


Local Agency Village of Northfield	 Illinois Department of Transportation Preliminary Engineering Services Agreement For Federal Participation	Consultant Patrick Engineering Inc.
County Cook		Address 4970 Varsity Drive
Section		City Lisle
Project No.		State IL
Job No.		Zip Code 60532
Contact Name/Phone/E-mail Address Stacy Sigman 847-441-3852 ssigman@northfieldil.org		Contact Name/Phone/E-mail Address Jarrod Cebulski 630-795-7468 icebulski@patrickco.com

THIS AGREEMENT is made and entered into this _____ day of May, 2016 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

Project Description

Name Happ Road Route _____ Length .70 mi. Structure No. _____
Termini Winnetka Road to Willow Road
Description Rehabilitation/reconstruction, intersection and drainage improvements

Agreement Provisions

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
3. To complete the services herein described within 365 calendar days from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.

9. The undersigned certifies neither the ENGINEER nor I have:
- a. employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
 - b. agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
 - c. paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
 - d. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
 - e. have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
 - f. are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
 - g. have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.
10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LA.
11. To submit all invoices to the LA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.
12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).
13. Scope of Services to be provided by the ENGINEER:
- Make such detailed surveys as are necessary for the planning and design of the PROJECT.
 - Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
 - Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
 - Design and/or approve cofferdams and superstructure shop drawings.
 - Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types and high water effects on roadway overflows and bridge approaches).
 - Prepare the necessary environmental and planning documents including the Project Development Report, Environmental Class of Action Determination or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.
 - Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
 - Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
 - Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
 - Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
 - Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
 - Furnish the LA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

II. THE LA AGREES,

1. To furnish the ENGINEER all presently available survey data and information
2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

Cost Plus Fixed Fee CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or
 CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or
 CPFF = 14.5%[(2.3 + R)DL + IHDC]

Where: DL = Direct Labor
 IHDC = In House Direct Costs
 OH = Consultant Firm's Actual Overhead Factor
 R = Complexity Factor

Specific Rate (Pay per element)

Lump Sum _____

3. To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- a) **For the first 50% of completed work**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **After 50% of the work is completed**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 95% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) **Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

Without Retainage

- a) **For progressive payments** – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

III. IT IS MUTALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use.

3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
6. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT.
7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
8. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
 - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
 - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
 - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance program; and
 - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

10. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

Agreement Summary

Prime Consultant:	TIN Number	Agreement Amount
Patrick Engineering	36-3008281	\$412,000.76
Sub-Consultants:	TIN Number	Agreement Amount
Gewalt Hamilton	36-3426053	\$31,752.49
Teska Associates	36-3051497	\$28,120.00
Huff & Huff	36-3044842	\$13,304.18
	Sub-Consultant Total:	
	Prime Consultant Total:	
	Total for all Work:	

Executed by the LA:

Village of Northfield

(Municipality/Township/County)

ATTEST:

By: [Signature]
Village Clerk

(SEAL)



By: [Signature]
Village President

Executed by the ENGINEER:

ATTEST:

By: Jamod J. Cahill
TRANSPORTATION MANAGER

PATRICK ENGINEERING

By: [Signature]
VICE PRESIDENT

The Village of Northfield

June 23, 2016

Ms. Tara C. Fifer, Highway Engineer IV
Cook Co. Dept. of Transp. & Hwys
Project Development Bureau
69 W. Washington Street, 21st Floor
Chicago, IL 60602-3007

Re: Preliminary Engineering Services Agreement – Happ Road
Village of Northfield/Patrick Engineering

Dear Tara:

Enclosed please find two original Preliminary Engineering Services Agreements for your files which have been fully executed.


Sincerely,



Stacy A. Sigman

SAS/hm
Encls.



Local Agency Village of Northfield	 Illinois Department of Transportation Preliminary Engineering Services Agreement For Federal Participation	C O N S U L T A N T	Consultant Patrick Engineering Inc.
County Cook			Address 4970 Varsity Drive
Section			City Lisle
Project No.			State IL
Job No.			Zip Code 60532
Contact Name/Phone/E-mail Address Stacy Sigman 847-441-3852 ssiaman@northfieldil.org			Contact Name/Phone/E-mail Address Jarrod Cebulski 630-795-7468 icebulski@patrickco.com

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Project Description

Name Happ Road Route _____ Length .70 mi. Structure No. _____

Termini Winnetka Road to Willow Road

Description Rehabilitation/reconstruction, intersection and drainage improvements

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 - c. paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
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 - e. have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
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 - Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
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 - Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
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1. To furnish the ENGINEER all presently available survey data and information
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Cost Plus Fixed Fee CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or
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4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

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5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
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For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
 - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
 - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
 - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance program; and
 - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

10. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

Agreement Summary

Prime Consultant:	TIN Number	Agreement Amount
Patrick Engineering	36-3008281	\$412,000.76
Sub-Consultants:	TIN Number	Agreement Amount
Gewalt Hamilton	36-3426053	\$31,752.49
Teska Associates	36-3051497	\$28,120.00
Huff & Huff	36-3044842	\$13,304.18
	Sub-Consultant Total:	
	Prime Consultant Total:	
	Total for all Work:	

Executed by the LA:

Village of Northfield

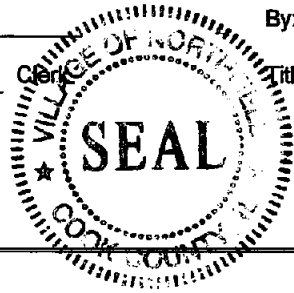
(Municipality/Township/County)

ATTEST:

By: [Signature]

Village

(SEAL)



By: [Signature]

Title:

Village President

Executed by the ENGINEER:

ATTEST:

By: Janod J. Cebel

Title: TRANSPORTATION MANAGER

PATRICK ENGINEERING

By: Paul M. [Signature]

Title:

VICE PRESIDENT

The Village of Northfield

May 18, 2016

Mr. Jarrod Cebulski
Patrick Engineering, Inc.
4970 Varsity Drive
Lisle, IL 60532

Re: Happ Road Engineering Study

Dear Mr. Cebulski:

Enclosed please find four original Preliminary Engineering Services Agreements for Federal Participation which have been executed by the Village President and Village Clerk. We will advise you as soon as we hear from the County as to the funding of the project.


Sincerely,



Stacy A. Sigman

SAS/hm
Encls.



Local Agency Village of Northfield	 Illinois Department of Transportation Preliminary Engineering Services Agreement For Federal Participation	Consultant Patrick Engineering Inc.
County Cook		Address 4970 Varsity Drive
Section		City Lisle
Project No.		State IL
Job No.		Zip Code 60532
Contact Name/Phone/E-mail Address Stacy Sigman 847-441-3852 ssigman@northfieldil.org		Contact Name/Phone/E-mail Address Jarrod Cebulski 630-795-7468 icebulski@patrickco.com

THIS AGREEMENT is made and entered into this _____ day of May, 2016 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

Project Description

Name Happ Road Route _____ Length .70 mi. Structure No. _____
Termini Winnetka Road to Willow Road
Description Rehabilitation/reconstruction, intersection and drainage improvements

Agreement Provisions

I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
3. To complete the services herein described within 365 calendar days from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.

9. The undersigned certifies neither the ENGINEER nor I have:
- employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
 - agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
 - paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
 - are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
 - have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
 - are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
 - have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.
10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LA.
11. To submit all invoices to the LA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.
12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).
13. Scope of Services to be provided by the ENGINEER:
- Make such detailed surveys as are necessary for the planning and design of the PROJECT.
 - Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
 - Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
 - Design and/or approve cofferdams and superstructure shop drawings.
 - Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types and high water effects on roadway overflows and bridge approaches).
 - Prepare the necessary environmental and planning documents including the Project Development Report, Environmental Class of Action Determination or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.
 - Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
 - Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
 - Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
 - Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
 - Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
 - Furnish the LA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

II. THE LA AGREES,

1. To furnish the ENGINEER all presently available survey data and information
2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

Cost Plus Fixed Fee CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or
 CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or
 CPFF = 14.5%[(2.3 + R)DL + IHDC]

Where: DL = Direct Labor
 IHDC = In House Direct Costs
 OH = Consultant Firm's Actual Overhead Factor
 R = Complexity Factor

Specific Rate (Pay per element)

Lump Sum _____

3. To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- a) **For the first 50% of completed work**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **After 50% of the work is completed**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 95% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) **Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

Without Retainage

- a) **For progressive payments** – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **Final Payment** – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

III. IT IS MUTALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use.

3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
6. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT.
7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
8. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
 - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
 - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
 - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
 - (3) Any available drug counseling, rehabilitation and employee assistance program; and
 - (4) The penalties that may be imposed upon an employee for drug violations.
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- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

10. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

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Patrick Engineering		36-3008281	\$412,000.76
Sub-Consultants:		TIN Number	Agreement Amount
Gewalt Hamilton		36-3426053	\$31,752.49
Teska Associates		36-3051497	\$28,120.00
Huff & Huff		36-3044842	\$13,304.18
		Sub-Consultant Total:	
		Prime Consultant Total:	
		Total for all Work:	

Executed by the LA:

Village of Northfield

(Municipality/Township/County)

ATTEST:

By: _____

[Handwritten Signature]
Village
(SEAL)

Clerk



Title

[Handwritten Signature]
Village President

Executed by the ENGINEER:

ATTEST:

By: _____

By: _____

Title: _____

Title: _____

Exhibit B



Engineering Payment Report

Prime Consultant

Name _____
Address _____
Telephone _____
TIN Number _____

Project Information

Local Agency _____
Section Number _____
Project Number _____
Job Number _____

This form is to verify the amount paid to the Sub-consultant on the above captioned contract. Under penalty of law for perjury or falsification, the undersigned certifies that work was executed by the Sub-consultant for the amount listed below.

Table with 3 columns: Sub-Consultant Name, TIN Number, Actual Payment from Prime. Includes summary rows for Sub-Consultant Total, Prime Consultant Total, and Total for all Work Completed.

Signature and title of Prime Consultant _____

Date _____

Note: The Department of Transportation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under state and federal law. Disclosure of this information is REQUIRED and shall be deemed as concurring with the payment amount specified above.

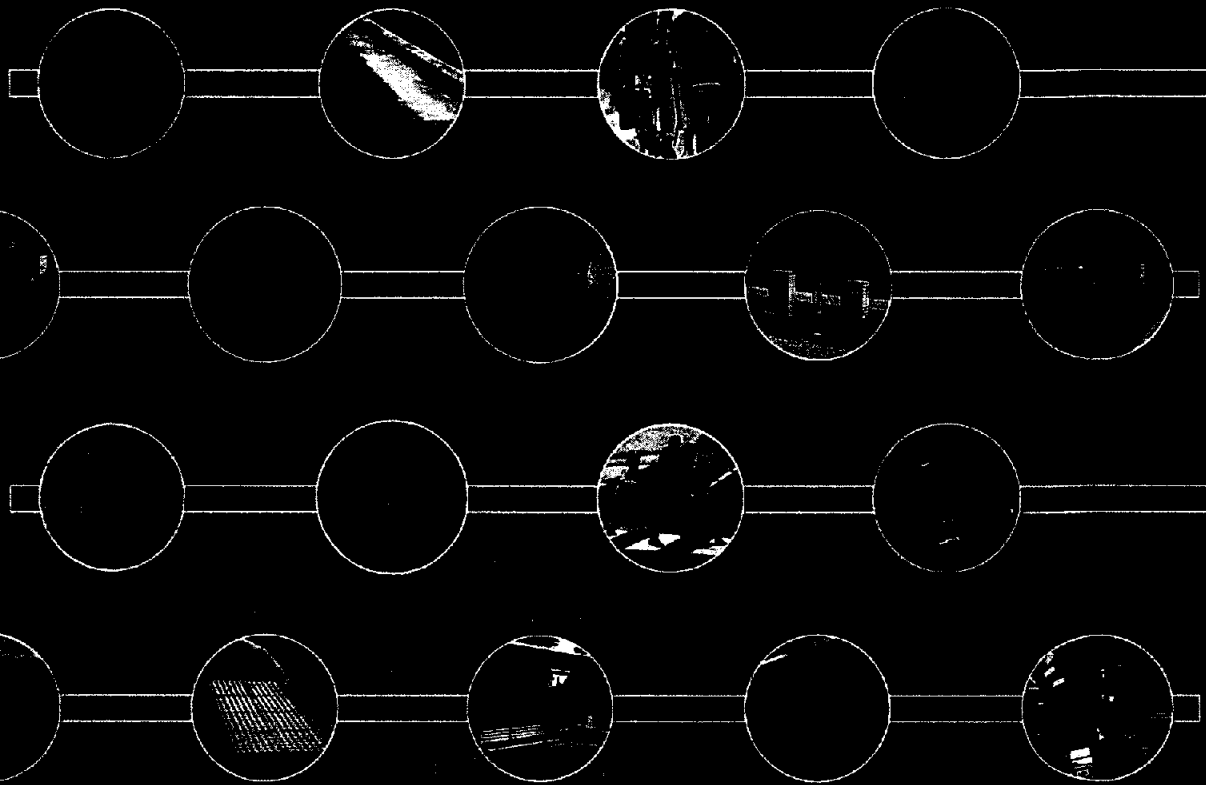
For information about IDOT's collection and use of confidential information review the department's Identity Protection Policy.

Proposal to provide
Phase I Engineering Services

for

Happ Road

*between Willow Road
and Winnetka Road*



Submitted to
Village of Northfield

Submitted by
PATRICK Patrick Engineering Inc.

November 6, 2015

Ms. Stacy Sigman
Village Manager
Village of Northfield
361 Happ Road
Northfield, Illinois 60093-3482

Reference: Phase I Design Engineering Services - Happ Road between Willow Road and Winnetka Road

Dear Ms. Sigman:

We at Patrick Engineering Inc. (Patrick) are very excited about the prospect of providing professional engineering services for the Village of Northfield (Village). Patrick's team will bring the greatest benefit to the Village for this work. **Using best practices from our award-winning Phase I experience will enhance the quality and efficiency of the engineering services that we will perform for the improvement of Happ Road.**

Understanding and Knowing the Process

- The staff at Patrick are experts in Phase I Engineering, which has allowed us to achieve 30 individual Design Approvals for Phase I Studies since mid-2008 on State and local projects all right here in northeastern Illinois (list of projects is included in Section 2, Experience of Firm). *We are well aware of the requirements and the process and can apply this knowledge to this project for the Village.*
- We have delivered projects that have utilized a wide range of local, state, and federal funding sources including MFT, STP, CMAQ, and HSIP and *have an in-depth knowledge and firsthand experience with the federal Phase I process.*
- Patrick has past experience performing federally-eligible Phase I Corridor Studies for the Cook County Department of Transportation and Highways (CCDTH) and maintains excellent working relationships with their high level staff. As this route is under the jurisdiction of the CCDTH, *this experience will be invaluable in coordinating this process towards efficient approvals.*
- Our key partner, **Gewalt Hamilton Associates**, is very familiar with the Village's needs from their prior transportation and water resource related projects throughout Northfield. We are also teaming with **Teska Associates**, who will provide aesthetic street- and landscaping concept support by way of their local knowledge on projects such as Northfield Road. Both firms will bring great value to our team by quickly *familiarizing us with your operating procedures.* **Huff & Huff** will round out our team by providing environmental support services for the Phase I Study, as they are the premier environmental firm for transportation studies in northeastern Illinois.

Best Value for Cost Effective Solutions

- By being a mid-size firm headquartered in Illinois, we can *supply large firm expertise and resources while providing small firm service and flexibility* to result in the best value for long-term cost-effective solutions.
- One of our Public Involvement and Coordination leads, Chris Kersten, works as a Project Manager at IDOT District One, overseeing Phase I studies and has received "excellent" performance ratings. Based on Chris' Phase I experiences, he *brings strategic value to our stakeholder involvement plan and can also assist with internal coordination within IDOT.*

Creative Ideas for Problem Solving

- Based on our evaluation of the project needs, we have brainstormed potential improvement ideas and identified a unique and innovative vision for the Happ Road improvement project, as further described in this proposal *that will address several transportation problems that exist in this area and create a vibrant corridor that the community can be proud of.*



PATRICK

We have provided the following information as requested in the RFP:

Company Name and Address | Patrick Engineering Inc., 4970 Varsity Drive, Lisle, Illinois, 60532

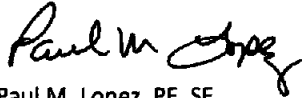
Person Authorized to Represent the Organization | Paul M. Lopez, PE, SE, Vice President, 630.795.7293, plopez@patrickco.com

Company History | Patrick Engineering Inc. was founded in 1979 in the State of Illinois by CEO Daniel Patrick Dietzler, P.E., who was determined to build a better infrastructure than what he had seen through his years of experience in the engineering industry. Today, Patrick has grown to employ over 230 professionals in multiple offices and has performed work in 48 states.

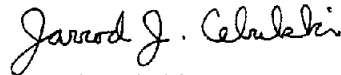
We appreciate this opportunity to present our proposal and look forward to establishing a professional relationship with the Village.

Sincerely,

PATRICK ENGINEERING INC.



Paul M. Lopez, PE, SE
Vice President

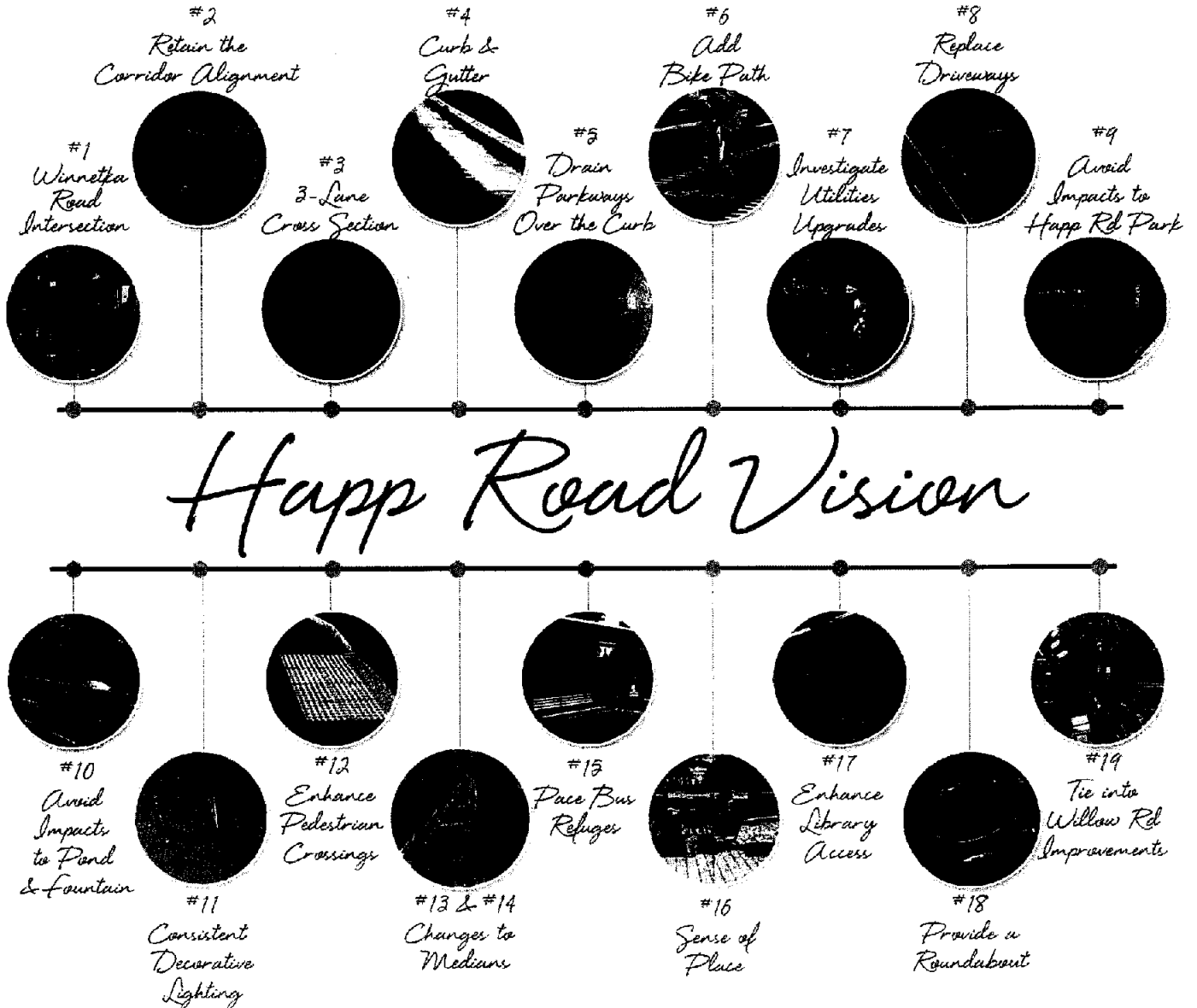


Jarrod J. Cebulski, PE
Director of Transportation

Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

On October 6, 2015, our Director of Transportation and Project Manager, Jarrod Cebulski, visited the project site. Based on our review of existing conditions and understanding of the needs and character of the surrounding areas, we have developed an overall vision for the Happ Road Improvements for the Village of Northfield. The following pages provide additional information for the items we propose to address in order to make this project a success.



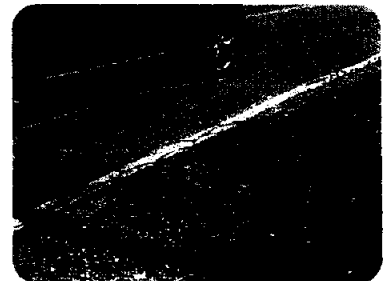
Phase I Engineering Services
Happ Road between Willow Road and Winnetka Road

Vision for Happ Road

1. Winnetka Road intersection | We will perform HCS, traffic signal warrant, and intersection control analyses to evaluate different intersection types such as retaining the stop-controlled intersection, providing a traffic signal, or implementing a modern roundabout. (See exhibit at the end of this section.) If a signal is added, left turn lanes will be developed for the north and south legs. If a roundabout is pursued, single lane approaches will likely suffice for design year traffic.
2. Retain the corridor alignment | Given that the route can be classified as "low speed urban," the current alignment of Happ Road can be retained with the 20mph cautionary speed limit for the curve, with no super-elevation required. Should the road be widened, slight centerline shifts will be investigated to minimize impacts to the adjacent properties.
3. Provide a 3-lane cross-section in the southern segment | Due to the numerous driveways and sidestreets present in the southern portion of the corridor, safety and operations can be improved by adding a center bi-directional left turn lane in this area. Impacts can be minimized by using narrower 11' or 10.5' lanes.
4. Provide curb & gutter along Happ Road | In order to improve safety and drainage along the corridor, we propose to extend the curb & gutter already existing in the northern segment of Happ Road to the south all the way to Winnetka Road. The existing aggregate shoulders are narrow and shoulder edge drop-offs of several inches were observed, making it difficult for motorists who happen to veer off the mainline lanes to recover safely. Further, the roadway drainage that now flows onto the parkways and into the front yards of the residences would be captured within the roadway footprint and collected in an underground drainage system.
5. Drain parkways over the curb | Given the large number of "bee hive" open grate inlets found in the various parkways along Happ Road, drainage appears to be an issue that could be improved. We propose to investigate lowering the profile of Happ Road to allow the parkway water to drain over the curb and into the roadway where it would be collected by curb inlets and into a storm sewer system.
6. Add a bikepath | While sidewalks generally exist along both sides of Happ Road, in order to provide bicycle accommodations, a wider multi-use path should be provided in place of sidewalks along one side of the road. On-road accommodations will also be investigated if the addition of a wider sidepath results in unacceptable impacts along the corridor.
7. Investigate utility upgrades | There are numerous public utilities that exist in the Happ Road pavement, such as water main and sanitary sewer. Should upgrades to these utilities be required, having them done as part of the roadway project will result in economies of scale. Relocating the utilities from the roadway into the adjacent parkways would also make them easier to access for any future maintenance needed to these lines. Utility installations along the corridor should also be "shielded" with attractive landscaping to screen them from the view of the community and enhance the aesthetics of the area.
8. Replace driveways to the right-of-way (ROW) line | As part of the roadway upgrade, driveways should be replaced out to the ROW line, especially in areas where the edge of pavement elevations are modified and/or curb & gutter is introduced to replace existing shoulders.



20 mph Curve along Happ Road



Unsafe Shoulder Edge Drop-offs



Screened Utility Installations

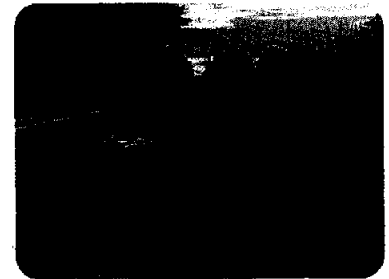
Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

9. **Avoid impacts to Happ Road Park |** Happ Road park is a small public park along the west side of Happ Road that is owned by the Winnetka Park District. This park is a protected 4(f) resource, and impacts to this park should be avoided due to any roadway improvement. As part of the roadway project, sidewalk access and connectivity to the park should be improved.
10. **Avoid impacts to the pond and fountain to the west by Northfield Square |** There is a pond along the west side of Happ Road by the Village Center Residences that likely serves a drainage retention purpose and should not be impacted by the proposed improvements.
11. **Provide consistent decorative lighting |** There are some light standards present along the corridor. A decorative branding should be selected and this treatment applied in a consistent manner throughout the northern commercial section of the corridor. Continuous lighting is not necessary in the southern residential section, but can be applied as intersection lighting at Winnetka Road.
12. **Enhance pedestrian crossings and ADA ramps |** The upgraded corridor should include standard ADA ramps and pedestrian crosswalks at all intersections.
13. **Eliminate 4' painted medians |** In the northern commercial section, where a center painted median/left turn lanes are present, there are 4' striped median areas adjacent to the left turn lanes. In this low speed urban area, these painted areas are not necessary. Especially if space will be required to provide bicyclist accommodations along the corridor, every foot will be valuable. Unless barrier medians are introduced, a double yellow centerline can be used along the left turn bays, and this additional pavement can be given back to provide for other more important uses.
14. **Add barrier median pockets |** In the northern section, between left turn lanes, the aesthetics of the corridor can be enhanced with small barrier median pockets. These areas can be landscaped and would provide traffic calming benefits, as well.
15. **Provide refuges for Pace bus route 421 |** Coordination will be undertaken with Pace with respect to their plans for their route 421. At a minimum, the project should provide concrete waiting pads at all stops along the route. In this manner, Pace could then come back and provide refuge shelters, benches, and other amenities as they deem appropriate for this area. We will perform an analysis to determine whether the bus stop locations would be better located on the near or far side of intersections. Patrick performed these tasks and provided coordination for our Narragansett Avenue project in the City of Burbank for the Cook County Department of Transportation and Highways, with great results.
16. **Preserve and enhance/expand public sense of place. |** Along the east side of Happ Road, just south of the Northfield Village hall, there exists an excellent example of an outdoor gathering area with benches, tables, brick pavers, and attractive landscaping. These areas are vital to the vibrancy of a community and improve quality of life. We will strive to replicate and enhance areas such as this along the corridor as part of this improvement to provide opportunities for the community to meet and interact.
17. **Enhance access and accessibility to the Northfield library |** The Northfield Library is a community asset that is a destination for many Village residents. We will work with the library to provide signage and other sidewalk entrance improvements to make it easier for those who live in the community to access this valuable resource.



