US 69 Corridor Study

Phase 1 Report

City of Overland Park, KS
June 22, 2018

Submitted by
HNTB Corporation

OVERLAND PARK
KANSAS
ABOVE AND BEYOND. BY DESIGN.

HNTB

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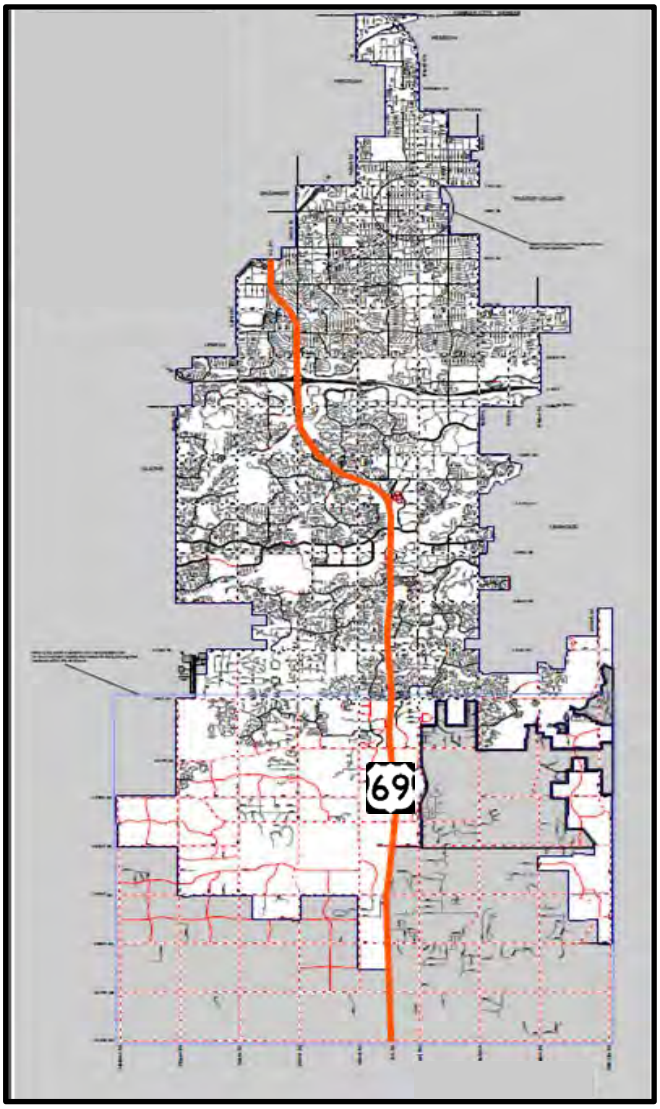
1.0 Study Background and Purpose

Figure 1 – US 69 Corridor



Source: HNTB

United States Highway 69 (US 69) is a vital component of the transportation network in the State of Kansas, the Kansas City metropolitan area and the City of Overland Park (City). Often referred to as the backbone of Overland Park, US 69 extends through the City between the junction with Interstate 35 (I-35) to the southern city limit (Figure 1). It feeds many of the primary east-west arterial corridors in the City providing connectivity to major employment centers and residential areas.

Over the course of the last two decades, significant investments have been made in upgrading and rehabilitating roadway infrastructure in response to the increasing congestion from continued commercial and residential development in the City and the region. The focus of much of this investment has been on the I-435 and US 69 interchange improvements. Four major projects in this interchange have been completed (Figure 2), representing approximately $375M of construction investment. These projects have been accomplished through the strong partnership between the City of Overland Park and the Kansas Department of Transportation (KDOT) with both entities contributing to various aspects of project planning, development, and construction. The improvements made to date have resulted in significant benefits to the traveling public. Access to major traffic generators such as Corporate Woods, the Sprint Campus, and Johnson County Community College, have been improved, along with the elimination of several freeway bottlenecks, and safety improvements in areas with above average crash history.

However, these improvements have not kept pace with the current demand within the corridor. As the City and the region continue to develop, new transportation needs are emerging south of 119th St where no comprehensive study of roadway safety and operations has been conducted since the I-35/US 69 Major Investment Study (MIS) in 2001.

Figure 2 – I-435 & US 69 Improvements

Source: HNTB

To better understand the existing and future challenges within the corridor, the City initiated a concept study focused on a corridor along US 69 from 103rd St. to 179th St., as well as a supporting arterial roadway network approximately 0.5 miles on both sides of US 69. Phase 1 of this study focused on answering the following questions:

1. What are the existing problems within the corridor from a traffic operations and safety perspective, as well as the condition of the existing infrastructure?
2. What are the effects of continued traffic growth if no improvements are made in the corridor?
3. What long-term transportation improvements are needed to address existing and future traffic, safety, and infrastructure issues? Specifically, do the recommendations in the I-35/US 69 MIS still represent a valid solution?
4. How should improvements be implemented over time?

Multimodal transportation issues were identified but only at a high level. This report documents Phase 1 of this study and recommends next steps for advancing improvements within the corridor.

2.0 Existing Conditions

What are the existing problems within the corridor, from a traffic operations and safety perspective, as well as the condition of the existing infrastructure?

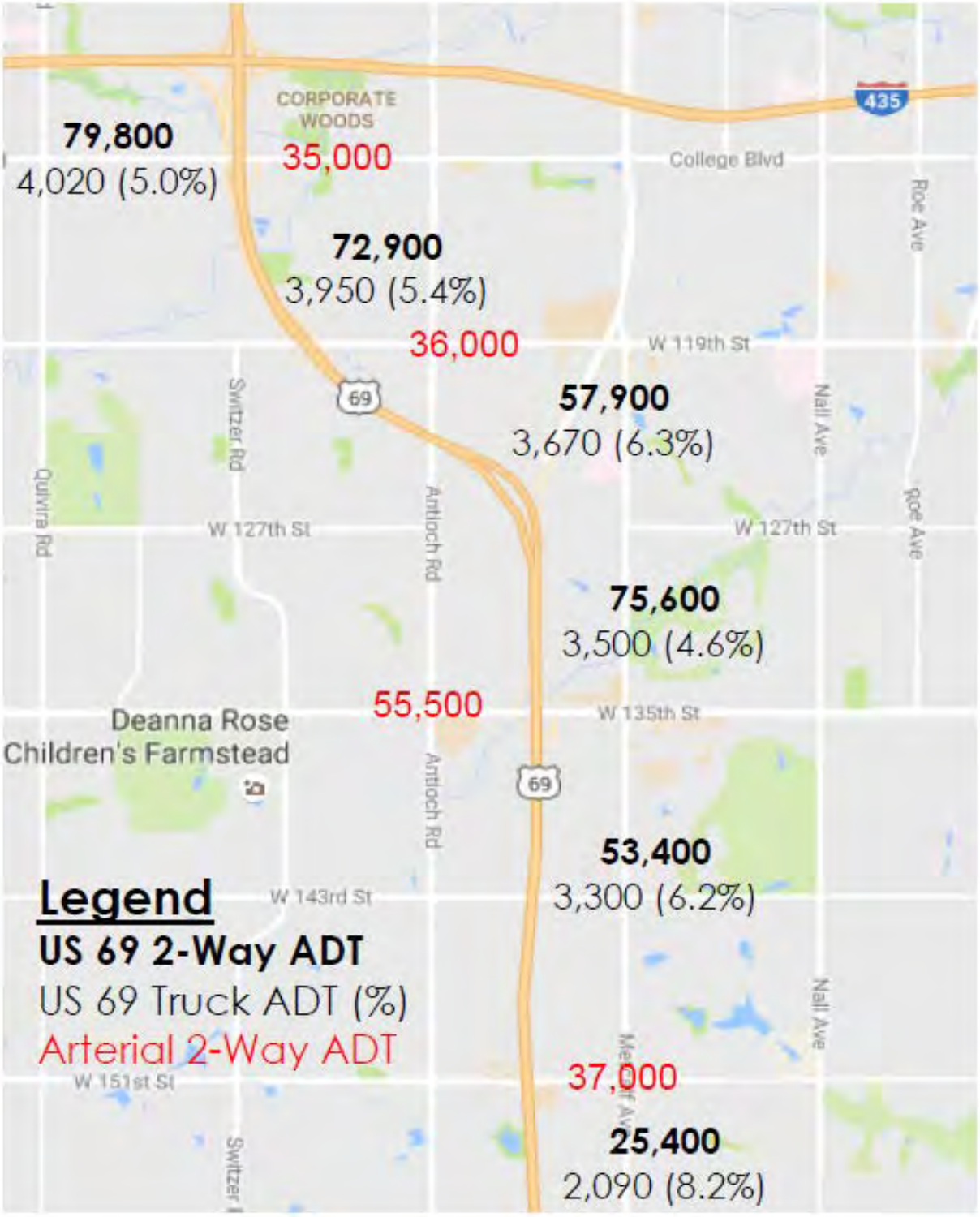
2.1 Traffic Data Collection and Calibration

Analysis of existing 2016 traffic operations began with collection of traffic count data from KDOT and the City. New counts were obtained at selected ramp intersections to supplement incomplete data. Additionally, 2015 origin/destination (O/D) data was obtained from INRIX. The primary purpose of the O/D data was to understand motorists travel routes in a complex segment between 135th Street and Blue Valley Parkway as well as between other interchanges. This data, summarized in Figure 3, was then input into a VISSIM model of the existing corridor. VISSIM is a microsimulation traffic operations model used to understand travel characteristics. The model was calibrated through multiple iterations using field travel time runs along with publicly available data from Google and KC SCOUT. The model underwent an in-depth quality review by KDOT, their independent consultant, and City staff.

2.2 Existing Operations

Using the calibrated VISSIM model, operations of the existing facility were analyzed. The analysis focused on the AM and PM peak travel periods; the AM peak period being 7:00 a.m. - 9:00 a.m., and the PM peak period being 4:00 p.m. - 6:00 p.m. To better understand the operational characteristics of the existing facility, it is illustrative to consider directional conditions at specific points in the corridor.

Figure 3 – Existing 2016 Daily Traffic Volumes



Source: HNTB

2.2.1 Existing Northbound Operations

At the southern limits of the corridor, existing volumes are low and traffic moves freely during the peak periods compared to the northern limits. Further north, during the AM peak hour, volumes increase through the interchanges at 167th St. and 159th St., and the operations of US 69 begin to degrade resulting in queues extending as far south as the 151st St. interchange.

The most significant area of congestion on northbound US 69 is between 135th St. and Blue Valley Pkwy. This is a result of:

- The high volume of entering vehicles from both the WB 135th St. and the EB 135th St. US 69 on-ramps, particularly the traffic from the low-speed eastbound to northbound loop ramp,
- The already congested mainline lanes of northbound US 69, and
- The high volume of weaving vehicles exiting to Blue Valley Pkwy.

Congestion within the segment between 135th St. and Blue Valley Pkwy. is the #2 ranked traffic bottleneck in northeast Kansas, as described by KDOT. Congestion is experienced daily with US 69 northbound speed reductions to approximately 20-30 mph during the AM peak period.

Between Blue Valley Pkwy. and College Blvd., congestion is moderate during the AM peak periods. The bottleneck between 135th St. and Blue Valley Pkwy. acts as a meter which restricts northbound traffic. The result is that the segment between Blue Valley Pkwy. and College Blvd. operates better today than it did 10 years ago. Continuing north of I-435, where US 69 has already been improved through the I-435 & US 69 "Green" project, US 69 operates without congestion through the study limits.

2.2.2 Existing Southbound Operations

Beginning in 2005, improvements were made to southbound US 69 from I-35 to 103rd St. as part of the I-435 & US 69 "Orange", "Green" and "Red" projects. These improvements helped alleviate congestion and safety issues as far south as College Blvd. by increasing mainline capacity as well as adding a southbound collector/distributor (C/D) road system. As the southbound C/D road connects to US 69 between College Blvd. and 119th St., it introduces a concentrated volume of traffic into the existing 2-lane section that causes daily congestion near the 119th St. interchange. This is an interim condition, necessitated by available funding limits, that will improve as additional improvements are completed on southbound US 69.

Similarly to what is experienced in the northbound AM peak direction, the southbound segment between Blue Valley Pkwy and 135th St. is the most significant area of congestion during the PM peak period. This is a result of:

- The high volume of entering vehicles originating from Blue Valley Pkwy.,
- The left entrance from Blue Valley Pkwy. and the weave with traffic exiting to 135th St.,
- The already congested mainline lanes of US 69,
- The lane continuity of southbound US 69 – The outside lane drops at 135th St., and
- The high volume of traffic exiting to 135th St.

Southbound congestion in this segment is not as pronounced during the PM peak as the northbound during the AM peak period, but speed reductions to approximately 40 mph are experienced daily. Further south, after emerging from the southbound bottleneck between Blue Valley Pkwy. and 135th St., traffic operations improve during the PM peak periods.

2.3 Existing Safety

Crash data for the 5-year period from 2011-2015 was analyzed for the study area. Within this period there were 569 reported crashes which is approximately one crash every three days. Rear-end crashes, typically associated with congestion, represented 44% of reported crashes. Crash severity data showed that 80% of crashes resulted in property damage only (455 crashes), 19.7% resulted in injuries (112 crashes), and 0.4% resulted in fatalities (2 crashes).

The areas in the corridor experiencing the most significant safety issues are located within the same areas experiencing the worst operational performance. The three locations with the highest number of crashes are:

1. Southbound: Between Blue Valley Pkwy. and 135th St. – Due to the left-hand entrance and weave. The crash rate in this segment is 53% higher than the statewide average for US highways in Kansas,
2. Northbound: 151st St. to 135th St. – Drivers approaching the back of the vehicle queue at the bottleneck between 135th St. and Blue Valley Pkwy., and
3. Northbound: Between Blue Valley Pkwy and 119th St. – Vehicles emerging from the bottleneck south of Blue Valley Pkwy.

Figure 4 below depicts a summary of the existing traffic and safety issues present within the study area. As traffic continues to increase on US 69, it is expected that these locations will see safety conditions worsen as well as new problem areas emerge.

Figure 4 – Existing Traffic and Safety Issues

Source: HNTB

2.4 Existing Infrastructure Conditions

US 69 pavement and bridges within the study limits were constructed in the late 1960s and early 1970s in a series of KDOT projects. Generally, segments of US 69 south of 127th St. turned 50 years old in 2017 and segments north of 127th St. will turn 50 years old in 2025. Together, this represents 46 lane miles of pavement and 21 bridges that are reaching the end of their design life.

US 69 within the study limits has received various maintenance actions in the last 10 years. On average KDOT currently spends $2M per year on roadway patching, overlays and bridge rehabilitations within the study limits. The cost of maintaining this facility in a state of good repair will rise as it ages and as traffic, including truck traffic, continues to increase. KDOT estimates that within 10 to 15 years maintenance will no longer be sufficient and US 69 will need to be reconstructed. To replace the existing roadway and bridges within the study limits, without any safety or capacity improvements, is estimated to cost approximately $230 million in construction (2016 dollars).

