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SOAH DOCKET NO. 473-22-2156
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APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE IVY LEAGUE 138-KV TRANSMISSION LINE IN COLLIN COUNTY	**§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

DIRECT TESTIMONY OF RUDOLPH "RUDI" REINECKE ON BEHALF OF IC-SB PRINCETON LAND PARTNERS, LP AND COMSOR CORP.

Rudolph "Rudi" Reinecke on behalf of the IC-SB Princeton Land Partners, LP and Comsor Corp. files this Direct Testimony, which is attached IC-SB Princeton Land Partners, LP, Comsor Corp., and Rudolph "Rudi" Reinecke stipulate that this Direct Testimony can be treated by all parties as if the answers were filed under oath.

Respectfully submitted,

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ATTORNEYS FOR IC-SB PRINCETON LAND PARTNERS, LP AND COMSOR CORP.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing has been served on all parties of record on May 12, 2022, in accordance with the commission's Second Order Suspending Rules issued on July 16, 2020, in Project No. 50664 and SOAH Order No. 2 issued in this docket.

/s/Patrick L. Reznik
Patrick L. Reznik

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IC-SB PRINCETON LAND PARTNERS, LP AND COMSOR CORP

MAY 12, 2022

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I. POSITION AND QUALIFICATIONS

Q: PLEASE STATE YOUR NAME, CURRENT BUSINESS ADDRESS, AND CURRENT EMPLOYMENT POSITION.

A: My name is Rudolph K. Reinecke. My business address is 301 West Eldorado Parkway; Suite 101, McKinney, Texas 75069. I am currently employed as Vice-President and Project Manager for Integrated Environmental Solutions, LLC ("IES").

Q: WHAT IS YOUR ROLE IN THIS CASE?

A: I have been retained as a testifying expert on behalf of IC-SB Princeton Land Partners, LP and Comsor Corp.

Q: WHAT IS YOUR EDUCATIONAL BACKGROUND?

A: I received my Bachelor of Science Degree in Rangeland Ecology and Management from Texas A&M University in 1994. I received my Master of Science Degree in Rangeland Ecology and Management from Texas A&M University in 1996.

Q: WHAT ARE YOUR PROFESSIONAL QUALIFICATIONS AND EXPERIENCE?

A: In short, I have more than 26 years of experience in environmental projects and surveys. I have extensive experience in the natural resources field through working at Texas Agriculture Experiment Stations, United States Forest Service, Texas Department of Transportation, Geo-Marine, Inc., and Integrated Environmental Solutions, LLC. Most of my experience includes plant ecology, specifically plant taxonomy, vegetation sampling, vegetation community characterization, wetland delineation, and wetland mitigation. I also have experience with the National Environmental Policy Act of 1969 process as an interdisciplinary team member and project manager. My professional qualifications are detailed in my Curriculum Vitae (CV), a true and correct copy of which is attached as **Exhibit RKR-1**.

Q: WHAT KIND OF WORK HAVE YOU DONE WHILE EMPLOYED BY INTEGRATED ENVIRONMENTAL SOLUTIONS, LLC?

A: I have acted as the Project Manager for numerous environmental projects in Texas. I have been involved in a spectrum of projects, including: Wildlife Habitat Assessments for Bird Air Strike Hazards around airports; forage production to determine stocking rates; wildlife management plans; pipeline routing surveys (i.e., gas, water, sewer); Phase I Environmental Site Assessments; endangered species surveys (i.e., habitat and species specific); ecosystem restoration (i.e., both planning and implementing); development planning (i.e., environmental surveys, permitting, mitigating, and monitoring); mitigation bank development and monitoring; and watershed health assessments for Integrated Natural Resource Management Plans. Additional examples of projects I have been involved in are provided in **Exhibit RKR-1**.

Q: HAVE YOU EVER TESTIFIED IN A PUBLIC UTILITY COMMISSION ("PUC" OR "COMMISSION") PROCEEDING?

A: Yes. I have submitted testimony in the Brown to Newton 345 kV Transmission Line Project, which is Docket Number 37464; the Riley to Krum 345 kV Transmission Line Project, which is Docket Number 38140; the Krum West to Anna 345 kV CREZ Transmission Line Project, which is Docket Number 38597; the Gray To White Deer 345-kV CREZ Transmission Line Project, which is Docket Number 38650; the North Edinburg to Loma Alta 345-kV Transmission Line, which is Docket Number 41606, the Blumenthal 138 kV Transmission Line Project, which is Docket Number 43599, and Parvin Substation and 138-kV Transmission Line Project, which is Docket Number 43878.

Q: DO YOU HAVE ANY PROFESSIONAL EXPERIENCE WORKING WITHIN THE IVY LEAGUE 138KV TRANSMISSION LINE PROJECT STUDY AREA?

A: Yes. I have worked on numerous projects within the study area. I have attached a graphic that illustrates all of the projects in relation to the proposed Ivy League routes (**Exhibit RKR-2**). These projects include waters of the United States delineations, Clean Water Act (CWA) Section 404 permits, protected species habitat assessments, and tree surveys, primarily for residential developers but also for the City of Princeton and North Texas Municipal Water District (NTMWD).

II. PURPOSE AND SCOPE OF TESTIMONY

Q: PLEASE INDICATE THE SCOPE OF YOUR TESTIMONY.

A: I evaluated information available from the Environmental Assessment (EA), Oncor Routing Memorandum, Texas Parks and Wildlife Department (TPWD) testimony, and aerial imagery, along with my professional experience to compare Routes 4626 and 1556 to make an independent assessment as to which route would better address the Public Utility Regulatory Act (PURA) requirements, as well as the criteria of the PUC Substantive Rule favoring the utilization of existing and paralleling compatible right-of-way (ROW) and paralleling property lines or other natural or cultural features.

Q: WOULD YOU PLEASE SUMMARIZE YOUR FINDINGS?

A: I have evaluated the EA, Oncor Routing Memorandum, and aerial photography and have come to the conclusion that TPWD's recommendation of Route 1556 is not the best route to meet Texas Utilities Code Section 37.056 (c)(4)(A)-(D) and PUC Substantive Rule §25.101(b)(3)(B). This is based on finding that (1) The Ticky Creek riparian corridor is not the quality resource that they claim it to be, (2) Route 4626 actually parallels an existing sanitary sewer line that is located between Ticky Creek and this route, and (3) Route 4626 has the least impact to J.M. Caldwell Sr. Park of all the western routes. Therefore, I conclude that Route 4626 best meets the requirements of Texas Utilities Code Section 37.056 (c)(4)(A)-(D) and PUC Substantive Rule §25.101(b)(3)(B).

III. TPWD ROUTING EVALUATION

Q: HAVE YOU REVIEWED THE DIRECT TESTIMONY FROM TPWD?

A: Yes, I have reviewed the testimony TPWD prepared on March 18, 2022.

Q: DID TPWD RECOMMEND THE SAME ROUTE AS ONCOR?

A: No, TPWD recommended Route 1556 an eastern route, while Oncor recommended Route 4626, a western route.

Q: WHAT IS YOUR OPINION WHY TPWD DISAGREED WITH ONCOR'S RECOMMENDATION?

A: Through a review of both the TPWD direct testimony and the Oncor Routing Memorandum dated December 16, 2021, there are clear differences in the methodology used by these two organizations. TPWD identifies in their direct testimony that TPWD provides recommendations that will protect fish and wildlife resources. This is clearly stated on page 3 under the section of TPWD's Recommended Route – "TPWD evaluated potential impacts to fish and wildlife resources using…". Whereas the Oncor Routing Memorandum identifies that their recommended route was the one that best meets the requirements of Texas Utilities Code Section 37.56 (c)(4)(A)-(D) and the Commission Substantive Rule 25.101(b)(3)(B).

In essence TPWD evaluated the data provided in the EA, specifically Table 7-2, and other publicly available data to consider potential impacts to wildlife and natural areas. Their evaluation removed the consideration of impact to a number of other routing criteria such as cost, length of route, habitable structures within 300 feet of the route centerline, or impacts to land use such as commercial/industrial areas, crop/hay meadows, or rangeland pasture. Based on this evaluation criteria, it is understood why they selected a different preferred route.

Q: WHAT WERE TPWD'S COMMENTS REGARDING ONCOR'S RECOMMENDED ROUTE

A: TPWD specifically stated that their route avoided fragmentation and loss to riparian woodlands along Ticky Creek and its tributaries. Additionally, TPWD noted that Ticky Creek and its tributaries are prominent stream corridors within the area. TPWD prefers avoiding riparian woodland habitats that occur within parkland, as they offer wildlife habitat and public recreation benefits.

Q: IS TPWD PLACING AN HIGH VALUE ON TICKY CREEK AS A NATURAL RESOURCE IN THEIR RECOMMENDATION TO AVOID ROUTE 4626?

A: I believe they are. I believe this is the case because this is a creek and natural area that are different than other habitat types within the study area. I also venture that TPWD believes these are important natural areas for both the wildlife and the public to enjoy.

Q: HAVE YOU EVALUATED TICKY CREEK AND ITS RIPARIAN AREAS?

A: Yes. I conducted the environmental surveys for the sewer line on the west side of Ticky Creek for the City of Princeton in early 2000's. I have also conducted environmental surveys on J.M. Caldwell Sr. Community Park for the City of Princeton's trail system in 2015. In 2018, I conducted field surveys on Brookside Residential Development, which is on the west side of Ticky Creek, south of U.S. Highway (US) 380. In 2016, I evaluated Ticky Creek for the North Texas Municipal Water District lift station adjacent to Ticky Creek and Myrick Lane. I have also reviewed recent and historic aerial photographs as part of this testimony.

Q: PLEASE DESCRIBE TICKY CREEK AND ITS RIPARIAN AREAS?

A: The Ticky Creek watershed is a relatively small watershed sandwiched between Sister Grove Creek and East Fork Trinity River watersheds, which are relatively large watersheds. All three of these watersheds directly empty into Lake Lavon to the south of this study area. The original settlement of Princeton was formed on a ridge between Ticky and Sister Grove Creeks. As Ticky Creek has a relatively small watershed, there is a very limited floodplain bench with alluvial soils important for crop cultivation. Through a review of the historic aerial photographs, the land use and conditions around Ticky Creek were divided by US 380. I have purchased historic aerial photographs for the areas south of US 380 along Ticky Creek (**Exhibit RKR-3**) and north of US 380 (**Exhibit RKR-4**) for this assessment.

Ticky Creek South of US 380 (**Exhibit RKR-3**)

Ticky Creek, south of US 380, was a very meandering creek across its floodplain in the 1942 aerial photograph. The riparian area was largely pastureland that was dominated by grassland with scattered trees. The adjacent upland areas were primarily cultivated fields, with some of them being terraced for soil conservation. The only indication that Ticky Creek was modified was associated with channelization south of the old railroad.

There was a significant change to Ticky Creek south of US 380 by 1951. Ticky Creek was completely channelized south of US 380 between 1942 and 1951. This was presumably conducted to improve drainage in the area. However, through this channelization effort, it appears that the relic Ticky Creek channel was left in the landscape. Near the Ticky Creek southern study area, a channelized overflow area was excavated and a tributary to Ticky Creek was channelized. All of the trees that remain are only along the relic channel areas of Ticky Creek and its associated tributaries. There was little to no riparian trees along this newly constructed channelized Ticky Creek.

The extent of alterations to Ticky Creek south of US 380 remain today. The only area of older tree growth is located on the west side of Ticky Creek along its original channel alignment about 2,000 feet south of US 380. The remainder of Ticky Creek riparian area was not dominated by trees, only sporadic groves of trees along the tributaries to Ticky Creek. A water treatment plant was built on the east side of Ticky Creek by 1964, which was modified by 1989 and removed by 2005.

My professional observations along Ticky Creek, south of US 380, over the last 20 years are those consistent with the creek channelization. The channel is linear, deep, with steep eroding banks. These conditions are typical for channelized creeks that have been experiencing increased flows from urbanization.

Ticky Creek North of U.S. Highway 380 (**Exhibit RKR -4**)

Ticky Creek, north of US 380, appeared to have a much smaller alluvial floodplain than south of US 380. Fields adjacent to Ticky Creek appeared to be cultivated very close to the creek banks in the 1940's. As such, there was little to no trees growing along the riparian area of Ticky Creek until cultivation stopped or scaled back in the 1960's. The 1964 aerial photograph illustrated sparse trees starting to colonize along the banks of Ticky Creek and its tributaries. These trees continued to grow through the early 1980's, but the extent of the coverage largely did not increase. Ticky Creek was channelized from the north side of J.M. Caldwell Sr Community Park south to US 380 between 1972 and 1981. Much of the natural extent of Ticky Creek was destroyed or filled through this channelization project, except for the reach within J.M. Caldwell Sr. Community Park. The Ticky Creel abandoned channel is still present, but not functioning on the east side of the park. Largely, the riparian corridor started to expand its extent along the channelized portion of Ticky Creek starting in 2005.

Personally, I have observed Ticky Creek north of US 380 through conducting environmental surveys of a sewer line project in early 2000s and surveys for the J.M. Caldwell Sr. Community Park in 2014 and 2015. In both experiences, I witnessed the same conditions as I described for Ticky Creek south of US 380, which are linear, deep, with steep eroding banks. Largely, the riparian corridor was dominated by early successional tree and shrub species that first colonize areas after long periods of disturbance.

Q: HOW DOES CHANNELIZATION ALTER THE RIPARIAN AREA?

A: Stream channelization is a process of cutting a new channel that is straighter, wider, and deeper than the natural channel. This process improves the conveyance of water within the area as the channel is more hydrologically efficient, which means the riparian areas receive less overbank flooding. Depending on how the construction is conducted, the old channel and riparian area could have been destroyed or the channelization could have been off-set from the natural tributary resulting in it being hydrologically removed from the system. Regardless, both construction process significantly alters the natural riparian system. The regeneration of a riparian system along a channelized creek is a very slow process. First the soils that are exposed are generally nutrient deficient, the soil density is more compacted with limited pore spaces as there is reduced organic material, and the hydrology has been altered. Generally, there is less flooding in channelized streams making the zone adjacent to the channel dryer and in many cases devoid of any riparian systems.

