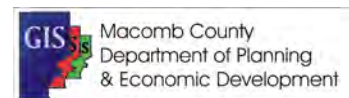


2021 Apportionment Plan Review



LUCIDO PLAN

Compiled by Macomb County Department of Planning and
Economic Development



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LUCIDO PLAN ANALYSIS

Performed by Macomb County Department of Planning and Economic Development

Methodology

Michigan Charter Counties Act 293 of 1966 MCL45.505(2)

Each district shall be contiguous, compact, and as nearly square in shape as is practicable, depending on the geography of the county area involved, and shall be drawn without regard to partisan political advantage. Each city and township shall be apportioned so that it shall have the largest possible number of complete districts within its boundaries before any part of the city or township is joined to territory outside the boundaries of the city or township to form a district. Townships, villages, cities, and precincts shall be divided only if necessary to meet the population standard.

United States Supreme Court 377 U.S. 633 (1964), 20 WMCA, Inc. v. Lomenzo

Case set standard 11.9% population variance for districts

District Contiguosness

All Districts are Contiguous

LUCIDO PLAN ANALYSIS

Performed by Macomb County Department of Planning and Economic Development

Measure of District Population Variance

District Target Population: 67,682 (County Population 879,872* / 13 Districts)

* State of Michigan CCD Tool Population Total = 881,217 - 1,345 [SOM Macomb Correctional Facility pop.]

District	Total Population	Target Population	Variance	Variance %
District #1	66,375	67,682	-1,307	-1.931%
District #2	68,282	67,682	600	0.886%
District #3	67,099	67,682	-583	-0.861%
District #4	68,932	67,682	1,250	1.847%
District #5	67,157	67,682	-525	-0.776%
District #6	67,189	67,682	-493	-0.728%
District #7	69,326	67,682	1,644	2.429%
District #8	70,279	67,682	2,597	3.837%
District #9	65,917	67,682	-1,765	-2.608%
District #10	69,687	67,682	2,005	2.962%
District #11	67,023	67,682	-659	-0.974%
District #12	66,095	67,682	-1,587	-2.345%
District #13	66,511	67,682	-1,171	-1.730%
	<u>879,872</u>			

Maximum Allowable Variance: less than 11.99%

Permitted Plan Variance: 3.837% to -8.153%

Actual Plan Variance: 3.837% to -2.608%

Plan Meets the 11.9% Standard

LUCIDO PLAN ANALYSIS

Performed by Macomb County Department of Planning and Economic Development

Measure of District Compactness

	Polsby-Popper Score
District #1	0.515
District #2	0.637
District #3	0.612
District #4	0.668
District #5	0.595
District #6	0.515
District #7	0.356
District #8	0.250
District #9	0.242 Least Comp
District #10	0.639
District #11	0.471
District #12	0.749 Most Comp
District #13	0.448

The Polsby-Popper test is a mathematical compactness measure of a shape developed to quantify the degree of gerrymandering of political districts. A district's Polsby-Popper score will always fall within the interval of 0-1, with a score of 0 indicating complete lack of compactness and a score of 1 indicating maximal compactness.

Formula: $PP(D) = \frac{4\pi A(D)}{P(D)^2}$

A(D) = Area of District
P(D) = Perimeter of District

ANALYSIS

Mean (Avg)	0.515
Min	0.242
Max	0.749
Median	0.515
Std. Dev.	0.158 (Average distance from mean value)

LUCIDO PLAN ANALYSIS

Performed by Macomb County Department of Planning and Economic Development

Analysis of Splits Total 6 splits

Cities 3

- City of St. Clair Shores
- City of Sterling Heights
- City of Warren

Townships 3

- Clinton Township
- Macomb Township
- Shelby Township

Villages 0

Census VTD 0

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Section 1 – District Descriptions

District 1

Armada Township

Bruce Township

City of Memphis

Ray Township

City of Richmond

Richmond Township

Shelby Charter Township (part) / VTD(s): Shelby Twp 16, Shelby Twp 17, Shelby Twp 18

Washington Township

District 2

Chesterfield Township

Lenox Township

City of New Baltimore

District 3

Shelby Charter Township (part) / VTD(s): Shelby Twp 1, Shelby Twp 10, Shelby Twp 11, Shelby Twp 12, Shelby Twp 13, Shelby Twp 14, Shelby Twp 15, Shelby Twp 19, Shelby Twp 2, Shelby Twp 20, Shelby Twp 21, Shelby Twp 22, Shelby Twp 23, Shelby Twp 24, Shelby Twp 25, Shelby Twp 26, Shelby Twp 3, Shelby Twp 30, Shelby Twp 4, Shelby Twp 5, Shelby Twp 6, Shelby Twp 7, Shelby Twp 8, Shelby Twp 9

City of Utica

District 4

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Macomb Township (part) / VTD(s): Macomb Twp 1, Macomb Twp 10, Macomb Twp 11, Macomb Twp 15, Macomb Twp 16, Macomb Twp 17, Macomb Twp 18, Macomb Twp 2, Macomb Twp 20, Macomb Twp 21, Macomb Twp 22, Macomb Twp 23, Macomb Twp 24, Macomb Twp 25, Macomb Twp 26, Macomb Twp 27, Macomb Twp 28, Macomb Twp 29, Macomb Twp 3, Macomb Twp 30, Macomb Twp 31, Macomb Twp 32, Macomb Twp 34, Macomb Twp 35, Macomb Twp 36, Macomb Twp 37, Macomb Twp 9

District 5

City of Sterling Heights (part) / VTD(s): Sterling Heights 1, Sterling Heights 13, Sterling Heights 14, Sterling Heights 15, Sterling Heights 16, Sterling Heights 17, Sterling Heights 2, Sterling Heights 22, Sterling Heights 23, Sterling Heights 24, Sterling Heights 25, Sterling Heights 31, Sterling Heights 32, Sterling Heights 33, Sterling Heights 34, Sterling Heights 35, Sterling Heights 43, Sterling Heights 44, Sterling Heights 45, Sterling Heights 7, Sterling Heights 8

District 6

City of Sterling Heights (part) / VTD(s): Sterling Heights 10, Sterling Heights 11, Sterling Heights 12, Sterling Heights 18, Sterling Heights 19, Sterling Heights 20, Sterling Heights 21, Sterling Heights 26, Sterling Heights 27, Sterling Heights 28, Sterling Heights 29, Sterling Heights 3, Sterling Heights 30, Sterling Heights 36, Sterling Heights 37, Sterling Heights 38, Sterling Heights 39, Sterling Heights 4, Sterling Heights 40, Sterling Heights 41, Sterling Heights 42, Sterling Heights 5, Sterling Heights 6, Sterling Heights 9

District 7

Clinton Charter Township (part) / VTD(s): Clinton Twp 1, Clinton Twp 10, Clinton Twp 19, Clinton Twp 23, Clinton Twp 27, Clinton Twp 35, Clinton Twp 36, Clinton Twp 37, Clinton Twp 38, Clinton Twp 39, Clinton Twp 40, Clinton Twp 41, Clinton Twp 42, Clinton Twp 44, Clinton Twp 45, Clinton Twp 46

Macomb Township (part) / VTD(s): Macomb Twp 12, Macomb Twp 13, Macomb Twp 14, Macomb Twp 19, Macomb Twp 33, Macomb Twp 4, Macomb Twp 5, Macomb Twp 6, Macomb Twp 7, Macomb Twp 8

Shelby Charter Township (part) / VTD(s): Shelby Twp 27, Shelby Twp 28, Shelby Twp 29

District 8

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Clinton Charter Township (part) / VTD(s): Clinton Twp 11, Clinton Twp 12, Clinton Twp 14, Clinton Twp 15, Clinton Twp 16, Clinton Twp 17, Clinton Twp 18, Clinton Twp 2, Clinton Twp 21, Clinton Twp 22, Clinton Twp 24, Clinton Twp 25, Clinton Twp 26, Clinton Twp 28, Clinton Twp 29, Clinton Twp 30, Clinton Twp 31, Clinton Twp 32, Clinton Twp 33, Clinton Twp 34, Clinton Twp 4, Clinton Twp 43, Clinton Twp 5, Clinton Twp 6, Clinton Twp 7, Clinton Twp 8, Clinton Twp 9

