

Greene County GIS Office

February 25, 2020 Huddle



Greene County GIS Office

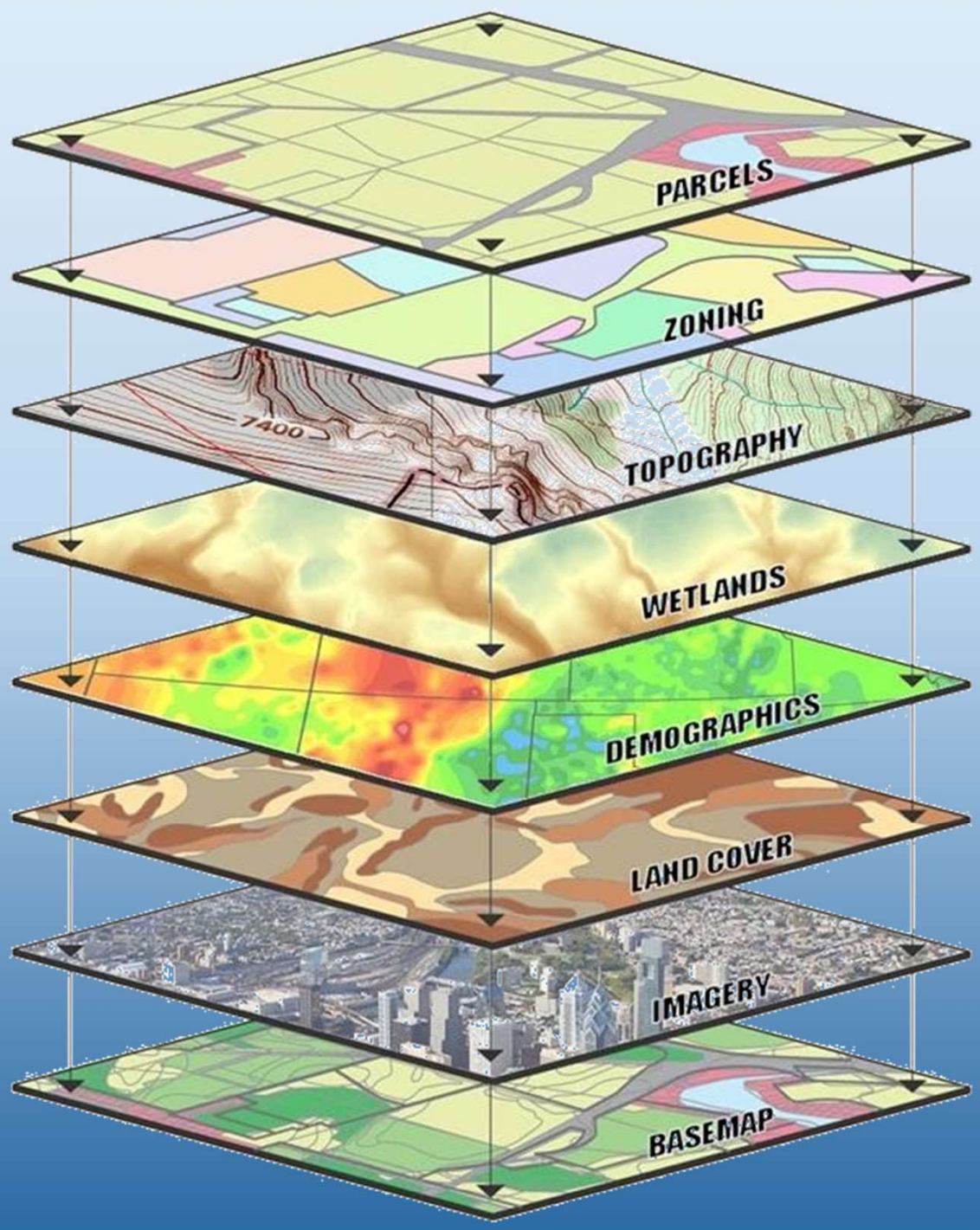
- Geographic Information Systems (I.S.)
- Create / Maintain geographic data for Greene Co

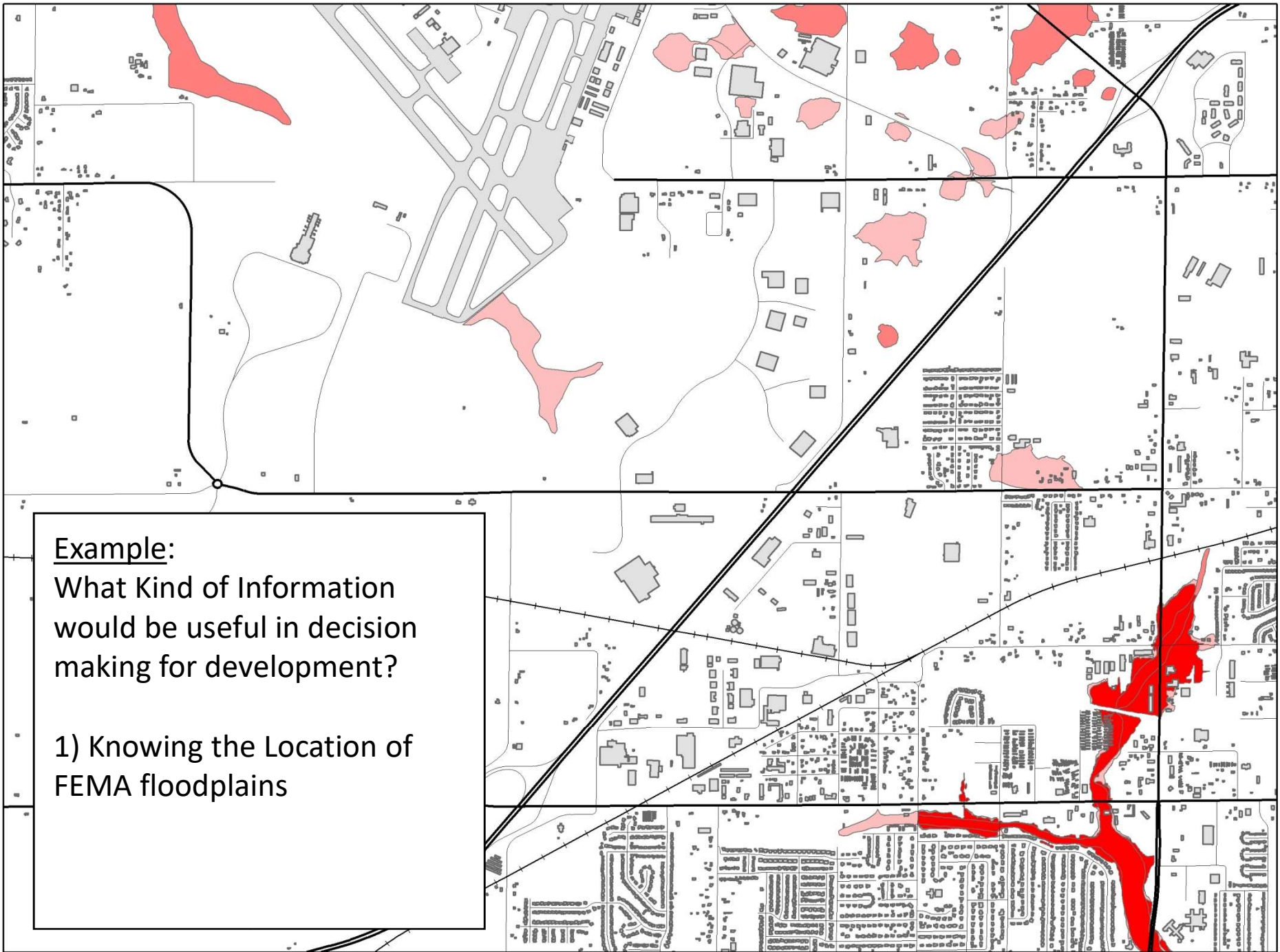


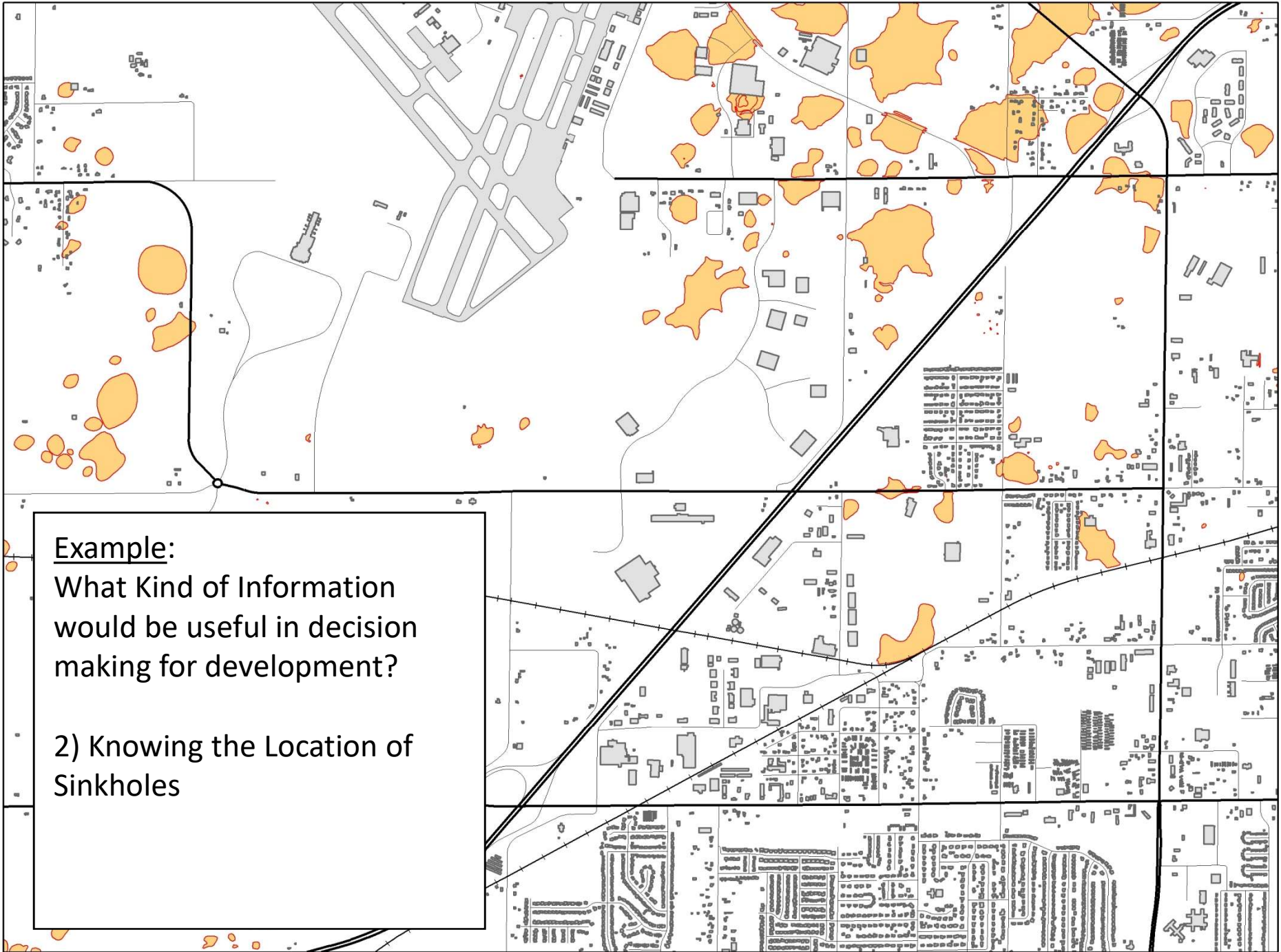
What is GIS?