Q: WOULD YOU CLASSIFY TICKY CREEK AND ITS RIPARIAN AREAS AS A HIGH-QUALITY NATURAL RESOURCE?

A: No. This channel has experienced a lot of impacts through time. The creek is unstable due to straightening which has increased the gradient and as a result increased the velocity. On top of that, the urbanization has increased the amount of water flowing in the channel at peak times. This increased flow

and velocity has scoured a channel that is enlarging to accommodate the peak flows. The riparian corridor is dominated by either early successional or invasive vegetation that does not provide much in the way of a variety of food for wildlife. There are not any portions of old tree growth along the riparian areas; most of the trees are less than 20 years of age. As such, I would consider this resource as low quality for this region, especially when you compare it to Sister Grove Creek to the east of Princeton that has a well-developed floodplain, no past channelization activities, and 60+ year old trees within the riparian area.

IV. ROUTE EVALUATION

Q: WHAT IS YOUR UNDERSTANDING OF THE ROUTING CRITERIA FOR A NEW TRANSMISSION LINE IN ACCORDANCE TO PUC SUBSTANTIVE RULE?

A: There are several factors that PUC Substantive Rule §25.101(b)(3)(B) identifies for routing new transmission lines. A line shall be routed to the extent reasonable to moderate the impact on affected community and landowners unless grid reliability and security dictate otherwise, to address the criteria in PURA §37.056(c) while considering engineering constraints and cost. It further states that the selection of alternative routes shall consider that it conforms to the criteria in PURA §37.056(c) and:

(i) whether the routes parallel or utilize existing compatible rights-of-way for electric facilities, including the use of vacant positions on existing multiple-circuit transmission lines;

(ii) whether the routes parallel or utilize other existing compatible rights-of-way, including roads, highways, railroads, or telephone utility rights-of-way;

(iii) whether the routes parallel property lines or other natural or cultural features; and

(iv) whether the routes conform with the policy of prudent avoidance.

Q: IN YOUR OPINION, WHAT IS THE CRITERIA FOR ROUTING A NEW TRANSMISSION LINE IN ACCORDANCE WITH PUC SUBSTANTIVE RULE?

A: The Routing alternatives must comply with PURA §37.056(C) and should comply with PUC Substantive Rule's engineering constraints, costs, consideration of the three paralleling criteria and confirmation with the policy of prudent avoidance.

Q: WHAT IS THE DEFINITION OF PRUDENT AVOIDANCE?

A: Prudent avoidance as defined by PUC Substantive Rule §25.101(a) is "The limiting of exposures to electric and magnetic fields that can be avoided with reasonable investments of money and effort."

Q: WHAT ARE THE CRITERIA IN PURA §37.056(C) THAT THE COMMISSION CONSIDERS BEFORE GRANTING A CERTIFICATION?

A: There are several, but for the purpose of this testimony, PURA §37.056(c)(4)(A-E) identifies community values, recreational and park areas, historic and aesthetic values, and environmental integrity.

Q: HOW DOES ROUTE 4626 PARALLEL COMPATIBLE RIGHTS-OF-WAYS, PROPERTY LINES, OR OTHER NATURAL OR CULTURAL FEATURES?

A: The data provided from Oncor's Routing Memorandum Table 2 identifies that Route 4626 parallels 406 linear feet of existing public roads/highways and 2,984 linear feet of apparent property boundaries. However, what appears to be a discrepancy in the data is that this route follows an existing sanitary sewer line for a long reach of the project. Through my experience in the area, I knew of the sewer line following the east side of Ticky Creek. I have mapped this sewer line in **Exhibit RKR-5** based on this experience and connecting the sewer manholes observed in aerial photographs. If you consider this sewer line as a compatible ROW, it accounts for an additional 7,693 linear feet of paralleling compatible features. When you combine this sewer line and apparent property boundaries, this route parallels compatible ROW for more than 70 percent of its length.

Q: DOES ROUTE 4626 AVOID OR MINIMIZE IMPACTS TO RECREATIONAL AND PARK AREAS?

A: Yes and no. While this route does not avoid crossing J.M. Caldwell Sr. Community Park, it is the western route that minimizes its impact to the park. This route utilizes Link M1 to cross the park, which according to the EA only has 1,290 linear feet in the park. All other routes have between 1,500 (Links M3 and J) to 2,740 (Links M3, L3, L2, and L1) linear feet across the park. Furthermore, Route 4626, using Link M1 is located on the east side of Ticky Creek and its riparian corridor minimizing the viewshed for the active part of the park (i.e., ball fields, soccer field, and dog park). Finally, I noticed that even the City of Princeton identified a resolution that supported this route through the park, indicating it would have the least impact to the city (**Exhibit RKR-6**).

Q: WHAT ARE THE DIFFERENCES BETWEEN ROUTES 1556 AND 4626?

A: I have reviewed the quantitative data provided in Oncor's Routing Memorandum Table 2 to surmise the differences between these routes. The positive routing factors of Route 1556 over Route 4626 includes:

- It parallels more public roads and highways – approximately 3,318 linear feet more length of line parallels roadways.
- It also parallels 4,937 linear feet more apparent property boundaries/existing compatible ROW than Route 4626. However, this does not account for Route 4626 paralleling approximately 7,693 linear feet of the Ticky Creek sewer line.
- It does not cross any parks/recreational areas, whereas Route 4626 crosses J.M. Caldwell Sr. Community Park for approximately 1,315 linear feet.
- It has only 900 linear feet across riparian areas, where as Route 4626 crosses 5,715 linear feet. Route 4626 has approximately 4,815 linear feet more riparian area crossing.
- It has no length of route paralleling a stream, compared to Route 4626 that parallels 885 linear feet.
- It has a smaller number of recorded cultural resources within 1,000 feet of the center line, less length of route across high archeological/historic site potential than Route 4626. Route 1556 only has one recorded cultural resource site within 1,000 feet, where as Route 4626 has three. Route

4326 has 8,593 linear feet more high potential for archaeological/historic sites as it parallels the Ticky Creek floodplain.

The positive routing factors for Route 4626 when compared to Route 1556 include:

- Route 1556 is 1.78 times longer (2.1 miles longer) than Route 4626, which is a result of taking the longer path to the east around the City of Princeton. As a result, this route will impact 2.1 miles more property, infrastructure, and resources.
- It has 10 less habitable structures within 300 feet of the route centerline.
- It has three less parks or recreation areas within 1,000 feet of the route centerline
- It impacts less commercial/industrial areas with having 453 linear feet less length across commercial/industrial areas
- It has no impacts to cropland/hay meadow, whereas Route 1556 impacts 8,881 linear feet of cropland/hay meadow.
- It has less impacts to woodlands, with only 56 feet of the route is crossing woodlands. Route 1556 has 1,820 linear feet across woodlands.
- Route 4626 has no impacts to lakes or ponds (open waters), whereas Route 1556 has 73 linear feet crossing a pond.
- It has less crossings of all roadways and less length of ROW within the foreground visual zone of U.S. and State Highways. Route 4626 only crosses six roads, where as Route 1556 crosses 11 roads. Route 4626 has 1,604 linear feet less in the foreground visual zone of U.S. and State Highways than Route 1556.
- Similarly, Route 1556 has less visual impacts to parks/recreational areas. This route has 8,488 less linear feet length within the foreground visual zone of park/recreational areas.

Q: DO YOU AGREE WITH ONCOR'S RECOMMENDATION OF ROUTE 4626 AS BEST MEETS THE REQUIREMENTS OF TEXAS UTILITIES CODE SECTION 37.056 (C)(4)(A)-(D) AND THE COMMISSION SUBSTANTIVE RULE 25.101(B)(3)(B)?

A: Yes. I believe it has the best balance of all the routing factors while considering the public interest identified in the public meetings to route away from habitable structures, accommodating the schools, and parks. This route is the second shortest route and when considering paralleling the sanitary sewer line along Ticky Creek has the highest percentage of the route paralleling compatible ROW. I believe this route best addresses prudent avoidance through the route largely paralleling Ticky Creek's floodplain and avoiding developed areas. I do also recognize that Route 4626 does cross a significant amount of riparian corridor given it follows Ticky Creek, but it is important to note that these riparian woods are less than 20 years of age, dominated by early successional species, along a highly disturbed creek, and have already been fragmented due to the construction of a sewer line. Therefore, it is my opinion that this route best meets the requirements of PUC Substantive Rule §25.101(b)(3)(B)(ii-ix).

V. SUMMARY AND CONCLUSION

Q: PLEASE SUMMARIZE YOUR TESTIMONY.

A: I have reviewed the EA, Oncor Routing Memorandum, TPWD testimony, and aerial photography and concluded that Route 4626 best meets the requirements of Texas Utilities Code Section 37.056 (c)(4)(A)-(D) and PUC Substantive Rule §25.101(b)(3)(B). I have concluded that TPWD's recommendation of Route 1556 does not consider either the PUC substantive rule or PURA. They are recommending a route that does not consider prudent avoidance or paralleling compatible ROW. They have placed a high degree of emphasis of avoiding Ticky Creek without considering that Route 4626 follows an existing sanitary sewer line that has already fragmented the riparian woods nor the fact that Ticky Creek is a highly disturbed creek with woods that are at best 20 years old dominated by a low diversity of early successional species. In addition to this, TPWD is concerned with Route 4626 crossing J.M. Caldwell Sr. Community Park, but this route is the shortest western route across the park and is in a manner that is screened from the park infrastructure.

I conclude that Route 4626 best conforms to PUC Substantive Rule §25.101(b)(3)(B)(ii) as it has more than 70 percent of its route paralleling compatible ROW through property lines and a sewer line. If you consider paralleling a floodplain as a natural feature under PUC Substantive Rule §25.101(b)(3)(B)(iii) this increases the amount of paralleling and conforms with the policy of prudent avoidance.

Q: DOES THIS CONCLUDE YOUR ROUTE ADEQUACY TESTIMONY?

A: Yes, it does, although I reserve the right to correct or augment my testimony if appropriate or necessary.

RUDOLPH K. REINECKE
Vice-President and Project Manager

EDUCATION:
M.S., Rangeland Ecology and Management, Texas A&M University, 1996
B.S., Rangeland Ecology and Management, Texas A&M University, 1994

IES POSITION:
Vice-President and Project Manager

Date of hire: 3 March 2003
Years of experience with other firms: 7

SUMMARY OF EXPERIENCE:
Mr. Reinecke has more than 26 years of experience in environmental projects and surveys. He has extensive experience in the natural resources field through working at Texas Agriculture Experiment Station, United States (U.S.) Forest Service, Texas Department of Transportation, Geo-Marine, Inc. and Integrated Environmental Solutions, Inc. The majority of his experience includes plant ecology, specifically plant taxonomy, vegetation sampling, vegetation community characterization, wetland delineation, and wetland mitigation. He also has experience with the National Environmental Policy Act (NEPA) process as an interdisciplinary team member and project manager.

While at IES, Mr. Reinecke has managed numerous projects with NEPA components. Between 2004 and 2005, Mr. Reinecke managed eight Phase I Environmental Site Assessments with Categorical Exclusion Checklists for the General Services Administration (GSA) through a Division of Federal Occupation Health One Year Vendor Contract. Most of these Phase I ESAs included standard Phase I Cultural Resources Assessments, as well, which were overseen by IES. Mr. Reinecke has also served as the principal environmental professional for over 20 Phase I ESAs for private developers since 2005. In addition to Phase I ESAs, Mr. Reinecke is the Senior Project Manager in charge of all Natural and Biological Resources services for IES. Through Mr. Reinecke's broad natural and cultural resource experience, he has been an expert witness in a number of transmission routing projects, which have included developing and studying routing analyses.

JOB HISTORY:

2003	Vice-President- Project Manager	Integrated Environmental Solutions, LLC Richardson/McKinney, TX	Project management, oversight on natural resource and compliance projects
1997-2003	Wetland Ecologist/ Project Manager	Geo-Marine, Inc., Plano, TX Newport News, VA	Project management, oversight on natural resource and compliance projects
1996-1997	Environmental Specialist	Texas Department of Transportation Waco, TX	NEPA compliance project manager
1996	Research Assistant	Texas Agriculture Experiment Station College Station, TX	Protected species surveys and plant community surveys
1994-1996	Research Technician	Texas Agriculture Experiment Station College Station, TX	Plant ecology surveys in arid ecosystems
1993	Field Biologist	Forest Service Rapid City, SD	Protected species surveys in national grasslands and plant ecology surveys in national forests

SELECTED PROJECT EXPERIENCE:

Waters of the United States Permitting Projects

- Residential Development at Lebanon/Teel, Frisco NWP; Florida Capital Real Estate Partners
- Forward Air Facility Section 404 NWP; Chiang Patel & Yerby
- Hogpen Branch Regional Detention Pond C Section 404 NWP 43; City of Mansfield/Teague Nall and Perkins
- Communications Parkway Section 404 NWP 14; City of Plano
- Keller Hicks Road Improvements Section NWP 14; City of Fort Worth/Teague Nall and Perkins
- Eagle Mountain High School #3 Section 404 NWP 29; Teague Nall and Perkins
- Standing Wave Feature Section 404 NWP 42 and Section 10 LOP; City of Dallas/Schrickle Rollins & Associates
- Southwest Parkway Section 4 Individual Section 404 Permit (IP); Jacobs Carter Burgess/NTTA
- Distribution Center at Carter Park, Fort Worth Section 404 IP; Pacheco Koch Consulting Engineers
- Hutchins Warehouse/Distribution Facility Section 404 IP; Pacheco Koch Consulting Engineers
- Creeks of Argyle 404 Section 404 IP; O'Brien Engineers, Inc.
- Commercial/Retail Development, Plano Section 404 IP; O'Brien Engineers, Inc.
- Lakeside Business Park Section 404 IP; Lennar Partners
- Harbor Point Section 404 Letter of Permission; Harvest Partners
- Tucker Hill Residential Development Section 404 IP; Southern Land Company
- University Park City Hall Expansion Section 404 IP Modification; Goodson Engineers
- Lakehills Residential Development Section 404 IP; Standard Pacific, Inc.
- Deerfield Residential Development Section 404 IP; Meritage Homes of Texas, LP
- Marshall Industrial Complex Section 404 IP; Alliance Architects

