion at the east wing entrance, due to the requirement for security screening and the sheer volume of visitors who will be managed. For this reason, it is recommended that consideration be given to construction of a temporary exterior structure for queuing and screening outside the east entrance. It is also recommended that the South Addition/Infill be constructed with priority order as follows:

1. Finish the public access points to a usable stage so that court traffic can be shifted into the new building entrance as quickly as possible (2A, 2B)
2. Finish G-level horizontal circulation between east and west wings immediately, to complete ADA compliant access to the west wing via the east wing entrance. (A temporary ramp or other accessible solution may be required on the west wing during some periods of construction of the new South Addition/Infill). (2C)
3. Complete the remaining build-out of interior spaces on non-court days, after court access and east-west movement have been resolved. (2D-2H)

Phase 2 A. Construct new building entrance/lobby addition/infill on G, 1st, and 3rd floors

This new lobby/public entrance will mitigate accessibility issues throughout the City Hall, and will provide a new public face for the building. It will also create separate public meeting spaces on the G level, which will be used by City Hall groups during renovation.

Phase 2 B. Install public elevator, stairs, and public circulation “bridge” to connect all levels and both wings.

Installing a new multi-level elevator, together with wrapping stairs that access all levels of the building, together with new east-west pedestrian circulation, provides public access to the public-facing sides of various department and functions near the main public entrance for easy way finding and increased quality of customer service.

Phase 2 C. Complete renovation and connection to meeting rooms on G level for public meeting purposes and east-west circulation.

Meeting and Support functions will be constructed on the G level, providing public access to meeting and public Police functions (dispatch). A demising wall will separate the public spaces



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 5 – Implementation

from the police areas completed in Phase 1. Public circulation will connect to east and west wings, and to the new elevator.

Phase 2 D. Connect new construction to new HVAC system installed in Phase 1.

This new construction should be connected to the new VAV HVAC system which was installed as part of the Phase 1 North Addition/Infill.

Phase 2 E. Relocate the Registrar of Voters to new location in the new public lobby

This relocation will place the Registrar in their final, permanent location inside the main lobby, permanently vacating space on the first floor, east wing for renovation in Phase 3.

Phase 2 F. Construct and relocate Clerk of Court to temporary space in the public lobby

Temporary Clerk of Court space will be built on the right side of the public lobby, in what will become a public seating area. This space can have secure staff egress (temporary, to be closed later) into the staff areas of the Tax Administration area (recently renovated, to remain as-is), located on the first floor, east wing. This move will temporarily vacate space on the first floor, east wing for renovation in Phase 3. (An alternate location is on the G level, in future meeting spaces).

Phase 2 G. Relocate Human Services to 3rd floor, North Addition/Infill

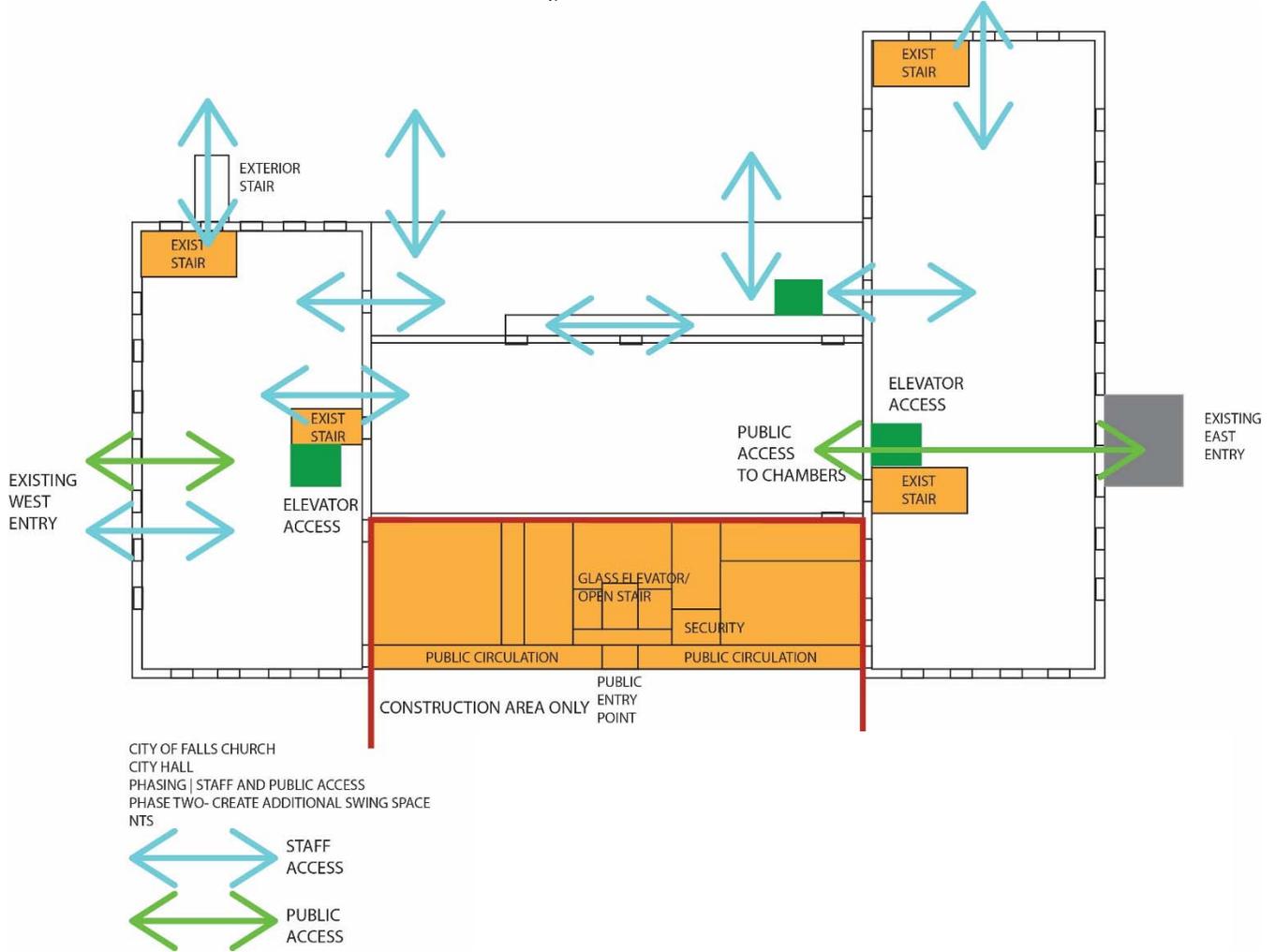
At the conclusion of Phase 2, relocate Human Services from east wing to 3rd floor of new North Addition/Infill constructed in Phase 1. This move will temporarily vacate space on the first floor, east wing for renovation in Phase 3.

Phase 2 H. Create improved public connection between new public lobby and east wing

The new connection will use the existing path of travel (up a short flight of stairs to Chambers level, then up additional stairs to first floor level), with improved finishes and other renovations to improve visibility, way finding, and public interface from the new public lobby.



Figure 2 - Phase 2





PHASE THREE - RENOVATE FIRST FLOOR, EAST WING

Phase 3 A. Renovate first floor, east wing

The first floor, east wing, vacated (except for Tax Administration, which will remain in place) in Phase 2, can be renovated during Phase 3 to meet the program of space needs for Human Services and the Clerk of Court. These agencies will reclaim portions of the public corridor for staff circulation, and will also share a public waiting room off of the east wing entrance. Access to Tax Administration during this time will be through the new main public lobby.

Phase 3 B. Renovate Police Lobby and Entrance

During the renovation of the east wing, first floor, significant disruption will occur on the lower G level. With a new public entrance (Phase 2) and new staff entrance (Phase 1), the police entrance on the east wing can be closed for G level renovations and upfit of program located there, per design.

Phase 3 C. Remove existing elevator and shaft

The existing elevator and shaft will be removed from this wing. The new public lobby and new public stairs, and new elevator will serve all public circulation needs from this point forward.

Phase 3 D. Upgrade G and 1st floor, east wing to new HVAC system

During the course of renovations, the G and 1st floors of the east wing will be connected to the new VRF HVAC system installed in Phase 1.

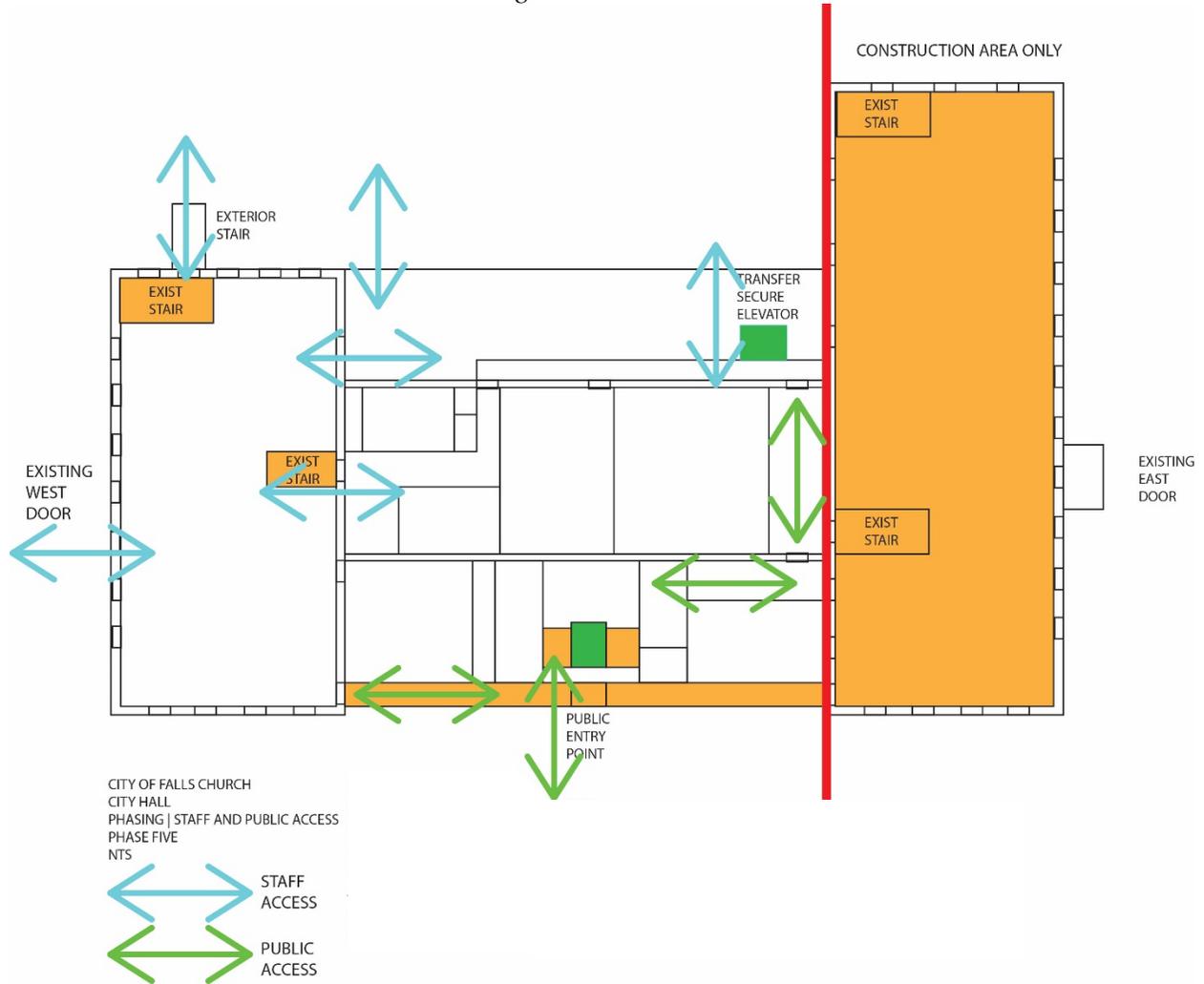
Phase 3 E. Relocate Human Services and Clerk of Court from swing space into first floor, east wing.

The final step in Phase 3 is to relocate Human Services from the North Addition/Infill into its new permanent location on the first floor, east wing, and to relocate the Clerk of Court from swing space in the lobby to its new permanent location on the first floor, east wing. These moves will vacate swing space for Phase 4.

All law enforcement activities are vital functions and must be maintained.



Figure 3 - Phase 3





Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 5 – Implementation

PHASE FOUR – RENOVATE WEST WING, FIRST AND THIRD FLOORS

With the north and south additions constructed and operational, and with the G level departmental and circulation functions in place, reconstruction will focus on the west wing, first and third floors. This renovation must have minimal impact on the G and lower levels; during the renovations, IT and various other support function operating out of the lower levels of the west wing must be on line at all times.

Phase 4 A. Relocate Development Services out of west wing into swing space

Development Services occupies approximately 3,875 DGSF in the building, and is projected to occupy a total of 5,913 DGSF. The 4,000 DGSF of space in the new north addition/infill, with temporary public access via the east wing, third floor can now house Development Services. To help reduce foot traffic through the building to this high-volume area, a temporary customer service desk can be established in the swing space on the east side of the lobby, to be relocated to its permanent location on the west side of the lobby upon completion of renovations.

