Meeting Summary

I-69 Tier 2 – Project Coordination Meeting

August 8, 2006 @ 10:00 am (EDT) – in INDOT's N755 Conference Room and Conference Call

Attendance

Tony DeSimone, FHWA
Ben Lawrence, INDOT
Curtis Tomak, INDOT
Nick Batta, INDOT
Kent Ahrenholtz, BLA
Jeremy Keefer, BLA (conference call)
Jim Gulick, BLA
David Cleveland, Corradino
Jason Bowers, Corradino
Mark Eckert, BLN
Tom Seeman, INDOT
Gary Mroczka, INDOT
David Butts, INDOT
Mike Grovak, BLA
Carol Hood, BLA (conference call)
Daniel Townsend, BLA
David Pluckebaum, Corradino
Jeff Hill, Corradino
Charlie Brackett, HDR

1. Introductions

2. End-to-End Alternatives

A brief recap of the original alternatives screening was presented. The project was broken into 5 subsections A through E. A screening report was previously reviewed by INDOT/FHWA and the Resource Agencies. Since that time, four end-to-end alternatives have been assembled from combinations of the remaining subsection alternatives.

Sub-section	Alternatives Carried Forward
1	3A-1 Mod, 3A-3
2	3B-2 Mod, 3B-3, 3B-4
3	3C-3
4	3D-2, 3D-3
5	3E-1

End-to-end Alternatives	Combination
1	3A3 + 3B2 Mod + 3C3 + 3D3 + 3E1
2	3A3 + 3B3 + 3C3 + 3D2 + 3E1
3	3A1 Mod + 3B4 + 3C3 + 3D3 + 3E1
4	3A1 Mod + 3B2 Mod + 3C3 + 3D2 + 3E1

Environmental factors were primarily used to screen the alternatives. Corradino recommended end-to-end alternative 1 as the preferred alternative. The **group concurred** with the preferred alternative.

3. Landlocks

Corradino commented that landlocked parcels were not included in the measurements for impacts for the various alternatives. Just because INDOT could purchase a landlocked parcel, does not mean that it falls within the project's construction limits. The **group concurred** with this approach.

4. Shift S-lines to Minimize Impacts

Corradino mentioned that for county road bridges and bridge approaches to I-69, the proposed centerline, and resulting construction limits, were set on top of the existing centerline. There are some instances where resources such as residences and wetlands are on one side of the county road, while the other side is open. The **group concurred** that the county road alignment should be shifted toward the open area as feasible to minimize potential impacts to environmental resources.

5. Potential Daviess CR 350 N Interchange

Based on public input, the Tier 2 study considered an interchange near the Daviess County Airport at Daviess County Road 350 N. Environmental impacts were assessed for the interchange with each sub-section alternative. The traffic model was used to determine the traffic volumes predicted to use the interchange. The model showed very little traffic using the interchange. Based on the additional impacts and very low traffic volumes, Corradino recommended eliminating this interchange for further consideration. With the elimination of the interchange, Corradino recommended that an overpass on Daviess CR 350 N be included in the project. The **group concurred** with Corradino's recommendations. The DEIS will recognize the local's request to consider an interchange at Daviess CR 350 N, but the document will not include a detailed assessment of the interchange.

6. Potential Daviess CR 1000 N Interchange

Based on public input and concern over interchange spacing, the Tier 2 study considered an interchange at Daviess County Road 1000 N. Environmental impacts were assessed for the interchange with each sub-section alternative. The traffic model was used to determine the traffic volumes predicted to use the interchange. The model showed very little traffic using the interchange. Traffic volumes for the connector between I-69 and Plainville were also low. Based on the additional impacts and low traffic volumes, Corradino recommended eliminating this interchange for further consideration. The **group concurred** with Corradino's recommendation. The DEIS will recognize the local's request to consider an interchange at Daviess CR 1000 N, but the document will not include a detailed assessment of the interchange.

7. Odon/Elnora Interchange

The Tier 1 study identified an interchange at SR 58 serving the towns of Odon and Elnora. The Town of Elnora asked the Tier 2 study team to consider moving the SR 58 interchange north to Daviess CR 1500 N. Based on Elnora's request, the Tier 2 study also included an interchange location at Daviess CR 1400

N. Petitions were received supporting the SR 58 location as well as petitions supporting the Daviess CR 1500 N location.

The Tier 2 study considered the alternate interchange location with each sub-section alternative. Environmental impacts were assessed for each alternative. The traffic model was used to estimate the traffic volumes for each alternative. Corradino recommended that the interchange remain at SR 58. The SR 58 interchange location generated the highest interchange traffic volumes. The Odon wellhead protection area lies within the SR 58 interchange area, but measures can be taken during design, such as the clay lining of ditches to contain spills, to protect this resource. The Daviess CR 1400 N location would have additional impacts because a north-south highway would need to be constructed for system connectivity. The north-south highway (realigned SR 58) would be located between the intersection of SR 58 and Daviess CR 500 E and the intersection of SR 57 and Daviess CR 1500 N in Elnora, and there is no guarantee that a relinquishment agreement would be worked out with the county. A rail crossing, south of SR 57, would also need to be provided if this connector were constructed.

Excluding wellhead protection, the environmental impacts are similar for the three alternatives, with the Daviess CR 1500 N requiring the acquisition of some wooded areas while the others do not. Corradino recommended an interchange location at SR 58, and the **group concurred**. The **group also concurred** with Corradino's recommendation not to include a north-south highway connection due to low anticipated traffic volumes. The preferred location for the Odon/Elnora interchange will be at SR 58.

The discussion turned toward the geometrics and footprint of the SR 58 interchange. Corradino recommended a smaller footprint for the interchange. The footprint would be reduced by eliminating the space within the interchange for future loops. Projected turning movements for the interchange are low, and a desirable level of service can be achieved for each ramp and intersection in the design year without the loops. The group did not make a decision relative to Corradino's interchange footprint recommendation. The group stated that the decision would need to be made by the Access Committee. Corradino will include the larger footprint in the DEIS. Corradino will prepare information for the Access Committee to determine the appropriate footprint for the SR 58 interchange.

INDOT asked Corradino to look further at the profile grade for I-69 and SR 58. INDOT wants to look at SR 58 going over I-69. INDOT also expressed concerns about spacing of adjacent county roads to the interchange ramps. Corradino will continue to look at the spacing issue.

8. Rest Area

A rest area will be included in Section 3. INDOT's Rest Area Committee and BLA had provided Corradino recommendations for rest area layout and potential locations at Daviess CR 200 N and Daviess CR 1000 N. Corradino coordinated with Midwestern Engineering, Inc. (Midwestern) concerning the availability of utility service for the potential interchange locations. Midwestern is located in Loogootee and represents Odon water and sewer, Elnora sewer, Washington water and sewer and Daviess County Rural Water. One stipulation for the rest area is that it must be serviced by public sewer and water. BLA provided two flow scenarios (typical rest area facility and larger facility) to Corradino, which Corradino then passed on to Midwestern. Corradino distributed a memo dated July 28, 2006 and entitled *Comparison of Rest Area Location Options and Recommendation* to the group. This memo summarizes Corradino's recommendation of the Daviess CR 1000 N location over the Daviess CR 200 N location.

Corradino recommended the Daviess CR 200 N location be eliminated due to impacts associated with utility work within Washington as well as possible concerns from the State Historic Preservation Officer (SHPO) about potential visual impacts to the Daviess County Home Historic District. The **group concurred** with this recommendation.

Upon concurrence from the group on the Daviess CR 1000 N location, Corradino recommended that the location actually be shifted further north to the southeast quadrant of I-69 and Daviess CR 1100 N. Reasons for shifting the rest area to Daviess CR 1100 N include:

- It moves the interchange 1 mile further from the town of Epsom and removes it from direct line of sight with two separate wooded areas providing buffers. There is also less residential in this area.
- It reduces off site utility costs by as much as $270,000 since the offsite route will be at least 1 mile shorter.
- The CR 1000 N area was strip mined as recently as 15 years ago. There has been no strip mining at Daviess CR 1100 N. This should be a consideration since the rest area will include large parking areas and buildings.
- It moves the interchange 1 mile further from the historic McCall Family farmstead. The McCall Family Farmstead is approximately the same distance from the Daviess CR 1000 N location as the Daviess County Historic Home District is from the Daviess CR 200 N location; however, there is some existing buffering for the McCall Family Farmstead situation.
- Daviess CR 1000 N is paved and one of the more heavily traveled roads in the area, and it is proposed to remain open. Daviess CR 1100 N is proposed to be dead-ended on each side of I-69. A rest area could be put at the Daviess CR 1100 N location without changing the existing Daviess County traffic patterns.