Natural Resources Planning Projects

- Naval District Washington Integrated Natural Resource Management Plan (INRMP); U.S. Navy
- Naval Weapons Station Earle INRMP; U.S. Navy
- Vieques Island INRMP; U.S. Navy
- Live Impact Area Wetland Delineation, Naval Station Roosevelt Roads (NSRR) Vieques Island; U.S. Navy
- Vieques Island Baseline Survey, NSRR, Puerto Rico; U.S. Navy
- Natural Resource Damage Assessment for a JP-5 Fuel Spill at NSRR, Puerto Rico; U.S. Navy
- Habitat Characterization of Solid Waste Management at NSRR and Vieques Island, Puerto Rico; U.S. Navy
- NSRR Wetland Delineation, Cieba, Puerto Rico; U.S. Navy
- Biological Assessment for Environmental Assessments at Harvey Point Defense Testing Activity North Carolina
- Shaw Air Force Base Land Condition Trend Analysis, Sumter, South Carolina; U.S. Air Force
- Grand Bay Bombing Range Wetland Delineation, Moody Air Force Base, Lanier County, Georgia; U.S. Air Force
- Land Condition Trend Analysis (LCTA) 1998 Monitoring, Camp Blanding Training Site, Stark, Florida; U.S. Army
- Endangered Species Model, Brooks, Cameron, Hidalgo, Jim Hogg, Kennedy, Starr, Willacy, and Zapata Counties, Texas for TxDOT
- Plant Community Survey on Interstate 35 Corridor, Texas for TxDOT
- Endangered and Threatened Species Surveys, Sheyenne National Grasslands, North Dakota; U.S. Forest Service
- Camp Maxey Wetland Survey; Texas Army National Guard
- Camp Bowie Riparian and Pond Assessment; Texas Army National Guard
- City of Frisco Riparian and Wetland Assessment; City of Frisco, Texas
- Invasive Plant Species Surveys at Texas Army National Guard (TANG) Installations
- Natural and Cultural Resources Inventory in Support of Environmental Assessment for the Chesapeake Energy Natural Gas Exploration and Production, Dallas/Fort Worth (D/FW) International Airport, Texas.
- Watershed Assessments and Waters of the United States Delineations, Texas Army National Guard Installations, Texas
- Biological Inventory of Proposed South Texas Training Center for Army National Guard

Construction Monitoring and Training

- President George Bush Turnpike Segment IV for North Texas Tollway Authority
- 121 Regional Disposal Facility for North Texas Municipal Water District
- Natural Gas Drilling and Pipelines on DFW International Airport for Chesapeake Energy Corporation

Transmission Routing Studies

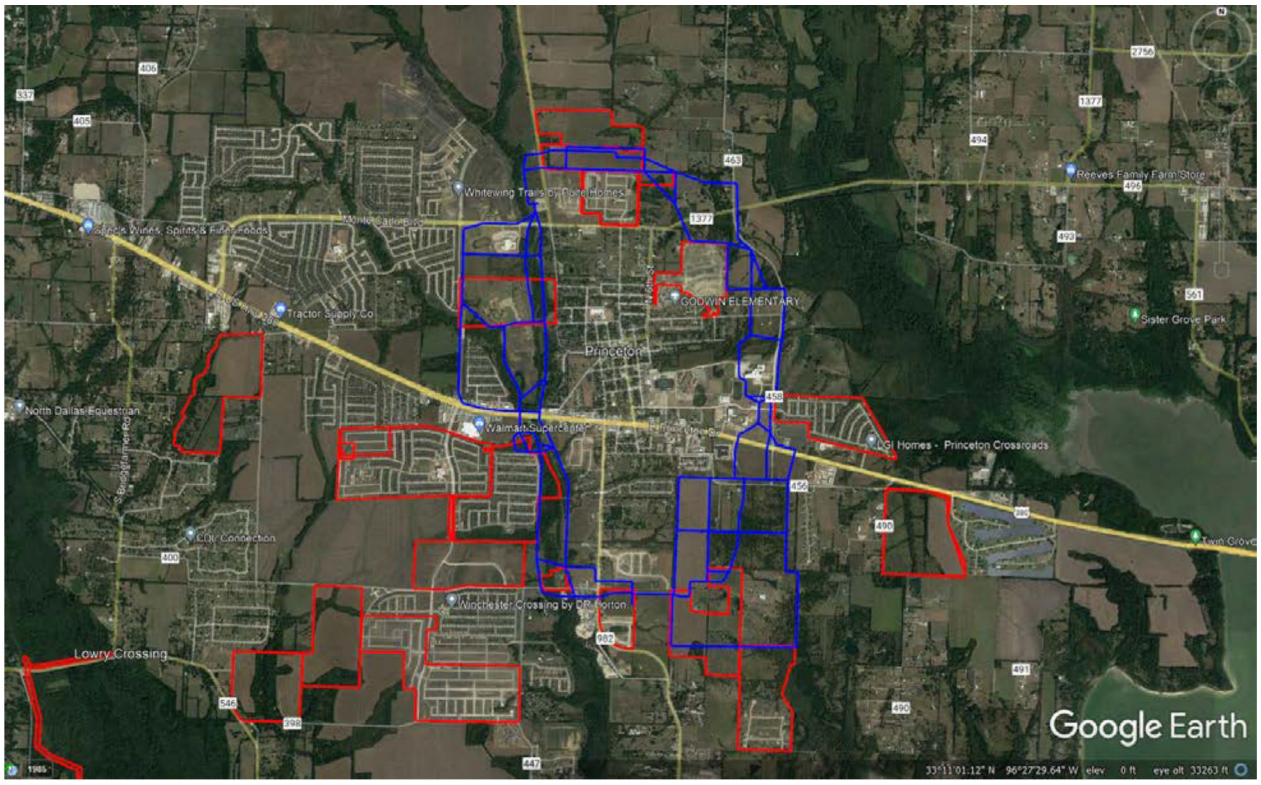
Expert Witness in Following Texas Public Utility Commission Dockets:

- Brown to Newton 345 kV Transmission Line Project, Docket Number 37464
- Riley to Krum 345 kV Transmission Line Project, Docket Number 38140
- Krum West to Anna 345 kV CREZ Transmission Line Project, Docket Number 38597
- Gray to White Deer 345 kV CREZ Transmission Line Project, Docket Number 38650
- Willow Creek to Hicks 345 kV CREZ Transmission Line Project, Docket Number 38324
- Lobo to Rio Bravo to North Edinburg 345 kV Transmission Line Project, Docket Number 40728
- North Edinburg to Loma Alta 345 kV Transmission Line Project, Docket Number 41606
- Parvin Substation and 138kV Transmission Line Project, Docket Number 43878

PROFESSIONAL CERTIFICATION

Certified Arborist with International Society of Arboriculture #180433

Exhibit RKR – 2
Rudolph Reinecke's Past Projects in Ivy League Study Area



Red polygons are projects that Mr. Reinecke has conducted within the Ivy League study area. Blue lines are the Ivy League proposed routes.

TICKY CREEK SOUTH OF US
HIGHWAY 380; PRINCETON

Inquiry Number: 6965986.1

May 04, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/04/22

Site Name:

Ticky Creek South

Client Name:

Integrated Env. Solutions, Inc.

EDR Inquiry # 6965986.1

Contact: Rudi Reinecke

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Search Results:

Year	Scale	Details	Source
2016	1"=625'	Flight Year: 2016	USDA/NAIP
2012	1"=625'	Flight Year: 2012	USDA/NAIP
2008	1"=625'	Flight Year: 2008	USDA/NAIP
2005	1"=625'	Flight Year: 2005	USDA/NAIP
1995	1"=625'	Acquisition Date: January 01, 1995	USGS/DOQQ
1990	1"=625'	Flight Date: October 01, 1990	NAPP
1989	1"=625'	Flight Date: December 03, 1989	NAPP
1981	1"=625'	Flight Date: September 21, 1981	USDA
1972	1"=625'	Flight Date: February 24, 1972	USDA
1968	1"=625'	Flight Date: May 01, 1968	USGS
1964	1"=625'	Flight Date: January 03, 1964	USDA
1951	1"=625'	Flight Date: December 30, 1951	USDA
1942	1"=625'	Flight Date: March 21, 1942	USDA

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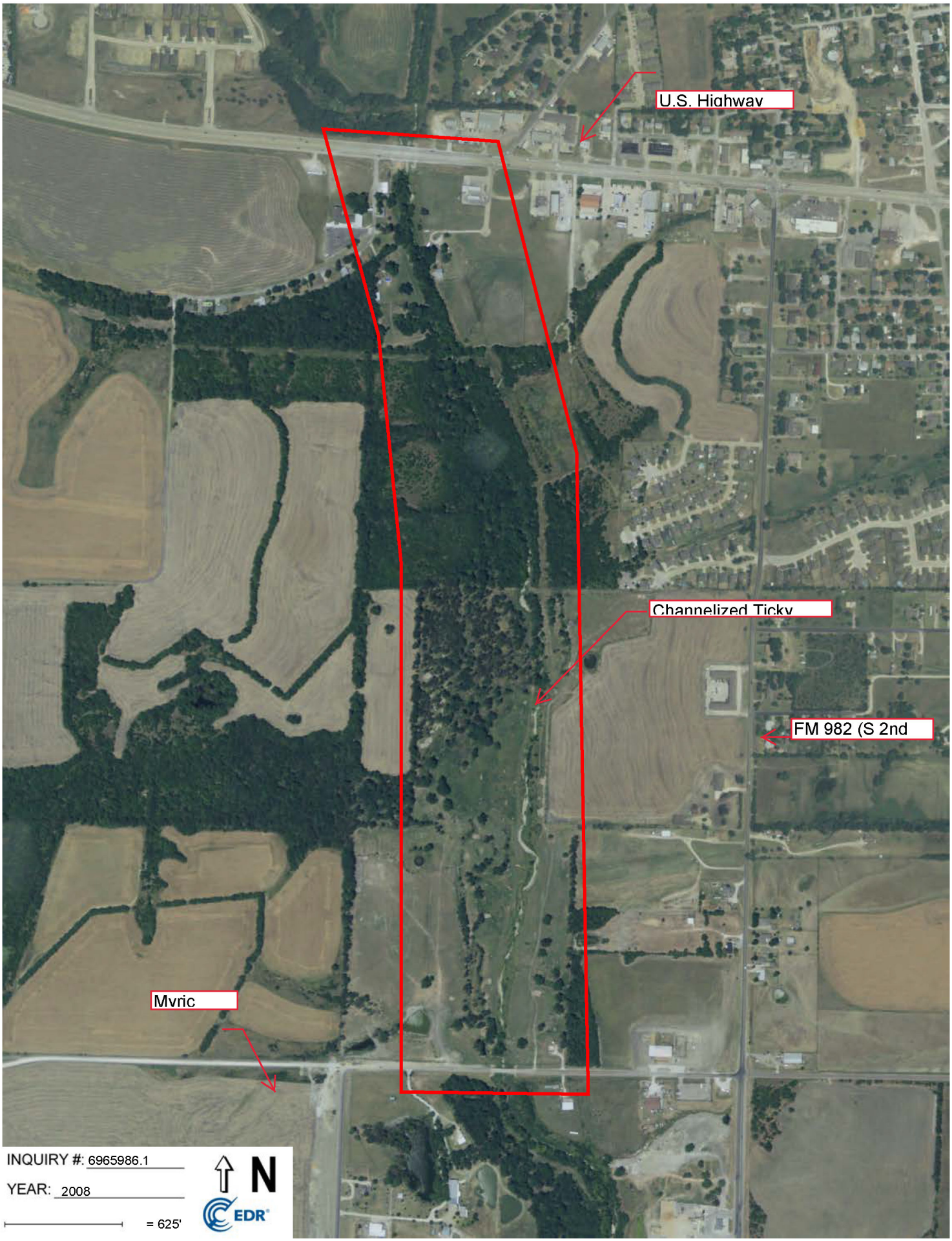
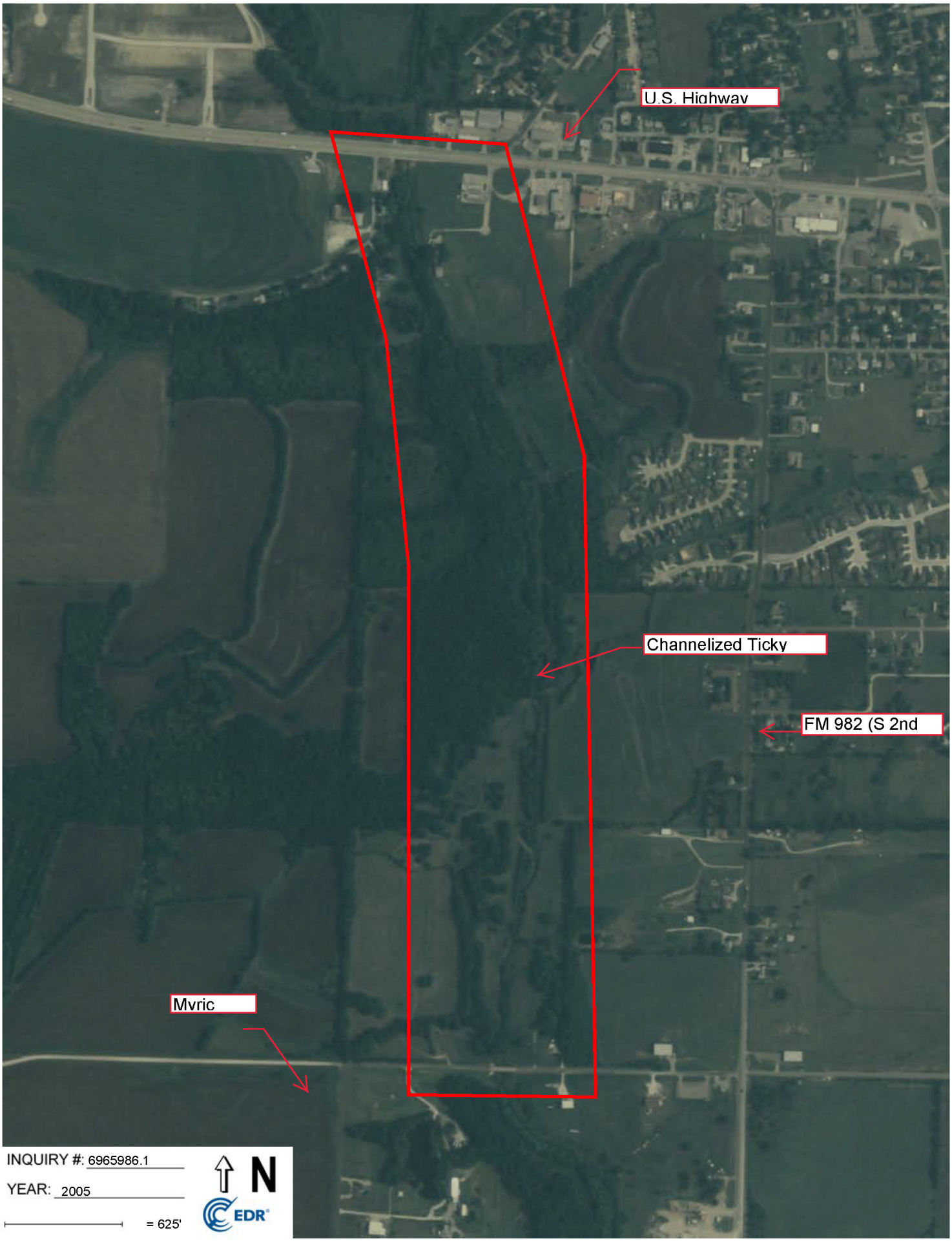
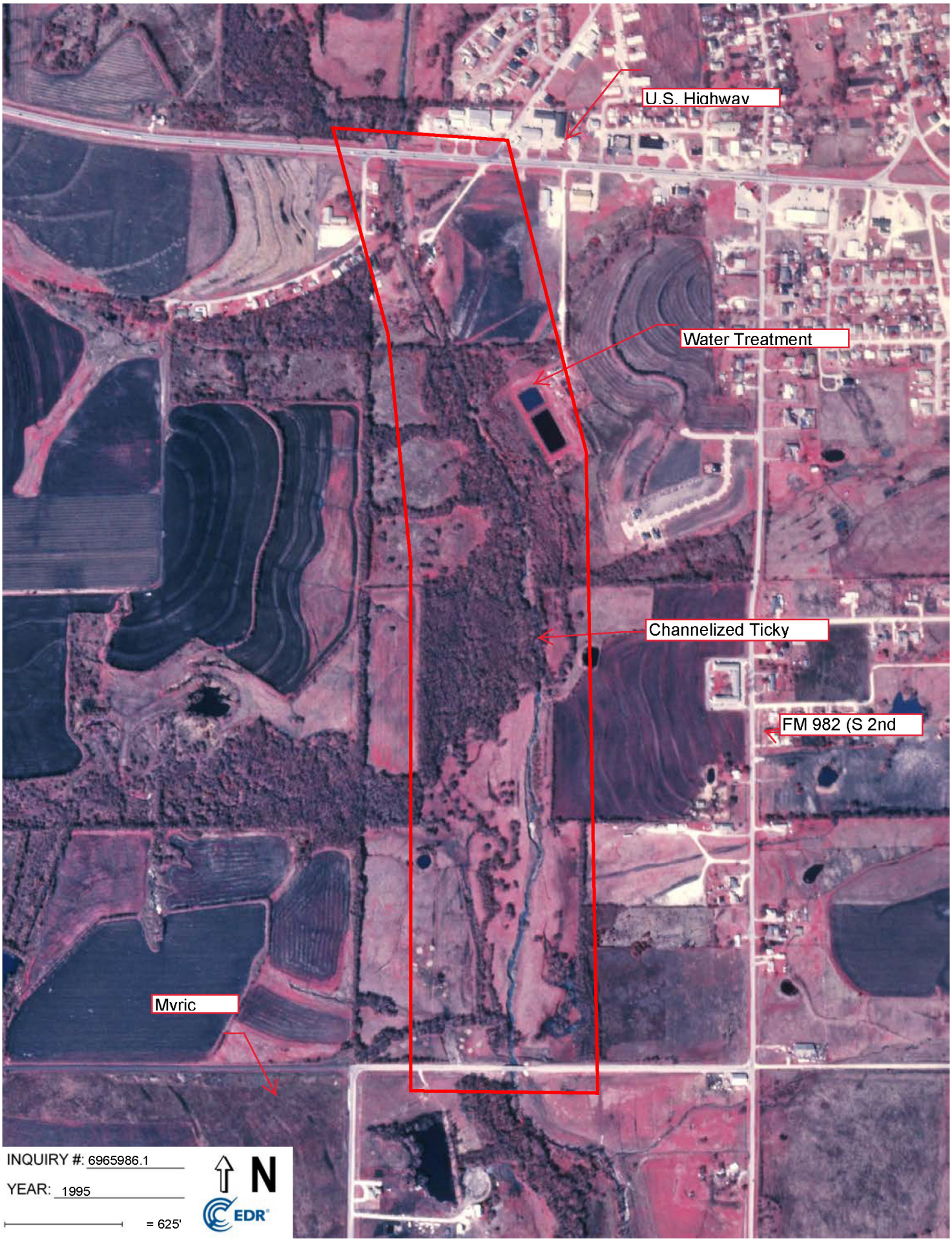
U.S. Highway
FM 982 (S 2nd
Channelized Ticky
Mvric
INQUIRY #: 6965986.1
YEAR: 2016
= 625'
N
EDR


