



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

2012 Annual Monitoring Network Plan for Mississippi

The MDEQ Air Division is receiving comments on the 2012 Annual Monitoring Network Plan until June 30th.

Please address comments to:
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Jerry_Beasley@deq.state.ms.us



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

Monitoring Network Review - 2012



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I. Background:

Federal Regulations (40 CFR 58.10) require that State and Local Agencies operating ambient air quality monitoring networks shall review their air quality monitoring networks on an annual basis. Any needed modifications to the network should be identified. A detailed monitoring network description should also be included. In addition, the plan should be available for public comment. MDEQ's plan is available on the MDEQ website at <http://www.deq.state.ms.us>.

The annual network review specified in *40 CFR 58.10* contains the following elements that apply to each monitoring site:

- The AQS site identification number.
- The location, including street address and geographical coordinates.
- The sampling and analysis method(s) for each measured parameter.
- The operating schedules for each monitor.
- Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
- The monitoring objective and spatial scale of representativeness for each monitor as defined in appendix D of part 58.
- The identification of any sites that are suitable and sites that are not suitable for comparison against the annual PM_{2.5} and Ozone NAAQS as described in part 58.30.
- The MSA, CBSA, CSA or other area represented by the monitor.
- The annual monitoring network plans and or periodic network assessments are subject to Regional approval according to part 58.14.

II. Overview:

In the State of Mississippi the Mississippi Department of Environmental Quality is the only agency operating an ambient air quality network. There are no local agencies. In Mississippi, as in other State agencies, network monitors are operated for a variety of monitoring objectives. These objectives include determining if an area of the State meets the NAAQS, for public information such as EPA's AirNow data mapping web site, Air Quality Index reporting for public information, background data collection, spatial considerations and special projects. The AQI forecast is currently reported for the Jackson Metro area, Biloxi/Gulfport area and DeSoto County area on the MDEQ web site at <http://www.deq.state.ms.us> under AQI. In addition, all hourly ozone and PM continuous data is reported to the EPA Airnow site.

All site data is suitable for NAAQS comparisons per appendices A, C, D, and E. MDEQ's Quality Management Plan is current with an approval date of 4/23/09 while the Criteria Pollutants QAPP is dated 10/1/06.

40 CFR 58 has set minimum monitoring requirements for the pollutants that are to be compared with the NAAQS. These minimum requirements are based on population, the level of monitored pollutants and MSA as defined in the latest US Census information. The tables below and the discussion on the following pages summarize this information.

Mississippi MSA	Pop 2010 Census
Memphis	1,316,100
Jackson	539,057
Hattiesburg	142,842
Gulfport – Biloxi	248,820
Pascagoula	162,246

Mississippi CSA	Pop 2010 Census
Jackson-Yazoo	567,122
Gulfport-Biloxi-Pascagoula	411,066

The network also includes a **NCore** (National Core monitoring site) site which is designed to provide long term pollutant data. Mississippi has one NCore site located in the Jackson metro area. The NCore site is discussed separately in this review. Please note, the NCore site will be moved to a new location because the University Medical Center has asked MDEQ to move the monitoring shelter off their property. Once a new location is determined and approved by the EPA, the site will be moved.

III. Site Discussion:

Mississippi's air quality monitoring network has been reviewed based on the historic monitoring data, air quality monitoring regulations, data representation based on spatial considerations, special data needs and changes needed based on the monitoring regulations. The items used in the evaluation were the AQS database, the 40 CFR parts 53 and 58 documents, census data and maps. All monitors operated by MDEQ are SLAMS with the exception of one NO_x analyzer located in Jackson County at the Pascagoula site (28.059.0006). This monitor is a special purpose (SPM), operated for MDEQ purposes.

The following describes the purposes and any changes related to each site in the ambient monitoring network in the State of Mississippi based on our review of existing monitoring efforts. A summary may be seen in the Network Design Tables in Section IV. Note that the comments for ozone are based on the **75ppb** standard and the comments for PM_{2.5} are based on the annual average standard of 15µg/m³ and the 24 hour average standard of 35µg/m³.

1. Memphis MSA:

- **Hernando** (DeSoto Co. 28.033.0002) - The PM_{2.5} sampler is designated as a transport sampler and therefore is a required sampler. A continuous PM_{2.5} sampler is operated at this site and an ozone monitor is required. All analyzers will continue to operate. MDEQ has a monitoring agreement with Memphis, TN, and AR to meet Appendix D requirements section 2, e. A copy is attached and is on file at Region 4.

2. Jackson MSA:

- **Jackson NCore** (Hinds Co. 28.049.0019) – A separate NCore section follows starting on page 14.
- **Jackson Metro** (Hinds Co. 28.049.0010) – All FRM PM_{2.5} analyzers and continuous PM_{2.5} analyzers will be deleted based on Appendix D Part 58. Only one PM_{2.5} monitor is required

for a MSA with a population of 500,000-1,000,000 and its most recent 3 year design value is less than 85% for all PM_{2.5} NAAQS. The annual PM_{2.5} value is 74% of the NAAQS and the 24 hour design value is 63% of the NAAQS. An ozone monitor is required to be operated in this MSA and will continue to operate.

- **PM₁₀ Sampling** – PM₁₀ sampling for the Jackson metro area is based on the sampling requirements for population in Appendix D. The PM₁₀ samplers, both regular and collocated FRMs, are located at the NCore site.

3. *Hattiesburg MSA:*

- **Hattiesburg** (Forrest Co. 28.035.0004) – This site will be relocated. MDEQ submitted a request to the EPA and has been granted permission to relocate to a new location. The FRM PM_{2.5} and a continuous PM_{2.5} is required for this MSA and will continue to operate.

4. *Gulfport-Biloxi MSA:*

- **Gulfport** (Harrison Co. 28.047.0008) – The FRM PM_{2.5} sampler is required based on population. A continuous PM_{2.5} sampler will be operated in this MSA. An ozone monitor is required. All analyzers will continue to operate. The NO_x and SO₂ monitors will be moved from the Pascagoula site to this site with a start date of January 2013. The SO₂ monitor is being moved to meet the PWEI requirements for the MSA.
- **Waveland** (Hancock Co. 28.045.0003) – The Waveland site in Hancock County consists of a FRM PM_{2.5} sampler, an ozone monitor and a met tower. All analyzers will continue to operate.

5. *Pascagoula MSA:*

- **Pascagoula** (Jackson Co. 28.059.0006) – The ozone monitor is required for the MSA. The FRM PM_{2.5} sampler is based on spatial considerations. The ozone and FRM PM_{2.5} will continue to operate. The NO_x and SO₂ monitors will be moved to the Gulfport site.

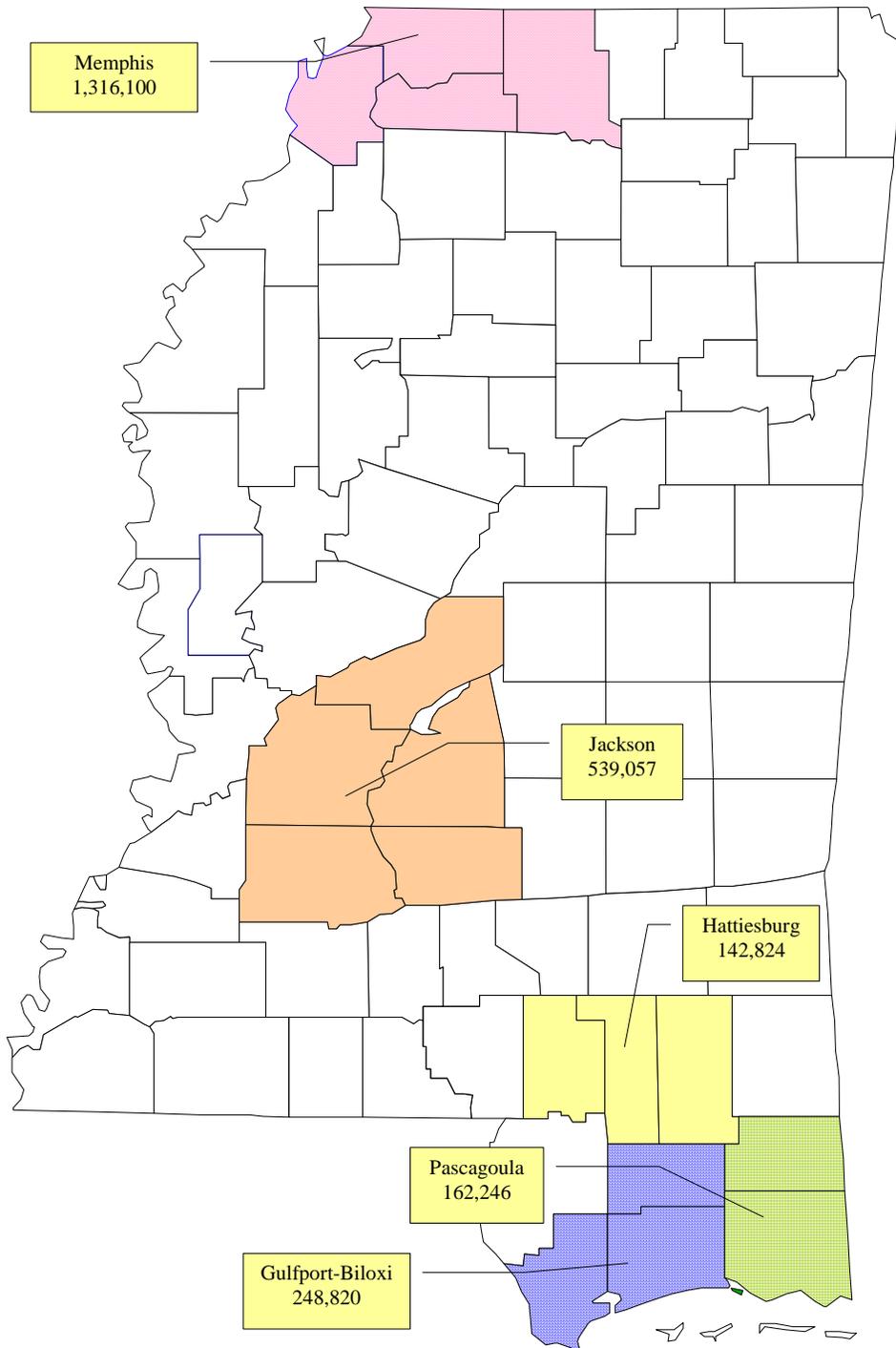
6. *Non-MSA Sites:*

- **Laurel** (Jones Co. 28.067.0002) – All PM_{2.5} analyzers will be deleted since the PM_{2.5} monitors are not in a MSA. The annual design value is 79% of the NAAQS and the 24 hour design value is 66% of the NAAQS. The collocated PM_{2.5} will be relocated to the Hattiesburg (Forrest Co. 28.035.0004) site. The SASS speciation and carbon analyzers will be deleted because the Jackson NCore site will operate speciation and carbon analyzers at that site. The data from these sites is comparable, continuing to operate the Laurel site is redundant and not needed.
- **Grenada** (Grenada Co. 28.043.0001) – A FRM PM_{2.5} sampler operates at the Grenada site as a background monitor for PM_{2.5} as required by regulations and will continue to operate.
- **Meridian** (Lauderdale Co. 28.075.0003) – The FRM PM_{2.5} analyzer will be deleted since the annual design value for 2009-2011 is 73% of NAAQS, and the 24 hour design value is 63% of the NAAQS. The continuous PM_{2.5} will be deleted (Non-MSA). Also, since the Ozone design value for 2009-2011 is 83% of the NAAQS, the ozone analyzer will be

deleted. Also, because this site is located less than 30 miles from an ozone and PM_{2.5} site located in Sumter County Alabama, this site is not needed for spatial purposes.

- **Tupelo** (Lee Co. 28.081-0005) – The FRM PM_{2.5} analyzer will be deleted since the design value for 2009-2011 is 73% of the NAAQS and the 24 hour design value is 63% of the NAAQS. The collocated PM_{2.5} will be relocated if MDEQ is required to operate two collocated samplers. The continuous PM_{2.5} will be deleted (non-MSA). The ozone monitor will continue to operate for spatial and population exposure purposes.
- **Cleveland** (Bolivar Co. 28.011.0001) - Since the PM_{2.5} continuous is not in a MSA and not required, the PM_{2.5} continuous will be deleted. The Ozone analyzer will continue to operate.

MSA MAP:



MISSISSIPPI MSA AREAS

- MEMPHIS – DeSoto, Tunica, Marshall, Tate
- JACKSON – Hinds, Rankin, Copiah, Simpson, Madison
- HATTIESBURG – Lamar, Forrest, Perry
- GULFPORT-BILOXI – Hancock, Harrison, Stone
- PASCAGOULA – Jackson, George

IV. Network Tables:

NETWORK DESIGN TABLES MISSISSIPPI - 2012

PM 10

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule	Comment
Jackson	Hinds	Jackson	28-049-0019	Pop. Exp.	Neighborhood	1	Y	Manual (6 Day)	126	Jan-Dec	At NCore Site

PM 2.5

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule
Cleveland	Bolivar	N/A	28-011-0001	Pop. Exp.	Neighborhood	0	N	Continuous	702 TEOM	Hourly
Hernando	DeSoto	Memphis	28-033-0002	Transport	Urban	1	N	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec
Hattiesburg	Forrest	Hattiesburg	28-035-0004	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec
Grenada	Grenada	N/A	28-043-0001	Background	Neighborhood	1	N	Manual (3 Day)	118 SEQ	Jan-Dec
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Neighborhood	0	N	Manual (3 Day)	118 SEQ	Jan-Dec
Gulfport	Harrison	Pop. Exp.	28-047-0008	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	N	Manual (3 Day)	118 SEQ	Jan-Dec
Jackson	Hinds	Jackson	28-049-0010	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec
Laurel	Jones	N/A	28-067-0002	Pop. Exp.	Neighborhood	0	Y	Manual (3 Day) Speciation(6 Day)	118 SEQ MetOne	Jan-Dec Jan-Dec
Meridian	Lauderdale	N/A	28-075-0003	Pop. Exp.	Neighborhood	0	N	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec
Tupelo	Lee	N/A	28-081-0005	Pop. Exp.	Neighborhood	0	Y	Manual (3 Day) Continuous	118 SEQ 702 TEOM	Jan-Dec Jan-Dec

Comments: All manual samplers are FRM and classified as SLAMS. The continuous samplers are non FEM.