GIS is essentially the ability to map different sets of data that have a geographical component to them; and then be able to view together; and make decisions based on putting all of that information together. Each data set is lined up so that it matches up with other data sets; and you then could look at one location, and get all kinds of information about that location; in one place; and then be able to make decisions based on what you see.



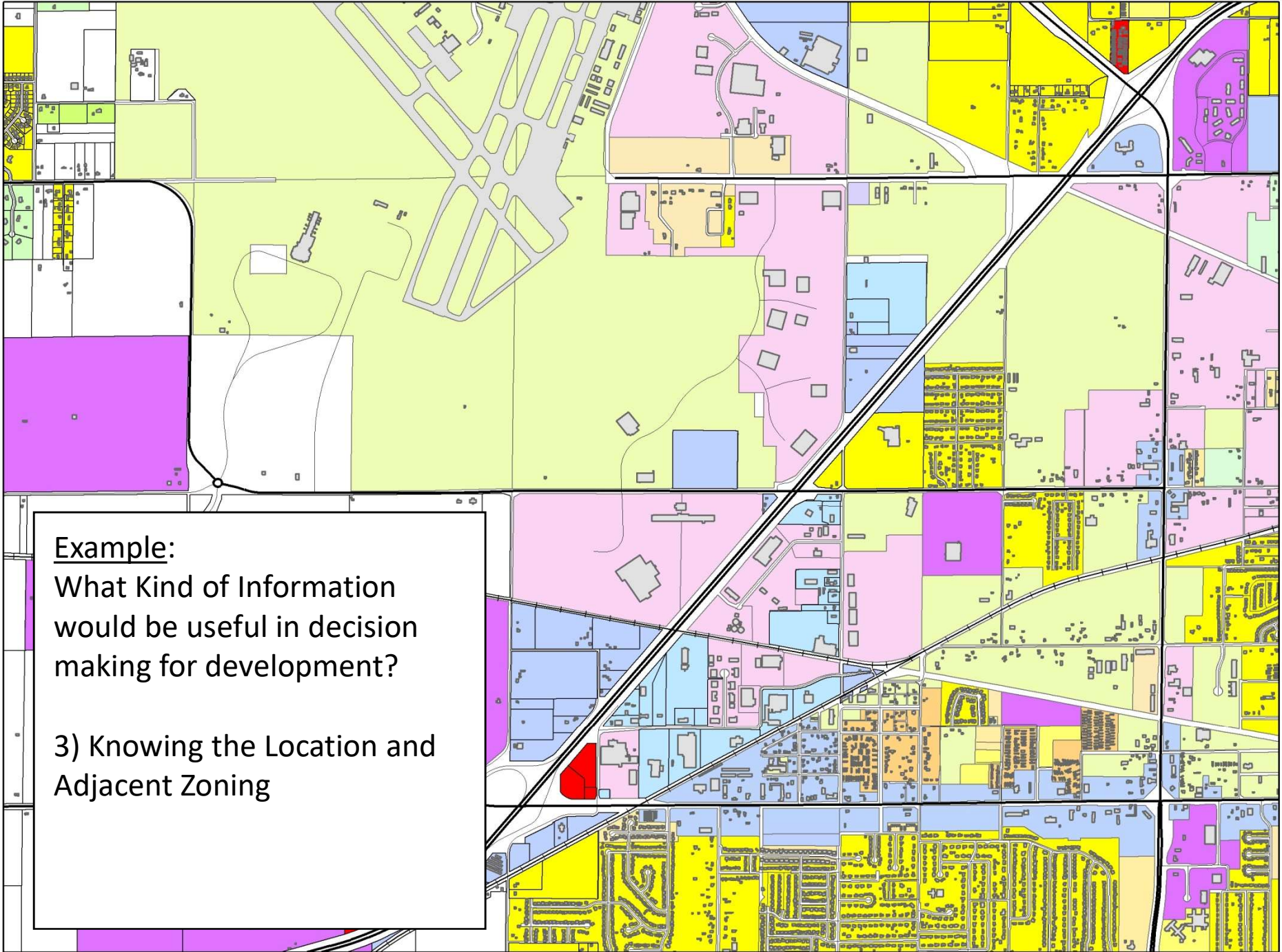




Example:

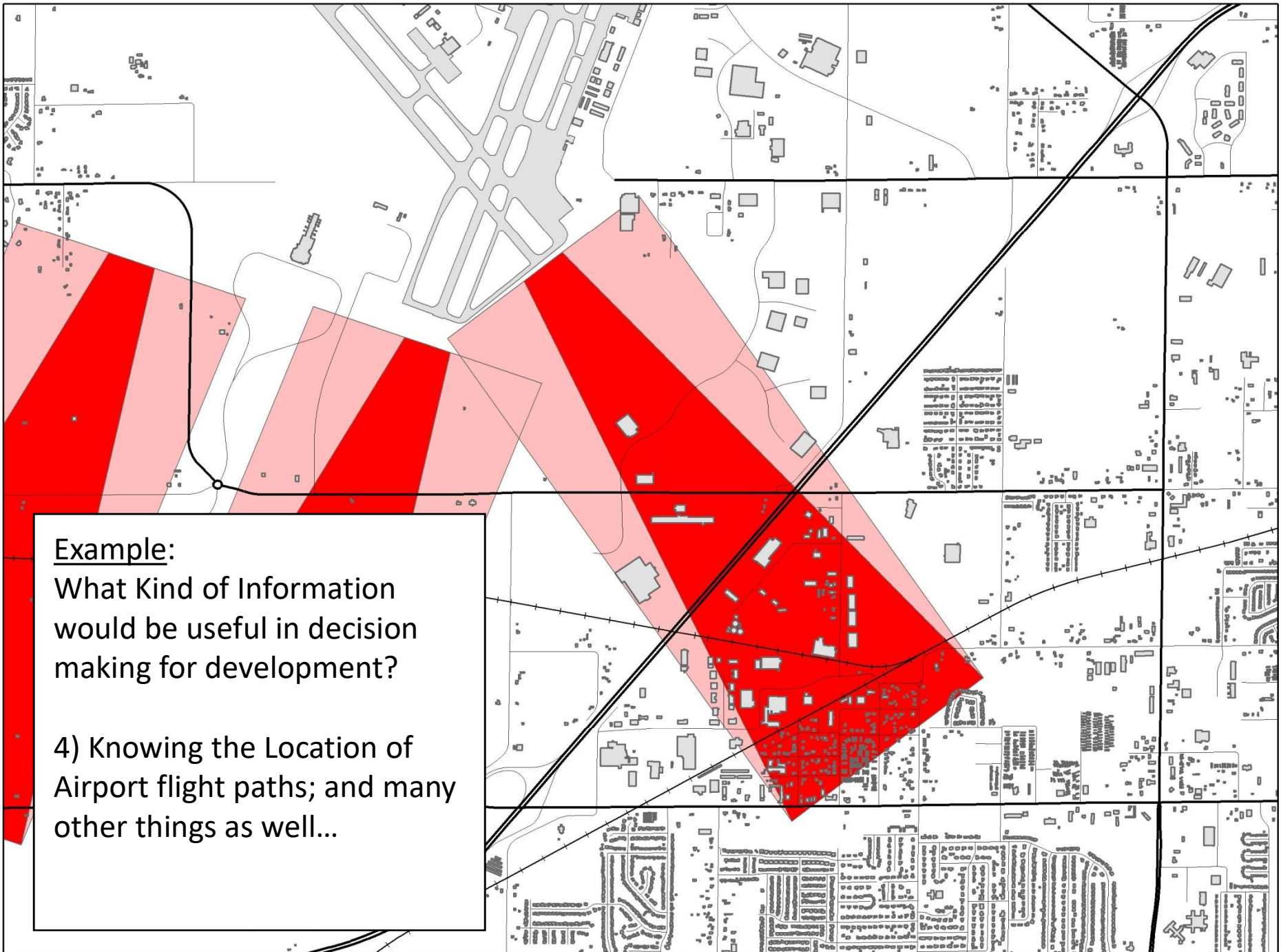
What Kind of Information
would be useful in decision
making for development?

