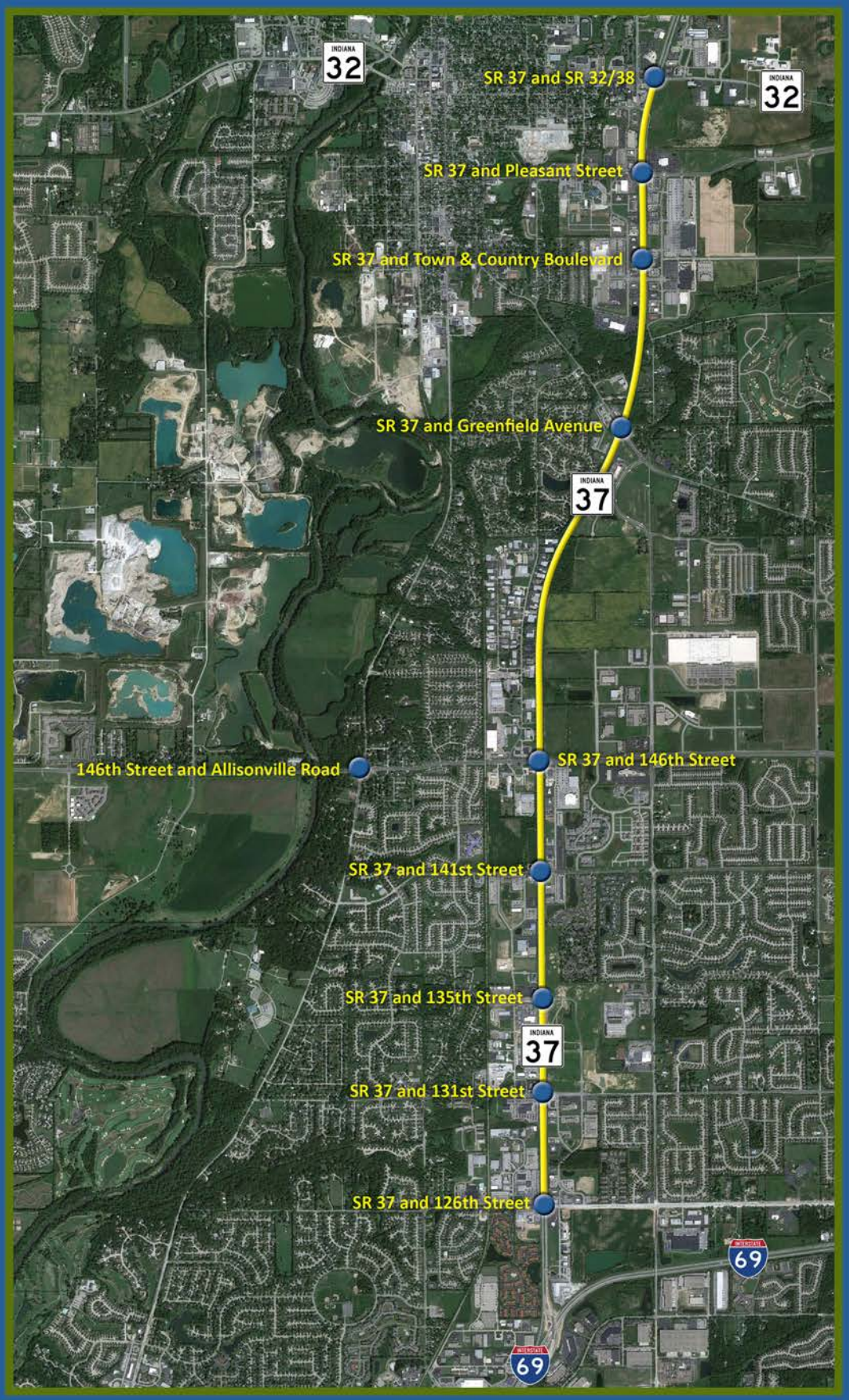
SR 37 Mobility Study



Project Overview

Presented to:

Presented by:

UNITED Consulting

AMERICAN STRUCTUREPOINT INC.

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SR 37 Mobility Study
126th Street to SR 32 / SR 38 and along 146th Street from Allisonville Road to Cumberland Road

Description of Proposed Project

I. GENERAL

The Indiana Department of Transportation, the Indianapolis Metropolitan Planning Organization, Hamilton County, Town of Fishers, and City of Noblesville have identified the need to significantly improve the SR 37 corridor from 126th Street to SR 32 / SR 38. The Study area also extends along 146th Street from Allisonville Road to Cumberland Road. The Study was funded 80% by the Federal Highway Administration through the MPO with the remainder provided by Hamilton County.

II. PURPOSE

The purpose of the Study was to evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for the project corridors without the need to add additional travel lanes along this segment of the SR 37 corridor. This includes the basic concept of reconstructing each of the existing and anticipated signalized intersections through this segment of SR 37 to interchanges; thus eliminating the need for added travel lanes along the corridor. If this was shown to be an improvement, then the Study was to further identify a preferred design solution for future improvements along the SR 37 corridor and to identify potential environmental concerns that may be present, and to establish a reliable budget to construct these improvements.

The preferred design solution was defined to a level which will allow officials with the INDOT, MPO, Hamilton County, Town of Fishers, and the City of Noblesville to begin making necessary amendments to their requisite Planning Documents.

III. EXISTING FACILITY

The subject corridor is located in south central Hamilton County in Delaware and Noblesville Townships, and in the Town of Fishers and City of Noblesville. SR 37 runs south to north through Hamilton County; including the Study area. Additionally, SR 37 is intersected by I-69 immediately south of the Study area. SR 37 is designated as a state highway in central Indiana. Near the Study area SR 37 begins at I-69 and proceeds in a northerly direction before terminating in the City of Marion, Grant County.

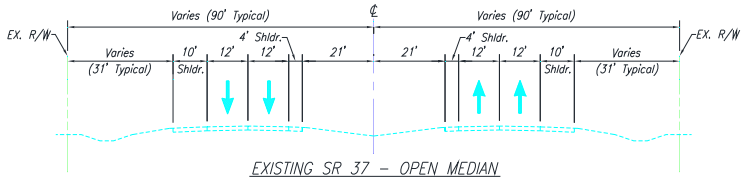
146th Street runs west to east through Hamilton County. 146th Street is classified as a Primary Arterial in the 2007 Hamilton County Thoroughfare Plan. A Primary Arterial is defined in the

2007 Thoroughfare Plan as a roadway that serves large traffic volumes, generally longer distances, and cross county connections. A Primary Arterial carries the majority of the commuter traffic into and out of the county and the adjacent land uses are usually quite dense. Mobility of through traffic, rather than access to adjoining land uses, is the main focus of the roadway. Table 1 shows the existing roadway system within the Study area:

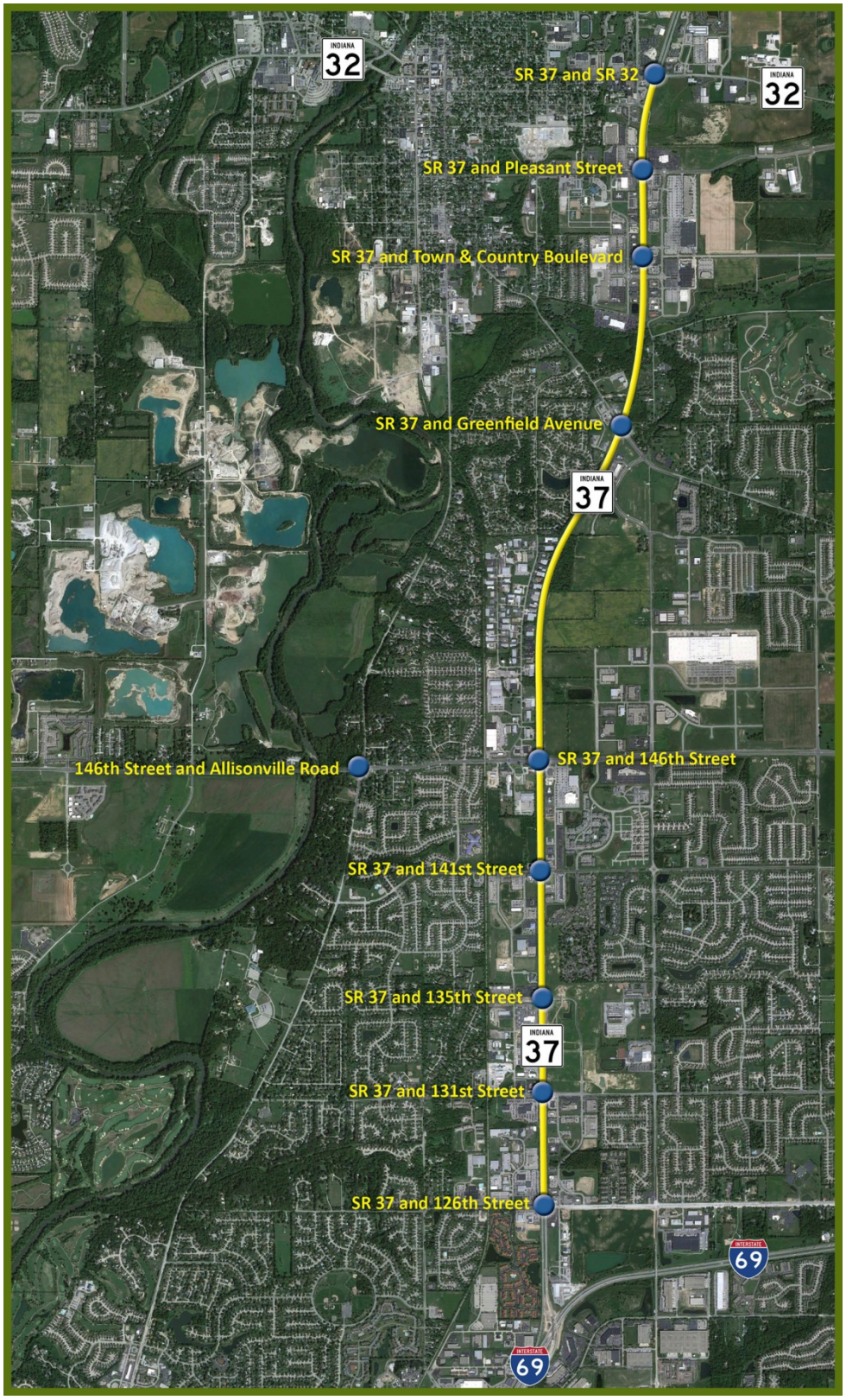
Table 1 – Existing Roadway System

Facility	Traffic Control	Travel Lanes	Functional Classification	Speed Limit (MPH)
SR 37	-	4	Expressway	55
126th Street	Signal	2	Secondary Arterial	35
131st Street	Signal	2	Collector	35
135th Street (Currently under construction)	Signal	2	-	-
141st Street	Signal	2	Secondary Arterial	35
146th Street	Signal	4	Primary Arterial	45
Greenfield Avenue	Signal	2	Primary Arterial	35 (West of SR 37) 40 (East of SR 37)
Town and Country Boulevard	Signal	2	Collector	35
Pleasant Street	Signal	2 (West of SR 37 4 (East of SR 37	Collector	35
Cherry Street	One-Way Stop	1	Collector	N/A
SR 32 / SR 38	Signal	4	Primary Arterial	35 (West of SR 37) 45 (East of SR 37)
Allisonville Road	Signal	4	Primary Arterial	35
Cumberland Road	Signal	4	Secondary Arterial	40

The following picture shows the existing typical cross section for SR 37 through the project limits:



The following map shows the project area along the SR 37 and 146th Street corridors:



Several field inspections were conducted during the completion of the Study. Ground level photographs showing existing conditions of the Study intersections is shown in the Appendix of this document. The following paragraphs give additional details for each of the existing facilities within the Study area:

126th Street

126th Street crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and is limited access. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

126th Street is classified as a Secondary Arterial through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, 126th Street is a two lane roadway with two 12-foot travel lanes, and one foot paved shoulders. The existing pavement on the west side of the intersection is full depth HMA and is in good condition within 150 feet of the intersection. Outside of this area, the existing pavement is in poor condition with significant longitudinal and block cracking, and some “alligator” cracking. An HMA pedestrian pathway borders both sides of 126th Street on the west side of the intersection. The pathway is eight feet wide on the north side and 6 feet wide on the south side. Both pathways are separated from the roadway by a five foot wide grass buffer. The north pathway extends to SR 37, however the south pathway stops 135 feet short of SR 37.

One the east side of the existing intersection, from Reynold’s Drive/Enterprise Drive (310 feet east of SR 37) east, 126th Street was recently reconstructed in 2011/2012 as a four lane PCCP roadway with a raised concrete center curb, and curb and gutter on outsides. This section of 126th Street has an eight foot HMA pedestrian pathway on the north side and a six foot concrete sidewalk on the south side, both separated by a five foot grass buffer strip. The existing pavement on the east side between the intersection and the recent PCCP construction is full depth HMA and is in good condition.

The intersection of SR 37 and 126th Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and a right turn lane on each approach. 126th Street also has one dedicated left and right turn lane in each direction. The east leg of 126th Street has a raised center curb. The eastbound departure leg has a left turn lane to businesses along the north side of 126th Street, on the east side of SR 37. This introduces a lane shift for the eastbound through movement through the intersection to the outside of the left turn lane.

The intersection is bordered by businesses in each quadrant. Each business facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

131st Street

131st Street crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

131st Street is classified as a Collector through the limits of this intersection and is not access controlled. Outside of the existing intersection limits on both sides of the intersection, 131st Street is a two lane roadway with two 12-foot travel lanes, and no shoulders or curb. The existing pavement on both sides of the intersection is full depth HMA and is in good condition. Approaching the intersection from both sides, the outside of the roadway is bordered by curb and gutter. On the west side of the intersection, a six foot sidewalk borders the north side of the roadway adjacent to the curb. This sidewalk stops 160 feet short of SR 37. One the east side of the intersection, an eight foot pedestrian pathway borders the south side of the roadway separated from the curb by a five foot grass buffer. This pathway stops 300 feet short of SR 37.

The intersection of SR 37 and 131st Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and a right turn lane on each approach. 131st Street has two left turn lanes, two through lanes, and one right turn lane on the eastbound approach. 131st Street has two left turn lanes, one through lane, and one right turn lane on the westbound approach. The eastbound departure leg has two travel lanes with the outside lane being a right turn lane into businesses on the south side of 131st Street on the east side of SR 37. This means that the outermost through lane on the eastbound approach lines up with the right turn lane on the opposite side and most merge left after traveling through the intersection in order to continue east on 131st Street.

The intersection is bordered by businesses in the southeast, southwest, and northwest quadrants, and a vacant field in the northeast quadrant. Each facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

135st Street

A four-way signalized at-grade intersection is planned at this location, but does not currently exist. The location of this future intersection is approximately 2200 feet north of 131st Street. SR 37 is classified as an Expressway through the limits of this future intersection and is limited access. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition.

A roadway has been constructed which intersects 135th Street approximately 825 feet east of SR 37, and runs north from that point. The roadway runs through an open area on the west side of Fishers Junior High School which is planned for development, and will be used to provide access to facilities within the development. The roadway parallels SR 37 and turns toward SR 37 in the location of the future intersection. The roadway will eventually extend past the intersection with SR 37 and intersect Britton Park Road on the west side of SR 37. The roadway consists of two 14 foot lanes separated by a 15 foot open grass median. A left turn lane will be added at the 135th Street approaches to the future intersection on both sides.