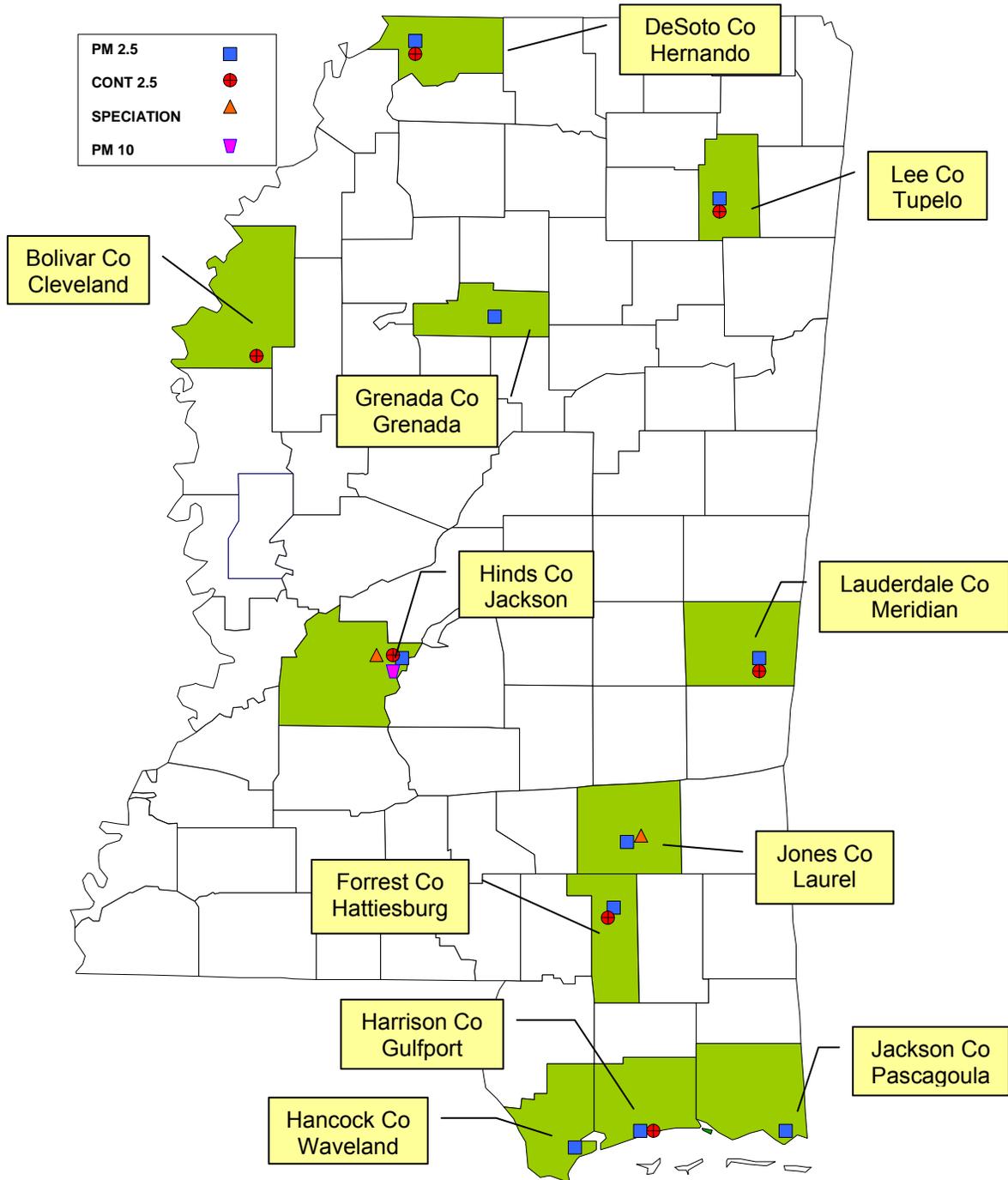
OZONE – 2012

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Cleveland	Bolivar	N/A	28-011-0001	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Gulfport	Harrison	Gulf/Biloxi	28-047-0008	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Hernando	DeSoto	Memphis	28-033-0002	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson	Hinds	Jackson	28-049-0010	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson	Hinds	Jackson	28-049-0019	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Meridian	Lauderdale	N/A	28-075-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Tupelo	Lee	N/A	28-081-0005	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct

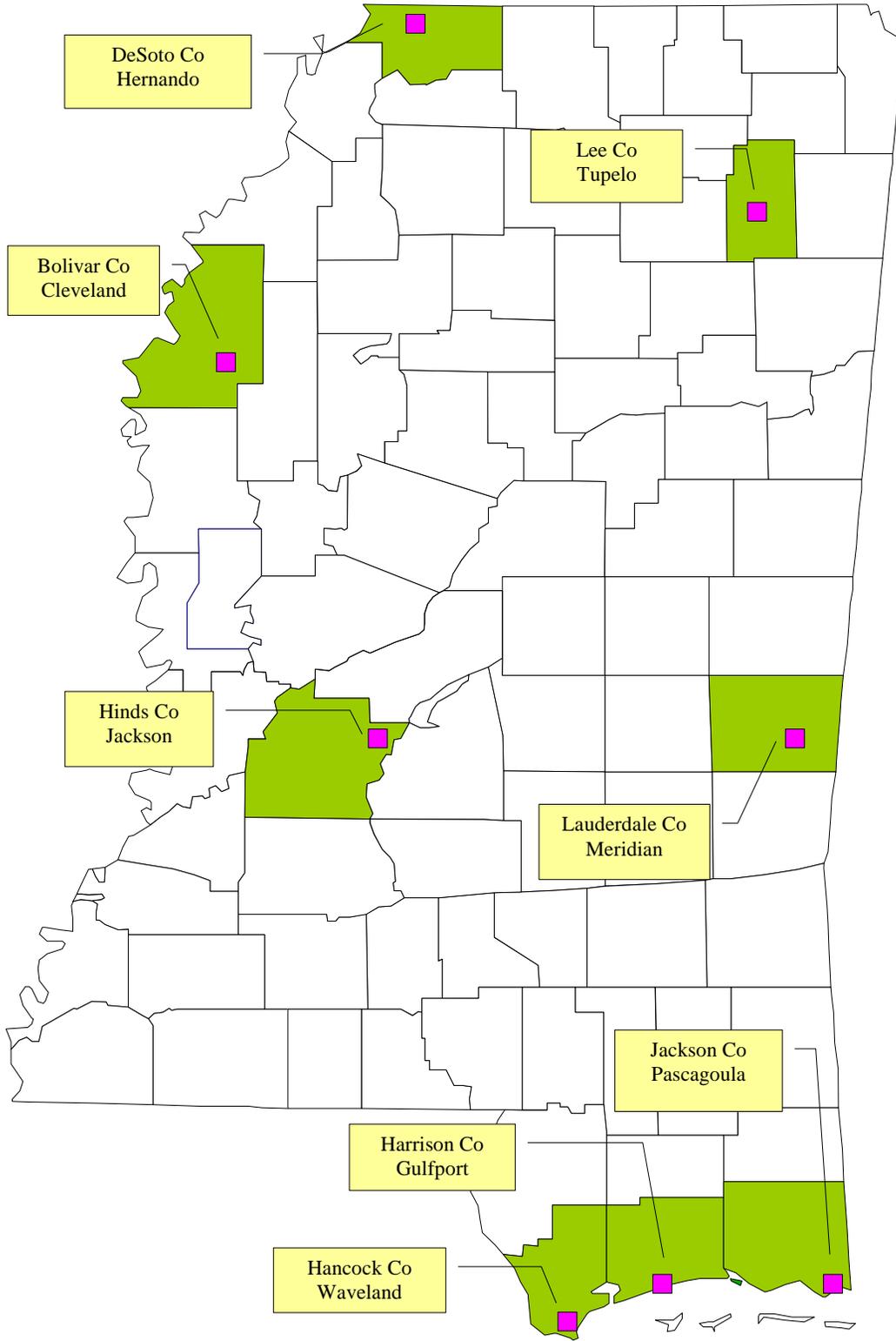
Comments: All monitors are classified as SLAMS

Site Location Coordinates

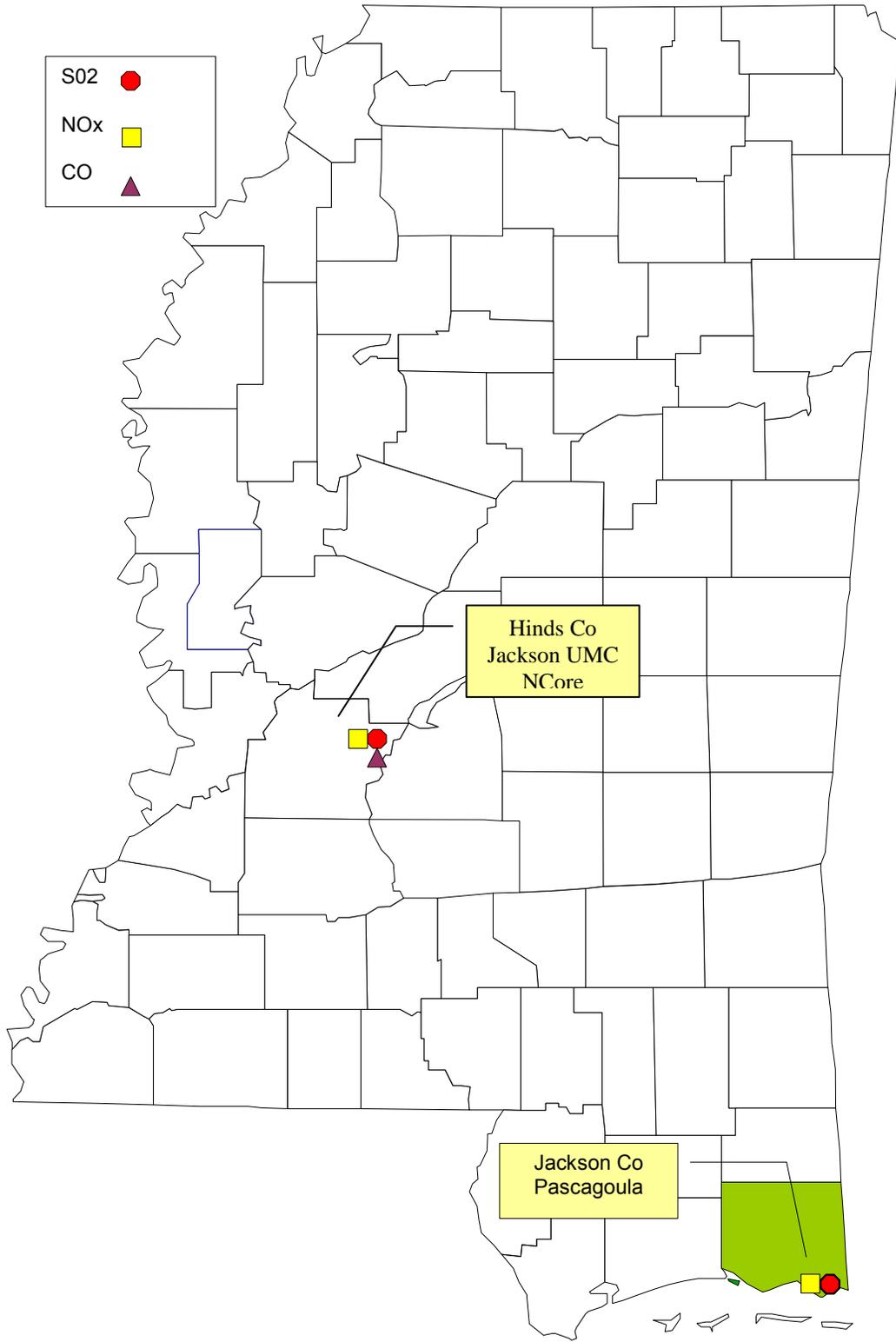
#	SITE ID	LAT			LONG			NAME	COUNTY	ADDRESS
1	28-011-0001	33	44	45	90	43	23	CLEVELAND	BOLIVAR	213 North Bayou Ave.
2	28-033-0002	34	49	14	89	59	16	HERNANDO	DESOTO	5 East South St.
3	28-035-0004	31	19	22	89	17	15	HATTIESBURG	FORREST	309 Court St.
4	28-043-0001	33	50	4	89	47	34	GRENADA	GRENADA	Hwy 332 at Grenada Airport
5	28-045-0003	30	18	4	89	23	45	WAVELAND	HANCOCK	400 Baltic St.
6	28-047-0008	30	23	24	89	2	59	GULFPORT YC	HARRISON	47 Maples Dr.
7	28-049-0010	32	23	8	90	8	28	JACK FS19	HINDS	5810 Ridgewood Rd.
8	28-049-0019	32	19	49	90	9	58	JACK UMC	HINDS	University Drive
9	28-059-0006	30	22	41	88	32	2	PASCAGOULA	JACKSON	Hospital Rd. and Vega St.
10	28-067-0002	31	41	17	89	8	4	LAUREL	JONES	26 Mason St
11	28-075-0003	32	21	52	88	43	53	MERIDIAN	LAUDERDALE	Hwy 19 and 53rd Ave.
12	28-081-0005	34	15	54	88	45	58	TUPELO	LEE	West Jackson at Tupelo Airport



MDEQ PARTICULATE SITES – 2012



MDEQ OZONE SITES AS OF - 2012



MDEQ SO2 / NOx/ CO SITES - 2012

NCORE SITE:

I. Background:

This part of the network review covers the NCore (National Core monitoring site) site information. This site is designed to provide long term pollutant data as well as very low level gaseous measurements. This site monitors for all pollutant parameters as well as meteorological parameters. The NCore multi-pollutant site provides support to integrated air quality management data needs. Each state is required to operate one NCore site. Mississippi has one NCore site located in the Jackson metro area.

II. Site Discussion:

Mississippi's air quality monitoring network will be enhanced with the addition of the NCore multi pollutant monitoring site. The site objectives will be to help determine compliance with the NAAQS, provide long term data trends as well as AQI data, and provide data for research related to air quality.

The NCore site contains a full compliment of instruments, including meteorological. The parameters currently include Ozone, Sulfur Dioxide, Carbon Monoxide, Nitric Oxides as NO_y, PM_{2.5} manual, PM_{2.5} continuous, PM_{10-2.5}, Speciated PM_{10-2.5}, wind speed, direction, ambient temperature and relative humidity. All samplers used at the NCore site including PM_{2.5} samplers will be reference or equivalent. The NCore site is the location for MDEQ's urban PM₁₀ sampling as well as urban lead sampling.

The monitoring scales for most site parameters are urban. However, a more realistic scale of representation is probably an area up to approximately 18 miles or 15 kilometers from the site location, not 40 kilometers.

The physical site consists of a 12' x 14' shelter with a roof mounted deck and a meteorological tower. It is located on the University of Mississippi Medical Center. The latitude and longitude is 32.19.49 and -90.09.58. The AQS site number is 28-049-0019.

The tables on the following page summarize all of the required elements related to the site as well as each parameter. In addition, a typical wind rose pattern for the Jackson metro area is included.