City of Mt Clemens

District 9

Harrison Charter Township

City of St Clair Shores (part) / VTD(s): St Clair Shores 1, St Clair Shores 11, St Clair Shores 12, St Clair Shores 13, St Clair Shores 14, St Clair Shores 15, St Clair Shores 16, St Clair Shores 17, St Clair Shores 18, St Clair Shores 19, St Clair Shores 2, St Clair Shores 20, St Clair Shores 21, St Clair Shores 22, St Clair Shores 23, St Clair Shores 8, St Clair Shores 9

City of The Village of Grosse Pointe Shores A Michigan City

District 10

Clinton Charter Township (part) / VTD(s): Clinton Twp 13, Clinton Twp 20, Clinton Twp 3

City of Fraser

City of Roseville

District 11

City of Warren (part) / VTD(s): Warren 1-46, Warren 1-47, Warren 1-56, Warren 2-41, Warren 2-43, Warren 2-44, Warren 2-45, Warren 2-48, Warren 2-55, Warren 2-57, Warren 3-24, Warren 3-25, Warren 3-28, Warren 3-32, Warren 3-49, Warren 3-51, Warren 3-52, Warren 3-53, Warren 3-54, Warren 4-26, Warren 4-27, Warren 4-31, Warren 4-33, Warren 4-50, Warren 4-58

District 12

City of Center Line

City of Warren (part) / VTD(s): Warren 1-1, Warren 1-19, Warren 1-34, Warren 1-38, Warren 1-5, Warren 1-6, Warren 2-20, Warren 2-35, Warren 2-36, Warren 5-12, Warren 5-13, Warren 5-18, Warren 5-22, Warren 5-23, Warren 5-3, Warren 5-4, Warren 5-7, Warren 5-8, Warren 5-9

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District 13

City of Eastpointe

City of St Clair Shores (part) / VTD(s): St Clair Shores 10, St Clair Shores 3, St Clair Shores 4, St Clair Shores 5, St Clair Shores 6, St Clair Shores 7

City of Warren (part) / VTD(s): Warren 3-10, Warren 3-11, Warren 3-14, Warren 4-15, Warren 4-17

Section 2 – Data and Demographics

Population

District Name	Total Population	Target Population	Variance	Variance %	Compactness Polsby Popper	Compactness Schwartzberg
District 1	66,375	67,682	-1,307	-1.932	0.515	0.718
District 10	69,687	67,682	2,005	2.962	0.639	0.799
District 11	67,023	67,682	-659	-0.974	0.471	0.686
District 12	66,095	67,682	-1,587	-2.345	0.749	0.865
District 13	66,511	67,682	-1,171	-1.731	0.448	0.669
District 2	68,282	67,682	600	0.886	0.637	0.798
District 3	67,099	67,682	-583	-0.862	0.612	0.782
District 4	68,932	67,682	1,250	1.846	0.668	0.817
District 5	67,157	67,682	-525	-0.776	0.595	0.771
District 6	67,189	67,682	-493	-0.729	0.515	0.718
District 7	69,326	67,682	1,644	2.428	0.356	0.597
District 8	70,279	67,682	2,597	3.836	0.250	0.500
District 9	65,917	67,682	-1,765	-2.608	0.242	0.492

Race

District Name	Total White Alone	Total Black Alone	Total American Indian And Alaskan Native Alone	Total Asian Alone	Total Native Hawaiian And Pacific Islander Alone	Total Other Alone
District 1	59,774	832	135	823	44	1,118
District 2	58,738	4,795	223	655	20	710

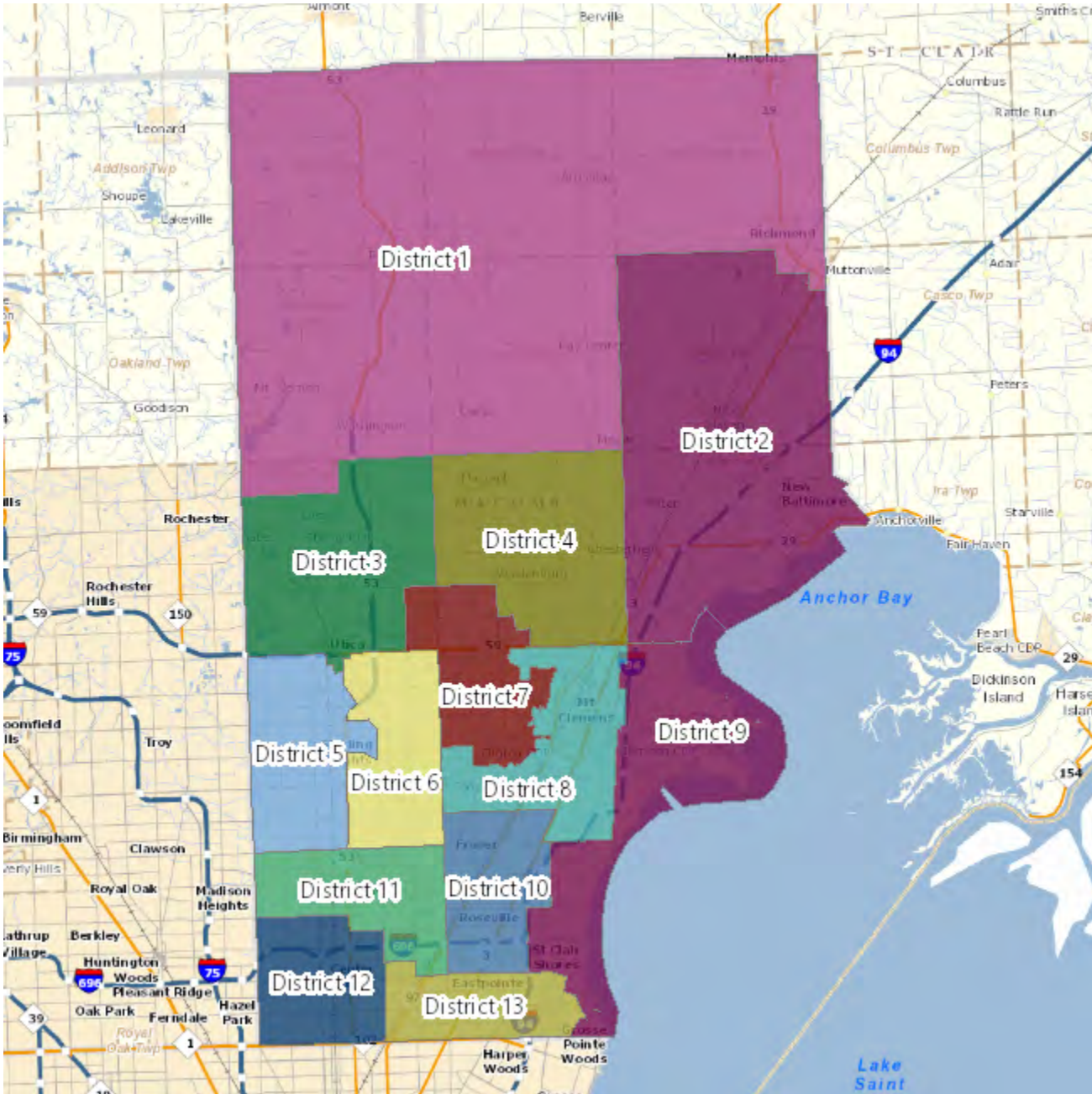
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District 3	57,141	2,423	175	2,792	10	880
District 4	58,386	3,532	99	2,516	17	541
District 5	52,763	3,728	133	7,129	8	525
District 6	54,280	5,074	121	3,831	9	481
District 7	57,601	5,511	120	2,039	17	587
District 8	47,648	16,001	206	1,200	19	833
District 9	56,848	4,178	148	661	17	490
District 10	49,517	12,856	260	1,357	20	650
District 11	47,971	8,974	150	6,114	6	484
District 12	36,721	15,969	265	8,138	22	824
District 13	34,876	25,603	190	1,166	20	702

