



# FALLS CHURCH CITY HALL IMPROVEMENTS AND PUBLIC SAFETY CENTER FEASIBILITY STUDY



## REPORT 3 – RECOMMENDED NEXT STEPS FINAL REPORT

JANUARY 2012

PSA  Dewberry





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

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

### Report 3 Section 1 – Overview

#### A. Study History

In September 2007, the 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, Sheriff, Police, and City Hall functions). The Community Center and Mary Riley Styles Library were also included in the study.

This study produced two prior reports, Report 1 and Report 2 (completed in July 2008). Report 1 identified 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 down town 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 down town, 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 down town, 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, Sheriff) on the existing City Hall site. The library is relocated to a mixed-use facility down town, 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 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.



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#### B. Current Context

In the period between the conclusion of the effort summarized in Reports 1 and 2 (completed in July 2008) and the present (July 2011), a number of conditions surrounding the agencies and facilities included in this study have changed. Those changes include the following:

- The economy has worsened, resulting in staff layoffs and reductions in government operations.
- Several general government components have been 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 have occurred within the City Hall, which have improved conditions for those departments and which have brought their space current with many of the programmed space needs identified in Report 1.
  - The Commissioner of Revenue/DMV and Treasurer 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 will 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 is that the courthouse will continue to operate with compromises in the secure circulation for judges and in-custody defendants; that the existing police holding will continue to serve as the total holding available for the building, serving courts and police without complete sight and sound separation available



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### Report 3 Section 1 – Overview

for juveniles and adults, males and females; and that most of the building will not have dedicated restrooms for staff. Storage will continue to need to be improvised within work areas and built-ins will be required in most offices to accommodate the lack of dedicated storage rooms and/or closets. Staff will need to schedule carefully for use of collaboration and meeting rooms, as these will be limited in quantity and located for shared use.

The remaining space needs are allocated to one of the projects recommended for implementation in the near future, along with additional structural and building system improvements that will bring the building into more efficient and sustainable performance.

The summary space shortfall table and project areas for the short-term projects are shown in the Update to City Hall Space Needs Plan.

Please note that the shortfall included in this Report 3 does not include the full expansion that was estimated to be needed in Report 1 to accommodate long-term growth, industry standards for work areas, and for the building occupants' desired separation of secure and public operations. This reduced shortfall represents the space shortfall estimated based on current staffing, minimal expansion, and reduced estimates of shared spaces.



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## Report 3 Section 1 – Overview

Update to City Hall Space Needs/Plan (2011)

Prior Program Number	Space Name	2008 Estimate of Space Needs (DGSF)	2011 Estimate of Space Needs (DGSF)	Phase/Location/Details
1.000	Secure Lobby/Reception	2,103	0	n/a - no renovations planned
6.000	Registrar of Voters	1,438	-	n/a - already done
7.000	Commissioner Of Revenue/DMV Select/Treasurer, Water & Sewer Customer Service	5,700	-	n/a - already done
8.000	Housing & Human Services Administration	2,552	-	n/a - already done
11.000	Clerk of the Court	2,882	-	n/a - renovations not part of this effort
12.000	Court Services Unit	2,558	-	n/a - off site
13.000	Court Set	3,611	-	Minimal improvements with Project 4
15.000	Inmate Processing	2,037	-	n/a - no renovations planned
15.100	Juvenile Holding	630	-	n/a - no renovations planned
15.200	Adult Holding	868	-	n/a - no renovations planned
100.000	Building Shared	7,277	-	Minimal improvements with Project 4
2008 Estimate of Long-Term Space Needs		<b>29,552</b>	<b>0</b>	<b>0%</b>

### Project 1 (POLICE EXPANSION / CENTRAL FRONT ENTRANCE)

1.000	Public Building Entrance	3,806	1,500	Complete as part of new addition
20.000	Training/Roll Call	1,150	3,800	Complete as part of new addition
21.000	Report Writing	613		Complete as part of new addition
22.000	Locker/Fitness	3,125		Minor changes through renovation.
23.000	Services Division (partial)	3,135		Minor changes through renovation.
25.000	Evidence Processing	459		Complete as part of new addition
26.000	Evidence Storage	378		Complete as part of new addition
27.000	Equipment Room/Armory	1,430		Complete as part of new addition
28.000	Vehicle Prep Bay and Officer Entrance	3,105		Reduced to exterior space only.
2008 Estimate of Long-Term Space Needs		<b>17,201</b>	<b>5,300</b>	<b>31%</b>

### Project 2 (CRITICAL INTERNAL RENOVATIONS AND INFRASTRUCTURE UPGRADES)

*NO BUILDING SPACE CREATED.*

### Project 3 (CITY CAMPUS PARKING IMPROVEMENTS)

*NO BUILDING SPACE CREATED.*

### Project 4 (REAR EXPANSION AND SPACE REALIGNMENT)

1.000	Public Building Entrance	n/a	1,500	West Wing, remainder of 1st floor
2.000	City Manager/Economic Development/Communications	4,948	3,700	1,600 in new addition, 3rd floor. Rest in 3 East.
3.000	City Attorney	1,796	1,000	3 East
4.000	City Council/Administrative Mtg Suite	756	-	n/a - included in east wing renovation.
5.000	Administrative Services - (Fin / IT), Human Resources	4,604	3,600	1,400 in new addition, 3rd floor. Rest in 3West.
9.000	Development Services / Public Works	9,126	4,500	West Wing, 1st and 3rd floors
14.000	Sheriff's Department Staff Areas	5,216	1,000	
16.000	Community/EOC	2,714	1,000	In existing G corridor area
17.000	Victim/Witness/Interview Area	689		
18.000	Police Administration	2,194	8,400	Space currently located in G2 and G3 East.
19.000	Police Operations Division	1,885		
23.000	Services Division (partial)	3,135		
24.000	Special Operations	405		
2008 Estimate of Long-Term Space Needs		<b>37,598</b>	<b>24,700</b>	<b>66%</b>

<b>GRAND TOTALS</b>		<b>84,351</b>	<b>30,000</b>	<b>36%</b>
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## **Falls Church City Hall Improvements and Public Safety Center Feasibility Study**

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### **Report 3 Section 1 – Overview**

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

Beyond the first five-year window addressed in the previous materials, which deal with space needs for City Hall, this study has also identified the long-term space needs for the Mary Riley Stiles Library and the Community Center. Neither of these facilities is included in the five-year window of urgency; however, both facilities will require increased space during the 20-year planning window encompassed by this study.



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

### Report 3 Section 2 – Facility Evaluation

#### A. Overview

In September 2007, 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 in order 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.** 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
  - o Exterior
  - o Interior
  - o Use Group and Construction Type
  - o Building Code
  - o Accessibility Code
  - o Envelope
- Engineering
  - o Mechanical
  - o Plumbing
  - o Fire Protection
  - o Electrical
- Hazardous Materials

#### B. Architectural Analysis

##### 1. 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



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### Report 3 Section 2 – Facility Evaluation

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, and includes basements under the Wings and a crawl space below the Courtroom/Chambers. 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 east-west Chambers Wing in 1956 and the later north-south East Wing in 1982 (with renovations to the initial facility at that time). 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 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



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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.

#### 2. 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. 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.

#### 3. 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. The elevator cabs and controls should be further evaluated for replacement.

#### 4. 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 is separated from the 1956 initial building by 2-hour fire resistance rated construction.



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### Report 3 Section 2 – Facility Evaluation

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 Wing creates problems of access, egress and wayfinding.

#### 5. 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 draftstops 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.



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- Stairs are lacking gates to prevent occupants from continuing to travel down below at the level of exit discharge.

#### 6. 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.

#### 7. 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.
- The thin brick has fallen off of the north chimney on the East Wing.



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### Report 3 Section 2 – Facility Evaluation

- The wood single-pane windows in the 1956 portions of the building have exceeded their expected useful lifespan.
- 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.

#### C. Engineering Analysis

##### 1. Mechanical

The original building's mechanical system consists of a cooling tower, chiller and a boiler providing hot water and chilled water to an air handling unit (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 very old. The cooling tower and air handling unit have been replaced recently; the cooling tower two months ago and air handling unit one year ago. All air-cooled split A/C system equipment is relatively new. The piping system is original.