III. NCore Tables:

NCore Site Table - 2012

AQS ID	MSA	Site Name	County	City	Latitude	Longitude	Street Address	Elevation (meters)	Site start date	Location Setting
28-049-019	Jackson	Univ Miss Medical Center	Hinds	Jackson	32.330194 (32.19.49)	-90.166111 (90.09.58)	Univ of Miss Medical Center Dr. UMC Campus	93	1/01/2011	Urban and city center

NCore Parameter Table - 2012

Parameter	Monitoring Objective	Measurement Scale	Designation	Type	Method	Schedule	Comment
CO	Pop. Exp.	Neighborhood	NCore	Continuous Analyzer	Non-Dispersive IR	Jan-Dec	
NOy	Pop. Exp.	Neighborhood /Urban	NCore	Continuous Analyzer	Chemiluminescence	Jan-Dec	
O3	Pop. Exp.	Neighborhood /Urban	NCore	Continuous Analyzer	UV Photometry	Jan-Dec	
SO2	Pop. Exp.	Neighborhood	NCore	Continuous Analyzer	UV fluorescence	Jan-Dec	
FRM PM 2.5	Pop. Exp	Neighborhood	NCore	Manual Reference Sampler(3 Day)	Gravimetric Analysis	Jan-Dec	
FEM PM 2.5	Pop. Exp	Neighborhood	NCore	Continuous Analyzer	Gravimetric	Jan-Dec	TEOM
PM 2.5 Speciation	Pop. Exp	Neighborhood	NCore	Manual Sampler (3 Day)	Multiple Methods	Jan-Dec	
PM coarse	Pop. Exp	Neighborhood	NCore	Manual Sampler (3 Day)	Difference by Gravimetric Analysis	Jan-Dec	
Meteorological	--	--	NCore	--	Wind speed, direction, ambient temperature, humidity	Jan-Dec	
Lead	Pop. Exp	Urban	NCore	Manual sampler (6 Day)	Manual Method via PM 10	Jan-Dec	Required for the metro area 500,000+ , non NCore
PM 10	Pop. Exp	Urban	SLAMS	Manual Reference Sampler(6 Day)	Gravimetric Analysis	Jan-Dec	Required for the metro area 500,000+, non NCore
Radiation	Pop. Exp	Urban	Rad Net	Continuous / manual		Jan-Dec	Non NCore