U.S. Highway
FM 982 (S 2nd
Channelized Ticky
Mvric
INQUIRY #: 6965986.1
YEAR: 2012
= 625'
N
EDR

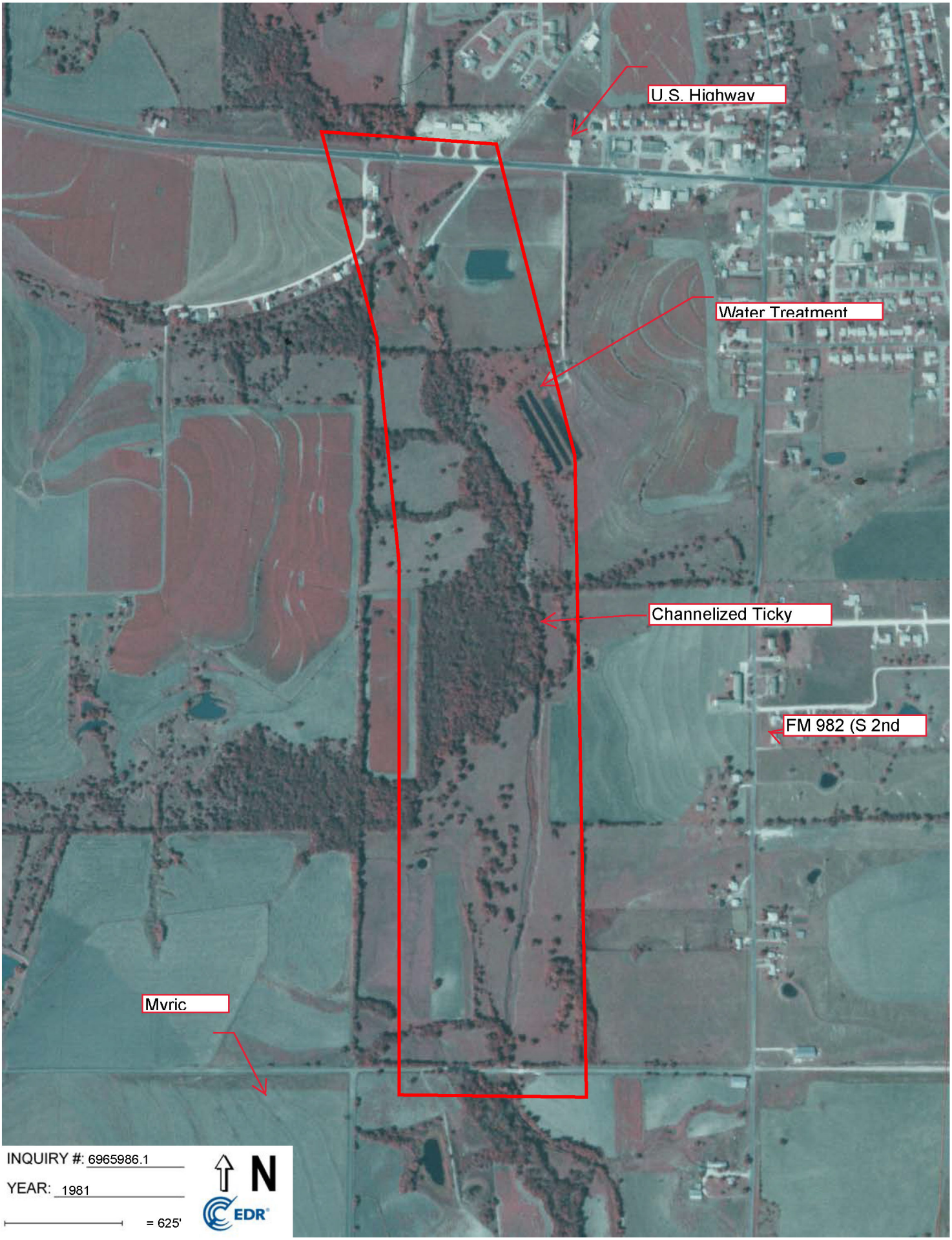

U.S. Highway
Channelized Ticky
FM 982 (S 2nd
Myric
INQUIRY #: 6965986.1
YEAR: 2008
= 625'
N
EDR

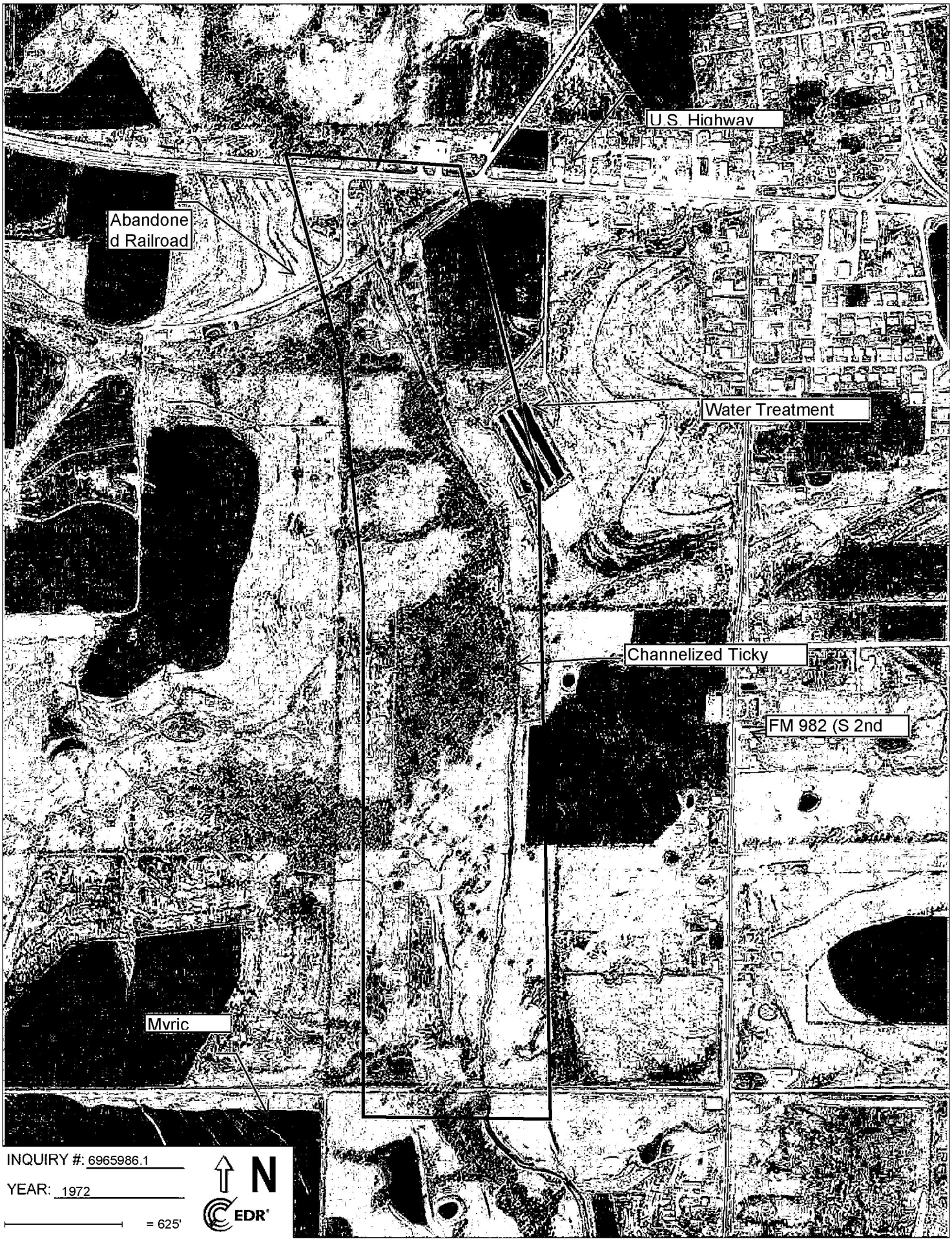

U.S. Highway
Channelized Ticky
FM 982 (S 2nd
Mvric
INQUIRY #: 6965986.1
YEAR: 2005
= 625'
N
EDR

