VILLAGE OF BARRINGTON HILLS Zoning Board of Appeals NOTICE OF MEETING



Monday, April 18, 2016 ~ 7:30 pm Village Hall - 112 Algonquin Road

AGENDA

- 1. Call to Order & Roll Call
- 2. Public Comments
- 3. [Vote] Minutes March 16, 2016

PUBLIC HEARING

- 4. Continued 337 Ridge Road, St. Mark's Episcopal Church Special Use Rectory
- 5. <u>205 W. County Line Road, Countryside School CUSD 220 Special Use</u> <u>Amendment Basketball Court and Sign</u>

PUBLIC MEETING

- 6. [Vote] 337 Ridge Road, Special Use Amendment Rectory
- 7. [Vote] 205 W. County Line Road, Special Use Amendment
- 8. Adjournment

Chairman: Dan Wolfgram

NOTICE AS POSTED

VILLAGE OF BARRINGTON HILLS ZONING BOARD OF APPEALS MacArthur Room – Village Hall Wednesday, March 16, 2016

1. Call to Order/Roll Call: The Meeting was called to Order at 7:30 by Chairman Dan Wolfgram. On roll call, the following members were present:

Dan Wolfgram, Chairman Debra Buettner Jan Goss Patrick J. Hennelly David Stieper Jim Root

Absent: Richard Chambers Patrick J. Hennelly

Staff Present:Robert Kosin, Village AdministratorSean Conway, Legal Counsel

2. Public Comments:

Chairman Wolfgram made a call for public comment. A member of the public, Steve Harrison, provided public comment. Mr. Harrison provided comment on hanging photographs in Village Hall Chambers.

3. Minutes:

February 17, 2016

Member Stieper requested a correction to a vote count on the St. Marks special use matter and explained that he had recused himself from that matter. Chairman Wolfgram requested typographic error corrections. Member Buettner made a general request that the minutes be more detailed.

Member Stieper moved, seconded by Member Root to approve the minutes of February 17, 2016 with corrections. Chairman Wolfgram called for discussion. There was no discussion.

On a voice vote, all Members voted "aye." The Motion Carried.

4. 337 Ridge Road – Special Use Amendment Rectory

Ms. Gina Erdman, on behalf of the Applicant, made a request to continue this matter to the next ZBA meeting due to the absence of some Members of the ZBA and Member Stieper's recusal. Ms. Erdman's request was granted.

5. Paganica HOA, Dormy Lane – Variance for Berm Height

Public Hearing

Chairman Wolfgram convened the Public Hearing on the Petition concerning Paganica HOA, Dormy Lane – Variance for Berm Height. All witnesses were put under Oath.

Robert Kosin provided background testimony on the application for zoning relief and on the required legal Notice.

Mike Hannigan, President of the Paganica Home Owner's Association testified on behalf of the Applicant. Mr. Hannigan provided an overview of the Application for zoning relief. Mr. Hannigan testified that there would be no adverse effects on the neighbors and that the neighbors are in favor of the requested zoning relief.

Member Buettner asked about the number of homes that would benefit from the increased berm height. Mr. Hannigan testified that 12 to 15 would benefit from the increased height.

Member Stieper asked Mr. Kosin to provide some background on the purpose of the Village's berm height requirement and Mr. Kosin provided some background information.

Member Goss asked Mr. Kosin about the height requirements for a fence and Mr. Kosin provided a description of the requirements.

Member Buettner asked about the geographic location of the berm and Mr. Hannigan testified that it was at the boarder of the Village.

Chairman Wolfgram asked a question about the nature of the lots on the map provided and Mr. Hannigan testified that some are individual lots and some are common areas.

Mr. Hannigan provided further testimony on standards for variations set forth in the Village Code.

Chairman Wolfgram closed the Public Hearing.

Public Meeting

Chairman Wolfgram opened the Public Meeting.

Findings of Fact:

Member Root moved, seconded by Member Goss to accept and adopt the findings of fact set forth in the Applicant's application as further supported by the Applicant's testimony. Chairman Wolfgram called for discussion.

Member Buettner suggested a modification on the Motion due to outstanding Army Corps of Engineering Approval.

ZBA Attorney Conway suggested that a condition upon approval of the zoning relief application can be put on the motion to approve the Application as opposed to the pending motion concerning the findings of fact.

Roll Call:		
	Y	Ν
Wolfgram	X	
Buettner	X	
Chambers		
Goss	Х	
Hennelly		
Root	X	
Stieper	X	

The Motion carried.

Approval:

Member Stieper moved, seconded by Member Goss to grant the variance as requested by the Applicant. Chairman Wolfgram called for discussion.

Member Stieper asked for clarification on federal and Lake County approvals and the Village Engineer Dan Strahan explained that the only outstanding approval is the Army Corps of Engineers' approval.

Member Goss asked Mr. Strahan whether he anticipates any issues with the Army Corps of Engineers' approval and Mr. Strahan stated that he does not anticipate any issues.

Member Goss inquired whether there is any liability for the Village if it approves the variance but the Army Corps of Engineers does not approve the proposed work.

ZBA Attorney Conway stated that the Village would not have any liability in that instance.

Member Buettner inquired on the effect of the Army Corps of Engineers disapproval if such approval is made a condition on the variance.

ZBA Attorney Conway explained that the Applicant would be required to appear before the ZBA for further zoning relief.

The Members discussed the merits of placing Army Corps of Engineers' approval as a condition on the grant of the variance.

Member Stieper made an amended motion, seconded by Member Buettner to grant the variance as requested by the Applicant conditioned on Army Corps of Engineers' approval. There was no discussion.

Roll Call:

	Y	Ν
Wolfgram	X	
Buettner	X	
Chambers		
Goss	X	
Hennelly		
Root	X	
Stieper	X	

The Motion carried.

Chairman Wolfgram closed the Public Meeting.

6. 300 Ridge Road, Variance Gross Lot Area, Average Lot Width

Chairman Wolfgram convened the Public Hearing on the Petition concerning 300 Ridge Road, Variance Gross Lot Area, Average Lot Width.

Robert Kosin provided background testimony on the application for zoning relief and on the required legal Notice.

Corey Dunn, on behalf of the Applicant, was placed under Oath. Corey Dunn provided an overview of the Application for zoning relief.

Member Stieper asked Mr. Kosin for some historical background on this property and Mr. Kosin provides some historical background.

The members asked Mr. Kosin questions on the five acres and lot width requirements and the scope of the zoning relief available for nonconforming lots and Mr. Kosin provided some explanation.

The members discussed the history of the five acres requirement.

Member Stieper asked Mr. Dunn on the whereabouts of the property owners. Mr. Dunn explained that they were unavailable to attend the hearing.

Mr. Dunn stated that it is his understanding that the owners have made some efforts to purchase property to achieve conformity with the Village Code. Mr. Dunn stated that he was not aware of any specific neighbor objections.

Mr. Dunn provided drawings of the proposed home to the Members.

Member Buettner asked questions about the number of nonconforming lots concerning the five acres requirement; the number of variances that have been issued in the past and whether this matter has precedential effect.

Member Stieper stated that each case is fact specific and no case has a precedential effect on another.

Chairman Wolfgram asked if any member of the public had any questions for the Applicant. There were none.

Mr. Kosin and Mr. Dunn provided additional information on the property characteristics.

Mr. Dunn testified that all other aspects of the property are in compliance with the Village's zoning regulations. Mr. Dunn further testified to the facts concerning the Village standards for variations.

Chairman Wolfgram closed the Public Hearing.

Public Meeting

Chairman Wolfgram opened the Public Meeting.

Findings of Fact:

Member Stieper moved, seconded by Member Buettner to accept and adopt the findings of fact required under the Village Code for variation relief as supported by the Applicant's testimony. Chairman Wolfgram called for discussion. There was no discussion.

Roll Call:

	Y	Ν
Wolfgram	Х	
Buettner	Х	
Chambers		
Goss	Х	
Hennelly		
Root	Х	
Stieper	Х	

The Motion carried.

Approval:

Member Root moved, seconded by Member Stieper to grant the variance as requested by the Applicant. Chairman Wolfgram called for discussion. There was no discussion.

Roll Call:		
	Y	Ν
Wolfgram	Х	
Buettner	Х	
Chambers		

Goss	Х
Hennelly	
Root	Х
Stieper	X

The Motion carried.

Chairman Wolfgram closed the Public Meeting.

7. Special Events Discussion

The Members discussed whether the ZBA would be interested in proposing a text amendment to the Village Code concerning special events use of property within the Village.

Chairman Wolfgram suggested that the special events discussion continue at the next ZBA meeting and invited Village Trustee Colleen Konecek to provide any thoughts on the matter at that time.

8. Adjournment

Motion to adjourn by Member Goss, seconded by Member Stieper at 9:08 p.m. On a voice vote, all members voting "aye." The meeting stands adjourned.

Approved: _____

Dated: _____

President Martin J. McLaughlin Trustee Colleen Konicek Hannigan Trustee Fritz Gohl Trustee Michael Harrington Trustee Bryan C. Croll Trustee Michelle Nagy Maison Trustee Brian D. Cecola



112 Algonquin Road Barrington Hills, IL 60010 847.551.3000

> village@vbhil.gov www.vbhil.gov

POSTED NOTICE - ZONING BOARD OF APPEALS

The Zoning Board of Appeals, in acting upon variations, special uses, amendments of the zoning ordinance, or appeals from action taken by the Zoning Enforcement Officer, hears all such cases at a public hearing at which neighboring property owners have a right to be heard.

If the subject to the hearing, as stated below, is of concern to you, you will have an opportunity to fully express your opinions whether for or against. For your guidance, a copy of the Zoning Ordinance is available in the Village Hall and online.

If it is inconvenient for you to appear at the hearing, you may file your opinion by letter or email to clerk@vbhil.gov, giving the street and lot number of the property owned by you and for what it is now used. Please state fully what your position is regarding the subject.

You are, by this posting, notified that the subject stated below will be heard at a public hearing at the Village Hall of Barrington Hills. 112 Algonquin Road, Barrington Hills, Illinois 60010-5199.

Date and Time of Hearing: Wednesday, February 17, 2016 at 7:30 pm Applicant: St. Mark's Episcopal Church

Address: 337 Ridge Road, Barrington Hills, IL 60010

Subject: A special use request for an religious institution including the ex

+isting church, rectory, columbarium and playground and to allow for the construction of a three seasons room addition to the rectory within 29 feet of the east lot line.

Chairman Dan Wolfgram Zoning Board of Appeals Village of Barrington Hills Publication Date: January 28, 2015 PUBLIC HEARING Before the Zoning Board of

Appeals, Village of Barrington Hills, Re: 337 Ridge Road

Re: 337 Ridge Road Notice is hereby given that a Public Hearing will be held on Wednesday February 17, 2016 at 7:30 p.m. or as soon thereafter as the matter may be heard by the Zoning Board of Appeals of the Vil-lage of Barrington Hills in the MacArthur Room of the Village Hall, 112 Algonquin Road, concerning the appli-cation of the St. Mark's Episcopal Church for the amendment of their Special Use being a religious institu-Use being a religious institution, subject to the provi-sions of Section 5-10-7 of the Zoning Ordinance.

special use requested to permit the use of the Subject Property for a religious in-stitution, including the existing church, rectory, co-lumbarium and playground. The existing Church was constructed precedent to the inclusion by the Village of inclusion by the Village of religious institutions and ac-cessory uses as a Special Use in the R-1 district refer-enced in Section 5-5-3 of the Zoning Ordinance. The co-lumbarium was granted a special use.

The purpose of this special use will be to bring the en-tire parcel and uses under the Special Use provision of Constant 10 of the Zerbing Or Chapter 10 of the Zoning Ordinance and to allow for the construction of a three sea-sons room addition to the rectory within 29 feet of the east lot line.

The Church rectory, columbarium and playground are all on the same parcel having the common postal ad-dress of 337 Ridge Road and said parcel of approxi-mately 5 acres is more fully described in the application to amend the Special Use as

follows, that part of the North half of the Northwest Quarter of the Southwest Quarter of the Northwest Quarter of Sec-tion 28, Township 43 North, Range 9 East of the 3rd Principal Meridian in Lake County

[REIN 13-28-1000-008] A copy of the application to amend the Special Use is are a construction of the special of the office of the Village Clerk at Barrington Hills Village Hall during the cus-tomary hours of operation. All interested parties are invited to attend the Public Hearing and will be given an opportunity to be heard. Daniel Wolfgram, Chairman

Zoning Board of Appeals Village of Barrington Hills Published in Daily Herald

Jan. 28, 2016 (4430986)

CERTIFICATE OF PUBLICATION Paddock Publications, Inc.



Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the DAILY HERALD. That said DAILY HERALD is a secular newspaper and has been circulated daily in the Village(s) of Algonquin, Antioch, Arlington Heights, Aurora, Barrington, Barrington Hills, Lake Barrington, North Barrington, South Barrington, Bartlett, Batavia, Buffalo Grove, Burlington, Campton Hills, Carpentersville, Cary, Deer Park, Des Plaines, South Elgin, East Dundee, Elburn, Elgin, Elk Grove Village, Fox Lake, Fox River Grove, Geneva, Gilberts, Grayslake, Green Oaks, Gurnee, Hainesville, Hampshire, Hanover Park, Hawthorn Woods, Hoffman Estates, Huntley, Inverness, Island Lake, Kildeer, Lake Villa, Lake in the Hills, Lake Zurich, Libertyville, Lincolnshire, Lindenhurst, Long Grove, Mt. Prospect, Mundelein, Palatine, Prospect Heights, Rolling Meadows, Round Lake, Round Lake Beach, Round Lake Heights, Round Lake park, Schaumburg, Sleepy Hollow, St. Charles, Streamwood, Tower Lakes, Vernon Hills, Volo, Wauconda, Wheeling, West Dundee, Wildwood, Sugar Grove, North Aurora

County(ies) of Cook, Kane, Lake, McHenry

and State of Illinois, continuously for more than one year prior to the date of the first publication of the notice hereinafter referred to and is of general circulation throughout said Village(s), County(ies) and State.

I further certify that the DAILY HERALD is a newspaper as defined in "an Act to revise the law in relation to notices" as amended in 1992 Illinois Compiled Statutes, Chapter 7150, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published January 28, 2016 in said DAILY HERALD.

IN WITNESS WHEREOF, the undersigned, the said PADDOCK PUBLICATIONS, Inc., has caused this certificate to be signed by, this authorized agent, at Arlington Heights, Illinois.

> 001.00

1. .

PADDOCK PUBLICATIONS, INC. DAILY HERALD NEWSPAPERS

BY Authorized Agent

Control # 4430986

Village of Barrington Hills

5-10-7: SPECIAL USES

(A) Purpose: The development and execution of a zoning ordinance is based upon the division of the Village into districts, within which districts the use of land and buildings and the bulk and location of buildings and structures in relation to the land are substantially uniform. It is recognized, however, that there are special uses which, because of their unique characteristics, cannot be properly classified in any particular district or districts without consideration, in each case, of the impact of those uses upon neighboring land and of the public or private need for the particular use at the particular location. Such special uses fall into two (2) categories:

1. Uses publicly operated or traditionally affected with a public interest.

2. Uses entirely private in character but of such an unusual nature that their operation may give rise to unique problems with respect to their impact upon neighboring property or public facilities.

(B) Initiation of Special Use: An application for a special use may be made by the owner of the subject property, or by another person having an interest therein with the written concurrence of the owner thereof, to use said property for one or more of the special uses provided for in this Zoning Title in the zoning district in which the land is situated.

(C) Application for Special Use: An application for a special use shall be filed in writing with the Enforcing Officer. The application shall contain such information as the Zoning Board of Appeals may from time to time, by rule, require. Notice of the time and place of such public hearing shall be published at least once, not less than fifteen (15) days nor more than thirty (30) days before the hearing in a newspaper of general circulation in the Village. The published notice may be supplemented by such additional form of notice as the Board, by rule, may require.

(D) Authorization: For each application for a special use the Zoning Board of Appeals shall report to the Board of Trustees of the Village its findings and recommendations, including the stipulations of additional conditions and guarantees that such conditions will be complied with when they are deemed necessary for the protection of the public interest.

The Board of Trustees may grant or deny any application for a special use; provided, however, that in the event of written protest against any proposed special use, signed and acknowledged by the owners of twenty percent (20%) of the property adjacent to the property proposed for a special use, and filed with the Village Clerk, such special use shall not be granted except by the favorable vote of two-thirds (2/3) of all the members of the Board of Trustees.

(E) Standards: No special use shall be recommended by the Zoning Board of Appeals unless said Board shall find:

1. That the establishment, maintenance or operation of the special use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.

Village of Barrington Hills

5-10-7: SPECIAL USES

2. That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.

3. That the establishment of the special use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.

4. That adequate utilities, access roads, drainage and/or other necessary facilities have been or are being provided.

5. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets and roads.

6. That the special use shall in all other respects conform to the applicable regulations of the district in which it is located, except as such regulations may in each instance be modified by the board of trustees pursuant to the recommendation of the zoning board of appeals.

(F) Conditions And Guaranties: Prior to the granting of any special use, the zoning board of appeals may recommend, and the board of trustees shall stipulate, such conditions and restrictions upon the establishment, location, construction, maintenance and operation of the special use as deemed necessary for the protection of the public interest and to secure compliance with the standards and requirements specified in subsection (E) of this section. In all cases in which special uses are granted, the board of trustees shall require such evidence and guaranties as it may deem necessary as proof that the conditions stipulated in connection therewith are being, and will be, complied with.

(G) Effect Of Denial Of A Special Use: No application for a special use which has been denied wholly or in part by the board of trustees shall be resubmitted for a period of one year from the date of said order of denial, except on the grounds of new evidence or proof of changed conditions found to be valid by the zoning board of appeals and the board of trustees.

(H) Revocation: In any case where a special use has not been established within six (6) months after the date of granting thereof, then without further action by the zoning board of appeals or the board of trustees, the special use authorization shall be null and void. The zoning board of appeals may, upon application filed within said six (6) months, and for good cause, extend said time an additional six (6) months.

(I) Special Uses On Historical Sites: An applicant may request as a unique historical use any permitted and/or special use allowed in any zoning district to be allowed in any other zoning district, subject to compliance with the following conditions:

1. Proof that the subject property or the improvements thereon are of historic value or significance and that preservation of the same will be enhanced, maintained or assisted by permitting the unique use as proposed.

Village of Barrington Hills

5-10-7: SPECIAL USES

2. Proof that permitting the unique use will be of some affirmative benefit, from a land use or preservation standpoint, to the subject property, the surrounding properties and neighborhood, and the village.

3. The application shall have the burden of presenting clear and convincing proof that the unique use is justified and proper.





January 12, 2017

Dear Members of the Zoning Board,

Thank you for your time in taking into consideration our appeal for an amendment to the Special Use of the rectory at St. Mark's Church located at 337 Ridge Rd.

Enclosed are the requested materials:

- 1. Special Use Application Worksheet
- 2. Current Plat of Survey
- 3. Names of adjacent property owners
- 4. Letter that will be sent to the property owners
- 5. Check for \$200

Again, your time and input is appreciated. The screened in porch that we would like to add to the rectory will not change the current use of the home.

Regards,

Gina Erdman Director of Operations St. Mark's Episcopal Church

SPECIAL USE APPLICATION

- 1. The establishment, maintenance or operation of the special use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare; because it will not alter the use of the home.
- 2. The special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood and described screened porch is similar to others in the neighborhood, is in keeping with the conservative size of the home and will not be in the view of any other neighboring homes.
- 3. THE ESTABLISHMENT OF THE SPECIAL USE WILL NOT IMPEDE THE NORMAL AND ORDERLY DEVELOPMENT AND IMPROVEMENT OF SURROUNDING PROPERTY FOR USES PERMITTED IN THE DISTRICT; AND WILL NOT BE AN EYESORE BECAUSE IT DOESN'T DIFFER ARCHITECTURALLY FROM OTHER HOMES IN THE NEIGHBORHOOD AND IMPROVES THE LOOK FOR THE HOME.
- 4. ADEQUATE UTILITIES, ACCESS ROADS, DRAINAGE AND /OR OTHER NECESSARY FACILITIES HAVE BEEN OR ARE BEING PROVIDED; AND WILL NOT AFFECT ANY EXISTING UTILITIES. ALL OF THE BUILDING CODES AND REQUIREMENTS WILL BE ADDRESSED. NO CHANGE WILL BE NECESSARY TO THE SURROUNDING ROADS, UTILITIES, DRAINAGE OR OTHER FACILITIES.
- 5. Adequate measures have been or will be taken to provide ingress and egres so designed as to minimize traffic congestion in the public streets and roads; and will impact property only. The special use shall in all other respects conform to the applicable regulations of the district in which it is located, except as such regulations may in each instance be modified by the board of trustees pursuant to the recommendation of the zoning board of appeals. The only modified condition is setback and we are keeping the existing driveway as it has been for the last 50 years the home has been in existence without any issues.

THEREFORE, ST. MARK'S REQUESTS THE ZBA TO AMEND THE SPECIAL USE AND GRANT US PERMISSION TO BUILD THE SCREEN PORCH

Jiva Edman Violetor of Operations St. M. Jaobs Church



The undersigned states that she has read the foregoing application signed by her and that all information contained within this application is true and accurate to the best of her knowledge.

This application for an amendment of a Special Use for St. Mark's Episcopal Church is respectfully submitted to the Barrington Hills Zoning Board of Appeals by

Gina Erdman Director of Operations St. Mark's Episcopal Church 337 Ridge Road Barrington Hills, Illinois

Subscribed and Sworn

Notary Public, State of Illinois My Commission Expires 6/22/2019

Notarized by: **"OFFICIAL SEAL"** Anna L. Paul



January 15, 2016

This is to serve notice that Gina Erdman has been granted authority to speak on behalf of St. Mark's Episcopal Church at 337 Ridge Rd, Barrington Hills, IL to appeal for the variance to amend the Special Use for the screened in porch.

Dail Cill

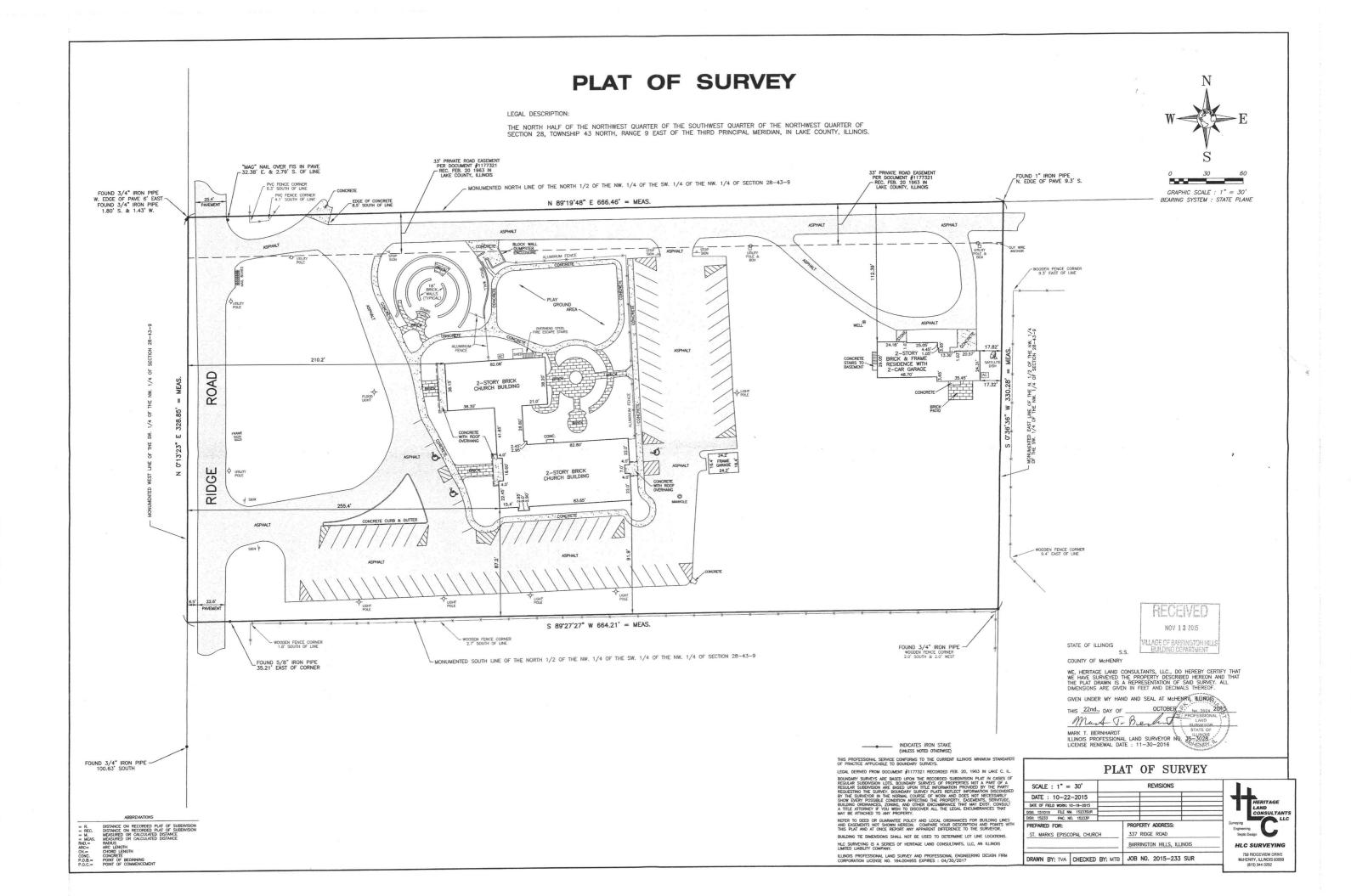
Rev. David A Gibbons Rector

LEGAL DESCRIPTION

The North half of the Northwest Quarter of the Southwest Quarter of the Northwest Quarter of Section 28, Township 43 North, Range 9 East of the Third Principal Meridian in Lake County.

337 Ridge Road

13-28-100-008





State License

Building Dept <building-dept@barringtonhills-il.gov> To: Robert Kosin <rkosin@barringtonhills-il.gov> Mon, Mar 21, 2016 at 7:49 AM

3/21/2016 Illinois Division of Professional Regulation 7:43:48 AM

SEARCH FOR LICENSEE BY PROFESSION: Land Surveyor, Professional, Licensed THERE ARE 1 RECORDS WHOSE NAME CONTAINS: Bernhardt

Licensee's	DBA/AKA	License	License	City,	Original	Current	Ever
Name		Number	Status	State	Date	Exprtn	Discplned?
MARK T BERNHARDT	I I	035003028		HARVARD, IL	01/12/1993	11/30/2016	N

Building Department Village of Barrington Hills Direct: 847-551-3003

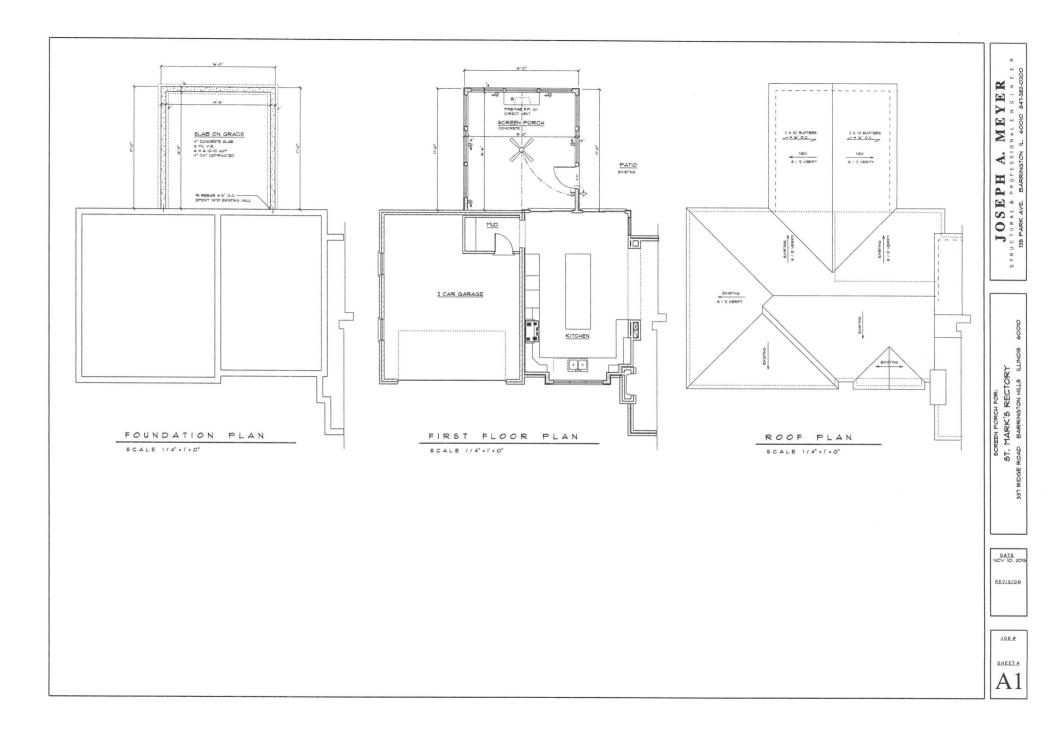
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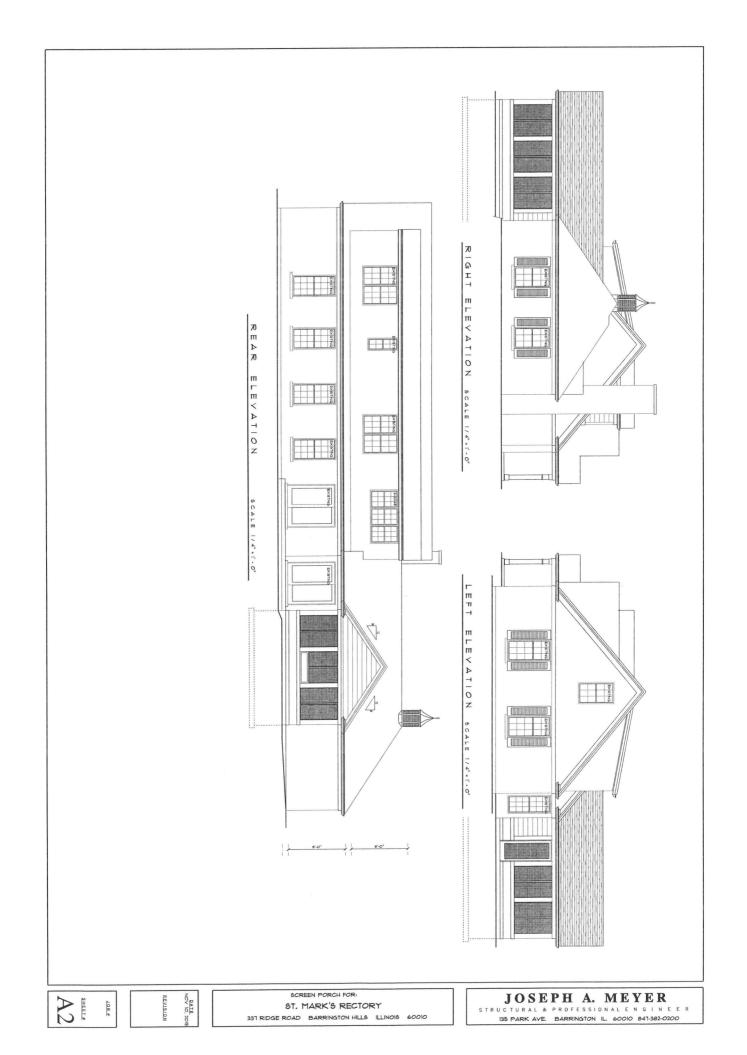
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To ensure compliance with the Open Meetings Act, elected or appointed members of the public body may reply to this message, but they should not forward it or send a copy of the reply to other members of the public body.

To ensure compliance with the Open Meetings Act, elected or appointed members of the public body may reply to this message, but they should not forward it or send a copy of the reply to other members of the public body.

