# A PROPOSED MAP OF MICHIGAN HOUSE OF REPRESENTATIVES ELECTORAL DISTRICTS

"EGUIA MI HOUSE 1/15/2024"



Jon X. Eguia. January 15, 2024

As the Michigan Independent Citizen Redistricting Commission –and a Special Master— begin work to redraw a map of electoral districts to be used in the 2024, 2026, 2028 and 2030 elections to the Michigan House of Representatives, I submit this map proposal as an example to show that it is possible to draw a map that:

- redraws the boundaries of the seven districts (districts 1, 7, 8, 10, 11, 12 and 14) found to be in violation of the Equal Protection clause in *Agee v Benson*, with their new boundaries set not on the basis of race, thus providing the main remedy required by the Court;
- ii. leaves intact almost all of the other 103 districts in the official 2022 MI House map adopted by the Commission in 2021, thus narrowly targeting the revision to attain exclusively the remedy sought by the *Agee v Benson* ruling, and maximally deferring to the Commission's work otherwise;
- iii. creates districts of opportunity for minority voters, wherever they constitute a majority in a geographically compact area, thus complying with the Voting Rights Act;
- iv. reflects the neighborhood communities in the City of Detroit and surrounding areas in Metro Detroit;
- v. preserves the partisan fairness results attained by the official 2022 MI House map, introducing no new advantage or disadvantage to any party through these changes;
- vi. performs at least as well as the official 2022 MI House map on equalizing population across districts, respecting county, city and township boundaries, and compactness.

This document is divided into three sections. In Part I, I present the map, overall and district by district. In Part II I explain the motivation, process, and method I used to draw it. And in Part III, I evaluate the map according to quantitative measures of compliance with its objectives.

The map is publicly available at this link at

https://davesredistricting.org/join/bb5ac744-40b4-433c-bf7a-e7538f563176.

# PART I. THE "EGUIA MI HOUSE JAN 2024 MAP"

This map preserves 100 districts in the official 2022 MI House map, which the State of Michigan makes available at <a href="https://www.michigan.gov/micrc/mapping-process/final-maps">https://www.michigan.gov/micrc/mapping-process/final-maps</a>.

This proposed map only revises districts 1, 4, 7, 8, 9, 10, 11, 12, 13 and 14, all of them in the City of Detroit, or adjacent to it, to the north. All these revised districts are shown here.



Figure 1. Map of all ten revised districts (districts 1, 4, 7, 8, 9, 10, 11, 12, 13 and 14).

I next provide two more focused maps, one of the districts in Oakland and Macomb counties (north), and another of the districts in Wayne Co. (south); and then a district-by-district map and description of each district.



Figure 2. Districts 7, 11, 12, 13 and 14.



Figure 3. Districts 1, 4, 8, 9, and 10 in Wayne Co.

Next, I show and I describe each district individually, starting with the eastern-most District 11, and proceeding clockwise.

Names in blue refer to cities, and blue lines to their boundaries; smaller names in black refer to current neighborhoods as compiled by the City of Detroit, and soft gray lines to their boundaries.

# I.i. DISTRICT 11: GROSSE POINTE



Figure 4. District 11: Grosse Pointe and South St. Clair Shores.

This district includes the cities of Grosse Pointe Park, Grosse Pointe, Grosse Pointe Farms, Gross Pointe Woods, and Harper Woods (all in Wayne Co.) and Grosse Pointe Shores (straddling Wayne Co. and Macomb Co.) in their entirety, and then stretching into St. Clair Shores just as far north as needed to attain population equality, with the northern district boundary ending up half-way between 10 Mile Rd and 11 Mile Rd. These cities –with the exception of Harper Woods— are composed of very affluent coastal communities (among the richest in the state of Michigan, with double the state's average household income), which share an interest in Lake St. Clair and the entrance to the Detroit River.



# I.ii. DISTRICT 10: DETROIT EAST OF GRATIOT (M-3)

Figure 5. District 10: City of Detroit, East of Gratiot (M-3 roadway).

This district includes all the easternmost neighborhoods of Detroit, located East of Gratiot Avenue (M-3 state highway) and of the Conner Creek Industrial Complex (with its Chrysler manufacturing plant). It also stretches west of Conner Creek up to and including the "West End", "Indian Village" and "Gold Coast" neighborhoods, and Belle Isle.

# 8 10 $\pm$ DET **Highland Park** Hamtramc Detroit Gratiot New Poletown Center Islandview 9 Midtown Elmwood 1 Detroi Corktown Windsor

# I.iii. DISTRICT 9: DOWNTOWN AND HAMTRAMCK

Figure 6. District 9: Downtown Detroit to Hamtramck.

