Report of the

Independent Advisory Committee

Regarding the

Status of the Silver Spring Transit Center

Prepared for

The County Executive

of Montgomery County, Maryland

April 21, 2014

INDEPENDENT ADVISORY COMMITTEE

Silver Spring Transit Center

April 21, 2014

The Honorable Isiah Leggett
Montgomery County Executive
Executive Office Building, 2nd Fl.
101 Monroe St.
Rockville, MD 20850

Dear Mr. Leggett:

An independent review has been conducted of the plans for completion of the Silver Spring Transit Center (SSTC) as well as the projected cost and schedule associated therewith.

The resulting report is attached herewith and reflects the work of the group the chair recommended be formed when asked for his assessment of the status of the SSTC construction effort. Our group stands ready to discuss it with you and your staff in whatever depth you may wish. We appreciate the candor and support evidenced by everyone with whom we met and hope that you may find our assessment helpful in bringing to completion this facility which is clearly important to our County and its neighbors.

Very truly yours,

Norman R. Augustine, Chair

Kenneth J. O'Connell, PhD, P.E

Algynon Collymore, P.E., PMP

Donald W. Vannoy, PhD, P.E.

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1.0 Introduction

The Silver Spring Transit Center (SSTC) is to serve as a junction for Washington Metropolitan Area Transit Authority (WMATA) passenger service and bus service, private vehicles and pedestrians. During its construction the facility encountered various anomalies ranging from chemical contamination of the ground where the facility was to be built to, most recently, evidence of surface cracking and spalling of the concrete of which the structure is largely composed.

Given the adverse impact that these developments have had on schedule and cost, the County Executive sought advice on three specific issues: (1) the going-forward plan for completion of the Center; (2) the credibility of the currently projected "to-complete" costs; and (3) the viability of the currently projected schedule for completing proposed repairs. This document contains the relevant findings and recommendations of the group that was formed at the recommendation of the chair in response to questions posed by the County Executive. The County Executive emphasized that what was sought was forward-looking and that no constraints were to be placed on the review with regard to access. This has indeed been the case.

A committee composed of four individuals carried out the above assessment. Its members have a combined experience of over a century in project management, engineering design, concrete construction, and failure analysis. They served *pro bono* and none has had business interests in the Silver Spring Transit Center, although each has performed previous work on other matters for the County and, in some instances, for the participating contractors.

The review that was conducted involved examining hundreds of pages of documents, meeting with key participants in the project, including representatives of the design engineering firm, Parsons Brinckerhoff, and inspecting the site. A wide range of views was expressed by various participants in the project, particularly with regard to the likelihood and severity of spalling (and potential repairs) that might result from combined shear and torsion stresses within the structure. The review focused on the structural aspects of the Transit Center given that other elements such as plumbing, heating and electrical work are reported to have satisfactorily completed acceptance testing.

Due to time constraints and the abundance of existing data the Committee performed no original analyses or testing, but rather conducted an independent review of the substantial body of available evidence.

This report was shared with the County staff in draft form for the sole purpose of identifying factual errors and assuring clarity. No substantive changes were made as a result of that review.

2.0 Executive Summary

The Silver Spring Transit Center is a 259,000 ft.^{2} post-tensioned, cast-in-place, open-air, concrete structure designed to serve as a connecting point for rail, auto, bus and foot traffic. During its evolution a number of problems were encountered, most of which have been resolved. In the Committee's opinion there remain two principal issues: the need to strengthen elements of the structure to withstand combined shear and torsion stresses, including those resulting from dynamic loading conditions, and the need to protect post-tensioning conduits, and reinforcement that are currently unacceptably close to the surface.

The Committee concludes that the solution to the combined shear and torsion stresses is to provide reinforcing to certain interior beams and girders. This is considered to be important because the failure mode of the as-built configuration would be sudden and could therefore pose a local safety hazard. The Committee concludes that the preferred solution to the lack of cover of the post-tensioning conduits and reinforcement is to apply a two-inch, latex-modified concrete overlay on the two upper driving and parking lanes as proposed by KCE Structural Engineers, P.C.

