

Olympian-Lincoln Special Committee
November 10, 2010

Documents Distributed at the Meeting



Engineering | Architecture | Planning | Allied Services

Champaign County Board Olympian Drive Subcommittee

North Lincoln Avenue Location Study



Purpose and Need

North Lincoln Avenue Location Study Purpose

- Improve access to land projected to develop north of Urbana
- Improve the alignment of North Lincoln to better accommodate anticipated traffic increases
- Improve traffic circulation, in conjunction with US 45 and Olympian Drive, into the anticipated industrial and commercial growth areas

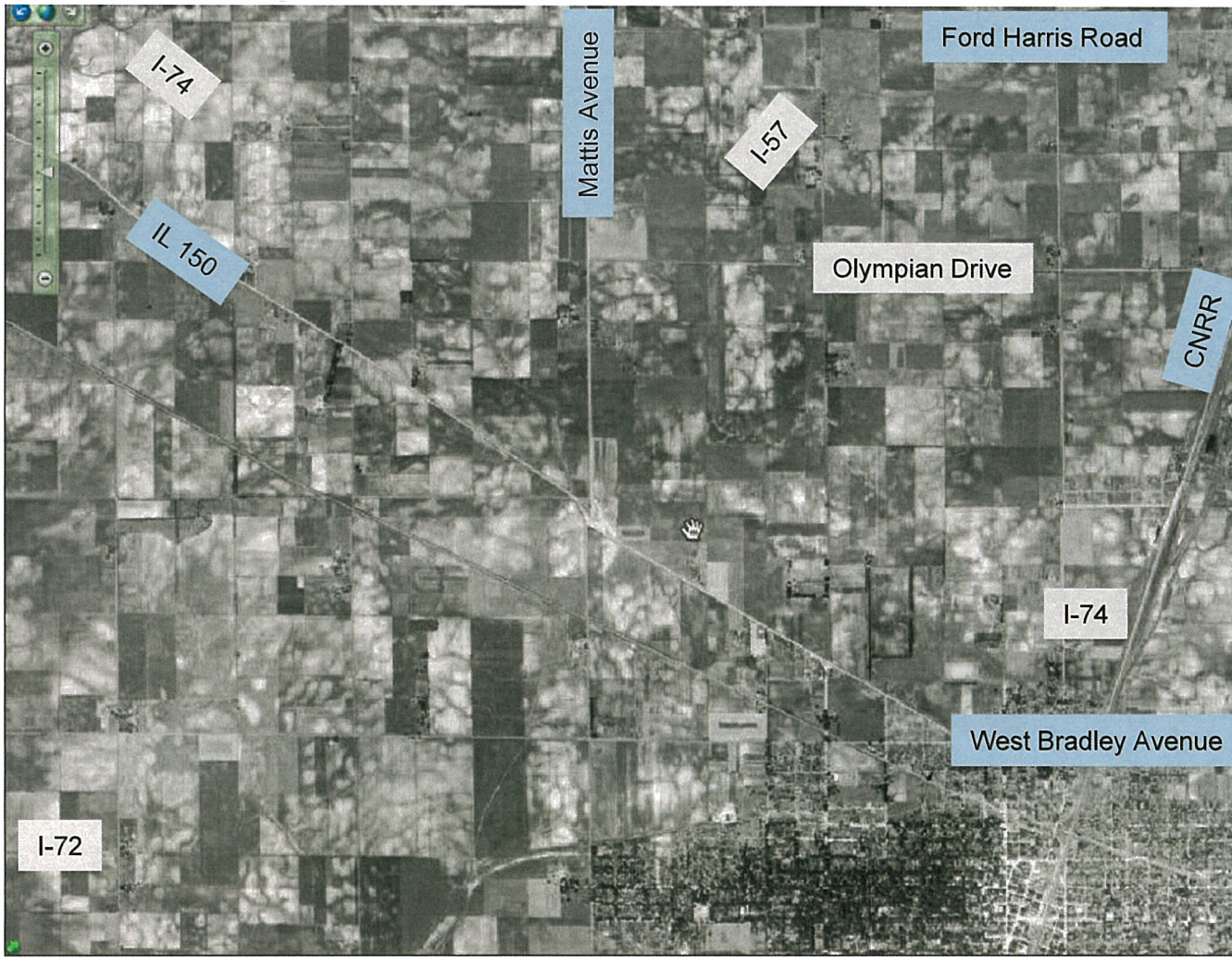
North Lincoln Avenue Location Study Need

- A report in the Location Study cited planned development and roadway system connectivity as reasons to pursue the upgraded infrastructure
 - Enhancing Urbana's Future: The One and One-Half Mile Extra Territorial Jurisdictional Area Plan by the City of Urbana
- Traffic Impacts
 - Increasing Traffic Volumes on North Lincoln due to anticipated development
- Roadway Deficiencies of existing North Lincoln Avenue
 - Sharp curves
 - Narrow lanes and shoulders

Current Approved Plans Supporting North Lincoln Avenue Extension

- Choices 2035 – CUUATS Long Range Transportation Plan
- 2005 Urbana Comprehensive Plan

