Engineer's Report
Des. No. 0014500
Added Travel Lanes
SR 53, 109th Avenue to 93rd Avenue
Lake County
Author: Kenny Anderson, P.E.
Thru: Hassan N. Nasralla, P.E.
June 23rd, 2006

PURPOSE OF REPORT

The purpose of this Engineer's Report is to document the engineering assessment phase, including an outline of the proposal for improvements along SR 53. The report provides the information and coordination associated with the development of this project's recommended improvements. This report will serve as a guide for preparing ongoing environmental studies and subsequent survey and design.

PROJECT LOCATION

This project is located on SR 53 (Broadway Avenue) from 109th Avenue (RP 01+34) north to 93rd Avenue (RP 03+38). SR 53 in this area serves as the boundary line between the City of Crown Point and the City of Merrillville. The entire length of the project is located in Lake County in the INDOT LaPorte District. For location map, refer to Figure 1 aside as well as Appendices A-1 and A-2.

PROJECT NEED AND PURPOSE

The primary need for this project is the current substandard traffic-carrying capacity along this section of SR 53. Additional deficiencies include substandard level-of-service (LOS) at one or more of the intersections as well as drainage throughout most of the project. The purpose of the project is to improve the overall condition, capacity, and safety of SR 53 by adding travel lanes along SR 53, providing auxiliary lanes at the intersections, improve signage, modernizing signalization, and providing an enclosed stormwater system.

EXISTING CONDITIONS

Roadway plans [1937 and 1962] were available for this project. Refer to Appendix A-3 and A-4 for aerial and ground level photographs throughout the project limits.

Figure 1: Location Map

- **Function**

This section of SR 53 is classified as an Urban Minor Arterial. Although SR 53 is not on the National Highway System, it is listed on the National Truck Network and the Indiana 3R Network. In the INDOT Long Range Plan 2000-2025

Within the project limit, SR 53 intersects 109th street, East Summit Street, 101st Street and 93rd Street. The intersecting roadways are classified as Urban Minor Arterials except for the east leg of 109th Street and the west leg of 101st Street. The first is classified as a local road and the second is classified as Urban Collector. All intersecting roadways are neither on the National Highway System, nor are on the National Truck Network.

- **Roadway Cross Section**

The existing State Road 53 in this project area is a two-lane highway with gravel shoulders built in 1937. The highway typical cross-section through the project limits originally consisted of two 12' travel lanes, bordered by 4' gravel shoulders. Subsequent improvements included paved shoulders; left and right turn lanes at selected locations and some signalization.

The existing right-of-way along SR 53 is approximately 100' in total width throughout the project area. The right-of-way is generally centered along the existing centerline.

The roadway is generally on a tangent horizontal alignment through the project limits. The vertical alignment along SR 53 is generally classified as level through the project limits.

- **Existing Pavement History**

This segment of SR 53 was built in 1937 with concrete. It was widened to 24' and resurfaced with hot asphalt emulsion in 1963 and 1975. This segment of SR 53 was widened to 30' and resurfaced in 1988. According to the INDOT Pavement Surface Report (2004), this section of SR 53 has a PCR value is 93, Rut ranging from 0.12" to 0.14", IRI ranging from 123 to 125 and PQI range from 29 to 71.

- **Intersecting Roads**

There are five major intersections along SR 53 within the project limits. The intersecting roadways from south to north are 109th Avenue/East North Street (RP 01+34), East Summit Street (RP 01+85), 101st Avenue (RP 02+37), West 97th Avenue/West 96th Place (RP 02+93), and 93rd Avenue (@RP 03+38). Refer to Figure 2, 3, 4 and 5 aside as well as Appendix A-4 for ground level photographs.

The West 97th Avenue/West 96th Place intersection with SR 53 is a stop-controlled "T" intersection. All other intersections are signalized, with East Summit Street being the only other "T" intersection. Both 3-leg intersections have a passing blister along SR 53. The 93rd Avenue intersection features left turn lanes on all four legs. State Road 53 has right turn lanes at 101st Street and at 109th Street in both directions and a left turn lane for westbound 109th Street. Additional ground level photographs of the intersections appear in Appendix A-4.

In the summer of 2004 a new road cut for 98th Boulevard was constructed approximately 1800' north of 101st Avenue along the east side of SR 53. Ninety-eighth Boulevard serves as an access to the Purdue Technology Center developments. The Purdue Technology Center is a 400-acre site between 101st Avenue and 93rd Avenue with several planned developments along SR 53.

