

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

COALITION FOR EQUITY AND  
EXCELLENCE IN MARYLAND  
HIGHER EDUCATION, *et al.*,

Plaintiffs

v.

MARYLAND HIGHER EDUCATION  
COMMISSION, *et al.*,

Defendants.

Civil Action No.: 1:06-cv-02773-CCB

**DEFENDANTS' PROPOSED FINDINGS OF FACT  
AND CONCLUSIONS OF LAW**

Date: April 24, 2017

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## **INTRODUCTION AND SUMMARY OF PROPOSED FINDINGS**

### **A. The Status of Proceedings**

Any remedy in this case must address Maryland's system of public higher education as it exists today, not how it functioned when segregated; not as it was more than ten years ago when the complaint was filed; and not even as it was five years ago when the liability trial was conducted. During the past few years alone, Maryland has invested hundreds of millions of dollars in capital projects for the HBIs, such as Morgan State University's impressive School of Business and Management (the "latest jewel on Morgan's campus," by its president's description)<sup>1</sup> and Coppin State University's state-of-the-art Science and Technology Center (both completed in 2015).<sup>2</sup> The State's academic program approval rules have become more protective of the HBIs, and are administered with sensitivity to those institutions' unique position in Maryland higher education. The HBIs' student bodies have grown steadily more diverse. Plaintiffs nonetheless continue to seek extraordinarily costly remedies that, if ordered, would constitute one of the largest changes in academic programs—if not the largest—ever made in any public system of higher education.

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<sup>1</sup> 1/9/17 pm Tr. 113 (Wilson).

<sup>2</sup> Over the course of this litigation, this Court has ruled against Plaintiffs on all but one of ten claims asserted against the State, including those related to funding. As the Court's 2013 opinion noted, "[e]ven when facing the economic downturn, state financial support for the HBIs grew by 82.5%" as the State took steps to "avoid reducing HBI budgets where other budget cuts have been required due to the state's overall fiscal health." ECF 382 at 41. But despite the express rejection of Plaintiffs' funding disparity claims, Plaintiffs' remedies remain focused on shifting many hundreds of millions or even billions of dollars in finite public funds to Maryland's historically black institutions.

For example, Plaintiffs ask the Court to order the dismantling of two dozen highly successful programs at the non-HBI schools where they exist now, and then to mandate an attempt to re-create the same programs at the HBIs. As Maryland's university presidents explained at trial, if adopted, this part of Plaintiffs' proposal alone would likely destroy the largest online public university in the nation, which currently educates more African-American students than any other Maryland institution and more than all the HBIs combined (University of Maryland University College); deal a severe blow to a school which is both majority-minority and a catalyst for change and growth in Baltimore City (the University of Baltimore); eliminate the foundation of a program which is a vital part of the Baltimore-area business ecosystem (Towson University); and eviscerate a nationally-recognized innovator in science, technology, engineering and math (STEM) education—particularly STEM education for African-American students and other underrepresented groups (University of Maryland, Baltimore County).<sup>3</sup> Seven weeks of testimony have demonstrated that the repercussions for Maryland would not stop there, because these are not just any academic programs. They are marquee programs: the leading engines of growth and innovation at their institutions. They are racially diverse. And they are producers of the scores of nurses, engineers, entrepreneurs, and other skilled professionals desperately needed by the State.

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<sup>3</sup> The Court heard testimony on these points from Dr. Freeman Hrabowski of the University of Maryland, Baltimore County, Dr. Kim Schatzel of Towson University, the Hon. Kurt Schmoke of the University of Baltimore, and President Javier Miyares of University of Maryland University College and others, including administrators and alumni from the potentially affected schools.

Plaintiffs can point to no comparable court-ordered remedy. Not even the court in *Knight v. Alabama*—faced with multiple state policies and a fully segregated system of higher education—was willing to run these risks. A proposal so completely unprecedented, by every possible measure, poses too great a threat to the diverse populations of students served by the programs marked for “transfer,” and to Maryland’s collective system of public higher education.

Judged by any reliable standard of analysis, there is strong evidence that Plaintiffs’ program-based proposal would fail, and minimal evidence that it would succeed. Indeed, Plaintiffs argue that their proposal must first be adopted before its effectiveness may even be tested. Trial testimony has demonstrated that the foundations for Plaintiffs’ proposal—including a methodologically substandard advocacy piece performed two decades ago on a handful of self-selected students in the South—cannot possibly predict the results of Plaintiffs’ proposal in the Maryland of 2017.

As Defendants have argued and continue to maintain, under the current circumstances of this case, no remedy would satisfy the demanding standards for equitable relief established by Supreme Court and Fourth Circuit precedent. Nevertheless, at the Court’s request, the State proffers today a revised remedial proposal which is grounded in trial testimony. If the Court does determine to order a remedy, the Court should reject Plaintiffs’ proposal and instead adopt the State’s revised proposed remedy, or a remedy of similar scope providing flexibility to the HBIs in recruiting other-race students without risk to the rest of the Maryland public higher education system.

**B. The Organizing Framework for the State’s Proposed Findings**

The State’s proposed Findings and Conclusions below address what this Court has properly called “the complex question of what remedies are educationally sound, justified by the scope of the violation found, and best targeted to remedy that violation while enhancing rather than harming Maryland’s system of public higher education.” ECF 460 at 1.<sup>4</sup>

A necessary starting point is ascertaining the facts about the *current* status of diversity in the HBIs’ student populations. The black-white dichotomy of years-ago student enrollment no longer exists. Today, Maryland’s universities include an array of ethnicities and racial backgrounds: not just white students and African-American students, but also Asian, Latino, and international students, as well as a significant group of students who identify as multiracial. The number and proportion of HBI students who identify as a race other than African-American (collectively, “other-race students”) grows larger each year.

This updated information about changing campus demographics is relevant to determine whether the sole violation found at the 2012 trial—unnecessary program duplication—continues to have any (or any substantial) segregative effect. It is also relevant to fixing the scope of any remedy, and deciding whether that remedy will succeed.

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<sup>4</sup> The issues to be decided are mixed questions involving the application of law to fact. Rather than dividing this submission into inherently overlapping Findings and Conclusions sections, the State has organized its submission topically to address the evidence in terms of the guiding remedial principles reflected in the Court’s order and the underlying case law.

The Court's Order, read together with *United States v. Fordice*, 505 U.S. 717 (1992), and the traditional injunction factors, suggests three guiding principles for any remedy: (1) do no harm to Maryland's system of public higher education; (2) ensure that the remedy "best target[s]" the violation, ECF 460 at 1, *i.e.*, that it is most likely to be effective; and (3) make the remedy proportional to the scope of that violation. The State's revised remedial proposal meets those tests. Plaintiffs' proposal does not.

**1. Do no harm.** Every injunction must satisfy the traditional four-factor test, which requires weighing both the balance of hardships, and the public interest, against the wrong sought to be cured. *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157 (2010). In addition, *Fordice* expressly cautions that where violations are found, they may only be reformed "to the extent practicable and consistent with sound educational practices." 505 U.S. at 729-30. Thus, the first governing principle for any remedy should be to protect the only legally cognizable interest the Court has recognized in this case: the interest of present and future *students* in "[a]ttendance at an educational institution" unaffected "by segregative policies traceable to a prior *de jure* system." ECF 382 at 18.<sup>5</sup>

It is undisputed that Maryland's public university system—including, but not limited to, the institutions that would be most gravely harmed by Plaintiffs' remedial proposal—already offers Maryland students of every race the opportunity for an

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<sup>5</sup> By contrast, this Court has not identified the institutional interests of the HBIs or their alumni and faculty in enhancing the HBIs' facilities or reputations as either legally cognizable, or harmed by any policy traceable to the *de jure* era.

education in a diverse setting. ECF 460 (“Maryland’s TWIs are no longer segregated, thus distinguishing this case from the earlier *Fordice* litigation”).<sup>6</sup> It is therefore essential that any remedy do no harm to those already-diverse universities and the students and families they serve. Dr. Freeman Hrabowski, President of UMBC, testified proudly about insisting on representing multiple races (African-American, Asian-American, and white) working collaboratively as students and faculty on the cover of his most recent book (DRE135) to illustrate “UMBC’s dream: that you have people of all races trusting each other enough to work effectively together with the skills they need to solve the problems of humankind.” 1/30/17 Tr. 19.

A remedy that curtails the availability of high quality public higher education in a diverse setting would harm the interests of the future students whom the remedy must be intended to benefit. It would be both educationally unsound and inequitable to adopt a remedy that damages already-diverse schools like UB, UMBC, UMUC, and Towson without very strong evidence (which does not exist in this case) that this damage would be offset by a dramatic increase in diversity at the HBIs. By the same token, a remedy

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<sup>6</sup> This includes each institution directly affected by Plaintiffs’ proposal. At Towson, 40% of the students are non-white, and 20% are African American. 2/1/17 Tr. 32 (Schatzel). Dr. Schatzel testified that Towson is “a very, very diverse campus.” *Id.* UMBC’s diverse enrollment is “high 40s white”; “20-some percent Asian”; “Not quite 20 percent black”; 6-7% Hispanic; and includes a large number of multicultural or other-race students. 1/30/17 Tr. 28 (Hrabowski). UMUC “enroll[s] more African-American students than the four [HBIs] combined.” 2/6/17 Tr. 41 (Miyares). Overall, UMUC is “basically 60 percent non-white.” *Id.* at 42. UB “is probably the most integrated—racially integrated institution of the twelve in the USM system.” 2/9/17 Tr. 25 (Schmoke). UB’s enrollment is 46% African-American, 43% white. *Id.* at 25-26.

that pours resources into the HBIs but simultaneously threatens both their accreditations, and the accreditations of the non-HBIs, would also be unsound.

**2. Is the remedy likely to achieve its proper purpose?**

An acceptable remedy must be one that is “most likely to achieve the remedial purpose in the future,” *Knight v. Alabama*, 900 F. Supp. 272, 284-85 (N.D. Ala. 1995), and the Court should reject any proposal that is “not likely to” succeed, *Ayers v. Fordice*, 111 F.3d 1183, 1213 (5th Cir. 1997). Under *Fordice*, the proper purpose of a remedial order is to “eradicate[] policies and practices traceable to [a state’s] prior *de jure* dual system that continue to foster segregation.” *United States v. Fordice*, 505 U.S. at 728. Importantly, low other-race enrollment is not, in itself, a violation. *See id.* at 743 (“That an institution is predominantly white or black does not in itself make out a constitutional violation.”). “Racial identifiability” of the HBIs is relevant only to the extent that it is “attributable to the State” (*id.*), rather than to factors other than a traceable state policy. The violation to be targeted for relief is thus only the extent of segregation *caused by* the unnecessary program duplication the Court found in its liability decision. Relief that would address any segregative effect from program duplication must be carefully identified and distinguished from proposals designed to increase funding for the HBIs and or change their missions -- claims the Court has already rejected. ECF 382 at 24-33 (mission); 33-43 (funding). Although every college president would agree with Dr. Maria Thompson’s (President of UMES) candid statement that “I sure would like more money” for Coppin (1/11/17 pm Tr. 57), that is not a legal basis for action here.

**3. Is the remedy proportional?** The third principle is that the remedy must fit the scope of the violation, which is not the existence of program duplication in the abstract, but rather any *segregative effect* of that program duplication. It is settled law that injunctive relief “should not go beyond the extent of the established violation.” *Kentuckians for the Commonwealth, Inc. v. Rivenburgh*, 317 F.3d 425, 436 (4th Cir. 2003). Put differently, the remedy must be “tailored” to fit the violation. *Dayton Bd. of Educ. v. Brinkman*, 433 U.S. 406, 415, 420 (1977).

Plaintiffs have not shown, and this Court did not find, that the difference between the current level of other-race enrollment at the HBIs (as compared to some historical level) is necessarily due to program duplication as defined in the Court’s liability opinion. The Court ruled only that unnecessary program duplication as defined by Dr. Clifton Conrad was a factor in the lack of diversity at Morgan, Coppin, and Bowie State University—that it had a “palpable,” more than *de minimis* effect—not that it was the sole factor or even an especially significant one. ECF 382 at 55. Thus, any remedy should not attempt to counter the effects on HBI enrollment of changes in statewide or local demographics, or of factors affecting student choice that are unrelated to program duplication, including college rankings and average test scores that students and their families use to identify the schools to which they will apply.

Nor should a remedy attempt to counter the effects of preferences of some African-American students in particular for a “minority-serving” educational setting—something both Dr. Conrad and Dr. Walter Allen have singled out for praise. Clifton Conrad & Marybeth Gasman, *Educating a Diverse Nation: Lessons from Minority-*



*Serving Institutions* 18, n.22 (2015) (citing, *inter alia*, Walter R. Allen, *et al.*, *College in Black and White: African American Students in Predominantly White and Historically Black Public Universities* (1991)). See, e.g., Skylar Mitchell, “Why I Chose a Historically Black College,” *New York Times*, SR 10 (April 1, 2017), available at [https://www.nytimes.com/2017/04/01/opinion/sunday/finding-growth-at-my-historically-black-college.html?\\_r=0](https://www.nytimes.com/2017/04/01/opinion/sunday/finding-growth-at-my-historically-black-college.html?_r=0) (explaining Maryland student’s reason for choosing Spelman College over other highly-ranked institutions).

### **C. Summary of Proposed Findings**

Maryland’s HBIs have become increasingly diverse, even since the 2012 trial. This has important implications for this Court’s earlier findings about segregative effect, as well as any remedy. Part I, *infra*.

Plaintiffs’ proposed “transfers” would fail if ordered. They cannot possibly succeed at UMUC because its online model is so different from the HBIs’ traditional four-year approach. Eliminating these programs at UMUC and UB threatens the existence of both institutions, and their closure at UMBC and Towson will have substantial negative collateral consequences for those institutions and the State’s (and Baltimore City’s) economic and workforce development strategies. Those consequences will be magnified—particularly in the STEM and healthcare fields—by Plaintiffs’ proposal to forbid any future encroachment on the HBIs’ actual or contemplated “academic niches.” Because of the unprecedented scope of Plaintiffs’ scheme, it poses substantial risks for the academic accreditations of the HBIs as well as UMUC and UB. And finally, because any helpful increase in other-race enrollment would require the

HBIIs to increase several-fold in size, Plaintiffs' proposal is likely to cost well over one billion dollars, and those increased expenditures will trade off directly against the State's spending on its other, diverse, institutions of higher education. Part II, *infra*.

These costs cannot be justified by the potential success of Plaintiffs' remedies, because rigorous statistical methods, including multivariate regression analysis, show that those remedies would fail. Dr. Conrad's 1994 study, the ultimate basis of Plaintiffs' remedial theory, cannot be relied upon for any purpose, and certainly not to predict outcomes in Maryland in 2017. Nor can his unstable definitions of "core" and "duplicated" programs be used to craft a remedy. Because understanding student choice can be reliably accomplished through a routine application of standard methods of quantitative analysis, there is no reason to rely on impressionistic, unsystematic sources to support Plaintiffs' proposal—including the HBIIs' proposals and the beliefs of their presidents. Part III, *infra*.

No remedy can be justified for UMES, because this Court found no program duplication there, nor can one be justified elsewhere because of the lack of evidence about the actual level of segregative effect. Changes in MHEC's regulations, and their real-world administration by the State (along with the termination of the UB-Towson MBA program) undercut the original basis for any remedy. Even since the 2012 trial, the HBIIs have continued to adopt new academic programs and to develop their institutional identities. However, because there is at most a weak relationship between programs and student choice, and because the HBIIs and the non-HBIIs do not compete for the same students, Plaintiffs' proposal would be destined to fail. Part IV, *infra*.

**I. DIVERSITY HAS INCREASED AT MARYLAND’S HBIS SINCE 2012.**

1. Based on the 2012 trial (which reflected evidence from 2009 and 2011), this Court made findings about the HBIs’ racial identifiability. ECF 382 at 20-21. Evidence presented at the 2017 trial about the period 2012 to date demonstrated notable growth in other-race enrollment at Maryland’s HBIs since that time. Through marketing and recruitment under its Enrollment Management Plan, between Fall 2013 and Fall 2014, Bowie increased its percentage of non-African-American students from 15% to 17%. DRE035 at 2.<sup>7</sup> The University of Maryland Eastern Shore, Maryland’s most diverse HBI, and one of the most diverse HBIs in the nation, has steadily increased diversity on its campus. DRE164 at 3; 1/10/17 pm Tr. 79 (Dr. Juliette Bell, President of UMES). For the 2008-2009 reporting year, 18% of UMES’s entering freshman and transfer students were non-African-American students (DRE040 at 4), but by the 2012-2013 academic year, 30% of the entering freshman and transfer students were non-African-American. DRE040 at 9. Currently, only 67% of UMES’s students are African-American, 13% identify as white, and 20% as other non-African-American students. 1/10/17 pm Tr. 79-80 (Bell). Coppin also experienced a substantial increase in its non-African-American representation—“a 50 percent increase over a five-year period” from 12% non-African American to approximately 18% non-African-American. 2/14/17 Tr. 8 (Lichtman). Likewise, at Morgan, “in seven years [it] has gone from a 90 percent-plus

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<sup>7</sup> All trial exhibit citations are to the branded (imprinted) exhibit numbers and the corresponding branded pagination.

African-American institution to an institution that is slightly below 75 percent African-American.” *Id.* These data are not disputed.

2. Any remedial order must be entered on the basis of the most accurate, up-to-date evidence in the record. *See Mackin v. City of Boston*, 969 F.2d 1273, 1276-77 (1st Cir. 1992), *opinion corrected* (July 20, 1992). “[F]ederal courts, at least in the minerun of civil rights and institutional reform cases, have no choice but to make decisions about the maintenance, modification, or dissolution of structural remedial orders by referring to *the most current population statistics* readily available.” *Id.* (emphasis added); *see also Brown v. Bd. of Educ. of Topeka, Shawnee Cty., Kan.*, 978 F.2d 585, 593 (10th Cir. 1992) (“[T]he district court must consider the *current situation* in Topeka schools in order to fashion an appropriate remedy. Six years have passed since the trial, and it is likely that many changes have occurred in the school system. The district court should inquire into the recent history . . . .” (emphasis added)).

3. Here, the up-to-date evidence demonstrates that any program duplication at the HBIs does not currently have a segregative effect. And even if this Court were to find a continued (but vastly attenuated) remaining effect, this evidence bears on whether the remedy is “justified by the scope of the violation” and “best targeted to remedy that violation.” ECF 460 at 1.

**II. PLAINTIFFS’ PROPOSED REMEDY WOULD CAUSE IMMEDIATE AND ONGOING HARM TO MARYLAND’S STUDENTS, THEIR FAMILIES, AND THE STATE’S HIGHER EDUCATION SYSTEM AS A WHOLE.**

4. As just noted, any remedy must enhance rather than harm Maryland’s system of public higher education. ECF 460 at 1. Yet Plaintiffs’ proposed remedy would

cause great harm by disrupting existing academic programs and related academic departments at non-HBIs facing program “transfer”; by creating administrative and accreditation problems at the HBIs; and by impeding academic innovation throughout the system to clear the way for merely “contemplated” niches of programs that may or may not come to fruition, and that are unlikely to meet the State’s educational needs.<sup>8</sup>

5. Plaintiffs have proposed approximately 100 new and transferred programs for Maryland’s HBIs, which includes the dismantling of more than two dozen highly successful academic programs at four other Maryland institutions. PRX021. Plaintiffs’ proposal is of an unprecedented magnitude (1/17/17 pm Tr. 100-101 (Plaintiffs’ expert, Dr. Lucie Lapovsky, stated that “this is the first time I’ve seen anything like this. . . .”); 2/8/17 Tr. 127 (Dr. Sylvia Manning, former president of the Higher Learning Commission of the North Central Association (regional accrediting body), stated: “I’ve never seen anything like this . . . amount of change.”)) and its impacts could devastate Maryland’s higher education system.

6. First, Plaintiffs propose to transfer programs from four non-HBIs—the UB, UMBC, UMUC, and Towson—that today educate diverse student populations (as set forth above). ECF 460 at 1 (“Maryland’s TWIs are no longer segregated.”). Any remedy must not harm these racially diverse and inclusive institutions. ECF 460 at 1; *see also Knight v. Alabama*, 900 F. Supp. 272, 284-85 (N.D. Ala. 1995). These four non-HBIs have achieved national acclaim in many fields, and they educate diverse students and

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<sup>8</sup> According to Dr. Allen, Plaintiffs’ proposal did not consider the non-HBI presidents’ detailed declarations regarding the harm to those institutions because “[t]he focus was on the HBIs.” 1/19/17 pm Tr. 102 (Allen).

minority populations across the State, the nation and internationally. *See, e.g.*, 1/30/17 Tr. 27 (Hrabowski).

7. In general, transfers are quite risky. Dr. Allan J. Lichtman warned that “[r]ipping out programs is an enormously disruptive, an enormously agonizing kind of process. It is done at institutions only, as far as I know, under extreme circumstances of financial exigency or a program has simply atrophied away. But to take thriving programs and terminate them, that has all kinds of very substantial, intangible, not necessarily measurable costs.” 2/14/17 Tr. 87 (Lichtman). As Dr. James Fielder, Secretary of the Maryland Higher Education Commission (MHEC) testified, Plaintiffs’ proposal to eliminate successful programs at the non-HBIs would be very disruptive to those institutions, to Maryland’s system of higher education overall, and it is not sound education policy. 1/12/17 pm Tr. 72. Indeed, Plaintiffs’ proposal has already caused concern among the non-HBIs’ students, their families, the faculty, and the business partners of the affected institutions, who have reacted to the mere *threat* of closure of some of these programs. 1/30/17 Tr. 80-81, 161 (Hrabowski); 2/9/17 Tr. 68 (Hon. Kurt Schmoke, President of UB). Continued instability and uncertainty about the future of these institutions stymies their ability to continue to attract top students and faculty to Maryland, and inhibits their ability to continue to develop business partnerships that benefit the State. 1/30/17 Tr. 81-82 (Hrabowski); 2/1/17 Tr. 46 (Dr. Kim Schatzel, President of Towson); 2/1/17 Tr. 43-44 (Simmons).

8. Second, Plaintiffs propose to create more than seventy new programs at the four HBIs. PRX021. On average, between 2013 and 2016, the HBIs each introduced

two or three new programs a year. *See* DRE200. Plaintiffs' proposal for an unprecedented volume of new programs implies a 50% increase in the total program inventory at some of the institutions and would, at minimum, be a "heavy lift" for the HBIs. 2/8/17 Tr. 16 (Wheatley).

9. Moreover, these proposed programs have not undergone the extensive research, development, and vetting processes that any new academic program must undergo by its own institution and MHEC before implementation. 2/7/17 Tr. 71-73 (Wheatley) (describing the program proposal review process undertaken by MHEC analysts); 2/1/17 Tr. 40-41 (Schatzel) (explaining that typical program development takes two to four years and must establish that the program will "meet a standard of quality" for student success); 1/10/17 am Tr. 45-46 (Dr. David Wilson, President of Morgan) (testifying that it is important for an institution to be able to demonstrate that it has adequate curriculum design and delivery, as well as the ability to support a regional or statewide need with that program prior to implementing that program); 1/17/17 pm Tr. 42 (Lapovsky) (the information provided in Plaintiffs' proposal and the HBIs' proposals was insufficient).

10. Third, Plaintiffs propose a sweeping moratorium on the development by non-HBIs of new programs that would "infringe" on actual or "contemplated" HBI niches. PRX312 ¶ 198. Such a policy would go far beyond preventing future program duplication, because it would apply to programs within the scope of broad niches that may not include the specific program (and may not ever come into existence). It would give the HBIs a virtual monopoly on the development of new programs in the very areas

of highest state workforce need and student demand, such as Engineering, Computer Science, and Nursing. And it would prevent non-HBIs from offering new programs in deference to tentative or contemplated actions by an HBI that might never produce an actual program for Maryland students.

11. The effects of Plaintiffs' proposal would extend beyond those institutions directly affected, exacerbating the State's current challenges to produce enough graduates to meet its workforce demands and its students' educational needs. As the Governor's STEM Task Force found, "competing states significantly out-produce us in terms of . . . [STEM] graduates, STEM workforce development, and STEM-based economic development." DRE021 at 3. Plaintiffs' proposal would cause Maryland to fall even further behind, by shutting down programs that currently enroll and graduate thousands of students in STEM fields (*see, e.g.*, 1/31/17 Tr. 41-42 (Simmons) (the National Security Agency (NSA) has hired more than a thousand graduates from UMBC, including approximately 400 in the last three years alone)); by driving students out-of-state to pursue their educations (*see* DRE021 at 18 (more than a third of all Maryland high school students who attend college leave the State to obtain their degrees)); and by forcing employers to go out-of-state or out of the country for their hiring needs. *See* 2/15/17 Tr. 182-84 (Dzirasa).

**A. Closing Successful Programs Would Harm Maryland's System of Public Higher Education, the Non-HBIs, Their Faculties and Maryland Students.**

12. As several witnesses testified, the term "transfer" is a misnomer. 1/12/17 pm Tr. 72 (Fielder) (explaining that "there really isn't a transfer or merger. You really



are eliminating and removing an academic program that typically is successful or the institution [would] have closed it, with the thought that it can simply be implanted somewhere else.”); 1/30/17 Tr. 67-68 (Hrabowski); 2/6/17 Tr. 61 (Javier Miyares, President of UMUC); 2/8/17 Tr. 68-69 (Manning). In addition, in many instances the HBI that Plaintiffs have designated to receive the program already offers that program. In such cases, the “transfer” is simply closure of the program at the non-HBI.<sup>9</sup> See DRE096 at 1 (letter from Plaintiffs’ counsel explaining that the transfer of UB’s MBA program to Morgan, which currently offers an MBA, means that UB’s in-person and online MBA would both be “discontinued”).

13. As more fully set forth below, programs cannot be transplanted wholesale from one institution to another. There will likely be “huge amounts of tension and difficulties and problems within the transferring institutions. . . . you are going to weaken all related programs.” 2/14/17 Tr. 86 (Lichtman). Students are not forced to transfer, those enrolled in the program are generally entitled to complete their degrees, meaning that the terminating institution must bear the costs of several years of “teach-out” —*i.e.*, completion of the entire degree program for every student at the school losing the program. See 2/8/17 Tr. 121 (Manning). Similarly, faculty do not transfer. 2/9/17 Tr. 56

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<sup>9</sup> In instances where the program is not currently offered by the HBI, the non-HBI program would be terminated and then a new program attempted at the HBI. By way of example, Plaintiffs have proposed to “transfer” Towson’s Master’s in Integrated Homeland Security Management. PRX021 at 27. As President Schatzel explained, that program is an interdisciplinary degree created from existing resources and faculty and cannot exist as a stand-alone offering. 2/1/17 Tr. 50 (Schatzel). Therefore, there is nothing to “transfer” to Coppin. Coppin would need to acquire faculty and resources for a brand-new program, and the related costs such as marketing, administration, facilities, etc. would all be required at Coppin.

(Schmoke). They may not be forced to accept appointments at another school, and can be expected to refuse offers that come with lower salaries, higher course loads, or less desirable conditions. *Id.* Moreover, faculty are generally not tied to a single program of study; they teach in departments and generally have responsibility for courses in multiple programs. *See e.g.*, 1/31/17 Tr. 12-13 (UMBC alumna Tina Williams). Plaintiffs' proposed closure of thriving programs in popular academic specialties would put the Maryland system at great risk of losing talented faculty—not only for the specific program targeted for “transfer,” but also for other programs and courses taught in the same academic department. *See e.g.*, 2/9/17 Tr. 13-14, 41-42 (Schmoke).

14. The mere threat of transfers has already had severe consequences at the non-HBIs. As the president of each of the targeted non-HBIs testified, the threat of losing highly successful academic programs creates great difficulties in retaining and attracting qualified faculty and administrators, along with students. 1/30/17 Tr. 39 (Hrabowski); 2/1/17 Tr. 46 (Schatzel); 2/9/17 Tr. 56-57 (Schmoke). As a concrete example, the dean of UMBC's College of Engineering and Information Technology recently announced that she will be leaving UMBC to accept a position as Dean of the College of Engineering at UMBC's competitor, Virginia Polytechnic Institute and State University. 1/30/17 Tr. 39, 86 (Hrabowski) (“[W]hen she [the dean of engineering] goes to Virginia Tech, she doesn't have to worry about whether they have this program or that. And most important, she doesn't have to worry that somebody may get one of her programs.”).

15. President Miyares testified that proposing to transfer programs or having a special master review programs at UMUC would have an immediate impact on enrollments because “the for-profit competitors and the public competitors will find their way to spread the word that UMUC is going through a process through which it may lose X programs. Working adults will not -- enroll in any institution in a program that may disappear.” 2/6/17 Tr. 166-67 (Miyares); 1/30/17 Tr. 80-81 (Hrabowski) (the resulting instability will allow competitor institutions to obtain an edge on applicants). As President Schatzel explained, “[a]ny type of suggestion of transfer, even a study of transfer, with regard to the programs at Towson would create uncertainty,” interest from prospective students would “be negatively impacted in terms of being able to take a look at Towson” and it would prevent the non-HBIs from attracting and retaining quality faculty in high-demand areas. 2/1/17 Tr. 46 (Schatzel).

16. Distinguished faculty who would otherwise join these Maryland institutions are deterred from committing because they are rightfully “concerned about exactly where these programs will be over the next few years.” 2/9/17 Tr. 68 (Schmoke); 1/30/17 Tr. 39, 81 (Hrabowski) (“[A]s we get ready to recruit another [D]ean [of Engineering], the first question I’m going to get besides—even more than money is: Are you who you are, or will you be losing programs[?]”). High-demand faculty “have the ability to go wherever they want,” which, in typical circumstances, would not include a risky start-up program. 2/1/17 Tr. 43-44 (Schatzel). President Schatzel testified that her “biggest concern” regarding the proposed transfers is whether Towson “would be able to retain as

well as to attract faculty into the institution itself, particularly in these high-demand areas.” 2/1/17 Tr. 46 (Schatzel).

17. In addition to the difficulty in attracting high-quality faculty while programs are under the threat (or the later reality) of closure, presidents of the non-HBIs testified that they would also face difficulty in retaining their current faculty if anything like Plaintiffs’ proposal is adopted. 1/30/17 Tr. 39 (Hrabowski). The current faculty at the non-HBIs have raised strong objections to the proposed transfers. 2/9/17 Tr. 60, 67-68 (Schmoke). The faculty have made it clear that they fear the loss of tenure rights, loss of control over program development, loss of research-related resources, and the loss of their “academic rights” if their programs are transferred to other institutions. 2/9/17 Tr. 56 (Schmoke).

18. Plaintiffs’ expert, Dr. Lapovsky, acknowledged that faculty are averse to change and that being forced to terminate tenured faculty has “a lingering negative effect” on an institution. 1/17/17 pm Tr. 56-57; 1/18/17 am Tr. 9 (Lapovsky). Dr. Lapovsky recounted an incident that occurred at Goucher College, two decades before her employment there, when tenured faculty were fired and then sued the university; twenty years later, remaining faculty at Goucher were still upset about the firing and it remained an “albatross over the school.” 1/18/17 am Tr. 12-13 (Lapovsky). Dr. Lapovsky agreed that if Plaintiffs’ proposal was enacted, the inevitable terminations or transfers would continue to have an effect on the non-HBIs for many years to come. 1/18/17 am Tr. 14 (Lapovsky).

19. Shutting down successful programs would have a “devastating impact on the . . . reputation of the institution.” 1/30/17 Tr. 67-68 (Hrabowski). High-quality faculty give “prestige to the institution” (2/1/17 Tr. 41 (Schatzel)), and the inability to attract qualified faculty can place specialized accreditations in jeopardy. 1/10/17 pm Tr. 42 (Bell).

**B. Plaintiffs’ Proposed Transfers Would Destroy Highly Successful Programs at the Non-HBIs that Are Serving Diverse Student Populations.**

20. Plaintiffs have proposed to shutter among the most successful academic programs at UMBC, UB, UMUC and Towson. These programs collectively enroll well over ten thousand students of all races and backgrounds. 2/1/17 Tr. 47 (Schatzel) (Towson’s Bachelor’s in Accounting enrolls over 1,000 students); 2/9/17 Tr. 27 (Schmoke) (UB’s MBA and Criminal Justice programs collectively enroll over 1,000 students); 2/6/17 Tr. 64-68 (Miyares) (UMUC’s programs slated for transfer enroll more than 8,500 students).

**1. UMBC’s Engineering Programs**

21. Plaintiffs propose to terminate the following seven programs at UMBC:

- Bachelor’s in Computer Engineering;
- Master’s in Computer Engineering;
- Doctorate in Computer Engineering;
- Master’s in Environmental Engineering;
- Doctorate in Environmental Engineering;
- Master’s in Electrical Engineering; and

- Doctorate in Electrical Engineering;

(PRX021; DRE096). Losing these programs would fundamentally disrupt not only UMBC's College of Engineering and Information Technology, but the institution's educational approach. "[W]e are talking about the very core of computing at UMBC." 1/30/17 Tr. 96 (Hrabowski).