Development History



1940

Limited
Development



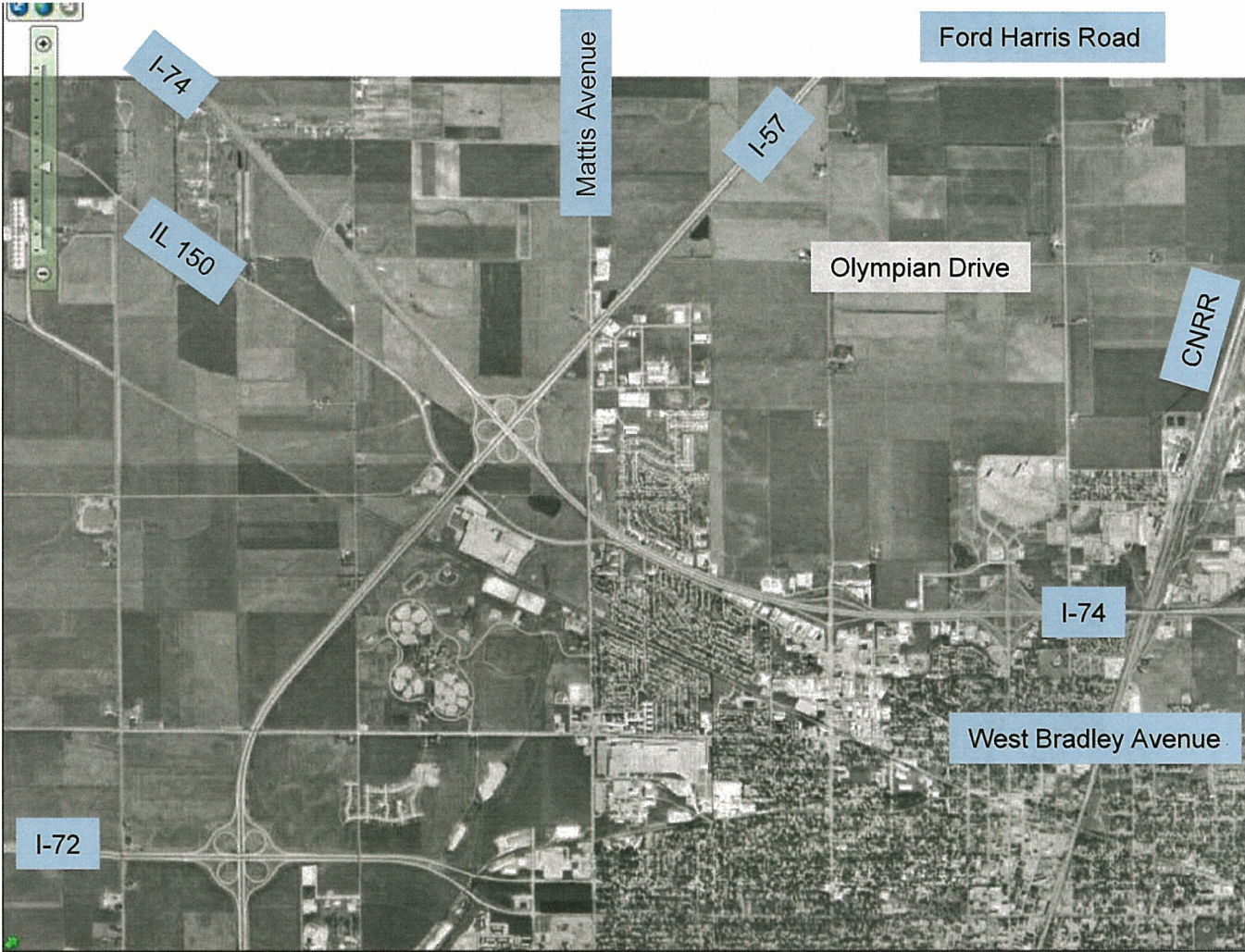
Development History



1967

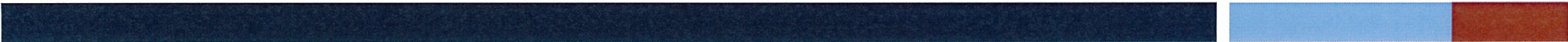
Growth to I-74

Development History



1982

Some limited growth north of I-74 along arterials



Development History

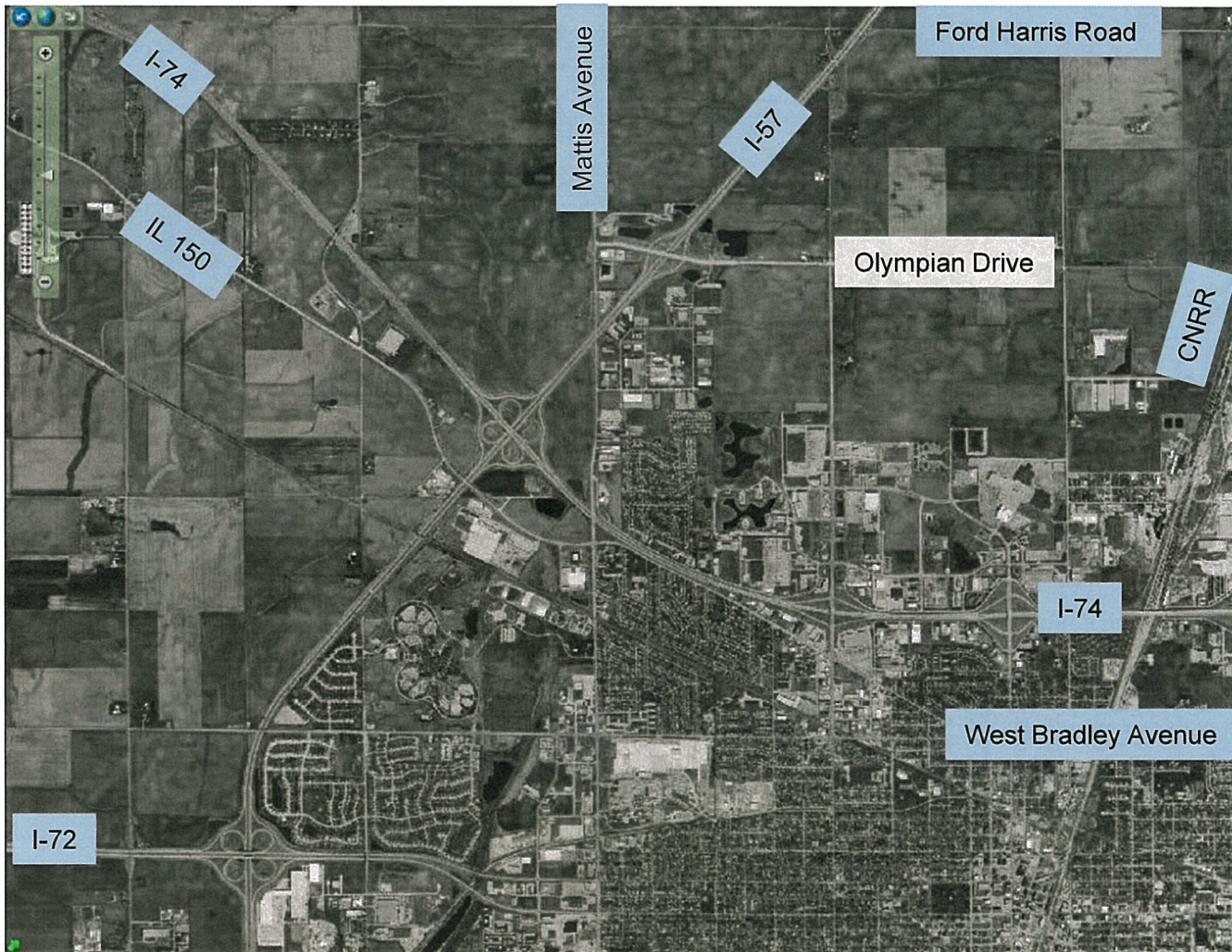


1993

Olympian Drive
Interchange
Constructed



Development History



2002

Development limited to roadways supported by I-74 and new Olympian Drive Interchange