Pond at Northfield Square



4' Painted Medians along Happ Rd



Outdoor Gathering Area

Phase I Engineering Services
Happ Road between Willow Road and Winnetka Road

18. Provide a roundabout at the Orchard Lane intersection | We will evaluate improvement of a standard intersection configuration at the Orchard Lane intersection, however, given the traffic volumes and angles of intersection at this crossing, it appears that a roundabout could be a highly beneficial application at this crossing. Further, the unconventional intersection of Walnut Street could be improved by tying it in as a right-in/right-out access point that would be safer and easier for drivers to navigate. (See exhibit at the end of this section)

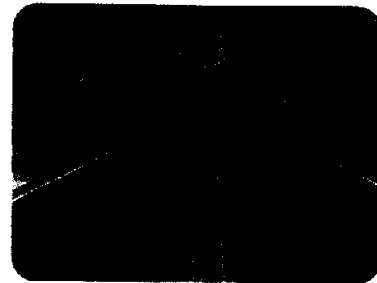


Improvements at Willow Road

19. Tie into recent improvements to the north at Willow Road | The recent project by IDOT improved the intersection of Willow and Happ Roads. The Happ Road corridor improvement should tie into the Willow Road project, minimizing impacts to recent improvements, yet maximizing the benefit to the Happ Road corridor.

Project Understanding/Approach

The Village is seeking to upgrade a vital corridor that traverses key commercial and highly desirable residential areas. Happ Road connects the constituents of Northfield with a wide variety of destinations, including New Trier High School, the Northfield Public Library, recreational and forest preserve areas, local parks, economic opportunities, and the downtown Village Center/Village Hall. Since Happ Road is under the jurisdiction of the Cook County Department of Transportation and Highways (CCDTH), extensive coordination will be required with them during the course of this project. Patrick has performed previous Phase I Studies for the CCDTH, so we understand their requirements, and we have excellent working relationships with Superintendent John Yonan, Assistant Superintendent Sis Killen, and Transportation and Planning Bureau Chief Jill Hayes, with whom the project will be coordinated.



Cross-Section of Happ Road

A primary focus of the project will be to develop it in such a manner as to allow it to be federally eligible. Based on our Team's collective experience in performing Phase I Studies for State and Local Agency clients, we have honed our skills and developed and refined a process that we have found to be most effective for accomplishing the project goals. Our process expedites the project schedule and is compliant with IDOT project development procedures that will ensure the Happ Road project is eligible for federal funding opportunities. It is this process that we will follow for the Happ Road Phase I Study. A general step-by-step description of this process follows:

Project Start-up

Patrick's Team will begin the Phase I Study by meeting with the Village to ensure we have a clear understanding of the objectives for the project and desired project schedule. We will perform a detailed review all of the available planning or scoping information provided by the Village before we begin our work. The Team understands that continuous and thorough communication with our Village liaison is the key to success for the Preliminary Engineering process. A regular, recurring project coordination meeting schedule with the Village will be established to ensure an active project dialogue is maintained throughout the engineering process and to document the progression of the work. The Village's preferred protocol for communicating with any property owners will be established.

The goals for managing this project will include producing project documents that are of the highest quality; designing a safe and economical facility that meets the project goals established by the Village and meets IDOT design standards; meeting or exceeding the project schedules; keeping all involved entities informed of the project status; satisfying all requirements and approvals necessary to ensure the project is federally-eligible; and achieving stakeholder buy-in, all which will be vital to the success of this study.



How we do it!

In a recent Quality Audit by the Illinois Tollway, Patrick was in complete conformance and the audit was closed on the same day.

Prior to the start of the contract, a project-specific QA/QC plan will be developed. The Team will hold the quality of our work at the highest level. The QA/QC Plan will include our existing QA/QC procedures supplemented with project specific procedures. Checklists for each of the work tasks, modified to meet the project requirements, will be included, as well as QA/QC sign-off forms that our staff complete for each milestone deliverable. The project schedule, scope of work, budget, estimated construction cost, project guidelines and standards will be included in the QC/QA plan.

Once we receive formal notice to proceed, we will have an internal kick-off meeting with the project Team. At this meeting the project scope, schedule, budget, QA/QC plan, and reporting procedures will be discussed. The project schedule will include interim dates where various tasks need to be completed prior to milestone submittals. Prior to each submittal, the Project Manager will review the documents and verify that the QA/QC procedures were followed. In addition, the QA/QC managers of the project will also perform constructability and peer reviews. Constructability and accurate cost estimating are important aspects of all preliminary engineering projects; therefore, significant emphasis will be placed on cost effective-solutions to address potential construction conflicts. All questions and comments by the Project Manager, Constructability Engineer, and peer reviewers will be discussed with the Project Engineer. Their comments will be addressed before submittal of any documents. We routinely perform self-audits of our own work, in addition to achieving high results on audits done by our clients.

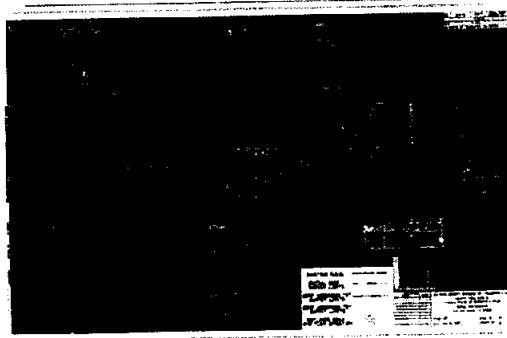
Data Collection

An initial early action item on this project will be the identification of data collection needs such as traffic counts, traffic projections, crash data, and the ground survey. The survey requirements will need to be determined as early as possible and early submittal of the environmental survey request (ESR) forms will be important to the overall project development process. Patrick will begin to work immediately with Village staff to adequately define an area on exhibits and determine the extent of resource surveys needed for the preliminary engineering studies.

Our subconsultant, GHA will perform the necessary traffic counts needed to accurately analyze the primary intersections at Orchard Lane and Winnetka Road (the intersection of Willow Road was recently improved as part of a separate IDOT project). The counts will be compiled and design year 2040 traffic projections will be obtained from the Chicago Metropolitan Agency for Planning (CMAP). While existing traffic counts can be used for the traffic analysis for a 3R (widening and resurfacing) scope of work, should the scope include full roadway reconstruction, the design will be based on the 2040 planning horizon year. The CMAP traffic projections will be converted to appropriate design hour volumes for use in the highway capacity analyses and determination of the basic number of lanes and intersection types and configurations to be used for this improvement. A Synchro corridor model can be prepared if this type of analysis is desired.

Topographical and Environmental surveys

A complete topographic survey will be undertaken at the onset of the project by GHA. The survey will include all roadway and topographic features, as well as drainage information and cross-sections. We will coordinate the limits of the survey with the Village to ensure that we are collecting sufficient data for the study to avoid the need to go back into the field later for more information. In addition to the topographic data, we will also perform fieldwork to determine the extents of the existing ROW of the roads. Early submittal of the environmental survey request (ESR) form and associated exhibits (*sample at right*) will be critical in the goal of an expedited project schedule. Patrick





will utilize Sidwell maps and plans from previous projects to roughly estimate the existing ROW, and then estimate proposed ROW needs based on what we already know of the anticipated scope of the proposed improvement. We will be sure to consider the need for any detention and/or compensatory storage due to any proposed widening so that ESR addenda are not required later, which could delay the processing of the preliminary engineering study. Wetlands surveys will also be performed by our subconsultant, Huff & Huff.

Data Analyses

The Team will define all pertinent design criteria to be used for the study and secure agency approval prior to beginning any analysis or design work. The design criteria will be formally documented and submitted to the Village for approval at the beginning of the design to expedite review and approval of design documents. We will then perform the capacity analysis, crash analysis, typical cross-section and access management analysis, and couple this with any findings from any available environmental evaluations, as well as any compatible recommendations from the earlier project scoping. The traffic analysis will be performed for existing and proposed intersection conditions in the AM and PM peak periods (mid-day and weekend traffic will also be considered) using Highway Capacity Software (HCS) and Synchro (for systems). Traffic signal warrant analyses will also be performed for the intersections at Winnetka Road and Orchard Lane. A traffic signal would be an appropriate improvement at the Winnetka Road intersection, however, with Orchard Road being only approximately 350' away from the Willow Road signalized intersection, a traffic signal at Orchard could create queuing problems between the two. Intersection Control Evaluations will be performed to evaluate potential roundabouts at all intersection locations. A roundabout would be a beneficial application at both the Winnetka and Orchard intersections. At Winnetka Road, traffic operations and safety would be improved, however, ROW impacts to residential properties on three of the four quadrants and the New Trier High School in the southeast quadrant may render a standard stop-controlled or signalized intersection the preferred alternative.



Winnetka Road Intersection



Orchard Road Intersection

From a typical cross-section perspective, Happ Road is a two-lane roadway (one lane in each direction), and given the average daily traffic (ADT) volumes in the range of 6,000 vehicles per day (vpd), maintaining the two-lane configuration is likely. We will investigate the addition of a center bi-direction left turn lane at the southern residential section of the corridor and optimizing each left and right turn lane configurations in the northern commercial section. We would also look to extend the curb & gutter section that exists on the north portion to the south so that the narrow gravel shoulders can be eliminated and the roadway drainage can be kept in the pavement and not in the front yards of the adjacent homes.

The Crash Analysis will be prepared by reviewing and analyzing crash data for the latest three years and preparing collision diagrams. We will identify crash patterns and critical crash locations, and recommend appropriate remedial measures. 5% Locations will also be identified. If requested, visualization simulations of traffic conditions will be prepared using Synchro or similar software that may be useful for public involvement and consensus building efforts.

Patrick will then prepare a "Findings Memo" to summarize the results of the preliminary analyses. The Findings Memo will summarize the existing and proposed conditions for several alternatives and outline our recommendations for the preferred alternative. This memo will be submitted to the Village and can be used to coordinate with IDOT and the FHWA, as necessary at this stage of the study, as a stand-alone document with supporting documentation. This document will provide the project scoping information and analysis that will be



the basis for review and collaboration and used to define the transportation problems to be solved to allow us to focus on a proposed project solution.

In order to supplement the preliminary data analysis process, a project photo log will be prepared based on a field visit to the project site. The route survey will be processed and base maps will be developed in the latest Bentley Power Geopak V8i SELECTSeries 4 MicroStation mapping files. Finally, we will add all information, such as street names, right-of-way info, property lines, property owners' names, etc. to the existing topography to provide a clear and accurate aerial mosaic for use in the development of project exhibits.

Alternative Geometric Studies

Once the Findings Memo is approved, the detailed preliminary engineering geometrics (plan, profile, and typical sections) will be finalized, Intersection Design Studies will be completed, and final templated cross-sections and right-of-way requirements will be determined. A detailed 30% level construction cost estimate will also be completed at this time. Any project Design Exceptions will be identified and presented at a monthly Federal Highway Administration (FHWA) meeting, where approval will be sought on the scope and logical termini of the study. Patrick has represented numerous agencies very effectively at FHWA meetings for many of our past projects. We have excellent relationships with IDOT Bureau of Local Roads staff, including Alex Househ, with whom we have worked for many years on numerous highway projects, as well as FHWA staff. There is a mutual respect and a trust factor is immediately developed when we represent our clients at these meetings. We understand how important a step this is in finalizing the overall scope and geometric details so that the project can proceed forward in the development process. Prior to the FHWA meeting, we have learned that it is best to meet beforehand with IDOT staff to ensure that we are on the same page in terms of the materials being presented to the FHWA. Patrick then comes well-prepared to these meetings with a detailed agenda, listing all salient project details for presentation, as well as all appropriate backup data and information including project location maps, results of crash and capacity analysis, full-size project color aerials and black & white plan-and profile sheets, and all available environmental information. This preparation is vital to the success of these meetings so that decisions can be made at the first presentation and we do not need to come back and attend follow-up monthly meetings, which wastes the IDOT's valuable presentation time with this important agency.

Complete Streets

Another important aspect is the review of the project to ensure that it meets "Complete Streets" policy requirements. We will follow the principles identified in the Village of Northfield's May 19, 2006 "Walkability Assessment and Workshop" in the design of this project, including crossing layout and alignment, narrower lanes, small radius corners, right turn slip lanes, and strategically located mid-block crossings. The Complete Streets policies generally require inclusion of pedestrian and bicycle facilities commensurate with the speed limit and level of traffic on the study route, whether on-road or off-road provisions are made and the necessary widths and offsets from the traveled way that are to be provided. Patrick has extensive experience with these policies and coordinating with IDOT to ensure that the spirit of the policy is met and that this aspect of the project is coordinated early and not an afterthought. ADA compliance is also a key criterion and will be evaluated for the study area and intersections and built into the project from the start. We will examine this section of Happ Road to determine the best means to accommodate bicycle traffic within this corridor.

How we do it!

Patrick is currently performing ADA Data Collection services for IDOT D1 to support their ADA Transition Plan, so we have firsthand knowledge of the requirements and how to apply them.

Environmental Processing

As the project geometrics are being developed, the results of the environmental surveys are typically becoming available. This includes biological, cultural, and wetland resources and recognized environmental concerns (REC's) based on the special waste PESA (preliminary environmental site assessment) present in the project vicinity. Should any sensitive resources be identified, we will develop or revisit the proposed geometry to avoid impacts to



them during the design process. If impacts are unavoidable, efforts towards impact minimization and mitigation will commence, in that order. Patrick is also prequalified in Environmental Assessments (EA's) should that level of processing be required. Should wetland impacts be unavoidable, a pre-application meeting with the US Army Corps of Engineers will be held for any wetlands that have the potential to be jurisdictional.

How we do it!

Patrick has executed numerous Stakeholder Involvement Plans for federally funded Local Agency projects.

Stakeholder Involvement

The stakeholder involvement process is flexible and modular, meaning that it can be tailored to fit the needs of this specific project. Stakeholder involvement components, such as public meetings and hearings, a project website, and/or local community group meetings, can be included in the scope of the study as the Village sees fit. We will initially develop a Stakeholder Involvement Plan (SIP), for the Village's review and approval that will select from a cafeteria-style range of stakeholder involvement components that the Patrick Team can effectively provide, as described below:

- **Initial Public Meeting** – This meeting occurs early on in the study process, once sufficient data has been collected and analyzed. The Initial Public Meeting will present base information on the study area, introduce the study, and offer aerial exhibits of the study area upon which attendees can mark their comments, input, and ideas. *(A photo from a recent public meeting is at right)*
- **Community Advisory Groups (CAG's)** – The CAG is a way to have a more extensive dialog with a smaller and more engaged group of individuals from the community within which the project exists. It can include elected or municipal officials, representatives from local or interest groups, residence or business owners along the project, and members of the general public. At these meetings, it is important to relay the ground rules of participation, explain that this is an advisory and not a decision making body, and that all project decisions are made by the Project Study Group (PSG) consisting of the Village, IDOT, and the FHWA. This is a good forum to identify and reach consensus on transportation issues, a range of improvement alternatives, and the preferred alternative to be carried forward in the project development process.
- **Project Website** – Patrick has the full capabilities to design and host an interactive project website for this study. The website can be continually updated to include current project information, minutes of meetings, notification of upcoming events, and the latest project schedule. The public can also view aerials and exhibits of the project area and be able to provide comments that can be transmitted to the study team.
- **One-on-One Meetings** – The Patrick Team will responsibly represent the Village at any meeting with an outside agency or member of the general public. We handle the meeting arrangements, distribute an agenda beforehand, present the information with the use of effective exhibits, and prepare and submit the meeting summary within two days after the meeting.
- **Public Meetings and Hearings** – Patrick has prepared for and held numerous open house public meetings and hearings for our engineering studies for a wide variety of clients. We provide turnkey services in this regard including mailing list development, invitee notification, exhibit and PowerPoint presentation preparation, media packets, fact sheets, briefing papers, staffing the meeting, preparation of handouts and materials, preparing summaries of the meeting and addressing all comments received. Our goal is to handle every aspect, so Village staff need only attend on the afternoon of the meeting or hearing and everything else is handled.



Drainage

Patrick will lead the project drainage analysis and design, with key support by our subconsultant, GHA. Patrick has an extensive knowledge of IDOT drainage design criteria, and GHA has a detailed knowledge of drainage patterns within the Village through past projects. For drainage design, data collection will include the following base information: Record roadway grading and drainage plans, record stormwater reports and grading and drainage plans for adjacent developments, public and private utility plans and atlases (GHA will work the Village to obtain this information), USGS maps and Flood Insurance Rate Maps, and flooding records and drainage complaints. The drainage component of the Phase I Study is prepared beginning with a review of existing drainage and development of an Existing Drainage Plan (EDP). Drainage investigations will be performed for any areas with a reported history of drainage problems, with recommendations made to address these situations. The proposed drainage system will be designed and presented as part of the Proposed Drainage Plan (PDP). Based on past experience with IDOT, a formal Location Drainage Study will not be required, but instead a Location Drainage Technical Memo (LDTM) will be prepared. Any drainage related permits needed for this project during Phase II will also be identified with summary forms completed and included. In addition, Patrick will work with GHA to evaluate existing sanitary sewer and water main along with other utilities within the project limits, and identify any replacement or upgrade needs.

Any proposed roadway widening, as well as any added multi-use path and/or sidewalk will require exploration of detention options such as expansion of existing surface facilities and inline storage to control downstream impacts and minimize ROW requirements. Given the corridor's proximity to the North Branch of the Chicago River, water quality Best Management Practices including runoff volume control will be a project key.

The corridor includes numerous drainage "beehive" inlets to collect surficial stormwater runoff. This is indicative of a drainage system that includes roadway runoff entering parkway and private property areas and being collected via inlets and catch basins outside the roadway and shoulders. **In order to improve overall drainage collection within the corridor, we will investigate the addition of curb and gutter to replace the roadway shoulders and a lowering of the roadway profile to allow parkway water to flow over the curb and be collected in curb inlets.** There are also a variety of underground utilities located within the corridor. Each utility will be identified, and the proposed drainage system concept will be planned to minimize potential conflicts or relocations. The drainage design will require extensive coordination from the Village, local property owners, utilities, and County, State, and Federal agencies.



Parkway "Beehive" Inlets

ROW Analysis

Once the geometric designs for the roadway and intersections are developed to an adequate level of completion, as well as drainage and environmental concerns are addressed, work will progress regarding determining if the improvement can be built within the existing ROW or if proposed ROW or easements will be required. Our work will be based on our determination of the existing ROW through found evidence in the field, as well as recorded documents. The existing ROW in conjunction with the proposed limits of the roadway improvements, as well as anticipated limits of construction, will allow areas of proposed right-of-way and construction easements to be created. This will be done by developing a cross-section at 100' intervals along the project to depict any widening, drainage facilities, embankment slope modifications. Maintenance of traffic will be considered in the ROW needs determination. We will strive to minimize the proposed ROW or easements (permanent and temporary), so that the project schedule is not extended due to extensive impacts due to the ROW acquisition process. Short retaining walls will also be investigated to avoid any spot locations where construction limits extrude beyond existing ROW limits or would result in impacts to features such as buildings, parking lots, or private drainage facilities.



Maintenance of Traffic/Constructability

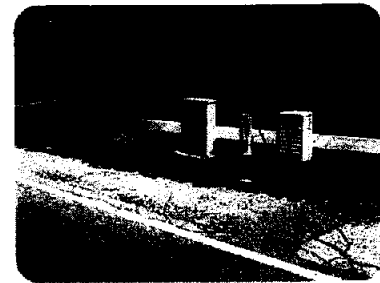
Maintenance of Traffic (MOT) is something that is oftentimes overlooked during Phase I. However, if a conceptual plan is not developed and fully vetted as part of Phase I, this could result in issues during design and construction. The MOT plan will identify areas that:

- 1.) Need to be included as part of the environmental surveys,
- 2.) Could include temporary traffic signal work at adjacent intersections,
- 3.) Could result in constructive use impacts if access to 4(f) properties (such as Happ Road Park, owned by the Winnetka Park District) is affected, and
- 4.) Would affect the overall project cost if additional roadway resurfacing is required to accommodate traffic shifts.

These items will all be carefully considered by Patrick's engineers to ensure that there are no surprises during Phase II and III. With a potential reconstruction scope of work for Happ Road, we would propose half-at-a-time construction, with temporary pavement to maintain one lane of traffic in each direction at all time. If roundabouts are selected, there may be substantial construction operations benefits with the use of a one-way detour for Happ Road (with one direction of traffic diverted to nearby Northfield Road to the west) to open up more physical space to construct the circular pavement sections. We will rely on our construction engineers for constructability reviews at each stage of plan development. This will include any special requirements that may be needed for construction access, equipment storage areas, and interferences with utilities.

Utilities

Utilities will also be located and any conflicts with the proposed improvement will be identified and either avoided or documented with the appropriate coordination performed with the utility owner (whether publicly or privately owned), commensurate with this phase of project development. **Patrick is well-suited to address any utility issues, having served as the Statewide Utility Coordination Program Management Consultant for the Illinois Department of Transportation.** Avoidance of all utilities will expedite the overall project; however, some relocation may be required. Overhead electric lines run along the east side of Happ Road. Also in the east parkway are extensive telecom lines and installations, as well as gas main. Sanitary and water main primarily exist in the pavement. Patrick's plan will be to obtain detailed location information as early on as possible in the study process, coordinate with the utility owners to confirm this information, and then design around the facilities, where possible. Where relocations are required, our experience has been to aggressively coordinate with the utility owner to explain our project and then strive for commitments from the utilities for the timeframes for their relocation work. In this manner, we should avoid all potential delays associated with utilities.



Utilities in the East Parkway

Geotechnical

Should the proposed widening to add a center bi-directional left turning lane exceed 6' or if short retaining walls are proposed in some areas to avoid or minimize impacts to adjacent properties, a Roadway Geotechnical Report (RGR) or a Structure Geotechnical Report (SGR) will need to be prepared as part of the study process. The RGR will support the pavement design (determination of pavement type and approximate thickness) and the SGR will guide the foundation design and type of wall proposed for the specific situation. The Geotechnical Reports and investigations will be prepared per the guidelines of the IDOT Geotechnical Manual and will provide information on the soil conditions to be used in the pavement or foundation design and soil remediation strategies. Patrick has highly experienced geotechnical engineers on our staff, to prepare the geotechnical reports and recommendations and interpretation of the applicable soils data.



Value Engineering

Value Engineering (VE) is a creative, collaborative approach with potential for reducing the capital, operating, and maintenance costs of a project. VE reviews the project to identify and analyze the functions that it has been designed to perform. We calculate the project's total life cycle costs and consider alternative designs to determine the most cost-effective method of performing the identified functions consistent with the requirements for quality, reliability, constructability, maintainability, and safety. The most effective approach to gaining maximum benefit from value engineering exercises requires a strategic evaluation of the project to identify areas of synergy or commonality that could be separated from other parts of the project, a clear methodology for selecting targets or items for specific focus by the value engineering team, an understanding of the overall objectives and challenges of the project including any risk factors, and the specific identification of key resources that make up the value engineering team that are aligned with the type of work we are evaluating.

How we do it!

Patrick recently completed a Value Engineering Study for a federally funded major add-lanes/ reconstruction and railroad grade separation project that met all IDOT requirements.

The ideal time to perform a VE Study on a project is towards the end of Phase I and prior to the commencement of Final Design Engineering. As part of the VE study, Patrick holds a workshop in which engineers, who have not been part of the design process, review the entire project from a constructability standpoint, in which they consider materials, methodology and sequencing of the project's construction. After the workshop, the VE team summarizes the potential savings identified during the workshop. We review the summarized findings with the designers to evaluate the validity of each VE finding. Once the VE findings have been reconciled, we present the findings for your consideration before implementing them into the phase II design.

Project Development Report

Once the public involvement activities are complete and all individual discipline activities have been developed to a relative level of completion, the draft Project Development Report (PDR) will be prepared for formal review and processing by the Village. Patrick will initially solicit approval of the format of the report, to ensure it is consistent with the latest IDOT guidelines. Regardless of the form used, the report will address the description of existing conditions, the Purpose/Need for the Project, a detailed description of the proposed improvements, and a summary of local and public involvement. The report will also address lighting, erosion and sediment control, utilities, any ADA issues, geotechnical considerations, aesthetic enhancements, traffic maintenance during construction, local cost participation requirements, and maintenance considerations. A construction cost estimate will be provided. Maps, charts, and typical sections will be then compiled for inclusion. The report will be checked, edited, and bound for submittal to be reviewed. Once all comments have been addressed, Patrick will complete the final PDR for the improvement. Based on our extensive past experience in working with IDOT, both at the district and central office levels, we will be able to expedite processing and provide a PDR that addresses

How we do it!

Patrick has an engineer working in the IDOT Bureau of Programming, so we are continually aware when report formats are updated.

all issues that IDOT will be looking for the first time, so that multiple reviews are not necessary and an expedient process can occur towards final Phase I Design Approval. Further, our Public Involvement & Agency Coordination lead, Chris Kersten, is currently working at the IDOT District Office in the Bureau of Programming (Phase I). Chris will keep us up-to-date on the latest IDOT policies, procedures and preferences, and can also internally follow-up on any reviews being performed by any internal bureaus or sections. Finally, any commitments made by the Village in regard to the project will be well documented and clearly and prominently presented in the PDR, with special attention to provide sufficient detail of what is to be done to meet the commitment, who's responsible for each commitment, and when the action associated with the commitment must be performed.

Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

Executive Summary



From project inception to completion, Patrick provides unparalleled highway, drainage, and traffic engineering. Our services include the preliminary to final design of roads, utilities, and stormwater management facilities in both rural and urban environments. Our seasoned project managers and engineers have comprehensive planning, design and construction expertise. Taking a programmatic approach to transportation projects, Patrick considers the client and the end user in the design of projects. We provide our clients with unmatched project planning, value engineering, and constructability expertise.

For this project Patrick is partnering with **Gewalt Hamilton Associates, Inc. (GHA)** to provide Traffic Engineering, Survey and Drainage support. GHA is a Professional Engineering and Land Surveying firm headquartered in Vernon Hills, is licensed and registered in the State of Illinois. For three decades, GHA has been providing civil engineering services to municipal governments, townships, county and state agencies, school districts, park districts, colleges and universities, and private organizations. The firm's Principals have long-standing career involvement in the public sector, a tradition that continues at GHA. GHA serves as full-time Village Engineer for thirteen municipalities and currently acts as the Traffic and Transportation Consultant for thirteen municipalities. GHA also provides periodic services for numerous other communities, institutions and developers. These work assignments include traffic planning, traffic impact studies, parking lot layout, and vehicle and pedestrian circulation, from planning through design and construction phases.



Teska Associates, Inc., (Teska) will also be part of our team to provide streetscape and landscape services. Founded in 1975, Teska is a planning and landscape design firm based in Evanston and Plainfield, Illinois. Teska specializes in community planning, development economics, landscape architecture, and site design. Having completed dozens of comprehensive plans, corridor and sub-corridor plans, special area and downtown plans, zoning and transit-oriented / urban redevelopment projects – Teska strives for all to incorporate cutting edge designs, new media, and visualization graphics to enhance the clarity and usability of the plans.

Their experience includes both public and private sector clients – so they understand the perspectives from both sides of the development business. Teska believes strongly in community participation and stakeholder processes that inspire community consensus. A key to that public input is using design techniques and interactive media to communicate goals for the built environment, development scenarios and plan alternatives - as well as supporting creative brainstorming and discussions. Teska's processes breathe life into projects by creating a pictorial sense of place that residents can see and relate to. These processes are used throughout our work, from developing ideas and inspiring community input, to creating plan strategies and implementing projects.

Patrick will also utilize the services of **Huff & Huff, Inc.** for Wetlands & PESA. Founded in 1979, Huff & Huff, Inc. is a multidisciplinary firm providing environmental, civil, and biological engineering services. Huff & Huff is located in Oak Brook, Illinois, but has successfully developed a national practice and provides services across all environmental fields. Their areas of expertise include the following: natural resource assessments, wetlands, remediation design, wastewater design, stream surveys, sustainable solutions, environmental site assessments, air quality, underground storage tanks, risk assessment, hazardous waste management, and transportation-related environmental issues.





Key Staff Bios

Jarrod Cebulski, PE – Project Manager

Mr. Cebulski spent 13 years of his career at IDOT District One, with 11 of these years spent working in Phase I. Jarrod is a well-known leader in terms of Preliminary Engineering principles and execution the industry. His current responsibilities at Patrick, where he has worked for over 10 years since departing IDOT, include overseeing all Phase I, Traffic, and Feasibility Studies for Transportation Projects at Patrick Engineering, encompassing all aspects, such as project scoping and start-up, traffic and geometric studies, highway capacity analyses, traffic operations modeling, crash analyses, environmental studies and analysis, agency/stakeholder coordination and public involvement, report preparation, preliminary cost estimates, quality assurance/quality control, and project and contract management. Jarrod is Project Director for many major highway reconstruction studies and plans and is also a qualified Environmental Lead for Environmental Assessments for highway projects. Jarrod specializes in the development of Phase I Corridor Studies such as this one for the Happ Road improvement project.

Nick Schilling, PE – Roadway Engineer

Mr. Schilling has 14 years of professional experience in transportation engineering, encompassing all aspects, such as project scoping and start-up, geometric studies, accident analyses, environmental studies, agency/stakeholder coordination and public involvement, report preparation, preliminary cost estimates, and quality assurance/quality control. Mr. Schilling's responsibilities span all aspects of design work, including design, permitting, cost estimating, scheduling, contracting, and safety.

Paul Lopez, PE, SE – QA/QC

Mr. Lopez has more than 33 years of experience in transportation engineering with emphasis on both roadways and structures. He has led phase I studies, including Bridge Condition Reports, for IDOT and local agencies, and leads Patrick's internal QA/QC policy team.

Madukhar Reddy Karnati, PE, CFM, CPESC – Drainage Engineer

Mr. Karnati has more than 12 years of professional experience in hydraulic and hydrologic design, roadway geometric design and traffic analysis. He has experience with hydrologic analyses of watersheds; hydraulic design of sewers, channels, detention basins and control structures; permits related to storm water management; erosion and sediment control; and roadway design and plan preparation; and traffic studies including traffic projections, intersection capacity analysis, signal warrant analysis.

Eric Chow, PE, CFM – Drainage Engineer

Mr. Chow is a water resources engineer with more than ten years of experience in hydraulic and hydrologic design. Eric is well-respected by the IDOT D1 Hydraulics Section for his modeling approach and in-depth understanding of the various software tools available. His experience includes more than 10 Phase I drainage studies, including several projects as part of a various/various contract with CCDTH.

Karl Jensen, PE, CFM – Drainage Engineer

Karl A. Jensen is a Registered Professional Engineer and a Certified Floodplain Manager practicing for 13 years as a Civil Engineer, with emphasis on stormwater management and site development. Mr. Jensen has been in the employ of Gewalt Hamilton Associates, Inc. (GHA) since 2008. Prior to joining GHA Mr. Jensen was employed by Greengard, Inc. in Lincolnshire, Illinois.

Mike Vasak, PE – Civil Engineer

Mr. Vasak has more than seven years of professional experience in the design of transportation engineering projects. He has worked with state, county, municipal, and private clients performing Phase I Studies, including multiple studies for IDOT. His experience includes geometric roadway design and analysis, traffic studies, intersection design studies, highway capacity analysis, report and exhibit preparation, quantity calculations, construction progress schedule preparation, and maintenance of traffic concepts and plans.



Jeremy Reynolds, PG – Wetlands/PESA

Mr. Reynolds has 20 years of experience as an environmental consultant. Experience includes risk assessment, Phase I and II environmental site assessments, subsurface investigation and remediation including voluntary and consent order remediation sites involving petro and agri-chemicals, RCRA, and CERCLA hazardous waste sites, solid and hazardous waste management. In addition, Mr. Reynolds has transportation project experience related to municipal, local highway, interstate, and railroad projects including special and hazardous waste screening and direction of soils to clean construction and demolition debris (CCDD) landfills; Preliminary Environmental Site Assessments (PESA) and Preliminary Site Investigations (PSI).

James C. Novak – Wetlands/PESA

Mr. Novak has over 34 years of environmental experience. His areas of expertise include Wetland Delineation/Mitigation/Permitting, NEPA Documentation/EIS, EA, Constructed Wetland and Habitat Restoration Section 106 Reports, Section 4(f), and Threatened and Endangered Species Studies

Jodi Z. Mariano, PLA, ASLA, CLARB – Landscape/Streetscape

Ms. Mariano's backgrounds in landscape architecture and architecture have prepared her well to guide community urban design projects. Jodi brings a research-oriented, contextual approach to urban design, providing unique design solutions for our public and private sector clients. Jodi has directed public processes which have resulted in useful master plans, successful funding applications and dynamic implementation projects.

Dominic Suardin – Landscape/Streetscape

Mr. Suardin's background includes extensive knowledge in both landscape architecture and planning professions. Joining Teska in September of 2012, Dominic's experience includes a broad range of urban design, land planning, landscape design, construction documents, and planning projects, with a passion for creating special places for people to live, work and play.

Tim Reesman, PE, PTOE – Geometric & Safety Studies

Mr. Reesman has 10 years of professional experience in the design of roadway projects. His experience includes multiple intersection design studies, maintenance of traffic plans, review and interpretation of crash data and reports, and traffic signal design. He preliminary engineering projects have ranged from small intersection improvements to major interstate corridor and interchange reconstruction studies. His experience includes more than 10 Phase I studies. He is a PTOE and is our designated traffic engineer for this project.

Jason Chae, PE – Geometric Studies

Mr. Chae has five years of professional experience working on transportation engineering projects. His work experience has involved Phase I traffic studies, including multiple IDOT studies. He also has experience with road design and traffic impact analysis for state, county, municipal and private clients in the state of Illinois.

Daniel P. Brinkman, PE, PTOE – Traffic

Mr. Brinkman is a Licensed Professional Engineer with over 19 years of experience in the traffic engineering and transportation planning fields. His experience covers both the public and private sectors, with clients including municipalities, retail and residential developers, school districts, park districts and hospitals/medical centers.

Art Penn, PE – Traffic

Mr. Penn is responsible for managing the traffic data as it relates to computer input and out-put. He also maintains the traffic databases and provides a reliable backup system for all traffic count information. Mr. Penn has been managing GHA's traffic data collection projects for the past seven years.

Steve Lynch, PE – Safety Studies

Mr. Lynch has more than 14 years of experience in civil engineering and project management. His responsibilities have included project management for Phase I projects for IDOT, CDOT, and the CDA at O'Hare International Airport, including several projects with CCDTH, such as the 171st Street Reconstruction, Center Street



Reconstruction and Widening in Harvey, and the CCDTH Drainage Work Orders Contract including 170th Street in South Holland. Steve's past experience and excellent working relationship with CCDTH will be of great benefit to understanding their requirements and securing quick approvals.

Eric Boelter, PE – Maintenance of Traffic

Mr. Boelter has six years of professional experience in the industry. He has worked with state, county, municipal, and private clients performing Phase I Studies, including multiple IDOT traffic impact studies. His experience also includes traffic signal timing and operations, intersection design studies, highway capacity analysis, airport landside transportation planning, geometric roadway design and analysis, and construction inspection.

Brian Klabel, EIT – Constructability

Mr. Klabel has 15 years of professional engineering experience in the management and inspection of construction engineering projects, primarily for local agencies. He has managed and coordinated road and bridge construction projects. Mr. Klabel's responsibilities span all aspects of construction and design work, including specification compliance, bridge construction inspection, interstate roadway inspection, cost estimating, scheduling, contracting, layout and surveying, and safety.

Jon Past, PLS – Survey

Mr. Past is a Licensed Professional Surveyor with more than 30 years of experience with emphasis on Topographical Surveys, A.L.T.A/A.C.S.M. Land Title Surveys, Settlement Monitoring Surveys, Boundary Surveys, Plats of Right of Way, Easement, Dedication, Subdivision, and Annexation.

Matthew Breitenbach, PE – Geotechnical Engineer

Mr. Breitenbach has more than 18 years of experience in the design and management of geotechnical, site civil, and environmental projects. Responsibilities include directing and managing subsurface investigations, interpreting field and laboratory data, preparing geotechnical reports including recommendations regarding site preparation and foundation design, analyzing the stability of natural and manmade slopes using computer modeling software, performing various analyses for design of deep foundation systems, selecting and installing subsurface instrumentation systems, inspecting dams, and preparing engineer's cost estimates for project planning and bid comparison.

Christy Hawthorn, PE – Lighting

Ms. Hawthorn is responsible for all aspects of complex electrical engineering projects from bidding through final design. This experience includes detailed electrical design, project coordination, detailed analysis/computations, and associated power distribution, substations, lighting, and communication systems. Specific engineering responsibilities include one-line power diagrams, three-line power diagrams, protection and control schematic diagrams, wiring and connection diagrams, relay setting preparation and implementation, review of manufacturer submittals, power system calculations, preparation of contract documents, bid analysis, and witnessing factory tests.

Chris Kersten – Public Involvement & Agency Coordination

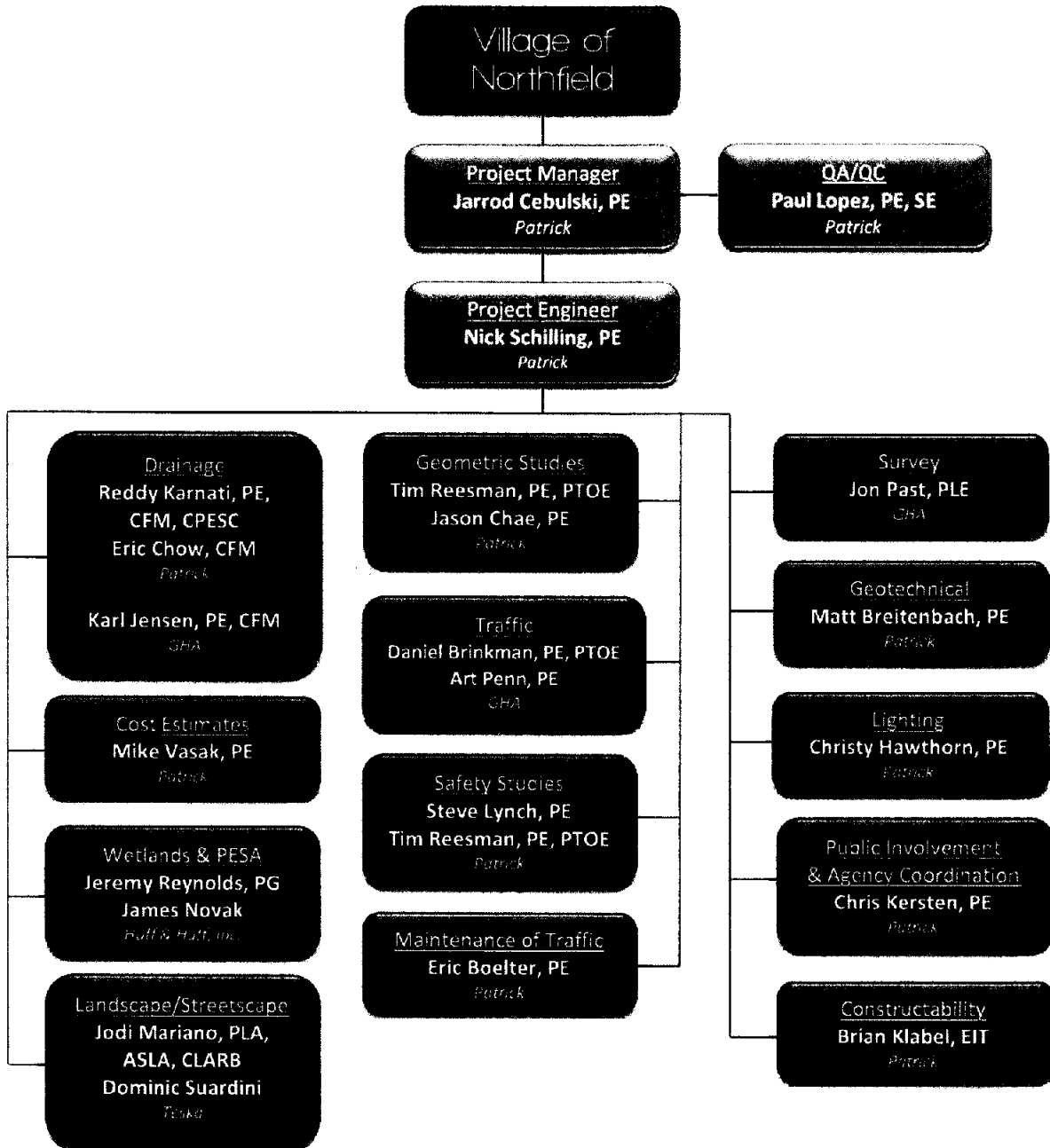
Mr. Kersten has 14 years of experience in the area of transportation engineering. He has worked with state, county, municipal, and private clients performing Phase I Studies, including his current assignment of being on-site with IDOT District One in the Bureau of Programming where he is overseeing other consultants prepare Phase I Studies. His experience includes more than 25 preliminary engineering studies with IDOT.

Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

Staff Information and Organization Chart

The key personnel assigned to this project were selected due to their Phase I experience and familiarity with the Village and IDOT. In addition, we have a staff member currently assigned full-time to IDOT District One in Phase I, which keeps us up-to-date on the latest procedures and gives us the ability to coordinate internally and follow-up on submittals.



Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

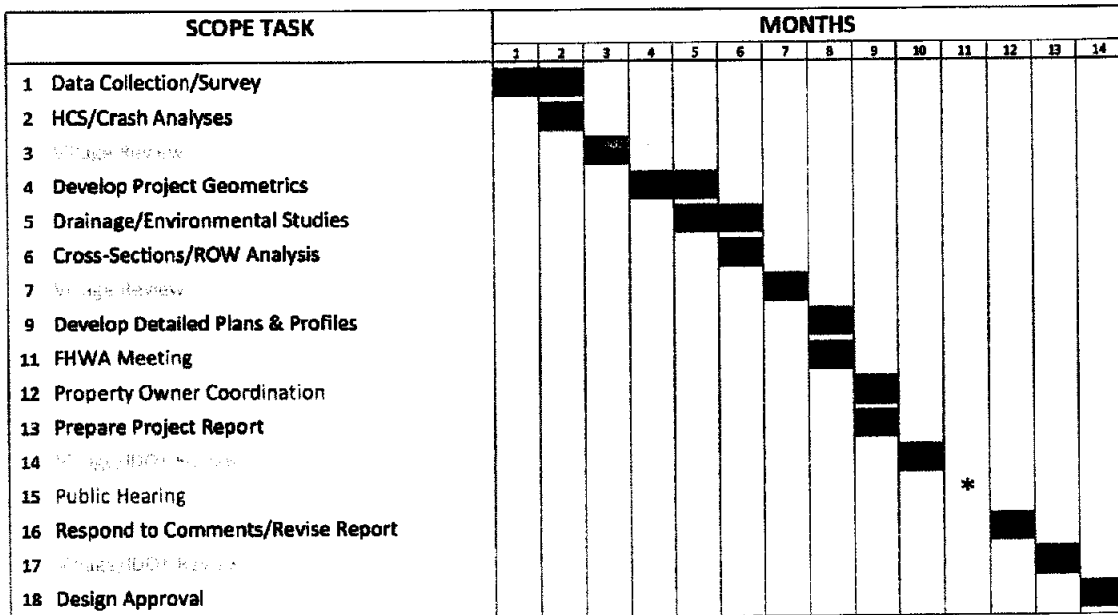
Schedule

For this project, we envision a 14-month Phase I schedule, as presented below in the bar chart graphic. The Patrick Team has proven our ability to work through the preliminary engineering issues involved, perform the analysis of alternatives, and provide recommendations to allow quick informed decision-making and maintain project progress. We do this by a commitment to an enhanced level of project communication. A technique that has worked well for us on previous projects is to hold biweekly status meetings or conference calls as a way to quickly touch base on recent accomplishments, upcoming tasks, and any issues that are hindering project progress. We will bring this approach and expertise to your project with the goals of completing the Phase I engineering study on an expedited schedule and ensuring all issues are resolved during Phase I to avoid any surprises during subsequent phases of project development and implementation.

"A key item in the college's criteria was the estimated time to completion of each phase of the project. Patrick's timeline commitment was the most aggressive and it has lived up to its part of the commitment to expedite this process"

David Quillen, Exec. VP of Finance & Operations, WCC for IL Route 47 at College Drive

Phase I Project Schedule





Experience of Firm

Patrick Engineering Inc. (Patrick) is a nationwide engineering, design and project management firm with a long history of success on a variety of complex infrastructure projects. Founded in 1979 by CEO Daniel Patrick Dietzler, Patrick has grown to employ over 240 individuals and has performed work throughout the United States and Canada. Truly a nationwide firm, Patrick holds 14 offices across the United States including its headquarters in Lisle, IL. Our headquarters are located at 4970 Varsity Drive in Lisle, Illinois. This is also the office where the services for this project will be performed.



Our expanding client list includes key government agencies, private and public utilities and FORTUNE 500 companies in a broad range of industries. We focus on providing pre-construction services, procurement, and construction management of heavy civil infrastructure projects. We accomplish this with technical experts in the fields of civil, transportation, structural, hydraulic, environmental, geotechnical, electrical engineering, geology, surveying, construction management, process control, and GIS. *Engineering News Record (ENR)* has included Patrick in its ENR Top 500 each year since 1993. Patrick is committed to achieving our client's vision and adding value to each project we touch.

Most importantly, Patrick understands the meaning of **Partnership**. It means proven expertise, a positive outlook and a proactive approach. It means asking relevant questions and communicating in a timely manner to understand short-term needs and long-term objectives. It means recognizing the vision and validating the contributions of everyone on the team. Good partners understand the importance of collaboration and appreciate the responsibility of leadership. They keep working to get the job done, regardless of what it takes.

At Patrick, we've embraced a partnering philosophy for **more than 36 years**. You see it in the way we work, the people we hire, and the pride we take in a job well done. Because for us, partnering isn't just a word. It's a way of doing business and how we will approach our work for the Village of Northfield.

Patrick provides unparalleled highway, traffic, and drainage engineering. Our services include the preliminary to final design of roads, highways, bridges and interchanges in rural, urban and mass transit environments. Our seasoned project managers and engineers have comprehensive planning, design and construction expertise. Taking a programmatic approach to transportation projects, Patrick considers the client and the end user in the design of projects. We provide our clients with unmatched value engineering and constructability expertise, as well as construction management services. Patrick has extensive experience in Phase I Engineering services for our transportation clients. Our proposed Project Manager, Jarrod Cebulski, PE, previously worked at IDOT as Head of Consultant Studies in the Bureau of Programming, performing Phase I Studies for highway improvement projects of a variety of sizes and scopes.

Under Jarrod's leadership, Patrick has prepared Phase I Studies and received 30 individual Design Approvals since mid-2008 for projects in Northeastern Illinois. These projects have been for IDOT, counties, municipalities, and townships and have utilized both local and federal funding (see list on the following page). As requested we have also provided full descriptions some of our projects in Section 3.





	Project	DA Date	DOT	Local
1	IL 59 @ US 30	7/31/2008	*	
2	IL 38 @ Gary's Mill Road	10/21/2008	*	
3	IL 72 @ Moon Lake Boulevard	12/16/2008	*	
4	Rakow Road, Ackman Road to IL 31	1/28/2009		*
5	IL 50 @ Morning Glory Drive	3/4/2009	*	
6	I-80 @ I-57 EB to NB Ramp	3/31/2009	*	
7	IL 31/IL 56 @ I-88 Ramps	7/21/2009	*	
8	West River Road Culvert	8/10/2009	*	
9	US 6 @ Bell Road	9/4/2009	*	
10	Narragansett Avenue, 87th Street to 79th Street	10/23/2009		*
11	IL 47 at Plank Road	10/28/2009		*
12	IL 72 @ Randall Road	2/11/2010	*	
13	Madison Street over Union Station	3/5/2010		*
14	IL 38 @ Meredith Road	6/2/2010	*	
15	Fullerton Avenue over Salt Creek	9/3/2010		*
16	US 12 @ Honey Lake Road	10/27/2010	*	
17	IL 58 @ Shales	12/31/2010	*	
18	Wolf Road @ 183rd	12/31/2010	*	
19	IL 53 @ New River Road	1/31/2011		*
20	75th Street over East Branch DuPage River	1/31/2011	*	
21	US 34 @ North Aurora/Raymond	2/6/2011	*	
22	IL 171 @ 104th	6/30/2011	*	
23	US 20, Bartlett to Park	8/31/2011	*	
24	IL 38 at County Farm Road	12/9/2011		*
25	Washington Street, Hainesville Road to Lake Street	1/13/2012		*
26	IL 47 at Waubensee Drive/Old Oaks Road	10/1/2012		*
27	115th Street at Pulaski Road	12/24/2013	*	
28	I-80 West Ramps at Briggs Street	3/7/2014	*	
29	US 12/20/45 at US 34	5/6/2014	*	
30	IL 53/68 (Dundee Road), US 12 to Kennedy Drive	10/28/2014	*	



Projects

Patrick has extensive experience in Phase I Engineering services for transportation improvements for our local agency clients and IDOT. Our proposed Project Manager, Jarrod Cebulski, PE, previously worked at IDOT District One as Head of Consultant Studies in the Bureau of Programming, performing and overseeing the preparation of Phase I Studies for highway improvement projects of a variety of sizes and scopes in Northeastern Illinois.

On the following pages, we have provided the requested five (maximum per firm) examples from our team of relevant project experience utilizing federal funds.

Patrick Engineering Projects

Narragansett Avenue – 87th Street to 79th Street
Burbank, Illinois



Project Details

Owner Reference
Cook County
Department of
Transportation and
Highways
John Yonan, PE
312.603.1700

Project Cost
\$3.96 Million
(Construction)
\$434,605 (Patrick)

Duration
2009

Relevance

- Public Involvement
- Traffic analysis
- Drainage study
- Coordination
- Pedestrian features

Patrick performed a Phase I project development report and drainage study for the improvement of Narragansett Avenue from 87th Street to 79th Street in the City of Burbank for the Cook County Highway Department. The goal of the proposed improvement was to provide a cost-effective highway facility with sufficient capacity to satisfy the design-year traffic demands, while improving safety.

Patrick coordinated closely with the local municipality, as well as the Illinois Department of Transportation (IDOT), to ensure the improvement would be eligible for federal funding. Extensive local community outreach occurred throughout the Phase I process, and we held a public meeting for the study. Other scope items included a drainage study for a new closed-storm-sewer drainage system, identification and correction of a number of potential utility conflicts, an extensive exploration of the lighting system, and utilization of a one-way detour for this project, working with the Burbank Fire Department to ensure the most appropriate direction. We maintained a single lane for north-bound traffic and detoured south-bound traffic while the project was constructed. Patrick filled in multiple existing sidewalk gaps and installed ADA-accessible ramps, with detectable warnings and more gradual slopes, at all crossroads along the corridor. We also designed bus pad locations to accommodate bus users.



Illinois Route 38 at County Farm Road
DuPage County, Illinois



Project Details

Owner
DuPage County Division
of Transportation
Christopher Snyder
630.407.6900

Project Cost
\$6.3 Million
(Construction)
\$340,000 (Patrick)

Duration
2002-2009

- Service Provided**
- Construction Services
 - Transportation Engineering

Patrick was retained to assist DuPage County in reducing motorist delays by improving the heavily traveled intersection of Illinois Route 38 (Roosevelt Road) at County Farm Road. In this area, Roosevelt Road is a Strategic Regional Arterial (SRA) route, as identified by the Illinois Department of Transportation (IDOT) and currently carries up to 34,000 vehicles per day. The intersection improvement includes additional auxiliary turning lanes, reconstruction, new barrier median, enhanced pedestrian safety features, and the replacement of a major culvert carrying Winfield Creek beneath the intersection of Roosevelt Road at Shaffner Road. Numerous improvement scenarios were analyzed via highway capacity software to determine the preferred improvement alternate. Given the proposed barrier median, the intersection needed to be designed to accommodate U-turn maneuvers on two of the legs. Section 4(f) coordination was also performed due to permanent easements that were required from the DuPage County Forest Preserve District. In order to address compensatory storage issues, excavation was proposed along the channel of Winfield Creek several blocks to the north of the roadway project. A westbound left turn lane was also provided at the unsignalized intersection at Shaffner Road to improve safety and operations along Roosevelt Road. The project was designed to comply with IDOT Complete Streets policy with a shelf being provided in the parkway to accommodate a future 10' wide bikepath.

