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Mr. R. Earl Lewis, Jr.
Deputy Secretary
Maryland Department of Transportation
7201 Corporate Center Drive
Hanover, MD 21076

Dear Deputy Secretary Lewis:

This letter responds to your question regarding whether NERA's disparity study, entitled *Business Disparities in the Maryland Market Area*, issued February 8, 2017 (the 2017 Disparity Study), also applies to the type of work that will likely be performed by approved licensees with respect to the proposed Expansion of Commercial Gaming (ECG).[1] As is explained in more detail below, our analysis finds that, while the exact type and mix of work to be performed with respect to ECG cannot be known until the specifications for permissible forms, means of conduct, and premises for wagering are established and licensees have been chosen, the 2017 Disparity Study very likely does provide a strong basis in evidence for the application of the Maryland Minority Business Enterprise (MBE) Program to the types of work involved in ECG.

I.   Background

The 2017 Disparity Study provides a comprehensive analysis of the participation of minority- and women-owned businesses in state contracting and in the geographic and product markets within which the State conducts its contracting. In Chapter IX of the 2017 Study, entitled "Suggested Best Practices for Race- and Gender-Conscious Contracting Programs," (p. 322), we wrote:

> Maryland has a strong basis in evidence to implement a race- and gender-based program for contracting and procurement based upon the findings in this Study. This record establishes that minorities and women in the Maryland market area continue to experience statistically significant disparities in their access to State and private sector contracts and in those factors necessary for business success. Further, the anecdotal evidence provides vivid individual accounts of the discriminatory barriers, both

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[1]   Maryland General Assembly, Department of Legislative Services. (2020). *Expansion of Commercial Gaming – Sports and event wagering referendum and minority business enterprise disparity study*. Senate Bill 4.

overt and covert, to their full and fair participation in both State and private sector procurement and contracting expenditures. The statistical and anecdotal evidence presented in this Study is strong evidence that establishes Maryland's compelling interest in remedying race and gender discrimination. The evidence supports the conclusion that affirmative intervention is still needed to dismantle the exclusion of racial and gender groups from the private sector market. Maryland will likely be a passive participant in a discriminatory marketplace if it fails to continue to address the issue. Moreover, as found in Chapter VI, there remain large and statistically significant disparities between the availability of M/WBEs and their utilization on State contracts despite the State's aggressive current efforts. These results support the need for continued remedial action.

NERA submitted the study to the Maryland Department of Transportation (MDOT) which then provided the study to the Maryland General Assembly and posted it on MDOT's website.

II.   Methods for the Current Inquiry

The State provided NERA with data regarding the types of work that would likely be part of ECG and an estimate of how the dollars spent on ECG would be distributed into various types of industries according to North American Industry Classification System (NAICS) codes. This analysis, entitled "*Analysis of the Sports and Event Wagering Industry and Relevant North American Industry Classification System (NAICS) Codes*," issued September 30, 2020 (the Keen Study) was performed by Keen Independent Research, a firm of consulting experts in the fields of market research, policy analysis, and business strategy. NERA was asked to examine the Keen Study regarding the types of work that are anticipated to be performed by an approved licensee for ECG and make a determination as to whether the industry codes relevant to that work were different in any consequential way from the industry codes examined in NERA's analysis of state contracting for the 2017 Disparity Study and whether that study could provide an evidentiary basis for applicability of the MBE Program to the proposed expansion of commercial gaming.

The NAICS uses a six-digit coding system to identify particular industry sectors, subsectors, industry groups and industries and their placement in a hierarchical classification structure. The first two digits identify the industry sector, the third designates the subsector, the fourth digit designates the industry group, and the last two digits designate the industry. In order to provide insight into the broader composition of firms involved in the gaming industry, NERA reviewed the NAICS codes in the Keen Study at both the industry group (four-digit) level and the industry (six-digit) level.

The Keen Study identified a total of 53 NAICS industry groups (*i.e.* 4-digit NAICS codes) applicable to ECG. Of these, 52, or more than 99 percent, also appear in the 2017 Disparity Study. These 52 NAICS industry groups account for more than 99 percent of the expected ECG spend identified by the Keen Study.[2] The 2017 Disparity Study published its results at the four-digit NAICS level.[3]

The Keen Study also identified a total of 72 NAICS industries (*i.e.* 6-digit NAICS codes) applicable to ECG. Of these, 69, or approximately 96 percent, also appear in the 2017 Disparity Study. Further, these 69 NAICS industries account for approximately 95 percent of the expected ECG spend identified by the Keen Study.[4]

Availability percentages for minority-owned and women-owned firms are already present in the 2017 Disparity Study for virtually all of the ECG-relevant NAICS industry groups and industries. Availability figures for the remaining NAICS industry groups and industries could be estimated using methods comparable to those from the 2017 Disparity Study.