The Renovation and Addition area mechanical system is independent from the 1956 building 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 eleven (11) ducted water-source heat pump units and forty-two (42) console type water-source heat pump units. Six (6) ducted units and two (2) console type units have been replaced within past five years. The cooling tower was replaced two years ago.

##### 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:





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### Report 3 Section 2 – Facility Evaluation

#### 1956 Original Building:

- 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:

- 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, many pieces of heat producing equipment are located in one workstation causing uncomfortable conditions.

#### 1956 Original Building:

- 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.
- 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.



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#### 1982 Renovation and Addition:

- 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.

#### 2. Plumbing and Fire Protection

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. A domestic water heater in each of the two mechanical rooms provides hot water to the building. The heaters appeared to be operational and in fair condition. 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

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

##### 1982 Renovation and Addition

- 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.

#### Findings

The plumbing piping in the 1956 building is original and is at the end of its useful life. The plumbing piping in the 1982 addition is approximately 25 years old and would 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 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.



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

### Report 3 Section 2 – Facility Evaluation

#### 3. Electrical

##### a. Service and Distribution

The existing 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.

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. 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.



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

### Report 3 Section 2 – Facility Evaluation

#### b. Emergency Power

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

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.

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 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 this portable generator will need to be connected via the pedestal, started manually, and the double throw switch will need to be turned from utility supply to generator supply. Upon return of utility power the generator will need to be turned off, and the loads need to be transferred over to utility power. The building emergency system also serves the fire alarm system and communication equipment.

#### Findings

The building emergency generator is in working condition. The emergency distribution system (switches, panels, etc.) are 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 a new properly sized generator and distribution equipment be installed for the entire building.



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

### Report 3 Section 2 – Facility Evaluation

#### c. Lighting

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 getting old for the most part. It is recommended that instead of replacing existing ballasts or other fixture components, 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.

#### d. 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.



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

### Report 3 Section 2 – Facility Evaluation

#### 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.

##### 1. 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.

##### 2. 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,



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

### Report 3 Section 2 – Facility Evaluation

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.

### 3. Cost Estimates <sup>1</sup>

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.
- 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

<sup>1</sup> 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.



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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.

- 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.





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

### Report 3 Section 3 –Recommended Building Utilization and Phasing Plan

#### A. Modified Building Utilization Plan - Overview

The prior studies produced three options, described in the previous section of this report. A review process was conducted, which consisted of a presentation to City Council and subsequent meetings with City staff. Although at the end of the review process preference was given 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. 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. If done in a logical and incremental manner, this plan will fit within the budget, will resolve the most serious facility issues, and will produce a better organization of components within the building.

This plan was developed by City staff, architects from the Falls Church firm Butz & Wilburn, and the Master Plan contractor, PSA-Dewberry. Working together, a plan emerged which can mitigate the highest priority concerns.

The revised plan focuses on strategies to work toward 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).



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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 like a complete court set.
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).

Two clear projects emerged which can advance multiple goals on the list, and which can be accomplished with reasonable expenditure. These two projects add new space which allows the first of a series of moves and renovations to occur. A third project enhances the parking to improve circulation and add capacity to serve the City Hall, the Library, and the Community Center. A fourth project was developed to complete the build-out of necessary space at the rear of the City Hall, allowing the final moves and renovations to complete the modernization and re-organization for optimal operational efficiency. These four projects comprise the recommended next steps for City Hall, through the Modified Building Utilization Plan.

#### **B. Parking Analysis – City Hall/Community Center Site**

The parking needs at the City Hall/Community Center site are a concern, as there is currently limited parking, and any building expansion will remove, rather than adding, parking. Given this concern, a parking analysis was completed to determine strategies for best matching the parking needs in each option with parking possibilities at the City Hall/Community Center site. The total parking analysis is included in Report 2. This summary includes the details pertinent to the selected scenario, modified for the adjustments to the program.



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

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Current parking at the City Hall is 123 spaces; there are 78 additional spaces near the Community Center, for a site total of 201 parking spaces. The estimated demand for parking was calculated based on estimated staff, visitor visits, and duration of stay for visitors at the City Hall. The City Hall parking needs alone (not including the Community Center) includes 169 staff vehicles, 12 city vehicles, and approximately 80 visitor vehicles at any given time, for a total parking demand of 261 spaces. The Community Center registers a regular need for 128 parking spaces, for a total site demand of 389 parking spaces.

It is important to note that the estimated demand was based on peak demand, and results in a parking-per SF ratio which exceeds the standard of one parking space per 300 SF of building area. The court, for example, has intermittent surges in visitor parking demand which is disproportionately high compared to the square footage of that function on mornings when court is scheduled. Similarly, the Community Center experiences peak volume of visitors in afterschool hours. These peak demands were built into the overall estimate of parking demand, and may result in a surplus of parking for these two functions at non-peak times. Judgment and careful design will be required to assess the optimal number of parking spaces to construct. A pragmatic decision may be made to construct fewer than this report's assessed needs, which will result in an assumption of shared parking at alternate times between the Community Center and the City Hall.

The addition on the front of the City Hall building, included in all three options, will result in a reconfiguration of the parking area in front of the building. Modifications can be made to convert the triangle in front of the building to a small parking area with approximately 46 spaces. A part of this additional parking may be below grade, as secure police and judge parking. Some existing spaces may be lost to create the entrance and exit driveways for this lot, and to provide the structural support for the secure underground parking. These modifications will remove several trees but will help to create better visibility for the City Hall building, and will increase the visual perception that this building is part of the new downtown area. This parking area must be carefully designed to maximize the number of spaces created. **Total +46**

Slight modifications to the parking on the East Wing of the City Hall can add five spaces on the lane closest to the building and seven spaces on the side away from the building, for a total of 12 additional parking spaces. These modifications will require some tree removal, but are also recommended for all three options. **Total +12**

The selected scenario includes a large building expansion to the rear, resulting in the loss of approximately 96 existing parking spaces. A complete reconfiguration of the existing parking area with 15% landscaping<sup>1</sup> results in an increase of 46 spaces (and a loss of a

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<sup>1</sup> An alternative plan using 10% landscaping could potentially provide 16 additional parking spaces.



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number of trees). Together with the creation of four new parallel spaces by the park, this option results in a net loss of a total of twenty parking spaces. **Total -46**

The driveway in front of the Community Center can be widened slightly to provide four handicapped parallel spaces in front of the Community Center. **Total +4**

Estimated parking totals for the selected option are shown in the table on the following page.

**Parking Analysis**

		City Hall	Community Center	Total
		<b>NEED:</b>	261	128
				<b>389</b>
Now		123	78	201
Front Addition and Parking Modifications		46		
	Gain 46 (front)	46		
East Wing Modifications		12		
	Gain 5 (efficiency)	5		
	Gain 13 (efficiency)	7		
Rear Parking Modifications		41	-5	
	Lose 96 (existing)	-14		
	Gain 46 (new layout) <sup>1</sup>	46		
	Gain 4 (parallel)	4		
Side Handicapped Parking			4	
	Gain 4 (parallel)	4		
Total Estimated Parking		222	77	299
<b>Estimated Parking Shortfall</b>		<b>39</b>	<b>51</b>	<b>90</b>

With the parking reconfigured as recommended, this site can provide approximately 201 spaces, for a total shortfall of 90 spaces.

It is recommended that the City explore options for an adjacent parking solution within a one-block walking distance in conjunction with the recommended on-site improvements, perhaps as part of one of the new development initiatives in the downtown core, in the event that the shortfall of 90 spaces cannot be mitigated through sharing of parking on off-peak hours.



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### Report 3 Section 3 – Recommended Building Utilization and Phasing Plan

#### **C. Modified Building Utilization Plan – Details of Projects 1, 2, 3, and 4**

The following descriptions and images describe the changes for Projects 1, 2, 3, and 4. Projects which are not visible at this scale are indicated in the descriptions and the key as list items, but are not shown visibly.

