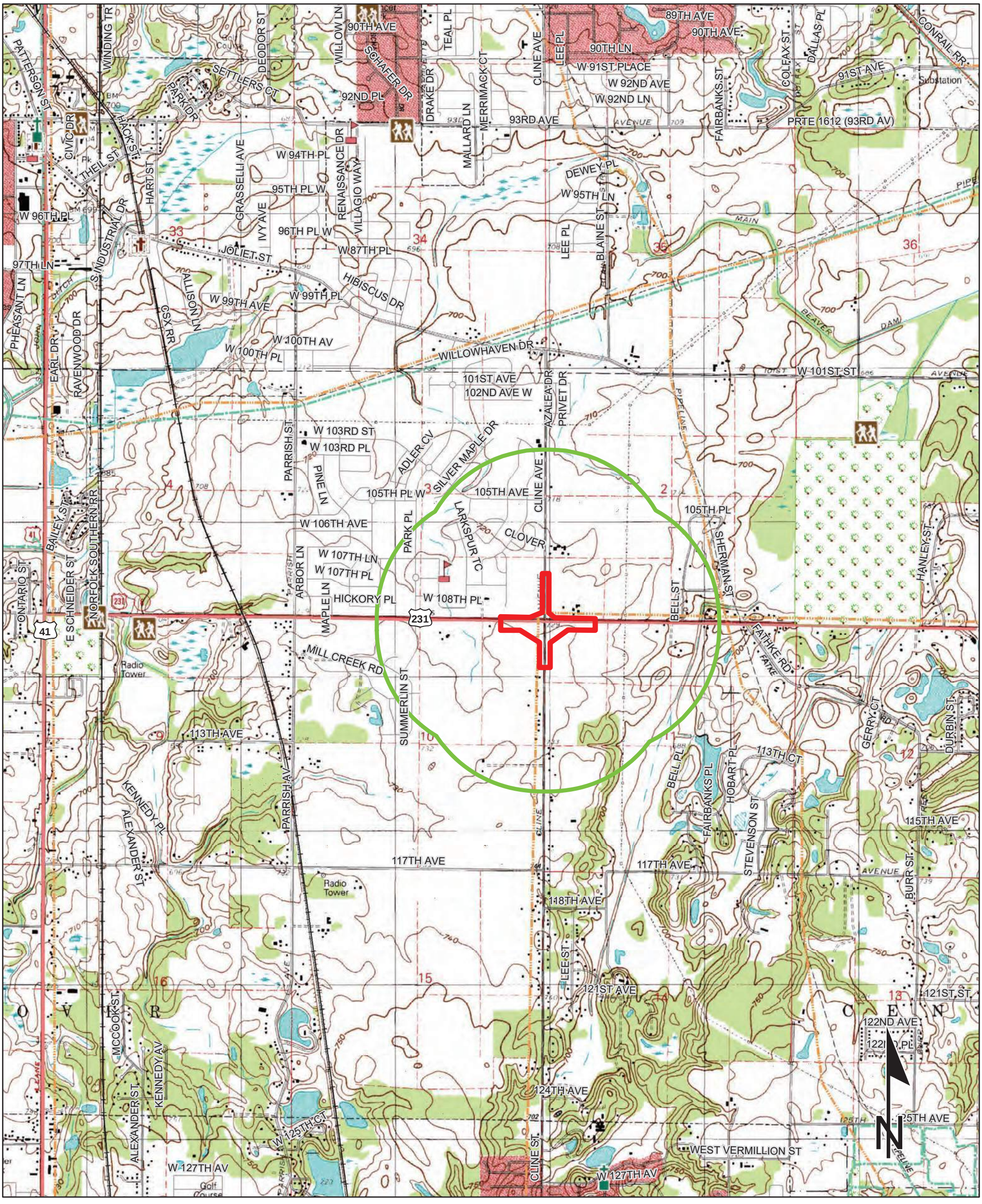
Red Flag Investigation - Site Location
US 231 at Cline Ave., 2.0 Miles East of US 41
Des. No.1700022, Intersection Improvement, Roundabout
Lake County, Indiana



Sources:

0.5 0.25 0 0.5 Miles

Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

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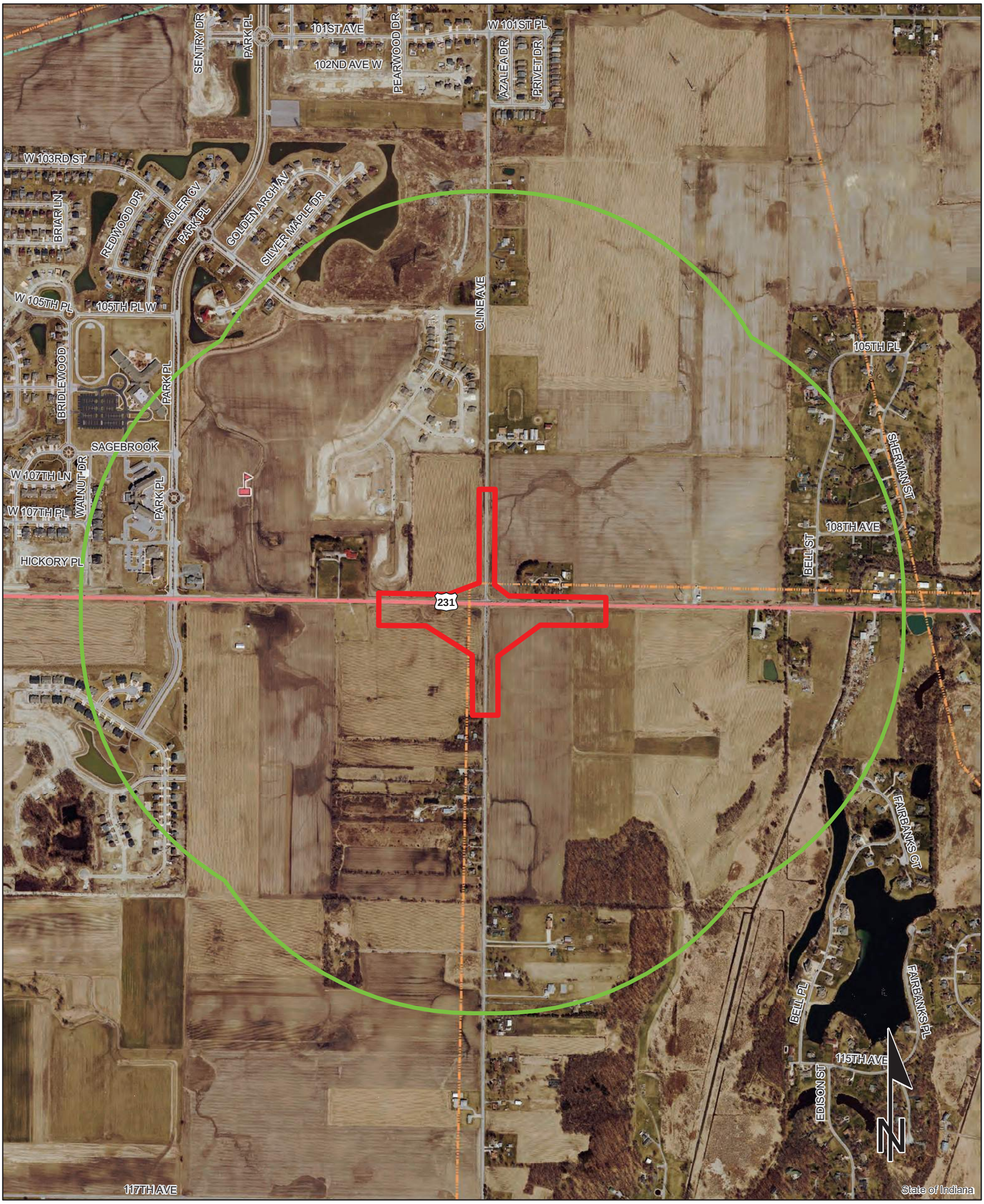
SAINT JOHN QUADRANGLES
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation - Infrastructure
US 231 at Cline Ave., 2.0 Miles East of US 41
Des. No.1700022, Intersection Improvement, Roundabout
Lake County, Indiana



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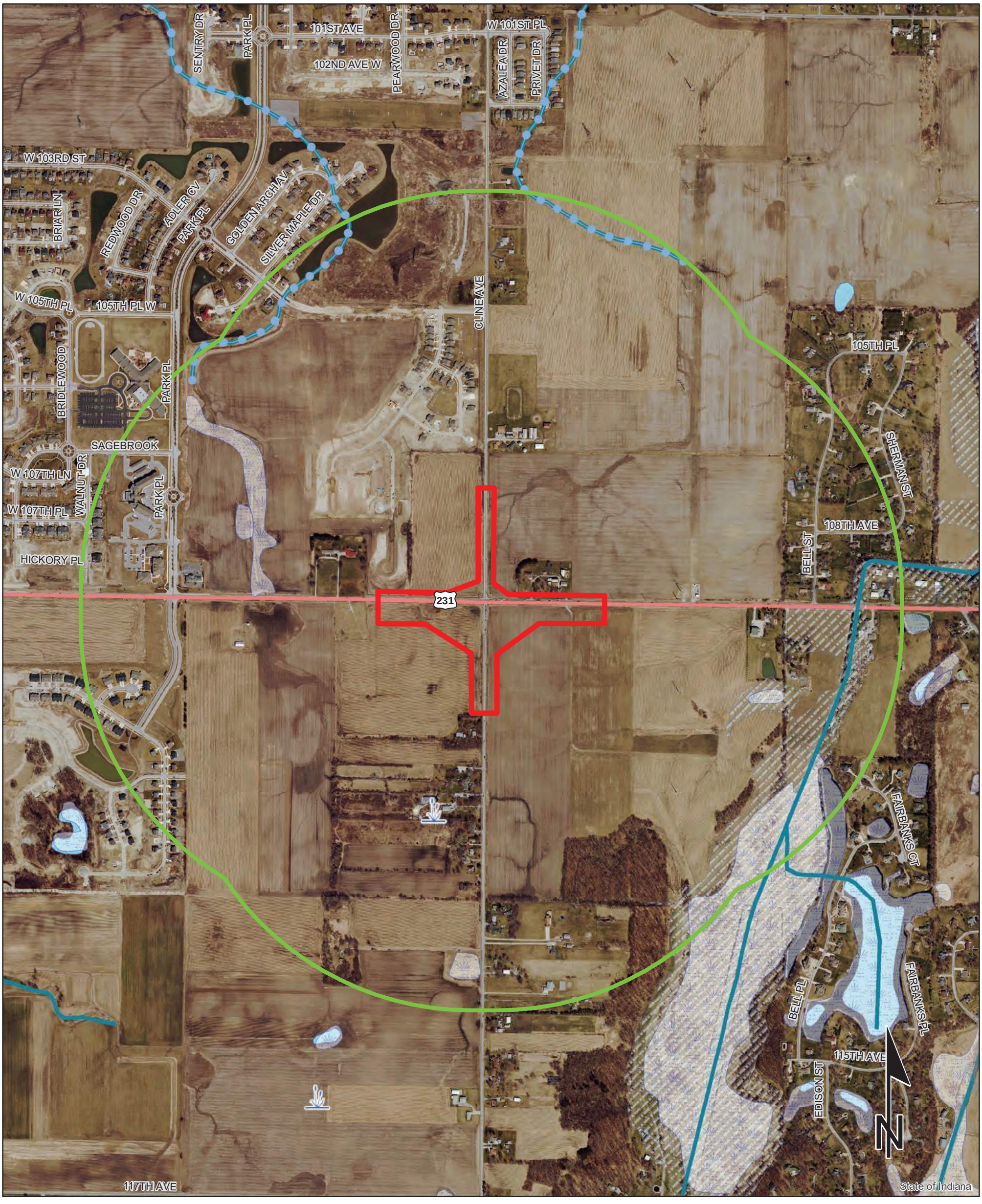
- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Water Resources
US 231 at Cline Ave., 2.0 Miles East of US 41
Des. No.1700022, Intersection Improvement, Roundabout
Lake County, Indiana



0.2 0.1 0 0.2 Miles

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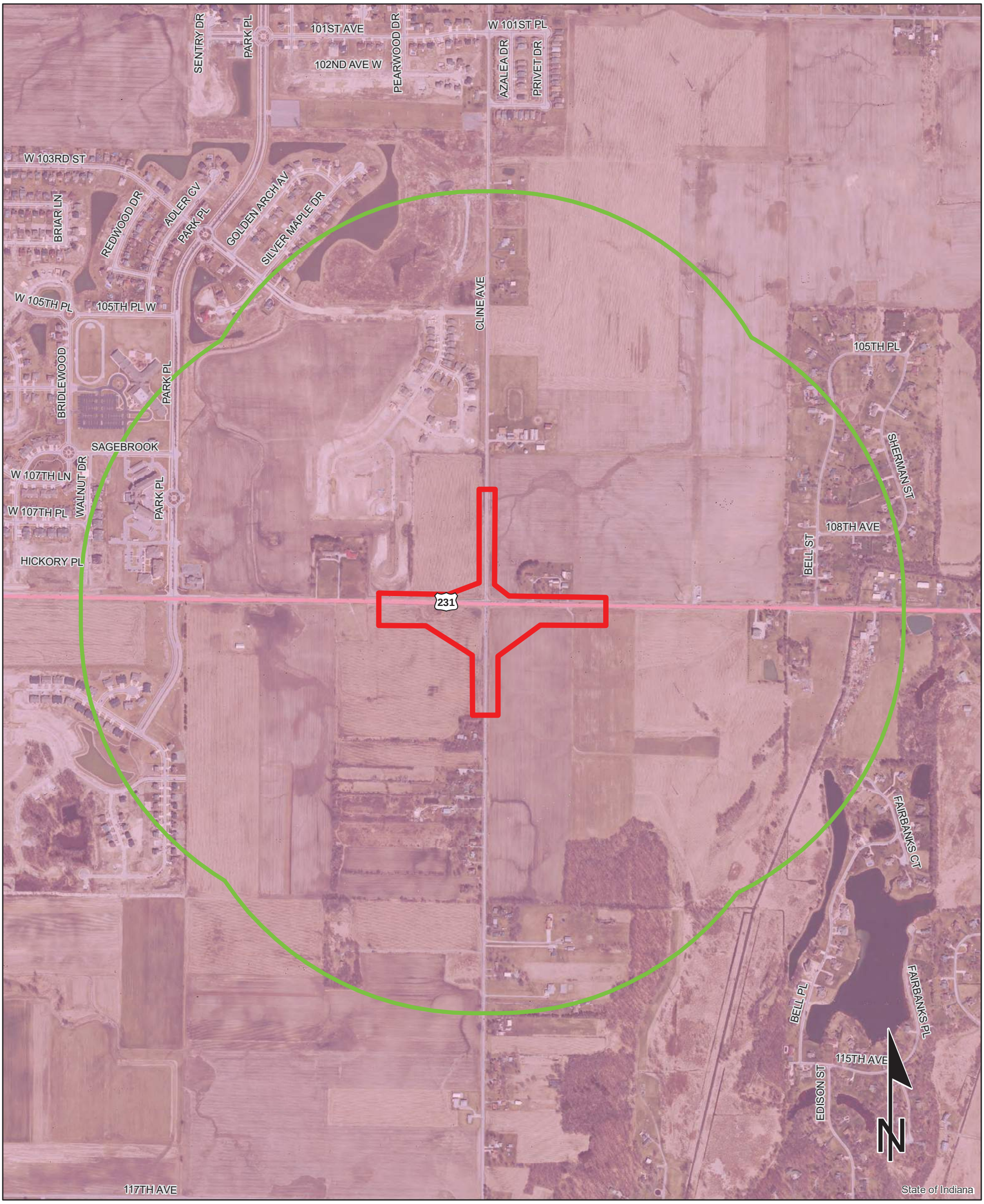
- NWI - Point
- Karst Spring
- NWI- Line
- Impaired_Stream_Lake
- NPS NRI listed
- River
- Canal Structure - Historic
- Canal Route - Historic
- Wetlands
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation - Urbanized Area Boundary
US 231 at Cline Ave., 2.0 Miles East of US 41
Des. No.1700022, Intersection Improvement, Roundabout
Lake County, Indiana



0.2 0.1 0 0.2 Miles

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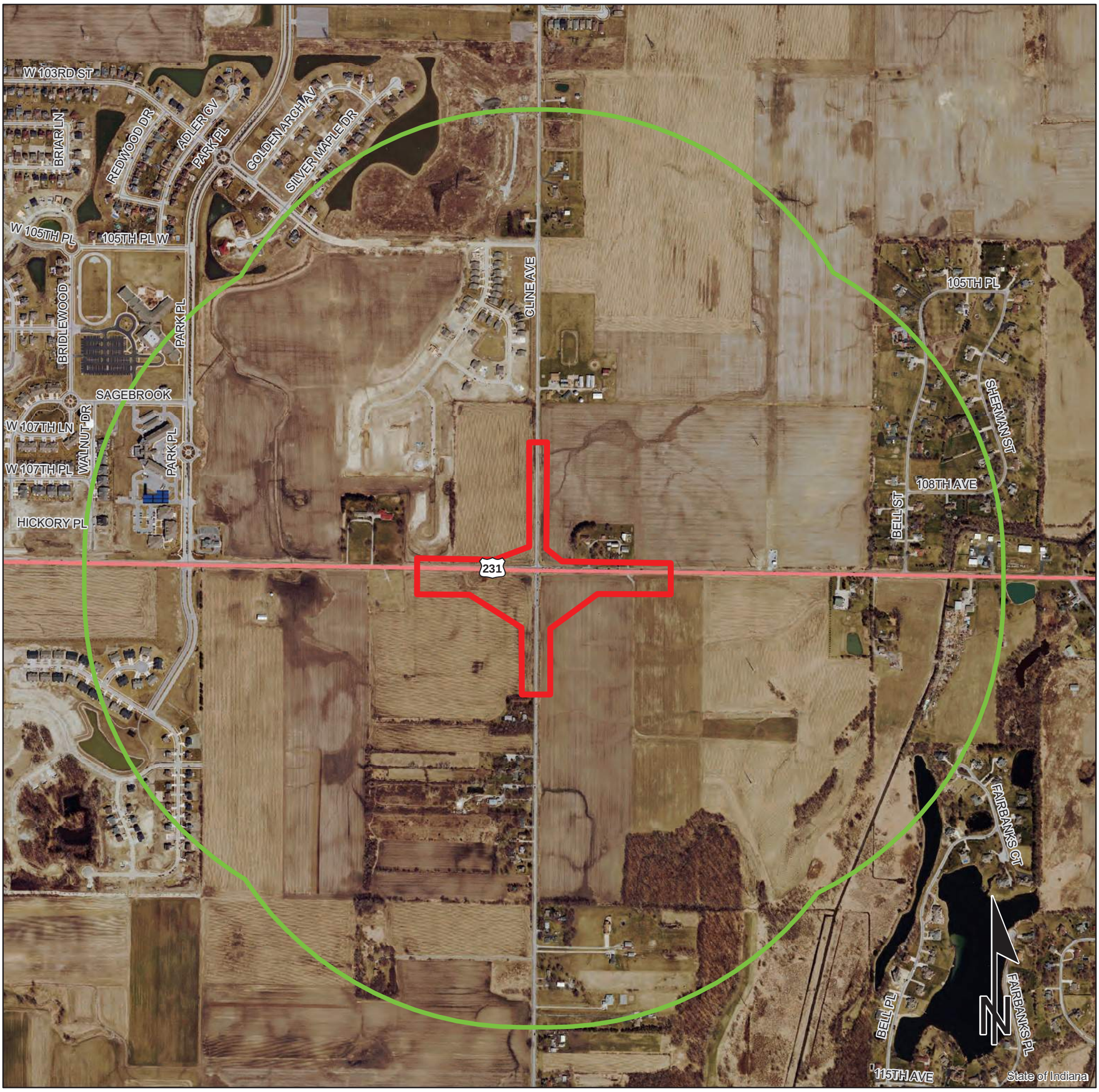
UAB
County Boundary
Project Area
Half Mile Radius
Toll
Interstate
State Route
US Route
Local Road

Red Flag Investigation - Hazardous Material Concerns US 231 at Cline Ave., 2.0 Miles East of US 41
Des. No.1700022, Intersection Improvement, Roundabout
Lake County, Indiana



- Brownfield
- RCRA Corrective Action Sites
- Confined Feeding Operation
- Notice_Of_Contamination
- Construction/Demolition Site
- Infectious/Medical Waste Site
- Leaking Underground Storage Tank
- Manufactured Gas Plant
- NPDES Facilites
- NPDES Pipe Locations
- Open Dump Waste Site
- RCRA Generator/TSD
- Restricted Waste Site
- Septage Waste Site
- Solid Waste Landfill
- State Cleanup Site
- Superfund
- Tire Waste Site
- Underground Storage Tank
- Voluntary Remediation Program
- Waste Transfer Station
- Institutional Controls
- County Boundary
- Project Area
- Half Mile Radius
- Toll
- Interstate
- State Route
- US Route
- Local Road

0.2 0.1 0 0.2 Miles

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Plethobasus cyphyus	Sheepnose	LE	SE	G3	S1
Venustaconcha ellipsiformis	Ellipse			G4	S2
Insect: Coleoptera (Beetles)					
Nicrophorus americanus	American Burying Beetle	LE	SX	G3	SX
Insect: Homoptera					
Bruchomorpha dorsata			SR	GNR	S2
Bruchomorpha extensa	The Long-nosed Elephant Hopper		SR	GNR	S2S3
Bruchomorpha oculata			SR	GNR	SNR
Chlorotettix fallax	Deceptive Chlorotettix Leafhopper		SR	GNR	S1S2
Cicadula straminea	Straw-colored Sedge Leafhopper		ST	GNR	S1S2
Cosmotettix bilineatus	Two-lined cosmotettix		SR	GNR	S1S2
Dorydiella kansana	Kansas Spikerush Leafhopper		SR	GNR	S2S3
Flexamia pyrops	The Long-nose Three-awn Leafhopper		ST	GNR	S1
Flexamia reflexus	Indiangrass Flexamia		SR	GNR	S1S2
Graminella mohri	Mohr's Switchgrass Leafhopper		SE	GNR	S1
Laevicephalus acus	Pointed Fen Laevicephalus		SR	GNR	S1S2
Limotettix divaricatus			ST	GNR	SNR
Mesamia nigridorsum	Black-banded Sunflower Leafhopper		WL	GNR	S2S3
Paraphilaenus parallelus	A Spittle Bug		ST	GNR	S1
Paraphlepsius lobatus	Lobed Paraphlepsius Leafhopper		SR	GNR	S2
Paraphlepsius maculosus	Peppered Paraphlepsius Leafhopper		ST	GNR	S1S2
Philaenarcys killa	Great Lakes dune spittlebug		SR	GNR	S2S3
Polyamia caperata	Little Bluestem Polyamia		SR	GNR	S2
Polyamia herbida	The Prairie Panic Grass Leafhopper		ST	GNR	S2
Prairiana kansana	The Kansas Prairie Leafhopper		SE	GNR	S1
Prosapia ignipectus	Red-legged Spittle Bug		SR	G4	S2
Insect: Hymenoptera					
Bombus affinis	Rusty-patched Bumble Bee	LE	SE	G2	S1
Dolichoderus plagiatus				G5	S2
Formica glacialis				G5	S2
Lasius flavus				G5	S2
Lasius minutus				GNR	S1
Lasius speculiventris				GNR	S1
Myrmica lobifrons				G5	S1
Solenopsis texana texana				GNRTNR	S1

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Indiana Department of Natural Resources
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Indiana County Endangered, Threatened and Rare Species List
County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Insect: Lepidoptera (Butterflies & Moths)					
Acleris semipurpurana	Oak Leaftier Moth		SR	GNR	SNR
Acronicta dactylina	Fingered Dagger Moth		SR	G5	SNR
Acronicta funeralis	Funerary Dagger Moth		SR	G5	SNR
Aethes patricia			SE	G3G4	S1
Agrotis stigmosa	Spotted Dart Moth		ST	G4	S1S2
Agrotis vetusta	Old Man Dart		SR	G5	S2
Ancylis semiovana			SR	GNR	S2S3
Apamea burgessi	A Noctuid Moth		ST	G4	S1
Apamea indocilis	The Spastic Apamea		ST	G5	S1S3
Apamea nigrior	Black-dashed Apamea		SR	G5	S2S3
Apantesis virguncula	Little Virgin Tiger Moth		SR	G5	S1S2
Atrytonopsis hianna	Dusted Skipper		ST	G4G5	S2S3
Boloria selene myrina	Silver-bordered Fritillary		ST	G5T5	S2S3
Capis curvata	Curved Halter Moth		ST	G5	S2S3
Capsula laeta	Red Sedge Borer		ST	G4	S1S2
Caradrina meralis	The Rare Sand Quaker		ST	G5	S2
Catocala antinympha	The Sweet Fern Underwing		SE	G5	S1
Catocala gracilis	Graceful Underwing		SR	G5	S2S3
Catocala praeclara	Praeclara Underwing		SR	G5	S2S3
Coenochroa illibella	Dune Panic Grass Moth		SR	GNR	S2S3
Crambus bidens	Forked Grass-veneer		SR	GNR	SNR
Cyclophora pendulinaria	Sweetfern Geometer		SR	G5	SNR
Cycnia collaris			ST	G4	S2S3
Danaus plexippus	Monarch	C	WL	G4	S4S5B
Dargida rubripennis	The Pink Streak		ST	G3G4	S1
Dichagyris acclivis	A Noctuid Moth		ST	G4G5	S2
Dichagyris grotei	Grote's Black-tipped Quaker		ST	G4	S2
Dichomeris aleatrix	Aleatrix dichomeris			GNR	S1S2
Digrammia eremiata	The Goat's Rue Looper		SR	G4	S2S3
Digrammia mellistrigata	A Geometrid Moth		SR	G5	SNR
Erynnis lucilius	Columbine Duskywing		SE	G2G3	SH
Erynnis martialis	Mottled Duskywing		WL	G3	S3
Erynnis persius persius	Persius Duskywing		SE	G5T1T3	S1
Euchloe olympia	Olympia Marble		ST	G5	S2S3
Eucoptocnemis fimbriaris	Fringed Dart		ST	G4	S1
Eucosma bilineana			SR	GNR	S1S2
Eucosma bipunctella	A Moth		SR	GNR	S1S2
Eucosma giganteana	Giant Eucosma		SR	GNR	S1S2
Eucosma ochroterminana	Buff-tipped Eucosma		SR	GNR	SNR

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Indiana County Endangered, Threatened and Rare Species List

County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Eucosma olivaceana	Olivaceous Eucosma		SR	GNR	S1S2
Eucosma striatana	Striated Eucosma		SR	G5	SNR
Eucosma umbrastriana			SR	GNR	SNR
Euphyes bimacula	Two-spotted Skipper		ST	G4	S1S2
Fagitana littera	The Marsh Fern Moth		ST	G4	S1S2
Feltia manifesta	The Record Keeper Moth		SR	G4	S3S4
Gabara subnivosella	A Noctuid Moth		SR	G4	S1S2
Glaucopsyche lygdamus couperi	Silvery Blue		SE	G5T5	SH
Grammia figurata	The Figured Grammia		SR	G5	S2S3
Grammia phyllira	The Sand Barrens Grammia		SR	G4	S2S3
Hadena capsularis	The Starry Campion Capsule Moth		SR	G5	S1S2
Hadena ectypa	The Starry Campion Moth		ST	G3G4	S1S3
Hemaris gracilis	The Blueberry Clearwing Sphinx		SR	G3G4	S1S2
Hesperia leonardus	Leonard's Skipper		ST	G4	S2S3
Hesperia ottoe	Ottoe Skipper		SE	G3	S1
Hypenodes caducus	Large Hypenodes		SR	GNR	SNR
Hyperaeschra georgica	A Prominent Moth		ST	G5	S2
Hypocoena inquinata	Tufted Sedge Moth		ST	G5	S1S2
Iodopepla u-album	White-eyed Borer Moth		SR	G5	S2
Lemmeria digitalis	Fingered Lemmeria		SR	G4	S1S2
Lesmone detrahens	Detracted Owlet		SR	G5	S2
Lethe eurydice eurydice	Eyed Brown		WL	G5T5	S3
Leucania amygdalina	Salt Marsh Wainscot		SR	GNR	S2
Leucania inermis	Unarmed Wainscot		SR	G5	S2S3
Leucania multilinea	Many-lined Wainscot		SR	G5	S1S2
Lycaeides melissa samuelis	Karner Blue	LE	SE	G2	S1
Lycaena dione	Gray Copper		SX	G5	SX
Lycaena helloides	Purplish Copper		ST	G5	S2S3
Macaria multilineata	Many-lined Angle		SR	G4	SNR
Macrochilo absorptalis	Slant-lined Owlet		SR	G4G5	S2S3
Macrochilo hypocritalis	Twin-dotted Macrochilo		SR	G4	S2
Macrochilo louisiana	Louisiana Macrochilo		ST	G4	S1S2
Melanomma auricinctaria	Huckleberry Eye-spot Moth		SR	G4	S2S3
Melipotis jucunda	Merry Melipotis Moth		SR	G5	S1S3
Meropleon ambifusca	Newman's Brocade		ST	G3G4	S1S2
Meropleon diversicolor	Multicolored Sedgeminer		SR	G5	S2S3
Metanema determinata	Dark Metanema		SR	G5	SNR
Metanema inatomaria	Pale Metanema		SR	G5	SNR
Metarranthis apiciaria	Barrens Metarranthis Moth		SE	G1G3	SH