Given the age and condition of the US 69 Corridor infrastructure, a comprehensive plan for implementing and funding improvements is needed. When condition issues require action to be taken, this plan will provide a roadmap for improving US 69 while minimizing spending on items incompatible with the long-term solution.

3.0 Future No-Build Conditions

What are the effects of continued traffic growth if no US 69 corridor improvements are made within the study limits?

3.1 Future No-Build Traffic Projections

To evaluate future traffic operational characteristics, the study team established future growth rates and resulting anticipated future traffic volumes out to a design year of 2040. This design year was chosen to be consistent with the current MARC adopted Long-Range Transportation Plan. The process of developing traffic projections began with assembling historical traffic growth data and compiling information from the many traffic studies previously performed in this corridor. To the right is a list of previous studies performed in this corridor in the last 20 years. The team determined that applying uniform growth rates throughout the entire study area was not a valid approach. Some areas are nearly fully developed, particularly north of Blue Valley Pkwy., whereas other areas are relatively undeveloped such as south of 159th St. As a result, two locations were chosen on US 69 to develop independent traffic forecasts:

Previous US 69 Studies

- *I-35/US 69 Major Investment Study*
- *I-35/US 69 Preferred Strategy Report*
- *I-435 and US 69 Design Study*
- *159th St and US 69 Break in Access*
- *167th St and US 69 Break in Access*
- *Overland Park South Streets Study*
- *Five County Regional Transportation Study*

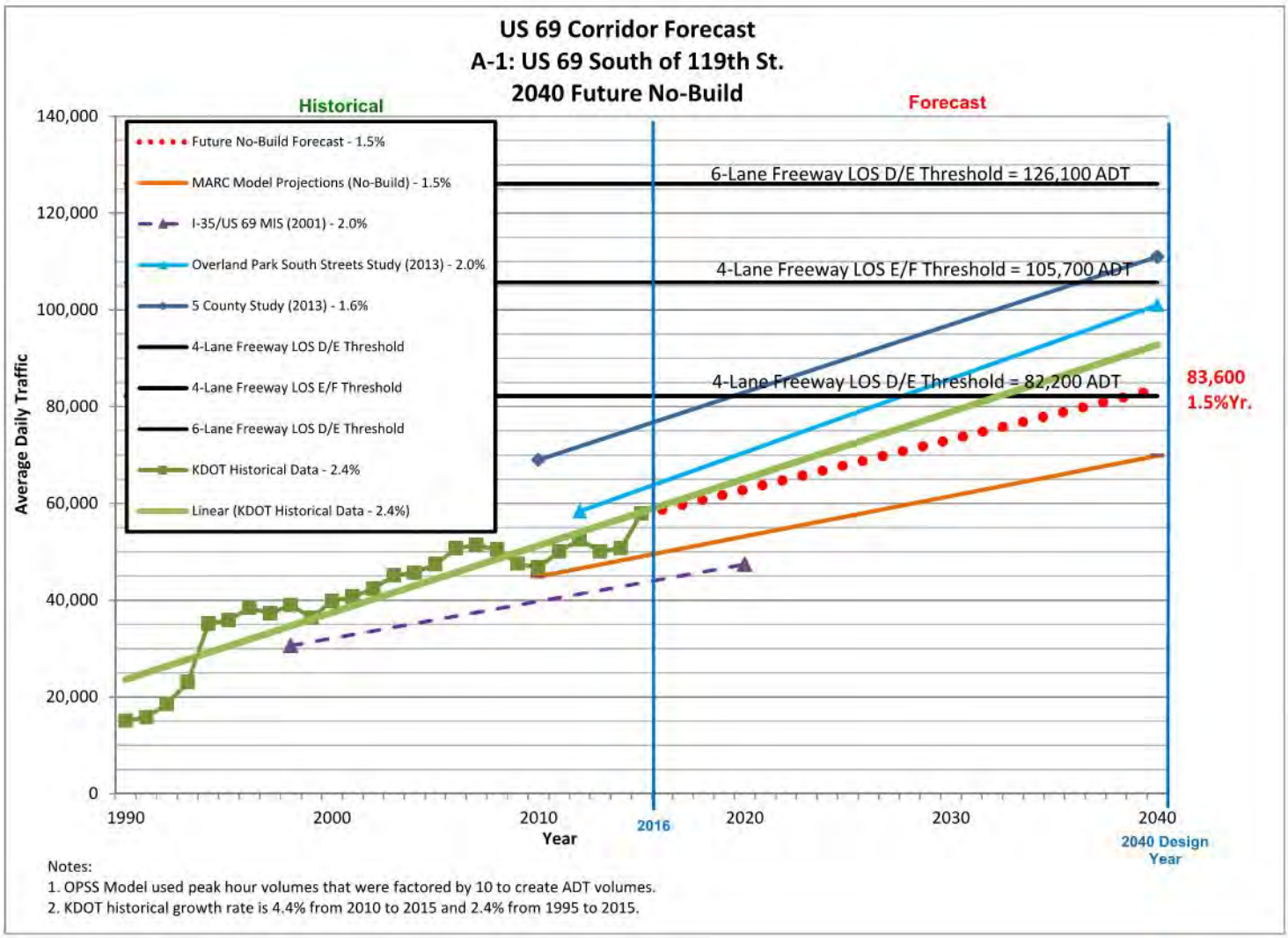
- Location A-1 – Between Blue Valley Pkwy. and 119th St.
- Location A-2 – South of 167th St.

Using a combination of the traffic forecasts from the previous studies, the current MARC regional model, Overland Park's travel demand model, and considerable coordination with the City, KDOT, FHWA, and MARC staff, the following No-Build growth rates were established:

- Location A-1: 1.5%/year
- Location A-2: 4.9%/year

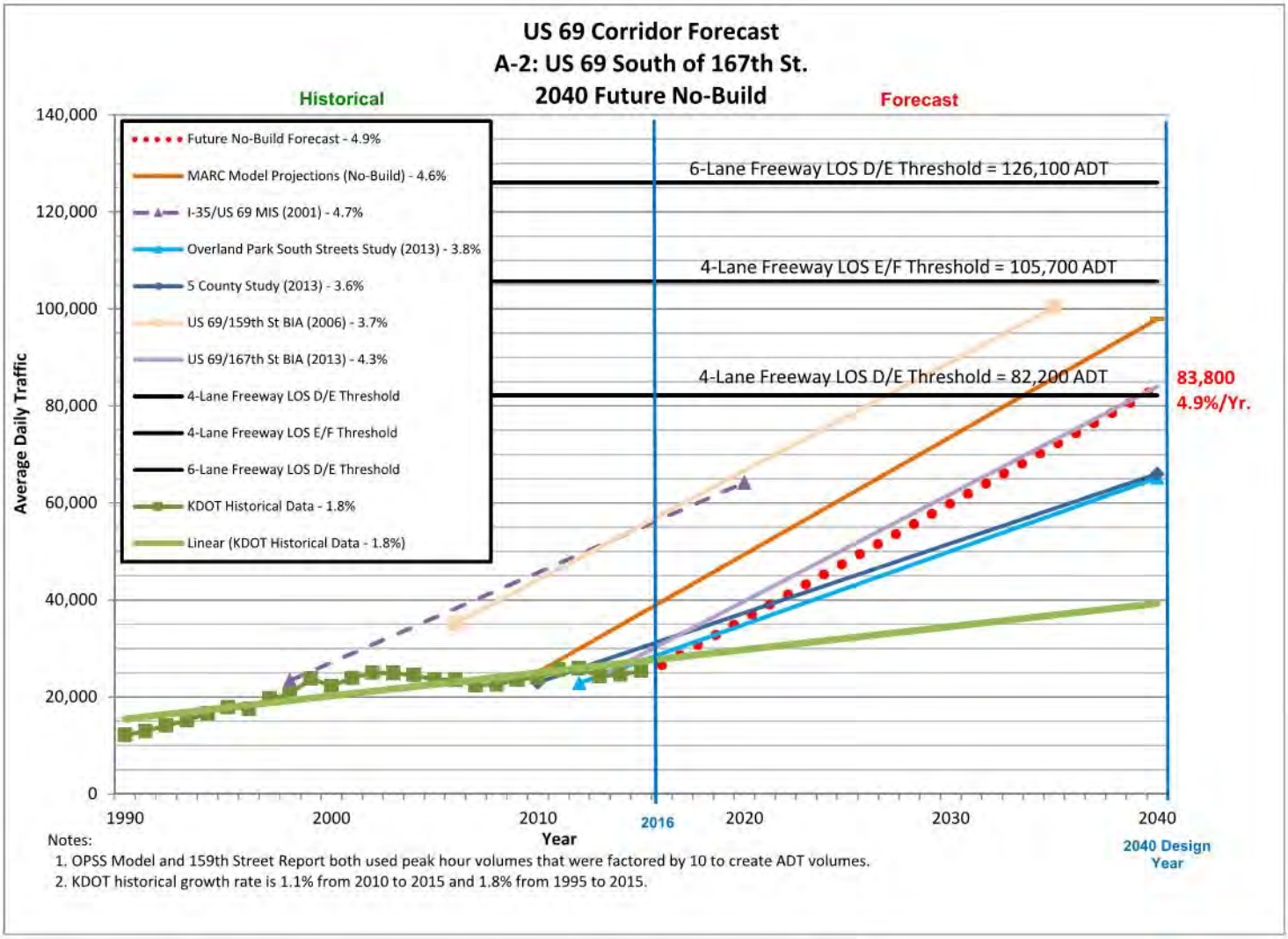
A graphical depiction of historical traffic volumes, shown in green, as well as the forecasts from the various studies discussed above, are illustrated in Figure 5 for location A-1, and in Figure 6 for location A-2. The agreed upon future No-Build growth rates for this study and resulting 2040 No-Build 2-way ADTs are shown in red.

Figure 5 – 2040 No-Build Traffic Forecast
Location A-1



Source: HNTB

Figure 6 – 2040 No-Build Traffic Forecast
Location A-2



Source: HNTB

Applying these growth rates to existing traffic volumes results in future No-Build 2-way volumes of 83,600 vehicles per day at location A-1 and 83,800 vehicles per day at location A-2. The growth rates at both locations are restricted by the capacity of a 4-lane freeway.

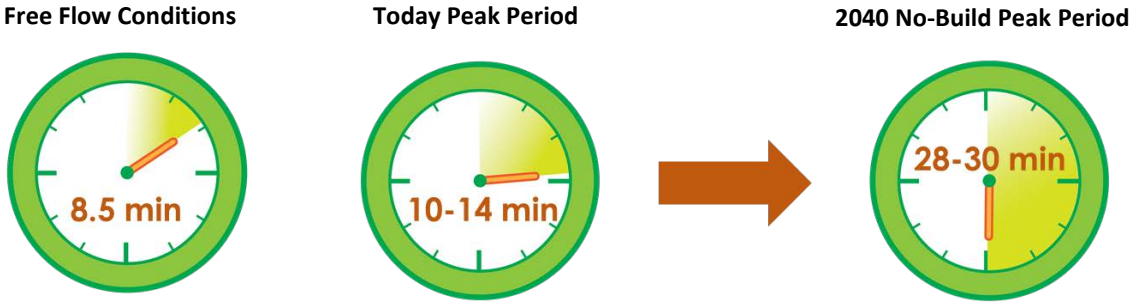
3.2 Future No-Build Operations

Using the 2040 No-Build forecasts, VISSIM was again used to evaluate the traffic operational effects in the corridor if no US 69 improvements are made through 2040. The results from this analysis can be summarized as follows:

- Locations where significant congestion exists today continued to degrade,
- New bottlenecks emerged at the northbound and southbound segments between 119th St. and I-435 and the northbound segment south of 151st St., and
- Operations of ramp terminal intersections and various arterial streets experienced significant delay, specifically the interchanges at 151st St., 135th St., and College Blvd.

Future No-Build traffic conditions are expected to provide poor levels of service by 2040 resulting in widespread increases in motorists' delay. To demonstrate the Future No-Build conditions, comparative travel times were developed for a trip through the corridor beginning at 179th St. and ending at College Blvd. during the AM peak period. As illustrated below in Figure 7, travel times for this trip grow from approximately 10-14 minutes today to nearly 30 minutes in 2040.

Figure 7 – AM Peak Hour Travel Time Comparison
(Northbound from 179th St. to College Blvd.)



Source: Project VISSIM Model

3.3 Future No-Build Safety

A high-level safety assessment was performed for the future No-Build condition. This analysis was performed by keeping the existing US 69 mainline crash rate constant and increasing the traffic to 2040 based on the future No-Build growth rates described in Section 3.1.

Table 1
Existing and 2040 Future No-Build US 69 Mainline Annual Crashes

	Fatal	Injury	PDO	Total	Change
Existing	2	112	455	569	--
2040 Future No-Build	4	233	948	1,185	108%

PDO = Property Damage Only

As shown in Table 1, 1,185 annual crashes would be expected to occur in the study area. This represents an increase of 108% or 616 crashes in 2040 compared to existing conditions. Conclusions from this high-level assessment include:

- Today, SB US-69 from BVP to 135th is the only segment that exceeds the statewide average. In the future No-Build, this segment would continue to degrade and other segments in the corridor would likely exceed the statewide average crash rate.
- Crashes are expected to significantly increase as traffic increases and congestion worsens.

4.0 Future Build Conditions

Allowing the traffic operations of US 69 to degrade to the degree illustrated by the 2040 No-Build analysis is likely to result in a negative effect on future growth, quality of life, and economic competitiveness of Overland Park and the Kansas City region. To better understand the type and magnitude of improvements needed to provide acceptable future operations, the team focused on answering the question:

What long-term transportation improvements are needed to address existing and future traffic, safety, and infrastructure issues?

The team focused on developing a highway solution to achieve operational and safety conditions that are improved from today's operating conditions. The team started with the last US 69 corridor plan, the I-35/US 69 Major Investment Study completed in 2001. This study did not evaluate other non-highway alternatives. As part of a more comprehensive evaluation of alternatives in conjunction with a future NEPA and Break-in-Access study, other alternatives will be considered. These may include:

- Improved accommodation for transit either on US 69 or on other routes, leading to a greater modal shift,
- Improvements to the local street network,
- Implementation of managed lanes on US 69 as a congestion mitigation strategy,
- Ramp metering and deployment of Intelligent Transportation Systems (ITS) technology as part of a broader integrated corridor management strategy, and
- Consideration of emerging technologies such as connected and autonomous vehicles (CAVs) and their effect on operations and mobility.