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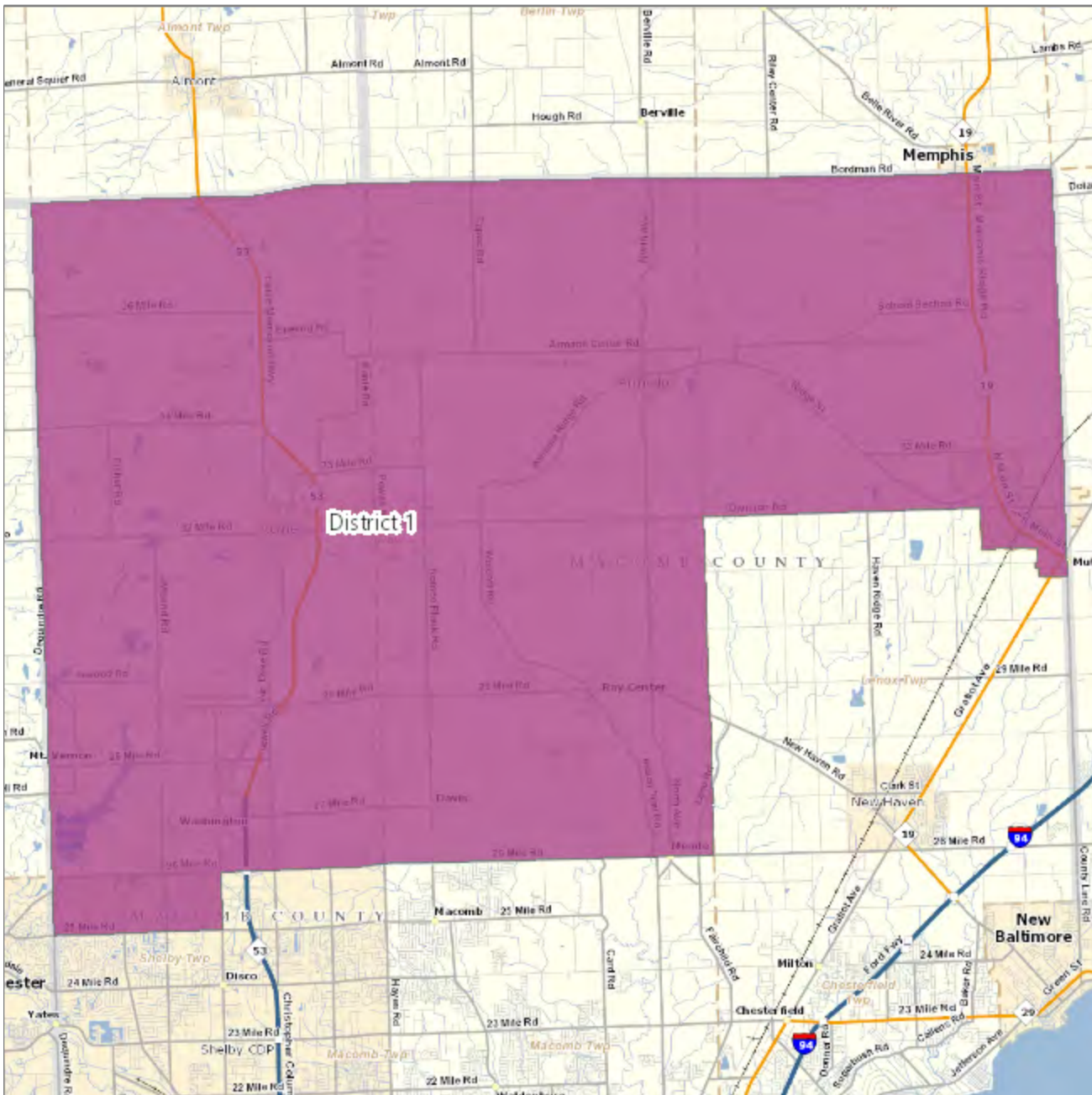
Section 3 – Maps

Macomb County District Map



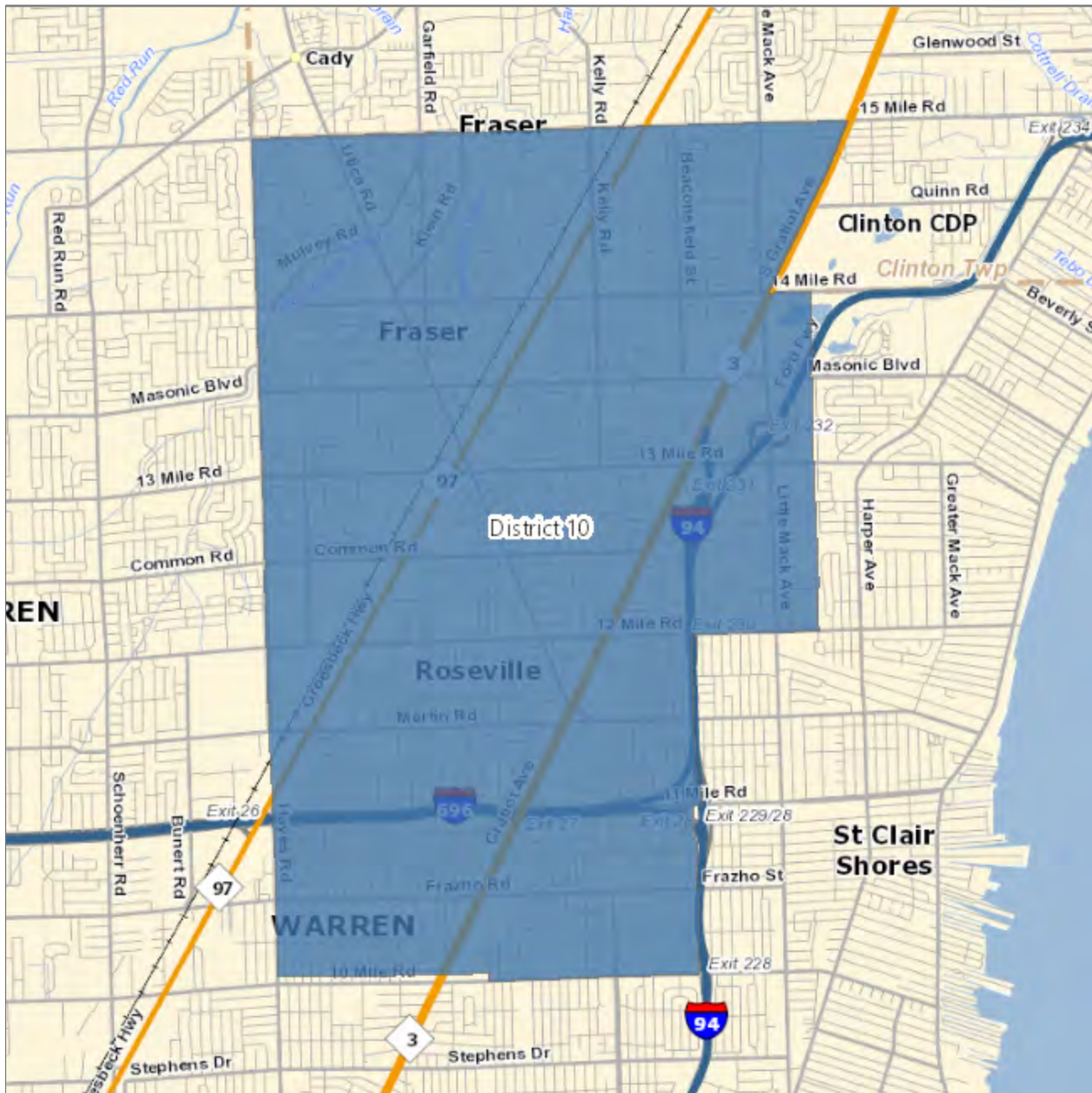
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District 1 - population 66,375