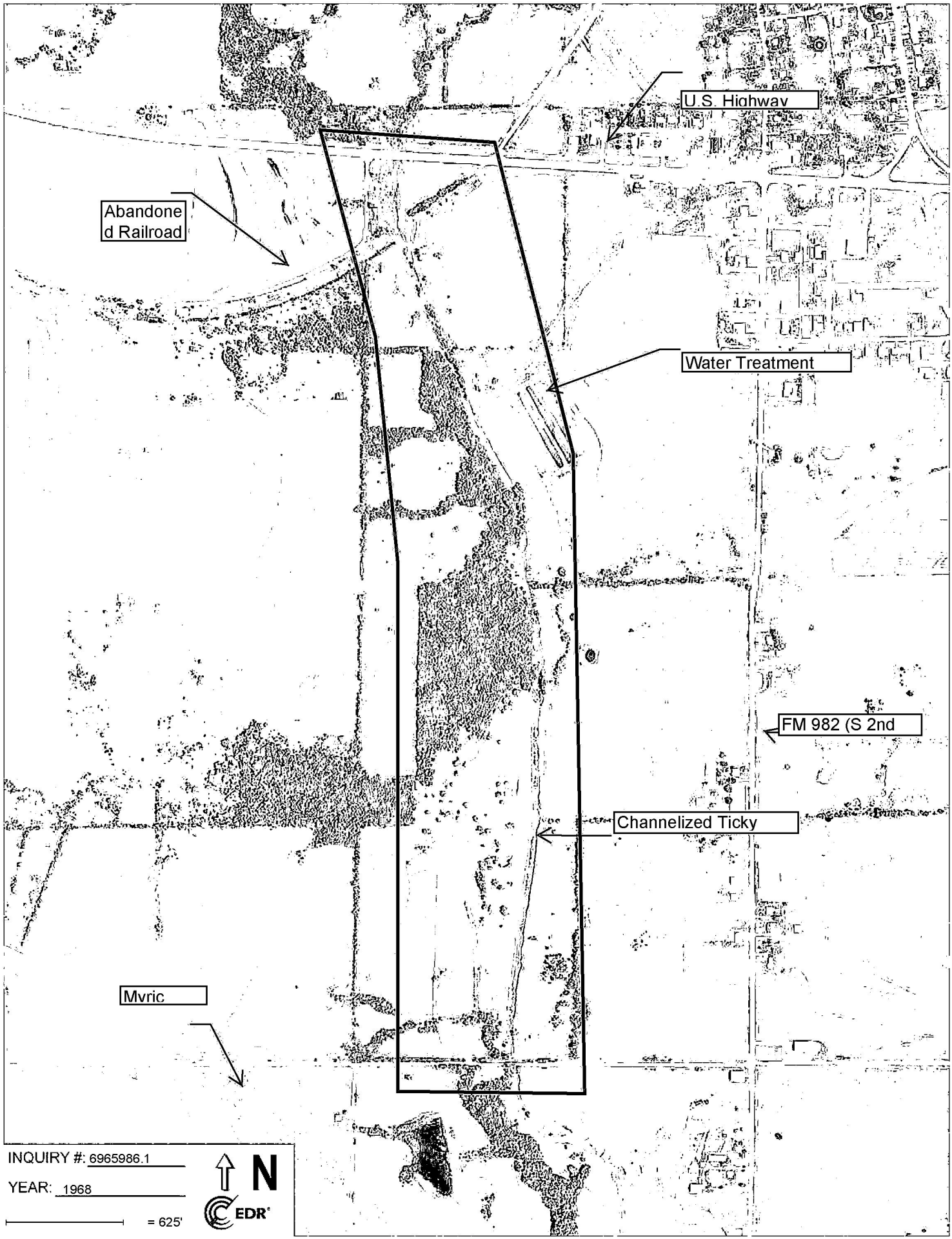

U.S. Highway
Water Treatment
Channelized Ticky
FM 982 (S 2nd
Mvric
INQUIRY #: 6965986.1
YEAR: 1995
= 625'
N
EDR


U.S. Highway
Channelized Tributary to Ticky Creek
Water Treatment
Channelized Ticky
FM 982 (S 2nd
Myric
INQUIRY #: 6965986.1
YEAR: 1990
= 625'
N
EDR

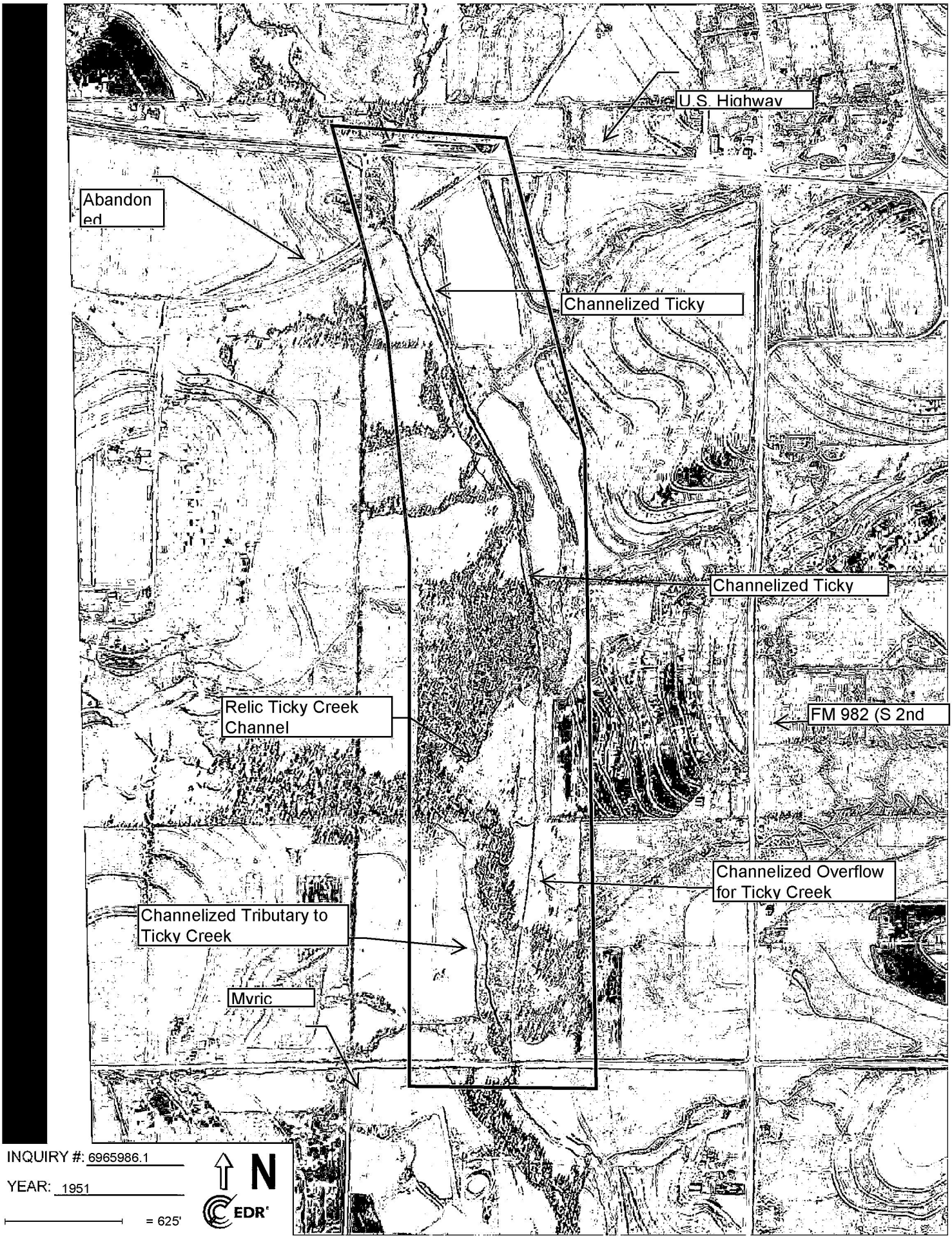

U.S. Highway
Channelized Tributary to Ticky Creek
Water Treatment
Channelized Ticky
FM 982 (S 2nd
Mvric
INQUIRY #: 6965986.1
YEAR: 1989
= 625'
N
EDR

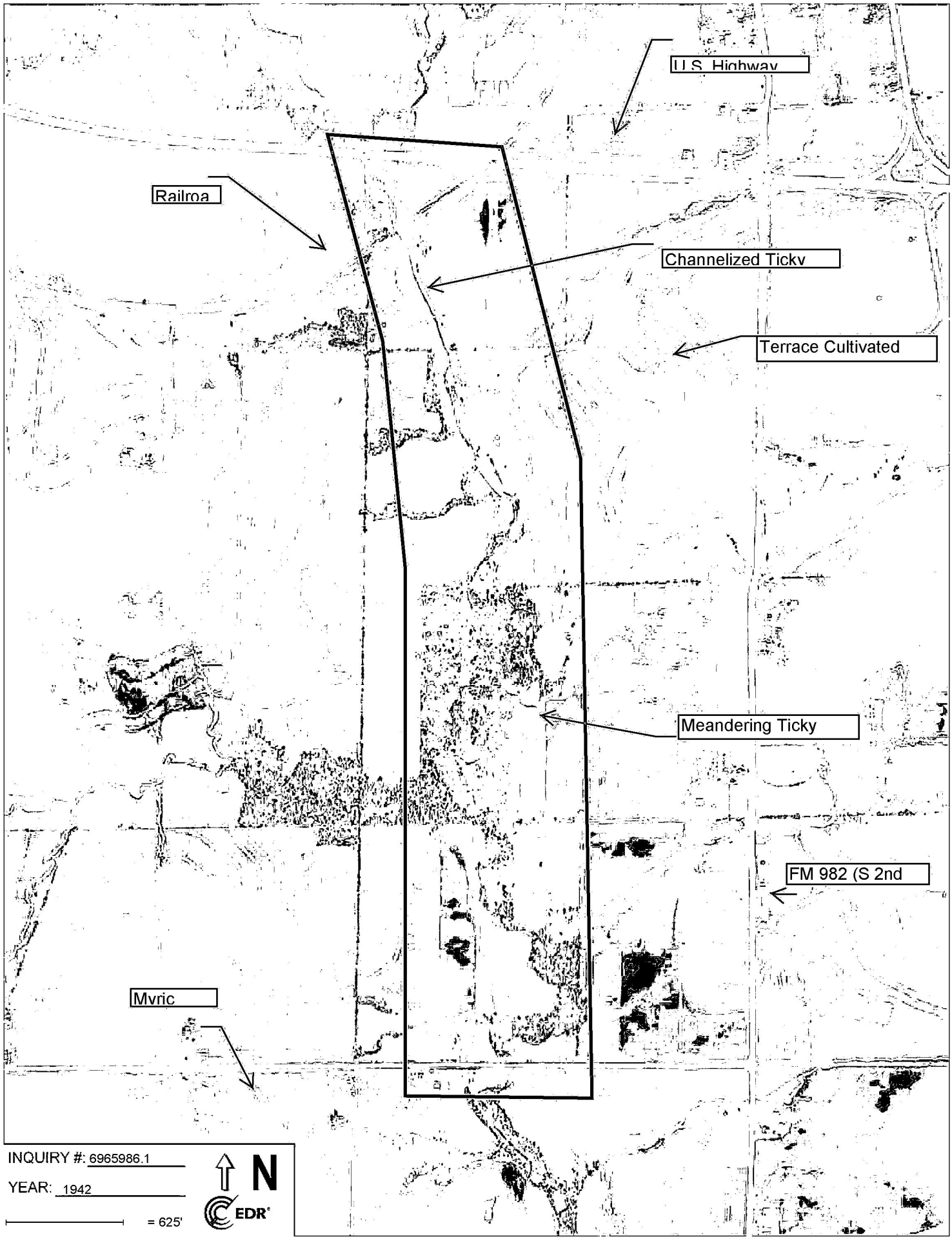

U.S. Highway
Water Treatment
Channelized Ticky
FM 982 (S 2nd
Myric
INQUIRY #: 6965986.1
YEAR: 1981
= 625'
N
EDR


U.S. Highway
Abandone
d Railroad
Water Treatment
Channelized Ticky
FM 982 (S 2nd
Mvric
INQUIRY #: 6965986.1
YEAR: 1972
= 625'
N
EDR


U.S. Highway
Abandoned Railroad
Water Treatment
FM 982 (S 2nd
Channelized Ticky
Mvric
INQUIRY #: 6965986.1
YEAR: 1968
= 625'
N
EDR


U.S. Highway
Abandoned Railroad
Water Treatment
Relic Ticky Creek Channel
FM 982 (S 2nd
Channelized Ticky
Channelized tributary of Ticky
Mvric
INQUIRY #: 6965986.1
YEAR: 1964
= 625'
N
EDR


U.S. Highway
Abandon
ed
Channelized Ticky
Channelized Ticky
Relic Ticky Creek
Channel
FM 982 (S 2nd
Channelized Overflow
for Ticky Creek
Channelized Tributary to
Ticky Creek
Mvric
INQUIRY #: 6965986.1
YEAR: 1951
= 625'
N
EDR


U.S. Highway
Railroa
Channelized Ticky
Terrace Cultivated
Meandering Ticky
FM 982 (S 2nd
Myric
INQUIRY #: 6965986.1
YEAR: 1942
= 625'
N
EDR

TICKY CREEK NORTH OF US
HIGHWAY 380; PRINCETON

Inquiry Number: 6965993.1

May 04, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/04/22

Site Name:

Ticky Creek North

Princeton, TX 75407
EDR Inquiry # 6965993.1

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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1995	1"=750'	Acquisition Date: January 01, 1995	USGS/DOQQ
1990	1"=750'	Flight Date: October 01, 1990	NAPP
1989	1"=750'	Flight Date: December 03, 1989	NAPP
1981	1"=750'	Flight Date: September 21, 1981	USDA
1972	1"=750'	Flight Date: February 24, 1972	USDA
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1951	1"=750'	Flight Date: December 30, 1951	USDA
1942	1"=750'	Flight Date: March 21, 1942	USDA