Appendix I
Site Maps and Photos



CLEVELAND - N



CLEVELAND - E



CLEVELAND - S

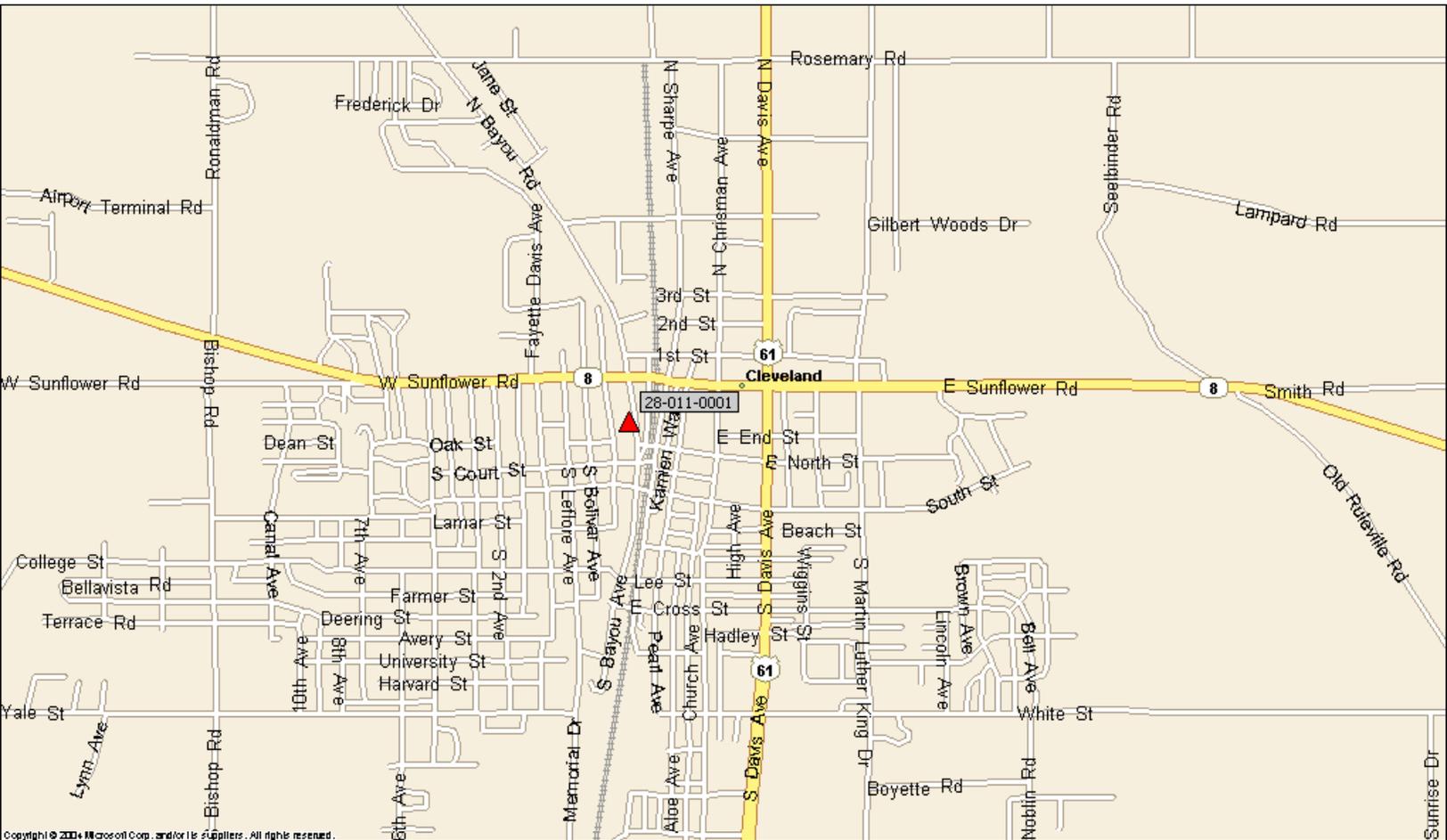


CLEVELAND - W



CLEVELAND - 28-011-0001

Bolivar



CLEVELAND 28-011-0001

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GRENADA, MS - 28-043-0001



© 2009 Tele Atlas
Image USDA Farm Service Agency
elev 198 ft

© 2008 Google

Aug 8, 2007

Eye alt 14943 ft

33°49'59.52" N 89°47'43.61" W



GRENADA - N



GRENADA - E



GRENADA - S

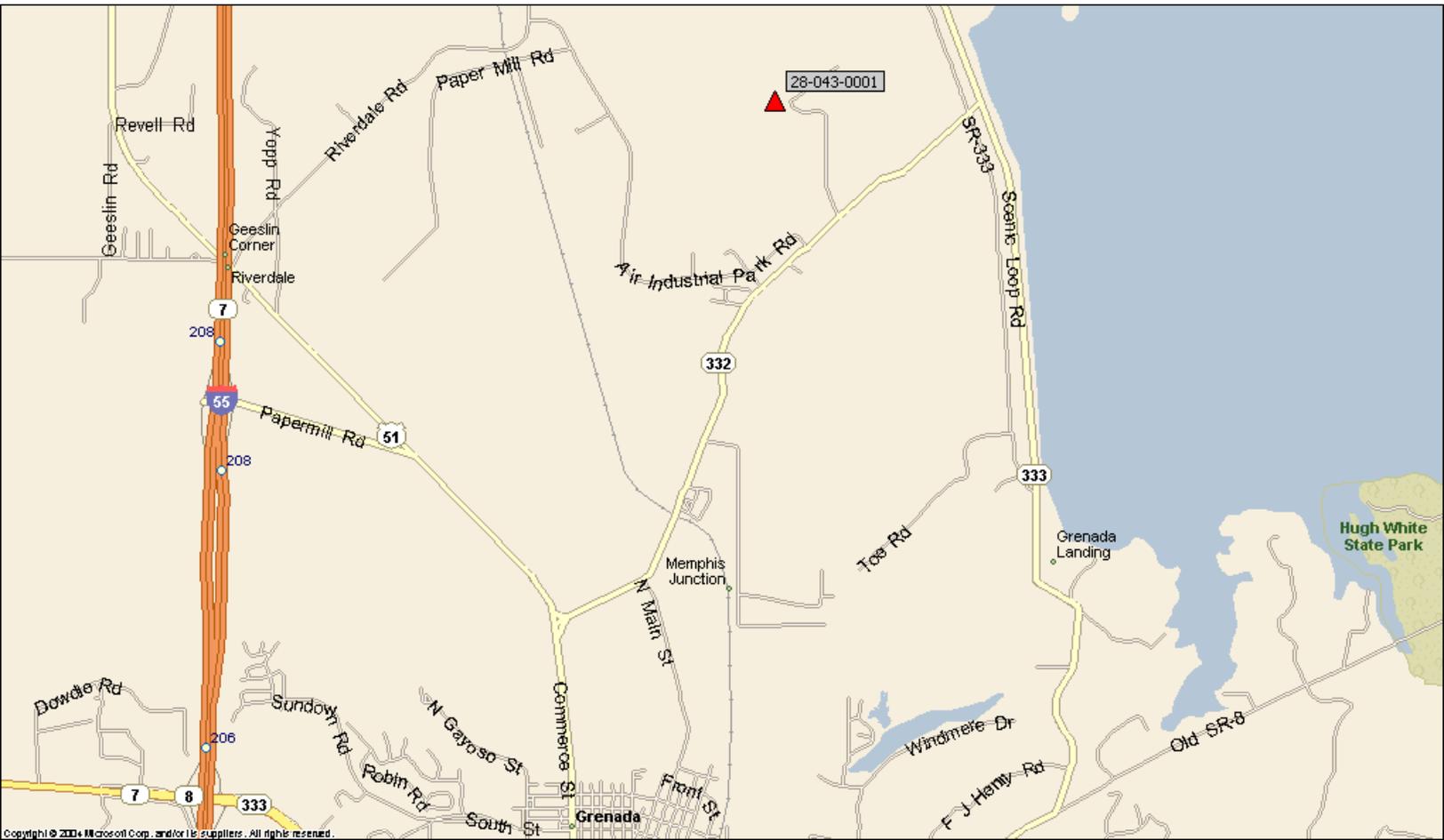


GRENADA - W



GRENADA - 28-043-0001

Grenada



GRENADA 28-043-0001



Image © 2009 DigitalGlobe

© 2009 Tele Atlas
© 2009 LeadDog Consulting

elev 30 ft

Mar 16, 2006

Eye alt 2337 ft

Google

30°23'25.12" N 89°03'00.09" W



GULFPORT - N



GULFPORT - E



GULFPORT - S



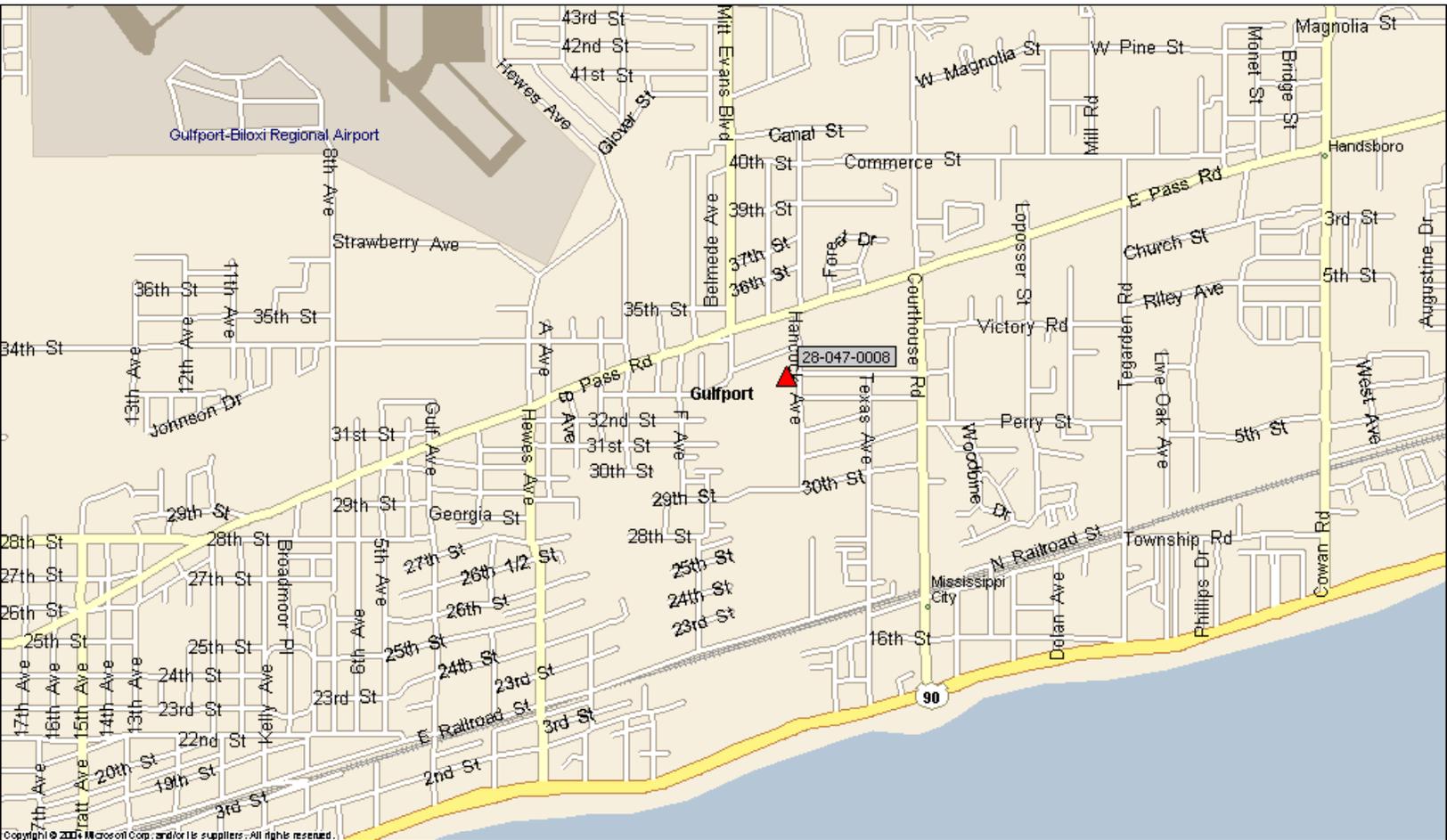
GULFPORT - W



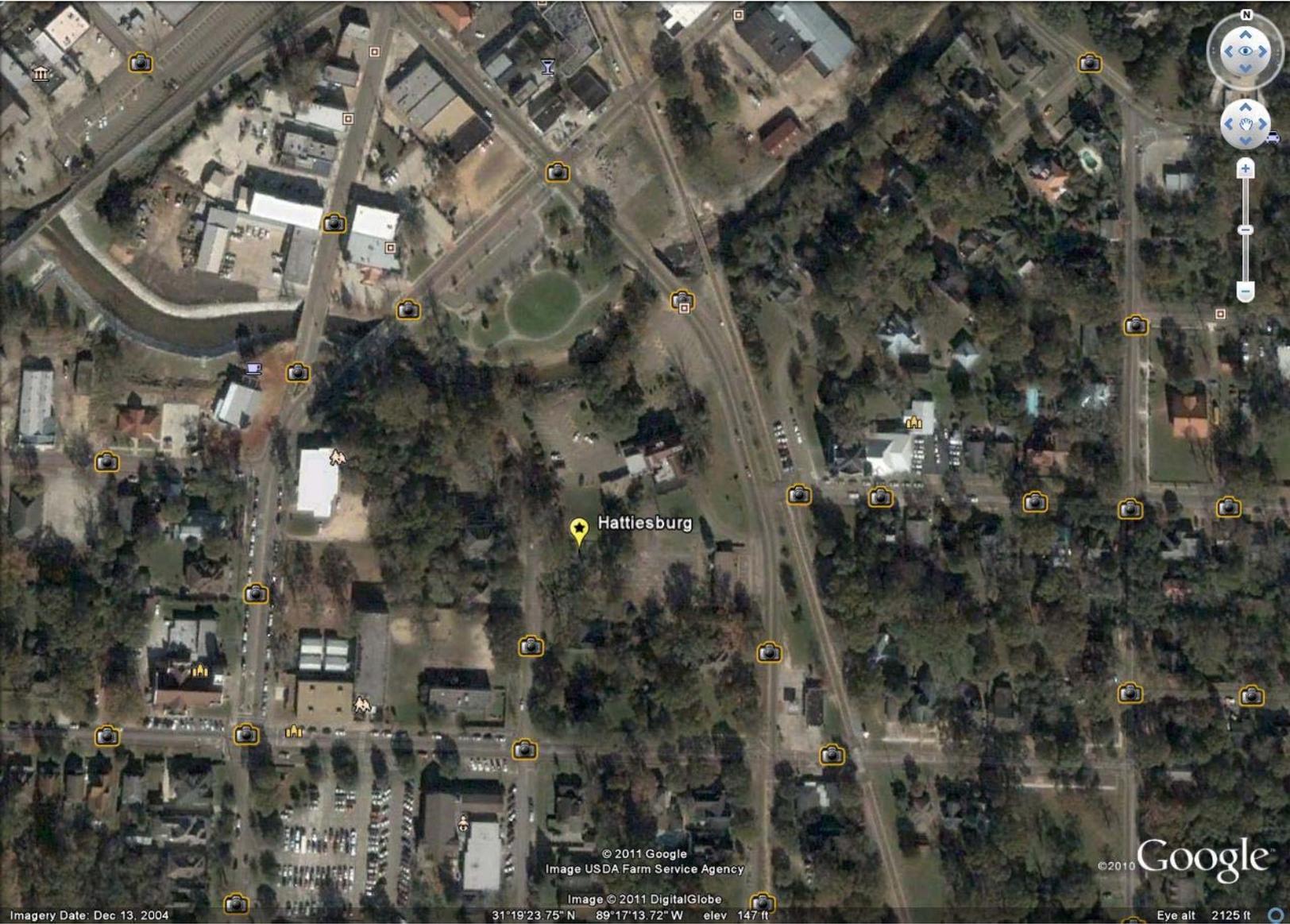
GULFPORT - 28-047-0008



Harrison



GULFPORT 28-047-0008



© 2011 Google
Image USDA Farm Service Agency

©2010 Google

Image © 2011 DigitalGlobe