III.   Supplementary Statistical Analyses

In the 2017 Disparity Study, I used a large dataset from the Census Bureau's American Community Survey to evaluate, using the statistical technique of regression analysis, the extent of disparities affecting minority- and women-owned businesses in the geographic market area and industries that are relevant to State of Maryland contracting activity. We considered disparities in three distinct but related areas: (1) wage and salary earnings, (2) business owner earnings, and (3) business formation rates.

With respect to disparities in wage and salary earnings, the 2017 Disparity Study concluded:

> … [M]inorities and women earn substantially and significantly less than their nonminority male counterparts in the State of Maryland market area. Such disparities are consistent with race and gender discrimination in the labor force that, in addition to its direct effect on workers, also reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through those internal labor markets and occupational

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[2]   The Keen Study presented its analysis only in terms of six-digit NAICS codes. NERA performed the conversions to 4-digit NAICS codes.

[3]   *See, e.g.*, NERA Economic Consulting, *Business Disparities in the Maryland Market Area* (February 8, 2017), pp. 45-58.

[4]   The 2017 Disparity Study also produced additional, unpublished, results at the six-digit NAICS level. *Ibid.*, p. 373, fn. 420.

hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere "societal discrimination" because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.[5]

With respect to disparities in business owner earnings, the 2017 Disparity Study concluded:

… [M]inority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of nonminority males, growth rates will slow, business failure rates will increase, and business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral market area.[6]

With respect to disparities in business formation rates, the 2017 Disparity Study concluded:

… [M]inorities and women in general are substantially and statistically significantly less likely to own their own businesses than would be expected based upon their observable demographic characteristics including age, education, geographic location, industry and trends over time. Moreover, as demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males whether they work as wage and salary employees or as entrepreneurs. These findings are consistent with results that would be observed in a discriminatory market area.[7]

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[5]   NERA Economic Consulting, *Business Disparities in the Maryland Market Area* (February 8, 2017), p. 6.

[6]   *Ibid.*

[7]   *Ibid.*, p. 165.

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As a check on our findings above, I re-created the regression analyses that were performed for the 2017 Disparity Study and customized them to reflect the NAICS codes identified in the Keen Study that are relevant to ECG.

The results of these analyses are summarized below in Table 1, which consists of three columns, one for each type of regression analysis performed, and seven rows, one for each minority group, one for all minority groups combined, and one for all minorities and non-minority women combined. "Adverse/Significant" in a given cell indicates that the corresponding regression coefficient was negative and statistically significant – a result consistent with the presence of discrimination. Of the 21 different coefficients summarized in Table 1, 19 (90.5%) are consistent with the presence of discrimination.[8]

Table 1. Regressions Analysis Results on NAICS Codes for ECG

	Wages and Salaries	Business Owner Earnings	Business Formation Rate
African American	Adverse / Significant	Adverse / Significant	Adverse / Significant
Hispanic	Adverse / Significant	Adverse / Significant	Adverse / Significant
Asian/Pacific Islander	Adverse / Significant	Not Adverse / Not Significant	Not Adverse / Not Significant
Native American	Adverse / Significant	Adverse / Significant	Adverse / Significant
Minorities	Adverse / Significant	Adverse / Significant	Adverse / Significant
Non-minority Female	Adverse / Significant	Adverse / Significant	Adverse / Significant
Minorities & Women	Adverse / Significant	Adverse / Significant	Adverse / Significant

IV.   Conclusions

After reviewing and analyzing the data received from the State, and bearing in mind that the 2017 Disparity Study concluded that discrimination continues to adversely impact minority-owned and women-owned firms throughout the Maryland economy, I conclude that an additional study is not required based upon the information available to me at this

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[8]   The underlying regression results for Table 1 are provided in the Appendix, Tables A.1 through A.3.. *See also* Chapter IV of the 2017 Disparity Study (pp. 121-176) for additional documentation of the data and methods used in these analyses.

