

DGS TECHNICAL REVIEW COMMENTS

PROJECT TITLE	Expand State Archives Building		
FACILITY	Annapolis State Government Complex	LOG-IN #	
PROJECT #	DBFP No. 0212092	ARCHITECT / ENGINEER	
SUBMITTAL PHASE	Program	TECHNICAL DISCIPLINE	General / PM
DATE	2/25/2009	REVIEWER / TELEPHONE	Peterson / (410) 767-4349
PROJECT MANAGER	Mark Peterson	DESIGN GROUP LEADER	Praful Vani
A/E RESPONDENT		RESPONDENT'S TELEPHONE #	

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		NOTE: A / E Firms and Consultants—Please type your response in <i>BOLD Italics</i> below the DGS comment
Transmittal	1	<p>Confirm two copies of the program, including a letter of transmittal, were sent to the Deputy Director, Office of Capital Budgeting at the DBM.</p> <p style="color: red;"><i>Confirmed.</i></p> <p>Also provided were the following publications:</p> <p style="color: red;"><i>Planning New and Remodeled Archival Facilities, Thomas P. Wilsted, Society of American Archivists, 2007</i></p> <p style="color: red;"><i>Archival Storage Standards, Directive of the Archivist of the United States, National Archives and Records Administration (NARA 1571), February 15, 2002.</i></p> <p style="color: red;"><i>Archival and Special Collections Facilities – Guidelines for Archivists, Librarians, Architects, and Engineers (Draft) Society of American Archivists, August 3, 2008. (Hereinafter referred to as Guidelines Document)</i></p> <p style="color: red;"><i>These guidelines should inform the design specification for the Archives.</i></p>
Cover Page	2	<p>Since it is not named in the program title and a Cost Estimate Worksheet was included, DGS is reviewing this document as an assumed Program Part 1 and 2.</p> <p style="color: red;"><i>Acknowledged.</i></p>
Table of Contents	3	<p>Provide a Table of Contents for the program document and indicate this is a Part 1 and 2 submission.</p> <p style="color: red;"><i>Included in Facility Program Document.</i></p>
Pg. 17, figure 1 Pg. 53, figure 1 EAF attach. Pg. 2	4	<p>Provide a legible Site Plan at an appropriate scale. Indicate the proposed footprint of the addition approximately to scale noting the number of stories.</p> <p style="color: red;"><i>See Appendix 1.</i></p>
Pg. 40, Note 1	5	<p>Quantify the extreme conditions criteria. What category of storm or wind mph should the facility withstand? What areas of the facility should be provided with temporary emergency power and for how long?</p> <p style="color: red;"><i>The facility needs to be able to withstand winds of at least 110 miles per hour. We should also be prepared for hurricanes, nor'easters and tornadoes. IBC / IRC 2003 version of the I – Codes. Design Pressure 50 is used on the Eastern</i></p>

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		<p>NOTE: A / E Firms and Consultants—Please type your response in <i>BOLD Italics</i> below the DGS comment</p> <p>Shore along the coast; given the predictions of intensifying storm patterns we should have at least that measure of protection. It should be noted that we are in a 100 year flood plain as well.</p> <p>The collections at the Archives are intended to be preserved until the end of the Republic. Therefore, the building structure and support systems should be designed with the thought that the facility will have at least a 100 year life expectancy and should be able to withstand any potential weather or natural disaster event that might be likely to occur in that timeframe.</p> <p>Design for archival facilities should generally exceed the life safety codes established for most buildings. The main goal of the facility is to not just protect inhabitants, but rather to provide maximum level of protection for the state's fine art and documentary treasures.</p> <p>At a minimum, the archival storage area (stacks) and cool storage areas <i>should</i> be provided with temporary emergency power with the cold storage being the last area to become inoperable. The electronic archives (data center) spaces and the cold storage spaces <i>must</i> be provided with temporary emergency power for a period of at least three days. The other spaces <i>must</i> be provided with general life safety systems support. However, we request that the emergency power capability be oversized to accommodate future requirements.</p> <p>Please see the <i>Guidelines Document</i> for greater detail.</p>
Pg. 40, Note 2	6	<p>Quantify the required fire ratings in hours for the spaces listed on pg. 16 and the sub-spaces listed on pg. 52. Should the Paper Records Storage be subdivided into a number of rooms of smaller cubic feet of storage to limit the possible exposure of the entire contents to fire or other negative occurrences?</p> <p>The writer raises a very good question that I think we would like to more fully develop as we move closer to actual design. Subdividing areas into numerous small spaces is viewed as a good practice in an archival environment. However, it does raise the cost. We feel that the size of our existing stack spaces is fairly efficient (for paper at least). One the other hand, the spaces could probably be subdivided at least in half and possibly in thirds which could also save on energy particularly in the summer time because staff would be accessing smaller spaces. The installation of 18 gauge (powder coated) steel between the verticals of the ranges can also slow down a fire, keeping a loss small.</p>