SR 53 intersects an old Erie Railroad road bed (RP 01+41) north of 109th Avenue. It is currently abandoned and, commencing northwest of this crossing, facilitates a bike path from Crown Point to Highland, via Griffith.

Figure 2: Looking north on SR 53 at 109th Street.

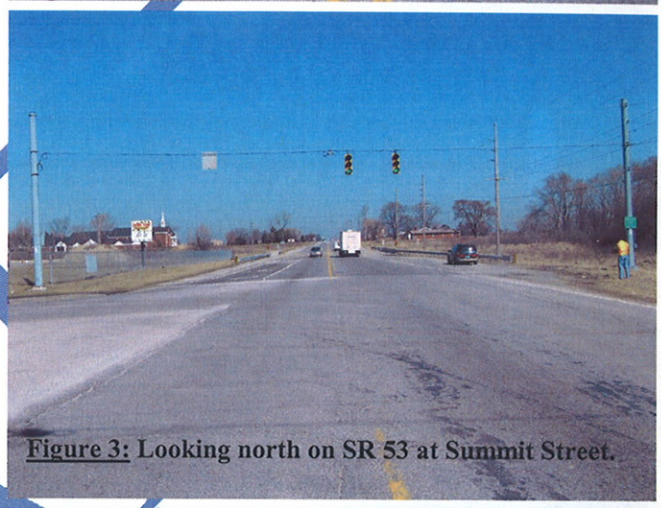

Figure 3: Looking north on SR 53 at Summit Street.

Figure 4: Looking north on SR 53 at 101st Street.

Figure 5: Looking north on SR 53 at 93rd Street.

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- **Drainage**

Drainage through the corridor is primarily roadside ditches. Several enclosed drainage storm pipes were noted in the preliminary field check. State Road 53 crosses the Deep River (Main Beaver Dam Ditch) via a 3 span concrete bridge structure at a 35° skew angle. The structure is located at RP 01+93, 425' north of the intersection of SR 53 with East Summit Street. This structure was completed in 1997 under Des. No. 8714905 and Contract No. B-22611. The bridge was last inspected in 2003 has an estimated remaining life of 18-40 years. The overall superstructure condition rating was 7 and the overall substructure condition rating was 8. The sufficiency rating for the bridge was 95.8. The structure has a length of 76' with a clear roadway width of 69'-4" consisting of two 12' travel lanes with the remainder of the deck between the guardrails and the travel lanes is used as shoulders. Guardrail ties into the concrete barrier walls at each bridge approach. This structure is hydraulically adequate for the 100-year storm. Refer to Appendix B-4 for excerpts of the inspection report for this structure. Refer to Figure 6 and 7 aside for a top view as well as a side view of the bridge.

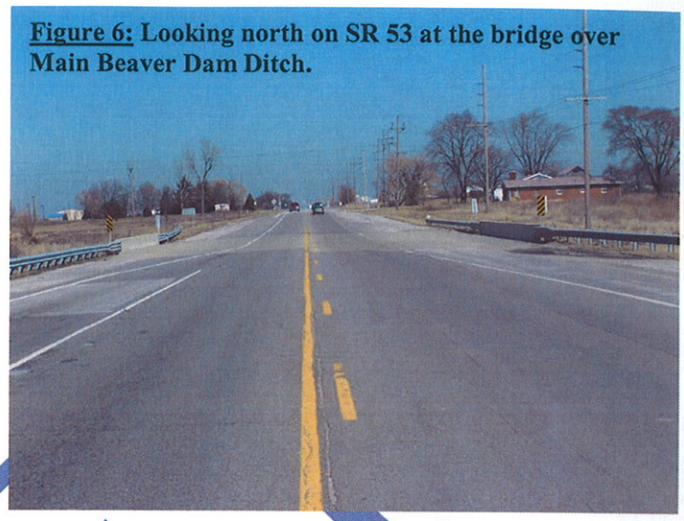

Figure 6: Looking north on SR 53 at the bridge over Main Beaver Dam Ditch.