22. As Dr. Hrabowski explained, these engineering programs are part of UMBC's "ecosystem" of research and development, which creates and relies on interdisciplinary teams to address state and national issues as well as educate its students. *Id.* at 68-70. UMBC alumni described the significant overlaps in coursework and faculty among UMBC's different engineering programs and computer science. 1/31/17 Tr. 12-13 (Williams); 2/16/17 Tr. 165-66 (Dzirasa). "[P]ulling pieces out" of this "existing and very highly functioning ecosystem," 2/15/17 Tr. 200 (Dzirasa), disrupts successful programs that educate a diverse student body to provide the workforce that Maryland needs. *See* DRE196 at 4; *see also* 2/16/17 Tr. 196-98 (Dzirasa).

23. One example of UMBC interdisciplinary work that is critical to the State of Maryland and threatened by Plaintiffs' proposals is the UMBC Institute of Marine and Environmental Technology. UMBC hosts scientists, engineers, and policy professionals to work with UMBC faculty and students to address threats facing the Chesapeake Bay. 1/30/17 Tr. 96 (Hrabowski). Terminating the school's Environmental Engineering programs risks not only that important research, but also certain of UMBC's competitive grants such as the U.S. Geological Survey's Water Science Center grant described by Dr. Hrabowski. *Id.*

24. Currently, UMBC is Maryland's only institution designated by the NSA as a Center of Academic Excellence for both research and education. DRE196 at 4. And as Greg Simmons, UMBC Vice President for Institutional Advancement testified, the @bwtech incubator at UMBC's research and technology park, has "the largest cluster of cybersecurity start-up companies we can find at a university-based research park in the country." 1/31/17 Tr. 46 (Simmons). Stripping UMBC of its programs would threaten its continued success in this area; "computer engineering is a central element . . . and ripping that from the college really changes the way we're able to work with partners and prepare students in a meaningful way." 1/31/17 Tr. 41 (Simmons). This would cripple UMBC's engineering school and destroy the network that relies upon its engineering faculty and students.<sup>10</sup> 1/30/17 Tr. 68-69 (Hrabowski).

25. Closing UMBC's engineering programs would not only harm the institution; it will also harm specific initiatives intended to enhance diversity in engineering. For example, engineering is critical to UMBC's Meyerhoff program, which recruits and nurtures talented STEM students like cybersecurity entrepreneur and trial witness Tina Williams, and Duke faculty member M.D./Ph.D. Kafui Dzirasa. *See* 1/31/17 Tr. 6-10 (Williams); 2/15/17 Tr. 162-63 (Dzirasa). The harm would even extend beyond the many African-American students who have chosen UMBC as the place to launch their STEM careers. UMBC's programs enroll and graduate students of diverse backgrounds, many of whom have gone on to create businesses which then, in turn, hire

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<sup>10</sup> Another example of this "ecosystem" is the faculty and curriculum overlap in Computer Science and Computer Engineering. 1/31/17 Tr. 13 (Williams).

the next generations of Maryland's students. 2/15/17 Tr. 189, 197 (Dzirasa). They are integral to UMBC's efforts to increase the success of women and other underrepresented populations in STEM-related careers through initiatives such as the Center for Women in Technology (CWIT). DRE121 at 2. Non-degree programs like CWIT distinguish UMBC's computing and engineering programs from their counterparts at other institutions, and encourage diversity. DRE121 at 2 (quoting Penny Rheignans, Director of CWIT, explaining that "CWIT is unique . . . . I have not seen anything like it. Programs [elsewhere] seem ad hoc or like a club. But CWIT is a program created with intentionality and pieces that fit together."). UMBC has initiated similar programs such as Building Recruiting and Inclusion for Diversity (BRAID), "which is aimed at increasing the representation of women and students of color in undergraduate computing majors." DRE143 at 1. Additionally, UMBC partners with community colleges through the STEM Transfer Student Success Initiative to support the successful transition to upper division courses of students pursuing STEM degrees. DRE143 at 3. UMBC supports the Baltimore County public schools with Increasing Student Participation, Interest and Recruitment in Engineering and Science (INSPIRES) and Project Lead the Way (PLTW) to prepare K-12 students to be globally competitive in STEM fields. DRE143 at 2.<sup>11</sup> These initiatives all rely on UMBC's engineering school for the faculty, resources, student involvement and corporate sponsors that sustain them.

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<sup>11</sup> As Dr. Hrabowski put it: "We need money – the campuses need money, all, all of us who are involved in this work, to build the pipeline of students who can succeed . . . a strengthening of teaching and learning between middle school and the first two years of



**2. Towson's Programs in Accounting, Forensic Science and Integrated Homeland Security Management**

26. Plaintiffs' proposal seeks to transfer the following programs from Towson:

- Bachelor's in Accounting;
- Master's in Forensic Science; and
- Master's in Integrated Homeland Security Management.

Each of these programs as developed at Towson has unique attributes that would not be transferrable to another institution. Towson's Master's in Forensic Science, for example, has obtained a specialized certification, awarded to only seventeen programs throughout the country, which cannot be transferred to another institution. 2/1/17 Tr. 49 (Schatzel). Towson's Master's in Integrated Homeland Security Management is an interdisciplinary degree created from other Towson programs and faculty and does not exist as a stand-alone program with faculty exclusive to it. 2/1/17 Tr. 50 (Schatzel). Towson's Bachelor's in Accounting produces employees for many of the greater Baltimore accounting firms because of alumni relationships that span decades. 2/1/17 Tr. 50-51 (Schatzel).

27. The Accounting program illustrates the high risk posed by Plaintiffs' proposed transfers. That program currently serves over 1,000 students. 2/1/17 Tr. 47 (Schatzel). Plaintiffs have proposed to "transfer" this program to Morgan, which currently offers its own Bachelor's in Accounting. 1/25/17 Tr. 92 (Conrad). They seek to shut down the Towson Accounting program in the hope that -- in the future -- students

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college . . . this is my speaking as an educator, as a math teacher of 40-some years. 1/30/17 Tr. 85.

will choose to enroll at Morgan if a program at Towson is no longer available to them. In other words, Plaintiffs' proposal is for the closure of an existing, thriving academic program, full stop. And as explained more fully below, *see infra* Part IV.E, there is little chance that these students would choose Morgan instead.

29. As President Schatzel testified, the proposed transfers would have a substantial negative impact on current and future students at Towson, as well as the Maryland business community. First, the more than 1,000 students currently enrolled in Towson's Bachelor's in Accounting program would require a "teach-out" to complete their degrees. *See* 2/1/17 Tr. 47 (Schatzel). Second, closing the Accounting program would hurt Towson's business school as a whole. *Id.* Accounting is a "core element" of Towson's business school and the loss of this core program (and its faculty) could cripple that school, which is currently one of the largest business schools in the State. *Id.* These ripple effects would also hit businesses in the greater Baltimore area, such as Deloitte and Wells Fargo, who rely on Towson to supply them with qualified graduates. 2/1/17 Tr. 50-51 (Schatzel). Plaintiffs' proposal threatens to destroy these valuable relationships which have taken more than two decades to develop fully. *Id.*

### **3. UB's Merrick School of Business and College of Public Affairs**

30. UB is "one of Maryland's most diverse universities in terms of both academic offerings and student profiles," with minority students making up "61.6 percent of its undergraduate students and 50.0 percent of its graduate students." DRE082 at 3. Nonetheless, Plaintiffs propose to terminate the following seven UB programs:

- Master's in Business Administration;

- Online Master's in Business Administration;
- Master's in Accounting and Business Advisory Services;
- Bachelor's in Criminal Justice;
- Master's in Criminal Justice;
- Bachelor's in Forensic Studies; and
- Doctorate in Information and Interaction Design.

PRX021. Several of these programs are foundational for UB's Merrick School of Business and its College of Public Affairs, which comprise two of the four schools at UB. 2/9/17 Tr. 26-27 (Schmoke).

31. The student enrollment in the Criminal Justice programs and the MBA programs at UB makes up approximately 20% of UB's total enrollment. 2/9/17 Tr. 27 (Schmoke). President Schmoke testified that the loss of such a substantial portion of UB's enrollment, the loss of the distinguished faculty associated with those programs, and the impact on UB's reputation would be a "body blow" to the institution that would threaten its future. 2/9/17 Tr. 43-44 (Schmoke). Such a drastic decline in enrollment would likely also trigger a review of UB's institutional accreditation. *See* Part II.F; 2/8/17 Tr. 120 (Manning). Moreover, teach-outs would be required for the affected 20% of UB's enrollment (2/8/17 Tr. 121 (Manning)) at an estimated cost of \$2.6 million for the Criminal Justice programs and \$7.9 million for the MBA programs. 2/9/17 Tr. 45, 63 (Schmoke).

**a. Criminal Justice Programs**

32. Criminal Justice is one of UB's oldest and largest undergraduate majors, currently enrolling over 530 students, which is approximately 30% of UB's College of Public Affairs; it is the fastest growing program at UB. 2/9/17 Tr. 26-27, 61 (Schmoke). More than two-thirds of the students in the undergraduate program are African-American. 2/9/17 Tr. 60 (Schmoke). Plaintiffs' proposal to terminate this program would therefore harm many African-American students who currently are receiving their educations in a diverse setting.

33. Additionally, Plaintiffs have offered no evidence to suggest that UB's Criminal Justice students and faculty would move to Coppin. Rather, evidence suggests that UB's Criminal Justice programs do not compete with Coppin's Criminal Justice programs for students or faculty. 2/9/17 Tr. 62-63 (Schmoke). UB's Criminal Justice programs have a more theoretical emphasis and focuses on victimology, which sets it apart from other Criminal Justice programs in Maryland. 2/9/17 Tr. 61, 62-63 (Schmoke); 2/7/17 Tr. 111-13 (Peay). UB's undergraduate and graduate programs in Criminal Justice are among a select few that are accredited by the Academy of Criminal Justice Sciences. 2/9/17 Tr. 68 (Schmoke). Competitor institutions for UB's Criminal Justice programs include the John Jay College in New York, UMUC, University of Maryland, College Park and Stevenson University. 2/9/17 Tr. 61-63 (Schmoke).

34. Faculty who teach in UB's Criminal Justice programs have stated that they would not follow those programs to Coppin, but would instead pursue options at other institutions. 2/9/17 Tr. 67-68 (Schmoke). Indeed, discussion of potential transfers over

the past two years has already begun to negatively affect faculty recruitment efforts at UB. 2/9/17 Tr. 68 (Schmoke).

35. The termination of UB's Criminal Justice programs would also strip support from related initiatives at UB that benefit both students and the community at large, such as the Roper Victim Assistance Academy, developed by UB Professor Debra Stanley. 2/7/17 Tr. 113 (Peay). The Roper Academy provides students, criminal justice professionals, and victims' services advocates with a greater understanding of "crime victim[s] and the overall process of criminal justice and not just the population [, . . . and] insight into a lot of these offenders being victims of some sort themselves." *Id.* The Academy, which grew out of and is associated with the Criminal Justice programs at UB, also allows criminal justice "agencies to communicate and dialog with each other . . . to collaborate and understand the needs of the independent agencies." 2/7/17 Tr. 116-117 (Peay).

36. Additionally, UB's Criminal Justice programs support, with federal grant funding, a program for inmates at the Jessup Correctional Facility. 2/9/17 Tr. 64 (Schmoke). This initiative offers admission to UB for qualified inmates upon their release. *Id.* Closing UB's Criminal Justice programs would also terminate these related initiatives that benefit the State of Maryland.

**b. The Merrick School of Business**

37. UB has offered its MBA program since 1925, when the University was founded as a private institution. 2/9/17 Tr. 5, 27 (Schmoke). Currently, the MBA program enrolls approximately 593 students and is the largest degree program in, and the

heart of, the Merrick School of Business. 2/9/17 Tr. 5, 27 (Schmoke). The Merrick School's MBA program is regarded as a "regional powerhouse," 2/9/17 Tr. 36-38, 59 (Schmoke); and its traditional and online MBA offerings have brought acclaim to UB and to the State. *See* DRE073. Its competitor schools include the Johns Hopkins University Carey Business School, the Loyola University Maryland Sellinger School of Business, the George Mason University School of Business, and the UMCP Robert H. Smith School of Business. 2/9/17 Tr. 37 (Schmoke). Morgan, where Plaintiffs propose to transfer UB's MBA programs, is not within UB's set of competitor institutions, and is classed as a "local" level of program. 2/9/17 Tr. 37 (Schmoke). It is therefore unlikely that if students were unable to enroll at UB, they would choose the Morgan MBA program instead.

38. UB and Towson have discontinued their joint MBA program (2/9/17 Tr. 10 (Schmoke)), which, according to Dr. Earl Richardson's (President Emeritus of Morgan) testimony, duplicated Morgan's program to the detriment of Morgan's enrollment. 1/17/17 am Tr. 17-18 (Richardson). But closing the UB/Towson program has had no identifiable effect on Morgan's business school enrollment. *See* 1/10/27 am Tr. 68-69 (Dr. Wilson was unaware of any changes to Morgan's business school enrollment). This is to be expected because from its inception, the UB/Towson program had no effect on Morgan's white enrollment. In 2004, the year before the joint UB/Towson program was adopted, Morgan's MBA program enrolled 28 students, none of whom was white. DRE070 at 45 ("Moreover, enrollments in Morgan's MBA program began to take off only in 2006, the year after adoption of the joint Towson/UB program. In that year,

according to Morgan’s website, the MBA program enrolled 68 students, well more than double the 2004 number, and 1 white student.”).

39. Morgan has acknowledged that it does not compete with UB with regard to its online MBA program. UB was one of the first institutions in the nation to offer an online MBA, and its online MBA is currently ranked 26 globally by CEO Magazine, while Morgan is unranked. DRE073 at 3; 2/9/17 Tr. 38 (Schmoke) (UB’s is “the only Maryland program that [has] received recognition every year by the U.S. News & World Report.”). In 2015, Morgan proposed to establish its own online MBA and was approved by MHEC. *See* DRE087. In its online MBA proposal, Morgan argued that programs offering the same degree are not inherently duplicative, and asserted that its program did not duplicate other online MBA programs, including UB’s online MBA. DRE087 at 18-19, 22. Morgan identified its online MBA as “unique in the Maryland system” for its “combination of cost, quality, and access for students from underserved communities”; “its focus on Military and underserved communities”; and for its “state-of-the-art delivery platform.” DRE087 at 18-19.

40. Loss of the MBA programs would destroy the foundation of UB’s Merrick School and drive away faculty who teach courses across degree programs in that School. 2/9/17 Tr. 40-42, 44 (Schmoke). Business faculty are in demand and scarce (1/18/17 am Tr. 15 (Lapovsky)), and the faculty in the Merrick School have made it clear that they will pursue other options if the proposed transfers are adopted and UB can no longer offer an MBA. 2/9/17 Tr. 13-14, 41-42 (Schmoke) (“[Y]ou have to ha[ve] an MBA program, that it was not enough just to have a good undergraduate BA, but to get the best

or the highest-quality Business School professors. You had to also have an MBA . . .”). The loss of distinguished faculty would impact other programs within the Merrick School, such as the Accounting program that provides “talent” for many of the large accounting firms in Baltimore. DRE091 at 1; 2/9/17 Tr. 24 (Schmoke).

41. UB also stands to lose substantial alumni and donor support if the Merrick School is harmed. Alumni of the Merrick School have contributed approximately \$22 million in unrestricted endowment to the university. 2/9/17 Tr. 49 (Schmoke). Generally, support from alumni is tied to the continuation of the programs and departments in which they received their degrees, so that closure of the MBA program could cost UB millions in future alumni support. 2/9/17 Tr. 50, 54-55 (Schmoke). President Schmoke provided a concrete example of the support that UB stands to lose from its alumni—Bob Parsons, a graduate of the Merrick School and the founder of the internet domain company GoDaddy, has given in excess of \$3 million to UB, has endowed a professorship in the School, and has indicated his willingness to give more. 2/9/17 Tr. 50, 53-55 (Schmoke). Nevertheless, Mr. Parsons has also made clear to President Schmoke that “if the Merrick School is not there, that he’s unlikely to make the same level of contributions to the university.” *Id.*

#### **4. UMUC’s service to diverse students throughout Maryland and overseas**

42. UMUC was founded by statute in 1947 to serve working adults, with an emphasis on serving military-affiliated students: a central focus that it continues to pursue “to this day.” 2/6/17 Tr. 11 (Miyares). UMUC’s expansion over the years is not a



result of attracting students who would otherwise attend a traditional Maryland institution, but rather, a response to an increase in the demand for alternative access to higher education in the form of online programs. 2/6/17 Tr. 51-52 (Miyares). Today, UMUC is Maryland's specialized provider of online education, and provides educational access for 85,000 students who might not otherwise be able to pursue their education in a traditional brick and mortar setting. 2/6/17 Tr. 52 (Miyares) ("I believe it is critical to the state, to the nation, I would even claim to the world to increase the number of people who . . . have a college credential."). It is not comparable to the other four-year public universities involved in the present litigation and faces unique challenges and risks from Plaintiffs' proposal. 2/6/17 Tr. 11 (Miyares).

**a. Plaintiffs' proposal is another attempt to eliminate UMUC, which this Court has already rejected.**

43. In its February 2, 2016 order, this Court made clear that it is not "likely to adopt a remedy that would essentially eliminate UMUC." ECF 460 at 2. Nonetheless, Plaintiffs propose to shut down the following seven programs at UMUC:

- Bachelor's in Criminal Justice;
- Bachelor's in Accounting;
- Bachelor's in Finance;
- Bachelor's in Investigative Forensics;
- Master's in Digital Forensics and Cyber Investigation;
- Master's in Accounting and Business Advisory Services; and

- Doctorate of Management, Community College Policy and Administration.

PRX021.

44. Plaintiffs have also proposed to “transfer all academic degree programs in Management, Business Management, and closely aligned fields from UMUC to [Morgan].” PRX021 at 17-18. UMUC’s “most extensive offerings are in business and management and computer studies.” DRE079 at 5. It is unclear, perhaps intentionally so, how many programs will ultimately be dismantled at UMUC if Plaintiffs’ proposal were adopted, because of the vague contours of what Plaintiffs have proposed. 2/8/17 Tr. 123 (Manning) (When asked whether she had ever seen such a “large scale academic proposal framed at this level of generality,” Dr. Manning replied that “this is not really a proposal yet, so I can’t compare it to a proposal. At some point every proposal was a twinkle in the eye. And this is a twinkle.”).

45. Finally, Plaintiffs have proposed to create a process to “inventory academic degree program duplication between UMUC and a specific [HBI]” and then to “[t]ransfer affected academic degree programs from UMUC to [the] HBI.” PRX021 at 17-18. The intended, widespread closure of an undefined number of UMUC’s programs would likely have the same effect as Plaintiffs’ initial proposal to eliminate UMUC.

**b. UMUC’s educational policies and high-volume enrollment model are not compatible with a traditional four-year institution’s.**

46. UMUC is distinct from virtually all other Maryland public higher education institutions because it does not have a physical campus; does not target traditional-aged

college students; is an open-access university; and currently provides only online or hybrid courses. 2/6/17 Tr. 11 (Miyares). UMUC also differs from the HBIs by:

- offering students exceptionally wide acceptance of transfer credits, including equivalency credits, prior learning credits, all community college credits, and military training credits;
- providing open-access undergraduate admission for any student who has a high school diploma and graduate admission for any student with a Bachelor's degree from a regionally accredited university;<sup>12</sup>
- providing a global footprint with resilient 24/7/365 call centers that replicate every student-facing support function of the university, from financial aid to academic advising to library services;
- employing a large number of part-time faculty (approximately 5,000) who are generally paid per course taught;
- giving individual faculty no final say over course content, and mandating a uniform curriculum for all faculty members teaching the same classes;<sup>13</sup>
- not offering tenure to any of its faculty;<sup>14</sup>
- having no research faculty or facilities, nor supporting or encouraging academic research projects by faculty;<sup>15</sup>

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<sup>12</sup> UMUC's transfer credit and open-access admissions policies are flatly contrary to the HBIs' expressed interest in raising their academic profiles. *See* 2/6/17 Tr. 18 (Miyares).

<sup>13</sup> Dr. Wilson testified that "[w]e at Morgan hold academic freedom very, very high. And so it's the hallmark of who we are as an institution. And so I cannot recall, during my tenure, where we have dictated to a professor what to teach." 1/9/17 pm Tr. 70 (Wilson). *See* 2/6/17 Tr. 19 (Miyares) ("[T]raditional institutions also have a faculty . . . that very much want to control the curriculum . . .").

<sup>14</sup> Dr. Wilson testified that Morgan "absolutely" prefers to have more full-time tenure-track faculty. 1/9/17 pm Tr. 69 (Wilson).

<sup>15</sup> "As a research university, Morgan State University's faculty are required to do research and are encouraged to maintain an appropriate balance between scholarly research and classroom learning and student support." DRE087 at 28; *See also* 1/10/17 pm Tr. 47 (Bell) (noting the importance of research to UMES's new Carnegie classification); 2/6/17 Tr. 19 (Miyares) ("An institution aspiring to academic prestige will have a faculty that is involved in research.").

- offering eight-week courses and ten course-start times per year;
- using 100% free online educational resources instead of textbooks; and
- operating a low-margin, high-volume model that serves 85,000 students, more than half of whom are military-affiliated, at an exceptionally low cost to the students and to the State.

See 2/6/17 Tr. 16-19, 22, 25, 29, 32-33, 35-36, 41, 56-57, 62 (Miyares). In short, the pedagogical, financial, and institutional practices and infrastructure supporting UMUC's programs are radically different from those of traditional institutions. Individually and collectively, these differences make the "transfer" of any of UMUC's program both impractical and educationally unsound.

47. Overall, Plaintiffs propose as an initial matter to shift programs currently enrolling approximately 8,500 students from UMUC to the HBIs. 2/6/17 Tr. 68 (Miyares). Transfer of UMUC's programs to the HBIs is not possible because they are neither equipped for, nor interested in, the volume of online enrollment that UMUC serves.<sup>16</sup> For instance, UMUC's Bachelor's in Criminal Justice, which Plaintiffs have targeted for transfer to Coppin, enrolls 3,148 students (2/6/17 Tr. 65 (Miyares)), which is equal to the institution-wide *total* enrollment for Coppin. 1/11/17 pm Tr. 40 (Thompson) (Coppin currently enrolls approximately 3,150 students.). UMUC's Bachelor's in Accounting, which Plaintiffs propose to transfer to Morgan, enrolls 2,287 students

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<sup>16</sup> In contrast, Morgan's long-range goal is to serve approximately 1,000 to 1,500 students in its online courses, which is less than 20% of Morgan's current enrollment. 1/9/17 pm Tr. 106 (Wilson).

throughout 365 sections (2/6/17 Tr. 64 (Miyares)), whereas Morgan's largest courses can accommodate fewer than 500 students. 1/9/17 pm Tr. 67 (Wilson).

48. Because UMUC's finances are enrollment-driven, a loss of as much as 10% of its students could threaten the viability of the institution. 2/6/17 Tr. 68-69 (Miyares). For example, President Miyares explained that in 2013, due to a multitude of factors, UMUC saw a dip in enrollment, forcing it to immediately cut \$60 million from its budget and to terminate 300 employees. 2/6/17 Tr. 53-57 (Miyares). Similarly, the substantial loss in enrollment resulting from Plaintiffs' proposal would threaten the institution and, at a minimum, require a massively increased State subsidy, increased tuition, or both, for UMUC to continue operations.<sup>17</sup> 2/6/17 Tr. 58 (Miyares).

**c. UMUC's military-affiliated students will not enroll in a traditional four-year institution.**

49. UMUC has a special focus on serving non-traditional students, including military personnel. 2/7/17 Tr. 31-32, 65 (Miles); MD. ANN. CODE, EDUC. § 13-101(a)-(b) ("It is the intent of the General Assembly that [UMUC] operate as Maryland's open university serving nontraditional students who reside in Maryland, the United States, and throughout the world. . . . The exercise by [UMUC] of its powers, including its overseas operations, is the performance of an essential public function."). Currently, approximately 60% (53,000 students) of UMUC's students are military-affiliated. 2/7/17 Tr. 65 (Miles). To accommodate the unique needs of its military-affiliated students, UMUC maintains teaching and advising staff, and provides in-person classroom teaching,

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<sup>17</sup> UMUC's current per-FTE subsidy is a miniscule \$1,525. DRE197 at 51.

on and near military bases across the United States and around the globe, including areas like the Middle East that are “inherently dangerous,” unprofitable, and logistically challenging to serve. 2/7/17 Tr. 8-9 (Miles). UMUC’s Bachelor’s in Criminal Justice, which Plaintiffs have proposed to shutter, enrolls 3,148 students. 2/7/17 Tr. 65 (Miyares). Approximately 75% of these students are affiliated with the military. *Id.* UMUC’s Bachelor’s in Finance, also proposed for transfer, currently serves 1,040 students, of which more than half (53%) are military-affiliated. 2/6/17 Tr. 65 (Miyares). Similarly, Investigative Forensics has an enrollment population that is almost 75% military-affiliated. 2/6/17 Tr. 66 (Miyares). If military-affiliated students no longer have the option to attend UMUC to obtain their degrees, they would likely enroll in one of the several non-Maryland institution options that are currently available to them on the bases where they are stationed. 2/7/17 Tr. 30-31 (Miles).

50. Major General Lloyd Miles (U.S. Army, Ret.), the Senior Vice-President for Global Military Operations at UMUC, testified that if “you take UMUC out of the equation, where you’re moving these students to or where they’re going to go to are the other competitors that are on the military base. They don’t travel anywhere. They travel from their barracks or where they live to their education centers to take their classes.” 2/7/17 Tr. 31 (Miles).

51. Unlike traditional four-year institutions, military-focused institutions like UMUC accept a wide variety of prior learning and military training credits; offer a low tuition cost matching the flat \$250 per credit hour available for military-affiliated students (2/7/17 Tr. 54 (Miles)), as opposed to the HBIs’ average out-of-state resident FY

2016 cost of \$659 per credit hour (DRE081 at 40)); and have extensive support services physically located on the bases where military students are stationed. 2/7/17 Tr. 13-14, 19-22 (Miles). Military students would not attend a university that cannot offer education at this low rate, but offering such rates at the HBIs would require massive levels of additional state support. 2/7/17 Tr. 35 (Miles) (“[M]ost traditional universities don’t operate with that model. It’s not sustainable for them to offer it at that rate.”).

52. Lack of access to military bases would also prevent the HBIs from educating the military population that UMUC currently serves. Major General Miles explained the lengthy and stringent process to gain access to military bases to recruit military-affiliated students—including a preference by the armed services for institutions with a demonstrated track record of serving military students globally. 2/7/17 Tr. 4-9 (Miles). Plaintiffs presented no evidence that the HBIs would be able to duplicate these agreements or recreate UMUC’s national and international operations.<sup>18</sup> In addition, the major competitors for military students have marketing budgets that are ten times UMUC’s and far exceed those of Maryland’s other public four-year institutions. *See* 2/6/17 Tr. 149, 165 (Miyares); 2/7/17 Tr. 17-18 (Miles). UMUC has been able to recruit students with only a fraction of that budget by building a reputation over several decades with the military that travels by word of mouth, and by establishing a presence around the

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<sup>18</sup> Dr. Allen testified that Plaintiffs did not look into whether the HBIs would be able to access the military bases UMUC serves, and their proposal assumed that the HBIs would be able to gain the same access. 1/19/17 pm Tr. 117-18 (Allen). Similarly, Plaintiffs’ proposal presumes that UMUC’s authority to access these bases is assignable to the HBIs (*id.*), which, as Major General Miles testified, would be unacceptable to the U.S. armed services. 2/7/17 Tr. 62-63 (Miles).

globe. 2/7/17 Tr. 33 (Miles). The vacuum created by any loss of programs from UMUC is likely to be filled by its for-profit competitors (*see* 2/6/17 Tr. 42-43 (Miyares)), and not by the HBIs.

**d. UMUC’s enrollment is majority-minority, and transfer of its programs would not desegregate the HBIs.**

53. By itself, UMUC enrolls more minority students than any other Maryland four-year institution, and enrolls more African-American students than the four HBIs combined. 2/6/17 Tr. 41-42 (Miyares).

54. From the perspective of students seeking education in an integrated setting, “transferring” an online program from one institution would be pointless. The student’s online experience would not change. Adding other-race online students might bulk up the HBIs’ nominal enrollment percentages, but it would not change the experience of HBI students seeking more campus diversity. President Miyares explained that because online students do not take classes on a campus, online programs “will not desegregate the institution in terms of a visually identifiable way.” 2/6/17 Tr. 53 (Miyares). Additionally, “one of the benefits of online education, is that nobody knows the race of the person you are interacting with.” *Id.* Generally, “the students will have no idea what is the racial composition of the classes they are taking.” *Id.*

55. Shutting down programs at UMUC also does not mean that the student would enroll at Morgan, even if it is the only Maryland institution that offers those programs. Online education is a distinct marketplace, and one that has changed rapidly during the past several years. By 2014, 30% of all students in the United States had taken



at least one course online (1/12/17 pm Tr. 68 (Fielder)), and in Maryland, approximately 35,000 students are currently enrolled in online education at out-of-state institutions. 2/7/17 Tr. 99-100 (Wheatley).

56. In 2015, seeking to “provide greater accessibility and affordability for all citizens” to education (1/12/17 pm Tr. 65, 73 (Fielder)), Maryland joined dozens of other states and the District of Columbia to participate in the State Authorization Reciprocity Agreement (“SARA”).<sup>19</sup> Today, 47 states and the District of Columbia are participants. 1/12/17 Tr. 65 (Fielder). SARA establishes a more uniform and accountable review and approval process for institutions offering higher education services online across state lines. *See* 1/12/17 pm Tr. 66 (Fielder). The practices and standards mandated by the National Council on SARA (“NC-SARA”) increase the accountability of institutions and certifying states, boosting consumer protections and creating responsive forums for student complaints. 2/7/17 Tr. 94-97 (Wheatley).

57. Under SARA, a state is responsible for review of programs offered by its own in-state institutions to students enrolled in all other member states.<sup>20</sup> 1/12/17 pm Tr. 66-67 (Fielder). Maryland-based institutions apply to MHEC to be certified to provide

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<sup>19</sup> In 2015, Maryland enacted legislation authorizing MHEC to participate in SARA. *See* MD. CODE ANN., EDUC. § 11-105(m)(3). Before participating in SARA, MHEC was required to consult with the Board of Regents of the University System of Maryland, the Board of Regents of Morgan, the Board of Trustees of St. Mary’s College of Maryland, and affected community colleges. MD. CODE ANN., EDUC. § 11-105(m)(2). MHEC also received a number of letters from Maryland universities in support of the State’s anticipated participation in SARA, including from UMES. 2/7/17 Tr. 135 (Wheatley).

<sup>20</sup> Participating institutions must reapply to their home states and NC-SARA every year, and participating states must reapply to NC-SARA every two years. 2/7/17 Tr. 97 (Wheatley).

educational services to students in other SARA member states, and MHEC certifies institutions that meet certain standards in quality and resources. 1/12/17 pm Tr. 65-66 (Fielder); 2/7/17 Tr. 96-97 (Wheatley). Likewise, other participating states are responsible for certifying their home institutions for participation in SARA to offer educational services online in member states. Thus, MHEC lacks the authority to approve or deny individual degree programs offered online to Maryland students by out-of-state participating institutions. 1/12/17 pm Tr. 66-67 (Fielder); 2/7/17 Tr. 98 (Wheatley).

58. Approximately twenty of Maryland's higher education institutions, including UMES, applied for and received SARA certification in Maryland's first year as a member state. 2/7/17 Tr. 97 (Wheatley). Others, such as Morgan, have expressed interest in seeking certification and are expected to pursue SARA certification as well. 2/7/17 Tr. 97 (Wheatley).

**C. Plaintiffs' Proposed Transfers Would Harm Long-Standing Partnerships that Further Key State Objectives, and Would Reduce Private Investment in Maryland Institutions.**

59. To supply businesses in Maryland with a qualified workforce of Maryland residents, the HBIs and non-HBIs have spent years developing strategic relationships, based on the strengths of each institution, with business and government partners across economic sectors throughout Maryland. Some of these relationships have taken decades to develop, and are intrinsically tied to each institution's ability to produce graduates in a field that aligns with the needs of that business. Illustrative is UMBC's 20-year relationship with NSA, which has led to NSA hiring almost a thousand graduates from

UMBC. 1/31/17 Tr. 42 (Simmons). Moreover, these partnerships can also lead to grants and donations for such necessities as facilities, equipment and other resources, thereby alleviating some of the financial burden on the State. For example, UMBC's long-standing business partnership with Northrop Grumman provided the University with \$3 million in funding for student scholarships last year. 1/31/17 Tr. 36 (Simmons).