Development History

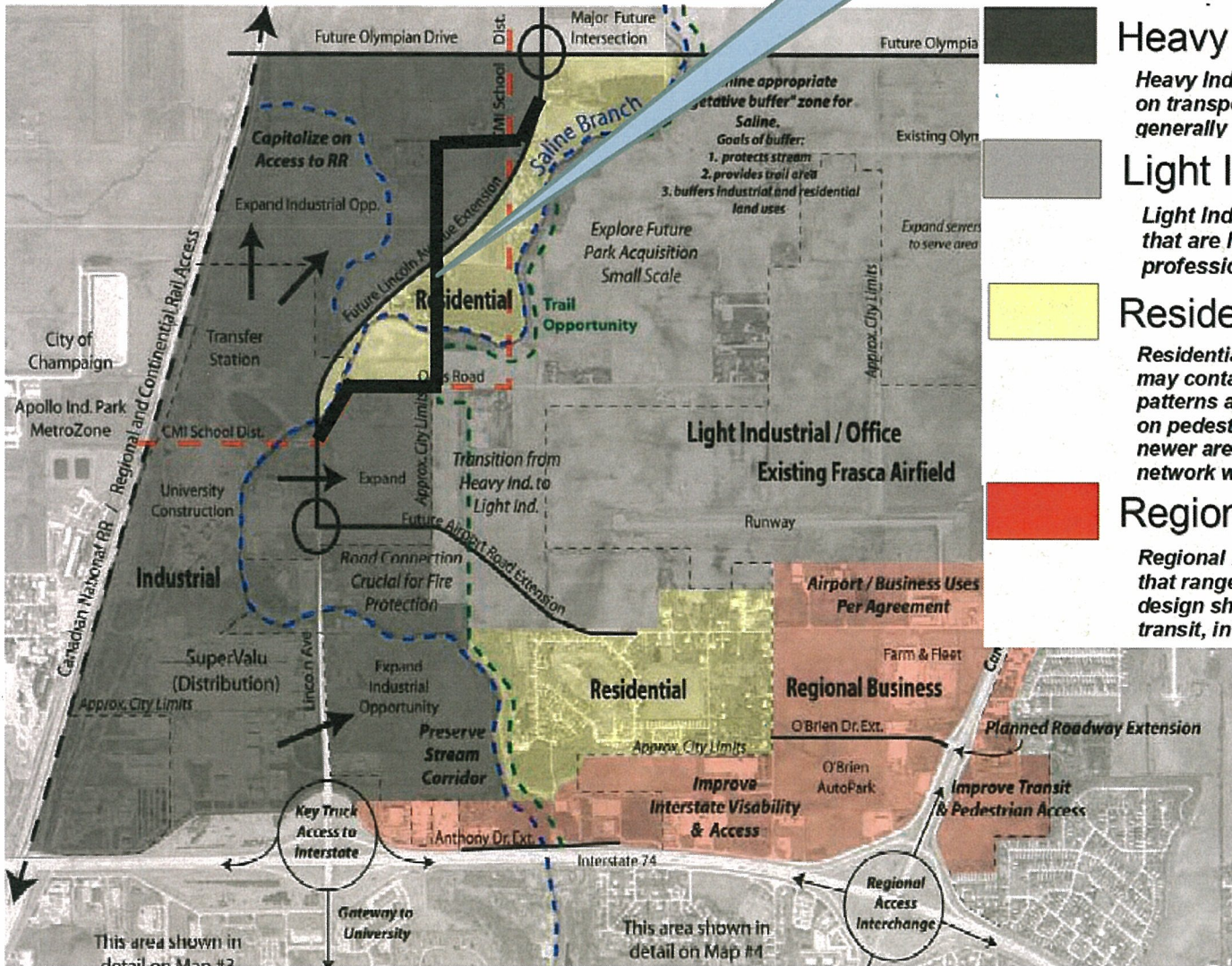


2008

Infill between I-74
and Olympian Drive

Land Use Plan

Existing North Lincoln Avenue



Heavy Industrial

Heavy Industrial areas are intense land uses heavily dependent on transportation facilities and significant amounts of land and are generally incompatible with residential uses.

Light Industrial/Office

Light Industrial/Office areas typically are planned developments that are less intensive than heavy industrial areas, including professional services, warehousing, and distribution facilities.

Residential

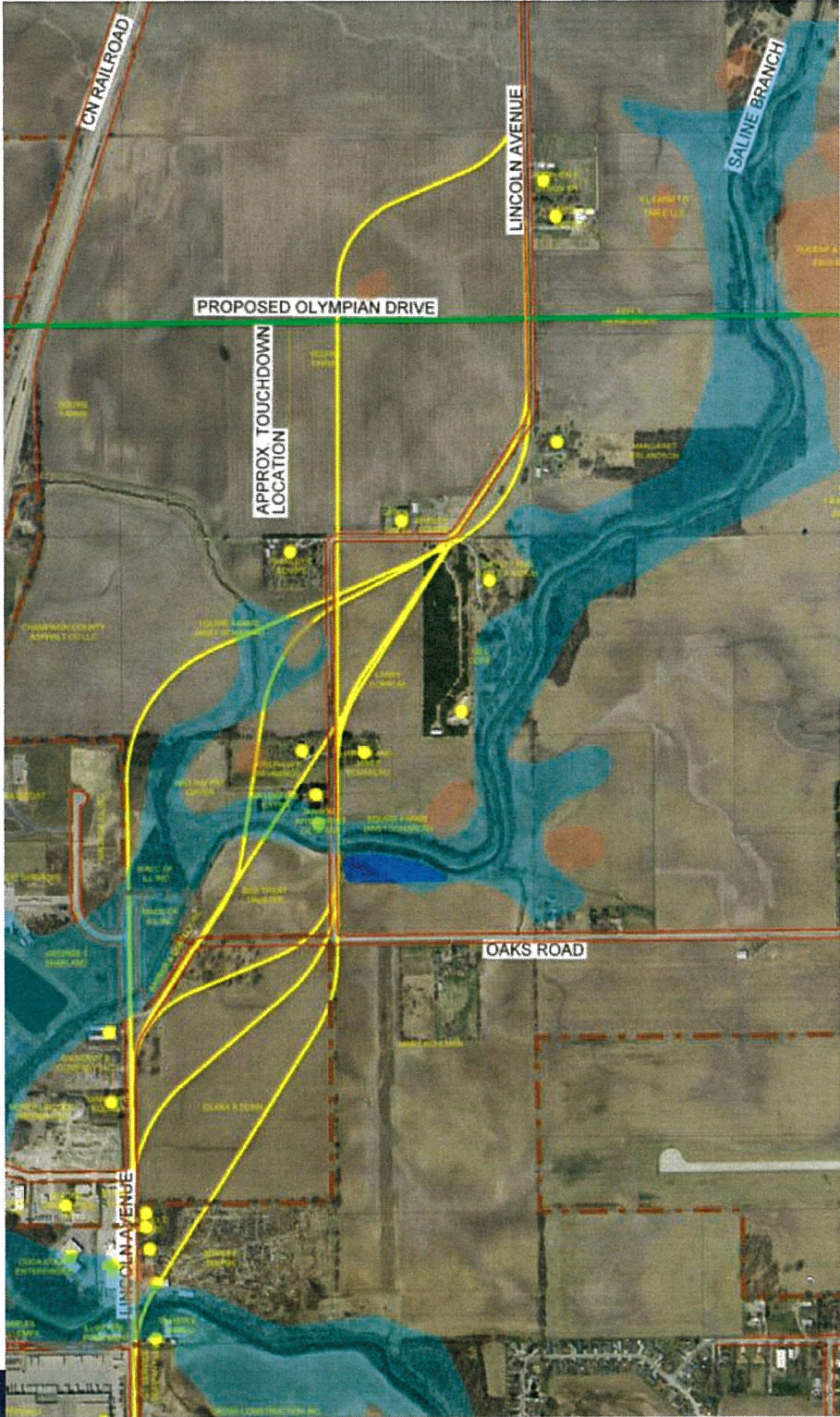
Residential areas contain primarily single-family housing, but may contain a variety of compatible land uses. Urban development patterns are often found in older neighborhoods, with an emphasis on pedestrian traffic. Suburban development patterns are found in newer areas, with larger lots served by a well-connected street network with pedestrian and bicycle facilities.