MEYER NALENCINE 0 SCREEN PORCH FOR: A. 5T. MARK'S RECTORY JOSEPH STRUCTURAL & PROFE 135 PARK AVE. BARRIN 6000 61. MARK'S RECTORY ROAD BARRINGTON HILLS ILL SHEET INDEX FOR. 6HEET NUMBER SHEET DESCRIPTION AERIAL IMAGE C5 NDEX / AERAIL & LOCATION MAP NO SCALE A! SCREEN PORCH FLOOR PLANS õ EXISTING DRIVEWAY A2 SCREEN PORCH ELEVATIONS 17.82 VILLAGE CODES EXISTING RESIDENCE 17.32 337 2004 Illinois State Plumbing Code 2012 International Common Code 1979 CABO One & Tw 1978 BOCA Basic Med PATIO 29.01 SCREEN PORCH DATE NOV 10, 2018 REVISION SITE PLAN SCALE 1" = 20' - 0" SIGNED: STRUCTURAL ENGINEER LICENSE NO. 081-002641 JOB # L HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY CONFORM TO THE VILLAGE OF BARINGTON HILLS ZONING AND BUILDING CODES LOCATION MAP NO SCALE SHEET # CS COPYRIGHT







State License

Building Dept <building-dept@barringtonhills-il.gov> To: Robert Kosin <rkosin@barringtonhills-il.gov> Mon, Mar 21, 2016 at 7:49 AM

3/21/2016 Illinois Division of Professional Regulation 7:48:15 AM

SEARCH FOR LICENSEE BY PROFESSION: Engineer Structural, Licensed THERE ARE 2 RECORDS WHOSE NAME CONTAINS: Meyer

Licensee's DBA/AKA Name						Ever Discplned?
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Joseph A Meyer	081002641	ACTIVE Barrin	gton, IL 06/20/19	062 11/30/2016 N

Building Department Village of Barrington Hills Direct: 847-551-3003

[Quoted text hidden]

[Quoted text hidden]



January 26, 2017

Dear Gary & Donna,

St. Mark's is currently renovating the existing rectory to make much needed improvements for Father David Gibbons and his family. We have filed with the Zoning Board at the Village of Barrington Hills to amend the Special Use to add a modest screened in porch for the rector and his family to escape the mosquitoes.

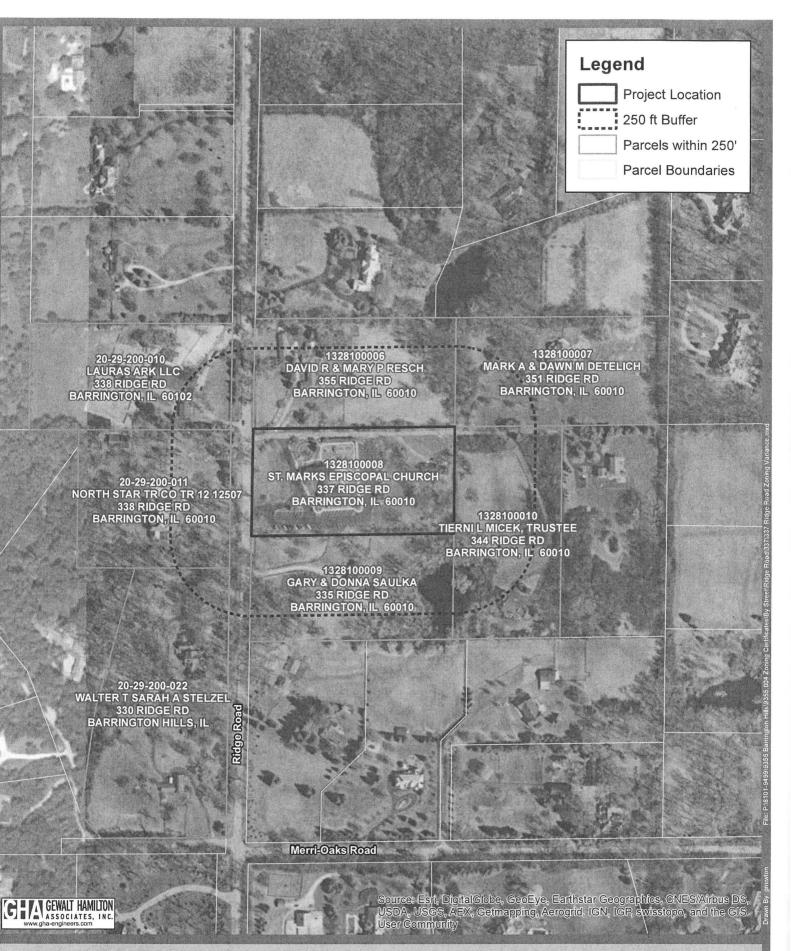
The porch would change the existing footprint of the home. It would be located 29.01 feet from the East lot line, and built on the South side of the home behind part of the existing garage and existing kitchen area. The structure will be in keeping with the current modest Cape Cod style of the home. It will have white painted siding to match the existing siding on the home, be a single story addition, and used for 3 seasons. It will be built on a slab, at grade and will be 17'x16'. The road and driveway would remain as it has existed since the house was built. It doesn't appear to impinge on anyone's vista since the east lot line has a fence and bushes. The Zoning Board of Appeals (ZBA) is scheduled to meet on February 17, 2016 at the Barrington Hills Village Hall. A plan of the porch is included in the letter in order to provide a visual of its modest size and discreet location. Please feel free to give me a call if I can answer any questions for you at 847-381-0596.

Thank you in advance for your consideration to allow the ZBA to grant us this amendment.

Gina 🕅 rdman

Director of Operations St. Mark's Episcopal Church





Public Notification Map

337 Ridge Road Barrington Hills, IL

Date: 1/14/2016 Project: 9355

Feet

1 inch =

88.19803 42.17918

300













D2 P

4076	U.S. Postal Service [™] CERTIFIED MAIL [®] RECEIPT Domestic Mail Only						
	For delivery information	n, visit our website	at www.usps.com [®] .				
1 0000 1732	Postage 5 Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required)	\$2,80 \$0.00 \$0.00 \$0.00 \$0.00	0011 04 Postmark Here				
3490	\$() . 49 Total Postage & Fees \$ \$6 . 74		01/26/2016				
7014	Street & Apt. No., 35	anona dana anona ana ana	esch e Pd				
	PS Form 3800, July 2014		60010 See Reverse for Instructions				



VILLAGE OF BARRINGTON HILLS NOTICE OF A PUBLIC HEARING

TODAY

Zika virus threatens to hit USA POCKETS REMAIN IYSTERY

will be held at 7:30 o'clock p.m. on 02-17-2016 at Barrington Hills Village Hall 112 Algonquin Rd Regarding a SPECIAL USE for this property 13-28-1000-008 By St. Mark's Episcopal Church before the Zoning Board of Appeals (VBH Ord. 5-10-7)

> Daniel Wolfgram Chairman, ZBA

MEMORANDUM

To: ZBA Members Robert Kosin, Village Administrator

- From: Dan Strahan, P.E., CFM Gewalt Hamilton Associates
- Date: March 12, 2016
- Re: St. Mark's Rectory Stormwater Review

GERA GEWALT HAMILTON associates, inc.

625 Forest Edge Drive, Vernon Hills, IL 60061 TEL 847.478.9700
FAx 847.478.9701

www.gha-engineers.com

The Village has requested that our office summarize the stormwater management and septic system details associated with the proposed addition to the rectory at St. Mark's Church, 337 Ridge Road. Below is an overview of both topics with associated exhibits attached to this memo.

Stormwater Management Overview

The proposed sunroom addition and patio project will result in a small increase (approximately 480 square feet) in the amount of impervious area on the site. The project is required to meet the provisions of the Lake County Watershed Development Ordinance (WDO). While the site currently has a high percentage of impervious surface relative to surrounding properties, detention requirements are based on "New" impervious surface area, defined by the ordinance as impervious surface area created after the original effective date of the WDO (10/18/92). A summary of the new impervious surface calculation based on the conceptual site plan is provided below:

Proposed Total Impervious Area	2.02 Acres
Pre-1993 Impervious Area	1.87 Acres
"New" Impervious Area	0.15 Acres*

*Approximately 0.01 acres new impervious from pending permit application.

The WDO establishes development thresholds beyond which detention is required. Below is a review of the WDO detention thresholds listed in Article 300.06:

- Threshold #1- More than one (1) acre of new impervious surface area; (NOT MET The proposed addition will result in less than one acre of new impervious area).
- Threshold #2- More than three (3) acres of hydrologically disturbed area, unless the total new impervious surface area is less than one half of one (0.5) acre; (NOT MET The hydrologically disturbed area is less than three acres and the new impervious surface area is less than 0.5 acres).
- Threshold #3- An impervious surface area ratio of 50 percent or greater, unless the total new impervious surface area is less than one half of one (0.5) acre. (NOT MET The impervious surface area ratio is less than 50% of the site and the new impervious area is less than 0.5 acres.)

While the proposed improvements do not exceed the detention requirements, the WDO requires that *"concentrated stormwater discharges must be conveyed into a maintainable outlet with adequate downstream capacity (as defined in Appendix A: Definitions) and will not result in increased flood and drainage hazard"* (Section 502.03). Due to the increase in impervious area, the sunroom addition is expected to result in a small increase in the stormwater discharge to the onsite swale that runs into a shared depressional area to the south. This depressional area has no known outlet and has been

demonstrated to result in flooding of the accessory structure at 335 Ridge Road as well as yard flooding at 315 Ridge Road, 343 Ridge Road, and 570 Merri Oaks Road. As a result, we would recommend that as a condition to approval of the permit, the applicant demonstrate that adequate measures have been provided to mitigate the impacts of the increase in impervious area such that the proposed release rate is equal to or less than the existing release rate. This could take the form of a stormwater quality basin designed to release runoff at a controlled rate, store excess runoff, and infiltrate the "first flush" volume of a storm event.

Septic System

As discussed at the previous ZBA meeting, the depressional area described above has also been the subject of water quality concerns, specifically related to septic systems within the drainage area. Septic systems can fail in one of two ways. First, if the system itself becomes clogged, sewage can back up into the house. Secondly, a system can fail due to the soils in which it is located either being too permeable (which can result in contamination of groundwater) or not permeable enough (in which case effluent can erupt at the ground surface. In response to previous concerns regarding water quality in the shared depressional area described above, our office had prepared (and has now updated) the attached exhibit graphically depicting the location of septic systems within or adjacent to the drainage area being referenced. Some properties do not have septic systems indicated as the Village only has records for septic systems that have been the subject of previous permit applications.

In 2011 our office received complaints in August and again in early December regarding concerns that a failing septic system on the property at St. Mark's church was resulting in septic effluent contaminating the pond at 335 Ridge, which floods and inundates the rear yard of 315 Ridge as well as other properties. Our office did not observe a surface failure on either occasion, though it was apparent that maintenance had recently occurred. We later learned that this maintenance included replacement of drop boxes and piping within the system as well as pumping of the tank and trenches.

It is noted that the septic system at 335 Ridge was relocated to its current location in 2014 after previous inquiries with the property owner (St. Mark's Church at that time) found that the existing septic system had been located within the area that had flooded during a 2013 storm event.

Since the February meeting, the applicant has submitted a permit application to replace the existing septic system serving the rectory as it has reached the end of its useful life. The drawings are currently under review and may require revision if stormwater measures discussed above are required in this area. The design engineer has been notified that the existing septic system is likely more extensive that what is shown based on photo documentation made in 2011 after the completion of septic maintenance on the property.

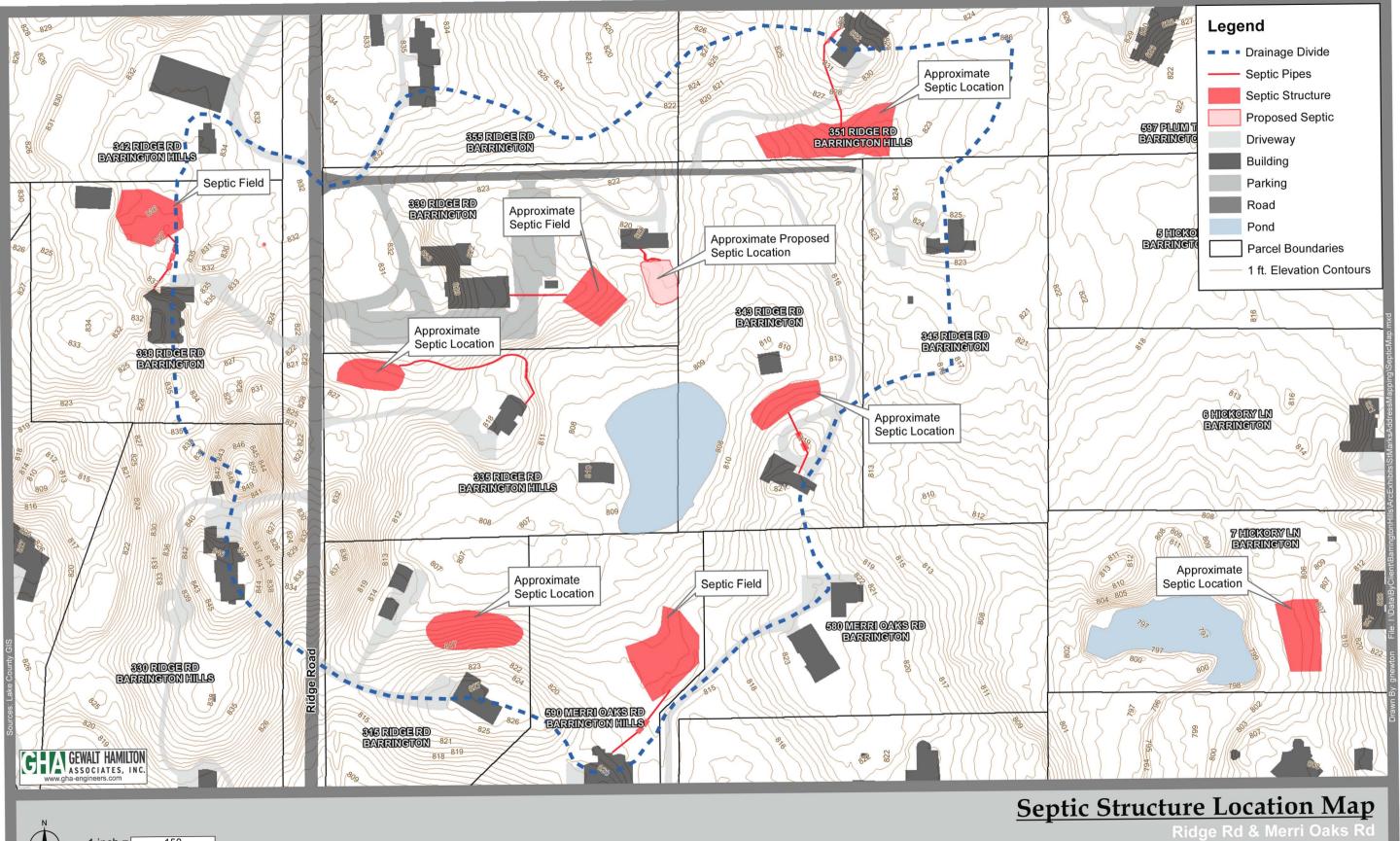


1 inch = 100

Feet

Existing Drainage Exhibit

tidge Rd & Merri Oaks Rd Barrington Hills, IL



1 inch = <u>150</u> Feet

Barrington Hills, IL

an Contor: 89 10706 42 17849

MEMORANDUM

To: ZBA Members Robert Kosin, Village Administrator

- From: Dan Strahan, P.E., CFM Gewalt Hamilton Associates
- Date: April 15, 2016
- Re: St. Mark's Rectory Stormwater Quality Testing- Fecal Coliform

625 Forest Edge Drive, Vernon Hills, IL 60061 Tel 847.478.9700 = Fax 847.478.9701

www.gha-engineers.com

Following discussions at the February 2015 ZBA meeting, Village staff requested that our office address the topic of fecal coliform in surface water. Our office complete water quality testing at various locations throughout the Village on an annual basis as part of the Village's NPDES permit, and fecal coliform was recently added as a parameter for which the Village must test.

Fecal coliform is a bacteria found in the digestive systems of warm blooded organisms. Fecal coliform itself does not pose a health threat but rather is used as an indicator for bacteria that can cause illnesses in both humans and aquatic life. Sources of fecal coliform in surface waters typically include animal waste and malfunctioning septic systems.

The Illinois Pollution Control Board Title 35, Subtitle C, Chapter 1, Section 304.224 establishes the following standards for permitted effluent discharges (i.e. licensed discharges from wastewater treatment plants) to surface waters:

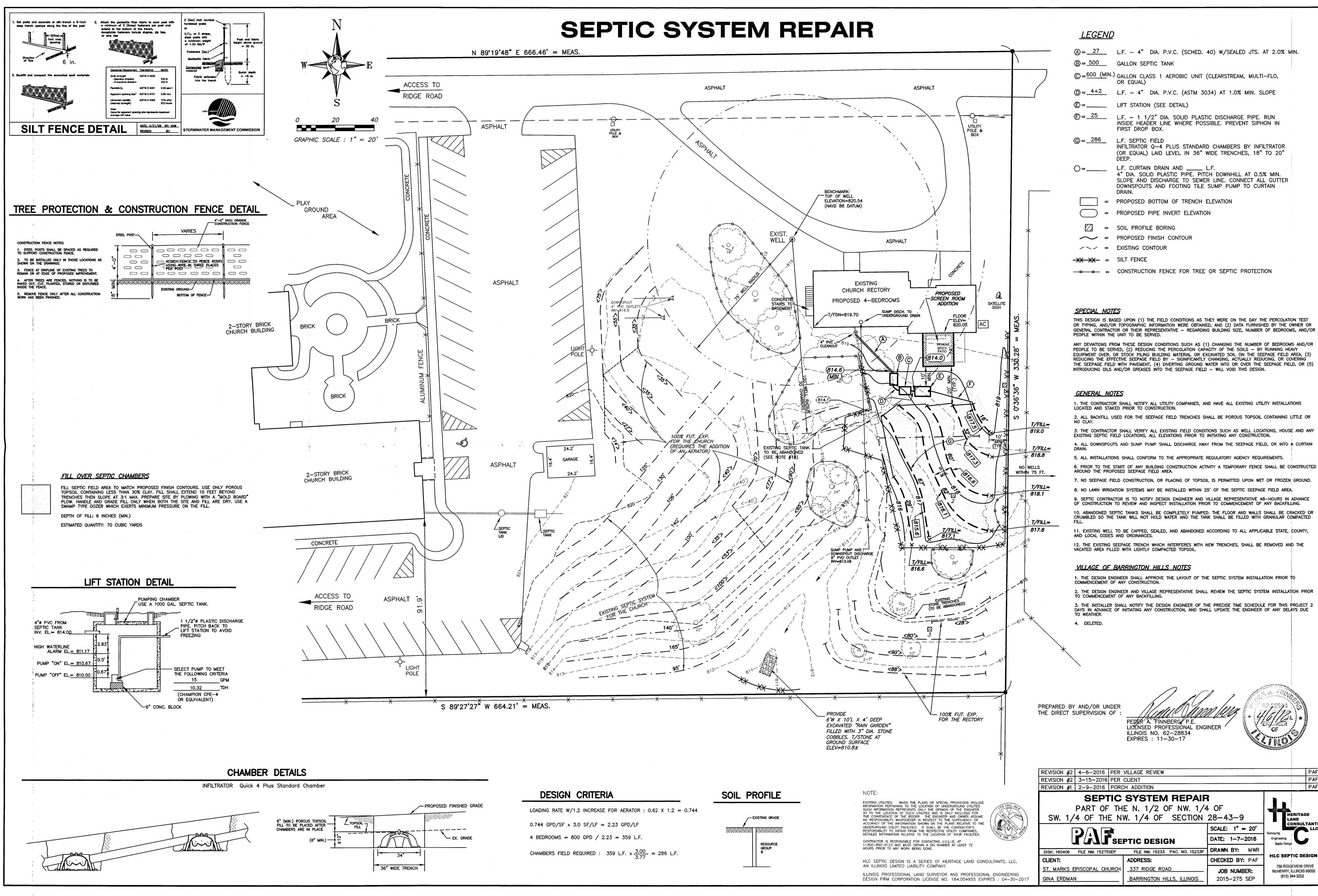
Section 304.224 Effluent Disinfection

From March 1 through November 30, effluents discharged to the Primary Contact Recreation waters listed in 35 III. Adm. Code 303.220 must not exceed 400 fecal coliform colony forming units (CFU) per 100 mL if less than 10 samples are taken in a month. If 10 or more samples are taken in a month, fecal coliform shall not exceed a 30-day geometric mean of 200 CFU per 100 mL, nor shall more than 10% of the samples during any 30 day period exceed 400 CFU per 100 mL. All effluents in existence on or before February 3, 2012 must meet these standards by March 1, 2016. All new discharges must meet these standards upon the initiation of discharge.

It is noted that these standards apply to Primary Contact Recreation waters (i.e. waters suitable for full immersion swimming, diving, etc.). For reference, the Village's water quality testing tested for fecal coliform at the upstream and downstream ends of Flint Creek and Spring Creek. The highest value found was at the upstream end, immediately downstream of Crabtree Nature Center, at a level of 517.2 CFU/100 mL.



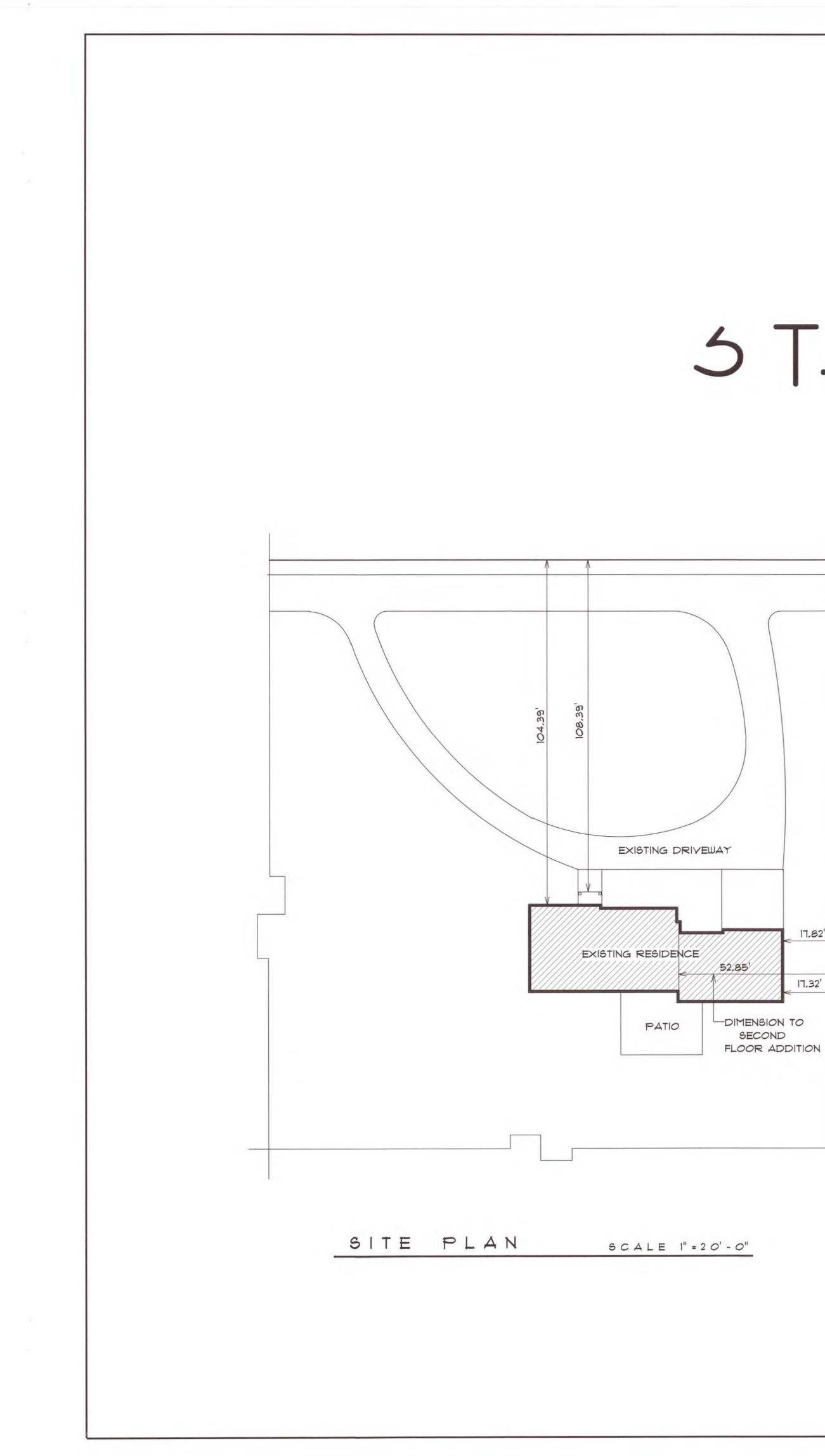
CONSULTING ENGINEERS



PAF

PAF

PAF



RESIDENTIAL REMODEL FOR:

ST. MARK'S RECTORY

17.82'