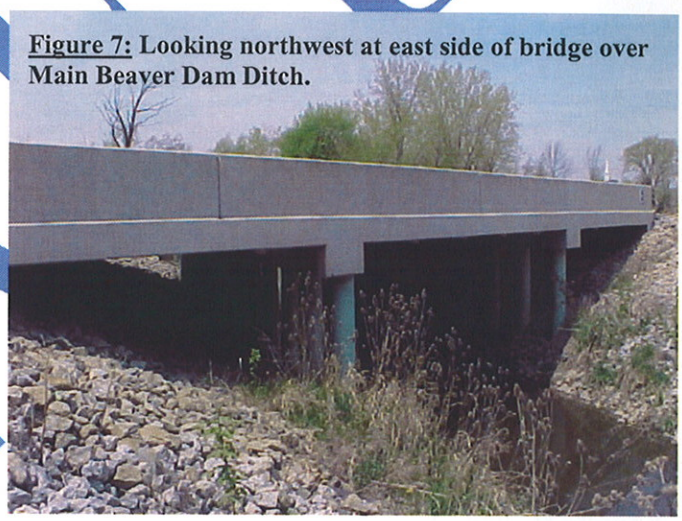

Figure 7: Looking northwest at east side of bridge over Main Beaver Dam Ditch.

Twin 24" CMP pipes located at RP 02+37, 0.44 miles north of the bridge structure, allow for drainage to pass under SR53 from the east side of the roadway. According to the preliminary hydraulic review, these structures are not hydraulically adequate to carry the 100-year storm. In addition, the ends of these pipes are obstacles in the clear zone. Refer to Appendix B-2 for additional information pertaining to the existing conditions at each structure crossing.

- **Existing Project Area Description and Land Use**

Aerial electric and telephone utilities are located throughout the project primarily along the east side of SR 53 with crossovers to the west sides for residences, a church and commercial (office buildings) properties. A sanitary sewer lift station is located just east of the right-of-way at RP 02+74, approximately 1000' south of West 97th Avenue.

Signage through the project limits consists of small guide, regulatory, warning, and street name signs. Turn arrow signs and street name signs are located on span wires at the intersections along SR 53. Street lighting is not present, except along 93rd Avenue.

The speed limit in the project area is un-posted and therefore is 55 mph. It is anticipated to be lowered to 45 mph as development occurs. During field inspection it was noted the four-lane section of SR 53, north of the project limits, has a posted speed limit of 45 mph.

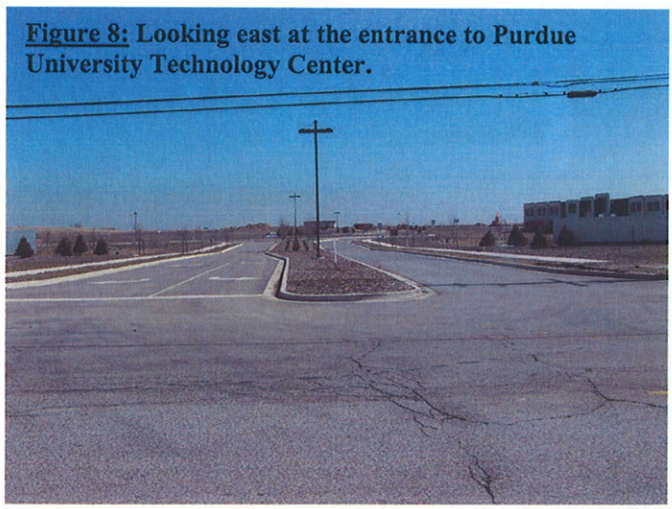

Figure 8: Looking east at the entrance to Purdue University Technology Center.

Land use through the project area is lightly developed and has various uses. Purdue University recently opened a new "Academic Learning Center", see Figure 8 aside for a ground level photograph of the entrance. Much of the land is agricultural interspersed with light industrial, institutional, and commercial uses however according to local officials it is anticipated that rapid growth will occur in the near future.

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CRASH DATA AND ANALYSIS

An analysis of available crash data from 2003-2003 revealed that 57 accidents have occurred within the project limits. Of these accidents 22 involved personal injury and one fatal crash occurred.