The intersection location is bordered by businesses in the two west quadrants. For a listing of each business adjacent to the intersection, see the aerial displays.

141st Street

141st Street crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

141st Street is classified as a Secondary Arterial through the limits of this intersection and is not access controlled. Outside of the existing intersection limits on both sides of the intersection, 141st Street is a two lane roadway with two 12-foot travel lanes, and no shoulders or curb. The existing pavement on both sides of the intersection is full depth HMA and is in good condition. Approaching the intersection from both sides, the outsides of the roadway have no shoulders or curbs. The eastbound approach has a four foot raised center curb between the eastbound and westbound lanes.

The intersection of SR 37 and 141st Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and a right turn lane on each approach. 141st Street has one left turn lane, one through lane, and one right turn lane on the each approach.

The intersection is bordered by businesses in the southwest, northwest, and northeast quadrants, and a vacant field in the southeast quadrant. Each facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

146th Street

146th Street crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound

and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

146th Street is classified as a Primary Arterial through the limits of this intersection and is not access controlled. Outside of the existing intersection limits on both sides of the intersection, 146st Street is a four lane roadway with four 12-foot travel lanes, a 16-foot median, and outside curb and gutter. The existing pavement on both sides of the intersection is full depth HMA and is in good condition. Approaching the intersection from both sides, 146th Street has outside curb and gutter and a four foot raised center curb between the eastbound and westbound lanes.

The intersection of SR 37 and 146st Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has two left turn lanes, two through lanes, and one right turn lane on each approach. 146st Street has two left turn lanes, two through lanes, and one right turn lane on the each approach.

The intersection is bordered by businesses in the southeast, southwest, and northeast quadrants, and a vacant field in the northeast quadrant. Each facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

Greenfield Avenue

Greenfield Avenue crosses SR 37 at an approximate 30 degree skew to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

Greenfield Avenue is classified as a Primary Arterial through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, Greenfield Avenue is a two lane roadway with two 12-foot travel lanes, and no shoulders or outside curbs. The existing pavement on the west side of the intersection is full depth HMA and is in good condition within 170 feet of the intersection. Outside of this area, the existing pavement is in poor condition with significant rutting and cracking, mainly in the westbound lane. Outside curb and gutter borders the south side of the roadway; however the north side has no curb and no shoulder.

One the east side of the existing intersection, outside the intersection limits, Greenfield Avenue is a two lane roadway with two 12-foot travel lanes, and no shoulders or outside curbs. The existing pavement on the east side of the intersection is full depth HMA and is in good condition. Outside curb and gutter borders both sides of the roadway. The eastbound and westbound lanes are separated by an eight foot raised center curb. An eight foot wide pedestrian pathway

also runs along the south side of the roadway on the east side of the intersection, separated from the curb by a seven foot grass buffer strip.

The intersection of SR 37 and Greenfield Avenue is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. Greenfield Avenue has one left turn lane, two through lanes, and one right turn lane on each approach.

The intersection is bordered by businesses in the southwest and northwest quadrants, and a residence in the northeast quadrant, and a vacant field in the southeast quadrant. The business and the residence in the north two quadrants are situated in close proximity to the intersection with little setback. For a listing of each business adjacent to the intersection, see the aerial displays.

Town and Country Boulevard

Town and Country Boulevard crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

Town and Country Boulevard is classified as a Collector through the limits of this intersection and is not access controlled. This road runs east to west and connects Clover Road on the west side of SR 37 to Mercantile Road on the east side of SR 37. Clover Road and Mercantile Boulevard run north to north and are used as frontage roads to access numerous retail businesses on each side of SR 37. These two roads intersect Town and Country Boulevard with roundabouts on each side of SR 37. The Clover Road roundabout is approximately 250 feet west of SR 37 and the Mercantile Boulevard roundabout is approximately 300 feet east of SR 37. Town and Country Boulevard is bordered by curb and gutter on the outside on each side of SR 37. On the west side of SR 37, Town and Country Boulevard has a four foot raised center median with light poles and small shrubs in the median. The existing pavement is full depth HMA and is in good condition. There is a six foot sidewalk adjacent to the curb in the two east quadrants of the Clover Road roundabout; however the sidewalk ends at the pedestrian crossing just east of Clover Road and the sidewalk does not extend along Town and Country Boulevard.

The intersection of SR 37 and Town and Country Boulevard is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. Town and Country has one left turn lane, two through lanes, and one right turn lane on the eastbound approach; and two left turn lanes, one through lane, and one right turn lane on the westbound approach. The westbound approach to Clover Road has one shared left/through

lane and one right turn lane. The east bound approach to Mercantile Boulevard has one left turn lane and a shared right/through lane.

The intersection is bordered by businesses in each quadrants, which are located in close proximity to the intersection with little setback. For a listing of each business adjacent to the intersection, see the aerial displays.

Pleasant Street

Pleasant Street crosses SR 37 at a right angle to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

Pleasant Street is classified as a Collector through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, Pleasant Street is a two lane roadway with two 12-foot travel lanes, outside curb and gutter and a six foot sidewalk on each side. The existing pavement on the west side of the intersection is full depth HMA and is in good condition. Within the intersection limits, the north side of the roadway is bordered by curb and gutter and a six foot sidewalk. The south side of the roadway is bordered by a five foot shoulder from SR 37 to approximately 220 feet west of the intersection. The south side of the roadway west of this point is bordered by curb and gutter and a six foot sidewalk.

One the east side of the existing intersection, outside the intersection limits, Pleasant Street is a four lane roadway with two 12-foot travel lanes in each direction bordered by curb and gutter, and an eight foot pedestrian pathway on the south side separated by a five foot grass buffer. The eastbound and westbound lanes are separated by a 16 foot wide raised center median. The existing pavement within the intersection limits on the east side is full depth HMA and is in good condition. Outside curb and gutter and an eight foot pedestrian pathway borders both sides of the roadway separated by a five foot grass buffer. There is also a painted five foot wide painted flush median in this area.

The intersection of SR 37 and Pleasant Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. Pleasant Street has one left turn lane, one through lane, and one right turn lane on the westbound approach; and one left turn lane and one shared right/through lane on the eastbound approach.

The intersection is bordered by businesses in each quadrant. For a listing of each business adjacent to the intersection, see the aerial displays.

Cherry Street

Cherry Street runs west to east and intersects SR 37 on the west side of the expressway approximately 700 feet south of SR 32 / SR 38. Technically, the intersection is a four way intersection, as there is a frontage road across from Cherry Street, however this frontage road runs south parallel to the east side of SR 37 then dead-ends and does not access any facility, residence or other road. Therefore, this intersection functions as a three way intersection with a median crossover on SR 37 to allow for left turns to and from Cherry Street. This intersection is not signalized. SR 37 is free-flow through this intersection, and Cherry Street is stop-controlled.

Approaching the intersection, SR 37 has one left turn lane and two through lanes on the northbound approach; and one left turn lane, two through lanes, and one right turn lane on southbound approach. On the Cherry Street approach, there is one left turn lane and one shared right/through lane. On the westbound approach, Cherry Street has one left turn lane and one through lane, and one shared right/through lane.

The intersection is bordered by businesses in the southwest and northwest quadrants, and a vacant field in the northeast and southeast quadrants. Each business facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

SR 32 / SR 38

SR 32 / SR 38 crosses SR 37 at an approximate 20 degree skew to form a four way at-grade intersection. SR 37 is classified as an Expressway through the limits of this intersection and has limited access right of way. Through the limits of this intersection, SR 37 is a four lane roadway with two 12-foot travel lanes, a four foot paved inside shoulder and ten foot paved outside shoulder. The northbound and southbound travel lanes are separated by a 50 foot open grass median. The existing pavement is full depth HMA and is in good condition. Next to all SR 37 turn lanes at the intersection, the shoulders are four feet wide.

SR 32 / SR 38 is classified as a Primary Arterial through the limits of this intersection and is not access controlled. On the west side of the existing intersection, outside the intersection limits, SR 32 / SR 38 is a four lane roadway with four 12-foot travel lanes, and outside curb and gutter on each side. The existing pavement on the west side of the intersection is full depth HMA and is in good condition. Within the intersection limits, each side of the roadway is bordered by curb and gutter.

One the east side of the existing intersection, outside the intersection limits, SR 32 / SR 38 is a two lane roadway with two 12-foot travel lanes in each direction bordered by a two foot shoulder on each side. The existing pavement within the intersection limits on the east side is full depth HMA and is in good condition. Near the intersection on the east side, the north side of the roadway is bordered by an eight foot shoulder, while the south side of the roadway is bordered by a six foot curb.

The intersection of SR 32 / SR 38 and SR 37 is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, SR 37 has one left turn lane, two through lanes, and one right turn lane on each approach. On the eastbound approach, SR 32 / SR 38 has one left turn lane, one through lane, and one right turn lane. On the westbound approach, SR 32 / SR 38 has one left turn lane and one through lane, and one shared right/through lane.

The intersection is bordered by businesses in the southwest, northwest, and northeast quadrants, and a vacant field in the southeast quadrant. Each business facility is set back according to the current Hamilton County Thoroughfare Plan for SR 37, with corners cuts preserved in each corner of the intersection. For a listing of each business adjacent to the intersection, see the aerial displays.

Allisonville Road and 146th Street

Allisonville Road runs south to north and crosses 146th Street at a 20 degree skew to form a four way at-grade intersection. 146th Street is considered the major road and is classified as a Primary Arterial through the limits of this intersection. 146st Street is a four lane roadway with four 12-foot travel lanes, a 16-foot median, and outside curb and gutter on each side. There is also an eight foot pedestrian pathway along the south side of 146th Street, separated by a five foot buffer strip. 146th Street overpasses the White River approximately 900 feet west of Allisonville Road. The existing pavement on both sides of the intersection is full depth HMA and is in good condition. Approaching the intersection from both sides, 146th Street has outside curb and gutter and a four foot raised center curb between the eastbound and westbound lanes.

Allisonville Road is classified as a Primary Arterial through the limits of this intersection. On the north and south sides, outside the intersection limits, Allisonville Road is a two lane roadway with two 12-foot travel lanes and six foot outside shoulders. The existing pavement on each side of the existing intersection is full depth HMA and is in good condition. There is outside curb and gutter around each intersection radius, however the curb does not continue along any leg of Allisonville Road past the end of the radii.

The intersection of Allisonville Road and 146th Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. There is a four foot raised center curb on 146th Street separating the eastbound and westbound lanes on each side of the intersection. Approaching the intersection, 146th Street has two left turn lanes, two through lanes, and one right turn lane on both approaches. Approaching the intersection, Allisonville Road has one left turn lane, two through lanes, and one right turn lane on each approach.

The intersection is bordered by residences in the northwest and northeast quadrants in close proximity to the intersection. There is a forested area in the southwest quadrant and an open grassy area in the southeast quadrant. For a listing of each residence adjacent to the intersection, see the aerial displays.

Cumberland Road and 146th Street

Cumberland Road runs south to north and crosses 146th Street at a right angle to form a four way at-grade intersection. 146th Street is considered the major road and is classified as a Primary Arterial through the limits of this intersection. 146st Street is a four lane roadway with four 12-foot travel lanes, a 16-foot median, and outside curb and gutter on each side. There is also an eight foot pedestrian pathway along each side of 146th Street, separated by a five foot buffer strip. The existing pavement on both sides of the intersection is full depth HMA and is in good condition.

Cumberland Road is classified as a Secondary Arterial through the limits of this intersection. On the north side, outside the intersection limits, Cumberland Road is a four lane roadway with four 12-foot travel lanes and outside curb and gutter. The existing pavement on each side of the existing intersection is full depth HMA and is in good condition. On the south side, outside the intersection limits, Cumberland Road is a two lane roadway with two 12-foot travel lanes with no shoulder or outside curb. Along Cumberland Road both north and south of the intersection, there is an eight foot pedestrian pathway along the west side of the roadway separated by a variable width grass buffer.

The intersection of Cumberland Road and 146th Street is a signalized intersection, operating as an 8 phase signal with protected left turns in each direction. Approaching the intersection, 146th Street has one left turn lane, two through lanes, and one right turn lane on both approaches. On the southbound approach, Cumberland Road has one left turn lane, one through lane, and one right turn lane. On the Northbound approach, Cumberland Road has one left turn lane and two through lanes.

The intersection is bordered by Community Health Network Rehab in the southwest quadrant, Indiana Surgery Center in the northwest quadrant, and a utility distribution station in the southeast quadrants in close proximity to the intersection. There is an open grassy area in the northeast quadrant.

IV. EVALUATED BUILD ALTERNATIVES

The Study evaluated two primary build alternatives: upgrading the existing SR 37 corridor with either teardrop roundabout interchanges (Alternative 1) or tight diamond interchanges (Alternative 2). Both alternatives will significantly improve traffic operations at the Study intersections.

V. TRAFFIC OPERATION ANALYSIS

A Traffic Operation Analysis was conducted for the Study area. The purpose of the Traffic Operation Analysis (TOA) was to evaluate traffic operations at the Study intersections along the SR 37 and 146th Street corridors. The TOA focused on performing capacity analysis and providing recommendations for the proposed intersection lane configurations.

Based on the analysis performed in the TOA, it was demonstrated that some Study intersections are currently operating at an unacceptable LOS, and if no improvements are

made, all of the Study intersections along SR 37 will be operating at an unacceptable LOS in the year 2036. The SR 37 Mobility Study has proposed a plan to upgrade the existing SR 37 corridor with either teardrop roundabout interchanges (Alternative 1) or tight diamond interchanges (Alternative 2).

Summary of Findings and recommendations

1. For Alternative 1, based on the RODEL analysis, all Study intersections will be operating at an acceptable LOS in year 2036 with the proposed intersection lane configurations.
    a. There are a total of five triple-lane approaches at four proposed roundabouts based on the year 2036 traffic volumes. During the design stage of this project, it is recommended to further evaluate the possibility of operating these roundabouts with less travel lanes in the opening year with future expandability to maximize the roundabouts' safety benefits.

2. For Alternative 2, all Study intersections will be operating at an acceptable LOS in year 2036 with the proposed intersection lane configurations.
    a. Due to the scope of the Study, only the tight-diamond interchange configuration was analyzed for Alternative 2. Previous research has indicated that the single-point urban interchange (SPUI) can provide comparable traffic operations with the same traffic volumes. One unique benefit of the SPUI is that there is only one signalized intersection at the interchange, which makes it easier to coordinate with adjacent signalized intersections along the cross street.
    b. Although no formal "Traffic Signal Warrant Analysis" has been performed, most of the proposed ramp intersections are expected to be signalized. During the design stage of this project, it is recommended to evaluate the need for traffic signals at the ramp intersections based on requirements documented in the Indiana MUTCD.

3. The abbreviated "Weaving Analysis" indicates that at five locations along SR 37, collector-distributor lanes will be required to interconnect adjacent interchanges, thus eliminating any weaving operations that are expected to fail in year 2036.

4. The construction of the new intersection at SR 37 and 135th Street will likely be driven by the development/redevelopment east and west of SR 37. Due to the nature of the development plans, the "Traffic Impact Study Reports" reviewed in this Study may have become outdated. It is recommended to continue to coordinate with the developers for the latest site plans to assure no significant changes have occurred that would affect the design of this interchange.