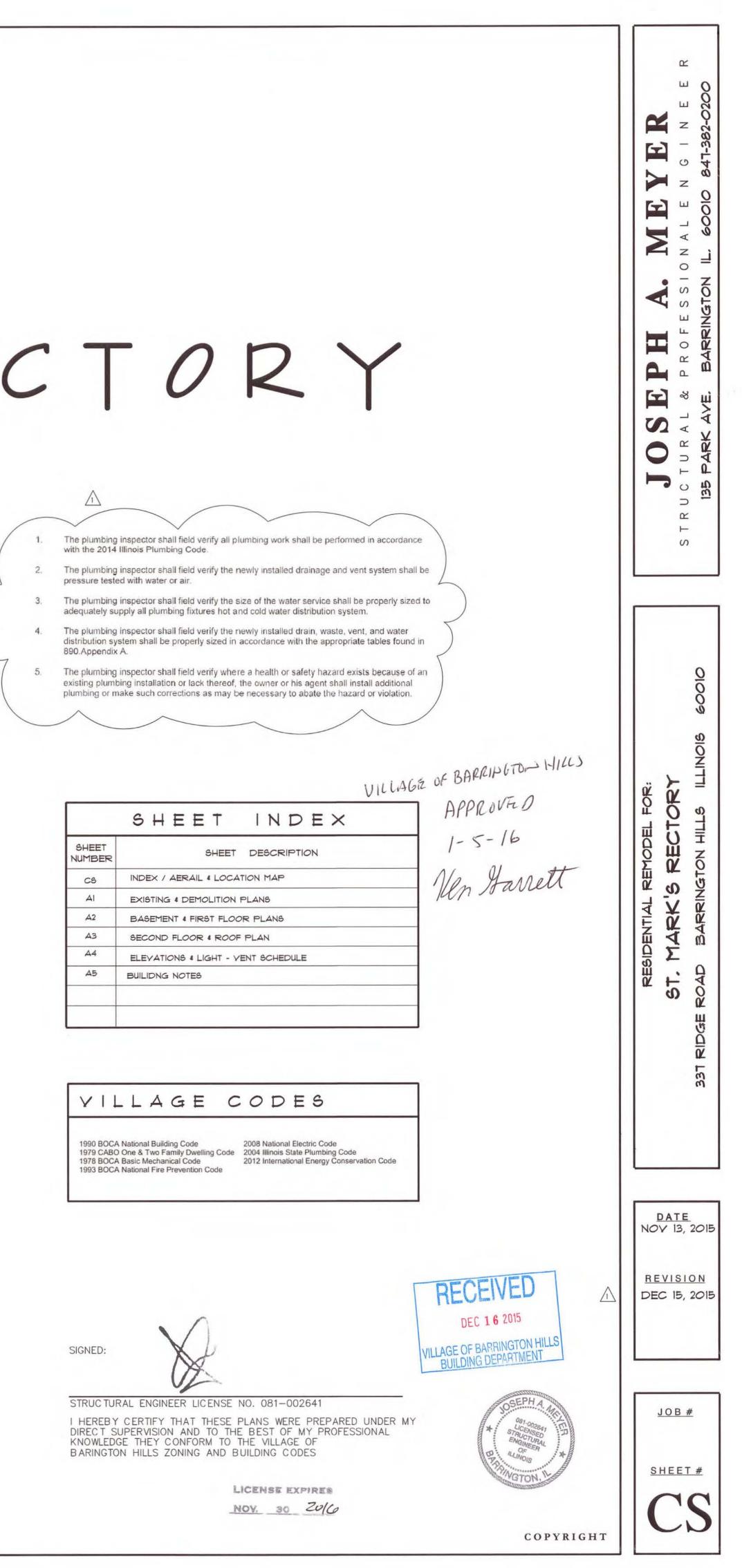
17.32

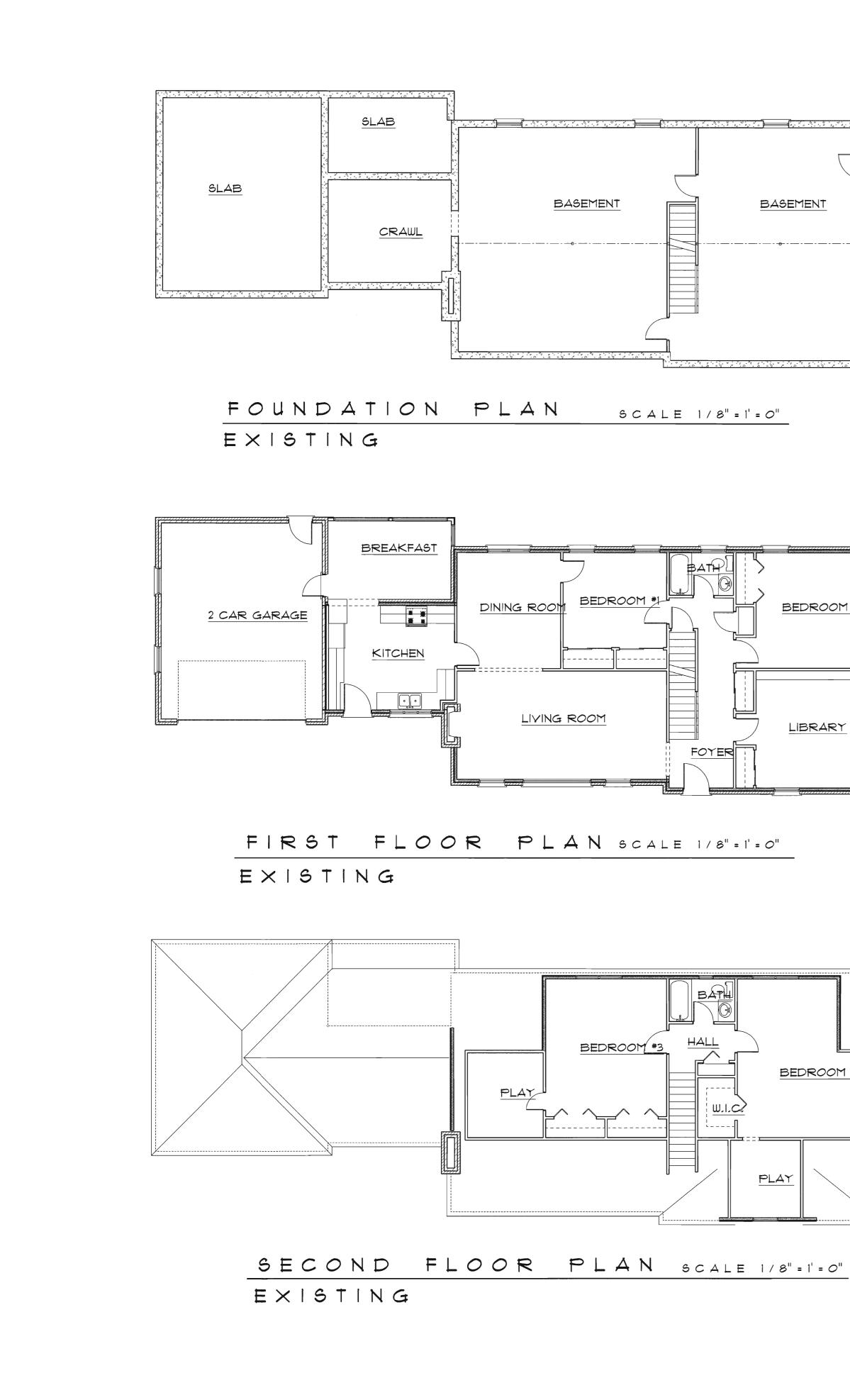


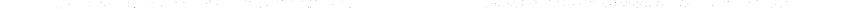
AERIAL IMAGE NO SCALE



LOCATION MAP NO SCALE



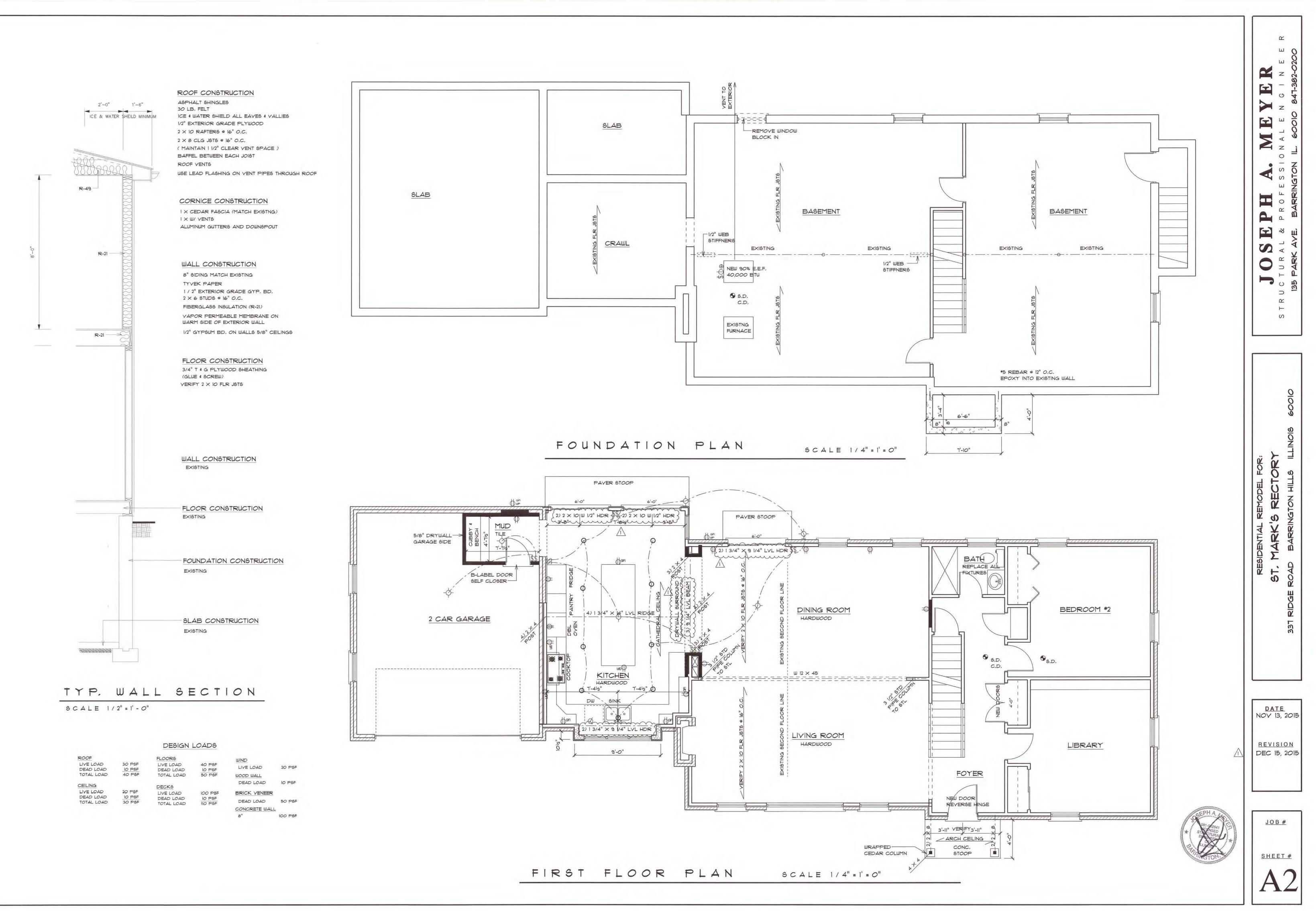


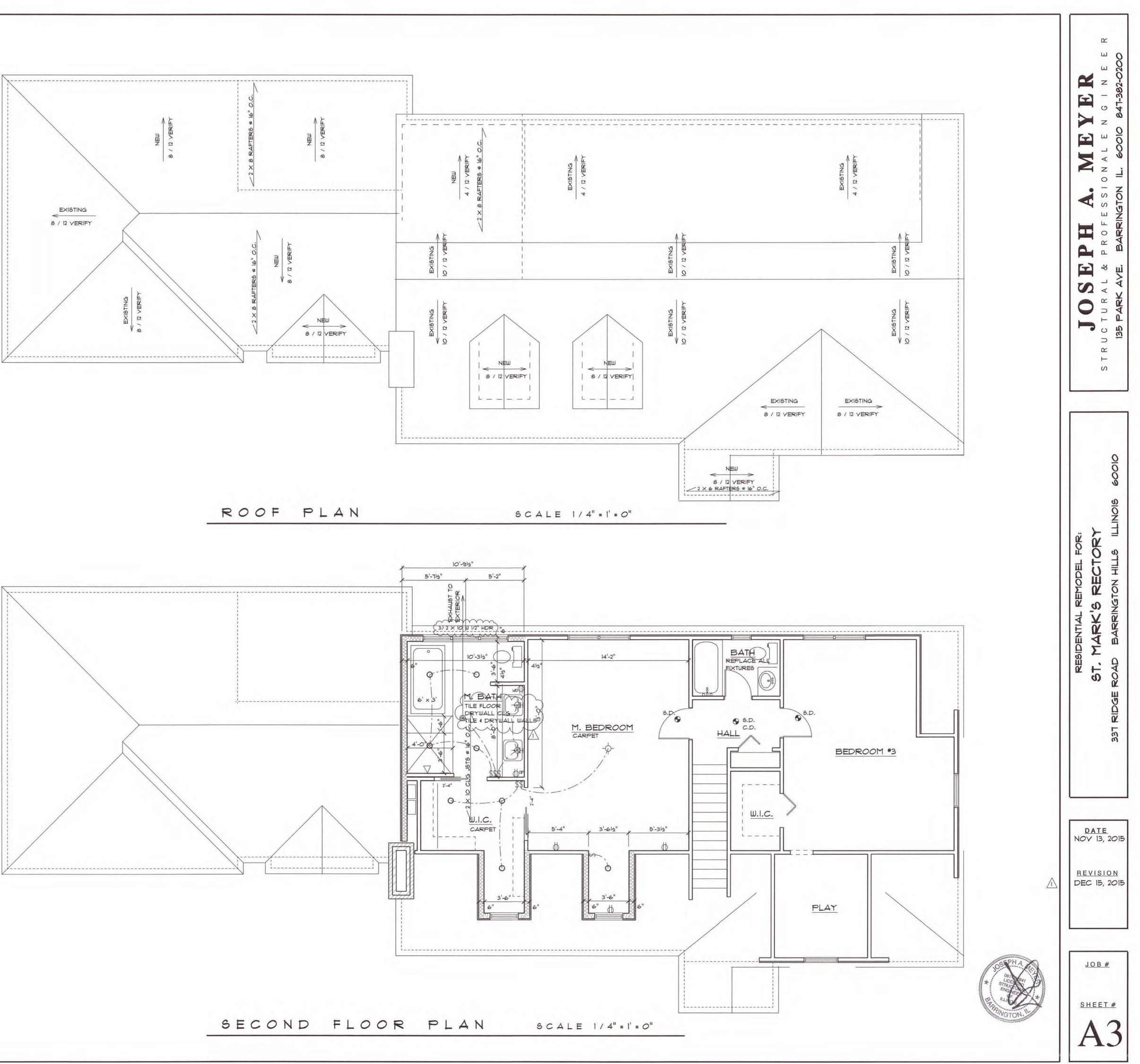




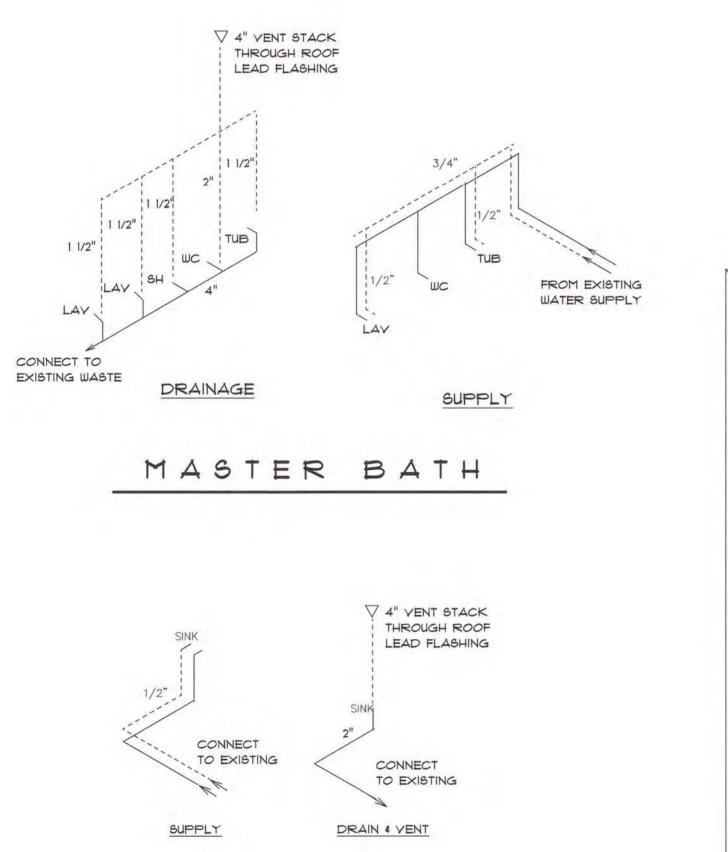


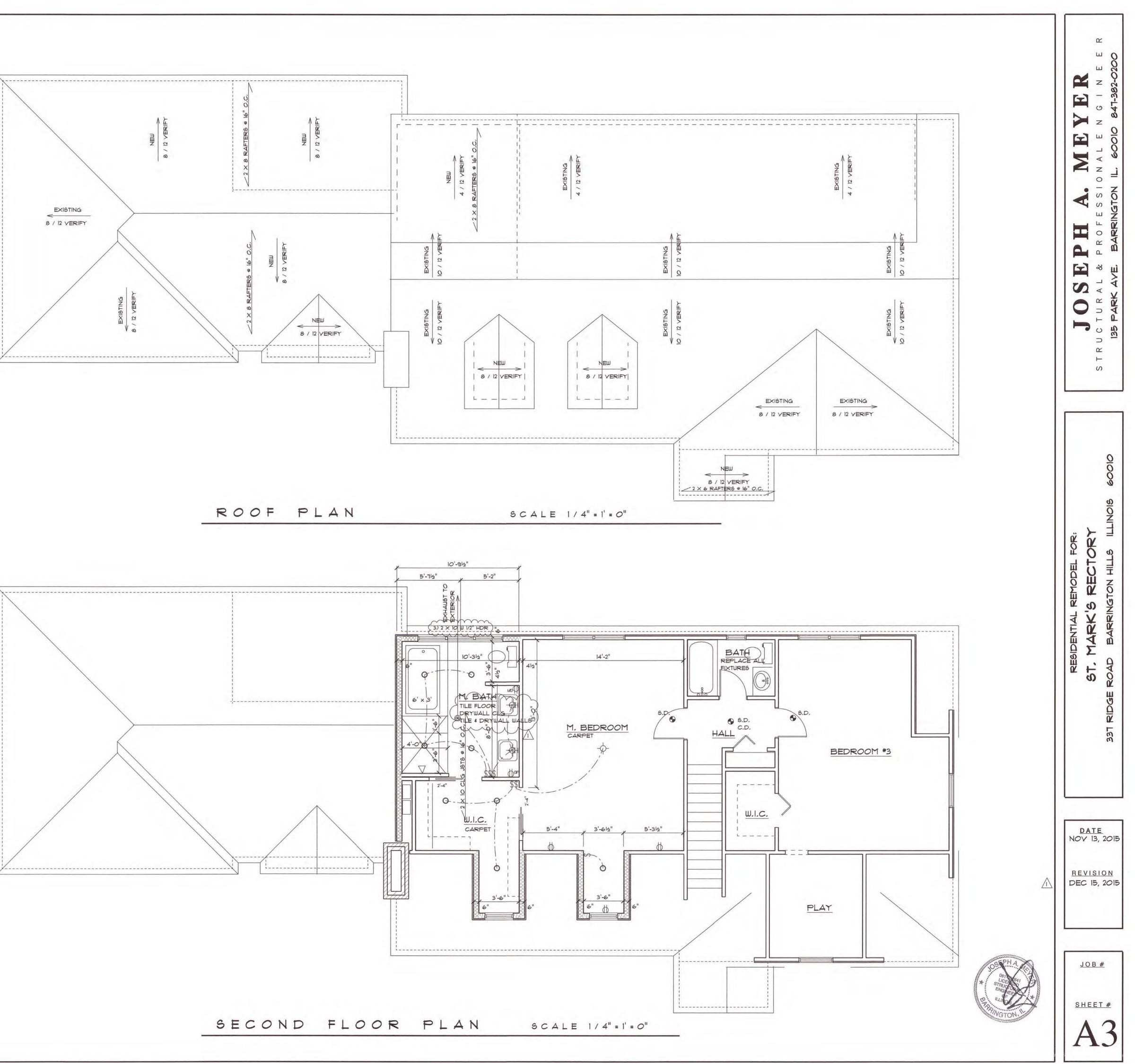
<u>Sheet #</u>





	AREA	LIGHT		VENTILATION			
ROOM	S.F.	REQ'D	ACT.	REQ'D	ACT.	REMARKS	
KITCHEN	326	26.0	65.0	13.0	56.0		
MUD ROOM	38				-		
M. BATHROOM	90		27.0	-	13.5	100 CFM EX-FAN	
W.I.C.	72		10.0		5.0		





KITCHEN

LEGEND

DRAIN	AGE	SUPPLY		
	WASTE		COLD	
	VENT		HOT	



GENERAL NOTES

- 1. ALL WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE BUILDING CODES ORDINANCES, REGULATIONS AND ALL OTHER AUTHORITIES HAVING JURISDICTION. 2. CONTRACTORS SHALL VERIFY ALL EXISTING DIMENSION AND CONDITIONS ON THE JOB
- AND SHALL IMMEDIATLY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK OR BE RESPONSIBLE FOR SAME. 3. ALL INTERIOR BEARING WALLS TO BE 2 X 4 STUDS @ 16" O.C. UNLESS OTHERWISE NOTED.
- 4. PROVIDE 2" MIN, WOOD FIRESTOPPING TO CUT OFF ALL CONCEALED DRAFT OPENINGS BETWEEN FLOORS AND ATTIC. PER CODE. 5. ALL COOKING AND HEATING DEVICES SHALL BE UL. INC. OR A.G. ASSOC. LABELED
- AND APPROVED OR EQUIVALENT.
- 6. HOT AND COLD AIR DUCTS TO BE NON-COMBUSTIBLE MATERIAL. 7. ALL JOISTS AND RAFTERS TO BE NO. 2 OR BETTER, E = 16, Fb = 87,5 MIN DOUGLAS FIR LARCH
- OR CANADIAN SPF, E = 14 LB, fb = 87.5
- 8. ALL JOISTS TO HAVE MIN 2" BEARING ON WOOD OR STEEL. MIN 3 1/2" ON MASONRY
- 9. 2) 2 \times 12 HEADERS W/ 1/2" OVER ALL EXTERIOR OPENING UNLESS NOTED OTHERWISE
- 10. SILL SEALER UNDER ALL EXTERIOR WALLS
- 11. ALL FURNACE ROOMS TO BE DRYWALLED AND TAPED PRIOR TO INSTALLATION OF FURNACE, 12. HOLES MAY BE BORED THROUGH JOISTS MAX 2 1/2" DIA, WITH EDGES MINIMUM 2" FROM BOTTOM OR TOP OF JOISTS.
- 13. ELECTRICAL PANEL LOCATION 3'-O" CLEAR EACH GIDE, 4'-O" CLEAR FRONT AND
- 6'-6" MAXIMUM HEADROOM INCLUDING PIPING 14. ALL WOOD SILL PLATES BEARING ON CONCRETE SHALL BE PRESSURE TREATED
- FOR ROT AND TERMITES. 15. ALL CLOTHES CLOSETS EXCEPT WALK-INS SHALL HAVE FLUORESCENT FIXTURES. RECESSED FIXTURES INSTALLED IN INSULATED JOIST SPACES SHALL BE PROTECTED BY ICT TYPE FIXTURES INSULATED THERMAL PROTECTION.
- 16. ROOF TRUSS DIAGRAMS AND SHOP DRAWINGS TO BE SUPPLIED BY TRUSS MANUFACTURER TO BE SEALED BY STRUCTURAL ENGINEER, REGISTERED IN THE STATE OF ILLINOIS: USE 5/8" PLYWOOD ROOF SHEATHING AND 5/8" GYPSUM BD. TYPE 'X' IN CONJUNCTION WITH TRUSSES. 17. ALL GLAZING SHALL BE PER CODE.
- 18. ALL CONTRACTORS SHALL CARRY WORKMANS COMPENSATION, PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE. THE OWNER SHALL MAINTAIN FIRE EXTENDED COVERAGE AND BUILDERS RISK INSURANCE.
- 19. PROVIDE 1/2" CEMENT BOARD IN TUB AND SHOWER WET WALLS WITH WITH CERAMIC TILE OVER.
- 20. PROVIDE MIN 1/4" UNDERLAYMENT BOARD UNDER FLOOR AREAS THAT ARE TO HAVE FLOOR TILE.
- 21. APPROVED JOIST HANGERS ARE REQUIRED AS CONNECTORS.
- 22. ALL DUCTWORK IN UNHEATED SPACES TO BE INSULATED.
- 23. TEMPERED GLASS REQUIRED ON WINDOWS AND DOORS PER CODE. 24. ALL OUTLETS WITHIN 6' OF KITCHEN SINK MUST BE G.F.I.C. PROTECTED.
- 25. EVERY ENTRANCE TO EVERY HABITABLE ROOM AND HALLWAY MUST HAVE AN ACCESSIBLE
- LIGHT SWITCH TO A PERMANENT LIGHT FIXTURE OF ELECTRICAL OUTLET PER CODE.
- 26. ALL FIXTURES IN CLOTHES CLOSEST MUST CONFORM TO CODE.
- 27. ALL PADDLE FAN INSTALLATION REQUIRE APPROVED TYPE CEILING BOXES. 28. ALL STRUCTURAL STEEL TO BE PROVIDED BY CLEO MANUFACTURING OR AN APPROVED SUBSTITUTE.
- 29. STAIRS TO COMPLY TO CODE. 30. ALL STAIR RISERS TO BE A MAX, 7 3/4" HIGH AND TREADS TO BE MINIMUM 10" DEEP PER CODE.

GENERAL CONCRETE NOTES

- 1. ALL FOOTINGS TO BE KEYED 4" INTO UNDISTURBED SOIL OR COMPACTED FILL
- AT 95% COMPACTION PER ASTM D-1557.
- 2. ALL FOOTINGS TO BE DESIGNED FOR 3,000 PSF SOIL BEARING CAPACITY 3. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ALL GOVERNING CODES AND ORDINANCES.
- 4. ALL REINFORCING BARS ARE TO BE ASTM GRADE 40.
- 5. ALL WELDED WIRE MEGH TO CONFORM TO ASTM 815-61T.
- 6. ALL CONCRETE TO BE MIXED AND PLACED IN ACCORDANCE WITH ALL GOVERNING CODES AND ORDINANCES. 1. PROTECT ALL CONCRETE FROM ADVERSE WEATHER.
- 8. ALL EXPOSED CONCRETE TO HAVE 5% TO 1% AIR ENTRAINMENT.
- 9. CONCRETE TO BE READY-MIXED 3,000 PSI MINIMUM 28 DAY STRENGTH (5 BAG MIX) TO BE POURED CONTINUOUSLY WHENEVER POSSIBLE.
- O, NO CONCRETE IS TO BE POURED INTO STANDING WATER OF ONTO FROZEN SUB-GRADE. 11. INTERIOR FLATWORK TO RECEIVE SMOOTH STEEL TROWEL FINISH. EXTERIOR FLATWORK TO RECEIVE A BROOM FINISH.
- 12. PROVIDE CONTROL JOINTS RADIATING OUT FROM ALL INTERIOR STEEL COLUMNS AND AS REQUIRED IN ALL LARGE POURS.
- 13. PROVIDE ALL GRANULAR FILL UNDER EXTERIOR STOOPS.
- 14. PROVIDED 4) *4 HOOKED RODS IN WALLS WHERE FOOTING ELEVATIONS ARE NOT CONTINUOUS. 15. CONCRETE EXPOSED TO THE WEATHER TO BE 3,500 PSI.

GENERAL STEEL NOTES

- I. STEEL WORK SHALL CONFORM TO THE CURRENT SPECIFICATIONS FOR THE DESING FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS ADOPTED BY THE A.I.S.C.
- 2. CONNECTIONS SHALL BE BOLTED OR WELDED, BOLTS SHALL CONFORM TO ASTM A323
- AND BE 3/4" DIAMETER UNLESS NOTED OTHERWISE.
- 3. ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AASTM SPECIFICATIONS A-36. STEEL FOR PIPE COLUMNS SHALL BE OR EQUIVALENT CAPACITY TO ASTM SPECIFICATIONS A-501.
- 4. ALL STEEL FILTCH PLATES SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATIONS A-36 AND
- BE SHOP DRILLED FOR STAGGERED BOLTING.
- 5. ALL STRUCTURAL STEEL BEAMS, COLUMNS, FLITCH PLATES, BOLTS AND SHIMS SHALL
- HAVE A SHOP APPLIED COAT OF RUST INHIBITING PAINT.
- 6. STEEL FABRICATER TO SUPPLY ALL NECESSARY BOLTS, FLANGES, SEAT ANGLES AND SHIMS NECCESSARY FOR PROPER INSTALLATION.
- 7. STEEL BASEMENT COLUMNS SHALL REST ON STACKED STEEL SHIMS NOT TO EXCEED 2"
- IN HEIGHT. SETTING STEEL COLUMNS ON CHUNKS OF BRICKS SHALL BE PROHIBITED. 8. ALL HOLES IN ALL CONNECTIONS SHALL RECEIVE A BOLT AND NUT AND ALL NUTS SHALL BE FIRMLY TIGHTENED PRIOR TO IMPOSING LOADING FROM ABOVE. MIS-ALIGNED CONNECTIONS SHALL BE FIELD-DRILLED AS REQUIRED TO INSERT ALL BOLTS OR BE FILED WELDED TO REPLACE SUCH BOLTS.

GENERAL PLUMBING NOTES

I. CLOSED WATER SYSTEM SHALL HAVE A PROPERLY SIZED THERMAL EXPANSION TANK LOCATED IN THE COLD WATER SUPPLY AS CLOSE TO THE WATER HEATER AS POSSIBLE.

- 2. NO MORE THAN SEVEN WATER SUPPLY FIXTURE UNITS SHALL BE SUPPLIED BY 1/2" PIPE IN A WATER SUPPLY SYSTEM USING FLUSH TANKS. 3. ALL SHOWERS AND TUB-SHOWERS COMBINATIONS SHALL BE PROVIDED WITH AN
- AUTOMATIC SAFETY WATER-MIXING DEVISE TO PREVENT EXCESSIVE SUDDEN TEMPERATURE CHANGES. THE VALUE SHALL COMPLY TO ANSI/ASSE 1016 - 1996 IN ACCORDANCE TO SECTION 899-210 AND BE DESIGNED WITH A MAXIMUM HANDLE ROTATION LIMIT/STOP OR COMPLY WITH ASSE 1017-1998 SECTION 890-210. THE DEVISE SHALL BE SET TO A MAXIMUM 115 DEGREES F AT THE TIME OF INSTALLATION.
- 4. CLEANOUTS ARE REQUIRED AT EACH CHANGE OF DIRECTION OF THE HORIZONTAL BUILDING DRAINAGE SYSTEM GREATER THAN 60 DEGREES AND NOT MORE THAN 4' ABOVE THE BASE OF EACH VERTICAL WASTE STACK.
- 5. EXHAUST FANS ON THE FIRST FLOOR TO EXHAUST HORIZONTALLY TO EXTERIOR AND ON THE SECOND FLOOR UP THROUGH THE ATTIC TO SOFFIT VENT OR TO ROOF VENT.
- 6. A SEPARATE TRAP IS REQUIRED FOR KITCHEN SINK AND GARBAGE DISPOSAL. 1. T'S AND CROSSED ARE NOT ALLOWED.
- 8. A 3" FULL SIZE STACK IS REQUIRED FOR WATER CLOSETS UNLESS REVENTED BACK TO MAIN FULL SIZE STACK WITHIN 20'-0",
- 9. ALL FUTURE WASHROOMS AND PLUMBING FIXTURES ARE TO BE CAPPED OFF PROPERLY. 10. EXPOSED HOT WATER SUPPLY LINES SHALL BE INSULATED PER SECTIONS 403, 503 AND 504 OF THE IECC.
- II, THE RIM TOP OF THE SUMP PIT IS A MINIMUM OF 2 INCHES ABOVE THE BASEMENT FLOOR, 12. REMOVE ALL EXISTING NON-COPPER WATER LINES.
- 13. HOT WATER PIPING SHALL BE INSULATED WITH R3 IF:
- PIPE DIAMETER IS LARGER THAN 3/4"
- PIPE IS SERVING MORE THAN ONE DWELLING UNIT.
- ENTIRE ROUTE FROM WATER HEATER TO KITCHEN FAUCETS PIPE IS OUTSIDE OF CONDITIONED SPACE.
- ENTIRE ROUTE FORM WATER HEATER T DISTRIBUTION MANIFOLD.
- PIPE IS UNDER FLOOR SLAB OR BURIED.
- PIPE RUN EXCEEDING 30 FT IF LARGES PIPE IS 3/8" DIA.
- PIPE RUN EXCEEDING 20 FT IF LARGES PIPE IS 1/2" DIA. PIPE RUN EXCEEDING 10 FT IF LARGEST PIPE IS 3/4" DIA.
- PIPE RUN EXCEEDING 5 FT IF LARGEST PIPE EXCEEDS 3/4" DIA.

GENERAL EXCAVATION NOTES

- 3. STRIP BLACK DIRT FROM BUILDING ZONE AND FROM DRIVEWAY.
- 5. ALL MATERIAL GENERATED FROM THE EXCAVATION SHALL BE SPATTERED INTO HOMOGENEOUS STOCKPILES.

- ALL SIDES OF THE BUILDING.

 - THE FOUNDATION IN CONFORMANCE WITH STATE DRAINAGE LAWS.

GENERAL ELECTRICAL NOTES

- FROM EVERY CORNER AND 4'-O" THERE AFTER.
- 9. RECESSED LIGHTS SHALL BE "IC" TYPE.

- 12. ALL CLOSET LIGHTS TO BE IN PER CODE.
- OR INSTALLED IN SEALED BOX WITH MIN 1/2" WALL BOARD.
- 16. GARAGE ON SEPARATE 20 AMP CIRCUIT. 17. ALL EXHAUST FANS TO EXHAUST DIRECTLY TO EXTERIOR
- 19. THERE SHALL BE NO MORE THAN TEN RECEPTACLES INSTALLED ON A FIFTEEN AMP ON A 20 AMP BRANCH CIRCUIT.
- BREAKER PANEL NO EXCEPTIONS.

POSSIBLE.

1. ALL WORK SHALL CONFORM WITH ALL LOCAL CODES AND ORDINANCES.

2. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAIN EXCAVATION GRADES FROM A GRADE STAKE SHOWING TOP OF FOUNDATION ELEVATIONS, THIS GRADE STAKE SHALL BE OUTSIDE THE BUILDING AREA AND SHALL BE PROVIDED BY THE BUILDER.

4. MACHINE EXCAVATE TO AN ELEVATION 6" BELOW THE PROPOSED TOP OF FOOTING ELEVATION TO ALLOW FOR THE FINAL 4" TO BE KEYED INTO UNDISTURBED SOIL BY HAND BY OTHERS.

6. EXCAVATE AS REQUIRED TO PROVIDED 8" OF GRADE 3 STONE UNDER THE CMP CULVERT (IF ANY). INERTS OF CULVERTS SHALL CONFORM TO THE EXISTING FLOW LINE IN THE DITCHLINE AND SHALL BE 18" MINIMUM BELOW THE CROWN OF THE ROAD, SUBCONTRACTOR SHALL CHECK FOR PROPER PITCH AND DEPTH PRIOR TO FILLING STONE OVER HE PIPE INSTALLATION OF A

DRIVEWAY WITH A HUMP OVER THE CULVERT PIPE SHALL BE PROHIBITED. 7. PRESUMPTIVE SOIL BEARING CAPACITY IS 3,000 PSF ON UNDISTURBED SOIL. IF AT PLAN DEPTH A QUESTIONABLE SOIL CONDITIONS ENCOUNTERED, SUBCONTRACTOR SHALL CONSULT WITH

BUILDER OR BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH EXCAVATEING DEEPER THAN PLAN. 8. NO EXCAVATION SHALL BE MADE WHOSE DEPTH BELOW THE FOOTING IS GREATER THAN 1/2 THE HORIZONTAL DISTANCE FROM THE NEAREST EDGE OF THE FOOTING. 9. ALL BACKFILL AT STOOPS. SLABS, STEPS AND PAVEMENTS SHALL BE CLEAN GRANULAR FILL.

PLACE IN 8" LAYERS AND COMPACT TO 95% MAXIMUM DRY DENSITY PER ASTM D-1557 OR PROVIDE ALL SELF-COMPACTING PER GRAVEL MATERIAL. 10. ALL SLABS ON GRADE SHALL BEAR ON MECHANICALLY COMPACTED CRUSHED STONE OR

SELF COMPACTING PER GRAVEL CAPABLE:E OF SUPPORTING 1,000 PSF. 11. BACKFILL SHALL BE BROUGHT UP EQUALLY ON EACH SIDE OF WALLS AND EQUALLY AROUND

12. ONLY RUBBER TIRED MACHINES MAY DRIVE ON EXISTING PAVEMENT AT STREET. LOADING AND UNLOADING OF METAL TRACK MACHINES SHALL BE MADE ON-SITE OR THE SUBTRACTION SHALL BE RESPONSIBLE FOR DAMAGES THAT MIGHT OCCUR.

13. SUBCONTRACTOR AND/OR BUILDER SHALL CALL JULIE AT LEAST 48 HOURS PRIOR TO THE START OF ANY DIGGING OPERATIONS OR BE HELD RESPONSIBLE FOR ANY REPAIRS TO UNDERGROUND UTILITY LINES DAMAGED OR DESTROYED IN THE PROCESS.

14. ANY EXISTING FILED TILES, WHETHER FLOWING OR NOT, SEVERED DURING THE EXCAVATION PHASE SHALL BE IMMEDIATLY MARKED SO AS TO ALLOW FOR THE PROPER RE-CONNECTION AROUND

1. LIGHTS ABOVE TUBS, SHOWERS & SAUNA SHALL BE GFIC PROTECTED.

2. SMOKE DETECTORS SHALL BE ON A DEDICATED CIRCUIT IN DEDICATED CONDUIT. 3. THE WHIRLPOOL SHALL BE BONDED TO THE WATER SUPPLIES.

4. BEDROOM RECEPTACLES CIRCUITS SHALL BE ARC FAULT PROTECTED. 5. ALL RECEPTACLES SHALL BE AUTO GROUND OR HAVE A BONDING JUMPER INSTALLED.

6. ALL CEILING BOXES IN HABITABLE SPACES SHALL BE FAN RATED. 7. RECEPTACLES ABOVE KITCHEN COUNTERS SHALL BE INSTALLED A MAXIMUM OF 2'-O"

8. INCANDESCENT CLOSET LIGHTS SHALL BE INSTALLED A MINIMUM OF 12". (FLUORESCENT ARE RECESSED 6" FROM THE VERTICAL PLANE OF THE NOSING OF THE CLOBET SHELF)

10. ALL 125 VOLT, SINGLE PHASE, 15 \$ 20 AMP RECEPTACLES INSTALLED IN KITCHEN TO SERVE COUNTER TOPS SURFACES SHALL HAVE GFI PROTECTIONS. 11. ALL SMOKE DETECTORS TO BE INTERCONNECTED ACTIVATION ONE ALARM AND ALL OTHERS WILL ACTIVATE, ALL SMOKE DETECTORS TO BE BATTERY BACK-UP.