It is the Committee's opinion that the above modifications should be implemented prior to opening the Center, even if it further delays that event. Performing repairs after any failure that occurs following the initiation of usage would be extremely disruptive to transit operations. Furthermore, it is noted that, as is the case with all exposed concrete structures, particular diligence must be devoted throughout the building's life to inspection and repair of defects such as newly opening cracks or the reopening of previously sealed cracks.

With regard to schedule and cost implications it is noted that neither funding reserves nor schedule float remain, thus diminishing the confidence that can be attributed to estimates pertaining to the above effort, particularly given the extent of the work to be accomplished and the performance record to date. Much of the above work should not be performed in cold weather, introducing further uncertainty, as does the possibility of additional coordination delays or potential litigation. By working multiple shifts or involving multiple teams some of the implied schedule slippage can be recovered; however, the former could adversely impact cost.

The Committee has concluded that the cost to address the shear and torsion stresses in the structure is approximately $7,100,000 and that the cost to address the deck cracking (protect post-tensioning cables and reinforcement) is approximately $2,500,000. Therefore, the Committee concludes that a reasonable estimate of the costs to address the current deficiencies at the SSTC including an overall 10% contingency is $10,600,000.

Other lesser costs such as those to correct ADA deficiencies and leaks near the concrete tree boxes are not addressed herein.

With respect to schedule (it should be noted that schedule and cost are inextricably related, i.e., measures taken to shorten or accelerate the schedule may increase costs), the Committee concludes that the repairs needed to address shear and torsion stresses will take approximately 8 to 10 months from the time a permit is issued. This duration can be reduced by implementing multiple shifts and weekend work. Reducing the duration of this work to 5 months, while more costly, is possible. The repairs to address deck cracking (protect tensioning conduits and reinforcement), namely placement of the Latex-Modified Concrete (LMC) overlay, will require approximately 3 months. While there exists the possibility of overlapping some of this work with the shear and torsion repairs, the LMC overlay cannot be placed until the repairs for shear and torsion on the top surface of the decks has been completed. Further, site access constraints and work space limitations will need to be coordinated.

In summary, if conducted on an expedited (multiple-shift) basis it is estimated that approximately $11M and eight months will be required to complete the major repairs specifically cited herein.

3.0 Findings

The Committee's findings with regard to plans for completing the Silver Spring Transit Center and their cost and schedule implications are discussed in the present section of this report.

3.1 Major Technical Issues

Although a substantial number of technical (design, construction and inspection) issues remain to be resolved, two are considered by the Committee to present significant cost and schedule risk. These are (1) the resolution of exposed conduits and reinforcement associated with the cracking and spalling of surface concrete and (2) the stress levels produced by combined shear and torsion on interior beams and girders, particularly under dynamic loading conditions that would be generated by the specified maximum traffic of up to 240 busses per hour—i.e., one every 15 seconds.

3.1.1 *Exposed Post-Tensioning Tendons and Insufficient Deck Thickness*

KCE Structural Engineers and their associates ("the Project Team") have described, among other observations, "widespread cracking, thin cementitious patches on top portions of the slabs, exposed post-tensioning tendons at the top surface of the slabs and reinforcing steel at the top of the elevated slabs with less than the specified concrete cover". Whether caused by design or construction deficiencies or both, these conditions must be addressed to prevent both short and long term problems from occurring that would impact serviceability, durability and eventually even the structural integrity of the slabs. The report of the Project Team presented two optional recommendations for remedial action. The first of these is to provide an unbonded overlay system and the second is to provide a bonded overlay system. The Project Team subsequently recommended the latter, utilizing a two-inch thick layer of Latex-Modified Concrete on the top surface of the relevant elevated slabs.