#### **Project 1 - Design and construct City Hall/Public Safety expansion for the front of the Harry E. Wells Municipal Building, including a basement level addition.**

Project 1 will occur over two fiscal years, FY 2012 and FY 2013. When completed, this project will provide a new front entrance consisting of approximately 3,200 SF of space for a new two story (approximately one 1,500 SF story above grade, one 1,700 SF story below grade) infill between the east and west wings, in front of the Harry E. Wells Municipal Building. The 1,700 SF of basement space will provide an addition to the Police Station which will serve as the first phase of renovations and improvements to the police space. The basement addition will improve the evidence and report storage areas and will allow foundation repairs to mitigate flooding. This step, the first in a series of moves, will ultimately (upon completion of Project 4) allow the police personnel to vacate space which is insecure, poorly planned, and prone to flooding. The space which is unsuitable for staff will be repurposed for storage and building infrastructure.

On the first floor, the approximately 1,500 SF of new space will offer a new front entrance to the building, complete with handicapped accessible and security screening features. The new space will be contiguous to the west wing, which will allow a partial renovation to create public restrooms and small meeting rooms which can be used after hours or in tandem with the council chambers. Project 4 will complete this meeting suite with a large flexible meeting space appropriate for a variety of government and community meetings. The new space will also build toward the ultimate goal of allowing the Development Services and the Public Works Department to create a new public service counter on the first floor of the west wing, which will give that high-traffic area easy access to their service counter. That step will not be completed until Project 4, when Human Resources and Real Estate will move out of the west wing first floor.

Although the addition will not provide the full 17,200 SF which were recommended in 2008, the approximately 3,200 SF of additional (new) space for the central front entrance that will be provided will be crafted to serve multiple purposes and maximum efficiency, and approximately 2,100 SF of renovations to existing space on G2 East. This project also provides the critical swing space to allow the first step of necessary renovations and moves for other building tenants.

The Central Front Entrance (Project 1), targeted for FY 2012, will provide:



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### Section 3 –Recommended Building Utilization and Phasing Plan

- a. ADA-compliant public restroom(s) near a new centralized public entrance.
- b. ADA-compliant access to the courtroom/Council Chambers, as well as to first floor services on both east and west wings.
- c. Public meeting rooms to augment the Council Chambers and courtroom, which can also be configured for a variety of other purposes.
- d. Security queuing and screening for the courtroom, City Council, School Board, Planning Commission, and other users of Chambers, plus the addition of some essential spaces to complete the court set/Council Chambers.
- e. Easy way finding and access through the front entrance to customer service windows for frequently used services associated with utility bill payment, licenses, and permits.
- f. Expansion for the Police Station on the basement level, to include a range and quality of space more appropriate to the industry standard for police stations which is more conducive to the security and isolation required for certain police functions.

In addition to providing much-needed additional space for several building functions, this project will also accomplish the following broader goals related to building infrastructure, life safety, or code compliance:

- g. Correction and improvements to the fire suppression system, to provide sprinklers in areas current not sprinklered, and to replace water-based suppression systems with non-water-based systems in the IT server room.
- h. Correcting the stormwater runoff/water seepage issue at the foundation level, which affects both the Police Station IT server room and the police evidence processing and storage areas, as well as other areas in City Hall.
- i. Phase 1 of roof repairs required to allow for safer snow off-loading and drainage, including replacement of gutters, downspouts, sump pump repair, and cleanouts for stormwater removal system.
- j. Elevator overhaul and/or replacement, which will provide for reliable ADA-compliant access. This project will also give access to the sump pump underneath the elevator, which will permit improvements to separate oil and water for more appropriate disposal of both.
- k. Removal and replacement of asbestos floor tiles, damaged wall coverings, and ceiling tiles in contiguous basement and first floor areas.
- l. Addition of secured police parking, area for secure police sign-out of equipment, and sally port for secure prisoner and judge movement.



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#### **Project 2 - Design and complete additional City Hall/Public Safety expansion through internal renovations and improvements to existing spaces, including infrastructure upgrades and Hazmat abatement.**

Project 2 is a renovation project which continues a range of life-safety and infrastructure improvement projects to improve the facility's performance, as well as some scheduled maintenance for wear and tear, and interior. This renovation project is targeted for FY 2013 as a follow-on to Project 1, and will include the following components:

- a. Life-safety improvements to fully sprinkler the unsprinklered portions of the building.
- b. System improvements to repair the aging/costly HVAC system and to remove all remaining asbestos in the West Wing, and/or replace the existing system with a more efficient system.
- c. Phase 2 of roof repairs required to allow for safer snow loading.
- d. Door and window replacement for energy efficiency.
- e. Replacement of all remaining pre-2006 carpet, and repainting all interior walls.

#### **Project 3 - City Campus Parking Expansion and Reconfiguration**

The shared parking lot which serves the City Hall, Police Station, Community Center, Library, Cherry Hill Farmhouse and Park, Courts, Farmer's Market, and Special Community Events offers fewer spaces than those required for the varied functions. Reconfiguring and expanding the parking lot will provide better circulation around the buildings for safer traffic flow, secure parking for the Police Department vehicles, and a greater number of parking spaces for the public.

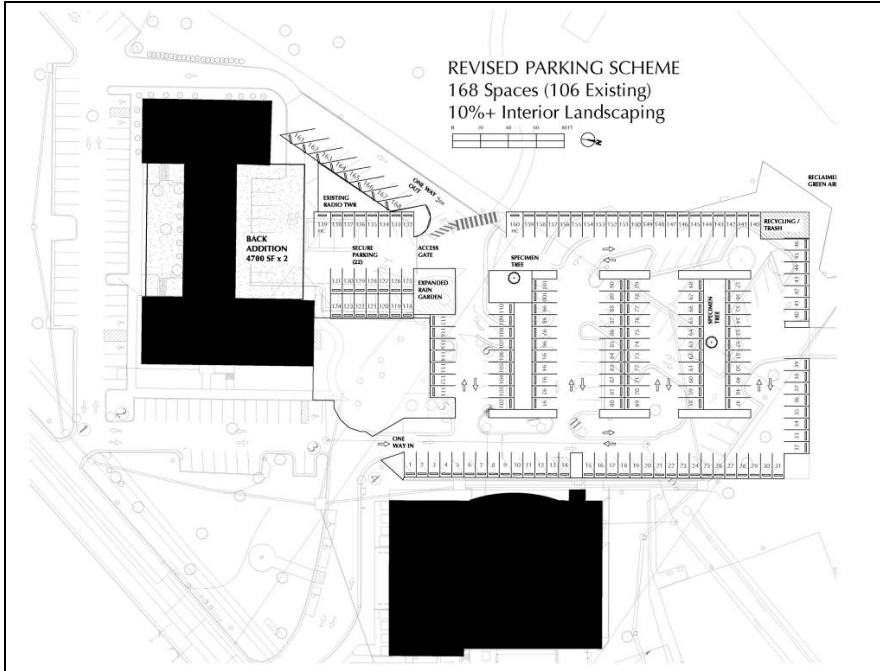
Two scenarios were devised for increasing parking capacity and correcting certain traffic flow issues. The first scenario increases parking from 106 to 168 spaces, with some encroachment onto existing parkland. The second increases the capacity from 106 to 152 spaces, with minimal encroachment on what is currently parkland. Both plans comply with Chesapeake Bay stormwater requirements, and retain as many trees as possible.