This district includes the business heart of Detroit, from the skyscrapers Downtown, to Midtown and New Center along Woodward Ave.; the city of Hamtramck, Poletown, Gratiot, Elmwood and Islandview east of Woodward; and Corktown to the west.



# I.iv. DISTRICT 1: MID- AND SOUTH-WEST DETROIT, AND RIVER ROUGE

Figure 7. District 1: Midwest Detroit, Southwest Detroit, and River Rouge.

The core of this district is Southwest Detroit (delimited north by Michigan Avenue) and Midwest Detroit (informally considered as the pie slice delimited between Michigan Ave and Grand River Ave). In addition, it includes the City of River Rouge to the south, and a few neighborhoods just north of Grand River, up to Lasalle Gardens and Elijah McCoy. Notably, this district includes the largest concentration of Hispanic residents in Michigan, in Southwest Detroit, west of the Mexicantown neighborhood. Hispanic residents constitute a majority of residents in this half of the district.

# I.v. DISTRICT 4



Figure 8. District 4. Parts of Dearborn and of Detroit's West side.

This district includes parts of northwest Dearborn, the neighborhood of Davison-Schoolcraft, the neighborhood of Oakman Blvd. up to Livernois Ave on the East, Barton-McFarland, and everything to the west of these three neighborhoods that wasn't already included in districts 3 to the southwest, 16 to the west, or 5 or 6 to the north. Most of the boundaries of District 4 are predetermined by the constraint to respect the Commission's lines for districts 3, 5, 6 and 16 around it; under this constraint, District 4 of necessity features a more eclectic geographic identity than other districts.



# I.vi. DISTRICT 8: NORTH-END, HIGHLAND PARK AND PALMER

Figure 9. District 8: Detroit's North End and Palmer, and Highland Park.

This district includes Detroit's Woodward corridor from North End to Palmer —with the City of Highland Park between them—, together with neighborhoods adjacent to this corridor in the near East Side and near West side. It reaches north up to the City of Detroit limits and Wayne County limits at 8 Mile Rd.

# I.vii. DISTRICT 7: SOUTHEAST OAKLAND CO.



Figure 10. District 7: The Southeast corner of Oakland Co., including Hazel Park, Ferndale, and Pleasant Ridge.

This district includes the southeast corner of Oakland County, including the cities of Ferndale, Pleasant Ridge and Hazel Park, most of Madison Heights, and the southern part of Royal Oak, up to 12 Mile Rd. Its western and northern boundaries were predetermined by the limits of districts 6, 56 and 57 in the 2022 MI House map. As the Oakland Co. population left outside these districts was just shy of the population required for a full district, District 7 also crosses over into Macomb Co. to pick up one precinct in the City of Warren.

# I.viii. DISTRICT 14: WARREN



Figure 11. District 14: Southwest Warren, Northeast Warren,, and Center Line.

This district includes much of the City of Warren, with the entirety of the City of Center Line inside it. District 14's boundaries to the north were pre-set by the limits of districts 58 and 61 in the official 2022 MI House map. The north-south divide between districts 14 and 13 follows the 11 Mile Rd. divider between Northeast Warren and Southeast Warren (it is also the boundary between Zip codes 48088 and 48093 (in District 14) to the north of 11 Mile Rd, and Zip code 48089 (in District 13) to the South. The east-west divide between districts 13 and 14 follows the boundary between the Fitgerald School District (in District 14) and the Van Dyke School District (in District 13).



# I.ix. DISTRICT 13: DETROIT NEAR EAST SIDE AND SOUTHEAST WARREN

Figure 12. District 13: Detroit's near East Side and Southeastern Warren.

This district includes most of the wedge between Conant Ave, Gratiot Ave and 8 Mile Rd. in Detroit's near (closest to Woodward) East Side, and it also includes the southeastern neighborhood of the City of Warren, on the north side of 8 Mile Rd. A large part of the district's footprint –but very little of its population— is in the Airport Sub neighborhood, home to the Coleman Young municipal airport.

# I.x. DISTRICT 12: EASTPOINTE AND ROSEVILLE



Figure 13. District 12: Eastpointe and Roseville (and parts of St Clair Shores).

This district includes the City of Eastpointe, most of Roseville, and some of St. Clair Shores. Splitting both Roseville and St. Clair Shores could have easily been avoided by redrawing the boundaries of District 63 to the north of District 12, so that District 12 fills up Roseville before it adds any precincts from St. Clair shores, but I prioritize deferring to the Commission's approved 2022 Michigan House map, over respecting city boundaries.