Patrick's work on the project included route survey, development of geometrics including plan and profile, crash analyses, Intersection Design Study, bridge condition report, environmental coordination, drainage study, and preparation of a categorical Exclusion Group II Project Report.





US Route 20 from Bartlett Road to Park Avenue
Cook County, Illinois



Project Details

Owner Reference
Illinois Department of
Transportation
Kimberly Murphy
847.705.4106

Project Cost
\$4,714,160
(Construction)
\$174,714 (Patrick)

Duration
01/2010-Ongoing

Service Provided

- Phase I Studies
- Crash Analysis
- Traffic Analysis
- Geometric Design
- Location Drainage Study
- Local Agency Coordination
- Phase I Project Development

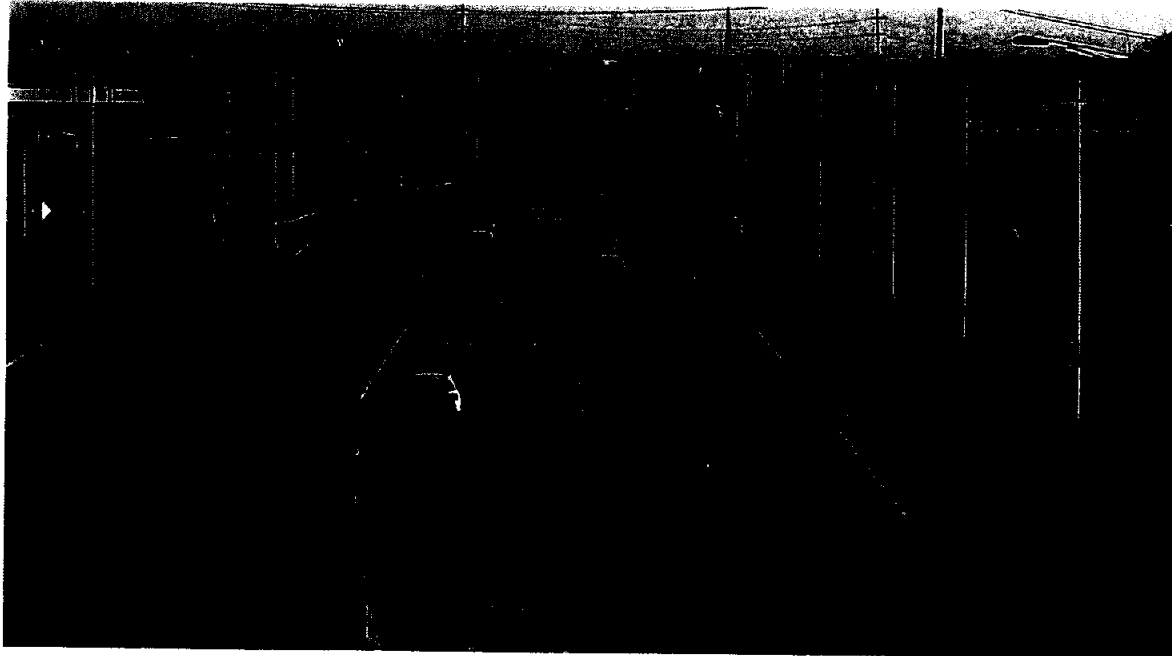
Patrick performed a Phase I Study for the Illinois Department of Transportation (IDOT) Region One for U.S. Route 20 from Bartlett Road to Park Avenue in Cook County, Illinois. This assignment was part of a blanket contract with IDOT’s Bureau of Programming Project Studies Section. This project was part of the federal Highway Safety Improvement Program (HSIP) as administered by IDOT. The program’s purpose is to reduce traffic fatalities and serious injuries on all public roads. This project addressed an increased occurrence of collisions based on a lack of turn lanes throughout this corridor section.

The project included site data collection, evaluation and interpretation of crash data, capacity and queue analyses, local agency coordination, and upon IDOT approval of concept geometry, final Phase I plans were developed as part of the Project Development Report. Patrick prepared and coordinated the project plans with the Village of Bartlett as well as the Village of Streamwood, utility companies, and internally with IDOT to ensure all interests were considered. The scope included adding both a left-turn and right-turn lane on US 20 at Bartlett Road, a right-turn lane at Oak Avenue, widening the corner radii to allow the truck volume to more easily navigate the intersections, traffic signal modernization, adding a two way left turn lane along US 20, and pedestrian and bicycle accommodations, including a multi-use path, in accordance with IDOT’s Complete Streets policy.





Rakow Road, Ackman Road to Illinois Route 31
McHenry County, Illinois



Project Details

Owner Reference
McHenry County Division
of Transportation
Joseph Korpalski
815.334.4962

Project Cost
\$32 Million
(Construction)
\$2.3 Million (Patrick)

Duration
08/2005-11/2010

Service Provided

- Ground survey
- Intersection design studies
- Horizontal and vertical alignment evaluations
- Right-of-way evaluation
- Phase I Engineering study
- Drainage study

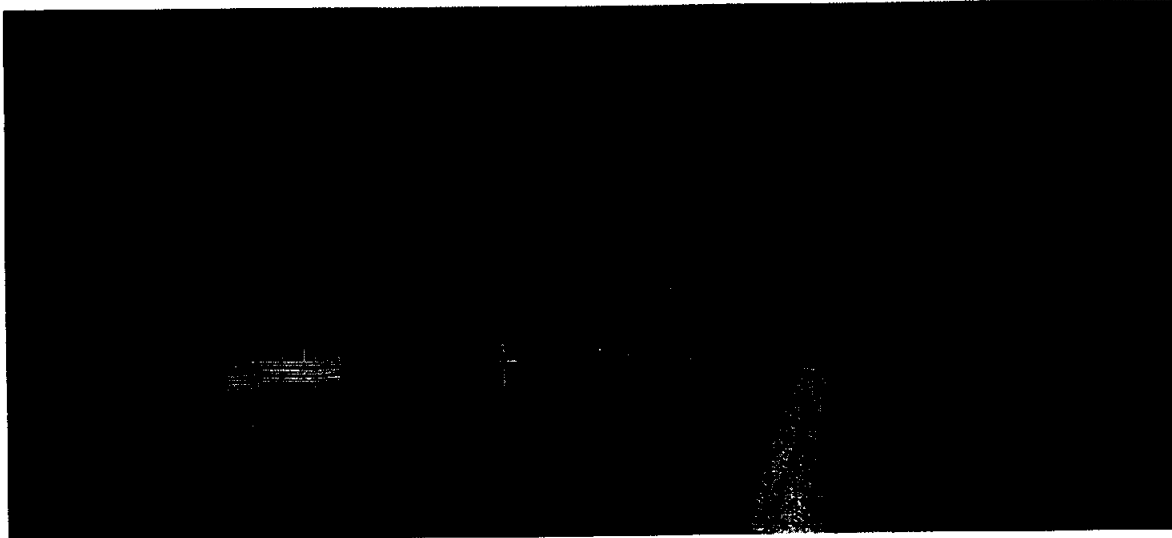
Patrick performed a Phase I engineering and environmental study and Phase II contract plans preparation for the widening of Rakow Road to a four six-lane cross-section with a median. The approximately 3-mile length of road runs from the Ackman Road intersection to Illinois Route 31 in McHenry County, Illinois. The goal of the project is to provide a cost effective highway facility with sufficient capacity to satisfy the design year (2030) traffic demands while improving safety.

Initially, Patrick made a thorough field review and considered potential areas of concern, such as speed limits, drainage facilities, geometric deficiencies, structure conditions, off-road features, lighting/utility impacts, and special land uses. A ground survey was also performed to establish horizontal and vertical control and existing roadway alignments. Then, Patrick studied traffic and accident data in order to determine accident patterns and problem areas. These studies, in turn, led to geometric intersection configuration investigations that could help meet traffic and safety needs.

After these initial studies, Patrick developed geometric alternatives in order to determine areas that could be improved. This entailed creating critical cross-sections that would help determine approximate land acquisition needs and impacts to sensitive areas, as well as utility impacts and construction cost estimates. Patrick prepared a Location Drainage Study detailing the stormwater management system for the selected alternative as well as a Hydraulic Report for a floodway crossing on Crystal Creek. A Bridge Condition Report was also prepared for the box culvert at this crossing. Patrick prepared a Project Development Report (PDR) for this improvement, which were approved by IDOT. A public meeting and public hearing were also held for this project.



Washington Street, Hainesville Road to Lake Street
Lake County, Illinois



Project Details

Owner Reference
Lake County Division of
Transportation
Chuck Gleason
847.362.3950

Project Cost
\$34 Million
(Construction)

Duration
2009-2015

Service Provided

- Phase I & II
Engineering
- Environmental Study
- Drainage Studies &
Design
- Topographic & ROW
Survey Services
- Structural Studies &
Design
- IDOT/FHWA
Coordination
- Public Involvement
- Pump Station Design
- Track Design
- Railroad Bridge Design

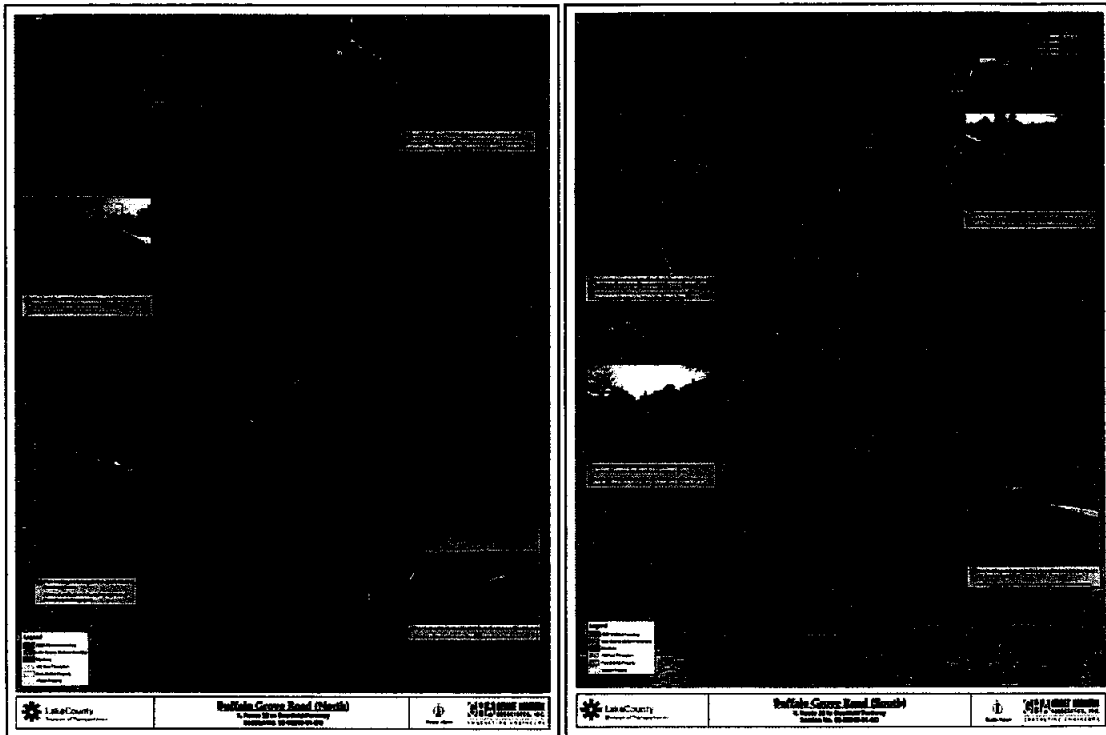
Patrick was retained by the Lake County Division of Transportation to perform a Phase I Engineering and Environmental Study and Phase II Contract Plan Preparation for the improvement of Washington Street from Hainesville Road to Lake Street in the Villages of Grayslake, Hainesville, and Round Lake Park, Lake County, a distance of approximately 1.4 miles. The goal of the proposed improvement is to provide a cost effective highway facility with sufficient capacity to satisfy the design year traffic demands while improving safety. The scope of work includes the reconstruction and widening of Washington Street from a two-lane to a five-lane cross-section, along with a grade separation structure at the crossing of Washington Street and the Canadian National Railroad (CNRR). As part of Patrick's Phase I scope of services, a Project Development Report and a Location Drainage Study were prepared. Stakeholder involvement was also a major part of the Phase I Study, which included public meetings and hearings, as well as smaller local community meetings targeted towards achieving overall consensus on the proposed improvements.

After Phase I Design Approval was received, Patrick began work on the Phase II Contract Plan Preparation for the roadway widening and reconstruction, as well as the new bridge that will carry the CNRR over the lowered Washington Street. The design of the railroad bridge consists of a single track ballast deck through plate girder superstructure supported on concrete abutments. The abutments are designed to accommodate the addition of a future second track. Detailed consideration of construction staging was required to maintain rail and road traffic throughout construction, as well as commuter rail service at the Grayslake Metra Station that is within the project limits. Other improvements include a pump station, sanitary lift station, retaining walls, conversion from an open drainage system to a closed drainage system, traffic signal modifications, and a 10' wide bicycle path and a 6' sidewalk throughout the project corridor.



Gewalt Hamilton Associates, Inc. Projects

Buffalo Grove Road Phase I Study Buffalo Grove, Illinois



Project Details

Owner Reference
Lake County Division of
Transportation
Paula J. Trigg, P.E.
847.377.7400

Project Cost

Phase I: \$686,000
Phase II: \$1.2 million

Duration

Phase I: 05/2011 –
11/2014
Phase II: 01/2015-
01/2017

Service Provided

- Phase I Engineering
- Survey
- Soils and Pavement
Analysis
- Structural Evaluation

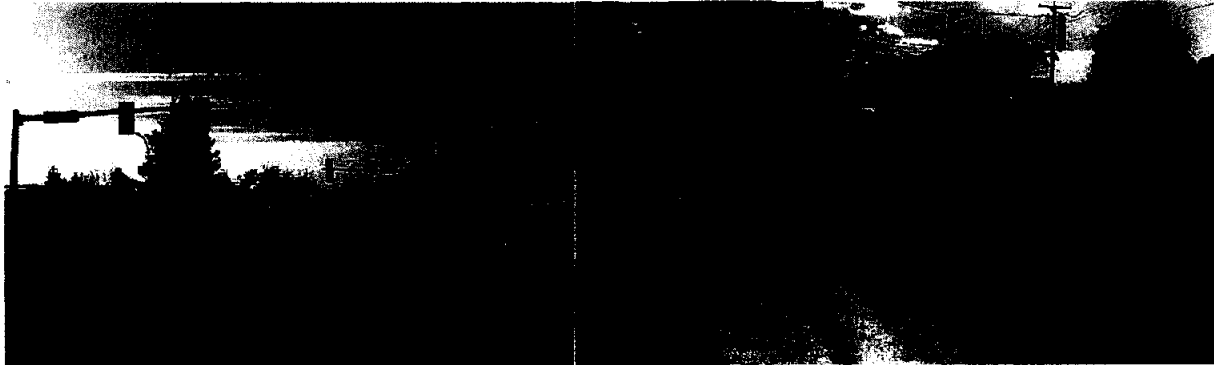
GHA recently completed Phase I Engineering for the improvement of Buffalo Grove Road from north of Deerfield Parkway to south of IL Rte. 22 in Buffalo Grove, Illinois. The project involves adding an additional through-lane in each direction within the 1.9-mile project length. A pavement condition evaluation was conducted to determine the method of rehabilitation.

Services included topographic and right-of-way surveys and preparation of base plans; coordination with a geotechnical specialist for soils and pavement analysis; coordination with a structural engineer for evaluation of two box culverts over Aptakisic Creek and its tributary; coordination with utility companies; traffic and crash analyses, including Intersection Design Studies and 2040 projections; environmental studies, including a wetland delineation and report; preliminary drainage and hydraulic studies; preliminary design plans; a Phase I Engineering Report; and coordination with a public outreach specialist for an extensive community outreach component including both face-to-face meetings and online applications.

GHA is currently under contract with LCDOT for Phase II Engineering Design of the improvements.



Central Street/Carpenter Avenue at Pratt Avenue
Lincolnwood, Illinois



Project Details

Owner References
Village of Lincolnwood
Mr. Timothy Wiberg
847.745.4717
Ms. Ashley Engelmann
847.745.4859

For a number of years the Village of Lincolnwood received complaints about the delays and safety concerns (including a pedestrian fatality) of the Central/ Carpenter Avenue at Pratt Avenue intersection on the western edge of the Village. Pratt Avenue is a border between Lincolnwood and neighboring Skokie, while Central / Carpenter (IDOT jurisdiction) serves as the border between Lincolnwood, Skokie and Chicago. Taking the lead, Lincolnwood worked with the adjacent communities of Skokie and the City of Chicago and sought STP funds to make improvements.

Project Cost

Phase I: \$30,000
Phase II: \$60,000
Phase III: \$65,000
(engineering)
Phase III: \$675,000
(construction)

After completing a preliminary geometric and traffic study to garner support from Skokie and Chicago, GHA was contracted by the Village to provide Phase I and Phase II engineering services. Phase I was processed as a Categorical Exclusion Type I and consisted primarily of an Intersection Design Study (IDS) and Special Waste clearances as well as coordination with IDOT Hydraulics Section. Upon approval of Ph I in June 2013 GHA commenced Phase II design upon approval of the IDOT agreement in October 2013. The existing 4-lane section was re-stripped to provide a separate southbound left turn (and protected-permitted phasing) while maintaining the existing pavement width. The nearly 30-year old traffic signal was brought to current standards and included pedestrian signals.

Duration

Phase I: 08/2011 – 06/2013
Phase II: 06/2013 – 12/2013
Phase III: 07/2014 – 11/2014

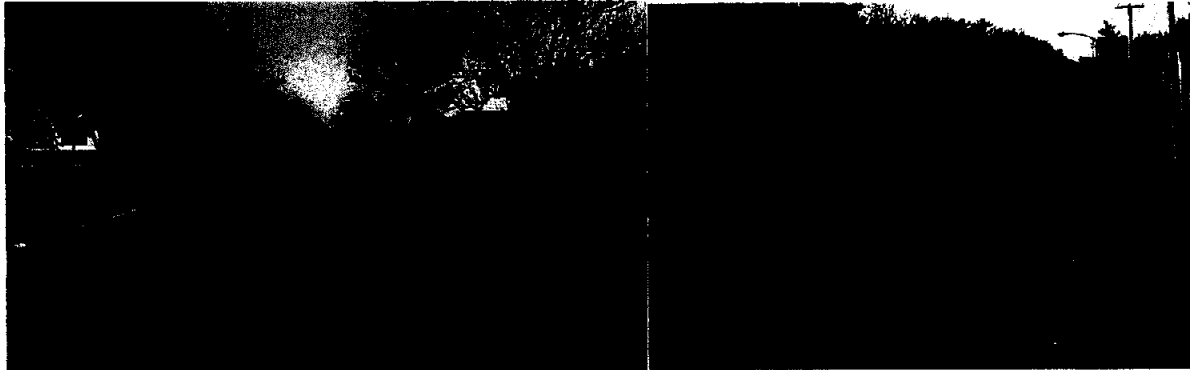
Service Provided

- Geometric Studies
- Phase I and Phase II Engineering





Beck Road Improvements
Lindenhurst, Illinois



Project Details
 Owner Reference
 Village of Lindenhurst
 Matthew Formica
 847.356.8252

Project Cost
 Phases I & II: \$270,000

Duration
 Phase I: 10/2013 – 10/2015
 Phase II: 11/2013 – 04/2016

Service Provided
 • Phase I & Phase II Engineering

GHA was retained by the Village of Lindenhurst to complete Phase I and Phase II design engineering for the improvement of Beck Road from Grass Lake Road to Sand Lake Road. As Surface Transportation Program (STP) funds will be utilized for construction, a Phase I engineering study in accordance with Illinois Department of Transportation (IDOT) procedures for Federal Aid Projects was required.

The project generally consists of resurfacing Beck Road between Sand Lake Road and Rolling Ridge Lane, and between Rolling Ridge Lane and Springhill Lane (approximately 27' from edge to edge of pavement). Improvements include spot repairs of storm sewer, curb and gutter, and roadway base; installation of a sidewalk on both sides of the street; and coordination with ComEd for possible light pole relocations and upgrades.

GHA is also providing Phase II Design Engineering for the reconstruction of Beck Road between Springhill Lane and Grass Lake Road. Improvements including widening and reconstruction of the existing pavement, installation of new storm sewers and underdrains, new sidewalk on both sides of the street, new curb and gutter along the route and re-profiling of the roadway to improve drainage conditions.



Traffic Counting and Data Collection
Various Routes, Various Counties



Project Details

Owner Reference
 Illinois Department of
 Transportation
 William Morgan
 217-782-0378

Project Cost

2005: \$2.6 Million
 2007: \$2.6 Million
 2009: \$4.2 Million
 2014: \$3.0 Million

Duration

2005: 2 years
 2007: 2 years
 2009: 3 years
 2014: 2 years

Service Provided

- Traffic Counts
- Video Data Collection

GHA has been collecting data on traffic since the company's formation in 1981. Accurate data gathering on traffic movements is vital in determining the existing transportation needs and impacts of any change in land use. GHA provides manual and machine counts, plus license plate surveys, pedestrian and bicycle volumes, parking space utilization, neighborhood cut thru traffic data and driving time information.

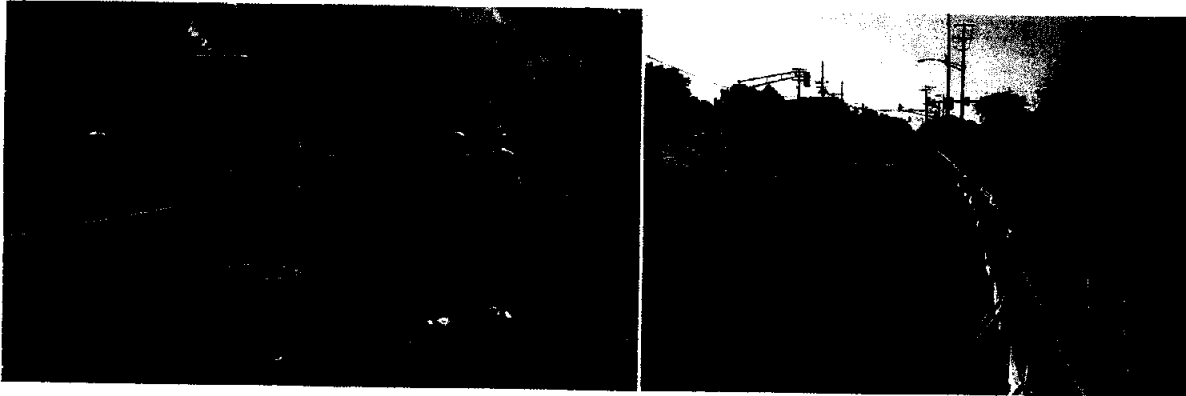
In 2005, 2007 and 2009 through 2012 (three year contract) GHA was selected by IDOT to collect 24-hour Passive Magnetic Sensor (PMS) counts. Each was a two-year contract that covered northern and central Illinois. Our crews worked from the Mississippi River to the Indiana state line, and from the Wisconsin state line to the area surrounding Peoria. Since 2005, we have completed over 35,000, 24-hour volume and vehicle length counts. In the past six years we have collected over 7,500 counts within the City of Chicago as part of this work.

Using the most advanced equipment GHA has developed ways to safely place the counters in a manner that protects our staff and the motoring public. During the 2009 project, GHA collected speed data on a daily basis for up to 150 locations simultaneously, including Interstate Highways, State Routes, County, Township and Municipal Roadways.

In the 2009 program we implemented the use of video data collection completing over 250 stations.



**Kensington Road
Mount Prospect, Illinois**



Project Details

Owner Reference
Mount Prospect Public Works

Sean Dorsey
Sean Dorsey

Project Cost

Phase I: \$156,000
Phase II: \$122,000
Phase III: \$390,000

Duration

Phase I: \$156,000
Phase II: \$122,000
Phase III: \$390,000

Service Provided

- Phase I, Phase II & Phase III Engineering

The Village of Mount Prospect was seeking to have improvements made to Kensington Road, between Forest Avenue and Rand Road, which included complete pavement reconstruction, widening the existing 2-lane roadway west of Elmhurst Avenue to a 3-lane cross section, adding an east-bound right turn lane to the 4-lane section at IL Rte 83, storm sewer, and street lights. Kensington Road is currently under jurisdiction of the Illinois Department of Transportation and upon completion of the project the Village of Mount Prospect will accept jurisdiction. The project will be funded using Federal STP funding, thus requiring a full Phase I engineering study which included planning, project development reports and preliminary design.

GHA was retained by the Village to provide Phase I Engineering services which included the following: Project Coordination and Data Collection, Topographic Survey and Base Plan Preparation, Pavement and Soil Investigation, Traffic and Crash Analyses, Environmental Studies, Location Drainage Study, Preliminary Design Plans and Project Development Report. The Phase I Report was approved by IDOT in February 2011.