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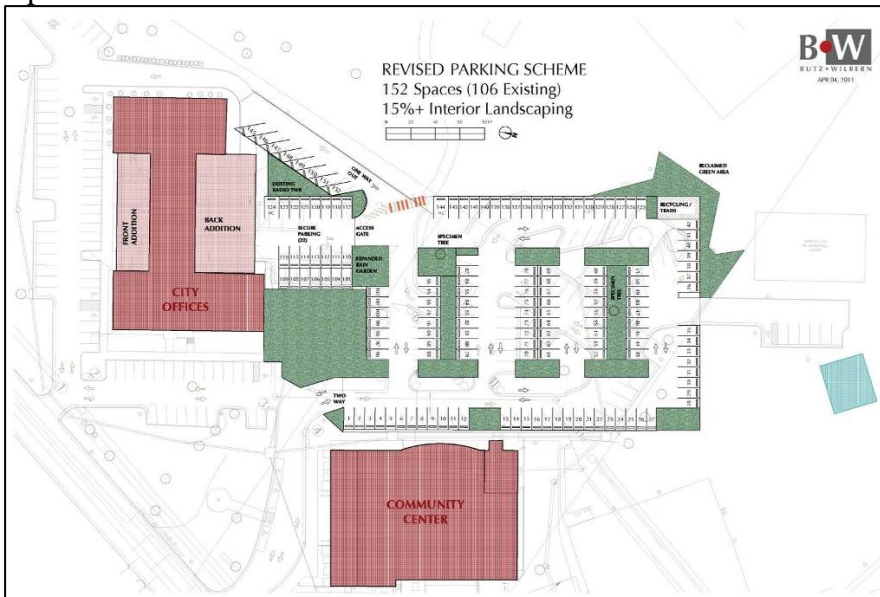
## Report 3 Section 3 – Recommended Building Utilization and Phasing Plan

### Option 1



Source: Butz & Wilburn, Falls Church, VA

### Option 2



Source: Butz & Wilburn, Falls Church, VA





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

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### Section 3 – Recommended Building Utilization and Phasing Plan

#### **Project 4 – City Hall Expansion – Rear Addition and Infill**

Scheduled for implementation in 2016, Project 4 is the final step in this multi-phase re-organization and modernization of the City Hall. Where most prior steps focused on infrastructure upgrades, this phase has the single goal of providing the final space required to permit all remaining renovations and moves to occur within the City Hall. This final project will re-organize and consolidate like government functions in shared work spaces for greater operational efficiency, either relative to one another or to the building entrance, and will complete the circulation linkage between the east and west wings on the third floor.

Project 4 will add an approximately 6,000-8,000 total DGSF two-story infill to the back of City Hall, aligning with the first (Courtroom/Chambers) and third floor East Wing of the existing structures. A new staff corridor will connect the building wings along the rear of the existing courtroom/chambers portion of the building, providing indirect light into the courtroom/chambers and allowing access between floors of the building and to the new addition.

Specific projects made possible by this addition will include:

- Development of a new EOC space along the area which is now the G corridor.
- Addition of new Police Department space for Administration, Operations, and Special Operations.
- A final phase of reconfiguration and renovation of Police Station operations, which will ultimately lead to the ability to create new Dispatch/Communications, emergency operations, and evidence/weapon storage areas.
- Renovation of former Police Department space in G2 into a dedicated Sheriff's Department space, which is needed for the Sheriff to relinquish space which will become the final judge's chambers and meeting space outside the courtroom/Council Chambers room.
- Completion of renovations to the west wing to add the areas and accessible restrooms to complete the new Public Building Entrance and meeting spaces for independent after-hours use without leaving the whole building open.
- Creation of the Development Services counter on the first floor of the West Wing, as a completion of the consolidation of that department in the West Wing with one-stop public counter on the ground floor.
- This addition will also create the roof over the police parking in the rear of the building.
- The third floor of the addition will create the short- and long-term expansion space needed for the remainder of general government, including the City Attorney, the City Manager, Economic Development, Communications, and any government consolidation with other agencies.



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### Report 3 Section 3 – Recommended Building Utilization and Phasing Plan

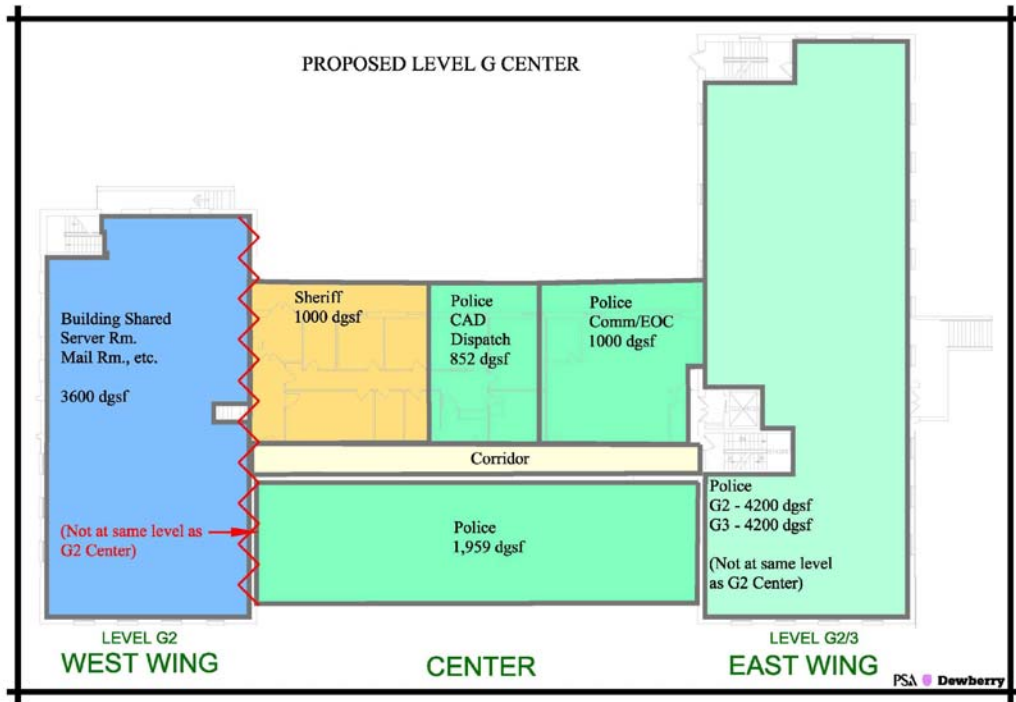
#### D. Projects 1, 2, and 4 - Area Summary (Estimated DGSF)

The table below summarizes the anticipated departmental gross square feet of space, or DGSF, that will be added with the recommended project improvements. Note that these spaces are estimated, and can only be finalized in the design phase. Existing departmental gross square feet is estimated based on takeoffs from existing CAD plans.

#### Area Summary (Estimated DGSF) by floor and building location<sup>2</sup>

Area Summary (Estimated DGSF)							
EXISTING	Third Floor	Second Floor	First Floor	G Level	G-2 Level	G-3 Level	TOTALS
Existing East Wing	5,914	-	5,914		5,914	4,197	21,939
Existing West Wing	4,197	-	4,197		4,197		12,591
Existing Center (Chamber/Courtroom)	-	3,318		3,318			6,636
<b>Existing Totals</b>	<b>10,111</b>	<b>3,318</b>	<b>10,111</b>	<b>3,318</b>	<b>10,111</b>	<b>4,197</b>	<b>41,166</b>
NEW	Third Floor	Second Floor	First Floor	G Level	G-2 Level	G-3 Level	TOTALS
New Main Entry (estimated DGSF)			1,500	2,000			3,500
New Office Addition (estimated DGSF)	3,000		3,000				6,000
<b>New Totals</b>	<b>3,000</b>		<b>4,500</b>				<b>7,500</b>
<b>GRAND TOTALS</b>	<b>13,111</b>	<b>3,318</b>	<b>14,611</b>	<b>3,318</b>	<b>10,111</b>	<b>4,197</b>	<b>48,666</b>