5. Both Alternatives 1 and 2 will be able to address the capacity needs at the Study intersections. To select the preferred alternative, other factors such as right-of-way impact, overall project cost, intersection safety, and community preference need to be evaluated. It is possible the preferred alternative may be a combination of Alternatives 1

and 2, and may include additional interchange configurations such as the single-point urban interchange (SPUI).

Please see the Traffic Operation Analysis (binder labeled Traffic Operation Analysis) to review the Study area results in their entirety.

VI. STAKEHOLDER COMMUNICATION

Throughout the Study process, periodic meetings were conducted with a project Stakeholder group. This group was comprised of technical transportation representatives of the MPO, INDOT, Hamilton County, Town of Fishers, and City of Noblesville. The following paragraphs briefly describe the intent and general results reached at each of the meetings. To review the individual meeting minutes, please refer to the Appendix of this document.

A project kick-off stakeholder meeting was conducted on November 23, 2010 at 2:00 p.m. at the offices of the Hamilton County Highway Department. The purpose of the meeting was to initiate the project.

A second project stakeholder meeting was conducted on June 10, 2011 at 9:30 a.m. at the offices of the Hamilton County Highway Department. The objective of the meeting was to provide an update on the development of the Study and to reach consensus from the Stakeholder group regarding the concept of utilization of collector-distributor (C-D)/Frontage Roads at interchanges. After discussion, the Stakeholder group concurred with the recommendation to analyze the use of C-D/Frontage Roads at the Study intersections/interchanges.

A third project stakeholder meeting was held on Wednesday, December 14, 2011 at 3:00 p.m. at the offices of the Hamilton County Highway Department. The objective of the meeting was to provide an update on the development of the Study and to reach consensus from the group regarding the preferred design solution to carry forward for additional evaluation. A PowerPoint presentation was shown that highlighted results from the draft Traffic Operation Analysis. The primary result from the meeting was the conclusion to continue further investigation of the tear drop build alternative.

A fourth project stakeholder meeting was held on Wednesday, October 10, 2012 at 9:30 a.m. at the offices of the Hamilton County Highway Department. The objective of the meeting was to conclude the stakeholder participation process for the SR 37 Mobility Study. The primary result was a discussion relative to the final design solution. This included an overview of the decisions made relative to over/under SR 37 and intersecting streets and the coordination involved with local Stakeholders.

In addition to the project Stakeholder meetings, numerous meetings were conducted during the Study process with local elected officials from each jurisdiction to keep them abreast of project developments.

VII. GEOTECHNICAL EVALUATION

General Overview

The corridor is located in a glaciated area. With the exception of the area near Stony Creek, the alignment is within a typical Central Indiana profile that consists of softer and moderate-plasticity clays overlying hard and low-plasticity clays, and bedrock is over 100 feet deep. The harder clays are usually within 20 feet of the surface. In addition, frequent seams and layers of granular soils can be encountered. This profile typically includes seasonal perched groundwater conditions within a few feet of the surface. From a design and construction perspective, CBR values are commonly in the range of 3 to 4, and subsurface drainage is typically required for pavement and below-grade structures (e.g., cut walls). Because of the perched groundwater and the clayey soils, improvement of the subgrade for support of pavement and construction activities is usually required, particularly in areas of cut. Support of bridges on driven piling and/or spread foundations is anticipated to be viable. In addition, support of MSE walls in these conditions typically includes preparation of the subgrade for the leveling pad and structure fill.

Cut walls over about 12 feet in height are anticipated to required tie-backs in order to control deflections, and the length of tie-backs is typically in the range of 25 to 50 ft.

A Geotechnical Evaluation will be required to evaluate the subsurface conditions and to provide the necessary information for a pavement design. This will include soil borings and a formal Geotechnical Report with recommendations that will be approved by INDOT.

Greenfield Avenue and Town and Country Boulevard

In the area of Stony Creek, the soil profile is anticipated to be glacial outwash and/or alluvium (i.e., primarily granular soil), and bedrock could be within 50 to 100 feet of the surface. The issues related to shallow perched groundwater are usually not of concern because of the well-drained profile. However, if the piezometric groundwater level is relatively shallow, a large influx of groundwater can require temporary and permanent dewatering in areas of cut. An additional construction cost of $500,000 is anticipated for each the Greenfield Avenue and Town and Country intersections to mitigate this condition.

Pleasant Street and SR 32 / SR 38

An exception to the profiles discussed above is anticipated to be encountered at the SR 32 / SR 38 interchange. On the east side of SR 37 at that interchange, we anticipate that marly soils may be exposed and/or may create special design and construction considerations, such as remove and replace or ground improvement. An additional construction cost of $500,000 is anticipated at the Pleasant Street intersection and $1,000,000 at the SR 32 / SR 38 intersection to mitigate this condition.

VIII. ENVIRONMENTAL INVESTIGATION

An environmental review for federally funded projects is required by the National Environmental Policy Act (NEPA). NEPA is our nation's basic charter for protection of the environment. NEPA requires all federal agencies to consider the significant effects of their actions on the human and natural environments in their planning and decision-making processes and to prepare a detailed statement documenting these considerations and the resulting recommendations.

The level of environmental evaluation is based on the predicted impacts of the project. Projects that will incur no or negligible impacts can be Categorically Excluded from review, which therefore requires minimal resource agency contact and documentation.

Projects that do not meet the criteria for Categorical Exclusion (CE), but will incur no significant impacts, are typically completed under an Environmental Assessment (EA). An Environmental Assessment (EA) is prepared for actions in which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued. An EA document requires coordination with various resource agencies as well as the general public. Based on the most recent INDOT procedural changes to the environmental process, it is anticipated that this project will require a Categorical Exclusion. The CE will fully evaluate the environmental impacts for the preferred alternative.

A preliminary environmental assessment of the proposed improvements was completed. The purpose of this assessment was to identify environmental features that exist within the Study area.

The paragraphs below highlight the key environmental issues associated with the roundabout alternative for the Study intersections along SR 37 and 146th Street.

Waters of the U.S. Impacts

Section 404 of the Clean Water Act establishes programs to regulate the discharge of dredged or fill material into waters of the United States. The Rivers and Harbors Act of 1899 defined navigable waters of the United States as "those waters that are subject to the ebb and flow of the tides and/or are presently used, or have been used in the past, or maybe susceptible to use to transport interstate or foreign commerce." The Clean Water Act built on this definition and defined waters of the United States to include tributaries to navigable waters, interstate wetlands, wetlands which could affect interstate or foreign commerce, and wetlands adjacent to other waters of the United States.

The National Wetland Inventory Map identifies a potential forested wetland site adjacent to the project corridor approximately 2,300 feet north of Greenfield Avenue. A "Waters of the U.S." report (wetland determination/delineation) will be required to confirm and identify wetland boundaries throughout the corridor. Wetland impacts greater than 0.10 acre will require compensatory mitigation. Any mitigation efforts should be coordinated with the U.S. Army Corps of Engineers and Indiana Department of Environmental Management.

Four potential stream crossings have been identified along the SR 37 Study corridor. A "Waters of the U.S." report (wetland determination/delineation) will be required to officially determine the boundaries and locations of all jurisdictional ditches, streams, or other watercourses within the project limits. It is likely the roundabout alternative will impact the following four streams:

1. Britton Branch
2. Unnamed Tributary to Britton Branch
3. Stony Creek
4. Unnamed Tributary to Stony Creek

Natural Areas and Nature Preserves

A preliminary red flag investigation did not locate the presence of any natural areas or nature preserves within the Study limits of the roundabout alternative.

Groundwater Resources

The project is not located within the legally designated St. Joseph Aquifer System.

Historic and Cultural Resources

The Hamilton County Interim Report was reviewed for the proposed corridor. The interim report shows no historic properties adjacent to the Study limits. However, properties may have become 50 years of age since the publication of the interim report.

The roundabout alternative would result in the acquisition of undisturbed right-of-way. As a result, an Archaeological Records Review and Phase Ia Archaeological Survey will be required to identify potentially significant cultural resources within the proposed project limits.

At a minimum, the preferred alternative will require the completion of the following Section 106 documents: Phase Ia Archaeological Survey, Historic Properties Report and a Section 106 Findings and Determinations (36 CFR 800.11) in order to be eligible for federal funding.

Cemetery Impacts

State law (IC 14-21-1-26.5) requires that any person planning to disturb the ground within 100 feet of a burial ground or cemetery for the purpose of erecting, altering, or repairing a structure must submit a development plan to the DHPA. IC 14-21-1-26.5. This project does not involve construction impacts within 100 feet of a cemetery.

Hazardous Materials

A search of the red flag indicators revealed several potential hazardous waste sites within ½ mile of the project corridor. A Phase I Initial Site Assessment will be required to fully identify potential hazardous waste sites and to determine if a Phase II Preliminary Site Investigation is required.

Section 4 (f) Resources

Section 4(f) of the USDOT Act of 1966 (Title 49, USC. Section 304) requires special consideration be made regarding the "use" of any publicly owned park, recreation area, wildlife/waterfowl refuge or historic property that is listed in or eligible for the National Register of Historic Places. No Section 4(f) resources were identified within or near the project area.

Section 6(f) Impacts

Section 6(f) resources are lands that were purchased with or improved using funds from the Land and Water Conservation Fund (LWCF). The fund was created through the Land and Water Conservation Fund Act of 1965 to preserve, develop and assure accessibility to outdoor recreation resources, and to strengthen the health and vitality of the public. These public recreation lands are to be maintained for public outdoor recreation use. The program is administered by the National Park Service (NPS) at the national level and by the Department of Natural Resources' (DNR) Division of Outdoor Recreation at the state level. Section 6(f) of the act prohibits the conversion of LWFC lands unless the National Park Service (NPS) approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value. No Section 6(f) resources are found within or near the project limits in the National Park Service's Land and Water Conservation Fund Database.

Air Quality Analysis

A conformity determination is required prior to approval of any NEPA decision for projects in non-attainment and maintenance areas. Hamilton County is currently considered non-attainment for Ozone (O_3) and Particulate Matter (PM) 2.5. For projects in Metropolitan Planning Organization (MPO) areas, including this project, the project's design, concept and scope will be confirmed that it is accurately reflected in the current Long Range Transportation Plan (TP) and Transportation Improvement Program (TIP) and both have been found to conform to the Indiana State Transportation Implementation Program (INSTIP).

Hot spot analyses are required for projects of air quality concern that are located in carbon monoxide (CO) or particulate matter ($PM_{2.5}$ or PM_{10}) non-attainment or maintenance areas. The proposed project is not located in a carbon monoxide (CO) non-attainment or maintenance area. The proposed project is located in a particulate matter non-attainment area.

Noise Analysis

Because this activity is classified as a Type I project, a noise analysis will be required. The noise analysis should be conducted in accordance with INDOT's Traffic Noise Policy effective July 2011. The traffic noise analysis will determine if noise abatement is required for this project.

Environmental Justice

Title VI of the Civil Rights Act of 1964 and the subsequent legislation require federal agencies to ensure that none of their programs discriminate on the basis of race, color, national origin, age

gender, handicap/disability and religion. The President's Executive Order 12898 on February 11, 1994 and the Presidents Memorandum on Environmental Justice of the same date underscore these provisions with respect to Environmental Justice in Minority Populations and Low Income Populations. The intent is to ensure that the federal departments and agencies identify and address any disproportionately high and adverse human health or environmental effects from their policies, programs and activities on minority populations and low income populations.

The following information was determined by a review of 2010 U.S. Census Tract Data concerning race, income, and poverty levels within the Study limits. The reference community is typically a county, city, or town that contains the project and is called the community of comparison (COC). Hamilton County was utilized as the community of comparison. The community that overlaps the project limits is called the affected community (AC). Affected communities that are more than 50 percent minority or low income are automatically environmental justice populations. Environmental Justice (EJ) populations are present if the low-income population or minority population is 25 percent higher than the population in the COC. The census data for the community of comparison (Hamilton County) is provided in Table 2 below:

Table 2 - Community of Comparison (Hamilton County)	
Census Information Categories	Community
Total Population	274,569
Non-White Population	29,379
Percent Minority Population	11%
Percent Individuals below Poverty Level	4.6%

Affected Communities Table - Census Trace 1108.07	
Census Information Categories	Community
Total Population	5,909
Non-White Population	1,551
Percent Minority Population	26%
Percent Individuals below Poverty Level	7%
Affected Communities Table– Census Tract 1108.09	
Census Information Categories	Community

Total Population	8,572
Non-White Population	1,015
Percent Minority Population	11.8%
Percent Individuals below Poverty Level	4%
Affected Communities Table – Census Tract 1105.06	
Census Information Categories	Community
Total Population	8,026
Non-White Population	293
Percent Minority Population	3.7%
Percent Individuals below Poverty Level	10%
Affected Communities Table - Census Trace 1107.00	
Census Information Categories	Community
Total Population	2,869
Non-White Population	352
Percent Minority Population	12.2%
Percent Individuals below Poverty Level	15%
Affected Communities Table – Census Tract 1106.00	
Census Information Categories	Community
Total Population	3,747
Non-White Population	293
Percent Minority Population	8%
Percent Individuals below Poverty Level	10%

The comparisons shown above indicate that the affected community has concentrations of minority and low income individuals when compared to Hamilton County as a whole. The proposed project will provide benefit to the identified EJ populations through improved vehicular access, roadway safety, and stormwater drainage. The proposed improvements do not

involve increased EJ impacts when compared to the other alternatives evaluated. As a result, the proposed project will not result in disproportionate negative impacts to EJ populations.

Regulatory Permits

The proposed improvements will require obtaining the following permits from Federal and State regulatory agencies.

IDEM Section 401 Water Quality Certification: The proposed improvements will require Section 401 Water Quality Certification from the Indiana Department of Environmental Management.

US Army Corps of Engineers Section 404 Permit: The proposed improvements will require a Section 404 permit from the Louisville District, U.S Army Corps of Engineers.

IDEM Rule 5 Permit: Since the proposed improvements will disturb greater than one acre, Rule 5 administered through the Indiana Department of Environmental Management will apply to this project. The designer shall coordinate all erosion and sediment control measures with the Hamilton County Soil and Water Conservation District.

IDNR Construction in Floodway Permit: Formal approval from the Indiana Department of Natural Resources (IDNR) - Division of Water for Construction in a Floodway will be required for this alternative at the following locations:

a. Britton Branch

b. Stony Creek

c. Unnamed Tributary to Stony Creek

Environmental Mitigation

Based upon our 'Red Flag' Investigation and preliminary layout of the preferred alternative, no environmental mitigation is expected.

IX. DRAINAGE

126th Street

The existing drainage on 126th Street is conveyed by sheet draining the pavement to the outside grass utility strip. This sheet flow is drained by small swales into the ditches on SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing north to a stream about 1200 feet north of the intersection.

The proposed drainage on 126th Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to the outlet stream approximately 1200 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as

well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the northwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 625 feet north of the intersection out to the side ditch where it will maintain positive drainage to the outlet stream. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

131st Street

The existing drainage on 131st Street is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter inlets are utilized to capture the storm water which flow toward SR 37 and drain into the ditches along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing north to Britton Branch about 1220 feet north of the intersection.

The proposed drainage on 131st Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Britton Branch approximately 1220 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the northwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 525 feet north of the intersection out to the side ditch where it will maintain positive drainage to Britton Branch outlet. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

135th Street

135th Street is currently being constructed and therefore will not be analyzed. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to Britton Branch about 1350 feet south of the intersection.