Table 1: SR 53 Accident Analysis (2003-2005)

LOCATION	COLLISION TYPE								LIGHT CONDITION			ACCIDENT SEVERITY			TOTAL
	REAR - END	HEAD-ON	RIGHT-TURN	LEFT TURN	SAME SIDE SIDESWAPE	OPPOSITE SIDESWIPE	RIGHT ANGLE	OTHERS	DUSK	DAYLIGHT	DARK	PERSONAL INJURY	PROPERTY DAMAGE	FATALITY	
93rd Avenue			1	3	4	1	11		1	17	2	6	14		20
96th Avenue				1			0			1			1		1
101st Street			1	1			5	2		6	3	3	6		9
109th Avenue	5	1		7	1	2	9	2		20	7	13	13	1	27
TOTAL	5	1	2	12	5	3	25	4	1	44	12	22	34	1	57

The relatively high proportions of right-angle and left turn accidents may be indicative of the need for advance warning and high-visibility controls.

TRAFFIC DATA ANALYSIS

Edwards & Kelcey compiled traffic volumes in August 2003 for this section of SR 53. Refer to Table 2 below for a summary of traffic volumes along the project area (see Appendix B1 for additional traffic count information):

- **State Road 53 Segment**

Table 2: Traffic Data Along SR 53

SR53 ROADWAY SEGMENT	2003 AADT	2007 AADT	2027 AADT
From 109th Avenue to 101st Avenue	19,140	19,910	23,740
From 101st Avenue to 93rd Avenue	17,440	18,140	21,630
* Commercial Vehicles: 10% AADT; 8% DHV, DHV: 7% AADT			

Using 2000 HCM methodology, SR 53, as a two-lane highway, is currently operating at a level of service (LOS) of E. As a two-lane highway in 2027, the highway will continue to operate at a LOS of E. Applying 2000 HCM methodology to 2027 traffic volumes, SR 53, as a four-lane highway with recommended improvements, will operate at a LOS of B from 109th Avenue to 101st Avenue. From 101st to 93rd, the roadway will operate at a LOS of A; refer to Table 3 on page 5 for details.

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Table 3: Traffic Data and Level of Service along SR 53

TRAFFIC DATA	109th TH AVENUE TO 101st AVENUE		101st AVENUE TO 93RD AVENUE	
	2-LANE	4-LANE	2-LANE	4-LANE
2003 AADT	19140	19140	17440	17440
LOS	D	N/A	D	N/A
2027 AADT	23740	23740	21630	21630
LOS	E	B	E	A

- **Intersections**

The intersections were analyzed to determine that the level of service did not fail for the existing and proposed SR 53 configuration. Table 4 below shows Traffic data along intersecting roadways.

Table 4: Traffic Data at SR 53 along Intersecting Roadways

INTERSECTION WITH:	2003 AADT	2007 AADT	2027 AADT	DHV	COMMERCIAL VEHICLES	
				% AADT	% AADT	% DHV
109th Avenue	8,090	8,410	10,030	9	9	8
101st Avenue	6,740	7,010	8,360	9	4	4
93rd Avenue	11,910	12,390	14,770	10	8	8

Utilizing (HCS), the signalized intersections at SR 53 and 109th Avenue, SR 53 and 101st Avenue, and SR 53 and 93rd Avenue were analyzed for the current traffic as well as the forecasted traffic volumes in the design year 2027. Level of service is improved for the proposed configuration. Refer to Table 5 below for details.

Table 5: Intersection Level of Service (Signalized) for the Year 2003 and 2027

SR 53 INTERSECTION WITH	PEAK HOUR	LEVEL OF SERVICE AND DELAY FOR INTERSECTIONS					
		EXISTING CONFIGURATION (2003 TRAFFIC)		EXISTING CONFIGURATION (2027 TRAFFIC)		PROPOSED CONFIGURATION (2027 TRAFFIC)	
		LOS	DELAY (SEC)	LOS	DELAY (SEC)	LOS	DELAY (SEC)
109th Avenue	AM	B	12	B	14	B	12
	PM	B	14	C	21	B	17
101st Avenue	AM	B	12	B	16	A	9
	PM	B	20	E	72	B	13
93rd Avenue*	AM	B	12	B	15	B	15
	PM	B	13	B	16	B	16

As it can be noticed from Table 5 above, the intersection LOS for the three signalized intersections within the project limit does not significantly improve with the proposed configuration since a large percentage of the volume is diverted from the SR 53 traffic pattern at these intersections and there are sufficient turning lanes capable of handling the forecasted volumes, with the exception of the 101st Avenue pm LOS. However, as indicated in Table 3 above, the forecasted traffic and existing road configuration result in a LOS of E along SR 53. As a four-lane facility, SR 53 will operate at a LOS of B from 109th Avenue to 101st Avenue and a LOS of A from 101st to 93rd.