31°19'23.75" N 89°17'13.72" W elev 147 ft

Imagery Date: Dec 13, 2004

Eye alt 2125 ft



HATTIESBURG - N



HATTIESBURG - E



HATTIESBURG - S



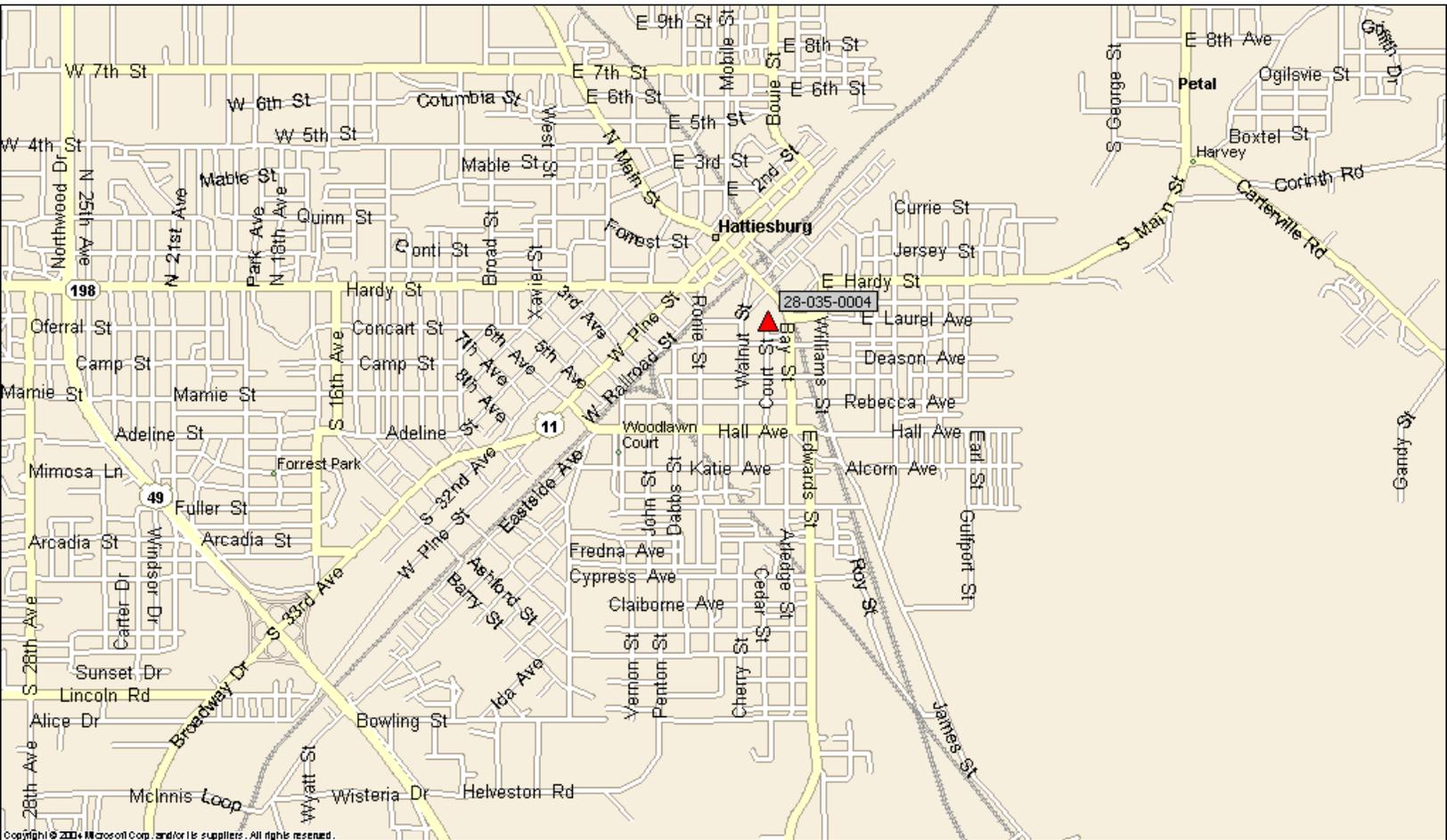
HATTIESBURG - W



HATTIESBURG - 28-047-0008

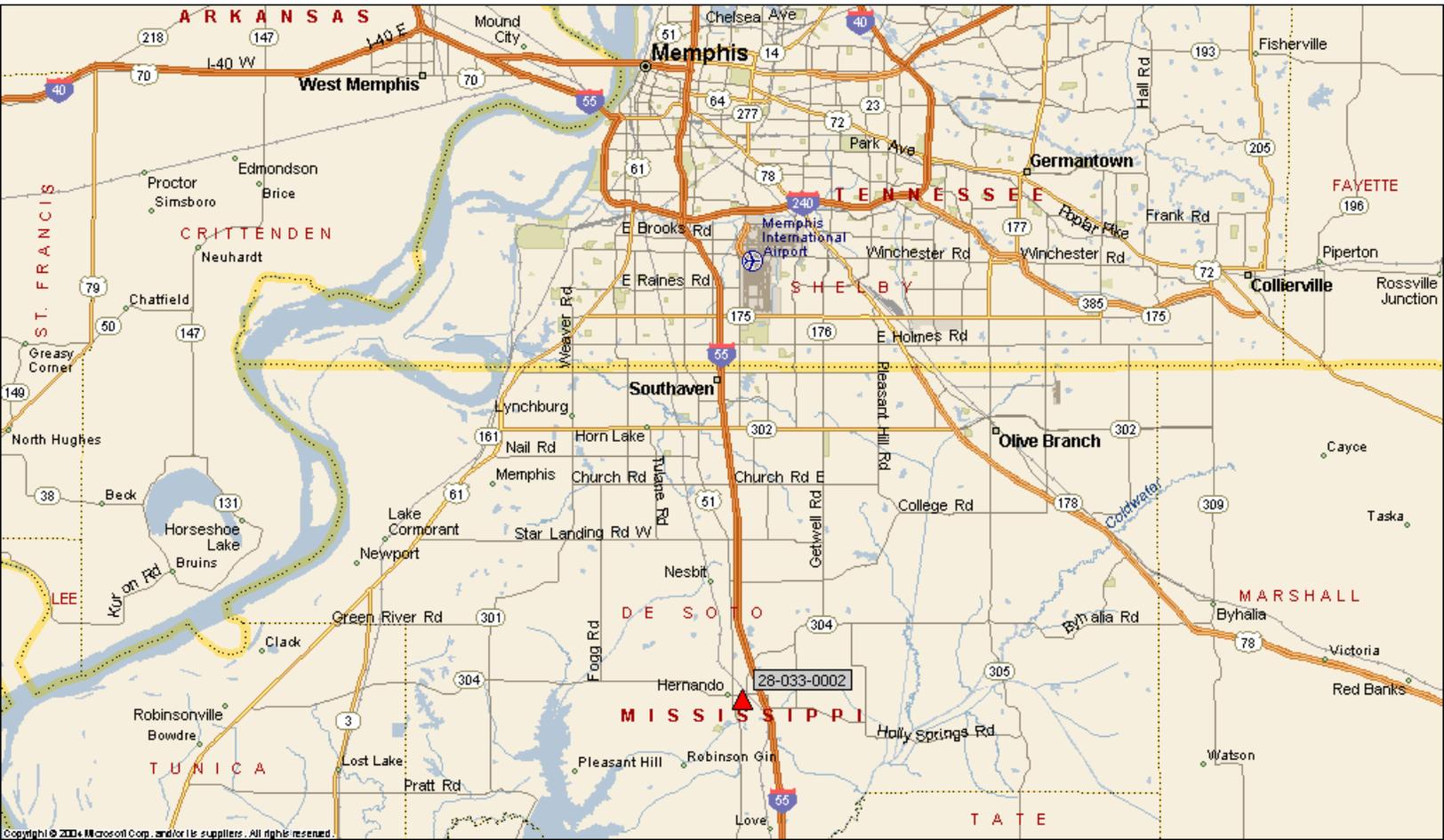


Forrest

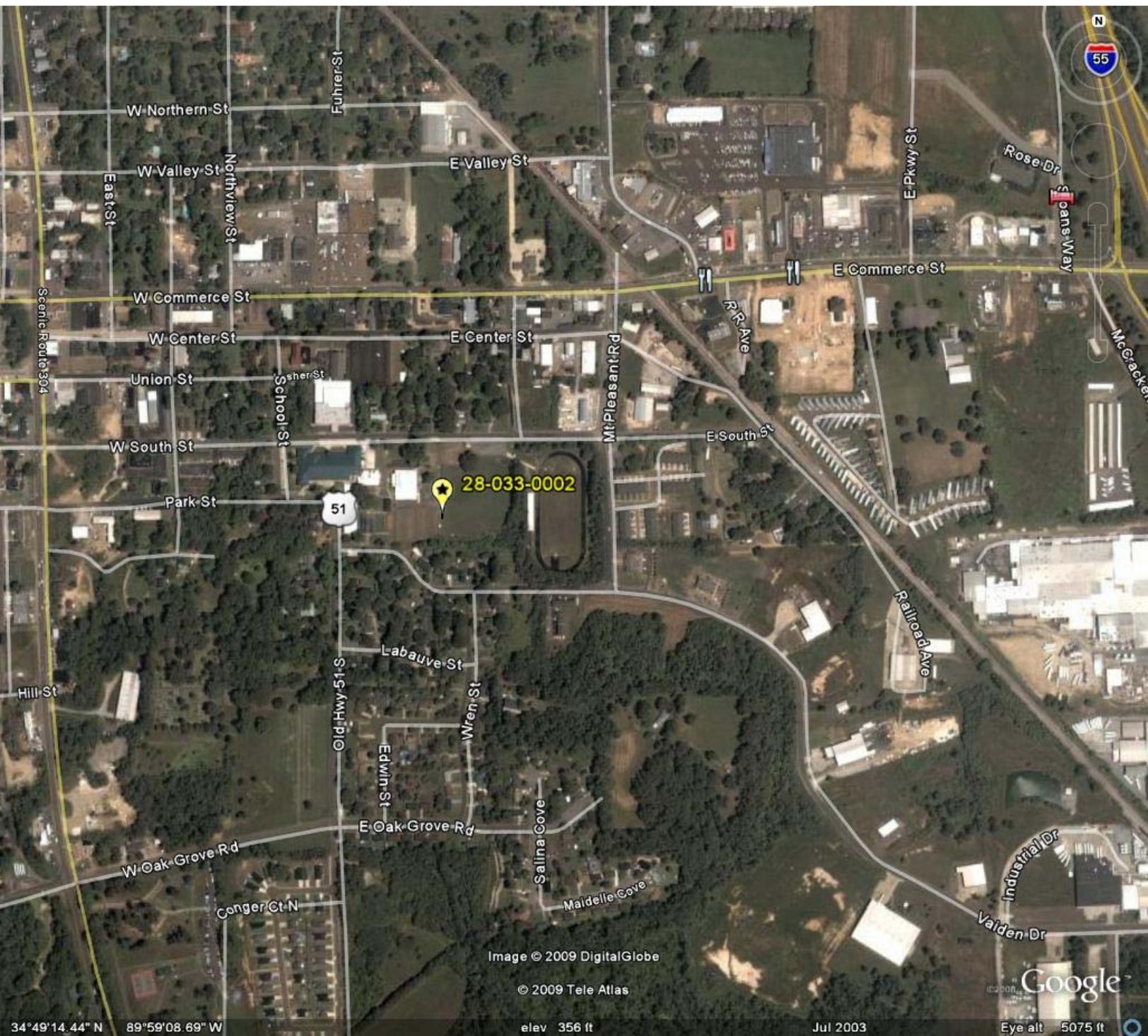


HATTIESBURG 28-035-0004

HERNANDO-MEMPHIS AREA



HERNANDO, MS - 28-033-0002



28-033-0002

Image © 2009 DigitalGlobe

© 2009 Tele Atlas

elev 356 ft

Jul 2003

Eye alt 5075 ft

Google

34°49'14.44" N 89°59'08.69" W



HERNANDO - N



HERNANDO- E



HERNANDO - S

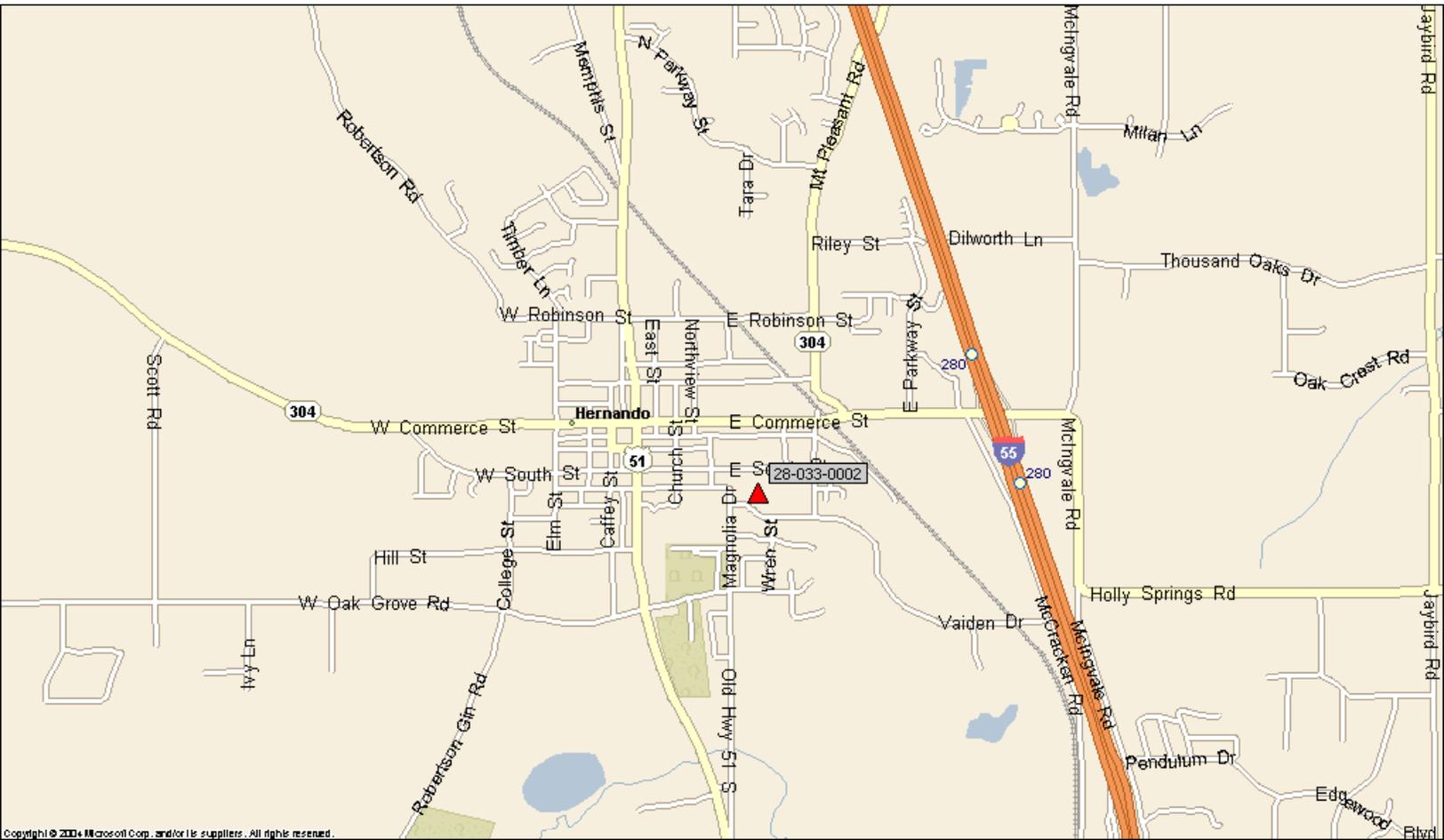


HERNANDO -W



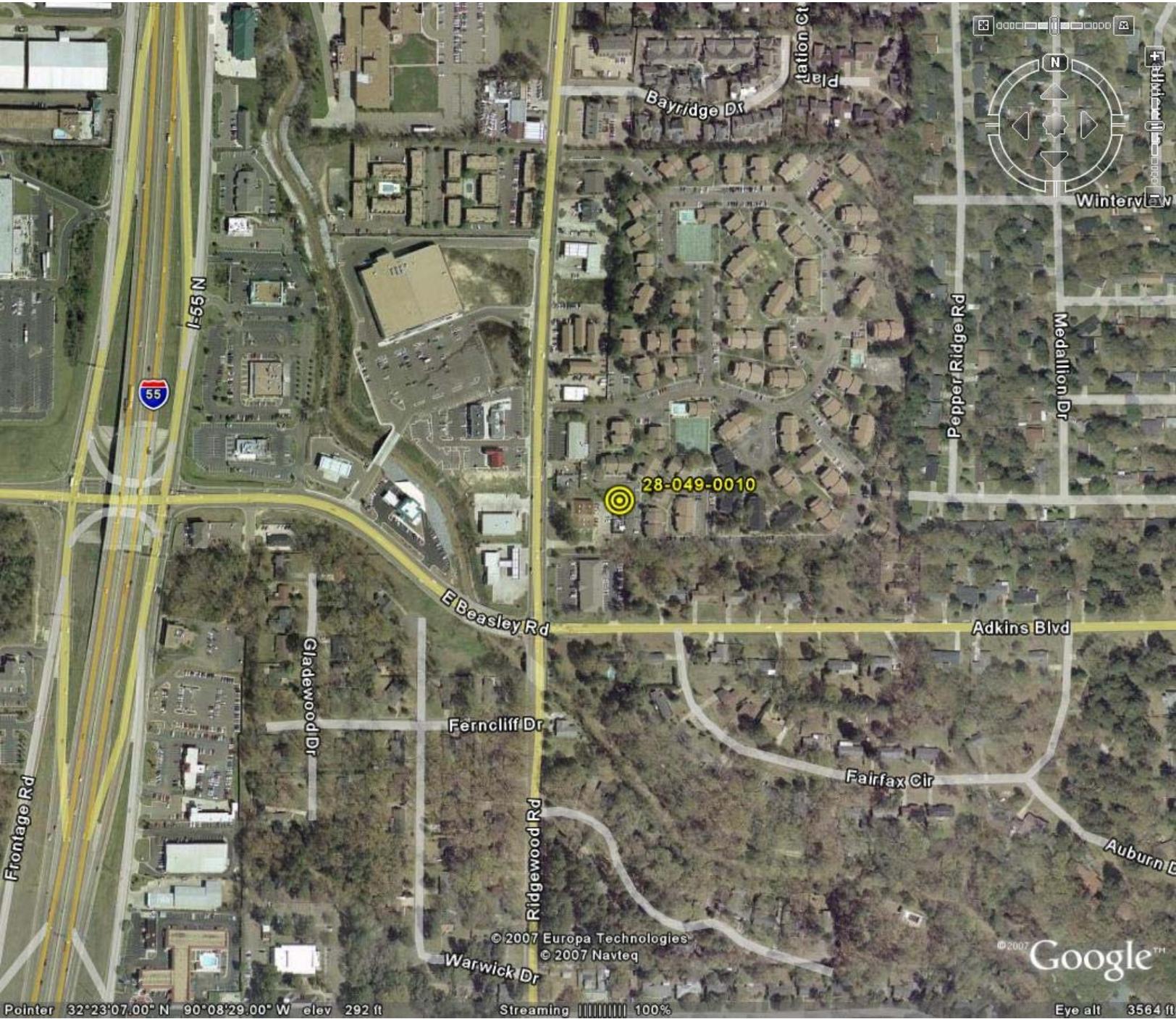
HERNANDO - 28-033-0003

DeSoto



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HERNANDO 28-033-0002





JACK FS19 - N



JACK FS19 - E



JACK FS19 - S

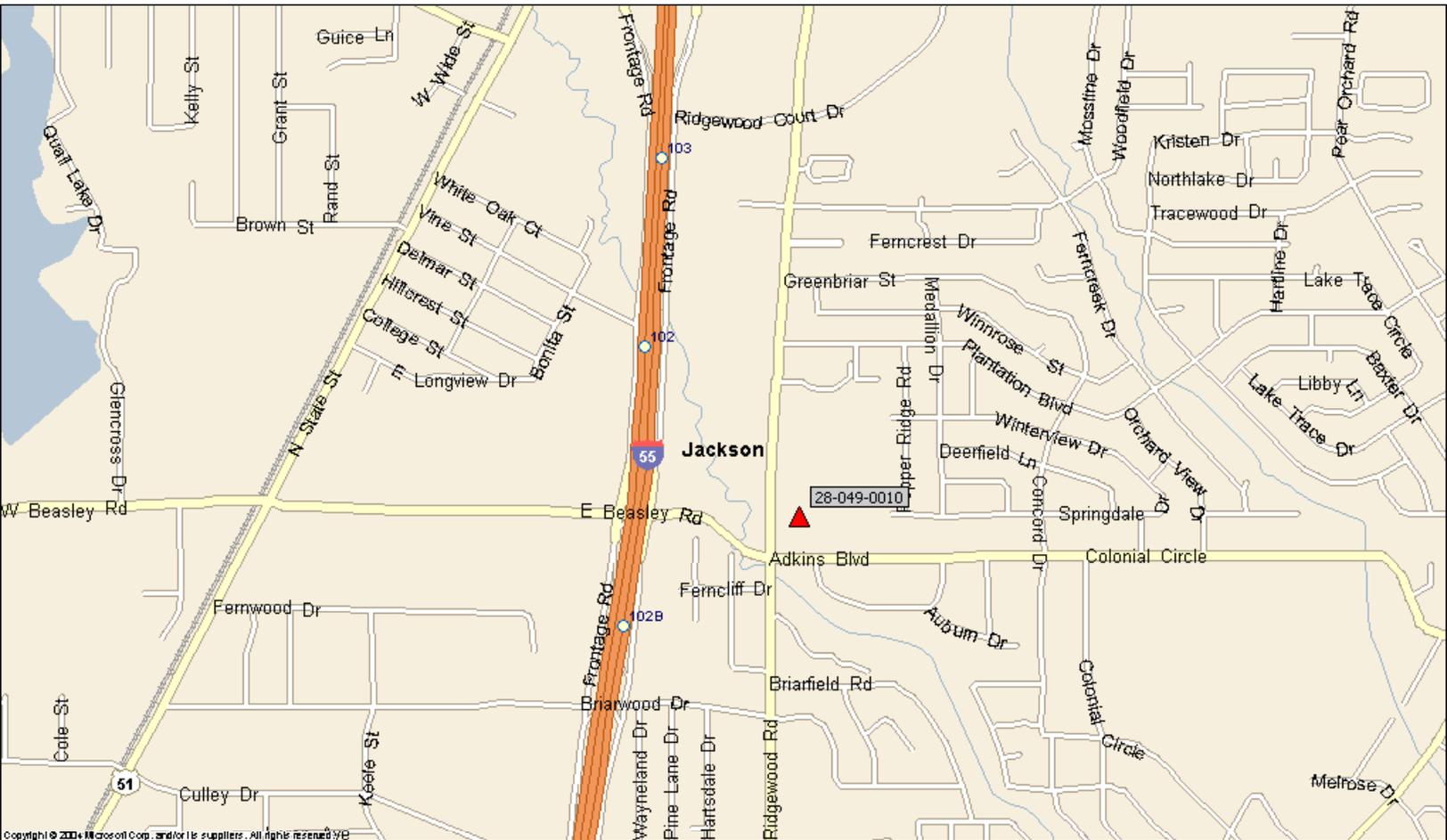


JACK FS19 - W



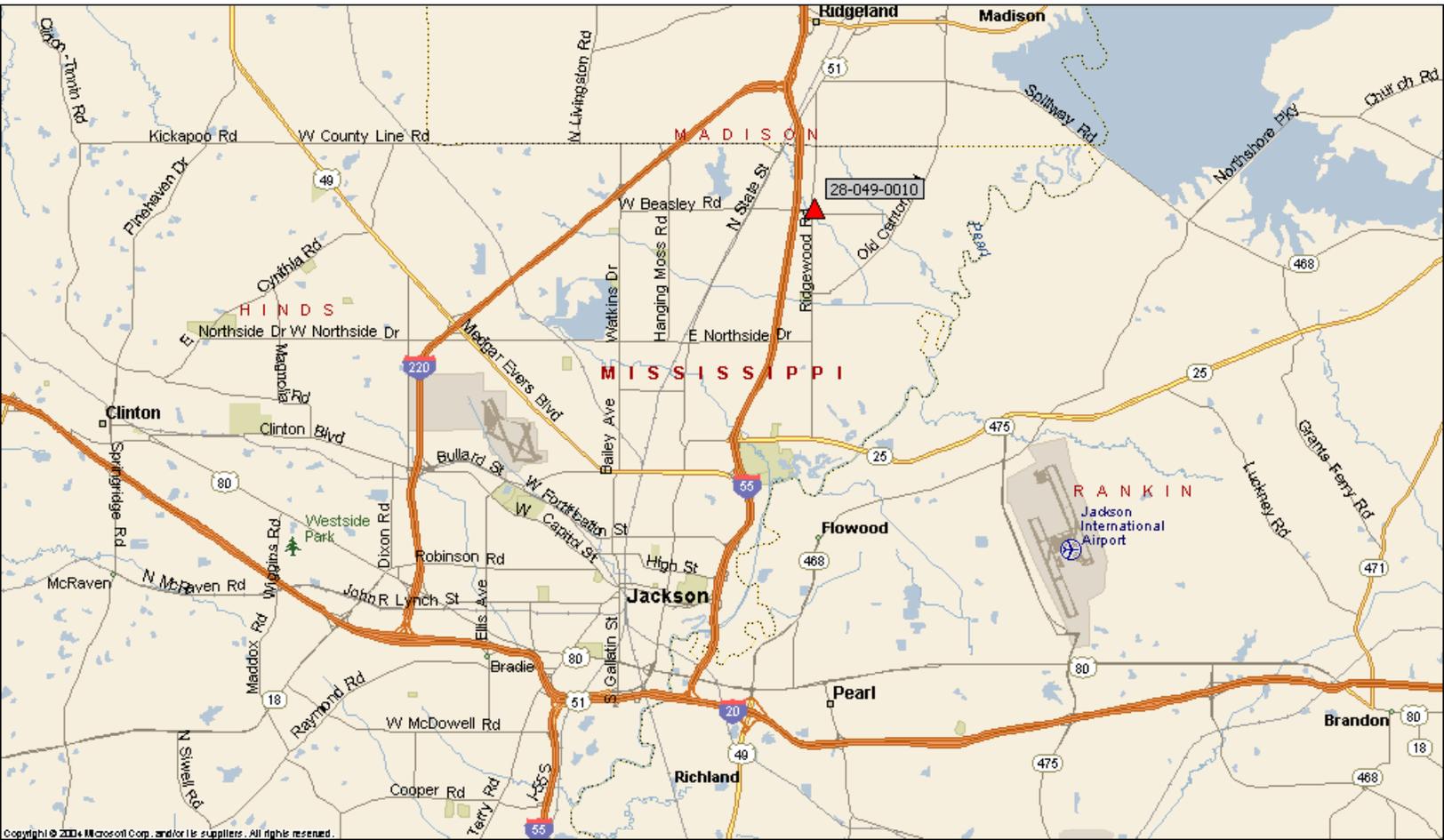
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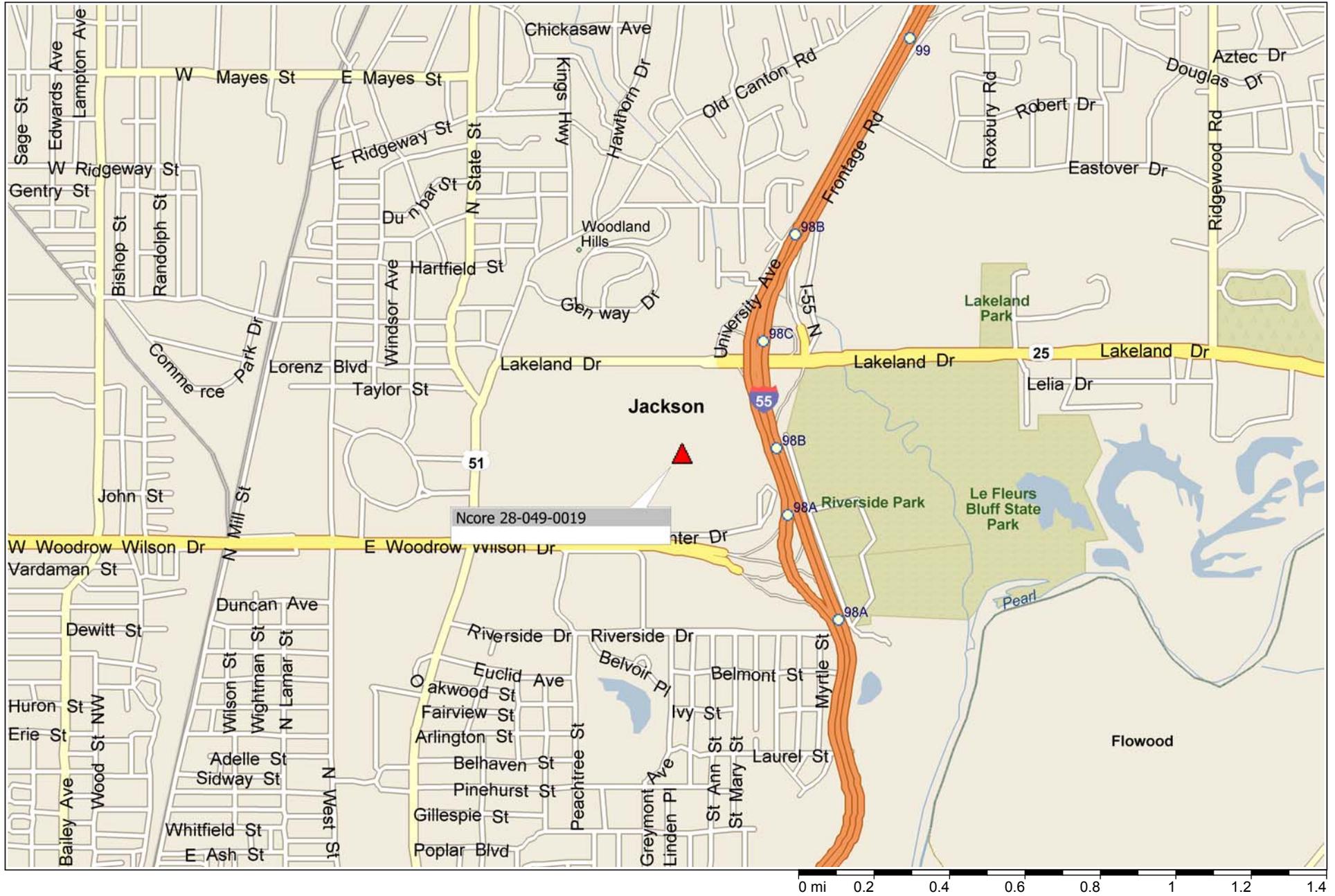
Hinds