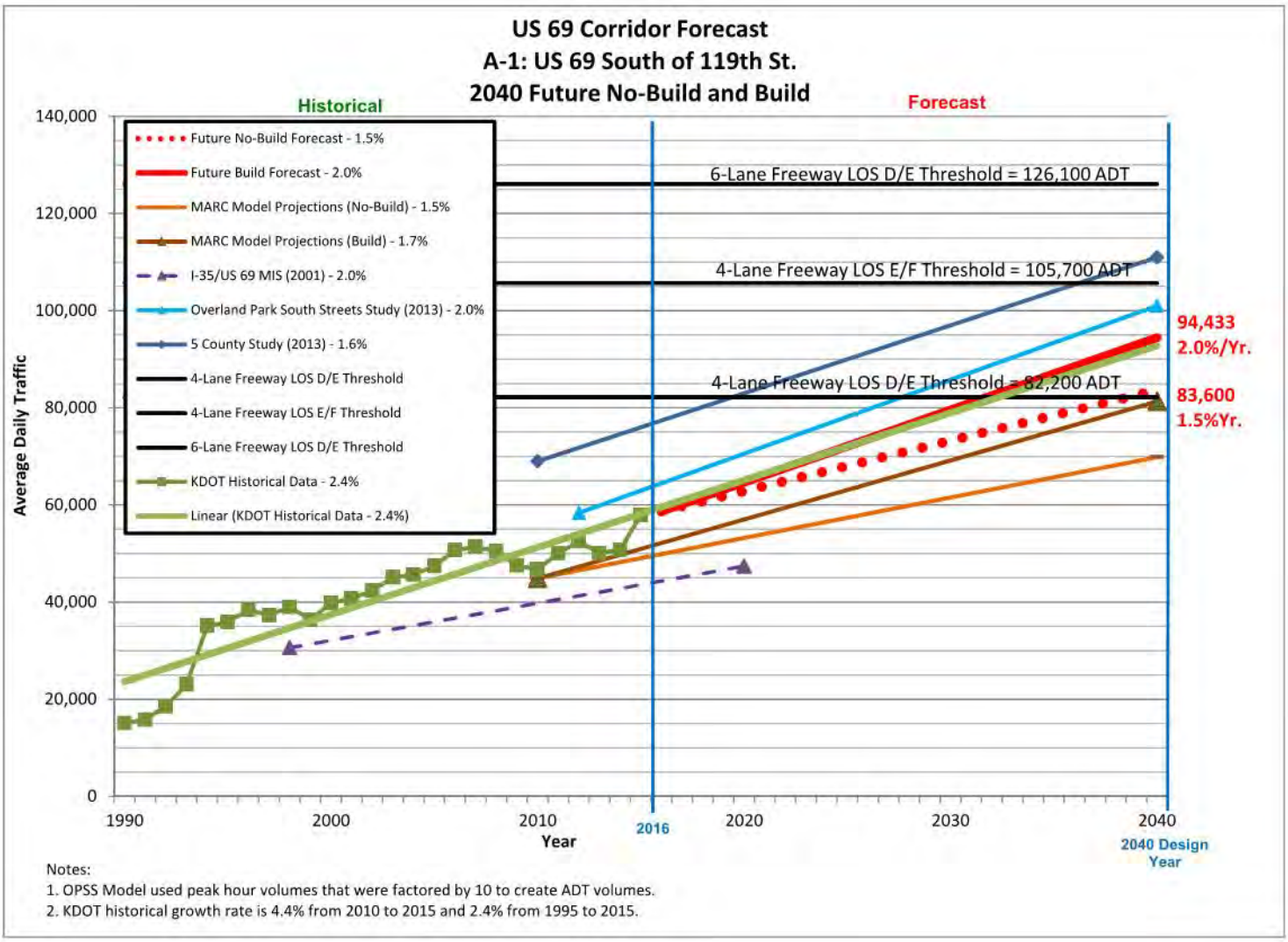
4.1 Future Build Traffic Projections

To evaluate the traffic operations of various Build improvement concepts, the team developed traffic forecasts for the Build conditions. The team used the same methodology to develop the Build growth rates as the No-Build growth rates. Through considerable coordination with the City, KDOT, FHWA, and MARC staff, the following 2040 Build growth rates were established:

- Location A-1: 2.0%/year
- Location A-2: 5.4%/year

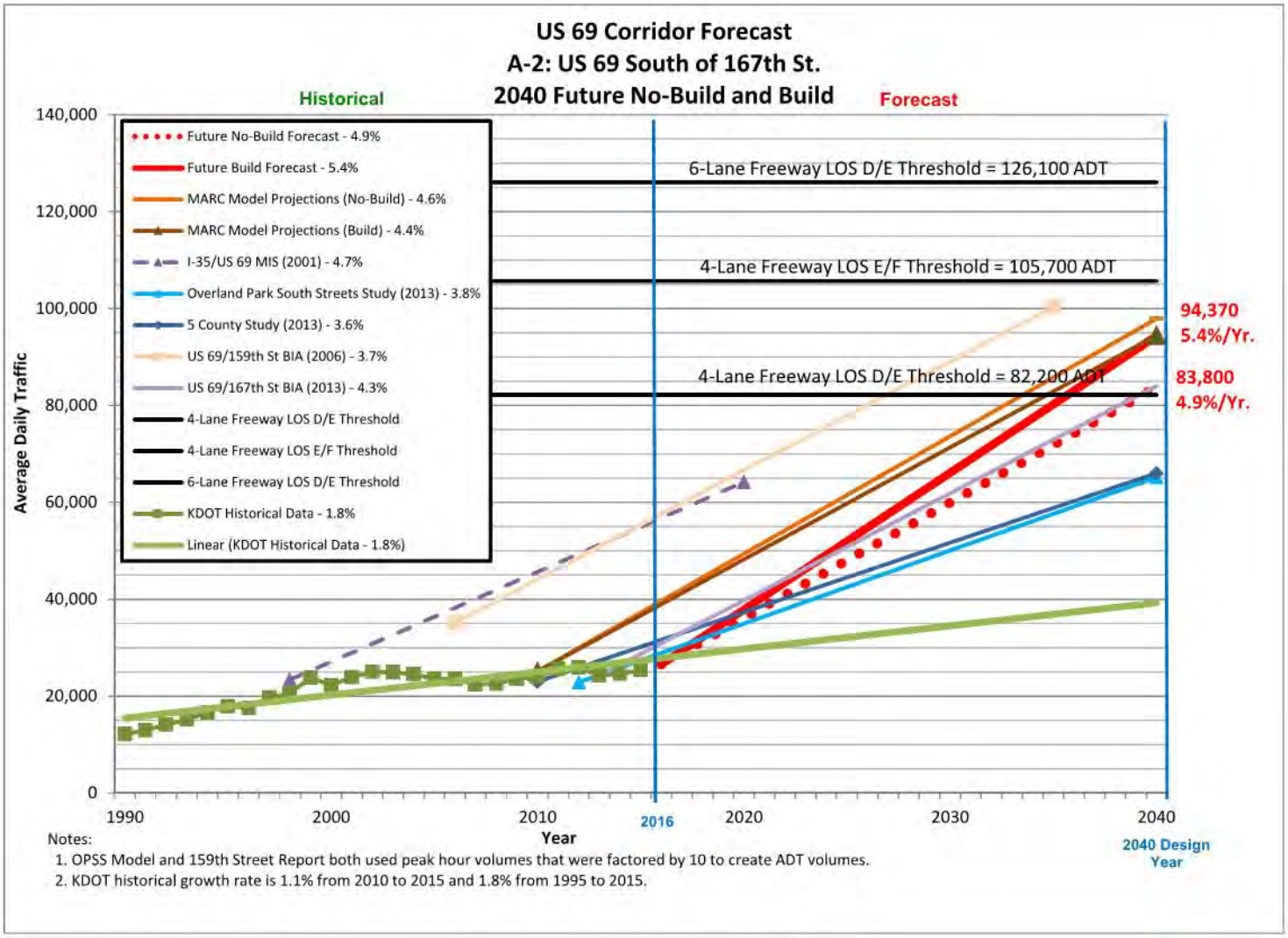
Figures 8 and 9 show the Build traffic forecasts for locations A-1 and A-2 respectively.

Figure 8 – 2040 Build Traffic Forecast
Location A-1



Source: HNTB

Figure 9 – 2040 Build Traffic Forecast
Location A-2



Source: HNTB

Applying these growth rates to existing traffic volumes results in future Build 2-way volumes of 94,433 vehicles per day at location A-1 and 94,370 vehicles per day at location A-2. Because Build traffic forecasts assume a 6-lane US 69 and the No-Build forecast assumes a 4-lane US 69, traffic forecasts for the Build condition are higher than the No-Build. This is a direct result of the capacity restriction of a 4-lane freeway being removed and induced demand attracting vehicles to US 69. These are motorists that preferred to use the corridor in the No-Build alternative but did not because of the severe congestion.

4.2 Ultimate Improvement Concept

The evaluation of a long-term (ultimate) improvement concept for the corridor began with an assessment of concepts previously developed. For the purposes of this evaluation, the corridor was divided into two segments based on where US 69 crosses Antioch Road.

4.2.1 North of Antioch Road Segment (I-435 & US 69 Interchange Improvements)

The US 69 segment north of Antioch Road consists of highway capacity improvements associated with the I-435 & US 69 interchange colored projects as shown in Figure 2. The I-435 & US 69 interchange project has been an area of focus for KDOT, MARC, Johnson County and Overland Park with considerable investment over the last two decades. These improvements have already been through a comprehensive alternatives study, a NEPA Study which resulted in a Finding of No Significant Impact (FONSI), and an approved Break-in-Access. Approximately 60% of the improvements recommended from those activities have been constructed and design of the remaining improvements has been developed to various levels ranging from 30%-90% complete depending on the specific component.

The team evaluated the anticipated traffic operational performance of the planned improvements north of Antioch Road using updated 2040 traffic forecasts developed through this study. That evaluation confirmed the remaining I-435 & US 69 improvements north of Antioch Road will operate at an acceptable level. Therefore, no modifications to the planned improvements north of Antioch Road are recommended at this time.

4.2.2 South of Antioch Road Segment

The segment south of Antioch Road has not had the same level of planning and design as the segment north of Antioch Road, except for work associated with the 159th St. Interchange and 167th St. Interchange. The I-35/US 69 Major Investment Study, 2001, stands as the most recent comprehensive corridor study for this area. Given its age and the 2020 design year of the study, the recommendations from the MIS require a re-evaluation. The MIS improvements generally consist of the following:

- Expansion of the US 69 mainline from two to three through mainline lanes in each direction,
- Construction of auxiliary lanes between the 151st St. and 135th St. interchanges,
- Improvements to ramps and arterial streets within the interchanges at 151st St. and 167th St. (e.g. added ramp terminal and arterial capacity and intersection control)

A more detailed depiction of these improvements can be found in Section 1 of the appendix.

The team started the Build analysis by evaluating the MIS concept using the 2040 Build traffic developed through the methodology discussed above. This analysis confirmed that with additional traffic growth, the improvements recommended in the MIS south of Antioch Rd. will operate acceptably with the exception of the segment between 135th St. and Antioch Rd.

In the southbound direction, the MIS concept proposed a C/D road to address the weave between Blue Valley Pkwy. southbound on-ramp traffic and traffic exiting to 135th St. However, in the northbound direction, the MIS concept did not include a C/D road, but rather an auxiliary lane between 135th St. and Blue Valley Pkwy. Given the significantly higher traffic volumes projected with this study and high weave volumes between these two interchanges, the auxiliary lane solution did not operate acceptably and the addition of a northbound C/D road is recommended. This study's recommended improvements for the segment that includes the 135th St. interchange and the Blue Valley Pkwy. interchange generally consist of the following:

- Expansion of the US 69 mainline from two to three through lanes in each direction
- Construction of a braided ramp to eliminate the left entrance of southbound Blue Valley Pkwy. to southbound US 69
- Construction of C/D roads in both the northbound and southbound directions between 135th St. and Blue Valley Pkwy., and
- Improvements to ramps and arterial street within the 135th St interchange. (e.g. added ramp terminal and arterial capacity and intersection control)

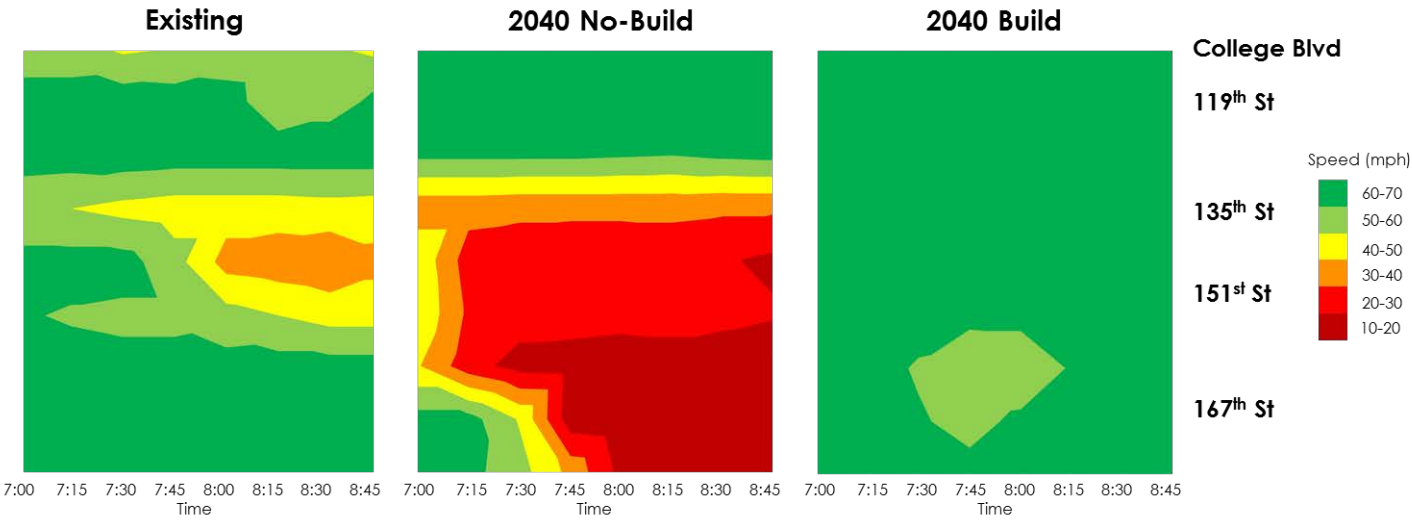
A more detailed depiction of these improvements can be found in Section 2 of the appendix.

4.3 Future Build Operations

The Ultimate Improvement Concept described above and depicted in Section 2 of the appendix, operates acceptably during 2040 peak periods. While reduced speeds are anticipated in the design year peak periods, significant reductions in corridor travel times, and improvements in safety are expected. The effect of these improvements is illustrated using speed profiles in the figures below.