Latex-Modified Concrete is produced by adding Latex to standard (unmodified) concrete and results in a product that requires less water and therefore has higher strength than conventional concrete. In addition, the latex forms membranes throughout the concrete that reduce the formation of voids in the material. LMC thus resists the penetration of foreign substances (oil, water, salt, etc.) into the concrete surface, thereby reducing cracking and increasing long-term durability.

Placing a two-inch layer of LMC over the driving and parking lanes at the SSTC can be expected to alleviate only the current top-of-slab cracking and insufficient concrete cover over post-tensioning conduits and reinforcing steel (in the elevated concrete driving and parking lanes). However, some of these old active cracks or new cracks that form in the substrate under the LMC will likely radiate up through

the LMC. To address these cracks in the LMC will require that an active long-term maintenance program be put in place.

3.1.2 *Combined Shear and Torsion Stresses*

The Silver Spring Transit Center, based on the applicable building permit, must comply with the 2003 edition of the International Building Code (IBC 2003) and its referenced documents, such as, but not limited to, ACI 318-02, Codes and publications referenced therein, and Industry Standards. In addition, the SSTC was specified to comply with the WMATA Manual of Design Criteria and WMATA Standards, which were to have been incorporated into the design and which have requirements that are, in some cases, more stringent than those prescribed by IBC 2003.

Montgomery County retained KCE on June 18, 2012 (Notice to Proceed issued on June 20, 2012), to conduct an extensive document review and structural evaluation of the SSTC structure. To assist with their evaluation, KCE retained Wiss Janney Elstner Associates, Inc. (WJE) and Walter P. Moore and Associates, Inc. (WPM). As noted previously, the above three firms are referred to as the Project Team.

During the structural evaluation conducted by the Project Team it was determined among other things that a deficiency in the Parsons Brinckerhoff (PB) design was in the assessment of shear and torsion forces on the interior beams and girders. PB performed no finite element analysis during design. (See KCE reports and other Montgomery County documents for other deficiencies.) The PB design accounted for shear and torsion of the girders at the one center expansion joint and the perimeter beams. However, the interior beams and other girders were not properly assessed by PB for shear and torsion on Levels 330 and 350. A complete structural analysis including several 3-D finite element analyses of the SSTC was thus conducted by the Project Team. Based upon the latter structural analysis, remediation work for the interior beams and girders to correct the shear and torsion deficiencies has been proposed by the Project Team. The Committee agrees with the analysis and recommendations made by the Project Team.

It is important to satisfy the requirements for combined shear and torsion from both a structural integrity issue as well as a potential local safety issue for the general public using the SSTC. The cracking from shear and torsion deficiencies will occur without warning. The cracking could immediately reduce the structural load carrying capacity of the interior beams and girders and result in limits on the allowable bus loading on Levels 330 and/or 350. Long-term maintenance and regular biannual inspections by a specialty engineer will be required due to the deficiencies noted. Shear and torsion cracks, where and if they occur, could combine with the existing cracks. When shear and torsion cracks occur alone or when meeting existing or new cracks caused by other design deficiencies they can result in spalls and pop-outs that may cause concrete to fall locally from the structure. Any dislodged pieces of concrete could pose a potential safety hazard to

pedestrians walking below an area where a spall occurs. The likelihood of sudden failure which could impact safety to large numbers of persons is considered to be low provided proper long-term maintenance and regular biannual inspections are performed as noted above.

Without repairs to the beams and girders prior to the SSTC opening for use, the cracks due to shear and torsion could occur at any time over the entire expected useful life of the structure. Under that circumstance repairs to the damaged structural load-carrying beams and girders could require significant repairs. Epoxy injection of the cracks would only return the elements back to their deficient state and not correct the original design deficiency. The impact of closing the facility either completely or partially for repairs would represent an extreme disruption in service to the projected 30,000 daily commuters.