60. Such partnerships also provide critical resources to the State of Maryland, supplying research data for analyzing and addressing policy questions before the State. 2/9/17 Tr. 57-58 (Schmoke). For instance, the Jacob France Institute within UB's Merrick School of Business is a policy research think-tank in which UB professors attack problems affecting Baltimore City to provide city officials with the critical information they need to craft policy changes and solutions. 2/9/17 Tr. 57-58 (Schmoke). Similarly, UB's Criminal Justice programs and their faculty provide support to the Governor's Office of Crime Control and Prevention, and supply the State with critical data and developments in the forensic science field through UB's microscopy lab and the Maryland Crime Victims Resource Center. 2/9/17 Tr. 65-67 (Schmoke). Recently, UB's College of Public Affairs was selected by the federal government "to become a center of drug research, drug policy research and enforcement" via the High Intensity Drug Trafficking Area ("HIDTA") program, which will produce several million dollars of research support to UB from the federal government. 2/9/17 Tr. 64-65 (Schmoke). Unfortunately, the federal government has already ruled out Coppin as a site for the HIDTA program (*id.*), so that (as with the other initiatives listed above), it is extremely unlikely that a transferred program could carry on this work.

61. These relationships, like the academic programs themselves, are not transferable. Dismantling or ripping out programs like Computer Engineering, which is a “central element” of the work that UMBC does with business partners would “really change[] the way [UMBC is] able to work with partners and prepare students in a meaningful way.” 1/31/17 Tr. 40-41 (Simmons). As Mr. Gregory Simmons, Vice-President for Institutional Advancement at UMBC, explained:

If you introduce instability or doubt [in the academic complement of programs], then you create an environment where somebody can make a different decision on what to do with their resources. . . . [T]hat means people may wonder if the people that they’re working with will be there. They may wonder if labs or resources will continue to be there. And even if it’s not in a very specific lab that they’ve become accustomed to working ‘to,’ if the lab next door to it disappears and we know that those two investigators have worked collaboratively for a long time, that doubt gives people the opportunity, by necessity, to rethink the investment that they’re making.

1/31/17 Tr. 43-44 (Simmons). Mr. Simmons explained that over the years UMBC has “developed a particular approach to partnership. I think it’s reflective of the leadership that we have on the campus, of the way we’ve organized our administration, of the shared governance culture that we’ve created at UMBC. It’s a function of relationships. It’s a function of history, it’s a function of track record. And so, you know, I don’t think our approach to partnership development is transferable. You can’t – you can’t take those people and those histories and move them.” 1/31/17 Tr. 41 (Simmons).

62. Similarly, Towson has established relationships with accounting firms, many with Towson alumni, and those firms hire Towson graduates because of their

relationships and these relationships are non-transferable. 2/1/17 Tr. 51 (Schatzel); *see also* DRE091. UB has likewise developed relationships throughout Baltimore's business community that are tied to the Merrick School of Business and its MBA program. 2/9/17 Tr. 24 (Schmoke).

**D. Plaintiffs' Proposal Would Require the HBIs to Nearly Quadruple in Size and Would be a Colossal Misallocation of the State's Limited Resources.**

63. In its 2013 liability opinion, this Court determined that "the current funding formula has not disadvantaged the HBIs or provided them any less state-controlled funding than the TWIs. . . . [M]ost importantly, under the current funding formula, Maryland's HBIs are not 'underfunded' by the State, relative to the TWIs. . . . [B]etween 1984-2010, Maryland's HBIs received \$84,621,000 in state appropriations and enhancement funds above what they would have received if these funds had been distributed to all Maryland institutions in proportion to their student enrollment." ECF 382 at 38. To the extent that the HBIs experience financial challenges more than the non-HBIs, this Court found that is "because of many factors outside of State control, such as lower tuition revenue, (*see e.g.*, 2/8/12 AM Trial Tr. 66-67 (Toutkoushian)), insufficient fundraising capacity, (*see* 1/17/12 PM Trial Tr. 42-43 (Kaiser)), and difficulty in attaining external grants, (1/12/12 AM Trial Tr. 36-37 (Robinson).)" ECF No. 382 at 41. This Court found that the State "has put policies in place to address these disparities. . . . Furthermore, the HBIs' 'dual mission' does not require additional funding beyond what the HBIs already have received in enhancement funding from the state." ECF No. 382 at 41.

64. In the face of these findings, Plaintiffs propose far-reaching actions that are likely to cost billions of dollars in general fund appropriations over the next ten years<sup>21</sup> (2/14/17 Tr. 84-85 (Lichtman); DRE070 at 138, Table 39), including more than \$185 million for the proposed transfers alone (2/14/17 Tr. 85 (Lichtman); DRE070 at 136, Table 37), and considerably more to reach Plaintiffs' hoped-for increases in white student enrollment.

65. Despite having more than three years from this Court's Order in 2013 to assess the expected costs of their proposal, Plaintiffs chose not to provide *any* cost estimates or enrollment projections for their plan.<sup>22</sup> PRX021; 1/17/17 pm Tr. 99 (Lapovsky) (explaining that Plaintiffs' counsel instructed Dr. Lapovsky that cost-estimating the proposal "was not something that was being done at this point in time"). Dr. Lichtman's estimates were based on Plaintiffs' earlier (and much smaller)<sup>23</sup> May 2015 proposal. 2/13/17 Tr. 15 (Lichtman); 2/14/17 Tr. 56-57 (Lichtman). Using the HBIs' own estimates of increased enrollment, Dr. Lichtman then took the current per-FTE cost to the State of each student at each HBI, and multiplied the FTE against the

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<sup>21</sup> These costs do not include "the marketing, the advertising, the planning, the independent reviews . . . . They just reflect the annual appropriation per student." 2/14/17 Tr. 84 (Lichtman).

<sup>22</sup> Despite the lack of specific enrollment projections for Plaintiffs' proposal, their expert does not dispute that Plaintiffs' proposal projects very substantially increased new enrollments at the HBIs and that large numbers of white students would be needed to diversify enrollment. 1/18/17 am Tr. 18-19 (Lapovsky).

<sup>23</sup> Purely judged on numbers of programs, Plaintiffs' earlier proposal was no more than half the size of their current one. *See* DRE070 at 114-19 (identifying about 50 programs in earlier proposal, vs. 100 today).

estimated new enrollment projections.<sup>24</sup> 2/14/17 Tr. 63 (Lichtman).<sup>25</sup> Dr. Lichtman applied the same methodology for transfer programs using the current number of FTE students in the transfer programs. 2/14/17 Tr. 73 (Lichtman). Based on current FTE appropriations, Dr. Lichtman estimated that general fund appropriations for the HBIs—under the smaller 2015 proposal—would total approximately \$210 million the first year, \$951 million over five years, and \$1.8 billion over ten years.<sup>26</sup> DRE070 at 138, Table 39.

66. Dr. Lichtman's estimated \$2 billion price tag for operating expenses is based on much less growth in the HBIs' enrollments (as forecast under Plaintiffs' smaller May 2015 proposal) than would be required to meet Plaintiffs' own benchmarks for

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<sup>24</sup> Morgan used a similar methodology in its proposal for its online Master's in Social Work (*see* DRE094 at 18) and Morgan's online MBA. *See* DRE087 at 49. Plaintiffs' cost expert, Dr. Lapovsky, agreed that this was one method by which to arrive at estimated program costs. 1/18/17 am Tr. 54 (Lapovsky).

<sup>25</sup> Dr. Lichtman agreed that these estimates could be low or high based on a multitude of factors, but noted that these estimates provide the most reliable estimates based on the limited data available. 2/14/17 Tr. 64 (Lichtman). Dr. Lichtman explained that costs could be higher than estimated due to factors such as: higher cost of graduate programs than undergraduate programs, added expense of capital costs for science, engineering and health-related programs, or certain more expensive faculty. 2/13/17 Tr. 65 (Lichtman). Likewise, according to the HBI proposals, operating costs for the new programs could require tens or hundreds of millions of dollars in marketing expenses, admission and recruitment funds, financial aid and scholarships. 1/10/17 pm Tr. 94-95 (Bell).

<sup>26</sup> In addition to normal operating expenses, Plaintiffs assert that new programs will also require start-up expenses such as: new faculty, administrators, marketing and advertising, and potentially external evaluators to review the new programs. PRX021; 2/14/17 Tr. 70 (Lichtman); 1/18/17 am Tr. 45 (Lapovsky) (noting that new programs would require additional funds for marketing, recruitment, and financial aid, among other expenses). Dr. Lapovsky testified that with substantial increases in enrollment, the HBIs would likely also require additional fixed expenses such as public safety, athletics, and other services that colleges provide to their students. 1/18/17 am Tr. 23 (Lapovsky).

enrollment.<sup>27</sup> 2/14/17 Tr. 72 (Lichtman). As Dr. Lichtman explained, assuming that the influx of new students would be 20% other-race (substantially higher than current enrollment percentages), the HBIs would need to grow nearly four-fold from their current 21,000 size, adding more than 58,000 students, to reach Plaintiffs' goal of 16.2% other-race enrollment. DRE098 at 93, Table 40. More than 56,000 additional students would be needed at the three Western Shore HBIs alone. 2/13/17 Tr. 175-77 (Lichtman); DRE098 at 93, Table 40 (Bowie would need to add 18,750 new students; Coppin would need to add 12,000; and Morgan would need to add 26,000).<sup>28</sup> Given the state of operations funding of the HBIs which is currently in the hundreds of millions per year (*see* DRE197 at 7), this implies increased spending in the multiple billions of dollars.

67. Dr. Lichtman also sought to estimate the capital costs for the proposed new and transferred programs by totaling the HBIs' current unmet capital requirements. 2/14/17 Tr. 57 (Lichtman). Dr. Lichtman estimates that the capital expenditures, based on just the capital projects *currently* proposed by the HBIs, would total approximately \$872 million over the next five years and approximately \$1.6 billion over the next ten

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<sup>27</sup> As Dr. Lichtman noted, in "their reports and all their analyses," Drs. Conrad and Allen "focused on white students, not necessarily on other-race students" 2/13/17 Tr. 33. Accordingly, Dr. Lichtman's critique and analysis of those reports mirrors Plaintiffs' terminology and focus on the number of "whites" at HBIs rather than "other-race" students, even though today's reality is far more diverse. *See* DRE208. As an example, Plaintiffs' proposal provides figures for how many white students that each HBI would need to add to their enrollment figures "to approach the percentage of white enrollment the HBIs reported as a whole in fall of 1975, (16.2%)." PRX312 ¶ 70. But as Dr. Lichtman explained, "this is only true if you're adding a hundred percent white students." 2/13/17 Tr. 174 (Lichtman).

<sup>28</sup> Consistent with this analysis, Plaintiffs' expert, Dr. Allen, testified that Morgan, "left unfettered, would probably have been around twenty-five to thirty thousand students." 1/23/17 Tr. 92 (Allen).



years. 2/14/17 Tr. 88-89 (Lichtman); DRE070 at 148 (Bowie's additional capital costs would be approximately \$177 million for the first five years and \$260 million over ten years; Coppin's increased capital costs would be approximately \$32 million for the first five years and \$220 million over ten years; Morgan's capital costs would be approximately \$593 million for the first five years and \$871 million over ten years; and UMES's capital costs would be approximately \$70 million for the first five years and \$286 million over ten years).

68. These costs “go beyond programs in that if you’re going to attract large numbers of new students, which is essential, if the remedy is to have any effect, that’s going to impact the entire institution: dormitories, health facilities, anything—even athletic facilities. Anything that’s affected by expanded enrollments could increase costs at the institution.” 2/14/17 Tr. 57 (Lichtman). Dr. Lapovsky acknowledged that Plaintiffs’ “fairly significant changes” are “more than just adding one program” and could require additional non-program specific capital expenditures that occur on a campus-wide basis. 1/17/17 pm Tr. 41 (Lapovsky). Although critical of Dr. Lichtman’s approach, Dr. Lapovsky nonetheless testified that with large increases in enrollment, anticipated capital expenditures would likely include entire new facilities and “very significant investment.”<sup>29</sup> 1/18/17 am Tr. 43 (Lapovsky) (explaining that Plaintiffs’ proposal for a Doctorate in Veterinary Medicine would require an entire new facility for

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<sup>29</sup> Dr. Lapovsky also testified that the HBIs could reallocate existing resources, such as Morgan’s current engineering facilities, which contradicts Morgan’s estimate of \$56 million for necessary renovation of its engineering facility and an additional \$10 million over five years to enhance “the existing engineering core.” PRX402 at 11; 1/10/17 am Tr. 65 (Wilson).

that program, which is why the State of Maryland has never chosen to have such a program); 1/18/17 am Tr. 63-64 (Lapovsky) (conceding that Plaintiffs proposal calls for new facilities at all of the HBIs); 1/9/17 pm Tr. 67 (Wilson) (“[W]e hope we can get funding from the State to build a new academic building at Morgan, with larger classrooms.”).<sup>30</sup>

69. Dr. Lichtman’s cost projections are only estimates, but they are consistent in magnitude with the HBIs’ cost estimates in their own proposals. 2/14/17 Tr. 85-86 (Lichtman); PRX002 (UMES Proposal); PRX002A (Supplement to UMES Proposal); PRX007 (Bowie Proposal); PRX402 (Morgan Proposal). According to the HBIs’ cost estimates, implementing a high volume of new programs and transfers could require billions of dollars. *See e.g.*, PRX402; 1/9/17 pm Tr. 56 (Wilson), 1/10/17 am Tr. 63 (Wilson) (Morgan’s proposal is estimated to cost approximately \$683 million to implement more than 75 new programs and the facilities, equipment and enhancements that correspond with those programs)<sup>31</sup>; 1/10/17 pm Tr. 96 (Bell) (the UMES proposal is

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<sup>30</sup> Dr. Lapovsky testified that the HBIs could also increase “classroom utilization and certainly the lab utilization” in existing facilities to accommodate new programs. 1/17/17 Tr. 75. By contrast, Dr. Bell cited operating the pharmacy program out of five different buildings and two portable trailers as the reason UMES’s pharmacy program’s accreditation was threatened with a downgrade. 1/10/17 pm Tr. 43-44. Similarly, Dr. Allen testified that new facilities could be “a trailer or they’re simply retasked or redesigned space” (2/21/17 Tr. 135), which, according to Dr. Bell, president of Maryland’s most diverse HBI, would undercut attempts at increasing white enrollment because “it’s very difficult to convince a parent and a child to come and be engaged in what you are calling your signature program when you are operating out of a trailer.” 1/10/17 pm Tr. 43.

<sup>31</sup> Morgan’s proposal would add more than 75 new programs to its current inventory of approximately 90 programs. 1/10/17 am Tr. 63-65 (Wilson). To Dr. Wilson’s

estimated to cost \$349 million to implement, which is more than ten times the annual appropriation UMES receives from the State).

70. Beyond direct operational and capital costs at the HBIs, the State and its taxpayers would likely see indirect costs from Plaintiffs' proposal, such as teach-outs at the non-HBIs for three to four years.<sup>32</sup> 2/14/17 Tr. 77 (Lichtman); 2/9/17 Tr. 44, 63 (Schmoke) (President Schmoke testified that a teach-out of the MBA program at UB would cost approximately \$7.9 million; a teach-out of the Criminal Justice programs would cost approximately \$2.6 million).

71. By redirecting to the HBIs large amounts of the State's limited funds, Plaintiffs' proposal would also weaken the non-HBIs that currently serve diverse student populations. 2/9/17 Tr. 70-72 (Schmoke); 2/6/17 Tr. 59-60 (Miyares). The overall higher education budget is currently approximately \$1.9 billion, but the State's overall budget faces expected shortfalls of \$800 million over the next two years, which will undoubtedly affect education spending.<sup>33</sup> 1/12/17 pm Tr. 70-71 (Fielder). \$1.36 billion

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knowledge, Morgan has never increased its program inventory by even as much as 50% in any five-year or ten-year period. 1/10/17 am Tr. 64 (Wilson).

<sup>32</sup> Dr. Lapovsky asserted that Plaintiffs' proposal relies on an assumption that a transfer of a program means a shifting of the resources from the non-HBIs to the HBIs. 2/17/17 Tr. 54 (Lapovsky). This assertion ignores the mandatory teach-outs of programs for at least three to four years, among other costs that would remain at the non-HBIs even if specific programs were to close.

<sup>33</sup> As Secretary Fielder explained, the institutions submit their requests for funding to the Department of Budget and Management, which provides assistance to the Governor in preparing the overall State budget. 1/12/17 pm Tr. 8-9 (Fielder). That budget is then presented to the General Assembly for review and approval. 1/12/17 pm Tr. 8-9 (Fielder). Each institution also presents testimony to the General Assembly about operations and capital funding, as well as institutional goals and accomplishments. 2/8/17 Tr. 85 (Wheatley).

of this budget supports the 300,000 students currently enrolled in Maryland's public four-year post-secondary institutions (1/12/17 pm Tr. 71 (Fielder)), of whom only 7% (approximately 21,000 students) are enrolled at the four HBIs. DRE081 at 10, 12 (Coppin enrolls approximately 3,100 students; Bowie enrolls approximately 5,700 students; UMES enrolls approximately 4,200 students; and Morgan enrolls approximately 7,700 students). As President Miyares explained,

[w]hen you're talking about 75 programs in basically traditional institutions, two of them research, Morgan and UMES – UMES has a research mission – you are talking about a lot of new full-time faculty, a new tenure/tenure-track faculty – I think you posed before some quotes from Dr. Wilson along those lines – it means facilities; it means graduate [assistants]; depending on the 75 areas, it will mean the specialized facilities that are even more expensive. The result of doing that, first, would be that the receiving institutions, they're allowed – their funding guidelines attainment will go through the roof. Simply is mathematics. I believe that Your Honor has found the budget in the original litigation was not an issue here; but getting these programs, 75 programs, to HBCUs is a budget issue. It also means, which is why I'm expanding a little bit, that the other institutions that are educating African-American students will suffer. I think we are all old enough to know that there is so much money that will go to higher education. So it will have to come from somebody. It means that African-American students, the gist of the case, attending other institutions will suffer.

2/6/17 Tr. 59 (Miyares).

**E. Plaintiffs' Proposal Would Impede the State's Ability to Meet State-Wide Workforce Demands and Students' Educational Needs.**

72. In addition to eliminating existing programs at the non-HBIs through “transfer,” Plaintiffs seek to impose a broad ten-year prohibition on the non-HBIs’

development of any new programs falling within any of the HBIs' program "niches," as broadly defined by Plaintiffs to include programs that do not actually exist at HBIs but are merely "contemplated." 1/23/17 pm Tr. 88-89 (Allen) ("contemplation is some substance of—taking some steps toward planning and not just simply something in the imagination"; "it's something that's been planned or is in the planning stage."); PRX312 ¶ 198. In other words, non-HBIs would be barred from offering programs that may be in high demand among students and in the workforce, because an HBI *may* (but may not) develop a related niche that might not even include the specific program.

73. Dr. Allen agreed that "prohibiting infringement on the education niches . . . casts a pretty large shadow." 1/23/17 pm Tr. 87. Under Plaintiffs' proposal, it would include, for starters: (a) the proposed computer science niche at Bowie; (b) the engineering niches at Morgan and UMES; (c) the business niche at Morgan; (d) the criminal justice niche at Morgan; (e) the nursing, social work and education niche at Bowie; and (f) the health profession niche at UMES. *Id.* at 86 (Allen). Those niches are already quite large. *Id.* at 87 (Allen) (agreeing that the UMES niche is "fairly expansive" and would include, in Plaintiffs' view, hospitality management and business management in the pharmacy and health professions niche). And the shadow over the ability of the non-HBIs to offer new programs would lengthen whenever an HBI decided to contemplate a new niche—even if the niche never came to fruition. *Id.* at 88 (Allen).

74. Plaintiffs' proposal would give the HBIs an effective veto over all new programs at other institutions, and would frustrate the State's effort to expand "the degree-seeking and degree-completing pipeline in STEM-related fields" (DRE021 at 3),

as well as other fields, such as nursing, for which there is a high need for additional skilled graduates. Such a moratorium on program development would be harmful to students seeking educational opportunities in the diverse settings already offered by the non-HBIs, as well as to the State's interest in meeting workforce needs.

**1. There is a consensus that Maryland's higher education institutions must increase production of graduates in STEM-related fields.**

75. Maryland's public four-year institutions, both HBIs and non-HBIs, have universally recognized an increasing need for "the expansion of the degree-seeking and degree-completing pipeline in STEM-related fields" such as engineering. DRE021 at 3; 1/17/17 am Tr. 30; 1/17/17 pm Tr. 4 (Richardson). Dr. Richardson testified that "engineering is a very, very high-demand program. If you would look again at the traditional sources that project the outlook for employment and the number of jobs, I think engineering and engineering-related disciplines are among the highest, and they are quite popular and in high demand." 1/17/17 am Tr. 30 (Richardson). Dr. Hrabowski, President of UMBC, testified that Maryland has workforce demands that require more engineering programs, not fewer. 1/30/17 Tr. 67-69 (Hrabowski). Dr. Bell, President of UMES, agreed that Maryland needs more STEM graduates and engineers. 1/10/17 pm Tr. 85 (Bell). Greg Simmons, Vice President of Institutional Advancement at UMBC, testified that there are more than 17,000 cyber-related jobs in the greater Baltimore metro area that are unfilled (1/30/17 Tr. 50 (Simmons); DRE196), despite the Baltimore area's advantageous location, situated in proximity to the federal government and entities such as the National Security Agency. 1/30/17 Tr. 53 (Simmons). Plaintiffs' proposal to shut

down programs and prevent growth in areas such as Engineering and Computer Science (1/23/17 Tr. 85-86 (Allen)), would hobble the State's ability to meet employment demands in these fields. *See also* 1/24/17 Tr. 180-81 (Conrad testimony that he had recommended duplicative engineering programs in Texas because of high demand).

76. The Governor's STEM Task Force found that "Maryland already suffers from a shortage of highly qualified STEM workforce. We have approximately 6,000 STEM openings a year and we produce approximately 4,000 STEM graduates, one of the largest STEM workforce deficits among Maryland's competitor states." DRE021 at 5. This includes openings for more than 1,380 engineers and 4,060 employees in the IT field.<sup>34</sup> DRE021 at 20.

77. According to the STEM Task Force, "Maryland, with its strong public and private two- and four-year colleges and universities, has the potential to produce the workforce needed to fill the high-tech, high-paying jobs that exist in the state." DRE021 at 21. To take advantage of this potential, the Governor's STEM Task Force, including its Workforce Workgroup, co-chaired by Dean DeLoatch of Morgan's School of Engineering, recommended to the Governor that "Maryland must increase the number of interested, qualified, and motivated students prepared to take advantage of its highly regarded educational institutions . . . [and] enlarge the pool of STEM undergraduates and to bolster the production of STEM graduates." DRE021 at 21. Specifically, the

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<sup>34</sup> More recently, the Economic Alliance of Greater Baltimore's 2015 State of the Market Report, Cybersecurity in Greater Baltimore and the State of Maryland, found that there are "[n]early 20,000 cybersecurity jobs available in Maryland, while Baltimore ranks third among regions with the most available cybersecurity jobs." DRE196 at 3. These jobs "are difficult to fill due to the scarcity of qualified professionals." *Id.* at 10.

Governor's STEM Task Force suggested a goal of "[e]xpand[ing] STEM programs at Maryland's two- and four-year colleges and universities with the goal of increasing STEM enrollment from 20,000 to 25,000 students per year. This growth would focus on Engineering, Information Technology, Bioscience, and Environmental Sciences." DRE021 at 22.

**2. Maryland has a worsening shortage of qualified healthcare professionals.**

76. In Maryland, the increased demand for workers in many healthcare fields has outpaced the production of graduates. DRE095 at 2. A 2016 study by the University System of Maryland found that Maryland was generating fewer than half the qualified health professionals necessary to satisfy the State's needs in critical healthcare occupations, including nurses, health services managers, physical therapists, and health educators, among others. DRE095 at 3. While recognizing that allied health professions and nursing "continue to be among the fastest growing sectors of health care" (PRX021 at 8), with Maryland having "some of the highest concentrations of healthcare jobs" at one of the best pay rates for these professions (1/24/17 Tr. 103-104 (Conrad)), Plaintiffs nonetheless have proposed to shut down any non-HBI program growth in these fields for at least the next ten years. 1/23/17 Tr. 86-87 (Allen).

77. As of 2014, with existing resources, 41% of Maryland's need for nurses was going unmet; Maryland fell short of its need for medical and public health social workers by 63%; and the State fell short of production of allied health profession workers by 37% overall, down only slightly from the five years before. DRE095 at 3-4. From



2009 to 2015, job openings in healthcare grew by 2,800 openings while degree production increased by only approximately 800. DRE095 at 4. Secretary Fielder testified to “the tremendous healthcare shortage of nurses in our state” (1/12/17 pm Tr. 19), and MHEC administrator Monica Wheatley confirmed the State’s “projected nursing shortages.” 2/7/17 Tr. 81. Halting expansion of degree production at all but four of Maryland’s fourteen public four-year institutions would only worsen the shortage of qualified graduates and eliminate options for students to be able to pursue these careers in this State.

**F. Plaintiffs’ Proposal Poses Substantial Institutional Accreditation Risks to the HBIs and the Non-HBIs.**

78. Plaintiffs’ proposal poses accreditation risks for all of the Maryland institutions involved, whether they would gain programs (the HBIs) or lose them (the non-HBIs). The wide-scale disruption that would result from Plaintiffs’ proposal to terminate two dozen programs that currently enroll thousands of students at the non-HBIs, and the addition of an unprecedented volume of new programs at the HBIs, will likely cause many of the affected institutions to come under intense scrutiny by the Middle States Commission on Higher Education (“MSCHE”), the regional accrediting body for Maryland higher education institutions. 2/8/17 Tr. 38-39 (Manning). As Dr. Manning explained, for the HBIs this “[r]apid growth leads to the question of getting the growth ahead of the quality assurance and the ability to manage to the quality standards . . . .” 2/8/17 Tr. 38-39. “[T]he institution, when it was accredited, met a bunch of standards. When it changes by virtue of these new programs, for example, are they still

going to meet those standards?” 2/8/17 Tr. 30, 38-39 (Manning). Rapid growth in the number of programs offered and corresponding increases in enrollment at the HBIs would be considered by MSCHE to be a “substantive change” or a “complex substantive change” requiring review. 2/8/17 Tr. 80, 106-107 (Manning) (Dr. Manning noted that based on Morgan’s current size, the more than 30 programs to be created there under Plaintiffs’ proposal is “very significant and, therefore, that almost certainly would be a complex substantive change and could well require a comprehensive review.”).

79. Substantial changes would create particular concern for Coppin because it has been under monitoring by MSCHE since 2013 and has a self-study evaluation scheduled for 2017-2018 to assess its efforts to address financial and administrative concerns, “steps to improve student retention,” and “assessment of the achievement of learning goals in all programs including general education.” DRE166 at 2; 2/8/17 Tr. 83-84 (Manning). Plaintiffs’ proposal would increase the number of degree programs at Coppin by more than 50%, just as the institution is recovering from significant problems with “enrollment management and the . . . assessment of student learning.” 2/8/17 Tr. 83-84 (Manning).

80. Plaintiffs’ proposal would throw into disarray, and in fact reverse, an ongoing, State-sponsored effort to strengthen Coppin’s academic and institutional capabilities. In 2013, Coppin was evaluated by a Special Review Committee in response to a decline in enrollment during a period when the school had simultaneously added twenty new programs and increased faculty by 49%. PRX082; 1/12/17 am Tr. 14 (Thompson). At that time, Coppin had (and continues to have) the highest per-student

expenditure of any institution in the University System of Maryland. 1/12/17 am Tr. 14 (Thompson). The Special Review Committee prepared a report, outlining specific recommendations to stabilize the institution. PRX082; *see also* DRE057 at 16. In turn, Coppin prepared a response, the CSU Implementation Plan, setting forth 50 measures that the institution would undertake, focusing on an academic reorganization to increase student retention and graduation, strengthen its programs and faculty, and improve its administrative function and financial viability. PRX083; DRE057 at 4; 1/12/17 am Tr. 15 (Thompson). Coppin took actions to right-size its “academic enterprise” by consolidating 6 schools into 4 colleges, eliminating 14 low-enrollment academic programs and terminating positions for several deans and department chairs. DRE057 at 17. After the consolidations in programs, in 2015 Coppin had its smallest decrease in enrollment in several years. 1/12/17 am Tr. 16 (Thompson).

81. Plaintiffs’ proposal would add more than twenty new programs to Coppin, only five of which are described as unique, without cutting any existing programs.<sup>35</sup> 1/12/17 am Tr. 16-17 (Thompson).

82. The accreditation risks for Coppin and Bowie are especially foreseeable in the proposed health care/nursing niches. Coppin recently withdrew its nursing program from the Accreditation Commission for Education in Nursing (“ACEN”), which triggered an additional inquiry by MSCHE regarding that withdrawal. 2/8/17 Tr. 84 (Manning). Similarly, Bowie was required to report to MSCHE when it was placed on warning by

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<sup>35</sup> Coppin’s own proposal would add 46 new programs to Coppin without cutting any existing programs. 1/12/17 am Tr. 16 (Thompson).

ACEN in 2015 because aspects of its nursing program were out of compliance with ACEN standards. DRE204 at 2; 2/8/17 Tr. 94-95 (Manning). Having programs under review at Coppin and Bowie would likely call into question additional degree programs requested for these institutions. 2/8/17 Tr. 96 (Manning).

83. The non-HBIs would also likely be subject to review by MSCHE and specialized accreditors because of the loss of enrollment from shutting down the two dozen programs proposed for transfer. 2/8/17 Tr. 39 (Manning). Dr. Manning explained that “[t]he decline of enrollment is mainly concerned about viability; that is, are they losing so much enrollment that the loss of resources which would accompany that makes it difficult to operate the institution as a whole, not even just perhaps a program that was closed and caused the loss of enrollment.” 2/8/17 Tr. 39 (Manning). By way of example, (and consistent with President Schmoke’s testimony) Dr. Manning testified that loss of the students enrolled in UB’s MBA programs and Criminal Justice programs (roughly 20% of the institution’s overall enrollment) would trigger a review by its accreditor because of the loss of enrollment and also the loss of financial resources associated with those enrollments, which could result in questions regarding “the larger sustainability of the institution.” 2/8/17 Tr. 119-120 (Manning).

84. Dr. Manning testified that she had been in higher education for four decades, much of that time in senior university leadership and accreditation positions. She had “never seen anything like this . . . amount of change” or “anything of this magnitude.” 2/8/17 Tr. 126-27 (Manning). As Dr. Manning summed it up:

The number and extent of changes in a single, necessarily coordinated action as offered by the Proposal may be unprecedented in the annals of accreditation in higher education. The specific outcomes cannot be guessed, much less predicted, in advance of careful review of the details of each program proposed for development or transfer.

DRE118 at 32.

**III. PLAINTIFFS’ PROGRAM-BASED STRATEGY IS NOT “BEST TARGETED” TO REMEDY ANY SEGREGATIVE EFFECT OF UNNECESSARY PROGRAM DUPLICATION, BECAUSE THERE IS STRONG EVIDENCE IT WOULD NOT WORK AND NO CREDIBLE EVIDENCE THAT IT WOULD.**

85. To state the obvious, a remedy that “is not likely to desegregate an HBI” should be rejected. *Ayers v. Fordice*, 111 F.3d 1183, 1213 (5th Cir. 1997).

86. Thus, another criterion in the Court’s February 2, 2016 order was identifying those remedies “best targeted to remedy that violation while enhancing rather than harming Maryland’s system of public higher education.” ECF 460. Even without taking into consideration the harm that Plaintiffs’ remedial strategy would cause to students and families counting on Maryland’s higher education system, *see supra* Part II, Plaintiffs have failed to show that their remedial proposal would be “best targeted” because they have not produced valid evidence that it will attract disproportionately more other-race students to the HBIs.

87. The Court’s February 2016 order put Plaintiffs on notice that whether their proposed remedy would satisfy the criteria for a remedial order was a question to be explored at the upcoming hearing—not something to be taken for granted on the basis of

the abbreviated discussion of remedy in the Court’s 2013 liability opinion.<sup>36</sup> A remedy that does not increase diversity on the HBI campuses fails to redress the constitutional injury to students at the HBIs this Court has cited as the basis for Plaintiffs’ standing, which is denial of the “ability to receive an education in a racially integrated school.” ECF 382 at 18. The only remedies appropriate to redress that constitutional injury are those geared to produce greater campus diversity, not proposals to shift resources to the HBIs (or enhance their general “comparability and competitiveness”) regardless of the effect on diversity. *Fordice*, 505 U.S. at 743 (rejecting private plaintiffs’ remedial approach to enhancing the HBIs regardless of the effect on diversity); *U.S. v. Louisiana*, 9 F.3d 1159, 1163 (5th Cir. 1993) (rejecting a consent decree that “was directed more towards merely enhancing the State’s black schools as black schools rather than towards ‘convert[ing] its white colleges and black colleges to just colleges.’”) (quoting *U.S. v. Louisiana*, 692 F. Supp. 642, 658 (E.D. La. 1998)).