Regional Business

Regional Business centers are highly-visible developments that range from "big boxes" to smaller outlot businesses. Site design should include facilities for pedestrian, bicycle and public transit, in addition to automobile traffic.

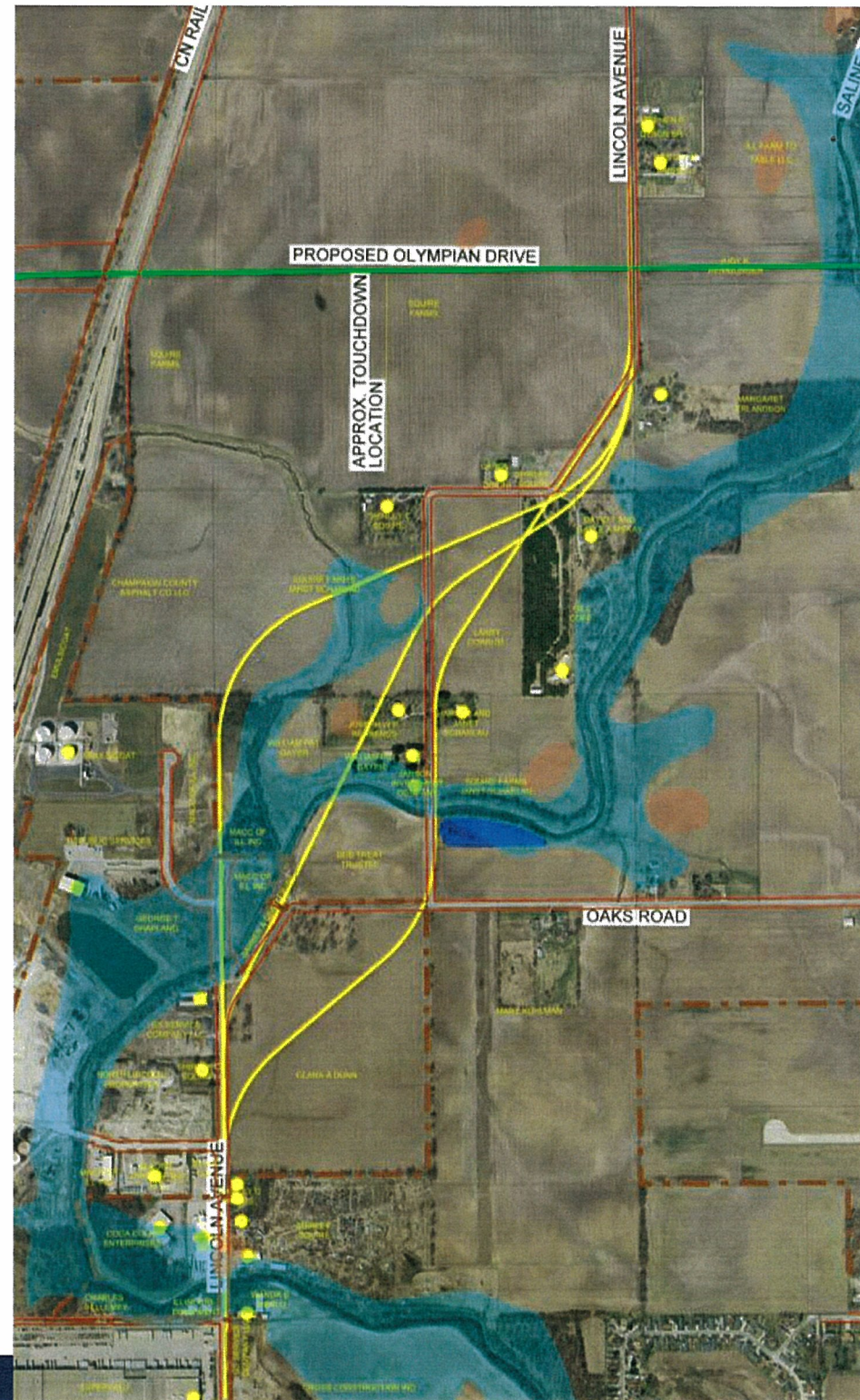