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Indiana County Endangered, Threatened and Rare Species List
County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Neodactria murellus	Prairie Sedge Moth		ST	GNR	S1
Nola cilicoides	Blurry-patched Nola Moth		SR	G5	SNR
Notodonta scitipennis	Finned-willow Prominent		ST	G5	S1S2
Odontosia elegans	Elegant Prominent		SR	G5	S1S2
Oligia obtusa	A Noctuid Moth		SE	G4	S1
Pangrapta decoralis	The Multicolored Huckleberry Moth		ST	G5	S2
Papaipema beeriana	Beer's Blazing Star Borer Moth		ST	G2G3	S1S3
Papaipema cerina	Golden Borer Moth		ST	G2G4	S1
Papaipema leucostigma	Columbine Borer		ST	G4G5	S1S2
Papaipema lysimachiae	The St. John's Wort Borer Moth		SR	G4G5	S1S3
Papaipema maritima	The Giant Sunflower Borer Moth		ST	G3	S2
Papaipema pterisii	Bracken Borer Moth		WL	G5	SNR
Papaipema rigida	Rigid Sunflower Borer Moth		SR	G4G5	S2S3
Papaipema sciata	The Culver's Root Borer		ST	G3	S1S2
Papaipema silphii	Silphium Borer Moth		ST	G3G4	S2
Papaipema speciosissima	The Royal Fern Borer Moth		ST	G4	S2S3
Parasa indetermina	Stinging Rose Caterpillar Moth		SR	G4	S1S2
Peoria gemmatella	Gemmed Cordgrass Borer		SE	GNR	S1
Peoria tetradella			SR	GNR	SNR
Photedes enervata	The Many-lined Cordgrass Moth		ST	G4	S1
Photedes includens	The Included Cordgrass Borer		ST	G4	S1
Photedes inops	Spartina Borer Moth		SR	G3G4	S2S3
Photedes panatela	Northern Cordgrass Borer		ST	GNR	S1
Phytometra ernestinana	Ernestine's Moth		SE	G4	S1
Poanes massasoit	Mulberry Wing Skipper			G4	S3S4
Poanes viator viator	Big Broad-winged Skipper		ST	G5T4	S2
Polites mystic	Long Dash Skipper			G5	S3S4
Polygonia progne	Gray Comma		ST	G5	S2S3
Ponometia binocula	Prairie Tarachidia			GNR	S1S2
Problema byssus	Bunchgrass Skipper		ST	G4	S1S2
Protorthodes incincta	Saturn quaker		SR	GNR	S2
Pygarctia spraguei	Sprague's Pygartic		SR	G5	S1S2
Pyrausta laticlavia	The Southern Purple Mint Moth		SR	GNR	S1S2
Pyrrhia aurantiago	False-foxglove Sun Moth		ST	G3G4	S1S2
Resapamea stipata	The Four-lined Cordgrass Borer		SE	G4	S1
Schinia indiana	Phlox Moth		SE	G2G4	S1
Schinia sanguinea	Bleeding Flower Moth			G4	S2S3
Schinia septentrionalis	Northern Flower Moth		SR	G3G4	S2S3
Scirpophaga perstrialis	Reed-boring Crambid Moth		SR	GNR	SNR

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Indiana County Endangered, Threatened and Rare Species List
County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Sitochroa dasconalis	Pearly Indigo Borer		ST	GNR	S1S2
Sonia fulminana	a tortricid moth		SR	GNR	S1S2
Speyeria idalia	Regal Fritillary	C	SE	G3?	S1S2
Sphinx luscitiosa	The Luscious Willow Sphinx		SR	G4G5	S1S2
Spilosoma latipennis	The Red-legged Tussock Moth		SR	G4	S2S3
Sympistis riparia	The Dune Oncocnemis Moth		ST	G4	S1S2
Tricholita notata	Marked Noctuid		ST	G5	S1S2
Zomaria interruptolineana	Broken-lined Zomaria		SR	GNR	SNR
Insect: Odonata (Dragonflies & Damselflies)					
Somatochlora hineana	Hine's Emerald	LE	SX	G2G3	SX
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
Insect: Orthoptera					
Chloealtis conspersa	Sprinkled Locust		SR	G5	S2S3
Conocephalus saltans	Prairie Meadow Katydid		SR	G5	S1S2
Hesperotettix viridis pratensis	Snakeweed Grasshopper		SR	G5T5	S1S2
Melanoplus fasciatus	Huckleberry Spur-throat Grasshopper		SR	G5	S2
Melanoplus keeleri luridus	Keeler's Spur-throated Grasshopper		SR	G5T5	S3S4
Neoconocephalus nebrascensis	Nebraska Conehead		SR	GNR	S1S2
Orphulella pelidna	Spotted-wing Grasshopper		SE	G5	S1
Pardalophora phoenicoptera	Orange-winged Grasshopper		SR	G5	S1S2
Paroxya atlantica	Atlantic Spastic Grasshopper		ST	GU	S2
Phoetaliotes nebrascensis	Large-headed Grasshopper		ST	G5	S1S2
Psinidia fenestralis	Sand Locust		SR	G5	S2
Trimerotropis maritima	Seaside Grasshopper		ST	G5	S1S2
Fish					
Acipenser fulvescens	Lake Sturgeon		SE	G3G4	S1
Ichthyomyzon fossor	Northern Brook Lamprey		SE	G4	S1
Rhinichthys cataractae	Longnose Dace		SSC	G5	S2
Amphibian					
Acris blanchardi	Blanchard's Cricket Frog		SSC	G5	S4
Ambystoma laterale	Blue-spotted Salamander		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Opheodrys vernalis	Smooth Green Snake		SE	G5	S2
Sistrurus catenatus	Eastern Massasauga	LT	SE	G3	S2

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Indiana County Endangered, Threatened and Rare Species List
County: Lake

Species Name	Common Name	FED	STATE	GRANK	SRANK
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
Terrapene ornata ornata	Ornate Box Turtle		SE	G5T5	S1
Thamnophis proximus proximus	Western Ribbon Snake		SSC	G5T5	S3
Thamnophis radix	Plains Garter Snake		SSC	G5	S4
Bird					
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Anas clypeata	Northern Shoveler			G5	SHB
Ardea alba	Great Egret		SSC	G5	S1B
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Botaurus lentiginosus	American Bittern		SE	G5	S2B
Buteo platypterus	Broad-winged Hawk		SSC	G5	S3B
Certhia americana	Brown Creeper			G5	S2B
Charadrius melodus	Piping Plover	LE	SE	G3	SXB
Chlidonias niger	Black Tern		SE	G4G5	S1B
Chordeiles minor	Common Nighthawk		SSC	G5	S4B
Cistothorus palustris	Marsh Wren		SE	G5	S3B
Cistothorus platensis	Sedge Wren		SE	G5	S3B
Cygnus buccinator	Trumpeter Swan		SE	G4	S1B
Euphagus cyanocephalus	Brewer's Blackbird			G5	SHB,S1N
Falco peregrinus	Peregrine Falcon		SSC	G4	S2B
Gallinula galeata	Common gallinule		SE	G5	S3B
Grus canadensis	Sandhill Crane		SSC	G5	S2B,S1N
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Hydroprogne caspia	Caspian Tern			G5	S1B
Ixobrychus exilis	Least Bittern		SE	G4G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Laterallus jamaicensis	Black Rail		SE	G3G4	SHB
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Nyctanassa violacea	Yellow-crowned Night-heron		SE	G5	S2B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SSC	G5	S1B
Phalaropus tricolor	Wilson's Phalarope		SSC	G5	SHB
Rallus elegans	King Rail		SE	G4	S1B
Rallus limicola	Virginia Rail		SE	G5	S3B
Scolopax minor	American Woodcock		SSC	G5	S4B
Tringa melanoleuca	Greater Yellowlegs		SSC	G5	S3M
Tringa solitaria	Solitary Sandpiper		SSC	G5	S3M
Tyto alba	Barn Owl		SE	G5	S2
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		SE	G5	S1B
Mammal					

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County: Lake

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Lasiurus borealis	Eastern Red Bat		SSC	G3G4	S4
Lasiurus cinereus	Hoary Bat		SSC	G3G4	S4
Myotis lucifugus	Little Brown Bat	C	SE	G3	S2
Myotis septentrionalis	Northern Long Eared Bat	LT	SE	G1G2	S2S3
Reithrodontomys megalotis	Western Harvest Mouse			G5	S2
Spermophilus franklinii	Franklin's Ground Squirrel		SE	G5	S2
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Agalinis auriculata	earleaf foxglove		ST	G3	S2
Agalinis gattingeri	roundstem foxglove		ST	G4	S3
Agalinis skinneriana	pale false foxglove		ST	G3G4	S2
Alnus incana ssp. rugosa	speckled alder		WL	G5T5	S3
Amelanchier humilis	running serviceberry		SE	G5	S1
Androsace occidentalis	western rockjasmine		ST	G5	S2
Aralia hispida	bristly sarsaparilla		SE	G5	S1
Arctostaphylos uva-ursi	bearberry		ST	G5	S3
Arethusa bulbosa	swamp-pink		SX	G5	SX
Aristida longespica var. geniculata	slim-spike three-awn grass		WL	G5T5?	S3
Aristida tuberculosa	seabeach needlegrass		ST	G5	S3
Asclepias meadii	Mead's milkweed	LT	SRE	G2	SX
Aureolaria grandiflora var. pulchra	large-flower false-foxglove		SX	G4G5T4T5	SX
Baptisia bracteata var. leucophaea	cream wild-indigo		WL	G4G5T4T5	S3
Baptisia tinctoria	yellow wild-indigo		WL	G5	S3
Betula papyrifera	paper birch		ST	G5	S3
Betula populifolia	gray birch		WL	G5	S1
Bidens beckii	Beck's water-marigold		SE	G5	S1
Botrychium matricariifolium	chamomile grape-fern		ST	G5	S3
Botrychium simplex	least grape-fern		SE	G5	S1
Buchnera americana	bluehearts		SE	G5?	S1
Calopogon oklahomensis	Oklahoma grass-pink		SX	G3	SX
Carex aurea	golden-fruited sedge		ST	G5	S3
Carex bebbii	Bebb's sedge		ST	G5	S3
Carex brunnescens	brownish sedge		ST	G5	S2
Carex conoidea	prairie gray sedge		ST	G5	S2
Carex crawei	Crawe's sedge		ST	G5	S2
Carex cumulata	clustered sedge		SE	G4G5	S1
Carex eburnea	ebony sedge		ST	G5	S3
Carex echinata	little prickly sedge		SE	G5	S1
Carex garberi	elk sedge		SE	G5	S1
Carex limosa	mud sedge		SE	G5	S1

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Carex projecta	necklace sedge		SE	G5	SU
Carex richardsonii	Richardson's sedge		ST	G5	S2
Carex seorsa	weak stellate sedge		ST	G5	S3
Carex straminea	straw sedge		ST	G5	S2
Carex trichocarpa	hairy-fruit sedge		WL	G4	S3
Catalpa speciosa	northern catalpa		ST	G4?	S3
Ceanothus herbaceus	prairie redroot		SE	G5	S1
Chamaenerion angustifolium	fireweed		SE	G5	S1
Chimaphila maculata	spotted wintergreen		WL	G5	S3
Cirsium hillii	Hill's thistle		SE	G3	S1
Cirsium pitcheri	dune thistle	LT	SE	G2G3	S1
Clinopodium arkansanum	calamint		ST	G5	S2
Clintonia borealis	Clinton's lily		SE	G5	S1
Comptonia peregrina	sweet fern		WL	G5	S3
Cornus amomum ssp. amomum	silky dogwood		SE	G5	S1
Cornus canadensis	bunchberry		SE	G5	S1
Cornus rugosa	roundleaf dogwood		ST	G5	S3
Corydalis sempervirens	pale corydalis		SE	G5	S1
Cyperus dentatus	toothed sedge		SE	G4	S1
Cypripedium candidum	small white lady's-slipper		ST	G4	S3
Cypripedium parviflorum var. makasin	small yellow lady's-slipper		ST	G5T4T5	S3
Cypripedium parviflorum var. pubescens	large yellow lady's-slipper		WL	G5T5	S3
Cypripedium reginae	showy lady's-slipper		ST	G4G5	S3
Dactylorhiza viridis	long-bract green orchid		SE	G5	S1
Dichanthelium boreale	northern witchgrass		ST	G5	S3
Dichanthelium deamii	Deam's panic-grass		SE	GNR	SU
Dichanthelium leibergii	Leiberg's witchgrass		ST	G4	S2
Diervilla lonicera	northern bush-honeysuckle		WL	G5	S3
Drosera intermedia	spoon-leaved sundew		ST	G5	S3
Drymocallis arguta	tall cinquefoil		WL	G5	SU
Eleocharis geniculata	capitate spike-rush		ST	G5	S2
Eleocharis melanocarpa	black-fruited spike-rush		ST	G4	S2
Eleocharis wolfii	Wolf's spikerush		ST	G3G5	S2
Epigaea repens	trailing arbutus		ST	G5	S3
Equisetum variegatum var. variegatum	variegated horsetail		SE	G5T5	S1
Eriophorum angustifolium	narrow-leaved cotton-grass		ST	G5	S3
Eriophorum gracile	slender cotton-grass		ST	G5	S2
Eurybia furcata	forked aster		ST	G3	S3
Fimbristylis puberula	Carolina fimbry		SE	G5	S1
Gentiana alba	yellow gentian		ST	G4	S3

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Gentiana puberulenta	downy gentian		SE	G4G5	S1
Geranium bicknellii	Bicknell's northern cranesbill		SE	G5	S1
Glyceria borealis	small floating manna-grass		SE	G5	S1
Hudsonia tomentosa	sand-heather		ST	G5	S2
Hydrastis canadensis	golden seal		WL	G3G4	S3
Hypericum adpressum	creeping St. John's-wort		SE	G3	S1
Hypericum kalmianum	Kalm's St. John's-wort		WL	G4	S3
Juglans cinerea	butternut		ST	G3	S2
Juncus articulatus	jointed rush		SE	G5	S1
Juncus balticus var. littoralis	Baltic rush		WL	G5T5	S3
Juncus pelocarpus	brown-fruited rush		SE	G5	S1
Juncus scirpoides	scirpus-like rush		ST	G5	S2
Juniperus communis var. depressa	ground juniper		ST	G5T5	S3
Juniperus horizontalis	creeping juniper		SX	G5	SX
Lathyrus japonicus	beach peavine		SE	G5	S1
Lathyrus venosus	smooth veiny pea		SE	G5	S1
Lechea stricta	upright pinweed		SX	G4?	SX
Liatris pycnostachya	cattail gay-feather		SE	G5	S1
Lilium philadelphicum	wood lily		WL	G5	SU
Linnaea borealis	twinflower		SX	G5	SX
Linum sulcatum	grooved yellow flax		ST	G5	S3
Liparis loeselii	Loesel's twayblade		WL	G5	S3
Lipocarpha drummondii	Drummond's hemicarpha		SE	G4G5	S1
Ludwigia sphaerocarpa	globe-fruited false-loosestrife		SE	G5	S1
Lycopodiella inundata	northern bog clubmoss		ST	G5	S2
Lycopodiella subappressa	northern appressed bog clubmoss		SE	G2	S1
Malaxis unifolia	green adder's-mouth orchid		SE	G5	S1
Matteuccia struthiopteris	ostrich fern		ST	G5	S3
Melampyrum lineare	American cow-wheat		SE	G5	S1
Mikania scandens	climbing hempweed		SE	G5	S1
Minuartia michauxii var. michauxii	Michaux's stitchwort		ST	G5T5	S2
Myosotis laxa	smaller forget-me-not		ST	G5	S2
Myriophyllum verticillatum	whorled water-milfoil		ST	G5	S3
Oenothera perennis	small sundrops		ST	G5	S3
Oligoneuron album	prairie goldenrod		ST	G5	S3
Orobanche fasciculata	clustered broomrape		SE	G4G5	S1
Orthilia secunda	one-sided wintergreen		SX	G5	SX
Panax quinquefolius	American ginseng		WL	G3G4	S3
Perideridia americana	eastern eulophus		SE	G4	S1
Persicaria careyi	Carey's smartweed		ST	G4	S2

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Indiana County Endangered, Threatened and Rare Species List

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Phemeranthus rugospermus	prairie fame-flower		SE	G3G4	S1
Pinus banksiana	jack pine		ST	G5	S3
Pinus strobus	eastern white pine		ST	G5	S3
Plantago cordata	heart-leaved plantain		SE	G4	S1
Platanthera aquilonis	leafy northern green orchid		ST	G5	S2
Platanthera ciliaris	yellow-fringe orchid		SE	G5	S1
Platanthera flava var. herbiola	pale green orchid		WL	G4?T4Q	S3
Platanthera hookeri	Hooker's Orchid		SX	G4	SX
Platanthera lacera	green-fringe orchid		WL	G5	S3
Platanthera leucophaea	prairie white-fringed orchid	LT	SE	G2G3	S1
Platanthera psycodes	small purple-fringe orchid		ST	G5	S3
Pogonia ophioglossoides	rose pogonia		ST	G5	S3
Polygonum articulatum	eastern jointweed		ST	G5	S3
Polytaenia nuttallii	prairie parsley		SE	G5	S1
Populus balsamifera	balsam poplar		SE	G5	S1
Potamogeton pulcher	spotted pondweed		ST	G5	S2
Potamogeton pusillus	slender pondweed		WL	G5	S2
Potamogeton richardsonii	redheadgrass		ST	G5	S3
Potamogeton robbinsii	flatleaf pondweed		ST	G5	S3
Potamogeton strictifolius	straight-leaf pondweed		ST	G5	S2
Potentilla anserina	silverweed		ST	G5	S2
Prenanthes aspera	rough rattlesnake-root		ST	G4?	S3
Prunus pensylvanica	fire cherry		ST	G5	S3
Pyrola americana	American wintergreen		ST	G5	S2
Rhus aromatica var. arenaria	beach sumac		ST	G5T3Q	S3
Rhynchospora macrostachya	tall beaked-rush		ST	G4	S3
Rhynchospora recognita	globe beaked-rush		SE	G5?	S1
Rhynchospora scirpoides	long-beaked baldrush		ST	G4	S3
Rorippa aquatica	lake cress		SE	G4?	S1
Rubus setosus	small bristleberry		SE	G5	S1
Salix cordata	heartleaf willow		SE	G4	S1
Sceptridium rugulosum	ternate grapefern		SX	G3	SX
Schoenoplectiella hallii	Hall's bulrush	C	SE	G2G3	S1
Schoenoplectiella smithii	Smith's Bulrush		ST	G5?	S2
Schoenoplectus subterminalis	water bulrush		ST	G5	S3
Schoenoplectus torreyi	Torrey's Bulrush		SE	G5?	S1
Scleria reticularis	reticulated nutrush		ST	G4	S2
Selaginella apoda	meadow spike-moss		WL	G5	S1
Selaginella rupestris	ledge spike-moss		SE	G5	S1
Shepherdia canadensis	Canada buffalo-berry		SX	G5	SX

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Sisyrinchium montanum	strict blue-eyed-grass		SE	G5	S1
Solidago simplex var. gillmanii	sticky goldenrod		ST	G5T3?	S2
Sparganium androcladum	branching bur-reed		ST	G4G5	S2
Sparganium natans			SX	G5	SX
Spiranthes lucida	shining ladies'-tresses		ST	G4	S3
Spiranthes magnicamporum	Great Plains ladies'-tresses		SE	G3G4	S1
Strophostyles leiosperma	slick-seed wild-bean		WL	G5	S3
Styrax americanus	American snowbell		ST	G5	S3
Symphyotrichum boreale	rushlike aster		ST	G5	S2
Symphyotrichum sericeum	western silvery aster		ST	G5	S2
Thuja occidentalis	northern white cedar		SE	G5	S1
Triantha glutinosa	false asphodel		ST	G5	S2
Trichostema dichotomum	forked bluecurl		WL	G5	S3
Triglochin palustris	marsh arrow-grass		ST	G5	S2
Utricularia cornuta	horned bladderwort		SE	G5	S1
Utricularia intermedia	flatleaf bladderwort		WL	G5	S3
Utricularia minor	lesser bladderwort		ST	G5	S1
Utricularia purpurea	purple bladderwort		ST	G5	S3
Utricularia resupinata	northeastern bladderwort		SE	G4	S1
Utricularia subulata	zigzag bladderwort		ST	G5	S2
Vaccinium myrtilloides	velvetleaf blueberry		SE	G5	S1
Valerianella chenopodiifolia	goose-foot corn-salad		WL	G4	S3
Viburnum opulus var. americanum	highbush-cranberry		SE	G5T5	S1
Viola pedatifida	prairie violet		ST	G5	S2
High Quality Natural Community					
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland dry Northwestern Morainal	Northwestern Morainal Dry Upland Forest		SG	GNR	S1
Forest - upland dry-mesic Northwestern Morainal	Northwestern Morainal Dry-mesic Upland Forest		SG	GNR	S1
Forest - upland mesic Northwestern Morainal	Northwestern Morainal Mesic Upland Forest		SG	GNR	S1
Lake - pond	Pond		SG	GNR	SNR
Prairie - dry-mesic	Dry-mesic Prairie		SG	G3	S2
Prairie - mesic	Mesic Prairie		SG	G2	S2
Prairie - sand dry	Dry Sand Prairie		SG	G3	S2
Prairie - sand dry-mesic	Dry-mesic Sand Prairie		SG	G3	S3
Prairie - sand mesic	Mesic Sand Prairie		SG	GNR	SNR
Prairie - sand wet	Wet Sand Prairie		SG	G3	S3
Prairie - sand wet-mesic	Wet-mesic Sand Prairie		SG	G1?	S2

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Prairie - wet	Wet Prairie		SG	G3	S1
Primary - dune lake	Foredune		SG	G3	S1
Savanna - mesic	Mesic Savanna		SG	GNR	SNR
Savanna - sand dry	Dry Sand Savanna		SG	G2?	S2
Savanna - sand dry-mesic	Dry-mesic Sand Savanna		SG	G2?	S2S3
Savanna - sand mesic	Mesic Sand Savanna		SG	GNR	SNR
Wetland - fen	Fen		SG	G3	S3
Wetland - marsh	Marsh		SG	GU	S4
Wetland - meadow sedge	Sedge Meadow		SG	G3?	S1
Wetland - panne	Panne		SG	G2	S1
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2
Other Significant Feature					
Migratory Bird Concentration Area	Migratory Bird Concentration Site		SG	G3	SNR

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long-term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long-term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

APPENDIX F

Water Resources

REGULATED WATERS DELINEATION REPORT

US231 and Cline Ave Intersection

DES No. 1700022

The Troyer Group

January 6, 2020

Cardno
Shaping the Future

Document Information

Prepared for	The Troyer Group
Project Name	US231 and Cline Ave Intersection
Project Number	Cardno PN #191018700
DES Number	DES. No. 1700022
Project Manager	Tim Meeks (Cardno)
	Date: January 6, 2020

Prepared for:

The Troyer Group

550 Union Street
Mishawaka, Indiana 46544

Prepared by:

Cardno
708 Roosevelt Road Walkerton, IN 46574

1 Introduction

1.1 Cardno has been contracted to perform a boundary delineation survey and assessment of regulated waters, including wetlands which are located at The Troyer Group US 231 and Cline Avenue intersection in Crown Point, Lake County, Indiana (INDOT Des No. 1700022). The project is located in Sections 2, 3, 10, and 11, Township 34 North, Range 9 West on the Saint John, Indiana USGS 7.5' topographic map quadrangle. The proposed project will involve the reconstruction of the intersection at US 231 and Cline Avenue. The proposed plan is to replace the four-way-intersection with a roundabout and would also include pavement resurfacing, relocating utilities, and possible pavement coring.

The project area consists of US 231 and Cline Avenue right of way as well as crop agricultural fields, maintained lawns, driveways, utility corridors, and roadside drainage ditches. Based on provided information, the proposed project area measures approximately 15.3 acres (ac), of which approximately 3.7 ac consists entirely of existing roadbed. As a result, Cardno surveyed a total of 11.6 ac within the project area.

Based on field investigations conducted by Cardno on May 24, 2019 it is our professional opinion that 1 wetland totaling 1.49 acres are present in the survey area. Boundary limits of identified wetland habitats were flagged in the field by Cardno and recorded with a Trimble hand held GPS data collector.

2 Background Information

Date of Waters Field Investigation: May 24, 2019
Location:
Longitude: 41.420656° N
Latitude: -87.432456°W
Section 2, 3,10, 11 Township 34N, Range 9W
Saint John, Indiana Quadrangle
Lake County, Indiana
HUC 12- 040400010501 Headwaters Main Beaver Dam Ditch

2.1 *National Wetland Inventory*

The National Wetland Inventory (NWI) map of the project area (Figure 2) identified no NWI wetland areas within the project survey boundaries. The survey shows an identified NWI west of the project area. This wetland is identified as a palustrine emergent persistent temporarily flooded and farmed (PEM1Af). The survey did show possible flow pattern lines southwest of the intersection and were determined part of an existing wetland. Flow pattern lines north of the intersection were determined to be part of a roadside ditch extending north on the west side of Cline Avenue.

2.2 *Soil Survey*

The NRCS *Soil Survey of Lake County* identified three soil series in the project area (Figure 3). The following table identifies the soil unit symbol, soil unit name, and whether or not the soil type contains components that meet the hydric soil criteria.

Table 2-1 Soil Types Within the US 231 and Cline Avenue Intersection Project Area

Symbol	Description	Hydric	Percent Hydric Inclusions
El	Elliott silt loam, 0 to 2 percent slopes	Yes	4%
MaB2	Markham silt loam, 2 to 6 percent slopes, eroded	Yes	10%
Pe	Pewamo silty clay loam	Yes	100%

Attached Documents:

- Figures
- Wetland Delineation Sheets
- Photographs of the project area
- FQA Data Inventories

Project Description:

The proposed project DES No. 1700022 will involve the reconstruction of the intersection at US 231 and Cline Avenue. The proposed plan is to replace the four-way-intersection with a roundabout and would also include pavement resurfacing, relocating utilities, and possible pavement coring.

3 Site Investigation and Description

3.1 *Investigation Methodology*

Prior to the field work, the background information was reviewed to establish the probability and potential location of wetlands on the site. Next, a general reconnaissance of the project area was conducted to determine site conditions. The site was then walked with the specific intent of determining and marking wetland boundaries. Data stations were established at locations within and near the wetland areas to document soil characteristics, evidence of hydrology and dominant vegetation. Soils were examined to a depth of at least 16 inches to assess soil characteristics and site hydrology. Complete descriptions of typical soil series can be found in the soil survey for Porter County.

3.1.1 Site Photographs. Photographs of the site are located in Appendix A. These photographs are the visual documentation of site conditions at the time of inspection. The photographs are intended to provide representative visual samples of any wetlands or other special features found on the site.

3.1.2 Delineation Data Sheets. Where stations represent a wetland boundary point they are presented as paired data points, one each documenting the wetland and upland sides of the wetland boundary. The routine wetland delineation data sheets used in the jurisdictional delineation process are located in Appendix B. These forms are the written documentation of how representative sample stations meet or do not meet each of the wetland criteria. For plant species included on the NWPL, nomenclature follows their lead. For all other plants not listed in the NWPL, additional sources are listed in the bibliography.

3.2 *Field Reconnaissance*

A field visit to the project area was conducted on May 24, 2019 by the Cardno Inc. staff. The survey footprint consisted of the area that had the potential to be impacted based on all possible design scenarios. The survey area was evaluated for the presence or absence of wetlands and waterways. Five separately mapped roadside ditches and one wetland area were found by Cardno within the Project area.

3.2.1 Wetlands

Wetland 1 PEM (1.49 acres)

Wetland 1 (1.49 acres) was surveyed and the area within the area of interest consists of a concave topographic relief with PEM wetland habitat adjacent to existing road infrastructure. Localized hydrology originates from surface runoff as the wetland is a low point in a relatively flat till plain landscape. The entirety of Wetland 1 existed within the area of interest for this project.

Invasive species are the dominant species present throughout the wetland area mapped in the project. The site can be characterized as low quality due to the size, limited function and compromised biodiversity indicated by the number of non-native species present.

Wetland 1 Data Point

Data Point (DP01)

Dominant vegetation in the vicinity of DP01 included reed canary grass (*Phalaris arundinacea*, FACW). In addition, non-dominant vegetation observed included common reed (*Phragmites australis*, FACW). The plants at this data point qualified as hydrophytic vegetation. The soil from 0 to 6 inches had a matrix soil color of 10YR 2/1 with a texture of Mucky Silty Clay. The soil from 6 to 24 inches had a matrix soil color of 10YR 2/1 with a texture of Clay. The soil at the data point was mapped as Pc- Pewamo silty clay loam- hydric, and met the Loamy Mucky Mineral (F1) hydric soil criteria. Primary indicators of hydrology included Surface Water (A1), Saturation (A3), Drift Deposits (B3), Inundation Visible on Aerial Imagery (B7), and secondary indicators of hydrology observed included Surface Soil Cracks (B6), Crayfish Burrows (C8), Stunted or Stressed Plants (D1), Geomorphic Position (D2), and the FAC-Neutral Test (D5). The wetland is mostly an untilled portion of agricultural field, some portions of the wetland are periodically tilled for planting. Those portions previously tilled have sparse vegetation. This data point qualified as a wetland.

Data Point (DP02)

Dominant vegetation in the vicinity of DP02 included cursed buttercup (*Ranunculus sceleratus*, OBL). In addition, non-dominant vegetation observed included cressleaf groundsel (P*ackera glabella*, FACW). The plants at this data point qualified as hydrophytic vegetation. The soil from 0 to 10 inches had a matrix soil color of 10YR 3/1 with a texture of Clay Loam. The soil from 10 to 20 inches had a matrix soil color of 10YR 4/3 with concentrations in the matrix at 20 percent, and a texture of Sandy Clay. The soil at the data point was mapped as Pc- Pewamo silty clay loam -hydric, and did not meet any hydric soil criteria. Soils have been routinely tilled for agricultural production. Only the secondary indicator the FAC-Neutral Test (D5) was observed. Sparse vegetation is present where routine tilling for agricultural production has taken place. This data point did not meet wetland criteria.

Table 3-1 Data Point Summary Table

Data Point	Vegetation	Soils	Hydrology	Wetland
DP01	Yes	Yes	Yes	Yes
DP02	Yes	No	No	No

3.2.2 Roadside Ditches

Five separate roadside ditches were observed or mapped during the site survey. These roadside ditches were clear excavations and directed surface runoff away from the intersection. None of these mapped roadside ditches displayed an ordinary high water mark or bed or bank required of a jurisdictional resource, meaning these roadside ditches are not jurisdictional features. The main direction of flow for these ditches was north and east. Recent seasonally heavy precipitation occurred in several days prior to the field observation resulted in standing or flowing surface water draining through these roadside ditches.

3.2.3 Bat and Bird Habitats

No current habitats were present for roosting or high quality foraging habitat was available within the survey area for either bats nor birds.