88. Plaintiffs’ remedial theory is based on the idea that the factors that may draw white students (Plaintiffs do not address other-race generally) to HBIs are fundamentally *different* from the factors that have been shown to influence college choice generally. *See* DRE007 at 24 (“[T]here is minimal correspondence between the top five determinates of choice identified in the study [by Dr. Conrad] and the literature on college choice.”). The State’s approach, set forth in its revised remedial proposal, is

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<sup>36</sup> In the liability phase the Court heard only from Plaintiffs on remedy, and the State had no opportunity to depose Dr. Allen about the basis for his opinions on remedy. The Court overruled the State’s objection to his testimony concerning remedy. *See* ECF 529 at 8.

based on the idea that the *same* factors that influence college choice generally apply to the HBIs as well. The State’s remedy focuses on exposing a diverse pool of prospective students to the HBIs, their campuses, and their demonstrable strengths in many areas, so that more students will include the HBIs in their “consideration sets”—the set of institutions to which they may apply. A good illustration is Dr. Hrabowski’s description of how UMBC has reached out to attract applications from Hispanic students and their families (1/30/17 Tr. 61-62) and to encourage women, including African-American women, to enter STEM fields. (1/30/17 Tr. 63-64).<sup>37</sup> The State’s revised proposal gives the HBIs resources they can use for marketing, recruiting, and financial aid to diversify their campuses. Those are the same tools colleges throughout the country use to build their enrollments and expand their reach to new pools of potential applicants.

89. Plaintiffs’ remedy is based on programs, and particularly on the supposedly dominant influence of programs on the choice of college. Yet programs do not appear to play a significant role in college choice generally, as reflected in President Schmoke’s example of freshmen who enrolled at UB without realizing that it does not even offer the full spectrum of undergraduate courses available at most universities. 2/9/17 Tr. 153-54 (Schmoke). *See infra* Part IV.D. Indeed, although there is an abundant academic literature about college choice, as well as numerous surveys of students’ reasons for choosing a college (*see, e.g.*, DRE183), Plaintiffs have offered no evidence that the availability of specific programs has an important effect on college choice in general.

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<sup>37</sup> Among other steps, Dr. Hrabowski described “bring[ing] the [Hispanic] children to campus regularly,” holding receptions for families, a coding program for middle school girls in Baltimore, the BRAID program, and the CWIT program. 1/30/17 Tr. 62.

Rather, their theory is that programs are a uniquely important influence on the choice of other-race students to attend HBIs.<sup>38</sup> Thus, whether Plaintiffs' remedial proposal is "best targeted" comes down to whether Plaintiffs have shown that high-demand and unique programs are the dominant influence on whether additional other-race students would choose to attend HBIs in the future.

90. Plaintiffs have presented no credible and reliable evidence that a program-based approach is likely to increase white (let alone other-race) enrollment at the HBIs. Even if Drs. Conrad and Allen's testimony on this subject were to be found *admissible* under Rule 702, that testimony should be given little weight due to the unreliability of their methods and the inadequacy of the data they have presented in making predictions about the likely success of their remedial strategy.<sup>39</sup>

91. As Dr. Lichtman explained, to succeed in achieving Plaintiffs' stated objective, Plaintiffs' remedy must accomplish two things: (1) "attract large numbers of additional students to the HBIs, and again, particularly to the Western Shore HBIs"; and (2) "bring in a high percentage of white students among them." 2/13/17 Tr. 22-23 (Lichtman). A remedial strategy will not increase other-race enrollment at the HBIs unless it does both. 2/13/17 Tr. 23 (Lichtman); DRE098 at 7; PRX331 ¶ 20 (Dr.

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<sup>38</sup> Plaintiffs offered no evidence about attracting non-white other-race students, including the Latino and Asian students who make up increasing parts of Maryland's demography.

<sup>39</sup> Pursuant to the Court's briefing order, ECF 610 (adopting Plaintiffs' proposed schedule, ECF 591), the State will not elaborate here on the reasons for excluding the expert testimony under Rule 702 and *Daubert*, which have already been set forth in the State's pretrial submission and are fully borne out by the trial record. See ECF 495, 500, 511, 529.



Arrington, deeming it obvious “[t]hat the HBIs as a whole cannot be desegregated unless there are large numbers and percentages of white students in large programs.”).

92. Plaintiffs’ specific remedial strategy is based on (1) “programmatic niches . . . grounded in unique, high-demand programs”; (2) enhancing “affiliated academic programs”; and (3) protecting niches from duplication. 1/18/17 am Tr. 78 (Allen). In their Second Corrected Reply Report (PRX312),<sup>40</sup> Conrad and Allen assert the following as the basis for their remedial theory:

1) “Based on Dr. Conrad’s research and review of data from a number of states, he has determined that high-demand programs are the single most important factor in terms of influencing student choice.” PRX312 ¶ 177.

2) “Dr. Conrad’s research shows that unique programs are also very important in terms of offering desegregative potential, and program uniqueness is particularly important when combined with high-demand.” PRX312 ¶ 178.

3) “*Based on these findings*, it is our opinion that individually and combined, program uniqueness and demand must provide the centerpiece of the proposed programmatic niches.” PRX312 ¶ 179 (emphasis added).

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<sup>40</sup> The Court admitted the report subject to the State’s Rule 702 objections previously stated in multiple pretrial submissions. The State’s proposed findings in this document concerning the probative value of the testimony of Drs. Conrad and Allen and their report are likewise subject to admissibility under Rule 702, and are provided here in the event this evidence is admitted. Similarly, all admissible evidence submitted by the State on the Rule 702 issue (including, but not limited to Dr. Bastedo’s testimony) should also be considered on the question of probative value, if the Drs. Conrad and Allen testimony is admitted.

Thus, Plaintiffs' remedial theory is explicitly premised on the belief that new high-demand and unique programs will increase white enrollment, because Dr. Conrad's prior research supposedly showed that high-demand and unique programs accounted for white enrollment at certain HBIs in the past.

93. Notably, Dr. Allen did not claim to have affirmative evidence that Plaintiffs' remedial strategy would increase white enrollment. Rather, his claim was only that "no persuasive evidence has been found to *disprove* these three strategies." 1/18/17 am Tr. 77 (Allen) (emphasis added).<sup>41</sup>

**A. Plaintiffs' Actual Proposal Does Not Match Their Theory.**

94. As an initial matter, there is a mismatch between Plaintiffs' theory and their actual proposal. Even if Plaintiffs' remedial *theory* were correct, their actual proposed remedy does not conform to that theory. 2/13/17 Tr. 47 (Lichtman) ("they don't do what the plan says, what they say the plan has to do"). Only six of 65 new programs proposed for Coppin, Morgan and Bowie (9%) are classified as both unique and high-demand. 2/13/17 Tr. 40 (Lichtman).

**B. Multiple Regression Analysis Shows That Plaintiffs' Remedial Strategy Would Not Work.**

95. There is persuasive evidence that Plaintiffs' remedial strategy would not work. Dr. Lichtman performed a multiple regression analysis using Plaintiffs' own data set (corrected) of recent Maryland enrollment. PRX354. By definition, these data reflect

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<sup>41</sup> Yet despite that seemingly modest claim and the admission that their analyses were not designed to prove that their remedial strategy would be effective, Dr. Allen referred on cross-examination to "those particular programs are the programs that we have evidence and *are assured will attract white students.*" 1/19/17 am Tr. 73 (emphasis added).

present-day choices of Maryland students. Dr. Lichtman first used the standard technique of ordinary least squares (OLS) regression and later—to address Dr. Arrington’s critique—he repeated the analysis using Dr. Arrington’s suggested method of fractional logistic regression. 2/13/17 Tr. 83-84; DRE098 at 53, Table 18; DRE206 at 5. The purpose of multiple regression is to assess the effect of various different independent variables that are thought to explain or predict an outcome, expressed as a value of a dependent variable. Multiple regression allows the measurement of the correlation between one independent variable and the dependent variable, while holding the other independent or predictor variables constant. A *negative* correlation means the value of the dependent variable (here, % white enrollment) goes down when the value of the independent variable increases. A *positive* correlation means when one goes up, the other goes up. Multiple regression is designed to be used to analyze complex or “messy” processes in which multiple explanatory factors may be at work. *See* 2/13/17 Tr. 71-72 (Lichtman) (describing multiple regression); DRE098 at 22 (explaining appropriate methodology).

**Table 2**  
**Comparison of Regression Results for Table 18 of the Lichtman, August 30, 2016 Report With Results From the Same Model Using Fractional Logistic Regression**

Results From Table 18 Dependent Variable = Percentage of White Students Model with High Demand Programs			Results Using Fractional Logistic Regression, Same Model As In Table 18		
Independent Variable	Regression Coefficient	Statistical Significance	Independent Variable	Regression Coefficient	Statistical Significance
High Demand Programs	-.5	Not Significant	High Demand Programs	-.09	Not Significant
Proximately Unique Programs	+4.3	Not Significant	Proximately Unique Programs	+.56	Not Significant
Proximately Unique and High Demand Programs	-3.5	Not Significant	Proximately Unique and High Demand Programs	-.55	Not Significant
Regional Location	-14.2	<.00001	Regional Location	-.1.48	<.00001
Program Level	+5.8	<.00001	Program Level	+.68	<.00001
Results From Table 18 Dependent Variable = Percentage of White Students Model with High Demand Programs			Results Using Fractional Logistic Regression, Same Model As In Table 18		
Exceptionally High Demand Programs	-2.8	Not Significant	Exceptionally High Demand Programs	-.55	<.05
Proximately Unique Programs	+3.5	Not Significant	Proximately Unique Programs	+.45	Not Significant
Proximately Unique and High Demand Programs	-3.1	Not Significant	Proximately Unique and High Demand Programs	-.45	Not Significant
Regional Location	-14.2	<.00001	Regional Location	-.1.48	<.00001
Program Level	+5.6	<.00001	Program Level	+.66	<.00001

DRE206, Table 2.

96. Dr. Lichtman's multiple regression analyses showed a *negative* correlation between high-demand (and exceptionally high-demand) programs and increased white

enrollment.<sup>42</sup> 2/13/17 Tr. 73-74 (Lichtman); DRE098 at 24 (Table 9), 53 (Table 18). That is, data reflecting the current aggregate choices (as opposed to selective examples) of students attending Maryland institutions showed the opposite of Plaintiffs' theory that adding high-demand programs will increase white enrollment.

97. Those correlations were not statistically significant (using OLS regression), so a social scientist would not rely on them to predict that adding high-demand programs would *reduce* white enrollment, but they do show that the data do not support Conrad and Allen's theory. 2/13/17 Tr. 74-75 (Lichtman). Using the alternative fractional logistic regression technique, however, the negative correlation *was* statistically significant. 2/13/17 Tr. 84. Dr. Arrington likewise found a negative correlation using fractional logistic regression and a different variable (Trend 14) to measure program size or "demand." PRX331 Table 2; 2/16/17 Tr. 97 (Arrington) (describing data in scatterplot); *id.* at 129-130 (describing table and scatterplot).<sup>43</sup> Dr. Lichtman also found a negative

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<sup>42</sup> Dr. Lichtman's analysis addressed white enrollment (versus, for example, enrollment of "other-race" or non-African-American students) because that was the exclusive focus of the 1994 Conrad study and Plaintiffs' quantitative analyses.

<sup>43</sup> Dr. Arrington's concurrence with Dr. Lichtman's results using a different model adds some weight to them. However, the Court cannot rely on Dr. Arrington's opinion when it is not directly supported by, or is contradicted by, other evidence. Dr. Arrington's testimony showed that he failed to exercise due care in expressing opinions on important matters, such as asserting the invalidity of Dr. Lichtman's initial regression analysis without having an adequate foundation for that opinion. Cutting and pasting unread sources from an unread Wikipedia article is not an adequate basis for expert opinion testimony. *See* 2/16/17 Tr. 187-89 (including agreement that, "You not only did not read any of the sources you cite in your declaration; you didn't even read the Wikipedia entry they came from?"). Dr. Arrington also responded to impeachment with testimony he had given about methodology in federal district court in a prior case, by admitting to a similar lack of care and caution in testifying on technical matters. 2/16/17 Tr. 156 ("you learn as you go along"); *id.* at 175 ("I've learned to state things differently."). And Dr. Arrington

correlation for programs classified as both high-demand and unique. So did Dr. Arrington, PRX331, Table 2. There was a positive correlation for proximately unique programs, but it was not statistically significant.<sup>44</sup> Dr. Arrington's own regression analysis concurred. PRX331, Table 2.<sup>45</sup>

98. Dr. Lichtman also showed (in Tables 11, 13, 15 and 17 of DRE098) that Dr. Conrad was wrong when he claimed that “where they [white students] are enrolled in HBIs or TBIs, they are enrolled in high-demand programs or unique programs that are only duplicated at UMCP, unique and high demand programs and so on.” 1/24/17 Tr. 63 (Conrad). *See* DRE098 at 33, 38, 46, 51. The data that Conrad and Allen assembled do not support that claim. In bivariate comparisons, at most institutions and degree levels,

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erroneously testified that “[t]here’s nothing in that data set, . . . which goes to . . . any of the other things [aside from unique programs] that may be in the proposed remedies,” 2/16/17 Tr. 81, even though the data set also includes high-demand programs which both Dr. Arrington and Dr. Lichtman found to be negatively correlated with—*i.e.*, tending to reduce--white enrollment. 2/16/17 Tr. 106 (“We knew that bigger programs have fewer whites.”). Dr. Arrington later admitted his error. 2/16/17 Tr. 127-28. Dr. Arrington also admitted that he was wrong in his deposition when he testified that skewness in the data might change a correlation in a regression from positive to negative. 2/16/17 Tr. 191 (“[H]aving been alarmed by that question, I then checked and discovered it would not.”). Another example of Dr. Arrington’s methodological sloppiness is his computation of a composite percentage enrollment by averaging enrollment percentages in Table 1 of his report without regard to the number of students in different programs. 2/16/17 Tr. 140-42. As revealed on cross-examination, that method produces a composite average that has no actual relationship to the overall mean percentage. *Id.* at 142 (using example to illustrate fallacy).

<sup>44</sup> Dr. Arrington agreed that social scientists generally accept a standard of .05—meaning a 1/20 probability the result is due to chance—as the level for statistical significance. 2/16/17 Tr. 157.

<sup>45</sup> Dr. Arrington obtained a statistically significant positive correlation for certain program categories (proximate unique, duplicated only at UMCP, and unique and high-demand) only by re-doing his regression without the region variable. PRX331, Table 3. *See infra* Part III.E.2 discussing the need to include the region variable.

the percentage of white students enrolled in programs Conrad and Allen classify as unique or high-demand is *lower* than the corresponding percentage enrolled in that institution and degree level as a whole. 2/13/17 Tr. 129-137.<sup>46</sup>

99. Another significant finding from Dr. Lichtman's regression analysis is that Conrad and Allen's model, which attributes changes in white enrollment to program offerings, actually explains only a very small portion of the variation in white enrollment, consistent with the State's position that other factors such as campus environment and broader demographic trends are at work. *See* 2/6/12 pm Tr. 48-50 (Hossler) (effects of local demographics); 1/25/12 am Tr. 22-23 (Passmore) (Bowie relies on Prince George's County, which had become increasingly African-American, as the "heart of its enrollment growth," which was one of the factors driving increased African-American enrollment.).<sup>47</sup>

100. This information is reflected in the "R-squared" statistic from the multiple regression analysis. Dr. Lichtman explained that the R-squared statistic tells you "to what extent can these [independent or explanatory] variables explain the change from one program to another in the percentage of white students?" 2/14/17 Tr. 11; *accord* 2/16/17 Tr. 155 (Arrington) ("R-squared would tell you how much of the variation . . . was

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<sup>46</sup> For programs classified as high-demand, the exceptions are graduate programs at Coppin (0.3% higher), and undergraduate programs at Morgan (0.4% higher). For programs classified as unique: undergraduate programs at Bowie (0.1% higher); graduate programs at Coppin (0.2% higher); *See* 2/13/17 Tr. 129-37; DRE098 at 33, 38, 46, 55.

<sup>47</sup> Consistent with demographic trends, UB, UMBC and UMCP all had decreases in the number of white students. 1/25/12 am Tr. 85 (Passmore).

explained by changes in the independent variable.”). It “is a goodness-of-fit measure.”  
2/16/17 Tr. 109 (Arrington).<sup>48</sup>

101. R-squared values can range from 0 to 1. 2/14/17 Tr. 11 (Lichtman); *see also* 2/16/17 Tr. 110-11 (Arrington). The value of R-squared is often expressed as a percentage, meaning the percentage of the variation in the dependent or outcome variable that is explained by changes in the values of the independent or explanatory variables. *See* 2/14/17 Tr. 10-11 (Lichtman).

102. The R-squared value for Dr. Lichtman’s regression analysis of the Conrad and Allen remedial model is extremely low: 11.4%, meaning that nearly 89% of the variation in white enrollment is unexplained by their model. That is much lower than the .3/30% standard Dr. Arrington testified was the threshold for an “important relationship” between the independent and dependent variables. 2/16/17 Tr. 156, 161 (Arrington). Thus, changing the factors in Conrad and Allen’s model (*i.e.*, programs) is not likely to significantly change white enrollment if all the other unidentified factors *not included* in

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<sup>48</sup> Prof. Finkelstein refers to the  $R^2$  as “[t]he basic measure of precision of the equation as a whole is the correlation between the observed values of the dependent variable and the estimated values generated by the regression equation. This correlation is frequently referred to as the “fit” of the equation, and its measure, the coefficient of determination, is denoted  $R^2$ . If the regression equation yielded estimates which coincided exactly with the actual values of the dependent variable, all variability would be “explained” by the regression estimate. In that circumstance,  $R^2$  would equal one. At the other hypothetical extreme, if the regression estimate explained none of the variation in the values of the dependent variable,  $R^2$  would equal zero. An  $R^2$  of .90, for example, means that 90% of total variability of the dependent variable has been explained or accounted for by the regression estimate.  $R^2$  is thus a measure of the explanatory power of the regression equation.” *Regression Models in Administrative Proceedings*, 86 Harv. L. Rev. 1442, 1448–49, n.27 (1973) (footnotes omitted).



Conrad and Allen's model remain unchanged. 2/14/17 Tr. 12-14 (Lichtman). Although he designed his own regression analysis, Dr. Arrington himself found a very low R-squared value for the analysis he used to test the Conrad and Allen model. For his regression analysis of data from Morgan, Coppin and Bowie, the R-squared value was only 9.4%. 2/16/17 Tr. 161 (Arrington). And when he omitted the variable identifying the region, R-squared *dropped* to 6.6% (2/16/17 Tr. 162 (Arrington)), signifying that explanatory information captured by the region variable had been lost.

103. Regression analysis of Conrad and Allen's own Maryland HBI enrollment data thus casts substantial doubt on Plaintiffs' theory that new programs are an important factor, much less the only important factor, that could influence white (let alone other-race) students to attend Maryland HBIs. The low R-squared statistic shows that there are many other factors influencing white enrollment unaccounted for in Conrad and Allen's program-driven theory.<sup>49</sup> Dr. Arrington agreed that one could develop a regression analysis that would include variables such as demography, recruitment efforts, and cost. 2/16/17 Tr. 195. The only factor Conrad and Allen identify in their model that is positively correlated with white enrollment is proximate uniqueness, but the lack of statistical significance means that the seeming correlation could be due to chance, and it would be impermissibly speculative to infer that adding unique programs to the HBIs

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<sup>49</sup> The Court's prior finding that program duplication has some more than *de minimis* segregative effect is consistent with the evidence that this effect is relatively small in comparison to other factors. *See infra* Part IV.2.

would increase white enrollment.<sup>50</sup> The *negative* correlation for high-demand programs is inconsistent with a remedial theory built on the creation of “niches” containing high-demand and unique programs, as there is no reason to think that adding high-demand programs would increase white enrollment—it may well reduce it. Moreover, adding programs that are classified as unique but have small enrollments cannot substantially increase diversity at the HBIs, even if those programs were to attract a slightly higher proportion of white students.

**C. Plaintiffs’ Remedial Theory is Untestable Only Because It is So Poorly Defined; to the Extent that It Can Be Tested, It Fails.**

104. Plaintiffs have offered no evidence to prove their theory that niches would “amplify” the effects they attribute to high-demand and unique programs (if those effects actually existed). 2/16/17 Tr. 28 (Lichtman).

**1. “Niche” is not a valid or reliable concept.**

105. One reason it is difficult to test Plaintiffs’ theory is that there is no clear definition of what a “niche” is, making it nearly impossible to find an existing niche at an HBI to see whether it performs according to Conrad and Allen’s theory. Dr. Lichtman explained that to be useful in social science, a concept like programmatic niche must be both reliable and valid. 2/13/17 Tr. 54 (Lichtman). Neither the concept of niches, nor the

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<sup>50</sup> Dr. Arrington described statistical significance as a measure of “consistency.” 2/16/17 Tr. 93-94. Thought of in those terms, the absence of statistical significance means that we do not have confidence that the results seen in one group (of current “unique” HBI programs) will be consistent in a different group (of proposed future “unique” HBI programs). It does not matter if the relationship among *existing* programs is “by definition, real,” as Dr. Arrington put it (2/16/17 Tr. 93), because what matters is the effect of new programs.

constituent concepts of uniqueness, core, and high-demand, meet those requirements. 2/13/17 Tr. 56-70 (Lichtman) (high-demand); 2/13/17 Tr. 85-94 (Lichtman) (uniqueness); 2/13/17 Tr. 94-97 (Lichtman) (core); 2/13/17 Tr. 97-98 (Lichtman) (niche).

106. Conrad and Allen invented the term “niche.” 1/19/17 pm Tr. 48 (Allen); 1/25/17 Tr. 117-119 (Conrad) (first used niche or cluster in his 2005 report concerning Oklahoma). It is not a term that is widely used or accepted in the field of higher education.<sup>51</sup> The vagueness of their definition and the absence of any accepted usage makes it impossible to determine whether any existing cluster of related programs qualifies as a niche that could be examined for evidence supporting or contradicting Conrad and Allen’s “amplification” thesis. Dr. Allen testified that “each niche should have represented some core, some meaningful number of unique, high-demand programs, and that there should be a core of graduate programs.” 1/18/17 pm Tr. 46.<sup>52</sup> He also described niches as a “group of thematically similar programs . . . at their core are programs that are unique, high demand and/or unique and high-demand,” but may include “core” programs as well. 2/21/17 Tr. 102 (Allen). Dr. Allen could not identify a single example of a niche as he defines it at any school, anywhere in the country. 1/9/17

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<sup>51</sup> See DRE209 (Plaintiffs’ interrogatory answer defining “niche” in circular fashion and citing as authority A. Garibaldi, *Black Colleges and Universities: Challenges for the Future* (1984) (no page number), which does not discuss or define the term).

<sup>52</sup> Dr. Allen’s liability trial testimony, on which this Court relied for its earlier suggestion that the remedy should include niches, used “niche” in a different and broader sense as a cluster of related programs with “a unique program focus that has as its center point an area of growth in terms of jobs, in terms of the economy . . . .” 1/18/12 am Tr. 92-93; *id.* at 96-97 (explaining that Dr. Allen selected the proposed niches by “looking through federal government projections of growth fields and areas”).

pm Tr. 58-59 (Allen). He did not identify a niche outside Maryland that showed the desired effect of increasing white enrollment. 1/9/17 pm Tr. 58-59.

107. Dr. Lichtman explained that the real difficulty in testing Plaintiffs' niche theory is that "it is defined in such vague and general terms that there's really no way of figuring out what is a niche and what isn't a niche." 2/13/17 Tr. 98 (Lichtman).<sup>53</sup> That vagueness frustrates the ability to test the proposition that niches drive college choice and therefore would "amplify" the asserted effects of high-demand and unique programs. Indeed, at one point Dr. Allen defined a niche in circular terms: "[a] fully developed academic niche reasonably uses white enrollment as one of the standards." 1/19/17 am Tr. 31-35 (Allen). Thus: a niche that failed to deliver an increased white enrollment is not a niche at all, or at least it would not be "fully developed" enough to test. *Id.* Such a malleable definition allows Conrad and Allen to deflect questions about why program clusters like Morgan's new school of global journalism or its Cyber Defense center have not functioned as niches and attracted other-race students, while advocating for large increases in state funding for additional clusters. 1/19/17 pm Tr. 43-61 (Allen); *see also* PRX439 at 80 (UMES "niche" for Pharmacy and Health Professions which includes both Hospitality and Tourism, and Criminal Justice); PRX044 at 95 (Coppin "niche" in

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<sup>53</sup> Dr. Burnim described a programmatic niche as a "programmatic area for which the institution is particularly well-suited to carry out or execute." 1/11/17 pm Tr. 28. Dr. Allen testified: "to talk about a programmatic niche, to talk about clusters as came forward out of the Bowie State faculty proposal, the concept is the same." 1/19/17 pm Tr. 44 (Allen). Such variation in the meaning given to the terms is unsurprising. The term has no "specialized" meaning; a knowledgeable person "could really define it any way he liked." 1/11/17 pm Tr. 21 (Burnim). "There is no known set of programs that belong in a particular niche. This is not a generally understood . . . taxonomy that is being used." 2/8/17 Tr. 167 (Manning).

Criminal Justice, Social Science and Political Science which includes both Cybersecurity and Urban Arts).

108. Yet, as discussed *supra* Part II.E., Plaintiffs propose not only to require the State to fund niches at the HBIs, but also to use the same vague concept as a basis for inhibiting all of Maryland's other public institutions from offering programs that "infringe" on them. 1/23/17 Tr. 85-90 (Allen). Dr. Allen agreed that "prohibiting infringement on educational niches, . . . casts a pretty large shadow." 1/23/17 Tr. 86, 85-90 (Allen). Plaintiffs' prohibition would apply not only to niches that exist, but those that are "contemplated"—meaning that non-HBIs would be forbidden to offer new programs, no matter how great the State's workforce needs might be in a given area, even though no HBI program exists, might ever exist, or might grow large enough to satisfy the statewide demand. 1/23/17 Tr. 85-90 (Allen). And all of this before the efficacy of niches in diversifying HBI student populations could even be tested.

109. Although Dr. Lichtman identified clusters of current programs that satisfy the definition of "niche" that Plaintiffs provided in response to an interrogatory, (*e.g.*, 2/13/17 Tr. 101, 109 (Lichtman)), the absence of an accepted or definite meaning allowed Plaintiffs' experts to disagree about whether those program clusters constitute niches. 1/19/17 pm Tr. 43-61 (Allen) ("There are clusters of similar programs, so the answer [to whether there are any current niches] is no."). One such cluster or niche is the Bowie cluster of programs in nursing, social work, and education. But the percentage of white enrollment in that "niche" is about the same as the percentage for Bowie overall. 2/13/17 Tr. 102 (Lichtman). Coppin also has a cluster of rehabilitation programs, including

programs Conrad and Allen classify as unique and high-demand—but there are no white students enrolled. 2/14/17 Tr. 19-20 (Lichtman). UMES has a similar program cluster, but white enrollment is below the UMES average of white student enrollment for the corresponding degree level. 2/14/17 Tr. 20 (Lichtman).

110. Likewise, the communications niche at Morgan—which include programs Plaintiffs classify as unique—“is well below the overall Morgan percentage of about 3 percent. It’s only 0.6 percent.” 2/13/17 Tr. 107 (Lichtman). At trial, Dr. Allen would not agree that it qualified as a niche, even though Morgan promotes it as a center of excellence—one of the concepts Dr. Allen elsewhere equated with niches. 1/19/17 pm Tr. 50 (Allen).<sup>54</sup> Morgan’s president, on the other hand, testified it *was* like a niche. 1/9/17 pm Tr. 74-75 (Wilson). The journalism school includes large high-demand programs, but each of them enrolls only one white student. 1/19/17 pm Tr. 52 (Allen). And two of the programs are unique statewide. *Id.* There is no apparent reason why this cluster of programs would not qualify as a “niche,” except that its low white enrollment numbers contradict Conrad and Allen’s remedial theory.<sup>55</sup> Other program clusters (*e.g.*, computer science, social work and education at Bowie) would also seem to qualify as

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<sup>54</sup> 1/18/12 am Tr. 101 (Allen) (describing the “whole point” of niches as “being to create those areas of excellence that define the institutions where they are housed”); 1/19/17 pm Tr. 44 (Allen) (“So to talk about an area of excellence, to talk about a programmatic niche, to talk about clusters as came forward out of the Bowie State faculty proposal, the concept is the same.”).

<sup>55</sup> In rebuttal, Dr. Allen testified that Morgan’s communications cluster was not a niche because there were “broadly similar” programs elsewhere, even though *Plaintiffs’ own report* classified the programs as statewide unique. 2/21/17 Tr. 107-08. But that means either “niche” or “unique” (or both) is so indeterminate as to be meaningless. *See* 2/21/17 Tr. 169 (Dr. Allen describing “the way we use and conceptualize uniqueness” as “evolving”).

niches but the programs in those clusters do not even show up in Conrad and Allen's analyses because the level of white enrollment is too low. 1/19/17 pm Tr. 43-61 (Allen).

111. At the remedy trial, Dr. Allen testified that the reason for niches is to get a "critical mass" so that white students will feel more comfortable attending an HBI where the majority of students are non-white. 1/19/17 pm Tr. 14-15. Dr. Allen also testified that niches contributed to the "branding of institutions" by conveying that the institution is strong in related areas. 1/18/17 pm Tr. 17. However, he offered no evidence that such "branding" would be likely to disproportionately increase white enrollment, or that it was more important to the recruitment of white students (as opposed to the recruitment of non-white students) to convey institutional strength in a single area of closely-related programs than in different, more varied fields. And the "critical mass" theory requires all or almost all of the programs in a niche to attract a disproportionate number of white students. Otherwise, grouping programs together does not add to a "critical mass." But Plaintiffs' proposed niches include programs that are neither high-demand nor unique, so Plaintiffs' own theory does not predict success. And, of course, the data reflecting Maryland's students' expressed preferences do not support the theory for high-demand and unique programs.

112. Plaintiffs contend that their theory about the amplifying effect of "niches" cannot possibly be tested because such niches do not yet exist. PRX312 ¶ 204. Plaintiffs offered no evidence that such niches (or the attributes of such niches) play any role in prospective students' choice among universities, nor did they offer any evidence that they are likely to attract a higher percentage of white students.

**2. Programs Conrad and Allen classify as high-demand or unique (or both) do not produce the effects on white enrollment that would be required for the remedial strategy to be effective.**

113. Plaintiffs do not contend that their original claims about the effects of high-demand and unique programs on white enrollment—the effects supposedly amplified by niches—are untestable. The ultimate foundation for their claim that programs they classify as high-demand and unique will attract an increased proportion of white students is Dr. Conrad’s case study of white student enrollment at five southern HBIs in 1994.<sup>56</sup>

**a. Dr. Conrad’s 1994 case study cannot be generalized to Maryland in 2017.**

114. Dr. Conrad agreed that his quarter-century-old analysis of interviews of 35 white students (and one student of unspecified race), and 44 faculty and administrators at 5 non-Maryland HBIs (Winston Salem State University, North Carolina A&T State University, Savannah State College, Southern University-New Orleans (SUNO), and Kentucky State University) was “an exploratory study” needing “further testing.” 1/25/17 Tr. 54 (Conrad).

115. There are numerous criticisms of the way Dr. Conrad conducted his 1994 study. But there is also the separate and fundamental problem that qualitative case studies are not properly generalized to other “cases,” at least without a long track record of replication using the same methods on many different “cases.” Dr. Lichtman quoted from a recognized authority on qualitative methods: “Qualitative generalization is a term

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<sup>56</sup> Like the Conrad and Allen testimony generally, Dr. Conrad’s study is unreliable not just for the reasons cited here, but also as set forth in the admissible evidence in the State’s *Daubert* briefing. *See supra* note 40.



that is used in a limited way in qualitative research, since the intent of this form of inquiry is not to generalize findings to individuals, sites, or places outside of those under study.” 2/14/17 Tr. 36 (Lichtman) (quoting Dr. Creswell). Social scientists use quantitative methods to test whether conclusions drawn from limited case studies like Dr. Conrad’s can be extended to other circumstances.<sup>57</sup>

116. Qualitative research methods permit an in-depth exploration of a phenomenon of interest to look for explanations, and can be performed without having any particular general hypothesis or theory to test. But the methodological strength of analytical depth comes with a corresponding weakness in breadth. Chance can play a role in the selection of subjects who are interviewed or observed, so that results may not be typical of the group that is being studied. And the group itself may not be typical of a broader population in ways that make the results of even sound qualitative research inapplicable to other groups in other circumstances.

117. There are numerous reasons to be skeptical that the responses of HBI administrators, faculty and students Dr. Conrad interviewed at five southern HBIs in 1994 can be used to predict the choices of prospective white enrollees in Maryland in 2017 (and thereafter)—let alone the entire constellation of other-race students, who are the population of interest in fashioning a remedy in this case. First, there have been important changes in race relations in the intervening decades. Second, although

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<sup>57</sup> Thus, as the excerpt from the article Dr. Allen quoted for the advantages of qualitative research in “process tracing” (2/21/17 Tr. 35 (Allen)) goes on to say, “[q]uantitative analysis, in turn, can frame and generalize the findings of qualitative studies.” 2/21/17 Tr. 132.