Phase 4 B. Gut and renovate west wing for Development Services Suite

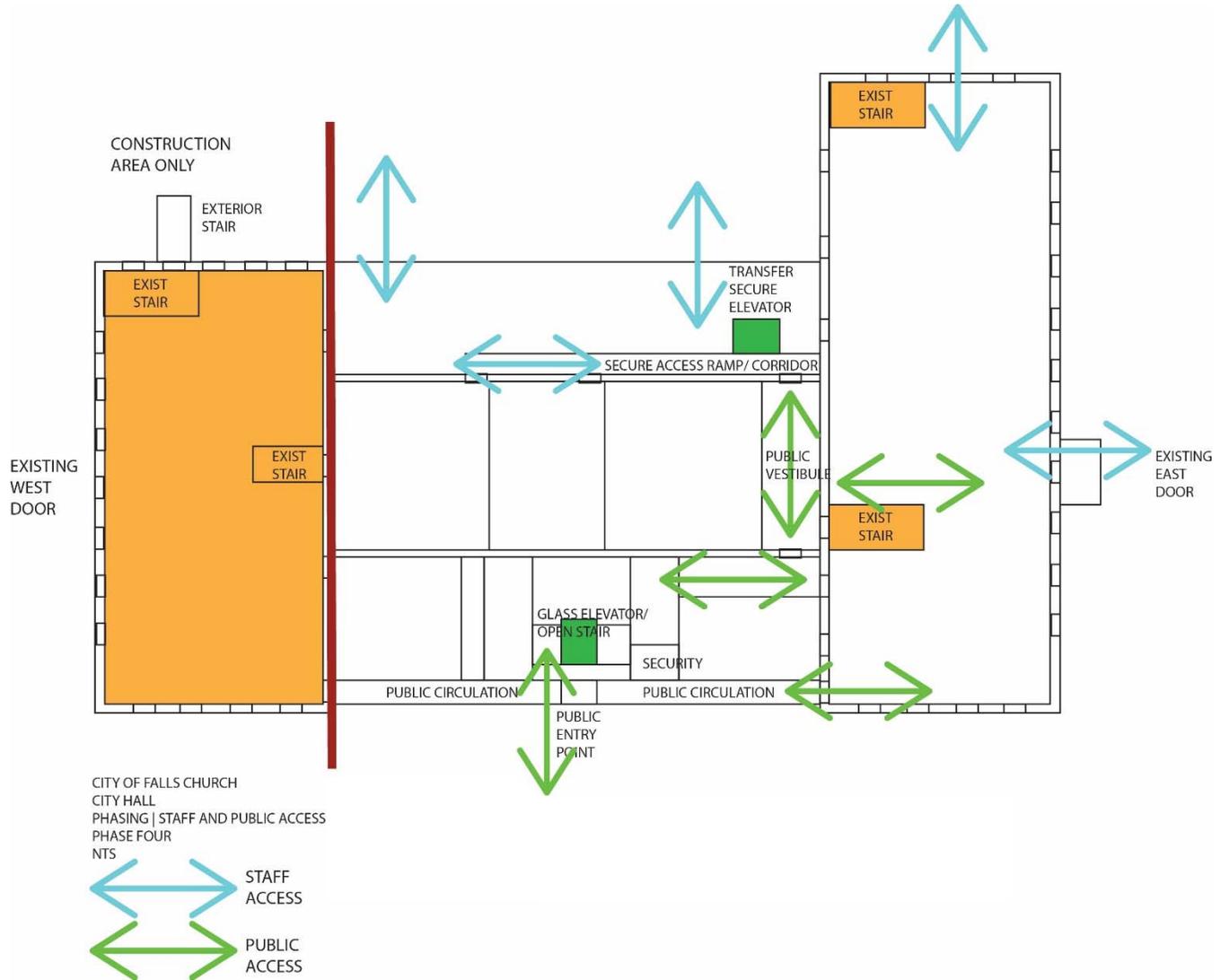
West wing demolition will include removal of the existing elevator and shaft, complete renovation of public restrooms, and reconfiguration of space to create one two-story Development Services suite, with customer service face opening into the new public lobby. Because of the possibility of noise issues, it is recommended that work adjacent to the Council Chambers be completed on non-court days, or in the evening. This renovation will include replacement of all building systems, including electrical panels and upgrades to the new VRF HVAC system installed in Phase 1.

Phase 4 C. Relocate Development Services from swing space into west wing

The final stage of Phase 4 is to relocate Development Services into its new permanent location in the west wing, thereby vacating swing space on the 3rd floor, north addition/infill and in the lobby.



Figure 4 - Phase 4





PHASE FIVE – MINOR CHAMBERS RENOVATION

Although the Council Chambers is not scheduled for any direct renovation, the various other building changes will have resulted in some implicit changes which must be carried through to Chambers for them to be fully functional. These include connecting the Chambers to the new VRF system, and adjusting its ductwork in any way required to account for its new encapsulation on north and south sides. Any modifications in lighting should also be executed at this time, as well as renovations to the office/meeting areas behind the dais. This phase can be completed concurrent with Phase Four or with Phase Six.

Although renovations will be minor, to minimize disruption of the court schedule, all work must be completed on non-court days, or in the evening. Construction projects must be phased so that the space can be left clean, safe, and in usable condition prior to court days.

Phase 5 A. Renovate and create new access points, as required

The new access point for secure inmate movement was created in Phase 1; any additional access points should be created at this time (secure officer access from the north addition/infill, for example).

Phase 5 B. Reconfigure and renovate office areas, as required

The spaces behind the dais have historically been used primarily as Sheriff's headquarters, secondarily as judicial chambers and breakout space during Council meetings. These areas require minor touch-ups and perhaps some minor reorganization of interior walls/doors to accommodate their new primary use as judicial chambers/breakout spaces for Council.

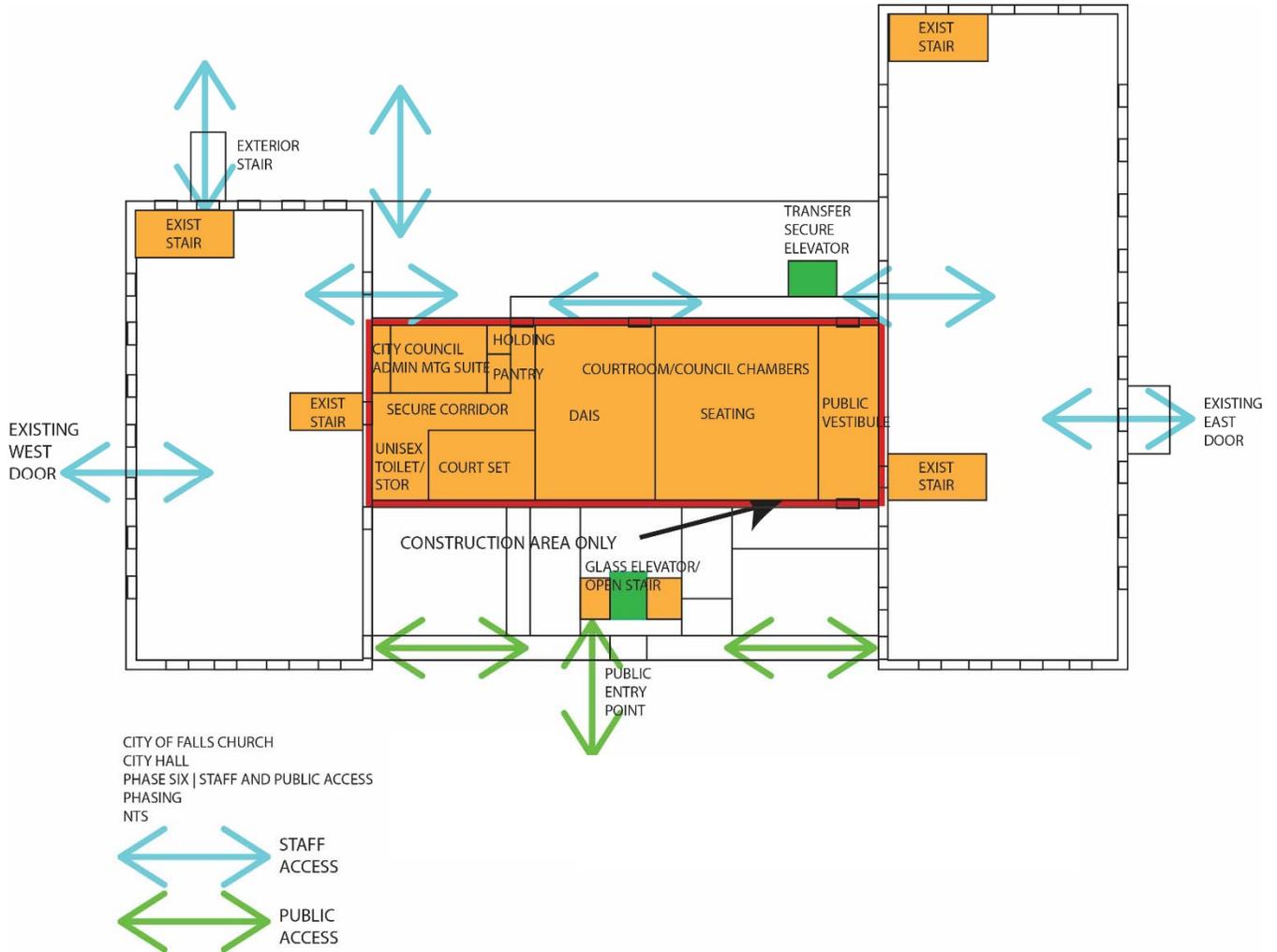
Phase 5 C. Install new HVAC infrastructure and lighting in Chambers, as required

The encapsulation of Chambers through additions to the north and south will have significantly affected the load and HVAC requirements in this space. This room should have the redesigned VRF HVAC infrastructure installed and made operational at this point in time.

Lighting conditions will also have changed, due to the encapsulation and changes in exterior lighting conditions. Sufficient time will have transpired in the new environment to allow many types of users to give input on lighting conditions, so that an improved design can be developed and implemented. Reduced energy lighting solutions should be given priority. Consideration should also be given to how bulbs will be replaced, given the high ceilings in this space.



Figure 5 - Phase 5





PHASE SIX - RENOVATE EAST WING, THIRD FLOOR

Phase 6 completes the building renovation by vacating and renovating the east wing, 3rd floor. This renovation requires the third floor to be vacated, and for that, all 3rd floor functions must occupy their final locations in the north addition/infill or in swing space.

Phase 6 A. Renovate 4,000 DGSF of swing space for final occupancy by City Administration and relocate City Administration functions.

City Administration will be the final buildout occupant of the north infill/addition per design, and those functions will relocate into that space at the beginning of Phase 6. This move will vacate the majority of the 3rd floor, east wing. Temporary access to these functions should be created on the west wing, 3rd floor (through Development Services). A temporary customer service/triage station can be established in the lobby swing space, to limit unnecessary walking traffic up to the office suite.

Phase 6 B. Relocate remainder of City Administration functions to G level swing space

Some City Administration functions will be relocated to temporary swing space on the G level. These functions will be housed in the public meeting space during renovation and construction of the 3rd floor, east wing suite.

Phase 6 C. Gut and renovate 3rd floor, east wing

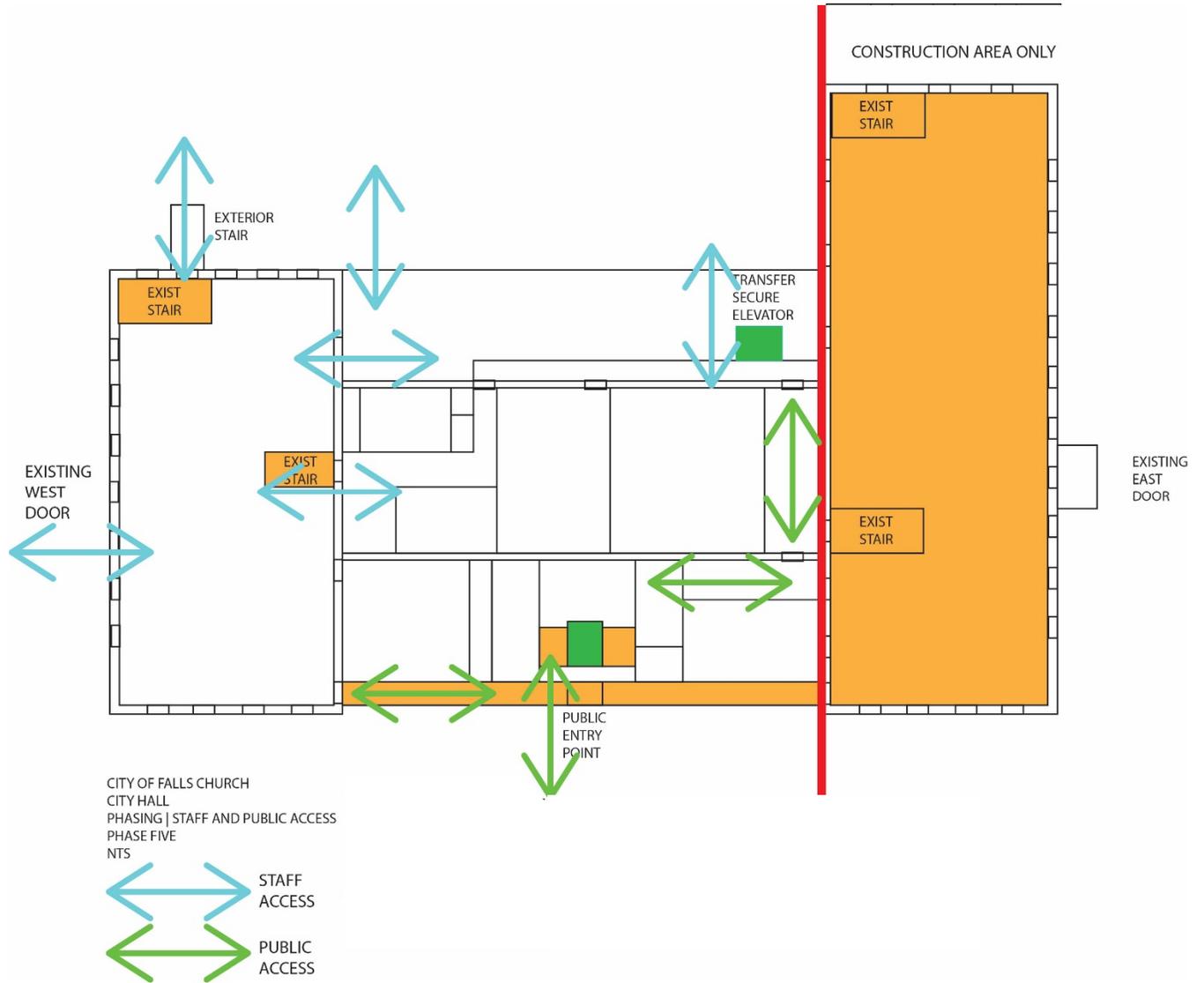
Extensive renovations are required on the 3rd floor, east wing, to create the new suite entrance, public connection to the new public lobby and walkway on the 3rd floor, and to recapture the interior corridors for staff use. These renovations will include replacement of the HVAC systems, renovation of public restrooms, and replacement of plumbing as required and recommended in the plan. At the conclusion of this renovation, the 3rd floor, east wing will be connected to the new VRF system.