#### E. Final Buildout Conceptual Sketches, Projects 1, 2, and 4.

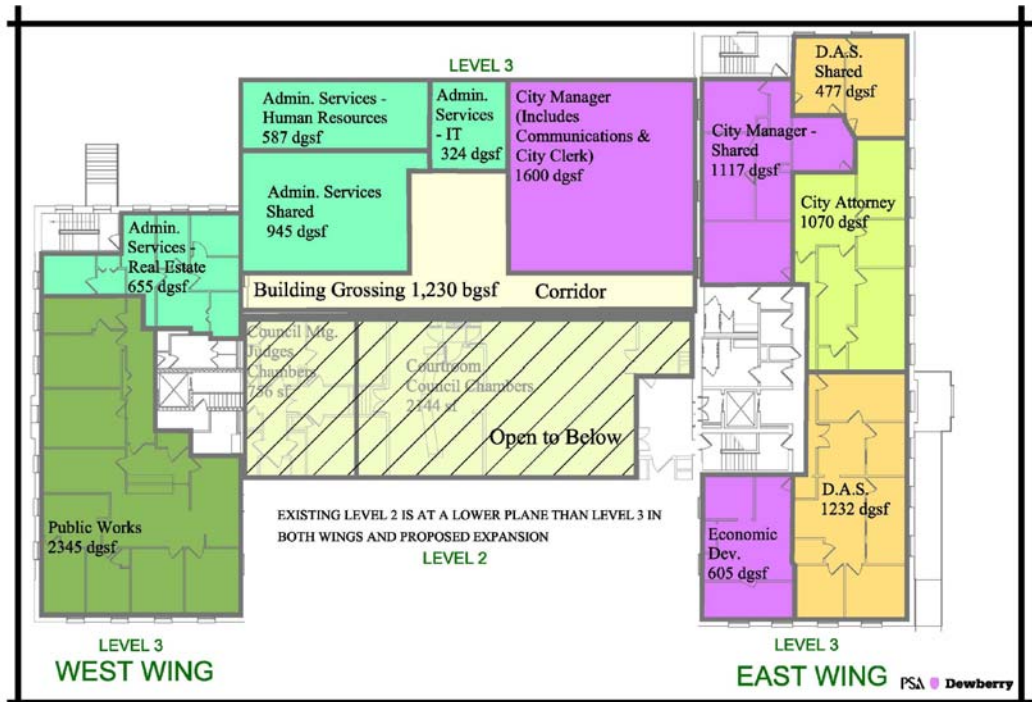
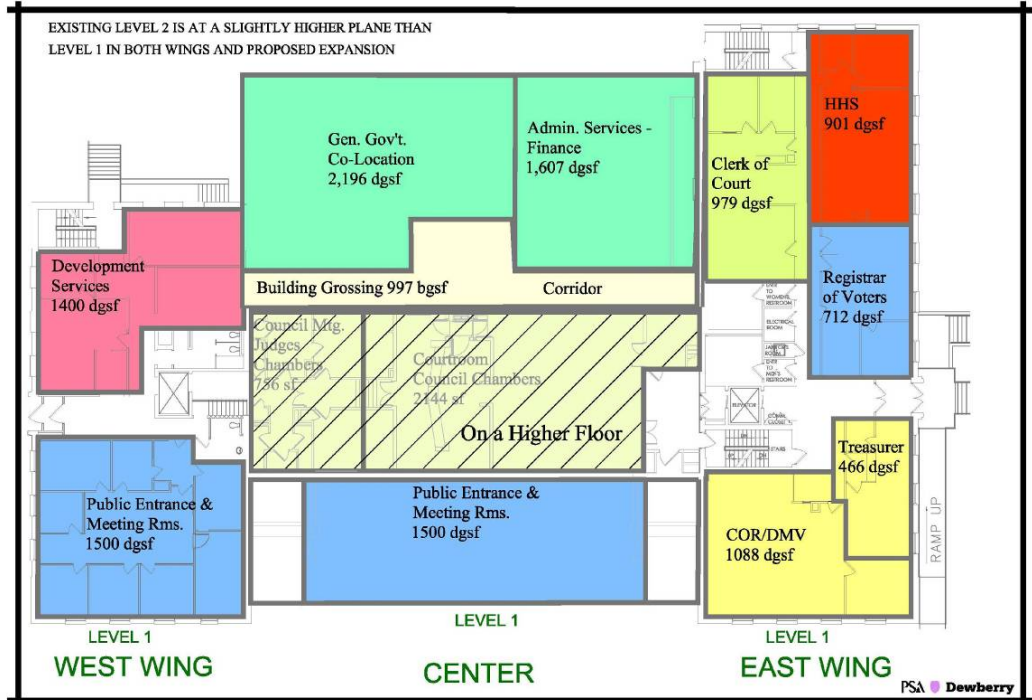


<sup>2</sup> Note that because not all spaces in the building are being renovated, this total SF will be higher than the one shown in the summary of the space to be modified in all projects.



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

## Report 3 Section 3 – Recommended Building Utilization and Phasing Plan

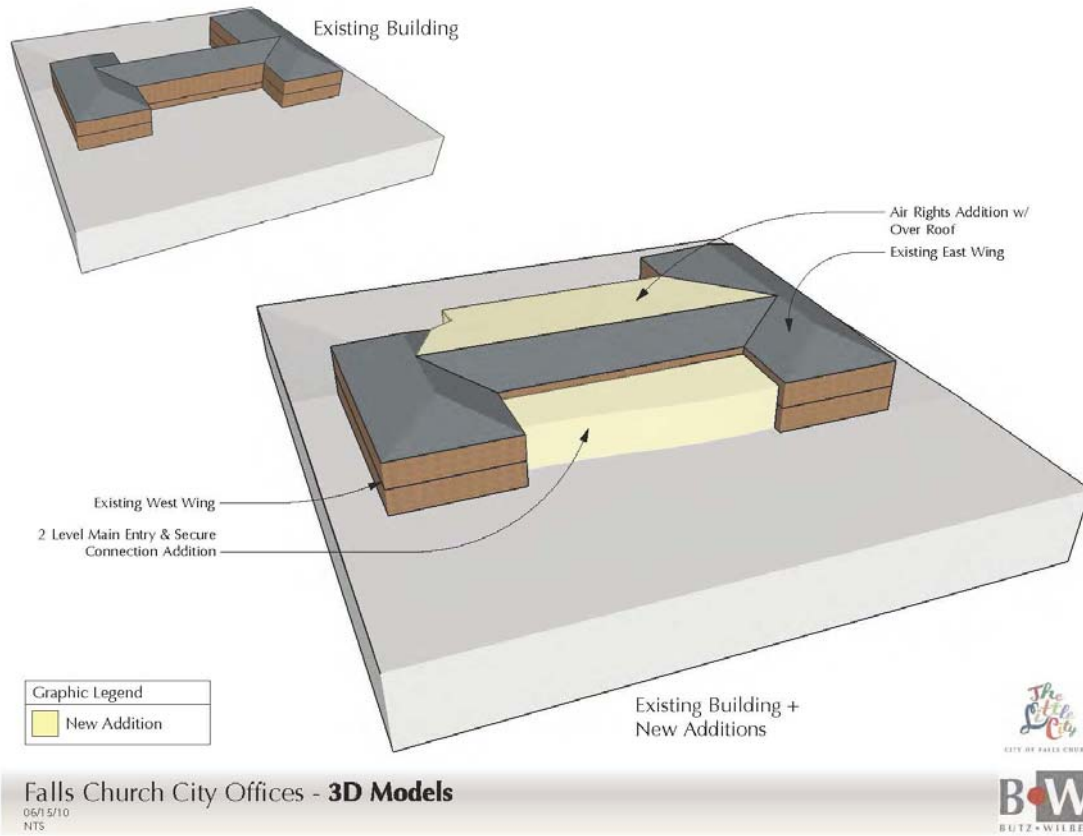




# Falls Church City Hall Improvements and Public Safety Center Feasibility Study

## Report 3 Section 3 – Recommended Building Utilization and Phasing Plan

### F. 3D Models, Final Buildout



Source: Butz & Wilburn, Falls Church, VA



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

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### Report 3 Section 4 – Cost Estimates

#### **A. Cost Estimating Process**

In November 2011 the City of Falls Church contracted with a third party cost estimator to develop cost estimates on the proposed Projects 1 and 2. These estimated costs are more detailed than general order of magnitude cost estimates, but as design is not yet completed on any of the Project 1 or 2 tasks, these are not detailed construction cost estimates. In some cases the cost estimator made design or material-based assumptions, which are included in the details of the estimate. Contingency factors of 10% to 25% are included depending on the number and range of assumptions which could prove contrary to the approach chosen once design is completed for each item in question.