time. This is because the 2017 Disparity Study provides a strong basis in evidence, consisting of both quantitative and qualitative findings that would support the use of race- and gender-based measures to remediate discrimination affecting minority- and women-owned businesses in the types of industries in which an approved licensee for ECG is likely to participate. The 2017 Disparity Study also contains evidence suggesting that minority- and women-owned businesses are even more disadvantaged in the context of competing for prime contracts as opposed to subcontracts. Moreover, the 2017 Disparity Study details a range of race- and gender-neutral activities that the State has already undertaken to address existing disparities. The 2017 Disparity Study found that, notwithstanding these race- and gender-neutral activities, many of which have been in place for a number of years, disparities continue to exist in both public and private contracting in the same geographic and industry markets in which an approved licensee for ECG is likely to operate. These disparities are for the most part large, adverse, and statistically significant. In addition, the 2017 Disparity Study contains both qualitative and quantitative evidence to suggest that economy-wide contracting disparities in the relevant markets are even greater than disparities in the public sector. This difference may be due to the fact that the State has, for a number of years, operated an assertive MBE Program in an attempt to remedy discrimination. This Program has reduced, though not yet eliminated, the effects of discrimination in public procurement. Absent such affirmative remedial efforts by the State, I would expect to see evidence in the relevant markets in which the State's approved ECG licensees will operate that is consistent with the continued presence of business discrimination.
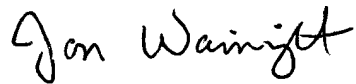
In closing I would note that I am an economist, but not a lawyer. I hold a doctorate in economics and I am well qualified to review the economic and statistical data presented to me and to opine on its significance. I am currently an Affiliated Consultant with NERA, after retiring in 2018 as a NERA Managing Director, the chair of its national affirmative action consulting practice, a member of its labor and employment practice, and the head of its Austin, Texas office. I have conducted numerous disparity and availability studies in my career as well as many other studies concerning various aspects of business markets and labor markets. These studies are often done in the context of litigation involving business enterprise or employment discrimination. I have acted as an expert witness in MBE program and other discrimination-related litigation on several occasions. I have testified and been accepted as an expert economist and statistician in federal district courts in California, Florida, Georgia, Illinois, Minnesota, Texas, and Wyoming, in the U.S. Court of Federal Claims, in state courts in Illinois and Texas, and before both chambers of the U.S. Congress.

As an expert in disparity studies and the economics of business discrimination, I have a high level of expertise concerning how economic data relates to the law that has been applied to MBE and related programs by courts and legislatures. I have not been asked to review the specific details of the Maryland Senate Bill 4 and I do not offer any opinion

about the specifics of that legislation. I would note, however, that even where a strong basis in evidence exists to support a race- or gender-based program, that fact alone should not end the inquiry. Specifically, it is imperative that any race- or gender-conscious goals or other mechanisms applied to the gaming industry be carefully established and implemented in a manner consistent with the law.

Sincerely,

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Managing Director (retired)
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Table A.1. Annual Wage Earnings Regressions, NAICS Codes for ECG, 2014-2018

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.407 (143.45)	-0.410 (138.45)	-0.410 (138.56)
Hispanic	-0.306 (129.93)	-0.306 (127.75)	-0.306 (129.86)
Asian	-0.161 (48.76)	-0.157 (45.99)	-0.158 (46.08)
Native American	-0.307 (31.60)	-0.306 (31.36)	-0.307 (31.63)
Two or more races	-0.267 (50.71)	-0.266 (49.22)	-0.267 (50.66)
Nonminority Female	-0.334 (192.64)	-0.336 (189.61)	-0.336 (189.97)
Age	0.188 (366.51)	0.188 (366.52)	0.188 (366.52)
Age^2	-0.002 (321.48)	-0.002 (321.48)	-0.002 (321.48)
MDMA	0.486 (44.53)	0.480 (39.31)	0.475 (40.63)
MDMA*African American		0.051 (3.80)	0.054 (4.12)
MDMA*Hispanic		-0.013 (0.92)	n/a
MDMA*Asian		-0.066 (4.68)	-0.063 (4.55)
MDMA*Native American		-0.071 (0.68)	n/a
MDMA*Two or more races		-0.018 (0.64)	n/a
MDMA*Nonminority Female		0.045 (4.41)	0.048 (4.91)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	1,206,321	1,206,321	1,206,321
Adj. R^2	.3677	.3677	.3677

Source: NERA calculations from the 2014-2018 ACS Public Use Microdata Sample. *See* 2017 Disparity Study, pp. 127-131 for a description of specifications 1 through 3.

Notes: (1) Universe is all private sector wage and salary workers between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual wages between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (4) Geography is defined based on place of residence; (5) "MDMA" is shorthand for "State of Maryland Market Area," which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (6) "n/a" in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described in the 2017 Disparity Study, pp. 129-131; (7) The "Yes" values next to the "Education," "Geography" and "Industry" rows indicate that control variables were included in the regression specification for these factors; (8) For any race or sex group that has a statistically significant MDMA interaction, the formula for the net impact for that group is as follows: log(main coefficient+1)+log(interaction term+1). In Table A.1, the net impact for African Americans is log(-0.410 + 1) + log(0.054 + 1) = -0.475. For Asians, the net impact is -0.237. For nonminority females, the net impact is -0.363. All three figures are statistically significant.