Phase 6 D. Re-occupy 3rd floor, east wing

Once renovations are complete, the City Administration functions can expand and flow from the north addition/infill into the new public-facing counter and service areas on the 3rd floor.



Figure 6 - Phase 6

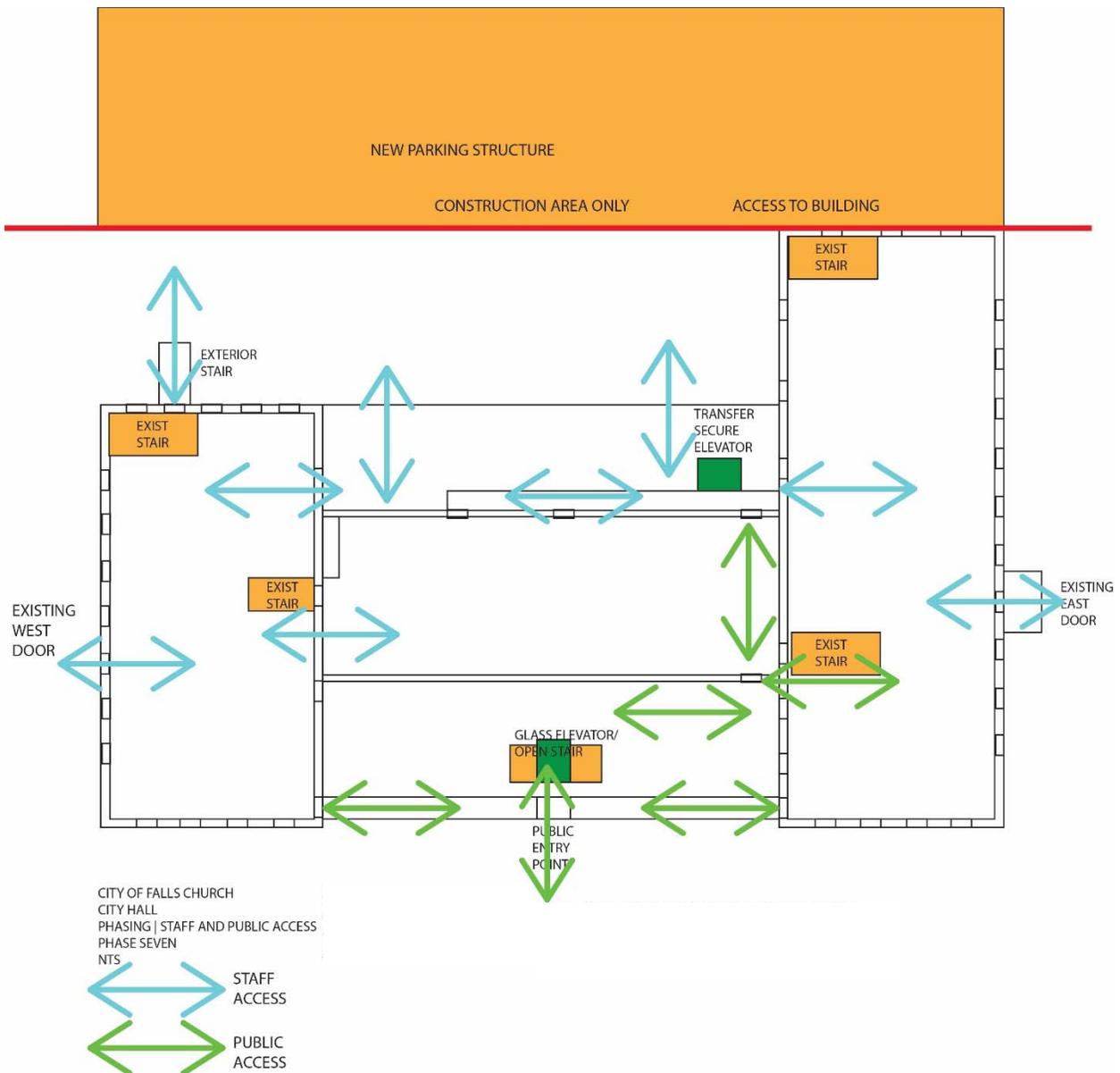




Phase 6 E. or Phase 7 - Construct Parking Structure

Complete construction of new parking structure (parts may have been constructed in Phase 1 with the exterior police spaces), will be staged either as the final task in Phase 6 or as a separate Phase 7. Adjacent (leased) staff parking should be sought during this time, to mitigate the limitations created during the construction stage.

Figure 7- Phase 6E or Phase 7





C. Site Civil Scope of Work

C1. Site – Demolition and Preparation

On the garage and roadways in front, and on the south, east, and west sides of existing City Hall, the following will be required:

- Remove all asphalt, curb and gutter from south, east and west sides.
- Remove existing 15” CMP, approx. 260’; along the front of the existing parking lot.
- Remove 3 existing storm structures along the front of the existing parking lot.
- Remove concrete pad with flag poles along the front of the existing parking lot.
- Relocate mail boxes, signs and possibly dry utilities.
- Remove the existing entrance and approx. 45 SY of asphalt and approx. 200’ of curb& gutter in front of the Community Center.

C2. Site - New structured parking

The proposed structured parking garage will need to be constructed with approx. 11’ maximum elevation difference between lower in ground and upper deck levels. This is due to the available storm sewer inverts. The upper deck level shall have a 2 % cross slope from north to south for positive drainage. The drainage shall be provided with a new storm pipe and structure system along the south side. The system will consist of approximately 80’ of 15” pipe, 140’ of 15” pipe, and 3 separate structures. The structural design of the garage will provide the discharge system from the deck into the storm system. The east and west entrances into lower level of the garage will each require a linear grate storm inlet across the steep slope, prior to the entrance into the lower level. A pump system with a 10” pipe and inlets system will be required to extract, from the lower level, any wetness entering and small drainage from the portion of each entrance.

C3. Site - East Side

The east side of the garage will extend enough to provide adequate room and vertical clearance for the lower entrance to enter and the upper level to make an acute turn at the top. The lower level entrance will utilize most of the existing drive aisle, with a grate inlet structure placed across the width, a few feet past the curb line, above the lower garage level, and discharge into the existing storm structure. Retaining walls of the garage will provide for the continuation of the upper level to the north on compacted fill. The passage way to the north will be at approx. 10% grade until the grade can be reduced to max. 5% for parking and tie back into the existing grade near the existing handicap spaces prior to the existing entrance road that extends to Little Falls St.

C4. Site – West Side

The west side existing entrance and roadway will be relocated further to the west with slight grading into the Cherry Hill Park. This move will also require relocation of 4 existing power poles, min. 2 utility box structures, sidewalk connection, bike rack, signs and light pole; and remove approx. 5 to 7 trees. The entrance to the lower level requires retaining walls on each



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Section 5 – Implementation

side, ranging from 1' to approximately 11' in height. The western garage deck, about 20', should slope up to help with vehicle clearance entering the lower level. A new storm system is required from the lower entrance level grate structure, south across the open area and tie into the existing storm structure at the corner of Park Ave. and Little Falls St. This system is approx. 260' with 2 MH structures.

C5. Site – Community Center (NOT INCLUDED IN COST ESTIMATE)

Create a new circular drive entrance to replace the existing entrance for the Community Center on Little Falls Street, as follows:

- Install new wide entrance, south of the existing, with an island placed in the middle of entrance for separation of in and out traffic and protection of existing gas valve.
- Install a circular travel way, approx. 15' wide for approx. 240' length and approx. 480' new curb & gutter. Match into the existing asphalt and gutter to remain, for positive drainage.
- Remove and install sidewalk and CG-12 ramps for entrance change.
- Revise storm str. # 3074, to match with new curb & gutter and add a DI-3C storm curb inlet with approx. 25' of 12" pipe.
- A few utilities are subject to adjustment, some signs to be relocated and a few trees to be removed.

Optional (**NOT INCLUDED IN COST ESTIMATE**): Create a new road on the north side of the Community Center, to connect between Great Falls Street and the existing parking area. The length will be approximately 220' and the width 24', with curb and gutter. Details as follows:

- Existing storm system follows the road and will require adjustment of 4 str. tops and the addition of a curb inlet along ex. pipe.
- Some existing walk will need minor adjustment, addition of 2 CG-12 ramps, removal of 2 trees and relocation of a light pole.

C6. Parking

Reconfiguration of parking area on the north side of the City Hall Building, as follows:

- Sidewalk to be added along the building infill addition.
- Relocate the existing concrete dumpster facility and the electric charging station to locations to be determined in design.
- Adjust existing storm trench drain and confirm existing pipe outfall location and adequacy.
- Revise the existing storm str. # 3148 to a grate inlet top and match the proposed new asphalt elevation.
- Remove bollards and signs for relocating as necessary.
- Relocate electric transformer and concrete pad to locations to be determined in design.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

Appendices



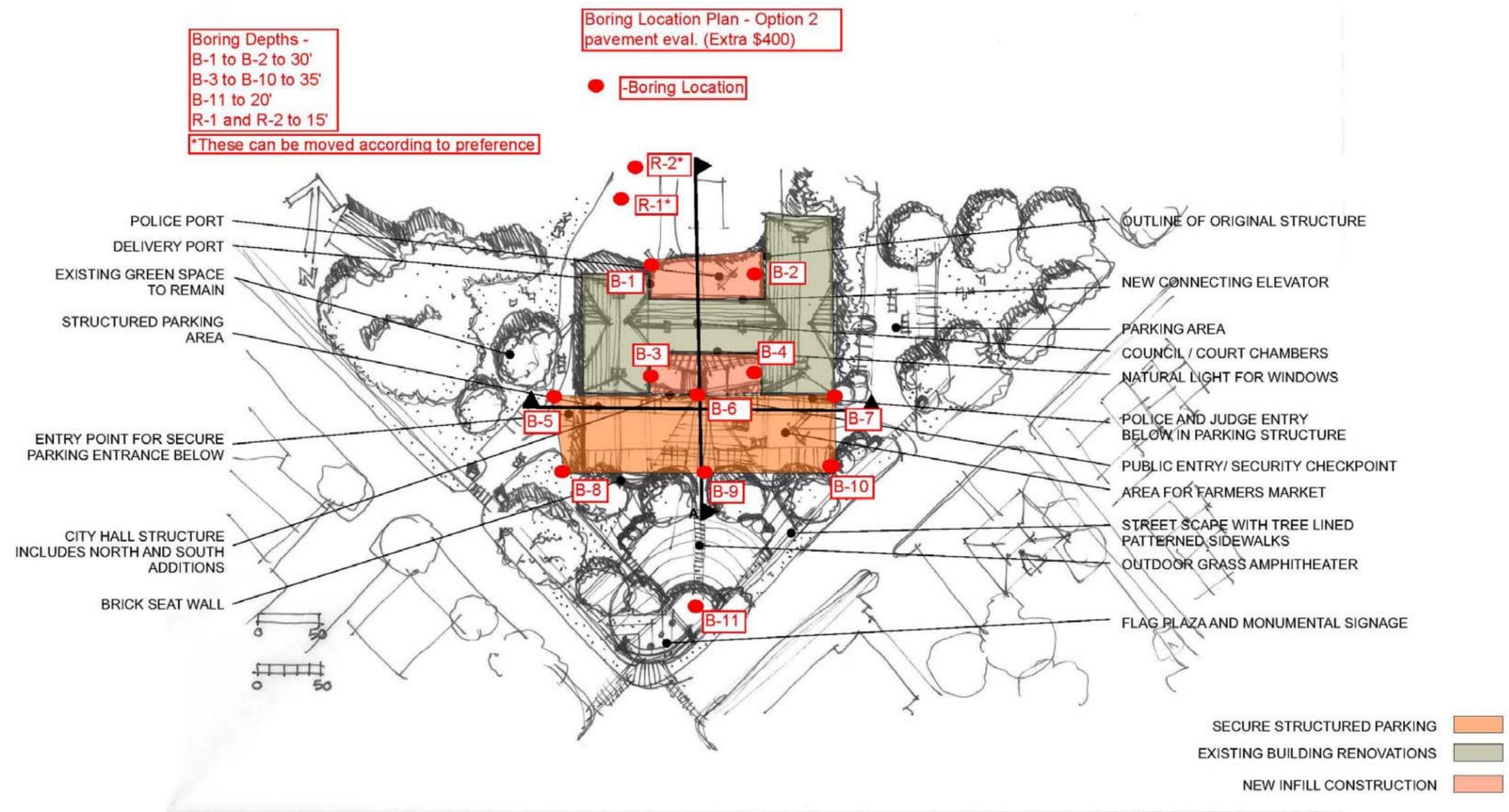
Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4

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Appendix A. Geotech Boring Locations



CITY OF FALLS CHURCH CITY HALL

MASTER PLANNING SCHEMES

CITY HALL ADDITION TO SOUTH AND NORTH OF CENTER SECTION

SCHEME ONE
DEWBERRY ARCHITECTS

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Appendix B. Civil Project Area