13. RECESSED FIXTURES INSTALLED IN BUILDING ENVELOPE TO BE IC RATED

14. PLEASE NOTE THAT ALL WIRING 25 VOLTS OR GREATER IN NEW CONSTRUCTION SHALL BE CONVEYED THROUGH RIGID METAL CONDUIT. PVC NOT ALLOWED.

15. EVERY ENTRANCE TO EVERY HABITABLE ROOM AND HALLWAY MUST HAVE AN ACCESSIBLE LIGHT SWITCH TO PERMANENT LIGHT FIXTURE OR ELECTRICAL OUTLET.

18. ANY POINT ALONG THE WALL OF A LIVABLE AREA SHALL NOT BE MORE THAN 6' FROM AN OUTLET. EACH WALL SPACE TO BE TREATED INDIVIDUALLY.

BRANCH CIRCUIT AND NO MORE THAN 15 RECEPTACLES INSTALLED

20. GROUND BUSHINGS OR LOCKNUTS SHALL BE USED IN METER FITTING AND CIRCUIT

21. ALL LOW VOLTAGE WIRING - PHONE, DOORBELL, THERMOSTAT, FIRE AND BURGLAR ALARM - SHALL BE INSTALLED IN CONDUIT WHERE SUCH WIRING WILL BE RENDERED INACCESSIBLE BY FINISHED MATERIAL OR WHERE SUBJECT TO PHYSICAL DAMAGE. 22. THE CIRCUIT BREAKER PANEL MOUNTED TO THE CONCRETE FOUNDATION WALL TO HAVE PLYWOOD BETWEEN THE WALL AND THE PANEL.

23. ALL 120 VOLT, SINGLE PHASE, 15-20 AMPERE RECEPTACLES INSTALLED IN BEDROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS LIBRARIES, DENS, SUNROOMS, REC ROOMS, CLOSETS, HALLWAYS, OR SIMILAR SHALL BE INSTALLED WITH AN ARC FAULT CIRCUIT INTERRUPTER PER CODE.

24. ALL 125 VOLT, 15-20 AMPERE RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES. 25. ONE CARBON MONOXIDE WITHIN 15 FEET OF ANY SLEEPING AREA WITHIN DWELLING UNIT.

GENERAL MECHANICAL NOTES

1. CONTRACTORS SHALL VISIT JOB SITE PRIOR TO BIDDING AND VERIFY ALL EXISTING CONDITIONS IN FILED AND INCORPORATE ALL REQUIRED CHANGES IN HIS BID TO PROVIDE A COMPLETE OPERATING SYSTEM. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR FROM PERFORMING THE WORK REQUIRED UNDER THIS CONTRACT, CONTRACTOR SHALL MAKE A DETAILED EXAMINATION OF ALL LOCATIONS WHERE NEW WORK IS TO BE INSTALLED AND SHALL EXAMINE PIPING, CONDUITS, STRUCTURAL SUPPORTING BEAMS, ETC. 2. WHERE THE EXISTING PIPING OR DUCTWORK SERVING ANY EXISTING MECHANICAL EQUIPMENT IN AREA OF THE EXISTING BUILDING NOT BEING ALTERED IS INTERFERED WITH, CONTRACTOR SHALL REROUTE AND RECONNECT ALL SUCH PIPES OR DUCTWORK. 3. EVERY EFFORT HAS BEEN MADE TO LOCATE, IDENTIFY AND IN SOME CASES, INDICATE THE SIZES FO EXISTING BUILDING UTILITIES AND SYSTEMS. HOWEVER, NOT EVERY FIXTURE, PIPE, DUCT, CONDUIT, ETC. REQUIRED TO BE REMOVED OR RELOCATED IS NECESSARILY SHOWN OR KEY NOTED. THE CONTRACTOR SHALL REMOVE OR RELOCATE EXISTING ITEMS AS REQUIRED TO ACHIEVE THE INTENT OF THE DOCUMENTS OR TO ACCOMMODATE NEW FIXTURES, PIPE, DUCT, CONDUIT, ETC. AS INDICATED BY THE DOCUMENTS AT NO ADDITIONAL COST TO OWNER REFER ALSO TO ALL OTHER SHEETS IN

THIS SET OF DOCUMENTS FOR RELATED INFORMATIONS. 4. THE ENTIRE INSTALLATION SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIONAL AND ACCEPTANCE BY THE OWNER/ENGINEER SHALL BE A CONDITION OF THE CONTRACT.

5. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCE, PRESERVE HEADROOM, AVOID OMISSION AND COORDINATE DIFFUSES LOCATIONS WITH REFLECTIVE CEILING PLAN.

6. DUCTWORK AND PIPING SHALL BE CONCEALED WHERE POSSIBLE, RUN IN STRAIGHT LINES PARALLEL AND/OR PERPENDICULAR TO THE BUILDING CONSTRUCTION AS HIGH AS

7. THIS CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPLETE THE WORK INCLUDING MOVING AND RIGGING OF MATERIALS AND EQUIPMENT, HANGERS, SUPPORTS, STRUCTURAL FRAMING CHANGES, ANCHORS, INCLUDING FIRE DAMPERS AS REQUIRED BY LOCAL CODES, FITTINGS SLEEVES AD DRAIN PIPING. 8. ALL MATERIAL, WORKMANSHIP AND EQUIPMENT SHALL BE GUARANTEED FOR ONE YEAR AFTER SYSTEM ACCEPTANCE. PROVIDE TYPEWRITTEN OPERATING INSTRUCTIONS AND EQUIPMENT WARRANTIES. AS A PART OF THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE A ONE YEAR SERVICE AND MAINTENANCE AGREEMENT.

9. FLEXIBLE DUCTWORK SHALL BE UL 181 TYPE AS APPROVED BY CODE AND SHALL HAVE MAXIMUM LENGTH OF 4'-O" AS MANUFACTURED BY THERMOFLEX. 10. ALL DUCTWORK SHALL BE CONSTRUCTED WITH GALVANIZED SHEET METAL IN ACCORDANCE WITH STATE AND LOCAL CODES, ASHRAE STANDARDS, SMACNA STANDARD AND NFPA.

11. ALL DUCTWORK PENETRATING A DESIGNATED SMOKE OR SMOKE/FIRE WALL SHALL BE FURNISHED WITH UL APPROVED MOTORIZED SMOKE DAMPERS. 12. ELECTRICAL CONTRACTOR AND MECHANICAL CONTRACTOR SHALL COORDINATE LOCATION

OF SMOKE DETECTORS SO THAT ALL DETECTORS ARE LOCATED BEYOND THE CODE PRESCRIBED SEPARATION FROM ANY SUPPLY OR RETURN DIFFUSER/REGISTER. 13. COORDINATE ALL SYSTEM SHUTDOWNS WITH BUILDING OWNERS 5 WORKING DAYS IN ADVANCE.

GENERAL NOTES

RECESSED FIXTURES INSTALLED IN BUILDING ENVELOPE TO BE IC RATED OR INSTALLED IN SEALED BOX WITH MINIMUM 1/2" WALL BOARD

GLAZING: MAXIMUM GLAZING U-FACTOR IS 0.32 FOR CLIMATE ZONE 14, LAKE COUNTY ILLINOIS

TEMPERED GLASS IS REQUIRED IN THE FOLLOWING LOCATIONS: DOORS, VISION PANELS ADJACENT TO DOORS, ENCLOSURES FOR TUBS AND SHOWERS, PANES GREATER THAN 9 SQUARE FEET WITH LOWER EDGE LESS THAN 18" ABOVE FLOOR.

DOUBLE-WIRE JOINT REINFORCEMENT ABOVE CORNERS OF MASONRY OPENING EXTENDING 12" ABOVE EACH SIDE.

FLASHING SHALL BE LOCATED BENEATH THE FIRST MASONRY COURSE ABOVE THE FINISHED GRADE LEVEL ABOVE FOUNDATION WALL OR SLAB, AND OTHER POINTS OR SUPPORT, INCLUDING STRUCTURAL FLOORS, SHELF ANGLES AND LINTELS.

ALL BEARING PARTITIONS WITH PIPES LARGER THAN 3/4" AND ALL NON-BEARING PARTITIONS WITH PIPES LARGER THAN 1 1/4" SHALL BE INCREASED TO A MINIMUM OF A 2 X 6 WALL.

ALL RAIN WATER FROM ALL BUILDING AND STRUCTURAL ROOFS SHALL BE COLLECTED BY GUTTERS OR DRAINPIPES WHICH DISCHARGE INTO DOWNSPOUTS ONTO A HARD SURFACE.

INSTALL PASSIVE RADON RESISTANT SYSTEM PER APPENDIX "F" OF THE IRC AND EPA SUGGESTED DESIGN.

ALL THERMOSATS TO BE PROGRAMMABLE

ATTIC ACCESS DOORS OR HATCHES MUST BE WEATHER-STRIPPED AND INSULATED TO A LEVEL EQIVELANT TO THE INSULATION ON THE SURROUNDING SURFACES

A MINIMUM OF 15 PERCENT OF THE LAMPS IN PERMANENTELY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICENCY LAMPS OR A MINIMUM OF 75 PERCENT OF PERMANENTLY INSTALLED LIGTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICIENCY LAMPS.

MINIMUM GLAZING FOR SKYLIGHS .40

THE BUILDING SHALL BE TESTED AND VERIFIED AS HAVING AIR

LEAKAGE NOT EXCEEDDING 3 CHANGES PER HOUR AFTER CREATION OF ALL PENETRATIONS FO THE BUILDING ENVELOPE, TESTING SHALL BECONDUCTED WITH BLOWER DOOR AT A PRESSURE OF 50 PASCAL'S. A WRITTEN AIR LEAKAGE REPORT SALL BE PROVIDED TO THE CODE OFFICIAL.

FENESTRATION SHALL BE LISTED AND LABELED BY MANUFACUTE. THE MAXIMUM AIR INFILTRATION OF WINDOWS SKYLIGHTS AND SLIDING GLASS DOOR IS 0.3 CFM PER SQUAE FOOT. MAXIMUM AIR FILTRATION OF SWINGING DOORS IS 0.5 CFM PER SQUARE FOOT.

A PERMANENT CERTIFICATE SALL BE COMPLETED AND POSTED ON OR IN ELECTRICAL DISTRIBUTION PANEL BY THE BUILDER OR REGISTERED DESIGN PROFFESIONAL.

IT SHALL LIST THE FOLLOWING I. PREDOMINANT R-VALUES OF INSUALTION INSTALLED IN OR ON CEILING/ROOF, WALLS FOUNDATION WALL, SLAB, BASEMENT WALL, CRAWLSPACE WALL AND /OR FLOOR, DUCTS OUTSIDE CONDITIONED SPACES

2. U FACTORS OF FENESTRATION 3. RESULTS OF ANY REQUIRED DUCT SYSTEM, AND BUILDING ENVELOPE AIR LEAKAGE TEST, LIST TYPES AND EFFICINCIES OF HEATING, COOLING AND SEVICE WATER HEAING EQUIPMENT AIR BARRIER SHALL BE INSTALLED ON FIREPLACE WALLS, FIREPLACES SHALL HAVE GASKETED DOORS

BLOWN IN OR SPRAYED ROOF/CEILING INSUALTION SHALL BE WRITEN IN INCHES ON MARKERS THAT AE INSTALLED AT LEAST ONE FOR EVERY 300 SQUARE FEET HROUGH THE ATTIC SPACE, THE MARKERS SHAL BE AFFIXED TO TRUSSED OR JOISTS.

FOR BLOWN IN OR SPRAYED INSULATION (FIBERGLASS AND CELLULOSE)

INSTALLERS CERTIFICATION SHALL BE INCLUDE INSTALLED THICKNESS, STTLED THICKNESS, SETTLED R-VALUE, INSTALLED DENSITY, COVERAGE AREA AND NUMBER OF BAGS SHALL BE LISTED ON CERTIFICATION.

FOR SPRAYED POLYURETHANE FOAM INSULATION THE INSTALLED THICKNESS OF THE AREAS COVERED AND R-VALUES OF INSTALLED THICKNESS SHALLE E POSTED ON THE CERTIFICATION. THE INSULATION INSTALLER SHALL SIGN DATE AND POST THE CERTIFICATION ON THE JOB SITE.

PASSIVE RADON CONTROL SYSTEM BEING USED

CRIPPLE WALL STUDS SHORTER THAN 14" MUST BE SHEATHED WITH A WOOD SRUCTURAL PANEL FASTENED TO BOTH TOP AND BOTTOM PLATES.

BRACED WALL LINES SHALL BE LOCATED NOT MORE THAN 25 FT O.C. AND BE PERMITTED TO BEGIN NO MORE THAN 12.5 FT FROM THE END OF TE BRACED WALL LINE

TOTAL COMBINED DISTANCE FROM EACH END OF BRACED WALL LINE TO NEAREST BRACED WALL PANEL IN THIS LINE SHALL NOT EXCEED 12.5 FT.

WHERE A 4-FOOT PANEL CANNOT BE PROVIDED WITH 12.5 FEET FROM THE WALL

CORNER PROVIDE ALTERNATE BRACED WALL PANEL DESIGN.

A BRACED WALL PANEL MAY BE OFFSET OUT OF PLANE UP TO 4 FT PROVIDED THAT A TOTAL OUT TO OUT OFFSET WITHIN ONE BRACED WALL LINE DOES NOT EXCEED & FT. A MINIMUM OF 18" OF BRICK VENEER IS REQUIRED ON EACH SIDE OF OPENING SPANNED BY LINTEL

DOUBLE - WIRE JOINT REINFORCEMENT ABOVE CORNERS OF MASONRY OPENINGS EXTENDING MINIMUM 12" BEYOND EACH SIDE OF OPENING

RAFTERS AND CEILING JOISTS LARGER THAN 2 X 10 REQUIRED LATERAL SUPPORT AT POINTS OF BEARING.

ELEMENTS TO BE SEALED

BREAKS IN JOINTS IN THE AIR BARRIER

ACCESS OPENINGS DROP DOWN STAIR OF KNEE WALL DOORS TO UNCONDITIONED ATIC SPACE JUNCTION OF TOP PLATE AND TOP OF EXTERIOR WALL JUNCTION OF FOUNDATION SILL PLATE

KNEE WALLS

SPACE BETWEEN WINDOW/DOOR JAMBS AND FRAMING

SPACE BETWEEN SKYLIGHT AND FRAMING

DUCT SHAFTS UTILITY PENETRATIONS AND FLUE SHAFTS OPENING TO EXTERIOR UNCONDITIONED SPACE

RECESSED LIGHT FIXTURES (AIRTIGHT, IC RATED)

HVAC REGISTER BOOTS THAT PENETRATE ENVELOPE DUCTS, AIR HANDLERS AND FILTER BOXES

JOINTS AND SEAMS IN HYAC DUCTWORK

WALL CEILING AND DOOR BETWEEN GARAGE AND CONDITIONED SPACE

INSULATION & AIR NOTES

FOR BLOWN INSULATION OR SPRAYED INSULATION (FIBERGLASS AND CELLULOSE) INSTALLERS CERTIFCATION SHALL INCLUDE INSTALLED THICKNESS, SETTLED THICKNESS, SETTLED R-VALUE, INSTALLED DENSITY. COVERAGE AREA AND NUMBER OF BAGS SHALL BE LISTED ON CERTIFICATION.

FOR SPRAYED POLYURETHANE FOAM INSULATION THE INSTALLED THICKNESS OF THE AREAS COVERED AND R-VALUE OF INSTALLED THICKNESS BE POSTED ON THE CERTIFICATION. THE INSULATION INSTALLER SHALL SIGN AND DATE AND POST THE CERTIFICATION ON THE JOB SITE.

BLOWN IN OR SPAYED ROOF/CEILING INSUALTION SHALL BE WRITTEN IN INCHES ON MARKERS THAT ARE INSTALLED AT LEAST ONE FOR EVERY 300 SQ. FT. THROUGH OUT THE ATTIC SPACE. THE MARKERS SHALL BE AFFIXED TO TRUSSES OR JOISTS.

A PERMANENT CERTIFICATE SHALL BE POSTED SHALL BE POSTED ON OR IN THE ELECTRICAL DIST PANEL BY THE BUILDER. IT SHALL LIST THE FOLLOWING.

PREDOMINANT R-VALUE OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION WALL, SLAB, BASEMENT WALL, CRAWLSPACE WALL AND OR FLOOR, DUCTS OUTSIDE CONDITIONED SPACES AND U-FACTORS OF FENESTRATION.

RESLULTS OF ANY REQUIRED DUCT SYSTEM, AND BUILDING ENVELOPE AIR LEAKAGE TEST, LIST TYPES AND EFFICIENCIES OF HEATING COOLING AND SERVICE WATER HEATING EQUIPMENT.

AIR BARRIER SHALL BE INSTALLED ON FIREPLACE TO HAVE GASKETED DOORS - FLUE TO BE WITH TIGHTFITTING DAMPER AND OUTDOOR COMBUSTION AIR.

THE FENESTRATION SALL BE LISTED AND LABELED BY MANUFACTURE. MAXIMUM AIR INFILTRATION OF SWINGING DOORS IS .5 CFM PER SQ. FT.

THE BUILDING SHALL BE TESTED AND VERIFIED AS HAVING AIR LEAKAGE NOT EXCEEDING THREE CHANGES PER HOUR AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. TESTING SHALL BE CONDUCTED WITH BLOWER DOOR AT A PRESSURE OF 50 PASCALS. A WRITTEN AIR LEAKAGE EPORT SHALL BE PROVIDED TO THE CODE OFFICIAL.

DUCT TIGHTNESS TEST SHALL BE EITHER POST CONSTRUCTION OR ROUGH-IN TEST (LEAKAGE LESS THAN OR EQUAL TO 4 CFM PER 100 SQ, FT. AT A PRESSURE DIFFERENTIAL O.I INCH W.G. (25 PASCAL))

AIR HANLER MANUFACTURER TO CONFIRM AIR LEAKAGE OF NOT MORE THAN 2%

OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN VENTILATION SYSTEM IS NOT OPERATING.





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DATE NOV 13, 2015 REVISION DEC 15, 2015

<u>SHEET #</u>



Mold Inspections Radon Testing - Soil Suitability Well and Septic Evaluations

4314-A Crystal Lake Rd • McHenry, IL 60050 • voice 815.344.4020 • tex 815.344.2208 • johnraber.com

December 29, 2015

Peder Finnberg PAF/ Heritage Land Consultants, LLC 758 Ridgeview Drive McHenry, Illinois 60050

Re: 337 Ridge Road, Barrington Hills

Dear Mr. Finnberg:

The soil analysis for septic suitability on the above referenced property has been completed.

Three (3) borings were made at the proposed septic location.

The slope at Boring #1 was 2%, Boring #2, 2%, and Boring #3, 4%.

Depth to seasonally high water table was >60 inches at Boring #1, >60 inches at Boring #2, 38 inches at Boring #3.

This is the depth at which the fluctuating water table reaches during the wettest season of the year.

No limiting permeability was found at Boring #1, Boring #2 or Boring #3.

The soil profiles taken by John A. Raber & Assoc., Inc., indicate only the soil characteristics present in the area reviewed at the time it was made. These soil profile descriptions are intended solely to permit evaluation by an engineer or local governmental authority to determine the suitability of the site for construction of an on-site wastewater disposal system. John A. Raber & Assoc. Inc. does not evaluate the suitability of the soils and makes no representation as to the suitability of the site.

Sincerely,

JOHN A. RABER & ASSOC., INC.

Brue & Horalos

Bruce J. Houghtby, C.P.S.S./S.C. Soil Scientist/Classifier

mjo enc.

This report is printed on watermarked paper.

LOCATION: 337 Ridge Rd., Barrington Hills, St. Mark's Episcopal PIN#

NEW CONSTRUCTION: C REPAIR: PROPERTY ALTERATION: COUNTY: Lake FILE # 2543/15

 BORING #
 I
 SOIL SERIES: Zurich
 OBSERVED WATER: None
 SOIL RESOURCE GROUP:
 B

 DEPTH TO SEASONALLY HIGH WATERTABLE:
 >60
 DEPTH TO LIMITING LOADING RATE:
 >60
 ASPECT/SLOPE
 SW2%

HORIZON	DEPTH	DMNT.COLOR	REDOX	COATINGS	STRUCTURE	TEXTURE	CONSISTENCE	LOADING/PERMEABILITY
٨	0-8	10yr4/3			2 vfsbk	sil	Friable	.75
Bt1	8-26	10yr4/6		m 10yr4/4cf	2 f&msbk	sicl	Friable	.62
Bt2	26-36	10yr6/6		c 10yr5/4cf	2 vfpr	sicl	Friable	.62
C	36-60	10yr6/6			massive	sil	Friable	.45
			The Providence of the	L		1		

INTERNAL DRAINAGE: Well

DEPTH OF COMPACTED LAYERS: None

TOWNSHIP: Cuba

BORING # 2

SOIL SERIES: Zurich

OBSERVED WATER: None

SOIL RESOURCE GROUP: B

DEPTH TO SEASONALLY HIGH WATERTABLE: >60

DEPTH TO LIMITING LOADING RATE: >60

the second se

ASPECT/SLOPE: SW2%

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HORIZON	DEPTH	DMNT.COLOR	REDOX	COATINGS	STRUCTURE	TEXTURE	CONSISTENCE	LOADING/PERMEABILITY
A	0-9	10yr4/3			2 vfsbk	sil	Friable	.75
Bt1	9-31	10yr4/6		m 10yr4/4cf	2 f&msbk	sicl	Friable	.62
Bt2	31-47	10yr6/6		m 10yr5/3cf	2 vfpr	siel	Friable	.62
С	47-60	10yr6/6			massive	sil	Friable	.45
INTEDNAL	DDAINA	CE. Wall		1	l	DED	THOECOMPACTE	D LAVERS, None

INTERNAL DRAINAGE: Well

Included and the second s

DEPTH OF COMPACTED LAYERS: None

JOHN A. RABER & ASSOCIATES, INC. 4314-A CRYSTAL LAKE ROAD MCHENRY, ILLINOIS 60050 (815) 344-4020 TEST DATE: 12/29/15



and a second second

Brue & Horalos

Bruce J. Houghtby, C.P.S.S./S.C. ARCPACS No. 1530 ISCA No. 51

BORING # 3

SOIL SERIES: Zurich

OBSERVED WATER: None

SOIL RESOURCE GROUP: B

DEPTH TO SEASONALLY HIGH WATERTABLE: 38" DEPTH TO LIMITING LOADING RATE: >60 ASPECT/SLOPE S4%

DEPTH	DMNT.COLOR	REDOX	COATINGS	STRUCTURE	TEXTURE	CONSISTENCE	LOADING PERMEABILITY
0-10	10yr4/3			2 vfsbk	sil	Friable	.75
10-29	10yr4/6	-24	m-l0yr4/4cf	2 f&msbk	sicl	Friable	.62
29-38	10yr6/6		m 10yr5/3cf	2 vfpr	sicl	Friable	.62
38-60	10yr6/6	c3 10yr6/2		massive	sil	Friable	.45
	0-10 10-29 29-38	0-10 10yr4/3 10-29 10yr4/6 29-38 10yr6/6	0-10 10yr4/3 10-29 10yr4/6 29-38 10yr6/6	0-10 10yr4/3 10-29 10yr4/6 29-38 10yr6/6	0-10 10yr4/3 2 vfsbk 10-29 10yr4/6 -m-10yr4/4cf 2 f&msbk 29-38 10yr6/6 m 10yr5/3cf 2 vfpr	0-10 10yr4/3 2 vfsbk sil 10-29 10yr4/6 - m-10yr4/4cf 2 f&msbk sicl 29-38 10yr6/6 m 10yr5/3cf 2 vfpr sicl	0-10 10yr4/3 2 vfsbk sil Friable 10-29 10yr4/6 -m-10yr4/4cf 2 f&msbk sicl Friable 29-38 10yr6/6 m 10yr5/3cf 2 vfpr sicl Friable

INTERNAL DRAINAGE: Moderately Well

DEPTH OF COMPACTED LAYERS: None

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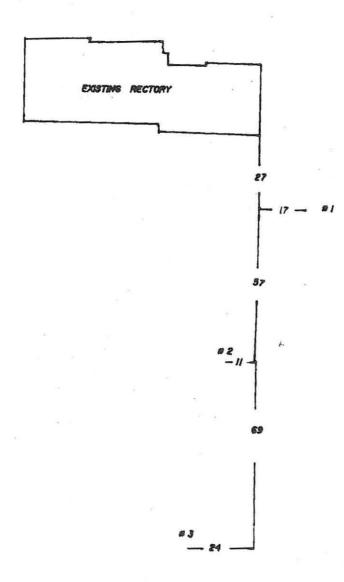
JOHN A. RABER & ASSOCIATES, INC. 4314-A CRYSTAL LAKE ROAD MCHENRY, ILLINOIS 60050 (815) 344-4020

TEST DATE: 12/29/15



Brue & Horglos

Bruce J. Houghtby, C.P.S.S./S.C. ARCPACS No. 1530 ISCA No. 51 337 RIDGE ROAD BARRINGTON HILLS CUBA TOWNSHIP



JOHN A. RABER & ASSOC. INC. 4314-A CRYSTAL LAKE ROAD McHENRY, IL. 60050 815-344-4020 soils@johnraber.com

PREPARED BY BRUCE J. HOUGHTBY CERTIFIED PROFESSIONAL SOIL SCIENTIST/SOIL CLASSIFIER SSSA No. 01530 ISCA No. 51

PAF/HLC 758 Ridgeview Drive McHenry, II. 60050	Client: St. Mark's Ch. PAF/HLC 15-275 Date: 1/11/2016 Location: VIg. Barr. Hills
Lift Station Pump	Calulations
Quantity = 151.38 Gallons 151.38	ter In Discharge Pipe 600 15 x Void Volume ge Pipe. Total Dosing 3 Gallons Per Dose/ 226 0 Gallon Lift Station.
 = 0.67 Feet Deep 2) Calculate Total Head Loss A) Vertical Head = Base of Pump to Overflow of Higher A) 818.3 - 810 = B) Friction Loss In Discharge Pipe 1 1/2 in. pipe = (0.02 0.15 15 Feet 2 in. Pipe = (0.0181) x Feet 	
C) Assigned Distal Pressure D) Total Feet of Head a) 8.30 + b) 0.02 +	$\begin{array}{ccc} C) = & 2.00 \\ 15.00 \\ c) & = & 10.32 \end{array}$
3) Select Pump: A Champion <u>CPE 4</u> Septic E @ <u>10.32</u> Total Head Will Pump (not less than 10 GPM nor more than Pump Floats Will Be Set To Pump	ffluent Pump 15 45 GPM) 0.67 Feet of Effluent



Heritage Land Consultants, LLC

HLC Surveying – HLC Engineering – HLC Septic Design Office: 758 Ridgeview Drive, McHenry, IL 60050

Tel: 815-344-3252 Fax: 815-344-3257 Website: www.heritagelandconsultants.com



April 6, 2016

Re: Septic Design Revision St. Marks Rectory 337 Ridge Road PAF/HLC Job # 15-275

Gewalt Hamilton & Associates Mr. Daniel J. Strahan 625 Forest Edge Drive Vernon Hills, Il. 60061

Gewalt Hamilton

APR 1 1 2016 Associates, Inc.

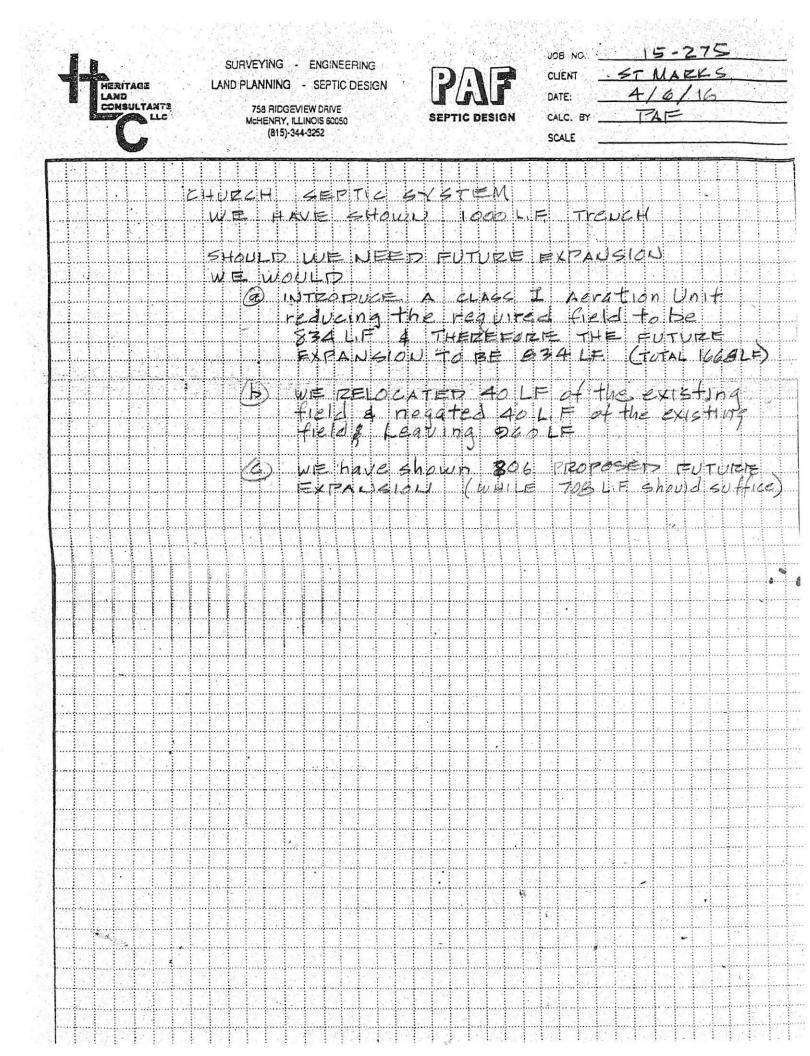
Dear Mr. Strahan:

Transmitted herewith is one revised print of the septic system design for the above referenced property. This print reflects changes requested by you for the appropriate permit: We have responded to all 6 comments in your review letter. The attached calculation sheet shows how we arrived at the 100% expansion for the church septic system.

Please contact me in this office if you have any questions regarding this transmittal. Thank you.

Respectfully, der A. Finnberg

cc: w/2 prints Wendi Frisen-Vlg. of Barrington Hills w/2 prints Client



February 23, 2016



CONSULTING ENGINEERS

625 Forest Edge Drive, Vernon Hills, IL 60061 TEL 847.478.9700 = FAX 847.478.9701

www.gha-engineers.com

Mr. Robert Kosin Barrington Hills Village Hall 112 Algonquin Road Barrington Hills, IL 60010

Dear Mr. Kosin,

We are enclosing the results of the water quality monitoring performed by McHenry Analytical Water Laboratory, as part of the comprehensive water quality monitoring effort by the Flint & Spring Creek Watershed Partnerships, and Citizens for Conservation. This annual monitoring is performed to ensure that the Village of Barrington Hills remains in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Stormwater Permit ILR40 for discharges from Small Municipal Separate Storm Sewer Systems (MS4s), and to determine if the best management practices (BMPs) being performed by the Village are helping to improve water quality within the receiving waters.

The most recent version of the ILR40 permit expired on March 31, 2014, but has been administratively continued by the IEPA. The new draft version of the permit states that: "At a minimum, analysis shall include the following parameters: total suspended solids, total nitrogen, total phosphorus, fecal coliform, and chlorides, and oil and grease". Fecal coliform and oil/grease were added as new parameters this year in anticipation of the final permit.

Also enclosed is a report produced by Gewalt Hamilton Associates, Inc. (GHA) containing maps of the monitoring sites, a comparison of upstream and downstream results, graphs which summarize and compare results from the previous years, and recommendations for stormwater BMPs to improve the quality of stormwater runoff within the Village.

Should you have any questions, please do not hesitate to contact me at <u>cburke@gha-engineers.com</u> or at (847) 821-6256.