Initial Alternatives



Final Alternatives

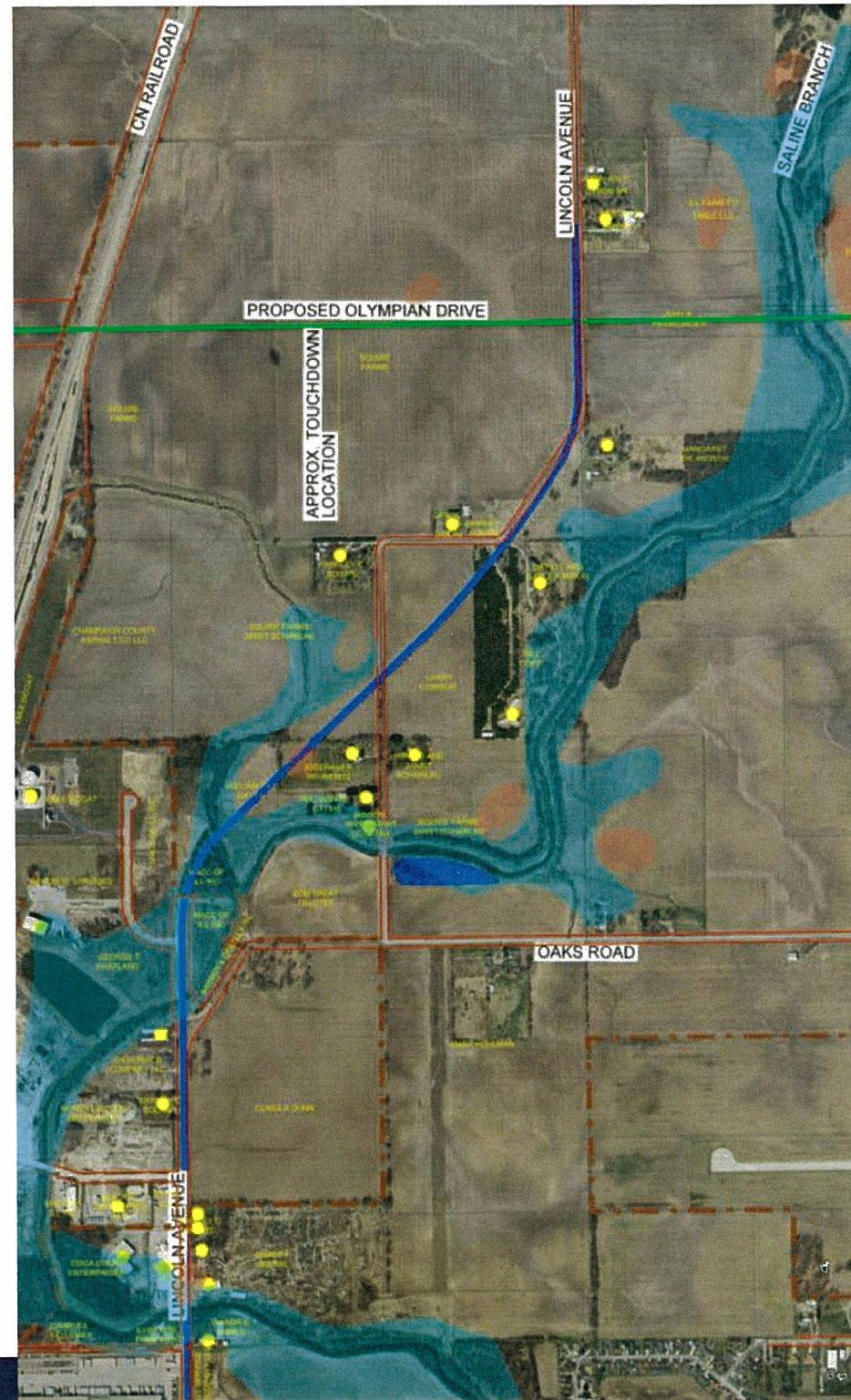
Displayed at Public Information Meeting
on January 22, 1997



Recommended Alternative

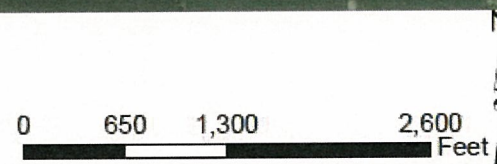
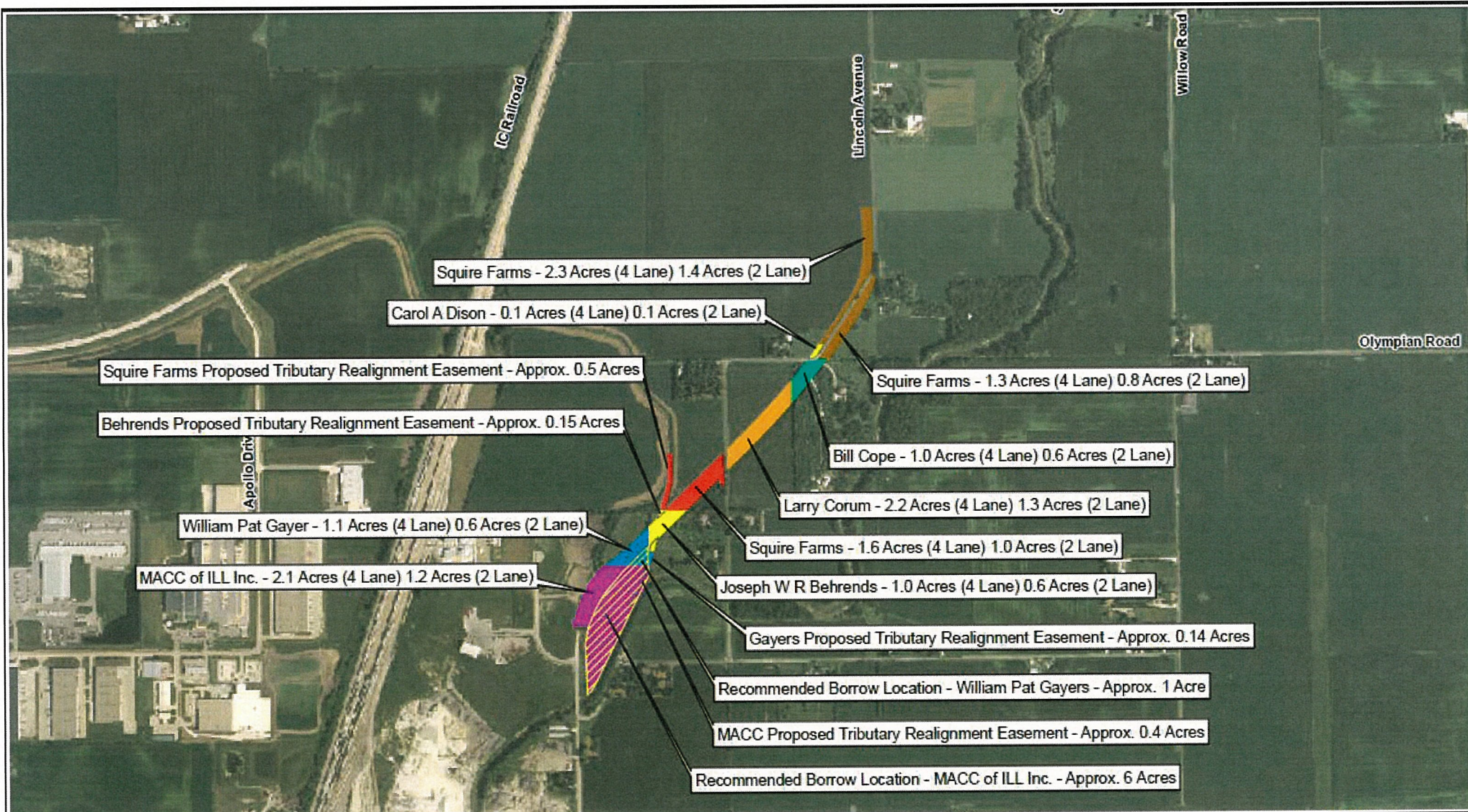
Displayed at Public Informational Meeting
on September 24, 1997