4 Summary and Conclusion

4.1 *Wetland Summary*

Cardno conducted an investigation of potentially jurisdictional waters within the Project area on May 24, 2019. The 1 wetland features was identified by Cardno. The wetland within the Project area survey and boundary limits of identified wetland habitats were pin staked in the field by Cardno. These areas are representative the delineated boundaries within the contracted Project boundary. Resource acreage or length, in some cases exists beyond the Project area. Cardno's investigation suggests that Wetland 1 would be under jurisdiction of the USACE Chicago District. Based upon connection via NHD flowlines the wetland feature should be considered a jurisdictional feature.

While this report represents our best professional judgment based on our knowledge and experience, it is important to note that the Chicago District of the USACE has final discretionary authority over all jurisdictional determinations of "waters of the U.S." including wetlands under Section 404 of the CWA in this region. It is therefore, recommended that a copy of this report be furnished to the Chicago District of the USACE to confirm the results of our findings.

Wetland Summary Table 4-1
US 231 and Cline Avenue
Lake County, Indiana
Designation Number: 1700022

Wetland Name	Photo	Lat/Long	Wetland Type	Quality	Wetland Acres in Project	Likely Waters of the U.S.
Wetland 1	11,31,32, 35,36,37, 38	41.420656°, -87.432456°	PEM	Poor	1.49	Yes

Conclusions:
The survey area was evaluated for the presence or absence of wetlands and waterways. Five roadside ditches that are not jurisdictional resources were found by Cardno within the Project area. Field observations found 1 wetland located within the project area. The wetlands are likely Waters of the U.S under the jurisdiction of the USACE. Every effort should be taken to avoid and minimize impacts to the waterway. If impacts are necessary, then mitigation may be required. The INDOT Environmental Services Division should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgment based on the guidelines set forth by the USACE.

Acknowledgements:
This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.
Tim Meeks

Senior Staff Scientist
Cardno, Inc.

5 References

Environmental Laboratory. 1987. *U.S. Army Corps of Engineers' Wetland Delineation Manual*, Technical Report Y-87-1, U.S. Waterways Experiment Station, Vicksburg, MS.

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Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. 2nd Edition. The New York Botanical Garden. Bronx, NY.

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Swink, Floyd, and Gerould Wilhelm. Plants of the Chicago Region. 4th ed. Indianapolis: The Indiana Academy of Science, 1994. Print.

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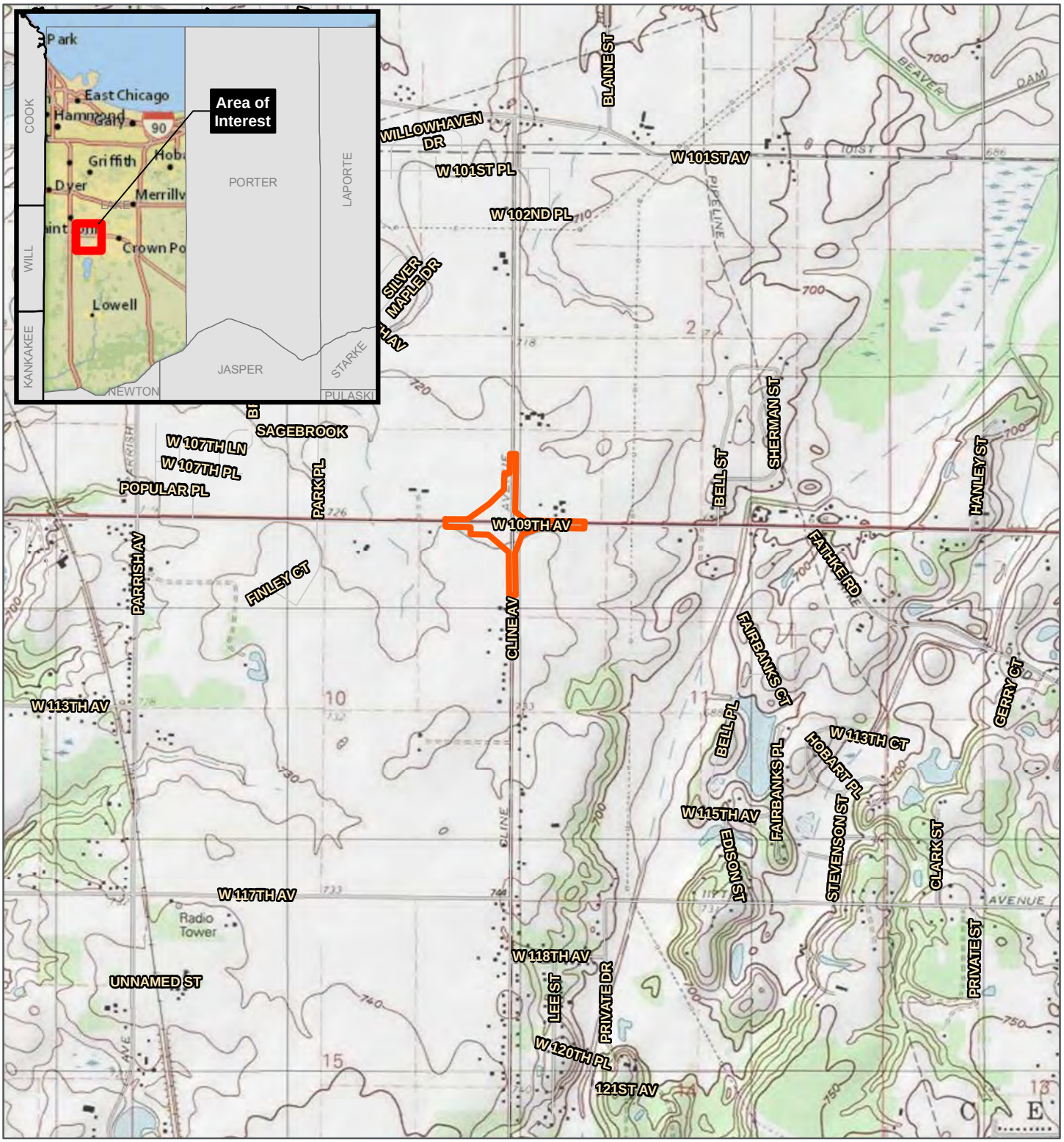

1 inch = 2,000 feet

0 1,000 2,000 4,000 Feet

Area of Interest

N W E S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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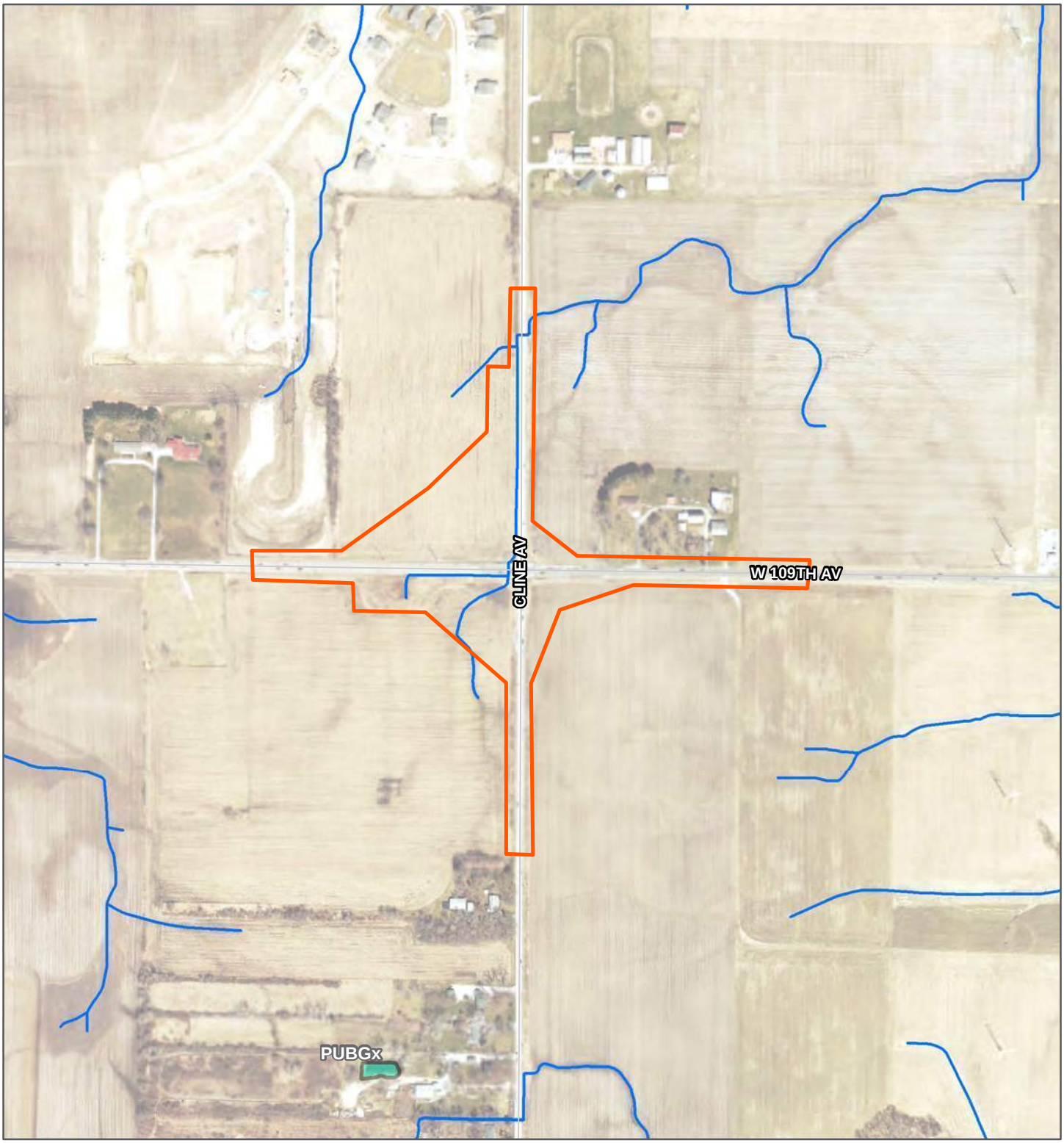
Figure 1. Project Location
Intersection of US 231 & Cline Ave
DES 1700022
Troyer Group
Lake County, Indiana

Cardno
708 Roosevelt Road, Walkerton, IN 46574
Phone (+1) 574-586-3400 Fax (+1) 574-586-3446
www.cardno.com

Date: 5/29/2019 File Path: R:\Projects\19\191\191018700_Troyer_DES1700022_US231_IntersectImprov_LakeCty\GIS\MXD\Delineation__May2019\20190529_F1_US231_INTERSECTION_loc.mxd Saved By: Christine.Dittmar



1 inch = 500 feet

0 250 500 1,000 Feet

Area of Interest
NHD Flowline
NWI Wetland

N
W E
S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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Figure 2. National Wetland Inventory

Intersection of US 231 & Cline Ave
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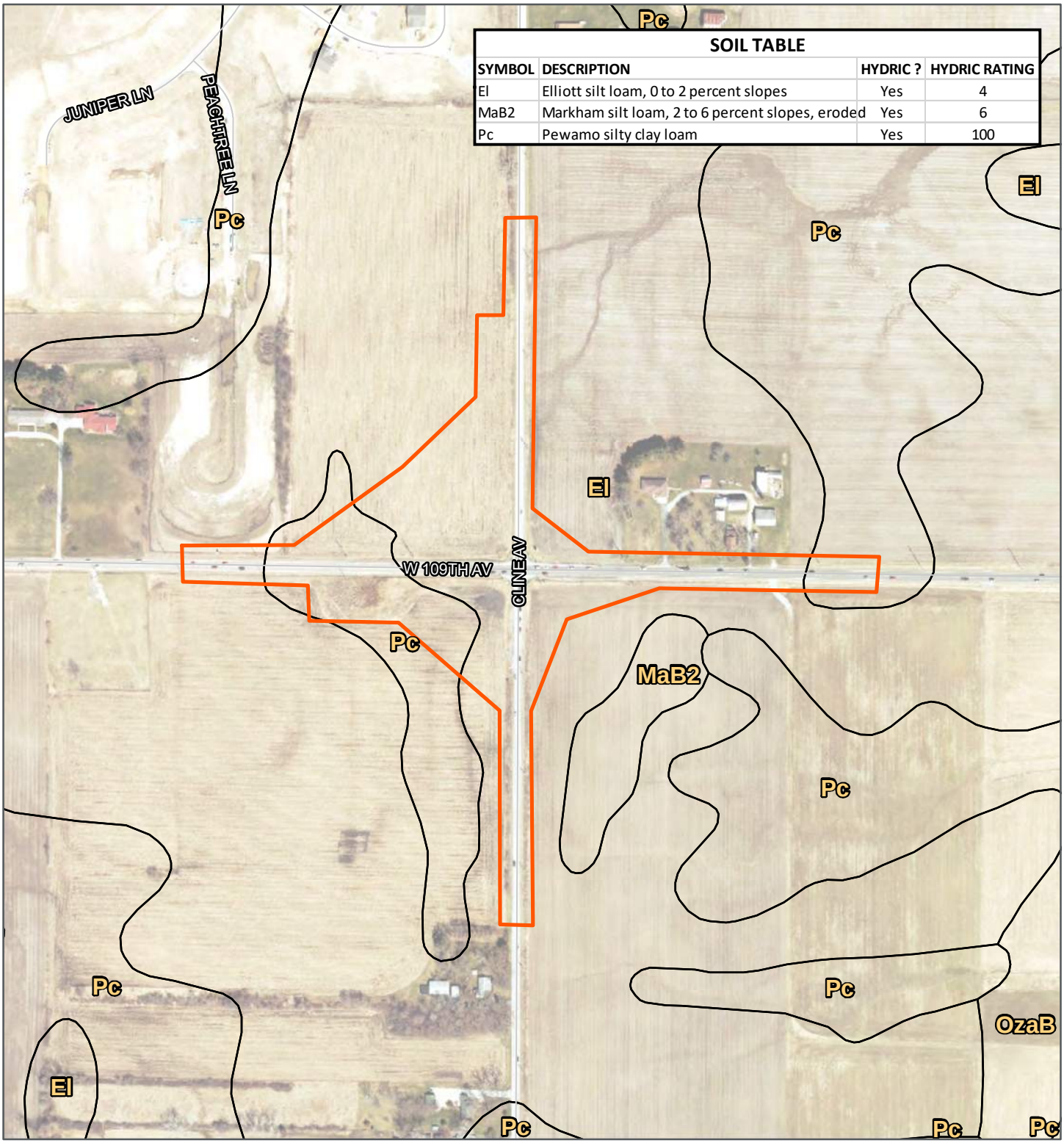
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



SOIL TABLE			
SYMBOL	DESCRIPTION	HYDRIC ?	HYDRIC RATING
El	Elliott silt loam, 0 to 2 percent slopes	Yes	4
MaB2	Markham silt loam, 2 to 6 percent slopes, eroded	Yes	6
Pc	Pewamo silty clay loam	Yes	100

1 inch = 400 feet

0 205 410 820 Feet

Soil Unit

Area of Interest

N W E S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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Figure 3. Soil Map
Intersection of US 231 & Cline Ave
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Lake County, Indiana

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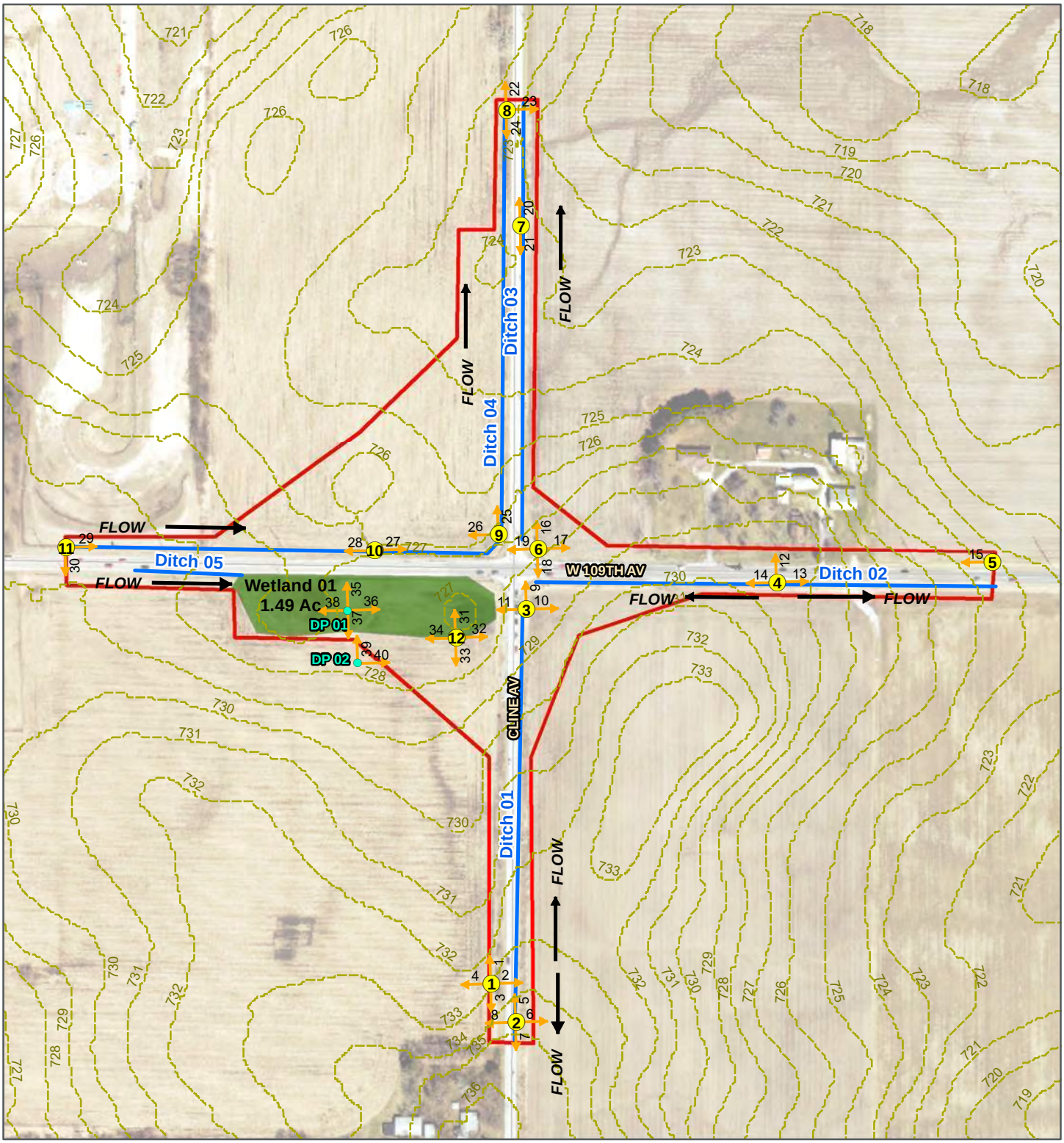
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

Figure 4. Wetland Delineation
Intersection of US 231 & Cline Ave
DES 1700022
Troyer Group
Lake County, Indiana

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Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.

1 inch = 600 feet

0 300 600 1,200 Feet

Area of Interest

National Flood Hazard - FIRM Panels

FEMA Mapped 100-year Floodplain

Regulated Floodway

N W E S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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Figure 5. Floodway/ Floodplain
Intersection of US 231 & Cline Ave
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Lake County, Indiana

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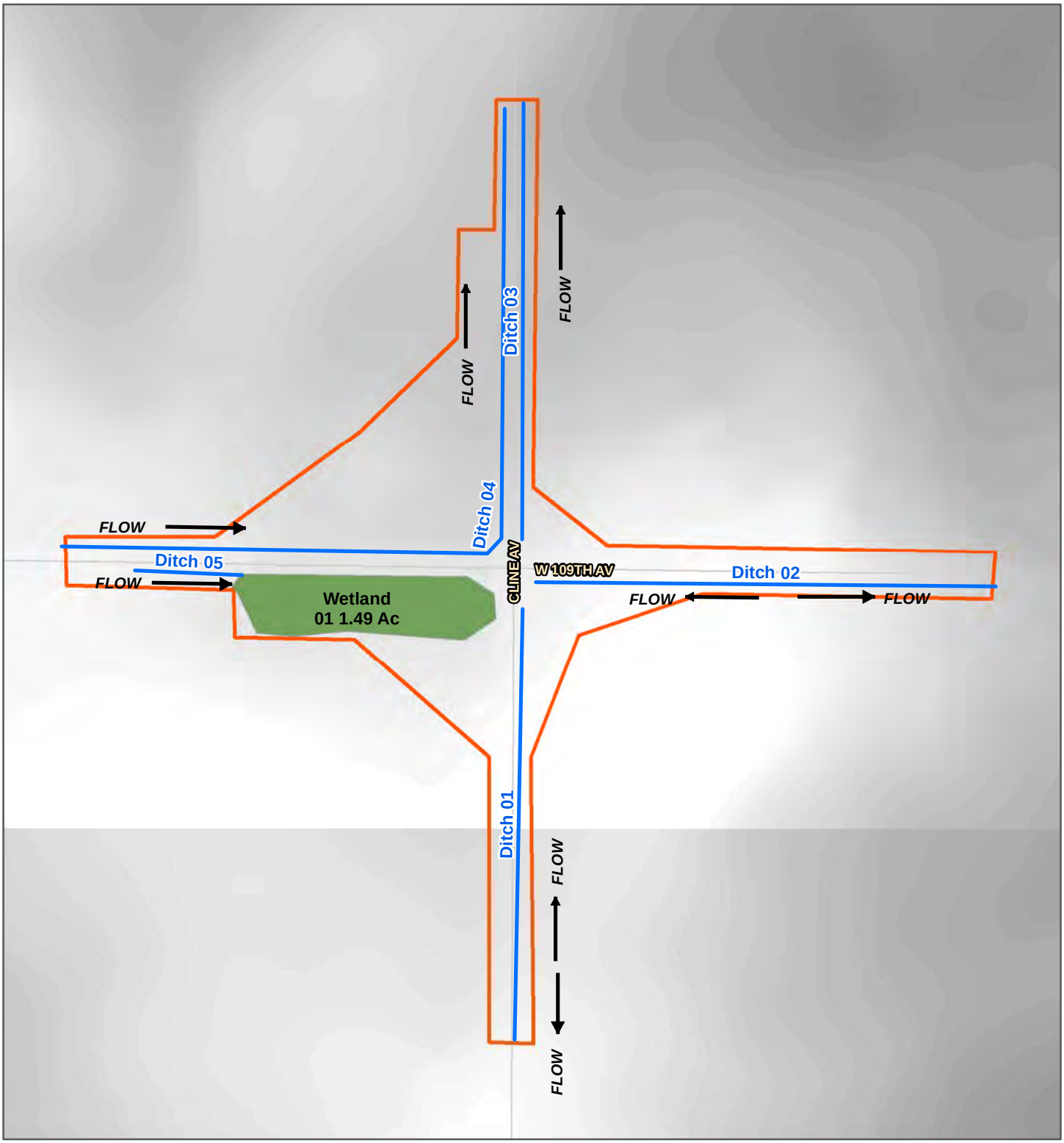
Basemap: Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.



1 inch = 300 feet

0 150 300 600 Feet

OHWM
Existing Wetland
Area of Interest
High : 733.699
Low : 693.698

N
W E
S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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Figure 6. LIDAR Map
Intersection of US 231 & Cline Ave
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Lake County, Indiana

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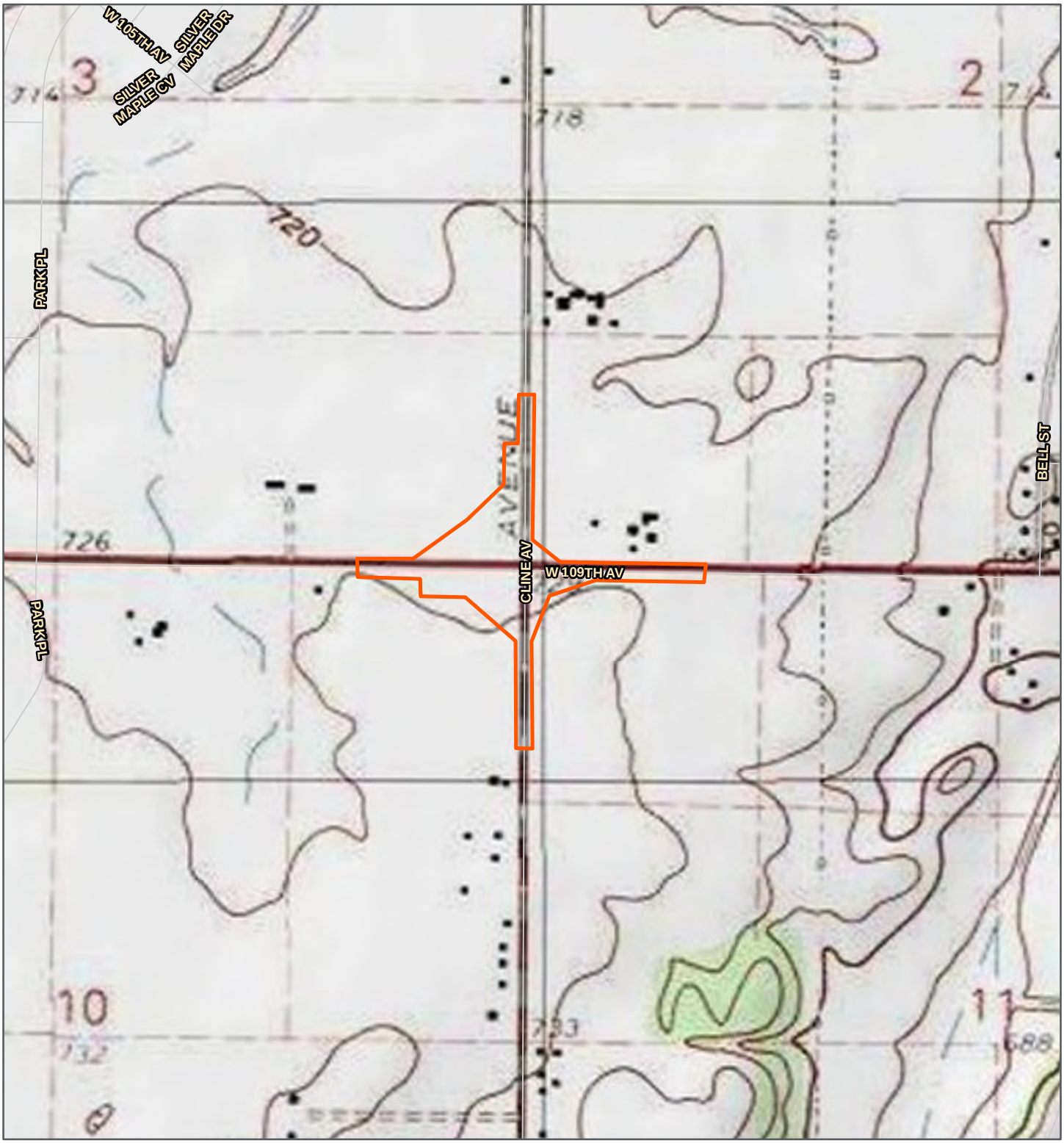

1 inch = 800 feet

0 395 790 1,580 Feet

Area of Interest

N
W E
S

Township 34 North
Range 9 West
Sections 2,3,10,11
J191018700

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Figure 7. Topographic Map
Intersection of US 231 & Cline Ave
DES 1700022
Troyer Group
Lake County, Indiana

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Photo 1: Photo Station 1 Facing North

Photo 2: Photo Station 1 Facing East

Photo 3: Photo Station 1 Facing South

Photo 4: Photo Station 1 Facing West

Project Number:
J191018700

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Site Photographs 05/24/2019

Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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708 Roosevelt Road, Walkerton, IN 46574
Office (574-586-3400)
www.cardno.com

Photo 5: Photo Station 2 Facing North

Photo 6: Photo Station 2 Facing East

Photo 7: Photo Station 2 Facing South

Photo 8: Photo Station 2 Facing West

Project Number:
J191018700

Site Photographs 5/24/2019

Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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Photo 9: Photo Station 3 Facing North

Photo 10: Photo Station 3 Facing East

Photo 11: Photo Station 3 Facing West, an overview of Wetland 01.