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Pg. 52, Pg. 59	7	<p>Confirm Cold Storage mechanical requirements as 60 degrees F (+/- 5 degrees) and a RH max. of 35% per existing Archive storage.</p> <p style="color: red;">This answer focuses only on <i>cold</i> storage and not generally on <i>cool</i> storage for records.</p> <p style="color: red;">National Archives and Records Administration have the following temperatures for Cold Storage: 25° F and 30% RH for color motion picture 38° F and 35% RH for aerial film</p> <p style="color: red;">These Cold Storage areas necessitate acclimatization rooms with varying temperatures and humidity as well: 50° F and 30% RH for color motion picture 55° F and 35% RH for aerial film</p> <p style="color: red;">Cool Storage is needed (by NARA standards) for black and white film, b & w motion picture, sound recordings, glass plate negatives, slides and posters: 65° F and 35% RH and there is no need for acclimatization.</p>
Pg. 53, Tables	8	<p>The relocated 13 staff positions and proposed additional 5 staff positions do not include patrol by State Security as mentioned on pg. 39. Is the intent to provide security solely by electronic means or should one or more security personnel positions be indicated on the occupant total?</p> <p style="color: red;">The intent of the referenced narrative was to draw attention to the fact that the record and art storage warehouses that are leased by the Maryland State Archives have no security at all – no routine patrols, no assigned guards, no electronic surveillance etc.,</p> <p style="color: red;">By contrast, the Edward C. Papenfuse State Archives Building in Annapolis has guards present from 7:00 a.m. to 10:00 p.m. and has routine patrols throughout the day and night by the Maryland Capitol Police force and staff from the Department of General Services Facilities Operations and Maintenance.</p> <p style="color: red;">The current level of Maryland Capitol Police surveillance and staffing, along with electronic monitoring tied in to the existing security system should be</p>

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Pg. 53, last para. Pg. 60, first para.	9	<p>Please clarify whether the proposed addition is one story or multi story. If multi story indicate the vertical circulation requirements.</p> <p style="color: red;">The intention is to build multi-story. For the storage component: total four stories - ground level plus three and basement. For the Exhibits and Conference Space: two total stories – ground level plus basement.</p>
Pg. 60, Condition of the Facility	10	<p>Please provide status of the report addressing the possible need to upgrade the existing HVAC system.</p> <p style="color: red;">We will need to consult with the Department of General Services.</p>
Pg. 60, Bullet 4	11	<p>What is the number of existing parking spaces currently available at the Main Entry exclusive of the area proposed for the new addition? Per pg. 34 in the year 2007 the Archives had 7,061 in-person visits. That number translates to approximately 37 visitors per day, Wednesday through Friday plus the three Saturdays per month. Please confirm a minimum of 40 visitor parking spaces should be provided adjacent to the Main Entry. Provide a required visitor parking space total for the proposed 8000sf Public Exhibits space or confirm a minimum of approximately 32 additional visitor spaces should also be provided adjacent to the Main Entry. Total parking to be provided both existing and new adjacent to the Main Entry would be a minimum of approximately 72 spaces. It is hard to determine from the aerial view on pg. 17 whether this number can be accommodated or not. See following comment 13 for a further discussion of this requirement. Parking for the proposed new and relocated 18 staff will also need to be provided. What is the total of existing parking spaces available for staff, volunteer, visiting conservator and student intern use exclusive of the area proposed for the new addition? These may need to be located remotely from the Main Entry in a separate lot similar to the current conditions.</p> <p style="color: red;">Presently, there are 58 regular spots and 4 handicapped spots adjacent to the main entrance. Please NOTE: the number of patron visitors (7,061 in 2007) is the number of individuals that came to do research. For purposes of determining parking requirements, the number should at least be doubled because it does not include the number of people who come to the building for meetings.</p> <p style="color: red;">In addition, to the parking in front, the Archives staff has been using roughly 35 to 40 parking spaces behind the building. Our suggestion is to modestly expand the parking in the front of the building and provide staff and additional visitor</p>