# PART II. MOTIVATION AND PROCESS

#### II.i. About the author.

I, Jon X. Eguia, am a Professor of Economics and (by courtesy), of Political Science at Michigan State University, and an affiliate of the *Institute for Public Policy and Social Research* (IPPSR), also at Michigan State University.

I have been a resident of Michigan since 2014.



My expertise on redistricting focuses on partisan fairness. I am the author of one peerreviewed article and one unpublished working paper on redistricting; I have been invited to discuss this work at the Michigan Law School and the New York University Law School, and I am the lead author of the 163-page Report: "Michigan Redistricting Map Analysis" released by the IPPSR in December 2021, and quoted in the federal Court Opinion in the case *Agee v. Benson*, which has triggered the current effort to redraw the Michigan legislative maps. In addition, in 2020 and 2021, I served on two Orientation and Training panels for the Michigan Independent Citizen Redistricting Commission, and throughout the 2021 redistricting process, I was frequently quoted in the Michigan media (newspapers, radio and television) on the topic. In December 2023, I was a panelist at a conference for citizen commissioners and reform advocates on redistricting, organized by *Common Cause*.

I have received funding from IPPSR, and I am also indirectly grateful to the Joyce Foundation and Kellogg Foundation for their support of IPSSR's initiatives to support the redistricting process in Michigan.

#### II.ii. The task.

On December 21, 2023, a federal Court 3-judge panel in the Western District of Michigan, South Division, ruled on the case *Agee v Benson*, declaring that districts 1, 4, 6, 8, 9, 10, 11, 12, and 14 in the official 2022 Michigan House map were impermissibly drawn *"predominantly on the basis of race"*, in violation of the Equal Protection clause in the 14<sup>th</sup> Amendment to the U.S. Constitution.<sup>1</sup> These districts must therefore be redrawn. Subsequently, the federal Court panel set a February 2, 2024 deadline for the Michigan Independent Redistricting Commission to produce a new map, and it appointed a Special Master to produce a back-up map, and a second Special Master to oversee the two maps.<sup>2</sup>

The Michigan House of Representatives has 110 representatives, one per district. Holding fixed the other 103 districts that are not directly affected by the *Agee v Benson* ruling, the remedy required by the Court consists of drawing seven electoral districts in the following geographic area, in a manner consistent with federal Law, and with seven criteria on redistricting listed in Article IV §6 (13) in the constitution of the State of Michigan.

<sup>&</sup>lt;sup>1</sup>*Agee v. Benson*, No. 1: 22-cv-272 (W.D. Mich. Dec. 21, 2023).

<sup>&</sup>lt;sup>2</sup> The Court also ruled that six districts in the official 2022 MI Senate map must be redrawn, but since the new electoral districts are not needed until 2026, as of the time of writing, the Court is prioritizing the redrawing of the House map.



Figure 14. The required remedy: to map the gray area into seven districts that comply with the Law.

As can be surmised by visual inspection, districts 4, 9 and 13 protrude into the geographic area that must be redrawn, much constraining any possible redrawing, and compromising the goal of drawing districts compliant with the seven criteria in the Michigan Constitution.

Redrawing other districts was not explicitly required in the *Agee v Benson* Opinion, but nor was it explicitly forbidden, and providing the remedy sought by the Court becomes a much more attainable goal if districts 4, 9 and 13 are redrawn as well. The *Agee v Benson* Opinion requires a remedy that appears to necessitate redrawing districts 4, 9, and 13.

Therefore, the practical exercise I undertake is to consider one hundred of the 2022 MI House districts fixed, and to draw ten districts out of the geographic areas covered by districts 1, 4, 7, 8, 9, 10, 11, 12, 13 and 14. The starting canvas for this exercise is the following:



Figure 15. A more realistic remedy: to map this gray area into ten law-compliant districts.

To a lesser extent, the same argument for redrawing additional districts beyond the seven struck down by the *Agee v Benson* ruling applies to District 6 as well. This district is adjacent to only one district that must necessarily be redrawn (District 7), but perhaps it is easier to draw a better new District 7 if District 6 is redrawn as well. This is, indeed, the approach taken by Plaintiffs, in the demonstration map by Sean Trende (map "Trende House") submitted as evidence, which redraws districts 4, 9, 13 and 6, in addition to the seven that must be redrawn.

While the court panel did not explicitly rule out edits to additional districts (including, possibly, to every district), a principle of minimal intervention, with maximal deference for the previous work of the Commission, favors maintaining as many of the other districts as possible

intact, as in the official 2022 Michigan House districts, and to narrowly tailor the redrawing to the minimal goal of providing the remedy required by the Court's ruling.