2) Knowing the Location of
Sinkholes



Example:
What Kind of Information
would be useful in decision
making for development?

3) Knowing the Location and
Adjacent Zoning



Example:

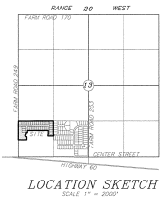
What Kind of Information would be useful in decision making for development?

4) Knowing the Location of Airport flight paths; and many other things as well...

GIS Data

- 200 + Data sets that we have created and maintain
- Constantly developing new data
- Graphical updates as well as Database updates





BASIS OF BEARINGS
 GRID NORTH
 MISSOURI COORDINATE SYSTEM 1983
 CENTRAL ZONE
 MONUMENTS 09-30 & 09-30A
 GRID FACTOR: 0.9999070

AAA-645 #5330
 043882-19 04 Dec 2019 11:07:31AM

Book 2019
 Page 043882-19
 1 page

REAL ESTATE DOCUMENT
 SYSTEM CONTROL NUMBER
 043882-19

Chad R. Harrison
 REGISTERED SURVEYOR

ELEVATION BENCHMARK

MISSOURI GEOGRAPHIC
 REFERENCE MONUMENT 09-58
 ELEVATION = 1425.85
 DATUM NAVD 1988

TBM - 1/2" IRON PIN LOCATED AT THE
 NORTHWEST CORNER OF THE SOUTH HALF
 OF SEC 13, T28N, R20W
 ELEVATION = 1489.47

SALLY J SMITH, TRUST
 BOOK 2014 PAGE 017643-14

KEVIN SMITH, TRUST
 BOOK 2014 PAGE 017625-14

SALLY J SMITH, TRUST
 BOOK 2014 PAGE 017643-14

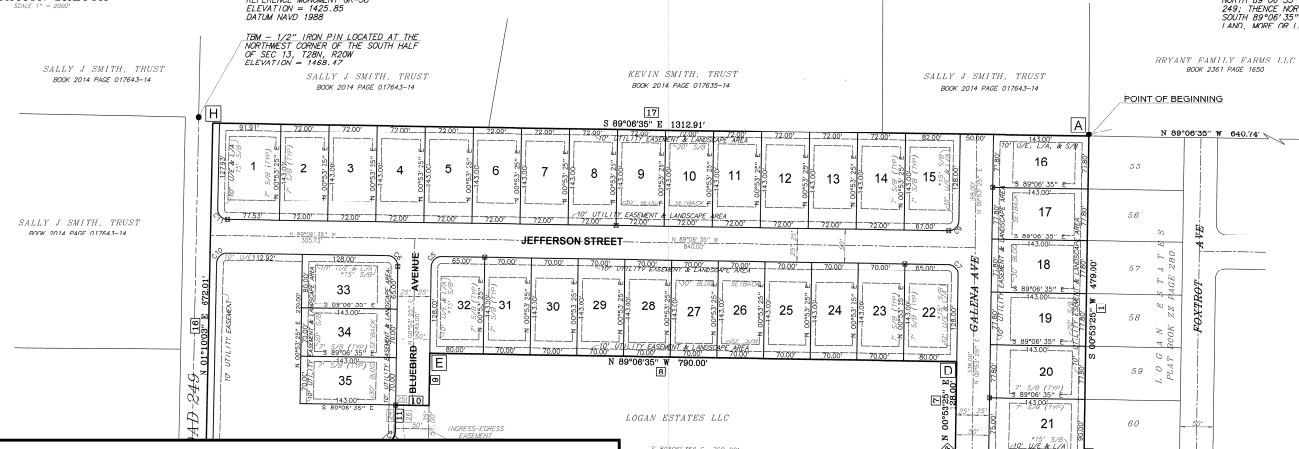
RYVANT FAMILY FARMS LLC
 BOOK 2007 PAGE 1652

FINAL PLAT
LOGAN ESTATES PHASE TWO 2ND ADDITION
 A PART OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF
 SECTION 13, TOWNSHIP 28 NORTH, RANGE 20 WEST
 ROGERSVILLE, GREENE COUNTY, MISSOURI

OWNER/DEVELOPER
 CONTROLLED BURN, LLC
 722 W. OLIVE STREET
 SPRINGFIELD, MO 65806
 PHONE: (417) 864-6661
 FAX: (417) 865-6666

PROPERTY DESCRIPTION
 BOOK 2019 PAGE 002356-19

A TRACT OF LAND, SITUATED IN THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 13, TOWNSHIP 28 NORTH, RANGE 20 WEST, GREENE COUNTY, MISSOURI, BEING HERE PARTITIONALLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 13; THENCE NORTH 89°06'35" WEST, 686.30 FEET; THENCE NORTH 89°06'35" WEST, 640.74 FEET TO THE POINT OF BEGINNING, SAID POINT BEING THE NORTHWEST CORNER OF LOT 35 OF LOGAN ESTATES, A SUBDIVISION RECORDED IN PLAT BOOK 22 AT PAGE 290, GREENE COUNTY RECORDS; THENCE SOUTH 00°01'25" WEST, 479.52 FEET; THENCE SOUTH 89°06'35" WEST, 217.59 FEET; THENCE SOUTH 00°01'25" WEST, 50.00 FEET; THENCE NORTH 89°06'35" WEST, 217.59 FEET; THENCE SOUTH 00°01'25" WEST, 50.00 FEET; THENCE NORTH 89°06'35" WEST, 790.00 FEET; THENCE SOUTH 00°01'25" WEST, 271.00 FEET; THENCE NORTH 89°06'35" WEST, 50.00 FEET; THENCE SOUTH 00°01'25" WEST, 39.77 FEET; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 18.00 FEET, AN ARC LENGTH OF 143.69 FEET, AND A CHORD WHICH BEARS SOUTH 26°54'01" WEST HAVING A CHORD DISTANCE OF 13.16 FEET TO A POINT OF REVERSE CURVE; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET, A DELTA OF 140°43'49" AN ARC LENGTH OF 122.81 FEET, AND A CHORD WHICH BEARS SOUTH 17°27'18" EAST NORTH 89°06'35" WEST, 307.04 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF FARM ROAD 249; THENCE NORTH 01°10'03" EAST ALONG SAID EAST RIGHT OF WAY LINE 872.01 FEET; THENCE SOUTH 89°06'35" EAST, 1,312.81 FEET TO THE POINT OF BEGINNING, AND CONTAINING 13.31 ACRES OF LAND, MORE OR LESS, SUBJECT TO EASEMENTS AND/OR RIGHTS OF WAY.



DEDICATION:

WAYNE MORLOCK, MEMBER OF CONTROLLED BURN, LLC, OWNER AND DEVELOPER OF SAID REAL ESTATE DESCRIBED AND SHOWN HEREIN, DO HEREBY CERTIFY THAT HE HAS CAUSED SAID REAL ESTATE TO BE PLATED AS SHOWN HEREON AND THAT SAID REAL ESTATE SHALL BE KNOWN AND DESIGNATED AS LOGAN ESTATES PHASE TWO 2ND ADDITION AND THAT ALL STREETS, EASEMENTS AND ACCESS LIMITATIONS AS SHOWN HEREON ARE DEDICATED TO THE PUBLIC IN WHOLE WHEREOF I HAVE SET MY HAND AND AFFIXED MY SEAL THIS 3RD DAY OF December, 2019.

Wayne Morlock
 WAYNE MORLOCK - MEMBER

ACKNOWLEDGMENT
 STATE OF MISSOURI
 COUNTY OF GREENE

ON THE 3RD DAY OF December, 2019, BEFORE ME PERSONALLY APPEARED WAYNE MORLOCK, WHO DULY SHOWED TO ME THAT HE IS A MEMBER OF CONTROLLED BURN, LLC, AND THAT THE FOREGOING INSTRUMENT WAS SIGNED AND SEALED ON BEHALF OF SAID CONTROLLED BURN, LLC IN AUTHORITY OF ITS MEMBERS AND ACKNOWLEDGE SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CONTROLLED BURN, LLC.

IN WITNESS WHEREOF I HAVE SET MY HAND AND AFFIXED MY OFFICIAL SEAL AT MY OFFICE IN GREENE COUNTY, MISSOURI, THE FIRST DAY OF December, 2019.

Linda S. Harrison
 Linda S. Harrison
 MY COMMISSION EXPIRES: 4.17.23

NOTARY PUBLIC, MISSOURI
 MISSOURI PUBLIC NOTARY 3441
 STATE OF MISSOURI
 GREENE COUNTY
 COMMISSION # 1488292
 MA Commission Expires 04-17-2023

CERTIFICATE OF APPROVAL BY THE BOARD OF ALDERMEN

APPROVED BY THE BOARD OF ALDERMEN OF THE CITY OF ROGERSVILLE, MISSOURI, THIS 2ND DAY OF December, 2019.

CHAIRMAN: *Tom Stoll*

CERTIFICATE OF APPROVAL BY THE PLANNING AND ZONING COMMISSION

APPROVED BY THE PLANNING AND ZONING COMMISSION OF THE CITY OF ROGERSVILLE, MISSOURI, ADOPTED THIS 26TH DAY OF November, 2019.

CHAIRMAN: *John Dyer*

The Lots on this plat are subject to a Property Owners Association with protective covenants and restrictions recorded separate from this plat.

KNOWN ALL MEN BY THESE PRESENTS THAT I, LAWRENCE E. JANSEN, DO HEREBY DECLARE THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL SURVEY OF THE LAND HEREIN DESCRIBED, AND THAT THE CORNER MONUMENTS AND LOT CORNER PINS SHOWN HEREON WERE PLACED UNDER THE PERSONAL SUPERVISION OF LAWRENCE E. JANSEN IN 2385 IN ACCORDANCE WITH THE MISSOURI MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS, AND IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF ROGERSVILLE, MISSOURI.