Maryland has a history of *de jure* segregation in public higher education, unlike Louisiana (the site of the largest number of student interviews) and Georgia, two of the states involved in the 1994 study, Maryland immediately repealed that legal authority after *Brown*.<sup>58</sup> Maryland's non-HBIs are desegregated, and this undisputed fact is relevant to whether the situation in 2017 Maryland can be assumed to be identical to that in the states Dr. Conrad visited in 1994.<sup>59</sup> Third, Dr. Conrad's study focused on "non-traditional" students, rather than high school or community college graduates. DRE005 at 30, 32, 54. The advent of online education, which did not exist in 1994, has dramatically changed the options for career-oriented non-traditional/older students, and those options include online offerings by private and out-of-state institutions, expanding the marketplace from when Dr. Conrad did his research. 1/25/17 Tr. 64-65 (Conrad). It is much harder now for a public institution to be the only game in town—assuming that matters—if an out-of-state school can offer a competing program online. *See* 2/16/17 Tr. 106 (Miyares). Online programs are at odds with a remedial strategy based on forcing non-traditional students seeking a certain degree program to enroll at an HBI in order to get it. Finally, students today are also more mobile than they were in 1994. 1/25/17 Tr. 64 (Conrad).

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<sup>58</sup> Compare *Podberesky v. Kirwan*, 838 F. Supp. 1075, 1078 (D. Md. 1993), *rev'd on other grounds*, 38 F.3d 147 (4th Cir. 1994) (immediately after *Brown*, Maryland Board of Regents agreed to admit students of all races; no policy of massive resistance), to *McCoy v. Louisiana State Bd. of Educ.*, 332 F.2d 915, 916 (5th Cir. 1964) (noting continued state law prohibition on admission of black students a decade after *Brown*), and *Holmes v. Danner*, 191 F. Supp. 394, 402 (M.D. Ga. 1961) (ordering admission of first black student to University of Georgia).

<sup>59</sup> The State's position was, and remains, that *Fordice* cannot apply to 2017 Maryland because the State does not sponsor a dual system.

- b. Dr. Conrad's 1994 study is not probative for many reasons, but especially his failure to address unconscious bias to confirm his 1990 *Knight* testimony before conducting a study.**

118. Even if there were no barriers to generalizing Dr. Conrad's 1994 study because it is qualitative research involving a small number of interviewees, the way he conducted the research precludes a court from relying on his research. The most fundamental problem is that Dr. Conrad had committed himself to the view that high-demand and unique programs would attract white students to HBIs by testifying to that opinion *before* he did the research. Although he initially claimed he had "no theory" in 1994 about what attracted white students (1/25/17 Tr. 31 (Conrad)), in fact he had submitted a report and testified to that view in *Knight v. Alabama* in 1990. 1/25/17 Tr. 34-36 (Conrad); *see also* 1/24/17 Tr. 188 (Dr. Conrad's testimony that "I didn't have a clue what attracted whites to HBIs when I began to do my research.").

119. Confirmation bias is insidious in qualitative research because it can operate unconsciously (*see* 2/13/17 Tr. 156-57 (Lichtman)), through subtle (and not-so-subtle) verbal or non-verbal cues in an interview or in the interpretation of an interviewee's statements. Dr. Conrad agreed that avoiding confirmation bias is "one of the single most important things" when doing research for policy purposes. 1/24/17 Tr. 192.

120. No one can be certain exactly how Dr. Conrad's pre-judgment affected the data he collected, because his recordings of the interviews no longer exist, and he did not

transcribe most of them.<sup>60</sup> 1/25/17 Tr. 19 (Conrad). *Compare* 2/21/17 Tr. 181 (Allen) (Sum, Light article transcribed all focus group interviews). But the record is clear that he did not take standard precautions against investigator bias, including confirmation bias. 2/14/17 Tr. 49 (Lichtman). For example:

- No one else participated in the interviews. 1/25/17 Tr. 20 (Conrad).
- No one else checked the accuracy of Dr. Conrad's interpretation of responses against the recordings—not the interviewees (member checking); not third-party peer reviewers (auditing); not even his coauthors on the published paper. 1/25/17 Tr. 20 (Conrad); 2/14/17 Tr. 43 (Lichtman).
- Nor is it possible for anyone to review Dr. Conrad's data today, although Dr. Allen acknowledged that social scientists expect data to be available for inspection.<sup>61</sup> 2/21/17 Tr. 166 (Allen) (discussing Yin text).

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<sup>60</sup> Dr. Allen's testimony that Professor Yin believes that a researcher can, under some circumstances, choose not to record interviews is irrelevant to the reliability of Dr. Conrad's study. *See* 2/21/17 Tr. 159. Dr. Conrad's research protocol called for him to seek the subject's permission to record the interview—just what Yin says researchers in some circumstances may want to avoid—and he *did* record them. 2/21/17 Tr. 156, 160 (Conrad). Having chosen to record, what Dr. Conrad did not do, but what Dr. Allen's own published research shows that he (Dr. Allen) consistently does, is transcribe the recordings so that multiple independent reviewers can analyze them and “code” the responses. 2/21/17 Tr. 145-55. It is not reasonable to rely solely on notes when recordings are available for transcription. Recordings and transcripts may expose subtle forms of unconscious investigator bias that would be discernible to independent reviewers, but that could not be discerned from notes which themselves may reflect the same unconscious bias. 2/15/17 Tr. 16-17, 26-29 (Bastedo).

<sup>61</sup> Dr. Conrad's 1994 study remains the foundation of the Conrad and Allen remedial strategy, and he continued to rely on it in a long series of expert witness engagements spanning the period from when he conducted the research to the time he was first engaged in this case, and even beyond. 1/25/17 Tr. 22 (Conrad destroyed underlying data in late 1990s while still working for the Department of Justice on related matters); *see*

121. And the record shows that Dr. Conrad's prior expectations *did* influence the manner in which he conducted the research. At the three HBIs he visited after North Carolina, Dr. Conrad gave his interview subjects a survey form that presented examples of factors that might relate to enrollment at an HBI. 1/25/17 Tr. 17. The first two items on that survey form mirrored the testimony Dr. Conrad had previously given:

APPENDIX C: INTERVIEWEE RATING INSTRUMENT  
FACTORS CONTRIBUTING TO THE MATRICULATION OF WHITE STUDENTS IN PBI<sub>s</sub>

Score (1-10)

- I. Academic Program Offerings  
A. High-Demand Programs:  
B. Unique (Unduplicated by Proximate PWI) Programs and/or  
Caps on Program Enrollments in Proximate PWIs:  
C. Graduate Programs:  
Overall:

122. Primacy—the focus on the first thing—is a well-recognized phenomenon in social science research, which is why surveys typically rotate answers to avoid the suggestive impact of always putting a particular response first. 1/25/17 Tr. 45 (Conrad); 2/14/17 Tr. 42-43 (Lichtman). Here, Dr. Conrad's distribution of a survey form shows that the order of responses may at a minimum have influenced his interviewees to focus on the program-based responses he put first. *See* 1/25/17 Tr. 44-45 (Conrad). It also shows that he was operating under the influence of his preconceptions in conducting the

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*also* 1/24/17 Tr. 142 (continued reliance in 1998 for Texas opinions); 147 (Virginia in 2001); 155 (Oklahoma in 2005).

research, although precisely how that played out in the interviews and in coding cannot be discerned from the face of his study and without the requisite backup.

123. Dr. Conrad's testimony in *Knight* and his pre-commitment to program-based remedies may also help to explain why he did not seek negative cases and discrepant evidence—including failing to look at a published article reaching conclusions contrary to his even after it was drawn to his attention in Dr. Lichtman's November 2015 report. 1/25/17 Tr. 48-49 (Conrad) (acknowledging failures).

**c. Dr. Conrad failed to take into account negative cases and discrepant evidence.**

124. One way Dr. Conrad failed to consider negative cases and discrepant evidence was that he failed to interview students who had chosen not to enroll at an HBI—something he admitted in his published article and in testimony would be appropriate and useful. 1/25/17 Tr. 52, 59-60 (Conrad). Without doing such interviews, Dr. Conrad could not reach a reasoned conclusion about whether the population of students he interviewed at the HBIs was similar to or different from the students the HBIs need to attract to increase white enrollment. Increasing white enrollment beyond the current population means understanding what would motivate students who have not chosen HBIs (negative cases) to attend. There is simply no way to know whether, and no basis to assume that, the students Dr. Conrad interviewed are representative of a broader population of white students, or whether they are different in ways that make their opinions about what attracts white students to HBIs unenlightening about what would

attract others, and useless as the basis for designing a remedy. *See* 2/14/17 Tr. 39-40 (Lichtman).

125. Another failure to address negative cases and discrepant evidence was Dr. Conrad's ignorance of the Sum, Light study cited in Dr. Lichtman's November 2015 expert report when preparing Dr. Conrad's July 2016 report on which his trial testimony was based. DRE070 at 66. Conrad and Allen captioned their July 2016 report a "reply" to Dr. Lichtman, but they said nothing about the study. And Dr. Conrad had not even read the Sum, Light study before his deposition in September 2016. The failure to address this study, even after Dr. Lichtman flagged it in his report, further undercuts the thoroughness and reliability of what Conrad and Allen describe as mixed-methods social science. As Dr. Lichtman testified, when there are only two published studies on a question, "You can't leave it out. You can debate it. You can say it's not reliable. You can say, I know this study exists, but I think my study is -- all that's fine, but you can't leave it out when you say you're relying on qualitative work." 2/14/17 Tr. 46; *see also id.* at 50. Dr. Lichtman described the duty to address such contrary authority as "an absolute obligation." 2/16/17 Tr. 53. "It's perfectly proper to argue why you don't think it's valid or why your study is better. That's fine. You cannot simply erase it." 2/16/17 Tr. 53.

**d. There is no basis for generalizing from Dr. Conrad's 1994 study.**

126. Another flaw in Dr. Conrad's study that prevents generalization is that there is no reason to believe that his interviewees were typical even of white students who

enrolled in those five HBIs in 1994. Dr. Conrad's sample was neither random nor representative. Most—at least two-thirds—of his student interview subjects were chosen by “institutional liaison,” HBI administrators who were aware of the purpose and context of Dr. Conrad's study. 1/25/17 Tr. 9-10 (Conrad). The institutional liaisons at the HBIs were crucial. 1/25/17 Tr. 42 (Conrad). Dr. Conrad admitted that HBI faculty and administrators were likely to want to enhance their institutions by adding programs, and therefore likely had an interest in advancing Dr. Conrad's program-based remedial theory. 1/24/17 Tr. 39 (Conrad). Moreover, there was no relationship between the number of students Dr. Conrad interviewed at an HBI and the size of that school's white enrollment or overall enrollment. For example, he interviewed 15 students (over 40% of the total) at SUNO where Dr. Conrad had a “good relationship” with the institutional liaison, even though it was smaller than other schools and had a much lower white enrollment. 1/25/17 Tr. 11-12 (Conrad). Similarly, he did not keep track of the proportion of students who were graduate or undergraduates. 1/25/17 Tr. 12 (Conrad).

127. Although there is such a thing in qualitative research as “purposive sampling”—intentionally trying to shape the characteristics of the sample population (1/23/17 Tr. 65 (Allen))—Dr. Conrad's study does not claim that he did this. In fact, the study claimed that all of the schools had been chosen for *success* in attracting white students. DRE007 at 7. Nor is that how he treated the data he collected. Rather than looking separately at a school like Kentucky State University that had been very successful at attracting white students, and at SUNO, which had a very low white enrollment, Dr. Conrad lumped all of the HBIs together in a single “case” for purposes of



analysis. 1/25/17 Tr. 15 (Conrad); 2/14/17 Tr. 56 (Lichtman). So there was no way to tell whether there was any relationship between what faculty, students, and administrators told Dr. Conrad about what would attract white students, and the actual degree of success (or not) of their institution.

**e. Sporadic, undocumented conversations with white students at HBIs are not probative.**

128. In addition to his 1994 study, discussed above, Dr. Conrad also testified that one of the foundations of the remedial theory was his sporadic conversations with white students at HBIs, which he called a form of ethnography in his direct testimony. 1/24/17 Tr. 25; 1/24/17 Tr. 184-85 (Lichtman). However, Dr. Conrad did not record or describe these conversations in any way, and Plaintiffs have made no effort to show that any social scientist would base an opinion on such un-systematically collected and unrecorded information. And, of course, any data collection that is inherently limited to students who do attend an HBI has one of the same flaws as the 1994 study—it leaves out the population of greatest importance to a remedy intended to increase white enrollment, which is the population of students who have not chosen an HBI.

**3. The available evidence shows a negative relationship between high-demand programs and white enrollment at the HBIs.**

129. Plaintiffs claimed that high-demand programs were the “single most important factor in terms of influencing student choice.” PRX312 ¶ 177. However, there is no sound quantitative evidence to support the theory that adding high-demand programs would increase the proportion or percentage of white students at the HBIs. That is, although high-demand programs might increase *total* enrollments at the HBIs—

by definition, they are popular programs—they would do nothing to promote diversity. Every statistical analysis in the case—even those sponsored by Plaintiffs’ experts—shows that high-demand programs will not increase white enrollment.

130. That is what Dr. Arrington reported from his own regression analysis, and that is what Dr. Allen reported in his rebuttal table (PRX504), which shows that the percentage of white students in high-demand programs is lower than the overall percentage of white students in non-core/non-joint programs (4.86% versus 5.69%). The results are even worse for “exceptionally high-demand” programs (3.84% versus 5.69%). Dr. Allen tried to explain away that result by breaking the comparison down by degree level, but this comparison is meaningless as explained *infra* Part III.E.5.b.

131. There is no basis for constructing niches around high-demand programs, because there is no demonstrated effect to “amplify.” As noted, high-demand programs are negatively correlated with the percentage of white enrollment, meaning that adding such programs would tend to attract proportionately fewer white students. Moreover, the definition of high-demand programs Plaintiffs used is arbitrary and unstable. 1/25/17 Tr. 107-08, 110. Even Dr. Arrington agreed that the use of arbitrary “cut points” —*i.e.*, numerical enrollment floors for classifying or counting programs—was unreasonable. 2/16/17 Tr. 137-38 (Arrington) (researchers “always want to [use]” data expressed in actual numbers rather than categories).

**4. The evidence shows no statistically significant positive relationship between unique programs and white enrollment.**

132. Plaintiffs denied in the liability phase that duplication at UMCP was different from duplication at other institutions. ECF 355 ¶ 618 (“Programs at UMUC and UMCP should not be treated separately for a program duplication analysis.”). Duplication of programs at UMCP thus played a significant numerical role in Dr. Conrad’s liability phase assessment of program duplication statewide. 1/10/12 pm Tr. 7 (Conrad). That included duplication of programs first offered at a non-HBI, such as UMCP. ECF 367 ¶¶ 316, 319 (“approximately one-third of the instances of unnecessary program duplication identified by Dr. Conrad were for programs first begun at a [non-HBI].”) (emphasis omitted).

133. In the remedy trial, the degree of actual competition became relevant. Dr. Allen testified that UMCP “as the flagship campus, is a special case.” 1/18/17 am Tr. 92 (Allen). He described UMCP as not being a true competitor institution. For purposes of the remedial theory, “its uniqueness [is] qualified by the fact that, except for College Park, we’re the only ones offering it. So whoever doesn’t get into College Park, then, are more likely to come to us.” 1/18/17 am Tr. 92 (Allen). *See also* 1/18/17 pm Tr. 43-44 (Allen); 1/19/17 am Tr. 25 (Allen). Yet Conrad and Allen did not actually analyze the degree to which any of the non-HBIs other than UMCP actually compete with the HBIs for the same students. They considered only geographic proximity, not other factors known to influence student choice.

134. Dr. Allen focused on “proximate uniqueness,” presumably excluding UMCP, “because it’s a regionally subscribed competition for these students.” 1/18/17 am Tr. 93 (Allen). Dr. Allen testified that “when one is attempting to fashion a remedy it is important to take into account proximate uniqueness and to look at the reality of regional boundaries, if you will and, in that sense, the service areas of institutions.” 1/18/17 am Tr. 93 (Allen). *But see* ECF 367 ¶ 328 (Plaintiffs asserting that all institutions have “overlapping service areas” and “statewide draw”). *See also* 1/10/17 pm Tr. 19-20 (Bell).

135. Dr. Allen agreed that an analysis of whether UMBC was actually competing with Morgan for engineering students “could be informative.” 2/21/17 Tr. 175. Despite the new focus on actual competition, however, Plaintiffs presented no evidence of the extent of actual competition between the HBIs and non-HBIs. Dr. Conrad had justified his earlier recommendation that a Texas HBI adopt duplicative engineering programs in part on the ground that the nearby non-HBI was “highly selective,” meaning presumably that students who might not qualify for the non-HBI program might choose to enroll at the HBI. 1/24/17 Tr. 180 and DRE189 at 1. But he did not know whether there was a similar difference in UMBC’s selectivity as compared to Morgan’s—*i.e.*, whether they actually compete for similar students. 1/24/17 Tr. 181 (Conrad). Indeed, the evidence is that they do not. *See infra* Part IV.E.

136. Plaintiffs’ remedial theory is that unique programs “creat[e] a seller’s market.” 1/18/17 pm Tr. 14 (Allen). That “market” theory presumes actual competition for the same students. But one of the fundamental problems with assessing the predictive value of that theory for other-race enrollment at the HBIs is the absence of any consensus

about what makes a program “unique,” and so different people use the term to refer to different ideas. As Monica Wheatley testified, “[t]here’s nothing official” defining uniqueness. 2/8/17 Tr. 7. She used the term to describe a program, “that is not widely offered or has some particular element that’s not found in similar types of programs.” 2/8/17 Tr. 7.<sup>62</sup> Some university presidents focused on delivery modality. President Schmoke, for example, used “unique” to refer to very particular aspects of how a program is taught. 2/9/17 Tr. 152. Similarly, President Thompson defined program uniqueness in terms of instructional style: “not only just how it’s delivered, but what is in the delivery of it. For instance, infusing undergraduate research, having a capstone course.” 1/11/17 pm Tr. 63.

137. Using the presidents’ definitions, programs with identical CIP codes would still be unique if there were something special and innovative about them. Programs with identical CIP codes may also be designed to prepare students for very different career paths; or they may be designed for students with very different incoming levels of preparation—factors that in the real world affect whether the same students would be interested in both programs (assuming they were making decisions based on programs at all).

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<sup>62</sup> For example, MHEC approved an online Master’s in Social Work program for Morgan which was different from other programs because it was “much more targeted to urban—doing social work activities with urban populations, which, of course, would be very different from the sorts of things you would have to work with in non-urban environments.” 2/7/17 Tr. 141 (Wheatley). Salisbury objected, but “we looked at the focus of the program” and concluded the programs were different. *Id.*

138. In fact, the HBIs' own recent program proposals have identified their programs as unique because of the way the HBI proposed to offer that program, and not because of an exclusive right to offer that program. In 2015, for example, MHEC approved Morgan's application for a Post-Baccalaureate Certificate in Advanced National Security. DRE064. Morgan described its program as different from all others at Maryland institutions because its program offered a unique interdisciplinary approach. DRE064 at 17.

139. Similarly, in 2016 MHEC approved Morgan's proposal to offer its existing MBA in online format with six areas of concentration. DRE087 at 63. At the time that Morgan submitted its proposal to MHEC, MBA programs were being offered at seventeen Maryland-based institutions, including UB's online MBA which Plaintiffs have targeted for transfer to Morgan. DRE087 at 18-19. Yet Morgan asserted that its program was not duplicative of other online MBAs, including UB's program, because of the Morgan program's "combination of cost, quality, and access for students from underserved communities"; its "focus on Military and underserved communities"; and because Morgan had "a state-of-the-art technology delivery platform." DRE087 at 18-19. MHEC approved Morgan's proposal and determined that it was not unreasonably duplicative because demand for properly-credentialed professionals in the field was a sound educational justification for the program. DRE087 at 3-5.

140. Morgan likewise identified its new online MSW program as being "distinguished from both of the other [online MSW] programs by its explicit focus on

urban social work practice with African Americans and other marginalized populations.” DRE094 at 11.

141. In 2015, MHEC approved three new areas of concentration in Computational Chemistry, Biochemistry, and Applied Sciences at Coppin. DRE065 at 7. In reviewing Coppin’s proposal, MHEC noted that “[t]hese are relatively unique program offerings in Maryland, particularly when offered as areas of concentration within existing degree programs. Coppin cites its unique role in offering these programs . . . . Instructional space for these programs will be utilized in Coppin’s new Science and Technology Center (STC) on campus. This building is equipped with cutting-edge technology and state-of-the-art equipment in laboratories and classrooms.” DRE065 at 7.

142. Plaintiffs’ remedial theory is based, however, on Dr. Conrad’s particular definition of uniqueness as the converse of duplication. Presumptively, that simply means no other public institution is offering a program with the same CIP code, excluding Dr. Conrad’s list of “core” programs.

143. Dr. Conrad’s testimony showed that his definition of a core program, which in turn determines whether a program will be considered “unnecessarily duplicated” or unique, is itself a subjective, moving target. 1/24/17 Tr. 127-151. For example, Dr. Allen testified that “by our definition of core programs, computer science is not a core program.” 1/23/17 Tr. 9. The Conrad and Allen report’s list of “core programs” includes: Environmental Science, Environmental Studies, Women and Gender Studies, German, Interdisciplinary Studies, and Intercultural Communication, but not Computer Science. ECF 480-1, Exh. 9; 1/24/17 Tr. 126. Nor did Dr. Conrad include engineering or

social work as core programs. 1/24/17 Tr. 132 (Conrad). In fact, Dr. Conrad unequivocally denied ever having classified Computer Science as a core program. 1/24/17 Tr. 134 (“I have not classified computer science as a core program, no, I have not.”). Yet Dr. Conrad *did* include Computer Science on his list of core programs (along with four other computer-related programs) as far back as 1990 when he testified in the *Knight* case before a federal district judge in Alabama. 1/24/17 Tr. 137-38. A decade later, Dr. Conrad likewise listed “all the computer-related disciplines” as core programs in a 2001 report for the Department of Education. 1/24/17 Tr. 147.

144. Dr. Conrad admitted that his list of core programs has shrunk by about 60% over 27 years. 1/24/17 Tr. 140. That means his approach will necessarily find a much larger number of “unnecessarily duplicated” programs and a much bigger disparity between the number of unique programs at HBIs and non-HBIs than there would be with Dr. Conrad’s original larger “core.” It also means any comparison between the extent of duplication in Maryland in 2012 or 2017 and Mississippi in the 1980s is meaningless or misleading. *See* ECF 382 at 46 (comparing Conrad’s duplication statistics).

145. Dr. Conrad also denied having classified engineering as a core program: “I have never classified engineering as a core program.” 1/24/17 Tr. 134. Yet in his report about Virginia for the Department of Education he listed all engineering and engineering-related disciplines. 1/24/17 Tr. 147 (Conrad); DRE186. And he similarly listed engineering in his report on Texas in 1998. 1/24/17 Tr. 146 (Conrad).

146. Dr. Conrad conceded “that if engineering and computer-related programs were considered to be core and thus couldn’t become part of a niche, then a certain



portion of [Conrad and Allen's] remedial proposal would have to be carved away.” 1/24/17 Tr. 149. That would affect, for example, the proposed computer science niche at Bowie and the engineering niches at Morgan and UMES. 1/24/17 Tr. 150 (Conrad).

147. Dr. Conrad also admitted that his “calculation of the number of non-core, unduplicated programs at the HBIs and the non-HBIs would have to be adjusted.” 1/24/17 Tr. 150. Changing the definition of core “would affect [his] calculation of unique, unduplicated programs.” *Id.*

148. But the implications of a 60% change in core programs go beyond upending all of the statistics on which Plaintiffs have built their liability and remedy case. Because what Dr. Conrad's testimony shows is that there is *no objective or commonly-agreed standard* for classifying a program as core or non-core, and so his crucial dividing line between permissible duplication of programs that might be offered at any university and constitutionally-condemned “unnecessary program duplication” is arbitrary, unreliable, and lacks legitimacy. Dr. Conrad admitted that even as he has updated his list of core programs to include environmental studies or gender studies, he has disregarded the strong educational and work force push for more STEM programs. 1/24/17 Tr. 151.

149. As the district court in the *Knight* case observed: “In Dr. Conrad's definition of ‘core’ there is no appreciation for the educational rationale for a particular program's existence. Dr. Conrad's definition of a ‘core academic program’ is, for purposes of this litigation, overly restricted when considered in relation to actual student program enrollments and the functioning of curricular development at the state's institutions.” *Knight v. Alabama*, 787 F. Supp. 1030, 1318 (N.D. Ala. 1991), *aff'd in*

*part, vacated in part, rev'd in part*, 14 F.3d 1534 (11th Cir. 1994). The *Knight* court pithily described the disconnection between the function of public universities and Dr. Conrad's definition of "core": "Under the doctor's definition Portuguese and particle physics are core programs while elementary education and business are not." *Id.* at 1317. The gap between what might generally be thought of as the core of public higher education and Dr. Conrad's list is even greater when the list has been reduced by 60% compared to when Dr. Conrad testified in *Knight*.

150. The elasticity—indeed, manipulability—of Dr. Conrad's definitions of "core" and "unique" programs is exemplified by his treatment of the UMBC engineering programs that Plaintiffs seek to transfer. Dr. Conrad created a program inventory showing his classification of all of the programs offered by the HBIs and non-HBIs. He used the inventory to compare the extent of unique programs offered at non-HBIs to those offered at the HBIs. In the inventory, Dr. Conrad classified UMBC's Master's in Environmental Engineering program as unique. 1/24/17 Tr. 175. "[T]hat means it doesn't duplicate any other program in the state." 1/24/17 Tr. 176. The same was true of the doctoral degree. 1/24/17 Tr. 177. And the same was true of UMBC's Bachelor's, Master's and Doctoral programs in Computer Engineering (1/24/17 Tr. 177 (Conrad)), as well as UMBC's Master's and Doctorate in Electrical Engineering. 1/24/17 Tr. 178 (Conrad). Yet, before he was confronted with his own program inventory, Dr. Conrad testified that "the UMBC engineering programs that [he] testified about on direct

duplicate programs at Morgan State University.” 1/24/17 Tr. 175.<sup>63</sup> Dr. Conrad refused to concede that high student demand justified duplication of Electrical Engineering programs, 1/24/17 Tr. 179, even while testifying he “would not be surprised” if there were differences in the selectivity of the UMBC and Morgan programs which would mean they do not directly compete for students. 1/24/17 Tr. 180-81. Dr. Conrad also acknowledged that in a prior case in Texas he had recommended developing engineering programs at an HBI, even though they would be duplicative of programs offered at a nearby non-HBI, because of high-demand for the program. 1/24/17 Tr. 180.

151. Dr. Conrad’s about-face on the uniqueness of UMBC’s engineering programs, in the context of advocating transfer of the UMBC programs to Morgan, illustrates the arbitrariness of his entire classification scheme. And that arbitrariness, in turn, invalidates any analysis of the effect of unnecessary program duplication.

**D. The Testimony of the HBI Presidents Does Not Support Plaintiffs’ Remedial Theory.**

152. Dr. Allen testified that he was also relying on testimony by “three out of four” of the HBI presidents as support for Plaintiffs’ remedial theory, but he never discussed what Presidents Wilson, Bell, and Thompson actually said about the effect of programs. 1/19/17 am Tr. 78. The Conrad and Allen remedial strategy is based on the

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<sup>63</sup> Indeed, the whole point of former Morgan Engineering Dean DeLoatch’s testimony was to advance a different meaning for duplication and uniqueness. *See* 1/12/17 am Tr. 69-70. Because Dr. DeLoatch’s testimony is not relevant to remedy and amounts to an attempt to advance a new liability theory, it should be stricken and disregarded. Moreover, if the Court were to accept Plaintiffs’ new view of duplication, all of the liability phase evidence would have to be reconsidered, including the relative number of unique programs at HBIs and non-HBIs.

idea that white students will be attracted to HBIs for reasons that are different from the reasons (reflected in college-choice literature) that students generally choose universities, so that offering programs will draw proportionately more white students than are currently in the HBIs' applicant pool. But drawing more applicants of all races, including whites, will not change the racial composition of the HBIs. The three HBI presidents testified about what they believed would attract applicants to their institutions in general—students of diverse races—not what would change the proportions. 1/10/17 pm Tr. 97 (Bell); *id.* at 99; 1/11/17 pm Tr. 87-89 (Thompson) (“[W]ell-funded” programs would “help us to attract the students we need to reach our capacity. And that would include other-race students.”).<sup>64</sup> The record shows that there are many high-demand and unique programs at the HBIs with very low white enrollments (DRE098 at 28-52); simply offering more such programs without addressing other factors that may keep other-race students from applying to the HBIs will not change the mix of applicants. Rather than endorsing programs as a kind of race-conscious remedy to increase white or other-race enrollment, the HBI presidents spoke of programs, including notably the

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<sup>64</sup> Some of the program justifications in the HBI proposals were explicitly addressed to serving minority students. *E.g.*, 1/10/17 pm Tr. 99 (Bell) (UMES Family and Consumer Sciences master's program “will increase the number of highly qualified minorities in the workforce”); *id.* at 100 (digital media studies program to redress disparity in minority journalists); ECF 531 at 5-6 (Coppin's Healthcare Administration bachelor's program “will increase diversity by enabling more first generation college students and more minority and foreign born students to enroll”; and the diversity rationale for Coppin's Cybersecurity bachelor's program is that “[t]here are many job opportunities for professionals in cybersecurity, but too few African-American students graduate to help fill this void.”).

reputation of programs for quality, as a race-neutral attraction.<sup>65</sup> Dr. Wilson was particularly clear about this; he endorsed enhancing Morgan to open its doors to students of all backgrounds, not to change its racial balance. 1/10/17 am Tr. 30. When asked how important it was for Morgan to attract white or other-race students, Dr. Wilson responded as follows: “It’s important for Morgan State University as the premier public urban research university in this city and in this state to behave like one. And what that means is that you have an institution that is identifiable with that description, and that means that the institution is open for all students regardless of the hue of their skin or their ethnicity.” 1/10/17 am Tr. 30-31.

153. Dr. Bell, by contrast, explicitly addressed the need to market UMES’s programs and “show the diversity on our campus and show that it is a place where all students can thrive if they chose to come.” 1/10/17 pm Tr. 64; *id.* at 65 (referring to “targeted recruitment”); *id.* at 68 (referring to the use of scholarships and financial aid). Dr. Bell also noted UMES’s “institutional core value that reflects cultural diversity” and described her pride in “the university’s success in attracting a wide diversity of students.” 1/10/17 pm Tr. 78. *See also infra* ¶¶ 284-85. The three HBI presidents’ testimony can be said to support Conrad and Allen’s proposed remedial *action* (funding for programs and facilities), which would bring additional resources to the HBIs, but not their remedial *theory*, whose foundation is Dr. Conrad’s study positing that white students attend HBIs

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<sup>65</sup> Dr. Bell testified that the real problem was not duplication *per se*, but certain inferior facilities and the inability to fully support certain programs. 1/10/17 pm Tr. 70-71. Dr. Wilson testified to similar effect. 1/9/17 pm Tr. 110 (Wilson) (citing need for \$409 million capital expense in Morgan proposal).

for reasons that are different from African-American students and will therefore be disproportionately drawn by unique and high-demand programs.<sup>66</sup>

**E. Plaintiffs May Not Excuse the Absence of Proof By Claiming the Data Their Experts Collected Cannot Be Subjected to Proper Quantitative Analysis.**

154. Dr. Allen testified at trial that “the nature of the data at our disposal precludes, at this point precludes a quantitative, analytic approach.” 1/19/17 am Tr. 7. But in fact Dr. Allen took primary responsibility for having prepared the *two* quantitative analyses included in Plaintiffs’ expert report—the “disproportion” analysis and the analysis of a selected set of programs with higher-than-usual levels of white enrollment. *See* 2/16/17 Tr. 69 (Dr. Arrington defining quantitative methods); 1/19/17 am Tr. 16 (Allen) (“We made extensive use of quantitative data”); *id.* at 17 (“it was beyond doubt that we used quantitative methods and analysis.”).

155. Dr. Allen acknowledged that their quantitative statistical analyses were intended to be purely “descriptive,” meaning that they characterized the collected data but were not intended to support inferences that could be generalized and applied to make predictions regarding other data—such as the effect of *other* programs added to the HBIs. 1/19/17 am Tr. 16, 47, 56 (Allen); *see also* 2/13/17 Tr. 36 (Lichtman) (“[I]t’s not even a

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<sup>66</sup> President Schmoke also testified that academic programs attracted diverse students. However, this observation rests on a limited factual foundation. At President Schmoke’s first academic appointment, Howard University, a private HBI, there are quite low undergraduate (1.5%) and graduate (6.4%) levels of white enrollment. 2/13/17 Tr. 179-82 (Lichtman) (“not a model for the attraction of white students at any level”). As for the University of Baltimore, Dr. Lichtman’s uncontradicted analysis of programs at that school demonstrated that “unique programs are not driving the growth of the University of Baltimore” and “that’s not what’s driving diversification [at UB] either.” 2/13/17 Tr. 185-86 (Lichtman).

complete descriptive analysis.”) As Dr. Lichtman explained, descriptive statistics, unlike inferential statistics, “do[n’t] go beyond the known. It just tells you: This is what we know, and here’s how we can describe it in meaningful ways of the data.” 2/13/17 Tr. 26. As such, descriptive statistics cannot be the foundation for an opinion predicting the effect of other programs—*i.e.*, new and transferred programs—not included in the initial set of programs chosen based on white enrollment. 2/13/17 Tr. 52 (Lichtman).