Photo 12: Photo Station 4 Facing North

Project Number:
J191018700

Site Photographs 5/24/2019
Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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Photo 13: Photo Station 4 Facing East along Ditch 02

Photo 14: Photo Station 4 Facing West along Ditch 02

Photo 15: Photo Station 5 Facing West

Photo 16: Photo Station 6 Facing North

Project Number:
J191018700

Site Photographs 5/24/2019

Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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Photo 17: Photo Station 6 Facing East

Photo 18: Photo Station 6 Facing South

Photo 19: Photo Station 6 Facing West

Photo 20: Photo Station 7 Facing North along Ditch 03

Project Number:
J191018700

Site Photographs 5/24/2019

Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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Photo 21: Photo Station 7 Facing South along Ditch 03

Photo 22: Photo Station 8 Facing North along Ditch 04

Photo 23: Photo Station 8 Facing East

Photo 24: Photo Station 8 Facing South along Ditch 04

Project Number:
J191018700

Site Photographs 5/24/2019
Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

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Office (574-586-3400)
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Photo 25: Photo Station 9 Facing North

Photo 26: Photo Station 9 Facing West

Photo 27: Photo Station 10 Facing East along Ditch 4

Photo 28: Photo Station 10 Facing West along Ditch 4

Project Number:
J191018700

Site Photographs 5/24/2019

Wetland Delineation Photo
US231 and Cline Ave Intersection
DES. No. 1700022
Lake County, Indiana

Cardno
Shaping the Future
708 Roosevelt Road, Walkerton, IN 46574
Office (574-586-3400)
www.cardno.com

Photo 29: Photo Station 11 Facing East

Photo 30: Photo Station 11 Facing South

Photo 31: Photo Station 12 Facing North to Wetland 01

Photo 32: Photo Station 12 Facing East to Wetland 01 boundary

Project Number:
J191018700

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Photo 33: Photo Station 12 Facing South

Photo 34: Photo Station 12 Facing West

Photo 35: Data Point 1 Facing North in Wetland 01

Photo 36: Data Point 1 Facing East in Wetland 01

Project Number:
J191018700

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Photo 37: Data Point 1 Facing South in Wetland 01

Photo 38: Data Point 1 Facing West in Wetland 01

Photo 39: Data Point 2 Facing North

Photo 40: Data Point 2 Facing East

Project Number:
J191018700

Site Photographs 5/24/2019

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WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: DES 1700022 US 231 and Cline Ave. Intersection City/County: Crown Point/Lake Sampling Date: 5/24/2019

Applicant/Owner: INDOT State: IN Sampling Point: DP01

Investigator(s): Tim Meeks, Ben Long Section, Township, Range: S10, T34N, R9W

Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): concave

Slope (%): 0% Lat: 41.420664 Long: -87.432456 Datum: NAD83 UTM16N

Soil Map Unit Name: Pc- Pewamo silty clay loam -hydric NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**	
Hydric Soil Present?	Yes X	No ____	**within a Wetland?**	Yes X No ____
Wetland Hydrology Present?	Yes X	No ____		

Remarks:
The wetland is mostly an untilled portion of agricultural field, some portions of the wetland are periodically tilled for planting. Those portions previously tilled have sparse vegetation.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinacea*	85%	Yes	FACW
2. *Phragmites australis*	10%	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	95%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	95%	x2 =	1.90
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	95% (A)		1.90 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- X 1-Rapid Test for Hydrophytic Vegetation
- X 2-Dominance Test is >50%
- X 3-Prevalence Index is ≤3.0[1]
- ____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 2/1	100					Mucky Silty Clay	
6-24"	10YR 2/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- X Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X No ___	Depth (inches):	12
Water Table Present?	Yes ___ No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes X No ___	Depth (inches):	6"

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: DES 1700022 US 231 and Cline Ave. Intersection City/County: Crown Point/Lake Sampling Date: 5/24/2019

Applicant/Owner: INDOT State: IN Sampling Point: DP02

Investigator(s): Tim Meeks, Ben Long Section, Township, Range: S10, T34N, R9W

Landform (hillslope, terrace, etc.): Till Plain Local relief (concave, convex, none): none

Slope (%): 1% Lat: 41.420364 Long: -87.432382 Datum: NAD83 UTM16N

Soil Map Unit Name: Pc- Pewamo silty clay loam -hydric NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks:
Sparse vegetation is present where routine tilling for agricultural production has taken place.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Ranunculus sceleratus*	5%	Yes	OBL
2. *Packera glabella*	1%	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	6%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	5%	x1 =	0.05
FACW species	1%	x2 =	0.02
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	6% (A)		0.07 (B)

Prevalence Index = B/A = 1.17

Hydrophytic Vegetation Indicators:

X 1-Rapid Test for Hydrophytic Vegetation
X 2-Dominance Test is >50%
___ 3-Prevalence Index is ≤3.0[1]
___ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10"	10YR 3/1	100					Clay Loam	
10-20"	10YR 4/3	80	10YR 5/8	20	C	M	Sandy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators[3]:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5 cm Mucky Peat or Peat (S3)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Test Indicators of Hydric Soils:

___ Iron-Manganese Masses (F12)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]The hydric soil indicators have been updated to comply with the *Field Indicators of Hydric Soils in the United States*, Version 8.0, 2016.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Soils have been routinely tilled for agricultural production.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Gauge or Well Data (D9)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____
Water Table Present? Yes ___ No X Depth (inches): >18"
Saturation Present? Yes ___ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 01/06/2020

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Tim Meeks-Senior Staff Scientist, Cardno Inc. 708 Roosevelt Road, Walkerton, IN 46574

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

The Troyer Group US 231 and Cline Avenue intersection in Crown Point, Lake County, Indiana (INDOT Des No. 1700022). The project is located in Sections 2, 3, 10, and 11, Township 34 North, Range 9 West on the Saint John, Indiana USGS 7.5' topographic map quadrangle. The proposed project will involve the reconstruction of the intersection at US 231 and Cline Avenue. The proposed plan is to replace the four-way-intersection with a roundabout and would also include pavement resurfacing, relocating utilities, and possible pavement coring.
The project area consists of US 231 and Cline Avenue right of way as well as crop agricultural fields, maintained lawns, driveways, utility corridors, and roadside drainage ditches.

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: IN County/parish/borough: Lake City: Crown Point

Center coordinates of site (lat/long in degree decimal format):

Lat.: 40.847550 N Long.: -86.745495 W

Universal Transverse Mercator: 16N

Name of nearest waterbody: UNT to Beaver Dam Ditch >0.4 miles

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland 01	41.420656 N	-87.432456 W	1.49 ac	Wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: Cardno supplied figure set.
- ■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report. Rationale: _____.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☐ U.S. Geological Survey Hydrologic Atlas: _____.
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ■ U.S. Geological Survey map(s). Cite scale & quad name: Saint John 7.5 minute.
- ■ Natural Resources Conservation Service Soil Survey. Citation: U.S. Dept of Agricultural Websoil Survey 2019.
- ■ National wetlands inventory map(s). Cite name: U.S. Fish and Wildlife Service, National Wetland Inventory 2019.
- ☐ State/local wetland inventory map(s): _____.
- ■ FEMA/FIRM maps: 18089C0241E 01/18/2012.
- ☐ 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- ■ Photographs: ■ Aerial (Name & Date): 2016 Google Earth.
  or ■ Other (Name & Date): Field Survey 05/24/2019.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	_____
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

National Flood Hazard Layer FIRMette

Appendix F-34

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) *Zone A, V, A99*
  - With BFE or Depth *Zone AE, AO, AH, VE, AR*
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
  - Future Conditions 1% Annual Chance Flood Hazard *Zone X*
  - Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
  - Area with Flood Risk due to Levee *Zone D*
- **OTHER AREAS**
  - NO SCREEN Area of Minimal Flood Hazard *Zone X*
  - Effective LOMRs
  - Area of Undetermined Flood Hazard *Zone D*
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

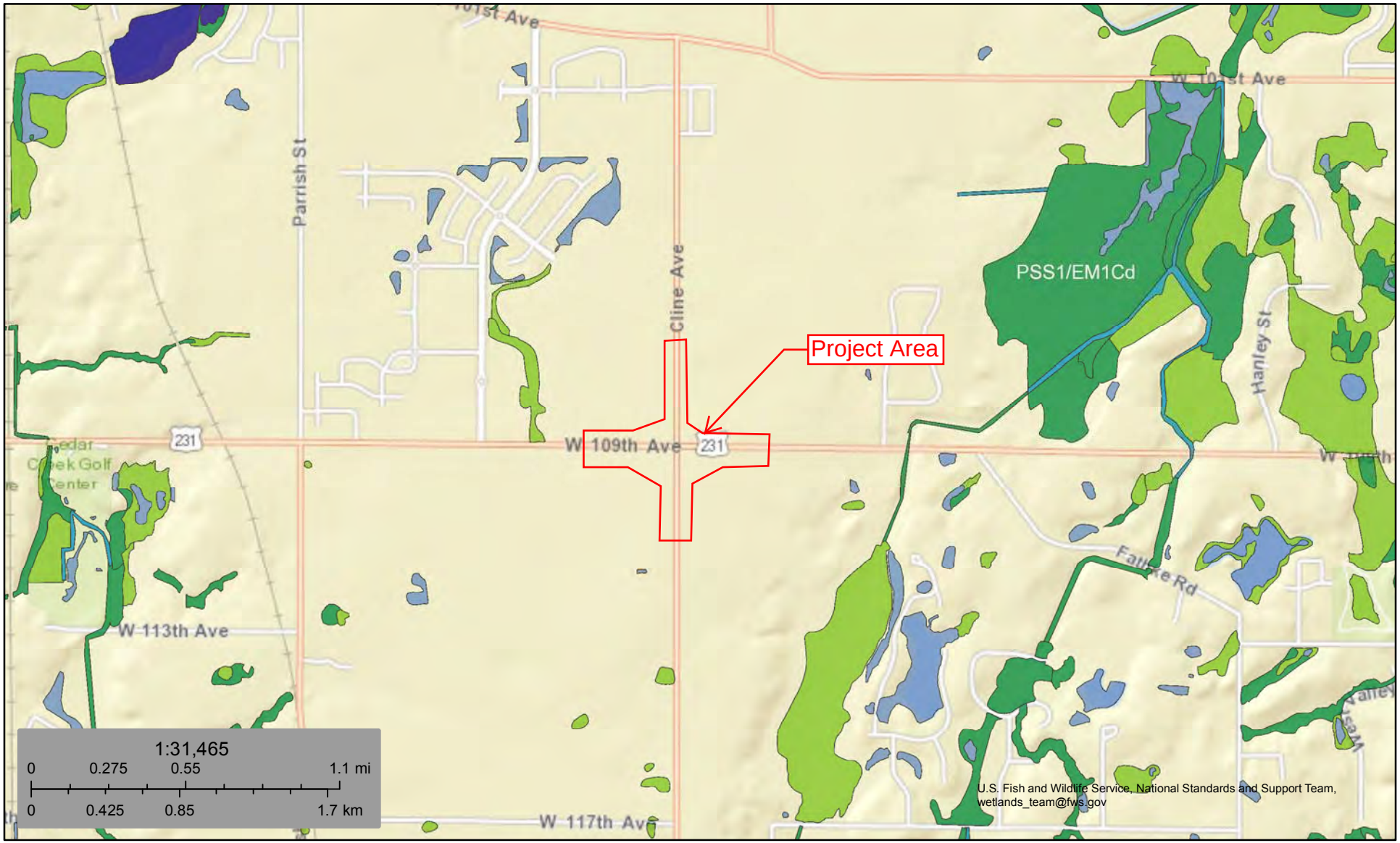
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/10/2019 at 2:53:29 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Des. No. 1700022 US 231 at Cline



April 10, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

APPENDIX G
Public Involvement

JONES PETRIE RAFINSKI
your one single source

Surveying • Engineering • Planning • Architecture • Utility Management
GIS • Environmental • Renewable Energy • Landscape Architecture

January 7, 2019

Property Owner

RE: NOTICE OF SURVEY, INDOT DES NO. 1700022, U.S. 231, LAKE COUNTY, INDIANA

Dear Property Owner:

Our information indicates that you own or occupy property near the proposed highway project (U.S. 231 aka 109th Avenue) at Cline Avenue in Lake County. Our employees will be doing a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law under Indiana Code IC 8-23-7-26. If you are available, they will show you their identification before coming onto your property. If you have sold this property, or it is occupied by someone else, please let us know the name and address of the new owner or current occupant so we can contact them regarding the survey.

At this stage we generally do not know what effect, if any, our project may eventually have on your property. If we determine later that your property is involved, we will contact you with additional information.

The survey work will include mapping the location of features such as trees, buildings, fences and drives, and obtaining ground elevations. The survey is needed for the proper planning and design of this highway project. Please be assured of our sincere desire to cause you as little inconvenience as possible during this survey. If any problems do arise, please contact our field crew or contact me at 574-232-4388.

Sincerely yours,

Jeffrey S. Barnes, PS
Professional Surveyor

H:\2018 Projects\2018-0342\Surv\Notice of Survey Letter\2019-01-07 Des No. 1700022 US 231 Notice of Survey Letter.docx

jpr1source.com

200 Nibco Parkway
Suite 200
Elkhart IN 46516
574.293.7762

325 S Lafayette Blvd
South Bend IN 46601
574.232.4388

108 W Columbia St.
Fort Wayne IN 46802
260.422.2522

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

Eric Holcomb, Governor
Joe McGuinness, Commissioner

LEGAL NOTICE OF PUBLIC HEARING – DES# 1700022
Proposed intersection improvement at US 231 and Cline Ave, St. John, Lake County

The Troyer Group, in coordination with the Indiana Department of Transportation (INDOT), will host a public hearing on Wednesday, March 9 at Suncrest Christian Church, 10009 Parrish Ave, St. John, IN 46373. The hearing will begin at 6:00 P.M. CST. Prior to the official public hearing, project representatives will be available during a project open house from 5:00 P.M. CST. Following the public hearing, a second project open house will occur. The purpose of the public hearing is to offer all interested persons an opportunity to comment on current preliminary design plans to modify the intersection at US 231 with Cline Avenue, St. John, Lake County. The project area will extend from 0.22 mile west to 0.18 mile east of the intersection on US 231, and from 0.13 mile north to 0.12 mile south of the intersection on Cline Avenue. The need for this project stems from the intersection's existing safety deficiencies. The intersection sees a high rate of traffic accidents and injuries, due in part to the current intersection geometry. The purpose of the proposed project is to increase operational safety at the intersection and to reduce the frequency of severe accidents at this location.

The public hearing will follow Indiana State Department of Health (ISDH) guidance health and safety protocols, including encouraging the use of face coverings, providing hand sanitizer, providing ample access to handwashing facilities, implementing social distancing, and monitoring the number of attendees participating to comply with local ordinances. Face coverings will be available upon request.

For those wishing to participate in the hearing, but not attend in-person, the public hearing will be streamed live over the internet via Facebook Live from INDOT Northwest's Facebook page (https://www.facebook.com/INDOTNorthwest/).

As proposed, the project involves the conversion of the existing signalized intersection into a roundabout at the intersection. The roundabout lanes will be 16 ft. wide, with 10 to 24-ft truck aprons between the travel lanes and the center island. Concrete splitters will be installed at each approach to better direct traffic flow. Additional grading will be done, at the request of the INDOT district, in the northwest and southeast quadrants to allow for the possibility of right-turn bypasses being added to Cline Ave. at a future date. No paving will be done in these areas as part of this project. In order to accommodate stormwater drainage within the proposed project limits, the existing storm sewer network will be improved. The existing storm sewer pipes will be replaced in a configuration that diverts water around the proposed roundabout. Storm sewer improvements will be limited to the minimum area needed to accommodate the project and will not include improvements outside of the project area. In addition, five culvert structures within the intersection, ranging from 15 to 24 inches in diameter, will have end sections matching the existing diameters installed to extend the structures. Permanent lighting around the intersection will be reconfigured to accommodate the proposed roundabout.

As proposed, the maintenance of traffic (MOT) for the project will be phased. During phase one,

east-west traffic on US 231 will remain open, while Cline Ave will be closed to north-south traffic. A detour using local routes following 101st Ave., Parrish St., and 117th Ave., will be implemented. This detour is approximately 4.6 miles long and will add roughly five minutes to the average commute. Phase two involves full closure of the intersection and utilization of a detour. The detour will use US 231, US 41, US 30, and SR 55. It will be approximately 16 miles long, and will add 10.5 miles to the average daily commute. This MOT plan is expected to be in place for approximately one construction season, or 8-10 months, with a roughly even breakdown between the two phases.

Additional project details will be presented during the public hearing and will be also made available via the INDOT website.

Construction is anticipated to begin in Spring of 2024. The project will be entirely State funded and will not use local or federal funds. Current project costs are expected to be approximately $2,702,321. The project is anticipated to require acquisition of approximately 8.367 acres of permanent ROW from adjacent properties. Approximately 1.748 acres of existing ROW within the US 231 and Cline Avenue corridors will need to be reacquired due to a lack of clear title, as well. No relocations are anticipated for this project. INDOT and the Federal Highway Administration have agreed that this project poses minimal impact to natural environment. A Categorical Exclusion (CE) level 3 environmental document has been prepared for the project. This document lists the expected impacts across several environmental categories, including impacts to wetlands and historic properties, both of which exist within or adjacent to this project area. The environmental documentation and preliminary design information is available to view prior on the project webpage and at the following location:

> Lake County Public Library St. John Branch, 9450 Wicker Ave, St. John, IN 46373 & Crown Point Community Library, 122 North Main St, Crown Point, IN 46307. Documents will be available during all library operating hours. Please call ahead for an appointment to access the library (St. John: 219-365-5379, Crown Point: 219-663-0270).

Community members may wish to visit the project webpage at www.in.gov/indot/about-indot/central-office/welcome-to-the-laporte-district/us-231-at-cline-ave-intersection-improvement to view project information. Community members may submit comments to the project team via mail or email. Persons with limited internet access may contact the project team to request project information be mailed to them. Please contact Troyer Group, Attn: James Landry, 3930 Edison Lakes Pkwy, Mishawaka, IN 46545, (574) 259-9976 or jlandry@troyergroup.com.

Public statements for the record will be taken as part of the public hearing procedure. All verbal statements recorded during the public hearing and all written comments submitted prior to, during, and for a period of two (2) weeks following the hearing date will be evaluated, considered, and addressed in subsequent environmental documentation. Written comments may be submitted prior to the public hearing and within the comment period to Troyer Group, Attn: James Landry, 3930 Edison Lakes Pkwy, Mishawaka, IN 46545, email address: jlandry@troyergroup.com or to Michael Grylewicz, INDOT Project Manager at INDOT LaPorte District, 315 E. Boyd Rd., LaPorte, IN 46350, email address: mgrylewicz@indot.in.gov. INDOT respectfully requests all comments be submitted by 5:00 PM CT, March 23, 2022.

With advance notice, INDOT will provide accommodations for persons with disabilities with regards to participation and access to project information as part of the hearings process, including arranging auxiliary aids, interpretation services for the hearing impaired, services for the sight impaired, and other services as needed. In addition, INDOT will provide accommodations for

persons of Limited English Proficiency (LEP) requiring auxiliary aids, including language interpretation services and document conversion. Should an accommodation be required, please contact Lisa Shrader, INDOT Consultant Service Manager at INDOT LaPorte District, 315 E. Boyd Rd., LaPorte, IN 46350, email address: lshrader@indot.in.gov.

This notice is published in compliance with Code of Federal Regulations, Title 23, Section 771 CFR 771.111(h)(1), which states: "Each State must have procedures approved by the FHWA to carry out a public involvement/public hearing program," 23 CFR 450.210(a)(1)(ix) stating, "Provide for the periodic review of the effectiveness of the public involvement process to ensure that the process provides full and open access to all interested Parties and revise the process, as appropriate; and The INDOT Project Development Public Involvement Procedures Manual approved by the Federal Highway Administration on July 7, 2021.

*** Proof of Publication ***

State of Indiana)
) ss:
Lake County)

Personally appeared before me, a notary public in and for said county and state, the undersigned Nicole Muscari who, being duly sworn, says that She/he is Legal Clerk of the Northwest Indiana Times newspaper of general circulation printed and published in the English language in the Town of Munster in state and county afore-said, and that the printed matter attached hereto is a true copy, which was duly published in said paper for 2 time(s), the date(s) of publication being as follows:
Feb 18 & 25, 2022

The Troyer Group /Legals
Cherryl Connors
3930 EDISON LAKES PKWY P.O. BOX 543
MISHAWAKA IN 46545

ORDER NUMBER 88380

The undersigned further states that the Northwest Indiana Times newspaper maintains an Internet website, which is located at www.nwi.com website and that a copy of the above referenced printed matter was posted on such website on the date(s) of publication set forth above.

Nicole Muscari, Legal Clerk

By: Amanda Kopp

Subscribed and sworn to before me this 20 day of June, 2022

Dawn Renee Heili
Notary Public

DAWN RENEE HEILI
Notary Public, State of Indiana
Lake County
Commission #696125
My Commission Expires 01/31/25

My commission expires: 1/31/25

Section: Legals
Category: 198 Legal - Lake County
PUBLISHED ON: 02/18/2022, 02/25/2022

TOTAL AD COST:	184.18
FILED ON:	2/25/2022

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The public hearing will follow Indiana State Department of Health (ISDH) guidance health and safety protocols, including encouraging the use of face coverings, providing hand sanitizer, providing ample access to handwashing facilities, implementing social distancing, and monitoring the number of attendees participating to comply with local ordinances. Face coverings will be available upon request.

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As proposed, the project involves the conversion of the existing signalized intersection into a roundabout at the intersection. The roundabout lanes will be 16 ft. wide, with 10 to 24-ft truck aprons between the travel lanes and the center island. Concrete splitters will be installed at each approach to better direct traffic flow. Additional grading will be done, at the request of the INDOT district, in the northwest and southeast quadrants to allow for the possibility of right-turn bypasses being added to Cline Ave. at a future date. No paving will be done in these areas as part of this project. In order to accommodate stormwater drainage within the proposed project limits, the existing storm sewer network will be improved. The existing storm sewer pipes will be replaced in a configuration that diverts water around the proposed roundabout.

Storm sewer improvements will be limited to the minimum area needed to accommodate the project and will not include improvements outside of the project area. In addition, five culvert structures within the intersection, ranging from 15 to 24 inches in diameter, will have end sections matching the existing diameters installed to extend the structures. Permanent lighting around the intersection will be reconfigured to accommodate the proposed roundabout.

As proposed, the maintenance of traffic (MOT) for the project will be phased. During phase one, east

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*** Proof of Publication ***

Manager at INDOT LaPorte District, 315 E. Boyd Rd., LaPorte, IN 46350, email address: mgrylewicz@indot.in.gov. INDOT respectfully requests all comments be submitted by 5:00 PM CT, March 23, 2022.

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2/18, 2/25 - 88380 HSPAXLP

ATTACH COPY OF ADVERTISEMENT HERE

Prescribed by State Board of Accounts

General Form No. 99P (Rev. 2009A)

The Troyer Group
(Governmental Unit)

To: The Times Media Company

Lake County, Indiana

601-45th Avenue, Munster, IN 46321

PUBLISHER'S CLAIM

LINE COUNT

Display Master (Must not exceed two actual lines, neither of which shall total more than four solid lines of the type in which the body of the advertisement is set) -- number of equivalent lines .....

Head -- number of lines ....

Body -- number of lines ....

Tail -- number of lines ....

Total number of lines in notice ....

COMPUTATION OF CHARGES

252 lines, ...1..... columns wide equals 252 equivalent lines at .7338 cents per line − 1 Line ..... $ 184.18

Additional charges for notices containing rule or tabular work (50 per cent of above amount) ....

Charge for extra proofs of publication ($1.00 for each proof in excess of two) ....

TOTAL AMOUNT OF CLAIM ..... $ 184.18

DATA FOR COMPUTING COST

Width of single column in picas 9p4

Size of type 7.0 point.

Number of insertions 2

88380

Pursuant to the provisions and penalties of IC 5-11-10-1, I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.

I also certify that the printed matter attached hereto is a true copy, of the same column width and type size, which was duly published in said paper (2) times. The dates of publication being as follows:

.....

Feb 18 & 25, 2022

Additionally, the statement checked below is true and correct:

..... Newspaper does not have a Web site.

..X.. Newspaper has a Web site and this public notice was posted on the same day as it was published in the newspaper.

..... Newspaper has a Web site, but due to technical problem or error, public notice was posted on .....

..... Newspaper has a Web site but refuses to post the public notice.

Date June 20 2022

Nicole L. Muscari

Title: Legal Clerk

By .....

LEGAL ADVERTISING

See table of legal rates in the applicable State Board of Accounts Bulletin

Claim No. _____ Warrant No. _____

IN FAVOR OF

$_____

ON ACCOUNT OF APPROPRIATION FOR

The Times Media Company
601 W. 45th Avenue, Munster, IN 46321

Appropriation No. _____

ALLOWED _____

IN THE SUM OF $_____

I have examined the within claim and hereby certify as follows:

That it is in proper form.

That it is duly authenticated as required by law.

That it is based upon statutory authority.

correct

That it is apparently

incorrect

I certify that the within claim is true and correct, that the services there in itemized and for which charge is made were ordered by me and were necessary to the public business

_____

_____

Project Stakeholders

Agency	Email/contact info
Federal Highway Administration	k.carmanygeorge@dot.gov
Indiana Department of Natural Resources - DFW	environmentalreview@dnr.in.gov
US Fish and Wildlife Service	elizabeth_mccloskey@fws.gov
Army Corps of Engineers - Chicago District	chicagorequests@usace.army.mil
INDOT LaPorte District - Environmental Coordinator	SMichels@indot.IN.gov
NRCS	Rick.neilson@in.usda.gov
NIRPC	kluther@nirpc.org
Indiana State Senator, District 6	Senator.Niemeyer@iga.in.gov
Lake County Highway Superintendent	110 E. Monitor St, Crown Point, IN 46307
Lake County Surveyor	emerson@lakecountyin.org
Lake County Board of Commissioners	Building A 3rd Floor, 2293 N Main St, Crown Point, IN 46307
Town of St. John Council, Ward 2	gswets@stjohnin.com
Town of St. John, Town Manager	csalatas@stjohnin.com
Town of St. John, MS4 coordinator	10955 W 93rd Ave, St John, IN 46373

Adjacent Landowners

Property Owner	Mailing Address
Donald Barman	7910 W 109th Ave, Crown Point, IN 46307-8843
Lake County Trust Co. - Trust #5272	8700 S Chicago Ave, Chicago, IL 60617
Edward J & Kim E Strbjak	10745 Peachtree Ln, St. John, IN 46373
Ted & Kathy Chapman	495 Brighton Ln, Dyer, IN 46311
Illiana Construction Co.	PO Box 120, Lansing, IL 60438
BLB St. John, LLC	10865B Maple Ln, St. John, IN 46373
Jose Pinto	8330 W 109th Ave, St. John, IN 46373
KRT Properties, LLC	11798 Clark Ct, Crown Point, IN 46307
Lake County Highway Superintendent	110 E. Monitor St, Crown Point, IN 46307
Lake County Board of Commissioners	Building A, 3rd Floor, 2293 N Main St, Crown Point, IN 46307
Town of St. John, MS4 Coordinator	10955 W 93rd Ave, St. John, IN 46373

INDOT Des. No. 1700022

Proposed intersection improvement at US 231 & Cline Ave, Lake County

SIGN-IN SHEET **PLEASE PRINT**

DATE: March 09, 2022

Before including your address, phone number, e-mail address, or other personal identifying information on the meeting sign-in sheet or on your comment submittal, be advised that your comment "including your personal identifying information" may be made publicly available at any time. Though you can ask us to withhold personal identifying information from public review, we cannot guarantee that we will be able to do so.

NAME	ADDRESS	EMAIL (OPTIONAL)
Karl Koenig	10186 Hanley St.	[redacted]
Wally Bunner	11613 Cline Ave	[redacted]
STEVEN FLORES	11033 W. 93RD AVE. ST. JOHN	[redacted]
Russ Johnston	12601 Morning Dove Dr Cedar Lake	[redacted]
Ruth & Ralph Derold	11894 Parrish Ave Cedar Lake IN	
Steve & Cathy Thomas	7070 West 105th Place, Crown Point,	IN
Ken Hueman	10378 W. 151st Cedar Lake In	
Joseph Michalik	11829 Lee St Crown Point.	
Stephanie Michalik	11	
Norma Lindsey	11022 Cline Ave. Crown Point, IN	
RAYMOND HODGOW	13417 FIR STREET CEDAR LAKE, IN	[redacted]
ERNEST YRAM	12730 PARRISH AVE CEDAR LAKE, IN	

INDIANA DEPARTMENT OF TRANSPORTATION

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NAME	ADDRESS	EMAIL (OPTIONAL)
Babette Houdeshell	11607 Cline Ave	———
Judith Houser	11607 Cline Ave	———
Len Barman	7910 W 109th Ave CP	[redacted]
Rebecca Hoogewerf	6901 W 108th Ave CP	
Pamela Swarens	7471 West 83rd Lane CP	
Martin Werth	7237 Tapper Hammond IN.	
Bob Davis	10176 Belmont Ct. St. John	
Duane Alverson	1100 E. Munster Grand Point	[redacted]

INDIANA DEPARTMENT OF TRANSPORTATION

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NAME	ADDRESS	EMAIL (OPTIONAL)
BRYAN BLAZAIK	9299 FRANKLIN DR.	[redacted]
Jay Curt	10776 Sherman	
SARAH MOORE	9391 Chestnut Cove	[redacted]
Richard Oesterle	13120 W. 135th AVE. 46303	
Garry & Darlene DeBock	9163 Green Meadow 46303	
Clifford Hyad	11586 Cline Ave 46307	

INDIANA DEPARTMENT OF TRANSPORTATION

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NAME	ADDRESS	EMAIL (OPTIONAL)
Paul Obarski	7422 W. 127th Ave CEDAR LAKE,	[redacted]
PATRICK CONLON	12516 HAVENWOOD PASS IN 46303	
Rick Niemeyer	13304 W 181st Ave	Lowell
Dawn Gower	8605 W 138th Pl C.L.	
Russ Gower	8605 W 138th Pl Cedar Lake	
Shirley Moran	10715 Peach Tree Lane St. John	
GERALD ECKMAN	12718 MARSH LANDING COOPERLAKE	
Dave Gorecki	10225 Ayala D. C.P.	
KRISTIAN SORENSON	12622 PRINCE DR. ST JOHN	
TOM ADAMEK	9401 CHESTNUT CV ST. JOHN	
Dan Klein	11315 PARRISH Ave C.L.	
Gayle Weeks	13108 Hobart Ct. C.L.	

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NAME	ADDRESS	EMAIL (OPTIONAL)
Chris Barman	7910 W 109th Ave	[redacted]
Don Barman	7910 W 109th Ave	[redacted]
Donna Barman	7910 W 109th Ave	[redacted]
Mary Brzakowska	7304 W 134th Pl	
Nick Crnokrak	10656 Bell St	[redacted]
Dennis Hutchens	11019 Fathke Road	
Nancy Kleine	11315 Parrish Ave CL	[redacted]
Michael Schilling	14231 Onyx Way	

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NAME	ADDRESS	EMAIL (OPTIONAL)
Loretta Nelson	9005 W 117th Ave	[redacted]
Harold Monken	8443 Larkspur T	[redacted]
Joseph Wiszowaty	10955 W 93rd Ave St.	[redacted]
MARGARET Valois	11311 Cline Ave C.P	
MARGARET GOVERT	10225 AZALEA DR. C.P.	
Adam Kutemeier	727 Cub Run, Valparaiso	
Helen Terry	7112 W 138th Ave C.L	
Raymond Terry	"	

INDIANA DEPARTMENT OF TRANSPORTATION

SPEAKERS SCHEDULE

INDOT Des. No. 1700022
Proposed intersection improvement at US 231 and Cline Ave, Lake County

ALL WISHING TO SPEAK, PLEASE SIGN UP BELOW.
Speaker order will occur as listed below, beginning with elected and local officials.