The INDOT Design Manual recommends minimum 3 mile spacing between interchanges in rural areas. There was some discussion as to whether or not a rest area should be considered an interchange. There are no weaving or operational issues at this location for the 2 mile spacing option. Corradino commented that the requirement for minimum spacing between the rest area bridge and the nearest interchange bridge, as provided by BLA early in the project, was 2 miles. The Daviess CR 1100 N option provides 2 miles from the SR 58 interchange similar to how the eliminated CR 200 N option provided 2 miles from the US 50 interchange.

Corradino also recommended a diamond ramp configuration for the rest area instead of the “trumpet” configuration currently shown in the schematics. Corradino recommended the diamond for the following reasons:

- With a projected year 2030 mainline non-tolling two-way annual average daily traffic (AADT) of approximately 20,000 vehicles per day (VPD), diamond ramps can easily handle the anticipated flow to and from the rest area. Since there is no proposed through county road, some of the ramp movements to and from the rest area could be free flow.

- The diamond will be a prevalent interchange configuration along the I-69 corridor; therefore, this configuration fits with driver expectancy. Driver expectancy may have increased importance since some of the motorists entering the rest area may be drowsy.
- The semi-directional ramp associated with a trumpet configuration could promote higher speeds for motorists exiting I-69 and entering the rest area were stop conditions could exist.
- The trumpet configuration would require two separate bridges over I-69, with a potentially costly semi-directional ramp. The diamond configuration only requires a single two-way bridge, resulting in lower costs.
- The diamond configuration better accommodates a rest area parcel that abuts the I-69 mainline right-of-way, eliminating a strip of privately owned property between the rest area and I-69.

The group asked Corradino to further develop the Daviess CR 1000 N and CR 1100 N options including the diamond configuration for consideration by the Access Committee and well as the Rest Area Committee. Both locations will be carried forward in the DEIS, unless a decision is made soon on a preferred location.

9. US 231 Interchange

Corradino provided traffic information as well as information about the proposed "straightening out" of US 231. This section of US 231 is shown as a four lane divided highway in INDOT's Long Range Plan; therefore, a four lane divided section is proposed through the interchange area.

Four interchange options were presented: 1) Spread Diamond (providing room for future loops); 2) Diamond with 800' spacing between the ramp junctions; 3) Tight Diamond; and 4) Single Point Urban Interchange (SPUI). Projected year 2030 traffic volumes for the interchange and for the SR45/SR58 intersection with the proposed "straightened out" US 231 are relatively low. Traffic capacity analysis indicates that all for configurations are expected to operate at a high level with no queuing spillover between the two ramp junctions or the SR 45/SR58 intersection with US 231. The ramp junctions for the Spread Diamond, Diamond and Tight Diamond are projected to operate at level of Service (LOS) A for both the am and pm peak for year 2030, while the SPUI intersection is anticipated to operate at LOS B for the am and pm peak.

The interchange presents engineering and environmental challenges. The group discussed the potential environmental impacts associated with the interchange alternatives. The Tight Diamond and SPUI have the same footprint and are anticipated to impact 5.8 less wetlands, 4.3 acres less floodplain area, and 1,066 lineal feet less perennial stream (considerably less for Doans Creek) than the Spread Diamond. It is aniticpated the Diamond with 800' ramp junction spacing, as currently drawn, will have impacts closer to the Spread Dimaond and to the Tight Diamond.

Since Tight Diamonds and SPUIs are typically for built-up urban areas, and the subject condition is new construction in a rural area, the group concurred in eliminating the Tight Diamond and SPUI from further consideration. The group requested that Corradino carry the remaining two alternatives through the DEIS, while the access committee reviews Corradino's recommendations. A suggestion was made to look at shifting the ramps a little to the south for the Diamond with 800' ramp spacing, to minimize

impacts. This could result in the north ramp junction being spaced 200' to 300' north of the I-69 centerline with the south ramp junction being 500' to 600' from the centerline.

10. The meeting concluded at 12:06 pm.

Attachments (selected exhibits from the meeting):

1. Plan view of end-to-end alternatives with environmental impacts table.
2. Traffic exhibit for the potential Daviess CR 350 and CR 1000 N interchanges.
3. Traffic exhibit for the Odon/Elnora interchange.
4. Plan view of Odon/Elnora interchange alternatives.
5. Traffic exhibit for the US 231 interchange.
6. Plan view of the US 231 interchange alternatives
7. Potential rest area location exhibit.

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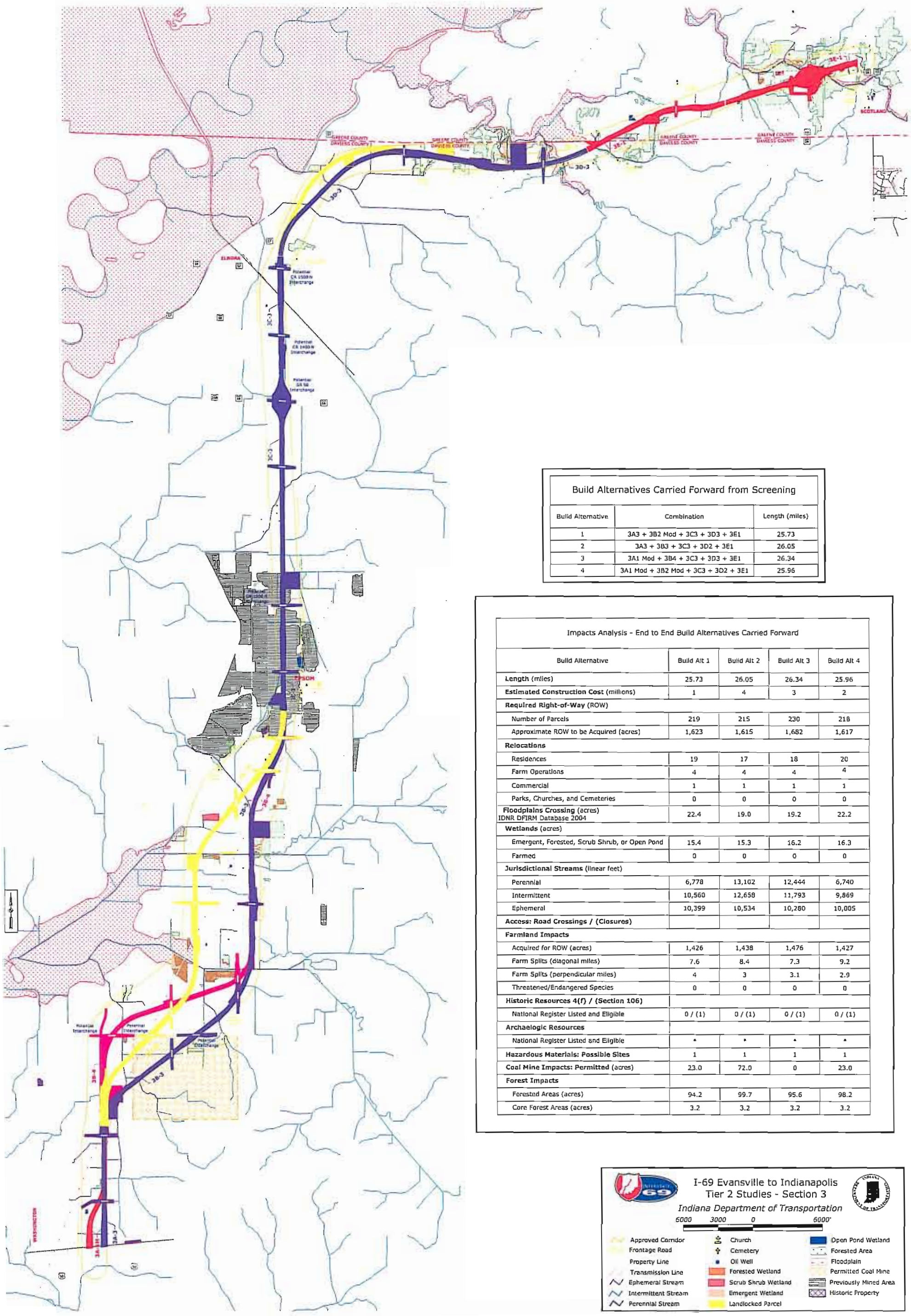
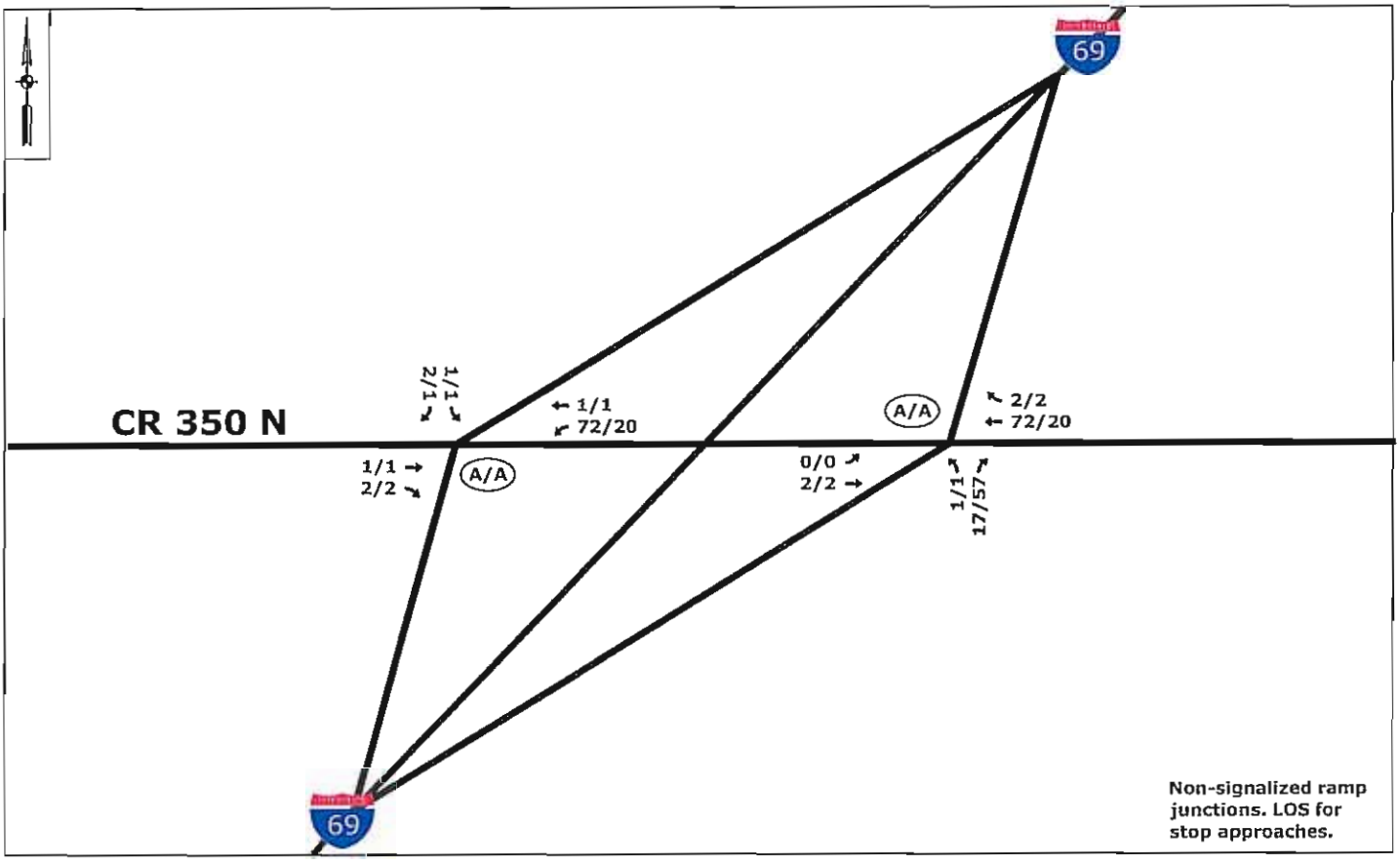
Please forward any comments or revisions to David Cleveland via dcleveland@corradino.com or the address below, by August 18, 2006.