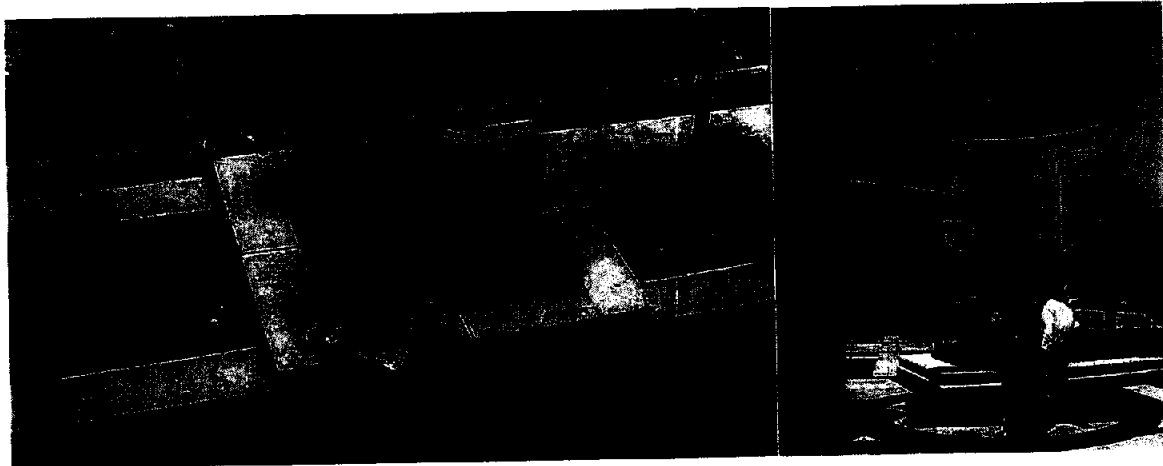
GHA was subsequently selected to provide complete Phase II Design Engineering for the reconstruction of Kensington Road from a two-lane cross section to a three-lane cross section, including enclosed storm sewer system and traffic signal improvements at the intersections of Kensington Road at IL Rte 83 and Rand Road. GHA also provided full-service resident engineering for implementation of the improvements.

Construction was completed in 2014.



Teska Associates, Inc. Projects

Master Streetscape Plan & Urban Design Evanston, Illinois



Project Details

Owner Reference
City of Evanston
Sat Nagar, Senior Engineer
snagar@cityofevanston.org
(847) 866-2967

Project Cost
Maple Street
Reconstruction (\$25,000
Design/\$350,000
Construction)

Sherman Plaza (\$30,000
Design/\$600,000
Construction),

Chicago Avenue
Streetscape (\$20,000
Design/\$100,000
Construction)

Duration
Ongoing

Based in downtown Evanston for 35 years, Teska Associates was part of a multi-disciplinary design team that developed a Master Appearance Plan for the redevelopment of 40 blocks in Evanston's downtown streetscape. Design efforts included a series of analytical workshops, assessment of existing conditions, design concepts and construction documentation.

Since the implementation of the original Master Appearance Plan, Teska has worked on behalf of both the City and private development community on the design and development of some of Evanston's most distinctive streetscapes.

Select streetscape and landscape projects include the following representative projects: Chicago Avenue Streetscape and Walgreens and AMLI developments, Maple Avenue Streetscape, Sherman Plaza, Church Street Plaza, Evanston Hospital, Optima Horizons, Optima Views, The Reserve, Ivy Court Townhomes, Mayfair Neighborhood Enhancements, Callan Avenue Neighborhood Landscape Enhancements.

The above projects all rely on our firm's ability to collaborate with both public and private interests alike. The measure of our success is a seamless merger of a variety of influences to create memorable urban design experiences.



Village Hall & Downtown Enhancements
Glencoe, Illinois



Project Details

Owner Reference
Village of Glencoe
David Mau
davidm
@villageofglencoe.org

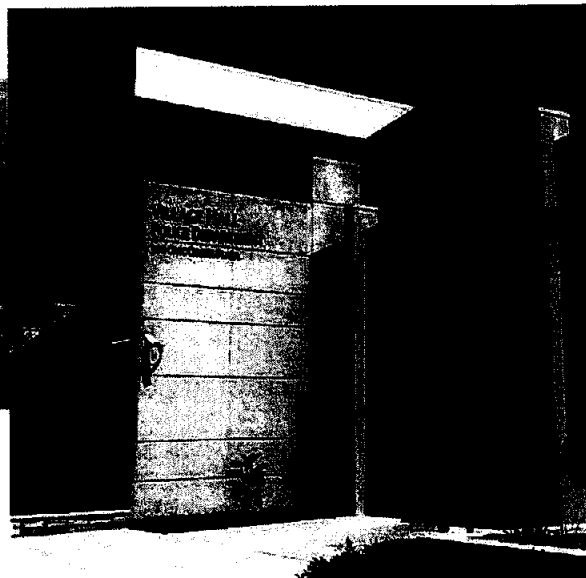
In advance of an upcoming art festival in downtown Glencoe, the Village turned to Teska Associates' landscape architects to guide its spring planting program. Teska worked closely with the Village's Public Works Department to improve the functions and appearances of significant downtown landscapes, including the front entrance of the newly remodeled Village Hall and planter areas within the downtown streetscape.

Project Cost
Village Hall (\$6,500
Design/\$20,000
Construction)
Downtown planting
program (\$5,000
Design/\$20,000
Construction)
Vernon Parking Lot
Reconstruction
(\$15,000
Design/\$300,000
Construction)
Dundee Road Median
(\$5,000
Design/\$15,000
Construction)

Plantings are coordinated to be compatible with existing infrastructure and utilities, high impact public use areas, Public Works maintenance practices, salt and urban tolerance, and superior seasonal interest. Teska's involvement extended beyond the drawing board, providing on-site planting layout and hands-on coordination with Public Works staff.

Duration
Ongoing

Signage & Wayfinding Plan



Project Details

Owner Reference
Village of Glendale
Heights

Joanne Kalchbrenner
jkalchbrenner
@glendaleheights.org

Project Cost
\$350,000 (Construction)
\$40,000 (Design)

Duration
2 years

The Village adopted the signage and wayfinding program to improve the diverse user experience on the Campus. Teska developed comprehensive wayfinding/signage plans that addressed vehicular/pedestrian routes, open space destinations, building entrances, interconnectedness of sidewalks and opportunities for enhancement. Signage and wayfinding elements include the following:

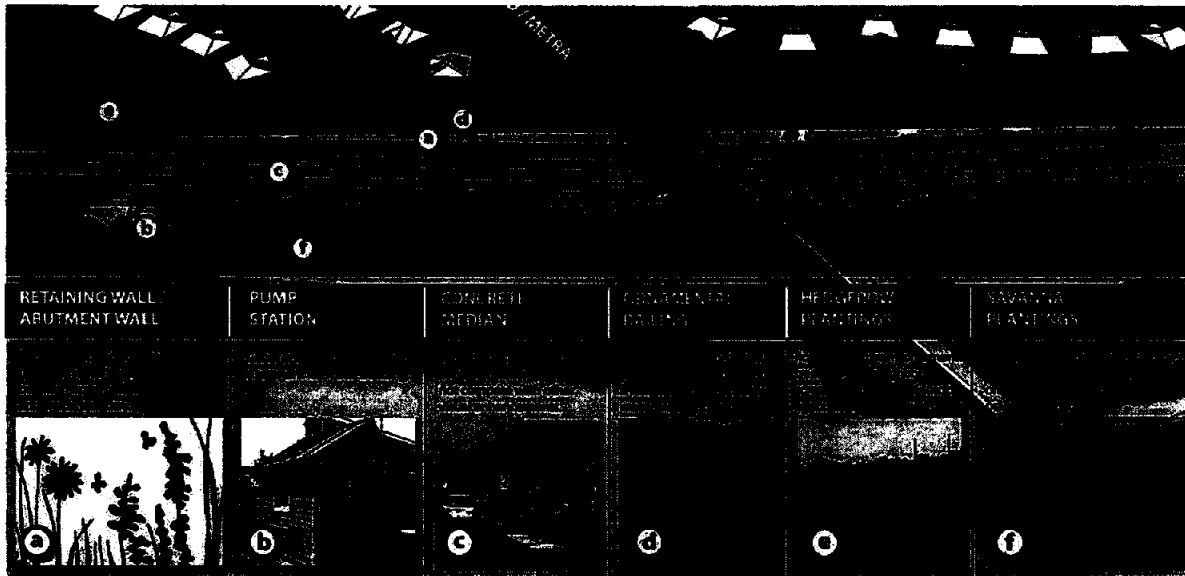
- Campus Gateway Sign
- Vehicular Directional Signage
- Pedestrian Directional Signage
- Parking Identity Signage
- Building Signage

The Campus includes Village Hall, Police Department, Court, Senior Center, Sports/Aquatic Center and a Safety School. With this diverse group of users and parking designations, the signage program clearly guided users with simple color coded vehicular and parking identity signs.

Phase I Engineering Services

Happ Road *between Willow Road and Winnetka Road*

Washington Street Grade Grayslake, Illinois



Project Details

Owner Reference
Lake County Department
of Transportation
Chuck Gleason
847.362.3950

Project Cost
\$34 Million
(Construction)

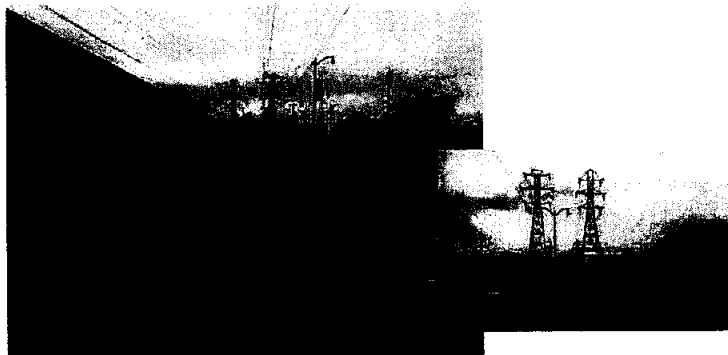
Duration
Ongoing

Lake County Department of Transportation is thinking about roadway infrastructure in a way that supports community identity and contextual design. Working with Patrick Engineering, Teska developed a Design Plan for the proposed roadway underpass that celebrates the Village of Grayslake's cultural and landscape identities.

Design treatments include landscape and architectural treatments that honor the Village's agrarian past as well as its native savanna plant communities. Features of the plan include:

- Retaining wall mural surface treatments that represent the native savanna;
- Pump station treatments that evoke a remnant farm out-building;
- Ornamental railing that recalls indigenous farm fences;
- Hedgerow plantings that reference vernacular windbreaks;
- Savanna plantings that represent native plant communities.

Skokie Swift Station Improvements Skokie, Cook County, Illinois



Project Details

Owner
Daniel Brinkman, P.E.
Gewalt Hamilton
Associates
847.478.9700

Project Cost
\$5,000 (Huff & Huff)

Duration
2015

The preliminary project scope includes the installation of a bike rack, an Americans with Disabilities Act (ADA) compliant ramp, and potential sidewalk replacement at one location and expand bike parking with shelter at three locations. Existing land use adjacent to the project area includes residential, commercial, the Skokie Valley Trail, Chicago Transit Authority (CTA) Yellow (Skokie Swift) rail line, and ComEd right-of-way.

H&H screened the study area to identify areas of potential environmental concern. The screening process followed general protocols associated with ASTM E1527-05, which is the standard environmental site assessment methodology, and the Manual for Conducting Preliminary Environmental Assessments for Illinois Department of Transportation Highway Projects (Erdmann et al., 1996).

Historical aerial photographs and historical maps were used to review and identify land use over time and potential areas of environmental concern. In addition, a governmental records search was conducted and reviewed for potential sources of contamination within and adjacent to the proposed project limits.

Using the above information, H&H identified areas of potential environmental risk for the project area. Based on the data collected, this assessment revealed evidence of fourteen (14) potentially impacted properties (PIPs) in connection to the project area. Therefore, a preliminary site investigation (PSI) related to identified sites is recommended based on available information.



Capital Investment Department Projects Clean Construction/Demolition Debris (CCDD) Certification
Glenview, Illinois



Project Details

Owner
Village of Glenview
Robert Steele
847.724.1700

Project Cost
\$30,000 (Huff & Huff)

Schedule
2013-Ongoing

The Village of Glenview has worked directly with Huff & Huff, Inc. for certification of clean spoils from various capital investment projects for disposal at CCDD or soil-only facilities. Huff & Huff completed environmental screenings and necessary sampling in support of producing either LPC-662 (owner signed) or LPC-663 Forms for various projects including, but not limited to:

- Centennial Trail
- Longmeadow Road Watermain
- Navy Bypass Sewer
- Nora and Neva Avenue Resurfacing
- Reding Circle ComEd Crossing
- 2014-2015 Resurfacing Program
- Cunliff Park Pump Station
- Harms Road and Glenview Road Pump Station
- Overlok Drive watermain
- Techny Trail Segment 4
- Sewer Pipe and Structure Replacements
- Debra & Sandy Lane Improvements
- Heatherfield Lane Reconstruction
- Hutchings Lane Reconstruction
- Longvalley Road Improvements
- Sprindale/Knollwood Sidewalks

H&H screened the study areas to identify areas of potential environmental concern. Historical aerial photographs and historical maps were used to review and identify land use over time and potential areas of environmental concern. In addition, a governmental record search was conducted and reviewed for potential sources of contamination within and adjacent to the proposed project limits.

Using the above information, H&H determined the necessary sampling protocol and collected samples appropriate for the specific projects in support of either the LPC-662 approach (soil pH only) or the LPC-663 approach (additional sampling relative to chemicals of concern related to associated potentially impacted properties (PIPs)).



The LPC documents were prepared using all pertinent supporting information and signed and stamped by either a professional engineer (PE) or professional geologist (PG). H&H has been authorized by Glenview to sign LPC-662 forms on their behalf.

In some cases where CCDD exclusion areas have been identified, load direction has been provided during construction to maximize the potential volume of non-impacted materials being directed to CCDD facilities.



Capital Investment Projects Clean
Construction/Demolition Debris (CCDD)
Certification
Northbrook, Illinois



Project Details

Owner
Village of Northbrook
Mr. Kelly Hamill
847.272.5050

Project Cost
\$40,000 (Huff & Huff)

Duration
2011-2015

The Village of Northbrook has worked directly with Huff & Huff, Inc. for certification of clean spoils from various projects for disposal at CCDD or soil-only facilities. Huff & Huff completed environmental screenings and necessary sampling in support of producing either LPC-662 (owner signed) or LPC-663 Forms for various projects including, but not limited to the following list since 2011:

- Annual MFT Resurfacing Contracts
- Annual Concrete Patching Contracts
- Annual Watermain Contracts
- Annual Sanitary Sewer Contracts
- Cedar Lane Stormwater Improvements
- Meadow Road Bank Stabilization
- Wescott Park Stormwater Detention
- Northbrook East Detention
- Cherry Lane Underpass Stormwater
- Shermer Road Overflow Stormwater
- Skokie Boulevard Sanitary Sewer
- Techy Road Stormwater
- Cherry Lane Improvements
- Western Avenue Improvements
- Sunny Acres Stormwater & Detention
- Lee Road & Ridge Road Stormwater

H&H screened the study areas to identify areas of potential environmental concern. Historical aerial photographs and historical maps were used to review and identify land use over time and potential areas of environmental concern. In addition, a governmental record search was conducted and reviewed for potential sources of contamination within and adjacent to the proposed project limits.

Using the above information, H&H determined the necessary sampling protocol and collected samples appropriate for the specific projects in support of either the LPC-662 approach (soil pH only) or the LPC-663 approach (additional sampling relative to chemicals of concern related to associated potentially impacted properties (PIPs)).



The LPC documents were prepared including all pertinent supporting information and signed and stamped by either a professional engineer (P.E.) or professional geologist (P.G.). H&H has been authorized by Northbrook to sign LPC-662 forms on their behalf.

In some cases where CCDD exclusion areas have been identified, load direction has been provided during construction to maximize the potential volume of non-impacted materials being directed to CCDD facilities.



Capital Investment Department Projects
 Clean Construction/Demolition Debris (CCDD)
 Certification
 Wilmette, Illinois



Project Details

Owner
 Village of Wilmette
 Mr. Jorge Cruz, P.E.
 847.251.2700

Project Cost
 \$17,500 (Huff & Huff)

Schedule
 2012-2015

The Village of Wilmette has worked directly with Huff & Huff, Inc. for certification of clean spoils from various capital investment projects for disposal at CCDD or soil-only facilities. Huff & Huff completed environmental screenings and necessary sampling in support of producing either LPC-662 (owner signed) or LPC-663 Forms for various projects including, but not limited to the following list since 2012:

- Brick Street Program 2012-2015
- Alley Projects Program 2013-2015
- Road Resurfacing Program 2013-2015
- Sewer & Valve Improvements 2013-2015
- MFT Resurfacing Program 2014-2015
- Elmwood Avenue Improvements
- Amhurst Avenue Improvements
- Oak Circle Improvements
- Hunter Road Sewer
- Sanitary Sewer & Local Storage
- Improvements

H&H screened the study areas to identify areas of potential environmental concern. Historical aerial photographs and historical maps were used to review and identify land use over time and potential areas of environmental concern. In addition, a governmental record search was conducted and reviewed for potential sources of contamination within and adjacent to the proposed project limits.

Using the above information, H&H determined the necessary sampling protocol and collected samples appropriate for the specific projects in support of either the LPC-662 approach (soil pH only, samples often collected by others during geotechnical assessment) or the LPC-663 approach (additional sampling relative to chemicals of concern related to associated potentially impacted properties (PIPs)).

The LPC documents were prepared including all pertinent supporting information and signed and stamped by either a professional engineer (P.E.) or professional geologist (P.G.). H&H has been authorized by Wilmette to sign LPC-662 forms on their behalf.



Experience of Key Personnel

Patrick's experienced project team is committed to enhancing your effectiveness by delivering long-term value to your project. To accomplish this objective, we draw upon our:

- **Highly experienced, local professional staff**
- **Extensive federal, state and local government background**
- **Commitment to clear, consistent client communication**
- **Familiarity with IDOT's STP requirements and expectations**

The following resumes show our proposed key project staff for Phase I improvements on the Happ Road project. As requested, an organization chart is also included in Section 1. All assigned key personnel are properly licensed to practice in Illinois. Illinois licenses are bolded on individual resumes.



Jarrold J. Cebulski, PE Project Manager

Education:
B.S., Civil Engineering,
University of Illinois at
Chicago, 1991

Registration:
Licensed Professional
Engineer: IL, WI, IN, MI,
CO, OH, IA

Professional Experience:
Highway Capacity and
Operational Analysis
Value Engineering
Environmental Analysis of
Highway Projects
NEPA and the
Transportation Decision
Making Process
Plan Format and
Composition
Erosion and Sediment
Control
Community Impact
Assessment
Training Advisor for IDOT
Context Sensitive
Solutions

Memberships:
Illinois Association of
Highway Engineers (IAHE)
Institute of Transportation
Engineers, Illinois Section
(ITE)
American Council of
Engineering Companies of
Illinois (ACEC)
American Public Works
Association (APWA)
American Society of Civil
Engineers (ASCE)
Illinois Association of
Environmental
Professions (IAEP)
Illinois Road and
Transportation Builders
Association (IRTBA)

Mr. Cebulski has over 23 years of professional experience in transportation engineering. Jarrod spent 13 years of his career at the Illinois Department of Transportation District One with his last position as head of consultant studies where he oversaw the preparation of all consultant-prepared Phase I Preliminary Engineering and Environmental Studies in the six-county region of northeastern Illinois. His experience encompasses all aspects of transportation engineering, such as project scoping and start-up, traffic and geometric studies, highway capacity analyses, traffic operations modeling, accident analyses, environmental studies and analysis, agency/stakeholder coordination and public involvement, report preparation, preliminary cost estimates, quality assurance/quality control, project and contract management, and client relations.

Phase I Studies for Various Highway Safety Improvement Program (HSIP) Projects, Illinois Department of Transportation, District One, Illinois

Project Manager for preparing Phase I Engineering Studies for Safety Improvement Projects for Region One/District One (PTB's #145/04, #150/08 and #162/03). The majority of the projects assigned under these blanket task order contracts have been a part of the Federally-funded Illinois Highway Safety Improvement Program (HSIP). As part of these contracts, we have performed the work of an In-House Unit Squad in the Bureau of Programming Project Studies Section in completing Phase I Studies from concept identification to Design Approval. The general scope of work of these projects includes widening and resurfacing for the addition of auxiliary turning lanes and traffic signal installations/modernizations. Tasks included highway capacity analyses, crash analyses, development of preliminary geometrics, drainage studies, structural inspections and reports, identification of proposed ROW needs, FHWA, local agency, and public coordination, internal IDOT coordination, and Project Report preparation.

Illinois Route 47 at Waubensee Drive/Old Oaks Drive, Waubensee Community College, Kane County, Illinois

Project Director for the Phase I Engineering Study and Phase II Contract Plan Preparation for the safety improvement at the intersection of Illinois Route 47 at Waubensee Drive / Old Oaks Drive in Sugar Grove, Illinois. The scope of work included the installation of a traffic signal, left-turn lanes, and the re-alignment of Old Oaks Drive to mitigate a history of fatal crashes at this location. This project was coordinated through the IDOT Bureau of Local Roads and Streets and included an Intersection Design Study, highway capacity studies, drainage design, wetlands, and local coordination.

U.S. Route 45 from Illinois Route 132 to Illinois Route 173 (Millburn Bypass), Lake County Division of Transportation, Lindenhurst, Illinois

Project Manager responsible for the Phase I project Public Involvement and alternatives development. This included directing an extensive stakeholder involvement program with the public and interested agencies. Tasks included the creation of the Public Involvement Plan, as well as coordination of planning for all Community Advisory Group meetings, Public Meetings, and Public Hearing. Additionally, Patrick was responsible for the geometric development of one of the bypass concept alternatives.





Washington Street from Hainesville Road to Lake Street, Lake County Division of Transportation, Lake County, Illinois

Project Manager for a Phase I Engineering and Environmental Study for the improvement of Washington Street from Hainesville Road to Lake Street in the Villages of Grayslake, Hainesville, and Round Lake Park, Lake County. The goal of the proposed improvement was to provide a cost effective highway facility with sufficient capacity to satisfy the design year traffic demands while improving safety. The scope of work included the reconstruction and widening of Washington Street from a two-lane to a five-lane cross-section. A grade separation structure at the crossing of Washington Street and the Canadian National Railroad (CNRR) was also investigated. The project will utilize federal funding and, as such, coordination was required with the Illinois Department of Transportation (IDOT) and the Federal Highway Administration (FHWA). The project included a Project Development Report and a Drainage Study. An aggressive stakeholder involvement program was also part of this Phase I Study, which included public meetings and hearings, as well as smaller local community meetings targeted towards achieving overall consensus on the proposed improvements.

Narragansett Avenue, 87th Street to 79th Street, Cook County Highway Department, Burbank, Illinois

Project Manager for the preparation of a Phase I Project Development Report and Drainage Study for the improvement of Narragansett Avenue from 87th Street to 79th Street in the Village of Burbank. The goal of the proposed improvement was to provide a cost effective highway facility with sufficient capacity to satisfy the design year traffic demands while improving safety. The scope of work included the reconstruction and widening of Narragansett Avenue to include one 12' lane in each direction and a 12' flush median with parallel parking lanes along both sides of the roadway. The project also included a new storm sewer drainage system, street lighting, and landscaping improvements. The proposed Narragansett Avenue project was closely coordinated with the local municipality, as well as the Illinois Department of Transportation to ensure eligibility for federal funding for the improvement. A public meeting was also held for the study.

Rakow Road from Ackman Road to Illinois Route 31, McHenry County Division of Transportation, McHenry County, Illinois

Project Manager for the Phase I engineering study (Project Development Report and Environmental Class of Action Determination (ECAD) document) for the add-lanes/reconstruction project for this 3-mile section of arterial highway. The project was coordinated through the IDOT Bureau of Local Roads and Streets and included accident analyses, highway capacity studies at seven signalized intersections, a major realignment, environmental issues including wetlands, floodplains, water quality, structural studies, and local coordination including a Public Meeting and a Public Hearing.





Paul M. Lopez, P.E., S.E. QA/QC

Education

B.S., Civil Engineering, Iowa State University, 1982

Professional Licenses

Licensed Professional

Engineer: FL, IL, IA, ID, IN, KY, MA, MI, NC, NM, OH, OK, PA, RI, SC, WI, WY

Licensed Structural

Engineer: IL, MA
NCEES: Model Law Engineer

Training Seminars and

Seismic Design of Highway Bridges

Wisconsin Department of Transportation – AASHTO Load and Resistance Factor Design 4-day Training

USDOT FHWA / National Highway Institute – Load and Resistance Factor Design for Highway Bridge Substructures and Earth Retained Structures, 4-day Training

Memberships

American Railway Engineering and Maintenance-of-Way Association (AREMA): Committee 15, Steel Structures

Illinois Road and Transportation Builders Association: IRTBA Metra Coop Committee

American Council of Engineering Companies: ACEC - Illinois Tollway Liaison Committee

Mr. Lopez began his career in the industry in 1982, joining Patrick in 1997. He is a licensed professional and structural engineer and has over 33 years of experience in transportation engineering with emphasis on both highway and railway facilities. He currently serves as Vice President for Patrick Engineering reporting directly to the senior vice-president and is responsible for Patrick Engineering's transportation operations in Illinois, Wisconsin and Pennsylvania. His professional experience includes: the successful planning, design, and construction management of large and complex highway and railway systems.

Ferry Road from Route 59 to Eola Road, DuPage County Division of Transportation, Aurora, Illinois

Project Manager to provide Phase III resident engineering services for the reconstruction of Ferry Road from Route 59 to Eola Road. Work included the construction of new roadway pavement, storm sewers and detention, a pedestrian bridge, and a new highway bridge over the EJ&E Railroad.

Mill Road (CTH S) Pavement Reconstruction from USH 45 to N. 91st Street, Milwaukee County Department of Transportation and Public Works, Milwaukee County, Wisconsin

Project Principal for construction engineering services associated with the reconstruction and rehabilitation of Mill Road that included new storm sewers and hot mixed asphalt pavement. Work included monitoring of construction staging, traffic control, utility coordination, public involvement, coordination with business for maintaining access, material testing coordination and project documentation.

Industrial Street Program, City of Chicago Department of Transportation, Chicago, Illinois

Project Manager for the supervision of construction and/or reconstruction of existing industrial streets at various city locations. The scope of work for each project generally included the following: special excavation; PC concrete base course; PC concrete sidewalk; PC concrete curb and gutter; PC concrete driveways and alley returns; placement of pavement markings; installation of storm sewer, manholes and catch basins; adjustment of utility structures; installation of street lighting; placement of bituminous binder and surface courses; and installation of topsoil, sodding, and trees.