Sincerely, GEWALT HAMILTON ASSOCIATES, INC.

tthe Bucke/

Caitlin Burke Environmental Consultant



WATER QUALITY REPORT February 2016



Village of Barrington Hills

GHA Project No. 9355.090



Prepared by Gewalt Hamilton Associates, Inc. 625 Forest Edge Drive Vernon Hills, IL 60061 847.478.9700 www.gha-engineers.com

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Section 1

Executive Summary

BACKGROUND

This water quality test analysis was developed for the Village of Barrington Hills for the purpose of demonstrating compliance with the minimum standards required by the Illinois Environmental Protection Agency (IEPA) General Storm Water Permit ILR40 for discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The most recent version of the ILR40 permit expired on March 31, 2014, but has been administratively continued by the IEPA. NOTE: The new *draft* version of the permit states that: <u>"At a minimum, analysis shall include the following parameters: total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease". Fecal coliform and oil and grease have been added to the list of parameters in anticipation of the final permit.</u>

Test results obtained through this project were compared against the Water Quality Standards (WQS) established by the Illinois Pollution Control Board (IPCB) under Title 35 of the Illinois Administrative Code; *Standard Methods for the Examination of Water and Wastewater*, a joint publication of the American Public Health Association (APHA), American Water Works Association (AWWA), and the Water Environment Federation (WEF); or Volunteer *Stream Monitoring: A Methods Manual*, published by the United States Environmental Protection Agency, Office of Water.

Extensive water quality testing was performed as part of a Water Quality Monitoring Plan, developed for Flint Creek Watershed Partnership, and Citizens for Conservation. The Water Quality Monitoring Plan was completed in February 2015, and subsequently approved by the IEPA.

Parameters

Lab Analyses

- 1. Ammonia
- 2. Biochemical Oxygen Demand (BOD)
- 3. Chloride
- 4. Fecal Coliform*
- 5. Fluoride
- 6. Oil & Grease*

7. Total Dissolved Solids (TDS) 8. Total Kjeldahl Nitrogen (TKN)

8. Total Kjeldani Nitrogen (TKN)

- 9. Total Phosphorous (TP)
- 10. Total Suspended Solids (TSS)
- 11. Phenolics
- 12. Potassium

Field Analyses

Conductivity
 Dissolved Oxygen (DO)
 Temperature
 pH

*Newly added parameters – see note in above paragraph.

Locations

Five (5) sites within the Village were tested, at locations upstream and downstream of the MS4 discharge:

- Spring Creek South (SCBH1Q)
- Spring Creek Middle (SCBH2Q)
- Spring Creek North (SCBH3Q)
- Flint Creek South (FCBH1)
- Flint Creek North (FCBH4)

A map of these locations is included in Section 3.

Section 2

Program Overview

PURPOSE

The purpose of water quality testing analysis is to demonstrate compliance with the minimum standards required by the Illinois Environmental Protection Agency (IEPA) General Storm Water Permit ILR40 for discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The permit requires annual monitoring of receiving waters upstream and downstream of the MS4 discharges, use of indicators to gauge the effects of storm water discharges on the physical/habitat-related aspects of the receiving waters and/or monitoring of the effectiveness of the Best Management Practices (BMPs). MS4 components include the conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, gutters, ditches, swales, manmade channels or storm sewers. Storm water run-off naturally contains numerous constituents; however, urbanization and urban activities (including municipal activities) typically increase concentrations to levels that may impact water quality. Pollutants associated with storm water include sediment, nutrients, bacteria and viruses, oil and grease, metals, organics, pesticides and gross pollutants.

Water pollution control programs are designed to protect the beneficial uses of the water resources within the state. Each state has the responsibility to set water quality standards (WQS) that protect these beneficial uses, commonly referred to as "designated uses". In Illinois, waters are designated for various uses including aquatic life, wildlife, agricultural use, primary contact (e.g., swimming, water skiing), secondary contact (e.g., boating, fishing), industrial use, drinking water, food-processing water supply and aesthetic quality. Illinois' WQS provide the basis for assessing whether the beneficial uses of the state's waters are being attained. The purpose of this study is to assess the quality of receiving waters and provide recommendations for BMPs that will target the identified areas of concern.

TESTING METHODS AND PARAMETERS

For proper analysis, water samples are taken at locations upstream and downstream of the MS4 discharge and kept on ice during transport to the laboratory for processing. Upstream and downstream results are compared to determine if MS4 discharges are contributing to water pollution in receiving waters.

Water quality test results are also compared against published water quality standards. The purposes of these standards are to protect existing uses of all waters of the State of Illinois, maintain above standard water quality, and prevent unnecessary deterioration of waters of the State. A majority of the standards referred to in this report have been established by the Illinois Pollution Control Board (IPCB), and can be found in the Illinois Administrative Code Title 35, Environmental Protection; Subtitle C, Water Pollution; Chapter I, Pollution Control Board; Part 302, Water Quality Standards, or Part 304, Effluent Standards

(http://www.ipcb.state.il.us/SLR/IPCBandIEPAEnvironmentalRegulations-Title35.asp).

The IPCB has not established standards for three of the parameters measured (Total Kjeldahl Nitrogen, Conductivity, and Potassium). For purposes of this report, the standards for these parameters have been established as follows:

- Total Kjeldahl Nitrogen As published in Standard Methods for the Examination of Water and Wastewater, a joint publication of the American Public Health Association (APHA), American Water Works Association (AWWA), and the Water Environment Federation (WEF) (<u>http://www.standardmethods.org/</u>).
- Conductivity As published in Volunteer Stream Monitoring: A Methods Manual, November 1997 by the United States Environmental Protection Agency, Office of Water (http://water.epa.gov/type/rsl/monitoring/upload/2002_08_13_volunteer_stream_stream.pdf)
- Potassium No acceptable limit for potassium has been established by the IPCB or other regulatory agency. For purposes of this report, the limit for potassium is identified as 20.0 mg/L.

The following table describes each parameter tested and the implications that can be drawn from the results:

Parameter	Description	Standards/Accepted Limits	Source
Ammonia	The source of most ammonia in water bodies is from sprawl and urban areas, specifically in the form of road run-off, lawn pesticides and human wastes. Fish and other aquatic life forms contribute to the production of ammonia in streams by producing waste.	15.0 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>General Use Water</i> <i>Quality Standards</i>
Biochemical Oxygen Demand (BOD)	Represents the amount of oxygen consumed by microorganisms in decomposing organic matter within stream water. The greater the BOD reading, the more rapidly oxygen has been depleted from the water system causing there to be less available DO for aquatic life.	< 8.0 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 304, Section 120: <i>Deoxygenating</i> <i>Wastes</i>
Chloride	May enter a water system from rocks, agricultural run-off, industrial wastewater, oil well wastes, wastewater treatment plant effluents, and road salts. Chloride in large quantities has negative impacts on aquatic life.	500.0 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart C: <i>Public and Food Processing Water</i> <i>Supply Standards</i>
Conductivity	The measure of the waters ability to pass an electrical current. This is affected by inorganic dissolved solids that carry either a negative or positive charge. When outside of the normal range the water may not be able to support certain fish or macroinvertebrate species.	50-1500 µS/cm	Volunteer Stream Monitoring: A Methods Manual
Dissolved Oxygen (DO)	DO is the amount of oxygen present in the water and it is necessary for fish respiration. Low DO levels will not support aquatic life and can lead to fish kills.	Mar – July: > 5 mg/L Aug – Feb: > 3.5 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>General Use Water</i> <i>Quality Standards</i>
Fecal Coliform	Bacteria found in the digestive systems of warm blooded organisms. It does not pose a health threat but can lead serve as an indicator for bacteria that cause illnesses in both humans and aquatic life.	200 CFU per 100 mL	IPCB Title 35, Subtitle C, Chapter 1, Part 304, Subpart B: <i>Temporary Effluent</i> <i>Standards</i>
Fluoride	Often added to drinking water for dental health but high concentrations are associated with toxicity in aquatic organisms. Fluoride is naturally occurring and often comes from manufacturing emissions and agricultural runoff.	1.4 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart D: Secondary Contact and Indigenous Aquatic Life Standards

Parameter	Description	Standards/Accepted Limits	Source
Oil & Grease	Sources of oil and grease include used fuel, motor oil, hydraulic fluids, and cooking oil. Most oil and grease is insoluble in water. Low levels of pollution can reduce aquatic organisms' ability to reproduce and survive. Toxicity varies among different types. Refined oils are generally more toxic than crude oils.	15 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>Temporary Effluent</i> <i>Standards</i>
Temperature	Changes in temperature affect the rates of biological & chemical processes, oxygen content of the water, rate of photosynthesis by aquatic plants, metabolic rates of aquatic organisms and the sensitivity of organisms to toxic wastes, parasites & diseases. If temperatures are outside of the desired range for long periods of time organisms become stressed and die.	Dec - Mar: 60° Max Apr - Nov: 90° Max	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>General Use Water</i> <i>Quality Standards</i>
Total Dissolved Solids	Consists of inorganic salts, small amounts of organic matter, dissolved materials in the water, and inorganic anions. Agricultural and urban runoff and industrial and wastewater treatment discharges increase the TDS levels.	1000 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302 Water Quality Standards Section 302.304
Total Kjeldahl Nitrogen (TKN)	TKN is the sum of organic nitrogen, ammonia (NH ₃ ⁺), and ammonium (NH4 ⁺) of soil, water or wastewater. Various compounds of nitrogen are found in storm water runoff from fertilizers, animal wastes, and plant decay. Once nitrite is broken down to nitrate, if it is in excess it will cause extreme algal growth ultimately lowering the DO levels.	< 20.0 mg/L	Standard Methods for the Examination of Water and Wastewater
Total Phosphorus	A key element in animal and plant growth. Rainfall causes varying amounts of phosphorus and phosphates to wash away from farm soils and certain pesticides into waterways in the form of runoff. Excess phosphates can cause eutrophication which is an excessive amount of algae growth that is consuming large amounts of oxygen.	0.05 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>General Use Water</i> <i>Quality Standards</i>

Parameter	Description	Standards/Accepted Limits	Source
Total Suspended Solids (TSS)	Both organic and inorganic solid materials that have low density and are too small to settle such as silt, plankton, mud, and industrial wastes. As TSS increases the transparency of the water and DO levels decrease making it hard for some forms of life to exist.	15.0 – 30.0 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 304, Section 124: <i>Additional</i> <i>Contaminants</i>
рН	A good indicator of liquid wastes coming from industries. Though it is not conclusive by itself, it can help identify problem areas.	6.5-9.0	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart B: <i>General Use Water</i> <i>Quality Standards</i>
Phenolics	Phenolics are a common group of chemicals found in foods, plants, medicines, cleaning products, industrial products & byproducts. Phenolics in storm water can indicate the presence of an illicit discharge.	0.100 mg/L	IPCB Title 35, Subtitle C, Chapter 1, Part 302, Subpart D: Secondary Contact and Indigenous Aquatic Life Standards
Potassium	Potassium is a primary component of the most commonly used fertilizer (potassium nitrate) and is abundant in animal waste. Potassium is found at relatively high concentrations in sewage, and in extremely high concentrations in many industrial process waters. Consequently, potassium can serve as a useful indicator for industrial wastes.	20.0 mg/L	None

Section 3

Testing Locations

In the Village of Barrington Hills, three (3) sites were selected for testing:

1. SCBH1Q (Spring Creek South)

The test site is located at the point where Spring Creek passes underneath Dundee Road, just east of Healy Road. In this report, the site is considered the upstream location for Spring Creek.

2. SCBH2Q (Spring Creek Middle)

This site is located where Spring Creek passes underneath Lake Cook Road/County Line Road after flowing through Spring Lake and Mud Lake. In this report, the site is in between the upstream and downstream locations for Flint Creek.

3. SCBH3Q (Spring Creek North)

The test site is located on the east side of Spring Creek at the southeast corner of Braeburn and Algonquin Roads in Barrington Hills. The samples were taken on the south side of Algonquin Road. In this report, the site is considered downstream of for Spring Creek

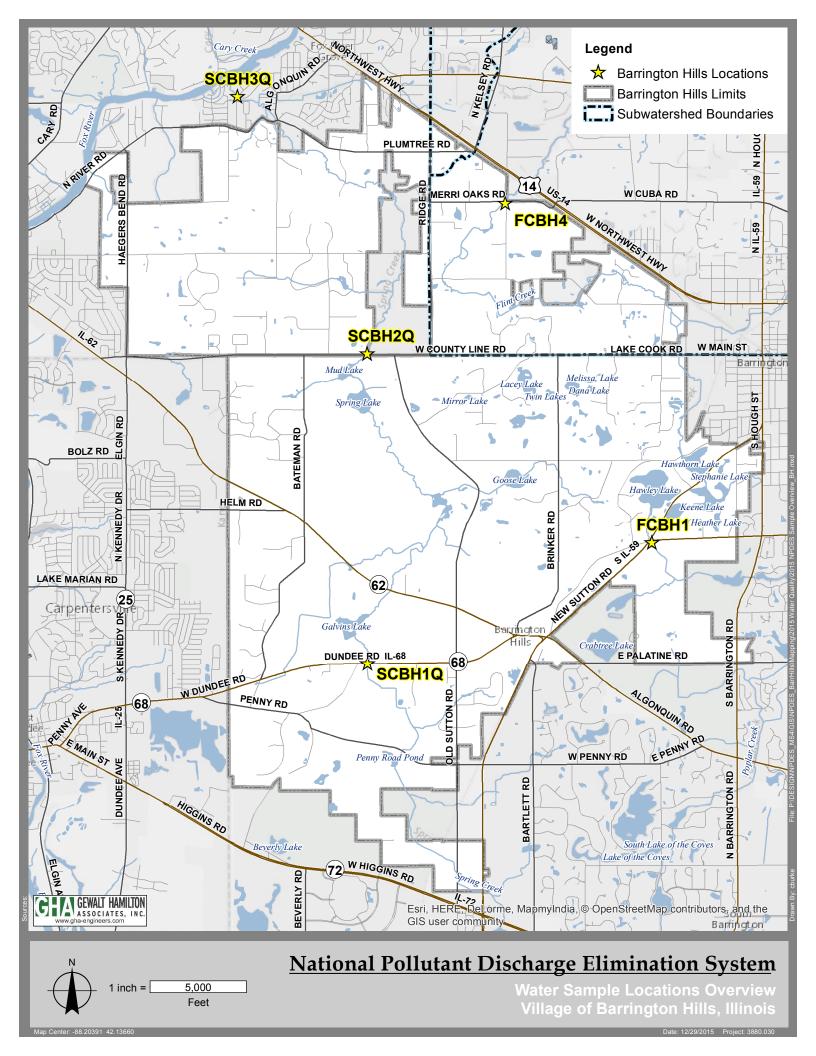
4. FCBH1 (Flint Creek South)

The test site is located on the east side of Flint Creek at the southeast corner of Dundee Road and Illinois Route 59 in Barrington Hills. The samples were taken on the south side of Dundee Road. In this report, the site is considered an upstream location for Flint Creek.

5. FCBH4 (Flint Creek North)

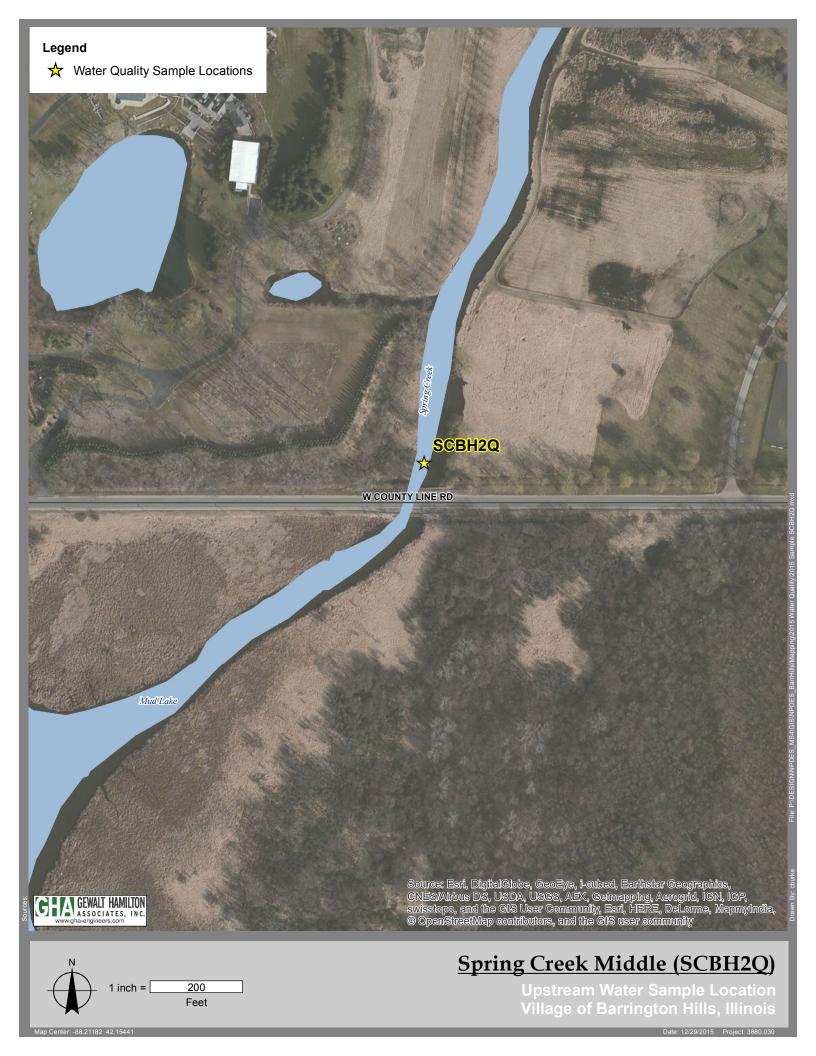
The test site is located on the west side of Flint Creek, north of Merri-Oaks Lane in Barrington Hills. The samples were taken on the west side of West Cuba Road. In this report, the site is considered a downstream location for Flint Creek.

Maps showing the approximate locations of the sample site are included on the following pages.





1 inch = 200 Feet Upstream Water Sample Location Village of Barrington Hills, Illinois





1 inch =

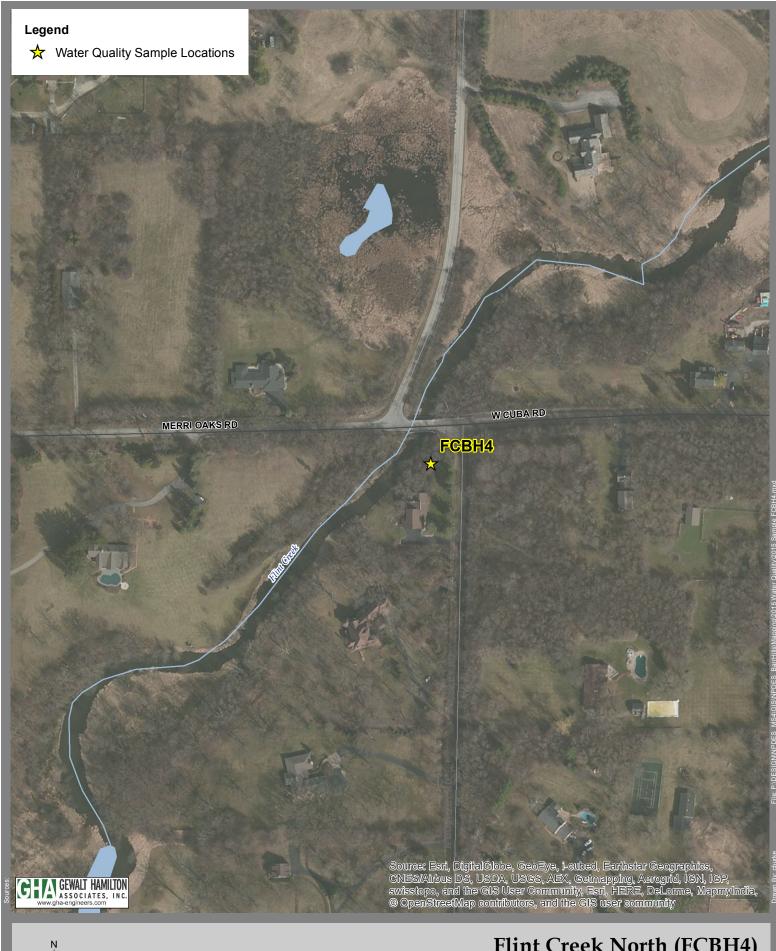
200

Feet

Spring Creek North (SCBH3Q)

Downstream Water Sample Location Village of Barrington Hills, Illinois







Flint Creek North (FCBH4)

Section 4

Results and Recommendations

TEST RESULTS

Test results were reviewed to detect changes between upstream and downstream sampling points and also against generally accepted standards. The results of the water quality testing indicate that the majority of parameters were within the Water Quality Standards (WQS) limit for the Village of Barrington Hills. A summary table of all results is located in the Appendix.

Testing Site	Location	Parameter	Accepted Limits	Test Results	Within Range
Spring Creek Middle (SCBH2Q)	Upstream	Dissolved Oxygen	> 3.5 ppm	0.46	Ν
		Fecal Coliform	200 CFU/100 mL	517.2	Ν
Flint Creek South (FCBH1)	Upstream	Conductivity	50-1500 µS/cm	1610.0	Ν
		Dissolved Oxygen	> 3.5 ppm	0.53	Ν
		Fecal Coliform	200 CFU/100 mL	325.5	Ν
Flint Creek North (FCBH4)	Downstream	Total Dissolved Solids	1000 ppm	1100.0	Ν
		Total Phosphorus	0.05 mg/L	0.19	Ν
		Total Suspended Solids	15-30 mg/L	33.0	Ν
		Conductivity	50-1500 µS/cm	1780.0	Ν

The following table summarizes only the parameters which were outside of the accepted limits:

*This analysis is in no way intended to identify violations of the IPCB Standards.

The results listed in **bold** present a greater concern (due to significantly high levels), and therefore are prioritized in our recommendations to the Village. See pages 5-7 above for further description of the tested parameters.

RECOMMENDATIONS

Fecal coliform levels are relatively high at the Flint Creek South site. Fecal coliform does not pose a threat to humans unless ingested. However, high levels could indicate a problem with local sewage treatment plants or pipes that carry the water. The results suggest that the fecal coliform levels decrease between the upstream and downstream sites, which may indicate that the source is upstream of the Flint Creek South site. Since this is the first year the Village has tested for fecal coliform, these results will provide a baseline against which we can compare next year's results. If next year's results do not indicate an improvement in water quality, we would recommend additional testing to locate the potential source.

Regarding dissolved oxygen, the low levels are most likely attributable to the low flow at those sites, as noted on the field data sheets.

At the request of the Village, we will coordinate any additional recommended testing to either confirm the levels of or track the source of the various pollutants.

BEST MANAGEMENT PRACTICES

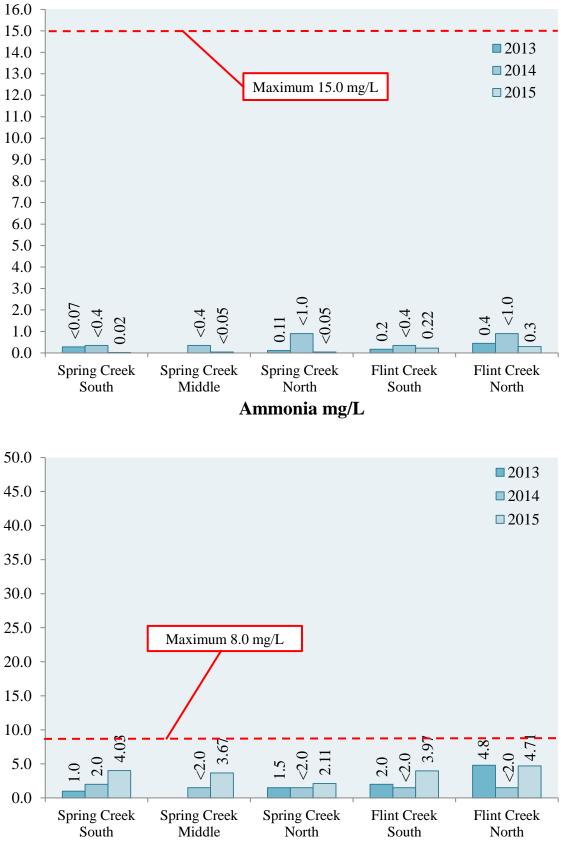
The Village of Barrington Hills can work with upstream communities and users to find solutions and reductions in pollution sources. Incorporating Best Management Practices (BMPs) such as the use of bioswales, rain gardens, filter strips, green infrastructure, reduction of de-icing salts and snow plowing, using grey water for irrigation, native

landscapes, watering restrictions, and enforcing septic regulations should be considered. We recommend using stormwater BMPs as outlined in the Village's Draft Stormwater Management Plan (SWMP) in order to reduce adverse effects of stormwater runoff on the Village's water quality.

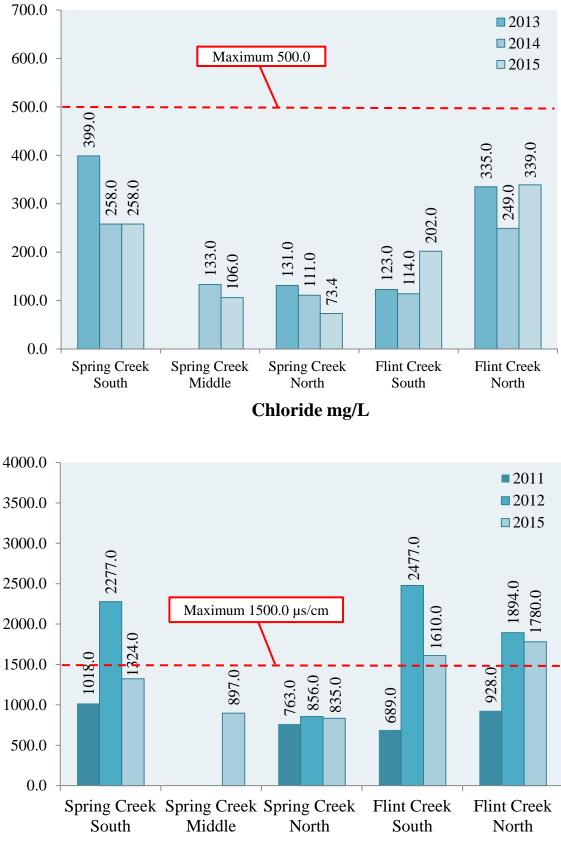
Additional educational materials to increase public awareness of pollution sources and ways to reduce these are critical to cooperative reduction in pollutants into the environment. Understanding sources of pollutants including pet waste, detergents and cleansers, fertilizers and pesticides will help residents, commercial and industry make informed choices. Supplying ideas on ways to reduce these problems and enforcing them will assist in long term reductions. For residents, these include using native landscape plantings, composting, rain barrels, reducing fertilizers and lawn watering, and reducing de-icing materials. For commercial, office and industrial, reducing de-icing salts or use of alternative materials, native landscaping, reducing or eliminating irrigation, using grey water, incorporating bioswales, rain gardens, filter strips, encouraging carpooling are ways to reduce pollutants.

The Village should continue to compare test results each year to determine if the BMPs performed by the Village are improving water quality in the receiving waters within the Village of Barrington Hills.

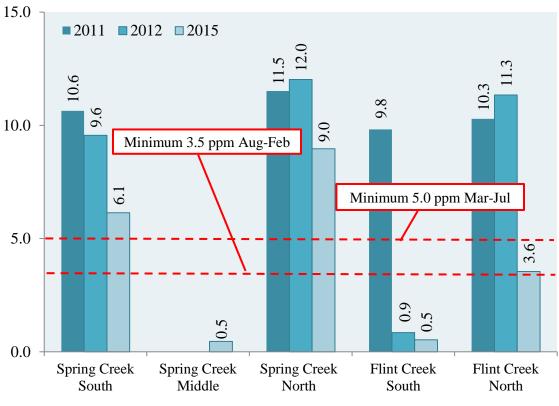
Graphs for each parameter are included on the following pages, which compare results from year to year.