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PROJECT RECOMMENDATIONS

Several possible treatments for SR53 were considered in the preparation of this report.

Alternate 1: Do Nothing

The first alternate is to leave SR53 untreated and allow the roadway geometry to remain in its current configuration. Due to the level of congestion and lack of safety indicated by the aforementioned accident rates, this alternate was quickly discarded.

Alternate 2: Three Lane Configuration

The second alternate is that State Road 53 could be reconfigured with two 12' travel lanes and a center two-way left turn lane (TWLTL). While this option addresses access to the ongoing development in the area, it does not provide additional capacity and could lead to additional accidents at uncontrolled turning points as the traffic volume increases. This alternate was also discarded.

Alternate 3: Four Lane Configuration

A third alternate for consideration is a four-lane section with dedicated left turn lanes at controlled intersections. While this treatment would relieve traffic congestion along SR53, it does not adequately address the issue of safety. It is anticipated that a four-lane section would lead to increased head-on and sideswipe collisions and additional rear-end collisions for mid-block left turns. To reduce the occurrence of sideswipes and head-on accidents, a median guardrail could be installed over the length of the project; however, this is a very costly measure.

Alternate 4: Four Lane With TWLTL Configuration

Another option considered is a four-lane section with TWLTL. This treatment would provide adequate capacity and opportunity for left turn movements. However, the corridor is expected to develop similarly to the section from 93rd Avenue to US30 with limited left turns, so the TWLTL would be unnecessary.

Alternate 5: Four Lane With Raise Median and Left Turn Lane Configuration (Recommended)

The project shall be designed in accordance to the design criteria as outlined in Chapter 53 [4R New/Reconstruction Projects] of the Indiana Design Manual. Consideration was given to utilizing 3R standards, considering the roadway's inclusion in Indiana's 3R network. However, 3R standards were not deemed appropriate, given the magnitude of the reconstruction. The following criteria shall be used for the design of the subject project:

Functional Classification:	Urban Minor Arterial
Design Classification:	Urban Arterial (Intermediate)
Project Length:	2.1 miles
Design Speed:	45 mph
Terrain:	Level
Cross Section:	Four lane through section with left turn lanes as needed
SR 53 Existing R/W:	100'
SR 53 Proposed R/W:	120'
Permanent Right-of-Way	5 acres
Relocations:	None
Access Control:	None
Traffic Maintenance:	Traffic maintained by Phase Construction
FHWA Oversight:	Exempt

The project along SR 53 shall begin at the intersection with 109th Avenue and end at the intersection with 93rd Avenue, comprising a total project length of approximately 2.1 miles. Refer to Appendix A-3 for aerial photos through the project limits. Although the current speed limit is 55 mph, it is recommended that the speed limit be lowered to 45mph due to the more suburban nature of future development.

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- **Typical Cross Section**

The highway shall be widened from a two-lane highway to a four-lane highway, with two 12' travel lanes in each direction and a 16' raised median with dedicated 12' left turn lanes at the intersections separated from oncoming traffic with 4' concrete curb to improve safety. Combined curb and gutter and curb offset of 2' shall border the roadway and a multi-use path placed as directed by INDOT in coordination with Northwestern Indiana Regional Planning Commission (NIRPC) and the Crown Point Parks Department Director. This alternate adequately addresses the purpose and need, as well as maintaining visual and geometric consistency with the section of SR53 immediately north of the project.

Both shoulder and curb and gutter treatments were also considered for the chosen alternate. With the anticipated future development, an enclosed stormwater system is preferred, favoring the curb and gutter section. Again, this is consistent with the roadway section north of 93rd Street. Furthermore, a shoulder section with open channel drainage would require substantial right-of-way acquisition, while the curb and gutter treatment could be built predominantly within a 120' right-of-way—only a slight acquisition over that existing. The additional right-of-way costs would be particularly significant due to recent development in the area, as well as previously existing homes and businesses in close proximity to SR53. This alternate would also encourage planners to consider frontage roads and other local access similar to the section of SR 53 from 93rd Avenue to US30, which would provide additional safety by further reducing unprotected left-turn movements.

Left turn lanes are warranted on SR 53 at 109th Avenue, 101st Avenue, and 93rd Avenue. Below are suggested improvements for these turn lanes. Refer to Appendix A-3 for aerial photographs of these intersections.