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		<p><i>NOTE: A / E Firms and Consultants—Please type your response in BOLD Italics below the DGS comment</i></p> <p>parking in the rear of the facility.</p> <p>As a side note, many of our staff have heretofore parked in the west Annapolis area. Increasingly, the City has changed parking in that area to residential permit or two hour only.</p> <p>Any additional parking over and above what can be provided in the front and rear of the building will have to be accommodated by the Navel Academy stadium parking lot.</p>
Pg. 60, Final note	12	<p>Provide reduced floor plan(s) of the existing building on 8 ½ x 11.</p> <p><i>See Appendix 3.</i></p>
Pg. 60, Final note	13	<p>Is the intent to provide the proposed Public Exhibits space within the existing building adjacent to the Main Entry or located remotely in the new addition adjacent to the Barrack J parcel? If located remotely the required visitor parking may be able to be split into two areas but an additional entrance would require a duplication of security at the point of entry. Please clarify.</p> <p><i>It was our original thought to have the conference room, some additional staff, the artistic property display space and perhaps the conservation lab adjacent to the existing main entry (and to the right of the main entrance).</i></p> <p><i>We would like to avoid creating an additional entrance.</i></p> <p><i>We believe at this point we may need to discuss options with a design architect.</i></p>
General	14	<p>Provide a bubble diagram or flow chart indicating the desired spatial interaction between the spaces noted on pgs. 16, 52 and 53.</p> <p><i>See Appendix 2 Space Specifications and Bubble (proximity) Diagram.</i></p>
General	15	<p>If the project is to be phased for tie-in of new to existing utilities and services, provide description of the phasing anticipated.</p> <p><i>If the project is to have independent, stand-alone mechanical, then phased tie-in is almost a non-issue. However, given that there are plans to replace existing chillers and install an additional cooling tower, perhaps it is worth engaging a discussion as to whether those projects could be combined with the construction of the addition.</i></p>

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General	16	<p style="color: red; font-weight: bold; margin: 0;">List relevant Codes and Regulations.</p> <p style="color: red; font-weight: bold; margin: 0;">Specific Codes and Regulations list will have to be developed in consultation with DGS Facilities Planning, Design and Construction. Design specification should conform to attached <i>Guidelines Document</i> and <i>Archival Storage Standards</i> directive.</p>														
General	17	<p style="color: red; font-weight: bold; margin: 0;">Note the proposed addition is to be designed and constructed to meet or exceed the LEED Silver rating.</p> <p style="color: red; font-weight: bold; margin: 0;">Noted</p>														
General	18	<p style="color: red; font-weight: bold; margin: 0;">Combine the spaces listed on pg. 16 and the breakdowns listed on pgs. 52 and 53 into one table of Net Assignable and Non-Assignable areas representing the 135,415 NSF building total.</p> <p style="color: red; font-weight: bold; margin: 0;">Summary of usable space</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 70%;">Description</th> <th style="width: 30%;">Requirement</th> </tr> </thead> <tbody> <tr> <td style="color: red; font-weight: bold;">Storage of Records</td> <td style="color: red; font-weight: bold; text-align: center;">98,110</td> </tr> <tr> <td style="color: red; font-weight: bold;">Processing of Records</td> <td style="color: red; font-weight: bold; text-align: center;">2,500</td> </tr> <tr> <td style="color: red; font-weight: bold;">Electronic Records Archives</td> <td style="color: red; font-weight: bold; text-align: center;">10,000</td> </tr> <tr> <td style="color: red; font-weight: bold;">Cold Storage</td> <td style="color: red; font-weight: bold; text-align: center;">1,000</td> </tr> <tr> <td style="color: red; font-weight: bold;">Storage of Artistic Property</td> <td style="color: red; font-weight: bold; text-align: center;">10,000</td> </tr> <tr> <td></td> <td style="color: red; font-weight: bold; text-align: center;">8,000</td> </tr> </tbody> </table>	Description	Requirement	Storage of Records	98,110	Processing of Records	2,500	Electronic Records Archives	10,000	Cold Storage	1,000	Storage of Artistic Property	10,000		8,000
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General	19	<p>Provide Room Specification Sheets for each space including toilet rooms for new staff and visitors listing NSF, occupant load, structural and MEP requirements, proposed level of performance of finishes, major items of furniture or equipment and security and telecom needs.</p>						
		<p style="color: red; font-weight: bold; font-style: italic;">Details not found in the program document will need to be developed in consultation with DGS Facilities, Design and Construction e.g., for occupant load, structural and MEP requirements.</p> <p style="color: red; font-weight: bold; font-style: italic;">The Archives will finalize and forward to DGS a listing of othermajor items of furniture and equipment.</p> <p style="color: red; font-weight: bold; font-style: italic;">The only requirement for additional rest room facilities will be for the space proximate to the conference space.</p> <p style="color: red; font-weight: bold; font-style: italic;">New staff and space requirement for them is depicted in Appendix 2 in the proximity diagram.</p>						
General	20	<p>Describe the specifics the existing building's electrical and mechanical services if known.</p>						
		<p style="color: red; font-weight: bold; font-style: italic;">The Department of General Services is developing plans to upgrade / replace some elements of the mechanical infrastructure such as chillers and cooling tower addition.</p> <p style="color: red; font-weight: bold; font-style: italic;">We believe that the electrical infrastructure is in need of upgrade and replacement especially of inefficient transformers.</p>						
General	21	<p>Describe any special fire protection needs per space if other than a standard wet system design.</p>						
		<p style="color: red; font-weight: bold; font-style: italic;">The spaces that are designated to be used for storage of works of art, historic</p>						