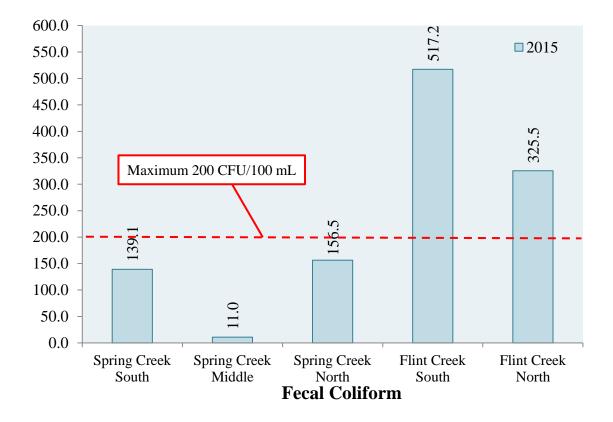
Biochemical Oxygen Demand mg/L

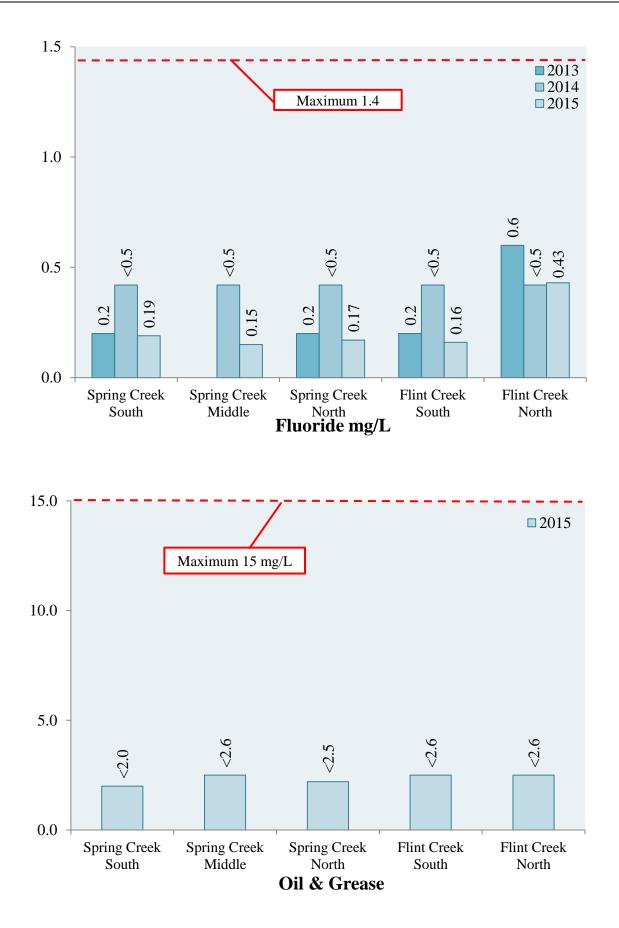


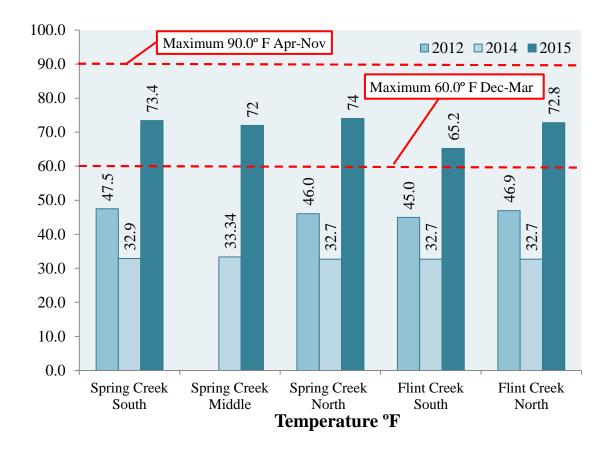
Conductivity µs/cm

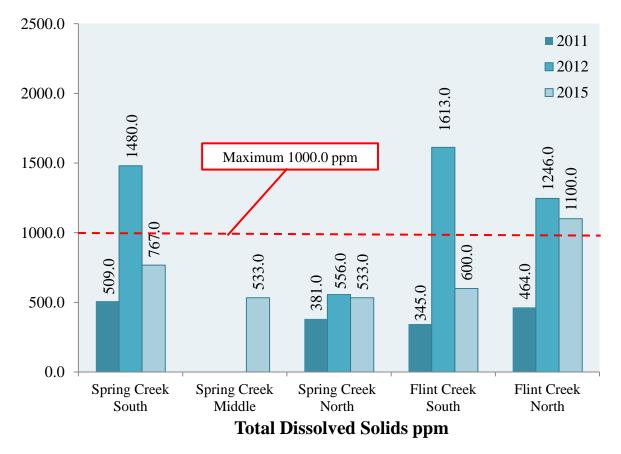


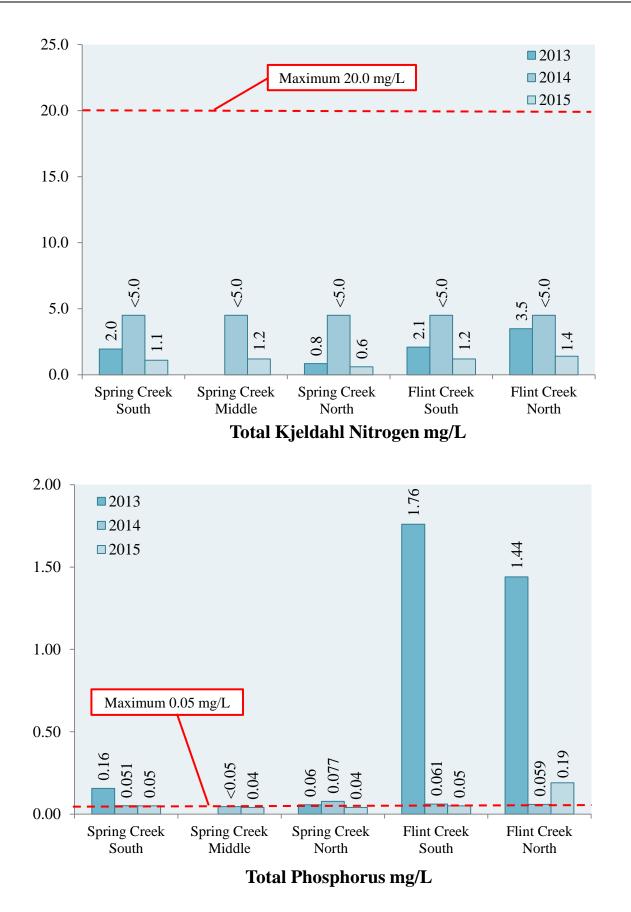
Dissolved Oxygen ppm

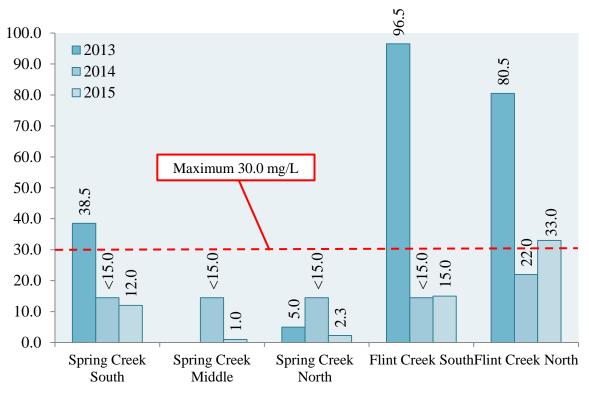




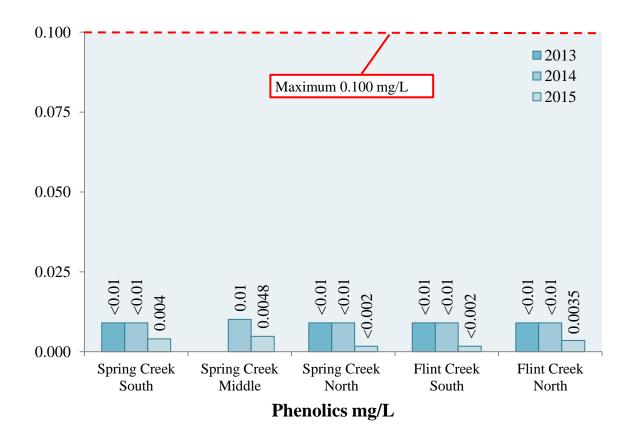


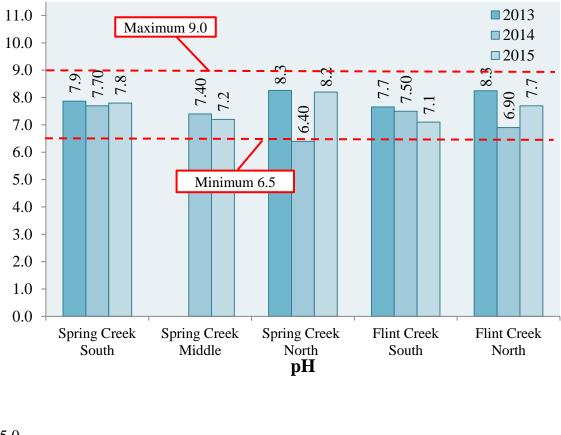


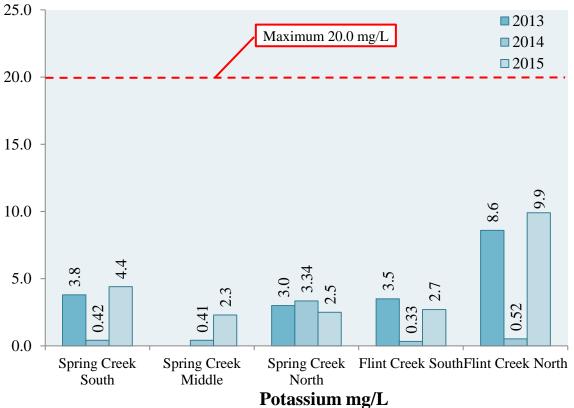




Total Suspended Solids mg/L







Section 5 Appendix

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	Illinois Water Pollution Control Board WQS* Limits in mg/L		Spring Creek South (SCBH1Q)	Spring Creek Middle (SCBH2Q)	Spring Creek North (SCBH3Q)	Flint Creek South (FCBH1)	Flint Creek North (FCBH4)
Date Tested: 8/14/15	: 8/14/15						
Lab Analyses							
Ammonia	302.212	15.0	0.02	<0.05	<0.05	0.22	0.30
BOD	304 Effluent Standards	<8.0	4.03	3.67	2.11	3.97	4.71
Chloride	302.304	500.0	258.0	106.0	73.4	202.0	339.0
Fecal Coliform	302.209	200 CFU/100mL	139.1	11.0	156.5	517.2	325.5
Fluoride	302.407	1.4	0.19	0.15	0.17	0.16	0.43
Oil & Grease	302.407	15 mg/L	<2.4	<2.6	<2.5	<2.6	<2.6
Total Dissolved Solids	302.304	1000.0 ppm	767.0	533.0	533.0	600.0	1100.0
Total Kjedahl Nitrogen	Standard Methods for the Examination of Water and Wastewater	<20.0	1.1	1.2	0.6	1.2	1.4
Phosphorous, Total	302.205	0.05	0.05	0.04	0.04	0.05	0.19
Total Suspended Solids	304 Effluent Standards	15-30.0	12.0	1.0	2.3	15.0	33.0
Phenolics	302.407	0.100	0.004	0.0048	<0.002	<0.002	0.0035
Potassium	None	20.0	4.4	2.3	2.5	2.7	9.9
Field Analyses							
Conductivity	USEPA Volunteer Stream Monitoring Manual	50.0-1500.0 μS/cm	1324.0	897.0	835.0	1610.0	1780.0
Dissolved Oxygen	302.206	March - July at least 5.0 ppm Aug -Feb at least 3.5 ppm	6.14	0.46	8.97	0.53	3.55
Temperature °F	302.211	Dec - Mar 60° F Max Apr - Nov 90° F Max	73.4	72.0	74.0	65.2	72.8
рН	302.204	6.5 - 9.0	7.8	7.2	8.2	7.1	7.7

Village of Barrington Hills Water Quality Results 2015

*Title 35 Part 302 Water Quality Standards unless otherwise noted.

Client ID	Result	Result Qualifier	Unit of Measure	Parameter Name	RDL
FCBH1	2419.60	Roount Quannor	100ml	Colilert (Quanti-Tray) Enumeration	2.2
FCBH1	517.20		100ml	Colilert (Quanti-Tray) Enumeration	2.2
FCBH1	0.16		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
FCBH1	8.87		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
FCBH1	202.00		mg/L	Chloride by Lachat 10-117-07-1-A	10.0
FCBH1	0.08		mg/L	Ortho-P by SM4500P,B,F	0.010
FCBH1	240.00		mg/L	Alkalinity by SM 2320B	4.0
FCBH1	0.05		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.010
FCBH1	3.97		mg/L	BOD by SM5210B, 2001	2.0
FCBH1	15.00		mg/L	TSS by SM2540D,1997	2.0
FCBH1	600.00		mg/L	TDS by SM2540C	20.0
FCBH1	0.22		mg/L	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
FCBH1	0.16		mg/L	Total-P by SM4500P-F, 1999	0.010
FCBH1	<2.6	U	mg/L	Oil & Grease - total	6.0
FCBH1	79		mg/L	Calcium	0.050
FCBH1	1.5		mg/L	Iron	0.010
FCBH1	2.7		mg/L	Potassium	0.50
FCBH1	36 87		mg/L	Magnesium	0.050
FCBH1 FCBH1	0.22		mg/L	Sodium	0.50
			mg/L	Aluminum Barium	
FCBH1 FCBH1	0.049	J	mg/L mg/L	Cadmium	0.0010
FCBH1	0.00084	J	mg/L mg/L	Cadmium	0.0010
FCBH1	1.3	5	mg/L	Manganese	0.0030
FCBH1	0.00096	J	mg/L	Lead	0.0010
FCBH1	0.0098	5	mg/L	Zinc	0.0010
FCBH1	0.035		mg/L	Nitrate/Nitrite-N	0.000
FCBH1	<0.0020	U	mg/L	Phenolics	0.0050
FCBH1	1.2	•	mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
FCBH1	35		mg/L	COD	6.0
FCBH4	2419.60		100ml	Colilert (Quanti-Tray) Enumeration	2.2
FCBH4	325.50		100ml	Colilert (Quanti-Tray) Enumeration	2.2
FCBH4	0.43		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
FCBH4	86.30		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
FCBH4	339.00		mg/L	Chloride by Lachat 10-117-07-1-A	10.0
FCBH4	0.43		mg/L	Ortho-P by SM4500P,B,F	0.010
FCBH4	290.00		mg/L	Alkalinity by SM 2320B	4.0
FCBH4	0.19		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.010
FCBH4	4.71		mg/L	BOD by SM5210B, 2001	2.0
FCBH4	33.00		mg/L	TSS by SM2540D,1997	2.0
FCBH4	1100.00		mg/L	TDS by SM2540C	20.0
FCBH4	0.30		mg/L	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
FCBH4	0.48		mg/L	Total-P by SM4500P-F, 1999	0.020
FCBH4	<2.6	U	mg/L	Oil & Grease - total	6.0
FCBH4	100		mg/L	Calcium	0.050
FCBH4	1.0		mg/L	Iron	0.010
FCBH4	9.9		mg/L	Potassium	0.50
FCBH4	53		mg/L	Magnesium	0.050
FCBH4 FCBH4	210 0.59		mg/L mg/L	Sodium Aluminum	0.50
FCBH4	0.063		mg/L	Barium	0.0010
FCBH4	0.003	J	mg/L	Cadmium	0.0010
FCBH4	0.00014		mg/L	Copper	0.0030
FCBH4	0.16		mg/L	Manganese	0.0010
FCBH4	0.0029		mg/L	Lead	0.0010
FCBH4	0.025		mg/L	Zinc	0.0060
FCBH4	2.8	1	mg/L	Nitrate/Nitrite-N	0.10
FCBH4	0.0035	J	mg/L	Phenolics	0.0050
FCBH4	1.4		mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
FCBH4	28		mg/L	COD	6.0
SCBH1Q	139.10		100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH1Q	2419.60		100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH1Q	0.19		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
SCBH1Q	60.49		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
SCBH1Q	258.00		mg/L	Chloride by Lachat 10-117-07-1-A	10.0
SCBH1Q	0.01		mg/L	Ortho-P by SM4500P,B,F	0.010
SCBH1Q	202.00		mg/L	Alkalinity by SM 2320B	4.0
SCBH1Q	0.02		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.010
SCBH1Q SCBH1Q	4.03		mg/L	BOD by SM5210B, 2001 TSS by SM2540D,1997	2.0 2.0
	110.00	1	mg/L		

SCBH1Q	0.02		ma/l	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
SCBH1Q SCBH1Q	767.00		mg/L mg/L	TDS by SM2540C	20.0
SCBH1Q	0.05		mg/L	Total-P by SM4500P-F, 1999	0.010
SCBH1Q	<2.4	U	mg/L	Oil & Grease - total	5.6
SCBH1Q	75	0	mg/L	Calcium	0.050
SCBH1Q	0.33		mg/L	Iron	0.000
SCBH1Q	4.4		mg/L	Potassium	0.50
SCBH1Q	34		mg/L	Magnesium	0.050
SCBH1Q	150		mg/L	Sodium	0.50
SCBH1Q	0.18		mg/L	Aluminum	0.010
SCBH1Q	0.072		mg/L	Barium	0.0010
SCBH1Q	0.000054	.1	mg/L	Cadmium	0.0010
SCBH1Q	0.0029	J	mg/L	Copper	0.0030
SCBH1Q	0.085	5	mg/L	Manganese	0.0010
SCBH1Q	0.00041	J	mg/L	Lead	0.0010
SCBH1Q	0.0059	J	mg/L	Zinc	0.0060
SCBH1Q	0.057	0	mg/L	Nitrate/Nitrite-N	0.020
SCBH1Q	0.0040	J	mg/L	Phenolics	0.0050
SCBH1Q	1.1		mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
SCBH1Q	31	Q2	mg/L	COD	6.0
SCBH2Q	11.00	~_	100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH2Q	2419.60		100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH2Q	0.15		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
SCBH2Q	35.47		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
SCBH2Q	106.00		mg/L	Chloride by Lachat 10-117-07-1-A	10.0
SCBH2Q	0.01		mg/L	Ortho-P by SM4500P,B,F	0.010
SCBH2Q	236.00		mg/L	Alkalinity by SM 2320B	4.0
SCBH2Q	0.04		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.010
SCBH2Q	3.67		mg/L	BOD by SM5210B, 2001	2.0
SCBH2Q	1.00		mg/L	TSS by SM2540D,1997	2.0
SCBH2Q	-0.03		mg/L	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
SCBH2Q	533.00		mg/L	TDS by SM2540C	20.0
SCBH2Q	0.05		mg/L	Total-P by SM4500P-F, 1999	0.010
SCBH2Q	<2.6	U	mg/L	Oil & Grease - total	6.0
SCBH2Q	75	0	mg/L	Calcium	0.050
SCBH2Q	0.072		mg/L	Iron	0.000
SCBH2Q	2.3		mg/L	Potassium	0.50
SCBH2Q	37		mg/L	Magnesium	0.050
SCBH2Q	67		mg/L	Sodium	0.50
SCBH2Q	0.077		mg/L	Aluminum	0.010
SCBH2Q	0.056		mg/L	Barium	0.0010
SCBH2Q	<0.000053	U	mg/L	Cadmium	0.0010
SCBH2Q	0.0012	J	mg/L	Copper	0.0030
SCBH2Q	0.23	0	mg/L	Manganese	0.0010
SCBH2Q	0.00016	J	mg/L	Lead	0.0010
SCBH2Q	0.0062	0	mg/L	Zinc	0.0060
SCBH2Q	0.071		mg/L	Nitrate/Nitrite-N	0.020
SCBH2Q	0.0048	J	mg/L	Phenolics	0.0050
SCBH2Q	1.2	U	mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
SCBH2Q	33		mg/L	COD	6.0
FCBH4 DUP	2419.60		100ml	Colilert (Quanti-Tray) Enumeration	2.2
FCBH4 DUP	365.40		100ml	Collect (Quanti-Tray) Enumeration	2.2
FCBH4 DUP	0.43		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
FCBH4 DUP	82.02		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
FCBH4 DUP	343.00		mg/L	Chloride by Lachat 10-117-07-1-A	10.0
FCBH4 DUP	0.43		mg/L	Ortho-P by SM4500P,B,F	0.010
FCBH4 DUP	286.00		mg/L	Alkalinity by SM 2320B	4.0
FCBH4 DUP	0.38		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.020
FCBH4 DUP	4.29		mg/L	BOD by SM5210B, 2001	2.0
FCBH4 DUP	28.00		mg/L	TSS by SM2540D,1997	2.0
FCBH4 DUP	0.29		mg/L	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
FCBH4 DUP	1067.00		mg/L	TDS by SM2540C	20.0
FCBH4 DUP	0.50		mg/L	Total-P by SM2540C	0.020
FCBH4 DUP	<2.6	U	mg/L	Oil & Grease - total	6.1
FCBH4 DUP	< <u>2.6</u> 100	5	mg/L	Calcium	0.050
FCBH4 DUP	0.82	-	mg/L mg/L	Iron	0.050
FCBH4 DUP	9.7		mg/L	Potassium	0.50
FCBH4 DUP	9.7 52	-	mg/L mg/L	Magnesium	0.50
FCBH4 DUP	210		mg/L	Sodium	0.50
FCBH4 DUP			mg/L mg/L	Aluminum	0.50
FCBH4 DUP	0.45		mg/L	Barium	0.0010

FCBH4 DUP	0.000086	J	mg/L	Cadmium	0.0010
FCBH4 DUP	0.0072		mg/L	Copper	0.0030
FCBH4 DUP	0.15		mg/L	Manganese	0.0010
FCBH4 DUP	0.0021		mg/L	Lead	0.0010
FCBH4 DUP	0.016		mg/L	Zinc	0.0060
FCBH4 DUP	2.7		mg/L	Nitrate/Nitrite-N	0.040
FCBH4 DUP	<0.0020	U	mg/L	Phenolics	0.0050
FCBH4 DUP	1.6		mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
FCBH4 DUP	15		mg/L	COD	6.0

Client ID	Result	Result Qualifier	Unit of Measure	Parameter Name	RDL
SCBH3Q	156.50		100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH3Q	2419.60		100ml	Colilert (Quanti-Tray) Enumeration	2.2
SCBH3Q	37.61		mg/L	Sulfate by EPA 300.0 Rev. 2.1	1.75
SCBH3Q	0.17		mg/L	Fluoride by EPA 300.0 Rev. 2.1	0.35
SCBH3Q	73.40		mg/L	Chloride by Lachat 10-117-07-1-A	1.00
SCBH3Q	0.03		mg/L	Ortho-P by SM4500P,B,F	0.010
SCBH3Q	0.04		mg/L	Total-P, Dissolved by SM4500P-F, 1999	0.010
SCBH3Q	282.00		mg/L	Alkalinity by SM 2320B	4.0
SCBH3Q	2.11		mg/L	BOD by SM5210B, 2001	2.0
SCBH3Q	-0.03		mg/L	Nitrogen Ammonia by SM4500NH3,G -1997	0.05
SCBH3Q	2.30		mg/L	TSS by SM2540D,1997	2.0
SCBH3Q	533.00		mg/L	TDS by SM2540C	20.0
SCBH3Q	0.04		mg/L	Total-P by SM4500P-F, 1999	0.010
SCBH3Q	<2.5	U	mg/L	Oil & Grease - total	5.8
SCBH3Q	76		mg/L	Calcium	0.20
SCBH3Q	0.25		mg/L	Iron	0.010
SCBH3Q	2.5		mg/L	Potassium	0.50
SCBH3Q	41		mg/L	Magnesium	0.10
SCBH3Q	41		mg/L	Sodium	1.5
SCBH3Q	0.033		mg/L	Aluminum	0.010
SCBH3Q	0.067		mg/L	Barium	0.0010
SCBH3Q	< 0.00005	3U	mg/L	Cadmium	0.0010
SCBH3Q	0.0015	J	mg/L	Copper	0.0030
SCBH3Q	0.017		mg/L	Manganese	0.0010
SCBH3Q	0.00013	J	mg/L	Lead	0.0010
SCBH3Q	0.0035	J	mg/L	Zinc	0.0060
SCBH3Q	0.29		mg/L	Nitrate/Nitrite-N	0.020
SCBH3Q	<0.0020	U	mg/L	Phenolics	0.0050
SCBH3Q	0.64	J	mg/L	Total Kjeldahl Nitrogen (TKN)	1.0
SCBH3Q	7.9		mg/L	COD	6.0

ILM Field Data Sheet

Date: 8/13 8/14 & 8/17/15

Flint and Spring Creeks

Weather: 8/13 Sunny 85°, west wind 10+ mph /(8/14) It. showers, no runoff, cloudy, then sunny, 90+ degrees, light wind, (8/17) 85° & humid, calm, sunny

#	Site ID	Time	Temp°c	Cond (mS/cm)	DO	рН	ORP	Discharge cfs	Comments
	1 FCNB1	8:50	18.44	1.500	6.35	7.60	-133.0	0.24	8/13/15 -Flint Creek North at Clover Hill, Very little flow
	2 FCNB2	10.05	20.67	1.187	6.54	7.30	-127.3	0.04	Dog Bone trib. Pool with no flow at Miller, went downstream to 545 Miller Rd. footbridge above Flint Creek North
		10.000	20107	1.107	0.01	7100	12/10		
3	3 FCNB4	10:40	19.95	1.335	6.93	7.60	-133.5	0.15	Flint Creek North at Rt. 59. Narrow channel., lower level than normal. Tree clearing at Rt. 59 near site.
			a a = a						
	4 FCNB7	11:30	23.76	1.084	4.46	7.24	-123.6	0.51	Honey Lake trib at outlet to Honey Lake on Biltmore Road.
Į.	5 FCLB3Q	12:45	24.23	1.354	7.68	7.96	-136.4	2.99	Flowing into Flint Lake. Collected at downstream side of bridge.
(5 FCLB4Q	1:45	20.95	1.043	6.31	7.30	-119.6	0.43	Behind house. Stream full of sediment over 1 ft thick.
	7 FCLB5Q	2:45	26.33	1.318	9.40	8.07	-147.5	4.02	Downstream side of Kelsey Road bridge near bike trail. Saw 2 deer.
	102030	2.45	20.55	1.510	5.40	0.07	147.5	4.02	
8	з SCBH3Q	4:00	23.32	0.835	8.76	8.16	-139.2	1.52	3 culverts at Lincoln Ave. Collected samples from highest flowleft downstream culvert. Flow from each culvert
9	FCBH4	8:15	22.65	1.780	3.55	7.70	-121.9	2.90	8/14/15 - Flint Creek at Merryoaks Rd. upstream side of bridge
10	SCBH2Q	9:09	22.20	0.897	0.46	7.16	-73.1	2.17	Spring Creek at County Line Rd. Very little flow, downstream side of bridge. Duckweed and pondweeds present
1:	1 SCBH1Q	9:58	23.01	1.324	6.14	7.79	-129.9	1.31	Spring Creek on north side of bridge at Rt. 68 (downstream). Mudflats in middle.

ILM Field Data Sheet

Date: 8/13 8/14 & 8/17/15

Flint and Spring Creeks

Weather: 8/13 Sunny 85°, west wind 10+ mph /(8/14) It. showers, no runoff, cloudy, then sunny, 90+ degrees, light wind, (8/17) 85° & humid, calm, sunny

#	Site ID	Time	Temp°c	Cond (mS/cm)	DO	рН	ORP	Discharge cfs	Comments
								0	
12	SCSB2	10:46	21.74	1.057	2.42	7.00	-92.5	0.01	Spring Creek branch on east side of Rt. 59, upstream. Very tiny flow. Choked with reed canary grass.
13	SCSB1	11:35	23.72	1.220	7.57	7.83	-134.1	2 00	Spring Creek north of Regency on Rt. 59. Flowing well, possibly from upstream pond.
13	50301	11.55	23.72	1.220	7.37	7.65	-154.1	5.00	Spring Creek north of Regency on Rt. 55. Flowing weil, possibly from upstream pond.
14	FCBH1	11:57	18.47	1.610	0.53	7.07	-73.4	0.05	Flint Creek at Rts. 68 & 59. Stagnant. Access is 10' below road.
15	FCB1	12.:46	22.23	2.640	2.40	7.17	-103.3	0.02	Flint Creek branch at Makray golf course. No flow. Cattails, bluegreen algae, water level very low
16	FCB3T	1:33	20.62	2.310	8.45	7.21	-86.4	7.05	Sewage treatment effluent draining into Flint Creek branch. Collected samples from effluent.
17	FCBH1Q	1:58	28.64	0.870	6.64	7.11	-75.4	0.18	Flint Creek at Lake Cook Rd. Low flow and mud flats on sides.
	56540	2.24	24.54	2.250	0.50	7.24	102.0	4.70	
18	FCB4Q	2:24	21.51	2.260	8.56	7.34	-103.9	1./6	Flint Creek branch at Hart Rd. 3 culverts only left downstream had flow, others contained mudflats.
19	FCB2	9:25	23.25	0.989	1.26	7.11	-87.5	0.12	Flint Creek branch Heavily wooded, sampled downstream side of bridge. Lots of rocks.
20	FCDP5	10:00	25.16	1.176	5.70	7.80	-124.3	0.13	Flint Creek branch off Braemer Lane, culvert under railroad tracks, flowing well.
2.	FCDP1	10:40	20.76	2.030	0.35	7.00	-70.2	0.00	Flint Creek branch off Bobwhite Lane, full of duckweed and cattails. No visible flow. Collected from footbridge.
		10.40	23.70	2.000	0.00		. 0.2	2.00	
22	FCDP2	11:20	19.74	1.310	1.92	7.30	-93.4	0.03	Flint Creek branch west side of Ela Rd. sampled due to debris upstream & multiple culverts. No visible flow.



VBH ZBA 4/18

 Robert Kosin

 Wed, Apr 6, 2016 at 9:05 AM

 To: Pauline Boyle

 Wed, Apr 6, 2016 at 9:05 AM

 Cc: Village Clerk <</td>

 Doc: Village Clerk <</td>

 Coc: Village Clerk <</td>

 Village Clerk <</td>
 <td

Dear Ms. Boyle,

This is to advise you that the ZBA will reconvene it's meeting regarding the application from St. Mark's on Monday April 18th at 7:30PM in the MacArthur Room of the Village Hall.

At the last meeting in February, you expressed certain opinions and concerns regarding septic systems and storm water drainage. In preparation of the upcoming meeting, please provide to the Village Clerk the documents, studies or tests that you referenced in your testimony to the ZBA. Likewise you have advised the Village that the plat of survey of the St. Marks parcel is erroneous and the basis for that opinion should be forward to the Clerk.

Please provide this information by Friday April 15th so it can be distributed for the consideration of the ZBA and made part of the public record for the meeting.

www.barringtonhills-il.gov/archive/zoning/ZBA_Archive.html#2016

You need not concern yourself with copies or the format of the documents as all will be addressed through the office of the Village Clerk. Likewise the records can be delivered during regular business hours or sent by email to the address of the Clerk as copied on this email.

Sincerely,

R. Kosin Director of Administration



Zoning board of appeals - St Marks Church

Pauline Boyle <daydreampauline@yahoo.com>

Fri, Apr 15, 2016 at 3:31 PM

Reply-To: Pauline Boyle <daydreampauline@yahoo.com> To: Bob Kosin <rkosin@barringtonhills-il.gov>, Colleen Konicek <ckonicek@barringtonhills-il.gov>, "dwolfgram@barringtonhills-il.gov" <dwolfgram@barringtonhills-il.gov>, "rchambers@barringtonhills-il.gov" <rchambers@barringtonhills-il.gov>, "jroot@barringtonhills-il.gov" <jroot@barringtonhills-il.gov>, "jgoss@barringtonhills-il.gov" <jgoss@barringtonhills-il.gov>, "dbuettner@barringtonhills-il.gov" <dbuettner@barringtonhills-il.gov>, "phennelly@barringtonhills-il.gov" <phennelly@barringtonhills-il.gov>, Lake County State's Attorney <statesattorney@lakecountvil.gov>

Cc: Pauline Boyle <pauline.boyle@icloud.com>, "clerk@barringtonhills-il.gov" <clerk@barringtonhills-il.gov>

Mr. Kosin,

As of today I have yet to receive a copy of the requested letter from Gewalt Hamilton regarding the St Marks Church permit as discussed at the February Zoning Board of Appeals meeting. I have yet to receive any other materials or emails in your possession Mr. Kosin, which were requested by the zoning board of appeals during the February meeting. I did receive one packet in which the permit issued in 2014 for the rectory septic relocation was added to this special use permit submitted to the zoning board of appeals. I am glad that St. Marks Church is finally taking some positive steps to insure my property no longer is contaminated by fecal matter from their multiple septic systems however I question why it took so long and why the septic relocation was enforced only because of my opposition to the addition to the rectory. Could you please explain? I would very much appreciate you forwarding all materials relevant to this issue that are in your possession so that I may prepare for Monday evenings meeting.

Additionally I am unable to provide at this time, due to an unforeseen emergency, all of my documentation however I promise to provide copies to all members of the zoning board of appeals and the trustee liaison Colleen Konicek Harrigan (minus Steiper who had recused himself of these proceedings) copies of same via email before Sunday afternoon April 17, 2016. I apologize for the inconvenience.

I am also providing below a series of emails between administrator Kosin and myself. Please review and note that at the St. Marks Church property there exists two separate septic systems - one for the church/school and one for the rectory. Both are located on the same parcel which is identified as a 5 acre parcel (?). This is another very important factor and was not discussed during the February meeting. I also have asked repeatedly - without response - the FAR (floor area ratio) of that property. Special use does not negate the FAR to be considered and enforced.

If the continued rhetoric and consensus of the village and Gewalt Hamilton further believes the FAR does not apply (as stated or alluded to by Kosin) - I ask as a long time tax paying resident of this village that this very same exact sentence be put to writing by the village administrator, the village engineer (Gewalt Hamilton) and also the village attorney.

I thank you in advance for the additional time I need to present documentation and look forward to my complete copy of the village and engineers reports as well as the FAR issue.

Regards Pauline Boyle CC clerk@barringtonhills-il.gov clerk@barringtonhills-il.gov dwolfgram@barringtonhills-il.gov BCC statesattorney@lakecountyil.gov Apr 6 at 10:54 AM

Additionally Mr. Kosin - the property located at St. Marks Church has two septic systems - one for the church/school and one for the rectory. After reviewing the septic structure location provided in the packet - it is apparent that the church/school septic system was left off of this document. Can you please provide the missing documentation and amend the septic location map to include the church/school septic system location and size as this should be included. Thank you

To Bob Kosin CC clerk@barringtonhills-il.gov clerk@barringtonhills-il.gov dwolfgram@barringtonhills-il.gov BCC Lake County State's Attorney

Apr 6 at 10:43 AM

Thank you for the reminder and please keep me apprised of any time changes - I was neglected being informed last time and arrived hours earlier than the scheduled meeting not knowing the time had been changed.

At the last meeting when I expressed 'certain opinions' I had not been informed of this hearing let alone provided any documents regarding same. Recently I was provided several documents which NOW include structures that were not listed on previous surveys I have in my possession. I will be happy to provide further documentation before the deadline as requested.

Again I am awaiting the FAR calculation for the property located at St Mark Church. I respectfully request that this calculation include building square footage and also to secretly calculate the square footage of paring lot and driveway.

I have noticed the addition of the septic changes to the rectory - obviously there is already questions arising our of septic and stormwater contamination and run off. Can you explain why this was not addressed and included in the first packet?

Thank you and I look forward to receiving your reply Pauline Boyle

On Apr 6, 2016, at 9:05 AM, Robert Kosin <rkosin@barringtonhills-il.gov> wrote:

Dear Ms. Boyle,

This is to advise you that the ZBA will reconvene it's meeting regarding the application from St. Mark's on Monday April 18th at 7:30PM in the MacArthur Room of the Village Hall.

At the last meeting in February, you expressed certain opinions and concerns regarding septic systems and storm water drainage. In preparation of the upcoming meeting, please provide to the Village Clerk the documents, studies or tests that you referenced in your testimony to the ZBA. Likewise you have advised the Village that the plat of survey of the St. Marks parcel is erroneous and the basis for that opinion should be forward to the Clerk. Please provide this information by Friday April 15th so it can be distributed for the consideration of the ZBA and made part of the public record for the meeting.

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You need not concern yourself with copies or the format of the documents as all will be addressed through the office of the Village Clerk. Likewise the records can be delivered during regular business hours or sent by email to the address of the Clerk as copied on this email.

Sincerely,

R. Kosin

Director of Administration

President Martin J. McLaughlin Trustee Colleen Konicek Hannigan Trustee Fritz Gohl Trustee Michael Harrington Trustee Bryan C. Croll Trustee Michelle Nagy Maison Trustee Brian D. Cecola



112 Algonquin Road Barrington Hills, IL 60010 847.551.3000

> village@vbhil.gov www.vbhil.gov

POSTED NOTICE - ZONING BOARD OF APPEALS

The Zoning Board of Appeals, in acting upon variations, special uses, amendments of the zoning ordinance, or appeals from action taken by the Zoning Enforcement Officer, hears all such cases at a public hearing at which neighboring property owners have a right to be heard.