LAWRENCE E. JANSEN
 LAWRENCE E. JANSEN PL# 2385
 DATE 11-22-19

CLASS: BOUNDARY SURVEY
 DATE: 11-22-19
 PLAT: 002356-19
 BOOK: 2019
 PAGE: 002356-19

SEAL: MISSOURI LAND SURVEYORS ASSOCIATION
 LAWRENCE E. JANSEN
 MISSOURI LAND SURVEYORS ASSOCIATION
 MEMBER
 NO. 15-2385

Job No.: 1807-001
 Date: 11-22-2019
 Location: East Center Street
 Rogersville, MO

There are 118,000+ property parcels in Greene County

Each property has over 100 data fields tied to it

Properties are split, combined and change ownership daily

SANITARY SEWER EASEMENT COURSES

Lot No.	Bearing	Distance
1	S 89°06'35" W	479.00
2	S 89°06'35" W	479.00
3	S 89°06'35" W	479.00
4	S 89°06'35" W	479.00
5	S 89°06'35" W	479.00
6	S 89°06'35" W	479.00
7	S 89°06'35" W	479.00
8	S 89°06'35" W	479.00
9	S 89°06'35" W	479.00
10	S 89°06'35" W	479.00
11	S 89°06'35" W	479.00
12	S 89°06'35" W	479.00
13	S 89°06'35" W	479.00
14	S 89°06'35" W	479.00
15	S 89°06'35" W	479.00
16	S 89°06'35" W	479.00
17	S 89°06'35" W	479.00
18	S 89°06'35" W	479.00
19	S 89°06'35" W	479.00
20	S 89°06'35" W	479.00
21	S 89°06'35" W	479.00
22	S 89°06'35" W	479.00
23	S 89°06'35" W	479.00
24	S 89°06'35" W	479.00
25	S 89°06'35" W	479.00
26	S 89°06'35" W	479.00
27	S 89°06'35" W	479.00
28	S 89°06'35" W	479.00
29	S 89°06'35" W	479.00
30	S 89°06'35" W	479.00
31	S 89°06'35" W	479.00
32	S 89°06'35" W	479.00
33	S 89°06'35" W	479.00
34	S 89°06'35" W	479.00
35	S 89°06'35" W	479.00

MINIMUM FINISHED FLOOR ELEVATIONS FOR SANITARY SEWER

Lot No.	F.F.
1	1469.2
2	1469.0
3	1468.8
4	1468.6
5	1470.7
6	1472.1
7	1473.4
8	1474.8
9	1475.8
10	1476.1
11	1476.5
12	1476.9
13	1477.2
14	1477.5
15	1477.8
16	1478.0
17	1478.2
18	1478.4
19	1478.6
20	1478.8
21	1479.0
22	1479.2
23	1479.4
24	1479.6
25	1479.8
26	1480.0
27	1480.2
28	1480.4
29	1480.6
30	1480.8
31	1481.0
32	1481.2
33	1481.4
34	1481.6
35	1481.8

MINIMUM FINISHED FLOOR ELEVATIONS FOR STORMWATER

Lot No.	F.F.
1	1473.4
2	1474.8
3	1475.8
4	1476.1
5	1476.5
6	1476.9
7	1477.2
8	1477.5
9	1477.8
10	1478.0
11	1478.2
12	1478.4
13	1478.6
14	1478.8
15	1479.0
16	1479.2
17	1479.4
18	1479.6
19	1479.8
20	1480.0
21	1480.2
22	1480.4
23	1480.6
24	1480.8
25	1481.0
26	1481.2
27	1481.4
28	1481.6
29	1481.8
30	1482.0
31	1482.2
32	1482.4
33	1482.6
34	1482.8
35	1483.0

BOUNDARY COURSES

URSE	BEARING	DISTANCE
1	S 00°00'00" W	479.00
2	S 89°06'35" W	6.52
3	S 00°00'00" W	50.00
4	N 89°06'35" W	217.59
5	S 00°00'00" W	50.00
6	N 45°53'25" E	21.21
7	N 00°00'00" W	128.00
8	N 89°06'35" W	790.00
9	S 00°00'00" W	50.00
10	N 89°06'35" W	50.00
11	S 00°00'00" W	38.77
12	N 26°54'01" E	13.16
13	N 17°27'18" E	44.19
14	S 00°00'00" W	118.01
15	N 00°00'00" W	307.04
16	N 01°10'03" E	872.01
17	S 89°06'35" E	1,312.81

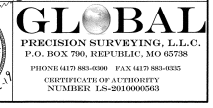
CURVE	RADIUS	ARC LENGTH
6	15.00'	23.56'
12	15.00'	13.82'
13	50.00'	122.81'

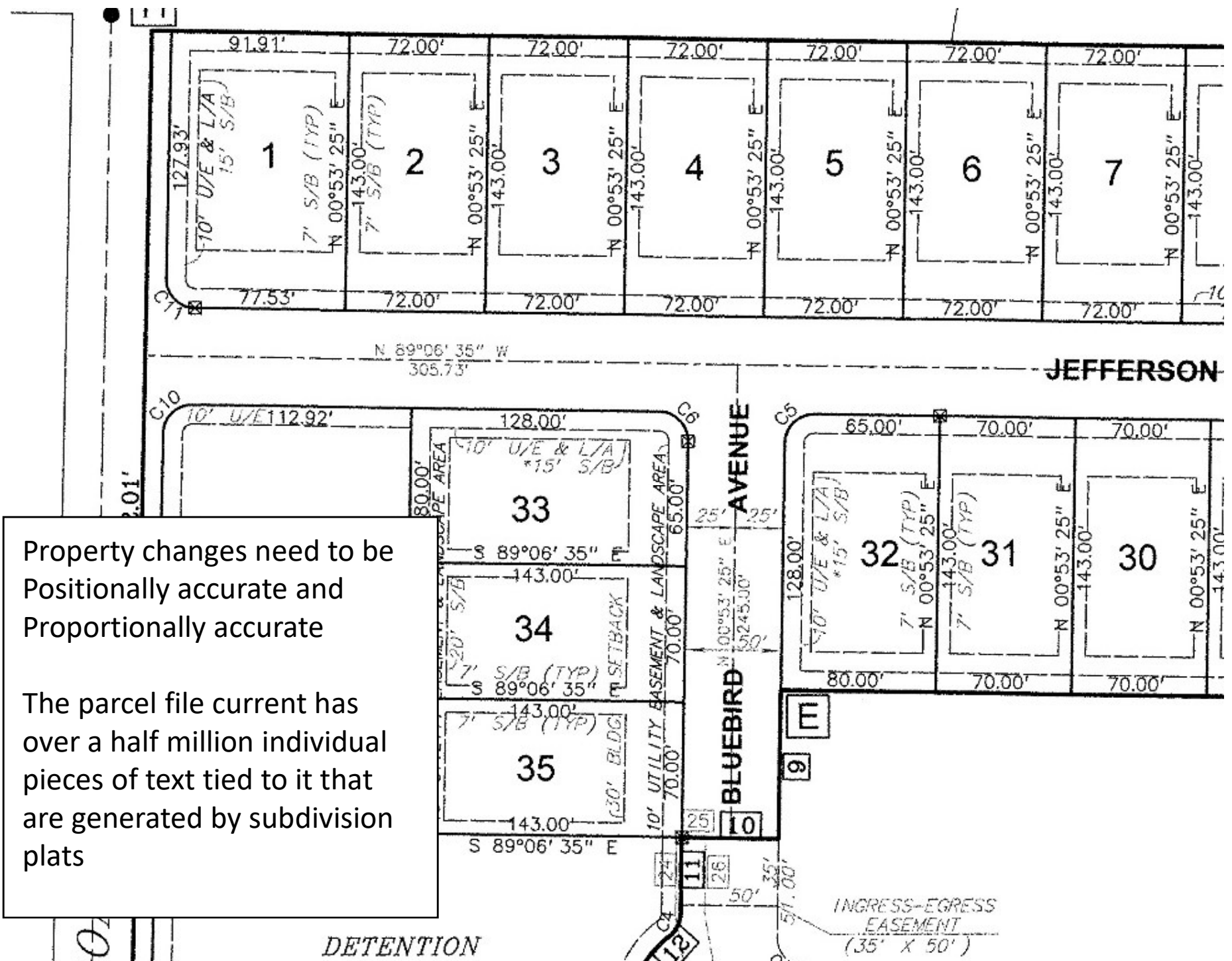
STATE PLANE COORDINATES FOR CONTROLLING CORNERS

CORNER	NORTHING	EASTING
A	143102.1116	446801.3909
B	142944.0863	446801.3909
C	142948.8763	446535.4949
D	143001.6247	446500.8803
E	143011.3655	446300.2169
F	142900.0969	446500.8803
G	142910.5425	446197.0881
H	143115.3295	446201.2620

CURVE DATA

#	Radius	Delta	Length	Chord	Tangent	Chord Bearing
1	15.00'	90°00'00"	23.56'	21.21'	15.00'	S 44°06'35" W
2	15.00'	32°01'12"	13.82'	13.16'	7.32'	S 04°20'48" W
3	50.00'	140°43'49"	122.81'	84.19'	140.13'	S 17°27'18" E
4	15.00'	52°01'12"	13.82'	13.16'	7.32'	N 26°54'01" E
5	15.00'	90°00'00"	23.56'	21.21'	15.00'	S 44°06'35" W
6	15.00'	90°00'00"	23.56'	21.21'	15.00'	N 44°06'35" W
7	15.00'	90°00'00"	23.56'	21.21'	15.00'	S 44°06'35" W
8	15.00'	90°00'00"	23.56'	21.21'	15.00'	N 44°06'35" W
9	15.00'	90°00'00"	23.56'	21.21'	15.00'	S 44°06'35" W
10	15.00'	89°43'21"	23.56'	21.16'	14.93'	S 44°06'35" W
11	15.00'	90°16'39"	23.56'	21.26'	15.07'	S 44°06'35" W
12	15.00'	90°00'00"	23.56'	21.21'	15.00'	N 44°06'35" E