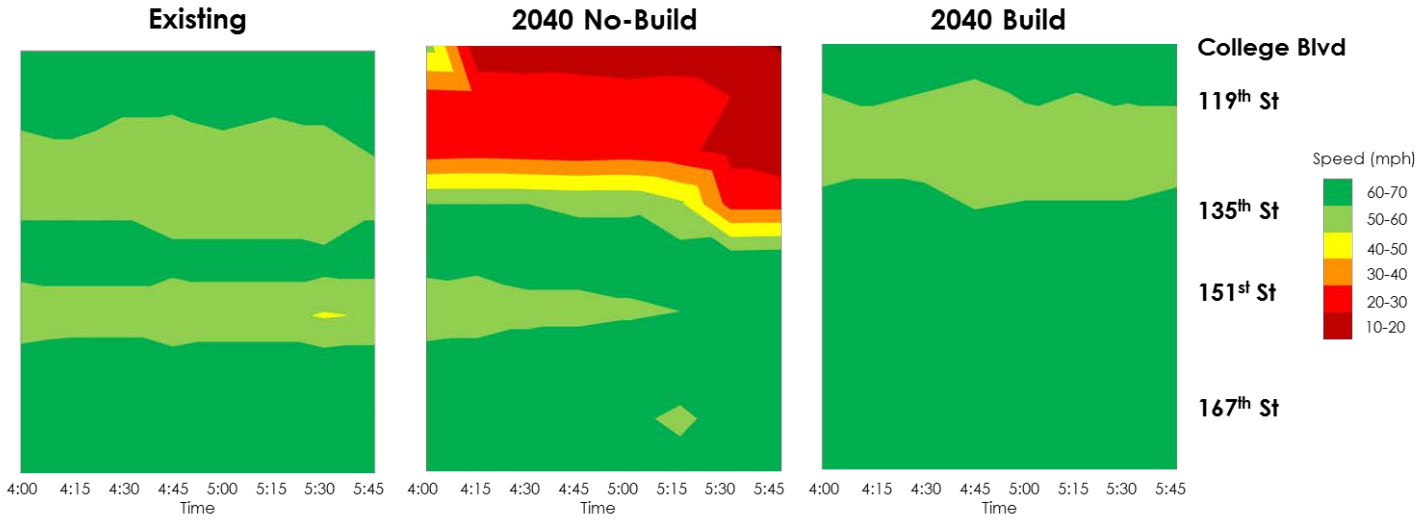
Figure 10 depicts anticipated travel speeds for northbound US 69 during the AM peak period comparing existing, 2040 No-Build, and 2040 Build conditions. Along the X-axis is the time of day from 7:00 am to 8:45 am, and along the Y axis are interchanges along the corridor. The color gradient represents average speeds across the roadway segment at each location at that time of day. Figure 11 depicts the same information for southbound US 69 during the PM peak period from 4:00 pm to 5:45 pm. As illustrated by Figures 10 and 11, the No-Build condition shows significant degradation of travel speeds, and the construction of the Ultimate Improvement Concept will result in improved travel speeds.

Figure 10 – Northbound AM Peak Period



Source: Project VISSIM Model

Figure 11 – Southbound PM Peak Period



Source: Project VISSIM Model

4.4 Future Build Safety

A future Build safety analysis was not performed in this high-level study. However, in a Build condition, the primary contributors of crashes in the study corridor would be eliminated which are the weave between Blue Valley Parkway and 135th Street as well as congestion caused by limited mainline capacity. Once these needs are addressed, it is expected that safety would improve to below statewide average conditions for comparable Kansas state highways.

4.5 Corridor Aspects Not Analyzed

The Future Build analysis was considered to be high-level from all aspects of traffic, safety and infrastructure assessment. Integrated Corridor Management (ICM), managed lanes and multimodal issues were discussed with the study team but a detailed assessment was not performed. More detailed analysis is planned for the next phase of the study.

5.0 Implementation Strategy

The ultimate improvements represent a significant investment in the US 69 Corridor. In 2016 dollars, these improvements are estimated to have a total construction cost of approximately $430M. With a cost of this magnitude it is unlikely that these improvements can be constructed in a single construction project unless there are significant changes in Federal, State, Local, or other revenues that can be directed towards improving US 69. It is more realistic that the ultimate improvements will be constructed in smaller, more manageable construction projects. This is consistent with how KDOT has approached other projects of comparable size and complexity in this region and across the state. Recognizing this, the team evaluated three different approaches for constructing the ultimate improvements in phases with the objective of answering the question:

How should these improvements be implemented over time?

- **Approach #1 – North to South Progression -** The first approach is a continuation of the practice currently in place for completing the I-435 & US 69 improvements. Improvements within the I-435 & US 69 family of projects have already been through the NEPA process and have progressed well into design with certain elements already developed to a near "shovel ready" state. Approach #1 would complete the I-435 & US 69 improvements and then continue working from the north to the south as funding is available. The primary advantage of this approach is the speed at which improvements could begin in the corridor. The disadvantage is that the most significant existing operational issues are in the segment between 135th St. and Blue Valley Pkwy., and significant time and resources will be expended before they are addressed. Minimal noticeable benefit in overall corridor traffic operations will be realized until the segment between 135th St. and Blue Valley Pkwy. is addressed.

- **Approach #2 – Operational Priority Approach -** The second approach focused on addressing the most pressing operational and safety issues as early in the implementation schedule as possible. With this approach, the initial improvements in the corridor would be focused in the segment between 135th St. and Blue Valley Pkwy. However, alleviating the bottlenecks at this location without additional improvements throughout the corridor will simply move the bottleneck to a new location. For that reason, the first phase of Approach #2 continues the southward expansion of US 69 to three through lanes in each direction from I-435 to 135th St. The break out of the ultimate improvements into phases for Approach #2 is illustrated in Section 3 of the appendix. The primary advantage of this approach is that the most significant traffic and safety issues are addressed early, which provides the greatest improvement in corridor operations. The most significant disadvantage of this approach is project readiness for any improvements south of Antioch Rd. for which Federal approvals have not been secured.

- **Approach #3 – Corridor Preservation Approach -** Recognizing the age and condition of the existing US 69 infrastructure, the team evaluated an approach focused on systematically replacing the existing pavement and bridges. With this approach, the existing pavement and bridges are reconstructed to be compatible with the ultimate improvements, not simply replaced in kind. The primary advantage is that this approach focuses on removing aging infrastructure from KDOT's system and will reduce the cost of ongoing maintenance and rehabilitation. The disadvantage of this approach is that significant time and resources will be expended in the corridor before the most significant traffic congestion and safety issues are fully addressed.

After consideration of these approach strategies and in coordination with the KDOT, the City, and FHWA, Approach #2 - Operational Priority Approach, was selected as the preferred implementation approach for the corridor. This approach addresses the most urgent traffic operational and safety issues as early as possible.

6.0 Recommended Future Activities

The work performed in Phase 1 of this study illustrates the existing and emerging traffic, safety and infrastructure condition issues within the corridor, provides insight into the circumstances that may develop without improvements, and identifies a viable ultimate improvements alternative that addresses existing and future needs within the corridor. The study results were approved by the City of Overland Park, FHWA, KDOT and MARC and the recommendations were used to update the MARC Long-Range Transportation Plan in the fall of 2017.

This study did not consider all potential improvement strategies that could be employed, nor did it include all preparatory activities necessary to advance improvements to construction. To continue the progress made in Phase 1, the team recommends the following next steps to be included in a future Phase 2 of this study:

- A NEPA and Break-in-Access study including the development of a formal Purpose and Need statement in relation to MARC's long-range planning objectives,
- A more thorough consideration of other multimodal alternative improvement strategies including non-highway solutions,
- Activities to engage stakeholders and the public in the evaluation of various improvement alternatives,
- Economic impact analysis, and
- Evaluation of alternatives for funding future improvements

US 69 is a critical transportation asset for the City of Overland Park, Johnson County, the greater Kansas City metropolitan area, and the state of Kansas. The importance of this corridor to the future of the region cannot be understated given the anticipated increases in both population and employment served by US 69. The future activities noted above will continue the progress begun through this study, establish a direction for the future of US 69, and position the region for continued growth and mobility.

Appendix

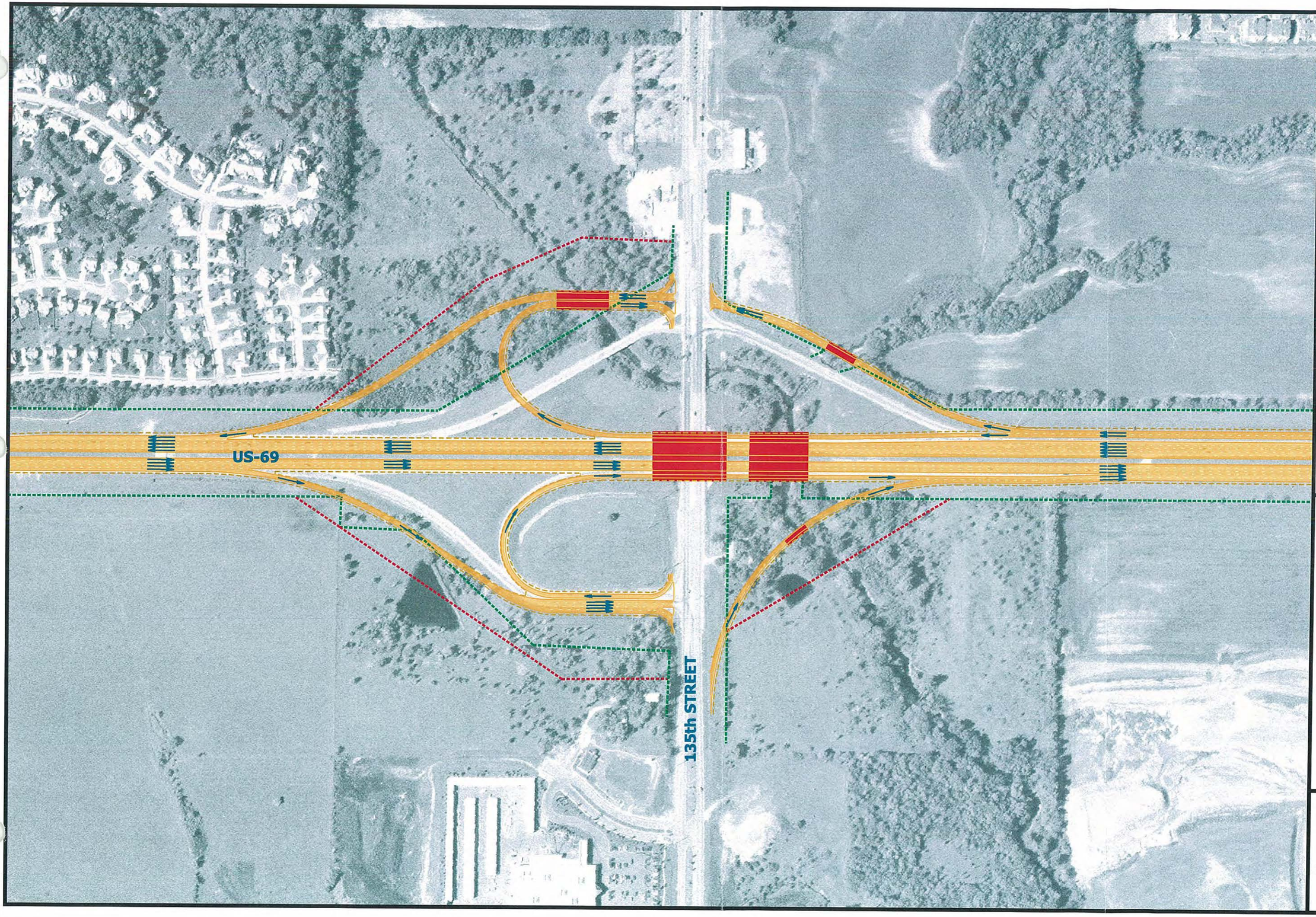
Section 1 – I-35/US 69 Major Investment Study – Relevant Plan Plate Drawings

Section 2 – Ultimate Improvement Concept Plate Drawings

Section 3 – Implementation Plan Exhibits

Appendix

Section 1
I-35/US 69 Major Investment Study
Relevant Plan Plate Drawings



I-35/US69
MAJOR INVESTMENT STUDY

Kansas Department of Transportation

PREFERRED ALTERNATIVES

US-69 CORRIDOR

PLATE #8

December, 2000

W
S
N
E

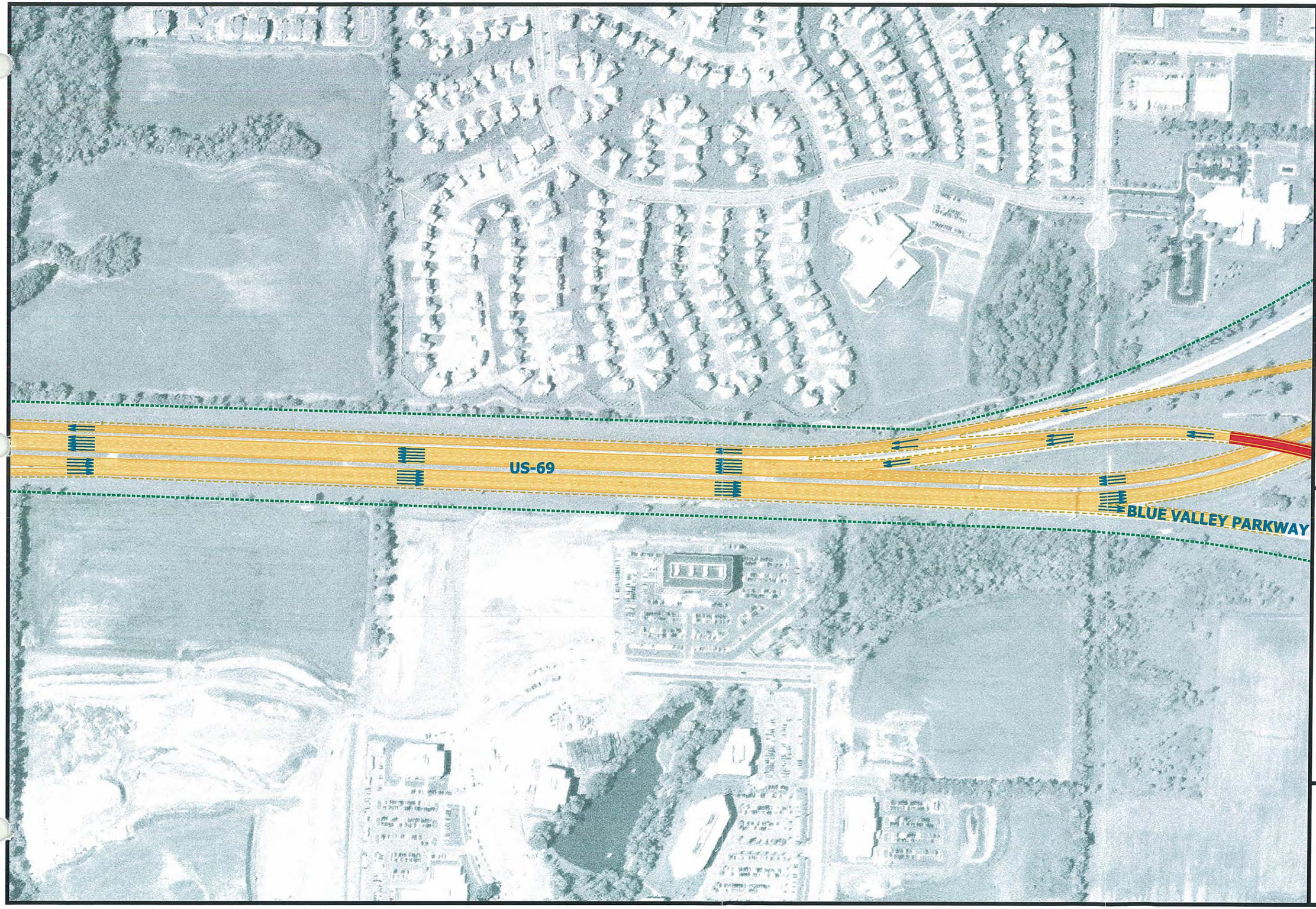
SCALE = 1:4000

LEGEND

- Bridge Improvements
- Lane Arrow
- New Pavement (KDOT)
- New Pavement (Others)
- Pavement Edge
- Pavement Removal
- Shoulders
- Existing R/W
- Minimum R/W