Displayed at Public Hearing on
June 24, 1998

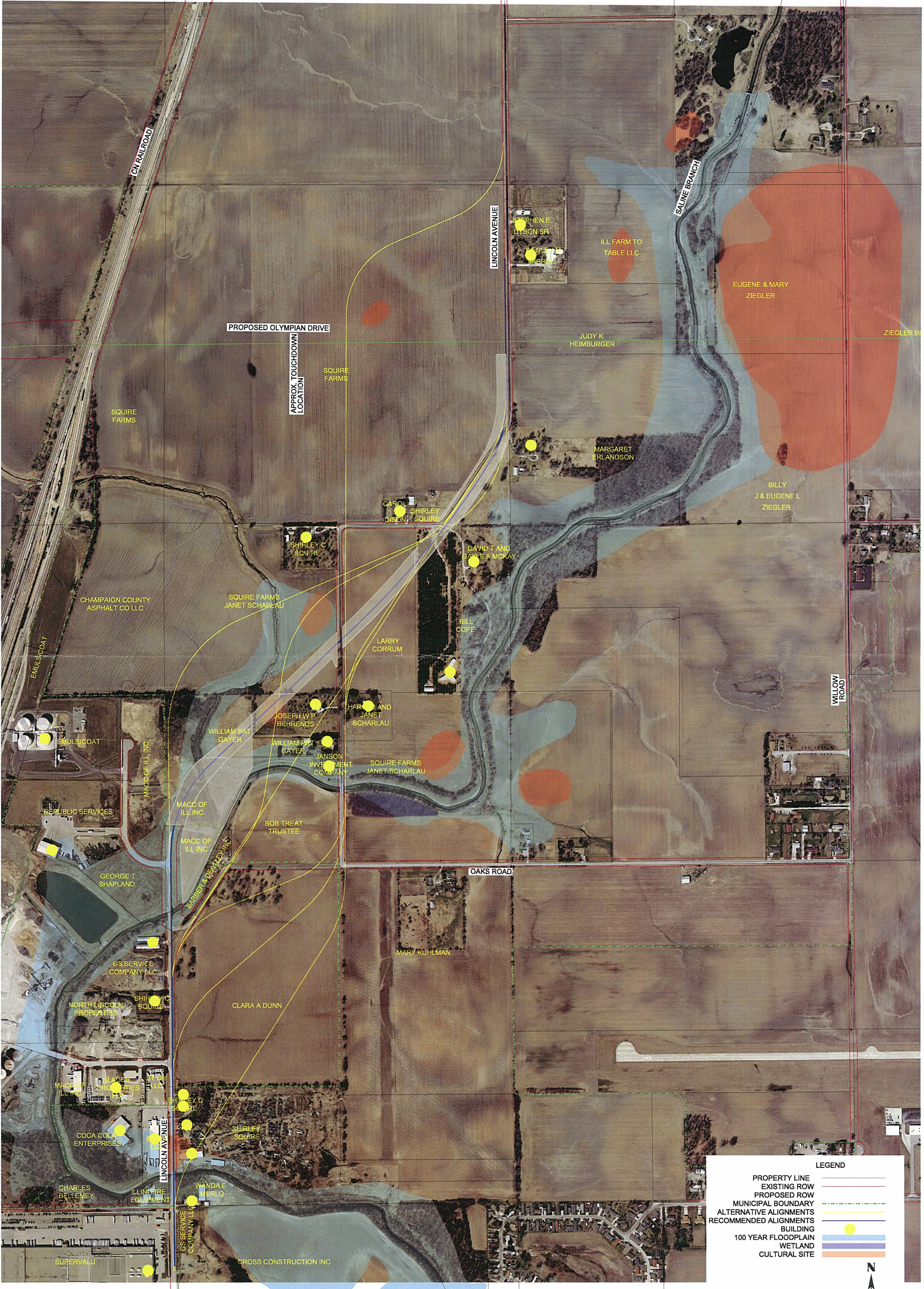


ROW Requirements

Handwritten notes:
 10/20/11
 10/20/11
 10/20/11



Lincoln Avenue
ESTIMATED STUDY RIGHT-OF-WAY Existing Lincoln Avenue to Proposed Olympian Drive Intersection
10L0007



