



**Roads & Bridges Committee**  
**NOTICE OF MEETING**

Thursday, June 22, 2017 ~ 4:00 pm  
112 Algonquin Road

**AGENDA**

1. Call to Order & Roll Call
2. Public Comments
3. [Vote] [Minutes May 18, 2017](#)
4. Discussion Items
  - 4.1 [Round Barn Drainage Update](#)
  - 4.2 Road Program 2017
  - 4.3 [IL 62 Pavement Markings](#)
  - 4.4 [IDOT- IL 25 Resurfacing Project](#)
  - 4.5 [Roadside Mowing Update](#)
  - 4.6 [2017 Culvert Inventory Report](#)
5. Engineering Firm Presentations & Questions
6. Adjournment

Chairman: Brian Cecola

**NOTICE AS POSTED**



## ROADS & BRIDGES COMMITTEE

### Meeting Minutes

112 Algonquin Road, Barrington Hills

Monday, May 18, 2017 | 4:00 pm

Committee Members Present: Trustee Brian Cecola, Chair  
Trustee Michelle Nagy Maison, Co-Chair  
Robert Kosin, Village Administrator  
Dan Strahan, Village Engineer

Others Present: TJ Podgorski, Cuba Township Highway Commissioner  
Dan Sheldon, Resident

**1. ORGANIZATIONAL:** The meeting of the Village of Barrington Hills Roads & Bridges Committee was called to order by Chairman Cecola at 4:02 PM.

**2. PUBLIC COMMENTS:** Dan Sheldon noted that Hickory Hills Park, adjacent to Autumn Trail and owned by the Dundee Township Park District, would be impacted by the Longmeadow Parkway project. He requested that the Village support the argument that the Village would lose some of the value of the park if land was lost due to the Longmeadow Park project.

**3. APPROVAL OF MINUTES:** The minutes of the Roads & Bridges Committee Meeting of April 20, 2017 were approved as written.

#### **CUBA TOWNSHIP HIGHWAY DEPARTMENT**

TJ Podgorski introduced himself as the newly elected Highway Commissioner for Cuba Township and noted his previous experience at other positions for the Highway Department. Mr. Podgorski noted that the current Inter Governmental Agreement between the Township and the Village of Barrington Hills for snow plowing services has expired and he expressed an interest in renewing for a four-year term. Chairman Cecola noted that he would work with Mr. Kosin to review the terms of the IGA. Mr. Podgorski also noted various other roadway maintenance services the Township could provide that could be included in the IGA. Mr. Kosin noted the timing of the Village's fiscal year and in response to questions from Trustee Maison regarding tree maintenance, reviewed prescriptive easement issues pertaining to tree trimming along Village roadways.

#### **4.1 2017 ROAD PROGRAM – BID REVIEW**

Mr. Strahan provided an overview of the bids received for the 2017 Road Program, noting that seven bids had been received and the low bid was from Lorig Construction in the amount of \$770,881.54. Mr. Strahan noted that this was below the budgeted amount for Road Maintenance Contracts, which was \$960,000. Mr. Strahan noted that two minor additions to the contract had been identified previously, including provision of a driveway apron for a Village owned property on IL Rte. 25, as well as drainage improvements on Hills N' Dales Road. Mr. Strahan noted that if the Village desired to use the full budget amount for resurfacing to take advantage of low bid process, he recommended resurfacing Hickory Lane and a portion of Merri Oaks Road. Chairman Cecola noted that we have been able to catch up on resurfacing over the last couple of years. Mr. Strahan noted that he would update the bid recommendation letter and board summary information for review of the Village Board at the May 23, 2017 meeting. Chairman Cecola noted rumors that a strike may affect work on June 1. Mr. Strahan noted a

similar situation had occurred on a previous Village Road Project several years ago, but noted that he did not anticipate work would begin by June 1.

#### **4.2 IL 25 VILLAGE PROPERTY ACCESS REVIEW**

Mr. Strahan noted that a permit application had been submitted to IDOT to install a minimal driveway apron to the Village property on IL 25. Mr. Kosin noted various public uses occurring and planned to occur within the parcel.

#### **4.3 VILLAGE OF ALGONQUIN – GLENMOOR SUBDIVISION RESURFACING**

Mr. Strahan noted that the Village of Algonquin is resurfacing Glenmoor Subdivision, and a small portion of the work is located within the Haegers Bend right-of-way.