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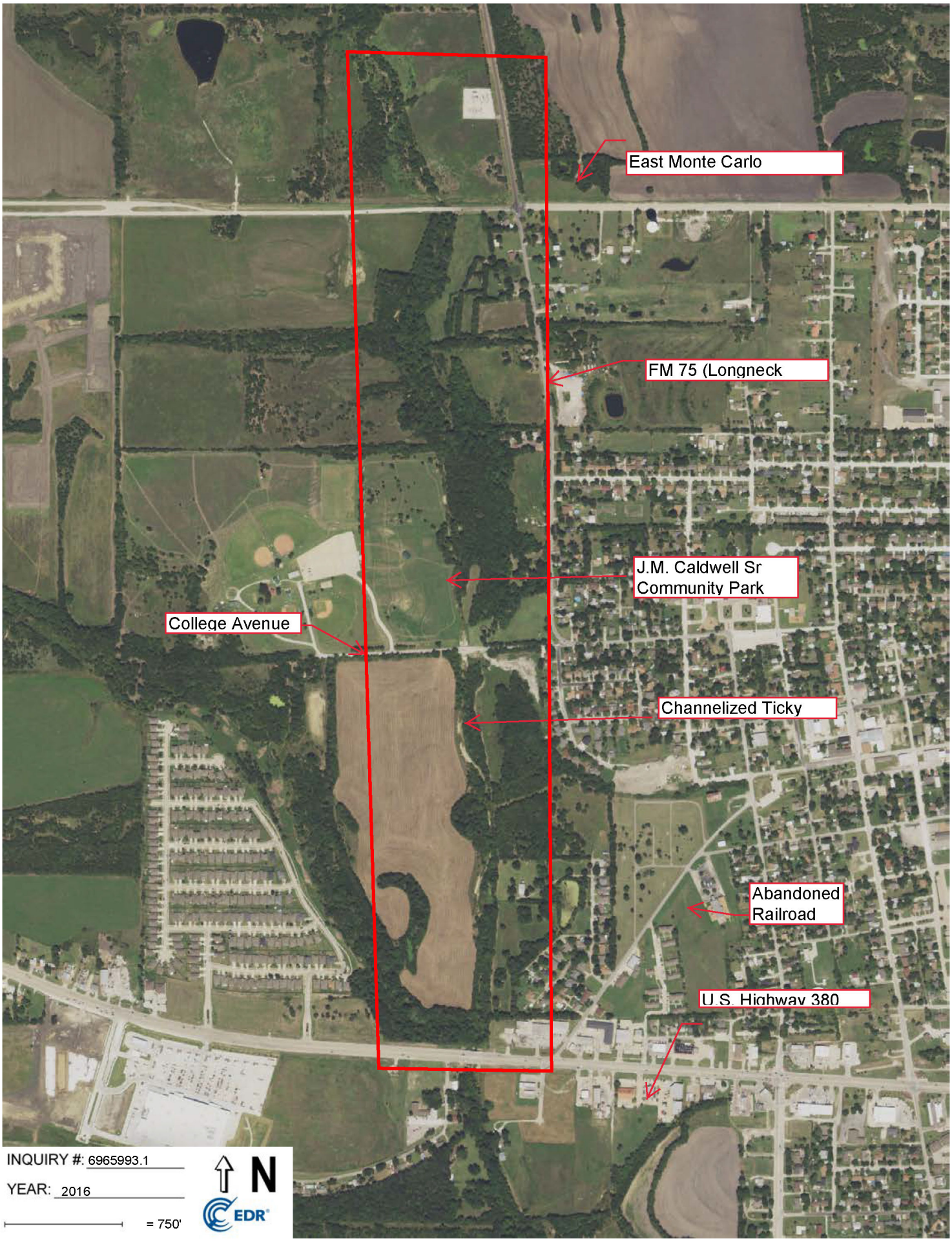
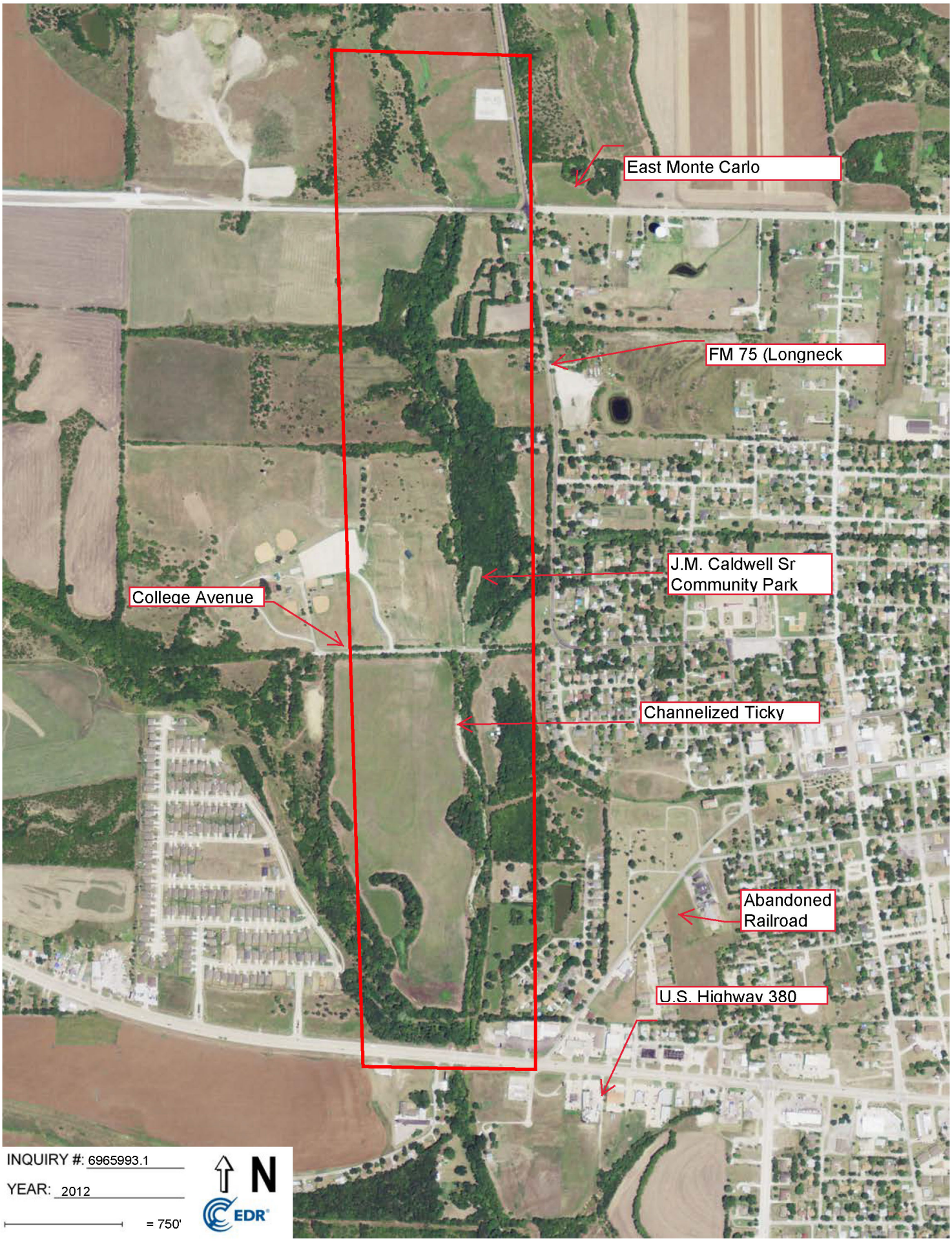
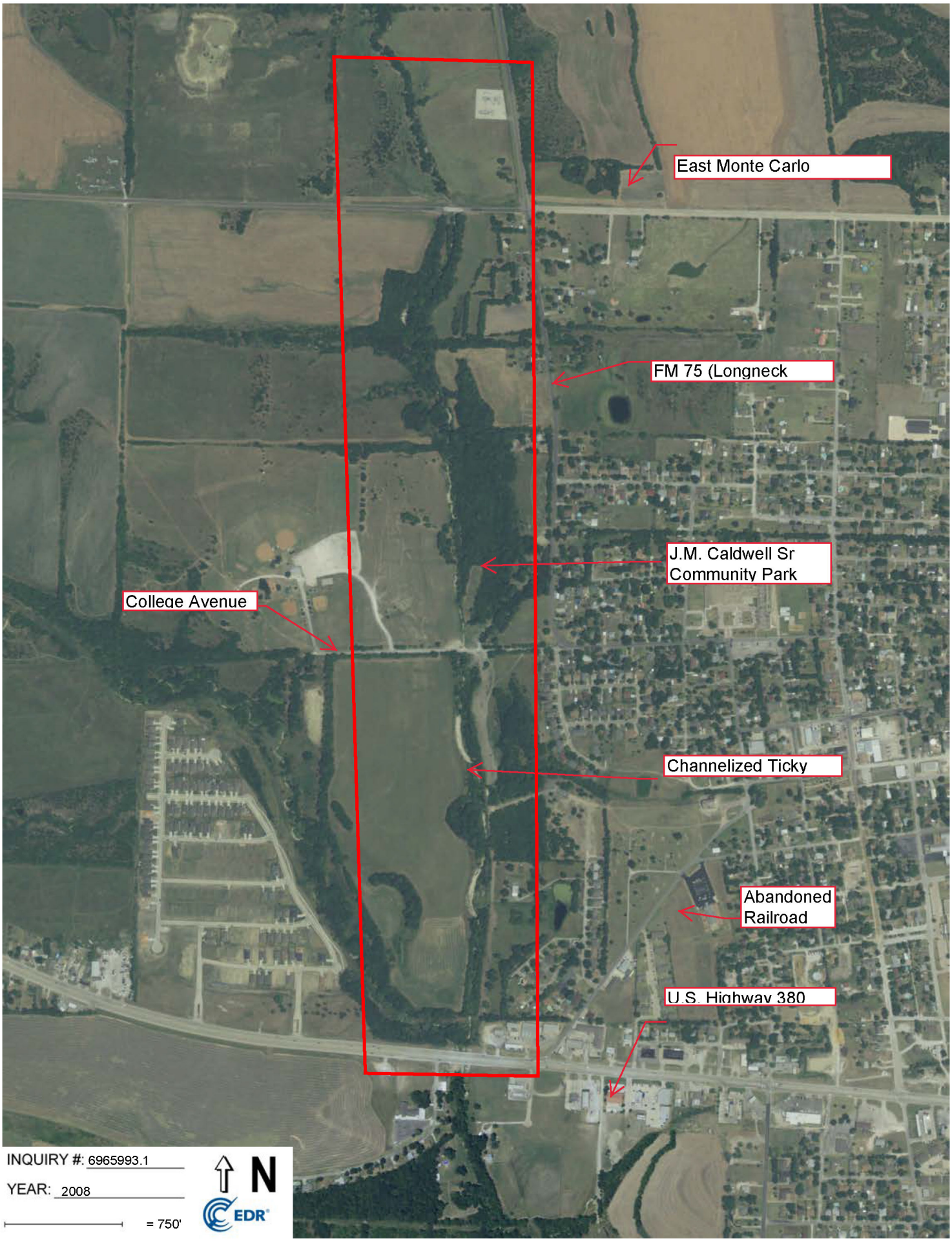
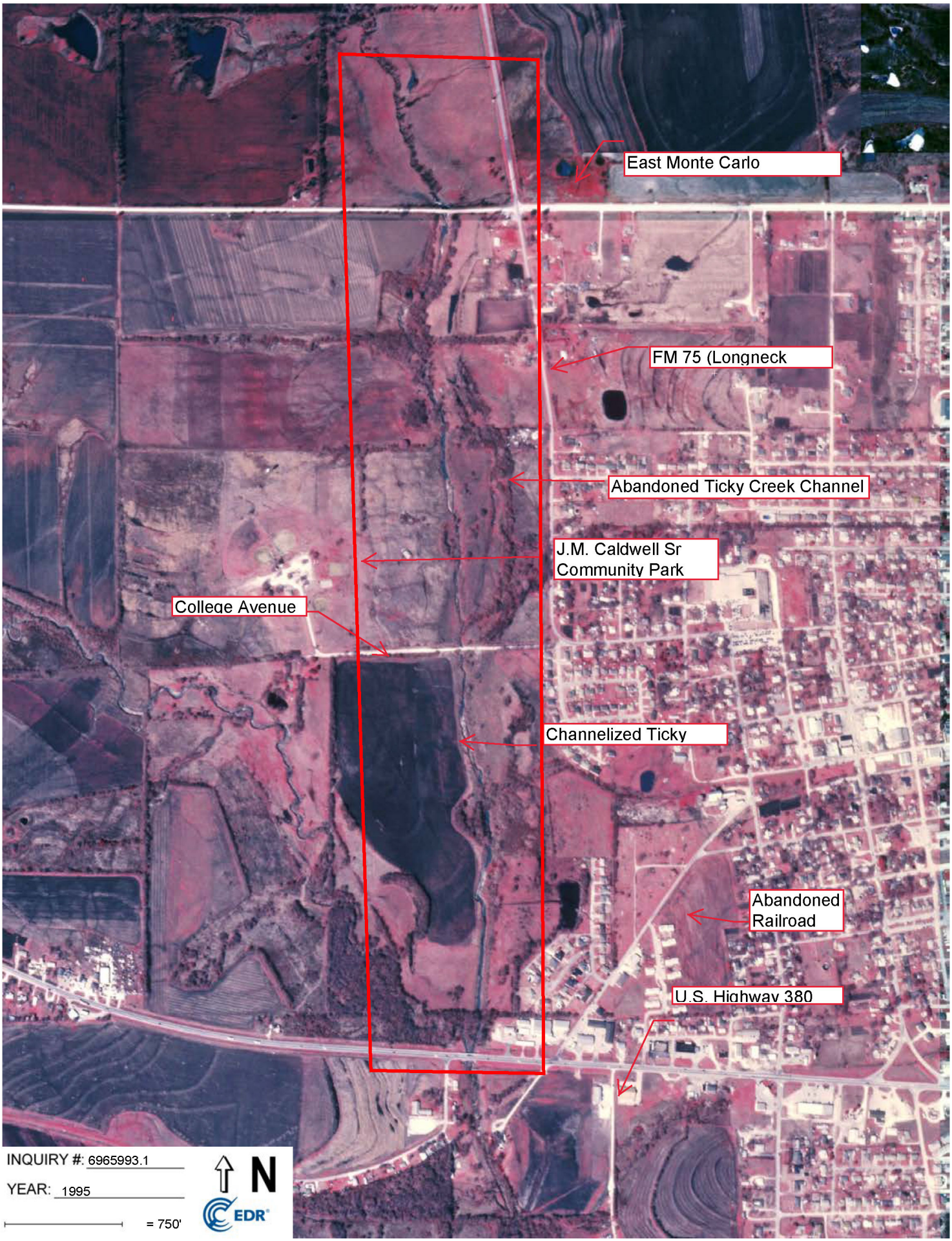