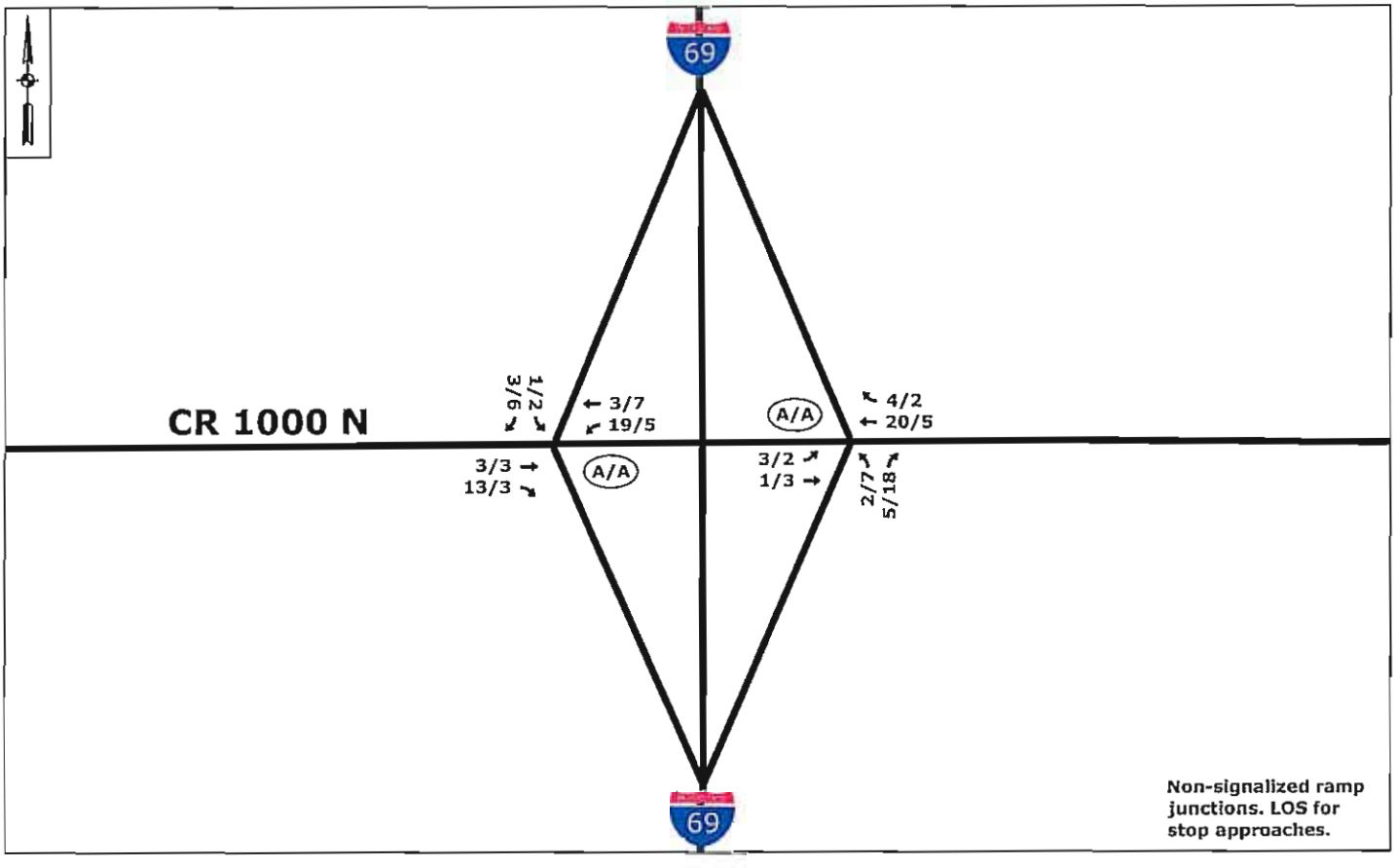
The Corradino Group
Section 3 Project Office
PO Box 522, 2 Commercial Park Drive
Washington, IN 47501
Ph. 866-675-0083
Fx. 812-257-0094