It is noted that when addressing certain repairs to an existing concrete member the word "invasive" is sometimes used. However, the proposed remediation by the Project team should not be viewed in a negative context by the use of that word. The proposed remediation by the Project Team has been well thought out and provides a solution with minimal risks to the post-tensioning and the existing beams and girders.

3.2 Other Technical Issues

Several additional shortcomings are viewed as requiring attention; however, none are of sufficient magnitude to impact schedule inasmuch as corrective work could be performed concurrently with the abovementioned tasks. These deficiencies are excessive cracking, non-compliance with the Americans with Disabilities Act, ceiling spall and large leaking recessed concrete tree boxes on the 350 level that could eventually cause damage to the deck beneath them.

3.2.1 *Cracking of Concrete*

There is an adage about concrete that two things are guaranteed. One, concrete will get hard; two, it will crack. Minimizing the degree to which concrete cracks, as defined in numerous ways such as the number of cracks, length of cracks, width of cracks, type of cracks, etc., is the objective of good design and construction practices. While cracking cannot be altogether prevented, it can be controlled to acceptable levels.

Unfortunately, the extensive cracking that has been observed (as documented by KCE in its report e.g. at pages 6 and 7 and as observed by the members of the Committee during site visits) is viewed as unacceptable and is indicative of design and/or construction deficiencies. Unacceptable cracks are present in slabs, beams, girders and columns (pages 43-44 of KCE report).

The Committee understands that the current recommendation of KCE with respect to cracking is as follows. The Latex-Modified Concrete topping will cover the cracks in the top of the slabs. All other cracks that are subject to infiltration by water and/or corrosive agents (e.g., de-icing chemicals) will need to be repaired. Given the facility's history, it can be expected that over time cracks will reopen and new cracks will appear. This will not affect overall structural integrity as long as these cracks are promptly treated as per designed by a structural engineer.

3.2.2 *Americans with Disabilities Act*

The handicap ramps, as installed, do not meet the *current* Americans with Disabilities Act (ADA) code requirements. The primary concern is the inability of a visually impaired patron to traverse from one ramp to another in a straight line. When crossing a road, individuals with impaired vision often use the curb ramp to orient themselves and then walk in a straight line to the other side. If the ramp does not align squarely with the curb, it can lead such individuals to move on an angle into the roadway rather than directly across the passageway. Although the ramps as installed are perpendicular to the direction of traffic flow, they are not aligned with each other laterally.

Several options are available to resolve this issue. The first is the "do nothing" option since the ramp design is essentially grandfathered under an older ADA Code and is in compliance in that respect. This option should be dismissed from a safety and responsibility perspective. The option also exists of installing a cane-guiding feature in the pavement. This approach would require periodic maintenance and replacement of the pavement features. There is also the option to incrementally repair/replace the ramps after the Transit Center is opened for public use. This would require the demolition and removal of existing sidewalks, an approach that results in operational and customer inconvenience and presents transitional safety concerns.

Finally, there is the option to demolish and repair/replace the existing ramps to meet the current ADA codes before opening the Transit Center. This approach resolves the issue with no operational impact to the Washington Metropolitan Area Transit Authority or inconvenience to its patrons.

3.2.3 *Soffit Spalling*

Spalling from the soffit was recently documented by the Project Team wherein a section of concrete fell onto the deck underneath it. While the incident was local and not associated with the shear and torsion issue, one segment of the falling concrete was as much as three inches thick. The event is attributable to voids in the concrete coupled with temperature cycling. This could pose a local safety hazard and will require inspection of all vulnerable soffit areas, and repairs as appropriate, prior to opening the facility for public use.

3.2.4 *Planters*

A number of large, recessed concrete tree boxes are located on Level 350, some of which are either leaking or trapping water beneath them. The sustained dripping is contributing to cracking of the concrete deck and subsequent penetration of water into the ceiling of Level 330. While this is not an immediate threat, it is unnecessary and potentially damaging and can be readily resolved.