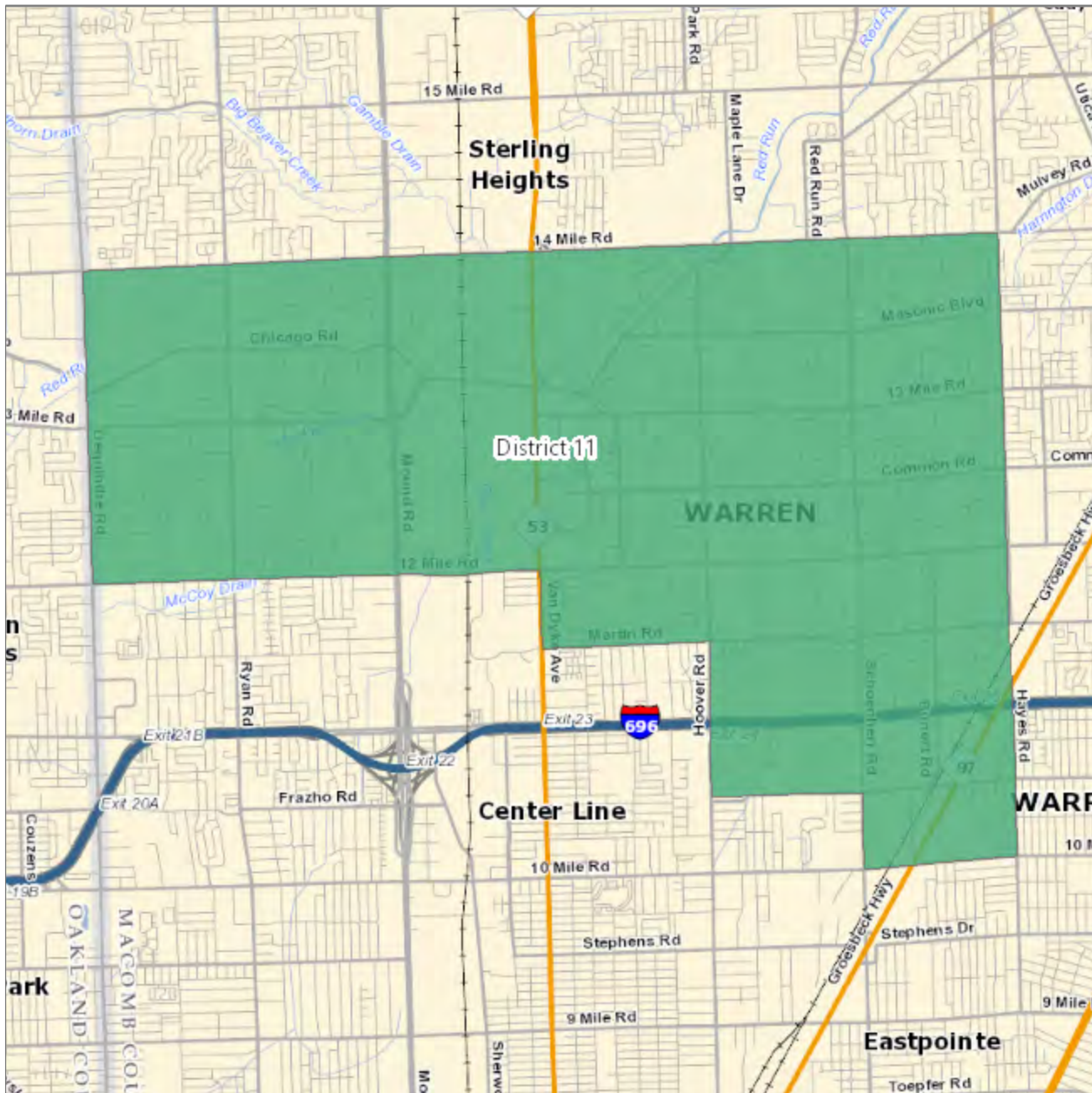
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District 10 - population 69,687



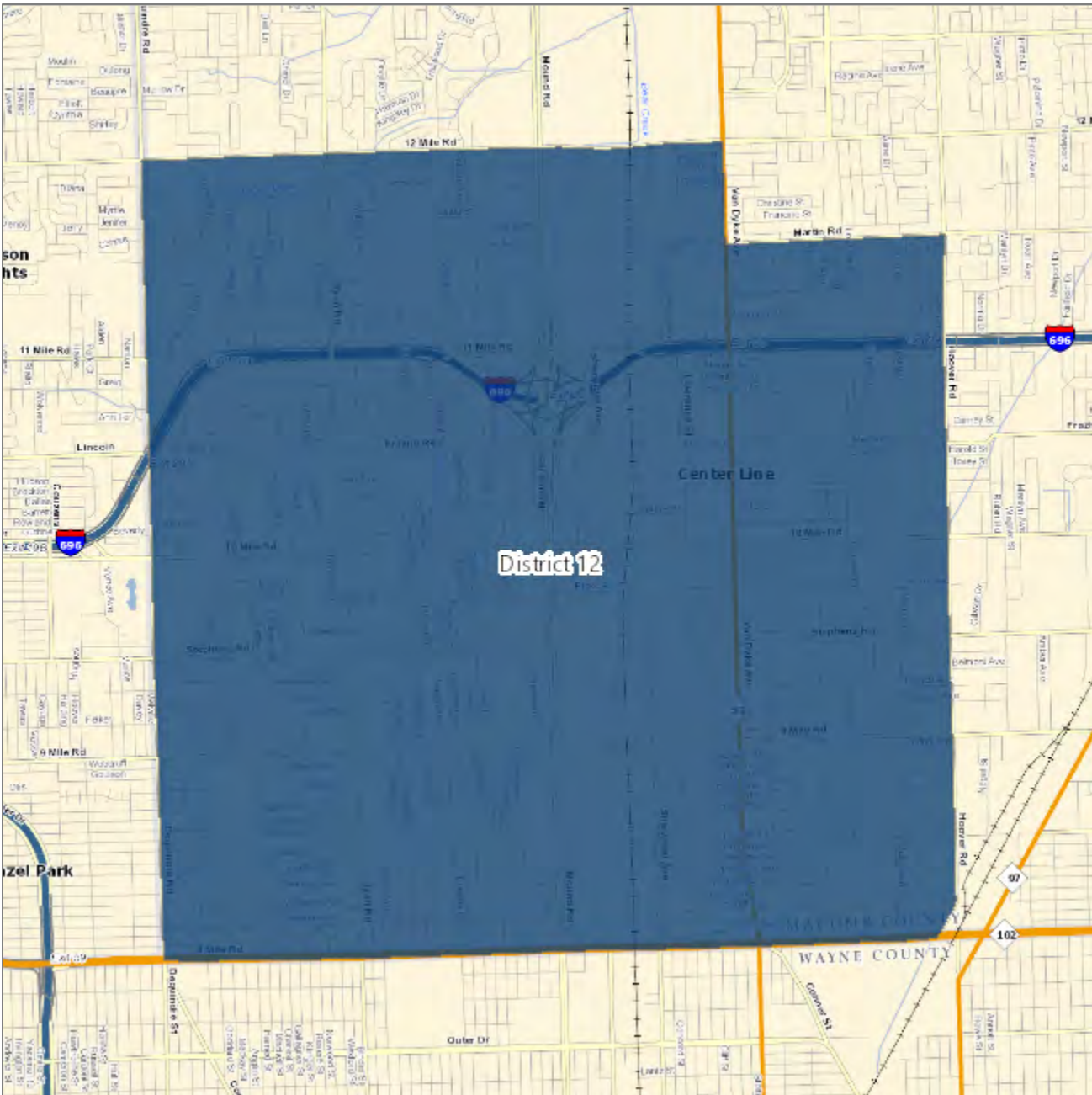
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District 11 - population 67,023