Table A.2. Annual Business Owner Earnings Regressions, NAICS Codes for ECG, 2014-2018

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.453	-0.454	-0.453
	(27.07)	(26.06)	(27.03)
Hispanic	-0.179	-0.183	-0.180
	(13.96)	(14.08)	(14.00)
Asian	-0.205	-0.220	-0.219
	(10.32)	(10.82)	(10.75)
Native American	-0.345	-0.353	-0.345
	(7.21)	(7.39)	(7.22)
Two or more races	-0.349	-0.349	-0.349
	(13.71)	(13.41)	(13.72)
Nonminority Female	-0.404	-0.406	-0.404
	(46.88)	(46.36)	(46.88)
Age	0.168	0.168	0.168
	(58.59)	(58.56)	(58.58)
Age^2	-0.002	-0.002	-0.002
	(50.98)	(50.96)	(50.97)
MDMA	0.339	0.254	0.307
	(6.12)	(4.30)	(5.54)
MDMA*African American		0.057	n/a
		(0.67)	
MDMA*Hispanic		0.132	n/a
		(1.64)	
MDMA*Asian		0.345	0.290
		(3.44)	(3.04)
MDMA*Native American		1.848	n/a
		(1.87)	
MDMA*Two or more races		-0.023	n/a
		(0.15)	
MDMA*Nonminority Female		0.093	n/a
		(1.64)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	154,354	154,354	154,354
Adj. R^2	.1090	.1090	.1090

Source: NERA calculations from the 2014-2018 ACS Public Use Microdata Sample. *See* 2017 Disparity Study, pp. 139-141, for a description of specifications 1 through 3.

Notes: (1) Universe is all persons in the private sector with positive business earnings between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual business earnings between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (4) Geography is defined based on place of residence; (5) "MDMA" is shorthand for "State of Maryland Market Area," which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (6) "n/a" in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2; (7) The "Yes" values next to the "Education," "Geography" and "Industry" rows indicate that control variables were included in the regression specification for these factors; (8) For any race or sex group that has a statistically significant MDMA interaction, the formula for the net impact for that group is as follows: log(main coefficient+1)+log(interaction term+1). In Table A.2, the net impact for Asians is $\log(-0.219 + 1) + \log(0.290 + 1) = 0.007$, and is not statistically significant.

Table A.3. Business Formation Regressions, NAICS Codes for ECG, 2014-2018

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African American	-0.047	-0.047	-0.046
	(45.74)	(43.84)	(45.47)
Hispanic	-0.027	-0.027	-0.027
	(34.43)	(34.62)	(34.62)
Asian	-0.037	-0.039	-0.039
	(35.74)	(36.60)	(36.59)
Native American	-0.036	-0.036	-0.036
	(12.28)	(12.32)	(12.33)
Two or more races	-0.015	-0.015	-0.015
	(8.53)	(8.32)	(8.56)
Nonminority Female	-0.022	-0.022	-0.022
	(35.25)	(35.18)	(35.18)
Age	0.011	0.011	0.011
	(68.81)	(68.79)	(68.79)
Age^2	-0.000	-0.000	-0.000
	(42.08)	(42.06)	(42.06)
MDMA	-0.019	-0.026	-0.025
	(7.27)	(9.28)	(9.32)
MDMA*African American		0.004	n/a
		(0.95)	
MDMA*Hispanic		0.015	0.015
		(3.34)	(3.25)
MDMA*Asian		0.048	0.047
		(8.65)	(8.63)
MDMA*Native American		0.018	n/a
		(0.52)	
MDMA*Two or more races		-0.002	n/a
		(0.24)	
MDMA*Nonminority Female		0.010	0.010
		(3.14)	(3.04)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	1,321,777	1,321,777	1,321,777
Pseudo R^2	.1543	.1543	.1544

Source: NERA calculations from the 2014-2018 ACS Public Use Microdata Sample. *See* 2017 Disparity Study, pp. 153-154, for a description of specifications 1 through 3.

Notes: (1) Universe is all private sector labor force participants between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and nonminority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.64 (1.96) (2.58) are statistically significant at a 90 (95) (99) percent confidence level; (4) Geography is defined based on place of residence; (5) "MDMA" is shorthand for "State of Maryland Market Area," which includes the State of Maryland, the State of Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (6) "n/a" in Specification 3 indicates that the category was not included in the regression because it was not statistically significant in Specification 2; (7) The "Yes" values next to the "Education," "Geography" and "Industry" rows indicate that control variables were included in the regression specification for these factors; (8) For any race or sex group that has a statistically significant MDMA interaction, the formula for the net impact for that group is simply the sum of the main coefficient and the interaction term. In Table A.3, the net impact for Hispanics is -0.027 + 0.015 = -0.012. For Asians, the net impact is 0.008. For nonminority females, the net impact is -0.012. The net impact for Hispanics and nonminority females is statistically significant. The net impact for Asians is not statistically significant.