The proposed drainage on 135th Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes

will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Britton Branch approximately 1350 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the southwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 720 feet south of the intersection out to the side ditch where it will maintain positive drainage to Britton Branch outlet. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

141st Street

The existing drainage on 141st Street is conveyed by sheet draining the pavement to the outside grass swales. The swales flow toward SR 37 and drain into the ditches along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to a detention pond about 825 feet south of the intersection.

The proposed drainage on 141st Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to the detention pond approximately 825 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the northwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 825 feet south of the intersection out to a detention pond. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

146th Street

The existing drainage on 146th Street is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter inlets are utilized to capture the storm water which flow toward SR 37 and drain into the ditches along SR 37. On mainline SR 37, the existing drainage

is conveyed by an open grass median and outside ditches flowing north to Overdorff Branch about 1950 feet north of the intersection.

The proposed drainage on 146th Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Overdorff Branch approximately 1950 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the northwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 730 feet north of the intersection out to the side ditch where it will maintain positive drainage to Overdorff Branch outlet. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

Greenfield Avenue

The existing drainage on Greenfield Avenue is conveyed on the southwest leg of the intersection by sheet draining the pavement to the outside curb and gutters, flowing out of curb turnouts into the existing ditch along SR 37. The drainage on the northwest leg of the intersection is conveyed by sheet draining the pavement into the ditch which flows into the ditch along SR 37. On the west leg of the intersection, the drainage is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter inlets are utilized to capture the storm water which flow away from SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing north to Stony Creek about 2260 feet north of the intersection.

The proposed drainage on Greenfield Avenue will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Stony Creek approximately 2260 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a low point of the profile. The manholes will convey the drainage to 2080 feet north of the intersection and outlet into the ditch along SR 37 and maintain positive drainage to Stony Creek.

Town and Country Boulevard

The existing drainage on Town and Country Boulevard is conveyed by sheet draining the pavement to the outside curb and gutters. Curb and gutter turnouts are utilized to outlet the

storm water into the ditches along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to Stony Creek about 1440 feet south of the intersection.

The proposed drainage on Town and Country Boulevard will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to Stony Creek approximately 1440 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the southwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 1440 feet south of the intersection out to Stony Creek. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

Pleasant Street

The existing drainage on Pleasant Street is conveyed on the northwest leg of the intersection by sheet draining the pavement into the ditch which flows into the ditch along SR 37. All the other legs on Please Street are conveyed by sheet draining the pavement to outside curb and gutters. Curb and gutter inlets are utilized to capture the storm water which flow toward SR 37 and drain into the ditches along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing north to a stream about 1060 feet north of the intersection.

The proposed drainage on Pleasant Street will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to the stream approximately 1060 feet north of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the northwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 1060 feet north of the intersection out to the outlet stream. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete

location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

SR 32 / SR 38

The existing drainage on SR 32 / SR 38 is conveyed on the west leg of the intersection by sheet draining the pavement to outside curb and gutters. Curb and gutter turnouts are utilized to capture the storm water which flow toward SR 37 and drain into the ditches along SR 37. The drainage is conveyed on the east leg by sheet draining the pavement into a small swale which flows into the ditch along SR 37. On mainline SR 37, the existing drainage is conveyed by an open grass median and outside ditches flowing south to a stream about 1290 feet south of the intersection.

The proposed drainage on SR 32 / SR 38 will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will then convey the water to an outside ditch along SR 37 where there is positive drainage from the ditch to the stream approximately 1290 feet south of the intersection. The drainage on SR 37 will be handled similarly. Inlets will be spaced along both sides of the median barrier as well as on the outsides against the walls. The inlets that are within the limits of the depressed profile will be conveyed by manholes to a lift station.

The lift station will be located in the southwest quadrant between the ramp and the wall on SR 37. A 20-inch forcemain is proposed between the wet well and the discharge location approximately 800 feet south of the intersection out to the side ditch where it will maintain positive drainage to the outlet stream. The proposed lift station will include two centrifugal submersible pumps for stormwater runoff installed within a precast concrete wet-well. An additional precast concrete valve vault will be installed adjacent to the wet well. An above grade control panel will be mounted on a pedestal at a discrete location near the lift station and a generator will be included for emergency backup power. The lift station will have a firm pumping capacity (one pump out of service) of 6,400 gpm.

146th Street and Allisonville Road

The existing drainage on Allisonville Road is conveyed by sheet draining the pavement into small swales. On the south leg of Allisonville Road, the swales flow away from the intersection. On the north leg of Allisonville Road, the swales flow toward 146th Street. On mainline 146th Street, the existing drainage is conveyed by sheet draining the pavement into curb and gutter. Curb and gutter inlets are utilized to capture the storm water which flow toward and drain into the White River approximately 900 feet west of the intersection.

The proposed drainage on Allisonville Road will utilize an enclosed storm sewer system consisting of curb and gutter inlets spaced appropriately which will connect to manholes. These manholes will be connected to the same enclosed system on 146th Street. The drainage on 146th Street will be handled similarly. Inlets will be spaced along both sides of the raised median curb as well as on the outsides against the walls. The inlets that are within the limits of

the depressed profile will be conveyed by manholes to a low point of the profile. The manholes will convey the drainage to 900 feet west of the intersection and outlet into White River.

X. UTILITY COORDINATION

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

A variety of utilities (electric, gas, water, telecommunications and sanitary) cross over and under the intersections within the project limits. Most of the impacted utilities are along the east-west county streets, but a few run along SR 37 outside the existing limited access right-of-way. The proposed plan is to raise the east – west county roads over SR 37, while lowering SR 37. This approach tries to balance the cut and fill required. Underground utilities along these east-west county roads can either relocate lower (under SR 37) or attach their facilities to the bridge. Overhead utilities along these east-west roads can remain if they do not conflict with the bridge, offset their facilities north or south of the bridge, or relocate underground. Service connections will also need to be adjusted.

At the Allisonville Road and 146th Street intersection, the proposed plan is to raise Allisonville Road over 146th Street, while lowering 146th Street. The existing utilities along Allisonville Road will be impacted in the same manner as the east-west county roads along SR 37. The possible relocation for overhead and underground utilities is the same as described above. The lowering of 146th Street will also impact the existing utilities within its right-of-way. Underground utilities along 146th Street can lower their facilities to maintain their cover or offset their facilities outside the construction limits. Overhead facilities along 146th Street can raise their facilities to carry them over Allisonville Road, offset their facilities north or south of the Allisonville Road bridge and maintain their current height, or relocate underground and pass through the embankment. Service connections will also need to be adjusted.

Several sanitary sewers cross under SR 37. Lowering SR 37 will require the sanitary trunkline to be either lowered or offset around the lowered portion. Both options can reduce the amount of fall required in a gravity-based system. If the amount of fall is reduced enough, a lift station will be required.

If utilities in their own easement are required to relocate, relocation expenses are reimbursable. Typically, overhead electrical transmission lines are located in easements due to the additional height of the facility and the complexity of the service. Overhead electrical transmission facilities are located along 126th Street, Greenfield Avenue, and Pleasant Street. It is expected that each of these facilities are in an easement.

The following paragraphs give details pertaining to the presence of utilities at each of the Study intersections. This is followed by a discussion of potential impacts resulting from the preferred alternative.

126th Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. Utility markings on 126th Street east of SR 37 were still visible from the 126th Street construction project. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric transmission and distribution runs along the north side of 126th Street. Electrical service to property owners is underground.

Gas: Underground gas is located on the north side of 126th Street, with service laterals to properties on both sides of the street.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street.

Water: The water main is located on the north side of 126th Street with service laterals to properties on both sides of the street.

Sanitary: There is no evidence of a sanitary sewer system.

Impacts

With 126th Street going over SR 37, existing underground facilities along 126th Street can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the 126th Street bridge, offset their facilities north or south of the 126th Street bridge, or relocate underground. Service connections will also need to be adjusted.

If utilities in their own easement are required to relocate, relocation expenses are reimbursable. Typically, overhead electrical transmission lines are located in easements due to the additional height of the facility and the complexity of the service. The two electrical poles on either side of SR 37 carrying the overhead electrical service are free-standing (no guy wires) steel poles. It is expected that this facility is in an easement. The anticipated reimbursable relocation cost to obtain new easements and to relocate this facility overhead within the new easement is $750,000.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

131st Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely

underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the south side of 131st Street. Electrical service to properties on both sides of the street is underground.

Gas: Underground gas begins along east side of SR 37 at the Dairy Queen and runs north toward the CVS, where it turns east through the CVS parking lot. It continues east along the south side of 131st Street. A gas marker is located in the northwest corner of the intersection, but no other information was available. Service laterals to properties on both sides of 131st Street are expected.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street.

Water: The water main is on the south side of 131st Street, west of SR 37. East of SR 37, the water main is on the north side of the 131st Street and the west side of Publishers Drive. Laterals provide service to properties on both sides of the street.

Sanitary: Sanitary sewer manholes are located on the south side of 131st Street on both sides of SR 37, but it is not known if the trunkline crosses under SR 37. Service laterals from properties on both sides of the street connect to the trunkline.

Impacts

With 131st Street going over SR 37, existing underground facilities along 131st Street can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the 131st Street bridge, offset their facilities north or south of the 131st Street bridge, or relocate underground. Service connections will also need to be adjusted.

If the sanitary sewer runs under SR 37, the trunkline will need to be either lowered or offset. Both options can severely impact a gravity-fed system, requiring a lift station to be constructed.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

135st Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. This street is still under construction but some basic utilities were observed. Unless utilities were bored under SR 37, it appears the utilities observed are extensions of the existing utilities. The west segment of 135th Street extends from Britton Park Drive, which provides utility services to businesses on both sides of the street. The east segment is undeveloped. It appears a "backbone" of various utilities was installed and that future distribution and service connections will depend on development of the site.

Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: All electrical facilities are underground. A ground-mounted transformer is located on the north side of 135th Street, west of SR 37. Another is located on the south side of 135th Street, east of SR 37.

Gas: There is no evidence of a gas pipeline.

Telecommunication: Underground telecommunication facilities were identified on the north side of 135th Street, west of SR 37.

Water: There is no evidence of a water main found west of SR 37. A fire hydrant is located on the north side of 135th Street, east of SR 37.

Sanitary: A sanitary manhole is located on the south side of 135th Street, west of SR 37. Sanitary manholes are located on the north side of 135th Street, east of SR 37.

Lighting: Foundations and junction boxes for future lighting at the roundabout at Britton Park Drive and 135th Street were observed. Electrical service is underground.

Impacts

With 135th Street going over SR 37 and no observed facilities running under SR 37, minor relocation work of the existing facilities on both segments of 135th Street is expected based on profile grade changes.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

141st Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the south side of 141st Street, west of SR 37. It crosses from the southwest to the northwest corner of the intersection and then continues east along the north side of 141st Street. Electrical service to property owners is underground.

Gas: A gas marker is located on the northwest corner of 141st Street and Mundy Drive. Without additional markers, the facility cannot be located.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street. An underground

cable belonging to McLeod is on the south side of 141st Street, west of Trade Center Drive. Underground cable markers belonging to SBC were located on the southwest corner of SR 37 and 141st Street, but without additional marker, the direction of the facility cannot be determined.

Water: The water main is located on the south side of 141st Street with service laterals to properties on both sides of the street.

Sanitary: Sanitary sewer manholes are located on the south side of 131st Street on both sides of SR 37, but it is not known if the trunkline crosses under SR 37. Service laterals from properties on both sides of the street connect to the trunkline.

Impacts

With 141st Street going over SR 37, existing underground facilities along 141st Street can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the 141st Street bridge, offset their facilities north or south of the 141st Street bridge, or relocate underground. Service connections will also need to be adjusted.

If the sanitary sewer runs under SR 37, the trunkline will need to be either lowered or offset. Both options can severely impact a gravity-fed system, requiring a lift station to be constructed.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

146th Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, “Holey Moley” or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the north side of 146th Street and across SR 37 to the northeast corner of the intersection. It crosses to the southeast corner, where it continues east along the south side of 146th Street. There are a service poles on the south side of 146th Street, west of SR 37, which feed from the north side of 146th Street. Electrical service to property owners is underground.

Gas: A gas marker is located at the southeast corner of the gas station entrance. Another marker is located on the north side of 146th Street, east of SR 37. Without additional markers, this facility cannot be located.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street. Ameritech manholes are found on the north side of 146th Street, west of SR 37.

Water: The water main is located on the north side of 146th Street with service laterals to properties on both sides of the street.

Sanitary: There is no evidence of a sanitary sewer system.

Street Lighting: Decorative street lights were added by the Town of Noblesville during the East 146th Street project. They are located on both the north and south sides of 146th Street on both sides of SR 37. The spacing is approximately 120 feet. The lighting panel is located on the southeast corner of the intersection.

Impacts

With 146th Street going over SR 37, existing underground facilities along 146th Street can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the 146th Street bridge, offset their facilities north or south of the 146th Street bridge, or relocate underground. Service connections will also need to be adjusted.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

Greenfield Avenue

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, “Holey Moley” or the individual utilities can be contacted.

Electric: Overhead electric transmission cuts diagonally across the intersection from southwest to northeast corners. Overhead electrical distribution runs from the southwest to the northwest corner and along the north side of Greenfield Avenue. Electrical service to property owners is underground.

Gas: A gas pipeline is on the south side of Greenfield Avenue, east of SR 37, with service laterals to properties on both sides of the street. There is no evidence of a gas pipeline west of SR 37.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street. Two “fiber optic” manholes are located on the south side of Greenfield Avenue, east of SR 37.

Water: The water main is on the south side of Greenfield Avenue with service laterals to properties on both sides of the street.

Sanitary: Sanitary manholes are located at the southeast corner of Prosperity Drive and Greenfield Avenue (west of SR 37) and at the southwest corner of Cumberland Road and

Greenfield Avenue (east of SR 37). There is no evidence that these manholes are connected. Service laterals connecting properties on both sides of the street to the manholes are expected.

Street Lighting: Decorative street lights were added by the Town of Noblesville during the Greenfield Avenue project. They are located on both the north and south sides of Greenfield Avenue, east of SR 37. The spacing is approximately 300 feet.

Impacts

With Greenfield Avenue going over SR 37, existing underground facilities along Greenfield Avenue can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the Greenfield Avenue bridge, offset their facilities north or south of the Greenfield Avenue bridge, or relocate underground. Service connections will also need to be adjusted.

If the sanitary sewer runs under SR 37, the trunkline will need to be either lowered or offset. Both options can severely impact a gravity-fed system, requiring a lift station to be constructed.

If utilities in their own easement are required to relocate, relocations expenses are reimbursable. Typically, overhead electrical transmission lines are located in easements due to the additional height of the facility and the complexity of the service. It is expected that this facility is in an easement. The anticipated reimbursable relocation cost to obtain new easements and to relocate this facility overhead within the new easement is $750,000.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

Town and Country Boulevard

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, “Holey Moley” or the individual utilities can be contacted.

There is no evidence of any utilities along Town and Country Boulevard. It appears that facilities for the development on each side of SR 37 are internal and do not cross SR 37.

Street Lighting: Decorative street lights are located around the eastern roundabout.