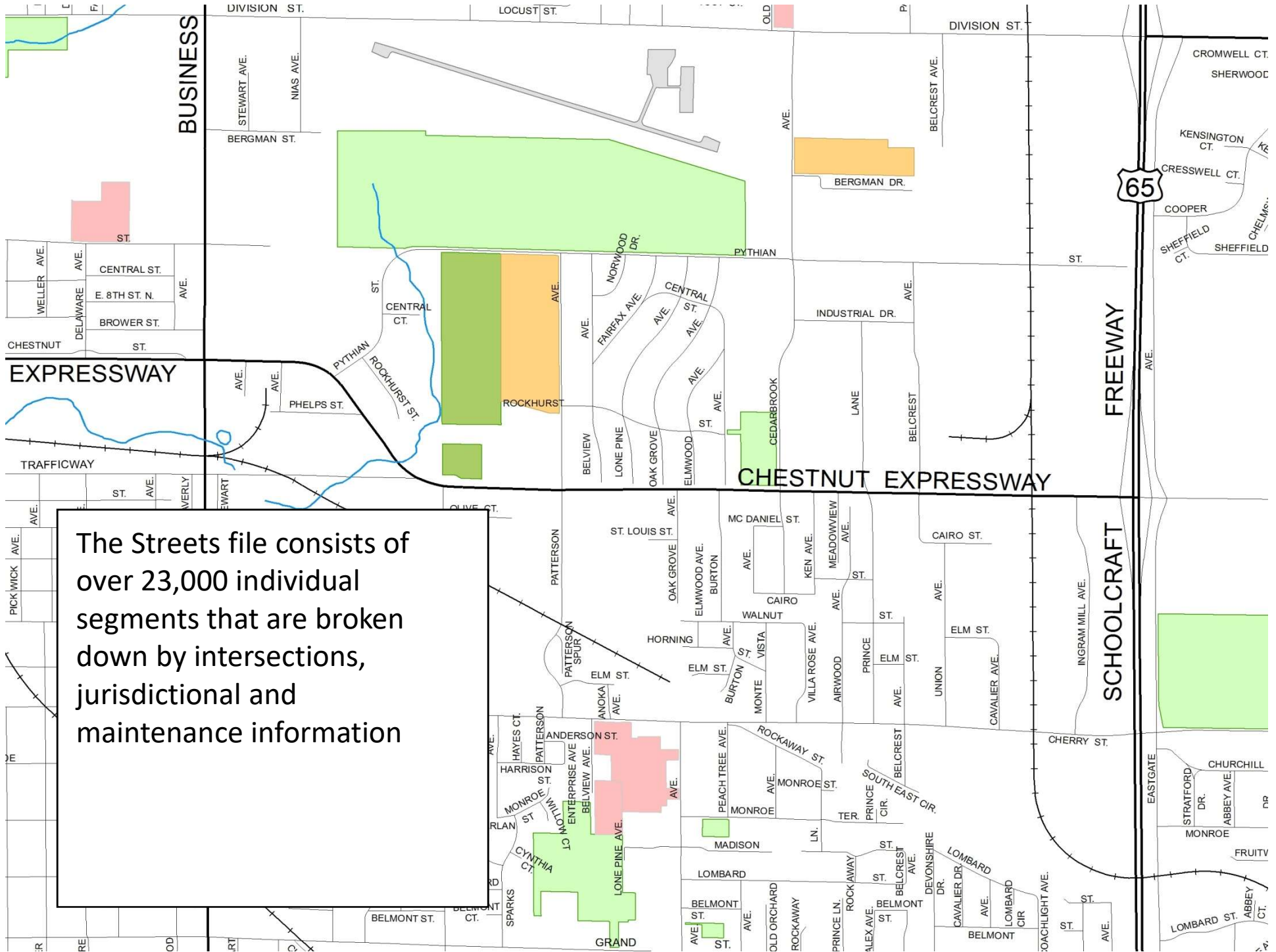


Property changes need to be Positionally accurate and Proportionally accurate

The parcel file current has over a half million individual pieces of text tied to it that are generated by subdivision plats

DETENTION

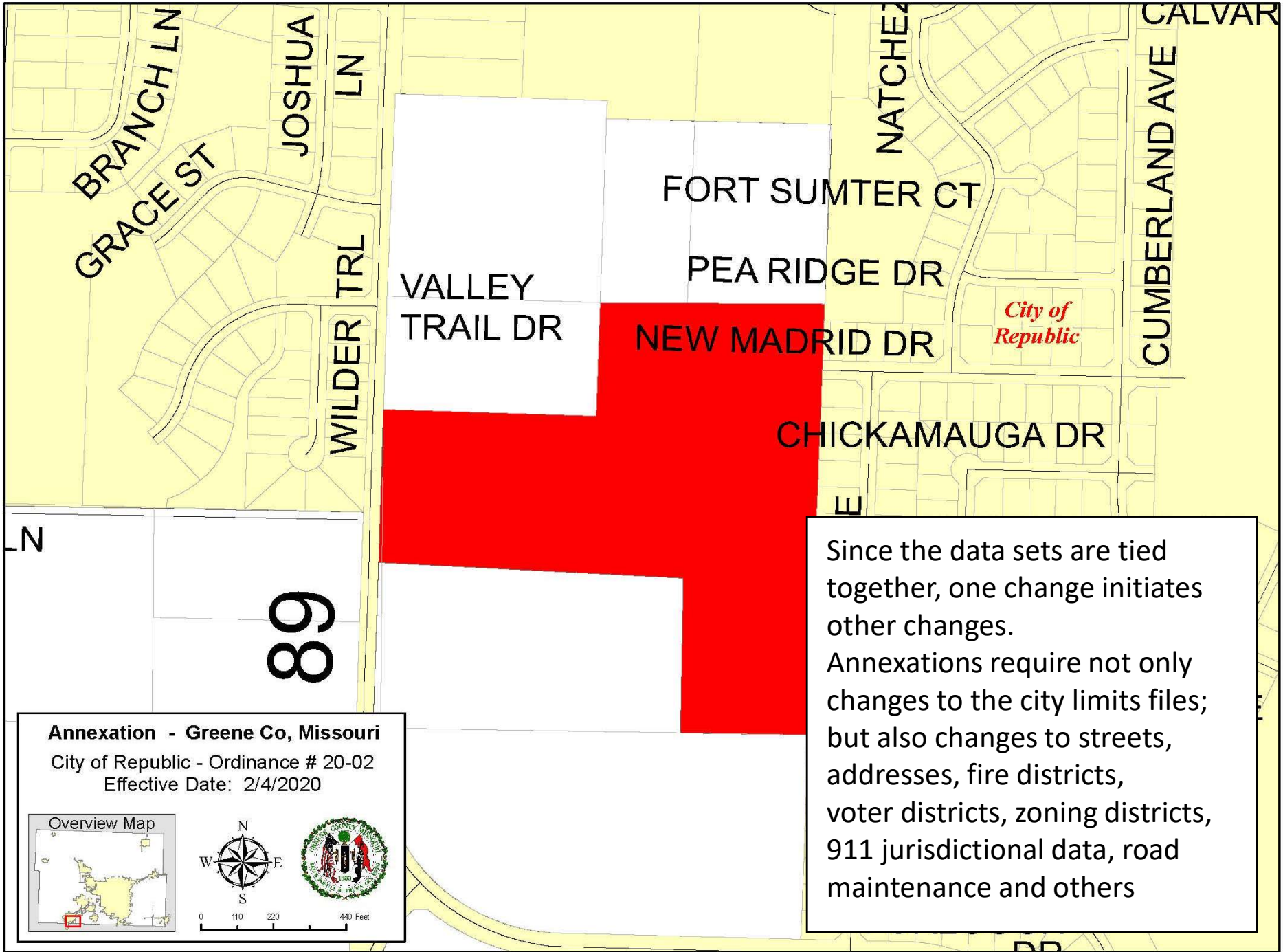
INGRESS-EGRESS EASEMENT (35' X 50')



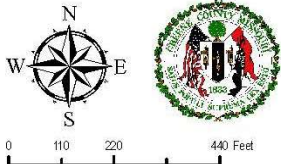
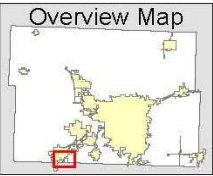
The Streets file consists of over 23,000 individual segments that are broken down by intersections, jurisdictional and maintenance information



The Address file has over 40,000 individual addresses in unincorporated Greene County; and over 122,00 county wide. Each one containing jurisdictional, current usage and historical information



Annexation - Greene Co, Missouri
 City of Republic - Ordinance # 20-02
 Effective Date: 2/4/2020