JACKSON 28-049-0010

JACKSON METRO







JACK UMC - N



JACK UMC - E



JACK UMC - S



JACK UMC - W

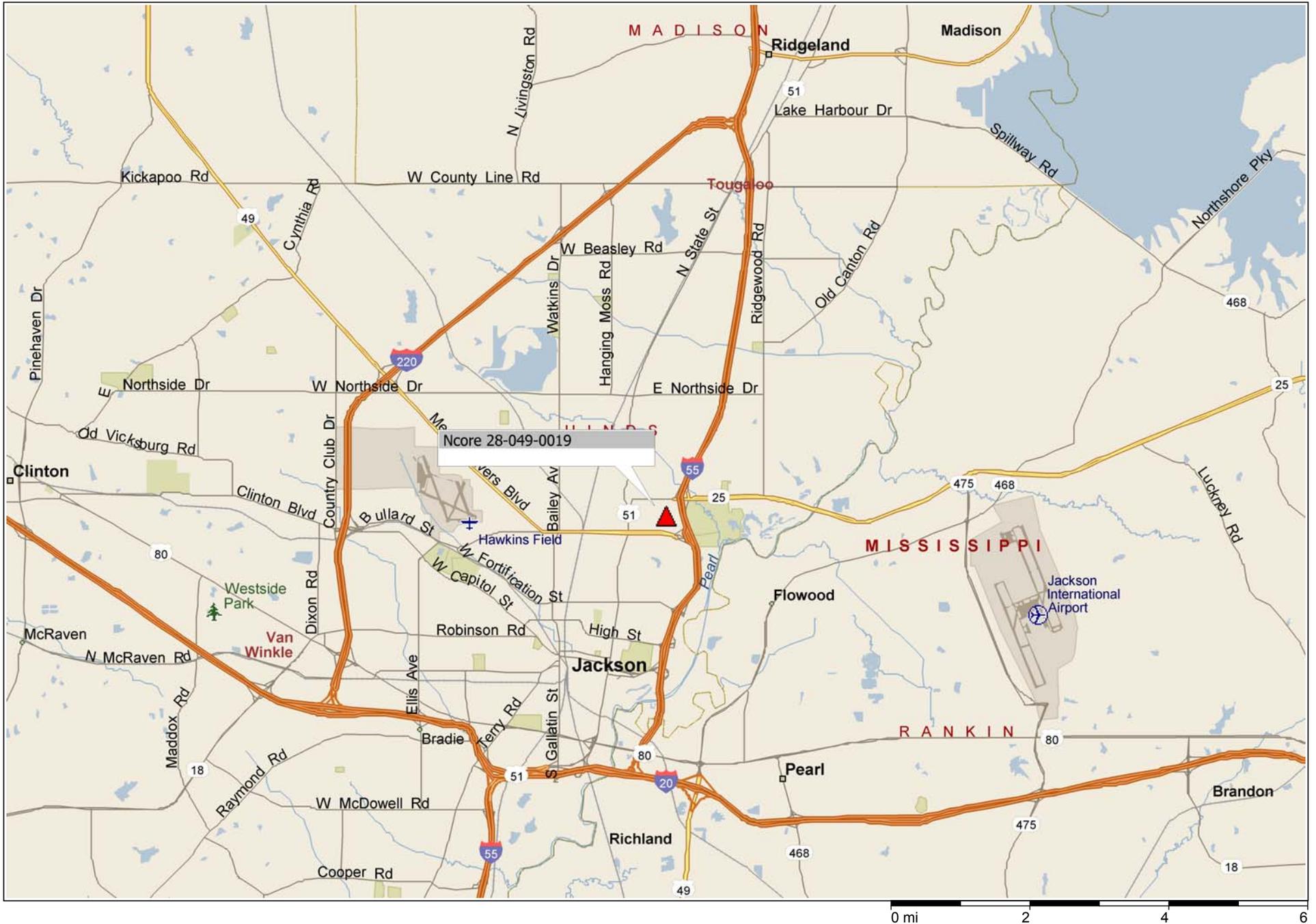


JACK UMC - 28-049-0019

JACKSON UMC
NCORE SITE
VIEWS
28-049-0019

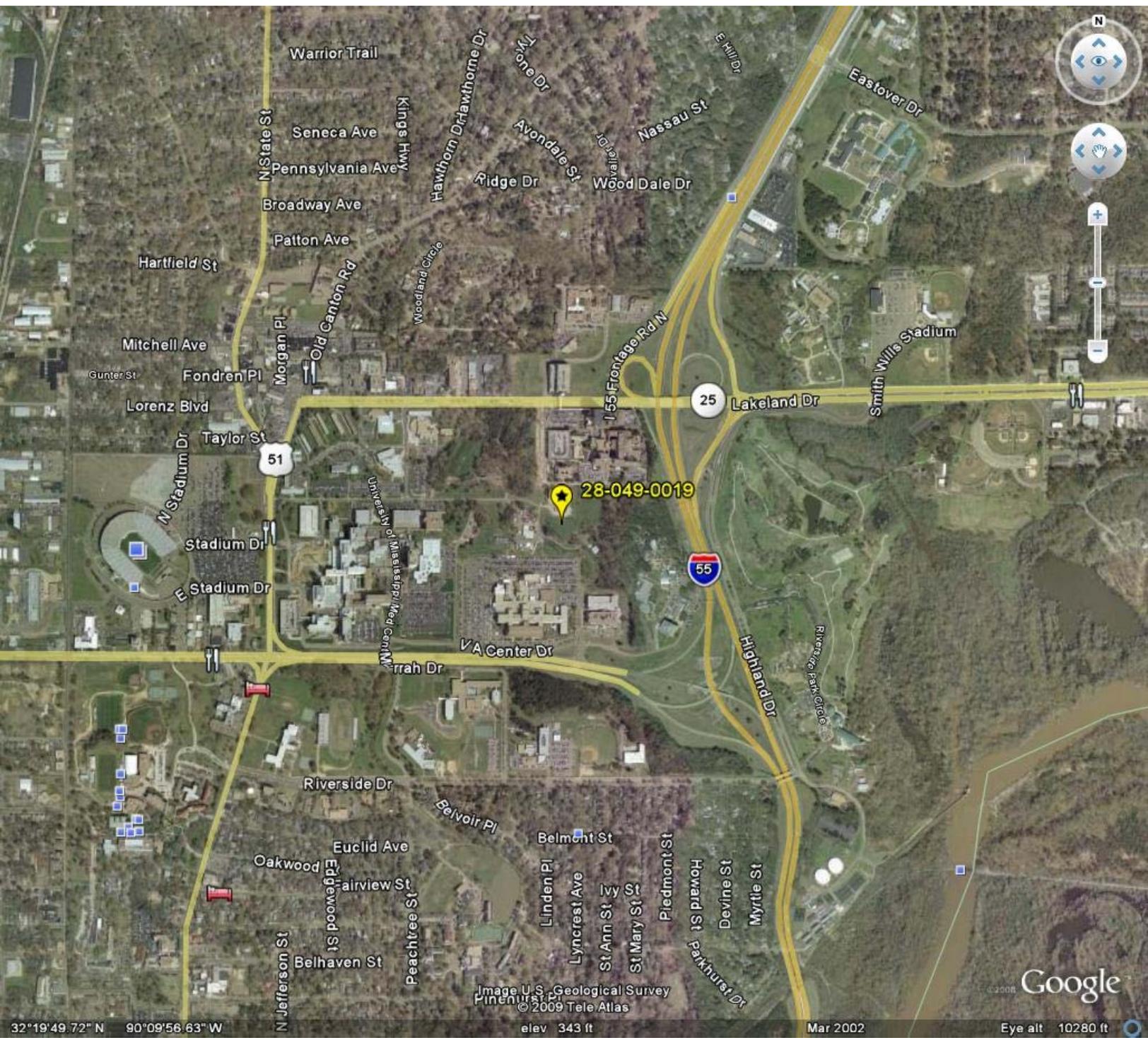
Ncore Jackson Urban

Hinds Co.