Impacts

The preferred alternative has Town and Country Boulevard going over SR 37 and connecting to the existing roundabouts on the west and east side. If there are existing utilities along Town and Country Boulevard, minor relocation work is expected based on relatively small change in profile grade.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

Pleasant Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric transmission and distribution runs along the south side of Pleasant Street, west of SR 37. From the southwest corner of the intersection, the overhead transmission runs north along the west side of SR 37 to Clover Road. The guy wires for the transmission poles on the southwest corner cross over Pleasant Street to the anchor poles on the northwest corner. The overhead distribution crosses over SR 37 to the southeast corner, where it proceeds north along the east side of SR 37 for approximately 600 feet before crossing back to the west side of SR 37. There is no overhead electrical on Pleasant Street east of SR 37. Electrical service to property owners is underground.

Gas: A gas pipeline is located on the south side of Pleasant Street with service laterals to properties on both sides of the street.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street.

Water: The water main is on the north side of Pleasant Street with service laterals to properties on both sides of the street.

Sanitary: There is no evidence of a sanitary sewer system.

Street Lighting: Cobra-style street lights are located on the north side of Pleasant Street, west of SR 37. The spacing is approximately 200 feet. Decorative street lights are located around the roundabout, east of SR 37.

Impacts

The preferred alternative has Pleasant Street going over SR 37 and connecting to the existing roundabouts on east side and the proposed roundabout at Clover Road (west of SR 37). Minor relocation work on Pleasant Street is expected based on relatively small change in profile grade.

The proposed lowering of SR 37 could impact the overhead electric transmission and distribution based on the proposed right-of-way on the west side of SR 37. Typically, overhead electrical transmission lines are located in easements due to the additional height of the facility and the complexity of the service. It is expected that this facility is in an easement. The anticipated reimbursable relocation cost to obtain new easements and to relocate this facility overhead within the new easement is $750,000.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

SR 32 / SR 38

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the north side of SR 32 / SR 38. Overhead electrical transmission runs along the east side of Cumberland Road. Electrical service to property owners is underground.

Gas: A gas marker is located on the south side of SR 32 / SR 38, west of SR 37, near the gas station. Without additional markers, this facility cannot be located.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street.

Water: The water main is on the south side of SR 32 / SR 38, west of SR 37, and on the north side of SR 32 / SR 38, east of SR 37. Laterals provide service to properties on both sides of the street.

Sanitary: There is no evidence of a sanitary sewer system.

Street Lighting: Decorative globe-style street lights are located on both sides of SR 32 / SR 38, west of SR 37. The spacing is approximately 150 feet. Cobra-style street lights are located on the south side of SR 32 / SR 38, east of SR 37. The spacing varies from 260 to 300 feet.

Impacts

With SR 32 going over SR 37, existing underground facilities along SR 32 can either relocate lower (under SR 37) or attach their facilities to the bridge. Existing overhead facilities can remain if they do not conflict with the SR 32 bridge, offset their facilities north or south of the SR 32 Street bridge, or relocate underground. Service connections will also need to be adjusted.

The preferred alternative ties into the existing profile of SR 32 just east of Cumberland Road. Ending the proposed profile east of Cumberland Road will avoid impacting the overhead electrical transmission on the east side of Cumberland Road and the associated reimbursable relocation costs.

All other existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

Allisonville Road and 146th Street

Existing Facilities

UNITED conducted a site visit to identify existing utilities. Based on observations of above ground facilities (ie, manholes, valve boxes, pedestals, utility markers), we identified likely underground facilities. If more accurate information is required, "Holey Moley" or the individual utilities can be contacted.

Electric: Overhead electric distribution runs along the south side of 146th Street. Due to the height of the system, several guy poles are located on the north side of 146th Street with guy wires crossing over 146th Street. Overhead electric distribution runs along the east side of Allisonville Road. Service poles are located sporadically on the north side of 146th Street and the west side of Allisonville Road. Electrical service to properties is also overhead.

Gas: A gas pipeline runs along the east side of Allisonville Road with service laterals to properties on both sides of the street. A gas marker is located at the northeast corner of Wellington Court and 146th Street. Without additional markers, this facility cannot be located.

Telecommunication: Various telecommunications facilities are located on the overhead electrical, with underground service to properties on both sides of the street. Ameritech manholes are located on the north side of 146th Street, west of Wellington Court, and in the southbound right turn lane. Another Ameritech manhole is located on the south side of 146th Street, east of Allisonville Road, near the first driveway.

Water: A water main runs along the east side of Allisonville Road with service laterals to properties on both sides of the street. A fire hydrant is located at the northwest corner of Wellington Court and 146th Street. Without additional markers, this facility cannot be located.

Sanitary: There is no evidence of a sanitary sewer system.

Impacts

With Allisonville Road going over 146th Street, existing underground facilities along Allisonville Road can either relocate lower (under 146th Street) or attach their facilities to the bridge. Existing overhead facilities along Allisonville Road can remain if they do not conflict with the Allisonville Road bridge, offset their facilities north or south of the Allisonville Road bridge, or relocate underground. Service connections will also need to be adjusted.

With the lowering of 146th Street below existing grade, existing underground facilities along 146th Street can lower their facilities to maintain their cover or offset their facilities outside the construction limits. Existing overhead facilities can raise their facilities to carry them over Allisonville Road, offset their facilities east or west of the Allisonville Road bridge and maintain their current height, or relocate underground and pass through the embankment. Service connections will also need to be adjusted.

All existing utilities appear to be in the existing right-of-way and are not eligible for reimbursement of relocation costs.

XI. PROPOSED INTERSECTION FACILITIES

SR 37 Corridor - General

Existing SR 37 is a four lane expressway with four 12-foot travel lanes, four foot inside shoulders, and ten foot outside shoulders. The northbound and southbound travel lanes are separated by a 50 foot open grass median (inside travel lane to inside travel lane). The existing right-of-way along SR 37 varies from mostly 85 feet to 95 feet from centerline on both sides. Many businesses line each side of the SR 37 right-of-way throughout the Study limits. The interchanges proposed in this Study require auxiliary lanes, ramp junctions, and ramp lanes adjacent to SR 37 travel lanes approaching each interchange from each side. Additional right-of-way will be required in many locations adjacent to ramp lanes and junctions. In an effort to minimize the amount of right-of-way required and the impacts to existing businesses, it is proposed that the SR 37 median be enclosed with a center median barrier and the SR 37 travel lanes be shifted in to narrow the width of the roadway through the interchange limits.

A 14.5 foot median is proposed, consisting of six foot inside shoulders and a 2.5 foot median barrier wall. Six foot is the desirable inside shoulder width required using Table 53-6 from the Indiana Design Manual (IDM). See the typical cross sections in this Study for full roadway dimensions. If any, one isolated interchange is constructed, the SR 37 travel lanes would shift back out on the north and south sides of the interchange to match the existing travel lanes and median width. As consecutive interchanges are constructed, it will not be feasible to shift lanes out to the existing median width and back in between most interchanges. If all interchanges were built concurrently, the median would remain enclosed from the south side of 126th Street to the north side of 146th Street, and from the south side of Town and Country Boulevard to the north side of SR 32 / SR 38. As there is sufficient distance between 146th Street and Greenfield Avenue, the travel lanes north of 146th Street could shift out the existing median width even if the 146th Street and Greenfield Avenue interchanges were constructed at the same time or consecutively. Furthermore, because of the layout and surrounding parcels at Greenfield Avenue, it is feasible to maintain the existing open median width through this location even when the proposed interchange is constructed. Where this is cost prohibitive at other locations due to right-of-way and business impacts associated with the wider roadway, it is economically feasible at the Greenfield Avenue Interchange. The travel lanes would shift back into an enclosed median south of Town and Country Boulevard and remain enclosed to north of SR 32 / SR 38, where the lanes would shift back out to meet the existing pavement.

This Study focuses on the interchanges; however the treatment of SR 37 proper, between the interchanges will be affected by each interchange's traffic and proximity to each other. The geometrics developed for this Study are unique to each area between interchanges according the findings of the Traffic Operations Analysis (TOA) conducted as part of this Study. In each segment between interchanges, in both directions, there will be an entrance ramp junction from one interchange followed by an exit ramp junction to the next interchange. This creates weaving areas between the interchanges, which were analyzed in the TOA. Some weaving areas were acceptable and are recommended. Other weaving areas are not acceptable and have been removed by interconnecting consecutive interchanges with collector distributor lanes.

See the TOA for the discussion and results of the weaving analysis conducted between interchanges. Below is a summary of the proposed configuration of SR 37 between each interchange:

South of 126th Street

The SR 37 travel lanes will shift inward in this area to transition from the existing median to the proposed enclosed median prior to the interchange. The northbound exit ramp to 126th Street will be a conventional exit ramp. The southbound entrance ramp from 126th Street will be a conventional entrance ramp.

Between 126th Street and 131st Street

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from 126th Street and the northbound exit ramp to 131st Street will be conventional entrance and exit ramps. The southbound entrance ramp from 131st Street and the southbound exit ramp to 126th Street will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between 131st Street and 135th Street

Both northbound and southbound weaving segments fail. A continuous collector-distributor (CD) lane will be used in each direction to interconnect the interchanges. In the northbound direction, only the northbound entrance ramp from 131st Street is proposed, exiting from the CD. Traffic wishing to exit northbound SR 37 to 135th Street will exit at 131st Street and travel through the CD to 135th Street. In the southbound direction, only the southbound exit to 131st Street is proposed, exiting to the CD. Traffic wishing to enter southbound SR 37 from 135th Street will travel through the CD and enter south of 131st Street.

Between 135th Street and 141st Street

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from 131st Street and the northbound exit ramp to 141st Street will be conventional entrance and exit ramps. The southbound entrance ramp from 141st Street and the southbound exit ramp to 135th Street will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between 141st Street and 146th Street

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from 141st Street and the northbound exit ramp to 146th Street will be conventional entrance and exit ramps. The southbound entrance ramp from 146th Street and the southbound exit ramp to 141st Street will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between 146th Street and Greenfield Avenue

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from 146th Street and the northbound exit ramp to Greenfield Avenue will be conventional entrance and exit ramps. The southbound entrance ramp from Greenfield Avenue and the southbound exit ramp to 146th Street will be conventional entrance and exit ramps. There will not be a continuous auxiliary lane between interchanges in both directions.

North of 146th Street, the travel lanes will shift out to transition from the enclosed median to the existing open median. This will eliminate the necessity to reconstruct SR 37, for the sake of enclosing the median, from north of 146th Street to Greenfield Avenue. This area can then be evaluated for replacement based solely on the condition of the pavement at the time of interchange construction, and not out of necessity to construct either interchange.

Between Greenfield Avenue and Town and Country Boulevard

Both northbound and southbound weaving segments are acceptable. The northbound entrance ramp from Greenfield Avenue and the northbound exit ramp to Town and Country Boulevard will be conventional entrance and exit ramps. The southbound entrance ramp from Town and Country Boulevard and the southbound exit ramp to Greenfield Avenue will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between interchanges in both directions.

Between these two interchanges, the travel lanes will need to shift inward to transition from the existing open grass median carried through the Greenfield Avenue interchange, to the proposed enclosed median prior to the Town and Country Boulevard interchange.

Between Town and Country Boulevard and Pleasant Street

The northbound weaving segment is acceptable; however the southbound weaving segment fails. The northbound entrance ramp from Town and Country Boulevard and the northbound exit ramp to Pleasant Street will be conventional entrance and exit ramps. There will be a continuous auxiliary lane between the interchanges in the northbound direction. In the southbound direction, a continuous collector-distributor (CD) lane will be used to interconnect the interchanges. Only the southbound exit to Town and Country Boulevard is proposed, exiting to the CD. Traffic wishing to enter southbound SR 37 from Pleasant Street will travel through the CD and enter south of Town and Country Boulevard.

Between Pleasant Street and SR 32 / SR 38

Both northbound and southbound weaving segments fail. A continuous collector-distributor (CD) lane will be used in each direction to interconnect the interchanges. In the northbound direction, only the northbound exit ramp to SR 32 / SR 38 is proposed, exiting to the CD. Traffic wishing to enter northbound SR 37 from Pleasant Street will travel through the CD to enter north of SR 32 / SR 38. In the southbound direction, only the southbound entrance from SR 32 / SR 38 is proposed, exiting from the CD. Traffic wishing to exit southbound SR 37 to Pleasant Street will exit at SR 32 / SR 38 and travel through the CD to Pleasant Street.

Cherry Street – Cherry Street will not be a full access interchange; however will be connected to the southbound CD between SR 32 / SR 38 and Pleasant Street. Eastbound traffic on Cherry Street will maintain the options to go south on Noble Creek Drive, or north on Cumberland Road prior to SR 37, however traffic entering SR 37 from Cherry Street will be forced to travel south within the CD between SR 32 / SR 38 and Pleasant Street. Traffic wishing to enter southbound SR 37 from eastbound Cherry Street will travel through the CD and enter south of Pleasant Street. Traffic wishing to enter northbound SR 37 from eastbound Cherry Street will travel north on Cumberland Road to SR 32 / SR 38, east on SR 32 / SR 38 through the interchange, and enter northbound SR 37 north of SR 32 / SR 38.

North of SR 32 / SR 38

The SR 37 travel lanes will shift out in this area to transition from the proposed enclosed median to the existing open median north of the interchange. The northbound entrance ramp from SR 32 / SR 38 will be a conventional entrance ramp. The southbound exit ramp to SR 32 / SR 38 will be a conventional exit ramp.

The following paragraphs describe the recommended improvements for each of the Study intersections.

126th Street

The preferred alternate for this intersection is to construct a “teardrop” roundabout interchange on 126th street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. 126th Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on 126th street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 126th Street. Exterior walls will also be necessary in each quadrant to minimize impacts to businesses in each quadrant (See aerial sheets for estimated wall limits).

126th Street will have two lanes in each direction through the east/west portion of the roundabouts. On both 126th Street approaches there will be one shared left/through lane and one shared right/through lane. Both exit ramps will exit as one lane and develop into two lanes at the roundabout approaches, consisting of one shared left/through lane, and one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

The current drive access off 126th Street to a gas station in the northeast quadrant will need to be closed due to the close proximity to the interchange and the vertical difference of proposed 126th Street. This business will maintain access to 126th Street by way of an existing drive on Enterprise Drive.

131st Street

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on 131st street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. 131st Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on 131st Street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 131st Street. Exterior walls will also be necessary in the southeast, southwest, and northwest quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

131st Street will have two lanes in each direction through the east/west portion of the roundabouts. On both 131st Street approaches there will be one shared left/through lane and one shared right/through lane. Both exit ramps will exit as one lane and develop into two lanes at the roundabout approaches, consisting of one shared left/through lane, and one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

Two current drive accesses off 131st Street will need to be removed due to their close proximity to the interchange and the vertical difference of proposed 131st Street in the area of the drives. One of these drives accesses the CVS in the southwest quadrant. This business will maintain access to 131th Street by way of two existing drives on Publishers Drive. The other drive to be removed accesses the gas station and McDonald's in the northwest quadrant. This business will maintain access to 131st Street by way of two existing drives on an un-named access roadway running north along the west side of the McDonald's.

135th Street

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on 135th Street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. 135th Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on 135th Street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 135th Street. Exterior walls will also be necessary in the northwest quadrants to minimize impacts to the business in this quadrant (See aerial sheets for estimated wall limits).

135th Street will have one lane in each direction through the east/west portion of the roundabouts. On both 135th Street approaches there will be one lane on the approach, with all movements being made from this lane. Both exit ramps will exit as one lane and remain one lane at the roundabout approaches, with all movements being made from this lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

There are no current drive accesses off 135th Street on either side of the intersection location as the roadway is under construction and the two east quadrants are not yet developed.