HNTB

In Association with
Transystems
Burns & McDonnell
The Technology Group



I-35/US69

MAJOR INVESTMENT STUDY

Kansas Department of Transportation

PREFERRED ALTERNATIVES

US-69 CORRIDOR

PLATE #9

December, 2000

W
S
N
E

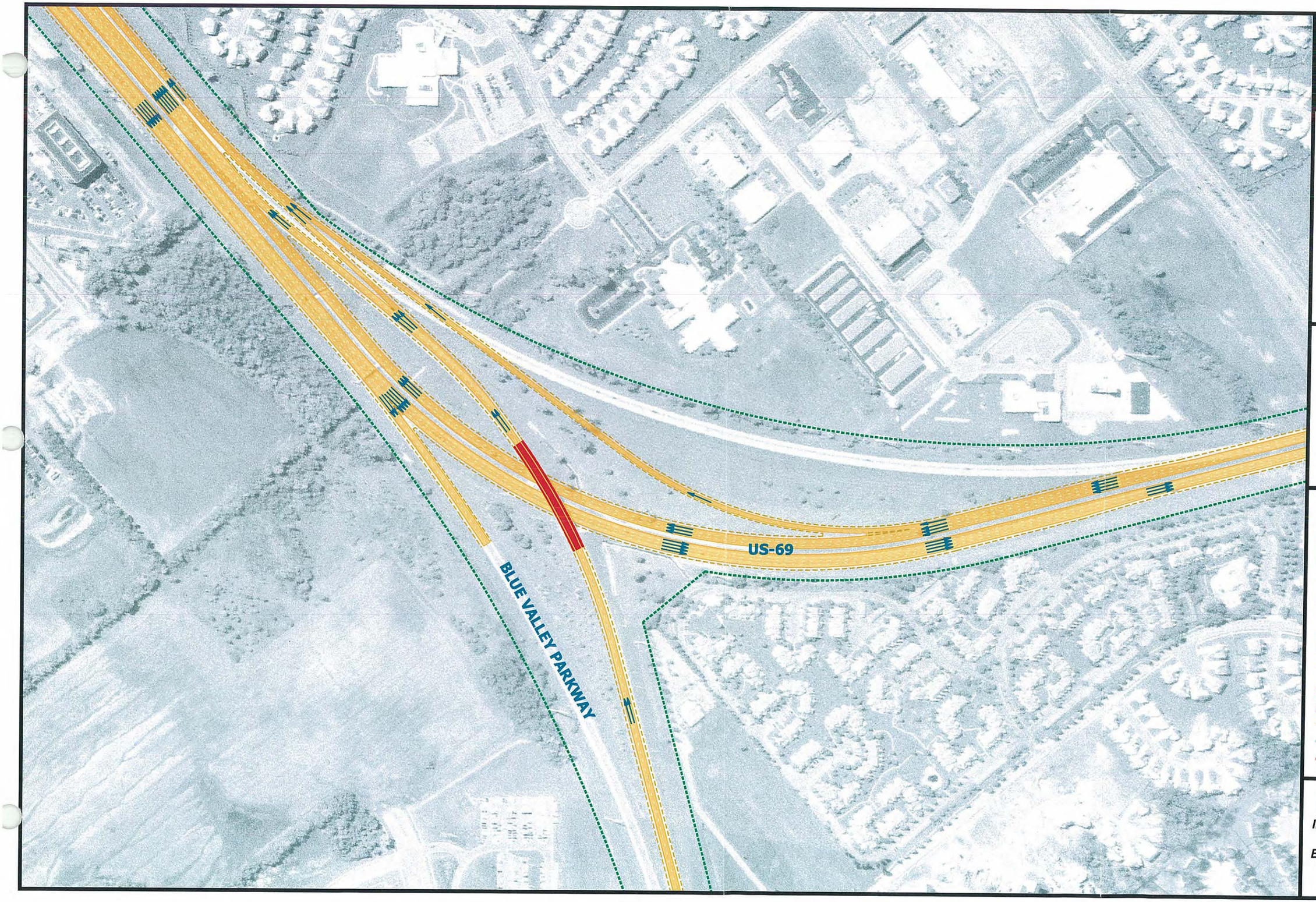
SCALE = 1:4000

LEGEND

- Bridge Improvements
- Lane Arrow
- New Pavement (KDOT)
- New Pavement (Others)
- Pavement Edge
- Pavement Removal
- Shoulders
- Existing R/W
- Minimum R/W

HNTB

In Association with Transystems Burns & McDonnell The Technology Group



I-35/US69

MAJOR INVESTMENT STUDY

Kansas Department of Transportation

PREFERRED ALTERNATIVES

US-69 CORRIDOR

PLATE #10

December, 2000

SCALE = 1:4000

LEGEND

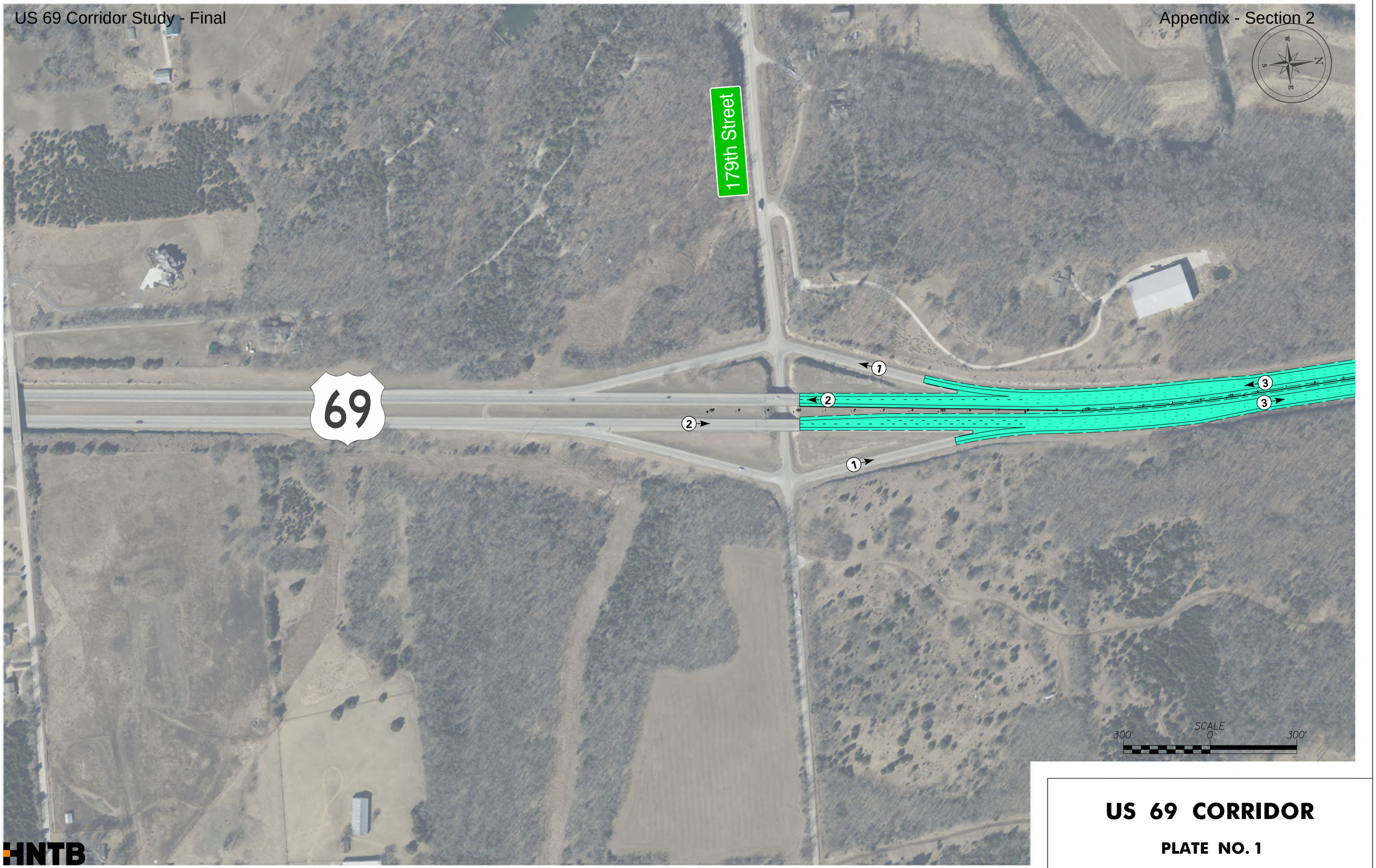
- Bridge Improvements
- Lane Arrow
- New Pavement (KDOT)
- New Pavement (Others)
- Pavement Edge
- Pavement Removal
- Shoulders
- Existing R/W
- Minimum R/W

HNTB

In Association with Transystems Burns & McDonnell The Technology Group

Appendix

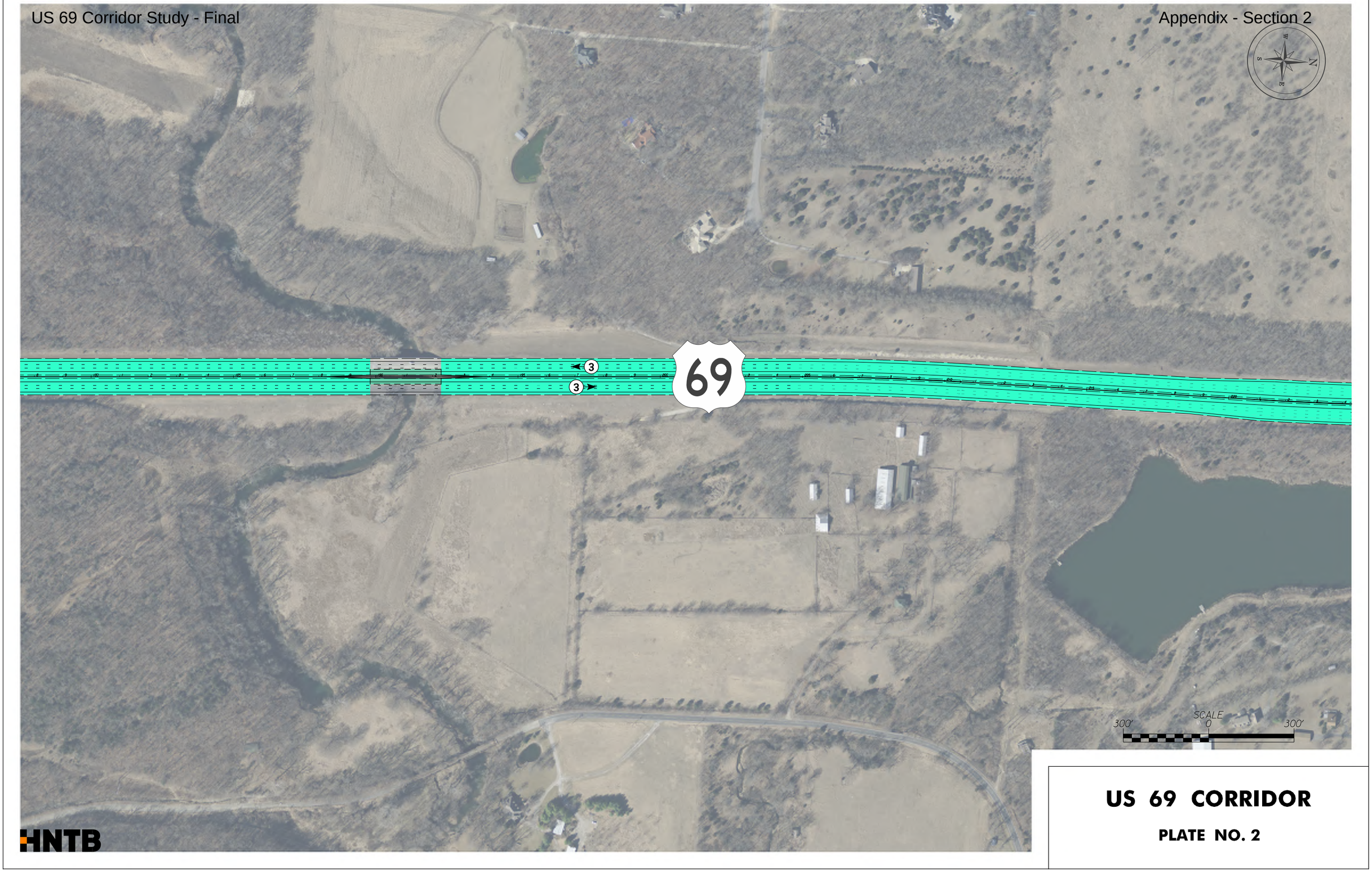
Section 2
Ultimate Improvement Concept
Plate Drawings