While the principle of minimal intervention to narrowly tailor any redrawing to the remedy required by the Court applies equally to any map-drawer (the Commission, the Special Master, or members of the public submitting map suggestions), the principle of deference to the work of the Commission does not apply –or, at least, it does not apply as forcefully— to the Commission itself. The Commission can change its views, and it can amend its previous acts with a newer act. The Commission may thus see more leeway to amend large parts or the whole of the Michigan House map adopted in 2022, than the Special Master or members of the public.

Any map drawn outside the process outlined by the Michigan Constitution –which assigns responsibility for map-drawing exclusively to the Commission—deviates from this constitutional path, and thus, I argue, the deviation should be minimized, by providing the remedy required by the *Agee v Benson* ruling in a manner that respects as much of the Commission's work as possible.

With this in mind, the map I propose only introduces changes to three additional districts (districts 4, 9, and 13), changes I find necessary to provide the required remedy in the seven districts struck down by Agee v Benson.

#### II.iii. Sources of information and tools used.

I use the mapping software freely available to the public through the online redistricting application "Dave's Redistricting App" or "DRA 2020" at <u>https://davesredistricting.org</u>.

This app allows mapping not only by precinct, but also by Census block, making it possible to better align the districts to communities of interest whose borders might not align with precinct boundaries.

The app also provides county, city, and township boundaries as a layer, along with demographic information, past election results for each precinct, and computations about how any map drawn on or uploaded to the app respects county boundaries and compactness goals, among others.

In addition to the data available in the app, to identify Communities of Interest (COIs) I use the following sources:

-Within the City of Detroit, to determine where exactly to place district boundaries, my main source is the <u>Current City of Detroit Neighborhoods</u> interactive map made publicly available by the City of Detroit at its data portal at:

https://data.detroitmi.gov

The City of Detroit describes this map as: "Current.(non\_historic).neighborhood.boundaries. as.compiled.by.Department.of.Neighborhoods.staff.in.concert.with.community.groups," and its latest update dates to December 6, 2023. This is thus an ideal resource to determine community boundaries within the City of Detroit.

Whenever possible, I align district boundaries to neighborhood boundaries, so that each neighborhood (a neighborhood as defined with input from Detroit community groups) is kept whole within the same district. Almost all neighborhoods are kept whole in this manner.

- -Within the City of Warren, absent such an authoritative source for the definition of its neighborhoods, I use the map of zip code lines and the map of school districts within the district.<sup>3</sup>
- -Across cities, to determine which areas constitute a more natural unit of representation if put together in the same district, I use Census data on household income (preferring to put together communities with more aligned economic interests), and geographic features such as coastal or inland nature of the city.<sup>4</sup>

<sup>&</sup>lt;sup>3</sup> On the relevance of zip codes for redistricting, see: Curiel, John A., and Tyler Steelman. "Redistricting out representation: Democratic harms in splitting zip codes." *Election Law Journal: Rules, Politics, and Policy* 17.4 (2018): 328-353, or Steelman, Tyler S., and John A. Curiel. "Redistricting Out Descriptive Representation: The Harmful Effect of Splitting ZIP Codes on the Constituent–Representative Link." *Journal of Race, Ethnicity, and Politics* 8.1 (2023): 1-19.

<sup>&</sup>lt;sup>4</sup> I have personally explored some of this geographic area on foot, specifically its southern and eastern edge along districts 1, 9 and 10 and 11 on this map, from River Rouge to Gross Pointe, observing the character of its neighborhoods and their comparative urban development. While less quantifiable, it is possible that this direct personal experience added context to any decision, in a way that was not the case for other geographic areas I have only studied in maps, and not experienced in person.

#### II.iv. The Process.

I set to draw ten districts out of the area in Figure 14.

At a first round of map-drawing, to make sure that these ten districts are not drawn "predominantly on the basis of race", I proceeded to draw without attention to race, without populating the demographic information in each district. I drew contiguous, equal population districts, drawing district boundaries that follow community (neighborhood) boundaries, city boundaries and county boundaries, and seeking to keep together communities with more aligned interests that constitute more meaningful units of representation. I deferred attention to VRA compliance to a second round, in which I would edit the results of the first round on account of race only as needed to satisfy with the VRA by providing necessary districts of opportunity to minority voters who constitute a sufficiently large majority in a reasonably compact geographic area.