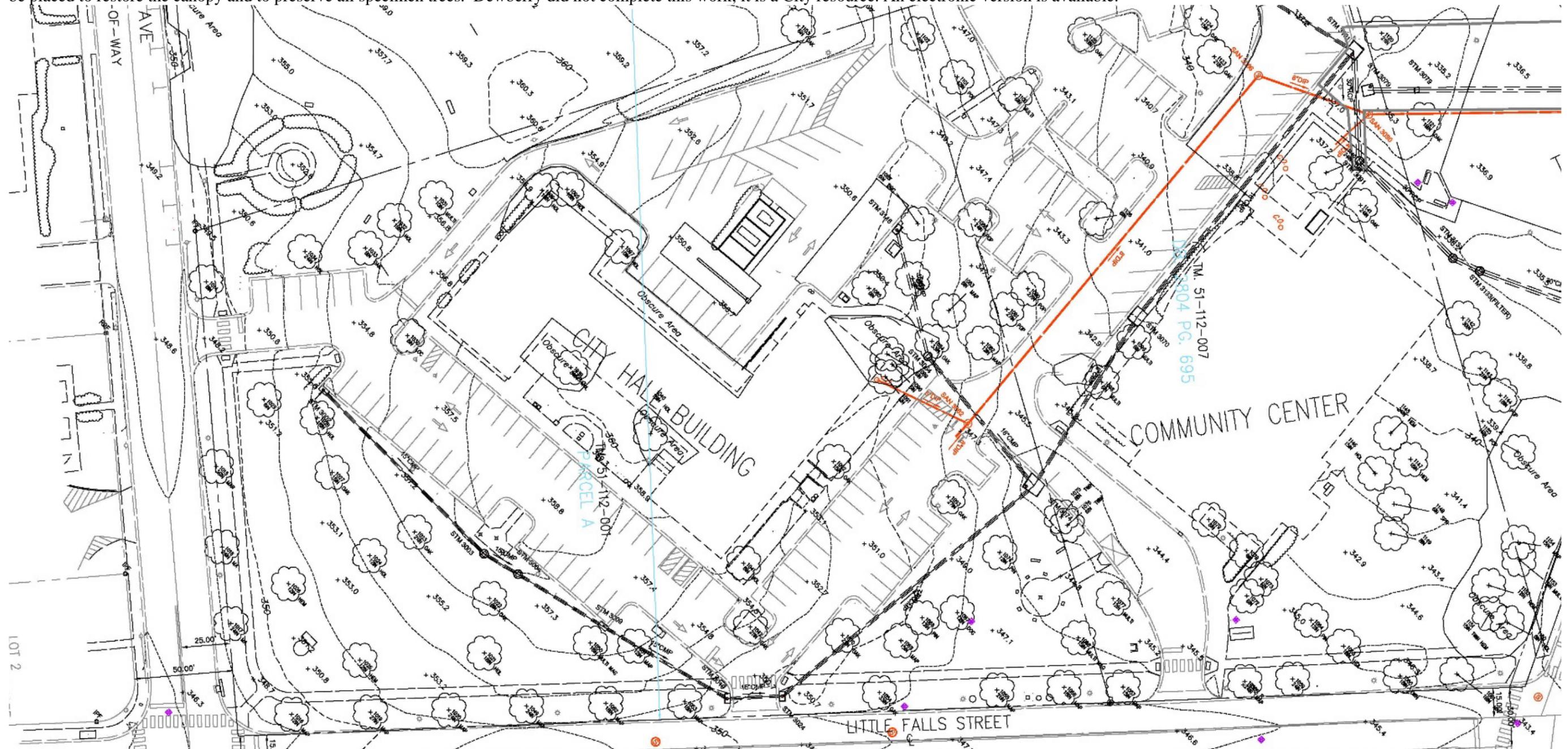


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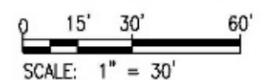


Appendix C. Tree Survey

The picture indicates a survey of all site trees, as on file with the City from previous work. Design should be completed to preserve as many trees as possible, and where trees must be removed, replacement plantings should be placed to restore the canopy and to preserve all specimen trees. Dewberry did not complete this work; it is a City resource. An electronic version is available.



CITY HALL TREE SURVEY



SCALE: 1" = 30'



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Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

Appendix D. Preliminary LEED Checklist

The sustainability policy for the City of Falls Church requires LEED Silver for all government facilities. The City Hall project does not include sufficient new space relative to the existing building for the project to qualify under the LEED criteria for Building Design and Construction; therefore, LEED for Existing Buildings is the most applicable criteria to follow. The project checklist included here identifies the LEED credits that this project should strive to achieve.

LEED 2009 for Existing Buildings: Operations & Maintenance		Project Checklist		City Hall, City of Falls Church		Project Name	
				4.24.14		Date	
Sustainable Sites		Possible Points: 26		Materials and Resources, Continued			
<input checked="" type="checkbox"/>	Credit 1	LEED Certified Design and Construction	4	<input checked="" type="checkbox"/>	Credit 6	Solid Waste Management—Waste Stream Audit	1
<input checked="" type="checkbox"/>	Credit 2	Building Exterior and Hardscape Management Plan	1	<input checked="" type="checkbox"/>	Credit 7	Solid Waste Management—Ongoing Consumables	1
<input checked="" type="checkbox"/>	Credit 3	Integrated Pest Mgmt, Erosion Control, and Landscape Mgmt Plan	1	<input checked="" type="checkbox"/>	Credit 8	Solid Waste Management—Durable Goods	1
<input type="checkbox"/>	Credit 4	Alternative Commuting Transportation	3 to 15	<input checked="" type="checkbox"/>	Credit 9	Solid Waste Management—Facility Alterations and Additions	1
<input checked="" type="checkbox"/>	Credit 5	Site Development—Protect or Restore Open Habitat	1	Indoor Environmental Quality			Possible Points: 15
<input checked="" type="checkbox"/>	Credit 6	Stormwater Quantity Control	1	<input checked="" type="checkbox"/>	Prereq 1	Minimum IAQ Performance	
<input checked="" type="checkbox"/>	Credit 7.1	Heat Island Reduction—Non-Roof	1	<input checked="" type="checkbox"/>	Prereq 2	Environmental Tobacco Smoke (ETS) Control	
<input checked="" type="checkbox"/>	Credit 7.2	Heat Island Reduction—Roof	1	<input checked="" type="checkbox"/>	Prereq 3	Green Cleaning Policy	
<input checked="" type="checkbox"/>	Credit 8	Light Pollution Reduction	1	<input checked="" type="checkbox"/>	Credit 1.1	IAQ Best Mgmt Practices—IAQ Management Program	1
Water Efficiency		Possible Points: 14		<input checked="" type="checkbox"/>	Credit 1.2	IAQ Best Mgmt Practices—Outdoor Air	1
<input checked="" type="checkbox"/>	Prereq 1	Minimum Indoor Plumbing Fixture and Fitting Efficiency		<input checked="" type="checkbox"/>	Credit 1.3	IAQ Best Mgmt Practices—Increased Ventilation	1
<input checked="" type="checkbox"/>	Credit 1	Water Performance Measurement	1 to 2	<input checked="" type="checkbox"/>	Credit 1.4	IAQ Best Mgmt Practices—Reduce Particulates in Air Distribution	1
<input checked="" type="checkbox"/>	Credit 2	Additional Indoor Plumbing Fixture and Fitting Efficiency	1 to 5	<input checked="" type="checkbox"/>	Credit 1.5	IAQ Mgmt Plan—IAQ Mgmt for Facility Alterations and Additions	1
<input checked="" type="checkbox"/>	Credit 3	Water Efficient Landscaping	1 to 5	<input checked="" type="checkbox"/>	Credit 2.1	Occupant Comfort—Occupant Survey	1
<input type="checkbox"/>	Credit 4	Cooling Tower Water Management	1 to 2	<input checked="" type="checkbox"/>	Credit 2.2	Controllability of Systems—Lighting	1
Energy and Atmosphere		Possible Points: 35		<input checked="" type="checkbox"/>	Credit 2.3	Occupant Comfort—Thermal Comfort Monitoring	1
<input checked="" type="checkbox"/>	Prereq 1	Energy Efficiency Best Management Practices		<input checked="" type="checkbox"/>	Credit 2.4	Daylight and Views	1
<input checked="" type="checkbox"/>	Prereq 2	Minimum Energy Efficiency Performance	12	<input checked="" type="checkbox"/>	Credit 3.1	Green Cleaning—High Performance Cleaning Program	1
<input checked="" type="checkbox"/>	Prereq 3	Fundamental Refrigerant Management		<input checked="" type="checkbox"/>	Credit 3.2	Green Cleaning—Custodial Effectiveness Assessment	1
<input checked="" type="checkbox"/>	Credit 1	Optimize Energy Efficiency Performance	1 to 18	<input checked="" type="checkbox"/>	Credit 3.3	Green Cleaning—Sustainable Cleaning Products, Materials Purchases	1
<input checked="" type="checkbox"/>	Credit 2.1	Existing Building Commissioning—Investigation and Analysis	2	<input checked="" type="checkbox"/>	Credit 3.4	Green Cleaning—Sustainable Cleaning Equipment	1
<input checked="" type="checkbox"/>	Credit 2.2	Existing Building Commissioning—Implementation	2	<input checked="" type="checkbox"/>	Credit 3.5	Green Cleaning—Indoor Chemical and Pollutant Source Control	1
<input checked="" type="checkbox"/>	Credit 2.3	Existing Building Commissioning—Ongoing Commissioning	2	<input checked="" type="checkbox"/>	Credit 3.6	Green Cleaning—Indoor Integrated Pest Management	1
<input checked="" type="checkbox"/>	Credit 3.1	Performance Measurement—Building Automation System	1	Innovation in Operations			Possible Points: 6
<input checked="" type="checkbox"/>	Credit 3.2	Performance Measurement—System-Level Metering	1 to 2	<input checked="" type="checkbox"/>	Credit 1.1	Innovation in Operations: Specific Title	1
<input checked="" type="checkbox"/>	Credit 4	On-site and Off-site Renewable Energy	1 to 6	<input checked="" type="checkbox"/>	Credit 1.2	Innovation in Operations: Specific Title	1
<input checked="" type="checkbox"/>	Credit 5	Enhanced Refrigerant Management	1	<input checked="" type="checkbox"/>	Credit 1.3	Innovation in Operations: Specific Title	1
<input checked="" type="checkbox"/>	Credit 6	Emissions Reduction Reporting	1	<input checked="" type="checkbox"/>	Credit 1.4	Innovation in Operations: Specific Title	1
Materials and Resources		Possible Points: 10		<input checked="" type="checkbox"/>	Credit 2	LEED Accredited Professional	1
<input checked="" type="checkbox"/>	Prereq 1	Sustainable Purchasing Policy		<input checked="" type="checkbox"/>	Credit 3	Documenting Sustainable Building Cost Impacts	1
<input checked="" type="checkbox"/>	Prereq 2	Solid Waste Management Policy		Regional Priority Credits			Possible Points: 4
<input checked="" type="checkbox"/>	Credit 1	Sustainable Purchasing—Ongoing Consumables	1	<input checked="" type="checkbox"/>	Credit 1.1	Regional Priority: Specific Credit	1
<input checked="" type="checkbox"/>	Credit 2.1	Sustainable Purchasing—Electric-Powered Equipment	1	<input checked="" type="checkbox"/>	Credit 1.2	Regional Priority: Specific Credit	1
<input checked="" type="checkbox"/>	Credit 2.2	Sustainable Purchasing—Furniture	1	<input checked="" type="checkbox"/>	Credit 1.3	Regional Priority: Specific Credit	1
<input checked="" type="checkbox"/>	Credit 3	Sustainable Purchasing—Facility Alterations and Additions	1	<input checked="" type="checkbox"/>	Credit 1.4	Regional Priority: Specific Credit	1
<input checked="" type="checkbox"/>	Credit 4	Sustainable Purchasing—Reduced Mercury in Lamps	1	Total			Possible Points: 119
<input checked="" type="checkbox"/>	Credit 5	Sustainable Purchasing—Food	1	44 + 11			



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

Appendix E. Hydrant Test Results

Fairfax Water - Central Maintenance
Fire Hydrant Flow Test - 301 Park Avenue, Falls Church

Q20	Available fire flow at a residual pressure of 20psi (gpm)		
Qt	Hydrant flow during test (gpm)		
Ps	Static pressure before hydrant test (psi)		
P20	20psi		
Pt	Residual pressure measured during hydrant test (psi)		

$$Q_{20} = Q_t \times \frac{(P_s - P_{20})^{0.54}}{(P_s - P_t)^{0.54}}$$

Qt	=	890			
Ps	=	44			
P20	=	20	Ps-P20	=	24
Pt	=	28	Ps-Pt	=	16

$$Q_{20} = 890 \times \frac{5.56306}{4.46915} = 1108$$

MAP	50-2	DATE	4/16/14
HYD	81		



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

Fairfax Water - Central Maintenance
Fire Hydrant Flow Test - 233 Little Falls Street, Falls Church