#### **4.4 2017 CULVERT INVENTORY- PROGRESS REPORT**

Mr. Strahan provided an update, noting the Village's shift from hard copy storm sewer/culvert atlas to an interactive GIS application to show culvert locations. Final data analysis of the 227 roadway culverts inventoried within the Village is in progress. Mr. Kosin discussed the Village's history of using RCP culverts for long term durability.

#### **4.5 LONGMEADOW PARKWAY PROJECT UPDATE**

Mr. Kosin reviewed the status of various litigation pertaining to the Longmeadow Parkway corridor project.

**5. ADJOURNMENT:** The meeting was adjourned at 4:57 PM.

## MEMORANDUM

To: Robert Kosin, VBH Director of Administration  
Brain Cecola, VBH Chairman Roads & Bridges

625 Forest Edge Drive, Vernon Hills, IL 60061

TEL 847.478.9700 ■ FAX 847.478.9701

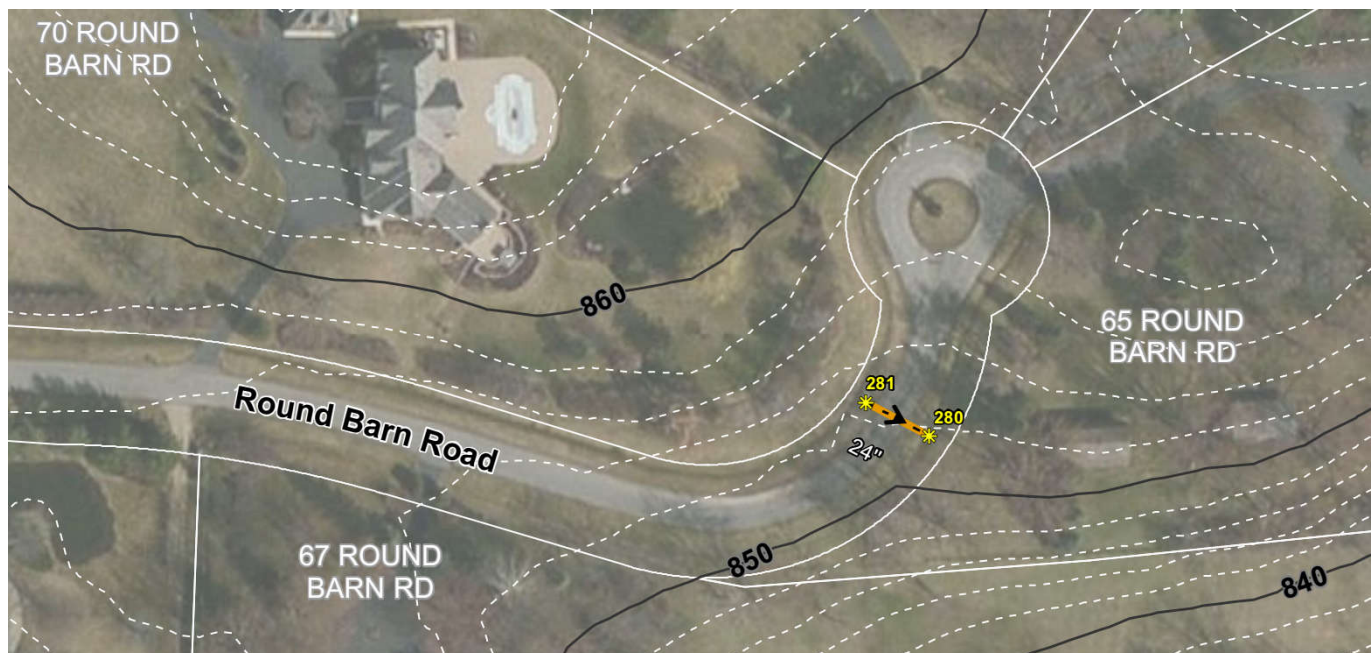
www.gha-engineers.com

From: Daniel J. Strahan, P.E., CFM  
Gewalt Hamilton Associates

Date: June 14, 2017

Re: Round Barn Drainage Review

At the April Roads & Bridges Committee meeting, discussion was held regarding a drainage complaint received from a family member of the property owner at 67 Round Barn Road. In particular, a video had been submitted and was reviewed at the meeting which documented the ditch drainage from the north/west side of Round Barn Road flowing through a 24" RCP culvert from west to east, then flowing within the roadside ditches south before leaving the right-of-way and flowing in a southeasterly direction towards Hawley Lake. Approximately 6.5 acres north of Round Barn drain down to the roadway culvert.