156. Predictions about the effect of adding new programs at the HBIs must be based on inferential statistics, because the prediction (adding certain new programs will cause more white students to enroll) is based on an inference that a correlation observed in the current known set of programs will also be observed in a different, future set of programs with similar characteristics. 2/13/17 Tr. 26-27 (Lichtman).<sup>67</sup>

157. Although the quantitative methods they used were inappropriate for making predictions, Dr. Allen nonetheless offered just that: “I am able to recognize and, to recognize a pattern of association that is not random and that, and therefore, can . . . comfortably position us to expect that you see that kind of association between white

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<sup>67</sup> As Dr. Lichtman explained, one problem with even Plaintiffs’ purely descriptive statistics is that they depend on Conrad and Allen’s method of classifying programs as high-demand, or unique. But those classifications were riddled with substantive mistakes—far more than would be expected in an expert report, 2/13/17 Tr. 187-196—and the classifications are invalid and arbitrary. 2/13/17 Tr. 75. For example, whether a program was classified as high-demand changed from year to year, using Conrad and Allen’s method. 2/13/17 Tr. 55-59 (Lichtman). There are other methods of classifying programs as high-demand that would be more stable and reliable, and could readily have been used instead. 2/13/17 Tr. 63 (Lichtman). Likewise, the classification of uniqueness has changed over time, including because uniqueness depends on Dr. Conrad’s personal and subjective definition of “core” programs, which changes from case to case and time to time. 2/13/17 Tr. 85-87, 95-97 (Lichtman). The meaning of “proximately unique” has also changed at least twice. 2/13/17 Tr. 88-89 (Lichtman).

enrollment at HBIs and the particular kinds of programs that they are attracted to.” 1/19/17 am Tr. 58. That is, Dr. Allen presented Plaintiffs’ descriptive statistics as if they could be used to draw the same kinds of inferences that rigorous statistical analysis is designed to support, but without using the statistical tools that actually permit social scientists to draw such inferences.

**1. Plaintiffs’ technical objections to ordinary statistical analysis are unfounded.**

158. Dr. Allen offered some technical reasons why he believed inferential statistical analyses could not be conducted. But those technical reasons do not withstand examination.

159. First, Dr. Allen repeated Dr. Arrington’s already-recanted statement about needing the “data” (by which, in context, he means the dependent variable, white enrollment) to be normally distributed in the shape of a bell curve. 1/19/17 am Tr. 7.<sup>68</sup> That is not a requirement. 2/13/17 Tr. 78-82 (Lichtman) (explaining that a normal distribution of the dependent variable is not required, and that the absence of a normally-distributed error term may affect the statistical significance of correlation coefficients, but not their sign (positive or negative) or value). In support, Dr. Allen invoked the statistical term heteroskedasticity, which he defined as follows: “put simply, . . . refers to whether one’s data set is normally distributed or not. And as I’ve pointed out, the distribution of

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<sup>68</sup> 2/16/17 Tr. 181, 183-84 (Arrington). Indeed, Dr. Arrington agreed that “I never expect to see normal distributions for the use of OLS or any other regression.” 2/16/17 Tr. 179. Dr. Allen returned to this point even after Dr. Arrington’s own testimony at trial confirmed his error. 2/21/17 Tr. 36.



white students [the dependent variable] across the HBIs is not a normal distribution.”  
1/19/17 am Tr. 8.

160. But both the claim that a normally-distributed outcome variable is required, and the attribution of that claim to heteroskedasticity, are flatly wrong. 2/13/17 Tr. 169 (Lichtman). To give just one citation, the Wooldridge treatise defines heteroskedasticity in the glossary as follows: “The variance of the *error term*, given the explanatory variable, is not constant.” Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach* (5<sup>th</sup> ed. 2013), p. 849 (emphasis added).<sup>69</sup> In plain English, that means that heteroskedasticity occurs when the error term measuring the extent of the variation in the dependent variable not captured by the values of the independent or predictor variables —*not the dependent or outcome variable itself*—increases or decreases with the values of the predictor variables so that the model “fits” better for some values of the dependent variable than others. 2/13/17 Tr. 169 (Lichtman).<sup>70</sup> Dr. Allen’s explanation is not an informal or non-technical way of expressing the right idea; it is just mistaken.

161. Dr. Lichtman also explained that a violation of the assumption of homoskedasticity (*i.e.*, the existence of heteroskedasticity) affects only statistical

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<sup>69</sup> Dr. Arrington agreed that Wooldridge is an authority in the field. 2/16/17 Tr. 163.

<sup>70</sup> Dr. Lichtman testified that the range of variation in the data was “sufficient to allow for a reliable multiple regression analysis,” despite the generally low percentages of white enrollment. 2/16/17 Tr. 54. Dr. Arrington acknowledged that his assertions about the invalidity of multiple regression because of what he described as the “skewed” distribution of the data were incorrect. 2/16/17 Tr. 86, 184. Dr. Arrington agreed with Dr. Lichtman that the problem of skewedness is “not meaningful to us . . . that the direction of these coefficients would all be the same, whether you used fractional logistic or whether you used OLS, all the same. The statistical significances would be different in some degree, but not in any important way.” 2/16/17 Tr. 184.

significance tests, not whether there is a positive or negative correlation, which has little or no relevance to samples as large as exist in this case. Moreover, he reanalyzed the data using the fractional logistic regression which overcomes this issue, and found similar results. 2/13/17 Tr. 169-70.

162. Second, Dr. Allen referred to the “small ‘n’” as a reason why they could not perform an inferential or predictive statistical analysis. 1/19/17 am Tr. 7. But as Plaintiffs’ quantitative methods expert Dr. Arrington admitted, the “n” (number of observations of values of the dependent or outcome variable) is the total number of academic programs at the HBIs. 2/16/17 Tr. 180. Asked if the “n” (number of programs) for the entire State (n=232) or for Morgan, Coppin, and Bowie (n=177) was sufficient to perform a multiple regression analysis, Dr. Arrington replied: “Oh, yes.” 2/16/17 Tr. 182. Dr. Lichtman agreed that the number of programs was ample for statistical analysis. 2/13/17 Tr. 168. Conrad and Allen reduced the “n” in their own descriptive analysis by limiting it to the subset of programs that enrolled more than ten (or fifteen) white students, thereby excluding from consideration all examples of high-demand and unique programs that did not enroll high numbers of white students. That decision raises its own fatal methodological problems, but it is not a reason why Plaintiffs could not have conducted appropriate quantitative analyses of the entire data set. The relevant “n” when analyzing what factors may explain *variations* in white enrollment by program is the number of all HBI programs, because the variation to be explained includes low as well as high values for the outcome variable (white enrollment). It is not the number of HBI

programs that meet whatever criteria Conrad and Allen have set for “meaningful representation.” 2/21/17 Tr. 37 (Allen).

163. Third, Dr. Allen asserted that “multicollinearity” was another problem with quantitative analysis. Dr. Allen did not claim the data reflected true collinearity, meaning that one variable is a linear factor of another. Rather, there is an overlap between variables, such that measuring the effect of one captures some of the effect of the other. He explained that, if it turns out “that the location of white students is highly correlated with a particular university, then you don’t have an independence between the effects of the name of the university and the percentage of white students.” 1/19/17 am Tr. 9. That, he testified, produces “difficulty separating those two variables and understanding which variable is explaining which.” *Id.*

164. Dr. Allen’s testimony about collinearity was a reference to the clear evidence that high percentages of white enrollment are very strongly correlated to UMES, making it difficult, without using appropriate statistical techniques, to know from an inspection of the data whether to attribute the high white enrollment percentage to something particular about UMES, or to characteristics of a program such as its being classified as high-demand or unique. Put differently, Dr. Allen’s example illustrates the potentially confounding effect of UMES on statistical analysis of the HBI enrollment data—the possibility that what appears to be a correlation between white enrollment and unique programs is actually a correlation to UMES. *See* 2/16/17 Tr. 8 (Lichtman); DRE098 at 25 (explaining need to control for UMES).

165. The term “multicollinearity” refers to “[h]igh (but not perfect) correlation between two or more independent variables.” Wooldridge, *Introductory Econometrics* at 95. Multicollinearity does not violate any of the assumptions necessary to carry out multiple regression. *Id.* Although it is preferable to have less correlation among predictor variables, dropping a variable—such as dropping a region or UMES variable because of correlation to proximate uniqueness —“can lead to bias.” *Id.* at 96. On the other hand, the existence of even a “high degree” of correlation among variables “can be irrelevant to how well we can estimate other parameters in the model.” *Id.* at 97. Thus, an overlap between predictor variables (such as “proximately unique” or “region”) is not fatal to the analysis, and may be preferable to excluding a variable. As Dr. Lichtman explained without contradiction, “[i]n the real world, things are associated; but they’re not so associated you can’t do an analysis.” 2/13/17 Tr. 172.

166. The existence of a correlation between independent or predictor variables is therefore neither a reason not to perform multiple regression, nor a reason to excise variables that otherwise belong in the model.

**2. Because of the great disparity between white enrollment at UMES as compared to the Western Shore HBIs, proper statistical analysis includes controlling for region.**

167. Moreover, the observed differences in the correlations when looking at the Morgan, Coppin and Bowie alone suggest that *UMES* itself is the genuine predictor variable. That is, the physical control of UMES data by analyzing it separately from Morgan, Coppin, and Bowie shows the same thing as statistical control; correlations which appear to exist when UMES is included disappear when controls are used. Indeed,

Dr. Arrington's regression analyses showed that omitting the UMES/region variable reduced the R-squared value of the model, demonstrating that about one third of the very limited explanatory power of the model is lost when the region variable is omitted. 2/16/17 Tr. 161-62 (Arrington) (9.4% to 6.6%). Thus, failing to account for the unknown difference between UMES and the other three HBIs reduces the predictive power of the analysis.

168. As Dr. Lichtman explained, "clearly, UMES differs fundamentally from the Western Shore HBIs when you're taking either the number or percentages of white students in programs. And so you need to separate out UMES from the Western Shore. I'm not saying throw away the data, but you don't merge them together. Merging them together doesn't help you because any remedy that is to apply has to apply across the Chesapeake Bay. You can't just look at UMES." 2/13/17 Tr. 112-13; *see also* 2/16/17 Tr. 9 (Lichtman) (difference between white enrollment at UMES and at the other HBIs means statistical controls are needed). One striking fact that illustrates the difference between UMES and the other HBIs is that *not one* of the high-white-enrollment programs that Conrad and Allen analyze in their report from an institution other than UMES is classified as unique, even though Conrad and Allen classify nearly 50 programs at Bowie, Coppin, and Morgan as unique. 2/13/17 Tr. 114-15 (Lichtman). The seeming effect of uniqueness vanishes across the Bay Bridge.<sup>71</sup>

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<sup>71</sup> Dr. Lichtman gave an illustration of a statistical correlation that might be misinterpreted as supporting a causal inference if one fails to consider a correlated variable which actually explains the phenomenon. As Lichtman explained, a study might find a negative statistical relationship between delinquency and ice cream consumption.

169. Dr. Lichtman used both statistical controls (a “dummy” variable for UMES in the regression analysis) and what he called “physical” controls, meaning separating UMES from the Western Shore HBIs. 2/13/17 Tr. 31 (relying on Keith F. Punch, *Introduction to Research Methods in Education* (2d ed. 2014)). Both sets of controls showed the same result: proximate uniqueness was not correlated with increased white enrollment, once the effect of UMES was controlled for.

170. Dr. Allen’s testimony that “it is settled science in terms of multivariate analysis and multiple regression analysis that multicollinearity must be avoided,” 2/21/17 Tr. 38, is not supported by Plaintiffs’ quantitative methodology expert Dr. Arrington’s report concerning Dr. Lichtman’s regression analysis, or by any relevant social science authority. It is contrary, for example, to Wooldridge, at 95.

171. Dr. Allen’s testimony that the vast majority of programs with fifteen or more white students at UMES (eight out of ten) “tells me that they [students] are drawn to unique and high-demand programs . . . [and] that of the HBIs in the system, [UMES] has more unique, high-demand programs,” 1/19/17 am Tr. 23, actually illustrates exactly why -- when overlaps between predictor variables exist -- it is important to use appropriate controls to tease the effects of the variables apart, not to attribute a correlation to one variable to the exclusion of the other.

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2/13/17 Tr. 29. But “[y]ou don’t conclude from that you should dose kids with ice cream. What’s really going on . . . is that relationship is being driven by something else, socioeconomic standing,” which is correlated with ice cream consumption. 2/13/17 Tr. 30. That is why an analysis of HBI enrollment data needs to take account of, and control for, UMES as a factor (like socioeconomic status in the analogy), lest the huge difference between white enrollment at UMES and the other three HBI campuses create a false link to the correlated variable, proximate uniqueness. 2/13/17 Tr. 31.

172. Dr. Allen admitted that UMES was a “special case” among the Maryland HBIs for multiple reasons in addition to having more proximately unique programs. 1/19/17 pm Tr. 39; *see also* 1/10/17 pm Tr. 64-65 (Bell) (citing UMES’s welcoming atmosphere and targeted recruitment of other-race students); *id.* at 81 (UMES’s emphasis of diversity on its website and in marketing materials); *infra* ¶¶ 284-85. Demographics on the Eastern Shore also make UMES a special case. *See infra* ¶ 270. But Conrad and Allen did not use any of the available techniques to assess whether any of the special characteristics of UMES other than unique programs had an effect on white enrollment. They did not use statistical techniques for analyzing multilevel data (1/19/17 pm Tr. 24-25 (Allen)); they did not analyze UMES data separately (1/19/17 pm Tr. 40-41 (Allen)); and they did not use a dummy or contextual variable for UMES as a statistical control. (1/19/17 pm Tr. 43 (Allen)).

173. Yet even Plaintiffs’ witness Dr. Arrington showed that quantitative techniques could control for, rather than ignore, the confounding effect of UMES. 2/16/17 Tr. 106. The difference between Dr. Arrington’s analyses *with* the statistical control for UMES and *without* it shows that something about UMES other than the presence of unique programs is at work.

174. Conrad and Allen’s category of “proximate unique” programs consists primarily of UMES programs, so that if UMES is more successful at attracting white students for reasons other than uniqueness, those effects will be hidden by an analysis that considers proximate uniqueness but does not account for school or region.

**3. Multiple regression is designed for complex problems; “messiness” is not a reason to ignore the evidence.**

175. There is also no reason why the complexity or “messiness” of college choice decisions precludes quantitative analysis. Dr. Allen himself has repeatedly used multiple regression to study college choice, as well as other complex processes. 2/21/17 Tr. 202-04. The whole point of multiple regression is to make analysis less “messy” by statistically controlling for other factors while measuring the impact of one. By contrast, “mining” the data as Dr. Allen said he and Dr. Conrad did (1/19/17 am Tr. 18) by picking programs with high white enrollment is not a sound basis for drawing causal inferences, even putting aside the statistical error of selecting on the dependent variable. *See infra* Part III.E.4. Multiple regression does not mean treating “student enrollment and race as if it exists in a vacuum.” 1/19/17 am Tr. 12 (Allen). Quite the contrary, it means looking at multiple factors that may be relevant in a way that allows for the assessment of each factor. Although that may not be important in all contexts, it certainly is when one is assessing a remedy premised on the existence of the causal relationship between increased white enrollment and high-demand or unique programs as Conrad and Allen asserted in their report.<sup>72</sup> PRX312 ¶¶ 177-78.

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<sup>72</sup> Another reason Dr. Allen gave for avoiding standard quantitative techniques, echoing Dr. Arrington, was that “we had the entire population”—not just a sample. 1/19/17 am Tr. 10. But that misunderstands statistical inference. Conrad and Allen did not have the ability to measure directly white enrollment in the set of *future* programs they propose to add to the HBIs. They sought to *predict* outcomes in a different statistical “population”—the future programs—from analysis of data on existing programs. That prediction is based on treating the existing programs as a sample of a larger population of potential future programs. This is no different from predicting how redistricting will affect future elections based on the available data on past elections. 2/16/17 Tr. 155 (Dr.



**4. Conrad and Allen’s alternative quantitative analyses are improper and are not probative.**

176. The fundamental problem with Conrad and Allen’s analysis of the subsets of HBI programs enrolling 10 or more white students is that by using the value of the dependent or outcome variable as the basis for selecting what data to examine, they discarded and failed to consider all of the evidence that would contradict their theory—instances of high-demand and unique programs with low white enrollments. Their sample amounts to nothing more than a form of anecdotal evidence that sometimes high-demand or unique programs have higher-than-average white enrollment. But sometimes they do not. The purpose of a proper statistical analysis is to look at all of the data to see whether a correlation exists. Choosing that part of the data (like programs that meet a certain threshold) is a form of selection bias: selection on the dependent variable.<sup>73</sup> DRE098 at 49-50. Put differently, such a selection process excludes the very negative cases (low white enrollment) that must be considered to test a hypothesis properly. In the face of the numerous authorities cited in the State’s *Daubert* motion (ECF 495 at 39-41)

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Arrington’s report in an election case reported the statistical significance of a correlation, “[e]ven though these data are not a random sample, but include all precincts”—*i.e.*, the total population). The “population” for statistical purposes is a category of behavior—voting, program selection—of which the set of programs offered at the HBIs in any given year is treated as a sample. The quantitative analyses that Dr. Allen did perform instead of multiple regression or even rigorous bivariate comparisons were inappropriate and unreliable. Statistically proper analysis can be done in conjunction with other sources of data, including qualitative studies. The use of qualitative information is not an excuse for using statistically invalid quantitative methods, as Conrad and Allen did.

<sup>73</sup> See also John Gerring, *Social Science Methodology: A Unified Framework* (2d ed. 2012). The glossary defines selection bias as “[b]ias in in a sample relative to a larger population that is introduced by a case-selection procedure (*e.g.*, choosing cases based on their outcomes).”

showing it is invalid and unreliable to analyze a sample selected on the dependent variable, Plaintiffs offered no basis, other than Dr. Allen's own *ipse dixit*, for the use of such a statistical technique. And Dr. Allen did not directly address, or claimed not to understand, the methodological problem inherent in performing a quantitative analysis of a subset of the data selected on the basis of only high values of the dependent or outcome variable. 2/21/17 Tr. 67-68 (Allen).<sup>74</sup> The point is not whether white enrollment is the variable of interest, as Dr. Allen testified, but that changes in that variable cannot be explained by looking only at programs with high values and ignoring programs with low ones.

177. Even if it made sense to use a sample of high-white-enrollment programs as a kind of case study to develop a remedial theory, Conrad and Allen's approach was not designed or appropriate to test that theory. By eliminating from their sample programs that they classify as unique or high-demand but that have low white enrollment, Conrad and Allen excluded the negative cases that are necessary to test a hypothesis.

178. Conrad and Allen's method of analysis cannot be relied upon to formulate a remedy because it excluded from consideration programs that are inconsistent with their theory, such as exceptionally high-demand programs with low white enrollment. 2/13/17 Tr. 121-23 (Lichtman). Similarly, not one of the nearly 50 programs at the three Western Shore HBIs that Conrad and Allen classify as unique was included in their set of high-

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<sup>74</sup> Dr. Allen's statement that, "the work I do satisfies the standards in the field and specific to the particular questions and tasks that are before me" (1/19/17 am Tr. 47), is an example of the kind of expert *ipse dixit* that courts must disregard because it cannot establish that the expert's methods in a particular case meet the standards of rigor in the field.

white-enrollment programs. 2/16/17 Tr. 12, 23 (Lichtman). Their methodology thus eliminated all of the evidence of unique programs with low white enrollment which contradicted the theory that uniqueness (or high-demand) is correlated with high white enrollment. As Dr. Lichtman explained, what Conrad and Allen “have done here is what we call technically selecting on the dependent variable. . . . They picked programs which they consider, by whatever criteria they worked out, successful programs. . . The problem is you can’t reason backwards from a self-selected or cherry-picked group of programs.” 2/13/17 Tr. 126.

179. The “dangers of grouping on the dependent variable” are “extremely well-recognized” in the social science literature, including in Dr. Lichtman’s own monograph on ecological inference.<sup>75</sup> 2/13/17 Tr. 127 (Lichtman). “[T]his gets even worse when you’re grouping on the dependent variables also correlated with some of the variables that you want to look at.” *Id.* Here, the grouping criterion—the number of white students enrolled—is correlated to the high-demand variable, because programs with larger enrollments tend to have higher numbers of white students, even if the percentage of white enrollment is unchanged. *Id.*

180. Dr. Lichtman illustrated the logical fallacy in reasoning backwards from a group of successful outcomes with the example of looking at whether people who scored high on a standardized test took a prep course, without looking at the whole population of test-takers. 2/13/17 Tr. 128.

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<sup>75</sup> Dr. Arrington recognized Dr. Lichtman’s work in this regard as authoritative. 2/16/17 Tr. 142-43.

181. Dr. Lichtman’s alternative was to examine *all* programs identified by Conrad and Allen as high-demand at the HBIs (not just those meeting an arbitrary threshold for white enrollment) and their white enrollment. The results do not support Plaintiffs’ theory.

**TABLE 11  
SUMMARY OF FINDINGS FROM TABLE 10 DATA ON HIGH DEMAND PROGRAMS  
AT HBIS IN MARYLAND**

Type	# of Programs	Total Enrolled	White Students Enrolled	Total Students Per Program	White Students Per Program	% White Students	% White Students At Level In Institution	Difference Between % White Students in Program and % White Students at Level in Institution
<b>BOWIE STATE UNIVERSITY</b>								
Undergrad	10	2,837	65	283.7	6.5	2.3%	2.5%	-0.2%
Graduate	13	917	58	70.5	4.5	6.3%	7.2%	-0.9%
<b>COPPIN STATE UNIVERSITY</b>								
Undergrad	12	1,608	26	134	2.2	1.6%	1.5%	+0.1%
Graduate	4	168	2	42.0	0.5	1.2%	0.9%	+0.3%
<b>MORGAN STATE UNIVERSITY</b>								
Undergrad	21	4,067	97	193.7	4.6	2.4%	2.0%	+0.4%
Graduate	16	913	71	57.1	4.4	7.8%	9.2%	-1.4%
<b>UNIVERSITY OF MARYLAND EASTERN SHORE</b>								
Undergrad	11	1,578	142	143.5	12.9	9.0%	11.6%	-2.6%
Graduate	11	585	160	53.2	14.5	27.4%	29.1%	-1.7%

DRE098 at 27.

182. Similarly, examining white enrollment in all programs identified as “unique” by Conrad and Allen (not just a selected sample) generally does not support Plaintiffs’ theory either:

**TABLE 15**  
**SUMMARY OF FINDINGS FROM TABLE 14 DATA ON UNIQUE PROGRAMS AT**  
**HBIS IN MARYLAND**

Type	# Of Programs	Total Enrolled	White Students Enrolled	Total Students Per Program	White Students Per Program	% White Students	% White Students At Level In School	Difference: % White Students in Program and % White Students in School
<b>BOWIE STATE UNIVERSITY</b>								
<b>Undergrad</b>	3	116	3	38.7	1.0	2.6%	2.5%	+0.1%
<b>Graduate</b>	5	368	19	73.6	3.8	5.2%	7.2%	-2.0%
<b>COPPIN STATE UNIVERSITY</b>								
<b>Undergrad</b>	6	110	0	18.3	0	0%	1.5%	-1.5%
<b>Graduate</b>	5	186	2	37.2	0.4	1.1%	0.9%	+0.2%
<b>MORGAN STATE UNIVERSITY</b>								
<b>Undergrad</b>	11	859	15	78.1	1.4	1.7%	2.0%	-0.3%
<b>Graduate</b>	17	334	34	19.6	2.0	10.2%	9.2%	+1.0%
<b>UNIVERSITY OF MARYLAND EASTERN SHORE</b>								
<b>Undergrad</b>	21	1,649	236	78.5	11.2	14.3%	11.6%	+2.7%
<b>Graduate</b>	15	629	177	41.9	11.8	28.1%	29.1%	-1.0%

DRE098 at 46.

183. Looking at the number of white students enrolled in large high-demand programs says very little about the likelihood that such programs will increase white enrollment. The average white enrollment in the non-UMES (Morgan, Coppin and Bowie) programs Conrad and Allen selected as enrolling 10 or more white students was only 6%, just a little higher than the 5% average for HBIs. 2/13/17 Tr. 115-16 (Lichtman); DRE098 at 58, Table 19. For the subset of Western Shore programs enrolling 15 or more white students, which Dr. Conrad called “off the charts” in white enrollment, the overall white percentage was around 3%--*lower* than the average white enrollment for the HBIs. 2/13/17 Tr. 119-21 (Lichtman); DRE098 at 60, Table 20.

184. Dr. Allen's "disproportion" analysis (PRX312 at 219, Exh. 7) is also statistically illegitimate because it compares the percentage of high-demand (or unique) programs at an HBI with the percentage of white students at that HBI who are enrolled in such programs. Dr. Allen was initially unwilling to agree that it would be arithmetically inappropriate to simply average the percentages of all the programs without regard to the relative size of the program. 1/19/17 am Tr. 85. *See also* 1/19/17 pm Tr. 9-11. He finally acknowledged the point. 1/19/17 pm Tr. 12. *See also* DRE098 at 56-58. Because that comparison treats programs alike regardless of their enrollment size, it has no bearing on whether proportionately more white students are enrolled in high-demand or unique programs than are enrolled in the university as a whole. 2/13/17 Tr. 153 (Lichtman). (It is simply not the case that if high-demand programs are "40% of the programs at HBIs, they should only have 40% of the white students enrolled." 1/19/17 am Tr. 28 (Allen). Because programs are of different size enrollments, there is no reason to expect the percentage of programs to mirror the percentage of students enrolled, white, black, or in any combination.

185. In fact, as Dr. Lichtman showed, once the overall enrollment is taken into account, there is no disproportion. 2/13/17 Tr. 155-56 (Lichtman). A university that added high-demand programs on the basis of Conrad and Allen's disproportion analysis "would actually be reducing the percentage of white students at their institution" if the pattern shown in the existing data holds. 2/13/17 Tr. 157 (Lichtman). Dr. Lichtman found that when the correct comparison is performed for all four of Plaintiffs' categories (high-demand, exceptionally high-demand, unique, and unique and high-demand),

“[t]hey showed either no disproportion for white students or that white students were disproportionately underrepresented.” 2/13/17 Tr. 160.

186. Dr. Lichtman criticized the “disproportion” analyses because they ignored the proportion of *non-white* students enrolled in high-demand or unique programs, and so they created the spurious impression that such programs enrolled more white students than the average for the HBI. 2/13/17 Tr. 151-160. As he explained, what Conrad and Allen failed to do was “take into account all students, not just the white students.” 2/13/17 Tr. 161 (Lichtman). They also failed to account separately for UMES and for degree level of programs, as discussed in *See infra* Part III.E.5; *see supra* Part III.E.2.

**5. Dr. Allen’s rebuttal analysis is not probative because it creates a spurious effect by lumping UMES data together with data from the other HBIs.**

**a. Dr. Allen’s new analysis is not a response to Dr. Lichtman’s critique.**

187. Dr. Lichtman presented a detailed critique of the “disproportion” analysis in his August 30, 2016 expert report, DRE098. Conrad and Allen chose not to respond to that critique at their depositions, or by submitting a responsive expert report at any point in the four months before trial. Instead, on the final day of trial, Dr. Allen presented, not a new “disproportion” analysis using actual percentages, but rather a bivariate comparison similar to tables 11, 13, 15, and 17 in Dr. Lichtman’s August 30 report. Although he drew on the same database as Dr. Lichtman (PRX354 Plaintiffs’ backup data disclosure), Dr. Allen appeared to reach a different result for unique (but not high-demand) programs. However, as discussed *supra* ¶ 184, he did so only by lumping all of

the HBIs together, rather than comparing white enrollment percentages for each category of programs against the overall white percentage for all programs *at the same degree level, at the same institution*.

188. Because the “unique” category continued to include an overwhelming proportion of programs from UMES, which also has a higher overall percentage of white enrollment, the first table of PRX504 (reproduced immediately below) was intended to make it appear that white enrollment is higher in unique programs than in comparable programs, contrary to Dr. Lichtman’s results in Table 15 of his report.

Type of Program	# Programs of Type	Total # HBI Programs	% Programs of Type	% White students at HBIs	% White Students in Programs of Type	Disproportionality
Proximately Unique	85	185	45.95%	5.69%	11.40%	2.0
High Demand	97	185	52.43%	5.69%	4.86%	0.9
Exceptionally HD	53	185	28.65%	5.69%	3.84%	0.7
Proximately Unique, HD	26	185	14.05%	5.69%	10.98%	1.9

189. The same thing occurs with PRX504’s summary of programs that are unique *and* high-demand. But in fact, as Dr. Lichtman had already shown, when the Western Shore HBIs are separated from UMES, the “disproportion” vanishes.<sup>76</sup> For example, if Dr. Lichtman’s results from his Table 15 (DRE098 at 36) are expressed as a ratio, as in Dr. Allen’s table:

<sup>76</sup> There are some other differences in Dr. Allen’s methodology. Instead of comparing the program category (*e.g.*, high-demand) to all programs at the same level and institution, he compares it only to a smaller set (185) of non-core, non-joint programs. But that does not produce the seeming “disproportion.” Another difference between Dr. Allen’s table and Dr. Lichtman’s is that Dr. Allen expresses the comparison as a ratio (% in program type, divided by % in all programs), while Dr. Lichtman subtracts one percentage from the other (% in program type, minus % in all programs).



Institution	Level	Ratio
BSU	Undergrad	$2.6/2.5=1.04$
BSU	Grad	$3.8/5.2=0.73$
CSU	Undergrad	$0/1.5=0$
CSU	Grad	$1.1/.9=1.22$
MSU	Undergrad	$1.7/2.0=0.85$
MSU	Grad	$10.2/9.2=1.11$

190. Thus, when the confounding effect of UMES’s much higher white enrollment on the combined enrollment numbers is stripped away as Dr. Lichtman’s Table 15 does, there is no pattern of “disproportion”—consistent with the regression analyses that found no statistically significant correlation between proximate uniqueness and percentage of white enrollment.

191. The same is true of programs that Conrad and Allen classify as both unique and high-demand. There were too few such programs to break down by institution. But Dr. Lichtman reported (Table 17, DRE098 at 51) that for the three Western Shore HBIs, white enrollment was lower in programs that were proximately unique and high-demand than in the institutions overall, at both the undergraduate ( $0.6-2.1= -1.5\%$ ) and graduate ( $3.8-6.3= -2.5\%$ ) levels. Expressed as ratios those are: 0.286 for undergraduate programs, and 0.6 for graduate programs. Those data contradict a conclusion that adding unique and high-demand programs is likely to increase the percentage of white enrollment.

192. The same result follows from using PRX504's approach, but separating out UMES, so that its higher general rate of white enrollment does not skew the results for programs that are classified as both high-demand and proximately unique.<sup>77</sup> For the Western Shore, the ratios are 0.3 (0.7%/2.1) for undergraduate programs, and 0.5 (3.8%/7.2%) for graduate programs. For UMES, the ratios are 1.0 (11.2%/11.6%) for undergraduate programs, and 0.9 (27.4%/29.1%) for graduate programs. There is no disproportionate enrollment of white students in such programs.

**b. Dr. Allen's comparison of high-demand programs separated by degree level, to a single percentage representing all programs (regardless of degree level), creates another spurious disproportion.**

193. The statistical analyses by both Dr. Lichtman and Dr. Arrington confirmed that high-demand programs had little to no effect on white enrollment. As a result, Dr. Allen sought to create the appearance of "hints in the data" (PRX331 at 2) that might support Plaintiffs' proposal's reliance on such programs.

194. Thus, in the second table of PRX504, reproduced immediately below, Dr. Allen also attempted to show "disproportions" by breaking the high-demand programs down by degree category. However, those comparisons are meaningless because this table compares (a) the percentage white enrollment in high-demand programs at the

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<sup>77</sup> The major difference between PRX504 and Dr. Lichtman's 11, 13, 15 and 17 is that PRX504 removes all "core" programs from the calculations. Dr. Allen did not explain why he had done this. But the data to duplicate his analysis, minus UMES, are all contained in the same database (used by both Allen and Conrad, and Dr. Lichtman): Plaintiffs' backup data disclosure. PRX354.

particular degree level, with (b) the same 5.69% white percentage *for all programs, at all degree levels*.