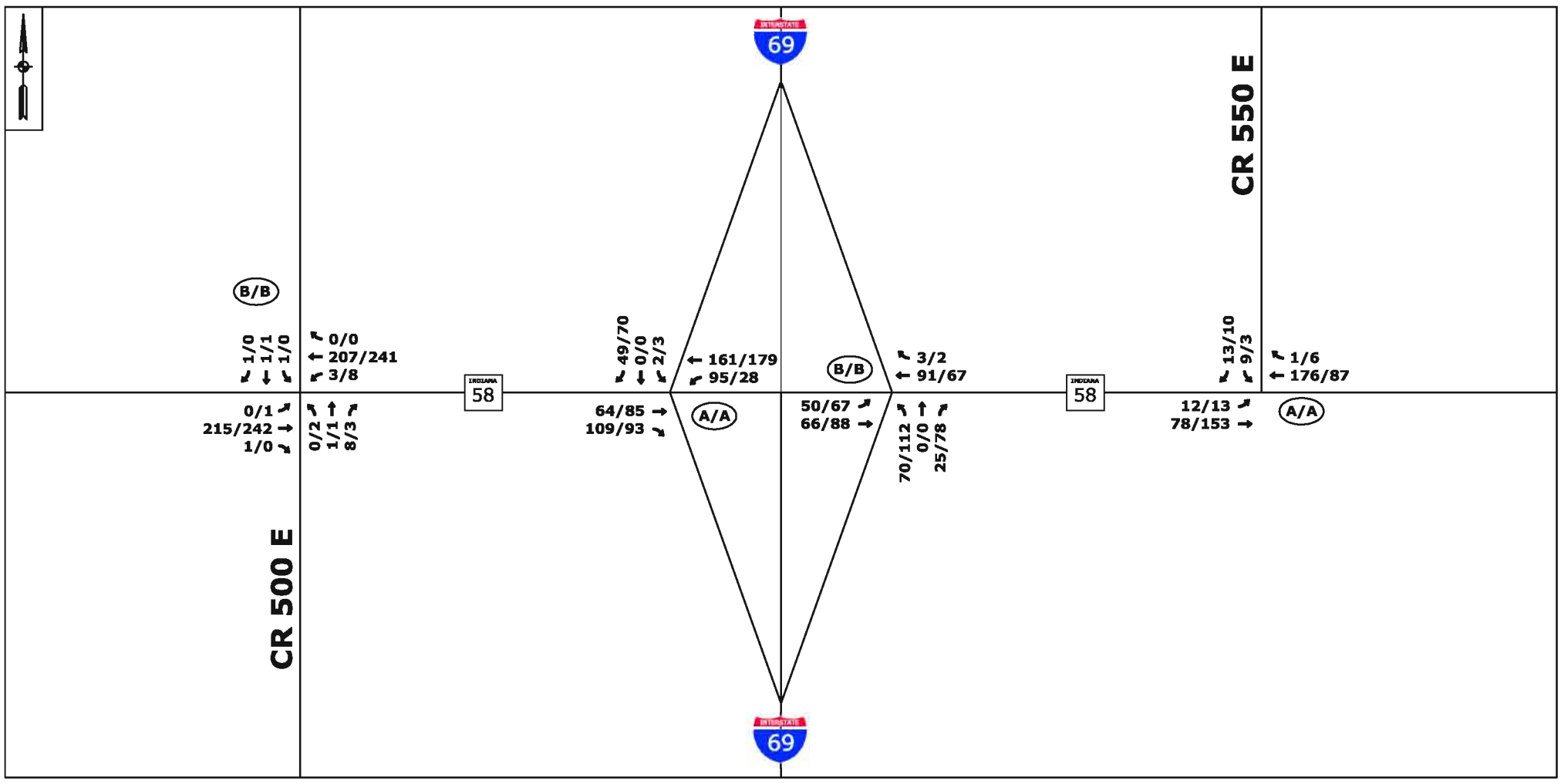


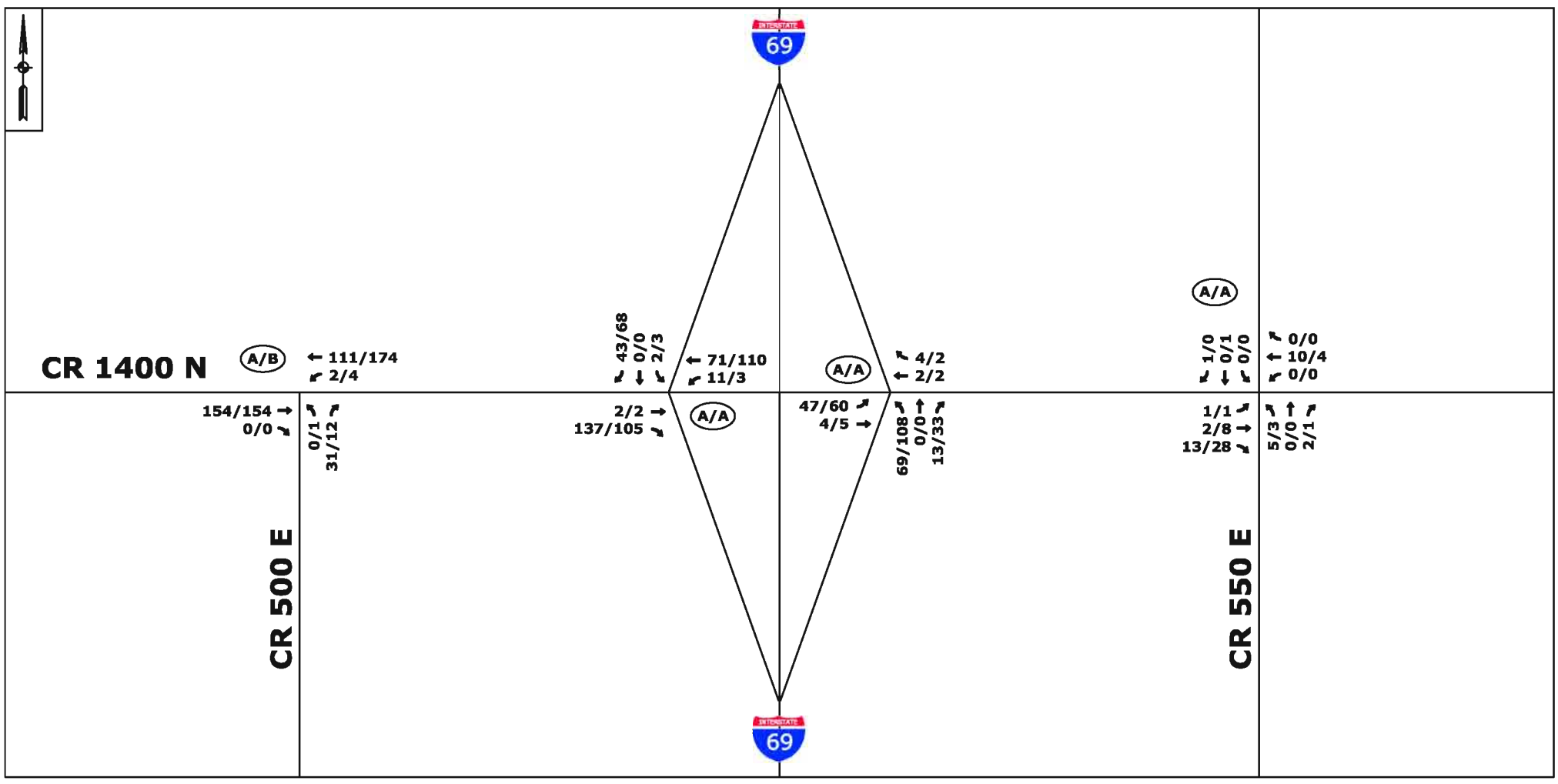
Build Alternatives Carried Forward from Screening		
Build Alternative	Combination	Length (miles)
1	3A3 + 3B2 Mod + 3C3 + 3D3 + 3E1	25.73
2	3A3 + 3B3 + 3C3 + 3D2 + 3E1	26.05
3	3A1 Mod + 3B4 + 3C3 + 3D3 + 3E1	26.34
4	3A1 Mod + 3B2 Mod + 3C3 + 3D2 + 3E1	25.96