Q20	Available fire flow at a residual pressure of 20psi (gpm)
Qt	Hydrant flow during test (gpm)
Ps	Static pressure before hydrant test (psi)
P20	20psi
Pt	Residual pressure measured during hydrant test (psi)

$$Q_{20} = Q_t \times \frac{(P_s - P_{20})^{0.54}}{(P_s - P_t)^{0.54}}$$

$$Q_t = 820$$

$$P_s = 40$$

$$P_{20} = 20$$

$$P_t = 24$$

$$P_s - P_{20} = 20$$

$$P_s - P_t = 16$$

$$Q_{20} = 820 \times \frac{5.04146}{4.46915} = 925$$

MAP 50-2

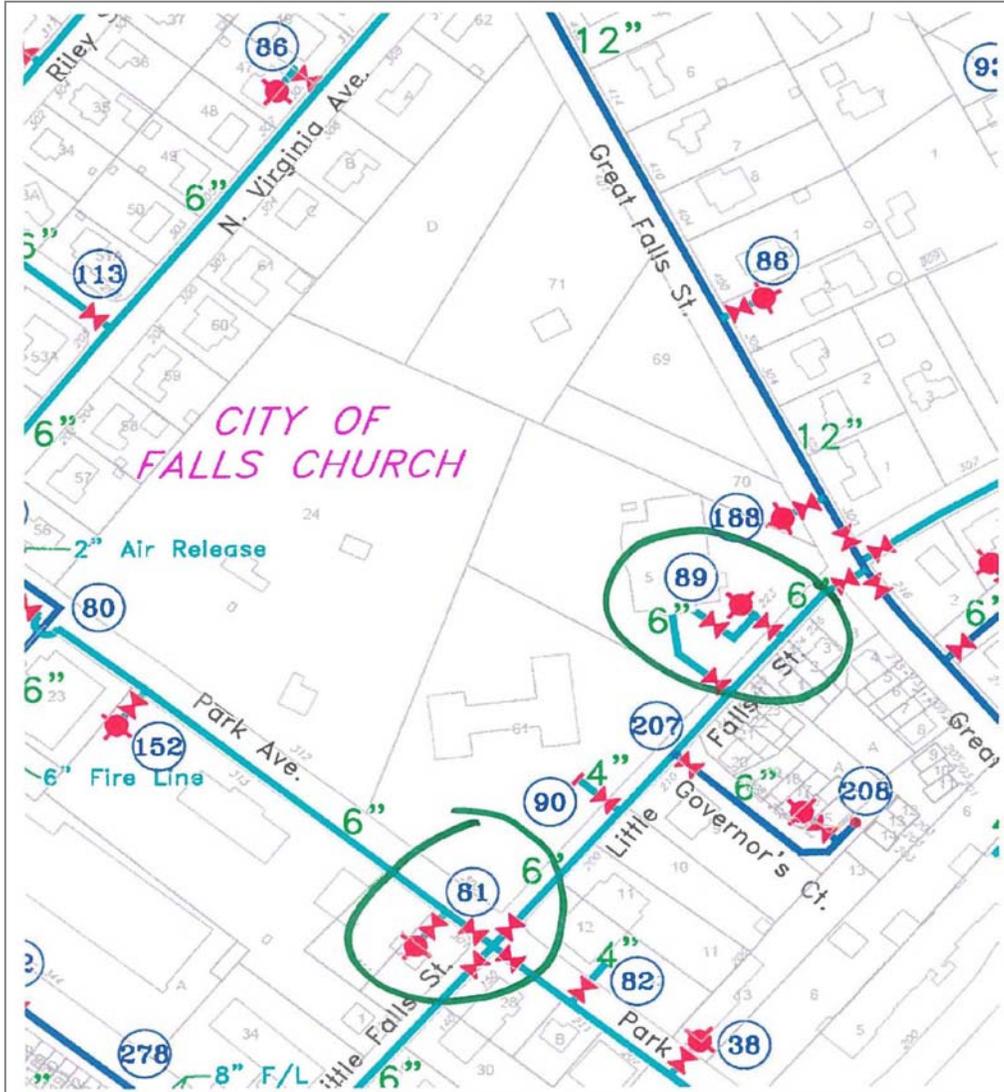
HYD 89

DATE 4/16/14



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)





Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

Appendix F. Cost Estimate

Notes: A full cost estimate was developed based on the scope as developed through the planning and schematic design process. Several items were subsequently removed as part of a value engineering step, including replacement windows for the 1956 portion of the building (west wing and center).

Assumptions include:

1. Renovation of 47,000 SF of interior space (project scope includes 30,000 DGSF renovation), including door frames, finishes, and hardware
2. Demolition and replacement of all domestic water service
3. Demolition and replacement of sprinkler water service
4. New plumbing fixtures for 2 kitchenettes and 10 toilet rooms, including 3 urinals, 11 water closets, and 14 lavatories (to be distributed in design).
5. Replacement of 1956 HVAC system with new VRF system in west and center portions of the existing building.
6. Replacement of 1982 Heat Pump system with new VRF system in east wing.
7. Removal and renovation of 2 existing elevator shafts and pits, to be replaced by proposed new public elevator
8. Two new elevators – one for secure inmate movement and staff circulation; one in the new lobby for public use.
9. Replacement of existing permanent generator and backup portable generator with one new permanent generator to serve the whole facility.
10. New stormwater management around parking structure



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITI

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

REVISION 1

ORDER OF MAGNITUDE COST ESTIMATE

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	PARKING GARAGE	RENOVATION	SOUTH ADDITION	NORTH ADDITION	SITE WORK	TOTAL
01	GENERAL REQUIREMENTS	\$92,765	\$387,598	\$76,450	\$95,705	\$35,338	\$687,856
02	EXISTING CONDITIONS	\$0	\$176,250	\$10,000	\$10,000		\$196,250
03	CONCRETE	\$770,680	\$23,500	\$75,500	\$127,700		\$997,380
04	MASONRY	\$220,530	\$0	\$75,000	\$186,000		\$481,530
05	METALS	\$36,000	\$10,000	\$397,500	\$283,400		\$726,900
06	WOOD & PLASTICS	\$5,000	\$159,800	\$25,000	\$36,000		\$225,800
07	THERMAL & MOISTURE PROTECTION	\$31,104	\$0	\$126,275	\$111,700		\$269,079
08	OPENINGS	\$40,500	\$238,150	\$237,000	\$121,900		\$637,550
09	FINISHES	\$10,000	\$644,250	\$191,750	\$190,800		\$1,036,800
10	SPECIALTIES	\$23,500	\$80,000	\$15,000	\$39,000		\$157,500
11	EQUIPMENT	\$0	\$0	\$0	\$0		\$0
12	FURNISHINGS	\$0	\$53,400	\$1,500	\$3,430		\$58,330
13	SPECIAL CONSTRUCTION	\$0	\$0	\$0	\$0		\$0
14	CONVEYING SYSTEMS	\$0	\$428,700	\$100,000	\$75,000		\$603,700
21	FIRE SUPPRESSION	\$70,403	\$164,250	\$11,550	\$24,000		\$270,203
22	PLUMBING	\$103,975	\$497,421	\$9,988	\$117,860		\$729,244
23	HVAC	\$70,363	\$1,697,752	\$149,788	\$351,299		\$2,269,202
25	INTEGRATED AUTOMATION	\$0	\$0	\$0	\$0		\$0
26	ELECTRICAL	\$150,360	\$1,092,194	\$83,635	\$180,910		\$1,507,099
27	COMMUNICATIONS	\$18,104	\$125,031	\$9,146	\$25,824		\$178,105
28	ELECTRONIC SAFETY & SECURITY	\$70,031	\$146,412	\$10,370	\$29,280		\$256,093
							\$0
31	EARTHWORK	\$139,500	\$0	\$0	\$0	\$135,275	\$274,775
32	EXTERIOR IMPROVEMENTS	\$89,250	\$0	\$0	\$0	\$473,985	\$563,235
33	UTILITIES	\$6,000	\$0	\$0	\$0	\$97,500	\$103,500
SUBTOTAL		\$1,948,063	\$5,924,708	\$1,605,452	\$2,009,808	\$742,098	\$12,230,129
	PHASING PREMIUM 10%		\$592,471				\$592,471
	G.C. OH / P 5%	\$97,403	\$325,859	\$80,273	\$100,490	\$37,105	\$641,130
	P & P BOND & INSURANCE 1.5%	\$30,682	\$102,646	\$25,286	\$31,654	\$11,688	\$201,956
	CONTINGENCY 10%	\$207,615	\$694,568	\$171,101	\$214,195	\$79,089	\$1,366,569
		\$2,283,763	\$7,640,251	\$1,882,111	\$2,356,148	\$869,980	\$15,032,254
	INFLATION 4 %	\$91,351	\$305,610	\$75,284	\$94,246	\$34,799	\$601,290
	TOTAL CONSTRUCTION COST	\$2,375,114	\$7,945,862	\$1,957,395	\$2,450,394	\$904,779	\$15,633,544
							\$1,563,354
							\$100,000
							\$17,296,899
	TOTAL PROJECT COST	\$2,375,114	\$7,945,862	\$1,957,395	\$2,450,394	\$904,779	\$17,296,899

Construction start 2015

A / E FEES 10%

UTILITY COMPANY ALLOWANCE



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

PARKING DECK

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
01	GENERAL CONDITIONS: General Conditions	%	5.00%	\$1,855,298			\$92,765	\$92,765	\$92,765	Total General Conditions
02	EXISTING CONDITIONS Included w/ Division 31	Ls	0	\$0.00			\$0	\$0	\$0	Total Existing Conditions
03	CONCRETE: Cast In Place Slab on grade & foundations Ramp construction Precast Concrete Precast wall panels Precast deck	Sf Sf Ea Sf Sf	20,115 1 17,475	\$12.00 \$40,000.00 \$15.00 \$28.00			\$241,380 \$40,000 \$0 \$489,300	\$241,380 \$40,000 \$0 \$489,300	\$770,680	Total Concrete
04	MASONRY: Brick & block exterior walls Masonry stair shafts Masonry partitions Bick façade @ spandrel	Sf Sf Sf Sf	4,030 1,200 312 2,272	\$35.00 \$15.00 \$15.00 \$25.00			\$141,050 \$18,000 \$4,680 \$56,800	\$141,050 \$18,000 \$4,680 \$56,800	\$220,530	Total Masonry
05	METALS: Stair roof structure Metal pan stairs Expansion joint Misc. metals	Sf Fl Lf Ls	200 1 50 1	\$35.00 \$6,500.00 \$50.00 \$20,000.00			\$7,000 \$6,500 \$2,500 \$20,000	\$7,000 \$6,500 \$2,500 \$20,000	\$36,000	Total Metals
06	WOODS & PLASTICS: Rough & finish carpentry	Ls	1	\$5,000.00			\$5,000	\$5,000	\$5,000	Total Wood & Plastics
07	THERMAL & MOIST. PROTECTION: Stair roofing Silane sealer Cauking	Sf Sf Ls	200 20,115 1	\$15.00 \$0.90 \$10,000.00			\$3,000 \$18,104 \$10,000	\$3,000 \$18,104 \$10,000	\$31,104	Total Thermal & Moist Protec.



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

PARKING DECK

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
26	ELECTRIC: Lighting & power	SF	37,590	\$4.00			\$150,360	\$150,360	\$150,360	Total Electric
27	COMMUNICATIONS: Empty conduit provisions	Sf	20,115	\$0.90			\$18,104	\$18,104	\$18,104	Total Communications
28	ELECTRONIC SAFETY & SECURITY Fire Alarm System	Sf	18,675	\$2.25			\$42,019	\$42,019		
	Security /Access Control Syst. - Empty conduit provisions	Sf	18,675	\$1.50			\$28,013	\$28,013	\$70,031	Total Elec. Safety & Security
31	EARTHWORK: Construction entrance	Ea	1	\$5,500.00			\$5,500	\$5,500		
	Sediment controls	Ea	1	\$15,000.00			\$15,000	\$15,000		
	Clear & grub	Ea	1	\$5,000.00			\$5,000	\$5,000		
	Rmv paving & curbs	Sf	30,000	\$1.25			\$37,500	\$37,500		
	Misc site demo	Ea	1	\$2,500.00			\$2,500	\$2,500		
	Grading	Sf	30,000	\$1.50			\$45,000	\$45,000		
	Misc. hand work	Hr	200	\$35.00			\$7,000	\$7,000		
	Misc. machine work	Hr	100	\$120.00			\$12,000	\$12,000		
	Layout	Ea	1	\$10,000.00			\$10,000	\$10,000	\$139,500	Total Earthwork
32	SITE IMPROVEMENTS: Asphalt paving	Sy	800	\$35.00			\$28,000	\$28,000		
	Curb & gutter	Lf	750	\$15.00			\$11,250	\$11,250		
	Misc site concrete	Ls	1	\$10,000.00			\$10,000	\$10,000		
	Landscaping	Allow	1	\$15,000.00			\$15,000	\$15,000		
	Site lighting	Ls	1	\$10,000.00			\$10,000	\$10,000		
	Misc site provisions	Allow	1	\$5,000.00			\$5,000	\$5,000		
	Site restoration / repairs	Ls	1	\$10,000.00			\$10,000	\$10,000	\$89,250	Total Site Improvements



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

PARKING DECK

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
33	UTILITIES:									
	Storm drainage Modifications	Ls	1	\$1,000.00			\$1,000	\$1,000		
	Misc utility adjustments	Ls	1	\$5,000.00			\$5,000	\$5,000		
									\$6,000	Total Utilities
OPT 1 LOUVERS IN LIEU OF BRICK EXTERIOR										
	Brick & block	Sf	-3,200	\$35.00			(\$112,000)	(\$112,000)		
	Louvers	Sf	3,200	\$30.00			\$96,000	\$96,000		
	Misc metals	Ls	1	\$25,000.00			\$25,000	\$25,000		
	Garage ventilation	SF	-18,675	\$3.50			(\$65,363)	(\$65,363)		
									(\$56,363)	
									(\$12,400)	Markups
									(\$68,762)	Subtotal
									(\$6,876)	A / E Fees
									(\$75,638)	Total Deduct