HNTB

US 69 CORRIDOR

PLATE NO. 1



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US 69 CORRIDOR

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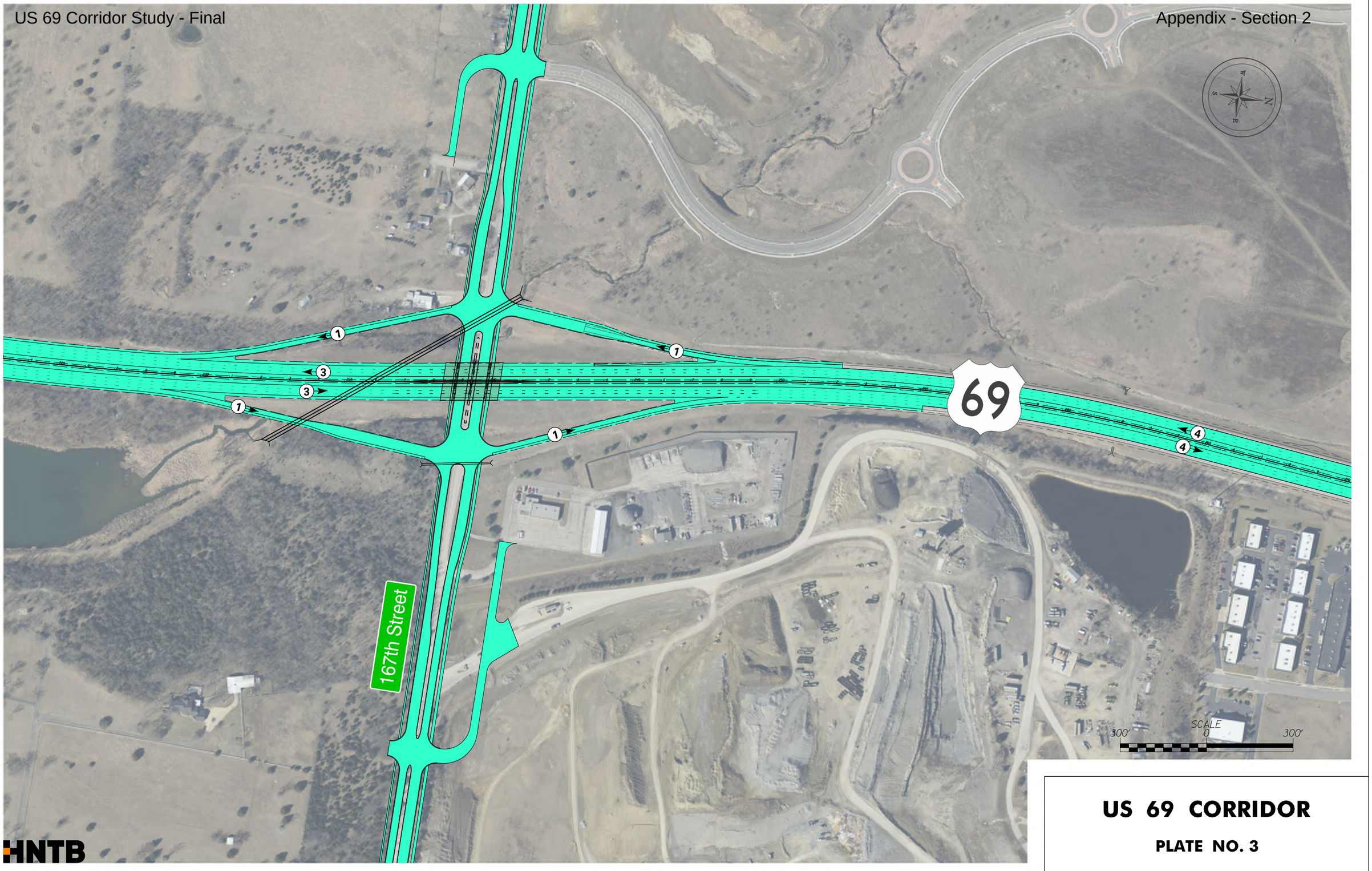

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US 69 CORRIDOR

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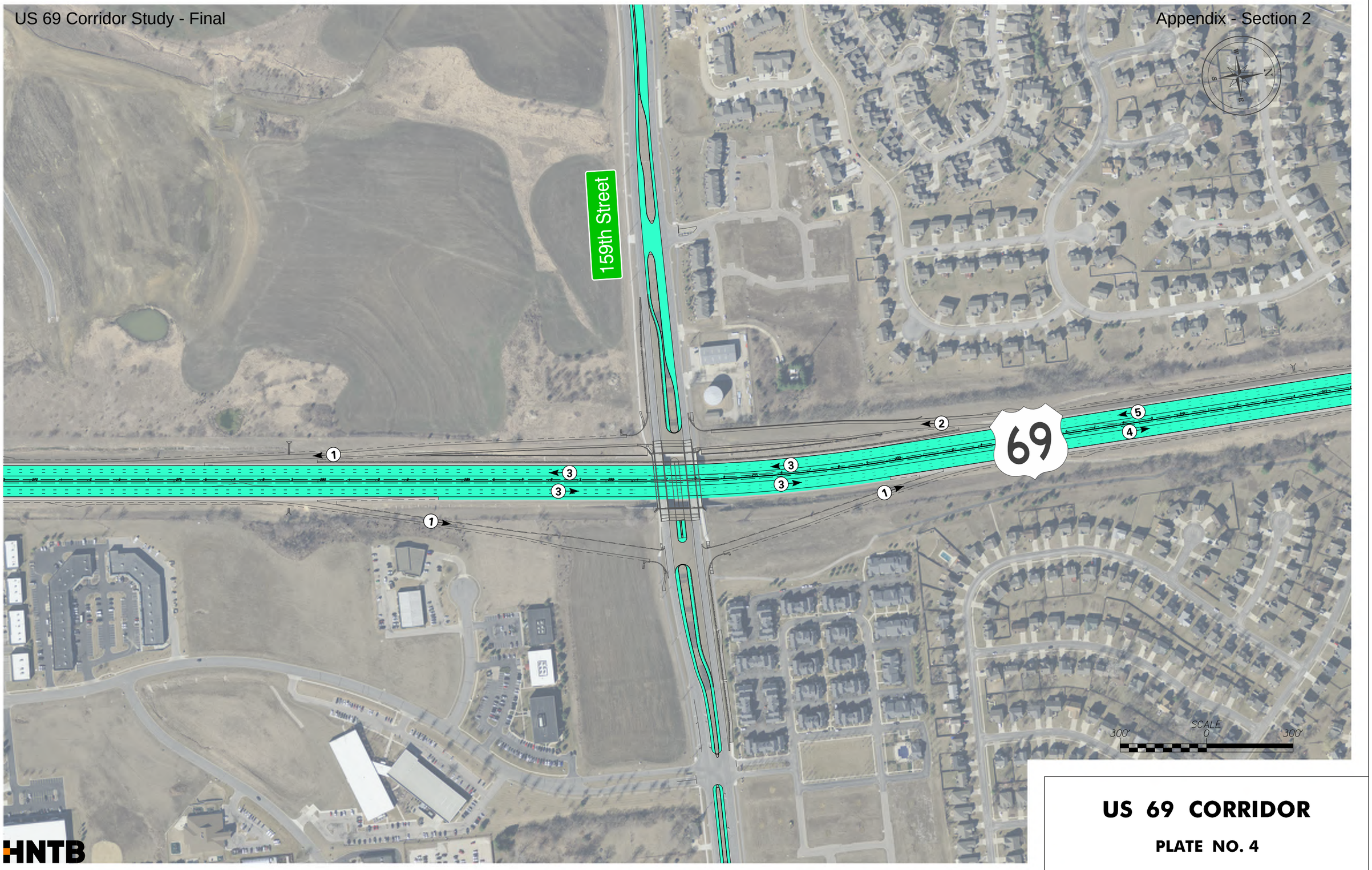

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US 69 CORRIDOR

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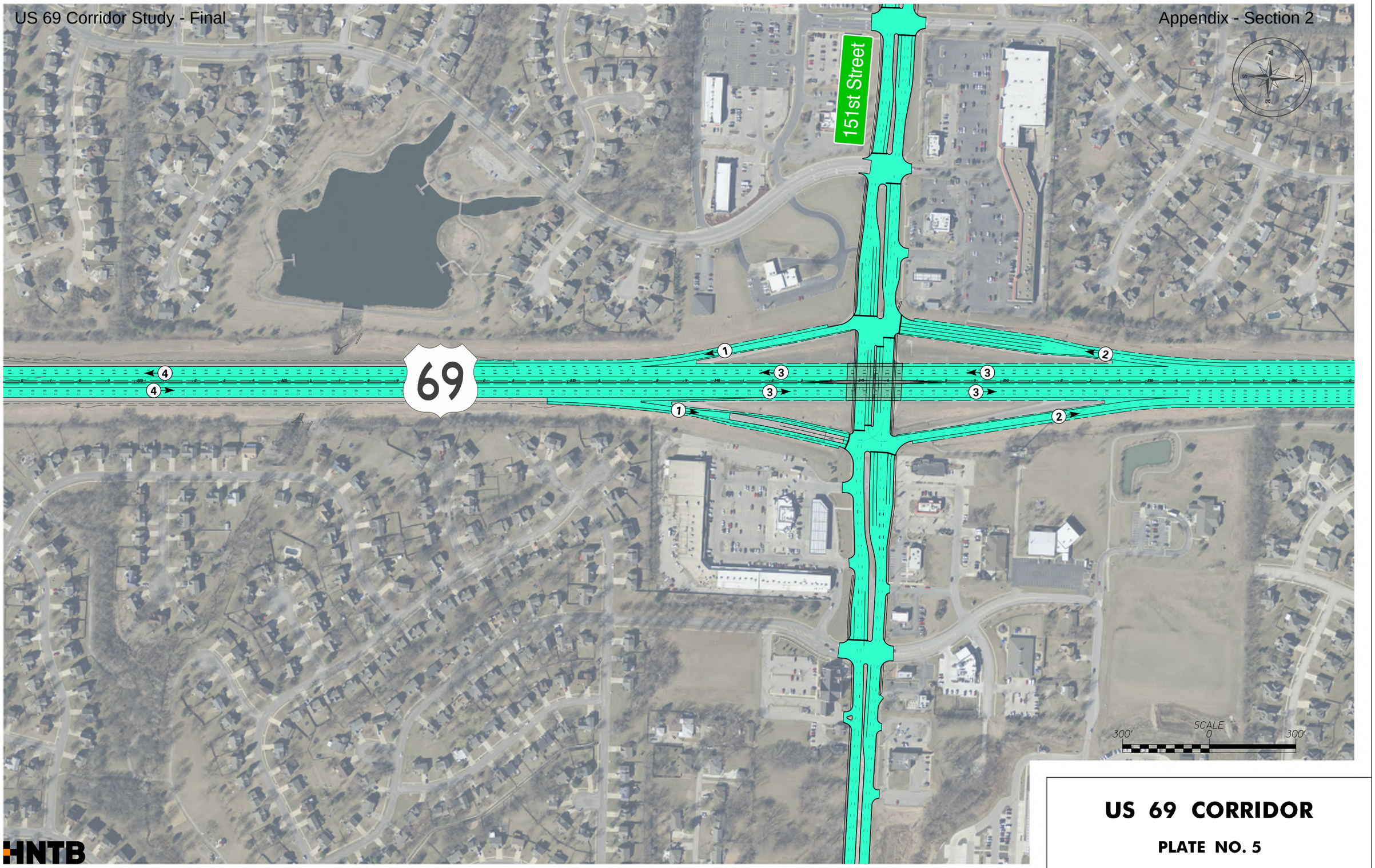

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US 69 CORRIDOR

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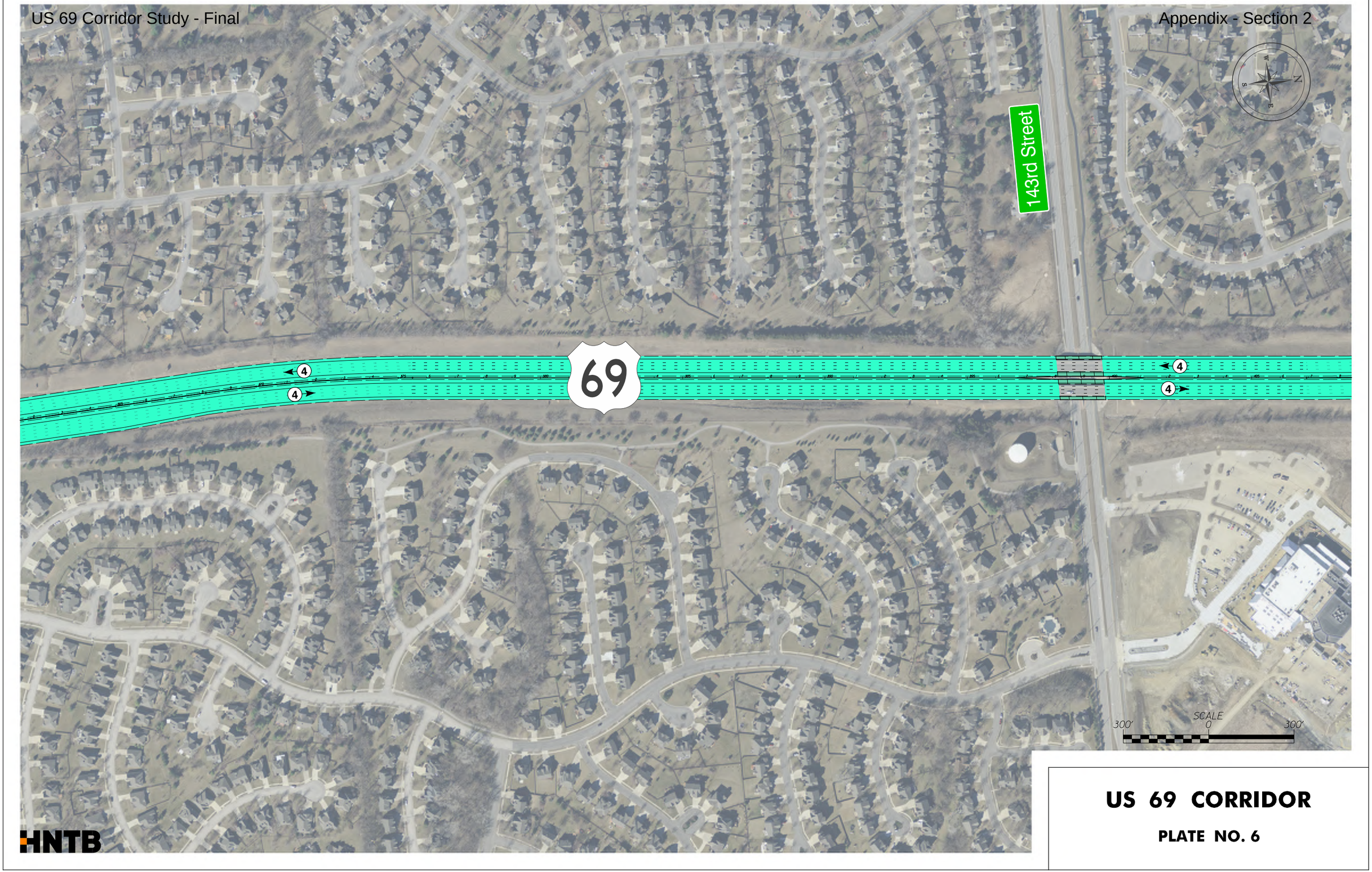