These cost estimates are included in B. Cost Estimates. A subsequent section, summarizes the costs by CIP year and priority, giving a complete picture of the anticipated expenditures by the City.

#### **B. Cost Estimates**

*See next page.*





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

## Report 3 Section 4 – Cost Estimates

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES  
PROJECT 1

11/30/11  
FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
3	Foundation Water Seepage Repairs									
	Curb inlet	Ea	1	\$5,000.00			\$5,000	\$5,000		
	Piping	Lf	55	\$90.00			\$4,950	\$4,950		
	Patch paving	Ls	1	\$4,500.00			\$4,500	\$4,500		
	Modify existing inlet	Ea	1	\$2,500.00			\$2,500	\$2,500		
	Area drain @ landscape area	Ea	1	\$1,500.00			\$1,500	\$1,500		
	Trench drain	Lf	7	\$150.00			\$1,050	\$1,050		
	Sidewalk repairs	Ls	1	\$2,500.00			\$2,500	\$2,500		
									\$22,000	
									\$3,300	General Conditions 15%
									\$2,530	GC OH & P 10%
									\$557	P & P Bond / Insurance 2%
									\$7,097	Contingency 25%
									\$1,774	Inflation 5%
									\$37,257	Total Construction Cost
									\$5,589	Engineering & Design 15%
									\$3,726	Falls Church Project Management 10%
									\$46,572	Total Cost
									USE	
									\$50,000	
5	ELEVATOR OVERHAUL									
	Rmv existing elevators	Ea	2	\$10,000.00			\$20,000	\$20,000		
	Electrical disconnect	Ea	2	\$500.00			\$1,000	\$1,000		
	New elevator	Ea	2	\$135,000			\$270,000	\$270,000		Olis Gen2 or equal
	Electrical connection	Ea	2	\$5,000.00			\$10,000	\$10,000		
	Elevator pit modifications	Ea	2	\$7,500.00			\$15,000	\$15,000		
	Sum pumps & discharge	Ea	2	\$3,500.00			\$7,000	\$7,000		
	Interface repairs	Allow	2	\$10,000.00			\$20,000	\$20,000		
									\$343,000	
									\$27,440	General Conditions 8%
									\$37,044	GC OH & P 10%
									\$8,150	P & P Bond / Insurance 2%
									\$83,127	Contingency 20%
									\$24,938	Inflation 5%
									\$523,698	Total Construction Cost
									\$52,370	Engineering & Design 10%
									\$52,370	Falls Church Project Management 10%
									\$628,438	Total Cost
									USE	
									\$630,000	
									\$0	
									\$0	
									\$0	
									\$0	TOTAL

11/30/11

FALLS CHURCH CITY HALL IMPROVEMENTS & PUBLIC SAFETY CENTER FEASIBILITY STUDY

LEWICKI ESTIMATING SERVICES, INC. PRECONSTRUCTION SERVICES

PROJECT 1



Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 3 Section 4 – Cost Estimates

Table with columns: NO., DESCRIPTION, UNIT, QUANTITY, UNIT COST, LABOR, MATERIAL, EQUIPMENT/SUBCONTRACT AMOUNT, TRADE SUBTOTAL, COMMENTS. Includes sections for ASBESTOS ABATEMENT and POLICE EVIDENCE & PROCESSING.





Falls Church City Hall Improvements and Public Safety Center Feasibility Study

Report 3  
Section 4 – Cost Estimates

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES

11/30/11  
FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

PROJECT 1

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
9	SECURED PARKING & SALLY PORT									
	Secured Parking									
	W/ fence	Lf	300	\$75.00			\$22,500	\$22,500		
	Motor operated gates	Ea	1	\$15,000.00			\$15,000	\$15,000		
	Man gates	Ea	2	\$2,000.00			\$4,000	\$4,000		
	Card access	Ea	4	\$3,500.00			\$14,000	\$14,000		
	Security cameras	Allow	1	\$10,000.00			\$10,000	\$10,000		
	Site lighting modifications	Allow	1	\$15,000.00			\$15,000	\$15,000		
	Paving modifications & repairs	Ea	1	\$2,500.00			\$2,500	\$2,500		
	Site restorations	Ea	1	\$3,000.00			\$3,000	\$3,000		
	Sally Port Canopy									
	Column footings & piers	Ea	4	\$900.00			\$3,600	\$3,600		
	Metal canopy	Sf	350	\$40.00			\$14,000	\$14,000		
	Canopy/lighting	Ls	1	\$2,500.00			\$2,500	\$2,500		
	Relocate camera	Ea	1	\$1,000.00			\$1,000	\$1,000		
	Storm drainage	Ea	1	\$2,000.00			\$2,000	\$2,000		
								\$109,100		
								\$8,728	General Conditions 8%	
								\$11,783	GC OH & P 10%	
								\$2,592	P & P Bond / Insurance 2%	
								\$26,441	Contingency 20%	
								\$7,932	Inflation 5%	
								\$166,576	Total Construction Cost	
								\$16,658	Engineering & Design 10%	
								\$16,658	Falls Church Project Management 10%	
								\$199,891	Total Cost	
								USE	\$200,000	
								\$0	\$0	TOTAL
								\$0	\$0	\$0



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

**Report 3  
Section 4 – Cost Estimates**

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES

11/30/11  
FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

PROJECT 1

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE		COMMENTS	
									AMOUNT	SUBTOTAL		
10	<b>WEST WING CARPET &amp; WALL COVERING</b>											
	Rmv & replace carpet	Sy	60	\$35.00			\$2,100	\$2,100				
	Vinyl base	Lf	150	\$2.00			\$300	\$300				
	Rmv wall covering	Sf	1,400	\$0.60			\$840	\$840				
	Prep & paint wall	Sf	1,400	\$1.00			\$1,400	\$1,400				
	Rmv & replace acoustical ceiling	Sf	460	\$3.50			\$1,610	\$1,610				
									\$6,250			
									\$938		General Conditions 15%	
									\$1,078		GC OH & P 15%	
									\$165		P & P Bond / Insurance 2%	
									\$1,686		Contingency 20%	
									\$506		Inflation 5%	
									\$10,623		Total Construction Cost	
									\$1,062		Engineering & Design 10%	
									\$1,062		Falls Church Project Management 10%	
									\$12,748		Total Cost	
								USE				
									\$13,000			
11	<b>DESIGN OF CENTRAL ENTRANCE</b>											
	Central Entrance A/E Services	Ls	1					\$300,000				
									\$0	\$0	\$0	TOTAL