Attentive to the 3-judge panel's assertion "that the Commission put cities like Gross Pointe, Bloomfield Hills, and Birmingham—some of the wealthiest cities in Michigan, where Porsches and Range Rovers are commonplace, and Cadillacs more numerous than Chevrolets—in the same districts as some of the poorest neighborhoods in Detroit, itself belies the idea that "communities of interest" were paramount in drawing these districts" (Agee v Benson), and because "communities of interest" are paramount in drawing the districts in this proposed map, I start by drawing District 11 in such a manner that several of the richest cities in Michigan (Grosse Pointe, Grosse Pointe Park, Grosse Pointe Farms, Grosse Pointe Shores, and Grosse Pointe Shores) are not in the same district as any the poorest neighborhoods of Detroit. Rather, District 11 eschews Detroit altogether, and grows north. A general aversion to cross county lines is overcome here because the Village of Grosse Pointe Shores (officially incorporated as a "city" in 2009) straddles Wayne Co. and Macomb Co., indicating that the county line is not a barrier separating communities in this case. Starting with the six cities northwest of the City of Detroit in Wayne County, District 11 then completes its population by taking as many of the southernmost precincts of the next city north in Macomb Co., namely St Clair Shores. Bounded by District 11 to the east, 8 Mile Rd to the north, and Gratiot Ave to the west, I drew District 10 by adding neighborhoods southwestward as far as needed.

District 9 followed next. After reaching Downtown staying East of Gratiot, I continued adding neighborhoods to District 9 northward along the Woodward Ave. corridor, through Midtown and up to New Center. The City of Hamtramck was next, together with the neighborhoods between it and Gratiot. On this first pass, District 9 did not contain Corktown (this was revisited on the second pass).

District 1 is largely confined by the city boundaries of Dearborn, Melvindale, Lincoln Park, and Ecorse. The only choices left are its boundaries within Detroit, and initially I set to Grand River Ave as the targeted divider, with Detroit's Southwest and Midwest in District 1, (this was later revisited at the margins).

District 4 is also largely wedged by its neighboring districts, which I left intact. The only change I introduced was to give it a more compact shape, retrenching its arm that had stretched to touch Highland Park, toward its core closer to Grand River Ave.

District 8's shape was then confined by the boundaries of districts 9, 1, 4 and 6, and 8 Mile Rd, growing east of Woodward Ave (and ultimately east of Conant St.) as much as needed to attain population equality.

District 7 then almost perfectly fit the area of Oakland Co. that needed to be assigned to a new district. I added only one adjacent precinct in the City of Warren in Macomb Co. for population equality.

Happily, the remainder of the cities of Detroit and Warren was just right for the population of two districts, so districts 13 and 14 could take up this population, without crossing over into Roseville or Eastpointe east of Warren, and District 12 was then set to be composed of Roseville, Eastpointe, and the remainder of St. Clair Shores, without crossing over into Warren or Detroit.

I drew districts 13 and 14 last, first determining that District 14 would stay in Warren, and District 13 would straddle Detroit and Warren. While I first drafted a dividing boundary that ran east-west between 9 Mile Rd and 10 Mile Rd, with District 13 below it, and District 14 above it...

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I could not find a compelling community justification for drawing such a horizontal dividing line. Warren seems to more easily divide itself in vertical lines: their own City Council precincts run north-south, not east-west as I intended,<sup>5</sup> and the community-dividing manufacturing infrastructure and train tracks through Warren also run north-south. I thus revisited this choice, and settled on a less compact choice that is but more aligned with my understanding of the Warren physical and social communities: Warren's South-East neighborhood, delimited by 11 Mile Rd to the north (which is also the limit of Zip code 48089) would be part of District 13, and the rest of Warren would be District 14. A small adjustment to better equalize population pushed the western boundary between the two districts westward from the boundary of Zip code 48089 to the boundary of the Van Dyke school district instead.

This completed a draft map of ten districts, which I then proceeded to analyze, searching for any minority community that constitutes a majority over a reasonably compact area with large enough population (about 90,000 residents) to constitute a district, but that currently is split into two districts in such a manner that its candidates of choice might lose in both districts. I did not find any. I did, however, find out that my District 1 was very similar to the District 1 in the 2022 MI House map, that the *Agee v Benson* found to be drawn predominantly on the basis of race in violation of the Equal Protection Clause. This seemed concerning. So, I endeavored to tweak District 1, to differentiate it from the one the Court had struck down. In a revision, District 1 then shed Corktown to District 9, and it picked up instead Elijah McCoy neighborhood. The resulting District 1 is now not as similar to the original one, and its demographics are such that it is now perhaps a slightly better district of opportunity for citizens who identify as "Black" (they now constitute 41.3% of the voting age population, instead of 40.8% in the 2022 MI House map, according to the most expansive definition of "identify as 'Black' ", and 38.4% vs 38.0% according to the most restrictive, while the size of the population that identifies as "Hispanic" remains almost unchanged from 38.5% to 38.4%).