If the subject to the hearing, as stated below, is of concern to you, you will have an opportunity to fully express your opinions whether for or against. For your guidance, a copy of the Zoning Ordinance is available in the Village Hall and online.

If it is inconvenient for you to appear at the hearing, you may file your opinion by letter or email to clerk@vbhil.gov, giving the street and lot number of the property owned by you and for what it is now used. Please state fully what your position is regarding the subject.

You are, by this posting, notified that the subject stated below will be heard at a public hearing at the Village Hall of Barrington Hills. 112 Algonquin Road, Barrington Hills, Illinois 60010-5199.

Date and Time of Hearing: Monday, April 18, 2016 at 7:30 pm Applicant: Community School District 220 - Countryside Elementary School Address: 205 W. County Line, Barrington Hills, IL Subject: Application for the issuance of a special use to permit an exterior non-illuminated asphalt pavement basketball court and remove and replace the existing non-illuminated monument sign.

> Chairman Dan Wolfgram Zoning Board of Appeals Village of Barrington Hills Publication Date: March 30,2016

> > A HOME RULE COMMUNITY

(A) Purpose: The development and execution of a zoning ordinance is based upon the division of the Village into districts, within which districts the use of land and buildings and the bulk and location of buildings and structures in relation to the land are substantially uniform. It is recognized, however, that there are special uses which, because of their unique characteristics, cannot be properly classified in any particular district or districts without consideration, in each case, of the impact of those uses upon neighboring land and of the public or private need for the particular use at the particular location. Such special uses fall into two (2) categories:

1. Uses publicly operated or traditionally affected with a public interest.

2. Uses entirely private in character but of such an unusual nature that their operation may give rise to unique problems with respect to their impact upon neighboring property or public facilities.

(B) Initiation of Special Use: An application for a special use may be made by the owner of the subject property, or by another person having an interest therein with the written concurrence of the owner thereof, to use said property for one or more of the special uses provided for in this Zoning Title in the zoning district in which the land is situated.

(C) Application for Special Use: An application for a special use shall be filed in writing with the Enforcing Officer. The application shall contain such information as the Zoning Board of Appeals may from time to time, by rule, require. Notice of the time and place of such public hearing shall be published at least once, not less than fifteen (15) days nor more than thirty (30) days before the hearing in a newspaper of general circulation in the Village. The published notice may be supplemented by such additional form of notice as the Board, by rule, may require.

(D) Authorization: For each application for a special use the Zoning Board of Appeals shall report to the Board of Trustees of the Village its findings and recommendations, including the stipulations of additional conditions and guarantees that such conditions will be complied with when they are deemed necessary for the protection of the public interest.

The Board of Trustees may grant or deny any application for a special use; provided, however, that in the event of written protest against any proposed special use, signed and acknowledged by the owners of twenty percent (20%) of the property adjacent to the property proposed for a special use, and filed with the Village Clerk, such special use shall not be granted except by the favorable vote of two-thirds (2/3) of all the members of the Board of Trustees.

(E) Standards: No special use shall be recommended by the Zoning Board of Appeals unless said Board shall find:

1. That the establishment, maintenance or operation of the special use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.

2. That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.

5-10-7: SPECIAL USES:

3. That the establishment of the special use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.

4. That adequate utilities, access roads, drainage and/or other necessary facilities have been or are being provided.

5. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets and roads.

6. That the special use shall in all other respects conform to the applicable regulations of the district in which it is located, except as such regulations may in each instance be modified by the board of trustees pursuant to the recommendation of the zoning board of appeals.

(F) Conditions And Guaranties: Prior to the granting of any special use, the zoning board of appeals may recommend, and the board of trustees shall stipulate, such conditions and restrictions upon the establishment, location, construction, maintenance and operation of the special use as deemed necessary for the protection of the public interest and to secure compliance with the standards and requirements specified in subsection (E) of this section. In all cases in which special uses are granted, the board of trustees shall require such evidence and guaranties as it may deem necessary as proof that the conditions stipulated in connection therewith are being, and will be, complied with.

(G) Effect Of Denial Of A Special Use: No application for a special use which has been denied wholly or in part by the board of trustees shall be resubmitted for a period of one year from the date of said order of denial, except on the grounds of new evidence or proof of changed conditions found to be valid by the zoning board of appeals and the board of trustees.

(H) Revocation: In any case where a special use has not been established within six (6) months after the date of granting thereof, then without further action by the zoning board of appeals or the board of trustees, the special use authorization shall be null and void. The zoning board of appeals may, upon application filed within said six (6) months, and for good cause, extend said time an additional six (6) months.

(I) Special Uses On Historical Sites: An applicant may request as a unique historical use any permitted and/or special use allowed in any zoning district to be allowed in any other zoning district, subject to compliance with the following conditions:

1. Proof that the subject property or the improvements thereon are of historic value or significance and that preservation of the same will be enhanced, maintained or assisted by permitting the unique use as proposed.

2. Proof that permitting the unique use will be of some affirmative benefit, from a land use or preservation standpoint, to the subject property, the surrounding properties and neighborhood, and the village.

5-10-7: SPECIAL USES:

3. The application shall have the burden of presenting clear and convincing proof that the unique use is justified and proper.

PUBLIC HEARING Before the Zoning Board of Appeals,

Village of Barrington Hills Re: 205 W. County Line Road

Notice is hereby given that a Public Hearing will be held on Monday April 18, 2016 at 7:30 p.m. or as soon thereafter as the matter may be heard by the Zoning Board of Appeals of the Village of Barrington Hills in the Ma-cArthur Room of the Village Hall, 112 Algonquin Road, concerning the application for an amendment of a Special Use being an educational institution at 205 W. County Line Road ("Subject Property"), subject to the provisions of Section 5-10-7 of the Zoning Ordinance. The application concerns an amendment of an existing Special Use for Countryside Elementary School as sub-mitted by Community Unit School District 220 to permit the installation of an extenon-illuminated, rior dsphalt pavement basketball court and remove and replace the existing non-illuminated monument sign.

Pursuant to Section 5-5-3 of the Village Code, Special Uses may be allowed subiect to the issuance of a Special Use Permit or an amendment thereof. An apan plication for the amendment for the basketball court and signage has been filed to address the provisions of Section 5-10-7 of the Zoning Ordinance containing there in the legal description of the Subject Property generally at the Southwest corner of Brinker and County Line Roads being approximately 15.2 acres and having the common postal address of 205 W. County Line Road [REIN 01-03-100-005 and 01-03-100-011].

A copy of the application to amend the Special Use is available for examination at the office of the Village Clerk at Barrington Hills Village Hall during the customary hours of operation. All interested parties are invited to attend the Public Hearing and will be given an opportunity to be heard. Daniel Wolfgram, Chair-

man Zoning Board of Appeals Village of Barrington Hills

Published in Daily Herald March 30, 2016 (4436523)

CERTIFICATE OF PUBLICATION Paddock Publications, Inc. Daily Herald

Corporation organized and existing under and by virtue of the laws of the State of Illinois, DOES HEREBY CERTIFY that it is the publisher of the DAILY HERALD. That said DAILY HERALD is a secular newspaper and has been circulated daily in the Village(s) of Algonquin, Antioch, Arlington Heights, Aurora, Barrington, Barrington Hills, Lake Barrington, North Barrington, South Barrington, Bartlett, Batavia, Buffalo Grove, Burlington, Campton Hills. Carpentersville, Cary, Deer Park, Des Plaines, South Elgin, East Dundee, Elburn, Elgin, Elk Grove Village, Fox Lake, Fox River Grove, Geneva, Gilberts, Grayslake, Green Oaks, Gurnee, Hainesville, Hampshire, Hanover Park, Hawthorn Woods, Hoffman Estates, Huntley, Inverness, Island Lake, Kildeer, Lake Villa, Lake in the Hills, Lake Zurich, Libertyville, Lincolnshire, Lindenhurst, Long Grove, Mt. Prospect, Mundelein, Palatine, Prospect Heights, Rolling Meadows, Round Lake, Round Lake Beach, Round Lake Heights, Round Lake park, Schaumburg, Sleepy Hollow, St. Charles, Streamwood, Tower Lakes, Vernon Hills, Volo, Wauconda, Wheeling, West Dundee, Wildwood, Sugar Grove, North Aurora

County(ies) of Cook, Kane, Lake, McHenry

and State of Illinois, continuously for more than one year prior to the date of the first publication of the notice hereinafter referred to and is of general circulation throughout said Village(s), County(ies) and State.

I further certify that the DAILY HERALD is a newspaper as defined in "an Act to revise the law in relation to notices" as amended in 1992 Illinois Compiled Statutes, Chapter 7150, Act 5, Section 1 and 5. That a notice of which the annexed printed slip is a true copy, was published March 30, 2016 in said DAILY HERALD.

IN WITNESS WHEREOF, the undersigned, the said PADDOCK PUBLICATIONS, Inc., has caused this certificate to be signed by, this authorized agent, at Arlington Heights, Illinois.

> Oggyd

PADDOCK PUBLICATIONS, INC. DAILY HERALD NEWSPAPERS

BY Authorized Agent

Control # 4436523

PART SIX CERTIFIED MAIL RECEIPTS / NOTIFICATION SIGN

Section Includes:

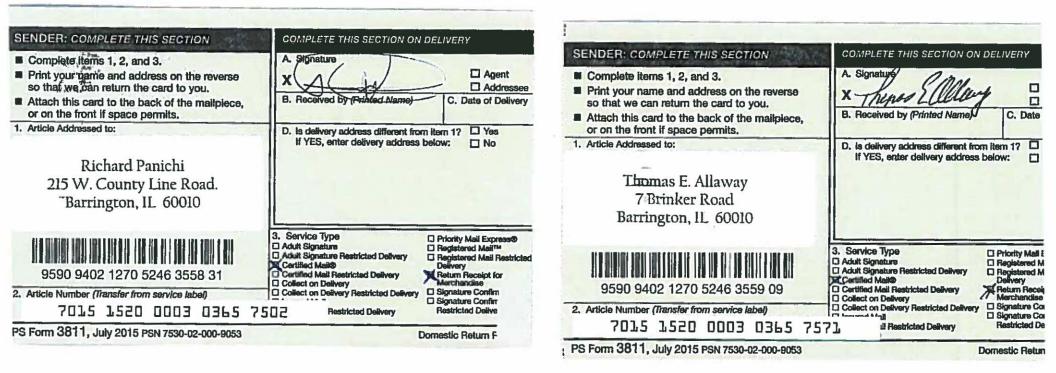
- The District has mailed certified notification letters to the surrounding property owners not more than 30 days and not less than 15 days prior to the Village of Barrington Hills Board meeting. (*Copies of the Certified Mail Receipts are attached.*)
- The District placed a Notification Sign on the subject property on March 31, 2016. (*Photograph of the sign is attached.*)

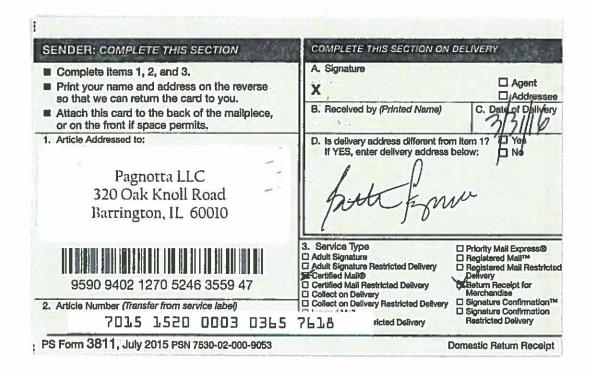
Page 1 of 1





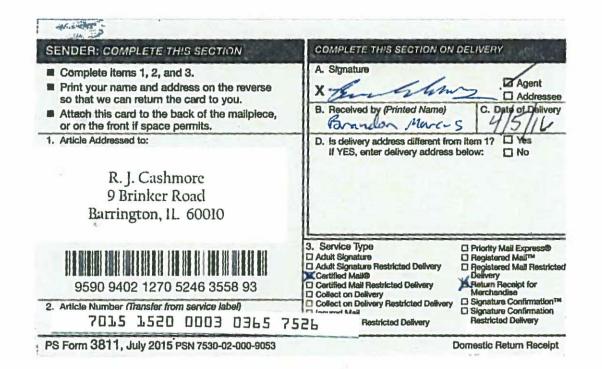






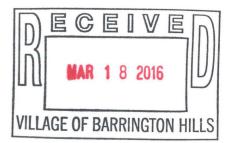
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SENDER: COMPLETE THIS SECTION	A. Signatura	
 Complete items 1, 2, and 3. Print your name and address on the reverse 	X	Agent Addressed
 so that we can return the card to you. Attach this card to the back of the mallpiece, or on the front if space permits. 	B. Received by (Printed Name)	C. Date of Delivery
A later a district and and	D. Is delivery address different from	item 17 Ves
John & Maria Kuechmann 229 W. County Line Road Barrington, 1L 60010	If YES, enter delivery address be	słow: 🔲 No







Petition to Amend Special Use Permit Village of Barrington Hills



Subject Property: Countryside Elementary School 205 W. County Line Road Barrington Hills, Illinois 60010

Submitted By: Community Unit School District 220

310 James Street Barrington, Illinois 60010



Issue Date: March 18, 2016

Prepared By: Barrington Community Unit School District 220 Cashman Stahler Group Gewalt Hamilton Associates, Inc.



March 18, 2016

Village of Barrington Hills 112 Algonquin Road Barrington Hills, Illinois 60010

RE: Petition to Amend Special Use Permit Countryside School 205 West County Line Road Barrington Hills, Illinois

Dear Members of the Zoning Board:

Community Unit School District 220 has prepared this submittal to Amend the Special Use Permit. This submission seeks the Village of Barrington Hills' approval to amend the current Special Use Permit for Countryside School in Barrington Hills, Illinois.

The District is contemplating the following site improvements:

- 1. Construction of a new asphalt pavement basketball court.
- 2. Removal and replacement of the existing monument sign presently located on the property with a new monument sign.

We look forward to working with the Village as we endeavor to improve the existing site to enhance student services.

Sincerely,

Timothy Neubauer Assistant Superintendent for Business Services

TN:jv

Timothy Neubauer Assistant Superintendent for Business Services O: 847.842.3515 Email: tneubauer@barrington220.org Administrative Office | www.barrington220.org | 310 E James Street, Barrington, IL 60010

Table of Contents

- Part 1 Application
- Part 2 List and Map of Surrounding Property Owners
- Property Legal Description / Current Legal Plat of Survey Part 3
- Part 4 Project Summary
- **Project Drawings** Part 5
- Certified Mail Receipts Part 6
- Part 7 Zoning Map

Supplemental Exhibits (Full-Scale Drawings)

Plat of Survey Site Plan - Exiting Conditions Site Plan - Proposed Conditions

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PART ONE APPLICATION

Section Includes:

- Special Use Application Worksheet
- Affidavit of Ownership
- Application Fee (Copy of Payment) (An application fee has been submitted separate from this application. A copy of the payment has been included.)

Page 1 of 1

PART ONE SPECIAL USE APPLICATION WORKSHEET

1. The establishment, maintenance or operation of the special use will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.

The District's continuous presence at the site indicates that the establishment, maintenance, and operation of the present school as a Special Use has not been, nor will it be, detrimental to nor endanger the public health, safety, comfort, morals or general welfare.

The new proposed site improvements, which are similar in character, use and quality to the present site improvements, will not detrimentally impact, or materially alter the existing Special Use that has been established, maintained and in continuous operation on the property.

2. The special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, not substantially diminished and impair property values within the neighborhood.

The purpose of the new asphalt basketball court site improvement is for the enhancement of the present instructional services uses afforded the students. The additional paved play surface is an expansion of present site play surfaces available to the students.

The replacement of the existing site monument sign is for the purposes of upgrading the condition and character of the existing sign to match the District's exterior sign program in place at the other District properties in the surrounding communities.

The site improvements will not be injurious to the use and enjoyment of other property in the immediate vicinity nor substantially diminish or impair property values within the neighborhood.

3. The establishment of the special use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.

The existing school and school property are essential elements of the community and neighborhood. The new site improvements are similar in character to existing site improvements presently on the school property. As such they will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.

4. Adequate utilities, access roads, drainage and/or other necessary facilities have been or are being provided.

All existing utilities (i.e., electrical service, gas service, well and domestic water service, septic field and sanitary service) for the building are adequate and will be unchanged by the proposed improvements.

All existing access roads will be unchanged by the proposed improvements.

The existing storm water management system design for the existing site and building impervious areas will be materially unchanged. The proposed new impervious asphalt surface will have no adverse affects on the surrounding properties and will be in compliance with local governing authority regulations.

5. Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets and roads.

The proposed site improvements will not necessitate the modification of the existing, established vehicular and pedestrian traffic ingress and egress to the property, or traffic circulation patterns or congestion in the public streets and roads surrounding the property.

6. The special use shall in all other respects conform to the applicable regulations of the district in which it is located, except as such regulations may in each instance be modified by the Board of Trustees pursuant to the recommendation of the zoning board of appeals.

The proposed site modifications will conform with all applicable regulations.

Page 2 of 3

Therefore, the Barrington Community Unit School District 220 requests the Village of Barrington Hills amend the Countryside School Special Use and grant the District permission to build a new asphalt basketball court and replace the existing site monument sign.

The undersigned confirms to have read the foregoing application and acknowledges to the best of their knowledge that all information contained within this request to amend the Special Use is true and accurate.

Signature

3/14/16 Date

Mr. Timothy Neubauer Assistant Superintendent for Business Service Barrington Community Unit School District 220 310 James Street Barrington, Illinois 60010

AFFIDAVIT OF OWNERSHIP

COUNTY OF <u>Lake</u>)) SS
STATE OF ILLINOIS)
I, <u>Timothy Neubauer</u> am (Print Nam the sole owner of the proper an owner of the property xx an authorized officer for the	erty
commonly described as	Countryside Elementary School 205 W. County Line Road Barrington Hills, IL 60010
and that such property is owne this date.	ed by <u>Barrington Community Unit</u> as of School District 220 (Signature)
SUBSCRIBED AND SWORN	
14th DAY OF March	AL UGHN E OF ILLINOIS

Z:\DS\DS Coordination\Commissions\ARC Cases\ARC PACKET\ARC - Historic Packet 10-0622\08 Affidavit of Ownership 10-0622.doc



CSG Checkin	q	1
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Countryside School Special Use Permit

CASHMAN STAHLER GROUP

Village of Barrington Hills Legal & Professional Services: Architectur 3/18/2016

200.00

8444

200.00

CSG Checking

AVMENT AVMENT BECORD School Countryside School Special Use Permit

200.00

PART TWO LIST AND MAP OF SURROUNDING PROPERTY OWNERS

Section Includes:

- Surrounding Property Owners Notification Map
- List of Surrounding Property Owners



PART TWO LIST OF SURROUNDING PROPERTY OWNERS

PIN: 1334300008

1 BELLWOOD DR BARRINGTON, IL 60010-2653 Owner: NICHOLAS ISAACSON

PIN: 1334300009 9 STEEPLECHASE RD BARRINGTON HILLS, IL 60010

Mailing Address 567 AUDUBPN BLVD #301 NAPLES, FL 34110 Owner: STELLA F WENNER TRUST

PIN: 1334302005

10 STEEPLECHASE RD BARRINGTON, IL 60010 Owner: STEPHEN V & KIMBERLY A D'AMORE

PIN: 1334301009 11 STEEPLECHASE RD BARRINGTON HILLS, IL 60011-0363 Owner: MICHAEL J MILLER

PIN: 1334300010

27676 W COUNTY LINE RD BARRINGTON HILLS, IL 60010

Mailing Address 11 W COUNTY LINE RD BARRINGTON, IL 60010 Owner: HARLAN MILLER

PIN: 0103100012

215 W COUNTY LINE RD BARRINGTON, IL 60010 Owner: RICHARD PANICHI

PIN: 0103100011

205 W COUNTY LINE RD BARRINGTON, IL 60010 Owner: EXEMPT BARRINGTON SCHOOL DIST. 220

Page 1 of 3

PIN: 0103100005

205 W COUNTY LINE RD BARRINGTON, IL 60010 **Owner: EXEMPT BARRINGTON SCHOOL DISTRICT 220**

PIN: 0103100039

231 W COUNTY LINE RD BARRINGTON HILLS, IL 60010 Owner: NAM S HUH

PIN: 0103100007

229 W COUNTY LINE RD BARRINGTON, IL 60010 **Owner: JOHN & MARIA KUECHMANN**

PIN: 0103100009

6 BRINKER RD BARRINGTON HILLS, IL 60010 Owner: (EXEMPT) PRESBYTERIAN CHURCH OF BARRINGTON

PIN: 1334301009 11 STEEPLECHASE RD BARRINGTON HILLS, IL 60011-0363 **Owner: MICHAEL J MILLER**

PIN: 1334300010

27676 W COUNTY LINE RD BARRINGTON HILLS, IL 60010

Mailing Address 11 W COUNTY LINE RD BARRINGTON, IL 60010 **Owner: HARLAN MILLER**

PIN: 0103101022

409 W COUNTY LINE RD **BARRINGTON HILLS, IL 60010**

Mailing Address 320 OAK KNOLL RD BARRINGTON, IL 60010 **Owner: PAGNOTTA LLC**

Page 2 of 3

PIN: 0103101037

3 BRINKER RD BARRINGTON HILLS, IL 60010 Mailing Address 320 OAK KNOLL RD BARRINGTON, IL 60010 **Owner: PAGNOTTA LLC**

PIN: 0103101036

7 BRINKER RD BARRINGTON, IL 60010 Owner: THOMAS E ALLAWAY

PIN: 0103101035

9 BRINKER RD BARRINGTON, IL 60010 Owner: R J CASHMORE

Page 3 of 3

PART THREE CURRENT PROPERTY LEGAL DESCRIPTION AND PLAT OF SURVEY

Section Includes:

- Current Property Legal Description • (An enlargement version of the Legal Description noted on the Plat of Survey)
- Current Legal Plat of Survey (Reduced Scale) • (A full-size Plat of Survey with the Legal Description for this property has been issued as an attachment to this document.)

Page 1 of 1

PART THREE **CURRENT PROPERTY LEGAL DESCRIPTION**

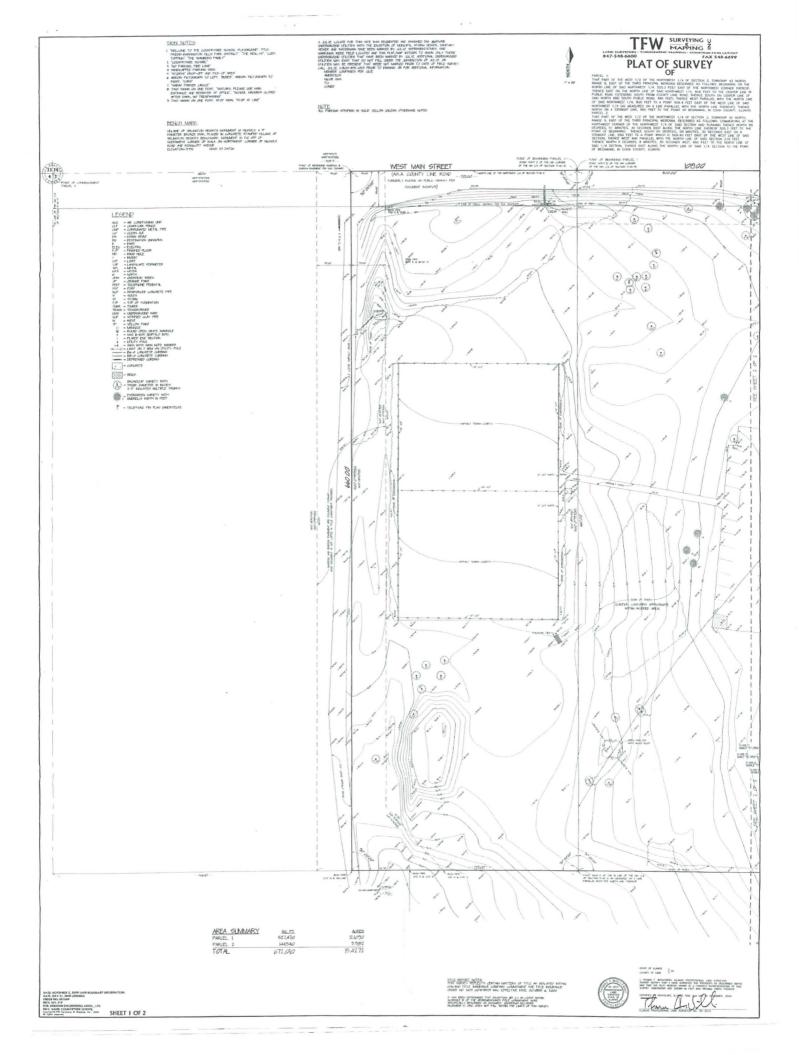
PARCEL 1:

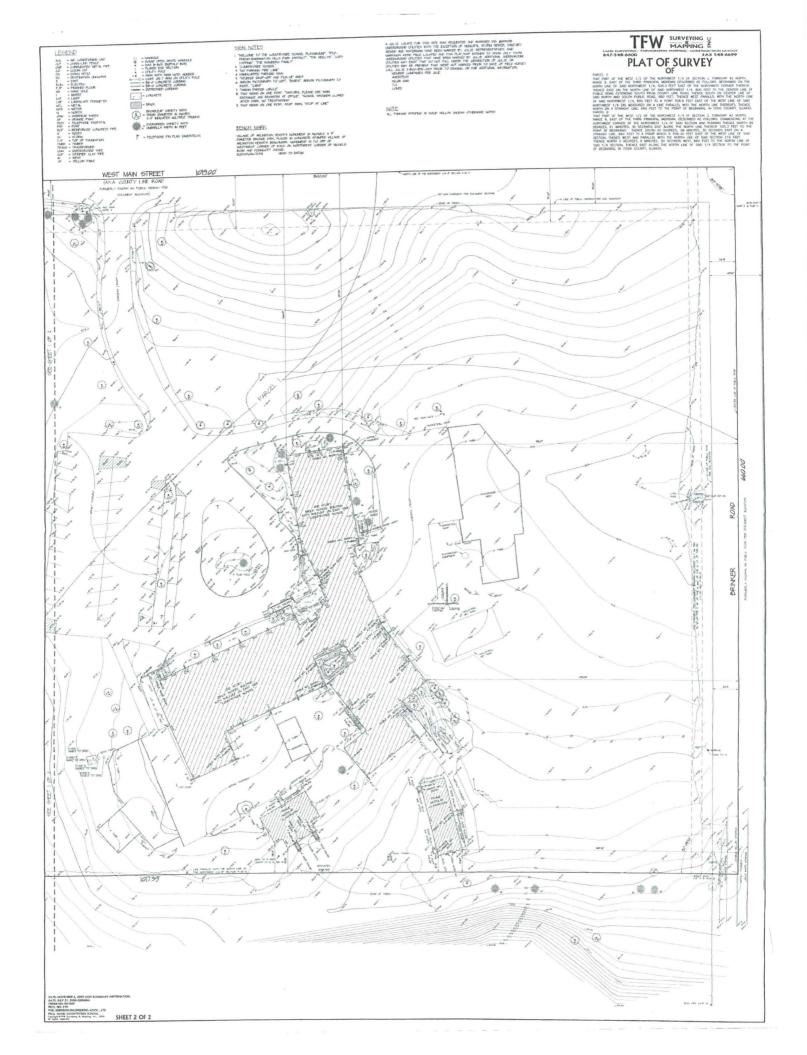
THAT PART OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 42 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: BEGINNING ON THE NORTH LINE OF SAID NORTHWEST 1 /4, 505.3 FEET EAST OF THE NORTHWEST CORNER THEREOF; THENCE EAST ON THE NORTH LINE OF SAID NORTHWEST 1/4, 800 FEET TO THE CENTER LINE OF PUBLIC ROAD EXTENDING SOUTH FROM COUNTY LINE ROAD; THENCE SOUTH ON CENTER LINE OF SAID NORTH AND SOUTH PUBLIC ROAD, 660 FEET; THENCE WEST PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST 1 /4, 800 FEET TO A POINT 506.4 FEET EAST OF THE WEST LINE OF SAID NORTHWEST 1/4 (AS MEASURED ON A LINE PARALLEL WITH THE NORTH LINE THEREOF) ; THENCE NORTH ON A STRAIGHT LINE, 660 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 42 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION AND RUNNING THENCE NORTH 89 DEGREES, 51 MINUTES, 30 SECONDS EAST ALONG THE NORTH LINE THEREOF 505.3 FEET TO THE POINT OF BEGINNING: THENCE SOUTH 00 DEGREES, 08 MINUTES, 30 SECONDS EAST ON A STRAIGHT LINE, 660 FEET TO A POINT WHICH IS 506.40 FEET EAST OF THE WEST LINE OF SAID SECTION; THENCE WEST AND PARALLEL WITH THE NORTH LINE OF SAID SECTION 219 FEET; THENCE NORTH 0 DEGREES. 8 MINUTES, 30 SECONDS WEST, 660 FEET TO THE NORTH LINE OF SAID 1 /4 SECTION; THENCE EAST ALONG THE NORTH LINE OF SAID 1 /4 SECTION TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS:

Page 1 of 1





PART FOUR PROJECT SUMMARY

Basketball Court

The Barrington Community Unit School District 220 is proposing the installation of an exterior asphalt basketball court. The specifics of the new court are as follows:

- Maximum Court Size: Fifty (50) feet by ninety four (94) feet.
- Maximum New Hard Surface: Sixty (60) feet by one hundred four (104) feet.
- The basketball court will be non-illuminated.
- The basketball court will increase the existing impervious site area by 0.14 acres.
- The basketball court storm water will sheet drain to the existing detention basin located on the east side of the property. In accordance with the Village of Barrington Hills storm water management requirements, the proposed increase in the impervious site area does not exceed the threshold required to provide additional storm water detention on the project site.

Exterior Monument Sign

The School District is proposing the replacement of the existing wood and stone monument sign with a new "District standard" monument sign similarly located on property. The specifics of the new sign are as follows:

- The sign will be a non-illuminated, two-sided, fixed monument sign.
- Sign base construction will include, concrete footing/foundation, brick veneer and stone cap masonry monument base.
- Sign cabinet will be an aluminum frame and aluminum face panel cabinet assembly. Sign cabinet finish color will be dark anodized bronze. Lettering and graphics will be black, white and red.
- Lower portion of sign cabinet panel faces will incorporate an attraction display board with manually changeable reflective lettering to post relevant community and school events. Overall area of sign attraction display board is twenty (20) square feet.
- Upper portion of sign cabinet faces will incorporate District and School identification and logo display. Overall area of sign identification and logo display face is twenty-four (24) square feet.