	NAME (Please Print)
1	~~Karl A. Boenig~~
2	Wally Bimmer
3	Judy Houser
4	Joseph Michalik
5	LEN BARMAN
6	CHRIS BARMAN
7	MARTIN WIERTN
8	NICK CRNOKRAK
9	Paul Panczak
10	KRIS SORENSON
11	Don Barman
12	Butch Houser
13	Russ Johnston
14	Russ Gower
15	Karl Boenig
16	Wally
17	Nick Crnokrak
18	Joseph Michalik
19	Donna Heinz
20	Margaret Malloy

SPEAKERS SCHEDULE – Elected/Local Officials

INDOT Des. No. 1700022
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	NAME (Please Print)
1	Rick Niemeyer — State Senator Niemeyer
2	Jerry Tipps — Lake County Commissioner
3	
4	
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INDIANA DEPARTMENT OF TRANSPORTATION

Public Hearing Agenda
Proposed intersection improvement at US 231 and Cline Ave, Lake County
INDOT Des. No. 1700022

5-6 pm **Project Open House**

6 pm **Meeting called to Order**

- Formal Presentation
  - NOTE: Questions or comments during the hearing should be deferred to the Public Comment Session or the Project Open House.
- Public Comment Session
  - Speakers will appear in this order:
    - Elected officials
    - Signed-up speakers (in order)
    - All others will be invited to speak.
  - Please clearly state your name prior to providing your comments.
  - Responses to questions or comments during the formal comment session will not be provided immediately. All verbal statements recorded during the public hearing will be transcribed and will be made part of the project record.

6:45 pm **Project Open House**

- The Formal Presentation and Comment Session may run beyond 6:45; however, the project team will remain available in the display area outside of the lecture hall to address questions.

All substantive comments received prior to, during, and following the public hearing will be evaluated and responded to in writing within the subsequent project documentation. The documentation will address concerns presented during the public hearing process and describe project decisions reached following careful consideration of the views and concerns of the public. Comments may be submitted by leaving the attached comment sheet with INDOT officials at the conclusion of the hearing, or by contacting the following:

- Troyer Group, attn: James Landry – jlandry@troyergroup.com; 3930 Edison Lakes Pkwy, Mishawaka, IN, 46575; (256) 633-0283
- INDOT, attn: Lisa Shrader – lshrader@indot.in.gov; 315 E Boyd Blvd, LaPorte, IN 46350; (219) 325-7522.

The draft environmental document is available for public review and inspection at the following locations:

- LAKE COUNTY PUBLIC LIBRARY, St. John Branch – 9450 Wicker Ave, St. John, IN 46373 Please call ahead for an appointment to access the document (219-365-5379). Please be aware of hours: 11 am–7pm Mon-Wed,; 9am–5pm Thurs-Sat; Closed Sun.

- CROWN POINT COMMUNITY LIBRARY – 122 N Main St, Crown Point, IN 46307 Please call ahead for an appointment to access the document (219-663-0270). Please be aware of hours: 9 am–8pm Mon-Thurs,; 9am–5pm Fri-Sat; 1pm-5pm Sun.

- LaPorte District Project Webpage at: https://www.in.gov/indot/about-indot/central-office/welcome-to-the-laporte-district/us-231-at-cline-ave-intersection-improvement/

Questions: Contact INDOT Customer Service 1-855-463-6848 (1-855-INDOT4U) INDOT@indot.in.gov

Thank you for attending tonight's public hearing.

INDIANA DEPARTMENT OF TRANSPORTATION

Thank you for attending this evening's public hearing regarding the proposed intersection improvement at US 231 and Cline Ave, Lake County. Please submit comments by using the space provided below. INDOT appreciates your attendance and participation this evening.

TODAY'S DATE: Wednesday March 9, 2022

Please submit comments by Wednesday, March 23 for inclusion into the project record:

PRINTED NAME: _____

SIGNATURE: _____

US 231 at Cline Avenue

Intersection Improvement
Lake County
DES-1700022

Indiana Department of Transportation

Wednesday, March 9, 2022
6:00 p.m.
Suncrest Christian Church
10009 Parrish Ave, St. John, IN 46373

Welcome

- Purpose/explanation of public hearing
- Public hearing format
- Visit our sign-in table
- Informational handouts
- Participate during public comment session
- Submit written public comments
- Project display area

US 231 at Cline Avenue Intersection Improvement

- Introduction of INDOT project team
  - Project management
  - Public involvement
  - LaPorte District – INDOT Regional Office
  - Environmental services
  - Real estate
- Troyer Group
  - Engineering, design, and environmental analysis team
- Recognition of elected and local public officials
- Sign-in at attendance table to be added to project mailing list.
- A public hearing notice was mailed to known property owners in the project area.
- An announcement of this hearing was posted to INDOT's website.
- A copy of the presentation and project documentation is available online via INDOT's website.
- Legal notice publishing:
  - Times in Northwest Indiana
    - February 18 and February 25, 2022

Submit Public Comments

- **Submit public comments using the options described in the first page of the information packet:**
  - Public Comment Form
  - Via e-mail (jlandry@troyergroup.com or lshrader@indot.in.gov)
  - Participating during the public comment session via microphone
    - Note that verbal comments will be recorded and transcribed for inclusion into the public hearing transcript.
- **INDOT respectfully requests comments be submitted by 5 p.m. CT March 23, 2022**
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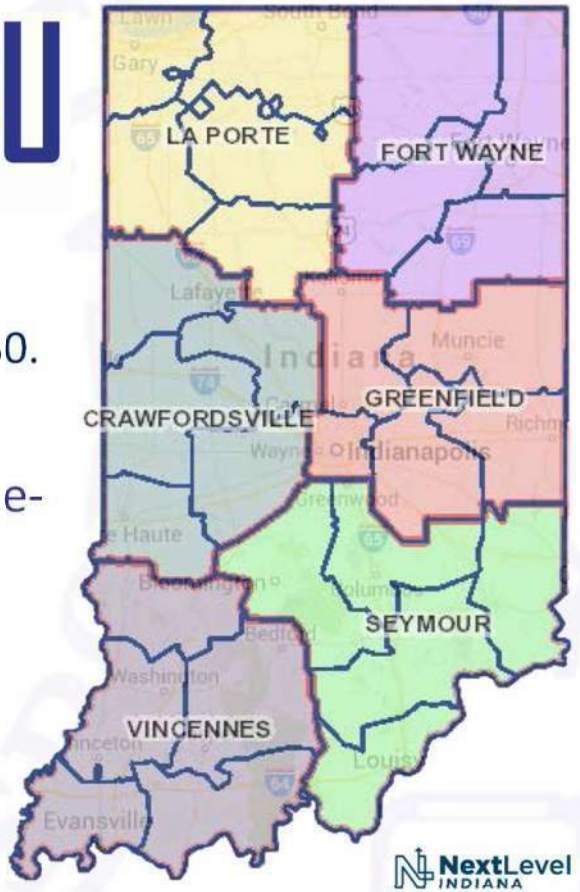
855 INDOT4U

855-463-6848



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Transportation Services Call Center

Provides citizens and business customers with a single point of contact to request transportation services, obtain information, or provide feedback through multiple channels of communication.

855-463-6848 • INDOT4U.com • INDOT@indot.in.gov

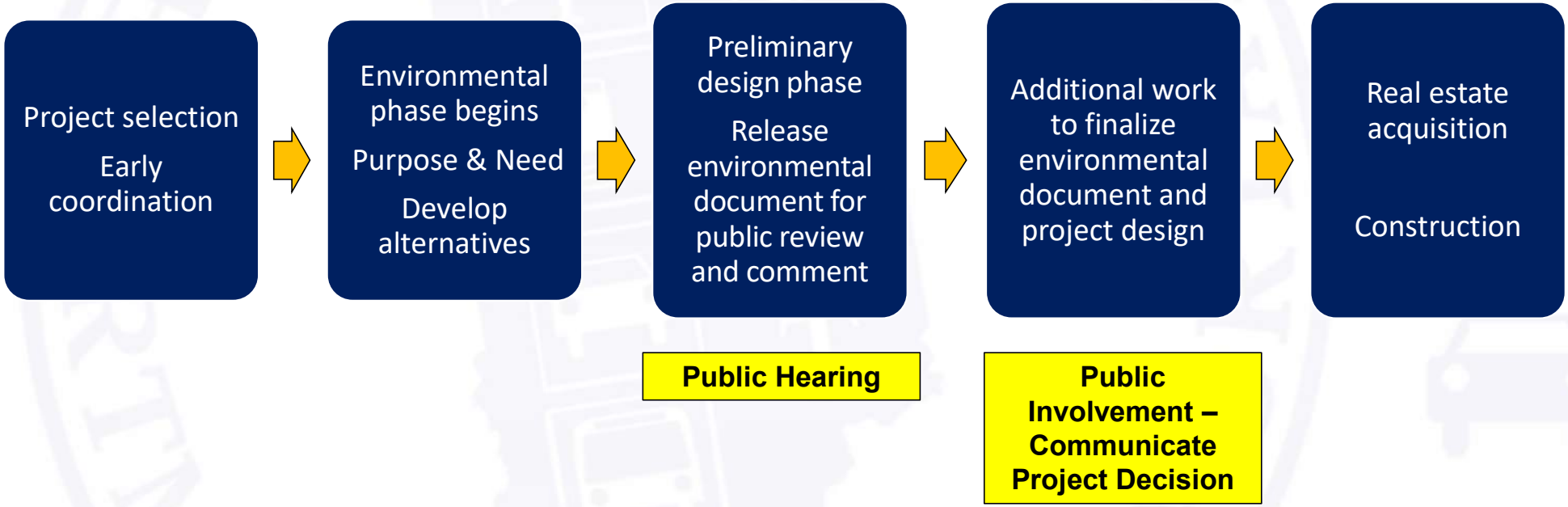
Project Stakeholders

- Indiana Department of Transportation
- Indiana Division Federal Highway Administration
- Lake County
- Elected and Local Officials
- Residents and citizens
- Commuters
- Businesses
- Emergency services
- Schools
- Churches
- Community organizations

Project Schedule

- Public Hearing: March 9, 2022
- Public comments requested by 5:00pm CT, March 23, 2022
- INDOT review and consideration of comments (Winter/Spring 2022)
  - Finalize environmental document
  - Design
  - Project decision
- Real estate acquisition phase: 2022
- Construction: 2024

Project Development



Environmental Document

National Environmental Policy Act (NEPA)

- Requires INDOT to analyze and evaluate the impacts of a proposed project to the natural and socio-economic environments
- NEPA is a decision-making process
  - Purpose and Need
  - Alternatives Screening
  - Preferred Alternative
- NEPA Environmental Documents are divided into categories based on impact level
  - Programmatic Categorical Exclusion (PCE) and CE Level 1 – Least impacts
  - CE Level 2-4 – Average level of impacts
  - Environmental Assessment/Impact Statement – Greatest level of impacts

Environmental Document

- **Impacts are analyzed, evaluated, and described in an environmental document**
  - What are the impacts this project might have on the community?
  - How can impacts be avoided?
  - Can impacts be minimized?
  - Mitigation for impacts?
- **Environmental document released for public involvement**
  - CE Level 3
    - Elevated to level 3 due to wetland impacts; project also has noteworthy impacts to cultural resources and from Right-of-Way acquisition, but not enough to elevate the CE Level any further.
  - January 2022
  - Available for review via public repositories

Environmental Document

- **Environmental Process**
  - Establish purpose and need
  - Develop possible alternatives
    - The “Do Nothing” alternative is a baseline for comparison
  - Evaluate and screen alternatives
  - Identify a preferred alternative
  - Evaluate impacts of preferred alternative
  - Solicit public comment on environmental document and preliminary design plan
  - Address and consider public comment as part of decision-making process
  - Finalize and approve environmental document

Examples of Items Evaluated

- **Right-of-way**
- **Cultural resources (historic/archaeological)**
- Streams, **wetlands**, and other waters
- Floodplains
- Endangered species
- Farmland
- Parks and recreational lands (trails)
- Air quality
- Noise
- Community impacts
- Environmental justice
- Hazardous materials
- **Permits**
- **Mitigation**
- Public involvement
- Commercial development

Historic Properties – Northeast Quadrant

- One Historic Property, the John Barman Farmstead, is located adjacent to the northeast portion of the project area.
- The property was investigated by a Qualified Historian, and after coordination with Indiana State Historic Preservation Office (SHPO) and Indiana Landmarks, was determined to be eligible for the National Register of Historic Places (NRHP).
- After this determination was made, the project design was altered to avoid any construction within the boundaries of the farm property.
  - Roundabout alignment was shifted westward, eliminating the need for any Right-of-Way acquisition from or construction within the boundaries of the Historic Property.
- As a result of redesign, INDOT determined the project would have “No Adverse Effect” on the historic farm in June 2021.
- Consulting Parties were invited to comment on INDOT’s finding. SHPO Approved INDOT’s “No Adverse Effect” finding in July 2021.

Finding of “No Adverse Effect”

Photo 1. John Barman Farm, corner view, facing northeast (INDOT-1a).

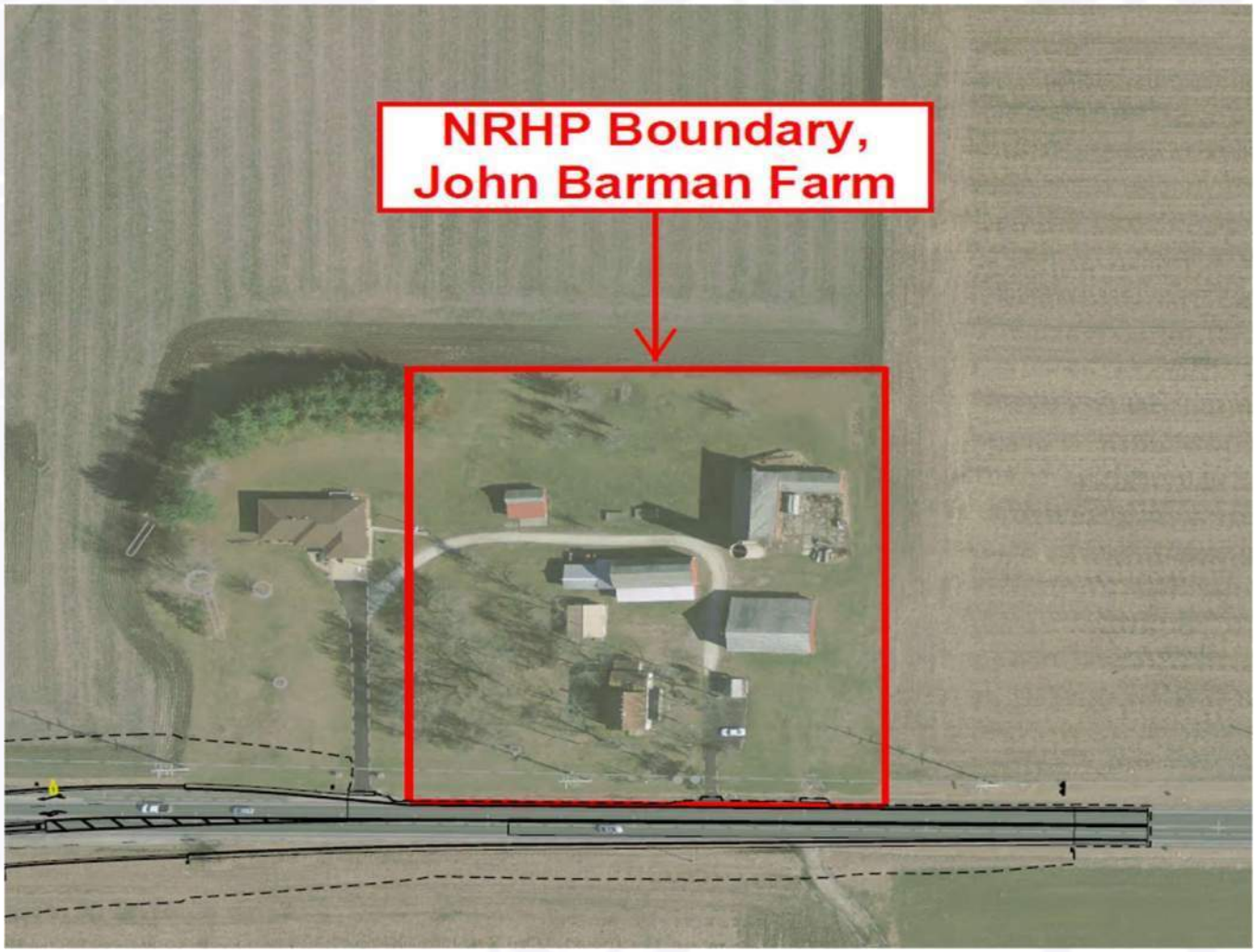
Photo 2. John Barman Farm Outbuildings, facing north (INDOT-1b).

- The John Barman Farmstead property “embodies the broad pattern of agricultural development of the area,” making it eligible for the National Register of Historic Places.
- Common impacts to historic properties from INDOT projects include converting property to a transportation use and altering the visual environment.
- No Right-of-Way will be acquired from the portion of the property that has been designated as historic.
- No new signage or lighting will be placed within 50 ft. of the historic property line. Any new signage or lighting installed will match existing conditions. Therefore, the visual environment will not be impacted.

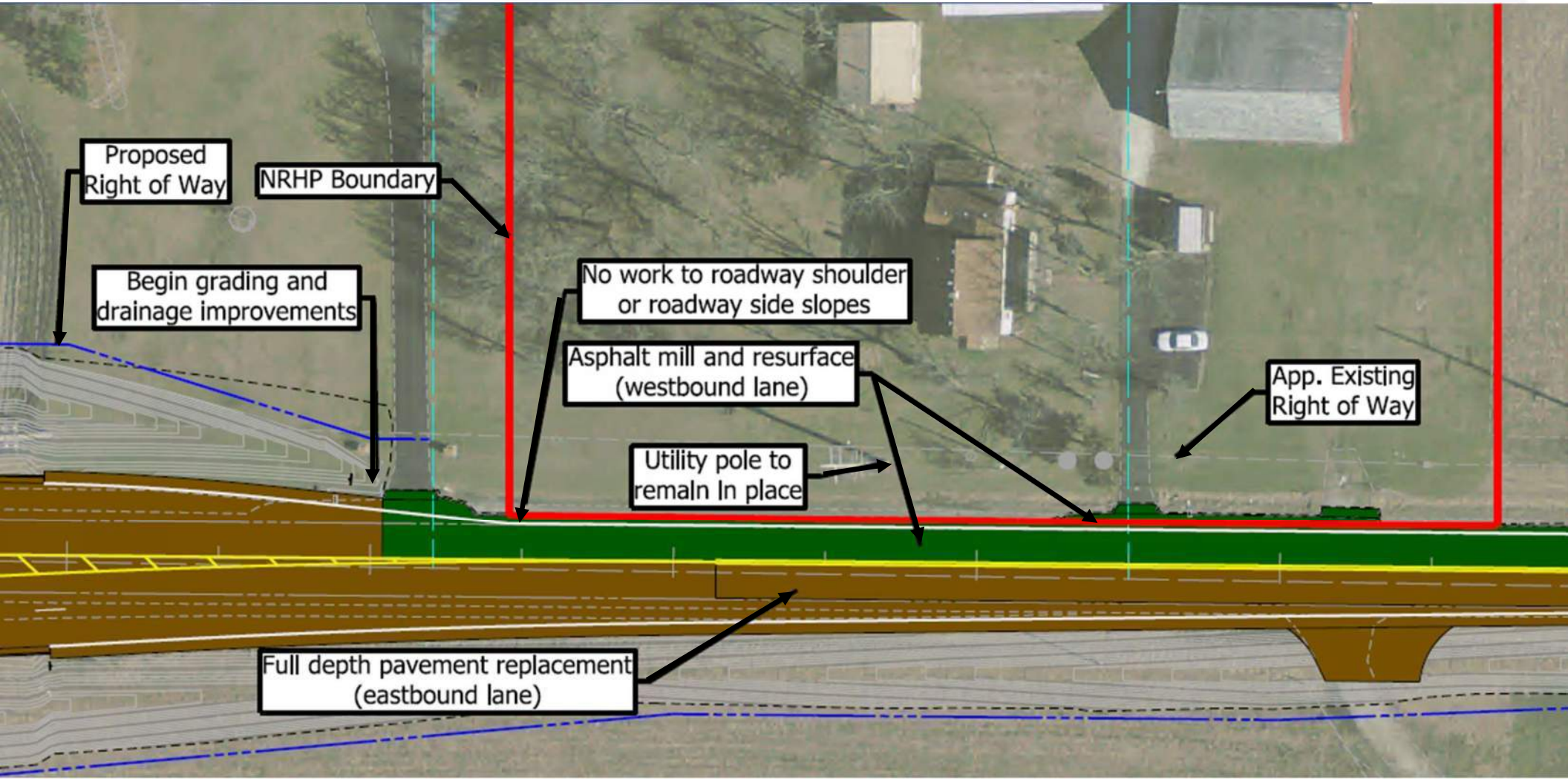
NextLevel INDIANA

Historic Properties (cont.)

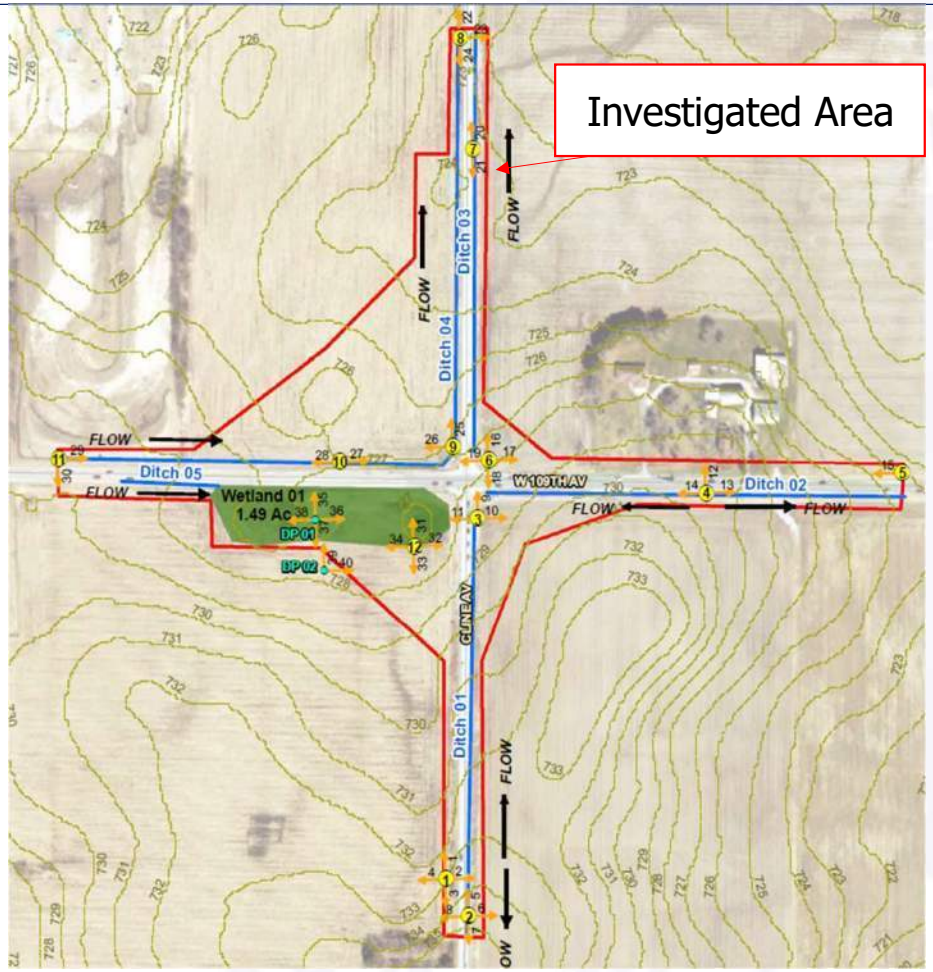
- NRHP southern boundary runs along existing roadway; western boundary extends along east side of the drive and house, but does not include the house; northern and eastern boundaries follow lines of un-tilled land



Historic Properties (cont.)



Wetland Impacts



- 1.49 acre wetland located in southwest quadrant of project area.
- Exists in depressed area at the edge of the farm-field, and receives runoff from both the field and adjacent roadways.
- Due to placement of proposed roundabout, 0.97 acre will be impacted.
- Permits will be acquired from USACE & IDEM, and impacts will be mitigated by purchasing credits from IDNR.
- Credit purchase will provide funding for IDNR to create higher-quality wetlands to make up for wetland acreage lost as part of this project.

US 231 at Cline Ave. – Project Purpose and Need

Purpose

- Increase operational safety at the intersection by reducing the frequency of crashes
- Eliminate turning movements that lead to right-angle crashes.
- Improve the overall efficiency of the intersection.

US 231 at Cline Ave. – Project Purpose and Need

Need

- According to a study from January 2016 to December 2020, 107 crashes occurred at this intersection.
  - This equates to an Intersection Crash Rate of 2.7 crashes per million vehicles entering intersection.
  - 18.7% resulted in injury, with a total of 37 injuries.
  - 74 incidents were rear-end crashes, 10 were left-turn crashes.
- The Level of Service for northbound traffic turning left onto US 231 has fallen below minimum INDOT standards. Other approaches are expected to fall below minimum standards in upcoming years.

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Other Alternatives Considered

- **No Build (Signalized Intersection)**
  - Baseline for comparison of build alternatives.
  - Does not meet purpose and need, does not enhance safety at the intersection, which is likely to decline with traffic growth.
- **Roadway Widening with Traffic Signal & Designated Turn Lanes**
  - **Would reduce number of accidents.**
    - Would require second through lane on US 231 to reduce vehicle queue distance as much as roundabout, resulting in higher cost and greater impacts.
  - **Would not eliminate the possibility for dangerous turning movements.**
    - Drivers will still be able to make dangerous left turns and disregard traffic signals.
  - **Would not improve intersection efficiency as much as roundabout.**
  - **Therefore, while this alternative meets the purpose of increasing safety, it does not offer the same degree of improvement as the preferred alternative.**

Preferred Alternative – Roundabout Intersection

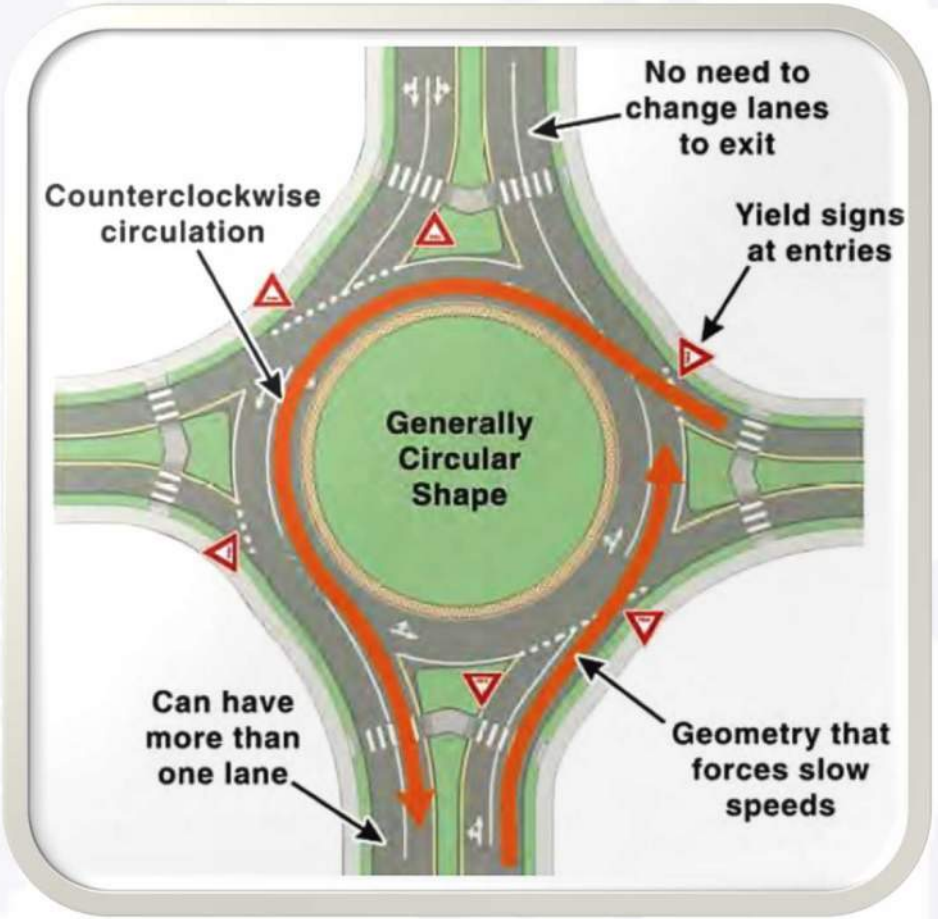
- Meets purpose and need of project
- Enhances safety by:
  - Reducing the number of potential vehicle conflict points
  - Eliminating potential for red-light running
  - Reducing the Vehicle Queue Length at the intersection
  - Significantly reducing the severity of traffic accidents
- Will promote free-flowing traffic, giving the intersection the highest level of efficiency possible.