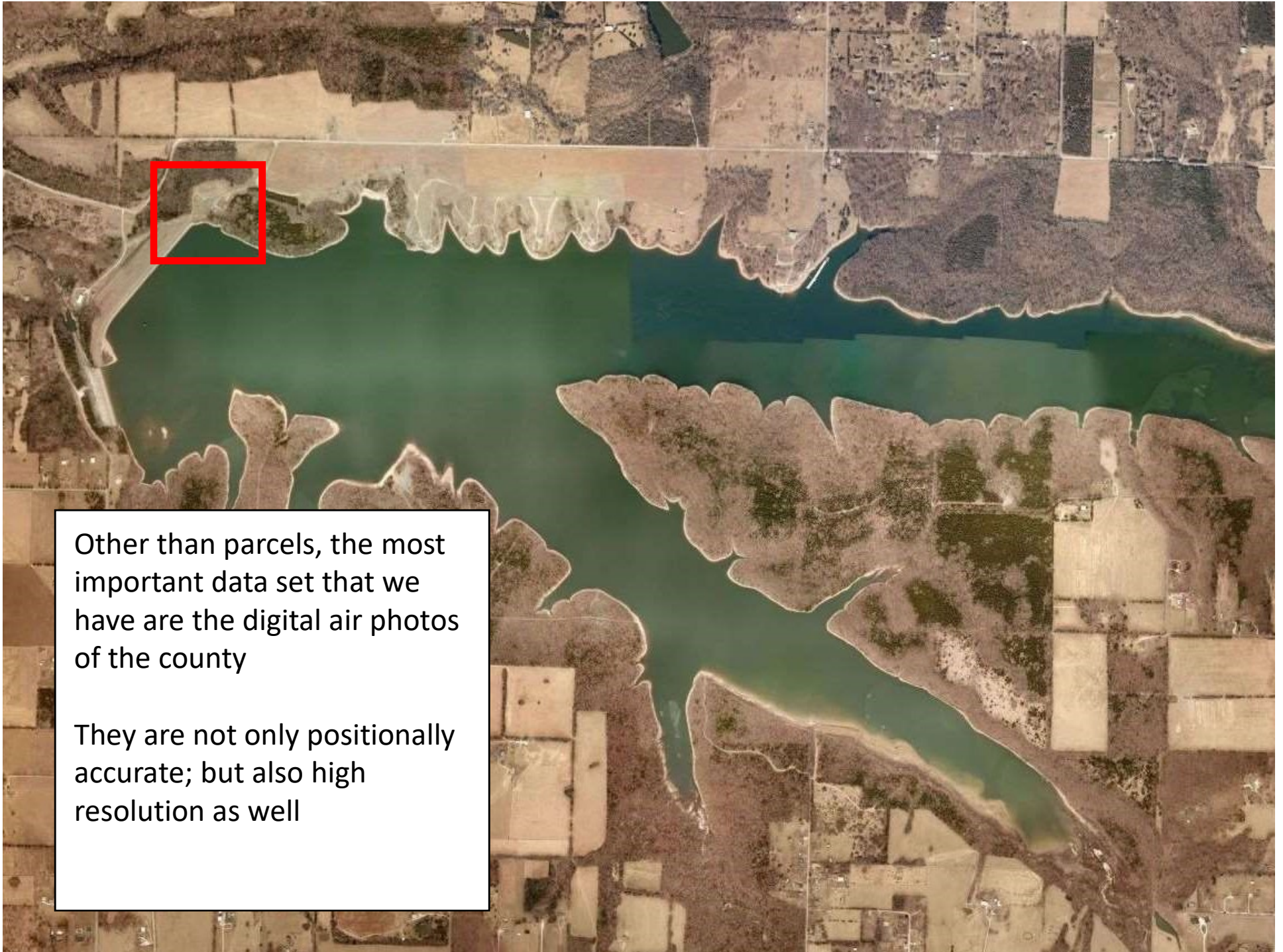


Since the data sets are tied together, one change initiates other changes. Annexations require not only changes to the city limits files; but also changes to streets, addresses, fire districts, voter districts, zoning districts, 911 jurisdictional data, road maintenance and others

GIS Data

- Addresses
- Zip Codes
- Building Permits
- Zoning Complaints
- Zoning Cases
- Cellular Towers
- Air Photos
- Building Footprints
- Floodplains
- Sinkholes
- Stormwater Drainage
- Caves
- Fault lines
- Mines
- Watersheds
- Bridges
- Lakes & Streams
- Fire Districts
- Polling Locations
- Cemeteries
- Contours
- Voter Districts
- School Districts
- Springs
- Parks
- LiDAR





Other than parcels, the most important data set that we have are the digital air photos of the county

They are not only positionally accurate; but also high resolution as well



This is the red square from the previous photo to show the level of detail they have

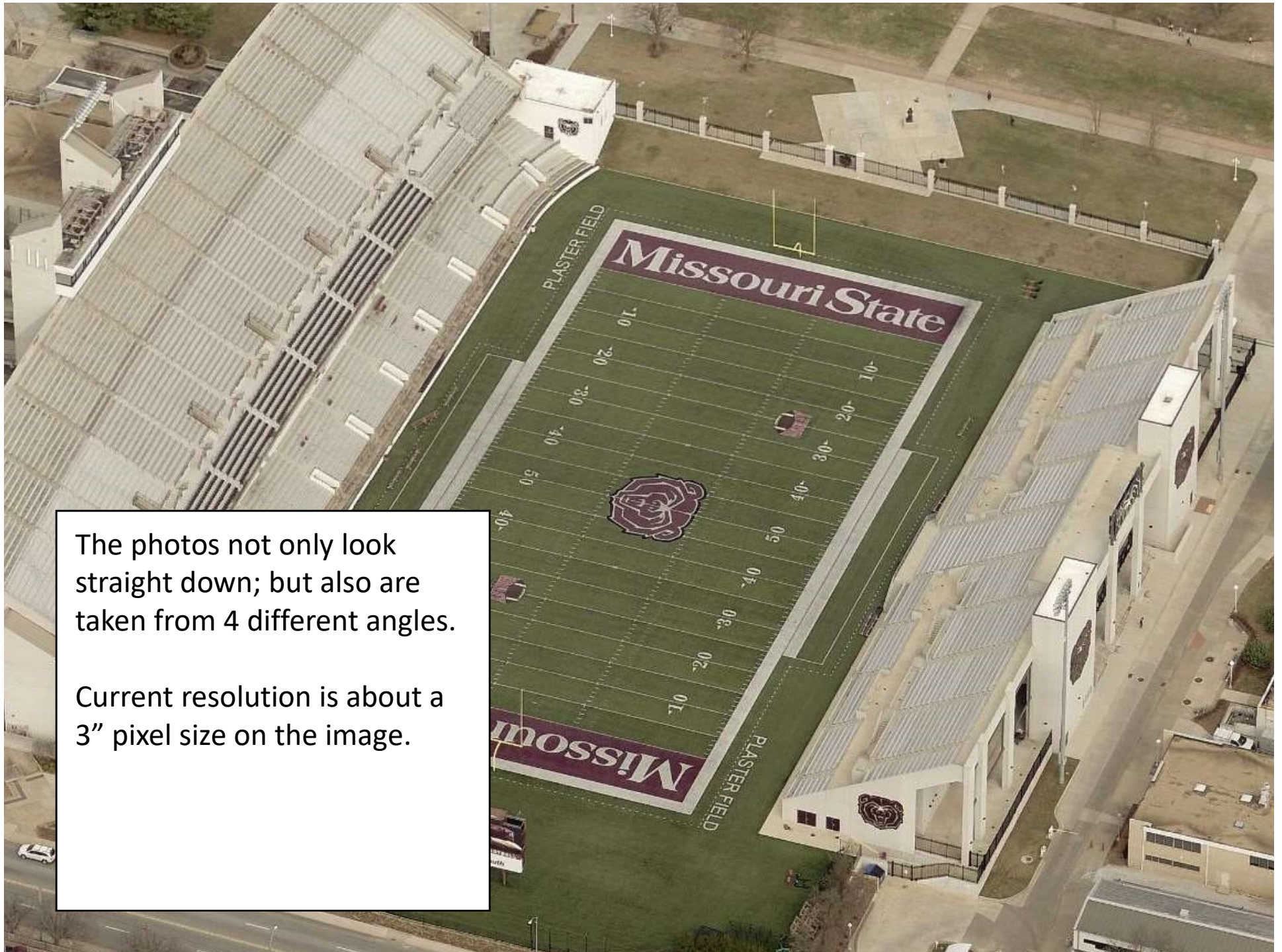
JUN 13 1936

F64-49

This photo is from 1936, showing the northern part of Springfield. (North is ➡)

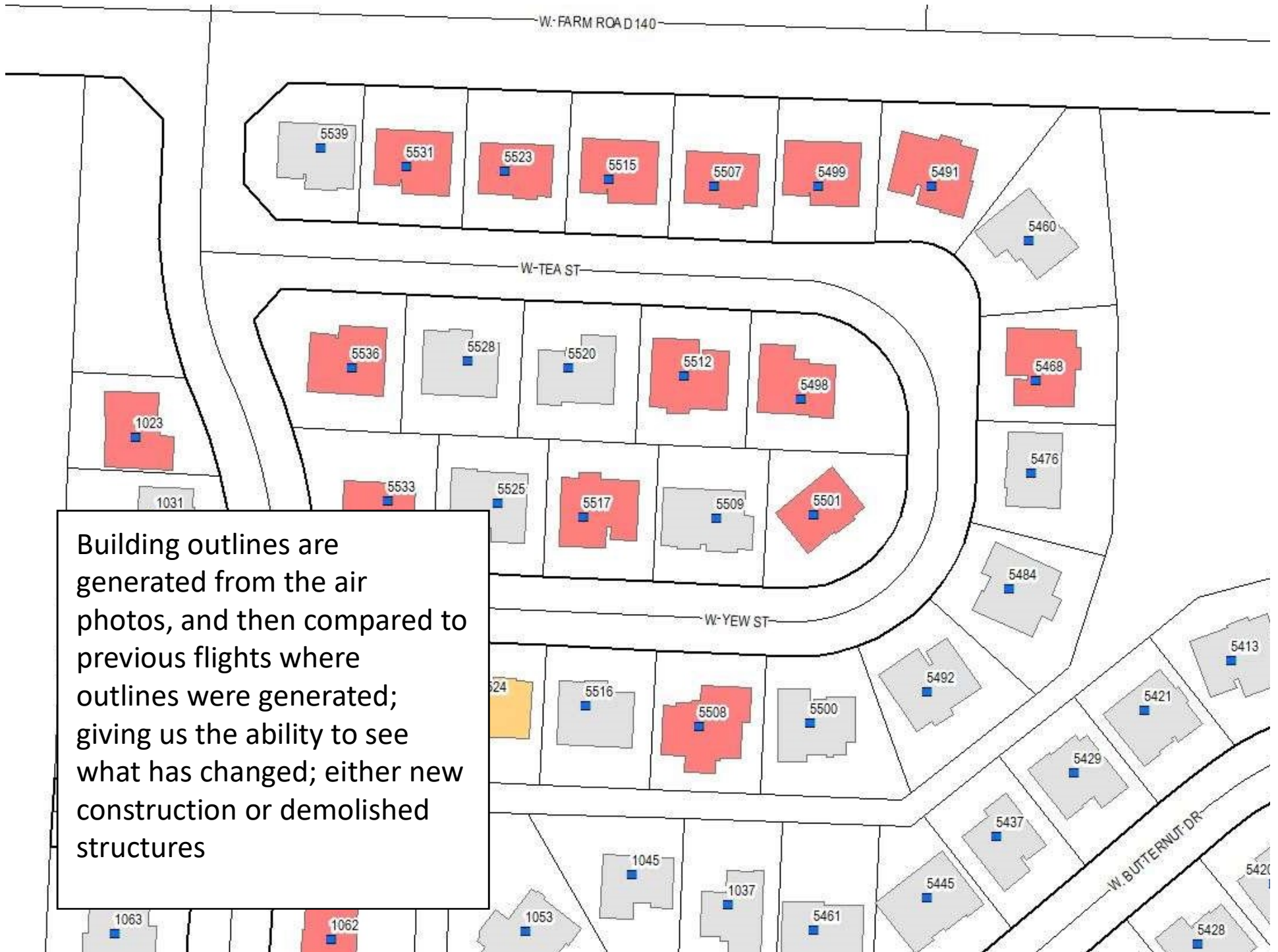
We have 27 flights available including one to be flown this month; and to be delivered in late spring of 2020.