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District 12 - population 66,095



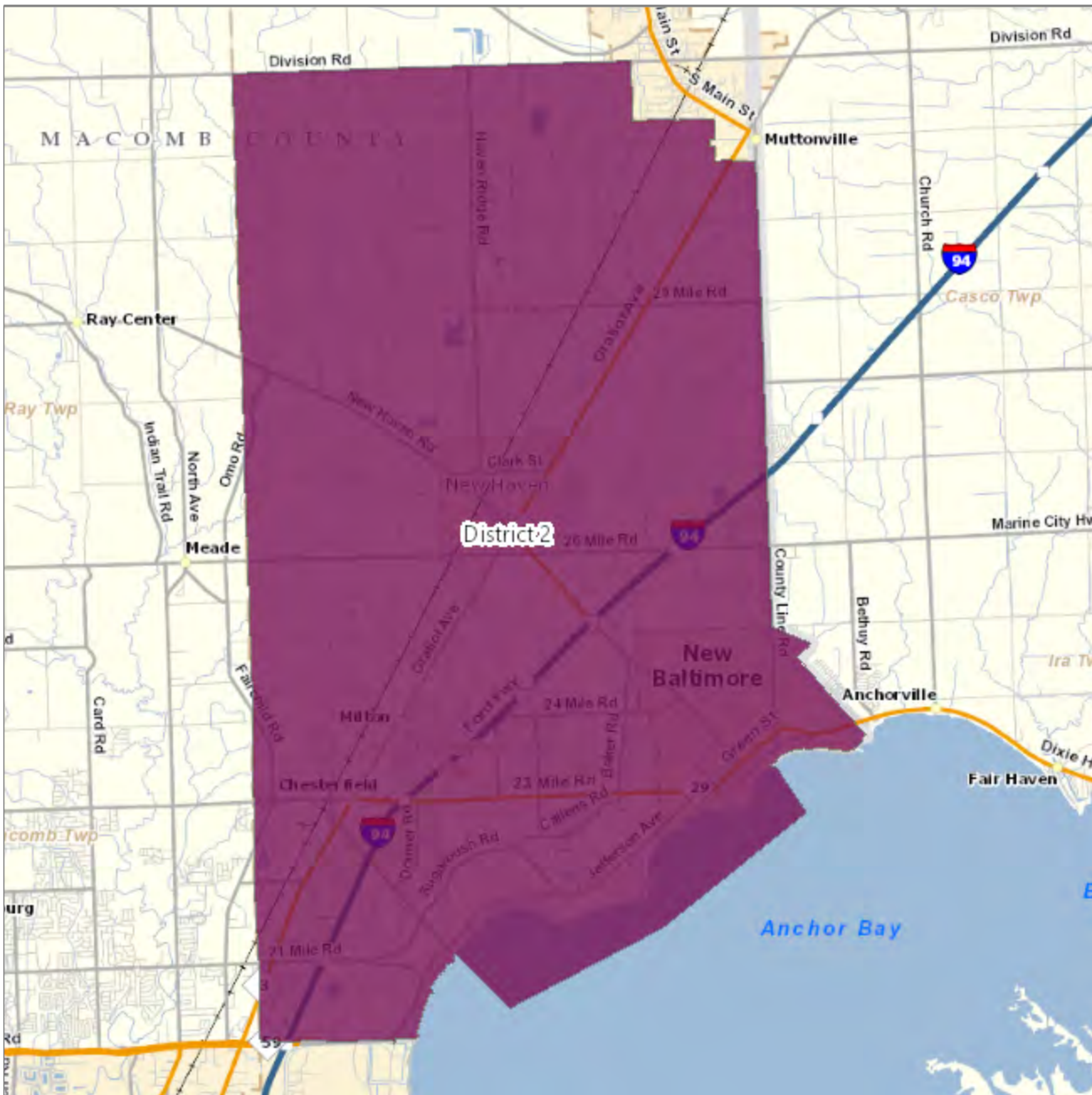
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District 13 - population 66,511



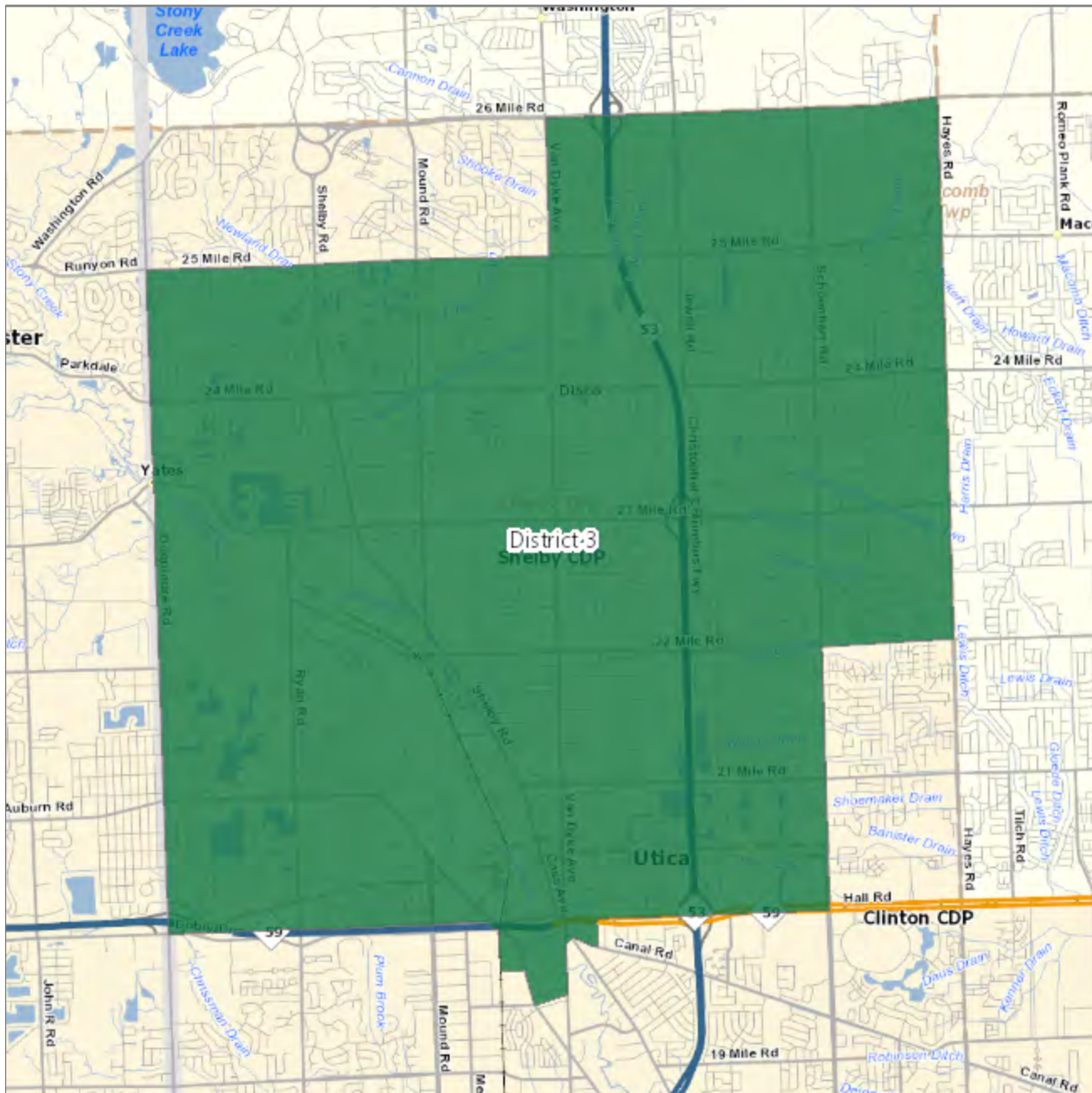
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District 2 - population 68,282