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

## Report 3 Section 4 – Cost Estimates

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES

11/30/11  
FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

PROJECT 1

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
12	<b>CENTRAL ENTRANCE EXPANSION</b>									
	Sitework -									
	Clear & grub	Ls	1	\$2,500.00			\$2,500	\$2,500		
	Relocate statue	Ea	1	\$2,000.00			\$2,000	\$2,000		
	Rmv stairs	Ea	2	\$2,500.00			\$5,000	\$5,000		
	Rmv pavers & walks	Ea	1	\$2,000.00			\$2,000	\$2,000		
	Rmv benches	Ls	1	\$1,000.00			\$1,000	\$1,000		
	Excavation	Cy	1,000	\$30.00			\$30,000	\$30,000		
	Shoring	Sf	920	\$45.00			\$41,400	\$41,400		
	Sidewalk replacement	Sf	500	\$6.00			\$3,000	\$3,000		
	Site restoration & repairs	Ls	1	\$7,500.00			\$7,500	\$7,500		
	Interface modifications	Allow	1	\$15,000.00			\$15,000	\$15,000		
	Structure & foundations -									
	Wall footings	Cy	20	\$350.00			\$7,000	\$7,000		
	Concrete foundation walls	Sf	150	\$30.00			\$4,500	\$4,500		
	Slab on grade	Sf	2,300	\$6.50			\$14,950	\$14,950		
	Structural floor	Sf	2,300	\$22.00			\$50,600	\$50,600		
	Roof framing	Sf	2,300	\$17.00			\$39,100	\$39,100		
	Exterior Envelope -									
	Brick & block walls - 60% of wall	Sf	1,800	\$35.00			\$63,000	\$63,000		
	Windows - 40% of wall	Sf	1,200	\$65.00			\$78,000	\$78,000		
	Entrance & doors	Ea	1	\$10,000.00			\$10,000	\$10,000		
	Roofing, insul. Sht metal	Sf	2,000	\$15.00			\$30,000	\$30,000		
	Expansion joints	Lf	300	\$20.00			\$6,000	\$6,000		
	Exterior trim	Ls	1	\$5,000.00			\$5,000	\$5,000		
	Skylight	Allow	1	\$50,000.00			\$50,000	\$50,000		
	Interior Finishes -									
	Flooring	Sf	4,600	\$7.00			\$32,200	\$32,200		
	Ceilings	Sf	4,600	\$4.50			\$20,700	\$20,700		
	Partitions	Sf	4,600	\$9.50			\$43,700	\$43,700		
	Doors & frames	Sf	4,600	\$2.50			\$11,500	\$11,500		
	Rough & finish carpentry	Sf	4,600	\$5.00			\$23,000	\$23,000		
	Stair	Ea	1	\$50,000.00			\$50,000	\$50,000		
	Toilet Rms	Rm	2	\$5,000.00			\$10,000	\$10,000		
	Interface repairs	Sf	4,600	\$2.00			\$9,200	\$9,200		
	Specialties	Sf	4,600	\$1.00			\$4,600	\$4,600		
	Conveying Systems -									
	Lula lift	Ea	1	\$25,000.00			\$25,000	\$25,000	\$697,450	Subtotal
									\$0	TOTAL
									\$0	\$0





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

## Report 3 Section 4 – Cost Estimates

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES  
PROJECT 2

1/30/11  
FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
3	HVAC & WINDOW REPLACEMENT									
	HVAC									
	Demolition	Sf	44,000	\$1.50			\$66,000	\$66,000		
	Chiller	Sf	44,000	\$2.50			\$110,000	\$110,000		
	Boiler	Sf	44,000	\$2.00			\$88,000	\$88,000		
	Air handling & ventilation	Sf	44,000	\$5.00			\$220,000	\$220,000		
	Hydronic piping	Sf	44,000	\$9.00			\$396,000	\$396,000		
	Fan coil units	Sf	44,000	\$7.50			\$330,000	\$330,000		
	Ductwork & insulation	Sf	44,000	\$6.00			\$264,000	\$264,000		
	Grilles & diffusers	Sf	44,000	\$0.75			\$33,000	\$33,000		
	General exhaust	Sf	44,000	\$0.50			\$22,000	\$22,000		
	Controls	Sf	44,000	\$5.00			\$220,000	\$220,000		
	Test & balance	Sf	44,000	\$1.00			\$44,000	\$44,000		
	Commissioning	Sf	44,000	\$0.75			\$33,000	\$33,000		
	Finish repairs	Sf	44,000	\$2.00			\$88,000	\$88,000		
	Chiller platform	Ls	1	\$35,000			\$35,000	\$35,000	\$1,949,000	
	Window Replacement									
	Rmv & replace windows	Ea	90	\$950.00			\$85,500	\$85,500		
	Trim out windows	Ea	90	\$200.00			\$18,000	\$18,000		
	Rmv & replace large windows	Ea	12	\$2,100.00			\$25,200	\$25,200		
	Trim out large windows	Ea	12	\$300.00			\$3,600	\$3,600		
	Asbestos abatement	Ea	102	\$150.00			\$15,300	\$15,300		
	Testing & monitoring	Ea	1	\$3,500.00			\$3,500	\$3,500		
	Entrances									
	Weather seal entrances	Ea	7	\$900.00			\$6,300	\$6,300		
									\$2,106,400	
										Phasing Preimum 10%
										General Conditions 6%
										GC OH & P 6%
										P & P Bond / Insurance 2%
										Contingency 15%
										Inflation 10%
										Total Construction Cost
										\$3,422,582
										Falls Church Project Management 10%
										\$342,258
										Total Cost
										\$3,764,840
										USE
										\$3,800,000
										TOTAL
										\$0
										\$0
										\$0
										\$0
										\$0



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

## Report 3 Section 4 – Cost Estimates

**LEWICKI ESTIMATING SERVICES, INC.**  
PRECONSTRUCTION SERVICES  
PROJECT 2

11/30/11  
**FALLS CHURCH CITY HALL IMPROVEMENTS & PUBLIC SAFETY CENTER FEASIBILITY STUDY**

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	LABOR	MATERIAL	EQUIPMENT/ SUBCONTRACT	AMOUNT	TRADE SUBTOTAL	COMMENTS
5	<b>CARPET REPLACEMENT</b>									
	Rmv & replace remaining carpet	Sy	1100	\$30.00			\$33,000	\$33,000		
	Rmv & replace vinyl base	Lf	1500	\$2.00			\$3,000	\$3,000		
									\$36,000	
										Phasing Preimium 10%
										\$3,600
										General Conditions 6%
										\$3,168
										GC OH & P 6%
										\$2,566
										\$907
										P & P Bond / Insurance 2%
										\$4,624
										Contingency 10%
										\$5,086
										Inflation 10%
										\$55,951
										Total Construction Cost
										\$5,595
										Falls Church Project Management 10%
										\$61,546
										Total Cost
								USE		\$62,000
6	<b>REPAINT INTERIOR CITY HALL</b>									
	Interior painting	Sf	44,000	\$2.25			\$99,000	\$99,000		
										Phasing Preimium 10%
										\$9,900
										General Conditions 6%
										\$8,712
										GC OH & P 6%
										\$7,057
										\$2,493
										P & P Bond / Insurance 2%
										\$12,716
										Contingency 10%
										\$13,988
										Inflation 10%
										\$153,866
										Total Construction Cost
										\$15,387
										Falls Church Project Management 10%
										\$169,253
										Total Cost
								USE		\$170,000
									\$0	
									\$0	
									\$0	
									\$0	<b>TOTAL</b>



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

## Report 3 Section 4 – Cost Estimates

11/30/11

### FALLS CHURCH CITY HALL IMPROVEMENTS & PUBLIC SAFETY CENTER FEASIBILITY STUDY

### LEWICKI ESTIMATING SERVICES, INC. PRECONSTRUCTION SERVICES

#### CLARIFICATIONS & QUALIFICATIONS

#### PROJECT 1 -

Work Item 1 - To deal with potential water damage resulting from fire protection system being activated a FM 200 system is being priced. Included in the cost estimate are budgets for fire alarm system modifications and an exhaust system.

Work Item 2 - The existing ceiling and lighting will be removed. New pendant lighting will be provided. A cable tray system for the data wiring is included. Relay out of the data wiring and any modifications is assumed to be by others and is not included in the cost estimate.

Work Item 3 - The goal is to intercept storm water from overflowing the sidewalk & landscape area and then spilling into the areaway. Based on a visual inspection we would propose a curb inlet in the corner of the paved area and adding an area drain in the landscaped area. The curb inlet and area drain would be piped to the drainage structure in the middle of the driveway. A trench drain would also be introduced in the sidewalk at the top of the areaway.

Work Item 5 - Our experience in elevator upgrades is that overhauling elevators costs as much as installing a new elevator. The basis of design for the cost estimate is new Otis Gen2 elevators. This is an energy efficient gearless, belt driven, machine room-less elevator. We assume that the elevator shafts & pits will remain. The elevator pits would probably have to be modified to accommodate sump pumps.

Work Item 6 - Our understanding is that the majority of the hazardous material issues identified in Report 1 have been addressed. The cost estimate is limited to abating 1300 SF of flooring & mastic. New flooring will be installed in the affected areas.

Work Item 7 - The scope of this work includes dividing the current evidence file room and creating a secure file room. A secure pass thru will also be provided between the file room and evidence storage.

Work Item 9 - A 7' decorative fence will be provided around the Police vehicle parking area. In addition two motor operated gates will be provided, and two card access man gates will also be provided. We have also included an allowance for additional security cameras and site lighting upgrades.

A metal canopy will be provided over the existing sally port. The cost estimate includes relocation of a security camera, canopy soffit lighting, and gutter & down spouts for storm drainage.