1. **SR 53 / 109th Avenue**

SR 53 will begin widening south of 109th Avenue to develop a northbound 150' left-turn lane (deceleration and storage). The median along SR 53 shall be transitioned to accommodate an opposing southbound 475' left-turn lane (deceleration and storage). In addition, 109th Avenue shall be widened to accommodate a 175' left-turn lane (deceleration and storage) from 109th Avenue heading northbound onto SR 53.

2. **SR 53/ East Summit Street and SR 53/West 97th Avenue**

For consistency throughout the project, at the T-intersections of SR 53 at East Summit Street and SR 53 at West 97th Avenue, the median shall be transitioned to develop a 425' left turn lane for northbound traffic.

3. **SR 53 / 101st Avenue**

The median along SR 53 shall be transitioned to develop opposing 500' left-turn lanes (deceleration and storage) for both northbound and southbound traffic movements. 101st Avenue shall be widened to accommodate a 260' left-turn lane (deceleration and storage) from 101st Avenue heading northbound onto SR 53. 101st Avenue shall be widened to accommodate a 125' left-turn lane (deceleration and storage) from 101st Avenue heading southbound onto SR 53.

4. **SR 53 / 93rd Avenue**

The median along SR 53 shall be transitioned to develop a northbound 650' left-turn lane (deceleration and storage). The southbound direction along SR53 does not warrant a left-turn lane. A left turn lane is present at 93rd Avenue and shall remain as it currently exists due to the recent reconstruction/widening of this section of roadway.

- **Pavement Recommendation**

Full depth reconstruction of the existing pavement is being proposed. For estimating purposes, the preliminary pavement design is a total of 12" to 16" thick. Final pavement design shall be determined during the design stage of the project in conference with the INDOT Pavement Design Engineer. Refer to Appendix B-3 for the preliminary pavement design.

- **Vertical and Horizontal Alignment Improvements**

The horizontal alignment along SR 53 shall essentially remain as it currently exists, but the designer, upon review of survey data shall evaluate and correct any minor alignment inconsistencies not meeting 4R design criteria. The proposed alignment shall tie into the existing alignment south of 109th Avenue and south of 93rd Avenue.

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The vertical alignment shall remain as it currently exists, but the designer, upon review of survey data shall be evaluated and correct any minor alignment inconsistencies not meet the 4R design criteria.

- **Hydraulic Recommendations**

Drainage through the project limits shall be enclosed with the construction of a new storm sewer system. The ditches at the southern terminus of the project must remain and the designer should make an appropriate treatment to the ditches, considering impacts of releasing into them the stormwater collected from the roadway.

The twin 24-inch CMP structures shall be replaced with the equivalent of a 7' (span) by 4' (rise) concrete box culvert with wing-walls per the recommendations of the INDOT Hydraulic Section (See Appendix B-2).

All of the small CMP structures along SR 53 shall be upgraded to a minimum of 36-inch. Refer to Appendix B-2 for details on these replacements. The designer shall further coordinate the design of the small structures with the INDOT Hydraulic Unit.

The existing 78' CRCS 3-span bridge over Main Beaver Dam Ditch shall remain in place. The typical cross section of SR 53 at the bridge will be adjusted so that the existing structure may accommodate the roadway. The raised median shall be narrowed to 12' and a lane shift taper of at least 45' is required on each side of the structure.

- **Survey Limits**

Survey, generally at a width of 160' (80' half width from the centerline of SR 53), will be required along the entire length of SR 53, 200' north and 1,000' south of the proposed project limits. All intersecting roadways shall be surveyed 500' in each direction from SR 53. Cross sections will be required along all drives and drainage structures within the limits of the project. Major hydraulic crossings shall be surveyed an additional 500' in either direction beyond the existing SR 53 right-of-way. It is anticipated that approximately 3.1 miles of route survey will be required as part of this project.

- **Right-of-Way Summary**

The existing right-of-way will accommodate most of the proposed cross-section along SR 53. With bike paths both developed and planned in this area, right-of-way acquisition should be considered for this project. An additional 10' right-of-way on each side of the roadway should adequately provide for a 10' multi-use path and 5' buffer on each side of SR 53. Therefore, 120' of total right-of-way is recommended for the current or future implementation of the facility. In addition, the drainage system may require detention north of 101st Avenue and west of SR 53. An additional two acres of right-of-way should be considered for this purpose. In order to properly provide for new curb and traffic signal modernization, corner cuts will also be required at the intersections along SR 53. Based on roadway plans dated 1937, approximately five acres of permanent right-of-way will be required due to the widening and corner cuts. Refer to Appendix A-3 for additional detail on the location of the proposed right-of-way.