743



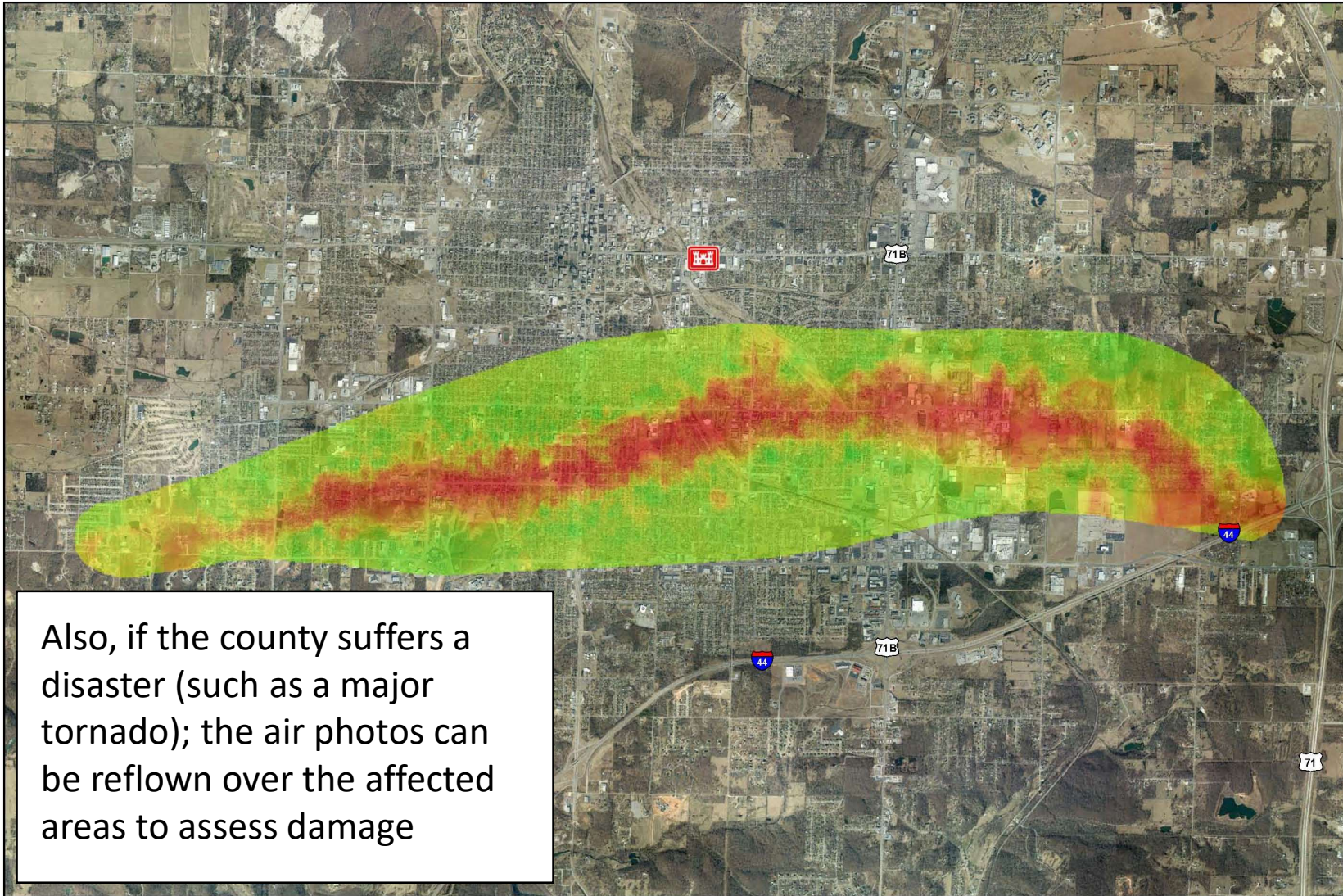
The photos not only look straight down; but also are taken from 4 different angles.

Current resolution is about a 3" pixel size on the image.



Building outlines are generated from the air photos, and then compared to previous flights where outlines were generated; giving us the ability to see what has changed; either new construction or demolished structures

JOPLIN MISSOURI TORNADO PATH IMPACTED AREA



Also, if the county suffers a disaster (such as a major tornado); the air photos can be reflown over the affected areas to assess damage