East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr Community Park
College Avenue
Channelized Ticky
Abandoned Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 2016
= 750'
N
EDR


East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr
Community Park
College Avenue
Channelized Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 2012
= 750'
N
EDR

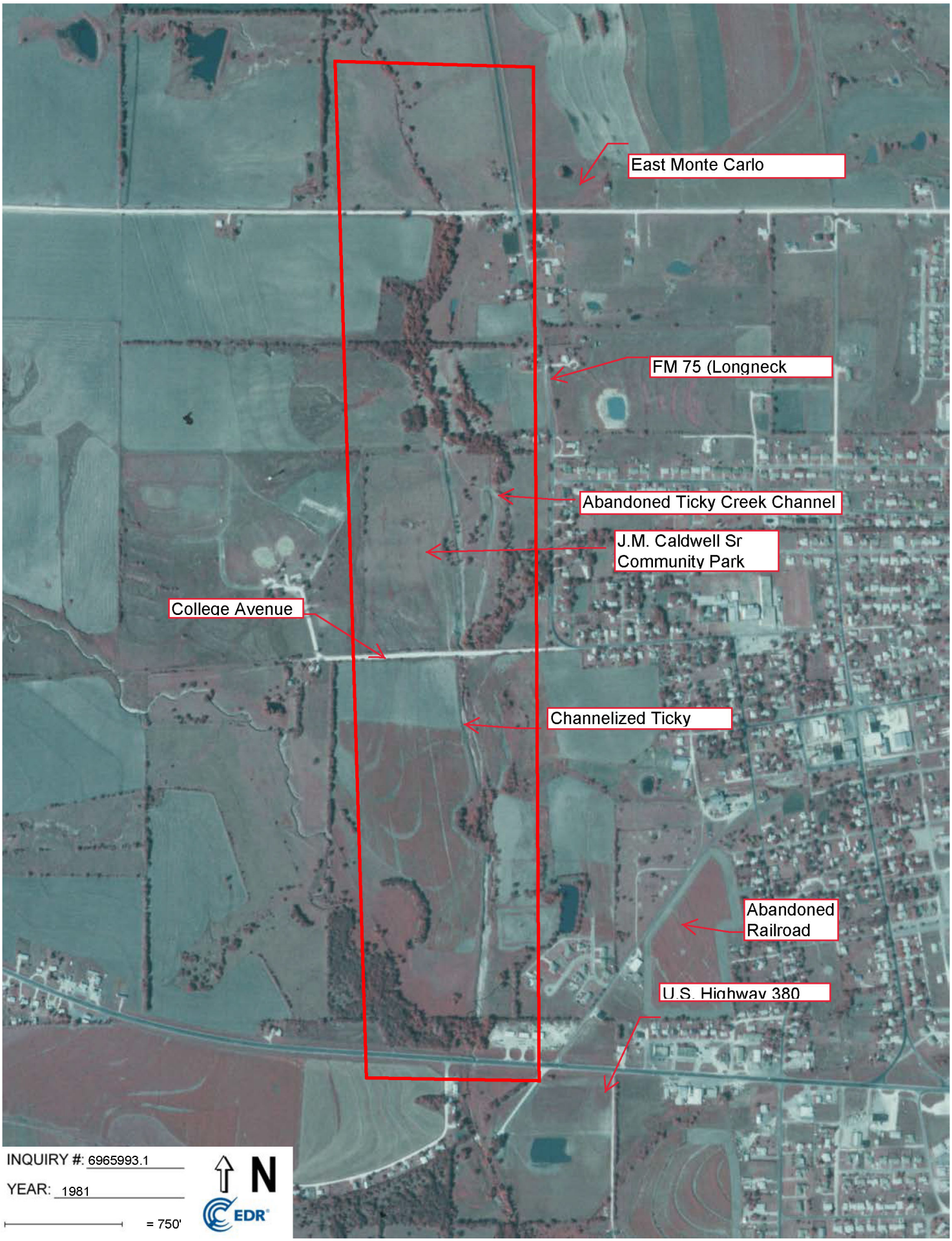

East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr Community Park
College Avenue
Channelized Ticky
Abandoned Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 2008
= 750'
N
EDR

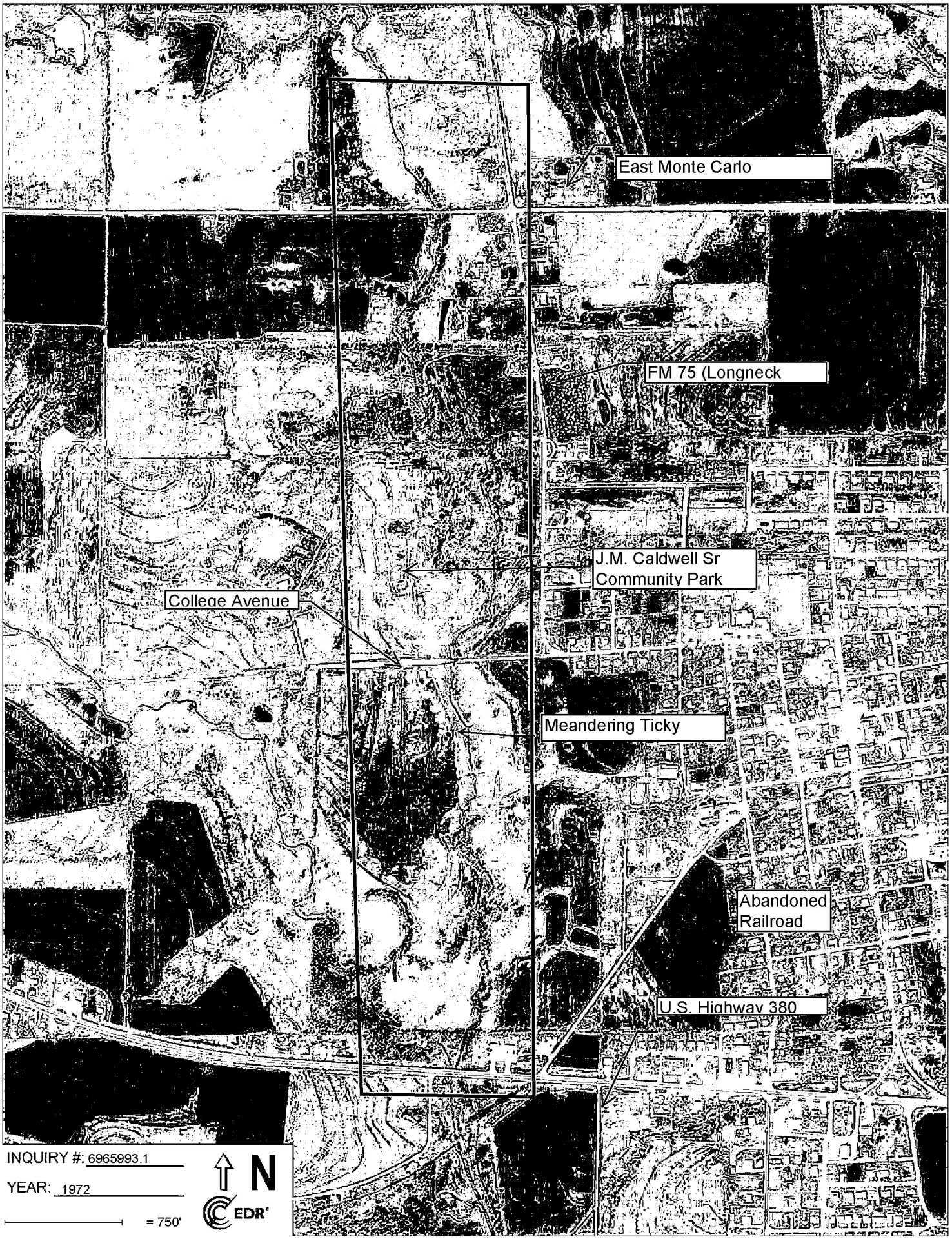

East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr
Community Park
College Avenue
Channelized Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 2005
N
= 750'
EDR

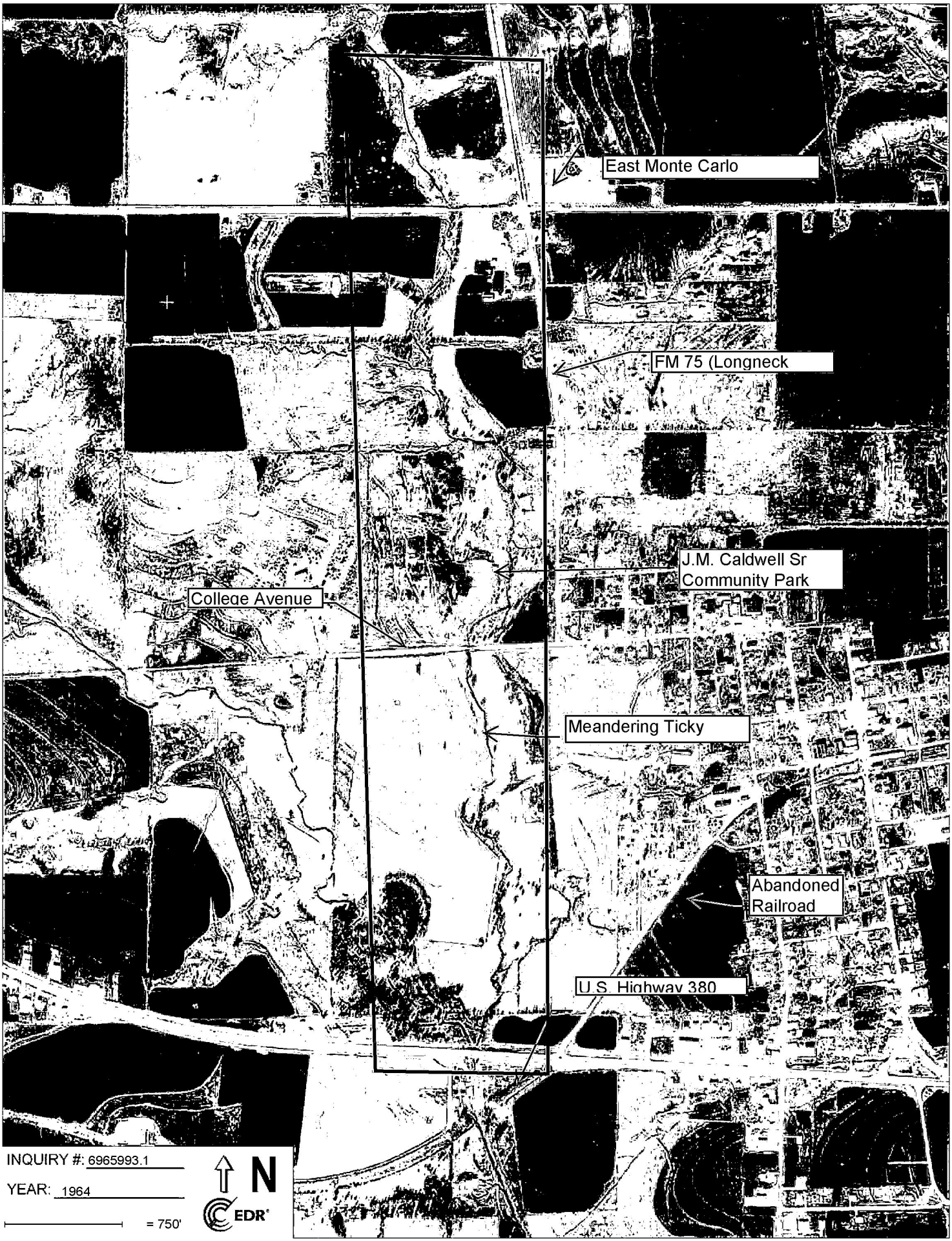

East Monte Carlo
FM 75 (Longneck
Abandoned Ticky Creek Channel
J.M. Caldwell Sr
Community Park
College Avenue
Channelized Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1995
= 750'
N
EDR