The proposed right-of-way dimensions and areas presented in this Engineer's Report are approximate, developed using limited information available at this stage. Later phases of project development will refine and establish precise right-of-way requirements, which are likely to differ from the provisional information presented here. Assessment of social, economic and environmental impacts should consider potential impacts a reasonable extent beyond conceptual right-of-way limits established in the report.

- **Maintenance of Traffic**

Traffic shall be maintained on the existing corridor during the construction phase. The new added travel lanes along SR 53 may be constructed with minimal disruption of the roadway, though temporary pavement will be required. Once completed, the existing roadway can be reconstructed under traffic. The District concurs to this maintenance of traffic plan, but should be consulted throughout the design process for acceptance of final details and coordination with other construction projects in the area.

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- **Area Description and Land Use**

The City of Crown Point and the Town of Merrillville are currently developing thoroughfare plans, including zoning and access management. Planning along this section of SR 53 includes moving local traffic away from SR 53 and to city "interior roads". These interior roads would allow for local traffic to move from the developments along SR 53 without traveling along SR 53 itself. Thoroughfare planning also shows a new road cut for the extension of 97th Avenue across SR 53 to a future retail development. The dates for construction of this road are based on the retail development progress. Sidewalks in the area are also under consideration.

Most utilities shall require relocation as part of this project. The designer shall coordinate early in the project development with the utility companies and the INDOT Utility Unit regarding the extent of these relocations.

Existing regulatory and warning signs shall be replaced as part of the subject project. The design engineer shall coordinate with the INDOT Signage Unit during the design phase of this project.

Street lighting should be consistent with that along SR 53 north of 93rd Avenue for consistency. The design engineer shall inspect and replace any substandard aerial lighting poles at 93rd Avenue.

ESTIMATED COSTS (2006)

Allocated Amount

$8,224,000

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OTHER PROJECTS IN THE AREA

The subject project is scheduled for a ready for contracts (RFC) date of January 15, 2010. A review of the current INDOT Directory of Proposed Highway Projects (May 2006) indicates that the following other projects are in the vicinity of the subject project:

- New Road Construction
  Summit Street from Main Street (SR 55) to Broadway in Crown Point
  Des. No. 9385360
  RFC December 15, 2005

- Major Pavement Project (Non-NHS)
  93rd Ave. to US 30 (Crown Point / Merrillville Corp. Line)
  Des. No. 0500462
  RFC January 1, 2017

It is not anticipated that these projects will impact the design of the subject project. However, the designer shall coordinate the construction and maintenance of traffic activities of the subject project with the above referenced projects and local projects in the vicinity.

ENVIRONMENTAL CONSIDERATIONS

Based on cursory inspection, it is not anticipated that this project will generate significant social, economical, or environmental impacts. The INDOT Environmental Services Section will further evaluate impacts and prepare the appropriate environmental document.

The proposed right-of-way dimensions, areas and number of parcels presented in this Engineer's Report are estimates at this stage in development of the project. Assessment of social, economic, and environmental impacts should account for the unrefined nature of these right-of-way limits by assessing potential impacts a reasonable extent beyond the proposed preliminary limits

COORDINATION

An engineering assessment meeting was conducted on July 17, 2002 between the consultant, the INDOT Design Division, and the La Porte District. Representatives from the City of Crown Point, the Town of Merrillville, Northwest Indiana Regional Plan Commission, the INDOT Environmental Assessment Division, and the INDOT Materials and Tests (Pavement Design) Division were invited to the meeting, but were unable to attend. Refer to Appendix C-1 for details of this meeting.