**HIGH DEMAND BY DEGREE LEVEL**

Type of Program	# Programs	% Programs of Type	% White students at HBIs	% White Students in Programs at the Level	Disproportionality
High Demand	97	52.43%	5.69%	4.86%	0.9
Bachelor's HD	53	28.65%	5.69%	3.20%	0.6
Master's HD	32	17.30%	5.69%	7.32%	1.3
Doctorate HD	12	6.49%	5.69%	19.76%	3.5

**c. Dr. Lichtman's analysis of the same data shows that the new "disproportion" chart is wrong.**

195. Plaintiffs had a full opportunity to depose Dr. Lichtman and to cross-examine him at trial about the results in tables 11, 13, 15 and 17. They have never suggested that the data reported in those tables are inaccurate. Dr. Lichtman's analyses are more persuasive than Dr. Allen's, which seem to have been hastily prepared and were not fully explained at trial.

196. Dr. Lichtman's more thorough analysis shows that the "disproportions" Dr. Allen described in his rebuttal testimony are illusory. Dr. Lichtman broke the data down by institution and by degree level. Table 11 (DRE098 at 33) showed that for high-demand programs, the percentage of white students enrolled was *lower* than the percentage for the degree level at the institution at Bowie and UMES. It was very slightly higher at Coppin for both graduate and undergraduate programs. At Morgan it was slightly higher ( $2.4\% - 2.0\% = 0.4\%$ ) for undergraduate programs, and significantly

lower (7.8%-9.2% = -1.4%) for graduate programs. (Again, expressed as proportions: 1.2 and .84, respectively.)

**F. Evidence About College Choice in General Is Not Consistent with Plaintiffs' Proposal.**

197. In the absence of evidence, Plaintiffs' theory is based on certain intuitions about college choice that may seem superficially plausible, but collapse upon examination. The first intuition is that the HBIs are competing with the non-HBIs for students, simply because they are public institutions within the same general geographic area. But the evidence is to the contrary. Schools can (and do) obtain information about "competitors" by looking at the other schools to which applicants send their test scores. The non-HBI presidents testified that applicants to their schools, whether Asian, white, Latino, or African-American, do *not* send their test scores to the HBIs, meaning that the HBIs are not part of their "consideration set." *See, e.g.*, 2/1/17 Tr. 47-48 (Schatzel); *see also* DRE192. It is uncontested that students choose schools for many reasons other than programs, including classifications of schools by measures such as U.S. News rankings<sup>78</sup> and average test scores,<sup>79</sup> which are generally lower at the HBIs.<sup>80</sup> For example, the

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<sup>78</sup> 1/10/12 pm Tr. 19 (Conrad); 2/9/17 Tr. 38 (Schmoke); DRE183 at 51 ("rankings in national magazines" were very important to 20.1% of students overall, and 18.4% of HBI students).

<sup>79</sup> 1/30/17 Tr. 112 (Hrabowski) ("My students certainly do and generally students do."); ECF 355, ¶ 397 (HBIs generally have lower test scores and more need for remediation).

<sup>80</sup> For example, Dr. Allen testified in the liability phase that the percentages of students requiring remediation at the HBIs and the percentages requiring remediation at the non-HBIs are "dramatically different." 1/18/12 am Tr. 77; *id.* at 78. Dr. Richardson testified that average SAT scores were lower at the HBIs. 1/12/17 am Tr. 59; *see also* DRE081 at 9.

availability of specific academic programs was not a factor in the survey of UB students' reasons for choosing the school. 2/9/17 Tr. 140-42 (Schmoke).

198. The most recent (2015) annual *American Freshman* survey produced by the Cooperative Institutional Research Program under the auspices of the Higher Education Research Institute at UCLA (a group whose board includes Dr. Allen) shows that the availability of a particular program at an institution is not a significant factor in college choice generally. DRE183. Although the program reviews the survey annually and regularly adds new questions to the survey based on new developments, *id.* at 62, *not one* of the reasons listed in the 2015 survey as “‘very important’ in deciding to go to this particular college” (like prior surveys) was based on specific programs. DRE183 at 51 (survey results), 71 (survey form). Most students—including those who may indicate an initial choice—have not firmly decided what major to pursue. 2/1/17 Tr. 35 (Schatzel) (“When we take a look at students making decisions in terms of college, 40 percent of the students are undecided when they enter college.”). Moreover, as Dr. Schatzel testified (and others agreed), “of the ones that have ticked off a box in terms of their application, they often change their mind.” *Id.*; *see also, e.g.*, 2/15/17 Tr. 163 (Dzirasa).

199. Even assuming (contrary to the evidence) that programs drive enrollment, removing desired programs from the non-HBIs is less likely to push white students towards the HBIs than it is to push them towards private institutions or out-of-state schools, increasing tuition costs for Maryland families and the out-flow of students educated in Maryland's high-performing public elementary and secondary schools, from the public higher education system. *See infra* Part IV.E (numerous out-of-state schools in

the non-HBI applicants' consideration sets). The State's remedial proposal, by contrast, is intended to address the barriers that may exclude the HBIs from the college choices of other-race students by increasing those students' exposure to and familiarity with the HBIs.

200. The University of Baltimore is a clear example of why a simplistic theory relying exclusively on programs will not remedy the violation found by this Court. UB is a majority-minority institution. To the extent that UB competes for students with HBIs in the Baltimore area, its success cannot be attributed simply to a non-HBI or "TWI" label. In addition, UB has reached out to Latino students in Montgomery and Anne Arundel Counties with the "Bee Line" program to facilitate the transfer of community college credits. 2/9/17 Tr. 82-83 (Schmoke).

**G. The HBI Proposals Are Not Probative of the Validity of Plaintiffs' Remedial Theory Because They Assume Its Accuracy.**

201. The Court cannot consider the responses of the HBI faculty and administration to the interrogatory Plaintiffs posed to them as support for Plaintiffs' theory, because Plaintiffs' invalid remedial theory is built into each of the HBI proposals as the premise of the question the HBIs were asked to address: "[p]lease identify all programmatic niches, new programs, program transfers and/or enhancements and all resources and accreditation necessary for the same that the administration and faculty of your institution believe would further the goals of desegregating your institution and contribute to your academic identity." ECF 485.

202. Moreover, when the HBIs were drafting responses to this interrogatory, they were not focusing on the Court's remedial task of increasing other-race enrollment at the HBIs. ECF 531 at 7-8. Morgan does not claim that its proposal was intended to increase other-race enrollment. President Wilson explained that "[t]he original purpose was to identify based on Judge Blake's order clusters of a minimum of two or more unique high-demand programs that could be in place at the institutions that are rooted in the historically black college and university tradition, that would attract students of all races. And that's what we attempted to do in this case. Had we been informed that we needed to also take these analyses and predict the number of white students and the number of these students, then we perhaps would have put forth a document that would have included that." 1/10/17 am Tr. 61 (Wilson). Presidents Wilson, Bell and Thompson all testified that their institutions seek to increase enrollment overall, regardless of race. 1/10/17 am Tr. 30 (Wilson); 1/10/17 am Tr. 97 (Bell); 1/12/17 am Tr. 11, 19 (Thompson). That explains why the HBI proposals include programs that are intended to increase the number of black graduates in certain fields or to attract foreign students.<sup>81</sup> See ECF 531 at 5-7 (citing examples such as Coppin's proposed Bachelor's in African-American Music).

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<sup>81</sup> The Bowie proposal, though more modest in scope, is also aimed at increasing enrollment in general. Dr. Burnim testified that the programs were chosen because in the national or State workforce, employees in those fields tend to be white. 1/11/17 pm Tr. 8-9. There is no reason to believe that such programs will draw large or disproportionate numbers of white students.

**IV. PLAINTIFFS' REMEDY IS RADICALLY DISPROPORTIONATE TO THE VIOLATION IDENTIFIED AND PROVEN.**

203. Although Plaintiffs have proposed a remedy that goes beyond the program-based relief ordered in Alabama, Mississippi, and Louisiana where the district courts had found multiple vestiges of *de jure* segregation leading to systems of higher education that remained divided between white and black schools—true dual systems—the contrast here is quite stark.

204. Unlike the situation in those states at the time of their remedial orders, Maryland's non-HBIs, including the State's flagship at College Park, are now desegregated. African-American students who want a public higher education in a diverse setting can and do get one. Nearly sixty-five percent of African-American students in Maryland's four-year public institutions attend a non-HBI. DRE081 at 14.

205. Presidents of the four targeted non-HBIs appropriately rejected Plaintiffs' classification of them as "TWIs" or "white schools." 1/30/17 Tr. 26-27 (Hrabowski); 2/6/17 Tr. 11 (Miyares); 2/1/17 Tr. 32 (Schatzel); 1/18/17 am Tr. 6 (Dr. Lapovsky) (acknowledging that what she described as "white schools" are in fact integrated institutions). The University of Baltimore, which Plaintiffs classify as a "TWI," is a majority-minority school. UMBC, never subject to *de jure* segregation, is today recognized as a national leader in STEM education for African-Americans. Towson's minority and African-American enrollment have substantially increased, reflecting the value the university places on diversity and the state's changing demographics. UMUC—a desegregated institution even before 1954—educates more African-



Americans than any other Maryland institution, including the HBIs. Although Plaintiffs' experts, Drs. Conrad and Allen, label Maryland's a "dual" system, they use that label to describe something very different from the systems of separate white and black schools described in *Fordice*.

**A. Any Remedy Must "Fit" the Violation that Has Been Found.**

206. The successful desegregation of the non-HBIs has important implications for remedy. First, it means that a remedy which weakens the non-HBIs, which already serve thousands of African-American students seeking diversity, is a blow *against* that same diversity. Second, it means that the Court must be especially careful to differentiate remedies that benefit the HBIs as institutions—regardless of the effect on student diversity—from remedies that are actually likely to increase other-race enrollment at the HBIs. That is, an appropriate remedy in this case is one designed to attract other-race students, and not for any other purpose. The Court's determination that there is no current policy, traceable to *de jure* segregation, of under-funding the HBIs eliminates any basis for a judicially-imposed remedy that increases HBI capital or operational funding. ECF 382 at 38 (rejecting operational funding claim); ECF 242 at 8-9 (rejecting capital funding claim). Indeed, the record shows that per-student funding for the HBIs exceeds funding at the comparable non-HBIs, and the State has implemented funding policies that favor the HBIs relative to the non-HBIs. *See e.g.*, 1/12/17 pm Tr. 10 (Fielder) (special access to funding of \$4.9 million annually for the HBIs).

207. The fact that the leaders of the HBIs—like other college leaders—seek additional funding, for example to hire faculty or to further improve their facilities, does

not mean that ordering such additional funding is an appropriate remedy. Every institution can identify projects that would benefit from increased funding. 1/30/17 Tr. 85 (Hrabowski). The allocation of funding among the State's institutions of higher education is a matter for the State to decide through its legislative and appropriations processes.

208. The State has proposed, and is prepared to pursue, a flexible approach to remedy that includes additional funding to enable the HBIs to adopt an array of practices to recruit and otherwise attract other-race students to their campuses without shifting their existing resources. By contrast, the billions or hundreds of millions of dollars in funding for new programs, enhancements, and new facilities in Plaintiffs' proposal cannot be justified as a remedy for the "vestige" of unnecessary program duplication. *See Freeman v. Pitts*, 503 U.S. 467, 474 (1992) (remedial power with respect to violation does not include other past practices that have been eliminated). *See also* 1/9/17 pm Tr. 56 (Wilson) (estimated \$683 million five-year cost of Morgan proposal); 1/10/17 pm Tr. 96 (Bell) (estimated \$349 million cost of UMES proposal).

209. Injunctive relief, even for a constitutional violation, is not automatic. An injunction "should issue only if the traditional four-factor test is satisfied." *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157 (2010) (citing *Winter v. NRDC*, 555 U.S. 7, 31-33 (2008)). Those factors are: (1) irreparable injury; (2) inadequacy of remedies at law; (3) the balance of hardships; and (4) the public interest. *Id.* at 156-57. Here, assuming that Plaintiffs have established an irreparable injury which damages would not redress, the Court must weigh the harm to the State and to future students and their

families against the requested injunction that would tear down successful public institutions serving Marylanders of all races in order to build up the HBIs. A court does not “exercise its remedial discretion responsibly where it approves a plan that, in the hope of providing better ‘quality education’ to some, has a substantial adverse effect upon the quality of education available to others.” *Wright v. Council of the City of Emporia*, 407 U.S. 451, 463 (1972).

210. In addition to the general standard for injunctive relief, *Fordice* itself mandates restraint: policies must be reformed only “to the extent practicable and consistent with sound educational practice.” 505 U.S. at 729. *See also id.* at 747 (Thomas, J., concurring) (citing recognition “from the beginning” that “desegregation remedies cannot be designed to ensure the elimination of any remnant at any price”).

211. As the Fourth Circuit recognized, injunctive relief “should not go beyond the extent of the established violation.” *Kentuckians for the Commonwealth.*, 317 F.3d at 436. That is, the remedy must be “tailored” to fit the violation. *Dayton Bd. of Educ.*, 433 U.S. at 420; *Hayes v. North State Law Enf’t Officers. Ass’n.*, 10 F.3d 207, 217 (4th Cir. 1993).

**1. There is no legal basis for a remedy for UMES.**

212. There is no basis for ordering any relief with respect to UMES, because “unnecessary program duplication is not a problem on the Eastern Shore.” ECF 382 at 45; *see* ECF 520. Contrary to Plaintiffs’ arguments (ECF 533) that general statements about “the HBIs” in the Court’s liability opinion imply the existence of a violation at UMES, the Court’s specific finding about UMES means that there is no violation to be

remedied. The existence of a small percentage of what Dr. Conrad classified as unnecessary program duplication at UMES cannot establish a policy traceable to *de jure* segregation when it is undisputed, and this Court has recognized, that some duplication exists among all universities, including the non-HBIs.<sup>82</sup> That is particularly true when Plaintiffs have not proven any “segregative effect” at UMES from the modest level of program duplication. Evidence that UMES might benefit from new programs, enhancements, or facilities—even if the specific programs seem useful and educationally sound—is not a basis for this Court to issue an injunction in the absence of a constitutional violation.

**2. Any remedy must also be proportionate to the (unproven) segregative effect of program duplication.**

213. Targeting or tailoring the remedy to the violation means not only limiting the remedy to the violation found (as opposed to rejected funding claims) and limiting the violation to the places where it is found to exist (not UMES), but also ordering a remedy that “fits” —in the sense that it is proportional to the violation. Here, that means a remedy proportional to the segregative effect of unnecessary program duplication. In the liability phase the Court found the existence of unnecessary program duplication and quantified the extent of duplication in the sense that it computed a percentage of duplicated HBI programs (although about a third of those were actually duplicated *by*

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<sup>82</sup> In addition, Dr. Conrad’s measuring stick for unnecessary duplication is his unique scheme for classifying programs as core (duplication permitted) or non-core (duplication not permitted). Given the new evidence at the remedy trial of the subjectivity and arbitrariness of Dr. Conrad’s classifications, a constitutional violation cannot be found on the basis of a small degree of unnecessary duplication as characterized by Dr. Conrad.

other HBIs). And the validity of those percentages depends on the Court's continued acceptance of Dr. Conrad's subjective and arbitrary method of classifying programs as core and non-core. But the violation to which the remedy must be proportional is not some quantity of duplication in the abstract, but rather the extent of racial identifiability attributable to duplication instead of some other cause.

214. Plaintiffs' remedial proposal rests on the assumption that the sole driver of white enrollment at the HBIs is the existence or nonexistence of unnecessary program duplication. This Court held in 2013 that the racial composition of the HBIs is "in part" because of duplication; that program duplication "is one significant factor" and "contributes to" racial identity at the HBIs; and that "it may be true that other factors are more important than program offerings." ECF 382 at 53, 55, 56. Plaintiffs, however, have confidently asserted that any difference in white enrollment can be cured through spending on new programs, or "enhancement" of existing ones.

215. Now that a fuller record is available, it is apparent that the evidence will not support Plaintiffs' broad claims. The conclusion that academic programs are one factor—even "one significant factor"—in student choice does not prove the converse: that even the outright elimination of program duplication (which Plaintiffs have not proposed) would ensure the enrollment of large and disproportionate increases in the numbers of white students at the HBIs. The Court's ruling that demographic change did not carry the State's burden of proving *no segregative effect* leaves ample room for the conclusion that program duplication plays at most a very limited role in explaining the

relatively low, but improving levels of other-race enrollment at the Morgan, Coppin and Bowie. *See supra* Part I.

216. The record in the remedial phase did not prove the extent of a segregative effect. Indeed, even in the light most favorable to Plaintiffs, the Maryland enrollment data show that any correlation between program uniqueness and white enrollment is not statistically significant. If such a correlation exists, it is quite weak and accounts for only a fraction of the explanation for the variation in white enrollment, as shown by the low R-squared statistic. *See supra* ¶¶ 100-02.

217. Plaintiffs assume that the entire difference between white enrollments (a) in graduate programs at the HBIs in the mid-1970s—during the height of the college baby boom and before significant demographic changes—and (b) today, can be attributed to program duplication. Yet the demographic changes are large. The percentage of white students in the University System of Maryland dropped steadily between 1980 and today. In 1980 white students were 76.2% of the overall student population. The percentage had dropped to 49.4% by 2009. 1/25/12 am Tr. 10-11 (Passmore). The same demographic pattern was reflected in the State's high school graduates. 1/25/12 am Tr. 16 (Passmore). Plaintiffs, however, have no evidence of the actual extent of program duplication in the mid-1970s to compare to the present, and it would be strange for a policy said to be

traceable to *de jure* segregation to have become more restrictive six decades after the end of legal segregation than it was in the aftermath.<sup>83</sup>

218. Even using the mid-1970s as a benchmark, only a very limited remedy would be proportional to the segregative effect that could be attributed to program duplication today. But as discussed *supra* Part I, evidence presented at the 2017 trial about the period since 2012 demonstrated substantial growth in other-race enrollment at Maryland's HBIs. Based on these developments, a proportionate remedy would have to be quite modest, if one were required at all.

**B. The Burden Remains on Plaintiffs to Show the Efficacy of Their Proposed Remedial Injunction, And Plaintiffs' Evidence Is Weak.**

219. Although the State had the burden in the liability phase to show *no segregative effect*, there is no presumption or burden-shifting rule to fill in the gap in Plaintiffs' proof of the extent of a violation for purposes of defining a proportional remedy. Plaintiffs bear that burden, and they have not met it.<sup>84</sup>

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<sup>83</sup> The Court has rejected allegations of current intentional discrimination. Thus, the intent requirement for a constitutional violation is satisfied only by imputing the intent of past *de jure* segregation to a traceable policy.

<sup>84</sup> In seeking to assign the burden to the State, Plaintiffs confuse the State's burden to prove that it has itself remedied the violation as a way of negating liability, with the burden to justify a judicial remedy. *See* ECF 367 at ¶ 350 where Plaintiffs explained that *Fordice's* requirement to show that a state policy "affects student choice and perpetuates a segregated" system actually "relates to remedy, *not* the burden for determining segregative effects" in the liability phase. (emphasis in original). Because the nature of the violation is the perpetuation of a policy traceable to *de jure* segregation, if the State eliminates the policy without judicial intervention, then no injunctive relief is required or appropriate. The State's view is that it does not have a policy of unnecessary program duplication, and that it has in any event eliminated any basis for finding such a current policy by terminating the UB-Towson joint MBA program and amending the MHEC

220. The record since the liability trial does not support any judicial remedy. In its liability opinion the Court focused on three things: (1) Dr. Conrad's calculation of the extent of duplication of HBI programs; (2) MHEC's approval of the Towson-UB joint MBA program; and (3) MHEC's program approval regulations.

**1. Dr. Conrad's remedy trial testimony fatally undermines his original program duplication analysis.**

221. The testimony at the remedy trial showed that the definition of "core" program that Dr. Conrad uses to distinguish "unnecessary" program duplication from permissible duplication is arbitrary, subjective, and changes from case to case. Dr. Conrad defined "core" more narrowly in this case than in the past, inflating the extent of "unnecessary duplication." *See supra* ¶¶ 144-46. There is no way to defend a determination to, for example, include Computer Science as a core program decades ago, but to exclude it today. *See supra* ¶ 143. The inadequacy and inconstancy of Dr. Conrad's definition is apparent from Plaintiffs' recent assertions that programs that Dr. Conrad describes as "unique" are actually duplicated. *See* 1/19/17 pm Tr. 52 (Allen) (Morgan's communications programs); 1/24/17 Tr. 173-76 (Conrad) (Morgan's engineering programs). Plaintiffs have disputed that Morgan's communications programs form a "niche" by asserting that programs Dr. Conrad lists as unique are really duplicated; and Dr. Conrad himself has similarly testified that engineering programs at UMBC that he lists as unique are actually duplicated. *See also* 1/9/17 pm Tr. 63 (Dr.

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program approval regulations. But assuming there remains a violation to be remedied, it is Plaintiffs who must provide the Court with a factual basis for ordering the scope of the relief they seek.



Wilson contending that Computer Engineering at UMBC is duplicative, although Dr. Conrad classified the UMBC program as unique). No finding of a constitutional violation—and certainly not one which risks the futures of tens of thousands of students and billions of dollars—can rest on such a wobbly foundation. And even if some unnecessary program duplication can still be found, the extent of such duplication would remain too indefinite to justify a broad remedy.

**2. The UB/Towson MBA program has been terminated.**

222. UB has terminated the joint MBA program at Towson. 2/9/17 Tr. 9-10 (Schmoke) (Memorandum of Understanding for joint program expired, program was “terminated,” and President Schmoke made it “absolutely clear” to Towson and to USM Board of Regents that decision was “final”). Even if the approval of a single program, however controversial it may have been, could establish a “policy” of unnecessary duplication, that program is no more. The 2005 approval of a since discontinued MBA program is not a basis for injunctive relief in 2017.

**3. The changes to MHEC’s regulations and the Commission’s current oversight of program approvals address any reasonable criticism.**

223. MHEC has substantially amended its program approval regulations. This Court recognized in its 2013 Order that the 2012 amendments to COMAR 13B.02.03.09 requiring an analysis of the “[e]ducational justification for the dual operation of programs broadly similar to unique or high-demand programs at the HBIs” were a “much clearer statement of the standard applicable under *Fordice*.” ECF 382 at 52 n.12. As amended,

the regulations fully address concerns about duplication of HBI programs. *See* 1/12/17 pm Tr. 13-18 (Fielder).

224. The new regulations consist of three changes to COMAR 13B.02.03. First, sub-section .06 (“Criteria for Program Review”) has been amended to add two criteria which must be addressed in every academic program proposal and review:

E. Relevance to the implementation or maintenance of high-demand programs at HBIs;

F. Relevance to the support of the uniqueness and institutional identities and missions of HBIs.

225. Second, sub-section .08 (“Need for the Proposed Program”) has been changed to place a thumb on the scales in favor of new programs at the HBIs. Thus:

B. A program proposal shall clearly demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general. Four kinds of needs may be identified:

\* \* \*

(4) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.

226. Finally, sub-section .09 (“Duplication of the Proposed Program”) now includes an additional required factor -- educational justification -- that MHEC must consider whenever program duplication is at issue:

C. Determination of Duplication.

(1) In determining whether a program is unreasonably duplicative, the Secretary shall consider:

\* \* \*

(2) The analysis shall include an examination of factors, including:

\* \* \*

(g) Educational justification for the dual operation of programs broadly similar to unique or high-demand programs at HBIs.

227. Monica Wheatley, Associate Director of Collegiate Affairs for MHEC, testified regarding the current program approval process run by MHEC analysts. MHEC reviews proposals for new programs, substantial modifications to existing programs, suspensions and discontinuations of programs, and title changes to programs. 2/7/17 Tr. 71 (Wheatley). Before a program proposal is submitted to MHEC, “it has been fully vetted by the institution and the governing board to increase its chance of success and successful approval.” 2/7/17 Tr. 90 (Wheatley).

228. First, an MHEC analyst reviews program applications for completeness and, if necessary, contacts the proposing institution about any missing elements of the proposal. 2/7/17 Tr. 71 (Wheatley). A proposal for a new program must contain all elements listed in new COMAR 13B.02.03.06 (2/7/17 Tr. 75 (Wheatley)), which includes an assessment of the “reasonableness of program duplication, if any; relevance to the implementation or maintenance of high-demand programs at HBIs; [and] relevance to the support of the uniqueness and institutional identities and missions of HBIs.” PRX028 at 13.

229. Once the proposal is complete, MHEC circulates it to every higher education institution in Maryland for comment or objection. 2/7/17 Tr. 71 (Wheatley).

MHEC analysts review the program proposal to assess whether all requirements of 13B.02.03.06 have been satisfied, including “centrality of the program to the mission of the institution; perhaps the market need for a program; whether there is duplication of the program in the state; the financial strength of the institution; and how they will sustain the program, as well as any specialized accreditation, any types of partnerships that the program may have among institutions or with the industry.” 2/7/17 Tr. 71-72, 75 (Wheatley). The analysts will also review the proposal to consider all elements related to duplication under 13B.02.03.09 to ensure that the proposed program is not unreasonably duplicative of an existing program. 2/7/17 Tr. 79 (Wheatley); PRX028 at 16.

230. MHEC analysts look at the academic program inventory, evaluating the CIP code and title, as well as coursework and curriculum of the program. 1/12/17 pm Tr. 12 (Fielder). As Secretary Fielder explained, “in a rapid, a changing academic world, the need for academic innovation is very, very prominent and academic titles in curriculum can differ from one institution to the next. And it can be either the same, similar, or not similar at all.” 1/12/17 pm Tr. 13 (Fielder). MHEC analysts also consider the degree to be awarded (2/7/17 Tr. 211 (Wheatley) (“[W]e’re looking at content of the program, so you may have a degree, a Master of Science, as an example, versus a Master of Arts that’s going to have more liberal art content.”)), area of specialization, equivalent competencies (2/7/17 Tr. 212 (Wheatley) (“What does the program prepare the student to do upon completion?”)), market demand, and the “educational justification for the dual operation of programs broadly similar to unique or high-demand programs at HBIs.” 2/7/17 Tr. 211-12 (Wheatley); PRX028 at 16. Associate Director Wheatley explained

that, in program proposal evaluations, MHEC “work[s] really hard in this review process to ensure that if there is duplication, that there is a need in the state for that type of duplication,” which could result from capacity issues at institutions currently offering the program, workforce development shortages in areas such as nursing, or aspects of programs that may seem duplicative on their face, but differ in curriculum and, therefore, are aimed at addressing different state needs. 2/7/17 Tr. 81 (Wheatley). Included in the analysis will be the results of the thirty-day circulation, to note whether the proposal received any comments or objections. 2/7/17 Tr. 78 (Wheatley).

231. MHEC’s approval process thus takes into account whether there is a sound educational justification for a program, even though Dr. Conrad testified that he would count it as unnecessarily duplicative in his classification scheme without having considered that justification. 1/10/12 am Tr. 112-114 (Conrad).<sup>85</sup>

232. After the analyst has completed this work, the Associate Director of MHEC reviews the proposal and analysis and conducts any necessary follow-up with the proposing institution or any institution that submitted comments or objections. 2/7/17 Tr. 72 (Wheatley). After all analysis and discussion has been completed, the Associate Director submits a recommendation to the Secretary of MHEC who determines whether the program will be approved or denied. 2/7/17 Tr. 72-73 (Wheatley).

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<sup>85</sup> That is, the record here shows that the absence of a sound educational justification is not implicit in “unnecessary program duplication” as classified by Dr. Conrad, unlike the Supreme Court’s understanding of the record in *Fordice*, 505 U.S. at 739.

233. The evidence showed that MHEC affirmatively checks for duplication that would be harmful to an HBI, even if the HBI has not objected to a proposed program.<sup>86</sup> By way of example, in 2014, MHEC contacted Bowie independently to ask Bowie's views on a proposal for a nursing program at UMB and whether Bowie objected to the program. 1/11/17 am Tr. 70-71 (Burnim). In a conversation with MHEC, Bowie did not object to the UMB proposal and noted that the UMB program in nursing "did not pose a threat" to the Bowie program in nursing. 1/11/17 am Tr. 71 (Burnim). In several instances, MHEC has "denied or questioned a proposing institution based on the – on the basis of duplication." 2/7/17 Tr. 79 (Wheatley). Recently, MHEC denied a proposal by the University of Southern California to offer a Doctor of Pharmacy program because similar programs at UMES and UMB were meeting the needs of the State in that field—"even though neither institution objected." 2/7/17 Tr. 80 (Wheatley). In another instance, a private institution proposed a new hospitality program to fill an unmet workforce need in that area; MHEC contacted UMES and Morgan, which offered similar programs and as a result, the institutions developed a collaborative program. 2/7/17 Tr. 83 (Wheatley).

234. In addition to program proposal reviews, MHEC engages institutions in dialogue regarding specific workforce needs, such as the NSA's need for more

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<sup>86</sup> MHEC has developed the Segmental Advisory Council, which meets monthly and includes members from USM, Morgan, St. Mary's College of Maryland, the Maryland Association of Community Colleges, and the Maryland Independent College and University Association, to facilitate dialogue regarding academic program development and more generalized higher education concerns. 2/7/17 Tr. 84 (Wheatley).

cybersecurity graduates, and has facilitated discussions between institutions to form collaborative programs. 2/7/17 Tr. 87 (Wheatley).

235. The HBI presidents generally testified that MHEC's current program approval process under the amended regulations is working as it should, and none criticized any specific program decisions. 1/11/17 am Tr. 72 (Burnim); *see also* 1/10/17 am Tr. 44-58 (Wilson) (President Wilson testified about the program proposal requirements set forth by MHEC, demonstrated by Morgan's proposal for an online Master's in Social Work, and generally agreed that each requirement was an appropriate requirement for the approval process); 1/10/17 pm Tr. 91-92 (Dr. Bell testified that during her tenure, MHEC has approved UMES's program proposals). Dr. Burnim testified that under the new regulations, no programs were approved over Bowie's objection. 1/11/17 am Tr. 69-70; *see also* 1/12/17 am Tr. 8 (Thompson) (same).

236. MHEC's revised regulations were reviewed by Dr. Houston Davis, who lately served as the Executive Vice Chancellor and Chief Academic Officer of the University System of Georgia, with prior experience in academic affairs in the public university systems of Tennessee and Oklahoma. 10/28/16 Davis Dep. Tr. 44 (Tennessee and Oklahoma); 89 (Georgia). Notably, he is intimately familiar with post-*Geier v. Tennessee* compliance and program review and approval processes in Tennessee. *Id.* at 158 (in Tennessee, "we had the ongoing situation with *Geier*" which "impact[ed] the thinking on program approval.") Dr. Davis compared Maryland's policies and procedures to those of Tennessee, Oklahoma, and Georgia, and to those of other public university systems with which he is familiar, including North Carolina, Texas, California

State, and SUNY. *Id.* He concluded that he “[couldn’t] stress enough that I think that the [program approval] process MHEC has out there is sound. It’s a good process. It’s in line about what I’ve seen in my three states that I’ve been a part of.” *Id.* at 271.

237. Plaintiffs were asked by interrogatory to identify every program approval decision by MHEC that they contend was made in error with respect to the new regulations since 2012. DRE137B. They named only two programs (Dr. Allen identified no others), and MHEC provided sound educational justifications for each decision. First, MHEC approved a new Master’s in Health Science at UMB that was not duplicative of any existing HBI program. *See* 2/7/17 Tr. 144-46 (Wheatley). Second, it approved a Bachelor’s in Nursing at UMUC because there was sound educational justification for approval based on Maryland’s severe shortage of nursing professionals. *See* DRE030; *cf.* 1/23/17 Tr. 79-80 (Allen) (Dr. Allen recognized Maryland’s need for more nursing professionals to meet the workforce demand.).

238. Dr. Allen stated that he believed the approval of the nursing program at UMUC was “a clear example of unnecessary duplication” because nursing programs are also offered at Bowie, Coppin, and Morgan. 1/18/17 pm Tr. 28-29, 31 (Allen). Dr. Allen conceded, however, that there is a state-wide need for nurses and that nursing is a high-demand program at many institutions. 1/23/17 Tr. 79-80 (Allen). Dr. Allen’s approach (just like Dr. Conrad’s liability phase analysis) strikes “the absence of a sound educational justification” from the definition of constitutionally impermissible duplication. This is a required element. *Fordice*, 505 U.S. at 739.



239. Associate Director Wheatley highlighted several practical consequences that would result from eliminating the consideration of sound educational justification in the program approval process: inability to prepare as many graduates as the State needs; students leaving the State for their educations; causing areas in the State's workforce to remain undeveloped or to outsource graduates; and placing the State at a competitive economic disadvantage. 2/7/17 Tr. 81 (Wheatley). Relying on the HBIs to shoulder the entire demand for a given field such as nursing would also strain the administrative infrastructure and resources of the HBIs and could threaten necessary specialized accreditation for programs such as nursing, which places limits on enrollments to ensure success of the students in the program. 2/7/17 Tr. 81-82 (Wheatley). Indeed, there was evidence that several of the HBIs had already encountered difficulties in maintaining or achieving accreditation for their nursing and allied health programs. 2/8/17 Tr. 94-96 (Manning); 1/19/17 pm Tr. 91-95 (Allen) (accreditation problems for Bowie Nursing program and UMES Physician Assistant program).