3.3 Additional Considerations

The Silver Spring Transit Center was designed by Parsons Brinckerhoff, Inc. and was constructed pursuant to a building permit issued by the Montgomery County Department of Permitting Services. The permit was based on drawings and specifications prepared by Parsons Brinckerhoff. The entity (corporation and/or person) responsible for the structural design is "The Structural Engineer of Record;" i.e., in this case, Parsons Brinckerhoff.

In order to implement significant changes to the building or make the more significant repairs discussed herein, the Engineer of Record must prepare drawings and/or specifications and submit those drawings and/or specifications to the County Department of Permitting Services for approval and issuance of a revised permit. This process is typical for projects of complexity similar to the Silver Spring Transit Center.

In the event that the Structural Engineer of Record elects not to prepare the required design documents or to do so in a timely fashion, the County will have no option but to procure the services of a Specialty Structural Engineer of Record. The Structural Engineer of Record may approve, or not object to, the implementation of a design.

3.4 Cost Implications

The Committee was provided with detailed cost estimates and analyses performed by consultants to the County. In addition, the Committee met with technical staff of the County to review and analyze those cost estimates. While other aspects were discussed, the focus of this evaluation was on the cost to address the two significant issues cited herein: the need to strengthen elements of the structure to withstand combined shear and torsion stresses and the need to protect post-tensioning conduits and reinforcement that are currently unacceptably close to the surface.

With respect to the costs to address shear and torsion stresses, the following represents a summary of what the Committee has concluded to be a reasonable estimate of costs:

Design	$ 600,000[1]
Permit	$ 300,000
Construction	$6,000,000
Inspection & Testing	$ 200,000
	$7,100,000

With respect to the costs to address deck cracking (protect tensioning conduits and reinforcement). The Committee has concluded that a reasonable estimate is $2,500,000. This figure is inclusive of subcontractor and general contractor mark-ups, insurance, design, testing and inspection, bonds, sales tax and contingency.

There are other lesser components of cost that are not addressed herein such as correction of ADA issues, leaks in the area of planters and demolition that may be required to implement curb repairs. These should not be difficult to estimate; however, because of their relatively straightforward character.

3.5 Schedule Implications

The Committee was provided with scheduling information developed by the Project Team. In addition, that scheduling information was reviewed with County technical staff.

The Committee has not been provided with a detailed (Critical Path Method) schedule for this work, however the Committee has concluded that a reasonable estimate for the work to be accomplished is as follows. The repairs to address shear and torsion will require approximately 8-10 months if the work is performed on a typical work schedule (single shift, 5 days a week). Subject to availability of contractor resources, noise and permit limitations, this time could be reduced to 5 months through various acceleration methods such as working multiple shifts, weekend work, etc. It should be noted that a permit to perform this work has not been applied for as of the date of this report. It is anticipated that 2-3 weeks will be required to obtain a permit.

The time required to address the deck cracking (protect post-tensioning conduits and reinforcing) is estimated to be 3 months. While some overlapping of these operations may be possible, site access restrictions and limited work areas must be considered. It is our judgment that the shear and torsion repairs to the top of the deck should be performed prior to placing the LMC overlay on the decks, and it is noted that Latex-Modified Concrete cannot be placed under certain cold weather conditions.

[1] Some of the design costs have already been incurred and paid by the County.

4.0 Recommendations

I. Correction of combined shear and torsion deficiencies should begin immediately. The County permit for the KCE remediation drawings for strengthening of support beams and girders to correct the design deficiencies (in assessing shear and torsion needs) should be approved as soon as possible. This remediation work for the beams and girders on Levels 330 and 350 should be completed prior to opening the facility. The remediation work needs to be coordinated with the installation of the latex-modified concrete overlay.

II. A latex-modified concrete overlay should be placed on the areas identified by PB Structural Engineers, P.C. This should be performed by a firm experienced in applying such coverings in high-traffic areas. We recommend that girder staples be installed before the LMC overlay is applied.