I considered three options to turn District 1 into a safer district of opportunity for voters who identify as "Black", but each of these involved unsatisfactory trade-offs. First, District 1 could

<sup>&</sup>lt;sup>5</sup> https://www.cityofwarren.org/wp-content/uploads/2023/01/Precinct-Map-2023-council.pdf

expand toward New Center, and yield precincts along the Detroit River to District 9; but District 9 is itself only marginally a district of opportunity, so this would either just flip their status, or leave both districts at about 45% "Black", which does not seem a compelling interest to justify the race-based change. Second, District 1 could expand into District 8 along Livernois Ave, while District 8 expands southward taking the District 1 precincts adjacent to District 9 all the way to Corktown; this would leave both District 1 and District 8 with majorities of residents who identify as "Black", but it would also make them not compact, nor congruent with any meaningful geographic area. Third, District 4 could cross the Dearborn-Detroit city boundaries to take up some of the heavily Hispanic population in Claytown, while District 1 takes instead some of Barton-McFarland, a neighborhood that overwhelmingly identifies as "Black;" such swap could bring both districts to close to 50% "Black", but the resulting District 1 would not capture a geographically compact area, District 4 would be even less substantively meaningful as a community than it currently is, and the Hispanic community in District 1 would be split. I therefore found no satisfactory solution to create a safe district of opportunity for voters who identify as "Black" out of a district that also contains the Hispanic community in Midwest and Southwest Detroit.

Substantive issues thus settled, further edits were thereafter only minimal adjustments at the block level, to adjust district boundaries to neighborhood boundaries, when precincts straddle neighborhoods.

This completed my map-drawing process. Following the example of United Kingdom's boundary commissions for England, Scotland, Wales, and Northern Ireland, tasked with redistricting these territories for parliamentary elections in the United Kingdom, I then attempted to assign a descriptive name to each district. Attempting to name districts with a label that is descriptive of the territory in the district encourages the creation of districts aligned with geographically meaningful communities... which are the ones for which existing names are descriptive (say, hypothetically, "Troy" or "Downriver"). The custom of naming districts only by numbers (MI House-1, MI House-2, etc.) can hide the reality of gerrymandered districts that do not represent any meaningful geographic communities and can only be labeled in a misleading or cumbersome way.

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## PART III. EVALUATION

Subjective evaluations of one's own creation are always difficult, as enough detachment to avoid positive bias is hard to avoid. I thus turn solely to objective, quantitative measures to assess this proposed map according to the goals set on Page 2 of this document.

#### III.i. Districts are drawn not according to race, i.e. the map provides remedy.

While this is a question of process, more than outcomes, some evidence from the racial composition of each district sheds light on this question. The MGGG Redistricting Lab at Tufts University created 100,000 maps of Michigan House district maps computationally generated according to an algorithm that did not consider racial information. In almost every such map (to be precise, in more than 97,500 of them), the number of districts with at least a certain share of voters who identify as "Black" is in the range indicated on the first row of Table 1 below. The number in the 2022 MI House map is on the second row, and the number in this map on the third row. On the last two rows, if a cell contains two or three numbers, it means that the number of districts in which the share of voters who identify as "Black" is above the threshold depends on whether we count only voters who identify exclusively as "Black" (leading to the lowest number), or also voters who identify as another race, or as "Hispanic", as well as identifying as "Black" (leading to the highest number).

# Districts at least "Black"	50%	55%	65%	75%	85%
Almost all maps drawn without considering race	5 to 9	4 to 8	3 to 6	2 to 5	1 to 3
2022 MI House map	7	2, 3 or 4	0	0	0
This map	9 or 10	5, 6 or 7	2	2	1 or 2

Table 1. Do these maps look like those drawn without attention to race?

If the numbers for a given map are not aligned within the range met by most maps drawn without attention to race, that is indicative statistical evidence that the maps were probably drawn paying attention to race. The 2022 MI House map is one such case; almost all maps drawn without attention to race feature at least one district that is at least 85% Black, two that are at least 75% Black, and three that are at least 65% Black, whereas the 2022 MI House map features no such district. The map I proposed (mostly) resolves this discrepancy, yielding at least one

district over 85% Black and two over 75%. Bear in mind that this proposal only redraws 10 districts; any attention to race that the Commission devoted to the other 100 districts is still carried over here.