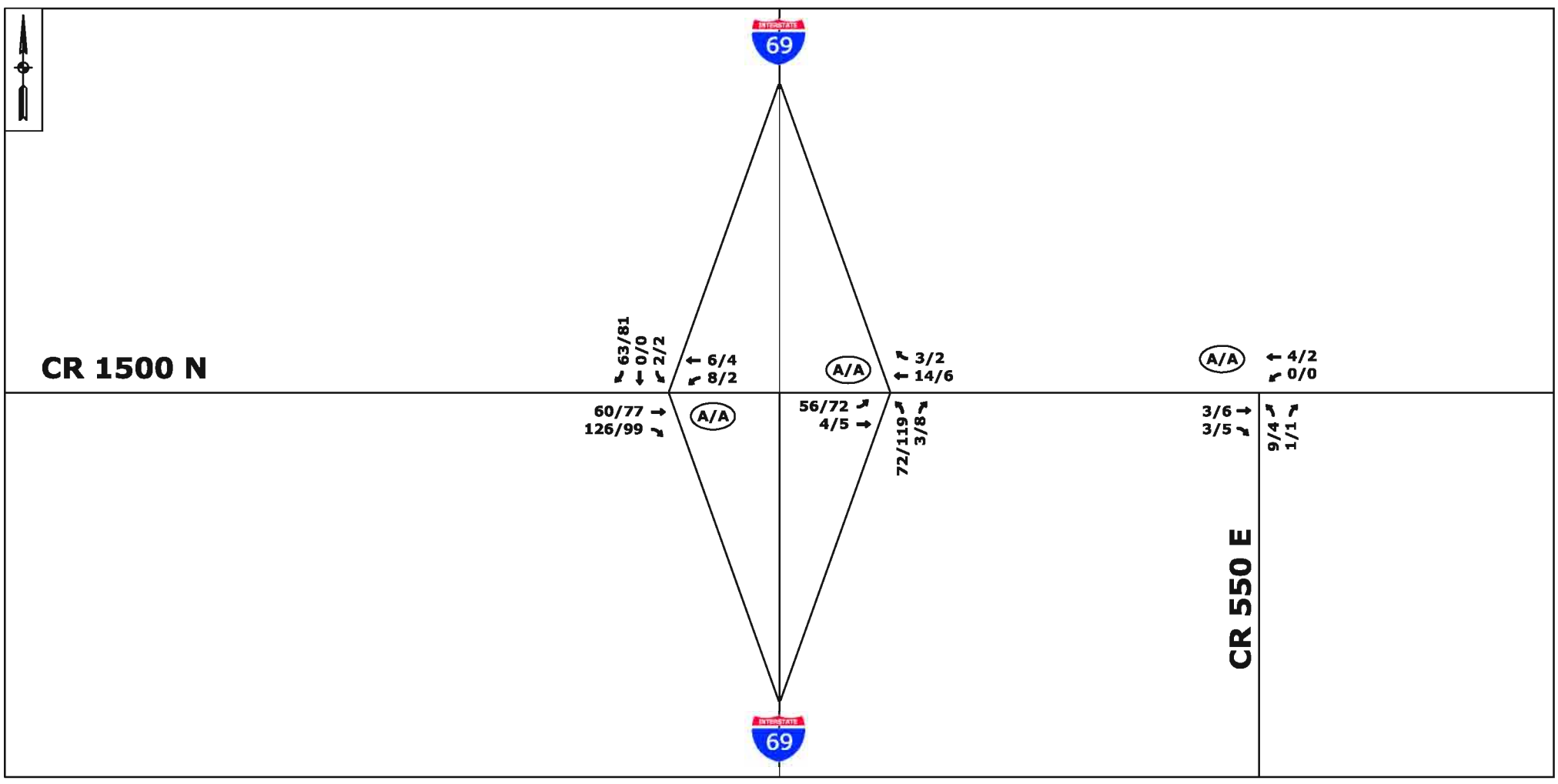
Impacts Analysis - End to End Build Alternatives Carried Forward				
Build Alternative	Build Alt 1	Build Alt 2	Build Alt 3	Build Alt 4
Length (miles)	25.73	26.05	26.34	25.96
Estimated Construction Cost (millions)	1	4	3	2
Required Right-of-Way (ROW)				
Number of Parcels	219	215	230	218
Approximate ROW to be Acquired (acres)	1,623	1,615	1,682	1,617
Relocations				
Residences	19	17	18	20
Farm Operations	4	4	4	4
Commercial	1	1	1	1
Parks, Churches, and Cemeteries	0	0	0	0
Floodplains Crossing (acres) IDNR DFIRM Database 2004	22.4	19.0	19.2	22.2
Wetlands (acres)				
Emergent, Forested, Scrub Shrub, or Open Pond	15.4	15.3	16.2	16.3
Farmed	0	0	0	0
Jurisdictional Streams (linear feet)				
Perennial	6,778	13,102	12,444	6,740
Intermittent	10,560	12,658	11,793	9,869
Ephemeral	10,399	10,534	10,280	10,005
Access: Road Crossings / (Closures)				
Farmland Impacts				
Acquired for ROW (acres)	1,426	1,438	1,476	1,427
Farm Splits (diagonal miles)	7.6	8.4	7.3	9.2
Farm Splits (perpendicular miles)	4	3	3.1	2.9
Threatened/Endangered Species	0	0	0	0
Historic Resources 4(f) / (Section 106)				
National Register Listed and Eligible	0 / (1)	0 / (1)	0 / (1)	0 / (1)
Archaelogic Resources				
National Register Listed and Eligible	*	*	*	*
Hazardous Materials: Possible Sites	1	1	1	1
Coal Mine Impacts: Permitted (acres)	23.0	72.0	0	23.0
Forest Impacts				
Forested Areas (acres)	94.2	99.7	95.6	98.2
Core Forest Areas (acres)	3.2	3.2	3.2	3.2

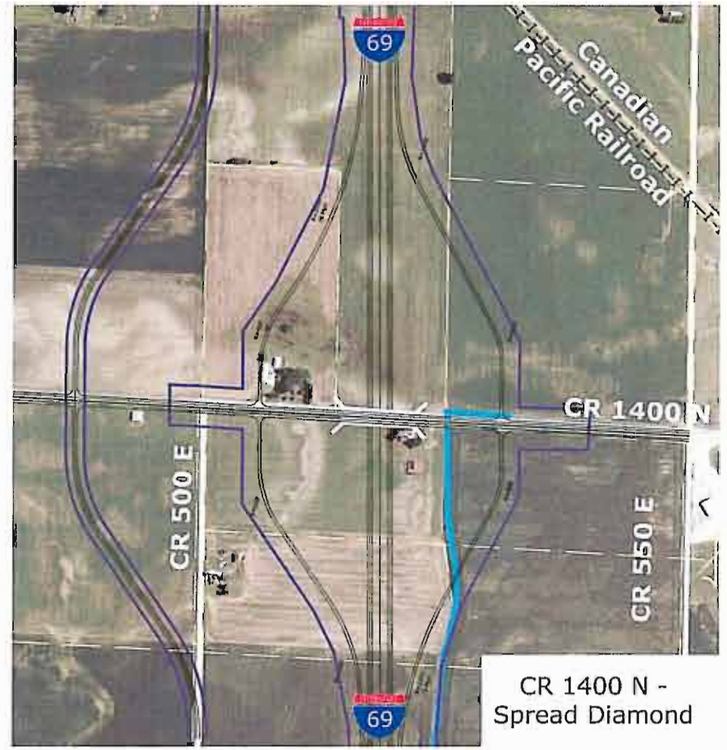

69
CR 350 N
1/1
2/1
1/1
72/20
A/A
2/2
72/20
1/1
2/2
A/A
0/0
2/2
1/1
17/57
69
Non-signalized ramp junctions. LOS for stop approaches.


69
CR 1000 N
1/2
3/6
3/7
19/5
A/A
4/2
20/5
3/3
13/3
A/A
3/2
1/3
2/7
5/18
69
Non-signalized ramp junctions. LOS for stop approaches.


INTERSTATE 69
CR 550 E
B/B
1/0
1/1
1/0
0/0
207/241
3/8
INDIANA 58
49/70
0/0
2/3
161/179
95/28
B/B
3/2
91/67
INDIANA 58
13/10
9/3
1/6
176/87
0/1
215/242
1/0
0/2
1/1
8/3
64/85
109/93
A/A
50/67
66/88
70/112
0/0
25/78
12/13
78/153
A/A
CR 500 E
INTERSTATE 69

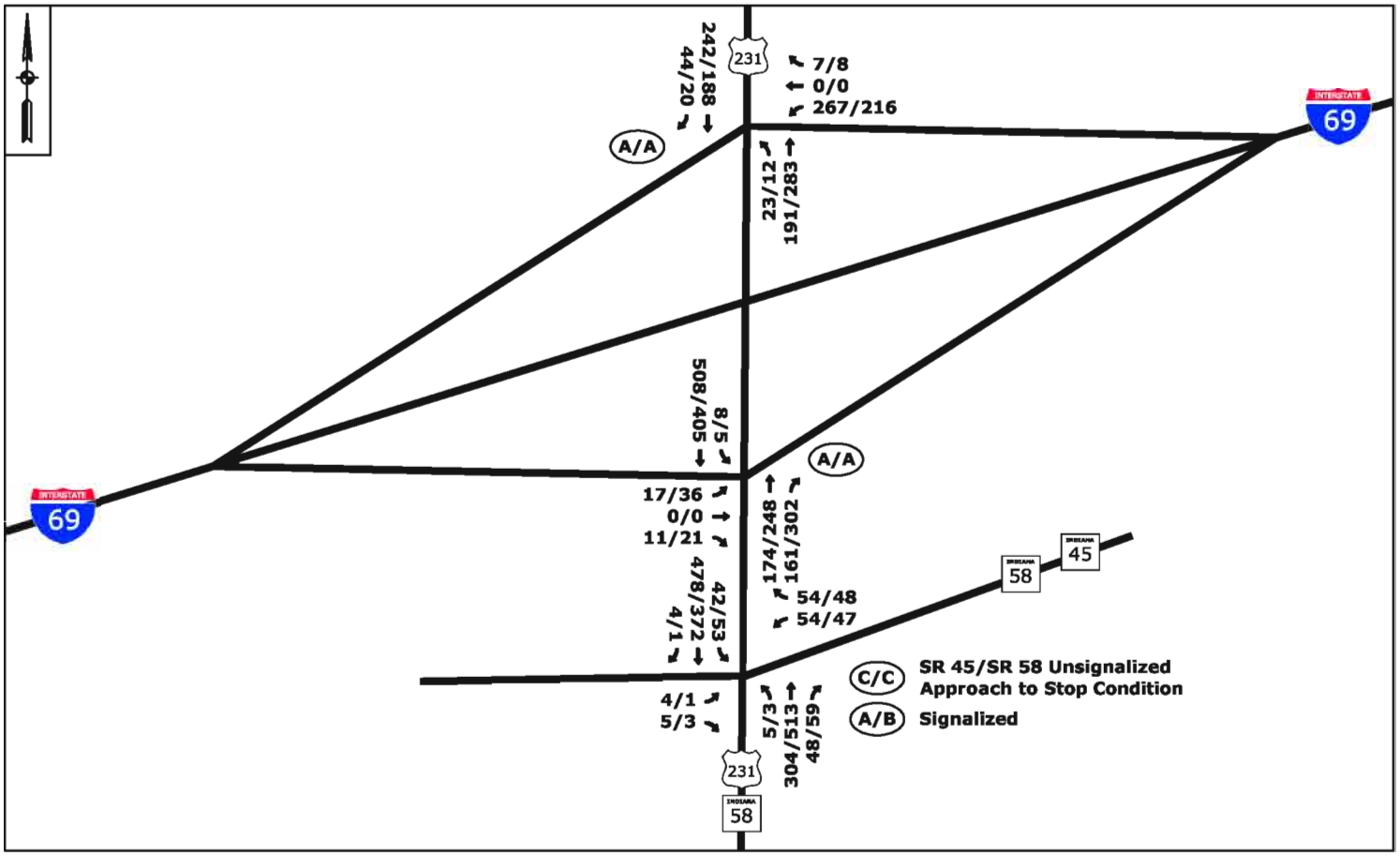

INTERSTATE 69
CR 1400 N
A/B
111/174
2/4
43/68
0/0
2/3
71/110
11/3
A/A
4/2
2/2
A/A
1/0
0/1
0/0
0/0
10/4
0/0
154/154
0/0
0/1
31/12
2/2
137/105
A/A
47/60
4/5
69/108
0/0
13/33
1/1
2/8
13/28
5/3
0/0
2/1
CR 500 E
CR 550 E
INTERSTATE 69