Coordination of this project has been undertaken with the following entities and associated individuals:

Engineering Assessment Section, Division of Environment, Planning, & Engineering (Brad Steckler)
Design Division
Materials and Tests Division (Kumar Dave)
Janssen & Spaans Engineering, rep. INDOT Design (Hasmukh Patel)
La Porte District (Don Abraham, Mike Yacullo)
Environmental Assessment (Jim Juricic)
City of Crown Point (Jeff Ban)
Town of Merrillville (Tris Miles)
Northwest Indiana Regional Planning Commission (James Ranfranz, Mitch Barloga)
Hoosier Rails-to-Trails Council (Kevin Heber)

CHANGES TO PROPOSAL

The Engineering Assessment Section shall be consulted if the proposal is to be changed. The person initiating the change should send a letter to the Engineering Assessment Section Manager for concurrence. Any request originating from the designer should be routed through the attending Design Development Section Manager. The letter should include justification for the change and the estimated cost difference.

LIST OF PROJECT CD RECEPIENTS

Matt Thomas
Ben Lawrence
Athar Khan
Don Abraham
Brad Steckler (File copy)
File: 970372-70173

Design Division - Utilities
Environmental Assessment Section
Materials & Test Division
LaPorte District Development
Engineering Assessment Section
Paul I. Cripe

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APPENDICES

Appendix A

A-1.1	Location map
A-2.1	Topographic map
A-3.1 to A-3.8	Aerial Photography
A-4.1 to A-4.5	Ground Level Photographs

Appendix B

B-1.1 to B1.9	Traffic Data
B-2.1	Hydraulic Unit Recommendation
B-3.1	Preliminary Pavement Design
B-4.1 to B-4.7	Excerpts from the Bridge Inspection Report

Appendix C

C-1.1 to C-1.2	Minutes of the Scoping Field Check Meeting

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SCOPE MEETING MINUTES

Added Travel Lanes
SR 53 – 93rd Ave to 109th Ave.
Des. No.: 0014500

A scope meeting was held **April 29, 2003** at Crown Point City Hall for the above referenced project. The following individuals were in attendance:

Don Abraham	INDOT LaPorte District (Development)
Mike Yacullo	INDOT LaPorte District (Traffic)
Hasmukh Patel	Janssen & Spanns Engineering
Tom Schellenberger	Paul I. Cripe, Inc. (Cripe)
Matthew Crane	Paul I. Cripe, Inc.

Those individuals invited, but unable to attend the meeting include:

Jeff Ban	City of Crown Point (Engineering)
Tris Miles	Town of Merrillville (Engineering)
James Ranfranz	Northwest Indiana Regional Plan Commission
Jim Juricic	INDOT Environmental Assessment
Kumar Dave	INDOT Materials and Tests (Pavement Design)

A summary of the issues discussed are as follows:

The conceptual scope of the project is to add additional travel lanes to the existing two lane SR53 (Broadway St.) from 109th to 93rd Ave.

The project is a continuation of the current multilane section north of 93rd Ave. Future projects will extend the multilane section further south to US 231.

It is anticipated the project limits will continue through the 109th Ave. intersection, but stop short of the 93rd Ave. intersection as most of this intersection was expanded when the project to the to the north was built.

The conceptual drainage scheme is to enclose drainage utilizing a new storm sewer built as part of this project. Several enclosed drainage pipes were noted during the field inspection.

The LaPorte District Traffic Section will prepare a package for Cripe to use which will include existing traffic counts and turning movements.

The bridge structure over Beaver Dam Creek appears to have been built with enough width to accommodate the widened section. Cripe will verify this during the assessment and make recommendation as to any work to be completed at this location.

ISO-9001 QUALITY ASSURANCE

The addition of a new interchange along I-65 is being studied. Two potential locations are either at 109th or 101st Ave. Cripe will consider the effects of the interchange on the design of the intersections with SR 53 at both locations.

Traffic shall be maintained during construction along the existing corridor without the use of detour routes.

Several residential and commercial developments were noted to be planned for frontage along SR 53 (as noted by the 'Land for Sale' signs). Cripe will work with the City of Crown Point and the Town of Merrillville to assess thoroughfare planning and future zoning for the area. Access management (drive locations, left turn lanes, etc.) shall be investigated as part of the engineering assessment.

This project is currently scheduled for construction in 2007 or 2008.

Meeting minutes prepared by:

Matthew J. Crane
PAUL I. CRIPE, INC.
May 6, 2003

CC: Attendees
Jim Juricic, INDOT Environmental Assessment
Kumar Dave, INDOT Materials and Tests
Jeff Ban, City of Crown Point
Tris Miles, Town of Merrillville
James Ranfranz, Northwest Indiana Regional Planning Committee
File