Legend

USACE - RFO

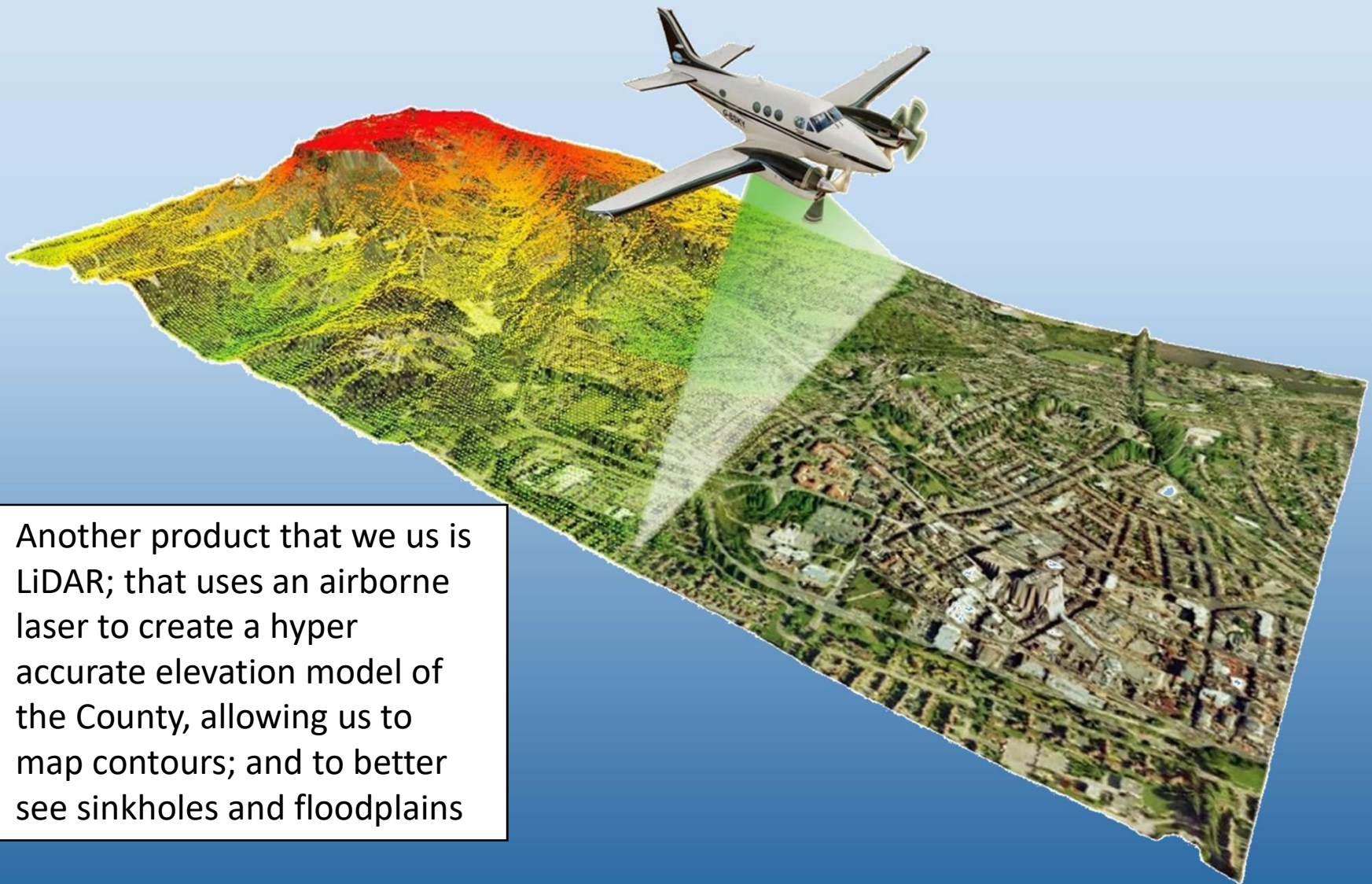
Structure Damage

- Catastrophic Damage
- Moderate Damage

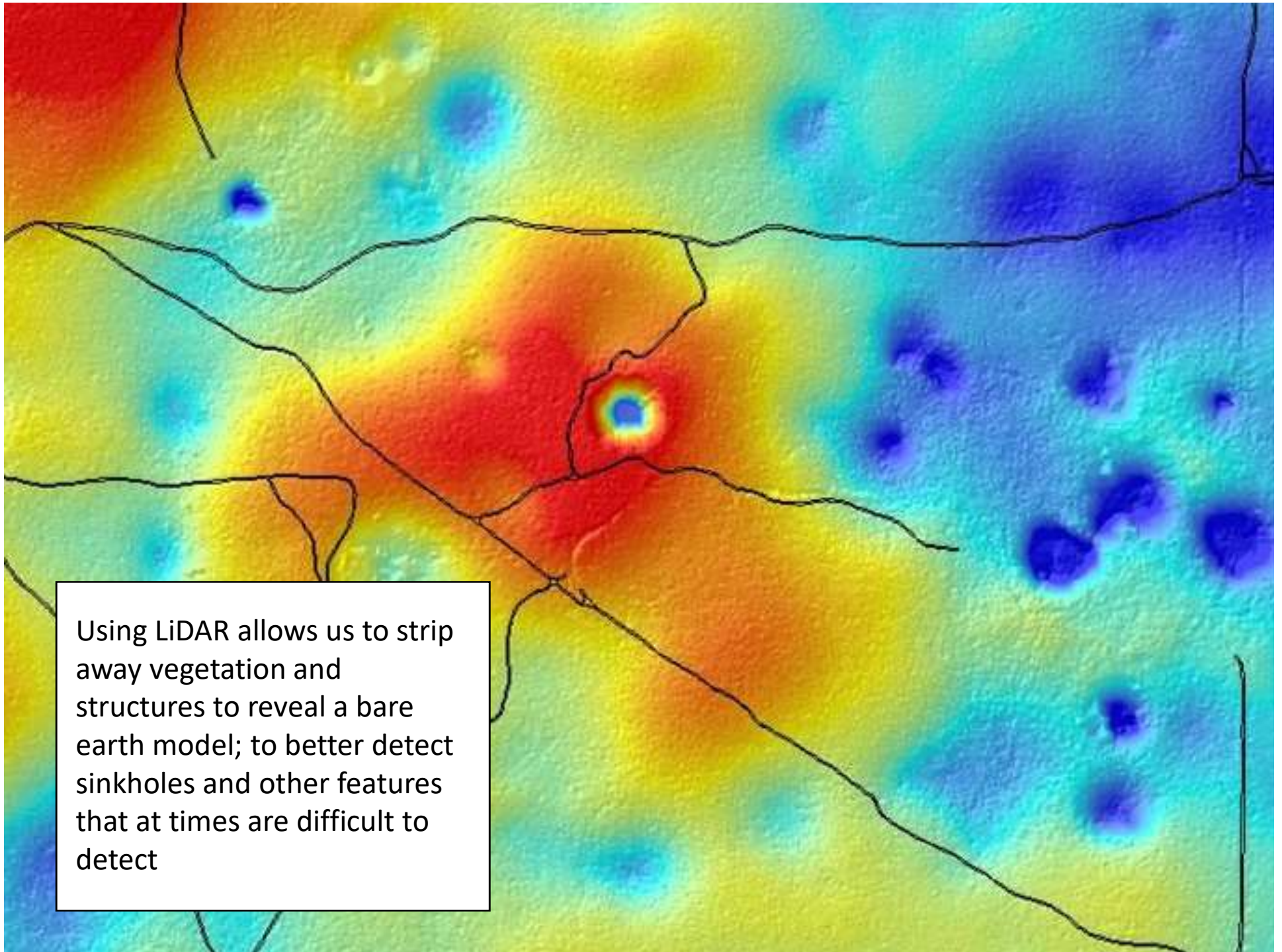
Location Map

DISCLAIMER: While the United States Army Corps of Engineers, (hereinafter referred to as USACE) has made a reasonable effort to ensure the accuracy of the maps and associated data, its should be clearly noted that USACE makes no warranty, representation or guarantee, either express or implied as to the content, accuracy, security, timeliness or completeness of any of the data provided herein. The USACE, its officers, agents, employees, or servants shall assume no liability of any nature for any errors, omissions, or inaccuracies in the information provided regardless of how caused. The USACE, its officers, agents, employees or servants shall assume no liability for any decisions made or actions taken or not taken by the user of the maps and associated data to reliance upon any information or data furnished here. By using these maps and associated data the user shall be deemed to have read and accepted the disclaimer and agrees to hold the USACE, its officers, agents, employees or servants harmless for any damages of any nature whatsoever that may result from or may be caused in any way by the use of the maps and associated data.

LiDAR - Light Detection and Ranging



Another product that we use is LiDAR; that uses an airborne laser to create a hyper accurate elevation model of the County, allowing us to map contours; and to better see sinkholes and floodplains

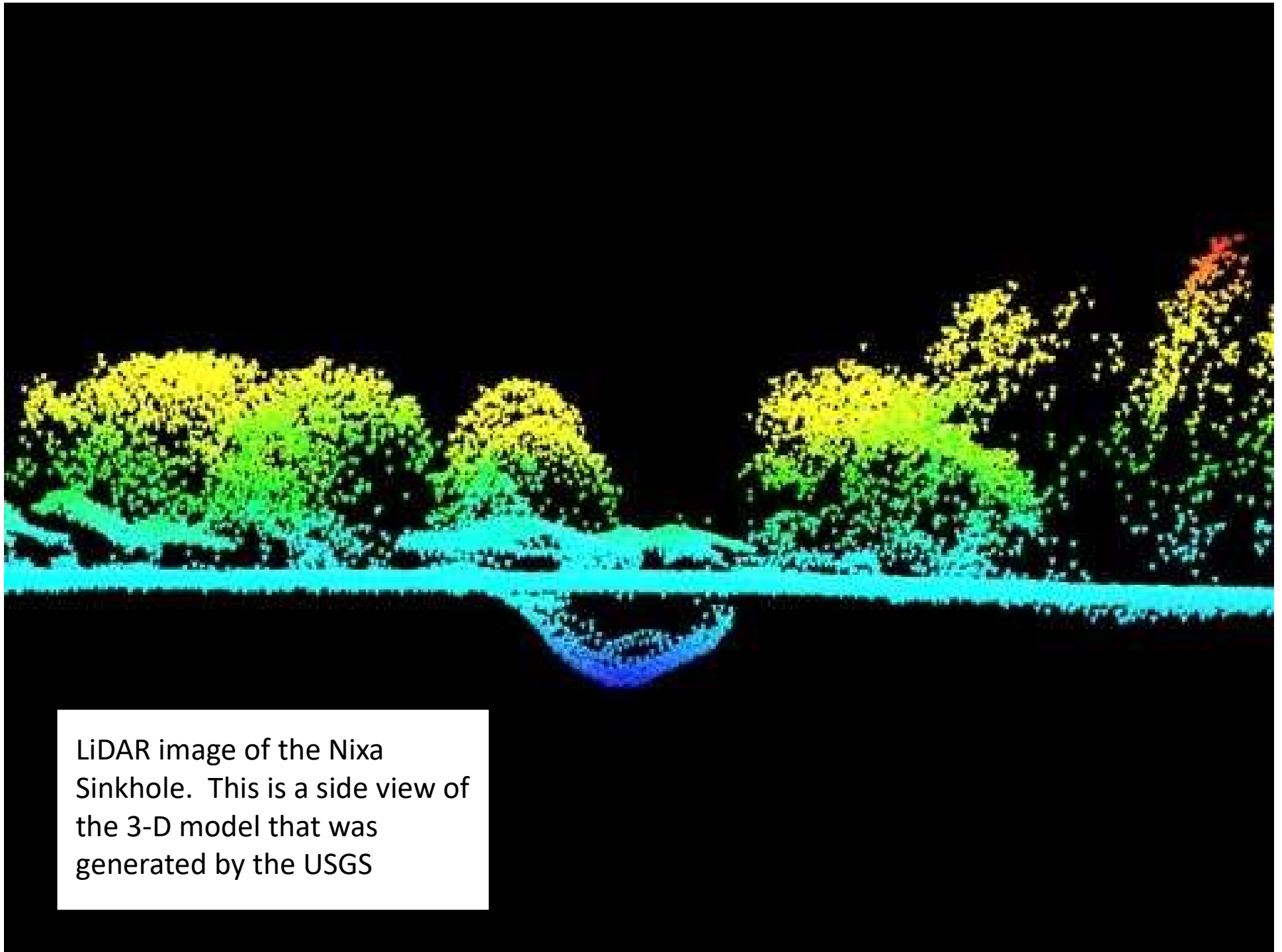


Using LiDAR allows us to strip away vegetation and structures to reveal a bare earth model; to better detect sinkholes and other features that at times are difficult to detect



Photo from the Nixa Sinkhole collapse in 2006

08/14/2006



LiDAR image of the Nixa Sinkhole. This is a side view of the 3-D model that was generated by the USGS

Current Projects

- 2020 Census
- B.A.S. - B.V.P. - L.U.C.A. - M.A.F. - N.C.
- Redeliniation of Census blocks and tracts
- Redistricting of political boundaries
- Changes in representation and funding



Looking toward the Future

- Keeping up with Technology
- Trying to anticipate Technology
- Transitioning to remote access



Greene County GIS Office

Questions?