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
01	GENERAL CONDITIONS: General Conditions	%	7.00%	\$5,537,110			\$387,598	\$387,598	\$387,598	Total General Conditions
02	EXISTING CONDITIONS Rmv interior finishes Haz mat abatement	Sf Ls	47,000 0	\$3.75 \$0.00			\$176,250 \$0	\$176,250 \$0		Excluded Total Existing Conditions
03	CONCRETE: Misc flash patching	Sf	47,000	\$0.50			\$23,500	\$23,500	\$23,500	Total Concrete
04	MASONRY: Exterior masonry cleaning & tuckpoint	Ls	0	\$0.00			\$0	\$0		Excluded
05	METALS: Misc metals	Ls	1	\$10,000.00			\$10,000	\$10,000	\$10,000	Total Metals
06	WOODS & PLASTICS: Rough & finish carpentry Casework & trim allowance	Sf Sf	47,000 47,000	\$1.15 \$2.25			\$54,050 \$105,750	\$54,050 \$105,750	\$159,800	Total Wood & Plastics
08	OPENNINGS: Doors frames & hardware Rmv & Replace Windows- Rmv & replace windows Trim out windows Rmv & replace large windows Trim out large windows Repair 35% of windows Misc. interior glazing	Sf Ea Ea Ea Ea Ea Ls	47,000 0 0 0 0 24 1	\$4.25 \$1,100.00 \$250.00 \$2,300.00 \$300.00 \$350.00 \$30,000.00			\$199,750 \$0 \$0 \$0 \$0 \$8,400 \$30,000	\$199,750 \$0 \$0 \$0 \$0 \$8,400 \$30,000		Deleted Deleted Deleted Deleted Total Opennings



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
09	FINISHES:									
	Drywall & Acoustical									
	Drywall partitions	Sf	47,000	\$4.00			\$188,000	\$188,000		
	Ceilings	Sf	47,000	\$2.25			\$105,750	\$105,750		
	Tile									
	Ceramic tile @ restrooms	Rms	10	\$4,500.00			\$45,000	\$45,000		
	Flooring									
	Flooring & base	Sf	47,000	\$4.00			\$188,000	\$188,000		
	Painting									
	Interior painting	Sf	47,000	\$2.50			\$117,500	\$117,500		
									\$644,250	Total Finishes
10	SPECIALTIES									
	Toilet Accessories & partitions	Rms	10	\$3,500.00			\$35,000	\$35,000		
	Signage	Allow	1	\$25,000.00			\$25,000	\$25,000		
	Markerboards / Tackboards	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Misc. Specialties	Allow	1	\$10,000.00			\$10,000	\$10,000		
									\$80,000	Total Specialties
11	EQUIPMENT:									
	None included									
12	FURNISHINGS:									
	Entrance mats	Ls	1	\$1,500.00			\$1,500	\$1,500		
	Window treatment	Ea	102	\$250.00			\$25,500	\$25,500		
	Pantries	Ea	3	\$8,800.00			\$26,400	\$26,400		Incl. plumbing
	Work stations	Ls	0	\$0.00			\$0	\$0		Excluded
	FF & E	Ls	0	\$0.00			\$0	\$0		Excluded
									\$53,400	Total Furnishings
14	CONVEYING SYSTEMS:									
	Replace Existing Elevators-									
	Rmv existing elevators	Ea	2	\$15,000.00			\$30,000	\$30,000		
	Rmv / replace elevator pit	Ea	2	\$10,000.00			\$20,000	\$20,000		
	Rmv elevator shafts	Sf	3,800	\$5.00			\$19,000	\$19,000		
	Reframe floor openings	Lvl	8	\$10,000.00			\$80,000	\$80,000		
	Masonry elevator shafts	Sf	2,200	\$13.50			\$29,700	\$29,700		
	Misc. metals	Ls	1	\$10,000.00			\$10,000	\$10,000		
	4 Stop elevators	Ea	2	\$120,000.00			\$240,000	\$240,000		
									\$428,700	Total Conveying Systems



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
21	FIRE SUPPRESSION:									
	Rm & replace Sprinkler System	SF	47,000	\$2.75			\$129,250	\$129,250		
	Fire pump	Ea	1	\$35,000.00			\$35,000	\$35,000		
									\$164,250	Total Fire Suppression
22	PLUMBING									
	West Wing									
	Demolition	SF	12,282	\$1.50	\$1.20	\$0.30	\$0.00	\$18,423		
	Extend domestic water service	EA	1	\$4,000.00	\$1,200.00	\$2,800.00	\$0.00	\$4,000		
	Video sanitary sewer	EA	1	\$2,500.00	\$0.00	\$0.00	\$2,500.00	\$2,500		
	Electric water cooler	EA	2	\$1,742.00	\$398.00	\$1,344.00	\$0.00	\$3,484		
	Water closet	EA	9	\$1,453.00	\$455.00	\$998.00	\$0.00	\$13,077		
	Urinal	EA	4	\$1,713.00	\$468.00	\$1,245.00	\$0.00	\$6,852		
	Lavatory	EA	9	\$1,024.00	\$359.00	\$665.00	\$0.00	\$9,216		
	Mop sink	EA	2	\$946.00	\$259.00	\$687.00	\$0.00	\$1,892		
	Kitchenette plumbing	EA	2	\$2,500.00	\$1,200.00	\$1,300.00	\$0.00	\$5,000		
	Domestic water heater w/ circulator	EA	0	\$9,895.00	\$995.00	\$8,900.00	\$0.00	\$0		Reuse existing
	Plumbing drains & specialty	SF	12,282	\$0.45	\$0.15	\$0.30	\$0.00	\$5,527		
	Storm, waste, & vent piping	SF	12,282	\$2.90	\$1.40	\$1.50	\$0.00	\$35,618		
	Insulated domestic water piping	SF	12,282	\$3.40	\$1.50	\$1.90	\$0.00	\$41,759		
	Start-up & testing	SF	12,282	\$0.15	\$0.10	\$0.05	\$0.00	\$1,842		
	Center & East Wing									
	Demolition	SF	34,198	\$1.50	\$1.20	\$0.30	\$0.00	\$51,297		
	Extend domestic water service	EA	1	\$8,000.00	\$2,400.00	\$5,600.00	\$0.00	\$8,000		
	Video sanitary sewer	EA	1	\$3,500.00	\$0.00	\$0.00	\$3,500.00	\$3,500		
	Electric water cooler	EA	3	\$1,742.00	\$398.00	\$1,344.00	\$0.00	\$5,226		
	Water closet	EA	11	\$1,453.00	\$455.00	\$998.00	\$0.00	\$15,983		
	Urinal	EA	3	\$1,713.00	\$468.00	\$1,245.00	\$0.00	\$5,139		
	Lavatory	EA	14	\$1,024.00	\$359.00	\$665.00	\$0.00	\$14,336		
	Mop sink	EA	4	\$946.00	\$259.00	\$687.00	\$0.00	\$3,784		
	Kitchenette plumbing	EA	2	\$2,500.00	\$1,200.00	\$1,300.00	\$0.00	\$5,000		
	Domestic water heater w/ circulator	EA	0	\$18,900.00	\$1,300.00	\$17,600.00	\$0.00	\$0		Reuse existing
	Plumbing drains & specialty	SF	34,198	\$0.45	\$0.15	\$0.30	\$0.00	\$15,389		
	Storm, waste, & vent piping	SF	34,198	\$2.90	\$1.40	\$1.50	\$0.00	\$99,174		
	Insulated domestic water piping	SF	34,198	\$3.40	\$1.50	\$1.90	\$0.00	\$116,273		
	Start-up & testing	SF	34,198	\$0.15	\$0.10	\$0.05	\$0.00	\$5,130		
									\$497,421	Total Plumbing



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
23	HVAC:									
	West Wing									
	Demolition	SF	12,282	\$1.35	\$1.25	\$0.10	\$0.00	\$16,581		
	Dedicated outdoor air unit- 15 ton	EA	1	\$52,100.00	\$2,800.00	\$48,100.00	\$1,200.00	\$52,100		
	VRF condensing unit-30 ton	EA	1	\$72,400.00	\$5,600.00	\$66,000.00	\$800.00	\$72,400		
	VRF evap. unit w/ distribution box- 2 ton	EA	15	\$4,881.00	\$656.00	\$4,225.00	\$0.00	\$73,215		
	Computer room cooling	SF	12,282	\$1.31	\$0.33	\$0.98	\$0.00	\$16,089		
	Insulated VRF piping	SF	12,282	\$3.08	\$1.30	\$1.78	\$0.00	\$37,829		
	Fire damper allowance	SF	12,282	\$0.12	\$0.03	\$0.09	\$0.00	\$1,474		
	Registers, grilles, diffuser allowance	SF	12,282	\$0.60	\$0.10	\$0.50	\$0.00	\$7,369		
	Louvers & air intakes	SF	12,282	\$0.35	\$0.12	\$0.23	\$0.00	\$4,299		
	Sheetmetal ductwork	SF	12,282	\$4.50	\$1.50	\$3.00	\$0.00	\$55,269		
	Ductwork insulation	SF	12,282	\$1.15	\$0.50	\$0.65	\$0.00	\$14,124		
	Temperature control	SF	12,282	\$5.00	\$2.20	\$2.80	\$0.00	\$61,410		
	Start-up, test, and balance	SF	12,282	\$0.70	\$0.50	\$0.20	\$0.00	\$8,597	\$420,756	
	Center Wing									
	Demolition	SF	10,830	\$1.35	\$1.25	\$0.10	\$0.00	\$14,621		
	Dedicated outdoor air unit- 15 ton	EA	1	\$52,100.00	\$2,800.00	\$48,100.00	\$1,200.00	\$52,100		
	VRF condensing unit-30 ton	EA	1	\$72,400.00	\$5,600.00	\$66,000.00	\$800.00	\$72,400		
	VRF evaporator unit w/ distrib. box- 2 ton	EA	15	\$4,881.00	\$656.00	\$4,225.00	\$0.00	\$73,215		
	Computer room cooling	SF	10,830	\$1.31	\$0.33	\$0.98	\$0.00	\$14,187		
	Insulated VRF piping	SF	10,830	\$2.95	\$1.30	\$1.65	\$0.00	\$31,949		
	Fire damper	SF	10,830	\$0.12	\$0.03	\$0.09	\$0.00	\$1,300		
	Registers, grilles, diffuser	SF	10,830	\$1.08	\$0.16	\$0.92	\$0.00	\$11,696		
	Louvers & air intakes	SF	10,830	\$0.35	\$0.12	\$0.23	\$0.00	\$3,791		
	Sheetmetal ductwork	SF	10,830	\$5.50	\$2.50	\$3.00	\$0.00	\$59,565		
	Ductwork insulation	SF	10,830	\$1.15	\$0.50	\$0.65	\$0.00	\$12,455		
	Temperature control	SF	10,830	\$5.65	\$2.40	\$3.25	\$0.00	\$61,190		
	Start-up, test, and balance	SF	10,830	\$1.40	\$1.00	\$0.40	\$0.00	\$15,162	\$423,629	
	East Wing									
	Demolition	SF	23,368	\$1.35	\$1.25	\$0.10	\$0.00	\$31,547		
	Hot water boiler	EA	2	\$43,950.00	\$4,450.00	\$38,900.00	\$600.00	\$87,900		
	Boiler flue	LF	30	\$38.00	\$16.00	\$22.00	\$0.00	\$1,140		
	Cooling tower	EA	1	\$25,575.00	\$1,925.00	\$22,650.00	\$1,000.00	\$25,575		
	Plate type heat exchanger	EA	1	\$42,500.00	\$2,800.00	\$38,900.00	\$800.00	\$42,500		
	Base mounted pump	EA	4	\$16,625.00	\$4,125.00	\$12,500.00	\$0.00	\$66,500		
	Ducted heat pump unit	EA	11	\$7,100.00	\$1,300.00	\$5,800.00	\$0.00	\$78,100		
	Console heat pump unit	EA	42	\$2,185.00	\$295.00	\$1,890.00	\$0.00	\$91,770		
	Condenser water piping	SF	23,368	\$0.65	\$0.30	\$0.35	\$0.00	\$15,189		
	Dual temperature piping	SF	23,368	\$2.85	\$1.25	\$1.60	\$0.00	\$66,599	\$506,820	
									\$1,351,205 Total HVAC	



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
23	HVAC:									
	East Wing									
	Miscellaneous heating unit	SF	23,368	\$0.30	\$0.08	\$0.22	\$0.00	\$7,010		
	Fire damper	SF	23,368	\$0.12	\$0.03	\$0.09	\$0.00	\$2,804		
	Registers, grilles, diffuser	SF	23,368	\$0.91	\$0.16	\$0.75	\$0.00	\$21,265		
	Louvers & air intakes	SF	23,368	\$0.35	\$0.12	\$0.23	\$0.00	\$8,179		
	Sheetmetal ductwork	SF	23,368	\$5.55	\$2.25	\$3.30	\$0.00	\$129,692		
	Ductwork insulation	SF	23,368	\$1.25	\$0.55	\$0.70	\$0.00	\$29,210		
	Temperature control	SF	23,368	\$5.65	\$2.40	\$3.25	\$0.00	\$132,029		
	Start-up, test, and balance	SF	23,368	\$0.70	\$0.50	\$0.20	\$0.00	\$16,358		
									\$853,367	
									\$1,697,752	Total HVAC