- Estimated Project Cost: $2,702,321

Existing Intersection

Roundabout – INDOT Preferred Alternative

- One-way circular intersection
- Traffic flows counter-clockwise around a center island
- Yield at entrance
- No parking



Roundabout Traffic Comparison

Both intersections utilize the same traffic data

Left Turning Vehicle

Right Turning Vehicle

Roundabouts Enhance Safety

U.S. DOT Federal Highway Administration Statistics

Traditional intersections account for:

- 45% of all crashes - *FHWA*
- 33% of all traffic fatalities - *FHWA*

Compared to traditional intersections, roundabouts:

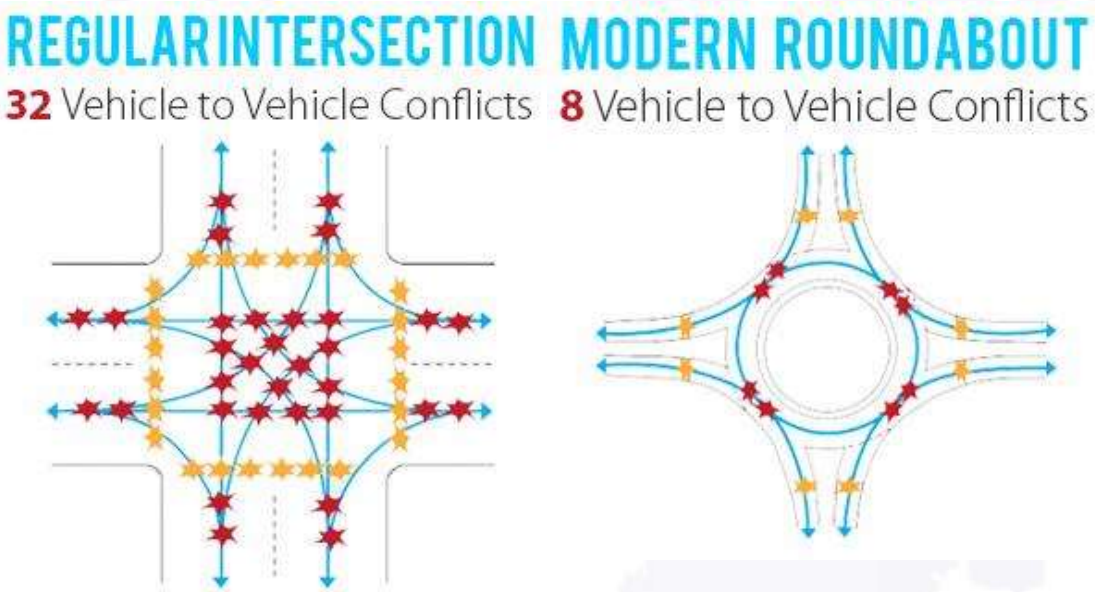
- **Reduce fatalities and injuries by 82% - *FHWA***
- Reduce total crashes by 44% - *FHWA*
- **Require vehicles to travel at lower speeds**

For more information:
http://safety.fhwa.dot.gov/intersection/innovative/roundabouts/

- Collisions at traditional intersections are severe because of:
  - High speed
  - Angle of impact

Benefits of Roundabouts

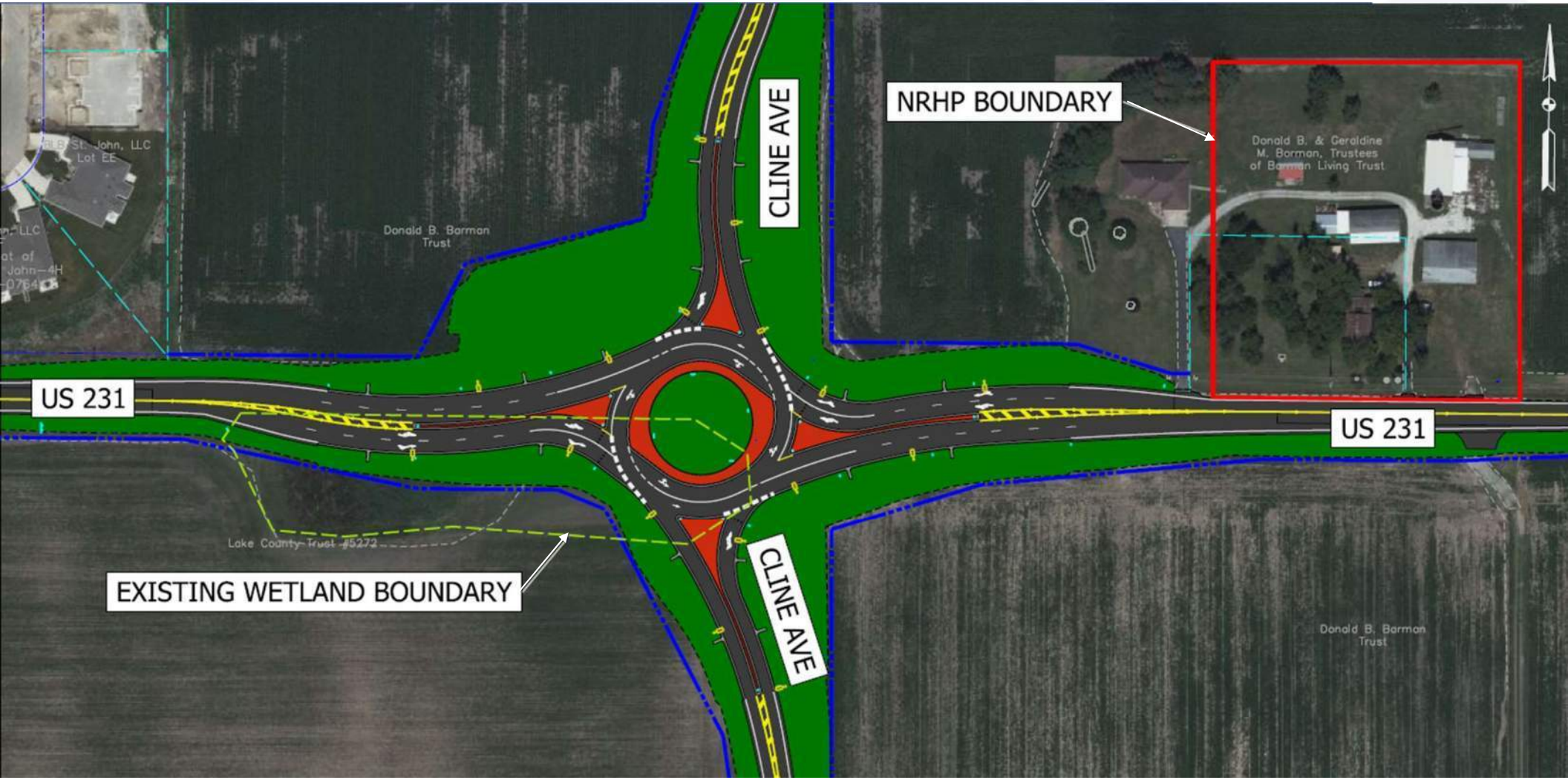
- Conflict points are dramatically reduced because all vehicles travel in the same direction.



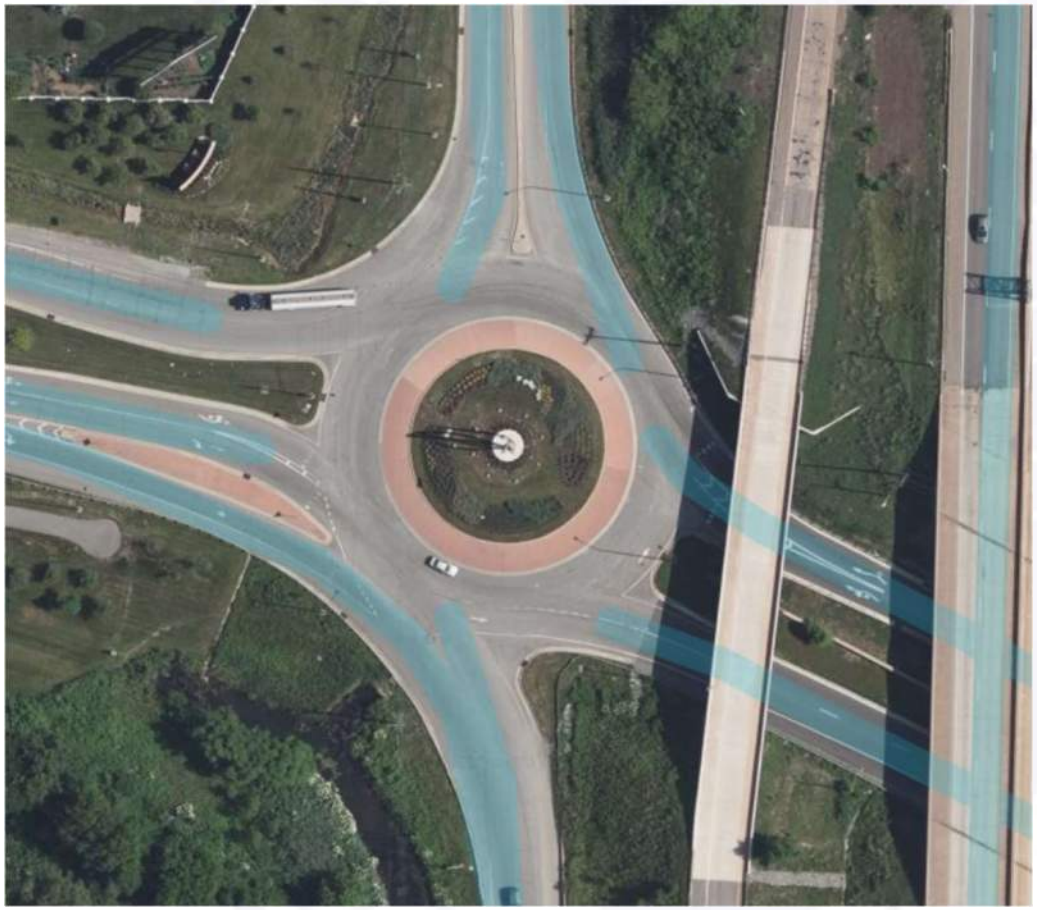
- **Enhances Safety**
  - Roundabouts reduce the number of potential accident points within an intersection.
  - 75% fewer conflict points than four-way intersections.
- **Slower vehicle speeds**
  - Reduces the severity of crashes
- **Efficient traffic flow**
  - Reduces need for turn lanes
  - Improves traffic flow
- **Community benefits**
  - Reduces congestion
  - Aesthetically pleasing landscaping

NextLevel INDIANA

Proposed Roundabout Layout



Example Roundabout – East Chicago



- Located at intersection of US 12, Cline Ave, and Airport Rd. in East Chicago.
- Double-lane Roundabout with two approaches at north, east, and west approaches.
- Single-lane heading north onto Cline or south onto US 12.

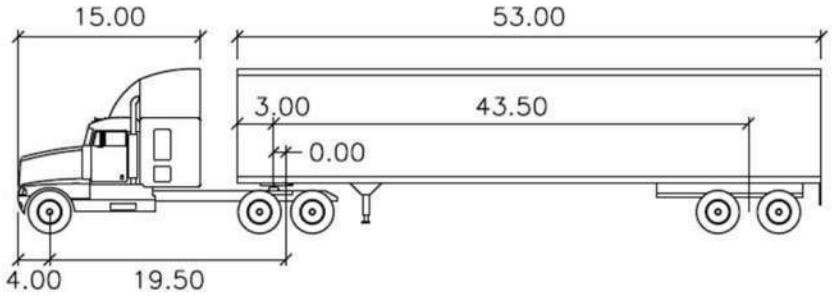
Example Roundabout – Crown Point

- Located at intersection of E. 109th Ave and Mississippi St. in Crown Point.
- Double-lane Roundabout with two approach lanes at the east, and west entrances
- Single-lane for north and south along Mississippi St.

Turning Movement – Semitruck

Turning Movement – Semitruck

Turning Movement – Semitruck

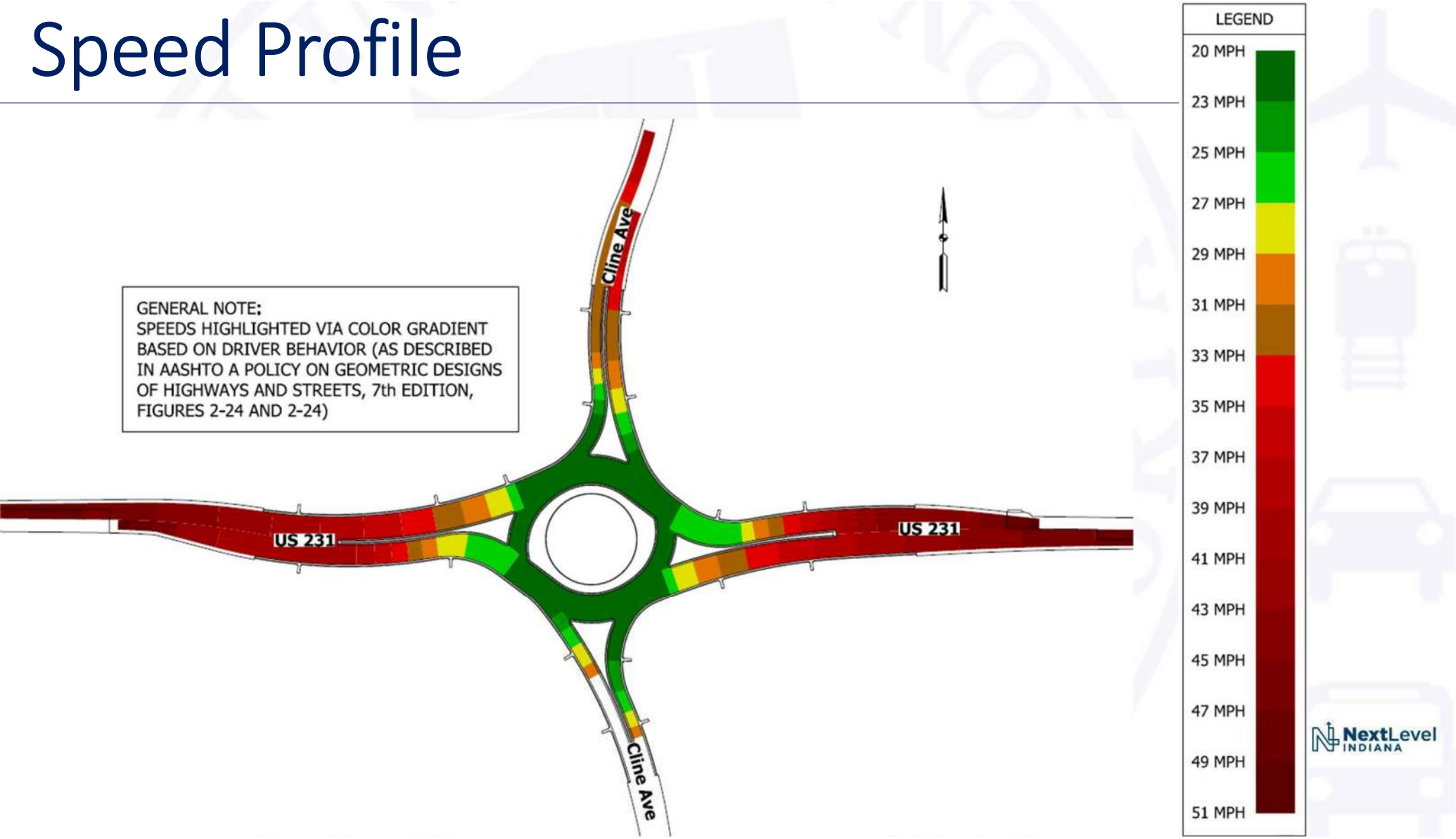


WB–65

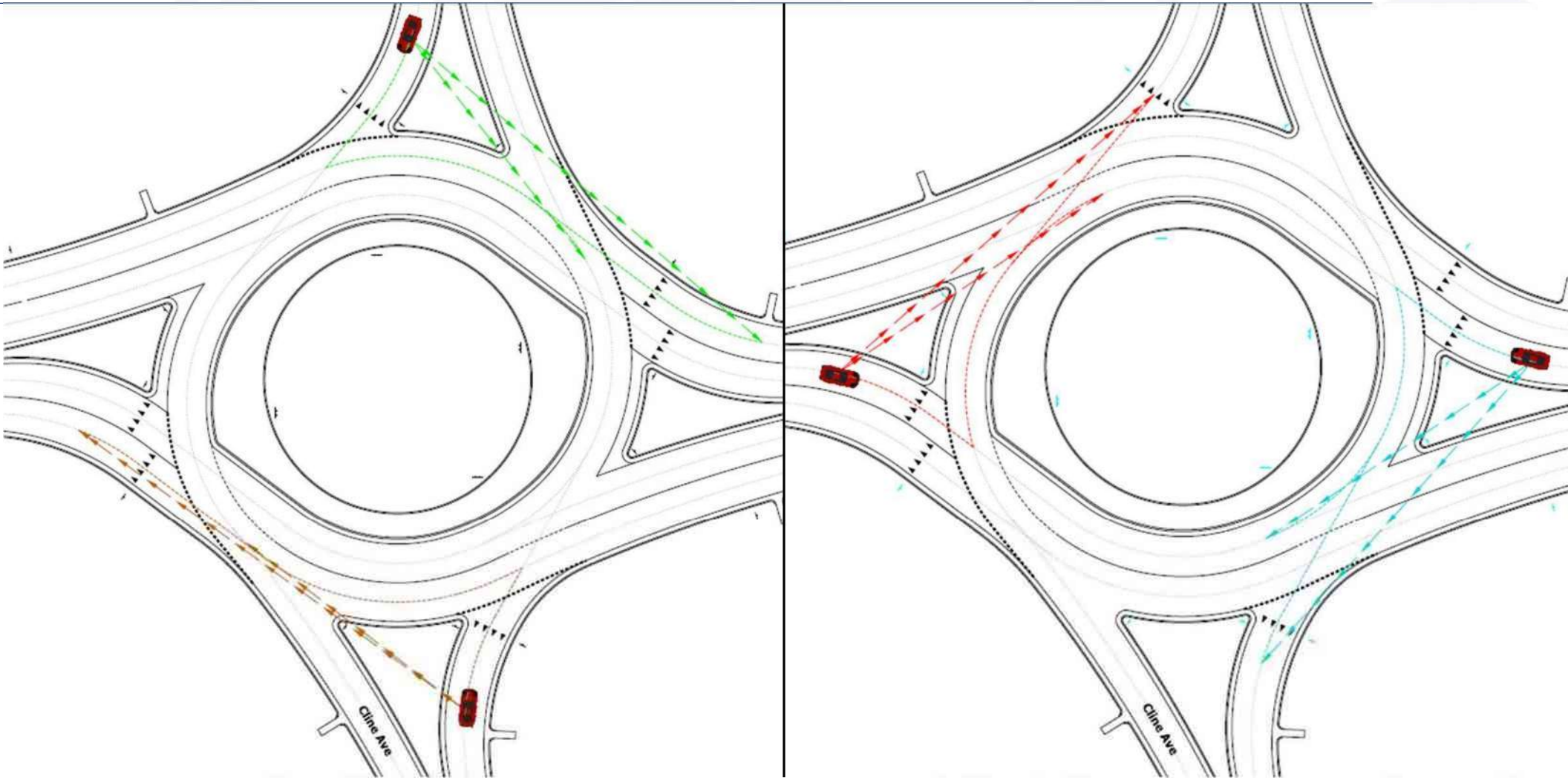
feet

Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		

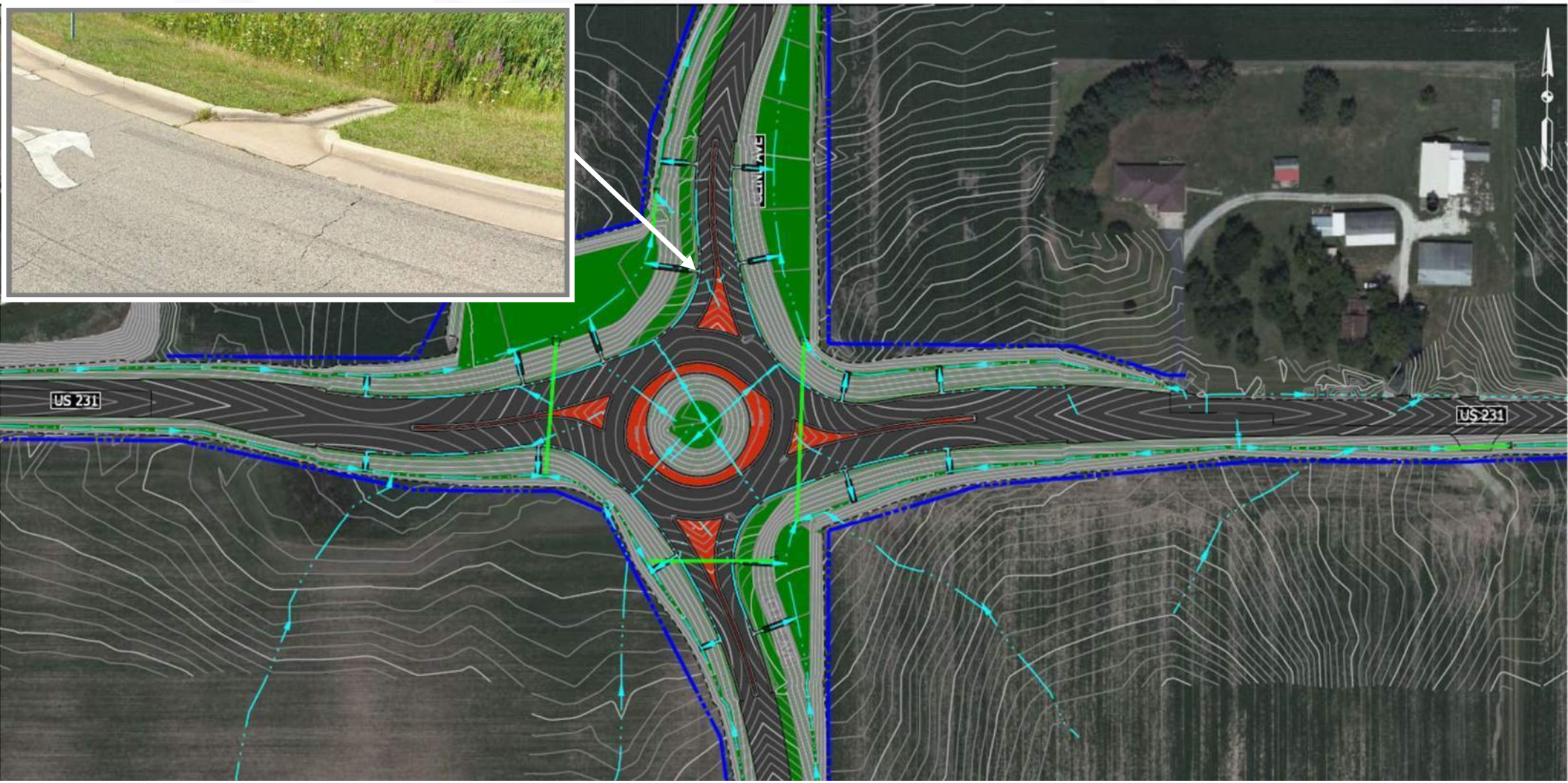
Speed Profile



Sight Distance

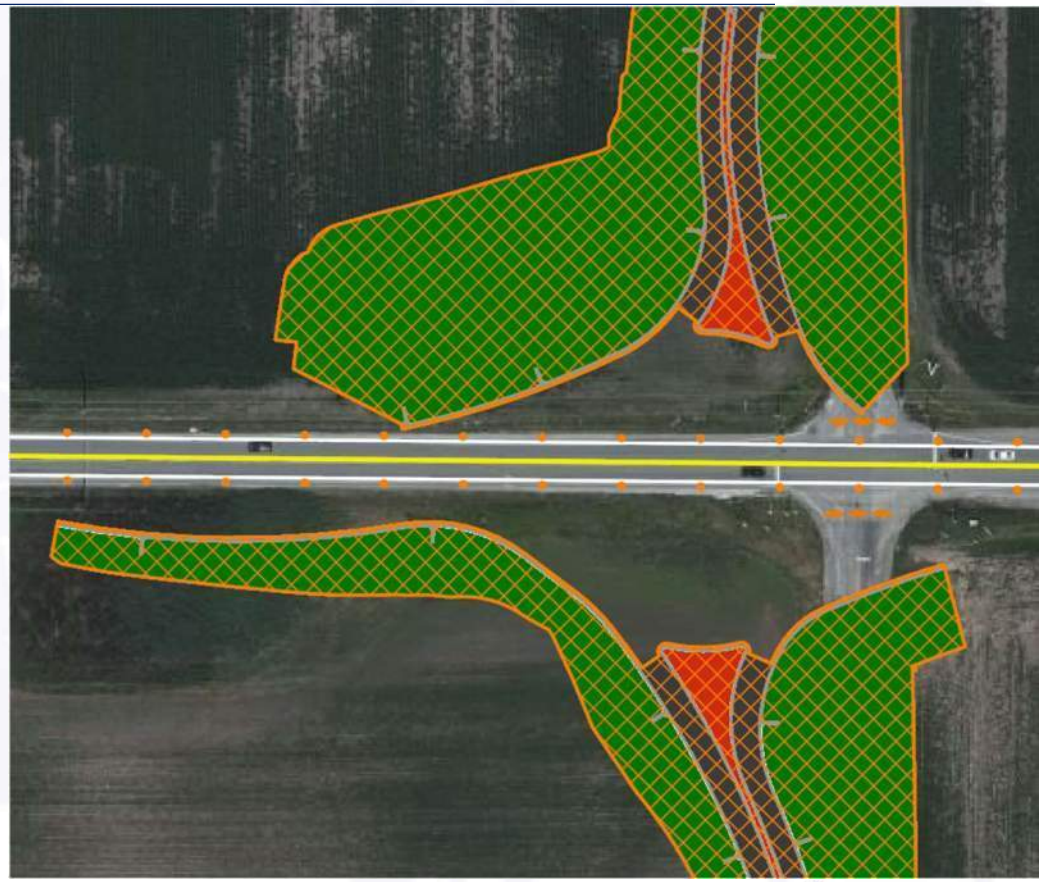


Proposed Roundabout Drainage



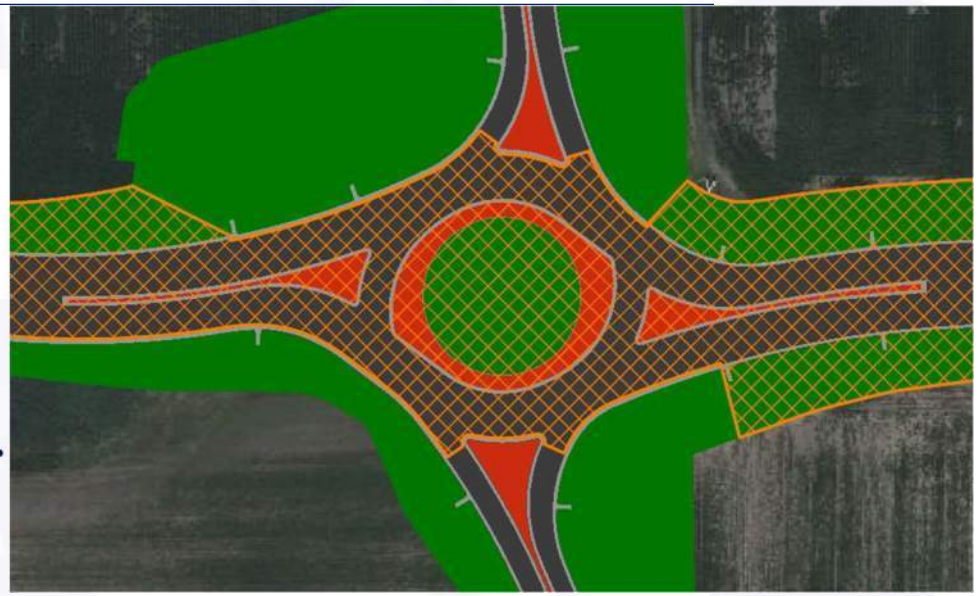
Maintenance of Traffic

- Phased MOT: will decrease the time required for a full intersection closure.
  - Phase 1:
    - East-west traffic on US 231 will remain open, while Cline Ave is closed to north-south traffic.
    - A 16-mile detour using US 231, US 41, US 30, and SR 55 will be implemented.
    - Expected to last roughly 4-5 months.

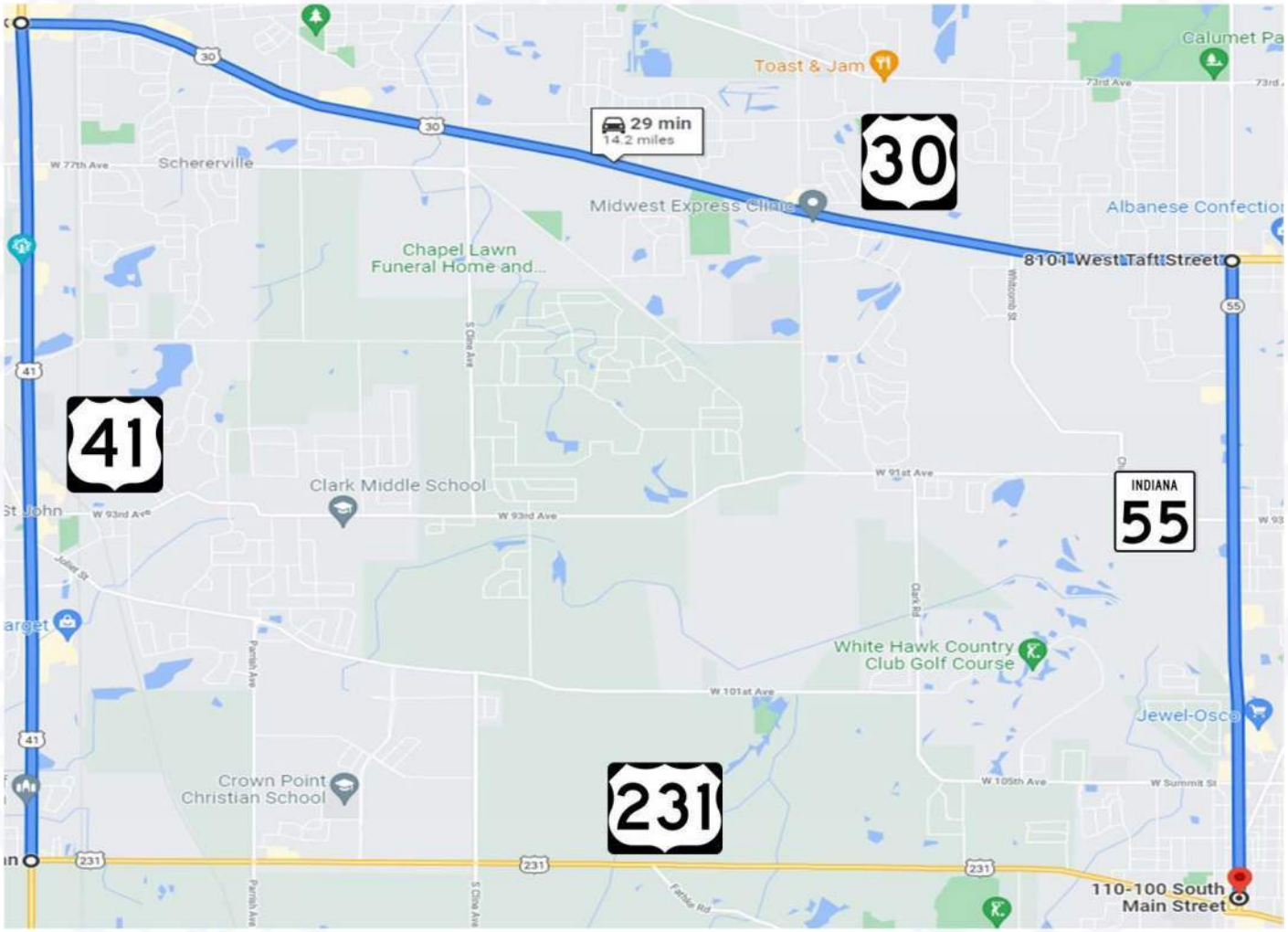


Maintenance of Traffic

- Phased MOT: will decrease the time required for a full intersection closure.
  - Phase 2:
    - The intersection will be fully closed.
    - Detour from Phase 1 will be maintained.
    - Provisions for a local detour/alternate routes may be coordinated with Lake County/Town of St. John.
    - Expected to last roughly 4-5 months.