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		<p style="color: red; font-weight: bold;">NOTE: A / E Firms and Consultants—Please type your response in <i>BOLD Italics</i> below the DGS comment</p> <p>*****</p> <p>Below are some other thoughts on fire suppression:</p> <p>Importance of more, smaller rooms, closed doors (even non fire rated), closed lids, spaces between shelves, to stall fire</p> <p>Consider putting in a backup detection system during renovation, when welding.</p> <p>Know that fire code is meant to save the average building from complete loss by holding a fire at bay till the fire department arrives. Our goals are much higher.</p> <p>Be sure sprinkler co. knows you expect something very different, are not just another office building.</p> <p>Types of pipes and welds effect longevity.</p> <p>A local company can fix it faster, make sure they don't subcontract.</p> <p>Be really vigilant about wet system's install. Non-tightened bolts may cause leaks or failures in 7 years!</p> <p>Supervise wet system installs, check parts are as ordered, NO LOOSE BOLTS.</p> <p>18 gauge steel between the verticals of the ranges can slow down a fire, keep a loss small.</p> <p>Stack areas need more sprinklers, spacers between moving shelves for water to get in</p> <p>More plastics in storage than ever – extreme heat release</p> <p>Staggered edge newspapers ignite really well.</p> <p>Arson (which is generally much faster than accidental fires) are responsible for most heritage fires.</p> <p>Chem. (ABC) Extinguishers not easy cleanup and may irreparably damage</p>

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SUBMITTAL PHASE	Program	TECHNICAL DISCIPLINE	General / PM
DATE	2/25/2009	REVIEWER / TELEPHONE	Peterson / (410) 767-4349
PROJECT MANAGER	Mark Peterson	DESIGN GROUP LEADER	Praful Vani
A/E RESPONDENT		RESPONDENT'S TELEPHONE #	

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		NOTE: A / E Firms and Consultants—Please type your response in <i>BOLD Italics</i> below the DGS comment permanent record material.
General	22	Identify any phasing requirements affecting the design or construction. We are not presently aware of any phasing requirements. Some may be identified as we move forward with design.
General	23	Are any hazardous materials present in the existing building, has a survey been performed? A survey has been conducted and below is a listing of all materials - not just hazardous materials. Chemical Inventory 01-28-2008 – Fume Hood, Room 125 <u>In the Flammables cabinet</u> Acetone (7) 4 liter bottles Beckman: Electrode Storage Solution (proprietary chloride solution) 100 mL Beckman: Reference Electrode Filling Solution, Potassium Chloride & Silver Chloride (100 mL) BookKeeper (3) 32 oz. bottles & 2 16 oz. spray cans Damar Varnish (3) 11 oz. spray cans Ethyl Alcohol (1) 4 liter bottle Incralac (1) 1liter bottle Methyl Ethyl Ketone (1) 1 liter bottle Methylene Chloride (1) 4 Liter bottle N, N-Diemethyl Formamide (1) 500mL bottle Paper Saver (2) 10 oz. spray cans

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		<p><i>NOTE: A / E Firms and Consultants—Please type your response in BOLD Italics below the DGS comment</i></p> <p>Paraloid B-72 (1) 250 gram container</p> <p>Paraloid/Acryloid B-67 1 ½ lb. small bag</p> <p>Pec-12 (1 envelope .5 grams) (photo chemical)</p> <p>Photo Mount (5) 10 oz. spray cans</p> <p>Speed Fixer (1) 1 gallon (photo chemical)</p> <p>Tetrachloroethylene (1) 4 Liter bottle</p> <p>Toluene (2) 4 Liter bottles</p> <p>Turpentine, English Distilled (1) 16 oz. (500 mL) bottle</p> <p>Xylenes (1) 4 Liter bottle</p> <p><u>Corrosives in File Cabinet</u></p> <p>Amonium Hydroxide (1) 500 mL bottle</p> <p>Calcium Carbonate (1) 500 gram container</p> <p>Calcium Hydroxide (8) 500 gram containers</p> <p>Inositol, Phytic acid (1) 250 mL bottle</p> <p>Jade 403, PVA adhesive (2) 1gallon containers, next to file cabinet</p> <p>HazMat Absorbent (1) 5 lb bag of socks, pillows and pads - on top of file cabinet</p> <p><u>Under the Fume Hood</u></p>