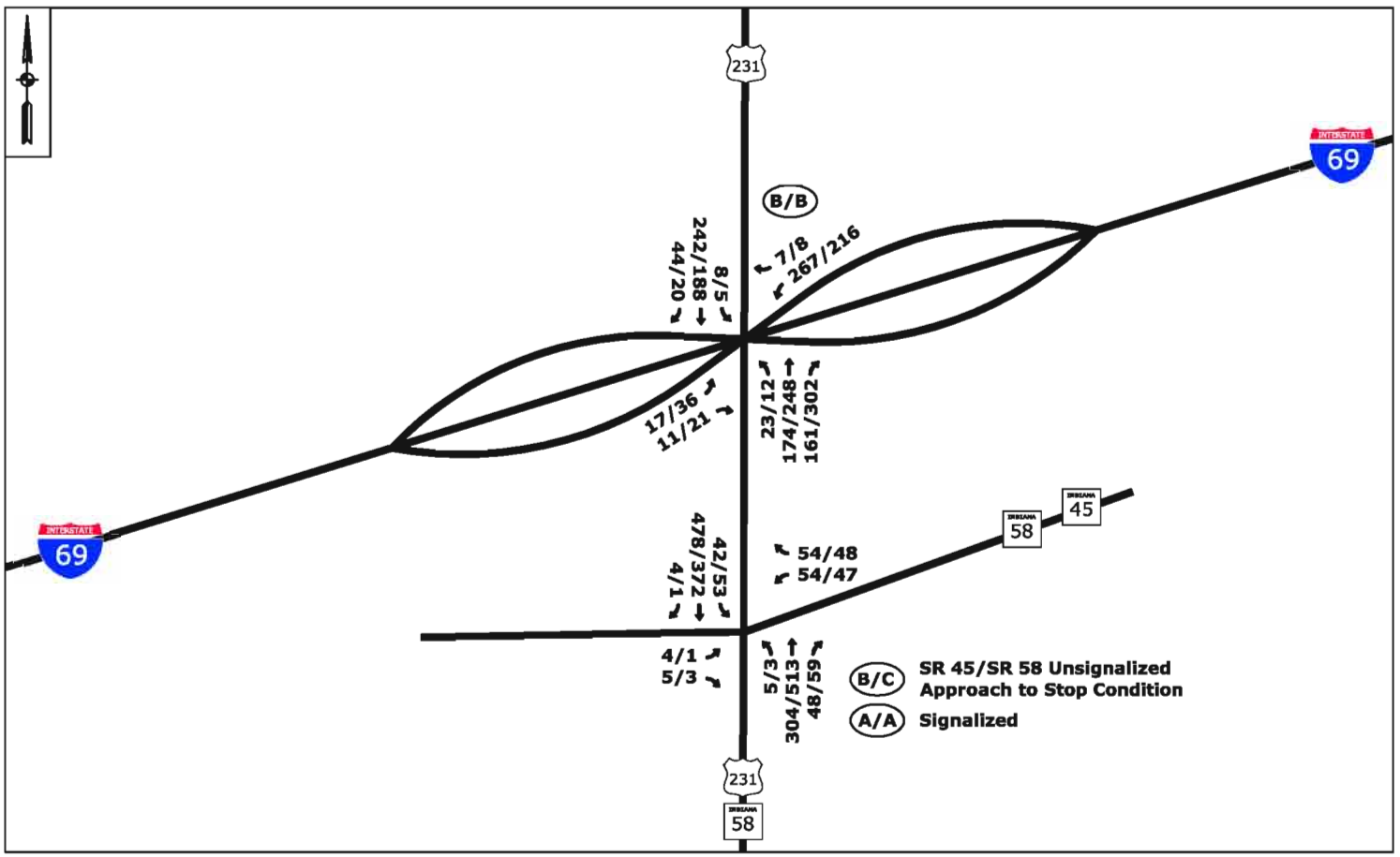

INTERSTATE 69
CR 1500 N
63/81
0/0
2/2
6/4
8/2
A/A
3/2
14/6
A/A
4/2
0/0
60/77
126/99
A/A
56/72
4/5
72/119
3/8
3/6
3/5
9/4
1/1
CR 550 E
INTERSTATE 69



I-69 Evansville to Indianapolis
Tier 2 Studies - Section 3
Indiana Department of Transportation
Not to Scale

Property Line
Transmission Line
Ephemeral Stream
Intermittent Stream
Perennial Stream
Forested Wetland
Scrub Shrub Wetland
Emergent Wetland
Open Pond Wetland
Floodplain


231
242/188
44/20
A/A
7/8
0/0
267/216
23/12
191/283
INTERSTATE
69
8/5
508/405
A/A
17/36
0/0
11/21
174/248
161/302
INTERSTATE
69
42/53
478/372
4/1
54/48
54/47
INDIANA
58
INDIANA
45
4/1
5/3
5/3
304/513
48/59
C/C
SR 45/SR 58 Unsignalized
Approach to Stop Condition
A/B
Signalized
231
INDIANA
58