### Site Meeting

On Tuesday, June 6, 2017, Bob Kosin and I met at the site with Melanie Medici, the daughter of the current property owner, to review the existing conditions and her observations of the stormwater conditions. The following items were of note:

- On the north side of Round Barn Road, there is small (~4") plastic drain pipe that outlets into the right-of-way from the property at 70 Round Barn Road. The video provided previously indicated that during storm events a steady flow of water discharges from this pipe into the ditchline.

- The ditch side slopes adjacent to the existing roadway culvert are fairly steep and appear to have been subject to erosion during storm events.
- Downstream of the roadway culvert, an area has been excavated out along the frontage of 65 Round Barn, directing water to a low point along the north property line of 67 Round Barn. This area may have been excavated to alleviate standing water in the upstream ditch.
- Runoff flows from the ditchline to a swale through the middle of 67 Round Barn Road and ultimate to the east into Hawley Lake. Per Ms. Medici, the lawn area between the roadside ditch and the swale through the yard has been saturated so frequently that the lawn service has been unable to maintain it.
- Within the west-to-east drainage swale running through 67 Round Barn, a broken drain tile was observed that had resulted in standing water in a few areas along the length of the swale. Based on the location of the drain tile and the observation by Ms. Medici that runoff did not previously overtop the ditches, it is possible that there is a drain tile that previously drained the roadside ditches and routed water underground to the 67 Round Barn swale.

### **Action Items & Next Steps**

Based on historical aerial topography, there do not appear to have been any significant changes/development in the upstream area over the last ten years that would significantly alter the volume of runoff arriving at the Round Barn Road culvert. However, further investigation of the drainage pipe is warranted to determine if that may be directing water more efficiently towards the roadway. There is an existing pond west of the house at 70 Round Barn Road which has been in place for at least twenty years. A review of available files for 70 Round Barn Road located a 1994 septic repair that shows the addition of a driveway to Hawley Woods Road, but the plan stops short of the pond area and so does not show any pipes in this area. Our office will follow up with the property owner to determine if the drain pipe was recently modified and investigate whether it is feasible to modify the pipe to reduce the rate of runoff to the roadside ditches.

Further investigation is also warranted to determine the extent of drain tiles on the property at 67 Round Barn Lane. If the existing drain tile extends north towards the roadway, it may be feasible to repair or replace the drain tile to restore the previous drainage patterns. Our office will coordinate with Huddleston McBride to request a proposal to locate drain tiles on 67 Round Barn Road and within the adjacent right-of-way.

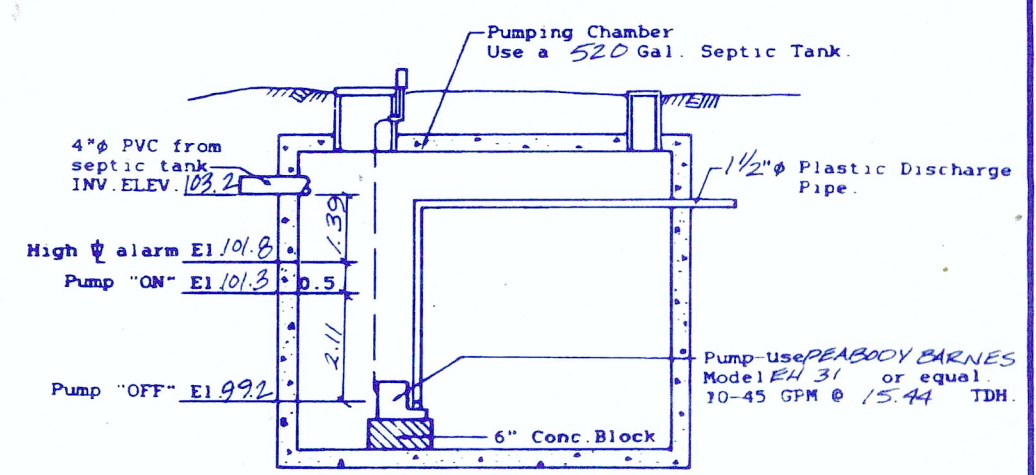
Within the Hawley Road right-of-way, at a minimum ditch maintenance will be required to restore the excavated area along the south side of the road which is eroding. Further maintenance was also discussed on the north side of the road to reduce the velocity of water entering the culvert and improve the ditch slopes in the area of the culvert. The scope of this work will be finalized pending results of the drain tile survey.