141st Street

The preferred alternate for this intersection is to construct a “teardrop” roundabout interchange on 141th Street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. 141st Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on 141st Street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 141th Street. Exterior walls will also be necessary in the southwest, northwest, and northeast quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

141st Street will have one lane in each direction through the east/west portion of the roundabouts. On both 141st Street approaches there will be one shared left/through lane and one right turn lane. Both exit ramps will exit as one lane and develop into two lanes at the roundabout approaches, consisting of one shared left/through lane, and one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

The current drive access off 141st Street to a gas station in the southwest quadrant will need to be closed due to the close proximity to the interchange and the vertical difference of proposed 141st Street. This business will maintain access to 141st Street by way of an existing drive on Trade Center Road.

146th Street

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on 146th Street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. 146th Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on 146th Street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 146th Street. Exterior walls will also be necessary in the southwest, and southeast quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

146th Street will have two lanes in each direction through the east/west portion of the roundabouts. On the eastbound 146th Street approach there will be one shared left/through lane, one through lane, and one right turn lane. On the westbound approach there will be one shared left/through lane, and one shared through/right lane. The northbound exit ramp will exit as one lane and develop into three lanes at the roundabout approach, consisting of one left turn lane, one shared left/through/right lane, and one right turn lane. The southbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through/right lane and one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

All current drive accesses off 146th Street can be perpetuated with the interchange design.

Greenfield Avenue

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on Greenfield Avenue consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. Greenfield Avenue will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on Greenfield Avenue will drive through the roundabouts with a yield condition on the roundabout approach. The current skew of Greenfield Avenue through this interchange will be maintained, as straightening the skew would require the re-alignment of Greenfield Avenue and

potential impact two businesses in the southwest quadrant and/or two additional residences in the northeast quadrant.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach Greenfield Avenue. Exterior walls will also be necessary in the southwest and northwest quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits). The residence in the northeast quadrant will be in conflict with the east roundabout and exit ramp, thus will need to be relocated to construct this interchange.

Greenfield Avenue will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, and one shared through/right lane. Both the northbound and southbound exit ramps will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, one right turn lane. The entrance ramps will both be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

Two current drive accesses off Greenfield Avenue will need to be removed due to their close proximity to the interchange and the vertical difference of proposed Greenfield Avenue in the area of the drives. One of these drives accesses the Marathon gas station in the southwest quadrant. This business will maintain access to Greenfield Avenue by way of a second existing drive located approximately 150 feet north of the removed drive. The other drive to be removed accesses the Gas America gas station in the northwest quadrant. This business will maintain access to Greenfield Avenue by way of a second existing drive located approximately 150 feet north of the removed drive.

Town and Country Boulevard

The preferred alternate for this intersection is to construct a “teardrop” roundabout interchange on Town and Country Boulevard consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. Town and Country Boulevard will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on Town and Country Boulevard will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the

mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach Town and Country Boulevard. Exterior walls will also be necessary in each quadrant to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

Town and Country Boulevard will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, and one shared through/right lane. The northbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane and one right turn lane. The southbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane and one shared through/right turn lane. The northbound entrance ramp will both be a one lane entrance. The southbound entrance ramp will be a two lane entrance to SR 37. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

One current drive accesses off Town and Country Boulevard will need to be removed due to the close proximity to the interchange and the vertical difference of proposed Town and Country Boulevard in the area of the drive. This drive is a right-in only access to the BP gas station in the northwest quadrant. This business will maintain access to Town and Country Boulevard by way of an existing drive on Clover Road.

Because of the length necessary to develop entrance and exit ramp junctions, and gain vertical separation between the SR 37 and the Town and Country Boulevard, the south side of the interchange is expected to extend across the existing SR 37 bridge over Stony Creek. This will require widening of this existing bridge to accommodate the width necessary for the tapers and ramp auxiliary lane development.

Pleasant Street

The preferred alternate for this intersection is to construct a “teardrop” roundabout interchange on Pleasant Street consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. Pleasant Street will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on Pleasant Street will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach Pleasant Street. Exterior walls will also be necessary in each quadrant to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

Pleasant Street will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, and one shared through/right lane. Both exit ramps will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane and one right turn lane. Both entrance ramps will be one lane entrances. For a diagram of the proposed lane configuration see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis).

All current drive accesses off Pleasant Street can be perpetuated with the interchange design.

SR 32 / SR 38

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on SR 32 / SR 38 consisting of two closely spaced roundabouts on either side of SR 37, which are tied together through the middle to function as one unit. SR 32 / SR 38 will overpass SR 37. SR 37 will be free-flow through this interchange and traffic traveling through on SR 32 / SR 38 will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to SR 37 maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach SR 32 / SR 38. Exterior walls will also be necessary in the southwest, northwest, and northeast quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

SR 32 / SR 38 will have two lanes in each direction through the east/west portion of the roundabouts. On both approaches there will be one shared left/through lane, one through lane, and one right turn lane. The northbound exit ramp will exit as one lane and develop into three lanes at the roundabout approach, consisting of one left turn lane, one shared left/through lane, and one shared through/right lane. The southbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, and one shared through/right lane. Both entrance ramps will depart from the roundabout as two lanes and merge to one lane before merging into SR 37.

One current drive accesses off SR 32 / SR 38 will need to be removed due to the close proximity to the interchange and the vertical difference of proposed SR 32 / SR 38 in the area of the drive. This drive is the easternmost drive accessing the Valero gas station in the southwest quadrant. This business has another drive off SR 32 / SR 38 approximately 90 feet west or the easternmost drive. This drive can remain, but should be changed to a right-in, right-out access to avoid queuing of westbound SR 32 / SR 38 traffic wishing to turn left into this drive. This business also has a third existing drive off of Cumberland Road. The existing drive off SR 32 / SR 38 accessing the retail plaza in the northwest quadrant can remain, but should be changed to a right-in only drive. This will avoid conflicts between vehicles exiting the west roundabout

and vehicles entering SR 32 / SR 38 from this business. This business has a second existing full access drive off of Cumberland Road.

Allisonville Road and 146th Street

The preferred alternate for this intersection is to construct a "teardrop" roundabout interchange on Allisonville Road consisting of two closely spaced roundabouts on either side of 146th Street, which are tied together through the middle to function as one unit. Allisonville Road will overpass 146th Street. 146th Street will be free-flow through this interchange and traffic traveling through on Allisonville Road will drive through the roundabouts with a yield condition on the roundabout approach.

The layout of the ramps will closely resemble a tight diamond interchange with directional entrance and exit ramps in each quadrant. Beyond the back of the gore area, all four ramps will remain directly adjacent to 146th Street maintaining an approximate 22 foot offset from outside edge of the SR 37 travel lane to the inside edge of the ramp lane(s). This offset allows for the minimum outside mainline shoulder, minimum inside ramp shoulder and the wall in between the mainline and the ramps. This wall is necessary to maintain the elevation difference between the mainline and the ramps as they approach 146th Street. Exterior walls will also be necessary in the southwest, northwest, and northeast quadrants to minimize impacts to businesses in these quadrants (See aerial sheets for estimated wall limits).

Allisonville will have two lanes in each direction through the north/south portion of the roundabouts. On both approaches there will be one shared left/through lane, one shared through/right lane. The westbound exit ramp from 146th Street will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, and one right turn lane. The eastbound exit ramp will exit as one lane and develop into two lanes at the roundabout approach, consisting of one shared left/through lane, and one right turn lane. Both entrance ramps will depart from the roundabout and merge into 146th Street as one lane.

There are many residential parcels with access points along existing 146th Street in the vicinity of the interchange, mainly on the east side of Allisonville Road. 146th Street will widen as it approaches Allisonville because of the development of ramps and auxiliary lanes approaching the roundabouts. Therefore, many of the houses along 146th Street would be damaged or relocated. Also, access may be affected to some residential parcels that aren't otherwise directly impacted. The north end of Willow Drive would need to end in a cul-de-sac and the public road approach would fall in the middle of the eastbound entrance ramp. Access to houses at the north end of Willow Drive would have access from North Lynn Avenue, for which a road approach could be provided to 146th Street. Likewise the south end of Wellingston Court would need to end in a cul-de-sac as that public road approach would fall in the westbound exit ramp. Access to houses at the south end of Wellingston Court would have access from Chelsea Drive, which has an existing road approach on Allisonville Road north of the interchange.

Because of the length necessary to develop entrance and exit ramp junctions, and gain vertical separation between the mainline and the cross-street, the west side of the interchange is

expected to extend well into the existing 146th Street bridge over the White River. This will require widening of this existing bridge to accommodate the width necessary for the tapers and ramp auxiliary lane development.

Cumberland Road and 146th Street

Results from the Traffic Operation Analysis show no improvement is necessary at the intersection of Cumberland Road and 146th Street. Instead, the existing at-grade signalized intersection will remain unchanged. For further details, please see the Traffic Operations Analysis (binder labeled Traffic Operation Analysis)..

XII. PROPOSED BRIDGE FACILITIES

The following paragraphs describe the recommended improvements for each of the Study interchanges.

126th Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at 126th Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

131st Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at 131st Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and

erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

135th Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at 135th Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a two lane roundabout facility with a clear roadway width of 169'-8" and an out to out coping of 173'-0". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

141st Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at 141st Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a two lane roundabout facility with a clear roadway width of 156'-8" and an out to out coping of 160'-0". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

146th Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at 146th Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out

coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

Greenfield Avenue over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at Greenfield Ave is anticipated to be a two span, 198.5 foot long, prestressed reinforced concrete bulb tee beam structure built with a 38 degree skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 232'-8" and an out to out coping of 236'-0". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

SR 37 over Stony Creek

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards.

The existing SR 37 bridge over the Stony Creek north of the Greenfield Avenue intersection will require widening in order to facilitate the Greenfield Avenue over SR 37 interchange modifications. The existing bridge is a four span, 193'-10" long, continuous steel beam bridge with a 30 degree skew and is a twin structure. Each structure currently carries two lanes of traffic and the out to out copings are 40'-0" SB and 42'-6" NB with a 37'-3" space between. The widening will allow for an additional lane of traffic on each of the twin structures to allow ramp access to the new Greenfield Avenue roundabout. The typical widening to the outside shoulder of each bridge deck structure will be 17'-0" SB and 14'-6" NB along with removal of approximately 2'-0" of existing concrete bridge deck and the removal of existing bridge railing. The widening will require the placement of four lines of new beams along each structure along with widening of the bridge approaches. In addition, the existing piers and bents will require widening, along with removal and replacement of the wing walls at each bent.

Town and Country Boulevard over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at Town and Country Rd is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

Pleasant Street over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at Pleasant Street is anticipated to be a two span, 118 foot long, prestressed reinforced concrete I beam structure built with no skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 202'-10" and an out to out coping of 206'-2". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

SR 32 / SR 38 over SR 37 Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over SR 37 is 16'-6".

The proposed bridge over SR 37 at SR 32 is anticipated to be a two span, 124'-10" long, prestressed reinforced concrete I beam structure built with a 20 degree skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 181'-10" and an out to out coping of 185'-4". The bridge will be designed to span the four lane SR 37 divided highway with the interior pier placed in the median of SR 37. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on

piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

Allisonville Road over 146th Street Interchange

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards. The minimum vertical clearance for roadways crossing over 146th Street is 16'-6".

The proposed bridge over 146th Street at Allisonville Road is anticipated to be a two span, 122'-0" long, prestressed reinforced concrete I beam structure built with a 12 degree skew to the roadway. The bridge will be a four lane roundabout facility with a clear roadway width of 217'-6" and an out to out coping of 221'-0". The bridge will be designed to span the four lane 146th Street divided highway with the interior pier placed in the median of 146th Street. It is anticipated that the proposed structure will be constructed with integral end bents on piles and a concrete interior wall pier on piles. The structure will also have reinforced concrete approach slabs to provide a smooth transition from the approach roadway to the bridge and to protect the ends of the bridge from settlement and erosion. The proposed bridge will include common height concrete bridge rail with transitions, approach guardrail and end treatments to meet current minimum standards.

Widening of 146th Street Bridge over the White River

The bridge will be designed to meet or exceed the current "AASHTO LRFD Bridge Design Specifications" as supplemented by INDOT design standards.

The existing 146TH Street bridge over the White River west of the Allisonville Rd. intersection will require widening in order to facilitate the Allisonville Rd. over 146th Street interchange modifications. The existing bridge is a four span, 530'-2" long, continuous composite prestressed bulb-tee beam bridge with 0 degree skew and is a twin structure. Each structure currently carries two lanes of traffic along with a pedestrian path and each structure has an out to out coping of 38'-9" with a 9'-6" space between. The widening will allow for an additional lane of traffic on each of the twin structures and will flare out with a 14 foot gore on the eastbound structure to allow ramp access to the new Allisonville Rd roundabout. The typical widening to the outside shoulder of each bridge deck structure will be 12'-4" along with removal of approximately 12'-0" of existing concrete bridge deck and the removal of existing bridge railing. The widening will require the placement of one line of new beams along the westbound structure and two lines of new beams along the eastbound structure along with widening of the bridge approaches. In addition, the existing piers and bents will require widening, along with removal and replacement of the wing walls at each bent.

XIII. MAINTENANCE OF TRAFFIC

There will be subtle differences in the Maintenance of Traffic (MOT) plan for each interchange as the access needs to and from each cross street is different. However, the basic MOT plan will likely be the same for each interchange. The following is a logical basic MOT plan for the construction of any interchange:

Phase 1 – The southbound SR 37 travel lanes will be widened to the inside with temporary widening. Temporary cross-overs will be constructed in the median to the north and south of the interchange.

Phase 2 – All SR 37 traffic will run on the southbound side with two travel lanes in each direction. The southbound travel lanes will be shifted west to run on the existing outside shoulder. The northbound traffic will be switched over to the southbound side to run on the temporary widening constructed in phase 1.

The northbound half of mainline SR 37 will be constructed. A temporary cut wall will be constructed "top down" between the existing southbound lanes and the proposed northbound lanes through the interchange area where SR 37 will be depressed.

The northbound exit and entrance ramps will be constructed up to the proposed roundabout. A temporary connection will be constructed across the proposed roundabout area connecting the top of the northbound exit ramp and the top of the northbound entrance ramp.

The east end bent for the proposed bridge will also be constructed in this phase.

The east segment of the cross-street will be closed, with no access to SR 37. The east segment of cross-street and roundabout approaches will be constructed.

The west segment of the cross-street will maintain access to SR 37. This could be set up as right-in/right-out access to and from the cross-street with SR 37 traffic remaining free-flow through the intersection. Alternatively, a temporary signal could be utilized to allow the west cross-street protected access to and from both directions of SR 37.

Phase 3 – All SR 37 traffic will run on the proposed northbound lanes and shoulders constructed in phase 2, with two lanes in each direction. The southbound lanes will be switched over to the northbound side to run on the proposed northbound lanes constructed in phase 2. The northbound lanes will run up the proposed northbound exit ramp, across the temporary connection, and back down the proposed northbound entrance ramp all constructed in phase 2.

The southbound half of mainline SR 37 will be constructed, as well as the west segment of the cross-street and the west roundabout. Both sides of the cross-street will have no access to or from SR 37 in this phase. However, temporary connections could be constructed on the east side between the portion of the east cross-street segment constructed in phase 2 and the northbound SR 37 travel lanes. If desired, this could be done to keep access to and from northbound SR 37 and the east side of the cross-street in this phase.