Work Item 10 - The existing carpet, acoustical ceiling, & wall covering will be removed. New carpeting, 2 x 2 acoustical ceiling will be provided. The walls will be patched and painted.

Work Item 12 - The new entrance structure will consist of two levels. The G2 level will be provided for Police functions. The main level will consist of a new entrance lobby including a formal stair, and Lula lift for handicap access. The main level will also include meeting room, and two private handicap rated toilet facilities. The exterior will complement the existing brick exterior and large windows.



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

## Report 3 Section 4 – Cost Estimates

11/30/11

FALLS CHURCH CITY HALL IMPROVEMENTS &  
PUBLIC SAFETY CENTER FEASIBILITY STUDY

LEWICKI ESTIMATING SERVICES, INC.  
PRECONSTRUCTION SERVICES

CLARIFICATIONS & QUALIFICATIONS

### PROJECT 2 -

Work Item 3 - The HVAC system being priced is similar to the current system. The system is a institutional quality hydronic system including a boiler, chiller, cooling tower, hydronic piping and fancoil units. The existing system will be completely replaced.

When the project is ready to go into design we would recommend that the Mechanical Engineer prepare a Life Cycle Cost Analysis on several systems. One alternative system being analyzed should be a Geothermal system. The initial cost is higher, but the overall operating cost is lower and very efficient. The geothermal wells would be drilled below the parking lot. This system would also eliminate the need for any exterior mechanical equipment ( chiller & cooling tower ).

The new windows being estimated would be metal clad wood windows, with insulated Low E glass. The windows would in keeping with character of the building. All existing entrances would be provided with new weatherstripping.

Work Item 6 - Interior paint will take place off hours and paused with the work areas restored by morning of the next day.





C. Summary of CIP Projections by Priority and Year

City Hall/Public Safety CIP Project Cost Estimate and Prioritization Update 11-30-11	FY	CIP Projections	Lewicki Estimate (hard costs)	Lewicki General Conditions	Lewicki: GC OH & P (10%)	Lewicki: Bond/ Insurance (2%)	Lewicki: Contingency (10- 25% range)	Lewicki: Inflation (5 or 10%)	Lewicki: Eng & Design (10%)	FC Project Management (10%)	Lewick: Cost Total	Dewberry Estimate	Cost Estimator Difference over/(under)
<b>Critical Renovation- Phase I* (\$1M)</b>	12												
<b>PRIORITY ORDER</b>													
1. Sprinkler installation/IT server correction		\$144,000	\$114,500	\$17,175	\$13,168	\$2,897	\$29,548	\$8,864	\$14,892	\$18,615	\$219,659	\$0	\$75,659
2. IT Server fire code ceiling correction (lighting and plumbing); concurrent w/#1		\$35,000	\$7,156	\$1,073	\$823	\$181	\$2,308	\$577	\$1,818	\$1,212	\$15,148	\$0	-\$19,852
3. Foundation Water Seepage- Police Station (see #9 for Sally Port water issue correction)		\$125,000	\$22,000	\$3,300	\$2,530	\$557	\$7,097	\$1,774	\$5,589	\$3,726	\$46,573	\$0	-\$78,427
4. Snow-loading Roof Repair- phase 1		\$119,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75,000	-\$44,000
5. Elevator Overhaul/Replacement		\$460,000	\$343,000	\$27,440	\$37,044	\$8,150	\$83,127	\$24,938	\$52,370	\$52,370	\$628,439	\$0	\$168,439
6. Asbestos Flooring/Tile Replacement		\$12,000	\$10,100	\$808	\$1,091	\$240	\$2,448	\$734	\$1,542	\$1,542	\$18,505	\$0	\$6,505
7. Police Evidence Processing & Storage		\$35,000	\$26,730	\$2,138	\$2,287	\$635	\$6,478	\$1,943	\$4,081	\$4,081	\$48,373	\$0	\$13,373
8. Police IT Server Environment Correction/AC unit		\$12,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000	\$0	\$0
9. Secured Police Parking and Sally Port		\$23,000	\$109,100	\$8,728	\$11,783	\$2,592	\$26,441	\$7,932	\$16,658	\$16,658	\$199,892	\$0	\$176,892
10. West Wing G2 carpet, wall covering removal/restoration; ceiling tile replacement		\$35,000	\$6,250	\$938	\$1,078	\$165	\$1,686	\$506	\$1,062	\$1,062	\$12,747	\$0	-\$22,253
<b>SUBTOTAL FY12</b>		<b>\$1,000,000</b>	<b>\$650,836</b>	<b>\$61,600</b>	<b>\$69,804</b>	<b>\$15,417</b>	<b>\$159,133</b>	<b>\$47,268</b>	<b>\$98,012</b>	<b>\$99,266</b>	<b>\$1,201,336</b>	<b>\$75,000</b>	<b>\$276,336</b>
<b>Critical Renovation- Phase II* (\$1.4M)</b>	13												
<b>PRIORITY ORDER</b>													
1. FY12 projects unfunded- TBD													
2. Snow-loading Roof Repair- phase 2		\$115,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	-\$65,000
3. HVAC System (\$1.2M)/ Doors-Windows Replacement (\$132k)/ Asbestos (\$18.8k)**		\$1,180,000	\$2,106,400	\$210,640	\$185,363	\$150,144	\$53,051	\$405,840	\$311,144	\$342,258	\$3,764,840	\$0	\$2,584,840
4. West Wing HVAC Asbestos Removal (see #3)		\$29,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	-\$29,000
5. Remaining pre- 2006 carpet replacement		\$41,000	\$36,000	\$3,600	\$3,168	\$2,566	\$907	\$4,624	\$5,086	\$5,595	\$61,546	\$0	\$20,546
6. Repaint interior City Hall		\$35,000	\$99,000	\$9,900	\$8,712	\$7,057	\$2,493	\$12,716	\$13,988	\$15,387	\$169,253	\$0	\$134,253
<b>SUBTOTAL FY13</b>		<b>\$1,400,000</b>	<b>\$2,241,400</b>	<b>\$224,140</b>	<b>\$197,243</b>	<b>\$159,767</b>	<b>\$56,451</b>	<b>\$423,180</b>	<b>\$330,218</b>	<b>\$363,240</b>	<b>\$3,995,639</b>	<b>\$0</b>	<b>\$2,595,639</b>
<b>Central Entrance Expansion/Renovation (\$1.6M)</b>	12 & 13	\$1,600,000	\$1,035,700	\$62,142	\$87,827	\$23,713	\$181,407	\$139,079	\$0	\$152,987	\$1,682,855	\$0	\$82,855
1. A&E (FY12)		\$300,000	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	\$0	\$0
2. Central ADA accessible securable entrance/meeting rooms (FY13)		\$650,000											
3. Police Comm./Dispatch/EOC (FY13)		\$650,000											
<b>SUBTOTAL FY12 &amp; 13</b>		<b>\$1,600,000</b>	<b>\$1,335,700</b>	<b>\$62,142</b>	<b>\$87,827</b>	<b>\$23,713</b>	<b>\$181,407</b>	<b>\$139,079</b>	<b>\$0</b>	<b>\$152,987</b>	<b>\$1,982,855</b>		<b>\$382,855</b>
<b>City Campus Parking Improvements- To Be Refined</b>	13	\$450,000	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450,000	\$0	\$0
<b>City Hall Rear Floors (8,880SF)- To Be Refined</b>	16	4,500,000	\$4,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,500,000	\$0	\$0
										<b>TOTAL POTENTIAL DIFFERENCE***:</b>			<b>\$3,254,830</b>
***\$2.1M delta is FY13 HVAC; PM is \$616k; Inflation is \$610k; Contingency is \$397; Project Management and inflation/contingency to be refined with actual quotes													
** City Hall annual electric bill is \$60k and 15% savings is \$9k; City paid in FY11 \$76k in HVAC maintenance and repairs													



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**REPORT 3 – RECOMMENDED NEXT STEPS  
FINAL REPORT**

**JANUARY 2012**

**PSA  Dewberry**