CALL JULIE 1-800-892-0123  
 WITH THE FOLLOWING:  
 COUNTY \_\_\_\_\_  
 CITY-TOWNSHIP \_\_\_\_\_  
 SEC. & 1/4 SEC. No.# \_\_\_\_\_  
**48 Hours Before You Dig.**  
 (TWO WORKING DAYS)

*KAREN DAVIS*  
 OWNER  
 (708)381-7459 Home  
 (312)329-8352 OFFICE  
 70 Round Barn

- 1) Installing Contractor shall pump out existing septic tanks to verify it's physical condition and capacity. If the physical condition is unacceptable and/or the capacity is less than 2500 gallons, then the contractor shall install new septic tank or tanks to bring the total capacity to 2500 gallons
- 2) Installing Contractor shall inspect the existing header line and drop boxes to verify their physical condition and check for blockages. Use 4"o PVC and approved type drop boxes to replace any broken or deteriorated pipe or drop boxes.
- 3) Any existing septic laterals, curtain drain, farm tiles or other trenches encountered during the installation of the new septic field shall be abandoned and the trench filled with compacted clay for a minimum distance of 5 feet on both sides of the new trench. All existing tile lines shall then be rerouted around the proposed new septic field and reconnected.



LIFT STATION DETAIL

**NOTE:**  
 THERE ARE NO EXISTING WELLS WITHIN 75 FEET OF THE PROPOSED SEPTIC SEEPAGE FIELD OR EXPANSION AREA.

- BARRINGTON HILLS NOTES:**
1. The Design Engineer shall approve the layout of the septic system installation prior to commencement of any construction.
  2. The Design Engineer and Village Representative shall review the septic system installation prior to commencement of any backfilling.
  3. The installer shall notify the Design Engineer of the precise time schedule for this project 3 days in advance of initiating any construction, and shall update the Engineer of any delays due to weather.

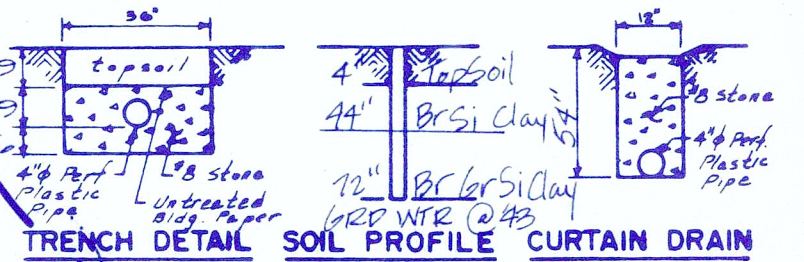
**LEGEND**

- = L.F. - 4" C.I.P. w/sealed jts. at 2.0% min.
- ⊙ = 500 Gal. Septic Tank
- ⊙ = Gal. Septic Tank
- ⊙ = 4 L.F. - 4" PVC (ASTM 3034) at 1.0% min.
- ⊙ = Lift Station (see detail)
- ⊙ = 07 L.F. - 1 1/2" Solid Plastic discharge pipe. Run inside header line where possible. Prevent siphon in first drop box.
- ⊙ = L.F. - 1/2" C.I.P. w/2" F.S. Install w/ no bump in driveway. +440 L.F. CREDIT FROM EXIST. = 1047 L.F.
- ⊙ = 627 L.F. SEPTIC FIELD  
 4" Perforated plastic pipe laid level in 36" wide trenches, 24" deep. Use approved drop boxes.
- ⊙ = 165 L.F. Curtain Drain and 45 L.F.  
 4" solid plastic pipe. Pitch downhill at 0.3% min. and discharge to surface. Connect all gutter downspouts and footing tile sump pump to curtain drain.
- = Proposed Pipe Invert Elevation
- ⊙ = Percolation Test Hole (perc rate = 54.1 mpl) 9/15/94
- ⊙ = Soil Profile Boring
- = Proposed finish contour
- = Existing Contour
- ⊙ = Existing Deciduous Tree
- ⊙ = Existing Evergreen Tree
- ⊙ = Straw Bales w/2 Stakes