XIV. LAND ACQUISITION

It is anticipated that over 200 parcels would be impacted by the construction of the preferred alternative discussed herein. Total permanent right of way acquisition required for construction of these improvements would be approximately 34 acres.

Because the project would likely utilize federal aid, future land acquisition would need to adhere to the *Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs Act*. This process includes title research, right-of-way engineering, appraisal problem analysis (APA), an appraisal, a review appraisal and negotiations/buying with the property owner.

All existing right-of-way would be verified during the land acquisition process, which may reveal the need for additional parcels. If recorded documents do not exist, it may be necessary to reacquire portions of the apparent existing right-of-way, which could also increase the anticipated number of parcels and costs affiliated with those additional parcels.

XV. PROJECT PRIORITIES

Table 3 below indicates the priority for construction of the proposed improvements. The ranking as shown generally flows south to north but can be revised without affecting the integrity of constructing methodologies.

Table 3 – Construction Priorities

Priority Rank	Binder Number	Intersection
1.	5	SR 37 at 146th Street
2.	10	146th Street at Allisonville Road
3.	1	SR 37 at 126th Street
4.	2	SR 37 at 131st Street
5.	3	SR 37 at 135th Street
6.	4	SR 37 at 141st Street
7.	6	SR 37 at Greenfield Avenue
8.	7	SR 37 at Town and Country Boulevard
9.	8	SR 37 at Pleasant Street
10.	9	SR 37 at SR 32 / SR 38

XVI. PROJECT BUDGET

A detailed Project Development Cost Estimate has been included herein to highlight the breakdown of individual design costs and all construction activities. The construction cost was developed based on current cost information with 10% contingency and inflated for construction in years 2018 thru 2027.

Summary of Project Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 32/SR 38

Priority	PROJECT ITEMS:			PROJECT COST (IN YEAR OF EXPENDITURE)
1	**146th STREET**			
	Engineering Costs	$	2,234,071	
	Construction Costs	$	19,275,850	
	Construction Cost Contingencies	$	1,927,585	
	Construction Inspection Costs	$	2,891,377	
	Utility Relocation Cost	$	-	
	Land Cost	$	1,329,316	
	Subtotal Allisonvile Road Interchange			$27,658,199
2	**ALLISONVILLE ROAD**			
	Engineering Costs	$	2,609,718	
	Construction Costs	$	21,856,942	
	Construction Cost Contingencies	$	2,185,694	
	Construction Inspection Costs	$	3,278,541	
	Utility Relocation Cost	$	-	
	Land Cost	$	4,056,760	
	Subtotal 146th Street Interchange			$33,987,656
3	**126th STREET**			
	Engineering Costs	$	2,431,249	
	Construction Costs	$	21,649,596	
	Construction Cost Contingencies	$	2,164,960	
	Construction Inspection Costs	$	3,247,439	
	Utility Relocation Cost	$	978,750	
	Land Cost	$	1,836,984	
	Subtotal 126th Street Interchange			$32,308,977
4	**131st STREET**			
	Engineering Costs	$	2,607,513	
	Construction Costs	$	20,580,215	
	Construction Cost Contingencies	$	2,058,021	
	Construction Inspection Costs	$	3,087,032	
	Utility Relocation Cost	$	-	
	Land Cost	$	1,004,308	
	Subtotal 131st Street Interchange			$29,337,090
5	**135th STREET**			
	Engineering Costs	$	2,743,032	
	Construction Costs	$	21,019,406	
	Construction Cost Contingencies	$	2,101,941	
	Construction Inspection Costs	$	3,152,910	
	Utility Relocation Cost	$	-	
	Land Cost	$	2,053,784	
	Subtotal 135th Street Interchange			$31,071,073

6	**141st STREET**			
	Engineering Costs	$	2,830,064	
	Construction Costs	$	21,057,025	
	Construction Cost Contingencies	$	2,105,703	
	Construction Inspection Costs	$	3,158,553	
	Utility Relocation Cost	$	-	
	Land Cost	$	3,020,176	
	Subtotal 141st Street Interchange			$32,171,521
7	**GREENFIELD AVENUE**			
	Engineering Costs	$	3,444,240	
	Construction Costs	$	24,886,132	
	Construction Cost Contingencies	$	2,488,613	
	Construction Inspection Costs	$	3,732,919	
	Utility Relocation Cost	$	1,101,750	
	Land Cost	$	3,620,861	
	Subtotal Greenfield Avenue Interchange			$39,274,515
8	**TOWN & COUNTRY BOULEVARD**			
	Engineering Costs	$	3,698,159	
	Construction Costs	$	25,933,795	
	Construction Cost Contingencies	$	2,593,380	
	Construction Inspection Costs	$	3,890,069	
	Utility Relocation Cost	$	-	
	Land Cost	$	4,178,703	
	Subtotal Town & Country Boulvard Interchange			$40,294,105
9	**PLEASANT STREET**			
	Engineering Costs	$	3,810,500	
	Construction Costs	$	25,939,415	
	Construction Cost Contingencies	$	2,593,941	
	Construction Inspection Costs	$	3,890,912	
	Utility Relocation Cost	$	1,168,500	
	Land Cost	$	2,607,587	
	Subtotal Pleasant Street Interchange			$40,010,856
10	**SR 32/ SR 38**			
	Engineering Costs	$	4,194,809	
	Construction Costs	$	27,725,110	
	Construction Cost Contingencies	$	2,772,511	
	Construction Inspection Costs	$	4,158,766	
	Utility Relocation Cost	$	-	
	Land Cost	$	2,524,952	
	Subtotal SR 32 Interchange			$41,376,149

"Engineering Costs" include preliminary engineering, geotechnical, permitting, and right-of-way services fees. It is estimated at 10% of Construction Costs.

"Construction Cost" is inflated at 3.0% per year out to the anticiapted year of actual construction.

"Construction Cost Contingencies" is intended to include all unknown, unquantified items. It is estimated at 10% of Construction Costs.

"Construction Inspection Costs" are estimated at 15% of Construction Costs.

"Utility Relocation Costs" were estimated only at those Interchanges where Reimburseable Utilities are expected.

"Land Cost" was estimated by a professional Appraiser, who is familiar with land values in Hamilton County.

TOTAL PROJECT COST: $347,490,141

Summary of Inflation Factors

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

CALENDAR YEAR	INFLATION * (%)	INFLATION FACTOR
2012	3.0	1.000
2013	3.0	1.061
2014	3.0	1.093
2015	3.0	1.126
2016	3.0	1.159
2017	3.0	1.194
2018	3.0	1.123
2019	3.0	1.267
2020	3.0	1.305
2021	3.0	1.344
2022	3.0	1.384
2023	3.0	1.426
2024	3.0	1.469
2025	3.0	1.513
2026	3.0	1.558
2027	3.0	1.605

* 3.0% Inflation is based on our averaging the last three years of "Construction Cost Index" data from ENR.

Summary of Construction Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville
S.R. 37 from South of 126th Street to North of SR 38/32

INTERCHANGE		BASE YEAR CONSTRUCTION COST (2102)	PROJECTED LETTING YEAR	INFLATION FACTOR	FUTURE CONSTRUCTION COST
146th Street	$	17,164,604	2018	1.123	$19,275,850.33
Allisonville Road	$	17,250,941	2019	1.267	$21,856,942.29
126th Street	$	16,589,728	2020	1.305	$21,649,595.52
131st Street	$	15,312,660	2021	1.344	$20,580,214.85
135th Street	$	15,187,432	2022	1.384	$21,019,406.34
141st Street	$	14,766,497	2023	1.426	$21,057,025.22
Greenfield Avenue	$	16,940,866	2024	1.469	$24,886,132.48
Town & Country	$	17,140,645	2025	1.513	$25,933,795.23
Pleasant Street	$	16,649,175	2026	1.558	$25,939,414.73
SR 32	$	17,274,212	2027	1.605	$27,725,110.37
TOTAL CONSTRUCTION COST:					**$229,923,487**

Summary of Engineering Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville
S.R. 37 from South of 126th Street to North of SR 38/32

INTERCHANGE		CONSTRUCTION COST (BASE YEAR)	PROJECTED DESIGN YEAR	INFLATION FACTOR	FUTURE ENGINEERING * COST
146th Street	$	19,275,850	2016	1.159	$2,234,071.00
Allisonville Road	$	21,856,942	2017	1.194	$2,609,718.00
126th Street	$	21,649,596	2018	1.123	$2,431,249.00
131st Street	$	20,580,215	2019	1.267	$2,607,513.00
135th Street	$	21,019,406	2020	1.305	$2,743,032.00
141st Street	$	21,057,025	2021	1.344	$2,830,064.00
Greenfield Avenue	$	24,886,132	2022	1.384	$3,444,240.00
Town & Country	$	25,933,795	2023	1.426	$3,698,159.00
Pleasant Street	$	25,939,415	2024	1.469	$3,810,500.00
SR 32	$	27,725,110	2025	1.513	$4,194,809.00
TOTAL INSPECTION COSTS:					**$30,603,355**

***** "Engineering Costs" include preliminary engineering, geotechnical, permitting, and right-of-way services fees. It is estimated at 10% of Construction Costs, in a Design Year that is 2 years prior to Letting.

Summary of Utility Relocation Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

INTERCHANGE	BASE YEAR CONSTRUCTION COST (2012)	PROJECTED LETTING YEAR	INFLATION FACTOR	FUTURE CONSTRUCTION COST
146th Street	$ -	2018	1.123	$0.00
Allisonville Road	$ -	2019	1.267	$0.00
126th Street	$ 750,000	2020	1.305	$978,750.00
131st Street	$ -	2021	1.344	$0.00
135th Street	$ -	2022	1.384	$0.00
141st Street	$ -	2023	1.426	$0.00
Greenfield Avenue	$ 750,000	2024	1.469	$1,101,750.00
Town & Country		2025	1.513	$0.00
Pleasant Street	$ 750,000	2026	1.558	$1,168,500.00
SR 32		2027	1.605	$0.00
TOTAL REIMBURSABLE UTILITY COSTS:				**$3,249,000**

Summary of Land Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

INTERCHANGE		BASE YEAR LAND COST (2012)	PROJECTED BUYING YEAR	INFLATION FACTOR	FUTURE LAND * COST
146th Street	$	1,113,330	2017	1.194	$1,329,316.02
Allisonville Road	$	3,612,431	2018	1.123	$4,056,760.01
126th Street	$	1,449,869	2019	1.267	$1,836,984.02
131st Street	$	769,585	2020	1.305	$1,004,308.43
135th Street	$	1,528,113	2021	1.344	$2,053,783.87
141st Street	$	2,182,208	2022	1.384	$3,020,175.87
Greenfield Avenue	$	2,539,173	2022	1.426	$3,620,860.70
Town & Country	$	2,844,590	2024	1.469	$4,178,702.71
Pleasant Street	$	1,723,455	2025	1.513	$2,607,587.42
SR 32	$	1,620,637	2026	1.558	$2,524,952.45
TOTAL LAND COSTS:					**$26,233,431**

* Assume Land Acquisition occurs in the year just prior to Letting.

Summary of Inspection Costs

SR 37 MOBILITY STUDY

Hamilton County, Town of Fishers and City of Noblesville

S.R. 37 from South of 126th Street to North of SR 38/32

INTERCHANGE	CONSTRUCTION COST (YEAR OF EXPEDITURE)	PROJECTED LETTING YEAR	FUTURE INSPECTION * COST
146th Street	$ 19,275,850	2018	$2,891,377.00
Allisonville Road	$ 21,856,942	2019	$3,278,541.00
126th Street	$ 21,649,596	2020	$3,247,439.00
131st Street	$ 20,580,215	2021	$3,087,032.00
135th Street	$ 21,019,406	2022	$3,152,910.00
141st Street	$ 21,057,025	2023	$3,158,553.00
Greenfield Avenue	$ 24,886,132	2024	$3,732,919.00
Town & Country	$ 25,933,795	2025	$3,890,069.00
Pleasant Street	$ 25,939,415	2026	$3,890,912.00
SR 32	$ 27,725,110	2027	$4,158,766.00
TOTAL INSPECTION COSTS:			**$34,488,518**

* 15% of Construction Cost budgeted for Constuction Inspection Services

APPENDIX

- Stakeholder Minutes
- Site Photographs

UNITED Consulting

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November 24, 2010

Bradley Davis, P.E., Highway Director
Hamilton County Highway Department
1700 South 10th Street
Noblesville, Indiana 46060

RE: Project Kick-off Meeting
SR 37 Mobility Study
From I-69 to SR 32
Hamilton County, Indiana

Dear Mr. Davis,

A project kick-off meeting was held on Tuesday, November 23, 2010 at 1:30 p.m. for the above referenced project. The meeting was held at the offices of the Hamilton County Highway Department. The following persons were present for this meeting:

Bradley Davis, Hamilton County Highway Department
Joel Thurman, Hamilton County Highway Department
Jim Neal, Hamilton County Highway Department
Tom Beck, Indianapolis Metropolitan Planning Organization (MPO)
Clint Sparks, American Structurepoint, Inc.
Jeromy Grenard, American Structurepoint, Inc.
Brian Craig, United Consulting (UNITED)
Michael Oliphant, UNITED
Michael Rowe, UNITED
Dave Richter, UNITED
Devin Stettler, UNITED

Project Overview:

United Consulting provided an overview of the project study. United Consulting is under contract with the Indianapolis MPO to study the SR 37 Corridor. The study area begins at I-69 and extends to SR 32 along SR 37. The study will also focus on 146th Street from Cumberland Road to Allisonville Road. The study will evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for this segment of SR 37. This includes the basic concept of reconstructing each of the existing signalized intersections through this segment of SR 37 to interchanges (single point or diamond interchanges, or roundabouts). Additionally, the study will evaluate whether the preferred design solution would eliminate the need for added travel lanes along this segment of SR 37.

Project Status:

United Consulting initiated the traffic data collection during the week of November 15, 2010. The traffic forecast is expected to begin upon completion of the traffic data collection. The completed traffic forecast will allow American Structurepoint, Inc. to begin the Traffic Operations Analysis (TOA).

United Consulting expects the study to be complete in November 2011. The existing contract with the MPO expires December 31, 2011.

Project Discussion:

United Consulting requested feedback from Hamilton County and the Indianapolis MPO. A summary of the discussions during this meeting is presented below:

1. Indianapolis MPO

The Indianapolis MPO is studying the feasibility of a light commuter rail extending from Indianapolis through Hamilton County. The Indianapolis MPO suggested the proposed light commuter rail corridor, which parallels the project corridor, might affect future traffic volumes along SR 37. The light commuter rail corridor study is scheduled for completion in the spring 2011.

Project invoices will be submitted to the Indianapolis MPO. The Indianapolis MPO will coordinate with Hamilton County prior to release of payment. The final invoice must be submitted to the Indianapolis MPO prior to expiration of the contract on December 31, 2011.

2. Hamilton County

Hamilton County is concerned about maintaining access to 126th Street, 131st Street, 141st Street and 146th Street. All of the intersections are in close proximity to each other. Additionally, a new signalized intersection is planned at 135th Street.

Hamilton County inquired if the current design speed will be maintained. Hamilton County would be open to changing the design speed if it significantly improved the mobility of traffic through the corridor.