III. All cracks noted in the driving and parking lanes should be repaired and/or sealed according to their dimensions. Long-term maintenance with regular biannual inspections by a specialty engineer will be required throughout the life of the facility.

IV. All ramps not in compliance with the current version of the Americans with Disabilities Act should be replaced prior to opening the facility.

V. Soffits (beams and decks) should be inspected for voids, and repairs made as necessary.

VI. The leaking planters and/or leaks thereunder on Level 350 should be sealed.

It is emphasized that the Silver Spring Transit Center, like all open-air concrete structures—particularly those subjected to harsh chemicals—will require disciplined inspection and maintenance throughout its lifetime.

5.0 Concluding Observations

The design and construction of the Silver Spring Transit Center has been widely portrayed as a troubled undertaking; however, if the steps described herein are pursued it should prove to be a very effective facility. The Committee deems it unwise to open the facility and subsequently make potentially significant repairs while the Center is in operation. The Committee has seen no evidence suggesting the danger of a major structural failure, even with the facility in its present form; however, it is particularly important that remediations of the type described herein be implemented promptly in order to avoid lesser safety hazards. It is also noted that the facility should be continually monitored for evidence of emerging problems, particularly cracking, to assure that minor issues do not become major issues that could, over the long-term, lead to major failures.

While the Committee did not assess non-structural elements of the Transit Center, it observes that a considerable amount of equipment has been installed for a year or more and may need to be re-qualified and warranty terms may need to be revisited.

Appendix

Committee Biographies

Norman R. Augustine, Chair. Mr. Augustine is the retired chairman and CEO of the Lockheed Martin Corporation, a former Under Secretary of the U.S. Army and a former member of the Mechanical and Aerospace Engineering Department of Princeton University. He has served as chairman of the National Academy of Engineering and is a member of the National Academy of Sciences. He is a Regent of the University System of Maryland, an Emeritus Trustee of Johns Hopkins and a former Trustee of MIT and Princeton. He was a member of the President's Council of Advisors on Science and Technology for sixteen years and has been awarded the National Medal of Technology by the President of the United States. During his career he oversaw numerous development and construction projects and while living in Texas was a licensed professional engineer in that state. He graduated from Princeton University in Aerospace Engineering and holds 31 Honorary Degrees.

Mr. Augustine has previously performed *pro bono* work for Montgomery County unrelated to the Silver Spring Transit Center or its contractors.

Algynon Collymore. Mr. Collymore is a Construction Supervisor with DC Water and responsible for delivery of approximately $500 Million in active construction projects. He is a licensed civil engineer registered in the District of Columbia and a Project Management Institute certified project manager with over 14 years of professional experience in the management of technical teams. His area of expertise includes management of projects from conception through design to execution and closeout. Mr. Collymore holds a Master of Engineering Degree in Civil Engineering Project Management from the University of Maryland College Park and a Bachelor of Science in Civil Engineering from Howard University in Washington, DC.

Prior to his engagement DC Water Mr. Collymore worked as a consultant with AECOM and as a design coordinator with the Washington Metropolitan Area Transit Authority. His work before that included a four year term with Parsons Brinckerhoff's then Construction Services Group as an office engineer.

Dr. Kenneth O'Connell. Dr. O'Connell is co-founder and president of O'Connell & Lawrence, Inc., a firm that specializes in providing construction consulting, project management, civil engineering, surveying, construction inspection and constructability reviews. Dr. O'Connell is a registered professional engineer and registered professional land surveyor. As Principal-in-Charge, Dr. O'Connell is responsible for the management of

all construction consulting and engineering activities of the firm. He has broad experience in the construction industry as a designer, project manager, and academician. His "hands-on" construction experience includes a wide range of commercial and governmental/public works projects. He is a court and board recognized expert in construction, engineering and surveying. Dr. O'Connell's academic background includes both research and teaching of civil engineering and construction engineering and management. He currently teaches as an adjunct at the University of Maryland and The Catholic University of America.