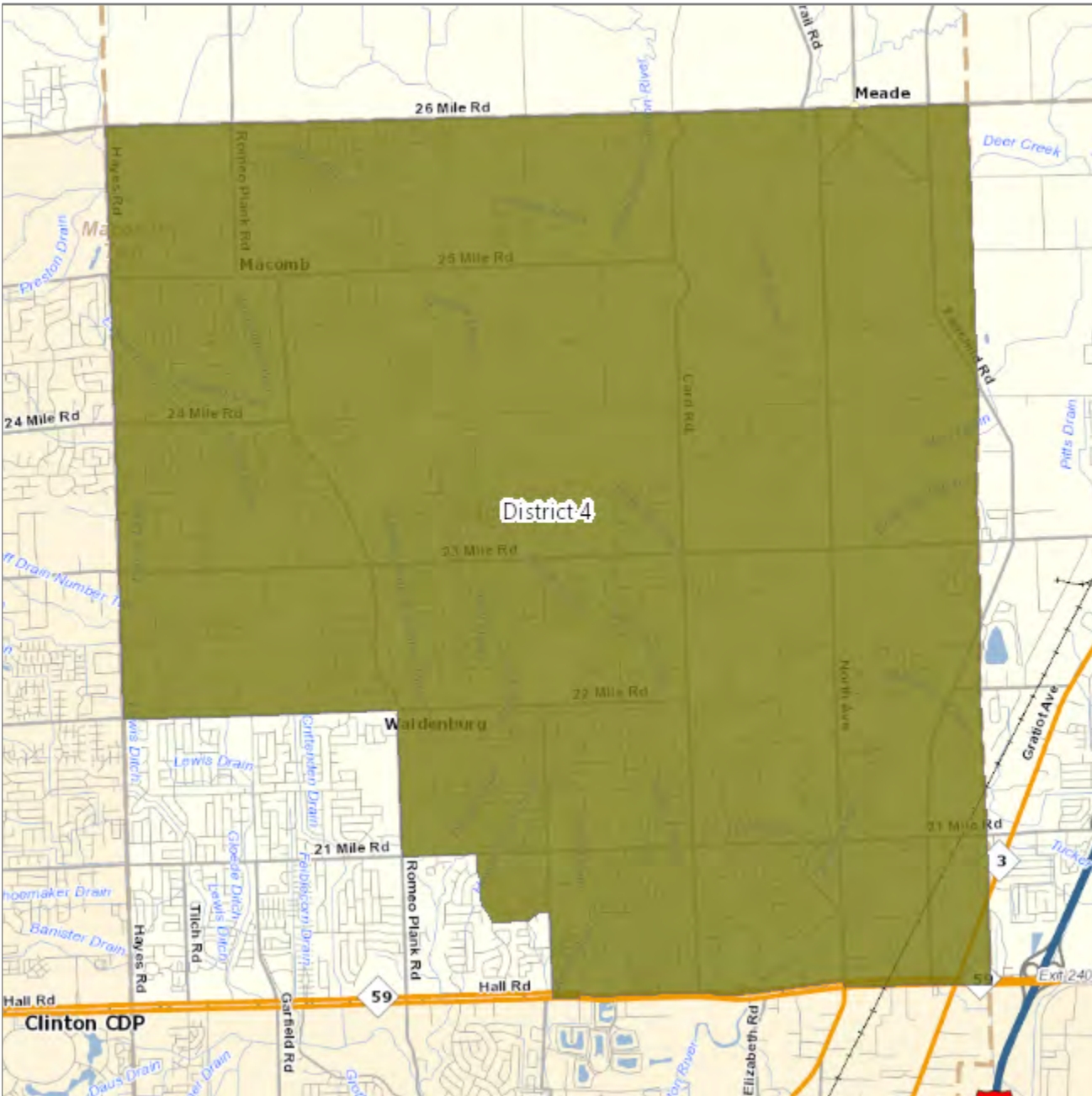
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District 3 - population 67,099



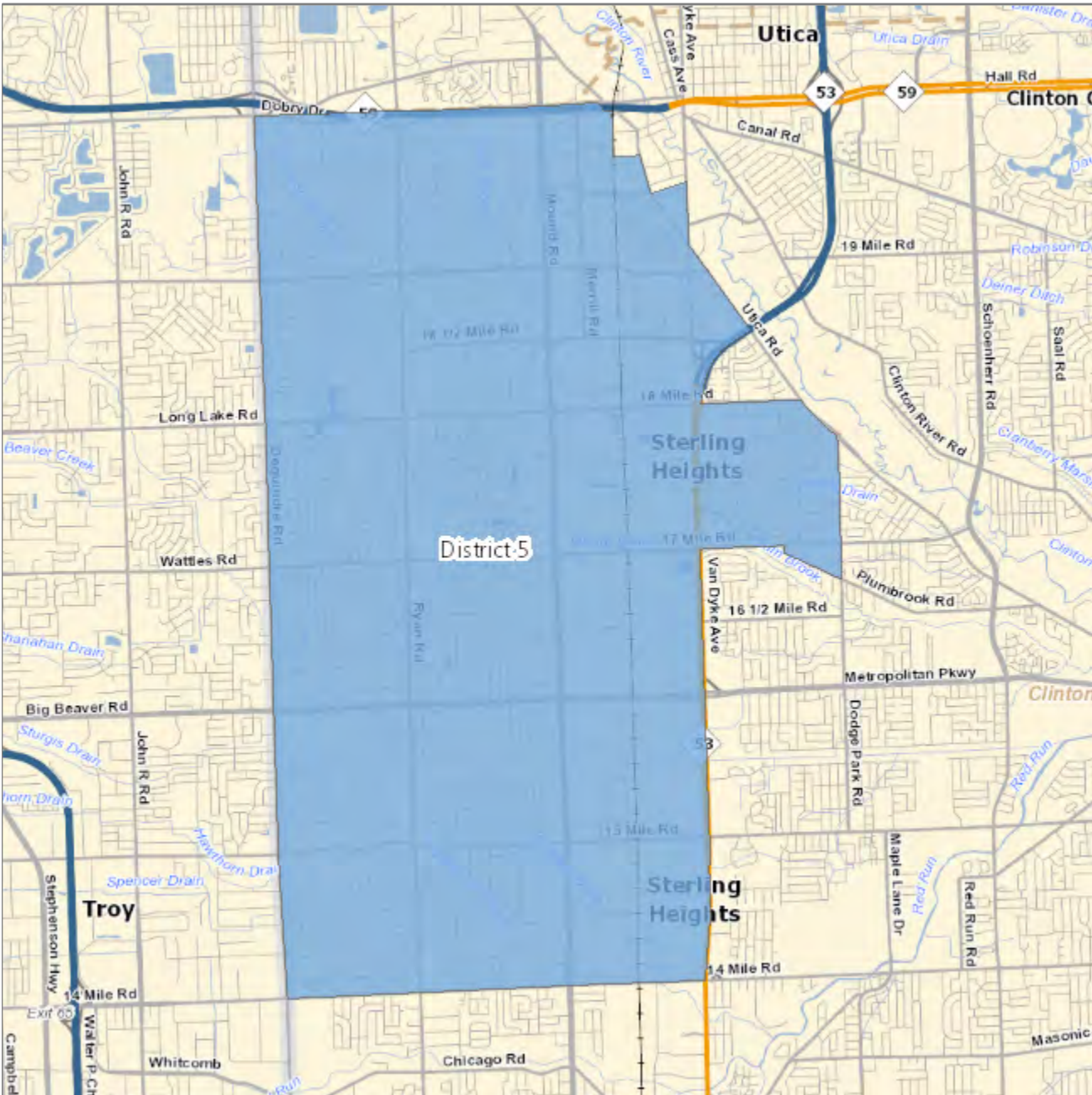
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District 4 - population 68,932