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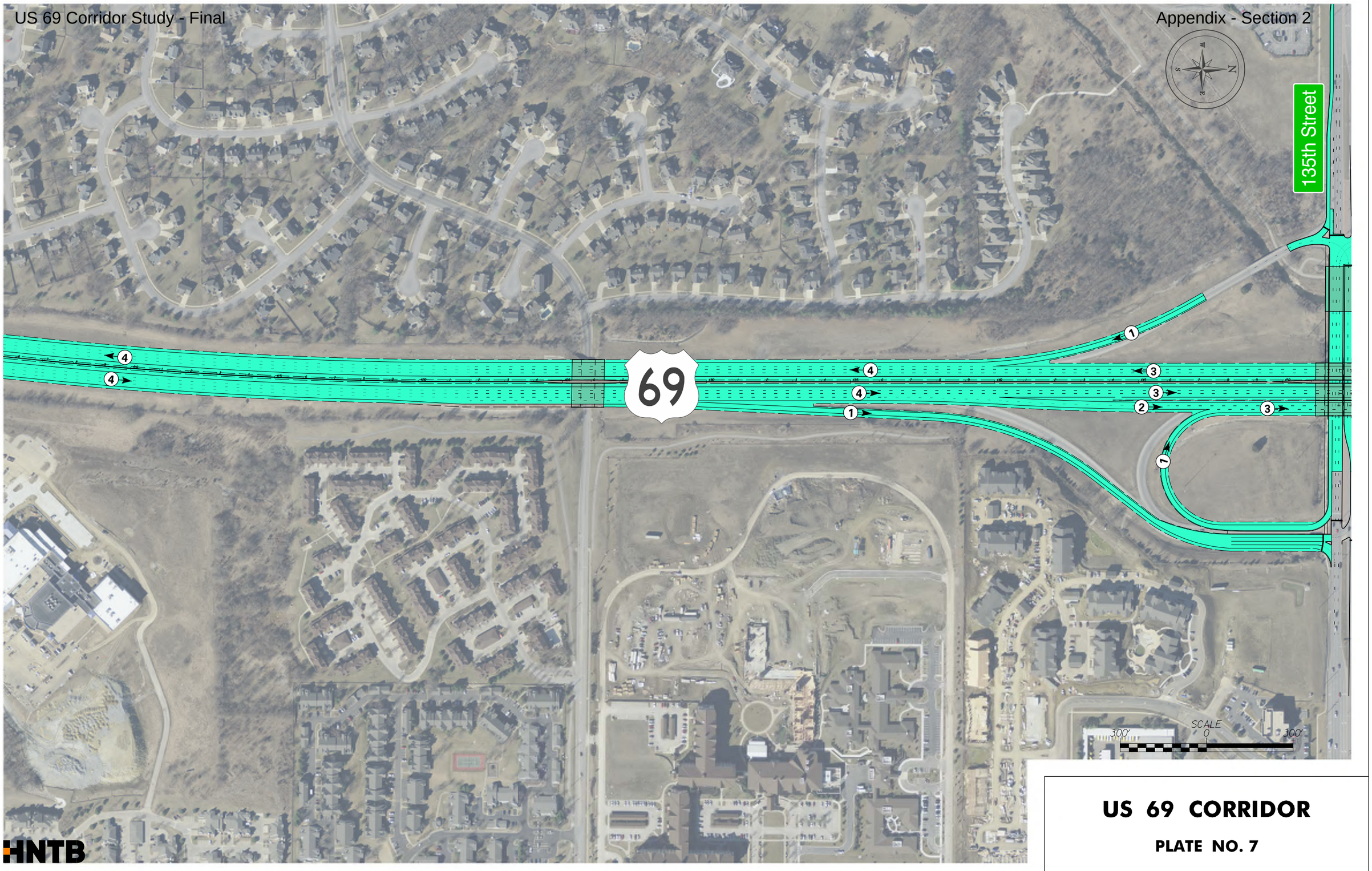
US 69 CORRIDOR

PLATE NO. 6



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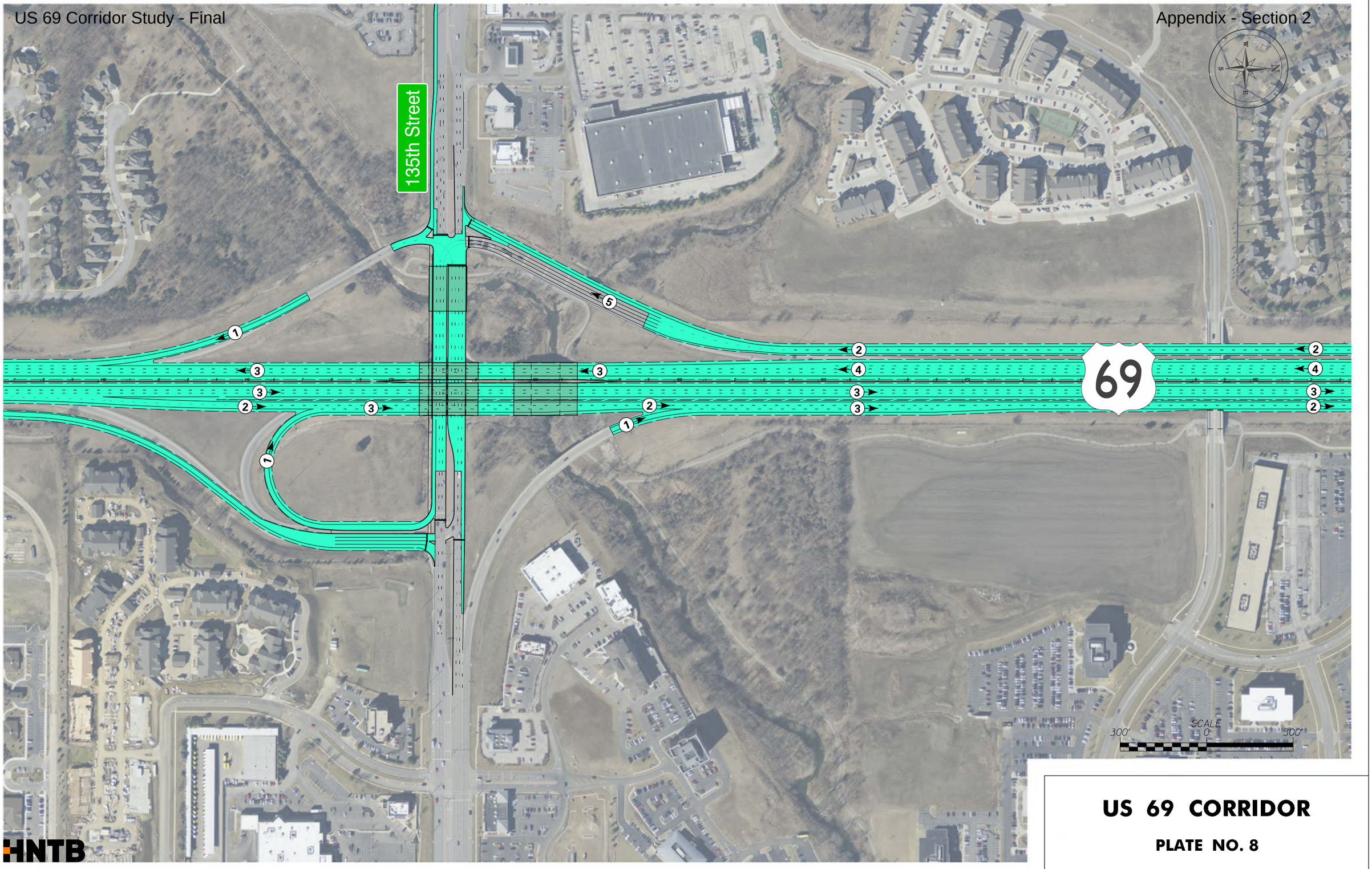
US 69 CORRIDOR

PLATE NO. 7



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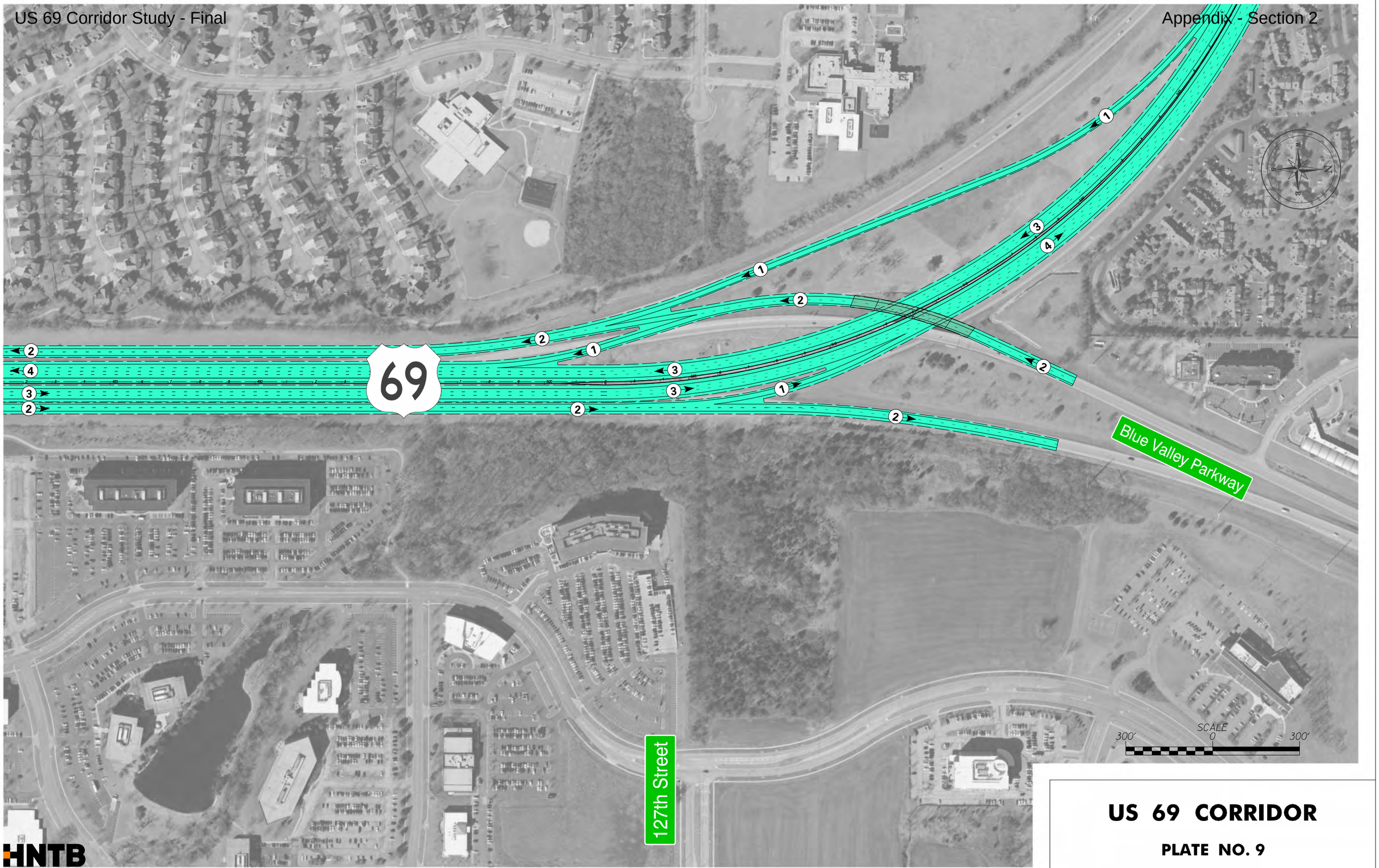
US 69 CORRIDOR

PLATE NO. 8



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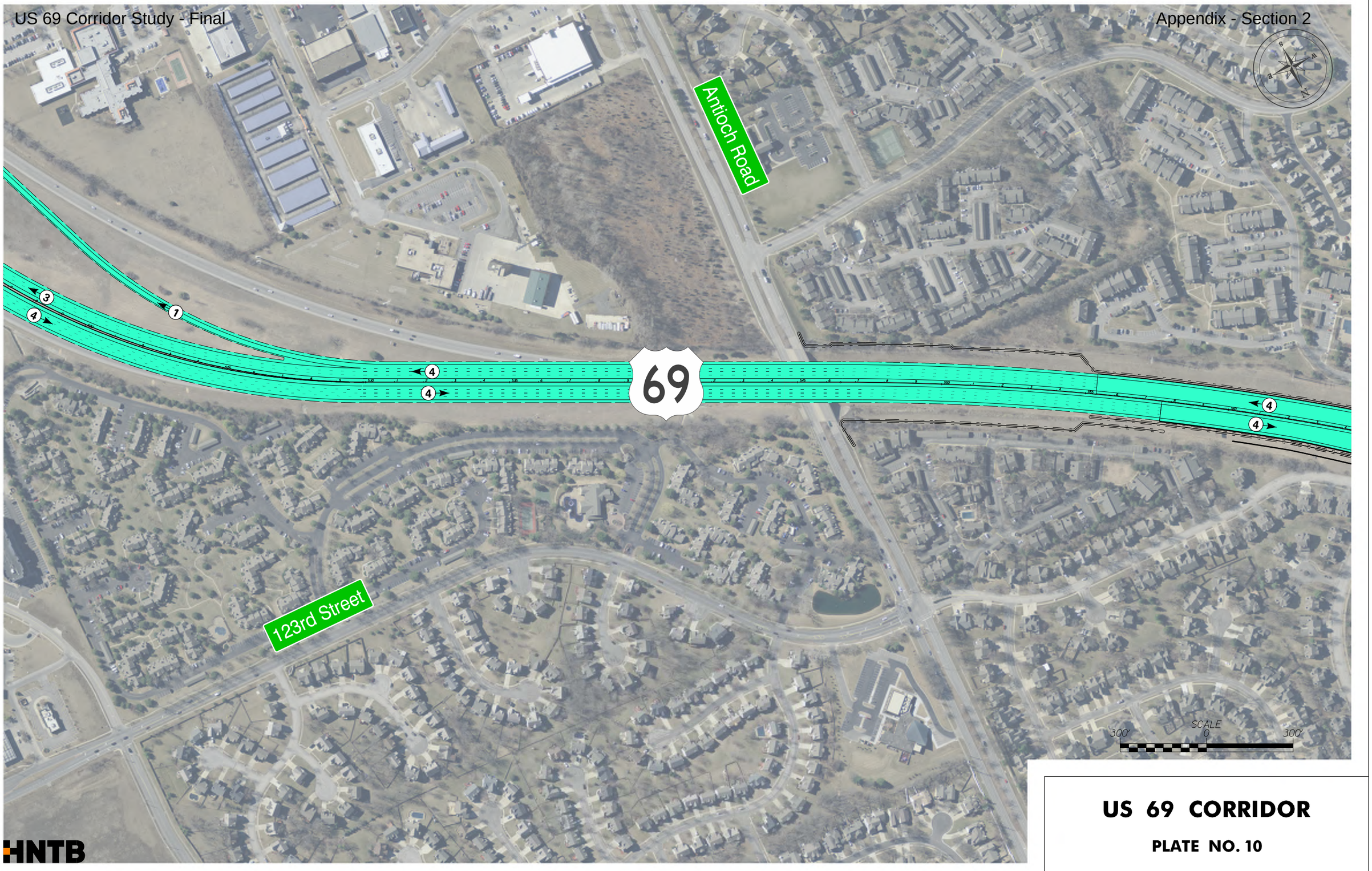
US 69 CORRIDOR