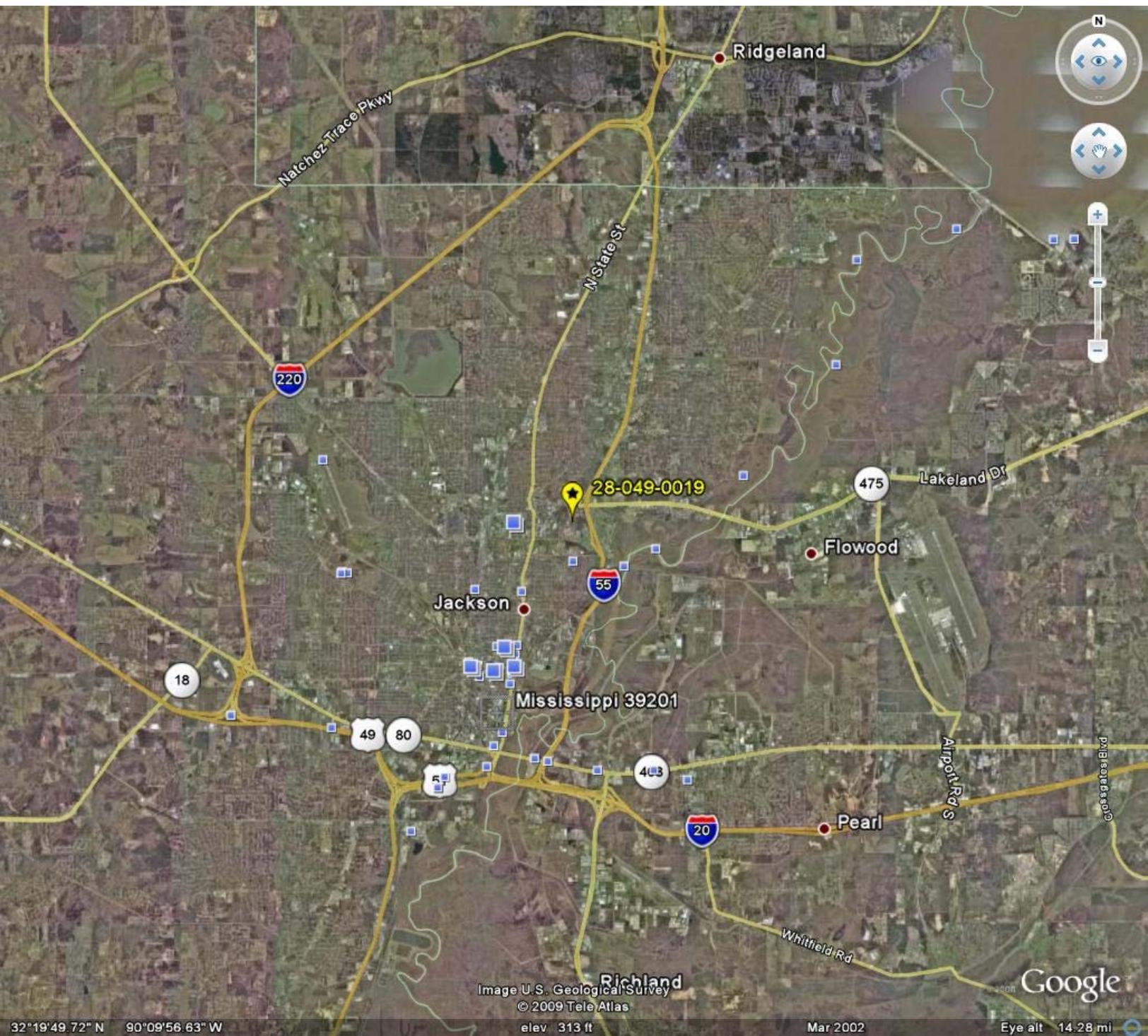




NCORE JACKSON, MS - 28-049-0019

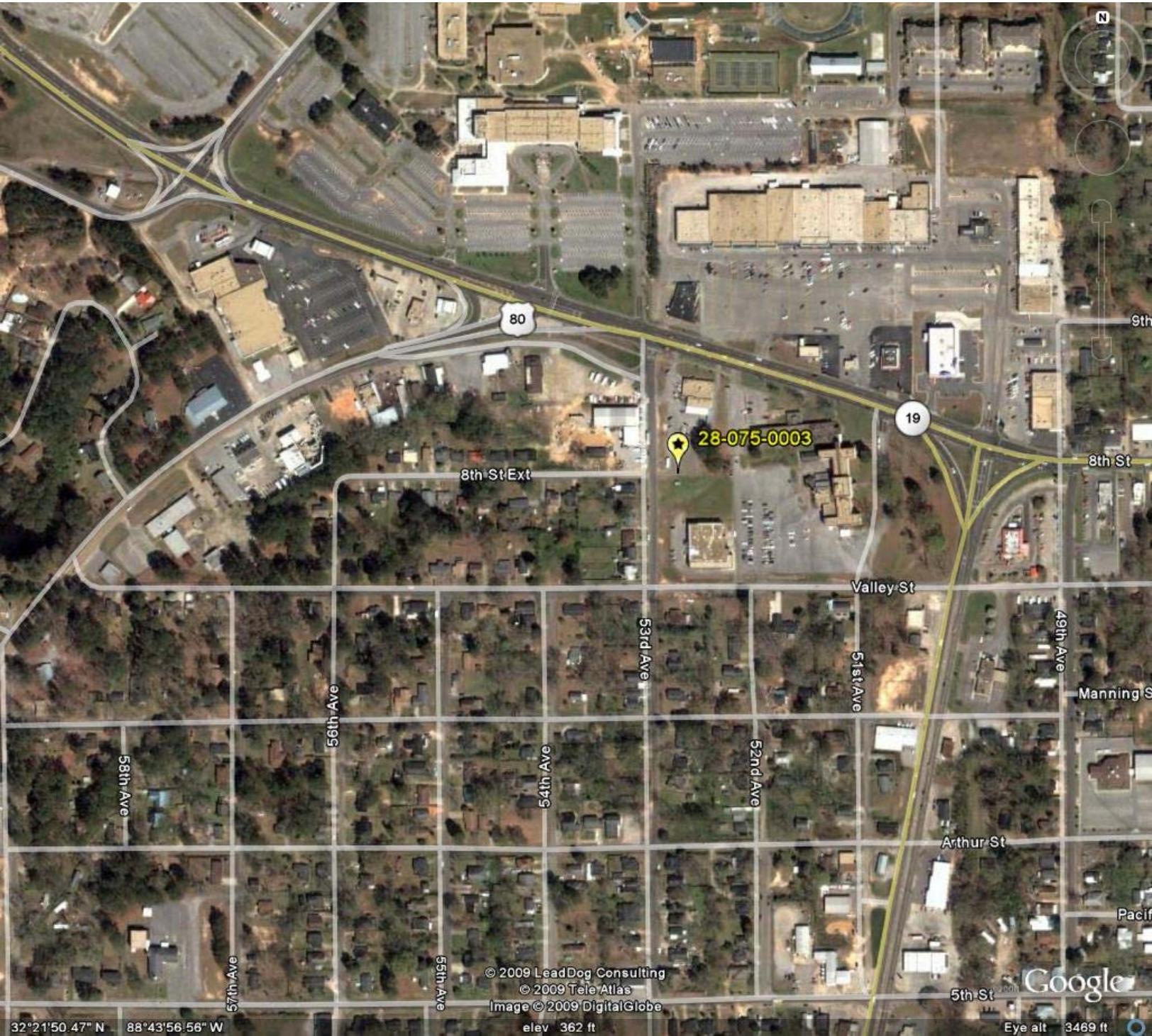


NCORE JACKSON, MS - 28-049-0019



LAUREL, MS - 28-067-0002







MERIDIAN - N



MERIDIAN - E



MERIDIAN - S

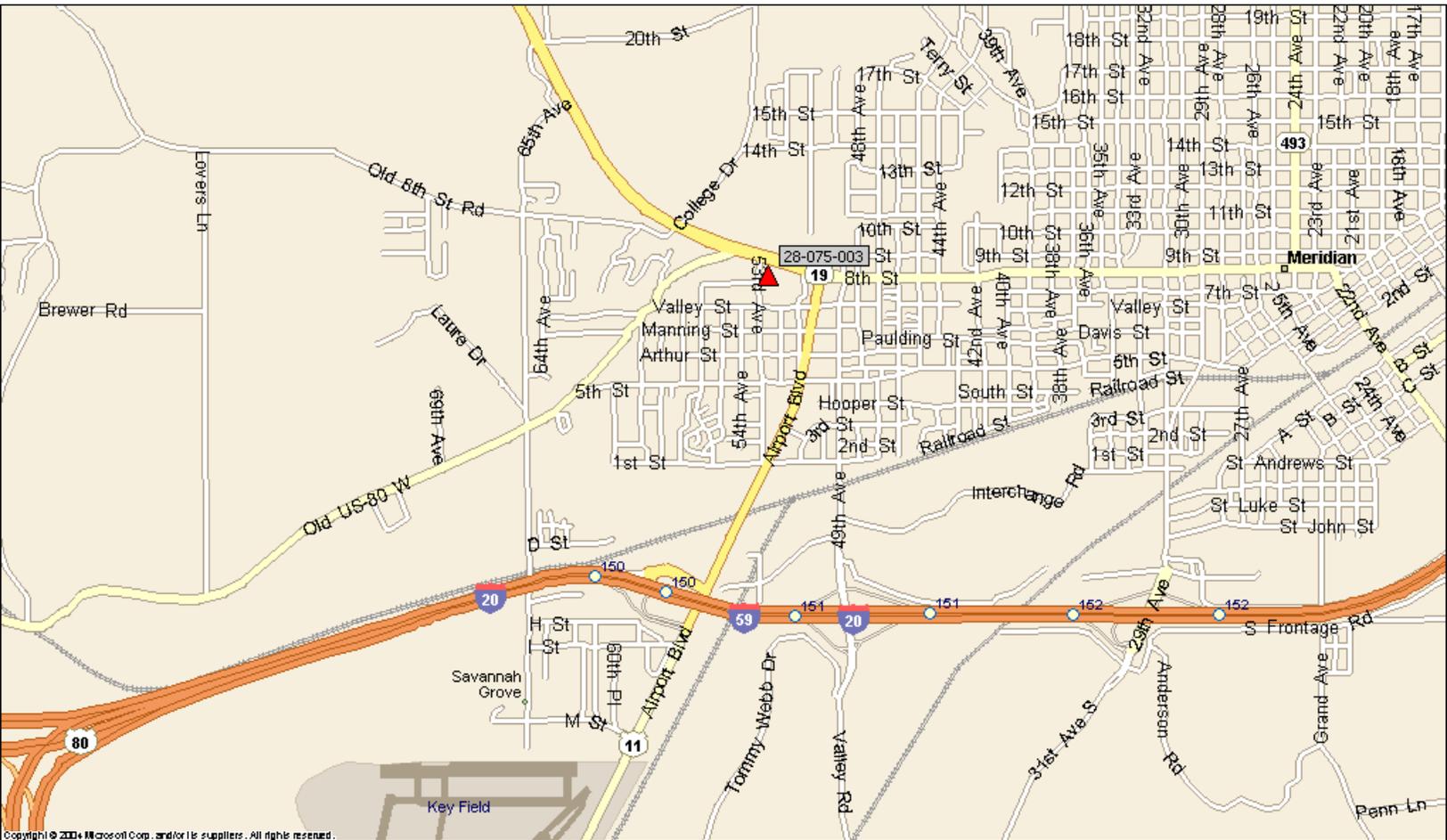


MERIDIAN - W



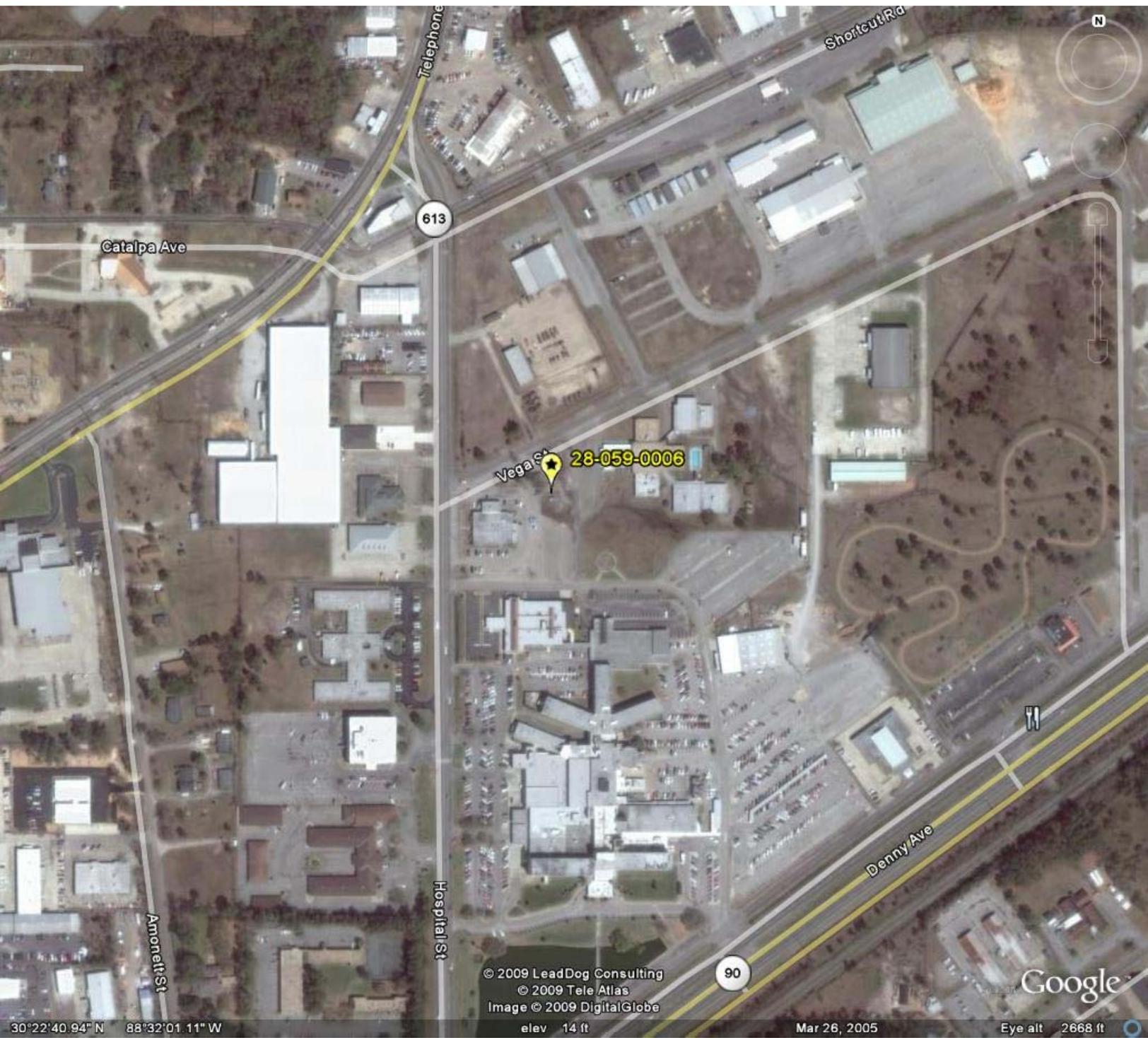
MERIDIAN - 28-075-0003

Lauderdale



MERIDIAN 28-075-0003

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PASCAGOULA - N



PASCAGOULA - E



PASCAGOULA - S



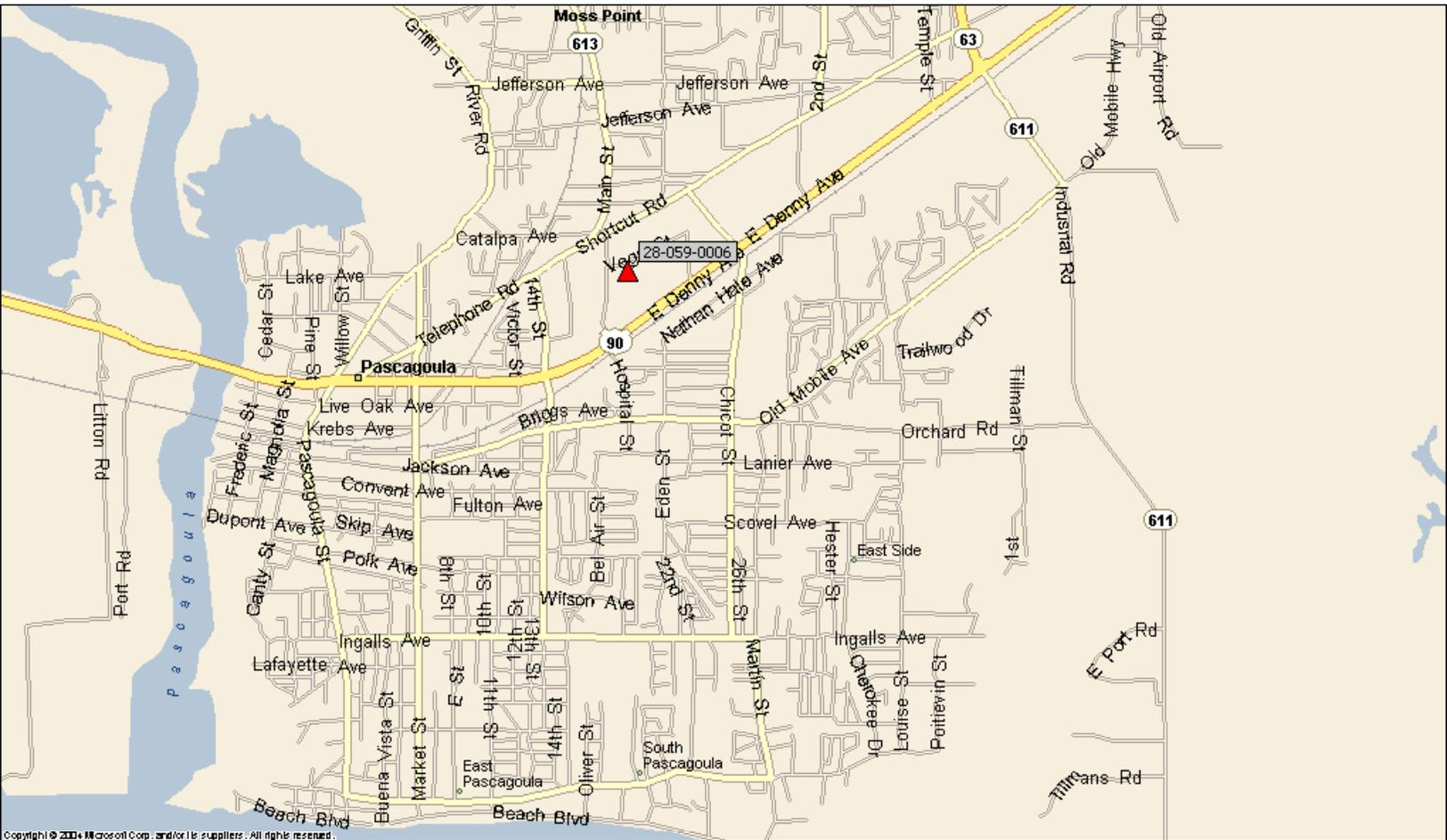
PASCAGOULA - W



PASCAGOULA - 28-059-0006



Jackson



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PASCAGOULA 28-059-0006





TUPELO - N



TUPELO - E



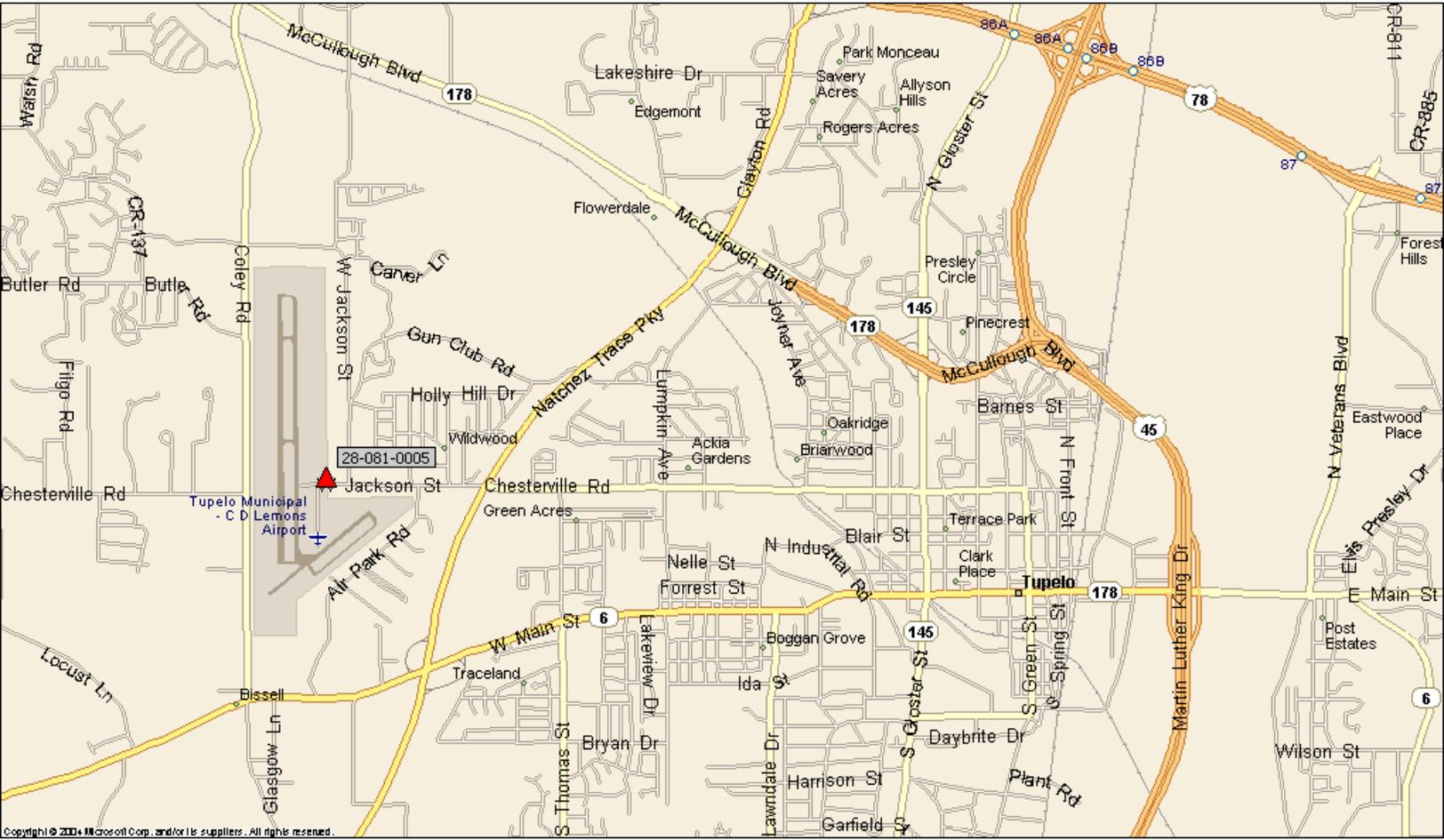
TUPELO - S



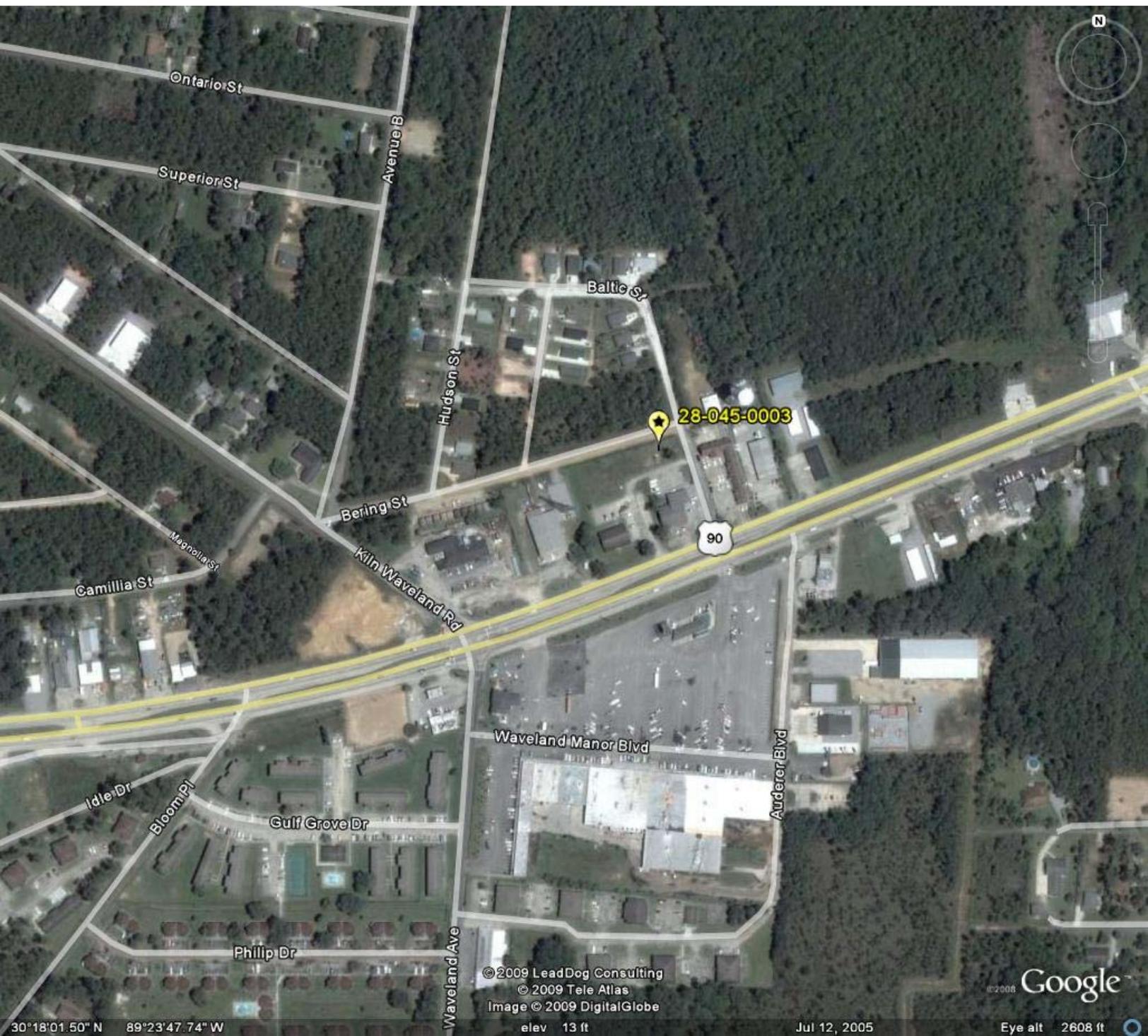
TUPELO - W



TUPELO - 28-081-0005



TUPELO 28-081-0005



28-045-0003

90

© 2009 LeadDog Consulting
© 2009 Tele Atlas
Image © 2009 DigitalGlobe

© 2008 Google

30°18'01.50" N 89°23'47.74" W

elev 13 ft

Jul 12, 2005

Eye alt 2608 ft



WAVELAND - N



WAVELAND - E



WAVELAND - S



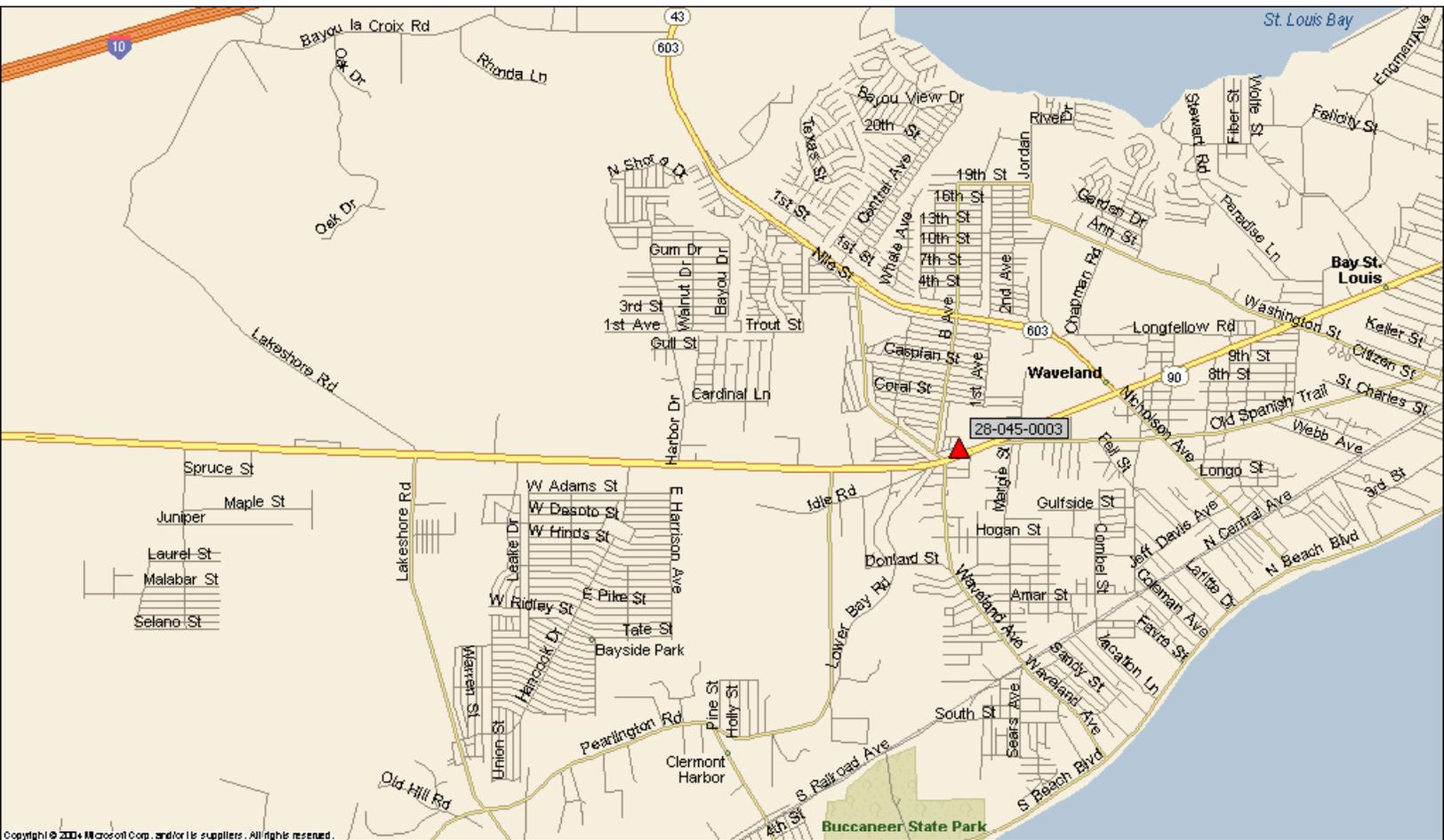
Hancock



WAVELAND - W



WAVELAND - 28-045-0003



WAVELAND 28-045-0003

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Appendix II

Regional Monitoring Agreement

RECEIVED

APR - 2 2012



Mark H. Luttrell, Jr.
Mayor
Shelby County

SHELBY COUNTY HEALTH DEPARTMENT

YVONNE S. MADLOCK
DIRECTOR

HELEN MORROW, M.D.
HEALTH OFFICER

Dept. of Environmental Quality



Public Health
Prevent. Promote. Protect.

March 28, 2011

Mr. Jackie Waynick, Chief Environmental Manager
Tennessee Division of Air Pollution Control
9th Floor, L & C Annex
Nashville, TN 37243-1531

Mr. Jerry Beasley, Environmental Regulator
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 2261
Jackson, MS 39225

Ms. Teresa Marks, Division Director
Arkansas Department of Environmental Quality
5301 Northshore Dr.
North Little Rock, AR 72118

Dear All,

Attached is a revision to the Air Monitoring Memorandum of Agreement (MOA) between our respective agencies. This revision document serves as the notification of changes described in the MOA between the Shelby County Health Department (SCHD), Mississippi Department of Environmental Quality (MDEQ), and the Arkansas Department of Environmental Quality (ADEQ) signed May and June of 2008. Of primary interest is the addition of the NCORE Air Monitoring Station located in Shelby Farms in Memphis.

NCORE

Shelby County was chosen by EPA as one of 75 NCORE site locations, nationally. This multi-pollutant air monitoring station is located at 6388 Haley Road (47-157-0075) in the Shelby Farms area.

NO₂

The Shelby County Health Department (SCHD) once operated a NO₂ analyzer at 416 Alabama (47-157-0024). It began to malfunction on October 23, 2006. The site operator, along with a service advisor with Teledyne Instruments Advanced Pollution Instrumentation concluded that diagnosis of the problem would have to be made at the factory. The Teledyne-API technician determined that the NO₂ analyzer needed considerable repair. Taking into account the age of the instrument and the cost of repair, it was deemed to be not worthy of repair. Also, the SCHD

did not have the resources to replace the analyzer. As a consequence, NO₂ has not been monitored in Shelby County since 2006. This information has been notated in AQS. Shelby County anticipates in participating in the Second Phase of the Core Based Statistical Area Near Road NO₂ monitoring in conjunction with the recently promulgated NO₂ regulations.

PM 2.5

The PM 2.5 continuous monitor (TEOM) is temporarily discontinued at the Alabama (47-157-0024) site. The EPA was notified on September 19, 2011 of the status on the monitor and has given the SCHD approval to temporarily discontinue this sampling until funds are located to replace the monitor. This monitor began to malfunction on July 25, 2011. This information has been notated in AQS. The letters requesting the discontinuation and approval are attached in the Appendix.

OZONE

The ozone monitoring requirement for NCORE increases the number of ozone analyzers in Shelby County to three at the following sites: 47-157-0021, 47-157-0075 and 47-157-1004.

LEAD