231
INTERSTATE
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174/248
161/302
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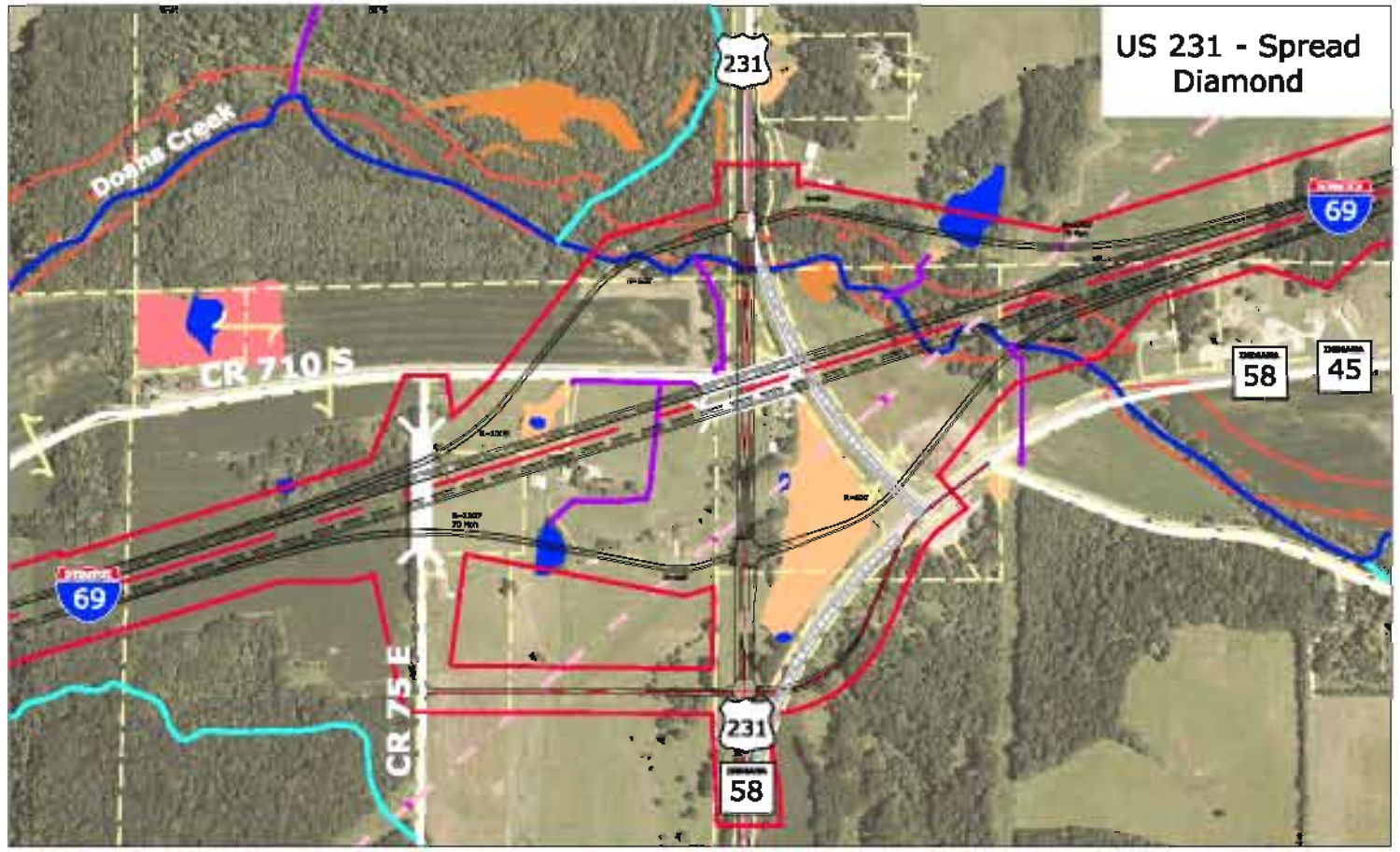
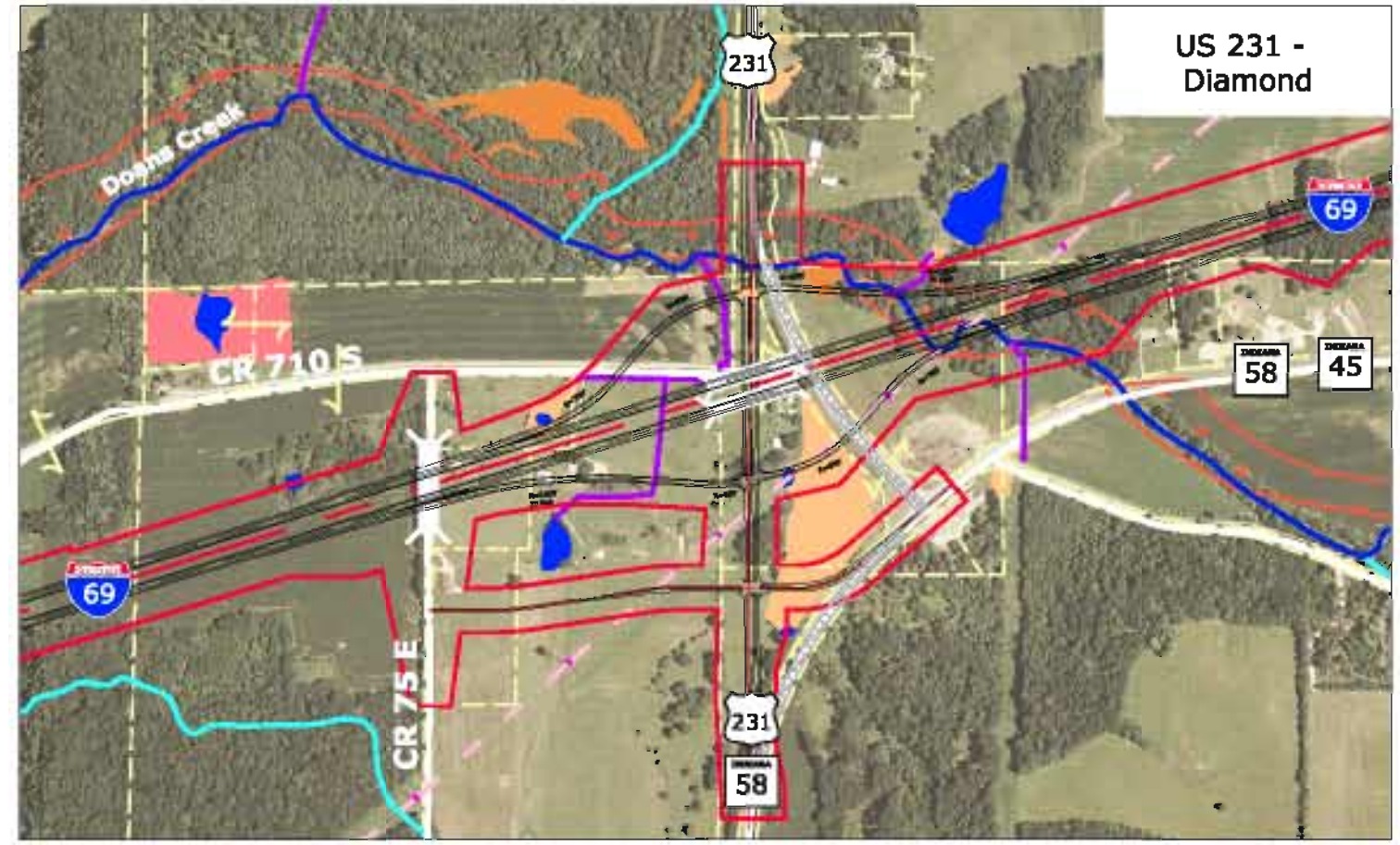
INTERSTATE
69
42/53
478/372
4/1
54/48
54/47
INDIANA
58
INDIANA
45
4/1
5/3
5/3
304/513
48/59
B/C
SR 45/SR 58 Unsignalized
Approach to Stop Condition
A/A
Signalized
231
INDIANA
58