PROPOSED OLYMPIAN DRIVE

APPROX TOUCHDOWN LOCATION

SQUIRE FARMS

SQUIRE FARMS

STEPHEN E DYSON SR

ILL FARM TO TABLE LLC

EUGENE & MARY ZIEGLER

ZIEGLER B

JUDY K HEIMBURGER

MARGARET ERLANDSON

BILLY J & EUGENE L ZIEGLER

CAROL SHIRLEY DISON SQUIRE

SHIRLEY C SQUIRE

DAVID T AND GAYLE A MCKAY

CHAMPAIGN COUNTY ASPHALT CO LLC

SQUIRE FARMS JANET SCHARLAU

LARRY CORRUM

BILL COPE

EMULSCOAT

WILLIAM PAT GAYER

JOSEPH W R BEHREND

HAROLD AND JANET SCHARLAU

LARRY CORRUM

WILLIAM PAT GAYER

JANSON INVESTMENT COMPANY

SQUIRE FARMS JANET SCHARLAU

MACC OF ILL INC

BOB TREAT TRUSTEE

OAKS ROAD

WILLOW ROAD

EMULSCOAT

GEORGE T SHAPLAND

MARY KUHLMAN

CLARA A DUNN

GS SERVICE COMPANY LLC

NORTH LINCOLN PROPERTIES

BLAGER PROPERTIES

COCA COLA ENTERPRISES

ILLINOIS EQUIPMENT

SHIRLEY C SQUIRE

WANDA E MERLO

CROSS CONSTRUCTION INC

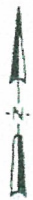
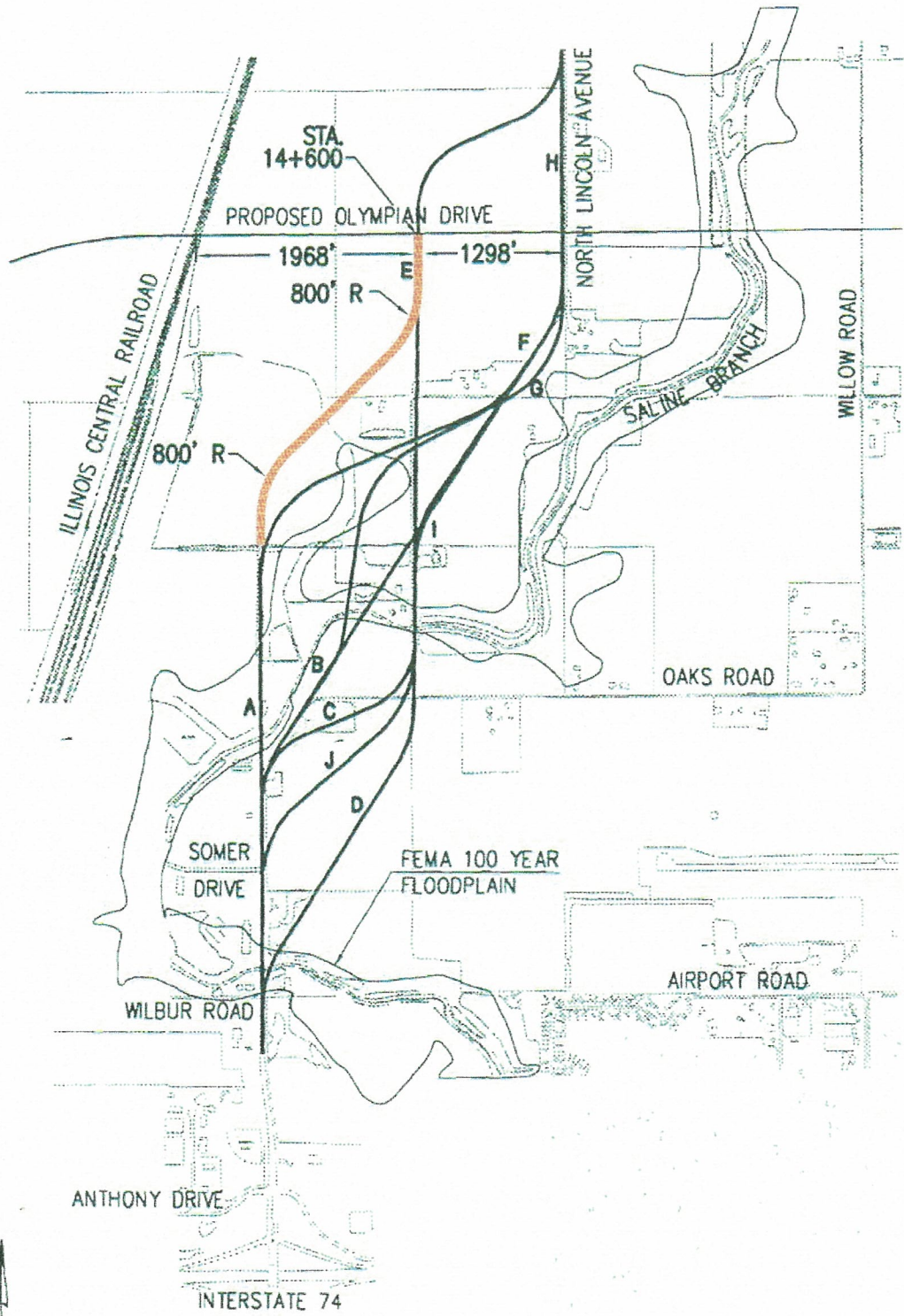
SUPERVALU

LEGEND

- PROPERTY LINE
- EXISTING ROW
- PROPOSED ROW
- MUNICIPAL BOUNDARY
- ALTERNATIVE ALIGNMENTS
- RECOMMENDED ALIGNMENTS
- BUILDING
- 100 YEAR FLOODPLAIN
- WETLAND
- CULTURAL SITE



P:\DRAWINGS\9552071\FIG4-4 DWG 05/12/99 21:23 JTB



200m 0 200m 400m



PRELIMINARY ALIGNMENTS

**NORTH LINCOLN AVENUE LOCATION STUDY
CHAMPAIGN COUNTY
URBANA, ILLINOIS**

HEI NO. 9552071

FIGURE 4.4

OLYMPIAN DRIVE AND LINCOLN AVENUE — COST OF DOING BUSINESS

ROUTE A = .91 MILES (ONE WAY)

(GAS + WAGES) × FLEET × TRIPS (PER DAY) × WORK DAYS (PER YEAR) = ANNUAL COST

(.47 + .83) × 300 × 2 × 280 = \$218,400

COST PER TRIP = \$1.30

EXTRA MILE TRANSPORT

ROUTE B = 1.38 MILES (ONE WAY)

(GAS + WAGES) × FLEET × TRIPS (PER DAY) × WORK DAYS (PER YEAR) = ANNUAL COST

(.70 + 1.22) × 300 × 2 × 280 = \$322,560

COST PER TRIP = \$1.92

ADDITIONAL COST A-vs-B = \$104,160

EXTRA MILE TRANSPORT

ROUTE C = 2 MILES (ONE WAY)