PLATE NO. 9



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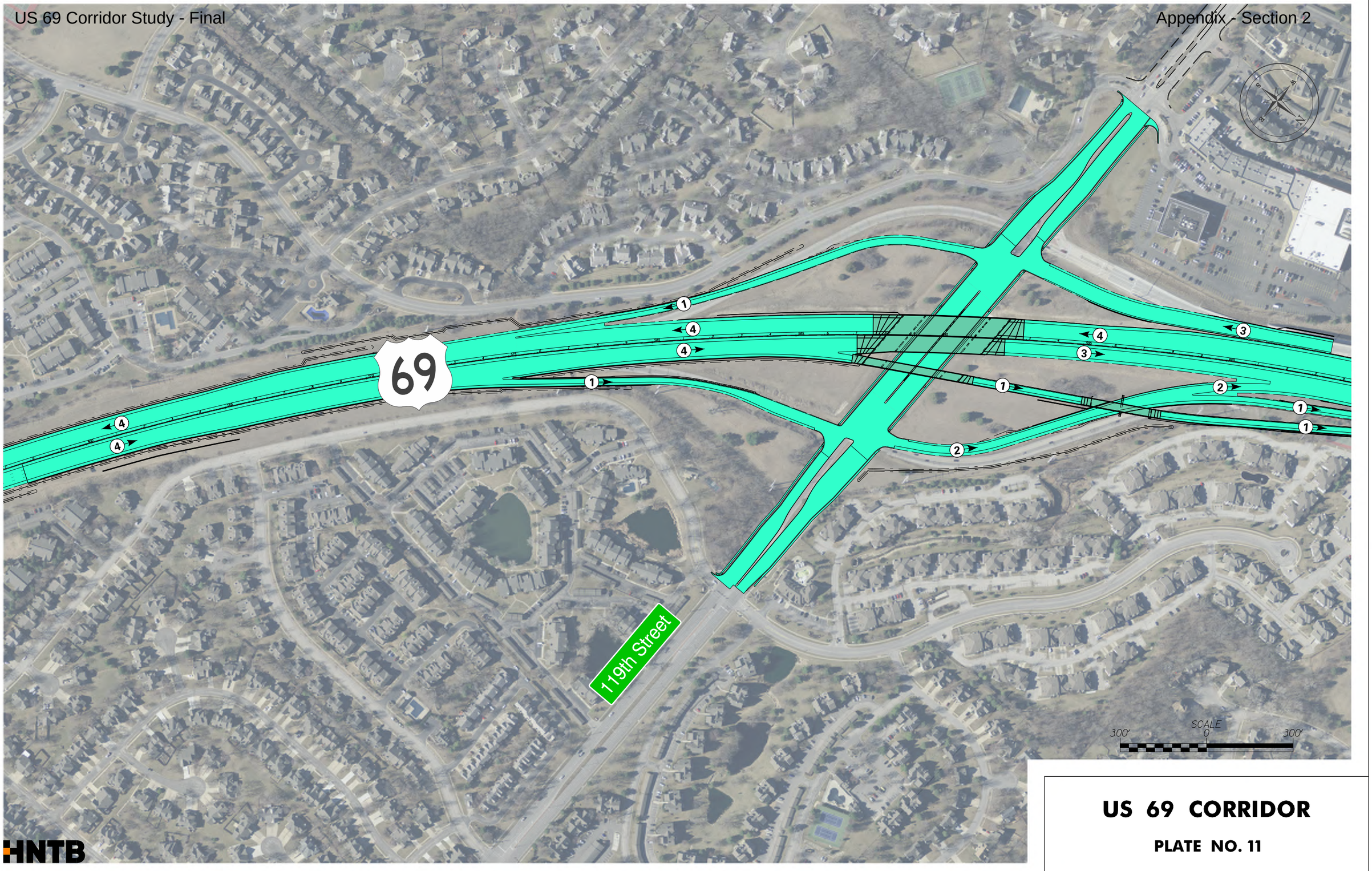
US 69 CORRIDOR

PLATE NO. 10



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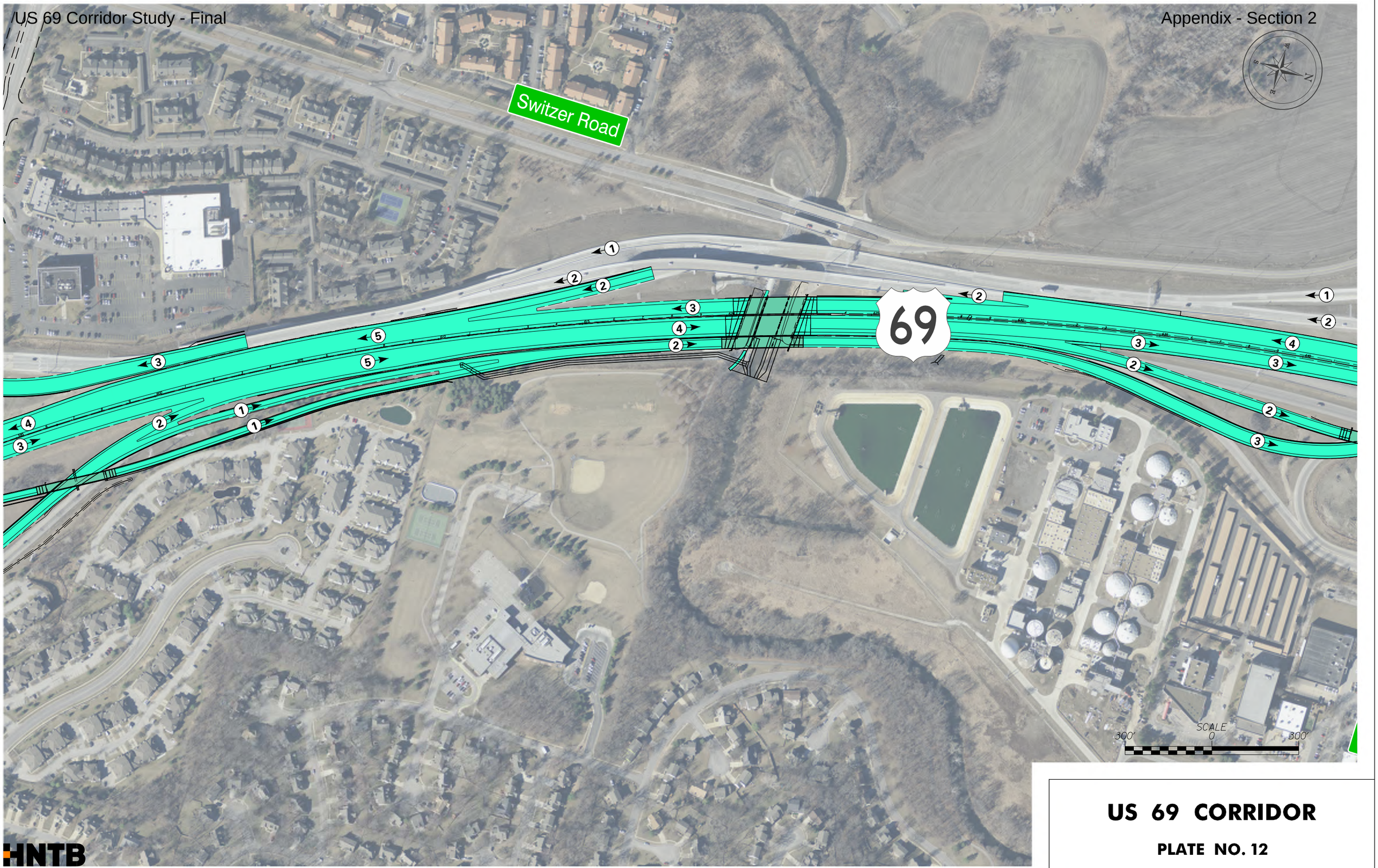
US 69 CORRIDOR

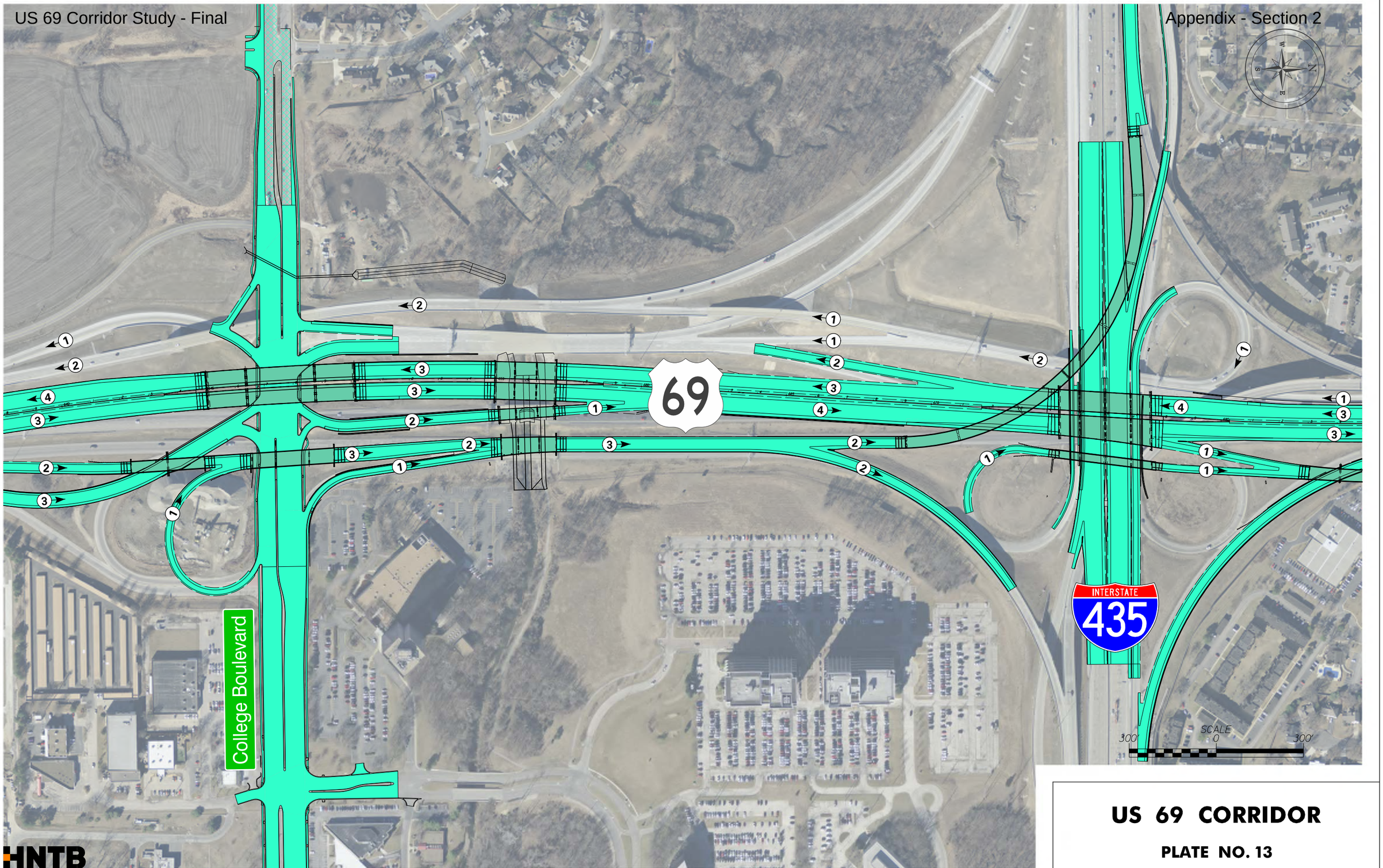
PLATE NO. 11



HNTB

US 69 CORRIDOR

PLATE NO. 12



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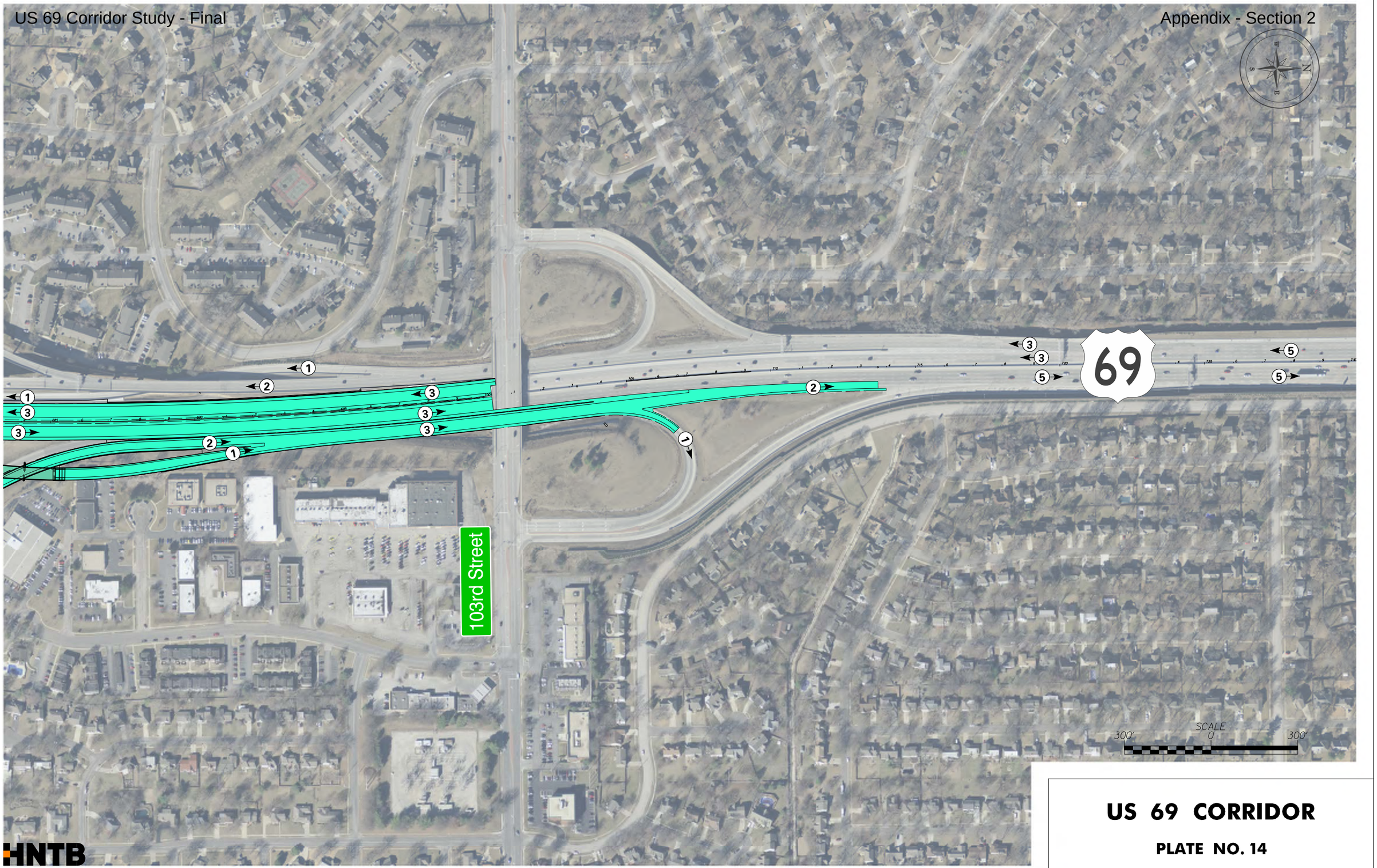
US 69 CORRIDOR

PLATE NO. 13



HNTB

US 69 CORRIDOR

PLATE NO. 14

Appendix

Section 3
Implementation Plan Exhibits

US-69 Corridor Phased Implementation Plan

- Project 1
- Project 2
- Project 3
- Project 4
- 167th Street Interchange

August 2017

Switzer Road
127th Street
Antioch Road
143rd Street
135th Street
119th Street
College Boulevard
69
435
MATCHLINE
Blue Valley Parkway
179th Street
167th Street
159th Street
151st Street
Metcalf Avenue