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

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PRECONSTRUCTION SERVICES

RENOVATION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
26	ELECTRIC:									
	West Wing									
	Demolition	SF	12,282	\$1.90	\$1.50	\$0.15	\$0.25	\$23,336		
	Panelboard allowance- 400A	EA	2	\$11,720.00	\$1,875.00	\$9,845.00	\$0.00	\$23,440		
	Panelboard allowance- 225A	EA	1	\$5,875.00	\$1,650.00	\$4,225.00	\$0.00	\$5,875		
	Panelboard allowance- 100A	EA	4	\$4,335.00	\$1,350.00	\$2,985.00	\$0.00	\$17,340		
	Transformer - 75 KVA	EA	2	\$9,655.00	\$1,675.00	\$7,980.00	\$0.00	\$19,310		
	275 kw generator	EA	1	\$104,800.00	\$9,800.00	\$95,000.00	\$0.00	\$104,800		
	Elevator shunt trip	EA	2	\$3,249.00	\$789.00	\$2,460.00	\$0.00	\$6,498		
	Equipment connection	SF	12,282	\$2.45	\$0.60	\$1.85	\$0.00	\$30,091		
	Power feeder conduit & wire	SF	12,282	\$1.70	\$0.50	\$1.20	\$0.00	\$20,879		
	Motor feeder conduit & wire	SF	12,282	\$1.50	\$0.55	\$0.95	\$0.00	\$18,423		
	Grounding system	SF	12,282	\$0.15	\$0.05	\$0.10	\$0.00	\$1,842		
	Interior lighting fixture	SF	12,282	\$5.00	\$1.75	\$3.25	\$0.00	\$61,410		
	Power/lighting device	SF	12,282	\$3.80	\$1.55	\$2.25	\$0.00	\$46,672		
	Branch circuit wiring	SF	12,282	\$3.00	\$1.40	\$1.60	\$0.00	\$36,846	\$416,762	
	Center & East Wing									
	Demolition	SF	34,198	\$1.90	\$1.50	\$0.15	\$0.25	\$64,976		
	Panelboard allowance- 400A	EA	1	\$11,720.00	\$1,875.00	\$9,845.00	\$0.00	\$11,720		
	Transformer allowance- 45 KVA	EA	2	\$5,265.00	\$1,110.00	\$4,155.00	\$0.00	\$10,530		
	Equipment connection	SF	34,198	\$2.45	\$0.60	\$1.85	\$0.00	\$83,785		
	Power feeder conduit & wire	SF	34,198	\$0.40	\$0.10	\$0.30	\$0.00	\$13,679		
	Motor feeder conduit & wire	SF	34,198	\$2.40	\$0.80	\$1.60	\$0.00	\$82,075		
	Grounding system allowance	SF	34,198	\$0.15	\$0.05	\$0.10	\$0.00	\$5,130		
	Interior lighting fixture	SF	34,198	\$5.00	\$1.75	\$3.25	\$0.00	\$170,990		
	Power/lighting device	SF	34,198	\$3.80	\$1.55	\$2.25	\$0.00	\$129,952		
	Branch circuit wiring	SF	34,198	\$3.00	\$1.40	\$1.60	\$0.00	\$102,594	\$675,432	
									\$1,092,194	Total Electric
27	COMMUNICATIONS:									
	Comm. empty conduit system	SF	46,480	\$0.95	\$0.30	\$0.65	\$0.00	\$44,156		
	CATV empty conduit system allowance	SF	46,480	\$0.57	\$0.12	\$0.45	\$0.00	\$26,494		
	Tel/data empty conduit system	SF	46,480	\$1.17	\$0.22	\$0.95	\$0.00	\$54,382		
									\$125,031	Total Communications
28	ELECTRONIC SAFETY & SECURITY									
	Fire alarm	SF	46,480	\$2.25	\$0.50	\$1.75	\$0.00	\$104,580		
	Security system empty conduit	SF	46,480	\$0.90	\$0.15	\$0.75	\$0.00	\$41,832		
									\$146,412	Total Elec. Safety & Security



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

SOUTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
01	GENERAL CONDITIONS: General Conditions	%	5.00%	\$1,529,002			\$76,450	\$76,450	\$76,450	Total General Conditions
02	EXISTING CONDITIONS Interface demo	Ls	1	\$10,000.00			\$10,000	\$10,000	\$10,000	Total Existing Conditions
03	CONCRETE: Foundations Slab on grade Slab on deck Elevator pit Misc Concrete	Sf Sf Sf Ea Ea	2,900 450 3,000 1 1	\$15.00 \$10.00 \$5.00 \$7,500.00 \$5,000.00			\$43,500 \$4,500 \$15,000 \$7,500 \$5,000	\$43,500 \$4,500 \$15,000 \$7,500 \$5,000	\$75,500	Total Concrete
04	MASONRY: Elevator shaft & cladding Brick/block masonry piers	Sf Sf	1,200 600	\$40.00 \$45.00			\$48,000 \$27,000	\$48,000 \$27,000	\$75,000	Total Masonry
05	METALS: Floor framing Bridge framing Roof framing HVAC dunnage Feature stair allowance Glass railing at lower level Glass railing at bridge Misc metals	Sf Sf Sf Ls Ea Lf Lf Ls	2,500 450 2,900 1 2 150 245 1	\$35.00 \$65.00 \$30.00 \$10,000.00 \$30,000 \$250.00 \$250.00 \$25,000.00			\$87,500 \$29,250 \$87,000 \$10,000 \$60,000 \$37,500 \$61,250 \$25,000	\$87,500 \$29,250 \$87,000 \$10,000 \$60,000 \$37,500 \$61,250 \$25,000	\$397,500	Total Metals
06	WOODS & PLASTICS: Rough & finish carpentry Casework allowance	Ls Allow	1 1	\$5,000.00 \$20,000.00			\$5,000 \$20,000	\$5,000 \$20,000	\$25,000	Total Wood & Plastics



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
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SOUTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
07	THERMAL & MOIST. PROTECTION:									
	Elevator pit waterproofing	Ea	1	\$1,500.00			\$1,500	\$1,500		
	Roofing & sheetmetal	Sf	2,850	\$11.50			\$32,775	\$32,775		
	Mechanical screen	Ea	1	\$30,000			\$30,000	\$30,000		
	Skylight allowance	Lf	95	\$600.00			\$57,000	\$57,000		
	Caiking	Ls	1	\$5,000.00			\$5,000	\$5,000		
									\$126,275	Total Thermal & Moist Protec.
08	OPENINGS:									
	Doors frames & hardware	Ea	10	\$1,200.00			\$12,000	\$12,000		
	Curtainwall	Sf	2,000	\$90.00			\$180,000	\$180,000		
	Vestibule airlock & doors	Ea	1	\$30,000.00			\$30,000	\$30,000		
	Misc. interior glazing	Ls	1	\$15,000.00			\$15,000	\$15,000		
									\$237,000	Total Openings
09	FINISHES:									
	Drywall & Acoustical									
	Drywall partitions	Ls	1	\$10,000.00			\$10,000	\$10,000		
	Ceilings	Sf	3,500	\$7.50			\$26,250	\$26,250		
	Flooring									
	Flooring	Sf	2,900	\$35.00			\$101,500	\$101,500		
	Painting									
	Intumescent paint	Sf	2,900	\$15.00			\$43,500	\$43,500		
	Interior painting	Sf	3,500	\$3.00			\$10,500	\$10,500		
									\$191,750	Total Finishes
10	SPECIALTIES									
	Signage & directory	Ls	1	\$10,000.00			\$10,000	\$10,000		
	Misc. Specialties	Ls	1	\$5,000.00			\$5,000	\$5,000		
									\$15,000	Total Specialties
12	FURNISHINGS:									
	Entrance mats	Ea	1	\$1,500.00			\$1,500	\$1,500		
	FF & E	Ls	0	\$0.00			\$0	\$0		Excluded
									\$1,500	Total Furnishings



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

SOUTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
14	CONVEYING SYSTEMS: New elevator	Ea	1	\$100,000			\$100,000	\$100,000	\$100,000	Total Conveying Systems
21	FIRE SUPPRESSION: Wet Pipe Sprinkler System	SF	3,300	\$3.50			\$11,550	\$11,550	\$11,550	Total Fire Suppression
22	PLUMBING Roof drainage	SF	2,850	\$1.75			\$4,988	\$4,988		
	Misc. plumbing, hose bibbs & piping	Ls	1	\$5,000.00			\$5,000	\$5,000		
									\$9,988	Total Plumbing
23	HVAC: Constant volume rooftop unit- 15 ton	EA	1	\$19,800.00	\$2,800.00	\$15,800.00	\$1,200.00	\$19,800		
	Dedicated outdoor air unit- 5 ton	EA	1	\$21,850.00	\$1,150.00	\$19,500.00	\$1,200.00	\$21,850		
	VRF condensing unit- 8 ton	EA	1	\$24,150.00	\$2,350.00	\$21,000.00	\$800.00	\$24,150		
	VRF evaporator unit w/ distribution box- 21	EA	4	\$4,881.00	\$656.00	\$4,225.00	\$0.00	\$19,524		
	Computer room cooling	SF	3,400	\$1.31	\$0.33	\$0.98	\$0.00	\$4,454		
	Insulated VRF piping	SF	3,400	\$3.08	\$1.30	\$1.78	\$0.00	\$10,472		
	Fire damper	SF	3,400	\$0.12	\$0.03	\$0.09	\$0.00	\$408		
	Registers, grilles, diffuser	SF	3,400	\$0.55	\$0.10	\$0.45	\$0.00	\$1,870		
	Louvers & air intakes	SF	3,400	\$0.35	\$0.12	\$0.23	\$0.00	\$1,190		
	Sheetmetal ductwork	SF	3,400	\$5.50	\$2.50	\$3.00	\$0.00	\$18,700		
	Ductwork insulation	SF	3,400	\$1.15	\$0.50	\$0.65	\$0.00	\$3,910		
	Temperature control	SF	3,400	\$5.75	\$2.50	\$3.25	\$0.00	\$19,550		
	Start-up, test, and balance	SF	3,400	\$1.15	\$0.75	\$0.40	\$0.00	\$3,910		
									\$149,788	Total HVAC
26	ELECTRIC: Panelboard allowance	EA	2	\$4,335.00	\$1,350.00	\$2,985.00	\$0.00	\$8,670		
	Transformer allowance	EA	1	\$5,265.00	\$1,110.00	\$4,155.00	\$0.00	\$5,265		
	Equipment connection	SF	3,400	\$1.25	\$0.35	\$0.90	\$0.00	\$4,250		
	Power feeder conduit & wire	SF	3,400	\$0.60	\$0.15	\$0.45	\$0.00	\$2,040		
	Motor feeder conduit & wire	SF	3,400	\$1.50	\$0.55	\$0.95	\$0.00	\$5,100		
	Grounding system	SF	3,400	\$0.15	\$0.05	\$0.10	\$0.00	\$510		
	Interior lighting fixture	SF	3,400	\$9.75	\$2.25	\$7.50	\$0.00	\$33,150		
	Power/lighting device	SF	3,400	\$4.05	\$1.55	\$2.50	\$0.00	\$13,770		
	Branch circuit wiring	SF	3,400	\$3.20	\$1.40	\$1.80	\$0.00	\$10,880		
									\$83,635	Total Electric



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

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SOUTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
27	COMMUNICATIONS:									
	Communication empty conduit system	SF	3,400	\$0.95	\$0.30	\$0.65	\$0.00	\$3,230		
	Tel/data empty conduit system	SF	3,400	\$1.17	\$0.22	\$0.95	\$0.00	\$3,978		
	CATV empty conduit system	SF	3,400	\$0.57	\$0.12	\$0.45	\$0.00	\$1,938		
									\$9,146	Total Communications
28	ELECTRONIC SAFETY & SECURITY									
	Fire alarm system	SF	3,400	\$2.15	\$0.65	\$1.50	\$0.00	\$7,310		
	Security system empty conduit	SF	3,400	\$0.90	\$0.15	\$0.75	\$0.00	\$3,060		
									\$10,370	Total Elec. Safety & Security
31	EARTHWORK:									
	Incl. w/ site work									



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

NORTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
01	GENERAL CONDITIONS: General Conditions	%	5.00%	\$1,914,103			\$95,705	\$95,705	\$95,705	Total General Conditions
02	EXISTING CONDITIONS Interface demo	Ls	1	\$10,000.00			\$10,000	\$10,000	\$10,000	Total Existing Conditions
03	CONCRETE: Foundations Slab on grade Slab on deck Elevator pit Misc Concrete	Sf Sf Sf Ea Ea	4,800 4,800 4,800 1 1	\$12.00 \$7.00 \$5.00 \$7,500.00 \$5,000.00			\$57,600 \$33,600 \$24,000 \$7,500 \$5,000	\$57,600 \$33,600 \$24,000 \$7,500 \$5,000	\$127,700	Total Concrete
04	MASONRY: Brick & block exterior Elevator & stair shaft	Sf Sf	3,900 3,300	\$35.00 \$15.00			\$136,500 \$49,500	\$136,500 \$49,500	\$186,000	Total Masonry
05	METALS: Floor framing Roof framing HVAC dunnage Fire stairs Misc metals	Sf Sf Ls Fl Ls	4,800 4,800 1 2 1	\$25.00 \$23.00 \$20,000.00 \$6,500.00 \$20,000.00			\$120,000 \$110,400 \$20,000 \$13,000 \$20,000	\$120,000 \$110,400 \$20,000 \$13,000 \$20,000	\$283,400	Total Metals
06	WOODS & PLASTICS: Rough & finish carpentry Casework & trim allowance	Sf Sf	9,600 9,600	\$1.50 \$2.25			\$14,400 \$21,600	\$14,400 \$21,600	\$36,000	Total Wood & Plastics



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

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PRECONSTRUCTION SERVICES

NORTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
07	THERMAL & MOIST. PROTECTION:									
	Elevator pit waterproofing	Ea	1	\$1,500.00			\$1,500	\$1,500		
	Roofing & sheetmetal	Sf	4,800	\$11.50			\$55,200	\$55,200		
	Mechanical screen	Allow	1	\$50,000.00			\$50,000	\$50,000		
	Caulking	Ls	1	\$5,000.00			\$5,000	\$5,000		
									\$111,700	Total Thermal & Moist Protec.
08	OPENINGS:									
	Doors frames & hardware	Sf	9,600	\$4.50			\$43,200	\$43,200		
	Exterior windows	Sf	980	\$65.00			\$63,700	\$63,700		25% of exterior
	Misc. interior glazing	Ls	1	\$15,000.00			\$15,000	\$15,000		
									\$121,900	Total Openings
09	FINISHES:									
	Drywall & Acoustical									
	Drywall partitions	Sf	9,600	\$5.50			\$52,800	\$52,800		
	Furring, insulation & drywall	Sf	9,600	\$3.50			\$33,600	\$33,600		
	Ceilings	Sf	9,600	\$2.50			\$24,000	\$24,000		
	Tile									
	Ceramic tile @ restrooms	Rms	4	\$4,500.00			\$18,000	\$18,000		
	Flooring									
	Flooring	Sf	9,600	\$4.00			\$38,400	\$38,400		
	Painting									
	Interior painting	Sf	9,600	\$2.50			\$24,000	\$24,000		
									\$190,800	Total Finishes
10	SPECIALTIES									
	Toilet Accessories & partitions	Rms	4	\$3,500.00			\$14,000	\$14,000		
	Signage	Allow	1	\$15,000.00			\$15,000	\$15,000		
	Markerboards / Tackboards	Allow	1	\$5,000.00			\$5,000	\$5,000		
	Misc. Specialties	Allow	1	\$5,000.00			\$5,000	\$5,000		
									\$39,000	Total Specialties
12	FURNISHINGS:									
	Window treatment	Sf	980	\$3.50			\$3,430	\$3,430		
	Work stations	Ls	0	\$0.00			\$0	\$0		Excluded
	FF & E	Ls	0	\$0.00			\$0	\$0		Excluded
									\$3,430	Total Furnishings