(GAS + WAGES) × FLEET × TRIPS (PER DAY) × WORK DAYS (PER YEAR) = ANNUAL COST

(1.02 + 1.72) × 300 × 2 × 280 = \$460,320

COST PER TRIP = \$2.74

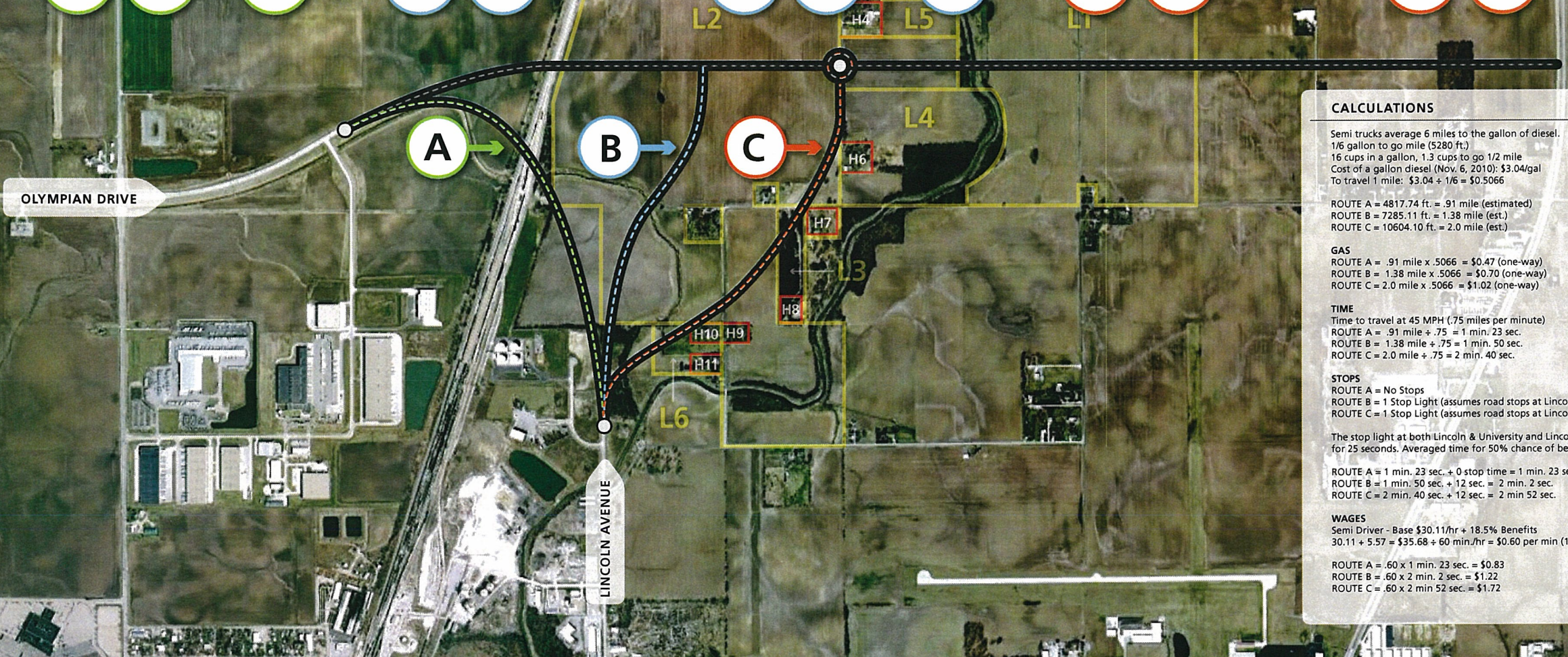
ADDITIONAL COST A-vs-C = \$241,920

ADDITIONAL COST B-vs-C = \$137,760

EXTRA MILE TRANSPORT

ASSUMED FLEET

- 1 Business
- 300 Trucks
- 280 Working Days M-F, 8-hour Shifts
- 1 Round Trip per Truck
- \$30.11 Semi Driver Hourly Wage Champaign County Prevailing Wage for November 2010



CALCULATIONS

Semi trucks average 6 miles to the gallon of diesel.
 1/6 gallon to go mile (5280 ft.)
 16 cups in a gallon, 1.3 cups to go 1/2 mile
 Cost of a gallon diesel (Nov. 6, 2010): \$3.04/gal
 To travel 1 mile: \$3.04 ÷ 1/6 = \$0.5066

ROUTE A = 4817.74 ft. = .91 mile (estimated)
 ROUTE B = 7285.11 ft. = 1.38 mile (est.)
 ROUTE C = 10604.10 ft. = 2.0 mile (est.)

GAS
 ROUTE A = .91 mile x .5066 = \$0.47 (one-way)
 ROUTE B = 1.38 mile x .5066 = \$0.70 (one-way)
 ROUTE C = 2.0 mile x .5066 = \$1.02 (one-way)

TIME
 Time to travel at 45 MPH (.75 miles per minute)
 ROUTE A = .91 mile ÷ .75 = 1 min. 23 sec.
 ROUTE B = 1.38 mile ÷ .75 = 1 min. 50 sec.
 ROUTE C = 2.0 mile ÷ .75 = 2 min. 40 sec.

STOPS
 ROUTE A = No Stops
 ROUTE B = 1 Stop Light (assumes road stops at Lincoln Ave.)
 ROUTE C = 1 Stop Light (assumes road stops at Lincoln Ave.)

The stop light at both Lincoln & University and Lincoln & Mattis holds red for 25 seconds. Averaged time for 50% chance of being stopped.

ROUTE A = 1 min. 23 sec. + 0 stop time = 1 min. 23 sec.
 ROUTE B = 1 min. 50 sec. + 12 sec. = 2 min. 2 sec.
 ROUTE C = 2 min. 40 sec. + 12 sec. = 2 min. 52 sec.

WAGES
 Semi Driver - Base \$30.11/hr + 18.5% Benefits
 30.11 + 5.57 = \$35.68 ÷ 60 min./hr = \$0.60 per min (1¢ a second)

ROUTE A = .60 x 1 min. 23 sec. = \$0.83
 ROUTE B = .60 x 2 min. 2 sec. = \$1.22
 ROUTE C = .60 x 2 min 52 sec. = \$1.72

FARMLAND / PROPERTIES

- L1 Ziegler Farm
- L2 Squire Farm / Scharlau-Carlson
- L3 Cope-Kalantzis
- L4 Grierson Farm
- L5 Prairie Fruit Farm / Jarrell-Cooperband
- L6 Gayer-Dixon

CLIENT HOMES

- H1 Bill & Virginia Ziegler
- H2 Mark, Cindy, & Douglas Ziegler
- H3 Gene & Mary Ziegler
- H4 Wes Jarrell & Leslie Cooperband
- H5 Steve & Kathy Dyson
- H6 Howard & Margaret Erlandson, Steve Grierson
- H7 Dave & Gayle McKay
- H8 Bill Cope & Mary Kalantzis
- H9 Harold & Janet Scharlau
- H10 Joe Behrends & Mary Rose Atkinson
- H11 William "Pat" Gayer & Sandy Dixon

KEY

- Proposed Routes
- Possible Alternative Routes*
- Property Lines
- Client Homes

* Routes for discussion purposes only. Not drawn to engineering or DOT specs.