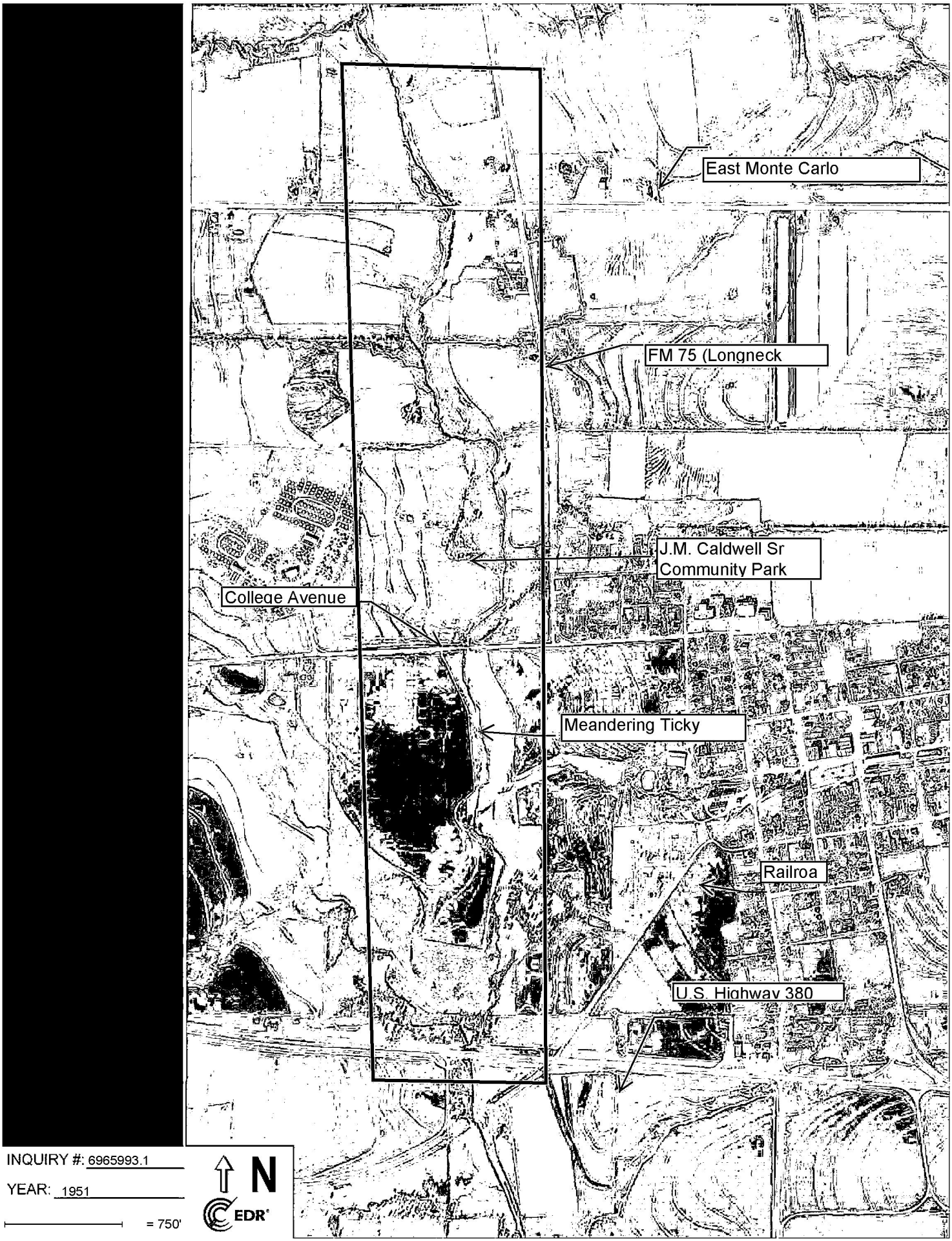

East Monte Carlo
FM 75 (Longneck
Channelized Ticky Creek
Abandoned Ticky Creek Channel
J.M. Caldwell Sr
Community Park
College Avenue
Channelized Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1990
= 750'
N
EDR


East Monte Carlo
FM 75 (Longneck
Abandoned Ticky Creek Channel
J.M. Caldwell Sr Community Park
College Avenue
Channelized Ticky
Abandoned Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1989
= 750'
N
EDR


East Monte Carlo
FM 75 (Longneck
Abandoned Ticky Creek Channel
J.M. Caldwell Sr Community Park
College Avenue
Channelized Ticky
Abandoned Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1981
= 750'
N
EDR


East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr
Community Park
College Avenue
Meandering Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1972
= 750'
N
EDR


East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr
Community Park
College Avenue
Meandering Ticky
Abandoned
Railroad
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1964
= 750'
N
EDR



INQUIRY #: 6965993.1

YEAR: 1951

= 750'

N

EDR

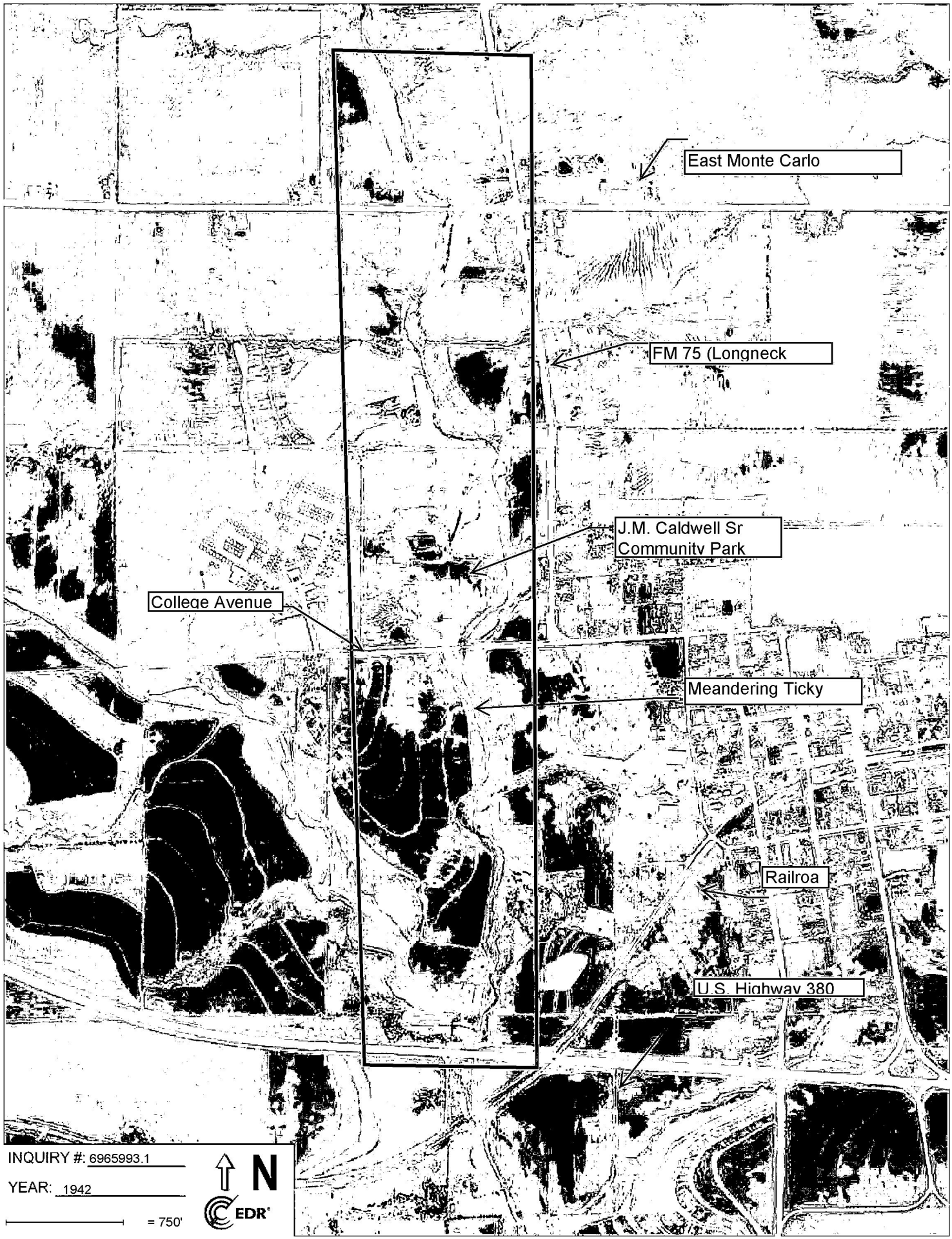
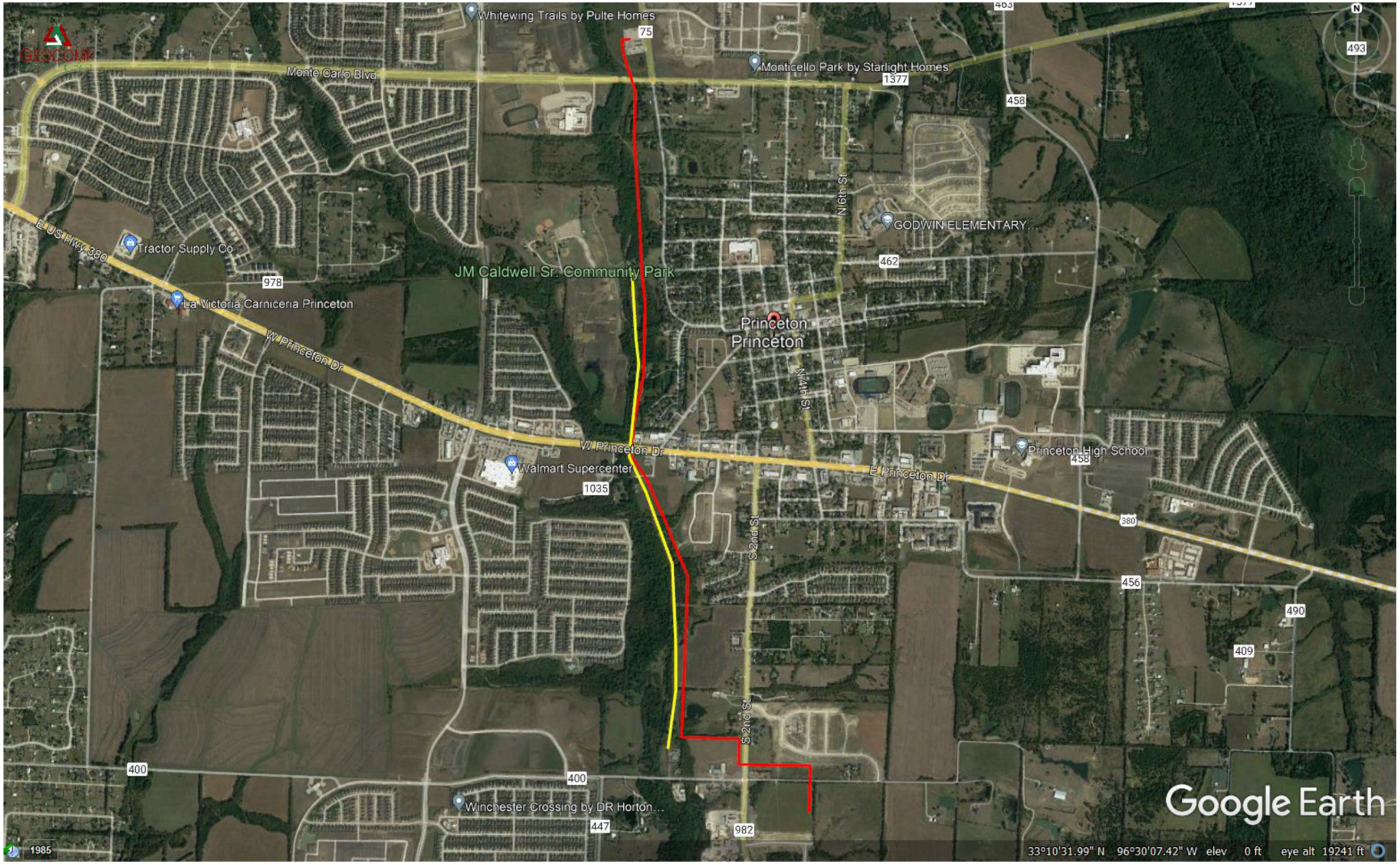

East Monte Carlo
FM 75 (Longneck
J.M. Caldwell Sr
Community Park
College Avenue
Meandering Ticky
Railroa
U.S. Highway 380
INQUIRY #: 6965993.1
YEAR: 1942
= 750'
N
EDR

Exhibit RKR – 5
Route 4626 Alignment in Relation to Ticky Creek Sewer Line



Red line represents Route 4626 and yellow line represents the existing Ticky Creek sewer line.

Exhibit RKR-6

RESOLUTION NO. 2022-04-11-R02

A RESOLUTION OF THE CITY OF PRINCETON, TEXAS, IN SUPPORT OF ONCOR ELECTRIC DELIVERY COMPANY LLC'S CONSTRUCTION OF THE IVY LEAGUE 138-KV TRANSMISSION LINE ON ROUTE 4626

WHEREAS, additional electric capacity is needed to support economic and population growth in the City of Princeton, Texas; and

WHEREAS, the City of Princeton is today electrically served from distant distribution feeders; and

WHEREAS, there is a need for reliability and service improvements in the City of Princeton to both improve existing service and serve Princeton's dramatic growth; and

WHEREAS, the City of Princeton has approved construction of the Ivy League Substation within the city limits; and

WHEREAS, on January 18, 2022, Oncor Electric Delivery Company LLC ("Oncor") filed an application for a certificate of convenience and necessity with the Public Utility Commission of Texas ("Commission"), in Docket No. 53053, *Application of Oncor Electric Delivery Company LLC to Amend its Certificate of Convenience and Necessity for the Ivy League 138-kV Transmission Line in Collin County*; and

WHEREAS, if Oncor's application is approved, Oncor will construct the Ivy League 138-kV transmission in the City of Princeton, which will provide additional electric capacity to Princeton residents and businesses; and

WHEREAS, if Oncor's application is approved, Oncor will construct the Ivy League 138-kV transmission line on the route selected by the Commission; and

WHEREAS, Oncor's application included 54 geographically diverse routing alternatives for the Commission's consideration, which traverse various areas across the City of Princeton and surrounding areas; and

WHEREAS, of the 54 filed routes, Route 4626 is among the shortest and most direct; and

WHEREAS, Route 4626 is located largely in a floodplain that is more limited in its potential uses than other land in the city limits that might be traversed by the transmission line; and

WHEREAS, Route 4626 would have the least impact on existing and planned development in the City of Princeton and the least impact on property owners among all the filed routes; and

WHEREAS, Route 4626 would best protect park lands and the City of Princeton's aesthetic values; and

WHEREAS, the City of Princeton desires that the Commission approve the Ivy League 138-kV transmission line on Route 4626 for the reasons herein stated;

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PRINCETON, TEXAS, THAT:

ARTICLE 1. It is hereby officially found and determined that, in regards to Public Utility Commission of Texas Docket No. 53053, *Application of Oncor Electric Delivery Company LLC to Amend its Certificate of Convenience and Necessity for the Ivy League 138-kV Transmission Line in Collin County*, Route 4626 is the

route that best reflects community values of the City of Princeton.

ARTICLE 2. The City of Princeton provides its official support for Oncor's construction of the Ivy League 138-kV transmission line on Route 4626.

ARTICLE 3. The City Secretary is hereby authorized and directed to file a letter on behalf of the City of Princeton affirming the City's support for Oncor's construction of the Ivy League 138-kV transmission line on Route 4626, which letter the City Secretary shall file with the Public Utility Commission of Texas in Docket No. 53053 no later than May 1, 2022.

Effective Date.

This Resolution shall be effective upon the date of passage by the City Council.

PASSED by the City Council of the City of Princeton, Texas, this 11th day of April 2022.

APPROVED:

Mayor

ATTEST:

City Secretary