Detour Route



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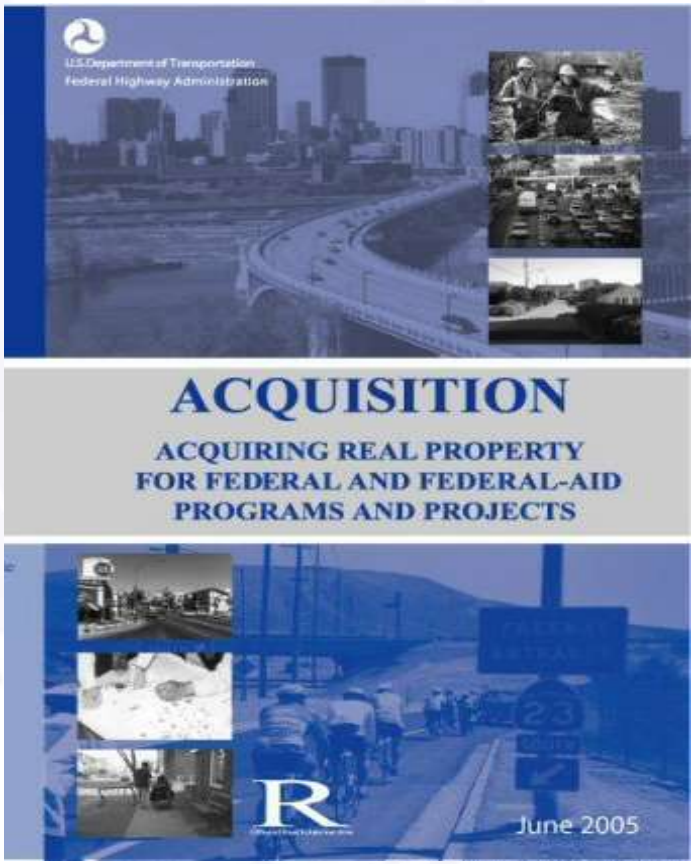
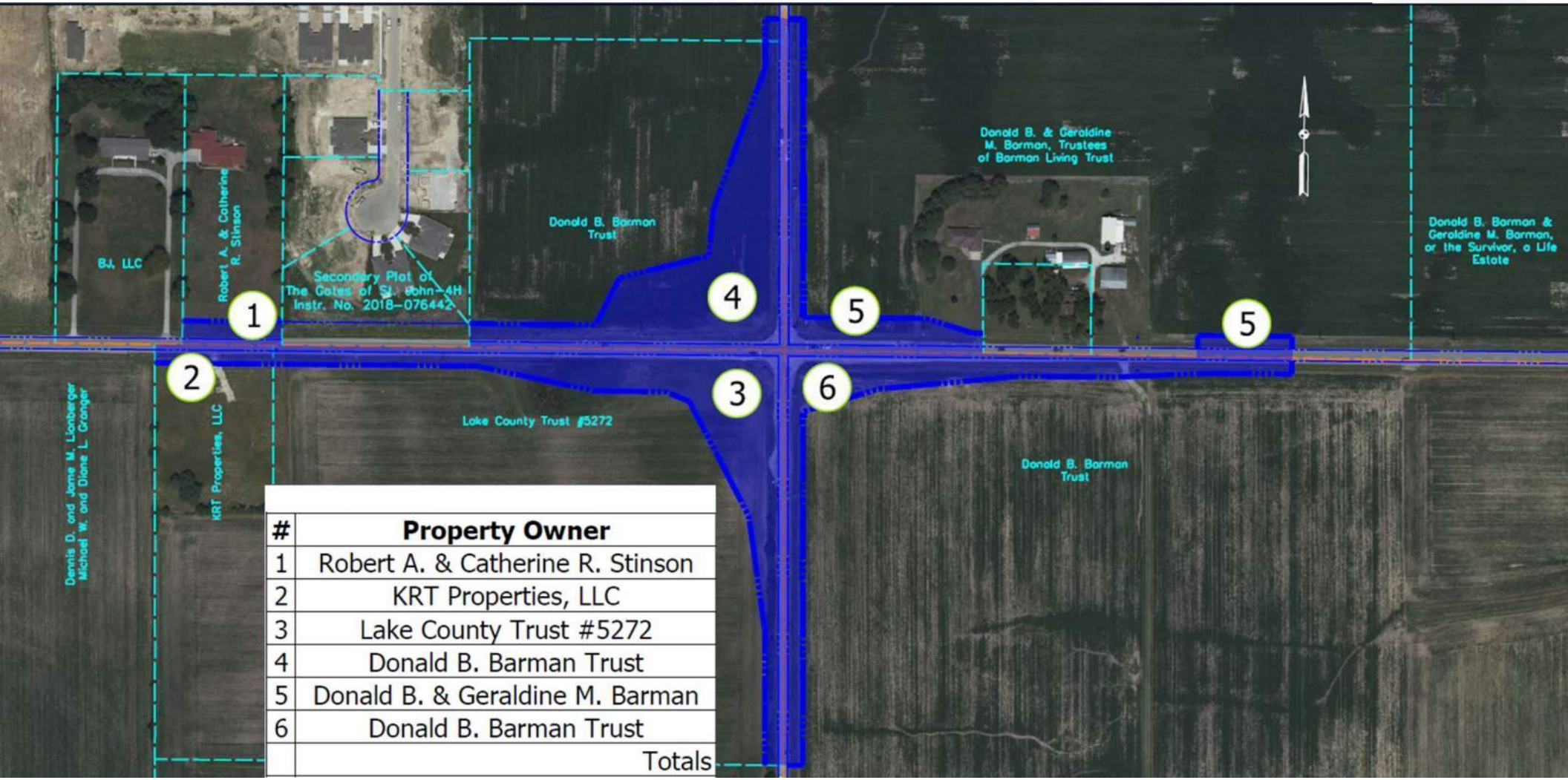
  - Design
  - Project decision
- Real estate acquisition phase: 2022
- Construction: 2024

Real Estate Acquisition Process

- **"Uniform Act of 1970"**
  - All federal, state, and local governments must comply.
  - Requires an offer for just compensation.
  - Project proposal affects 6 parcels requiring approximately 8.367 acres of new permanent right-of-way and 1.748 acres of re-acquisition.



Proposed Project Right-of-Way



#	Property Owner
1	Robert A. & Catherine R. Stinson
2	KRT Properties, LLC
3	Lake County Trust #5272
4	Donald B. Barman Trust
5	Donald B. & Geraldine M. Barman
6	Donald B. Barman Trust
	Totals

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NextLevel INDIANA

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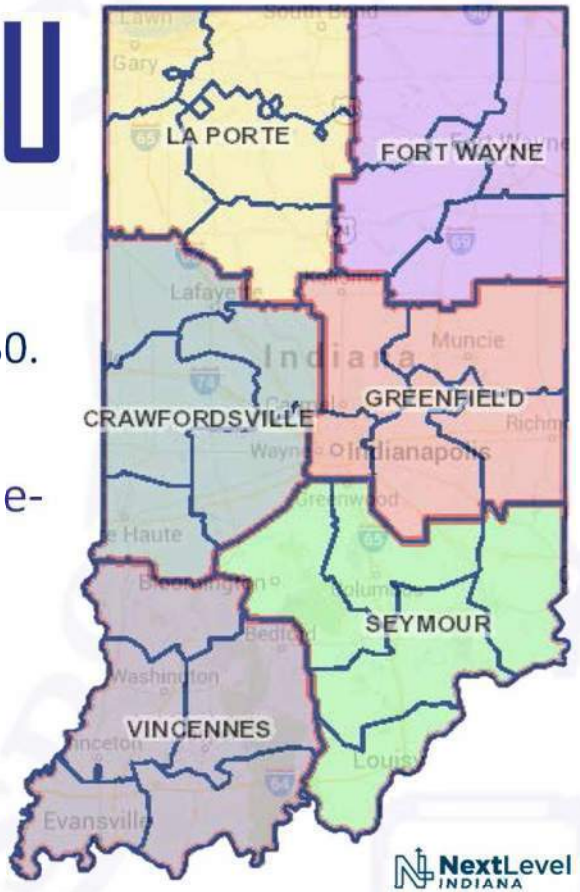

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855-463-6848 • INDOT4U.com • INDOT@indot.in.gov

Next Steps

- **Public and project stakeholder input**
  - Submit comments via options described in the project handout.
- **INDOT review and evaluation**
  - All comments are given full consideration during the decision-making process.
  - Address comments, finalize and approve the environmental document, and complete the project design.
- **Communicate a decision**
  - INDOT will notify project stakeholders of the decision.
  - Work through local media, social media outlets; paid legal notice.
  - Make project documents accessible via repositories.
- **Questions? Contact the Public Involvement Team.**

Public Comment Session

- **Please direct specific questions about the project to members of the project team following the Public Comment Session.**
- **Project Open House**
  - Project maps, displays, real estate acquisition table, INDOT project team, and informal Q & A
  - INDOT LaPorte District page: http://www.in.gov/indot/4090.htm
  - INDOT LaPorte District Facebook page: https://www.facebook.com/INDOTNorthwest/
  - LaPorteDistrictCommunications@indot.in.gov

Public Comment Session

Adam: As Erin said, we'll call out their name and, where they have signed up and if you haven't signed up and you wish to speak you'll have an opportunity as well. Going just in order. And again, you just stand and raise your hand. we'll bring the mic to you, just deliver your comment where you're at. We ask that you state your name and address for the record, and this will go into the record after the meeting. the first person on our list is Wally Binner.

Wally Binner: Good evening everyone. Most of you don't know me. My name is Wally Binner. I live south of this intersection at Cline Avenue, nine tenths of a mile to my driveway. So, definitely affected. I go through this intersection every day. And, you know, the one thing the young lady touched on, touched on just about everything, just about everything, covered everything except one thing - Human Factor. You know, what the hell is Human Factor? Human factor is a young mother coming down Cline Ave, 231, crying babies in the car. Human factor's elderly people who are not used to going through a roundabout. Okay, and these are not covered. These - I was driving down. My wife was driving, I should say, I was in the car with her because she doesn't trust my driving. So she says. We approach the roundabout at 77th and Cline Avenue, last Friday, very little traffic. I have nothing against roundabouts if they're placed at the right location and she got to the roundabout and she stopped. Immediately, the gentleman behind us laid on the horn. Scared the hell out of her. Now, she doesn't know what to do. That's, that's the Human Factor right there. And that's what she don't need. People intimidated by this roundabout going into it. Now. I'm not going to mention no names, but I was told, when I asked the question, what's going to happen in the evening and the morning hours where North and southbound traffic on Cline Avenue when we have a steady flow of traffic east and west? We can't get out in that roundabout? What's going to happen there? And the gentlemen, that I asked that question to he said he posed that same question to an official of INDOT. And you know what, the INDOT officer said? Well, I guess they'll just have to be a little more aggressive won't they? What kind of freaking answer is that? To me, that's, that's totally unacceptable. Now they're encouraging us to be more aggressive, you know, and the one thing they didn't mention too, whether or not it's important to you, it is to me, you get in the roundabout and there's a semi or, any trailer, truck trailer, any truck over 40 feet long and you have an accident. Well, your fault. Point Blank. I called the state police when I first found this out a couple of years ago, and I verified it with the State Police down in Indianapolis. So, do we want the roundabout there at Cline Ave? I don't. In my eyes, you can't convince me that turning Lanes And traffic lights won't get the job done. Okay, it's going to be less than, I think would be more cost-effective now, whether or not I'm right on that I don't know. But the bottom line is, why should we have something shoved down our throats it if we don't want it? We're the ones that have to live up here and deal with this. I wish there was a lot more people here today because I tell you what, the majority of the people I spoke to about a roundabout at 231 and Cline Avenue are totally against it. And if that's the case, I don't care what, And if they can't give us that, We should throw them out of office. That's the bottom line, in my eyes. They just sit up here and tell me all kinds of statistics. I got statistics right here too that I showed the gentleman earlier. Arizona. In the 2016, a senior Arizona State University that did a thesis on roundabouts out there. And it's just, like I said, some places they're good. Other places accident rates, go up. The fatalities will always go down because the slower rate of speed. But, if the crashes are going to go up, one crash and that one simple thing, you're there in that roundabout in the morning or in the evening rush hour. Traffic's going to be backed up. Eastbound traffic's going to back up to 41, westbound traffic's going to be backed up to the square in Crown Point. You know? For what? All we want is turning lanes and traffic lights. We

don't - now they've implemented these traffic lights that when you make a left hand turn they don't stay red if you missed it, they flash yellow. You're all familiar with them, and they work. And that would be another enhancement at that particular intersection. So that's the bottom line. I have to say, I mean, like I said, the only reason I'm standing up here making a fool of myself is because it's, it's, totally goes against me. My wife told me flat-out she won't drive it. That thing gets put in down there. She comes out of our driveway. She will go south in order to go north, and that's flat out ridiculous. She'll have to take 117th across to 41 or take the back roads east into Crown Point. Why, when we got a perfectly good road we can drive on, and she's afraid to do it? She's intimidated. Well, that's all I have. Thank you for your time.

Adam: Thank you, sir. Appreciate that. Judy Hauser

Judy Hauser: Hi my name is Judy Hauser, and I'll probably make fool of myself, but I really don't care. I live at 11607 Cline Avenue right next door to Wally and family. And I'll tell you what, I sat, and I sat, and I sat going east and west to try to turn, to go back, you know, southbound on, to take it to go back, south to go to my home. You sit, you sit there and you wait and you go through four, five, six, seven, eight lines. What about like Wally said, what about the mother with the baby that's, that's crying? What about the elderly person that has to go to the bathroom? What about that? Is that alright? Is that alright for them to mess themselves and embarrass themselves just because we want this, that the State of Indiana is now going to pay for? I mean, it, before it started out it was 80/20, now the rumors are spreading around that, it's it's 80/20. It's, but we are paying 100%. The government is not paying the 20%, for the 80%, We're paying 100% for this turnabout. Now, if everybody in this room wants to pay 100%, I'd like to see you raise your hands. We don't need it. We don't need, these here turnabouts. Just give us give us the turning lanes. Give us the yellow light and the red light and it works just fine. It works fine everywhere else. Why not here? What about school buses? What's, what about the kids that are late for school? What about the tardies start mounting up? What about that? Have you parents thought about that? It's going to happen. It's going to happen real fast.

Joseph Michalik: 11829 Lee St. I live about a little over a mile from that intersection. Unfortunately, I don't drive at this point. I used to drive there for 33 years. There used to be a stop sign. There was a red light. There was a stop and go light. But I did notice that all you guys have up there is a turnabout. What about, why don't you guys take the plans and make the people decide if they want a stop and go light? You guys have got all these plans. So, in other words, no matter what we say you guys are going to go through this plan. Is the Troyer Group the people who are going to build this?

Adam: No sir, they're our designer.

Okay, so he, it hasn't gone out for bid yet. Am I correct?

Adam: No, I can clarify that for you. So again, this is a proposed project, and what we've presented here is our preferred alternative. So we do have other alternatives in there outlined. But no, this has not gone out for bid. That will be at some point later.

Yeah, but you're only showing us one proposal. Where's the other proposals? That could have drawn out and say, hey, this is your second choice. This is your third choice, right now. We're just looking at one proposal. So, I think no matter what these people decide, you're going to do this project. No matter what. And we're the ones that are being paid for and it's not money coming out. It's coming out of our gas tax. So if the project goes overboard? Well, we're going to enter the two cents more per gallon because we got to pay for this project. Now. There's nothing wrong with a third lane, and have a turning lane there. Traffic is going to go just as good or just as bad. But you guys are overlooking one other thing. During summer time there are people with bikes going across there. Now. I know there's a bike path on 77th and Cline Ave. but if you're on a bike I'd like to see you try to get through there. Cars going 40 plus, even if they're 15-20 miles an hour, by the time you see that bike going through there, you're going through there. So either you guys build a pedestrian bridge for people because people do want, people do ride their bikes. But if this is your proposal that you guys have for us, then, then there's something wrong here. And I think the people have, should have a choice, and if you're not going to give us a choice and just like Wally says ram it down our throat, we're going to protest, and if we got to contact our politicians, if they don't care about this, we gotta get somebody who is down there. Because we live, well, most people have lived out here a lot longer than I have. I've only been here 35 years. But I seen a lot of changes. I know housing has boomed like crazy. Farmland has disappeared. It used to take me 20 minutes to get from where I worked at to home. Then when I finally worked there took me over an hour, because of all the traffic. And there's nothing wrong with people building homes, but you guys got to find another alternative besides 231 for heavy traffic, whether it's further South or further north. What you guys got to find some other alternative and I can say I'm totally against them and I don't think anyone else is really against it, but you've got to listen to our voices and see what you guys can do. Thank you.

Leonard Barman: I'm Leonard barman. I live in 7910 West, 109th Avenue. I'm here to represent the Barman Family Trust, fifth generation landowners, been there since 1852. We own three of the four corners. I along with most of the people in this room do not believe that a roundabout is the correct solution for that intersection. We'd like to see a delayed left turn signal, lanes put in, and widen that intersection to carry the traffic. We'd like you to consider, which I haven't heard any consideration of, the overflow from 80/94, the Borman Expressway. We get overflow regularly through there and when Borman shuts down the truck traffic through that intersection is phenomenal. Very large volume of heavy traffic, large trucks coming through that intersection. It's not acceptable that that would be a roundabout. That would just lead to accidents. I saw that you had statistics from 2016, but I noticed that you didn't show any casualties. You're saying that the roundabout's going to eliminate casualties, which you haven't shown, you shown some accidents, but you haven't shown any casualties. So, what are you trying to solve? I also request that you post, for public viewing, your proposed funding for this project. Because you're claiming it's state-funded, but I've been down to talk to Joe McGuinnis, previously, and he made a big pitch about an 80% funded by the feds and that we're not paying for it because the feds are absorbing all that, because of safety. So something doesn't quite add up about this funding. I'd also like to see a contingency plan for cost overruns because you're, no way you're going to do that project for 2.7 million. I also have concerns about the proposed drainage. You got a wetland on the southwest corner that you're running a 24-inch Culvert to my northwest corner and I'm not going to hold your water. So you need to figure out a different way to make that water flow the way it's intended to flow, which is through the ditch to the next legal

waterway, which is to the west, not to the north and flood me out. In 2017, INDOT proposed an intersection, signaled intersection, at that intersection. And there was agreed upon drainage between the County, the State, and the landowners. Did you take that into consideration when you went along with this project? I guess my last comment on this based on what I've seen so far in the speeding and the slides you're taking up public input. And then you're going ahead with the design and you're going to complete the project. I didn't see anything on your slide saying that you're going to reconsider this project and consider a different alternative based on public input. So like everyone else here, there's a feeling that you're ramming something down their throat, which we don't want. And we're telling you, we don't want it, but yet everything indicates you're going to push forward with whatever you want to do.

Chris Barman: Good evening everyone. I'm Chris Barman, and I live at 7910 W 109th Ave. My older brother Len just spoke. I'm here on behalf of the family. And there was a little bit of discussion earlier, about a cultural resource that might be impacted. That's something that we're very concerned about because that's our cultural resource, and I also want to point out what we could consider a cultural resource who's in the room. My Father, Don Barman. He's 89 years old. So, I really encourage INDOT and Troyer group and all others involved to take our input seriously, as a family who's been here for five generations, and it's not just the impact to our farm. It's the impact of the community around us because we've been part of this community for five generations since 1852. And we care about it. I want to add on to my brother's comments about the statistics. You showed from 2016 to 2022 there were zero fatalities. My research shows that one of the big factors of a roundabout is to eliminate fatalities. So, if there's no fatalities, why are we immediately going to a roundabout? Secondly, we're trying to address turns where there would be a right-angle impact. Given your own data you show tonight, 10% of the impacts, the 107 that happened were due to a right turn. So, we're bringing in a solution to only solve 10% of the problem. That doesn't make a lot of sense to me. What it seems to me is when all you have is a hammer, everything looks like a nail. But if it is to the point that we would have to have a roundabout, which we're highly against, I do want to share our concerns about drainage which are extremely serious. So the first that we want to make sure is that for the implementation of a future roundabout, there is a guarantee that it will not impact the current performance of drainage to the surrounding property on the northwest, northeast, or southeast corners at this intersection that exist today, US 231 and Cline Ave. It is also our understanding, Per section 37-9-27-71 of the Indiana law creating and setting forth operating procedures of the County Drainage board, a law that came into effect in 1966, the County Surveyor is responsible to develop and propose the drainage for this modification. We'd like to know what the surveyor's opinion or assessment of this has been. It is also our understanding for the Indiana law created and set forth the operating procedures of the County Drainage board that the drainage board must approve all drainage plans before any action is to begin on construction of a roundabout. I will also reiterate what my brother said earlier. From November of 2008 until April of 2009. There was consideration of adding turn lanes, all of that. Assessment work has been completed. All of the drainage was designed and understood. It would seem to me you could easily pull out those earlier designs and take that under consideration. The next point I would like to say is, why isn't the proposed detention basin located on the southwest corner of the roundabout, which is the direction in which water flows today. It seems unnatural to try and force water to flow in a direction it doesn't naturally. We also request that any field tile must not be disturbed during the construction of this project. We make a living off of our farmland. We need to make sure we can continue to

do that. It is our request that an escrow or bond account must be provided by the State of Indiana and held by the County Drainage board for ongoing maintenance, and to remediate any drainage issues that arise in the future that were not predicted or known at the time of the construction of the roundabout. INDOT can't walk away and leave us with this. It is our request that crossings or road cuts be maintained as is or relocated to an acceptable location to allow us to move our agricultural equipment to enter and exit each field of the farm without being restricted by the roundabout or any curbing that it has. We would like to know what the Lake County Surveyor, Mr. Bill Emerson, has concluded regarding the proposed changes, what is the current hydraulic capacity, and in which direction the watershed flows. What will the future hydraulic capacity be, and in which direction will the watershed flow, into what natural body of water? Will the drainage be routed in each direction, which is also part of that law from 1966. We would like to know what the Lake County Drainage Board's position is with respect to the proposed drainage changes by the Indiana Department of Transportation. As we have experienced, there have been too many construction projects in recent years that have resulted in drainage issues along US 231 and Cline Avenue corridors. So, special attention must be given to this massive project to ensure, no negative consequences due to lack of drainage or flooding to the surrounding land or residences, will occur, where no drainage issues exist today. And the last thing I would say in closing as part of your agenda There was supposed to be, before our public comment, public comment by any elected officials. I know Senator Niemeyer is here,

Adam. that's coming.

I would hope that he has the opportunity to speak to us as well. And I just wanted to verify that.

Adam: Yes, it's coming after.

All right, so thank you for your time. And listening to us on behalf of the Barman family.

Martin Wiebin: Well, good evening, everybody. I live in, I'm kind of an outsider, I live in Hammond, ok. But, I'm kind of speaking for everybody that kind of lives out in my neck of the woods, so to speak, that does come out and use that intersection. Because it's a way to get to Cedar Lake. I'm one of those, I haul a boat, so I can get to Cedar Lake. I went down this intersection this afternoon, this evening coming here. This one roundabout, what a nightmare. You literally have to stomp on the gas and hope you can get in between two cars to get around the corner because it's a constant flow. Okay, that's nonsense, and here on 231 that ain't gonna work because it's going to be a constant flow for those on the east, the east-west side. Here, you get somebody from outside here, comes in to use these roundabouts, but they don't know what's going on, and it's going to cause an accident. I'm going to have a hard time getting out and not only me but other people that haul trailers, doesn't matter if it's a boat or what. They're going to have a hard time getting out there, as well. Then you've got these young people, the middle-aged people - no offense, who like to look at their phones while they're driving. Very irritating and against the law, but who cares? And you get those people out there, and that just makes things worse. So, I have to agree with all these other people here that have already you know, came up and spoke. I don't see any reason why you get the turn lanes, you get the proper lights. Things like that. Traffic will move a lot smoother. Thank you.

Nick Crnokrak: For the record, my name is Nick Crnokrak. I live in 1656 Bell Street in Crown Point, Indiana. It's basically quarter mile east of this intersection. I've been in my home for 22 years. The need is bringing forward an effective traffic management system that not only takes care of complex traffic conditions, but also costs less to manage. Cost effectiveness and optimum use of land are two key requirements of building an effective traffic navigation system and unfortunately, roundabouts do not fulfill both conditions. Roundabouts also require educating people about navigation and crossing methods, which is a stressful exercise. How will you address the following points below? Point one, property and geography. The government does not own the property on three out of the four corners of the existing intersection. Construction of a roundabout will negatively affect the existing use of the area. Indiana is a right to farm state. Property a quarter mile to the east is not conducive to the widening of the road for slow down zones, due to the geography. Mainly, there are significant drop offs next to the road. This will be very expensive to rectify. The next point is traffic to safety, traffic speed and safety. One important factor in the case against roundabouts is that they are, by design, slow and will increase travel time by a huge margin in case of traffic congestion. The gap between vehicles becomes less. This can result in low-speed crashes and fender benders. Queue development can cause long lines at the entry points. Current speed limits are 45 miles an hour west of the intersection and 50 miles an hour east of the intersection. Large areas will have to be developed to allow vehicles to slow down properly to avoid collisions. You can see the, my point that I want to present to you at the end of this, roundabouts are not suitable for platooned traffic flow, meaning one right after the other. Emergency vehicles, like ambulances cannot make it through roundabouts easily. Cost. Very large roundabouts eat up a lot of public and private space. Temporary widening and the outside diameter space requirements increase the running cost of construction, as well. Alternative pathways must be designed to avoid roundabout exit accidents, and that increases the cost of construction. All roundabouts in Lake County have 14 high intensity lights within the roundabout area. These lights are expensive and require more maintenance than current traffic lights. In addition, the spurious light will negatively affect the surrounding human environments. Higher maintenance costs make modern roundabouts an expensive solution for traffic control. As I mentioned before about these 14 high intensity lights, very large roundabouts require a huge land mass and long splitter Islands further increasing cost. For large vehicles with weight restrictions, large vehicles are only allowed to travel east and west along 231 due to weight restrictions on north and south streets. A large vehicle will have difficulty navigating a roundabout. In addition, as I stated before emergency vehicles will have difficulty navigating a roundabout. Also, the most important thing for me, significant impacts of subdivisions and businesses. Subdivisions and businesses from Cline Avenue to Lane Street, which is due east of the intersection will be negatively affected due to the traffic flow. Long wait times due to no gaps in the traffic will cause traffic to be queued for long periods of time. In addition, traffic incidents will increase due to insufficient gaps in traffic flow. I am against the construction of this roundabout on the intersection of 231 and Cline Avenue. Due to the points I've listed above, I do not believe that all factors, including the safety of the citizens were considered during this proposal. This roundabout will not allow myself, my neighbors, or the businesses in the area to exit their subdivisions / businesses safely. There have been other negative issues at multiple Lake County roundabouts, currently placed throughout the county. Multiple accidents on 93rd Street, impeded traffic flow due to the slow nature of the design, 109th Avenue, and enormous light emission issues. It looks like a football game’s in season when you go by these roundabouts at night. I'm also submitting a solution. Option 2 since we

only see option one. Modify the intersection of Route 231 and Cline to allow a center turn lane, with traffic signals, allowing paused traffic flow. The solution allows for traffic to flow safely while keeping costs at a minimum. The solution has been implemented prior with great results. By the way, this solution will also be viable for route 231 and Parrish intersection. That intersection has considerable safety issues that have not been addressed, and is not part of today's discussion. However, it should be addressed at a later date.

Paul Panczak: Good evening. First off, let me say something good here. I appreciate that Something's getting done. So, whatever it is. That intersection needs improvement. Needs it bad. So does Parrish. Even though that's not tonight. So, if it's going to be a roundabout, there's two things that I didn't get a chance to hear, for the Q&A. Is there going to be overhead signage telling you which lane to be in? Because the little things get scraped off the pavement. I know that that grinds them in a little better, for all the new users in the area, and it's been brought up multiple times the overhead signage helps a lot, seeing that used. The second thing would be your north and south approach. Like your two-lane roads, put right turns so the people can get off Cline onto the, onto 231, facing the right turn. I don't know if that's at least been thought of or planned ahead for land acquisitions and handled later. So, two ways to improve that roundabout. Now, on to some of what was discussed here tonight. I like the turn lane as well and I take roundabouts every day. I do all over the state, and I know how to navigate them, but it is new to folks here, and turn lanes, I think, would be pretty effective. I know the long-range forecast says they won't be, but you do it right, it would work. So one of the other key factors that has not been brought up tonight is five months. I'm going to say five not four or five. Let's just say five months closure to 231 in this region. It's going to kill. Joliet's, going to turn into a racetrack, as if it wasn't already. So you can send all that traffic and St. John, and part of that's County Road Two, and so five months of closure. So how can you change that? If you did the turn lane solution with, you were to pick that alternative, you can keep the road open. You can build next to it, you can shift the traffic over like you do all the time. So that closure that's going to be bad for the area then. Then repeat that process on Parrish. You're gonna have another five month closure. You're going to kill us for two summers in this region. So I no longer live in St. John, but I utilize their Cline Corridor. My wife used go to work. I usually go south, but I even come up here sometimes. So last thing I'd like to say for elected officials that are here, especially at the State level. I really appreciate that Parrish has finally made the cut for funding. That's a great thing. It's two years behind this one.

Adam: One year.