Nicholas J. Schilling, P.E. Project Engineer

Education:
B.S. Civil Engineering,
Bradley University, 2000

Registration:
**Licensed Professional
Engineer: IL, CA**
Envision Sustainability
Professional (ENV SP)

Transportation Experience:
DMMC STP Workshop
ITS Roundabout Design
ADA & Transportation
Facility Design

Professional Affiliations:
ACEC ISTHA Liaison
Committee
American Society of Civil
Engineers (ASCE)
Engineers Without Borders
(EWB)

Mr. Schilling began his career in the industry in 2001, with Patrick. He has 14 years of professional experience in transportation engineering. Nicholas spent the first 5 years of his career with Patrick as a staff and project engineer. The next 9 years of his career were with Moffatt & Nichol as a lead project engineer and project manager for transportation projects. He rejoined Patrick in 2015 as a project manager. He is responsible for managing transportation projects and for directing the activities of staff engineers and technicians in all phases from preliminary engineering through final design. His current responsibilities include project management and overseeing staff members for Phase I design, Feasibility Studies, Phase II Contract Plans, and Phase III construction supervision work for Transportation Projects at Patrick Engineering, encompassing all aspects, such as project scoping and start-up, geometric studies, accident analyses, environmental studies, agency/stakeholder coordination and public involvement, report preparation, preliminary cost estimates, quality assurance/quality control, contract management, and client relations. He has managed and coordinated design-build construction projects, in addition to design-bid-build projects. Mr. Schilling's responsibilities span all aspects of design work, including design, permitting, cost estimating, scheduling, contracting, and safety.

Benedictine Connector, DuPage County Division of Transportation, DuPage County, Illinois

Project Manager for the Phase 1 update. DuPage County Division of Transportation (DPCDOT) is improving several segments of a multi-use trail that will constitute the Benedictine Connector portion of the East Branch DuPage River Greenway Trail from Burlington Avenue to College Road in the Village of Lisle, DuPage County. The project includes widening existing paths and constructing new segments of path in several separate and distinct areas. Structural retaining walls will be required as well as a canopy structure beneath the BNSF overpass. Pedestrian signal modifications will also be required. A Phase I Update and Addendum will be prepared. Upon approval of the Phase I Addendum, Phase II engineering services will begin.

75th Street from Interstate 355 to Illinois Route 83, DuPage County Division of Transportation, DuPage County, Illinois

Roadway engineer involved with the preparation of Project Development Report (PDR) and Environmental Class Action Determination (ECAD) documentation. The report investigated alternate studies for reconstructing the existing roadway facility as three lanes in each direction separated by a barrier median. The 5.1 add-lanes/reconstruction project included alternate geometric designs for widening the existing four-lane highway to three lanes in each direction separated by a barrier median, eleven intersection design studies, interchange traffic modeling, drainage studies, pavement condition survey, Section 4(f) and Section 106 coordination for a historic property, and a public hearing.

Illinois Route 53 from Army Trail Road to the Elgin-O'Hare Expressway, Illinois Department of Transportation, DuPage County, Illinois

Roadway engineer for the development of contract plans, specifications, and estimates for the add-lanes and reconstruction of four miles of Illinois Route 53 through the Villages of Addison and Itasca. The scope of work involved replacing the existing mostly two-lane rural roadway with a four-lane urban roadway with a median/center turn lane. As part of the project nine signalized intersections were



improved with two new traffic signals added, a new storm sewer drainage system, and new roadway lighting. Structural work included culvert replacement and new traffic noise abatement walls.

Algonquin Road, McHenry County Division of Transportation, McHenry County, Illinois
Roadway engineer for proposed reconstruction of five miles of Algonquin Road from two lanes in each direction to five lanes in each direction. Developed the preliminary geometrics for the roadway.

Village of Lincolnshire Elm/Oxford to Oakwood Sidepath, Village of Lincolnshire, Lake County, Illinois

Roadway engineer involved with the development of an 8-foot sidepath on the north side of Illinois Route 22 from Elm Road/Oxford Drive to Oakwood Lane. The necessary right-of-way and grading easements were identified to accommodate the sidepath. Prepared the contract plans, specification, developed a cost estimate, and submitted the necessary permit to the Illinois Department of Transportation.

Illinois Route 22 Reconstruction, Illinois Department of Transportation, Village of Lincolnshire/Lake County, Illinois

Lead project engineer for the roadway reconstruction, bridge rehabilitation, lighting, and traffic signals for the reconstruction of Illinois Route 22. The project included realignment of the roadway to improve geometrics and minimize private property impacts. The reconstructed road included new pavement, curb and gutter, retaining walls, decorative medians and a new drainage system. The project also included a new bridge and a bike path. The project received a 2005 ACEC Merit Award.

Medinah Road Reconstruction, DuPage County, Illinois

Project engineer for the reconstruction of a two-mile portion of Medinah Road from Lake Street to Irving Park Road. The project included the widening of a two-lane, ditched road to a three-lane road with curb and gutter, and a new drainage system. The project also included an eight-foot-wide bike path on one side.



Madukhar Reddy Kamati, PE, CFM, CPESC Drainage

Education
M.Tech., Civil
Engineering, Indian
Institute of Technology
at Kanpur, India, 2002
B.S., Civil Engineering,
Osmania University,
India 2000

Professional
Licensed Professional
Engineer: WI

Certifications
Certified Floodplain
Manager (CFM)
Certified Professional in
Erosion and Sediment
Control (CPESC)

Training
PTV VISSIM 40 hour
training On Traffic
simulation and various
applications
Bentley 40 hour training
On Geopak Corridor
Modeler

Workshops
ACEC/IDOT drainage
seminar 2014

Mr. Kamati has more than 12 years of professional experience in hydraulic and hydrologic design, roadway geometric design and traffic analysis. He has experience with hydrologic analyses of watersheds; hydraulic design of sewers, channels, detention basins and control structures; permits related to storm water management; erosion and sediment control; and roadway design and plan preparation; and traffic studies including traffic projections, intersection capacity analysis, signal warrant analysis. Mr. Kamati's responsibilities span all aspects of roadway design work including concepts, studies, design, analysis, permitting, cost estimating, construction plan preparation and specifications.

Laraway Road from Cedar Road to LaGrange Road, Will County Division of Transportation, Villages of New Lenox and Frankfort, Will County, Illinois
Drainage/utility Engineer for the Phase I Engineering study for the Laraway Road from Cedar Road to LaGrange Road. Responsibilities included contacting the JULIE for design stage request to receive a list of utility contacts and coordinate with all utility owners who have facilities within the study limits and obtain their atlas maps and/or related utility drawings and the information will be incorporated into the project base file. This utility information is being utilized when designing the proposed drainage features and avoided the conflicts where feasible.

US 20 at McLean Boulevard Interchange Reconstruction, Illinois Department of Transportation, Kane County, Illinois
Project Civil Engineer for Preparation of the contract plans for the reconstruction of the U.S. Route 20 Interchange at McLean Boulevard in Elgin, IL. This project involves the reconstruction of the existing U.S. Route 20 and McLean Blvd diamond interchange in Elgin to a single point urban interchange (SPUI). Responsibilities included roadway geometry, barrier warrant analysis, bridge cone and interchange grading, staging and maintenance of traffic concept plans, utility coordination and preparation of complex staging cross sections for the entire project.

U.S. Route 14 Reconstruction and Widening, Illinois Department of Transportation, Crystal Lake/ Woodstock, Illinois
Project Drainage Engineer for Preparation of drainage and utilities plans, erosion & sediment control plans and specifications for the reconstruction and widening of U.S. Route 14 two-lane facility to a four-lane divided principal arterial from West Lake Shore Drive to Lucas Road. Responsible for coordinating with various utilities throughout the project. Prepared the Army Corps permit and SWPPP for the project. Performed inlet spacing and storm sewer sizing calculations which assisted in laying out overall drainage for the project using Geopak drainage.

Canal Street Viaduct Improvements, Chicago Department of Transportation, Chicago, Illinois
Drainage Engineer for the Phase I Engineering study for the Canal Street Viaducts project from Taylor Street to Madison Street. Responsibilities included the preparation of existing and proposed drainage plans, evaluating the existing drainage system and providing the recommendations. Patrick's work includes structural inspections, bridge reports, type, size, & location drawings, as well as crash analysis, traffic, drainage, maintenance of traffic, and geometric studies along Canal Street.



Elgin O'Hare Western Access from Lively Boulevard to Supreme Drive, Illinois Tollway, DuPage County, Illinois

Lead Drainage Engineer for Phase II Contract Plan Preparation for the proposed construction of the Elgin O'Hare Western Access from Lively Boulevard to Supreme Drive, including Illinois Route 83 (Busse Road). Work includes the design of a new six-lane mainline toll facility with adjacent frontage roads, the widening and reconstruction of Illinois Route 83, eight new overhead mainline bridge structures, retaining walls, extensive utility coordination, lighting design, and drainage design. Drainage design includes several BMP detention facilities and bio swales.

Ronald Reagan Memorial Tollway (I-88) Reconstruction and Add-Lane Phase I and II, Illinois Tollway, Kane County, Illinois

Project Drainage Engineer for design and preparation of drainage and utilities plans, erosion & sediment control plans for I-88 improvement which consisted of various contracts involving bridge reconstruction, roadway and ramp reconstruction of the Reagan Memorial Tollway (I-88) from the Orchard Road Interchange to Aurora-Plaza 61. Performed hydraulic/hydrologic analysis for the entire project and used HEC-HMS for detention basin routing and restrictor size calculations. Responsible for preparation of Phase 1 drainage report as part of the master plan phase of the project.

Illinois Route 59 Phase II Rehabilitation at I-55, Illinois Department of Transportation, Shorewood, Illinois

Project Drainage Engineer for preparation of drainage and erosion control plans. The improvement includes relocation of the expressway interchange approximately ½ mile to the south, frontage road reconstruction, roadway widening, profile modifications, drainage design including storm sewers, ditches and detention basin.

Illinois Route 59 Widening & Reconstruction, Illinois Department of Transportation/Naperville, DuPage County, Illinois

Drainage Engineer for preparation of existing and proposed drainage plans. The project involves preliminary engineering study (Phase I) of Route 59 from New York/Aurora Rd to Ferry Ave. Drainage scope included the preparation of Location Drainage Study (LDS) for the project.

Chicago Department of Water Management, Chicago, Illinois

Project Civil engineer responsible for preparation of the site geometry, drainage plans and utility coordination. Various projects related to plant upgrades at the Jardine Water Purification Plant and South Water Purification Plant, Chicago, IL.



Eric Y. Chow, P.E., CFM Drainage

E. Education:
M.S., Civil and Environmental Engineering, University of Wisconsin at Madison, 2004
B.S., Civil and Environmental Engineering, University of Illinois, 2002
B.S., Mechanical Engineering, University of Illinois, 2001

Professional Licenses:
Licensed Professional Engineer: IL
Certified Floodplain Manager: IL

Professional Memberships:
Illinois Association for Floodplain and Stormwater Management

Professional Development:
FEQ Training Seminar: Unsteady Flow Analysis Using the FEQ Modeling System, 11/2008 by IAFSM
Fundamentals of Drainage and Drainage Studies, 3/2005 by IDOT & APWA

Professional Presentations:
Illinois Association for Floodplain and Stormwater Management Annual Conference, March 2012. NRCS Dam Risk Assessments: Inspections, Unsteady Flow Modeling and Breach Inundation Mapping for Two Dams in New Mexico.
Illinois Association for Floodplain and Stormwater Management Annual Conference, March

Mr. Chow began his career in the industry and with Patrick in 2004. He is a water resources engineer with over ten years of experience in hydraulic and hydrologic design. He has experience with hydrologic analyses and modeling of watersheds; modeling and analyses of channel and closed conduit flow; and hydraulic design of sewers, channels, detention basins and hydraulic control structures. He has experience with Phase I drainage studies and Phase II construction plans; stormwater and floodway construction permits; and floodplain mapping. He provides water resources support on transportation, rail, and environmental projects and provides training and supervision for staff engineers.

Illinois Route 38 at County Farm Road, Illinois Department of Transportation/DuPage County Division of Transportation, Wheaton, Illinois
Project engineer for Phase I study for the reconstruction of over one half mile of IL Route 38, including intersections with County Farm Road and Shaffner Road. The profile of Illinois Route 38 at Shaffner Road was raised to provide proper freeboard from Winfield Creek flood stage. HEC-2 modeling was performed along Winfield Creek for three bridge crossings. A Location Drainage Study and Hydraulic Report were prepared.

Washington Street from Hainesville Road to Lake Street, Lake County Division of Transportation, Lake County, Illinois
Drainage engineer for Phase I study for the widening and reconstruction of over one mile of road including the addition of a railroad grade separation. To reduce motorist delays and railroad crossing safety concerns, a railroad underpass structure at the crossing of Washington Street and the Canadian National Railroad (CNRR) was proposed. Washington Street will be lowered to pass under the railroad necessitating the construction of a pump station and retaining walls. A pump station hydraulic report was prepared as well as temporary drainage plans for a roadway runaround and railroad shoofly necessary to maintain vehicular and rail traffic respectively, while the railroad bridge is under construction. A hydraulic report was also prepared for 2 cross road culverts. Finally a Phase I drainage report was prepared for the entire improvement.

75th Street Over East Branch of DuPage River, DuPage County Division of Transportation, DuPage County, Illinois
Drainage engineer for Phase I bridge rehabilitation project. Drainage scope of work will include coordination with surveyors for stream survey, hydraulic analysis of bridge using HEC-2, scour evaluation, design of scour countermeasures, preparation of a Hydraulic Report, Phase I drainage analysis, and preparation of a Phase I drainage report.

Rakow Road from Ackman Road to Illinois Route 31 (Phase I), McHenry County Division of Transportation, McHenry County, Illinois
Project Engineer for drainage design for an add-lanes/reconstruction project of a 3.5-mile section of arterial highway in McHenry County. The project was coordinated through the IDOT Bureau of Local Roads and Streets and included environmental issues including wetlands, floodplains, floodway construction permit for a bridge replacement, water quality, and local coordination. Performed drainage design, stormwater detention calculations and design, hydraulic analysis of waterway crossing, floodplain compensatory storage calculations, and preparation of Location Drainage Study and Hydraulic Report.





2010. Application of IDNR Regulations to Concurrent/ Contingent Railroad Bridge Permitting; Modeling a Zero Slope Channel in HEC-RAS.

Patrick Engineering
Distinguishing Trait Award for "Committed to Results" - 2008

Erick Street from Crystal Lake Avenue to Illinois Route 176, City of Crystal Lake, Crystal Lake, Illinois

Phase II project engineer for the complete reconstruction and widening from two lanes to five lanes, of this City street. Drainage scope of work consisted of reviewing the Location Drainage Study and preparing contract drawings and specifications for all drainage related work including the expansion of an existing detention pond. Performed drainage calculations and design, quantity calculations, cost estimate, and final preparation of plan sets including grading plans, details, and specifications.

US 20 over Ditch West of Beck Road, Illinois Department of Transportation, McHenry County, Illinois

Drainage task manager for Phase I design of the culvert replacement under US 20 west of Beck Road. The project includes the evaluation of the existing culvert passing under US 20 and a proposed culvert design. Drainage scope a hydraulic report and modeling of existing hydrologic conditions using HEC-HMS and USGS StreamStats and modeling of existing hydraulic conditions using HEC-RAS. The hydrologic modeling included a large upstream pond storage component. The proposed design will also be modeled using HEC-RAS.

Warrenville Road Detention Pond Retrofit, DuPage County Division of Transportation, DuPage County, Illinois

Preparation of plans, specifications, and permit applications for the modification and shoreline stabilization of online detention basins. Required permits included DuPage County Stormwater Management Permit, IDNR Floodway Construction Permit, U.S. Army Corps of Engineers Regional Permit, and Kane-DuPage Soil and Water Conservation District Permit. Pond modifications included lowering of the normal water levels to provide detention and compensatory storage for improvements to Warrenville Road/Naperville Road/I-88 interchange and shoreline stabilization. Stormwater permit involved modeling modifications to Rott Creek using HEC-2 and FEQ, detention and compensatory storage calculations, storm sewer design, wetland and riparian environment delineation and remediation, and variance approval.

Phase I/II Engineering Services for 2014 KDOT Structural Services #1, Kane County Division of Transportation, Kane County, Illinois

Drainage task manager for Phase I and II engineering of three culvert replacements in central Kane County, IL. The Silver Glen Road crossing is an existing 5' diameter corrugated metal pipe culvert, and two Burlington Road crossings are existing concrete box culverts. Phase I drainage scope included a Drainage Study and Hydraulic Report for each crossing. HEC-HMS was used for hydrologic analysis and HEC-RAS was used for hydraulic analysis. Scour analysis was also performed.



Education:
Bachelor of Science, Civil
Engineering, University
of Wisconsin-
Platteville, 2002

Registration:
**Illinois Licensed
Professional Engineer**
#062 059946
Certified Floodplain
Manager

Memberships:
American Society of Civil
Engineers
Illinois Association for
Floodplain and
Stormwater
Management

Karl Jensen, P.E., CFM Drainage

Gewalt Hamilton Associates, Inc.

Karl A. Jensen is a Registered Professional Engineer and a Certified Floodplain Manager practicing for 13 years as a Civil Engineer, with emphasis on stormwater management and site development. Mr. Jensen has been in the employ of Gewalt Hamilton Associates, Inc. (GHA) since 2008. Prior to joining GHA Mr. Jensen was employed by Greengard, Inc. in Lincolnshire, Illinois.

Kensington Road Location Drainage Study, Village of Mount Prospect

Designed the preliminary storm water management facilities for the corresponding roadway widening improvements. The improvements include converting the existing drainage system from swales and culverts to a full storm sewer system. Incorporated within the storm sewer system is the required detention for the increase in impervious area. The project had special considerations with connecting to a neighboring municipality's storm sewer system and providing additional detention volume for future development per the request of the Village of Mount Prospect.

Illinois Route 31 Widening, Village of Johnsburg

Designed the stormwater management facilities in conjunction with a widening project along IL Rte 31 as part of a proposed commercial development. The improvements include proposed storm sewer, ditches and culverts meeting the Illinois Department of Transportation standards. Additional considerations also needed to be assessed included limited available right-of-way.

Eola, Sheffer, and Indian Trail Roads, City of Aurora

Assisted with stormwater and drainage detention design and calculations for the development of an approximately 10-acre retail parcel and associated roadway improvements, including the extension of Sheffer Road, addition of turn lanes on Sheffer and Eola Roads, and addition of site access drives. Stormwater detention followed the requirements of the City of Aurora Stormwater

Overall Village Drainage Study, Village of Northfield

Aided in the determination of reviewing Village drainage issues along two different major flooding sources. Met with and listened to citizen concerns of property flooding issues to better understand where the flooding occurs. Included calculations of existing flooding limits as well as several alternate improvements along the major Village wide flooding sources. Also included separate alternate improvements for smaller, more localized areas to reduce the amount of flooding in depressional areas farther from the major flooding sources.

Localized Area 2 Drainage Study, City of Crystal Lake

Completed the existing drainage calculations to determine flood elevations for a residential area with an approximate tributary area of 100 acres with multiple interconnected depressional areas. The concerns of the proposed design included reducing flood elevations and property damage while also improving water quality prior to discharging to Crystal Lake. Upon meeting with the residents of the study area, designed an offsite improvement to redirect over 50 acres towards an existing wetland, diverting flow around the residential area with the drainage issues.



Steve Lynch, PE Roadway Geometrics

Education
Bachelor of Engineering
(B.E.), Civil Engineering,
Vanderbilt University,
2001

Registration
**Licensed Professional
Engineer: IL, MI**

Memberships
American Society of Civil
Engineers –Illinois
Section
American Public Works
Association
American Council of
Engineering Companies:
ACEC - Chicago Liaison
Committee

Professional Experience
IDOT – Documentation of
Contract Quantities
Certification #14-0258

Awards
Patrick Engineering
Distinguishing Trait
award winner for
"Willing to take Risks" -
2014
"Willing to Partner" - 2012
"Technically Competent" –
2006

Other Positions
Cum Laude, Vanderbilt
University
Chair of the ASCE Illinois
Section Younger
Member Group,
2007/2008

Mr. Lynch has more than 14 years of experience in civil engineering and construction management. His responsibilities have included project management for Phase I projects for IDOT, CDOT, and the CDA at O'Hare International Airport. He also prepares Phase II contract documents including plans and specifications, prepares and submits permit applications, and coordinates with various project stakeholders.

Sample Projects
County Farm Road at Illinois Route 38, DuPage County Division of Transportation, Wheaton, Illinois

Project Engineer for Phase I Study for the reconstruction of over one half mile of Illinois Route 38, including the intersections with County Farm Road and Shaffner Road. The project scope of work included route survey, pavement condition survey, intersection design studies, pedestrian crossing study, location drainage study, and bridge condition reports and hydraulic studies of two crossings of Illinois Route 38 over Winfield Creek and Shaffner Road over Winfield Creek. The profile of Illinois Route 38 at Shaffner Road was raised to provide proper freeboard from Winfield Creek during flood conditions. The improvement also included adding new barrier median, enhanced pedestrian safety features, and the replacement of a major culvert beneath the intersection of Roosevelt Road at Shaffner Road.

Intersection Safety Studies, IDOT, Various Locations, District One

Project Engineer for Phase I Studies for Safety Improvement projects for Region One/District One as part of the Federally-funded Illinois Highway Safety Improvement Program (HSIP). The program's purpose is to reduce traffic fatalities and serious injuries on all public roads. This contract includes completing these Phase I Studies from concept identification to Design Approval. Representative locations include:

- Illinois Route 38 at Gary's Mill Road, DuPage County
- Illinois Route 50 (Roosevelt Road to Pershing), Cook County

Algonquin Road from IL Route 47 to Randall Road - Road Reconstruction, McHenry County Highway Department, McHenry County, Illinois

Staff Engineer for design of complete reconstruction of Algonquin Road from Illinois Route 47 to Randall Road in southeast McHenry County. Responsibilities included drainage design calculations involving storm sewer sizing, runoff detention, floodway compensatory storage and plan preparation. Scope of roadway work included removal and replacement of a single-span structure over Woods Creek and the addition of multiples lanes of traffic.

Canal Street Viaduct Improvements, Chicago Department of Transportation, Chicago, Illinois

Patrick's Project Manager for the Phase I Engineering study for the Canal Street Viaducts project from Taylor Street to Madison Street. The project is in the Complex Bridge category and includes a Phase I Engineering Study for four major bridges. Patrick's work includes structural inspections, bridge reports, type, size, & location drawings, as well as crash analysis, traffic, drainage, maintenance of traffic, and geometric studies along Canal Street. Project coordination will also be required with the Union Station Transportation Center, the Harrison Street Viaduct and the Bus



Rapid Transit (BRT) projects, as well as with the Illinois Department of Transportation (IDOT), and the Federal Highway Administration (FHWA).

Union Station Transit Center, City of Chicago Department of Transportation, Chicago, Illinois

Project Manager for the civil engineering portion of a multi-disciplined design effort to provide conceptual planning and design engineering for the new Union Station Transit Center (USTC) which is to be constructed by the Chicago Department of Transportation (CDOT) and utilized by the Chicago Transit Authority (CTA). Responsibilities included performing a geometric evaluation of the proposed site, coordinating with multiple disciplines, coordinating utility relocations with Chicago Department of Water Management (CDWM) Water and Sewers division, Commonwealth Edison, Peoples Gas, CDOT's Freight Tunnel Program, coordinating with the Central Loop BRT Design team and CTA to ensure project logistics were maintained. The project was performed as a combined Phase I and II with limited defined parameters prior to the start of the design.

Ronald Reagan (I-88) Tollway Reconstruction Design, Illinois State Toll Highway Authority, DuPage County, Illinois

Staff Engineer assisted with the roadway drainage calculations and the plan preparation for the reconstruction of approximately 4 miles of roadway on Interstate 88. Drainage calculations included storm sewer sizing, inlet spacing, runoff detention, floodway compensatory storage and sediment basin design and were completed per DuPage County DEC, ISTHA, and IDOT design criteria.

North Tri-State Tollway (I-94) from Illinois Route 22 to Illinois Route 60, Illinois Tollway, Lake County, Illinois

Drainage Project Engineer for the reconstruction and widening of the Tri Tri-State Tollway (I-94) from M.P. 56.5 (Illinois Route 22 / Half-Day Road) to M.P. 59.7 (Illinois Route 60 / Townline Road) , which consisted of a lane being added in each direction. Major tasks included preparing final Phase II drainage plans, profiles, schedule and quantities for South Bound lanes. Prepare preliminary Phase II plans for the entire project including ditch profile design, storm sewer layout and inlet spacing. Review and analyze the concept drainage study and resolve unfinished phase I tasks including final culvert design.



Tim Reesman, PE, PTOE Traffic Engineer

Education
B.S., Civil Engineering,
Marquette University,
2005

Registration
**Licensed Professional
Engineer: IL**

Training
ODOT Traffic Academy –
Traffic Signals Module
PTOE

Mr. Reesman has 10 years of professional experience in the design of roadway projects. His experience includes multiple intersection design studies, maintenance of traffic plans, review and interpretation of crash data and reports, and traffic signal design. He preliminary engineering projects have ranged from small intersection improvements to major interstate corridor and interchange reconstruction studies. His experience includes more than 10 Phase I studies. He has passed the PTOE exam as well.

Project Experience
IL 68 (Dundee Road) from US 12 to Kennedy Road, IDOT, Palatine, Illinois

Project Manager for a Phase I Study that was part of Region One/District One's Federally-funded Illinois Highway Safety Improvement Program. This project involved converting an existing flush median to a raised median. The project was located within the Village's main business district. Two Public Hearings were held to gather input from local stakeholders. The initial design was modified to accommodate the access needs of the local businesses and with the cooperation of the Village of Palatine cross-access agreements were obtained between adjacent property owners leading to a consolidation of access points and an overall increase in safety along this heavily trafficked corridor. Responsibilities included data collection, capacity and queue analysis, recommendations for improvements, design, review and interpretation of crash data and reports, preparation of intersection design study, plan and profile sheets, typical sections, public involvement coordination, and development of project development reports.

Illinois Route 47 at Waubensee Drive/Old Oaks Drive, Waubensee Community College, Kane County, Illinois

Project Engineer for the design and preparation of contract plans for the safety improvement at the intersection of Illinois Route 47 at Waubensee Drive / Old Oaks Drive in Sugar Grove, Illinois. The scope of work includes the installation of a traffic signal, additional left-turning lanes, and the re-alignment of Old Oaks Drive to mitigate a history of fatal crashes at this location. Responsibilities included the design of the fully actuated traffic signals with emergency vehicle preemption at the intersection.