#### III.ii. Most other districts are left intact, i.e. the remedy is narrowly tailored.

As discussed above, this map edits the boundaries of three additional districts (districts 4, 9 and 13), besides the seven that must be redrawn. Thus, it preserves 100 out of 103 districts that the Court did not explicitly require to be redrawn. I explained above why these three districts ought to be redrawn.

#### III.iii. The map provides sufficient districts of opportunity to comply with the VRA.

It is difficult to establish conclusively if a district is a district of opportunity, in which the candidates preferred by this minority (if it votes as a bloc) get elected to office: districts in which this minority constitutes over 50% of the voting-age population are definitely districts of opportunity, but for those in which it constitutes a large minority (say between 40% and 50%), it depends on voting patterns in primary elections, over which we have insufficient data... but the closer to 50% the size of the minority, the stronger the likelihood that the district will function as one of opportunity to the minority.

It is also difficult to assess how many districts of opportunity a map ought to establish. It depends on what degree of compactness we deem reasonable, and other "totality of circumstances" of uneasy interpretation.

Quantitatively, we can at least assess how many districts of opportunity a map creates, both the certain ones (above 50% share of voting-age voters of a given minority group), and the less certain ones (between say 40% and 49%).

This is the breakdown of the share of voting-age voters who identify as "Black" in this proposed map, again providing two percentages, the lower one using the most restrictive notion of "Black" identification, and the larger one using the most inclusive notion. I order the districts from lowest to highest "Black" identification.

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District	7	11	14	12	1	9	4	13	8	10
Between	7.3%	15.5%	15.9%	27.2%	38.4%	48.0%	56.1%	61.4%	83.4%	87.1%
and	8.5%	16.5%	17.0%	28.6%	41.3%	50.1%	58.2%	63.8%	86.6%	89.8%

Table 2. Share of voting-age residents who identify as "Black" in the redrawn districts.

Districts 10, 8, 13, 4, and 9 (all fully or largely in the City of Detroit) are districts of opportunity for residents who identify as "Black." Perhaps District 1 might be too, depending on voting patterns; note that District 1 is also 39.4% Hispanic, so it might conceivably also work as a district of opportunity for voters who identify as "Hispanic", again depending on voting patterns.

In addition, districts 5, 6, 16, 18 and 70, left intact from the 2022 MI House map, are also districts of opportunity, for a total of at least ten such districts, with perhaps District 17 (42% to 44% "Black") as an unreliable eleventh one.

For comparison, the adopted 2022 MI House map created only seven reliable districts of opportunity, even using a generous notion of "reliable" ("Black" voting-age population share above 48%, using the most expansive definition of "Black"; and above 45% using the most restrictive one). Further, almost all maps (more than 95,000 out of 100,000) computationally generated by the MGGG Lab without attention to race create between 6 and 9 districts of opportunity that are at least 48% "Black".

While VRA compliance ultimately rests on more factors than just these calculations, what these numbers show is that the current proposal generates more reliable districts of opportunity for voters who identify as "Black" than the 2022 MI House map or than most maps that pay no attention to race.

#### III.iv. The map reflects neighborhood communities in Detroit and Metro Detroit.

While "communities of interest" remain difficult to identify in an objective manner, and thus a quantitative analysis of compliance with the constitutional criterion of reflecting such communities remains elusive<sup>6</sup>, this proposed revision map exhibits the following desirable feature:

<sup>&</sup>lt;sup>6</sup> The constitutional assertion that "Districts shall reflect the state's diverse population" appears to be more of an aspirational value to be internalized, than a concrete operationalizable and measurable instruction.

Almost every revised district boundary line in this proposal follows either the county boundary line dividing Wayne Co. from Macomb Co., or a city boundary line, or, for district lines within the City of Detroit, a neighborhood boundary line according to the map neighborhoods that the City of Detroit's Department of Neighborhoods compiled *"in concert with community groups."* This is arguably the best approximation to a map of communities in the City of Detroit, compiled by the very same communities that we seek to represent.

Further, the district boundary lines within the City of Warren follow Zip code boundary lines and school district boundary lines. That is, in almost all cases and wherever possible, in the entire revision, district boundary lines follow pre-existing jurisdictional or administrative lines that are substantively meaningful to the communities that reside on either side of the line.

#### III.v. The map preserves the partisan fairness balance in the 2022 MI House map.

In this and related analyses of partisan fairness in MI House maps, I use election results from the 2016 and 2020 U.S. Presidential elections, the 2018 and 2020 U.S. Senate elections in Michigan, and the 2018 Michigan Governor election, as reported by DRA 2020.