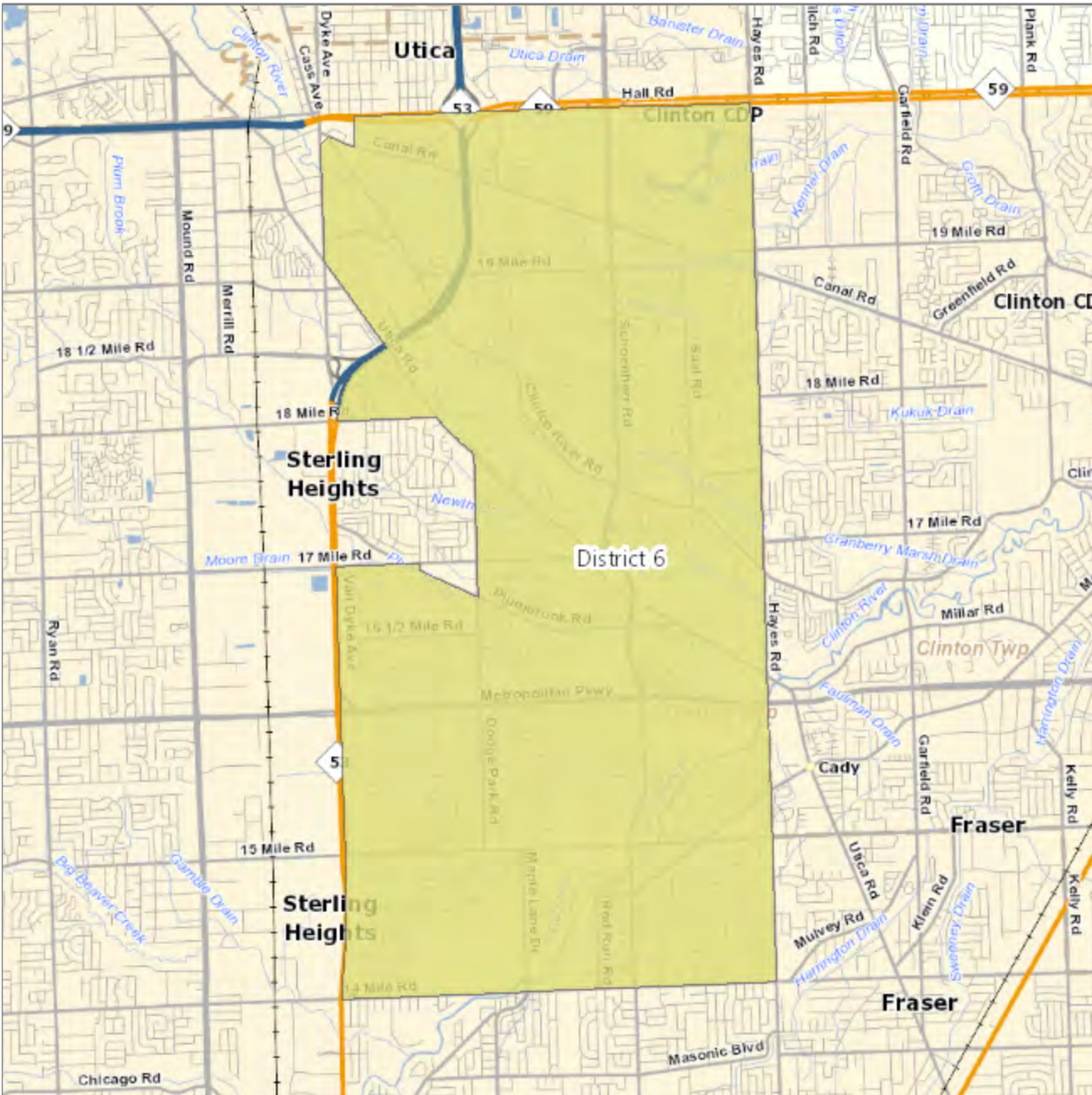
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District 5 - population 67,157



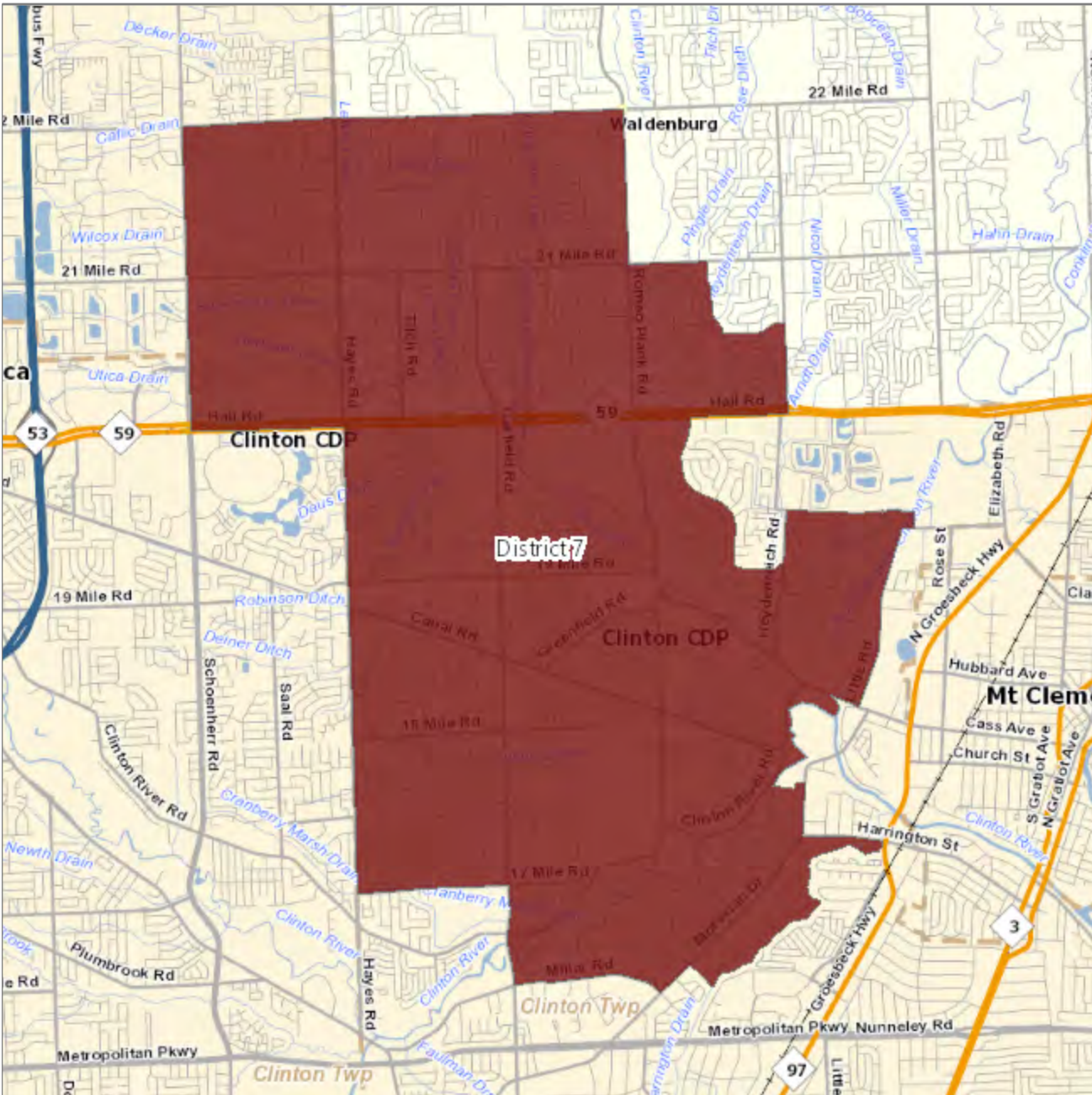
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District 6 - population 67,189



