

Exhibit B – Methodology and Sources

1. In the preparation of this report, I analyzed population and geographic data from the Decennial Census and the American Community Survey.

2. For my redistricting analysis, I used a geographic information system (GIS) software package called *Maptitude for Redistricting*, developed by the Caliper Corporation. This software is deployed by many local and state governing bodies across the country for redistricting and other types of demographic analysis.

3. The geographic boundary files that I used with *Maptitude* are created from the U.S. Census 1990-2010 TIGER (Topologically Integrated Geographic Encoding and Referencing) files.

4. I used population data from the 1990-2020 PL 94-171 data files published by the U.S. Census Bureau. The PL 94-171 dataset is published in electronic format and is the complete count population file designed by the Census Bureau for use in legislative redistricting. The file contains basic race and ethnicity data on the total population and voting-age population found in units of Census geography such as states, counties, municipalities, townships, reservations, school districts, census tracts, census block groups, precincts (called voting districts or “VTDs” by the Census Bureau) and census blocks.

5. I developed the illustrative plans presented in this report using *Maptitude for Redistricting*. The *Maptitude for Redistricting* software processes the

TIGER files to produce a map for display on a computer screen. The software also merges demographic data from the PL 94-171 files to match the relevant decennial Census geography.

6. I also reviewed and used data from the American Community Survey (“ACS”) conducted by the Census Bureau – specifically, the 1-year 2022 ACS, and the 5-year 2017-2021 ACS Special Tabulation of citizen population and voting age population by race and ethnicity (prepared by the Census Bureau for the U.S. Department of Justice) and available from the link below: <https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>.

7. For district level CVAP estimates, I used block-level disaggregated data sets prepared by the Redistricting Data Hub and available from the link below: <https://redistrictingdatahub.org/dataset/alabama-cvap-data-disaggregated-to-the-2020-block-level-2021/>.

8. For district-level registered voter estimates, I geocoded a statewide file listing 2023 registered voters by race that was provided to the Plaintiffs’ attorneys by the Defendants in July 2023.

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