A Corridor Traffic Study was conducted for a portion of the 146th Street corridor by First Group Engineering, Inc. The study extends from Cumberland Road to Allisionville Road. Hamilton County requested that UNITED review the recommendations of this study as part of this project.

This is our understanding of the proceedings of this meeting. If there are any questions or further clarification is needed on any information presented, please contact our firm.

Sincerely,
UNITED CONSULTING MAP

Devin L. Stettler, MPl, AICP
Manager, Planning Department

C: All Attendees
Stephanie Belch, MPO, Principal Regional Planner
UNITED File: (10-703)

Meeting Minutes

1625 N. Post Road, Indianapolis, IN 46219 (317) 895-2585 www.ucindy.com

June 16, 2011

Bradley Davis, P.E., Highway Director
Hamilton County Highway Department
1700 South 10th Street
Noblesville, Indiana 46060

RE: Project Stakeholders Meeting
SR 37 Mobility Study
From I-69 to SR 32
Hamilton County, Indiana

Dear Mr. Davis,

A project stakeholders meeting was held on Friday, June 10, 2011 at 9:30 a.m. for the above referenced project. The meeting was held at the offices of the Hamilton County Highway Department. The following persons were present for this meeting:

- Bradley Davis, Hamilton County Highway Department (HCHD)
- Joel Thurman, HCHD
- Jim Neal, HCHD
- Stephanie Belch, Indianapolis Metropolitan Planning Organization (MPO)
- Steve Smith, Indiana Department of Transportation (INDOT) – Planning Division
- Tami Otto, Town of Fishers
- Andrew Rodewald, City of Noblesville
- Clint Sparks, American Structurepoint, Inc.
- Jeromy Grenard, American Structurepoint, Inc.
- Brian Craig, United Consulting (UNITED)
- Michael Rowe, UNITED
- Dave Richter, UNITED
- Devin Stettler, UNITED

The objective of the meeting was to provide an update on the development of the corridor study and to reach consensus from the group regarding the concept of C-D/Frontage Roads at interchanges for the purposes of the study. A summary of the discussions is outlined below:

1. Devin Stettler explained that United Consulting is under contract with the Indianapolis MPO to study the SR 37 Corridor. The study area begins at I-69 and extends to SR 32 along SR 37. The study will also focus on 146th Street from Cumberland Road to Allisonville Road. The study will evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for this segment of SR 37. This includes the basic concept of reconstructing each of the existing signalized intersections through this segment of SR 37 to interchanges (signalized or roundabouts). Additionally, the study will evaluate whether the preferred design solution would eliminate the need for added travel lanes along this segment of SR 37.

2. Devin Stettler added that two intersections were added to the original scope of the study for the existing Cherry Street and proposal 135th Street.

3. Devin Stettler explained that the following items have been completed for the project:

    a. Traffic data collection
    b. Traffic forecasting
    c. Capacity analysis (existing condition) is ongoing
    d. Preliminary project alternatives is ongoing

4. Devin Stettler and Michael Rowe introduced and explained to the group the need to analyze the use of C-D / Frontage Roads at the subject intersections/interchanges. The need to analyze C-D / Frontage Roads near the northern and southern project termini is caused by the short distances between adjacent intersections and the weaving associated with turning movements at each intersection. The implementation of C-D / Frontage Roads will not restrict or eliminate turning moments where utilized. After discussion, the group concurred with the recommendation to analyze the use of C-D / Frontage Roads at the subject intersections/interchanges for purposes of this study.

5. Dave Richter asked Clint Sparks to share their project experiences regarding Keystone Avenue and the elimination of the signals. Dave Richter asked if American Structurepoint was aware of any businesses or residents along Keystone Avenue that would be willing to give testimonials (either written or verbal) regarding the development and execution of that project.

6. Clint Sparks thought that during construction some of the businesses were impacted as typical of construction. At the completion of the project's construction, the impacted businesses have had a positive feedback regarding the end product.

7. Steve Smith suggested that the project team analyze an alternative consisting of added travel lanes with traffic signals in the future year.

8. Jim Neal emphasized the importance of minimizing right-of-way impacts across the project corridor and developing a project which is fiscally responsible.

9. Andrew Rodewald would like to meet again at the completion of the proposed traffic capacity analysis to discuss the results.

The above minutes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions, or comments, please contact our office at your convenience.

Sincerely,
UNITED CONSULTING MAK

Devin L. Stettler, MPl, AICP
Manager, Planning Department

enclosures: Meeting Handouts

c: All Attendees
Tom Beck, MPO, Principal Planner
Dwane Myers, INDOT- Greenfield District, Planning & Programming Director
UNITED File: 10-703

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OFFICERS
William E. Hall, PE
Dave Richter, PE, PLS
Steven W. Jones
Christopher R. Pope, PE
B. Keith Bryant, PE
Michael Rowe, PE

PROFESSIONAL STAFF
Jerry D. Ritchie, PE
Andrew T. Wolka, PE
Devin L. Stettler, AICP
Darryl P. Wineinger, PE
Adam C. Post, PE
Michael S. Oliphant, AICP
E. Rachelle Pemberton, PE
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Brian W. Craig, PE
Jon E. Clodfelter, PE
Steven R. Passey, PE
Howard A. Berberick, PE
Kurt C. Courtney, PE
Brian J. Pierson, PE
Christopher L. Hammond, PE
Paul D. Glotzbach, PE
Brian S. Frederick, PE
Jay N. Ridens, PE
Christopher J. Dyer, PE
Matthew R. Lee, PE
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William R. Curtis, PE
Jeromy A. Richardson, PE
John P. Sprague, PE
Heather E. Kilgour, PE
Adam J. Greulich, PLS
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Kelly J. LaValley, PE
Matthew A. Taylor, PE
Josh O. Betz, PLS
Scott G. Minnich, PE
Dann C. Barrett, PE

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December 21, 2011

Bradley Davis, P.E., Highway Director
Hamilton County Highway Department
1700 South 10th Street
Noblesville, Indiana 46060

RE: Project Stakeholders Meeting
S.R. 37 Mobility Study
From I-69 to S.R. 32
Hamilton County, Indiana

Dear Mr. Davis,

A project stakeholders meeting was held on Wednesday, December 14, 2011 at 3:00 p.m. for the above referenced project. The meeting was held at the offices of the Hamilton County Highway Department. The following persons were present for this meeting:

- Bradley Davis, Hamilton County Highway Department (HCHD)
- Joel Thurman, Hamilton County Highway Department
- Tom Beck, Indianapolis Metropolitan Planning Organization (MPO)
- Dwane Myers, Indiana Department of Transportation (INDOT) – Greenfield District
- Scott Fadness, Town of Fishers
- Eric Pethtel, Town of Fishers
- John Beery, City of Noblesville
- Clint Sparks, American Structurepoint, Inc.
- Ting Wei, American Structurepoint, Inc.
- Cash Canfield, American Structurepoint, Inc.
- Jeromy Grenard, American Structurepoint, Inc.
- Brian Craig, United Consulting (UNITED)
- Chris Hammond, UNITED
- Michael Rowe, UNITED
- Dave Richter, UNITED
- Devin Stettler, UNITED

Project Overview:

United Consulting is under contract with the Indianapolis MPO to study the S.R. 37 Corridor. The study area begins at I-69 and extends to S.R. 32 along S.R. 37. The study will also focus on 146th Street from Cumberland Road to Allisonville Road. The study will evaluate whether grade separation of the existing intersections would improve the traffic capacity, efficiency, and safety for this segment of S.R. 37. This includes the basic concept of reconstructing each of the existing signalized intersections through this segment of S.R. 37 to interchanges (signalized or roundabouts). Additionally, the study will evaluate whether the preferred design solution will eliminate the need for added travel lanes along this segment of S.R. 37.

Project Status:

Mr. Stettler explained that the following items have been completed for the project:

a. Traffic Data Collection
b. Traffic Forecasting
c. Capacity Analysis (Existing Conditions)
d. Capacity Analysis (Future Conditions)
e. Preliminary Project Alternatives is ongoing

The objective of the meeting was to provide an update on the development of the corridor study and to reach consensus from the group regarding the preferred design solution to carry forward for additional evaluation. Mr. Stettler, Mr. Craig, and Mr. Grenard gave a PowerPoint presentation. The primary focus of the presentation was to highlight results from the draft Traffic Operations Analysis. A summary of the discussion after the presentation is outlined below:

1. Mr. Davis asked if the project team had started looking at the proposed vertical alignment of S.R. 37. He was wondering if S.R. 37 would go over or under the cross streets. Mr. Canfield shared that Keystone Avenue was depressed and the cross streets elevated in an effort to bring neighborhoods together and avoid creating artificial barriers.

2. Mr. Beery commented that drainage issues might be important along the S.R. 37 corridor; especially given the likely increase in impervious areas. He suggested contacting the Hamilton County Surveyor's office regarding potential detention requirements for the corridor.

3. Mr. Myers asked if the draft Traffic Operations Analysis had been reviewed by INDOT or the MPO. If not, he suggested sharing the draft Traffic Operations Analysis prior to finalizing the study.

4. Realizing the importance of maintenance of traffic, Mr. Myers inquired if it had been reviewed for the two potential build alternatives.

5. After discussion among the local stakeholders, the project team was given direction to continue further investigation of the tear drop build alternative.

The above minutes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions, or comments, please contact our office at your convenience.

Sincerely,
UNITED CONSULTING

Devin L. Stettler, MPI, AICP
Manager, Planning Department

C: All Attendees
UNITED File: 10-703

UNITED Consulting

October 12, 2012

Bradley Davis, P.E., Highway Director
Hamilton County Highway Department
1700 South 10th Street
Noblesville, Indiana 46060

RE: Final Project Stakeholder Meeting
S.R. 37 Mobility Study
From I-69 to S.R. 32
Hamilton County, Indiana

Dear Mr. Davis,

A project stakeholder meeting was held on Wednesday, October 10, 2012 at 9:30 a.m. for the referenced project. The meeting was held at the offices of the Hamilton County Highway Department. The following persons were present for this meeting:

- Chris Hammond, United Consulting (UNITED)
- Dave Richter, UNITED
- Devin Stettler, UNITED
- Bradley Davis, Hamilton County Highway Department (HCHD)
- Joel Thurman, HCHD
- Tom Beck, Indianapolis Metropolitan Planning Organization (MPO)
- Dwane Myers, Indiana Department of Transportation (INDOT) – Greenfield District
- Steve Smith, INDOT – Central Office
- Andrew Rodewald, City of Noblesville
- Jeff Hill, Town of Fishers
- Clint Sparks, American Structurepoint, Inc.
- Cash Canfield, American Structurepoint, Inc.
- Jeromy Grenard, American Structurepoint, Inc.

The objective of the meeting was to conclude the stakeholder participation process for the S.R. 37 Mobility Study. During the meeting the following information was discussed:

1. Chris Hammond reviewed the work completed to date for the project. This discussion included an overview of the decisions made relative to over/under S.R. 37 and intersecting streets and the coordination involved with local stakeholders. He also explained what was being proposed for the final report format.

2. Dwane Myers asked about the plan for pedestrian paths along the project corridor. He indicated that FHWA recently requested INDOT investigate this on their U.S. 31 project.

3. Jeff Hill asked if pedestrian mobility was considered along intersecting streets. Dave Richter indicated that any existing pedestrian pathway would be perpetuated and any plans for future pedestrian traffic would be incorporated in the project.

4. Dave Richter mentioned a positive trait offered by the current project solution is the community connectivity provided which typical intersection layouts do not provide.

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Dann C. Barrett, PE
Jacob T. Blanchard, PE
Scott M. Siple, PE

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5. Dwane Myers suggested an FTP site could be considered to share project deliverables with the stakeholders.

6. Chris Hammond indicated that two full sets of printed Final Reports will be produced. One copy for HCHD, and one to be maintained at United Consulting. All the other stakeholders will be provided with an electronic copy via flash drives.

7. Steve Smith indicated that Roy Nunnally and Paul Schmidt (with INDOT - Central Office) will be interested in reviewing the project's Traffic Operations Analysis and possibly meeting to discuss its results.

8. Steve Smith asked about the role of the NEPA process with this study.

9. Chris Hammond mentioned that an Environmental Screening was completed for the project alternative but not to the level of a NEPA document.

10. Brad Davis asked about the process of placing this project in the MPO's Long Range Transportation Plan (LRTP).

11. Chris Hammond indicated that once the project is finalized, the stakeholders can begin to incorporate the project solution into their planning documents (i.e. Thoroughfare Plans). Dwane Myers indicated this might be difficult if the project solution is not first included in the MPO's LRTP.

12. Tom Beck mentioned the first step will be to identify time frames for possible construction of the project. He suggested that project stakeholders will need to start coordinating project specific revisions to the LRTP as the MPO begins to discuss revisions to the LRTP in the future.

13. Chris Hammond presented a schedule for items yet to be completed showing a final project delivery date before December 21, 2012. He concluded with a discussion of what tasks need to be completed upon finalizing the project.

These minutes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions or comments, please contact me directly at your convenience.

Sincerely,
UNITED CONSULTING

Christopher L. Hammond, P.E.
Transportation Department Manager

C: All Attendees
UNITED File: 10-703

Looking North along SR 37 towards 126th Street

Looking West along 126th Street towards SR 37

Looking East along 126th Street toward SR 37

Looking South along SR 37 toward 126th Street

Looking North along SR 37 toward 131st Street

Looking West along 131st Street toward SR 37

Looking East along 131st Street toward SR 37

Looking South along SR 37 toward 131st Street

Looking North along SR 37 toward proposed 135th Street

Looking West along proposed 135th Street toward SR 37

Looking South along SR 37 toward proposed 135th Street

Looking East along proposed 135th Street toward SR 37

Looking North along SR 37 toward 141st Street

Looking West along 141st Street toward SR 37

Looking East along 141st Street toward SR 37

Looking South along SR 37 toward 141st Street

Looking North along SR 37 toward 146th Street

Looking West along 146th Street toward SR 37

Looking East along 146th Street toward SR 37


Looking South along SR 37 toward 146th Street

Looking North along Allisonville Road toward 146th Street

Looking West along 146th Street toward Allisonville Road

Looking East along 146th Street toward Allisonville Road

Looking South along Allisonville Road toward 146th Street

Looking North along Cumberland Road toward 146th Street

Looking West along 146th Street toward Cumberland Road

Looking East along 146th Street toward Cumberland Road

Looking South along Cumberland Road toward 146th Street

Looking North along SR 37 toward Greenfield Avenue

Looking West along Greenfield Avenue toward SR 37

Looking East along Greenfield Avenue toward SR 37

Looking South along SR 37 toward Greenfield Avenue

Looking North along SR 37 toward Town and Country Boulevard

Looking West along Town and Country Boulevard toward SR 37

Looking East along Town and Country Boulevard toward SR 37

Looking South along SR 37 toward Town and Country Boulevard

Looking North along SR 37 toward Pleasant Street

Looking West along Pleasant Street toward SR 37

Looking East along Pleasant Street toward SR 37

Looking South along SR 37 toward Pleasant Street

Looking Northeast along SR 37 toward Cherry Street

Looking Southwest along SR 37 toward Cherry Street

Looking East along Cherry Street toward SR 37

Looking North along SR 37 toward SR 32 / SR 38 / Conner Street

Looking West along SR 32 / SR 38 / Conner Street toward SR 37

Looking South along SR 37 toward SR 32 / SR 38 / Conner Street

Looking East along SR 32 / SR 38 / Conner Street toward SR 37


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