Phase I Safety Studies, Illinois Department of Transportation, District 1, Various Locations, Illinois

Project Manager for Phase I Studies for Safety Improvement projects for Region One/District One as part of the Federally-funded Illinois Highway Safety Improvement Program (HSIP). The program's purpose is to reduce traffic fatalities and serious injuries on all public roads. This contract includes completing these Phase I Studies from concept identification to Design Approval. Representative locations include:

- Wolf Road @ 183rd Street, Cook and Will Counties
- Illinois Route 53 @ New River Road, Will County
- Illinois Route 171 (Archer Avenue) @ 104th Avenue, Cook County
- US 20 (Lake Street), Bartlett to Park, Cook County
- IL 72 and IL 83, Cook County
- US 20 @ Coral Road, McHenry County
- US 20 @ Union Road, McHenry County



Work has included data collection, capacity and queue analysis, recommendations for improvements, design, review and interpretation of crash data and reports, preparation of intersection design study, plan and profile sheets, typical sections, and development of project development reports.

Wolf Road and Heggs Road, City of Aurora, Aurora, Illinois

Project Engineer responsible for the design and completion of plans for the widening and resurfacing of Heggs Road and the reconstruction of Wolf Road. Project consisted of the reconstruction of Wolf Road due to poor existing condition as well the need to improve the existing drainage pattern along Wolf Road in order to eliminate water overtopping the pavement. This project replaced the existing signals with new signals utilizing video detection, along with emergency vehicle preemption, and pedestrian signals. Responsibilities included horizontal and vertical alignment, roadway geometric design, storm sewer and drainage, traffic signal design, quantities/cost estimates, and plan preparation.

Union Station Transit Center, City of Chicago Department of Transportation, Chicago, Illinois

Project Engineer for the civil engineering portion of a multi-disciplined design effort to provide conceptual planning and design engineering for the new Union Station Transit Center (USTC) which is to be constructed by the Chicago Department of Transportation (CDOT) and utilized by the Chicago Transit Authority (CTA). Responsibilities included site design and contract plan preparation.

Interstate 80 from Ridge Road to US Route 30, Illinois Department of Transportation, Kendall, Grundy, and Will Counties, Illinois

Phase I design on a project to provide preliminary engineering and environmental services to the Illinois Department of Transportation for the improvement of Interstate 80 from Ridge Road to U.S. Route 30, a length of approximately 16 miles in Kendall, Grundy, and Will Counties passing through multiple municipalities, including Joliet, IL. The study is being processed via a Combined Design Report (CDR), an Environmental Assessment (EA), and a Location Drainage Study (LDS). The proposed improvement is anticipated to provide additional travel lanes and interchange improvements. Over 40 structures are being investigated as part of the project including the major twin truss bridges that carry I-80 over the Des Plaines River. Responsibilities include the design of horizontal and vertical alignments, preparation of plan and profile sheets, and traffic analysis.



Jason Chae, PE Roadway Geometrics

Education:
B.S., Civil Engineering,
University of Illinois at
Chicago, 2010

Registration:
**Licensed Professional
Engineer: IL**

Mr. Chae has five years of professional experience working on transportation engineering projects. His Phase I work experience has involved traffic analyses, crash analyses, roadway geometrics, cross-section evaluation, conceptual maintenance of traffic plans, utility conflict analyses, and Project Report preparation, for local and federally-funded projects. He also has experience with all aspects of Phase II plan preparation including road design and construction scheduling and staging plans state, county, municipal and private clients in the state of Illinois.

Professional Experience:

Glenwood Dyer Road from Illinois Route 83 to Stoney Island Avenue, Illinois Department of Transportation, District One, Cook County, Illinois

Project Engineer for a Phase I Engineering study of a proposed roadway improvement on a segment of Glenwood Dyer Road from Illinois Route 83 to Stoney Island Avenue in Lynwood, Illinois. The proposed work will include widening the existing pavement to provide a bi-directional left turn lane to increase the distance between opposing traffic and provide channelization for vehicles attempting left turns into driveways. The length of the project along Glenwood Dyer Road is approximately 0.79 miles. Patrick Engineering will be responsible for preparing a Categorical Exclusion Group II (CE II) Project Report.

Fullerton Avenue over Salt Creek, Addison Township Highway Department, Addison, Illinois

Project Engineer for a Phase I Engineering study of the roadway and transportation work on a bridge replacement project at Fullerton Avenue located in Addison, Illinois. Phase I Engineering services included alternative geometric studies, roadway cost estimate and the completion of a Project Development Report. Patrick was also responsible for the completion of a Bridge Condition Report, Drainage Study and Hydraulic Report.

Illinois Route 47 at Waubensee Drive/Old Oaks Road, Waubensee Community College, Will County, Illinois

Project Engineer for the Phase I analysis and design and preparation of Phase II contract plans for the intersection improvement project at Illinois Route 47 at Waubensee Drive/Old Oaks Road, located in unincorporated Sugar Grove, Illinois. This intersection serves as an entrance to Waubensee Community College and is under the college's jurisdiction. The improvements consisted of the addition of a traffic signal, northbound left-turn lane along Illinois Route 47 and realigning Old Oaks Road to align with Waubensee Drive.

Phase I Studies for Various Highway Safety Improvement Program (HSIP) Projects, Illinois Department of Transportation, District One, Illinois

Project Engineer for the preparation of Phase I reports in various intersections throughout IDOT District One. Work involved Phase I engineering services such as pavement analysis, cost estimation, traffic analysis and environmental studies. Intersections worked on include IL 38 at Meredith Road, IL 50 at Morning Glory Road and US 12 at Honey Lake Road.



Interstate 80 from Grundy County Line to US Route 30, Illinois Department of Transportation, District One, Will County, Illinois

Project Engineer for Phase I engineering services on the long term Phase I study of I-80 from the Grundy County Line to U.S. Route 30. Work included analysis of the existing expressway and determining possible design deficiencies in horizontal and vertical curvature and the super elevation rate and transition lengths on both the mainline and ramps at two interchanges along the project. Additional work involved the development of exhibits to present traffic data. Patrick was also responsible for the development of the proposed add lane improvement.

75th Street Bridge over the East Branch of the DuPage River, DuPage County Division of Transportation, DuPage County, Illinois

Project Engineer in the Phase I Engineering study of the 75th Street Bridge over the DuPage River. Work included the identification of different rehabilitation options and providing a cost estimate for each. Phase I Engineering services included alternative geometric studies, roadway cost estimate and the completion of a Project Development Report. Patrick was also responsible for the completion of a Bridge Condition Report, Drainage Study and Hydraulic Report.

Rakow Road from Ackman Road to Illinois Route 31, McHenry County Division of Transportation, McHenry County, Illinois

Project Engineer for the Phase II calculation of quantities for the contract plans and documents for the reconstruction and widening of James R. Rakow Road from Ackman Road to Illinois Route 31. Work included the addition of one to two mainline lanes in each direction, additional turn lanes at six signalized intersections, a major realignment of the roadway for safety improvements, drainage improvements, a grade-separated pedestrian and bicycle overpass, traffic signal modernization, retaining walls, a noise wall, the widening of the double box culvert for Crystal Creek, and a new lighting system.

Laraway Rd from Cedar Road to LaGrange Road, Will County Division of Transportation, Villages of New Lenox and Frankfort, Will County, Illinois

Drainage/utility Engineer for the Phase I Engineering study for the Laraway Road from Cedar Road to LaGrange Road. Responsibilities included contacting the JULIE for design stage request to receive a list of utility contacts and coordinate with all utility owners who have facilities within the study limits and obtain their atlas maps and/or related utility drawings and the information will be incorporated into the project base file. This utility information is being utilized when designing the proposed drainage features and avoided the conflicts where feasible.



Daniel P. Brinkman, PE, PTOE Traffic
Desmit Hamilton Associates, Inc.

Education
Bachelor of Science in
Civil Engineering,
University of Illinois at
Chicago; 1996

Certification
State of Illinois Licensed
Engineer #062-55293
Professional Traffic
Operations Engineer
(PTOE) # 1253

Memberships
Institute of
Transportation
Engineers
American Society of Civil
Engineers (ASCE)
ASCE Transportation and
Development
Institute
International Municipal
Signal Association
(IMSA)

Daniel P. Brinkman is a Licensed Professional Engineer with over 19 years of experience in the traffic engineering and transportation planning fields. His experience covers both the public and private sectors, with clients including municipalities, retail and residential developers, school districts, park districts and hospitals/medical centers.

Experience
Traffic Engineering | Conducted Traffic Impact Studies (TIS) in over 40 Illinois municipalities, primarily in the six-county Chicagoland area. Evaluated and designed site plan elements (e.g. parking facilities, access intersections, and internal circulation) for retail/commercial centers, residential communities, office parks, industrial/business parks, school districts, hospitals/medical centers, mixed-use developments, and recreational facilities.

Traffic Signal and Roadway Design | Conducted/reviewed numerous Traffic Signal Warrant studies and Intersection Design Studies (IDS). Experienced with designing new intersections as well as renovations of existing signalized intersections. Experienced in planning and design of roadway improvements and traffic signals for both new and existing developments.

Transportation Planning/Municipal Consulting | Managed comprehensive planning and corridor studies, conducted development reviews, and performed special topic investigations for many municipalities, such as Northbrook, Crystal Lake, Lake Forest, Lisle, Burr Ridge, Mundelein, Arlington Heights and Volo. Supports GHA staff that serve as Municipal Engineers for over a dozen communities, primarily in the Lake and north Cook County area.

Engineering for Federally Funded Projects | Managed both Locally and Federally funded Preliminary Engineering (Phase I and Phase II) assignments for County Highway Agencies and Municipalities including a variety of projects ranging from Safe Routes to School (SRTS) improvements to complete reconstruction of roadways. Experienced in the NEPA processing and completing Project Development Reports for Categorical Exclusion (CE-I and CE-II) projects. Experienced in presenting to IDOT BLRS and joint BLRS / FHWA meetings seeking Design Approval. Has Participated in numerous Open House Public Information meetings as well as formal Public Hearings for proposed improvements. He has also managed various types of transportation related Phase II Engineering projects including Surface Transportation Program (STP) funded roadway reconstruction, intersection improvements, and Congestion Mitigation and Air Quality (CMAQ) funded traffic signal upgrade and interconnect projects.

Expert Witness Testimony | Mr. Brinkman has overseen and prepared or assisted with production of Engineering Specialty Reports for multiple projects involving Eminent Domain and Land Acquisition. He has provided expert testimony for numerous cases on behalf of multiple clients, including the Illinois Department of Transportation, municipal governments, and private property owners in Cook, Will, DuPage, and McHenry Counties. Cases have included Eminent Domain/Condemnation, Highway Improvements, Roadway Safety, and Zoning.





Art Penn, PE Traffic

Director of Data Collection Division

Education
Bachelor of Science
Computer
Engineering,
University of
Michigan, 1993

Registration
State of Illinois Licensed
Professional Engineer
#062 060411

Arthur J. Penn, Director of GHA's Data Collection Division, is responsible for managing the traffic data as it relates to computer input and out-put. He also maintains the traffic databases and provides a reliable backup system for all traffic count information. Mr. Penn has been managing GHA's traffic data collection projects for the past seven years. He developed several QA/QC programs for increasing count accuracy, and also seamlessly implemented the use of GPS with client-provided shapefiles to identify counter placement and reduce fuel costs and mileage by plotting the most efficient route. He is assisted by members of our technical staff, each with years of hands-on experience collecting traffic data using tube counters, passive magnetic sensors, and video collection units.

Professional Experience

Traffic Data Collection, Various Routes, Various Counties, IDOT

Since 2005, Mr. Penn has provided data management for IDOT traffic data collection projects. In 2005, 2007 and 2009 GHA was selected by IDOT to collect 24-hour Passive Magnetic Sensor (PMS) counts. Each was a two-year contract that covered northern and central Illinois. Mr. Penn is currently responsible for data management of IDOT's 2011-2013 traffic data collection project. The current project utilizes a combination of Mio-Vision and tube counters at over 12,000

IDOT Traffic Data Collection – Various Routes, Various Counties

Year 2011-2013 – GHA and our subconsultant completed over 12,400 24-hour volume classification and road tube counts, and 130 video data counts for the Illinois Department of Transportation (IDOT), Districts One, Two and Three. During this contract, GHA implemented the use of video data collection equipment which provided accurate 24-hour turning movement counts for intersection design studies and other IDOT uses.

Year 2009-2010 – GHA and our subconsultant completed over 12,000 passive magnetic sensor (PMS) counts and 300 manual counts for the Illinois Department of Transportation (IDOT), Districts One, Two and Three. During 2009, GHA collected speed data on a daily basis for up to 150 locations simultaneously, including interstate highways, state routes, county highways, and townships and municipal roadways.

Year 2007-2008 – GHA and our subconsultant completed over 16,000 passive magnetic sensor (PMS) counts and 300 manual counts for the Illinois Department of Transportation (IDOT), Districts One, Two, and Four on both marked routes and various routes.



Christopher P. Kersten, PE Public Involvement and Agency Coordination

Education
B.S., Civil Engineering,
University of Illinois at
Urbana-Champaign,
2001

Registration
Licensed Professional
Engineer: IL

Memberships
American Society of Civil
Engineers

Training and Courses
IDOT Documentation of
Contract Quantities
IDOT Mixture Aggregate
Technician Course

Mr. Kersten has 14 years of experience in the area of transportation engineering. He has worked with state, county, municipal, and private clients performing Phase I Studies, including his current assignment of being on-site with IDOT District One in the Bureau of Programming where he is overseeing other consultants prepare Phase I Studies. His experience includes more than 25 preliminary engineering studies with IDOT.

Professional Experience
Phase I Consultant Studies Unit – Project Management Services for Various Projects, Illinois Department of Transportation, District One, *Various Locations, Illinois*
Project Manager for various Phase I projects assisting the District in reviewing, overseeing, tracking, and prioritizing projects being performed by Department personnel and other consultants. All work performed out of IDOT's District One office in Schaumburg, Illinois. Representative projects include:

- I-55 at US 6 – Village of Channahon, Will County
- US 30 at Western Avenue – City of Chicago Heights and Village of Olympia Fields, Cook County
- US 45 at IL 173 (Rosecrans Road) – Antioch Township, Lake County
- IL 7 at IL 171 – City of Lockport, Will County
- IL 7 : 131st Street to 3500' south of 135th Street - Palos Park, Cook County
- IL 19 at Scott Street and Judd Avenue - Village of Schiller Park, Cook County
- IL 23 at Coral Road/Pleasant Grove Road – Riley Township, McHenry County
- IL 31 at Big Timber Road – City of Elgin, Kane County
- IL 43 at 46th /47th Street – Village of Forest View and Lyons, Cook County
- IL 53 at Royce Road – Village of Bolingbrook, Will County
- IL 59 at West Bartlett Road – Village of Bartlett, Cook County
- IL 83 at IL 171 Main Street (S Junction) – Village of Lemont, Cook County
- East End Avenue 26th Street to 30th Street – Chicago Heights and South Chicago Heights, Cook County
- Golf Road at Harms Road – Village of Morton Grove, Cook County
- Joliet Road and 55th Street – Village of McCook, Cook County
- Oak Park Avenue at Windsor Avenue and at Stanley Avenue – City of Berwyn, Cook County
- 115th Street at Pulaski Road – Village of Alsip, Cook County

Phase I Studies for Various Highway Safety Improvement Program (HSIP) Projects, Illinois Department of Transportation, District One, *Various Locations, Illinois*
Project Manager of Phase I Studies for Safety Improvement projects in Region One/District One as part of the Federally-funded Illinois Highway Safety Improvement Program. The program's purpose is to reduce traffic fatalities and serious injuries on all public roads. This contract includes completing these Phase I Studies from concept identification to Design Approval. Representative locations include:

- US 12/20/45 at US 34 – Cook County
- 115th St at Pulaski – Cook County
- IL Rte 68 Access Study – Cook County
- Glenwood Dyer Road from IL Rte 83 to Stoney Island – Cook County
- US 20 at Coral and Union Rd – McHenry County



The general scope of work of these projects included widening and resurfacing for the addition of auxiliary turning lanes, channelization, sidewalk and path additions, and traffic signal installations/modifications. Tasks included collecting data, capacity analysis, crash analysis, geometric design, drainage studies, identification of proposed ROW needs, agency and public involvement, and ultimately, preparing a Project Development Report.

James R. Rakow Road, Ackman Road to Illinois Route 31, McHenry County Division of Transportation, McHenry County, Illinois

Project Engineer for the Phase I study and final design and preparation of contract plans and documents for the reconstruction and widening of a 3-mile section of James R. Rakow Road from Ackman Road to Illinois Route 31. Work included the addition of one to two mainline lanes in each direction, additional turn lanes at six signalized intersections, a major re-alignment of the roadway for safety improvements, drainage improvements, a grade-separated pedestrian and bicycle overpass, traffic signal modernization, retaining walls, a noise wall, the widening of the double box culvert for Crystal Creek, and a new lighting system. Full staging plans were provided for maintenance of traffic as part of the overall plan set.

Plank Road at Illinois Route 47, Kane County Division of Transportation, Kane County, Illinois

Lead project engineer for the preliminary engineering analysis, Intersection Design Study, and the development of contract plans, specifications, and estimates for the improvement of the intersection of Plank Road with Illinois Route 47. The project included pavement widening and resurfacing for the addition of left turn lanes on Plank Road and right turn lanes on Illinois Route 47. The project also included drainage improvements, traffic signal modernization, and lighting improvements. Construction staging plans were provided to ensure adequate space for the work zone during construction.

Algonquin Road from Illinois Route 47 to Randall Road, McHenry County Division of Transportation, McHenry County, Illinois

Project engineer responsible for the development of the maintenance of traffic concept and plans for the reconstruction and widening of Algonquin Road from a two-lane facility to a four-lane facility with a variable-width median. This project was constructed over a two-year period in two construction contracts, requiring close coordination.



Registration
**State of Illinois Licensed
Professional Land
Surveyor #035-003341**

Education
**Illinois Professional Land
Surveyors Association
National Society of
Professional Surveyors**

Jon Past, PLS Survey

Patrick Engineering Services, Inc.

Mr. Past is a Licensed Professional Surveyor with more than 30 years of experience with emphasis on Topographical Surveys, A.L.T.A./A.C.S.M. Land Title Surveys, Settlement Monitoring Surveys, Boundary Surveys, Plats of Right of Way, Easement, Dedication, Subdivision, and Annexation.

Experience

Boundary Surveys

Retraces and monument title lines for ALTA/ACSM land title surveys, new subdivisions and existing parcels requiring a current survey, including legal descriptions and plat preparation. Also prepares legal descriptions and plats for roadway and easement dedications, roadway and easement vacations and tax division or annexation parcels.

Route Surveys

Transportation related experience involving control surveys by GPS and classical methods. Determines existing centerline alignments and existing right-of-way from field surveys and public records. Also prepares plats of highway with legal descriptions for proposed right-of-way for small and large-scale land acquisition projects.

Engineering and Construction Surveys

Broad range of experience in small to very large private and public works projects involving settlement monitoring, roadway and site topographic surveys, centerline alignment surveys, and drainage and hydraulic surveys. Experience also includes construction layout and final as-built surveys. All experience has included residential, commercial and industrial development, along with railroads, quarries, roadways, bridges and airports.

Control Surveys

Experience with all forms of plane and geodetic survey control for horizontal and vertical purposes. Includes control for photogrammetry, densification, and topographic and engineering surveys.

Subdivision Surveys

Preparation and execution Subdivision surveying for the development of several multi acre developments (Residential, Retail and Industrial Subdivisions). From project beginning to fulfillment including deed research, Boundary Survey, ALTA/ACSM Land Title Survey, Plat of Subdivision, Individual Lot Plats. Field staking of development including layout of civil improvements, property lines houses, etc. Lake, McHenry, Boone, DuPage, Kane and Cook Counties



Happ Road *between Willow Road and Winnetka Road*

Matthew D. Breitenbach, PE Geotechnical Engineering

Education:

B.S., Geological Engineering, University of Missouri-Rolla, 1996

Registration:

Licensed Professional Engineer: IL

Employment History:

Patrick Engineering
Project Management Training Program, 2008

Memberships:

American Society of Civil Engineers

Publications:

CSX Railroad Bridge Replacements – A Case History in Geotechnical Engineering, 2013

Awards:

Patrick Engineering Distinguishing Trait Award for “Technically Competent” - 2013

Mr. Breitenbach has more than 18 years of experience in the design and management of geotechnical, site civil, and environmental projects. Responsibilities include directing and managing subsurface investigations, interpreting field and laboratory data, preparing geotechnical reports including recommendations regarding site preparation and foundation design, analyzing the stability of natural and manmade slopes using computer modeling software, performing various analyses for design of deep foundation systems, selecting and installing subsurface instrumentation systems, inspecting dams, and preparing engineer’s cost estimates for project planning and bid comparison.

Washington Street Phase I & Phase II

Lake County Department of Transportation, Grayslake, Illinois

Supervised multiple subsurface exploration programs and laboratory analyses for a rail/roadway grade separation project. Performed geotechnical analysis and prepared recommendations for the construction of new road alignment, multiple retaining walls, rail bridge foundations and detention basin construction. Geotechnical analyses included deep foundation recommendations, global stability analysis of retaining structure, and analyses and recommendations for short and long term control of groundwater below grade construction. Reviewed results of Phase I investigation. Provided recommendations for Phase II investigation.

Elgin O’Hare Western Bypass from Lively Boulevard to Supreme Drive, Illinois Tollway, DuPage County, Illinois

Project Geotechnical Engineer for Phase II Contract Plan Preparation for the proposed construction of the Elgin O’Hare Western Bypass from Lively Boulevard to Supreme Drive, including Illinois Route 83 (Busse Road). As Project Geotechnical Engineer, designed the field investigation including over 150 soil borings for design of multiple structural components including embankments, retaining walls, culverts, light poles, and bridge foundations. Directed and performed bearing capacity and settlement analyses, slope stability analyses, deep foundation design. Prepared Structural Geotechnical Reports and Roadway Geotechnical Reports for submittal to ISTHA and IDOT.

Also served on Value Engineering Team to review overall Elgin O’Hare Western Access project. Worked with VE-Team to propose and evaluate potential cost-saving measures using rigorous methodology.

Fullerton Avenue Bridge Reconstruction, Addison Township, Addison, Illinois

Directed subsurface exploration program and laboratory analysis in accordance with IDOT requirements for bridge replacement and roadway improvements. Performed geotechnical analysis for deep foundation design and prepared recommendations for the construction of new bridge substructure.

I-88 Retaining Walls, Albin Carlson Company, Lisle, Illinois

As Project Team Member, performed geotechnical analysis and prepared recommendations for the construction of MSE retaining walls along I-88 alignment. Evaluated data collected via soil borings, hand augers, test pits and excavation observations to provide criteria in use of global stability analysis. Performed slope stability analysis for temporary construction and long-term stability conditions.





Analyses allowed the construction contractor to re-engineer the design of the retaining wall at a considerable savings over the bid price.

Algonquin Road, McHenry County Division of Transportation, Crystal Lake, Illinois
Project Team Member responsible for analysis of using lightweight fill to allow construction of a new roadway over very soft organic soils. Performed calculations including bearing capacity and settlement as part of the geotechnical analysis team.

Material Handling and Rail Facilities, EFS Homer City, LLC, Homer City, Pennsylvania
Project Manager and Geotechnical Design Engineer for design and construction of a three million gallon stormwater detention pond. Due to regulatory requirements, the detention pond had to include a double liner with a leakage detection system. Designed and executed Construction Quality Assurance and Quality Control program. Oversaw field staff that monitored construction of the liner system and verified compliance with the approved program. Prepared certification report for Pennsylvania Department of Environment approval.

Old Dowd Road Retaining Wall, Norfolk Southern Railroad, Charlotte, North Carolina
Geotechnical Engineer for the design services for a soldier pile retaining wall with ground anchors intended to retain the embankment below an existing highway bridge and allow construction of a railroad track under the bridge between an existing bridge pier and the abutment. The soldier pile retaining wall is 192 feet long; the height varies from 5'-2" to 18'-6." The retaining wall was designed using the 2007 AASHTO LRFD Bridge Design Specifications. Provided geotechnical analysis.

Bicycle Path Bridge Design, Cherokee General Corporation/U.S. Army Corps of Engineers, Rend Lake, Benton, Illinois
Project Engineer responsible for geotechnical investigation and design of four pedestrian/bicycle bridges. Prepared scope of work for geotechnical drilling investigation, directed field crew, selected samples for laboratory testing. Prepared geotechnical calculations for use by structural engineer in foundation design.



Christy M. Hawthorn, P.E. Lighting

EDUCATION

B.S., Electrical
Engineering, University
of Illinois Urbana-
Champaign

CREDENTIALS

**Licensed Professional
Engineer: IL**
ISPE/NSPE Member

MEMBERSHIP

- University of Illinois, ECE
Department Alumni
Board, 2006-Present,
Treasurer 2009-
Present
- Project Management
Training (PMI), Patrick
Engineering
- NESC Training Seminar
(Chicago, March 2008)
- NFPA 70 Training
Seminar (Chicago,
May 2008)
- Schweitzer Engineering
Labs (SEL) Relay Basics
Course (St. Louis,
October 2002)
- NFPA 70E Training
Seminar (Chicago, July
2006)
- SKM Systems Analysis
Seminar
(Chicago, 2006)
- SKM Systems Arc Flash
Seminar (Chicago,
February 2007)

Ms. Hawthorn began her career in the industry in 2000, joining Patrick in 2006. She is responsible for all aspects of complex electrical engineering projects from bidding through final design. This experience includes detailed electrical design, project coordination, detailed analysis/computations, and associated power distribution, substations, lighting, and communication systems. Specific engineering responsibilities include one-line power diagrams, three-line power diagrams, protection and control schematic diagrams, wiring and connection diagrams, relay setting preparation and implementation, review of manufacturer submittals, power system calculations, preparation of contract documents, bid analysis, and witnessing factory tests.

Ms. Hawthorn has a well-documented history of delivering projects within budget and ahead of schedule. Her experience is very diverse and includes power system design as it relates to utility, industrial, municipal, commercial, and institutional type work. Ms. Hawthorn's professional expertise includes power systems analysis and design, short circuit analysis, protective device coordination, stability studies, arc flash analysis per IEEE 1584 and NFPA 70E, substation design including protection, control, and bus design, protective relay settings for generation, transmission, and distribution, industrial facility design including power distribution, cable tray layout, building systems design, lighting design, grounding analysis and design per IEEE 80, AC/DC substation protection/wiring schematic design, distribution line design, medium voltage switchgear, protective relays, transformers/ motors and cable systems.