Page 1 of 1

PART FIVE DRAWINGS

Section Includes:

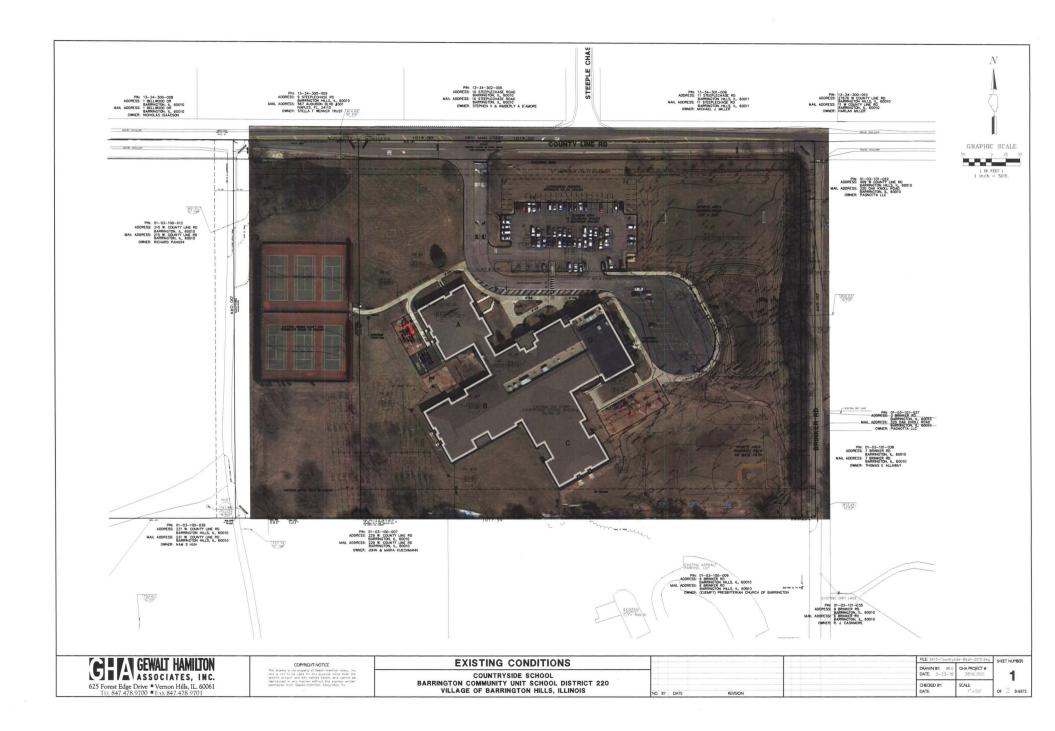
New Basketball Court

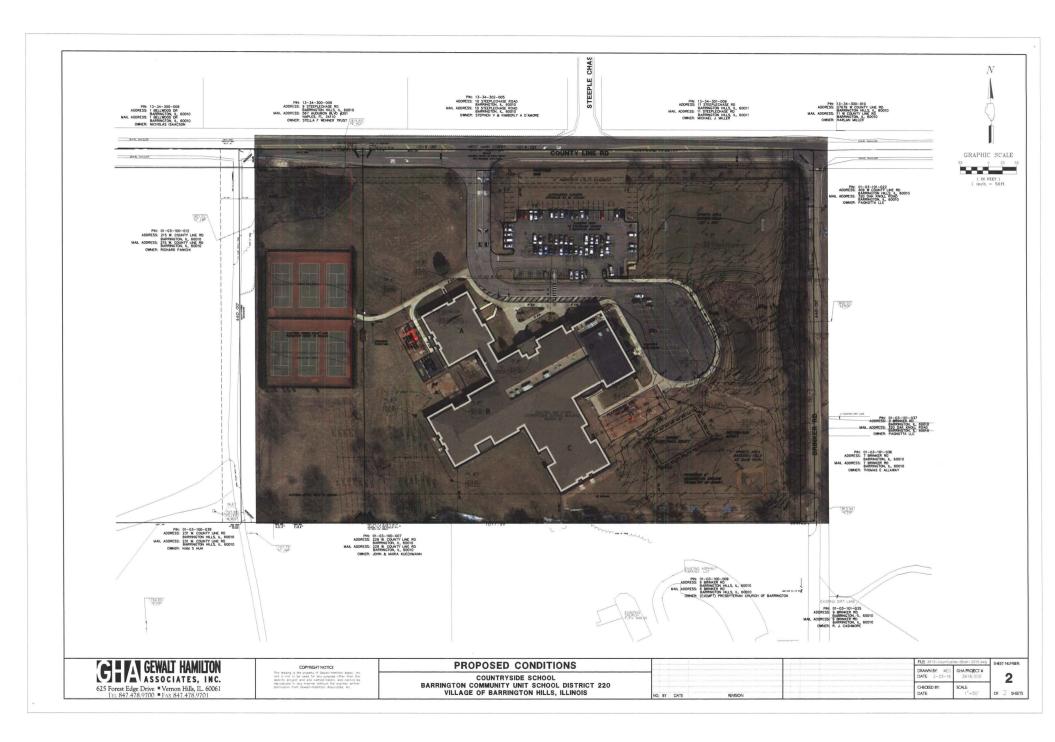
- Existing Conditions Site Plan
- Proposed Conditions Site Plan

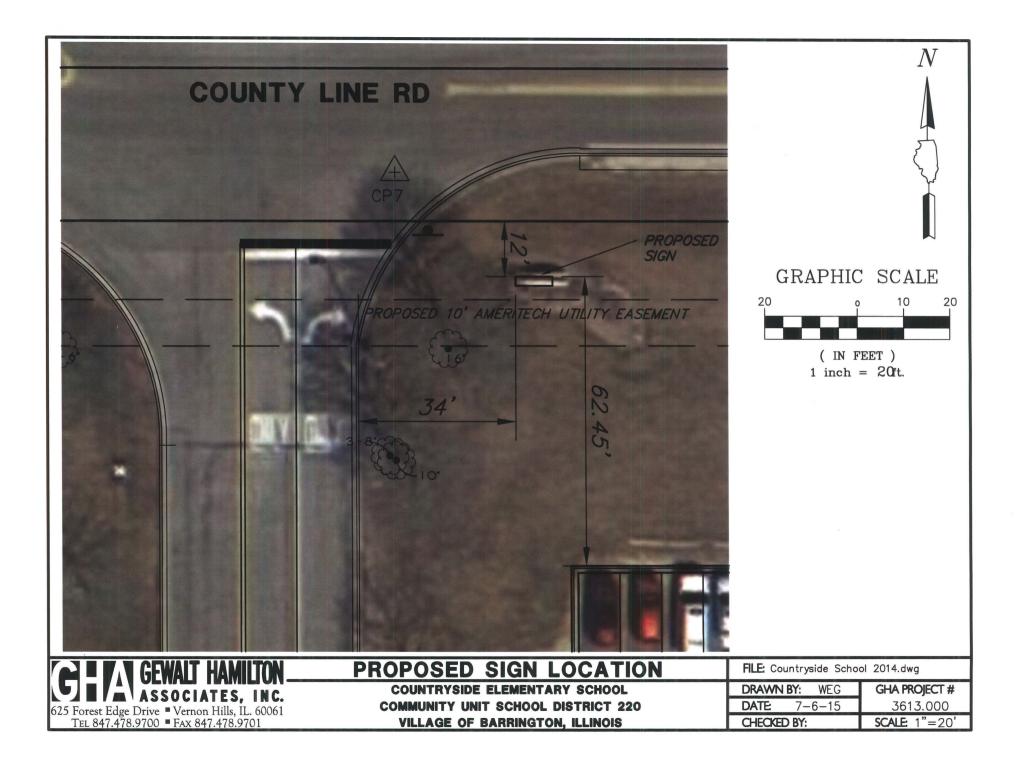
New Monument Sign

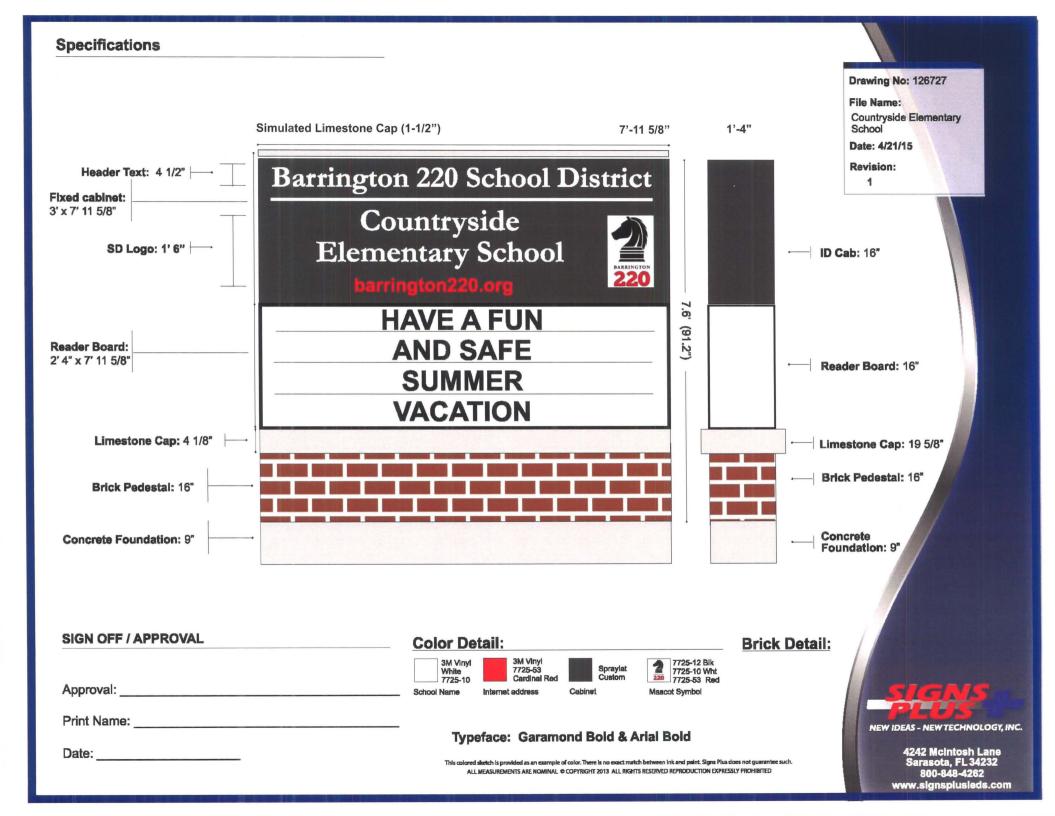
- Proposed Sign Location
- Proposed Sign Elevation
- Proposed Sign Foundation Construction
- Proposed Sign Cabinet Construction
- District Standard Sign Photograph
- Existing Sign Photograph

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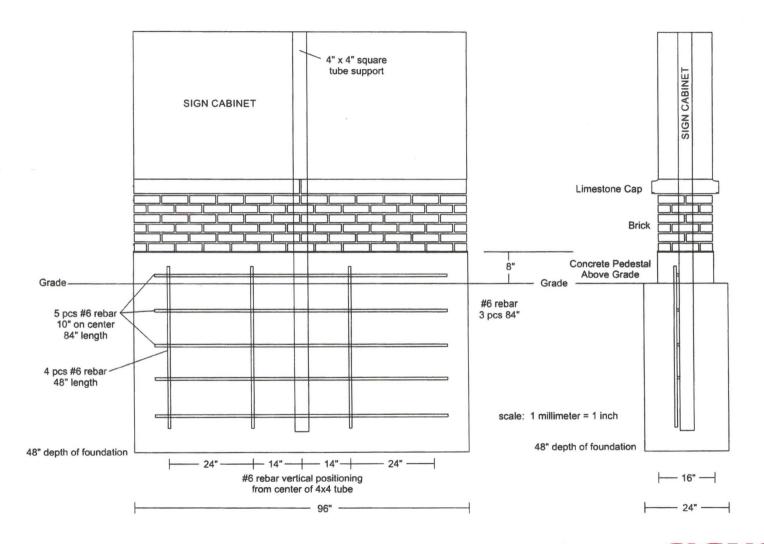




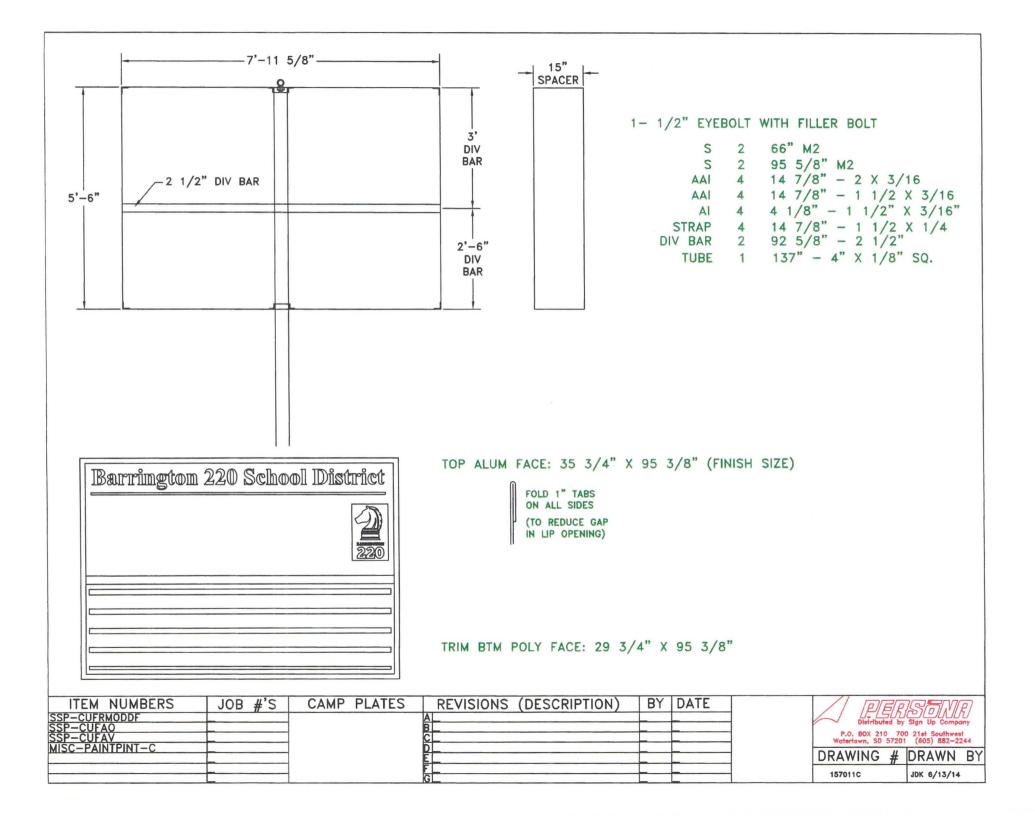




Foundation











Existing Sign to be Removed

PART SIX CERTIFIED MAIL RECEIPTS

Section Includes:

• The District will send certified notification letters to the surrounding property owners not more than 30 days and not less than 15 days prior to the Village of Barrington Hills Board meeting.

(Copies of the Certified Mail Receipts will subsequently be inserted in this section of the submission to the Village of Barrington Hills.)

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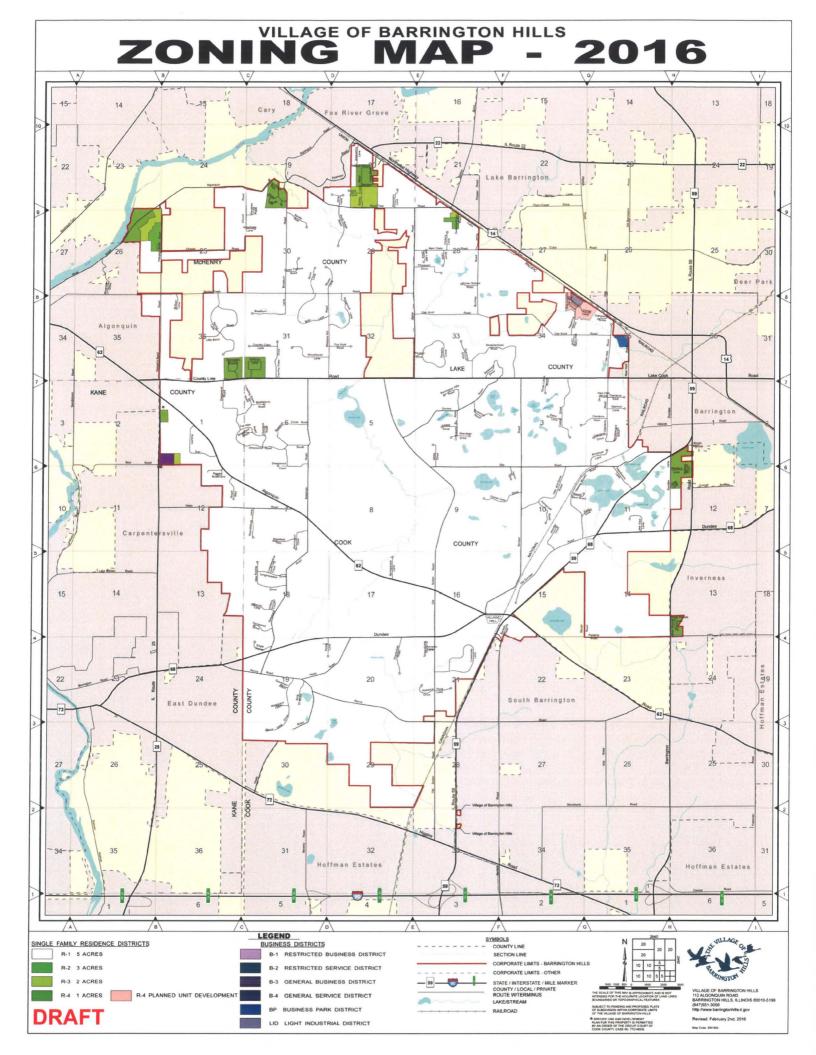
PART SEVEN ZONING MAP

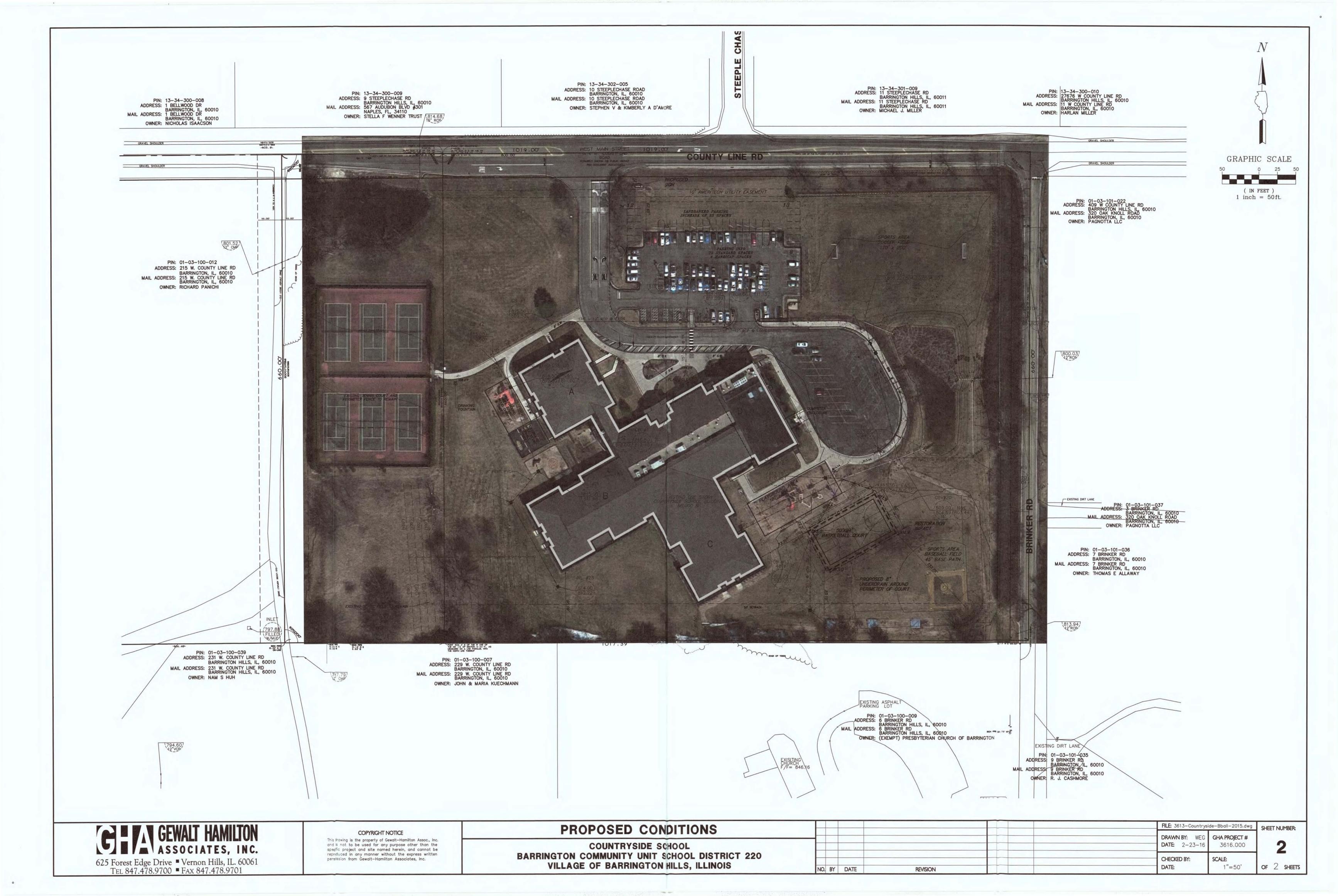
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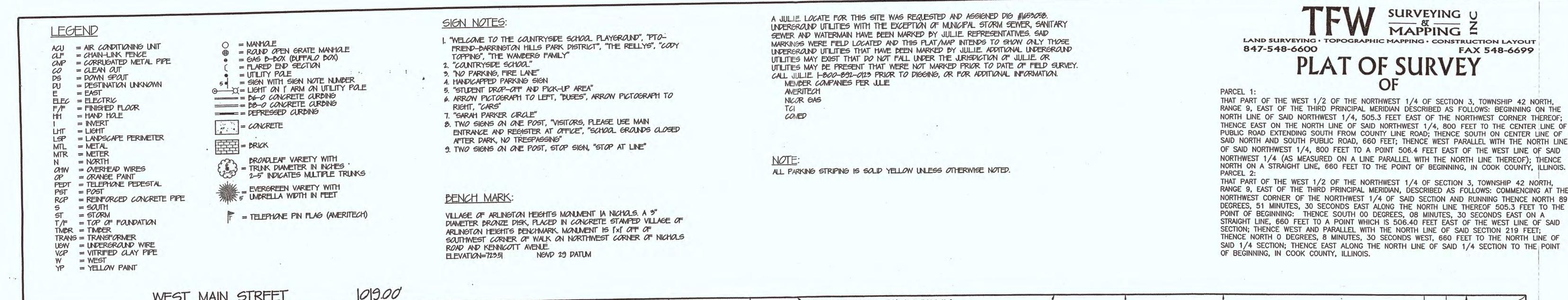
• Village of Barrington Hills Zoning Map

Cashman Stahler Group • Gewalt Hamilton Associates, Inc.

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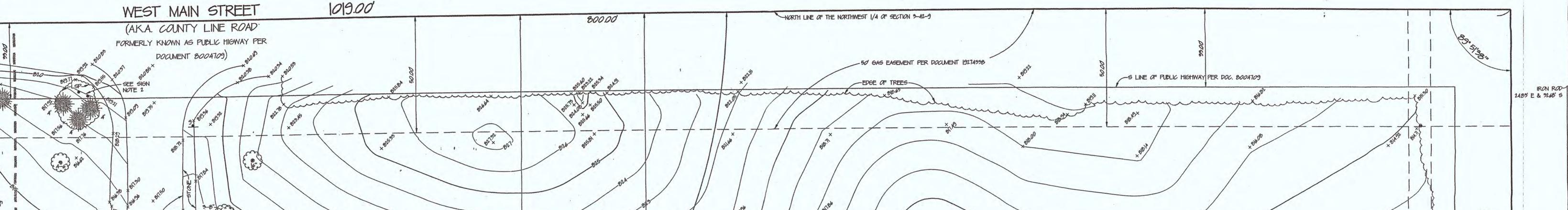




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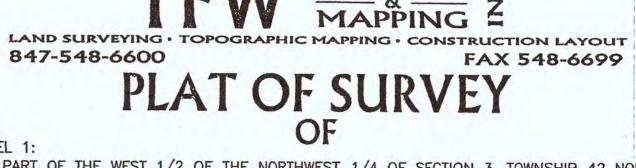
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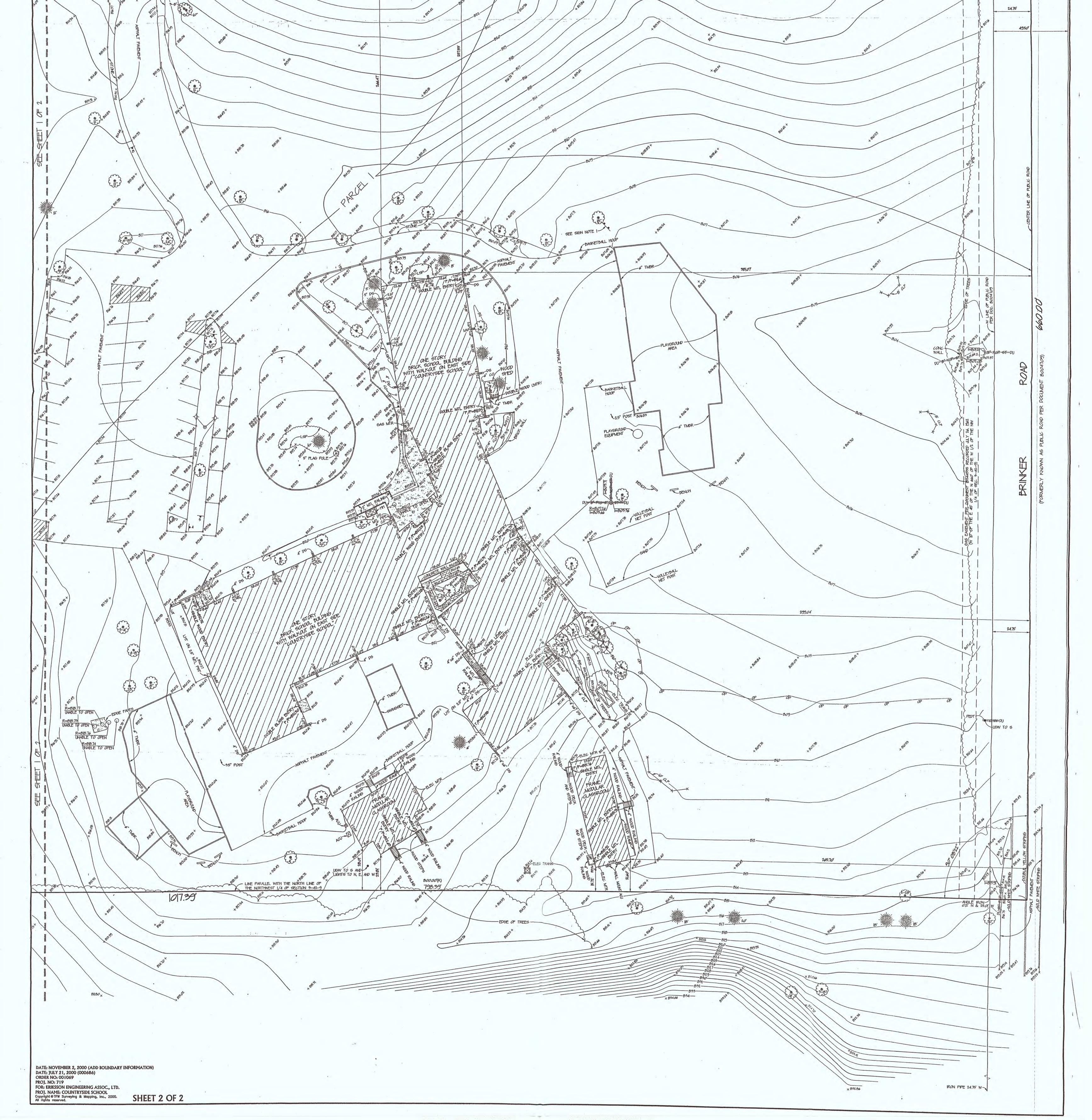


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NORTH ON A STRAIGHT LINE, 660 FEET TO THE POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS. THAT PART OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 42 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION AND RUNNING THENCE NORTH 89

THAT PART OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 42 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: BEGINNING ON THE NORTH LINE OF SAID NORTHWEST 1/4, 505.3 FEET EAST OF THE NORTHWEST CORNER THEREOF; THENCE EAST ON THE NORTH LINE OF SAID NORTHWEST 1/4, 800 FEET TO THE CENTER LINE OF PUBLIC ROAD EXTENDING SOUTH FROM COUNTY LINE ROAD; THENCE SOUTH ON CENTER LINE OF SAID NORTH AND SOUTH PUBLIC ROAD, 660 FEET; THENCE WEST PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST 1/4, 800 FEET TO A POINT 506.4 FEET EAST OF THE WEST LINE OF SAID NORTHWEST 1/4 (AS MEASURED ON A LINE PARALLEL WITH THE NORTH LINE THEREOF); THENCE





Hey and Associates, Inc.

Engineering, Ecology and Landscape Architecture

MILWAUKEE, WISCONSIN

26575 W. Commerce Drive, Suite 601 Volo, Illinois 60073 Phone (847) 740-0888 Fax (847) 740-2888

CHICAGO, ILLINOIS

April 14, 2016

Mr. Robert Kosin Director of Administration Village of Barrington Hills 112 Algonquin Road Barrington Hills, IL 60010

Project No.: 16-0121

Re: Review Services – Countryside School Barrington Hills, Illinois

Dear Mr. Kosin:

Hey and Associates, Inc. (Hey) has reviewed the following

- Stormwater and Traffic Impact Letter prepared by Gewalt Hamilton Associates, Inc. dated March 29, 2016
- Existing Conditions Plans prepared by Gewalt Hamilton Associates, Inc. dated February 23, 2016
- Proposed Sign Location Plan prepared by Gewalt Hamilton Associates, Inc. dated July 16, 2015
- Petition to Amend Special Unit Permit for Countryside Elementary School prepared by Barrington Community Unit School District 220 dated March 18, 2016

Additional information was requested and received from Gewalt Hamilton Associates, Inc. and is referenced below.

Sign Location Plan

We have reviewed the sign location plan with respect to the Illinois Department of Transportation (IDOT) Bureau of Design and Environment Manual, revised March 2016. While we found discrepancies with the distance used for the driver's eye, as well as some discrepancies between drawn and labeled distances on the plan, the location of the sign is not within the clear sight triangle recommended for this driveway design. Therefore, the sign does not pose an impediment to visibility.

Stormwater Detention Approach

We have reviewed the stormwater approach outlined in Gewalt Hamilton Associates, Inc's., as well as the associated plan and the original stormwater plan and report from 2001. The review of

Mr. Robert Kosin 16-0121 April 14, 2016 Page 2

the stormwater management is complicated by the fact that the original improvements were constructed in approximately 2001 under a different ordinance than is now in effect. Our focus is only on stormwater management for the proposed new basketball and not on any other plan or submittal elements. We offer the following comments:

- The project is located in Cook County.
- The site was redeveloped (same land use, but new building and parking) in approximately 2001 and was reviewed and permitted under the Cook County stormwater regulations in effect at the time.
- Our understanding is that County Line Road was improved at a later date, and as part of a separate project, so was not subject to the 2001 stormwater calculations and is thus not considered here.
- The Village adopted the Lake County Watershed Development Ordinance (WDO) for use throughout the Village in 2012.
- The proposal is to add a 4,700 square-foot (sf) basketball court that is tributary to the existing detention basin.
- The permitted 2001 plan accounts for 66,000 sf for the new building and 88,733 sf for parking, walks, etc. In addition, three (3) building additions totaling 11,349 sf were included in the plan, making the total impervious area subject to the 2001 detention calculations 166,082 sf (66,000+88,733+11,349) or 3.81 acres. The total tributary area to the detention is 7.97 acres (47.8% impervious) according to the calculations.
- Of the 166,082 sf of permitted impervious area, the three (3) building additions (11,349 sf) and approximately 9,400 sf of parking totaling 20,749 sf were not constructed. A separate small asphalt playground totaling 1,200 sf was built within the footprint of one of the additions. This yields a net 19,549 sf (11,349+9,400-1,200) of impervious area that was permitted but not constructed.
- Subtracting the proposed 4,700 sf basketball court from the impervious balance of 19,549 sf leaves a balance of 14,849 sf of impervious area that could still be constructed under the original permit.
- There is excess volume of approximately 0.32 acre-feet in the detention pond when comparing the required volume that was permitted in 2001 and the volume that is available based on the Gewalt Hamilton Associates, Inc. *As-Constructed Grading* plan dated December 12, 2002. We note that the high water level of the pond is 808.48 based on the as-constructed grading versus the permitted value of 808.0

It is our opinion, therefore, that no further action is required on the applicant's part relative to stormwater detention other than to maintain an ongoing accounting of total impervious area. If additional impervious area exceeding the remaining balance of 14,489 sf is planned, then the amount of new impervious area that exceeds that balance would be subject to the detention and other relevant portion of the WDO. We note that the value for the unconstructed parking area is approximate only and should be verified if additional impervious area beyond the basketball court is proposed.

Mr. Robert Kosin 16-0121 April 14, 2016 Page 3

We have sought input from the Lake County Stormwater Management Commission on this approach and they have concurred.

Please feel free to contact us should you have any other questions.

Sincerely,

Thomas L. Polzin, P.E., CFM, CPESC

President