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

NORTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
14	CONVEYING SYSTEMS: New elevator	Ea	1	\$90,000			\$90,000	\$75,000	\$75,000	Total Conveying Systems
21	FIRE SUPPRESSION: Wet Pipe Sprinkler System	SF	9,600	\$2.50			\$24,000	\$24,000	\$24,000	Total Fire Suppression
22	PLUMBING									
	Extend domestic water service	EA	1	\$4,000.00	1,200.00	2,800.00	0.00	\$4,000		
	Electric water cooler	EA	2	\$1,742.00	398.00	1,344.00	0.00	\$3,484		
	Water closet	EA	10	\$1,453.00	455.00	998.00	0.00	\$14,530		
	Urinal	EA	2	\$1,713.00	468.00	1,245.00	0.00	\$3,426		
	Lavatory	EA	12	\$1,024.00	359.00	665.00	0.00	\$12,288		
	Mop sink	EA	2	\$946.00	259.00	687.00	0.00	\$1,892		
	Plumbing drains & specialty	SF	9,600	\$0.50	0.15	0.35	0.00	\$4,800		
	Storm, waste, & vent piping	SF	9,600	\$3.40	1.40	2.00	0.00	\$32,640		
	Insulated domestic water piping	SF	9,600	\$4.10	1.90	2.20	0.00	\$39,360		
	Start-up & testing	SF	9,600	\$0.15	0.10	0.05	0.00	\$1,440		
									\$117,860	Total Plumbing
23	HVAC:									
	Dedicated outdoor air unit- 15 ton	EA	1	\$52,100.00	\$2,800.00	\$48,100.00	\$1,200.00	\$52,100		
	VRV condensing unit- 25 ton	EA	1	\$60,450.00	\$4,650.00	\$55,000.00	\$800.00	\$60,450		
	VRV evaporator unit w/ distribution box-	EA	13	\$4,881.00	\$656.00	\$4,225.00	\$0.00	\$63,453		
	Computer room cooling	SF	9,600	\$1.31	\$0.33	\$0.98	\$0.00	\$12,576		
	Insulated VRV piping	SF	9,600	\$3.08	\$1.30	\$1.78	\$0.00	\$29,568		
	Fire damper allowance	SF	9,600	\$0.12	\$0.03	\$0.09	\$0.00	\$1,152		
	Registers, grilles, diffuser	SF	9,600	\$0.55	\$0.10	\$0.45	\$0.00	\$5,280		
	Louvers & air intakes	SF	9,600	\$0.35	\$0.12	\$0.23	\$0.00	\$3,360		
	Sheetmetal ductwork	SF	9,600	\$4.50	\$1.50	\$3.00	\$0.00	\$43,200		
	Ductwork insulation	SF	9,600	\$1.15	\$0.50	\$0.65	\$0.00	\$11,040		
	Temperature control	SF	9,600	\$6.05	\$2.80	\$3.25	\$0.00	\$58,080		
	Start-up, test, and balance	SF	9,600	\$1.15	\$0.75	\$0.40	\$0.00	\$11,040		
									\$351,299	Total HVAC



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

NORTH ADDITION

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
26	ELECTRIC:									
	Panelboard	EA	4	\$5,875.00	\$1,650.00	\$4,225.00	\$0.00	\$23,500		
	Transformer allowance	EA	2	\$5,265.00	\$1,110.00	\$4,155.00	\$0.00	\$10,530		
	Equipment connection	SF	9,600	\$1.25	\$0.35	\$0.90	\$0.00	\$12,000		
	Power feeder conduit & wire	SF	9,600	\$0.60	\$0.15	\$0.45	\$0.00	\$5,760		
	Motor feeder conduit & wire	SF	9,600	\$1.50	\$0.55	\$0.95	\$0.00	\$14,400		
	Grounding system	SF	9,600	\$0.15	\$0.05	\$0.10	\$0.00	\$1,440		
	Interior lighting fixture	SF	9,600	\$5.00	\$1.75	\$3.25	\$0.00	\$48,000		
	Power/lighting device	SF	9,600	\$3.80	\$1.55	\$2.25	\$0.00	\$36,480		
	Branch circuit wiring	SF	9,600	\$3.00	\$1.40	\$1.60	\$0.00	\$28,800		
									\$180,910	Total Electric
27	COMMUNICATIONS:									
	Communication empty conduit system	SF	9,600	\$0.95	\$0.30	\$0.65	\$0.00	\$9,120		
	Tel/data empty conduit system	SF	9,600	\$1.17	\$0.22	\$0.95	\$0.00	\$11,232		
	CATV empty conduit system	SF	9,600	\$0.57	\$0.12	\$0.45	\$0.00	\$5,472		
									\$25,824	Total Communications
28	ELECTRONIC SAFETY & SECURITY									
	Fire alarm system	SF	9,600	\$2.15	\$0.65	\$1.50	\$0.00	\$20,640		
	Security system empty conduit	SF	9,600	\$0.90	\$0.15	\$0.75	\$0.00	\$8,640		
									\$29,280	Total Elec. Safety & Security
31	EARTHWORK:									
	Incl. w/ site work									



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14

FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

SITE WORK

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
01	GENERAL CONDITIONS:									
	General Conditions	%	5.00%	\$706,760			\$35,338	\$35,338	\$35,338	Total General Conditions
31	EARTHWORK:									
	Construction entrance	Ea	1	\$5,500.00			\$5,500	\$5,500		
	Sediment controls	Ea	1	\$20,000.00			\$20,000	\$20,000		
	Staging & trailer area	Ea	1	\$10,000.00			\$10,000	\$10,000		
	Rmv misc paving & curbs	Ls	1	\$5,000.00			\$5,000	\$5,000		
	Misc site demo	Ea	1	\$10,000.00			\$10,000	\$10,000		
	Rmv mech building & equip.	Ea	1	\$35,000.00			\$35,000	\$35,000		
	General grading	Sy	1,000	\$4.50			\$4,500	\$4,500		
	South addition grading	Sy	350	\$4.50			\$1,575	\$1,575		
	North addition grading	Sy	600	\$4.50			\$2,700	\$2,700		
	Misc. hand work	Hr	400	\$35.00			\$14,000	\$14,000		
	Misc. machine work	Hr	100	\$120.00			\$12,000	\$12,000		
	Layout	Ea	1	\$15,000.00			\$15,000	\$15,000		
									\$135,275	Total Earthwork
32	SITE IMPROVEMENTS:									
	Asphalt paving modifications	Sy	1,000	\$35.00			\$35,000	\$35,000		
	Sidewalk replacement	Sf	960	\$6.00			\$5,760	\$5,760		
	Interface repairs & modifications	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Monumental sign	Allow	1	\$30,000.00			\$30,000	\$30,000		
	Landscaping & irrigation	Allow	1	\$50,000.00			\$50,000	\$50,000		
	Traffic Circle -								\$124,475	
	Rmv Paving	Sf	450	\$1.50			\$675	\$675		
	Rmv curb & gutter	Lf	200	\$15.00			\$3,000	\$3,000		
	Misc. site demo	Ls	1	\$2,500.00			\$2,500	\$2,500		
	Grading	Sf	6000	\$2.50			\$15,000	\$15,000		
	Entrance drive / island	Sf	400	\$15.00			\$6,000	\$6,000		
	Asphalt paving	Sy	600	\$35.00			\$21,000	\$21,000		
	Curb & gutter	Lf	440	\$15.00			\$6,600	\$6,600		
	Brick sidewalks /concrete base	Sf	1,100	\$17.00			\$18,700	\$18,700		
	Hardscape	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Landscaping	Allow	1	\$15,000.00			\$15,000	\$15,000		
	Site lighting	Ls	1	\$7,500.00			\$7,500	\$7,500		
	Site furnishings	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Misc hand & machine work	Ea	1	\$3,500.00			\$3,500	\$3,500		
	Site restoration	Ea	1	\$5,000.00			\$5,000	\$5,000		
									\$255,235	Subtotal Site Improvements



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

SITE WORK

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
32	SITE IMPROVEMENTS:									
	Grass Amphitheater-	Allow	1	\$50,000.00			\$50,000	\$50,000		
	North Road -								\$87,750	
	Clear & grub	Ea	1	\$1,000.00			\$1,000	\$1,000		
	Grading	Sf	7000	\$2.50			\$17,500	\$17,500		
	Entrance drive / island	Sf	400	\$15.00			\$6,000	\$6,000		
	Asphalt paving	Sy	600	\$35.00			\$21,000	\$21,000		
	Curb & gutter	Lf	440	\$15.00			\$6,600	\$6,600		
	Sidewalk	Sf	1100	\$6.50			\$7,150	\$7,150		
	Adjust storm structures	Ea	4	\$2,500.00			\$10,000	\$10,000		
	Curb inlet & piping	Ea	1	\$6,500.00			\$6,500	\$6,500		
	Relocate light pole	Ea	1	\$3,500.00			\$3,500	\$3,500		
	Misc hand & machine work	Ea	1	\$3,500.00			\$3,500	\$3,500		
	Site restoration	Ea	1	\$5,000.00			\$5,000	\$5,000		
	Dumpster pad & enclosure	Ea	1	\$15,000.00			\$15,000	\$15,000		
	Site furnishings	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Flag poles & base	Ea	3	\$2,000.00			\$6,000	\$6,000		
	Site lighting	Ls	1	\$50,000.00			\$50,000	\$50,000		
									\$473,985	Total Site Improvements
33	UTILITIES:									
	Cap / remove utilities	Ls	1	\$7,500.00			\$7,500	\$7,500		
	Storm drainage modifications	Ls	1	\$10,000.00			\$10,000	\$10,000		
	Storm drainage connections	Ls	1	\$15,000.00			\$15,000	\$15,000		new additions
	Sanitary service	Ls	1	\$30,000.00			\$30,000	\$30,000		
	Domestic water service	Ls	0	\$0.00			\$0	\$0		Existing to remain
	6" Fire service	Ls	1	\$35,000.00			\$35,000	\$35,000		
									\$97,500	Total Utilities



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

HVAC OPTION 2

ARCHITECT: DEWBERRY ARCHITECTURE

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
HVAC OPTION 2										
West Wing										
No change										
Center Wing										
No change										
East Wing										
Demolition		SF	23,368	\$1.60	\$1.35	\$0.25	\$0.00	\$37,389		
Dedicated outdoor air unit- 15 ton		EA	1	\$52,100.00	\$2,800.00	\$48,100.00	\$1,200.00	\$52,100		
VRF condensing unit-40 ton		EA	1	\$96,050.00	\$7,250.00	\$88,000.00	\$800.00	\$96,050		
VRF evaporator unit w/ distrib. box- 2 ton		EA	20	\$4,881.00	\$656.00	\$4,225.00	\$0.00	\$97,620		
Computer room cooling		SF	23,368	\$1.31	\$0.33	\$0.98	\$0.00	\$30,612		
Insulated VRF piping		SF	23,368	\$2.95	\$1.30	\$1.65	\$0.00	\$68,936		
Fire damper		SF	23,368	\$0.12	\$0.03	\$0.09	\$0.00	\$2,804		
Registers, grilles, diffuser		SF	23,368	\$0.55	\$0.10	\$0.45	\$0.00	\$12,852		
Louvers & air intakes		SF	23,368	\$0.35	\$0.12	\$0.23	\$0.00	\$8,179		
Sheetmetal ductwork		SF	23,368	\$5.50	\$2.50	\$3.00	\$0.00	\$128,524		
Ductwork insulation		SF	23,368	\$1.15	\$0.50	\$0.65	\$0.00	\$26,873		
Temperature control		SF	23,368	\$5.25	\$2.40	\$2.85	\$0.00	\$122,682		
Start-up, test, and balance		SF	23,368	\$0.90	\$0.70	\$0.20	\$0.00	\$21,031		
									\$705,652	
									(\$853,367)	HVAC Option 1
									(\$147,715)	
									(\$47,269)	Markups
									(\$194,983)	Total Deduct



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 4 Appendices (2015)

07/14/14
FALLS CHURCH CITY HALL RENOVATION & ADDITION

LEWICKI ESTIMATING SERVICES, INC.
PRECONSTRUCTION SERVICES

CLARIFICATIONS AND QUALIFICATIONS

ARCHITECT: DEWBERRY ARCHITECTURE

- 1 All utility service & connection fees to be paid by owner
- 2 Inflation based on a 2015 construction start
- 3 Excluded -
 - All communications, telecom, security equipment, devices, & wiring by others
 - Hazardous material abatement is excluded
 - All FF&E by others
 - All work station furnishings



**Falls Church City Hall Improvements and
Public Safety Center Feasibility Study**

**Report 4
Appendices (2015)**

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**REPORT 4 – SCHEMATIC DESIGN
FINAL REPORT**

OCTOBER 2015