Representative Projects

Rakow Road, McHenry County Highway Department, McHenry County, Illinois
Project Engineer for the design of lighting for nearly three miles of James R. Rakow Road between Ackman Road and Illinois Route 31. Submittals included plans, photometric calculations, special provisions, and voltage drop calculations. Support was provided during construction.

Narragansett Avenue Lighting, Cook County Highway Department, Chicago, Illinois
Project Engineer for the Phase I engineering services for the roadway lighting along Narragansett Avenue. Prepared photometric calculations and proposed layout drawings for the lighting.

Decorative Lighting, Village of Westmont, Westmont, Illinois
Project Engineer for the street lighting design along Cass Avenue in the Village of Westmont. Submittals included detailed drawings, photometric calculations, voltage drop calculations, bill of materials and quantity calculations. The design was completed in full compliance with the IDOT Bureau of Electrical Operations standards and the Village of Westmont Specifications.

Historical Lighting, City of Elgin, Elgin, Illinois
Project Engineer for the street lighting design for the Central Business District of the City of Elgin. Submittals included detailed drawings, photometric calculations, voltage drop calculations, bill of materials and quantity calculations.





Lighting Project, Village of Buffalo Grove, Buffalo Grove, Illinois

Project Engineer for the street lighting design for Route 22 and Deerfield Parkways in the Village of Buffalo Grove. Submittals included detailed drawings, photometric calculations, voltage drop calculations, bill of materials and quantity calculations.

Illinois Route 22 (Half Day Road), Illinois Department of Transportation, Chicago, Illinois

Project Engineer for reviewing submittals for roadway lighting along Illinois Route 22 from Hewitt Drive to Lakeside Drive. Submittals included plans, photometric calculations, special provisions, and voltage drop calculations.

Lighting Project, Village of Addison, Addison, Illinois

Project Engineer for the street lighting design for Lake Street (Route 20) in the Village of Addison. Submittals included detailed drawings, photometric calculations, voltage drop calculations, bill of materials and quantity calculations. The design was completed in full compliance with the IDOT Bureau of Electrical Operations standards and the Village of Addison Specifications.

I-94 (Tri-State Tollway) Southbound Lighting, Illinois Tollway, Chicago, Illinois

Project Engineer for reviewing submittals for the replacement of roadway lighting for southbound Interstate 94 from just south of Illinois Route 22 to just north of Illinois Route 60. Submittals included plans, photometric calculations, special provisions, and voltage drop calculations.

Dan Ryan Expressway, Illinois Department of Transportation, Chicago, Illinois

Field Engineer for the electrical installation for the Dan Ryan Expressway in Chicago, Illinois. Duties included observation of installation and means of construction according to the plans, measurement of installed equipment, and necessary paperwork required by IDOT. Installation of high mast towers, temporary lighting, and controllers were included in the construction.

Borman Expressway, Illinois Department of Transportation, Chicago, Illinois

Project Engineer for the surveillance plans for the Borman Expressway. A review of the lighting and power distribution plans for the Borman expressway reconstruction was included. Submittals included detailed plans, specifications, pay item lists, and engineer's estimate of cost.

Lighting Project, Illinois Department of Transportation, Schaumburg, Illinois

Project Engineer for approximately five miles of expressway segment lighting of Route 53 between north of Algonquin Road to the north of Palatine Road. Submittals included detailed drawings, photometric calculations, voltage drop calculations, bill of materials and quantity calculations. The design was completed in full compliance with the IDOT Bureau of Electrical Operations standards.

State Highway 83 Lighting, Wisconsin Department of Transportation, Waukesha County, Wisconsin

Project Engineer for the design of lighting for two roundabouts and three miles of roadway lighting on STH 83 between USH 18 and CTH E and CTH DE in Waukesha County. Submittals included plans and photometric calculations.



Jodi Z. Mariano, PLA, ASLA, CLARB Landscape/Streetscape
Task 1 (assumes 10)

Education

B.A. Landscape
Architecture,
University of Illinois
Urbana-Champaign
M.A. Architecture,
University of Illinois,
Urbana-Champaign

Registration

State of Illinois,
Registered Landscape
Architect, License No.
157-001062
CLARB Certified
Landscape Architect,
No. 4570

Affiliations

Member, American
Society of Landscape
Architects
Instructor, Joseph
Regenstein, Jr. School,
Chicago Botanic
Gardens
Member, Women's
Transportation
Seminar

Ms. Mariano's backgrounds in landscape architecture and architecture have prepared her well to guide community urban design projects. Jodi brings a research-oriented, contextual approach to urban design, providing unique design solutions for our public and private sector clients. Jodi has directed public processes which have resulted in useful master plans, successful funding applications and dynamic implementation projects. Her professional responsibilities range from concept planning through design, construction phase services, development approval and project installation. Her proficiency with a wide range of graphic techniques, including hand drawings and computer generated graphics, allow her to craft effective and efficient communication techniques. Her technical experience enables her to produce dependable high quality construction documents. Prior to joining Teska Associates, Jodi worked for a Chicago engineering firm on high profile infrastructural projects, developing her interest in blending vibrant community based design with functional infrastructure needs. Jodi is an instructor at the Joseph Regenstein, Jr. School at the Chicago Botanic Gardens where she teaches in the Garden Design Certificate Program.

Special Assignments

Corridor and Urban Design Guidelines

Participated in and led community planning assignments which resulted in the design direction for publicly and privately owned properties, including assignments in Prospect Heights (Milwaukee Avenue Corridor), Arlington Heights (Palatine Road/Rand Road/Arlington Heights Road Corridor), Oak Lawn (95th Street Corridor), Ridgeland Avenue Corridor (Burbank, Oak Lawn, Chicago Ridge, Worth, Alsip, Palos Heights), Broadview (Roosevelt Road) Berkeley (St. Charles Road Corridor), Western Springs, Lombard, South Elgin, Itasca, West Chicago, Sugar Grove and Prairie Grove. Continuing services for many of these communities have provided assistance with municipal decision making for items such as new development, building additions and modifications.

Transportation & Streetscape Planning

Worked on behalf of both private developers and municipalities to develop streetscape visioning and detailed bid document plans for streetscape developments. Assisted with obtaining ITEP (Illinois Transportation Enhancement Program) funding for streetscape implementation. Transportation & Streetscape planning assignments include Orland Park Transportation Plan, Canton Downtown (Canton); Sherman Plaza, Maple Avenue & Borders Plaza (Evanston); Vernon Court Parking Lot, Downtown Planters & Dundee Road median plantings (Glencoe); Lemont Downtown and Historic I&M Canal Trail (Lemont); St. Charles Road (Berkeley); and Southside Streetscape (Greensboro, NC).

Façade Enhancements

Provided historical research and façade enhancement studies to assist with downtown revitalization projects. Assisted with obtaining DCEO (Department of Commerce and Economic Opportunity) grants for façade implementation. Façade enhancement assignments in downtowns include Chicago Ridge, Broadview, Canton, Glencoe, Fox River Grove, Rochelle and Lombard. Façade enhancement assignments for commercial centers include Olympia Fields.





Gateway & Wayfinding Signage

Prepared gateway and wayfinding signage packages for downtown district and corridor enhancement. Signage assignments have been completed for the Villages of Glendale Heights, Oak Lawn, South Elgin, Canton, Arlington Heights and Prospect Heights. Site, Landscape and Architectural Plan Review

Analyzed and prepared project reviews and testimony for a variety of large and small scale projects for the City of Highwood and Villages of Bloomingdale, Itasca, Glencoe, South Elgin, Algonquin and Highwood.

Landscape Architecture

Provided landscape architecture design services for multiple residential projects, including single family, townhome and condominium homes. Provided landscape architectural design for specialty garden areas such as the Wilmette Reading Garden, Glenbrook Hospital Memorial Sculpture Garden, Glencoe Village Hall and Downtown Planters, Astellas Pharmaceuticals. Provided landscape architecture for Northwestern University campus areas including North Campus Infrastructure, Foster Walker Quad, Patten Gym, Cresap Lab, Dearborn Observatory and University Hall.

Open Space and Parks Planning

Prepared open space planning for Vehe Farm (Deer Park). Prepared park plans for the South Elgin Parks Department, including Gateway Plaza, Pickerel Park, and Pioneer Park. Prepared playground plans for B’Nai Torah Congregation (Highland Park) and Apache Park (Des Plaines).

Infrastructure Design

Prepared concept through bid phase documentation for Washington Street underpass (Grayslake). While at another firm, collaborated with teams of engineers, architects and landscape architects on high profile infrastructure projects including the South Lake Shore Drive Reconstruction through Historic Jackson Park and the Michigan Avenue Planters above the North & South Grant Park Garages in Chicago.



Education
B.L.A. Landscape
Architecture, Michigan
State University, East
Lansing, MI

Dominic Suardini Landscape/Streetscape

Teska Associates, Inc.

Mr. Suardini's background includes extensive knowledge in both landscape architecture and planning professions. Joining Teska in September of 2012, Dominic's experience includes a broad range of urban design, land planning, landscape design, construction documents, and planning projects, with a passion for creating special places for people to live, work and play. Over 12 years experience in hand and computer rendering with applied software programs AutoCAD, Adobe Creative Suite, Google SketchUp, and Microsoft Office Dominic brings both work experience and graphic communication to the drawing board.

Detail-oriented with ability to put on the planner hat, Dominic understands big picture thinking involved in community planning down to the smallest of details in creating a vibrant and unique streetscape for a community. At Teska, his role as a designer has ranged from producing projects in size from playgrounds to streetscape design to large scale community master plans. His focus is executing projects from schematic design through construction and providing clients multiple creative solutions to every project no matter how large or small.

Sample Experience

Corridor and Urban Design Guidelines

Participated in community planning assignments which resulted in the design direction for publicly and privately owned properties, including assignments in Prospect Heights (Milwaukee Avenue Corridor), Arlington Heights (Palatine Road/Rand Road/Arlington Heights Road Corridor), Oak Lawn (95th Street Corridor), 6 communities (Ridgeland Avenue Corridor Plan), Fox River Grove (Downtown Subarea Architectural & Streetscape Design Guidelines), Chicago (Little Village SSA 45), and Evanston (Fountain Square Plaza Visioning).

Transportation & Streetscape Planning

Worked on behalf of both private developers and municipalities to develop streetscape visioning and detailed bid document plans for streetscape developments. Transportation & Streetscape planning assignments include Orland Park (Orland Park Transportation Plan), Broadview (Roosevelt Road Streetscape), and Grayslake (Washington Street Grade Separation)

Gateway & Wayfinding Signage

Prepared gateway and wayfinding signage packages for downtown district and corridor enhancement. Signage assignments have been completed for Glendale Heights, Arlington Heights, Prospect Heights, Fox River Grove, Broadview, Melrose Park, Ridgeland Avenue, Oak Lawn, Olympia Fields, Orland Park, and SSA 45.

Landscape Architecture

Provided landscape architecture design services for publicly and privately owned properties including, Glencoe Village Hall, Glenstar Mixed-Use Development, Roosevelt Road Streetscape, and Northwestern University North Campus Infrastructure Landscape Plan, and Northwestern University Foster Walker Quad Landscape Plan.





James Novak Wetlands/PESA

Patrick Engineering Services

Education

B.S. (1981) Geography and Environmental Studies, Northeastern Illinois University, Chicago

Post Graduate Studies in Environmental Studies, Northeastern Illinois University, Chicago

Professional Services

Designated Erosion Control Inspector (DECI) - Lake County Stormwater Management Commission 2013

Kane County QWRS - Qualified Wetland Review Specialist November, 2004

McHenry County Certified Wetland Specialist- 2008

Illinois Licensed Pesticide Applicator – 2005 to present

Wetland Delineation Training, Wetland Training Institute, Inc., 40 hours (1991)

- In-House Lead for Wetlands and Natural Resource studies conducted for the Tier 1 Illiana Expressway Draft and Final Environmental Impact Statement (EIS). Coordinated the development of EIS text for both Illinois and Indiana to combine into pertinent sections of the EIS. Tier 1 Final EIS and Record of Decision (ROD) approved in 2013. Participated in meetings with resource agencies and NEPA 404 Merger meetings. Tracked project schedules and budgets through the Tier 1 process.
- In-House Lead for Wetlands and Natural Resource studies conducted for the Tier 2 Illiana Expressway Draft and Final EIS. Coordinated the development of EIS text for both Illinois and Indiana. Provided QA/QC of technical memoranda for avian resources, riparian corridors, and wildlife corridors. Co-authored Biological Assessment for federally endangered species, submitted to USFWS in February 2014. Also assisted in the development of Indirect and Cumulative Impacts section, Permitting, and Section 4(f) for the Tier 2 Draft EIS. Continued coordination with resource agency and NEPA 404 Merger meetings. Tracked project schedules and budgets through the Tier 2 process. ROD completed in December 2014.
- Project manager for District 1, Illinois Department of Transportation Various Environmental Services Blanket contract. Coordinates and schedules staff for various work orders for wetland delineations for proposed transportation improvement projects. Have assisted junior staff in complex delineations for this contract. Provides QA/QC of all reports and results and coordinates with the Department on schedules, budgets, and project priorities.
- Oversaw the development of the wetlands and natural resource sections of the DEIS and FEIS for the 70 mile proposed improvements of US Route 51 from Centralia to Pana in District 7. Conducted map reviews of wetlands to assist in alternatives development prior to the receipt of the INHS wetland delineations and Biological Resource Review. The use of this review was to provide information for the numerous alternatives for the community bypass locations. Conducted field reconnaissance of wetland locations.
- Was responsible for technical review of the Elgin O’Hare DEIS and FEIS. Provided review of the entire DEIS in the first rounds of reviews and then focused on natural resource and wetland sections of the later drafts and FEIS. Involved in mitigation coordination for wetlands due to FAA restrictions on locations of creating natural areas near runway fly patterns.
- Conducted permitting task for Stearns Road Extension Project including the crossing of the Fox River. (Fox River Bridge EIS). Submitted permitting





documents and coordinated efforts between USACE, IEPA, and Kane County. Obtained Individual Section 404 permit in 2006.

- Environmental Lead for a CEII environmental review for the proposed reconstruction of the Barrington Road Bridge and roadway approaches over the Interstate 90 (Jane Addams Tollway). Major issues related to coordinating special waste review between local agency, IDOT and the Illinois Tollway. Coordination required for the completion of wetland impact section as a result of wetland delineations completed for two separate projects. Resolved potential Section 4(f) issue.
- Project manager for Environmental Inspections for the construction of Stearns Road in Kane County. This includes contractor awareness training for sensitive natural resources in the project corridor including the South Elgin Fen, McLean Blvd. Fen, James Pate Philip State Park, DeSantos Brewster Creek INAI site, and endangered species within the corridor including fishes, mussels, and various plant species. Participated in the mussel surveys and relocation for sections of Brewster Creek and its tributaries. (2007 to present).
- Provided final QA/QC and technical guidance in preparation of Wetland Technical Report for DEIS for Fox River Bridge Crossings project, Kane County, Illinois, 1997. Prepared response to comments from agencies and public (2001). Co-authored biological sections for DEIS. Conducted Supplemental Wetland delineation for one corridor of the DEIS, including threatened and endangered species survey and locating proximity to proposed roadway, as well as delineation of a hillside/slope fen wetland. Provided Floristic Quality Index compilation for delineated wetlands.
- Project manager for MWRDGC assessment of Upper Salt Creek Watershed. Trained staff to perform wetland and habitat investigations in the field screenings. Staff investigated over 200 areas and reported on existing conditions. Developed a project specific prioritizing system to identify highest priority sites based on a suite of field conditions keying on restoration potential. Goals were to identify areas of highest flood control/water quality benefits in the basin to the MWRDGC. (2008)
- Provided technical guidance and QA/QC oversight for the MWRDGC assessment of the North Branch Chicago River Watershed. Worked with staff to implement the field assessment and rating system developed for the Upper Salt Creek Watershed study for this watershed assessment. In addition to restoration priorities near existing streams, also assessed the ravine communities along Lake Michigan for existing conditions and restoration and enhancement potential. QA/QC of final report. (2009)



Jeremy Reynolds, PG Wetlands/PESA

10/15/2013

Education

B.S. (1994) Geology
(Hydrogeology focus),
Winona State University,
Winona MN

Registration

**Registered Professional
Geologist – Illinois
196.001170 via ASBOG
Exam (2006) and
Nebraska G-0343 (2009)**

Training

OSHA 8 Hour, refresher
course (1996-2012)
OSHA 40 Hour, OSHA 29
CFR 1910.120(e)(4) for
Hazardous Waste Sites
(1995)

Mr. Reynolds joined the Huff & Huff team in October 2004 after working with an environmental consulting firm in La Crosse, WI since 1994 and currently has 20 years of experience as an environmental consultant. Experience includes risk assessment, Phase I and II environmental site assessments, subsurface investigation and remediation including voluntary and consent order remediation sites involving petro and agri-chemicals, RCRA, and CERCLA hazardous waste sites, solid and hazardous waste management. In addition, Mr. Reynolds has transportation project experience related to municipal, local highway, interstate, and railroad projects including special and hazardous waste screening and direction of soils to clean construction and demolition debris (CCDD) landfills; Preliminary Environmental Site Assessments (PESA) and Preliminary Site Investigations (PSI). Mr. Reynolds began conducting PESA and PSI projects, primarily for local roads projects in 2005 and has since worked on a variety of transportation projects including conducting PESA projects for Chicago Region Environmental and Transportation Projects (CREATE) and several other projects that include improvements associated with railroad rights-of-way.

Current Projects

- Ongoing direction of soils for final disposition at Clean Construction and Demolition Debris (CCDD) determination for multiple municipalities, contractors, and various transportation related projects via LPC-662 and LPC-663 Forms and painted CCDD via LPC-667 Form (2010-current)
- Completed Subsurface Environmental Investigation Report and Comprehensive Human Health Risk Assessment for the City of Chicago Park District/Department of Transportation's Bloomingdale Trail linear park on historic elevated rail corridor. Also performing the environmental oversight during construction phase (2012-current)
- Protection of NFR status for a previously remediated industrial site owned by the City of Chicago Public Schools in a joint project with the Chicago Park District to reconstruct Greenbaum Park for the installation of multi-use artificial turf field over the formerly remediated property, including direction of various excavated materials to multiple disposal facilities (2011-2012)
- Currently conducting PESA, PSI, CCDD, and assessment of significant remediation challenges related to land acquisition on Longmeadow Parkway Bridge Project over the Fox River, Carpentersville, IL (2013-current)
- Conducted PESA and PSI work related to Batavia Streetscape Project in Batavia, IL (2011-2013)
- Conducted PSI for Ohio Street and within RR ROW for project over BNSF/METRA tracks in Aurora, IL (2011)



- Conducted a subsurface investigation and directed soil handling issues at a Morton Grove, IL site transferring commercial/industrial properties to expanded METRA parking in a TIF District (2009-2010)
- Subsurface investigation for a METRA station parking lot within a TIF District in Morton Grove, IL (2010)
- PESA/PSI to construct a pedestrian underpass at the Ravinia METRA station in Highland Park, IL (2010)
- Conducted a PSI for the Deerfield Road METRA Station Bridge Replacement in Deerfield, IL (2009)
- Conducted a PESA for the Brookmont Blvd. Improvement & RR Bridge Replacement Project in Kankakee, IL (2008)
- Conducted a PESA with borings for the Paxton, IL Bridge Replacement Project over CN Railroad right-of-way (2008)
- Conducted a PSI at a property associated with the US 41 Realignment Project in the City of Chicago (2007-2008)
- Directed excavation and disposal of special waste from residential roadway projects in Northbrook, IL (2007-2008)
- Conducted subsurface investigation at a former CCDD landfill, successfully completing landfill closure activities for a property associated with a portion of the Stearns Road Project in Kane County, Illinois (2006-2008)
- Conducted review of PSI documents for portions of the CREATE WA3 and WA5 Projects in the City of Chicago (2007)
- Conducted a special waste screening for a portion of CREATE Project P-2 in the City of Chicago, Illinois (2007)
- Conducted a PESA for the CREATE Project P-5 in the City of Chicago (2007)
- Conducted a special waste screening and Preliminary Environmental Site Assessment (PESA) of railroad right-of-way for the CREATE P-1 project in the City of Chicago, Illinois (2006-2007)
- Performed a special waste screening and PESA for Cermak Road Streetscape Improvement Project in the City of Chicago, Illinois (2006-2007)



Current and Future Commitments of Key Personnel

Below is a table of the current commitments and anticipated availability of our anticipated staff for this assignment. However, Patrick is a firm of over 240 professionals, and if selected for this project, we will review these current responsibilities and re-assign work as necessary so that the staff listed below are available to provide the specific services necessary commensurate with the Phase I schedule provided within this proposal.

Jarrod Cebulski	Project Manager	IDOT Phase I Studies I-80 Phase I Schaumburg Phase II Laraway Rd. Phase I	5% 5% 5% 5%	June 2016 September 2016 April 2016 March 2017	80%
Paul Lopez	QA/QC	Various Projects	50%	Ongoing	5%
Nicholas Schilling	Project Engineer	Tollway I-294 DuPage Bikepath	15% 15%	August 2016 August 2016	70%
Madukhar Reddy Karnati	Drainage	Laraway Rd. Phase I	30%	March 2017	70%
Eric Chow	Drainage	IDOT Various Phase I	20%	June 2016	80%
Steve Lynch	Geometrics	CREATE P6 Phase I Midway Airport	15% 15%	September 2016 January 2016	70%
Jason Chae	Geometrics	Laraway Rd. Phase I IDOT Various Phase I	20% 10%	March 2017 June 2016	70%
Tim Reesman	Traffic	I-80 Phase I IDOT Various Phase I	10% 20%	September 2016 June 2016	70%
Chris Kersten	Public Involvement & Agency Coord.	IDOT Program Management	80%	September 2016	20%
Matthew Breitenbach	Geotechnical	CREATE P6 Phase I Mars Chocolate Chiller Foundations Various Geotechnical Projects	5% 5% 50%	November 2015 October 2015 Ongoing	30%
Christy Hawthorn	Lighting	Industrial Arc Flash Projects	80%	January 2017	20%
Brian Klabel	Constructability	Elmhurst Road	100%	December 2015	10%
Jodi Z. Mariano	Landscape/ Streetscape	North Avenue Corridor Plan Lockport Streetscape and Signage Northwestern University Streetscape Orland Park Wayfinding and Branding Plan Glencoe Urban Design Englewood Trail	15% 10% 10% 10% 5% 5%	December 2016 March 2016 Ongoing April 2016 Ongoing September 2016	20%
Dominic Suardini	Landscape/ Streetscape	North Avenue Corridor Plan Lockport Streetscape and Signage Northwestern University Streetscape Orland Park	20% 15% 15% 10%	December 2016 March 2016 Ongoing April 2016	40%

Patrick Engineering Services
Happ Road *between Willow Road and Winnetka Road*

		Wayfinding and Branding Plan Englewood Trail	10%	September 2016	
Karl Jensen	Drainage	Unilever Chicago Chicago Botanic Garden Lincoln Elementary School Niles Township High School District 219 Winnetka Road Storm Sewer, Northfield	20% 10% 15% 15% 15%	July 2016 February 2016 January 2016 Ongoing February 2016	25%
Daniel P. Brinkman	Traffic	Grayslake Lake St Ph I LCDOT Traffic Signal Design Projects IDOT Condemnation Assistance, Various Various Traffic Signal & Intersection Projects Various Traffic Planning & Impact Studies/Reviews	10% 10% 15% 15% 35%	May 2016 March 2016 June 2016 Ongoing Ongoing	15%
Art Penn	Traffic	IDOT 2014-2016 Traffic Counts Miovision OnDemand Projects Kane County Traffic Counts State of Kansas Traffic Counts	60% 10% 10% 5%	November 2015 Ongoing December 2015 November 2016	15%
Jon Past	Survey	Arlington Heights Park District Sunset Meadows Survey & Layout Baker Demonstration School Wilmette Boundary & Topo Skokie Sports Park Topo Unilever Chicago Topo Elmhurst North York Rd Topo	5% 10% 15% 20% 20%	December 2015 December 2015 December 2015 December 2015 January 2016	30%
James Novak	Wetlands/PESA	IDOT Environmental Various Various Contract District 1 TS/Quentin Road Long Meadow Parkway High Speed Rail I-290	30% 5% 20% 5% 5%	2019 2017 2017 2017 2017	30%
Jeremy Reynolds	Wetlands/PESA	Longmeadow Parkway City of Aurora/CCDD Village of Northbrook/CCDD Village of Glenview/CCDD	5% 5% 5% 5%	2017 2017 2017 2017	60%

VILLAGE OF NORTHFIELD REGULAR BOARD MEETING SUMMARY SHEET

Meeting Date: <u>May 17, 2016</u>	<input type="checkbox"/> Ordinance
Subject: <u>Happ Road - Phase I Engineering</u>	<input checked="" type="checkbox"/> Resolution
	<input checked="" type="checkbox"/> Bid Authorization/Award
Submitted By: <u>Stacy Alberts Sigman, Village Manager</u>	<input type="checkbox"/> Information
Department: <u>Administration</u>	<input checked="" type="checkbox"/> Agreement

Details:

The Village has been working with the Cook County Department of Transportation and Highways to evaluate and plan the future of Happ Road, from Willow to Winnetka. A request for proposal was issued on October 1, 2015 and 18 firms responded to the request. A joint selection committee evaluated the proposals, interviewed the top 3 firms, and then rated Patrick Engineering as the top respondent. Patrick has an extensive amount of experience with County and State Phase I projects and they put together an exceptional team (partnering with Gewalt Hamilton Associates, Teska Associates, and Huff & Huff). The committee also felt their team demonstrated a strong understanding of the issues facing the corridor and recognized the need for extensive public input and a unique/creative approach. In accordance with the Phase I procurement procedures, once Patrick was identified as the top firm, we worked with them to develop a detailed scope of services, cost estimate, and contract.

The Village has also been working with the County on an Intergovernmental Agreement (IGA) to outline each party's responsibility relative to the Study. If approved, the Village will serve as the lead agency and will be responsible for executing an agreement with Patrick. The County will reimburse the Village for 100% of the project costs. The County will also be part of the project team and will work to ensure their technical needs are also addressed. Once the Village approves the IGA, it will be scheduled for review and approval by the Cook County Board. The project will proceed once both parties have approved the IGA.

Executive Action:

- A. A motion to approve a resolution, authorizing the execution of an IGA with Cook County, for the Happ Road Phase I Study.**
- B. A motion to approve a contract with Patrick Engineering for the Happ Road Phase I Study, in an amount of \$485,177.**