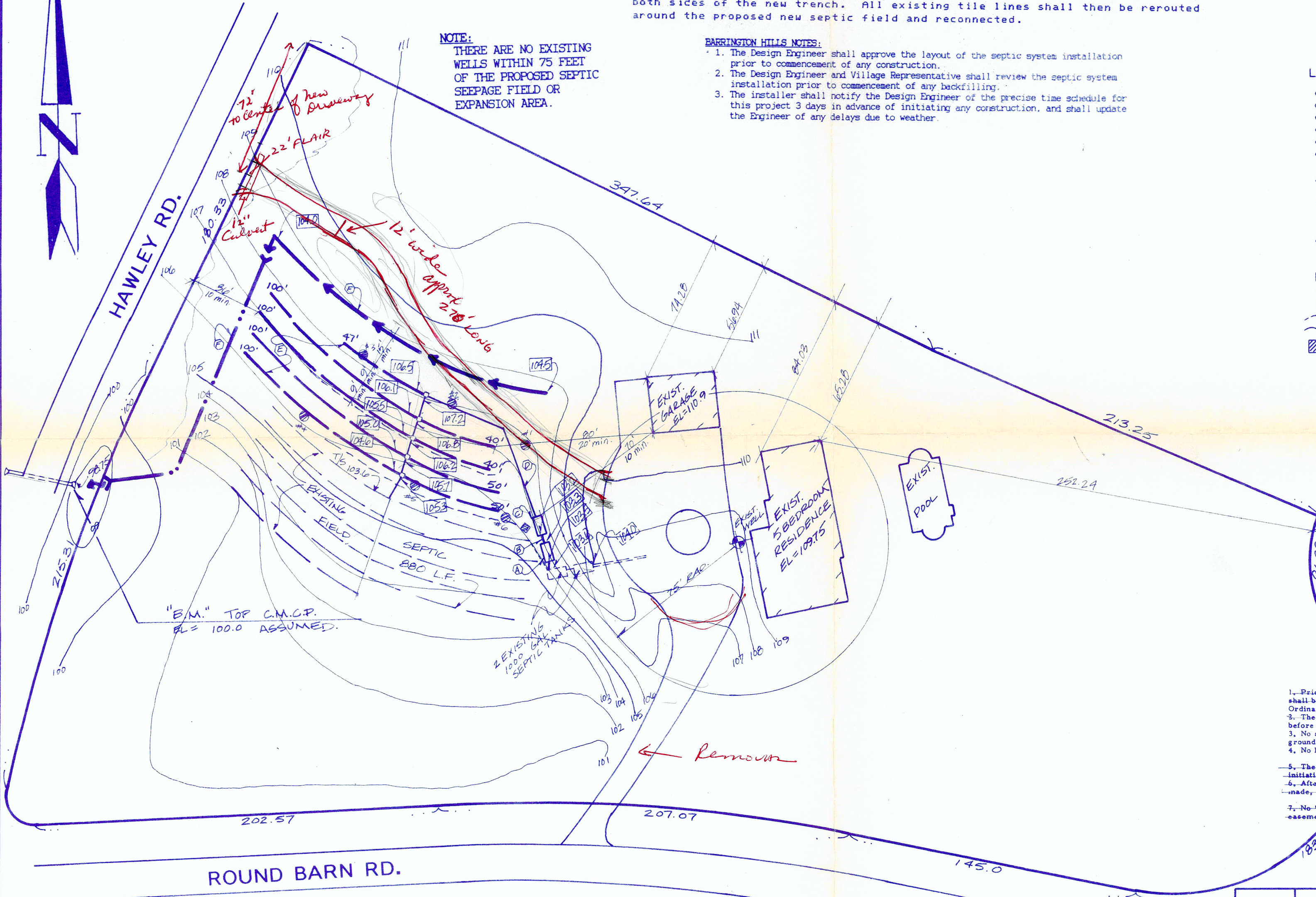
**SPECIAL NOTE:**  
 This design is based upon (1) the field conditions as they were on the day the percolation test, or soil typing, and/or topographic information were obtained, and (2) data furnished by the Owner, or General Contractor, or their Representative — regarding building size, number of bedrooms, and/or people within the unit to be served.

Any deviations from these design conditions such as (1) changing the number of bedrooms, and/or people to be served, (2) reducing the percolation capacity of the soils — by running heavy equipment over, or stock piling building material or excavated soil on, the seepage field area, (3) reducing the attractive seepage field by — significantly changing, actually reducing, or covering the seepage field with pavement, (4) diverting ground water into or over the seepage field, or (5) introducing oils and/or greases into the seepage field — will void this design.

- GENERAL NOTES:**
1. The Contractor shall notify all Utility Companies, and have all existing utility installations located and staked prior to construction.
  2. All backfill used for the seepage field trenches shall be porous topsoil containing little or no clay.
  3. The Contractor shall verify all existing field conditions such as well locations, house and any existing septic field locations, all elevations, prior to initiating any construction.
  4. All downspouts and sump pump shall discharge away from the seepage field, or into a curtain drain. ALSO ALL WATER SOFTENER & CONDENSATE LINES
  5. All installations shall conform to the appropriate Regulatory Agency requirements.