US 231 - Spread Diamond
Doans Creek
CR 710 S
CR 75 E
231
69
58
45


US 231 - Diamond
Doans Creek
CR 710 S
CR 75 E
231
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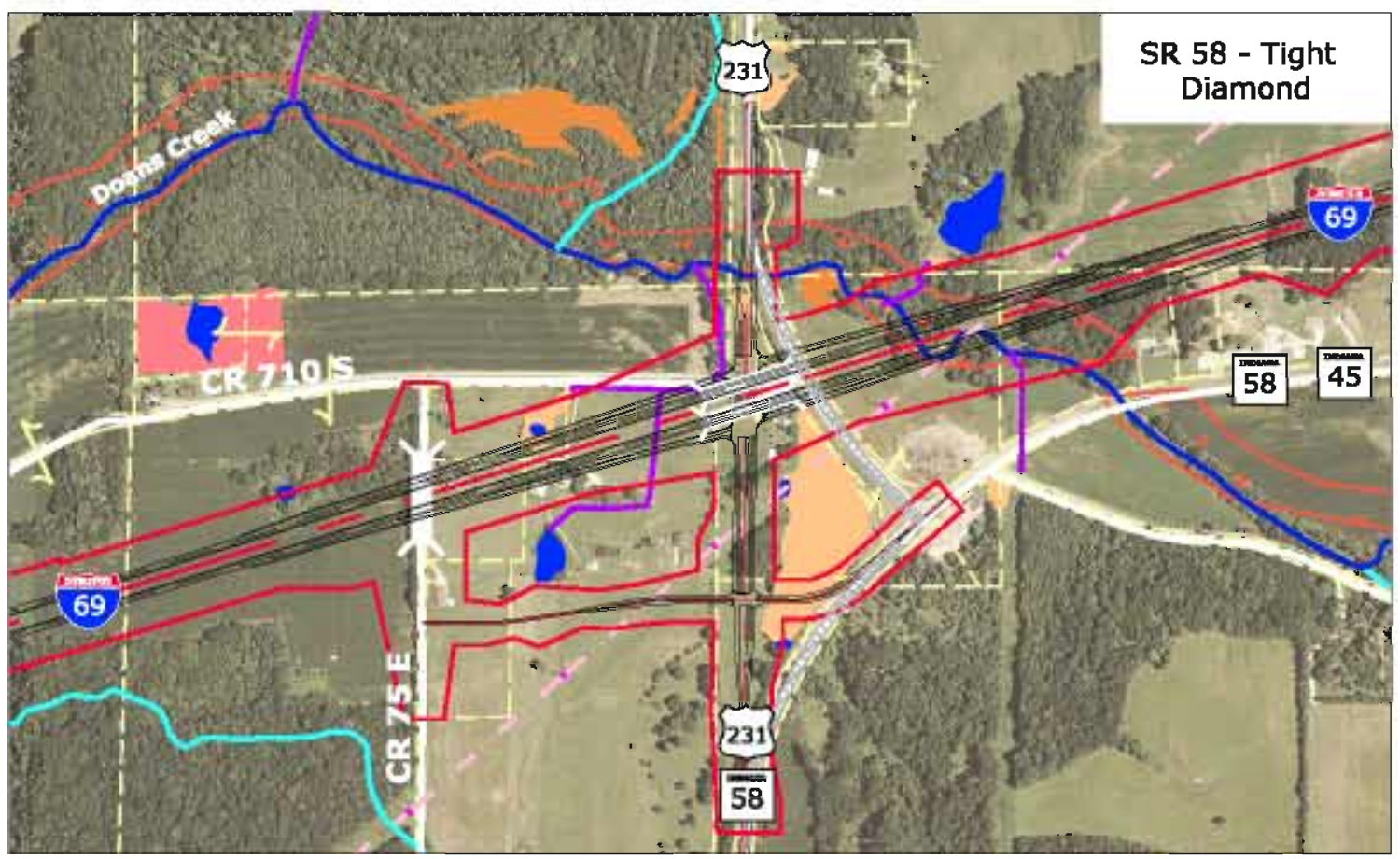
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CR 75 E
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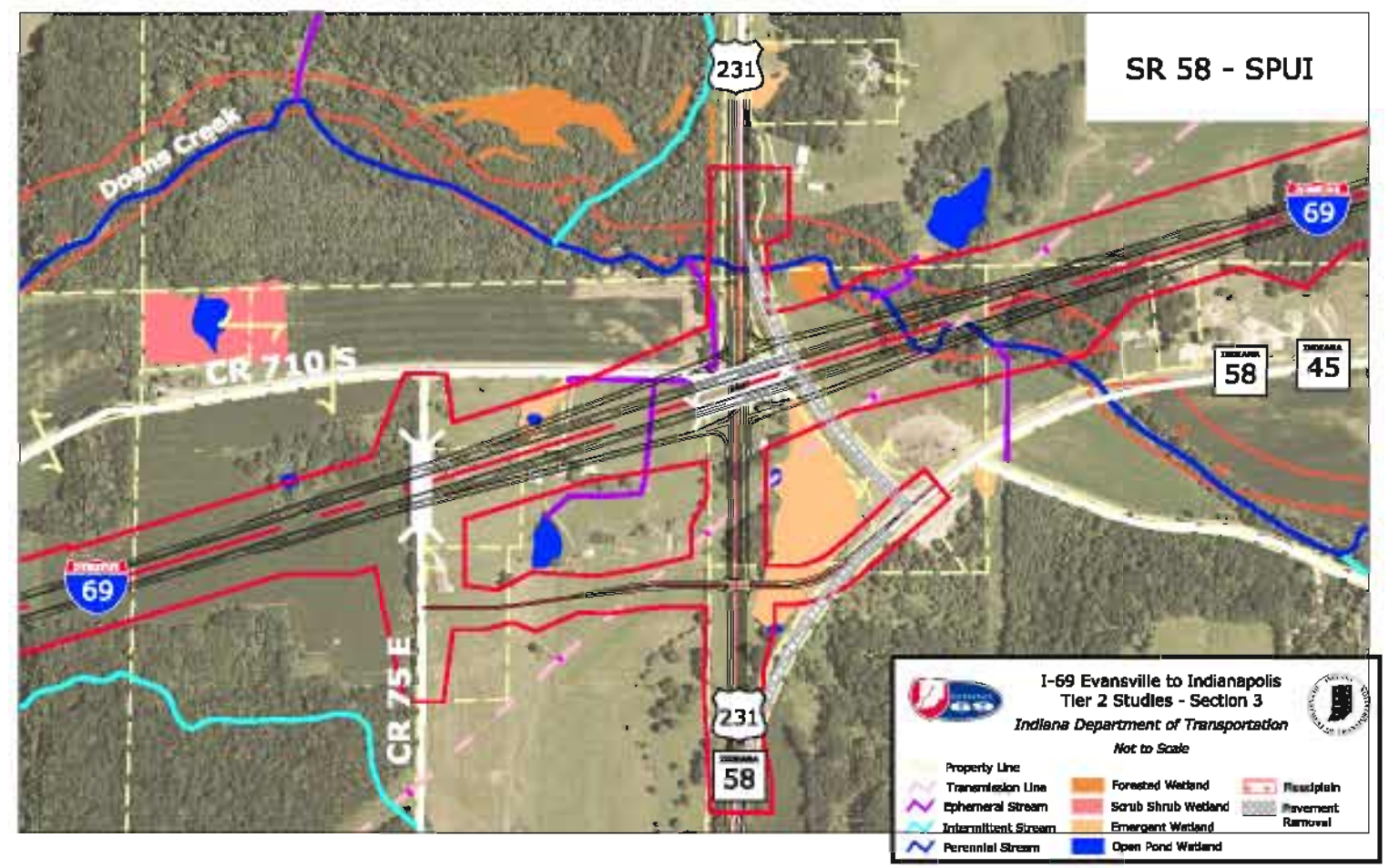
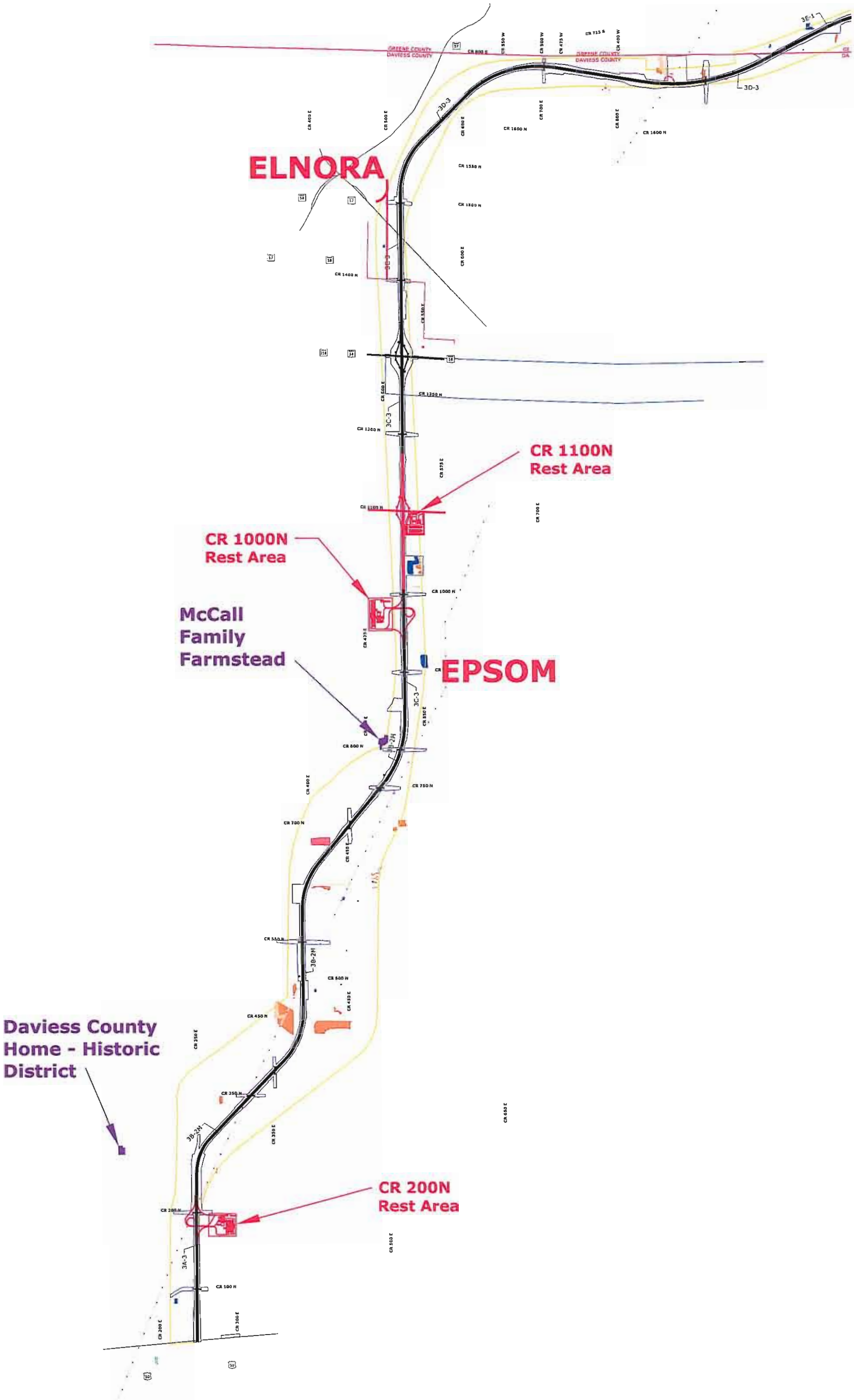

SR 58 - SPUI
Doans Creek
CR 710 S
CR 75 E
231
69
58
45
I-69 Evansville to Indianapolis
Tier 2 Studies - Section 3
Indiana Department of Transportation
Not to Scale
Property Line
Transmission Line
Ephemeral Stream
Intermittent Stream
Perennial Stream
Forested Wetland
Scrub Shrub Wetland
Emergent Wetland
Open Pond Wetland
Floodplain
Pavement Removal


ELNORA
CR 1100N
Rest Area
CR 1000N
Rest Area
McCall
Family
Farmstead
EPSOM
Daviess County
Home - Historic
District
CR 200N
Rest Area
GREENE COUNTY
DAVIESS COUNTY
3D-3
3E-1
3C-3
3B-2N
3A-3