One year, ok. Do it all together. Mobilize together, bid it out together, do it the right way. Don't tear apart one summer and tear it apart the next, or you know, that's just double the torture. So I mean I've seen how they've done it down in Marion County and they have pulled out every stop to get some of the bigger projects done, and including organizing everything. So if it can be considered to do Parrish at the same time as Cline, if you're that close, you already have the funding, make it happen. Thank you.

Kris Sorenson: My name is Kris Sorenson. I live at 12632, Patnoe Drive in St. John. Close to the ice rink for those who you know where that is. I've lived in the area since 93. Before that. I was in Griffith. I currently drive across this, I'm newly retired, a couple years ago, and I drive

across this and through this intersection. Three or four times a week. I'm on my way South to Cedar Lake, the project Love food pantry on a regular basis. And I also go to Meals on Wheels delivering food, you know that way, and so I've seen the traffic as its added and added. I've seen thousands of houses added in the South County, south of Lowell, and in between Lowell and Cedar Lake, between Cedar Lake and St. John. The subdivision, The Gates is you know mostly there now. It's still being added to. Now, we're adding on to the east side of Cline Avenue. We're going to add hundreds of more houses. I'm sure that eventually more houses will be added south of 231. There is the new subdivision that was added, what, how long ago was the apartments been added to south of the gates? A year or two? More are being built there. I fully expect that someday there's going to be commercial development along that and these people are right. When the Borman Expressway blocks up and Highway 30 blocks up, we are a route to get across and go south on 65. One solution at one point, was to build a road way south. We need four-lane road all the way from 394, all the way through Crown Point out to 65, and it needs to happen about 10 years ago. Now, we got all these houses built here and we're still adding more houses, hundreds of more houses, every year. There's been lots of houses added in the south side of Crown Point. A lot of those people commute to Chicago, commute to the other side of the state line for jobs. We're bedroom communities for the State and our taxes don't represent that here in this area. Unfortunately, we don't have agreements between the State of Indiana and the State of Illinois so we get to keep our money here in this state. And we realize that's part of what's going on, and that's unacceptable to those of us who are citizens here. We live here and we want the roads improved and the ways to get through here. And I understand having a farm for 50 years. My dad was a farmer and nobody wants to break up the farm. But as we continue to go on, it's happening, and we need the development and the turn lanes, and the intersection needs to be filled with four lanes going each direction and a turn lane right and turn left and get it done one time and be done with it. And then later on go on and add additional lanes. As the commercial developments happen. Let's do it right. We could have done that five years ago and then we wouldn't be out there picking up people, you know, seeing the police cars run down Highway 41 after leaving St. John and coming out to these intersections. 15 years ago, especially when all the utility poles got knocked down along the road and there was your time, that was the time, to move them back a little bit further, expecting a vision of what's going on in this part of the country. It's time State of Indiana, INDOT, to take care of the problem once and for all. Like the communities, you know, like going out of, north out of out of Indianapolis. Going to Noblesville, and all of the other communities. We are part of the Chicagoland area and we need better transportation in this area. Where's the four-lane road at? We don't even have water pressure over where I live at anymore because the gates.

Adam: Mr. Sorenson was the last person to sign up to speak but I do want to offer the opportunity for anyone who didn't sign up who'd like to make a comment to do So at this time before we get in to the local elected officials who Decided to speak. Is there Anybody else would like to make a public comment?

Donald Barman: Mr. Barman here. 5th generation there, at the Barman Farm. And all I got to say is that this could have been solved in 2008 and 2009. Turn Lanes there. I worked with the state on that and I worked with the mayor's office, and the Drainage Board, and we figured out a drainage way to do that, and we figured out lights and everything. And you could ask Senator Niemeyer. He knows about it and that. And for some reason or other the State didn't want it. So I

don't know for some reason or other. There's something with the roundabout, and like my son said, we talked with Joe McGuinnis here about two years ago, the Secretary of Transportation, and he says oh no, no, no, you have to take Federal money and you get 80% funding from the federal government. Well, I hope that eighty percent funding is included in this $2,700,000 because if you could do that and that amount of money by then, I'm sure we'll never see a turnaround, a turnabout. Thank you.

Butch Houser: Have you ever have you considered the traffic out on 41? Once you close that off up there, or they go down 41 over to 117th and take 117th across. Has anybody ever considered what's going to happen over there? Have you ever been out there? Have you ever been across 117th? That's a drag strip. A drag strip. When you block Cline Avenue off at 231, where's that traffic going to go? They're going to go down 41 and come across over to 117th, and then where? That's the man that lives on 117th and ask him. It's a drag strip over there. I can look out my window and watch the cars and the crotch rockets. Have you considered, what, anything over there?

Adam: You mean during the closure itself, like during construction?

Over the course of the shut down. You know? I know it's a two-lane road.

Russ Johnston: Whatever happens, I'm not for the roundabout. But whatever happens should happen at Parrish and Cline at the same time. Don't put people out twice in two years, or whatever time Parrish is. It's bad enough once. Do both of those intersections at the same time, they're not that far apart anyway. It's closed down anyway. Thank you.

Russ Gower: My name is Russ Gower, 8605 W 138th, west of Cedar Lake. I wasn't going to say anything, but I feel like I'm going to be the unpopular person here. I'm 100% for this project. I think it's a great project. But the fact of the matter is I don't know anything about traffic, just like everybody else here. Except the engineers that have been assigned this that have told us, it's going to reduce traffic. Excuse me. I listened to you, I would like to be able to talk as well. They've told us that this will increase the traffic flow, this will reduce accidents. I have no reason to doubt them. They do this for a living. This is their job. There's many, there's many things that we should decide based on our emotions. Who we're going to marry, where we're going to go to church. Engineering is not one of the things that we should decide based on emotion. It should be based on actual things. I know people are scared of the roundabouts, and we have a lot of fears - oh it was going to do this. This isn't the first roundabout that was ever made, and people that have those roundabouts also had things that they were afraid of. And traffic accidents went down. Because that's what happens, despite your reservations, despite the fact that people are afraid of these things. The people that have the other roundabouts also had the same concerns and traffic accidents went down. Because that's what happens. That's all I had to say. Thanks.

Adam: There will be an opportunity for discussion after. I do - our elected officials have been - everybody that wants to speak will have an opportunity but I do want Senator Niemeyer and commissioner Tipp to have an opportunity to speak and then. Yeah, everyone that wants an opportunity to speak, you will get the opportunity.

Senator Niemeyer: I'm not going to take too long. They asked us to speak towards the end. INDOT recognized as soon as I got here, and I signed up to speak. I'm about to hear in the comments here. I think most of you know, and God knows for sure that I've been involved, kind of, with this intersection. I lived here all my life in this, in South County. Since 2012 or 2010, I was elected to Lake County Council, and I was elected as a State Rep in 12, and State Senator in 2014. I've been working within INDOT. When I got a commission, I got in the state legislature, trying to get this intersection on the list to get something done with it, and they were very good about that. They told me how the rating system throughout the state can find these bad intersections to get put on there for rating how bad your intersection is. Eventually this intersection was deemed to be one of the intersections it seems we need to do something with and they did that study and they got to this position which was probably three or four years ago. So I was happy with that. I was real happy with what went on getting it to that point. Because we all know that live here that was a bad intersection, something needed to be done to it eventually, whatever that may be. So as time went on and then the roundabout seemed like it came about pretty quick in this conversation. That would be pretty honest. It was maybe two or three years ago even, we had a meeting at the fairgrounds and we had invited some residents in to talk about it and a roundabout was of the kind of preferred project they might be looking at that point. And now we're here. Today with the same position and this project has got to the point where the funding is going to get done. And now we're going to get something done. So I'm not jumping on this bandwagon, I think, lightly here, at the end. I understand that this man that just talked, the engineering stuff. I've looked at all of that. But I absolutely think that the volume of traffic on that roundabout is going to make that project very hard to perceive where it needs to be with a roundabout. I've always preferred the turning lanes. And I've been up for it, 3 or 4 years ago. I didn't like the roundabout, we was talking about it and I was hoping something here could change on it, as time went. That's why you had the meeting at the fairgrounds. You think about the traffic in Crown Point. You have Winfield growing like crazy. All that traffic and people that work in Illinois. This is their route. They've got to hit the exchange, they got to get across. I want to thank Commissioner Tipp and what the County has done to fix that area up to Kreitzburg and 109th to get those turning lanes in there, turning lights up through there, to get to the exchange. The county has done a great job with that, with that, as intended, as well as the town of St. John getting that area open. But I'm here tonight to listen to your concerns. I wish there was an alternate plan being looked at somewhat so you can see something else besides what they have tonight, because this has kind of been the preferred language we've had for a long time, and there's only this scenario that it was a roundabout. And we were always told that they would look at alternatives and look at things differently and see what the public's comment was, and I wish maybe we had a little more understanding of why the intersection will not work there. Why do you think it's better for the roundabout? Because I just have a real - again, Now, the engineer you know, is absolutely right, but I've lived here, all my life. And I know, I know that north-south traffic, certain part of the days on Cline Ave, it's going to be tough to go across there. Get across to keep going on Cline Ave one way or the other, or get on 231. It's going to be tough to get on there and it's going to have to be people kind of hesitating to let people get on there because you know, how constant it is. I come that way. The other night. I was, I was stopped, just barely got through Parrish and I was stopped, to get through here. Took me about four changes to get through. So I know the line and traffic there, and I know INDOT does too, and I know they've done all that study. But the intersection I know it's that it's at 41 and 231, but that's also County

Road at 109th of that came into play here. Intersection works perfect here with, and put those turn lanes in between 41 and 231. That was a night we were there with that traffic coming down that hill and trying to go into Crown Point and headed across there. And they did a great job with the intersection, and that's what I was hoping would be done here at this intersection, was that type of intersection build, would seem like, to me, to work better. There is a tremendous amount of commercial traffic on that road. See the end of Cline. You know my friend he farms that area. It's going to be tough to get to there with the kind of farm equipment we have nowadays and how big it is and the combines. It's going to be tough to get to those roundabouts. So I'm here tonight to listen to what you had to say, and Don and I've been talking about this issue for many years, and now it's here tonight, and hopefully that, maybe it was time to look at the alternate plan here. Okay, and I don't know if it is or not, and I'm not preaching, but I know that people are here tonight did not probably want this project, probably 95% of them in here, and I'm not here to rabble rouse. I've been involved in this my entire political life trying to do stuff with this intersection, like everybody else in this room has been doing. so hopefully that'll be looked at. It's why I came tonight and I have had conversations with INDOT. I gotta say INDOT's been very good. Every time we've asked them to come out and talk, they come out to Don's Farm one day. We had a meeting in the garage, and they've been very good to come out, and when we didn't agree we didn't agree, but we talked and we left friends, but we didn't agree. They would make their pitch, we would make ours, and we didn't back off of what we thought should be done. So that's kind of where I'm at on it. If it is the, more as a resident here I'm an elected official, of course, and I'm with the State, but more and more as a resident in this area of doing the right thing here, and hopefully we can look at some other alternatives here before it gets done. But whatever happens here, we all know something needs to be done at that intersection. That has to be done. It's just not working anymore and it's going to get worse. More traffic and more traffic's coming. If we, like we said, we know, we know best of anybody. We don't have an east-west corridor to get across to except that 231 corridor and nobody's going to 30 to run down 30 to get across. It's too much traffic. So, appreciate the comments tonight. I just want you to know that I have been involved in this. I'll stay involved in it and until it gets to it to a point where the point was one procedure and now, still I'll stay involved in it. Make sure it's done right. I'm not an engineer. These guys know what to do if the roundabout does go in. Looks like to me that they've done a good job, design is kind of pushing away from your farm down as much as they can. They got drainage issues you're going to have to deal with. So they did a good job there. The engineering was good there, try to stay way from that family farm. So that's what I wanted to say, and I appreciated everybody coming out tonight. That's all my comments right now. But I'm going to stay involved with this project until something gets done with it. One way or the other before you know that. [audience comment] I don't know. I mean, I'll talk on it a little bit, but again, the different comments tonight and that's going to be up to them what they want to go forward with. And I worked, well, with Adam before. Adam is always, and Amy has always responded to anything. I've, I've had, you know. As a State official, You know, we do the budgets, we set the money up for INDOT, and all the rest of these commissions out there, but we can't micromanage them, of course, because I can't do that because I don't know, the expertise to do that. But we do get the feedback from tonight. Because that's what we are. Elected officials. We were here tonight. Jerry Tipp's here, Jerry's going to talk. We get the feedback, that's sort of what our job is. So thank you again.

Adam: Thank you, Senator Niemeyer. I do want to offer Lake County Commissioner Jerry Tipp as well, and then we will go back around the room.

Commissioner Tipp: Thank you, sir. Really good to see all of you out here, taking an active role in your future at the intersection. I want to start by saying I'm here for a couple reasons. One. I want to let you know that I do represent all of you, and that my office is open to you or any with any issues you may have as this project rolls around, rolls along no matter what the choice is, whatever. Whatever we go with or whatever they decide to go with. We do not have a direct say in this intersection, it is completely under the control of the State of Indiana and INDOT, but we have been giving input to them. We do control Cline Avenue south of the intersection. So any issues that may happen at that and on that leg where we can help out, we're willing to do so. So please come and communicate your concerns to my office and we'll do the best we can. I also sit on the Drainage Board. So, the questions that came up regarding the drainage board, feel free to contact me with those concerns as well. I will say that along with Senator Niemeyer that we have taken an active role in following this project. And from the beginning, we had requested that they look at the signalized intersection with the lane improvements to improve the flow and improve the safety and in fact, today, I was in the office going through my old emails and I found one from two years ago, that Matt from INDOT replied to our request. And basically, we got the same what you saw today, that this is our choice and the roundabout. So, I'm not convinced. I do a lot of intersection work in the County along with our Highway Engineer who's here, Duane Alverson, and we do have intersections that we've improved using signalization and lane changes. And I would, I would ask that you guys maybe take some time to take a look at those intersections. Two that come to mind right away, are 101st and Sheffield and the other one is 109th and Colorado. Very similar situations where we had dangerous traffic, inability of cross traffic to make a turn into a major road, and they both, 101st and Sheffield's been up for about a year, and Colorado I think a little longer, both working great by using the loop detector system where the light recognizes that you're pulling up, and you need to turn and it gives you an arrow when you turn. Seems to be working very well. So I would just ask maybe revisit take a look at that. Again, if you could. I'd appreciate that. Other than that, thanks again for coming out.

Adam: Thank you Commissioner Tippe. We promised you'd have another opportunity.

Karl Koenig: Hello, excuse me, my name is Karl Koenig. I live just east of this intersection, and I've been driving this road about 40 years, when I first started to work in the steel mills, so I went both north and both east all the way to Chicago, using this 231 that intersection and as soon as they put that red light in as a matter of fact, I already stopped working there, but I had to travel, to Chicago on a regular basis, and it kept just getting worse and worse. That intersection itself. As soon as they put the light in without the turning lanes, I said to myself "What the hell are they trying to achieve?" Okay, I mean putting a stop, stop light in without turning lanes. It's ridiculous. Especially if you only provide right turning lanes, know what happens? People bypass the left turners and you're going to get whacked as soon as you try to get across that intersection. So from a design standpoint, the first design was just a mess. Fixing that design with right turning lanes and left turning lanes is not an expensive venture. Granted, you have to have some land from farming to be able to get the land on the east side of that intersection. And also in this west, excuse me, the south side of the intersection, but that cul-de-sac absorbs a tremendous amount of real estate. And I've traveled cul-de-sacs, and I traveled with my work of

forensic engineer, a lot of areas. Okay, some are great in this area where there is such heavy traffic coming in from route 41 with the stop lights on both Parrish and 41, gives you just a bottleneck of traffic into that cul-de-sac. And once you build that cul-de-sac what you've got is a big monument that whenever there needs to be a change you're going to have to tear a lot of concrete out and a lot of traffic signals, traffic control systems out. So personally, I looked at two reports that you guys basically issued. One was dated 2018 and the other one is dated 2022 pertaining to this intersection. In the 2018 report you basically evaluated what the impact would be to the traveling public during the construction phase with the turnaround. At that point. You estimated about 4.7 million dollars, would be the impact to the public during the construction phase. Now, if you just expanded the intersection through additional lanes, turning lanes, etc, how much money is going to be spent? As a matter of fact in that report, it was stated that in order to issue the final report, which is the 2022 report, you're going to emphasize the fact that you need to evaluate that condition longer, especially the fact that now, you have to relocate all the traffic. At least tell the people that move to go to a different route in order to get across 231. I'm sorry for this. I'm not, that great of a speaker, but still when I looked at the 22 report, there wasn't a mention made as far as the cost associated to the public in trying to get this intersection built using a roundabout. Okay, and, but you did lay out exactly what routes would we take, knew what the length of time of the delay was, and how many miles the delay was. Why weren't dollar values put on that because as far as I'm concerned with the cost of gas going up, cars are going to travel at about 40 miles an hour and the route, when they start doing the bypass that's going to cost over 10 million dollars. Even more. As far as I can figure. Okay? Now I used a very basic calculation. So I think you guys got to look at what is the cost to the public for just building this thing? It's a ridiculously high cost, and granted it's not the two point seven million, but it's still people that live in Indiana. Okay, or the people that move right to Illinois. So from that standpoint, I think there are a lot of things that you need to do, especially with the fact that that intersection was already a four way intersection, basically, with turning Lanes was already previously designed. Bring that back up again. If you don't get Federal funding, tough luck, okay, but I think it's ridiculous to put this big concrete monument in the middle of Barman's area there. Okay.

Adam: Is there anybody else who hasn't spoken who would like the opportunity.

Wally Binner: I just want to, I don't need the microphone. Anyone that picked up one of these sheets, the very bottom, it's got Governor Holcombe's phone number. call him and voice your concerns, whether you're for it or against it. Okay, commissioner of Transportation Joe McGuinness, call him and voice your opinion.

Adam: INDOT does have a new commissioner now, Mike Smith is his name. Okay, anybody else?

Nick Crnokrak: I'd like to reiterate one very important thing. If this goes through, there's no way that any one of these subdivisions that are east of here to Lane St. will safely get out of their subdivision because of the constant flow of traffic. So, and you have not addressed any of those issues. Are you going to put a Stop sign at the entrance of every single subdivision so that people can turn in there? I think not.

Adam: Anybody else, that would like an opportunity to talk?

Joseph Michalik: Just because the engineer draws for it, pays for it, makes it look good, that doesn't make it right. There's nothing wrong with being an engineer, but a lot has to do with common sense. Common sense says that just because you're an engineer, you're smart, you're book smart, and there's nothing wrong with that, but no common sense. I mean, I've seen that happen a lot of times. You look at these projects, especially you watch on TV where they build this huge building, but they forgot one little item that's going, the building, you know. Inhabitable. All I want for you guys to do is come back and say here's the other alternative. If we go with turning lane, it might slow the traffic maybe a little slower, but it's going to get through. And it's going to be the same amount of price. Let the people decide what they want to do, not what you want to do.

Adam: Anybody else?

Donna Heinz: I was following on Facebook earlier.

Adam: Please state your name for the recording.

Oh, Donna Heinz. 11321 Cline Ave. I have a question. With the amount of traffic there at the roundabout, how will it evenly be distributed so that one line won't completely back up while everybody's entering it? I just, get confused because I see the other line, it's not so crowded. So we wait and we give in and we merge in. But if everybody's going one direction going in, and in, in, all the other directions will be so backed up. I just don't understand why they don't make turning lanes and lights.

Adam: So yeah, as soon as this is over the members of the project team will be around and so grab, and in fact I'll come to you. So, we'll kind of talk through things. Anybody else? One last opportunity to comment.

Margaret Malloy: You know, I wasn't going to say anything, my name is Margaret Malloy. I live two houses down here from Mr. Barman's farm. When we have rain, and it rains for two hours very hard, if you go out to Cline, right to the street, the water is going real fast, real fast, real deep and no matter how hard we try with ditches, my ditch, all of us flood. All of us flood.

Adam: So we do Have a map here that kind of explains drainage flow. So

But when she was giving that presentation, she said you know, you're taking all that into consideration. Well, have you taken in enough consideration of how much rain in just 2 hours flows, and you're going to make it so huge with this roundabout? That's going to flood Cline Ave going down to Cedar Lake, unreal. You need to come out and watch on a two-hour event. Tell you to bring him down and how much rain goes down in those ditches.

Adam: So, I'll have a member of the project team come to you and walk you through the drainage. Anybody else that would like the opportunity to comment before we close the public

comment session? Seeing none. I want to thank everybody for being here today. This is a genuinely important part of this process. We really do value the feedback.

INDIANA DEPARTMENT OF TRANSPORTATION

Thank you for attending this evening's public hearing regarding the proposed intersection improvement at US 231 and Cline Ave, Lake County. Please submit comments by using the space provided below. INDOT appreciates your attendance and participation this evening.

TODAY'S DATE: Wednesday March 9, 2022

Please submit comments by Wednesday, March 23 for inclusion into the project record:

PLEASE BUILD THE ROUND A BOUT

ASAP

PRINTED NAME: _____

SIGNATURE: _____

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See Attached Comments

PRINTED NAME: Don Barman, Len Barman, Donna McDavitt

SIGNATURE: Chris Barman

March 9, 2022

In the matter of the hearing concerning improvements to the intersection at US 231 and Cline Avenue to construct a roundabout, the Barman Family, owners of property impacted by this project, submit the following statements and requests.

- Implementation of the future roundabout will not impact the current performance of drainage to the surrounding property on the northwest, northeast and southeast property of the current intersection of US 231 and Cline Avenue, where the roundabout is to be located.
- It is our understanding per section 37-9-27-71 of the Indiana law creating and setting forth operating procedures of the County Drainage Board, a law that first became effective in January 1966, the County Surveyor is responsible to develop and propose the drainage for this modification to the state (US 231) and county (Cline Avenue) highways.
- It is our understanding per the Indiana law creating and setting forth operating procedures of the County Drainage Board that the drainage board must approve all the drainage plans before any action to begin construction of the roundabout can begin.
- Why isn't the proposed detention basin located southwest of the roundabout, which is the direction where the water drains today?
- Field tile must not be disturbed during the construction of this project.
- It is our request that an escrow or bond account must be provided by the State of Indiana and held by the county drainage board for ongoing maintenance and to remediate any drainage issues that arise in the future that were not predicted or known at the time of the construction of the roundabout.
- It is our request that crossings (road cut) be maintained as is or relocated to allow agricultural equipment to enter or exit each farm field without being restricted by the newly constructed roundabout.

We would like to know what the Lake County surveyor, Bill Emerson Jr. has concluded regarding the proposed changes. What is the current hydraulic capacity and in which directions the water shed flows, what will the future hydraulic capacity be and in which direction will the watershed flow, and to what natural body of water will the drainage be routed in each direction?

We would like to know what the Lake County Drainage Board's position is with respect to the proposed drainage changes by the Indiana Department of Transportation.

There have been too many construction projects in recent years that have resulted in drainage issues along the US 231 and Cline Avenue corridors so that special attention must be given to this massive project to ensure no negative consequences of lack of drainage or flooding to surrounding land or residences will occur where no drainage issues exist today.

Respectfully,

The Barman Family

March 9, 2022

Chris Barman comments

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Respectfully,

The Barman Family

Nick Crnokrak
10656 Bell Street – Green Acre Estates
Crown Point, Indiana 46307 (Unincorporated)
To the Lake County team:

N.CRNOKRAK@YAHOO.COM
773-758-7276

For the record, my name is Nick Crnokrak – I live at 10656 Bell Street – Crown Point, Indiana 46307. I live in the Green Acre Estates Subdivision which is located ¼ mile East of this intersection. I have been at my home for over 22 years.

The need is bringing forward an effective traffic management system that not only takes care of complex traffic conditions, but also costs less to manage. Cost effectiveness and optimum use of land are two key requirements of building an effective traffic navigation system, and unfortunately roundabouts do not fulfill both conditions. Roundabouts also require educating people about navigation and crossing methods, which is a stressful exercise.

How will you address the following points below?

Property and Geography

- The government does not own the property on 3 out of the 4 corners of the existing intersection. Construction of a roundabout will negatively affect the existing use of the area. Indiana is a right to farm state.
- Property ¼ mile to the East is not conducive to the widening of the road for slow down zones due to the geography. Mainly there are significant drop-offs next to the road. This will be expensive to rectify.

Traffic, Speed and Safety

- One important factor in the case against roundabouts is that they are, by design, slow, and will increase travel time by a huge margin.
- In case of traffic congestion, the gap between vehicles becomes less. This can result in low-speed crashes and fender benders. Queue development can cause long lines at the entry points.
- Current speed limits are 45 MPH (West of intersection) and 50 MPH (East of intersection) large areas will have to be developed to allow vehicles to slow down properly to avoid collisions. (See Property and Geography section above.)
- Roundabouts are not suitable for "platooned" traffic flow. Emergency vehicles like ambulances cannot make it through roundabouts easily.

Cost

- Very large roundabouts eat up a lot of public and private space. Temporary widening and outside diameter space requirements increase the running cost of construction as well.
- Alternative pathways must be designed to avoid roundabout exit accidents and that increases the cost of construction.
- All roundabouts in Lake County have 14 high intensity lights within the roundabout area. These lights are expensive and require more maintenance than current traffic lights. In addition, the spurious light will negatively affect the surrounding human environment.

Nick Crnokrak
10656 Bell Street – Green Acre Estates
Crown Point, Indiana 46307 (Unincorporated)

Maintenance

- Higher maintenance costs make modern roundabouts an expensive solution for traffic control. (14 high intensity lights with roundabout area vs standard traffic signals.) Very large roundabouts require huge land mass and long splitter islands further increasing the cost.

Large vehicles and weight restrictions.

- Large vehicles are only allowed to travel East and West along Route 231 due to weight restrictions on the North and South streets. A large vehicle will have difficulty navigating the roundabout. In addition, emergency vehicles have difficulty navigating the roundabout also.

Significant impact to Subdivisions and businesses

- Subdivisions and businesses from Cline Avenue to Lane Street – Due East of the intersection will be negatively affected due to traffic flow. Long wait times due to no gaps in traffic will cause traffic to be queued for long periods of time. In addition, traffic incidents will increase due to insufficient gaps in traffic flow.

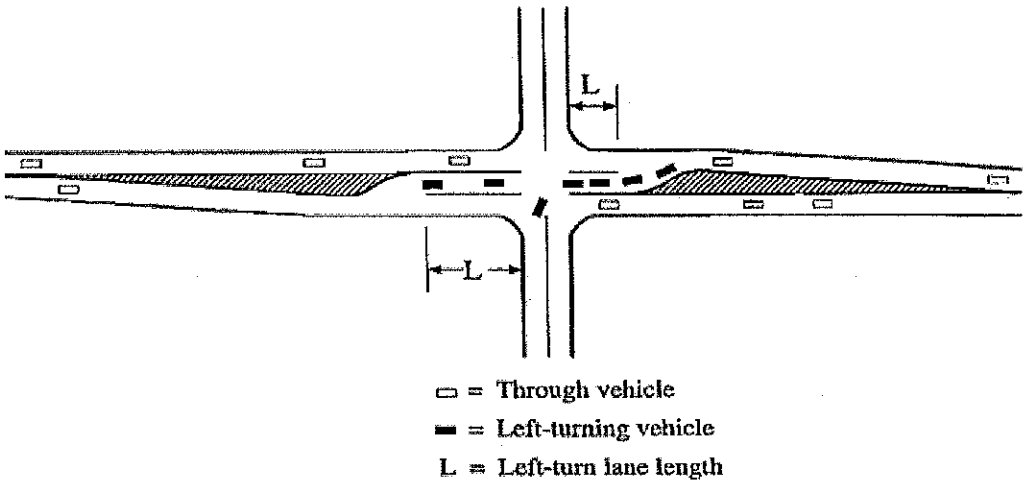
I am against the construction of this roundabout on the intersection of 231 and Cline Avenue due to the points I have listed above. I do not believe that all factors, including the safety of all citizens was considered during this proposal. This roundabout will not allow myself, my neighbors, or the businesses in the area, to exit their subdivision/businesses safely.

There have been other negative issues at multiple Lake County Roundabouts currently in place throughout the county. Multiple accidents (93rd Street), impeded traffic flow due to the slow nature of the design (109th Avenue) and enormous light emission issues – Looks like a football game is in session.

Nick Crnokrak
10656 Bell Street – Green Acre Estates
Crown Point, Indiana 46307 (Unincorporated)

I will be submitting a solution that may be viable alternative for this intersection.

Solution: Modify the intersection of Route 231 and Cline Avenue to allow a Center turn with traffic signals allowing paused traffic flow (e.g.: Calumet Avenue and 109th Avenue, Park Place and 109th Avenue – The Gates of St. John, etc.)



This solution allows for traffic to flow safely with keeping costs at a minimum. This solution has been implemented prior with great results.

This solution would also be viable for the Route 231 and Parrish intersection. That intersection has considerable safety issues that have not been address and is not part of today's discussion, however, it should be discussed at a later date.

Additional Comments from Wally Binner

Roundabout at Cline and State Highway 231

If you are in favor of a 2 lane roundabout at Cline Avenue and 231 which will reduce the speed of traffic to 25 mph, disregard this flyer.

This is just another example of politicians thinking that we are too stupid to know what is good for us.

At the present time the Governor of this great state has initiated a plan to build a 2 lane roundabout at Cline Avenue and 231 to alleviate the traffic congestion and reduce the risk for potential traffic accidents.

The sole purpose of this project can be easily achieved by simply installing turning lanes at all four corners, thus eliminating the need to destroy more agricultural land, be more cost effective, and more importantly we know it will work.

When meeting with the engineer who designed the two proposals he stated if this failed that it would cost him his job. While we are sure this young man will find more work, the question is, will we be stuck with his mess?

Call Governor Holcomb and voice your concern! 317-232-4567

Do We Want a Roundabout at State Road 231 and Cline Ave?

Valporaiso's Roundabout at Calumet Ave., Vale Park Road, and Roosevelt Road led the stats in 2019 with 78 crashes, followed by 43 at the interchange of Ind. Route 49 and Laporte Ave.

Remember if you are involved in an accident with any truck 40 feet or longer, such as a Semi, in the confines of a Roundabout you will be at fault. THAT'S THE LAW. Trucks 40 feet and longer will have the "Right of Way" in a Roundabout.

Do we really want a Roundabout at 231 & Cline?