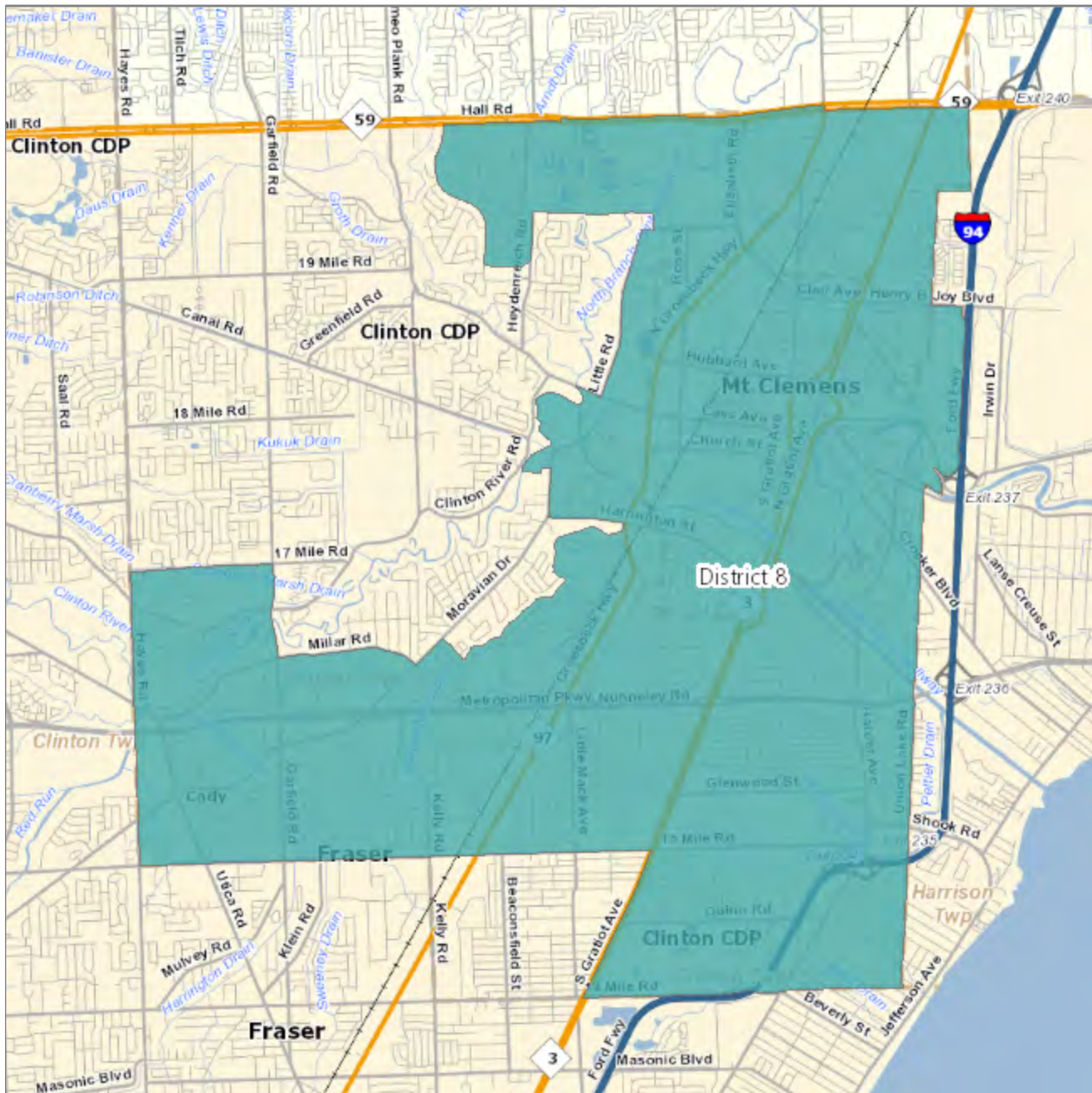
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District 7 - population 69,326



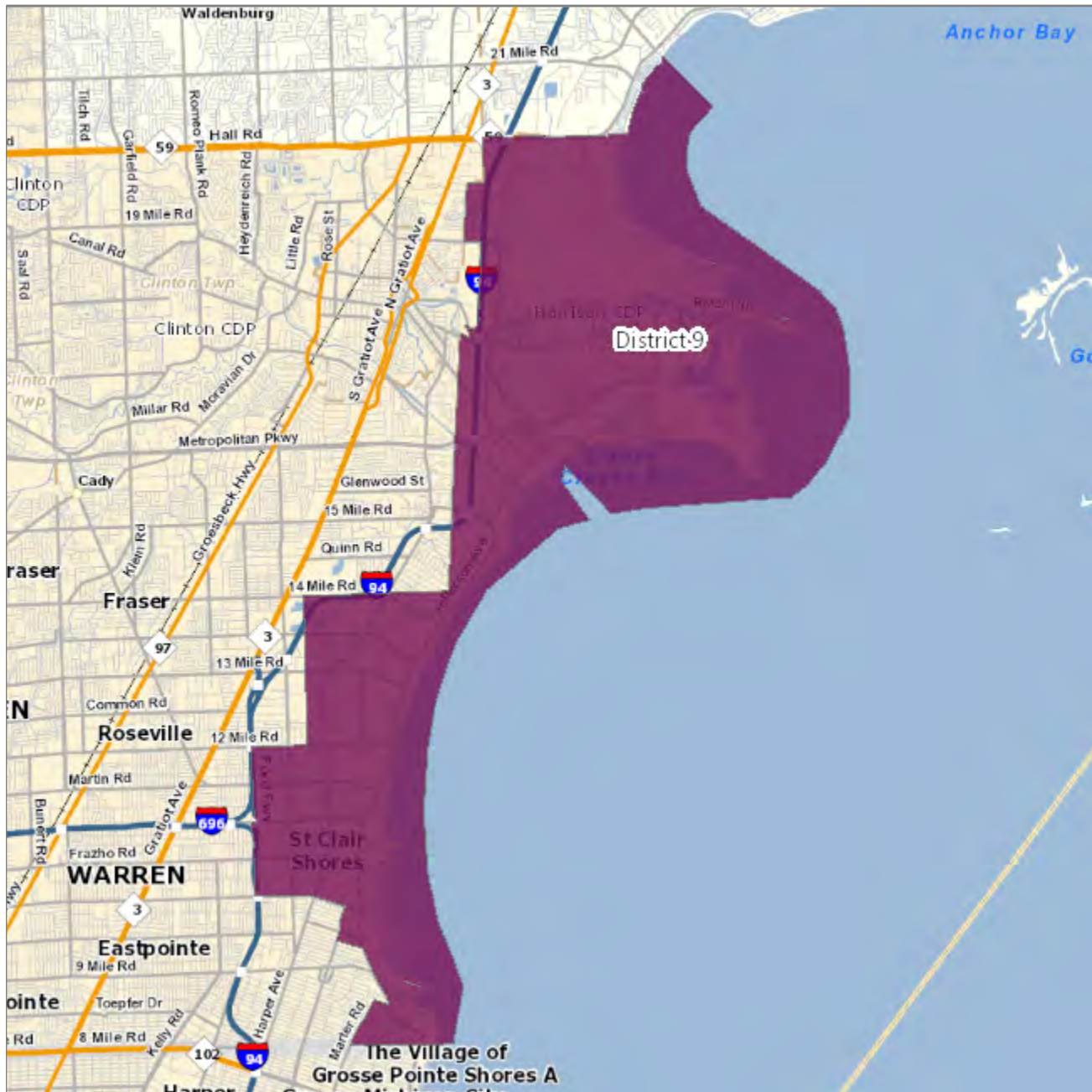
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District 8 - population 70,279



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District 9 - population 65,917



Total population all districts: 879,872