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		<p style="color: red; font-weight: bold; font-style: italic;">NOTE: A / E Firms and Consultants—Please type your response in BOLD Italics below the DGS comment</p> <p>Arten Beads (1) 5 lbs container</p> <p>Fullers earth (1) 5 lbs. & 1 3 Kg bags</p> <p>Magnesium Carbonate, anhydrous (2) 3 Kg bags</p> <p>Items in Room 124 - Inner Lab</p> <p><u>Under Sink</u></p> <p>Nalgene L900 Liquid Detergent (1) 4 liter bottle</p> <p>Sparkleen 1, detergent (1) 3 lbs. box</p> <p>US Filter, 6 large canisters (between sink and door) of highly filtered water</p> <p>Universal Absorbent (1) 20 gallon container of socks, pillows and pads - under desk</p> <p><u>In the Photo Duplication Lab</u></p> <p>The following chemicals are used in the production and duplication of microfilm.</p> <p>Chem-Mix Vitafix Fixer and Replenisher (7) cases</p> <p>Microflo Developer and Replenisher (3) cases</p> <p>Dry crystal Ammonia absorber and Neutralizer (4) cases</p> <p>Ammonia - 20 degree Baume' 17.7% concentration (4) cases</p> <p>NOTE: This inventory does NOT include cleaning supplies maintained by DGS or DGS contractors.</p>

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General	24	Provide an inspection report indicating the size, type and condition of the existing transformer. <i>An inspection report would have to be commissioned by the Department of General Services.</i>
General	25	Are the new fire alarm and security systems to be tied in to the existing building's systems? <i>Yes.</i>
General	26	State that the existing building is to remain fully operational during the construction. <i>The existing building is to remain fully operational during the construction.</i>
General	27	State the availability of record drawings for the existing facility and stipulate that the accuracy of furnished documents is not guaranteed by the State. <i>The Archives will provide the Department of General Services with a CD ROM of all drawings of the existing facility that are in the possession of the Archives. Additional drawings may be on file with the Department. The accuracy of these drawings is not guaranteed by the Archives.</i>
General	28	Prepare a New Building Project Checklist per the Facility Program Manual. <i>See Appendix 4.</i>
General	29	Prepare a Site Development Checklist Supplement per the Facility Program Manual. <i>See Appendix 5.</i>
		Please refer to http://www.dpscs.state.md.us/aboutdpscs/pdfs/Facility_Program_Manual.pdf for additional information
		<i>NOTE: Other design considerations that might not have been mentioned in the Program or Guidelines documents:</i> <i>1. Loading Dock area may need to be expanded to accommodate a ramp in addition to the existing loading dock bay.</i> <i>2. Not all special use equipment has been included in the document. Some</i>

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		<p style="color: red; font-weight: bold;">NOTE: A / E Firms and Consultants—Please type your response in <i>BOLD Italics</i> below the DGS comment</p> <p>equipment for the Art Conservation Lab is described below:</p> <ol style="list-style-type: none"> a. For example, the artistic property conservation lab will need to have special sinks, overhead, movable “truck” exhaust system. b. The ceiling of the artistic property lab will need to have a portion of it be open, with a catwalk, and at least 18 feet high to accommodate a camera to scan large paintings and textiles. These objects are beyond the use of our large scanner, not to mention our oversized textiles are not well served with our current storage limitations. c. Morgue tables (seriously) have been mentioned as having great flexibility for conservators of differing heights, and projects that warrant standing or sitting. 1/2" thick glass table tops were recommended by one photo conservator. Beige tabletops have been difficult for seeing paper on, stainless, or solid white, non-marking, chemical resistant, would be preferable. <ol style="list-style-type: none"> 3. All stack and storage spaces to be protected from light sources 4. Intercom should be integrated with existing intercom 5. All spaces wired for data 6. At least one of the stack spaces should be secured for storage of restricted records. 7. Redundant paths to network MD. 8. Additional primary power with at least 50% spare conduit (empty) for future growth.