Dr. O'Connell's firm, O'Connell & Lawrence, Inc. performs work for several public agencies including Montgomery County. Currently, the firm has two contracts with Montgomery County's Department of Transportation. The firm has had no involvement in the project that is the subject of this report.

Dr. Donald W. Vannoy. Dr. Vannoy has over four decades of design experience as well as teaching experience at the University of Maryland where he is Professor Emeritus of Civil & Environmental Engineering. He has received numerous awards and honors including being named Civil Engineer of the Year by the American Society of Civil Engineers, Maryland division, as well as by the Engineering Council of Maryland and the National Society of Professional Engineers. A registered Professional Engineer, he received a Doctor of Philosophy in Civil Engineering and a Master's from the University of Virginia and a Bachelor of Science in Civil Engineering from the West Virginia Institute of Technology. His firms, Vannoy & Associates, LLC and Trident Engineering Associates, Inc., are known for forensic engineering and failure analyses, ranging from accident reconstruction to emergency response.

Dr. Vannoy's firms, Vannoy & Associates, LLC and Trident Engineering Associates, Inc. have no contracts with Montgomery County's Department of Transportation. The firms have had no involvement in the project that is the subject of this report.

ADDENDUM TO
"REPORT OF THE INDEPENDENT ADVISORY COMMITTEE REGARDING THE STATUS OF THE SILVER SPRING TRANSIT CENTER"

The following elaboration is provided in response to questions raised regarding aspects of the report cited above:

Bottom of page 7 (soffits)
If inspections are properly performed and appropriate repairs made, the likelihood of further failures from this particular cause is considered remote.

Bottom of page 5 (shear and torsion)
A failure stemming from combined shear and torsion stresses is likely to be sudden. The consequence is unlikely to be a major structural collapse but rather will evidence itself by spalling of concrete in the local area. This could pose a danger from falling concrete spall to individuals within that area. The existence of cracks from causes unrelated to shear and torsion (some of which are already present) can increase the likelihood of a combined shear and torsion incident, as well as its extent; however, this compounding effect by itself can be minimized or eliminated by pursuing a rigorous inspection and repair protocol. Notwithstanding the above, the probability of an eventual failure from combined shear and torsion stresses is considered to be not insignificant; however, when such a failure might occur, or over what area, is largely indeterminable, since it is dependent upon such factors as loading history.

OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

Statement by County Executive Ike Leggett
on the Silver Spring Transit Center

April 28, 2014

"I have received the report by Norman Augustine and his associates reviewing timelines, costs, and methods involving the Silver Spring Transit Center. I very much appreciate their pro bono work.

"The Augustine report, agreeing with the KCE engineering team, believes remediation on possible beams and torsion issues should be done now. KCE has stated that this is a long-term maintenance issue, not a question of safety. The Augustine report also urges that possible safety issues be mitigated by a rigorous program of inspection and maintenance.

"Parsons Brinckerhoff, the Project's engineer-of-record, believes strongly that no remediation on beams and torsion is necessary and, in fact, that such remediation would be harmful to the structure. WMATA, the County's customer – for whom we are building the facility, has also expressed -- in writing -- concerns about damage to the structure from doing the remediation.

"The County is involved in discussions with Parsons Brinckerhoff and WMATA concerning a binding financial guarantee from Parsons Brinckerhoff to cover any possible future beam and torsion issues that might occur, plus a rigorous inspection and maintenance program that would mitigate concerns raised by KCE and by Augustine.

"As the weather improves, and the consistently warmer temperatures needed to pour the concrete overlay approach, the County remains committed, first, to turning over to WMATA a safe and durable facility and to ensure that any additional Transit Center costs caused by faulty workmanship, design or inspection are paid by the private parties responsible – not by the County taxpayers."

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