240. Dr. Allen's theory for why the approval of UMB's Master's in Health Science was unreasonably duplicative is also fundamentally flawed. Here, instead of foreclosing a program that *is* already offered by an HBI, "duplication analysis" would expand to cover programs that an HBI could, in theory, offer but does not. Thus, Dr. Allen testified that "for my way of thinking and in my expert judgment, [the Master's in Health Sciences at UMB] was just a perfect opportunity to assist Coppin in growing in this area of incipient strength around [A]llied [H]ealth." 1/18/17 pm Tr. 31 (Allen).

“[T]he decision was made to place it at UMB.”<sup>87</sup> 1/18/17 pm Tr. 31-32 (Allen). When asked how Plaintiffs’ proposal would work in practice to “find out whether Coppin even wants to do this?” 1/18/17 pm Tr. 32 (Allen), Dr. Allen suggested “talking to the faculty member, the dean, the institutional representative that had proposed the program about whether they had considered what the State has emphasized, by the way, in some of [its] pleadings, this whole notion of collaborative programs as being a potential route for addressing some of the concerns before the Court.” 1/18/17 pm Tr. 32-33 (Allen). Simply stated, this is not “duplication.”

241. In addition, Dr. Allen’s suggestion is not feasible or educationally sound from Coppin’s standpoint. In 2013, when UMB applied for this program, Coppin was seeking to right-size the institution and was shrinking, not expanding, its program inventory. 1/23/17 Tr. 80-81 (Allen). Coppin did not object to UMB’s proposal for that program. 1/23/17 Tr. 79-80 (Allen). Dr. Allen confirmed that two years later, Coppin applied for and was approved for a Bachelor’s in Health Science in 2015, and Coppin’s proposal for that program identified the potential for 712,000 jobs in that area. 1/23/17 Tr. 82-83 (Allen).

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<sup>87</sup> Notably, Dr. Allen’s contention ignores the autonomy of institutions and their faculty in identifying and developing programs and also ignores MHEC’s lack of authority to “place” programs. Associate Director Wheatley explained that MHEC lacks the authority to instruct an institution on what new programs it must offer, and that the institutions themselves are in the best position to know “where their strengths are, what their capabilities are” and to “propose programs that they feel are most appropriate for them, given their resources, their faculty resources, their student needs.” 2/7/17 Tr. 86-87 (Wheatley).

242. Thus, preventing either program from being offered would have been unsound policy for the State of Maryland. Notably, Plaintiffs presented no testimony from Coppin that the school wanted to, or would have been able to, take on this program—particularly in light of the fact that Coppin never objected to UMB’s proposal.

243. Without evidence that MHEC’s revised regulations are insufficient to prevent improper program duplication (again, assuming no sound educational justification for that duplication), Plaintiffs have shifted their critique to a demand that MHEC clear the ground for planned HBI “niches” by forbidding non-HBIs from offering new programs, regardless of any actual duplication and regardless of educational or workforce justifications.

244. It is neither educationally sound nor practicable for this Court to chart the HBIs’ course, looking 10-15 years into the future to identify niches and programs HBIs may want to develop. And it is neither educationally sound nor practicable to require MHEC to develop a system by which no public Maryland university other than the HBIs may develop new programs in Computer Science, Engineering, Criminal Justice, Social Work, Education, or Nursing and the Health Professions (or a niche contemplated by an HBI in the future), in the hope that the HBIs may one day be able to shoulder all the State’s workforce needs in these areas. As discussed in Section II, *supra*, such restrictions would be harmful to Maryland students and to the system of public higher education. But they are also not tailored to the violation found here, which is segregation resulting from actual, not hypothetical, duplication.

245. Accordingly, there is no basis for injunctive relief with regard to the program approval process.

**C. The HBIs Have the Opportunity, Which They Have Fully Exercised, to Create New, High-Demand Programs.**

**1. The HBIs Have Created Many New Academic Programs in the Past Five Years.**

246. Since the liability trial, the HBIs have had ample opportunity to develop new programs and facilities and to enhance their programs.<sup>88</sup> The institutions' respective annual budgets are substantial.<sup>89</sup> Plaintiffs' expert Dr. Lapovsky testified that at least some additional programs—such as those offering master's degrees—were low-cost “cash cows” which could generate income for institutions. 1/18/17 am Tr. 28-29. There is no evidence that the State has impeded the HBIs' efforts, or done anything other than support and approve new programs and facilities at the HBIs. Evidence demonstrated MHEC's commitment “to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs” (DRE064 at 6), and

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<sup>88</sup> The institutions regularly communicate institutional goals and funding needs directly to the General Assembly in the budgetary process. 2/7/17 Tr. 85 (Wheatley). The HBIs also participate in setting the goals and needs of the State, and determining how Maryland's higher education system can support those needs, by participating in the process to develop the Maryland State Plan for Postsecondary Education. 2/7/17 Tr. 85 (Wheatley).

<sup>89</sup> 1/12/17 am Tr. 10 (Thompson) (Coppin: approximately \$90 million, of which approximately \$45 million is State funds); 1/9/17 pm Tr. 64-65 (Wilson) (Morgan: approximately \$240 million, of which approximately \$91 million is State funds); 1/10/17 pm Tr. 96 (Bell) (UMES: approximately \$140 million, of which approximately \$33 million is State funds); 1/11/17am Tr. 57 (Burnim) (Bowie: approximately \$100 million, of which approximately \$50 million is State funds).

to “support . . . the uniqueness and institutional identities and missions of HBIs.” DRE065 at 11.

247. Plaintiffs offered no evidence at either trial that MHEC had disapproved a new program proposed by one of the HBIs or prevented an HBI from offering any unique or high-demand program it chose to offer. Since the liability trial, MHEC has approved the many new programs proposed by the HBIs. *See* 1/10/17 pm Tr.91-92 (Bell) (UMES program approvals); 1/11/17 am Tr. 72 (Burnim); 1/9/17 pm Tr. 23-27 (Wilson); 1/11/17 pm Tr. 8 (Thompson). Indeed, since 2011, the HBIs have proposed, and MHEC has approved, more than thirty new programs. 1/23/17 Tr. 75 (Allen). During that time, MHEC has not approved any programs at the non-HBIs over HBI objections. 1/11/17 am Tr. 70 (Dr. Burnim).

248. As a result, for example, Bowie’s academic program offerings compare favorably in their variety with those of the non-HBIs. 1/11/17 am Tr. 78-79 (Burnim).

249. In 2013 Morgan founded a new School of Global Journalism and Communication. 1/9/17 pm Tr. 72. The new school contains three centers: the Center for Advanced Journalism Studies, the Center for Knowledge-Based Journalism, and the Center for the Study of Social Media – the Fifth Estate. DRE158 at 28. To bolster the new School of Global Journalism and Communication, Morgan decided to realign its journalism offerings to encompass modern media methods and proposed a new Bachelor’s in Multimedia Journalism, which MHEC approved. DRE158.

250. Morgan anticipated that the School of Global Journalism and Communications would bring substantial growth in its undergraduate and graduate

programs in Journalism. DRE158 at 31. But the new school did not increase other-race enrollment at Morgan.<sup>90</sup> 1/9/17 pm Tr. 75 (Wilson). Dr. Wilson had not done any assessment to determine the effect of any programs at Morgan on white enrollment. 1/10/17 am Tr. 13 (Wilson). He was also not aware of any program that had “added significant numbers of white or other race students.” *Id.*

251. Morgan also added a new Ph.D. in Transportation and Urban Infrastructure, a Post-Baccalaureate Certificate (PBC) in Cybersecurity, a Bachelor’s in Services and Supply Chain Management, an online Master’s in Electrical Engineering, an online PBC in Advanced Study in Project Management, an online Master’s in Public Health, a new area of concentration in Executive Health Management, and two new degree programs in its school of architecture and planning. 1/10/17 am Tr. 25-26 (Wilson).

**2. The HBIs have further developed their institutional identities in the past five years.**

252. Not only have the HBIs had the opportunity to develop specific new programs, they have also -- to the extent relevant -- enhanced their institutional identities. Bowie’s Dr. Burnim, for example, testified that the school’s “institutional visibility throughout the region and the nation has been enhanced” in recent years. 1/11/17 am Tr. 56. Bowie today has “a distinctive identity as a top comprehensive university that is an exceptional value” for students,” 1/11/17 am Tr. 59 (Burnim), and has been ranked

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<sup>90</sup> Although Morgan’s proposal for its Bachelor’s in Multimedia Journalism stated that the School of Global Journalism and Communication would “recruit from groups beyond its core student body of African Americans” it proposed to do so by agreements with international schools “to bring international students to Morgan” and African-American students remained “an important element in the program’s recruitment efforts.” DRE158 at 41-42.

among the nation's top comprehensive universities and as the best value in Maryland by *The Economist* magazine. 1/11/17 am Tr. 59 (Burnim).

253. In addition to its academic offerings, Bowie has developed a program called the Education Innovation Initiative (founded by a Bowie alum who was an executive at Lockheed Martin), which seeks to provide exposure to STEM research and academics for prospective students. 1/11/17 am Tr. 58, 64, 66 (Burnim).

254. "Today, Bowie offers 22 undergraduate majors, 19 master's programs, 2 doctoral programs, and several certificate programs. [Bowie] serves[s] nearly 5,700 students with a rigorous academic program and the individual support they need to be prepared to compete in a changing world. [The school has] strong programs in science, technology, and liberal arts designed to prepare leaders for the careers of the future." DRE055 at 3. Bowie, in its 2013-2018 Strategic Plan, has committed that although it has seen all-time record highs in enrollment, the "true measure of . . . success" is "the number of students who successfully complete their degree programs . . . within a four to six-year time frame and are uniquely qualified to respond swiftly to unpredictable change and emerging opportunities." DRE033 at 3. The university's "second-year retention rate for the 2013 cohort was 74 percent, which placed Bowie State among the top 12 schools of more than 100 HBCUs where first-year students returned for a second year at this higher-than-average rate." DRE055 at 4. Bowie's "fall 2014 undergraduate and graduate STEM enrollment was higher than the previous two years, as was the number of degrees awarded for the same time period." DRE055 at 5.

255. Bowie has also developed a strong institutional identity in STEM and business. Bowie places a “special focus” on “computer and technology applications” in its mission that has “prompted growth in the Science, Technology, Engineering, and Mathematics (STEM) disciplines” and Bowie is “steadily building its research infrastructure to augment faculty capacity to instruct students.” DRE025 at 2. Examples of this include the approval of its second doctoral program in Computer Science (DRE025 at 3) and the recent addition of several new programs and initiatives in STEM-related disciplines. 1/11/17 am Tr. 32-34 (Burnim) (Bowie’s “signature program, the EI<sup>2</sup> initiative,” seeks to “expand[] and broaden[] the pipeline of students who are exposed to STEM and STEM-related disciplines”). Bowie has also recently partnered with UMBC on a certificate program to increase access to cybersecurity certifications. As a result of its efforts to focus on STEM, and specifically cybersecurity, Bowie has recently been designated a Center of Academic Excellence in Information Assurance Education by the Department of Homeland Security and the NSA, signaling that Bowie’s “programs are meeting the highest standards of excellence in preparing graduates for work in the critical cybersecurity industry.” DRE055 at 6. Bowie has also been working to grow its business department with a special focus on entrepreneurship. Bowie has recently begun its Entrepreneurship Academy, which provides “a pathway of practical learning to help college and high school students develop their own businesses.” DRE055 at 7. Bowie has also developed a business incubator—the first of its kind on an HBCU campus—which connects students with local entrepreneurs. *Id.*



256. Coppin recently began, and is still undergoing, a complex process to restructure the institution and maximize its financial and academic viability. The school's goal is to preserve its identity as an anchor institution for West Baltimore while improving its graduation and retention rates. Coppin now "offers 53 majors which include 31 undergraduate degrees, 12 master's degrees, 1 doctorate, and 9 certificates." DRE084 at 2. As a result of its reorganization efforts, Coppin has seen steady improvement in its second-year retention rates and six-year graduation rates. DRE057 at 4. "May 2014 was the largest graduating class in the 115 year history of Coppin" (DRE057 at 13) and Coppin currently enrolls approximately 3,000 students. 1/12/17 am Tr. 11 (Thompson). Coppin is continuing its "efforts to stabilize [its] enrollment" and improve "retention and student achievement." DRE084 at 5.

257. As Dr. Lapovsky testified, for an institution under special review and seeking to right-size itself, such as Coppin, it would make sense for that institution to "hunker down" and reevaluate its existing academic program offerings. 1/18/17 am Tr. 51 (Lapovsky). President Thompson testified that Coppin is committed to maintaining its history and reputation in the field of teaching, which includes its work overseeing the Coppin Academy High School and the Rosemont Elementary and Middle School. 1/12/17 am Tr. 7 (Thompson). Coppin is well-positioned to enhance Maryland's STEM offerings; has recently added new STEM concentrations in Applied Science, Computational Chemistry, and Biochemistry as well as a Bachelor's in Health Sciences; is currently developing new majors in Nanotechnology and Material Science, and new

concentrations in Environmental Sustainability and Microbiology. STEM programs are associated with Coppin's institutional identity today. 1/12/17 am Tr. 8 (Thompson).

258. Morgan, Maryland's urban doctoral research institution, is the number one HBI producer of Fulbright scholars (1/9/17 pm Tr. 76 (Wilson)), was listed as one of the best college campuses in America in 2016 (1/9/17 pm Tr. 97 (Wilson)), and has achieved a nationally-recognized brand name for education, both within and outside of Maryland. 1/9/17 pm Tr. 107, 109 (Wilson). Morgan also has a strong reputation with respect to engineering and its production of STEM graduates. 1/9/17 pm Tr. 106 (Wilson); see also DRE194 at 2. Morgan has a recognized "niche" in Social Work with "a unique brand as an HBCU focusing on urban social work." DRE094 at 2.

259. To expand this niche, in 2016, Morgan submitted a proposal to MHEC to add an online Master's in Social Work to complement its existing Master's in Social Work and further Morgan's strategic goal "to increase[] student enrollment by 'developing unique high demand online degree programs attractive to graduate students. It also aligns with the university's goal to lead 'the State of Maryland in graduating graduate students in high-demand areas' such as social work as reflected in the high number of applications received every year for the MSW degree." DRE094 at 2.

260. UMES, Maryland's most diverse HBI, has an institutional identity as a land-grant institution, with a focus on STEM and significant, unique, doctoral programs in science areas. 1/10/17 pm Tr. 84-86 (Bell). In 2016, UMES achieved a Carnegie designation as a doctoral research university, which only two other institutions in USM (and only 7% of all higher education institutions) have been able to achieve. 1/10/17 pm

Tr. 87-89 (Bell). During the past few years, UMES has proposed and had approved several new academic programs, including: a Bachelor's in Jazz and Popular Music, a Bachelor's in Marketing, a Bachelor's in Finance, a Ph.D. in Pharmaceutical Science, a Master's in Pharmaceutical Sciences, a Master's in Cybersecurity Engineering, and joint physics and engineering programs with Salisbury University. 1/10/17 pm Tr. 91-92 (Bell).

261. The HBIs have improved their facilities and a number of these new facilities have won architectural awards. 1/9/17 pm Tr. 111 (Wilson). During Dr. Wilson's tenure, Morgan has undergone or received commitments for approximately \$271 million in new construction on its campus. 1/9/17 pm Tr. 75-76 (Wilson). Jenkins Hall, which Dr. Wilson had testified in 2012 was leaking and dilapidated, is being replaced. 1/9/17 pm Tr. 95 (Wilson). It has added attractive new and renovated buildings to the campus. 1/9/17 pm Tr. 110-11 (Wilson). In August 2015, Morgan opened its new, \$72 million business school facility. DRE087 at 4; 1/9/17 pm Tr. 113 (Wilson). President Wilson described the new Earl G. Graves School of Business and Management building as including "cutting edge instructional equipment and a well-designed infrastructure, inclusive of a seamless content management system, faculty, student support systems, etc. In addition, the facility has an impressive inventory of smart classrooms, seminar areas, conference rooms, resource rooms, conversational spaces, a state-of-the-art Wall Street Trading interactive simulation room, and ample faculty offices" and is the latest "jewel" on Morgan's campus. DRE087 at 30; 1/9/17 pm Tr. 112, 113 (Wilson). However, Dr. Wilson deemed it an "unfair expectation" that the

new building and other improvements in the business program would increase white and other-race enrollment in Morgan's business programs. 1/10/17 am Tr. 69 (Wilson).

262. Under Dr. Wilson's tenure, Morgan won the University's largest-ever research contract, a \$28.5 million five-year contract from NASA. 1/9/17 pm Tr. 72 (Wilson). Morgan was also included as one of the recipients of a \$129 million energy research grant to Penn State University. 1/9/17 pm Tr. 72 (Wilson). Morgan recently launched a \$250 million capital campaign and, in the initial silent phase of the campaign, raised 70% of that \$250 million goal through private funds and federal grants and contracts. 1/9/17 pm Tr. 78 (Wilson).

263. Bowie added three new buildings during Dr. Burnim's leadership and is preparing to open a fourth. 1/11/17 am Tr. 56 (Burnim). In late 2013, Bowie opened its new Student Center, "the first HBCU LEED Gold-certified student center in the nation," which Bowie credits with assisting in efforts at student retention. DRE055 at 8. Now, Bowie is in its final phase of construction of its new Center for Natural Sciences, Mathematics and Nursing, which is approximately 148,995 gross square feet with "state-of-the-art research and instructional laboratories, classrooms and office space." DRE088 at 2-3. "The University System of Maryland's Board of Regents has [also] endorsed funding for a new Humanities Building, beginning in FY 2018." DRE088 at 6.

264. The 2013 study of Coppin reported that "new facilities built in the last decade dramatically improved the campus." 1/12/17 am Tr. 13 (Thompson); PRX082. In 2015, Coppin completed construction on its new \$83 million LEED-certified science and technology facility that enhances Coppin's STEM academic programs and services.

1/12/17 am Tr. 7-8, 13 (Thompson); DRE057. “[B]ecause of the generous state support for [Coppin’s] recently completed state of the art Science and Technology Center,” Coppin is “well positioned to enhance the state’s STEM profile.” DRE084 at 5.

265. This year, UMES completed its new 166,000 square foot, \$100 million aviation science and engineering building with state-of-the-art lab facilities. 1/10/17 pm Tr. 86-87 (Bell). UMES’s new pharmacy facility, supporting its Health Professions and Pharmacy program, has been placed in the queue for FY 2017 and FY 2018 planning funding, and the building is scheduled for construction funding in FY 2020 and FY 2021. 1/10/17 pm Tr. 43 (Bell).

266. These impressive capital improvements, identity enhancements, and panoply of new programs make clear that injunctive relief to simply provide more resources to the HBIs is not only an inappropriate remedy given the violation found, but also unnecessary.

**D. Any Connection Between Program Duplication and College Choice at the HBIs Is Weak, At Best.**

267. Plaintiffs’ expansive remedial proposal is also disproportionate to the actual role played by programs in driving student choice. Substantial national data exist on the most important factors driving students’ college choice decisions, and those data do not support Plaintiffs’ program-based hypothesis. For example, *The American Freshman* survey long led by Prof. Alexander Astin of UCLA, described above, has been conducted for decades using similar questions to identify these factors. DRE183. Both Dr. Allen

(1/23/17 Tr. 10) and Dr. Conrad (1/25/17 Tr. 4) recognized the Astin work as authoritative.

268. The most recent Fall 2015 version lists the top reasons why freshmen chose a particular college,<sup>91</sup> and they are virtually identical for all types of schools. Both for all baccalaureate institutions and for HBIs, the top choice—by far—was “This college has a very good academic reputation.” The other responses rounding out the top six in both cases were: “This college has a good reputation for its social activities,” “I was offered financial assistance,” “The cost of attending this college,” “This college’s graduates get good jobs,” and “A visit to the campus.” DRE183 at 57. “As Alexander Astin of UCLA has pointed out for thirty years now, incoming freshmen are much more concerned about other institutional characteristics . . . than they are about the specific academic specialty available.” R. Dickeson, *Prioritizing Academic Programs and Services* 16 (2010) (describing effort to “outbid[] the competition academically” as “both costly” and “usually futile.”). Dr. Conrad summarized Dr. Astin’s work as “some of the main indicators [of student choice] that have been factors that have been identified again and again for many years.” 1/25/17 Tr. 3-4 (Conrad).

269. Similar evidence exists for the University of Baltimore: specific programs are not a key factor in admission decisions. 2/9/17 Tr. 123-24 (Schmoke) (nearly 90% of UB freshmen reported that “a very good academic reputation” was “Very Important” or “Somewhat Important” to their decision to attend the school). Indeed, President

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<sup>91</sup> The specific question asked over the years was whether a given reason was “‘Very Important’ in deciding to go to this specific college.” DRE183 at 57.

Schmoke testified that UB recently sought to de-emphasize the admission of “native freshmen” (those matriculating directly from high school) because large numbers of admitted freshmen were unaware of the school’s limited course offerings. 2/9/17 Tr. 8-9 (Schmoke) (citing example of freshmen who sought to become pre-med, but failed to realize UB did not offer Organic Chemistry); *see also* 1/11/17 am Tr. at 82-83 (Burnim) (citing net price and scholarships, welcoming environment, marketing, and “the personal touch,” including face-to-face visits, as key factors in student choice).

270. The entire decline in white enrollment at the HBIs since a brief mid-70s baby boom peak cannot be attributed to program duplication without regard to other factors. There is also substantial new evidence on the influence of demography on student choice. To begin with, it is undisputed that the top ten HBIs in white attendance are all located in areas where (a) the surrounding population is either majority or plurality white, and (b) the public high school population is similarly majority-white. 2/14/17 Tr. 94 (Lichtman); DRE070 at 70 (Lichtman chart); 2/21/17 Tr. 184 (Allen) (no basis for disagreeing with Lichtman’s numbers); 1/25/17 Tr. 60 (Conrad) (explaining that he excluded Cheyney University of Pennsylvania and Lincoln University—among the HBIs with the highest percentages of white students—from his 1994 study because “they are not typical HBIs in many ways, including with their respective enrollment, where they’re located.”). *See also* 1/25/17 Tr. 84 (Conrad) (“the surrounding geographic area . . . can have some effect on white and other-race enrollment”); 85-86 (conceding substantial changes in demography in Prince George’s County and Baltimore City in recent

decades); 2/13/17 Tr. 184 (Lichtman) (“rapid falloff of the white percentage to small minorities in both areas”); DRE070 at 67-71.

271. Similarly, it is clear that UB’s ability to attract among the most diverse student bodies in Maryland has resulted from the City’s changing demography, not the university’s academic programs. 2/13/17 Tr. 184-85 (Lichtman) (“very likely” that changes in racial composition at UB were driven by Baltimore City transition to majority-black jurisdiction); *id.* 185-86 (Lichtman) (unrefuted analysis demonstrating that UB diversity was not the result of unique academic programs). Dr. Burnim similarly testified that he disagreed with “the assumption that student choice is all driven by academic programs” (1/11/17 am Tr. 82), and noted that Bowie drew “most of its students from Prince George’s County” (1/11/17 am Tr. 75), where the “the proportion of white students has continued to decline.” 1/11/17 am Tr. 82 (Burnim).

272. In the specific case of Morgan, the issues of demographic change and institutional focus are merged in the university’s Strategic Plan. DRE160. The Strategic Plan’s sole reference to other-race recruitment (except for several references to international students (*id.* at 3, 20) is at DRE160, page 25, where the school notes that there are a declining number of white and other-race students in Maryland (alongside an increase in black and Hispanic students), and states that Morgan’s less selective admissions policies are more consistent with the State’s changing demographics. DRE160 at 25. At trial, Dr. Wilson, Morgan’s President, declined to state any numerical goal for white or other-race student recruitment. 1/10/17 am Tr. 34 (Wilson).



273. A different model may be found at UMES, where, as discussed *infra* ¶ 284, “highly focused” marketing and recruitment have targeted white and other-race students in a variety of ways.

**E. Because the HBIs and the Non-HBIs Typically Do Not Compete for the Same Students, Plaintiffs’ Proposal Is Likely to Fail.**

274. One corollary to Morgan’s less-restrictive admissions policies, and to the HBIs’ embrace of a “dual mission” which opens their doors to first-generation and less-academically-prepared students, is that the HBIs have lower median test scores and other markers that prospective students and their families—rightly or wrongly—associate with academic quality. Dr. Lapovsky testified that “if you look at the SAT scores or . . . the academic stats of the students at the HBIs, they are lower than at most of the” non-HBIs. 1/17/17 pm Tr. 48 (Lapovsky); DRE081 (2016 MHEC Data Book) at 9 (four HBIs’ average SATs were lower than Towson, UB and UMBC’s). Dr. Lapovsky also testified that the HBIs’ retention (two-year) and graduation (six-year) rates are lower than the non-HBIs’ corresponding rates, 1/17/17 pm Tr. 49 (Lapovsky), and again the data bear that out. DRE081 at 21 (four HBIs’ retention and graduation rates are lower than UB, UMBC, and Towson’s).

275. These differences in entering test scores and other academic markers affect the students willing to consider applying to the Maryland HBIs—what Towson President Kim Schatzel, an expert in marketing, called the prospective student’s “consideration set.” 2/1/17 Tr. 25 (Schatzel). Towson, for example, tracks the other schools (alongside Towson) to which students request their SATs be sent. The “overlapping” schools for

Towson in Maryland include UMCP, UMBC and Stevenson University—but none of the HBIs. 2/1/17 Tr. 24, 25 (Schatzel).

Towson

276. As a result, shutting down the Towson Accounting program, as Plaintiffs propose, is unlikely to cause prospective students to shift to Morgan merely because Morgan also offers accounting. Instead, students at Towson are more likely to consider a school like UMBC—already in their consideration set—even though UMBC lacks an accounting program of its own. 2/1/17 Tr. 48 (Schatzel) (explaining that—consistent with the literature on student choice—students “often” do not even know if a particular program “even exist[s]” at a given school, but rather rely on “academic reputation”). *See also* 2/1/17 Tr. 48-49 (Schatzel) (prediction of shift to UMBC also based on information regarding student transfers).

UMBC

277. Similarly, at UMBC the top fifteen schools for its prospective students (based on SAT requests) include UMCP, Salisbury, and Frostburg—but not one of the HBIs. 1/30/17 Tr. 49-51 (Hrabowski); DRE192. Sixty-two percent of UMBC’s admitted students were also admitted at College Park, while other significant admission overlaps include Virginia Tech, the University of Delaware, Drexel University, Penn State, Loyola, the University of Virginia, and Salisbury—again, not including any of the HBIs. 1/30/17 Tr. 52-53 (Hrabowski); DRE193.

278. UMBC's applicants, like others, "certainly do" focus on average SATs and grades, and "clearly [UMBC's] students are looking for institutions that are going to have similar . . . academic profiles." 1/30/17 Tr. 112 (Hrabowski).

279. UMBC's higher graduation rates (80%-plus after six years, including students who graduate elsewhere) also narrow students' consideration sets, because "any family wants to know . . . whether or not students are going to succeed," and "the more sophisticated the family, the more they're going to look at it very analytically." 1/30/17 Tr. 111 (Hrabowski).

280. UMBC has shaped a unique institutional identity based not on its academic programs, but on the quality of its teaching and the way that it involves undergraduates in research and other activities outside the classroom. 1/30/17 Tr. 56 (Hrabowski). This has led to its designation as a Top 5 "academically innovative" school alongside institutions such as the Massachusetts Institute of Technology and Stanford University. 1/30/17 Tr. 54-55 (Hrabowski); DRE141.

University of Baltimore

281. For graduate programs, such as UB's MBA program and its Merrick School of Business, rankings are especially influential. 2/9/17 Tr. 38 (Schmoke). UB has the only online MBA program in Maryland which has been ranked every year by *U.S. News*. 2/9/17 Tr. 38 (Schmoke). And it has been ranked as the #26 Global Online MBA program, alongside schools like Wake Forest University, Boston College and the University of Florida, while Morgan's program is unranked. 2/9/17 Tr. 38-39 (Schmoke); DRE073 at 3. In more informal rankings, UB is considered a "regional

powerhouse” whose applicants’ consideration sets include Johns Hopkins, Loyola, George Mason and UMCP, while Morgan’s program is a locally-focused one. 2/9/17 Tr. 37 (Schmoke).

282. Similarly, UB’s well-regarded Criminal Justice programs compete for students with the John Jay College of Criminal Justice at CUNY, and locally with UMUC, UMCP and Stevenson—but not with Coppin. 2/9/17 Tr. 62 (Schmoke).

### UMUC

283. For different reasons, Maryland’s HBIs are not in most UMUC students’ consideration sets either. UMUC’s top competitors are predominantly for-profit online institutions, not public institutions and certainly not brick-and-mortar ones. 2/6/17 Tr. 43-44 (Miyares). Because of its unique emphasis on wholly or predominantly online instruction, UMUC does not consider any of the other Maryland institutions—including the HBIs—to be competitors. 2/6/17 Tr. 51 (Miyares). Put another way, UMUC’s distinctive methods of instructional delivery have expanded the pool of potential students, rather than taking them away from others. 2/6/17 Tr. 51 (Miyares). In addition, military students, who form a large proportion of UMUC enrollment, and are often stationed overseas will not transfer to a brick-and-mortar institution in Maryland. *See supra* Part II.B.4.c.

### **F. The State’s Remedial Proposal Represents A Lower-Risk, Higher-Reward Alternative for Increasing Other-Race Enrollment.**

284. There are lower-risk and lower-cost alternatives to Plaintiffs’ proposal, and those alternatives have a demonstrated ability to increase other-race enrollment at

Maryland's HBIs. Two of Maryland's HBIs, Bowie and UMES, credited their welcoming environments on campuses as integral to the successes that they have experienced in increasing other-race enrollment. Bowie creates a "welcoming campus climate" by offering courses and programs to promote cultural diversity and supports student organizations that are "associated with creating a deeper understanding of cultural diversity." DRE035 at 5-6. UMES, like Bowie, maintains a campus environment that is "inclusive, safe and respectful for people." DRE040 at 3. Dr. Bell highlighted the importance of marketing to target other-race students. 1/10/17 pm Tr. 64 ("I think it's important because often when white students hear that you're an HBCU, they don't see that [the] institution may be for them. And so I mention that we want to make sure that we show diversity on our campus and show that it is a place where all students can thrive if they choose to come.")

285. UMES, Maryland's most diverse HBI, identified key strategies that it has employed to increase diversity in its enrollment, including "[e]ngag[ing the] student body to assist with recruitment of non-African-American students and to contribute to retention through academic support services"; "[d]evelop[ing] and/or enhanc[ing] highly focused recruitment strategies aimed at non-African-American high-school students"; and "[b]uild[ing] partnerships with community colleges aimed at attracting non-African-American transfer students to UMES, as well as easing the transition between colleges." DRE040 at 5. Specific recruitment strategies include: "[b]uilding productive partnerships with key high schools that have high concentrations of non-African-American students; [c]oordinating outreach programs targeting communities of non-

African-Americans; [e]xpanding participation in summer programs on campus targeting non-African-American students; and [i]ncreasing participation in the Admissions Office's program for linking UMES non-African-American students as mentors to non-African-American students in the local public schools." DRE040 at 5.

286. Bowie's 2013-2018 Strategic Plan established a Strategic Goal to "honor its rich heritage and culture by recruiting, retaining, and graduating students who reflect the diversity of a globally oriented society, underscoring the belief that a diverse student body is a critical aspect of achieving national prominence as a world-class higher education institution." DRE033 at 13. Bowie's indicators for meeting this goal include "improvement in student population ethnic and racial diversity, second year retention rates and six-year graduation rates by sub-populations." DRE035 at 1-2.

287. Bowie also set a Strategic Goal to "define and proactively communicate the distinctive identity and value of the university to internal and external audiences to build understanding of who we are, what we do, and the value we offer. We will clearly articulate the attributes that differentiate BSU, focusing on our holistic academic experience, affordable educational opportunity, nurturing and inclusive environment and our rich legacy and tradition that provide a strong platform for success." DRE033 at 25. To achieve this goal, Bowie set objectives including: "[d]evelop institutional core messages and engage the campus community as front-line ambassadors to tell the Bowie State story" and to "[implement an integrated marketing plan to increase awareness of the university's strengths and value, support student enrollment, and effectively communicate to alumni and other key constituencies." DRE033 at 27.

288. As Dr. Schatzel put it in response to this Court's question, a "lower risk [and] cost" approach should focus on "[m]arketing [and] communication strategies, which would be to be able to move that prospect funnel in terms of identifying leads, communicating with them, creating awareness, being able to develop relationships with high schools, business communities, to be able to do that way." 2/1/17 Tr. 46 (Schatzel).

### **CONCLUSION**

For all of the foregoing reasons, no remedy is appropriate here. If the Court does determine to order a remedy, the Court should reject Plaintiffs' proposal and instead adopt the State's revised proposed remedy, or a remedy of similar scope providing flexibility to the HBIs in recruiting other-race students without risk to the rest of the Maryland public higher education system.