The area included in districts 1, 4, 7, 8, 9, 10, 11, 12, 13 and 14 is heavily Democratic. In fact, the Democratic Party won all ten districts in each of these five elections, according to both the district boundaries in this proposed map, and according to the adopted 2022 MI House map.

The revision to the district boundaries is thus not expected to have any implication for the relative balance of power between the two major parties in the Michigan House of Representatives, neither for future elections in which the Michigan electorate marginally favors the GOP as they did in the 2016 Presidential election, nor if they favor Democrats by a large margin as in the 2018 Governor election... or for any other election result in between.<sup>7</sup>

<sup>&</sup>lt;sup>7</sup> I analyze the partisan fairness of the 2022 MI House map in detail in the Report: "Michigan Redistricting Map Analysis" released by the IPPSR in December 2021. Legal claims against the partisan fairness of the 2022 MI House map were rejected by the Michigan Supreme Court in March 2022 in *League of Women Voters of Michigan v. Indep. Citizens Redistricting Commission.* 

# III.vi. This map is at least as good on population equality, county boundaries and compactness.

The ideal district population, which would equalize the population across all districts, is 91,612 inhabitants. The largest deviation in the 2022 MI House map is District 21's population, which at 93,876 inhabitants, is a deviation of 2,264, or 2.47%.

District 21 is left intact, and it also constitutes the largest deviation in the map proposed here, so the revisions do no worse (they could not do better without revising District 21) than the adopted 2022 MI House map.

The map in this proposal performs better than the adopted 2022 MI House map on respecting county boundaries. The adopted 2022 MI House map splits 48 counties across at least two districts, creating a total of 202 pieces of a county in the state assigned to a distinct district. This proposed map still splits 48 counties (as it necessarily must, since the 100 intact districts by themselves split 48 counties), but it reduces the number of separate pieces to 198, that is, it eliminates four separate pieces, by virtue of seeking to follow, but preferably not cross, county lines. Specifically, the following four inter-county splits, from East to West, do not occur:

- 1. District 10 is now fully in Wayne Co. no longer crosses over into Macomb Co.
- Conversely, District 12 is now fully in Macomb Co. and no longer crosses over into Wayne Co.
- 3. District 14 is now fully in Macomb Co. and no longer crosses over into Wayne Co.
- 4. District 8 is now fully in Wayne Co. and no longer crosses over into Oakland Co.

In addition, District 7, which straddled Oakland Co. and Wayne Co. is now mostly in Oakland Co., now crosses over into Macomb Co. instead.

The new districts are also more compact.

The Reock compactness score of a district is the ratio of the area of the district to the area of the smallest circle that would completely enclose the district. This captures how concentrated near its center the district is. Values range from a minimum of zero to a maximum of 1, attained by a circle. The average Reock compactness score of the ten revised districts is 0.45, compared to 0.36 in the 2022 MI House map.

The Popper-Polsby compactness score of a district captures how smooth is the border of the district. Formally, it is ratio of the area of the district to the area of a circle whose circumference is equal to the length of the boundary of the district. The average Popper-Polsby score in the ten revised districts is 0.36, negligibly better than in the 2022 MI House map, which also approximates to 0.36.

#### **SUMMARY**

This proposed map provides the remedy to the Michigan House district map required by the Court ruling in *Agee v Benson*, by editing the boundaries of ten districts (districts 1, 7, 8, 10, 11, 12 and 14 as required by the ruling, and 4, 9 and 13 as well).

I drew the new district boundaries either with no attention to race, or with attention to race narrowly tailored to checking, solely for sake of VRA compliance, whether a minority group could constitute a local majority in a compact geographic area of size large enough for a district. The new district boundaries reflect instead community boundaries: district boundaries follow county boundaries, city boundaries, and Detroit neighborhood boundaries as compiled by the City of Detroit in concert with community groups.

The resulting map aligns in its district demographics with the distribution of demographic characteristics of computationally generated maps drawn without attention to race; it creates more reliable districts of opportunity for minority citizens than either most computationally generated maps drawn without attention to race, or the official 2022 MI House map; it preserves the partisan fairness of this map, and it improves on its scores on respecting county boundaries and compactness.

I submit it as a proof-of-concept, hoping that it can be useful as an illustrative example to the interested public, and to those entrusted with the responsibility to draw the official map, as they resume their work to draw their own map.

**Note**: Given the urgency of the proceedings, at the time of writing (1/15/2024), this document may still contain errors not yet edited away. All errors are my own, and I apologize for each of them. This is a "live" document, and I will maintain an updated version, correcting errors as I detect them, available at:

https://sites.google.com/msu.edu/eguia/redistricting