The current lead (Pb) NAAQS requires identifying sources of lead emissions of one half ton per year or greater. The emissions inventory indicates that there are no sources with emissions of one half ton or greater. Therefore, the SCHD does not anticipate having to do any lead source sampling. However, lead monitoring is a component of the NCORE site. Lead sampling began on January 4, 2012.

If you have any questions, please call me at (901) 222-9597.

Sincerely,



Bob Rogers, Technical Manager
Pollution Control

Mission

To promote, protect and improve the health and environment of all Shelby County residents.

814 Jefferson Avenue Memphis, Tennessee 38105
(901) 222-9000

**MEMORANDUM OF AGREEMENT
ON AIR QUALITY MONITORING FOR CRITERIA
POLLUTANTS FOR
THE MEMPHIS, TN- MS- AR
METROPOLITAN STATISTICAL AREA (MSA)**

Participating Agencies:

Shelby County Health Department (SCHD)
Air Pollution Control Program

Mississippi Department of Environmental Quality (MDEQ)
Office of Pollution Control, Air Division

Arkansas Department of Environmental Quality (ADEQ)

PURPOSE / OBJECTIVE / GOALS

The purpose of this Memorandum of Agreement (MOA) is to inform the entities of the Memphis, Tennessee-Mississippi-Arkansas Metropolitan Statistical Area of monitoring network changes. The MOA between SCHD, MDEQ, and ADEQ is to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less (PM 10), particles of an aerodynamic diameter of 2.5 micrometers and less (PM 2.5), and ozone; as well as other criteria pollutants air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will formalize and reaffirm the collective agreement in order to provide adequate criteria pollutant monitoring for the Memphis, TN-MS-AR MSA as required by 40 CFR 58 Appendix D, Section 2, (e).

PM 2.5 MSA monitoring network include:

<u>County</u>	<u>Federal Referenced Method PM 2.5</u>	<u>Continuous PM 2.5</u>	<u>Speciation PM 2.5</u>	<u>Co located PM 2.5</u>
Shelby County, TN SCHD	2	1	2	1
Crittenden County, AR ADEQ	1	1		
DeSoto County, MS MDEQ	1	1		1

Criteria Air Pollutant MSA monitoring network include:

<u>County</u>	<u>PM 10</u>	<u>O₃</u>	<u>NO_x/NO/NO₂</u>	<u>CO</u>	<u>SO₂</u>
Shelby County, TN SCHD	2	3		2 (includes 1 trace at N CORE)	2 (includes 1 trace at N CORE)
Crittenden County, AR ADEQ		1	1		
DeSoto County, MS MDEQ		1			

RESPONSIBILITIES / ACTIONS

Each of the parties to this Agreement is responsible for ensuring that its obligations under the MOA are met. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected agency shall inform the other affected agencies via telephone or email of any monitoring changes occurring within its jurisdiction of the MSA at its earliest convenience, after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disasters, or any occurrences that result in an extended (greater than one quarter) or permanent change in the monitoring network.

LIMITATIONS

- All commitments made in this MOA are subject to the availability of appropriated funds and each agency's budget priorities. Nothing in this MOA obligates SCHD, MDEQ, or ADEQ to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.
- This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements that will be affected in writing by representatives of the parties.
- This MOA does not create any right or benefit enforceable by law or equity against SCHD, MDEQ, or ADEQ, their officers or employees, or any other person. This MOA does not apply to any entity outside SCHD, MDEQ, or ADEQ.
- No proprietary information or intellectual property is anticipated to arise out of this MOA.

TERMINATION

This Memorandum of Agreement may be revised upon the mutual consent of SCHD, MDEQ and ADEQ. Each party reserves the right to terminate this MOA. A thirty (30) day written notice must be given prior to the date of termination.

Shelby County Air Pollution Monitoring Sites 2012

<u>Site</u>	<u>Address</u>	<u>State</u>	<u>County</u>	<u>Site</u>	<u>Pollutant</u>	<u>Parameter</u>	<u>POC</u>
Alabama	416 Alabama	47	157	0024	CO	42101	1
					PM 2.5	88502	5
Edmund Orgill	6855 Mudville Rd.	47	157	1004	O ₃	44201	1
Frayser	1330 Frayser Blvd.	47	157	0021	O ₃	44201	1
Fite Rd.	3065 Fite Rd.	47	157	0046	SO ₂	42401	1
					PM 10	81102	1
Gas Service Center	1060 Tupelo	47	157	0016	PM 10	81102	1
					PM 10	81102	2
Guthrie Clinic	1064 Breedlove	47	157	0047	PM 2.5	88101	1
					PM 2.5	88101	2
Shelby Farms (NCORE)	6388 Haley Rd.	47	157	0075	Pb	14129	
					CO (Trace)	42101	1
					SO ₂ (Trace)	42401	1
					NOY	42600	1
					O ₃	44201	1
					PM 10 (Lo Vol)	85101	1
					PM 10-2.5	86101	1
					PM 2.5	88101	1
					PM 2.5	88502	3
					PM 2.5	88502	6