- NOTES:**
1. Prior to the \_\_\_\_\_ of any building construction \_\_\_\_\_ a temporary fence shall be constructed around the proposed seepage field area. This is required by Ordinance, and failure to comply, may be cause for revocation of the building permit.
  2. The Septic Contractor shall notify the \_\_\_\_\_ 24 hrs. before initiating construction.
  3. No seepage field construction, or placing of topsoil is permitted upon wet or frozen ground.
  4. No lawn irrigation systems shall be installed within the septic seepage field area.
  5. The \_\_\_\_\_ shall be notified 24 hrs. in advance of initiating the fill operation.
  6. After the proposed porous top-soil fill is in place, additional percolation tests shall be made, and the results sent to the Village Engineer.
  7. No "Plot of Survey" was furnished. Contractor to verify Lot size and existence of any easements.



<b>SEPTIC SYSTEM REPAIR: LOT 2</b>		
WOOTEN'S NE 1/4, SECT 10, T42N, R9E		
SCALE: 1"=40'	APPROVED BY:	DRAWN BY: AMC
DATE: 9/23/94		REVISED:
<b>PAF &amp; ASSOC.</b> 111 W. ALGONQUIN ROAD		<b>ALGONQUIN, IL. 60102</b>
LOCATION: BARRINGTON HILLS	CLIENT: DAVIS	DRAWING NUMBER: 94203





# Illinois Department of Transportation

Office of Highways Project Implementation / Region 1 / District 1  
201 West Center Court / Schaumburg, Illinois 60196-1096

LOCAL: Barrington Hills

June 9, 2017

The Honorable Martin J. McLaughlin  
Village President  
Village of Barrington Hills  
112 Algonquin Road  
Barrington Hills, IL 60010

Dear Village President McLaughlin:

The attached summary sheet indicates where stop bars and crosswalks need to be repainted. Your agency is responsible for the painting of crosswalks and stop bars. This letter will serve as authorization to allow your agency to mark all crosswalks and stop bars, if applicable, across State routes at the listed designated crossings. These markings should be in accordance with the Manual On Uniform Traffic Control Devices. Where applicable, the stop bar should be installed 4' in advance of and parallel to the nearest crosswalk. Proper temporary traffic control and signing in accordance with Standards 701501, 701606, and 701701 should be in effect while performing this work.

The fabrication, erection, and maintenance of all signing on State routes are the responsibility of this Department. We have reviewed all such signing related to the subject crossing. If there are questions concerning the signing at the designated crossings or if there are any designated crossings that are not listed on the attached summary sheet, please contact our Pedestrian Safety Engineer, Mr. Jim Stoner, at 847-705-4152.

Thank you for your assistance in assuring pedestrian safety. If you have any questions regarding this matter, please contact Mr. Stoner.

Very truly yours,

Anthony J. Quigley, P.E.  
Region One Engineer

By:   
Hussain Mesyef, P.E.  
Traffic Operations Engineer

Attachments

**VILLAGE OF BARRINGTON HILLS**

<b>EXISTING SCHOOL 20 ZONE NO CROSSINGS</b>	<b>CROSSWALKS</b>	<b>STOP BARS</b>	<b>OTHER</b>
Lake-Cook Rd. between Brinker and Donlea (Flashers)	N/A	N/A	(trim trees)

\*Village responsible to straighten EB and WB "SSL20 when Flashing" Posts and replace signs.

<b>EXISTING EQUESTRIAN CROSSINGS</b>	<b>CROSSWALKS</b>	<b>STOP BARS</b>	<b>OTHER</b>
IL 62 e/o Bateman Rd.	Repaint	N/A	
IL 62 1 mile w/o Sutton Rd.	Repaint	N/A	



# MEMORANDUM

625 Forest Edge Drive, Vernon Hills, IL 60061

TEL 847.478.9700 ■ FAX 847.478.9701

www.gha-engineers.com

To: Robert Kosin, VBH Director of Administration  
Brain Cecola, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM  
Gewalt Hamilton Associates

Date: June 15, 2017

Re: IDOT- IL 25 Resurfacing Project

On April 28, 2017 the Illinois Department of Transportation received three bids for the resurfacing of IL 25 between IL 72 and Boltz Road. The low bid was submitted by Plote Construction, Inc. in the amount of \$1,765,602.28.

Pricing for asphalt was comparable between the Village of Barrington Hills 2017 Road Program and the IL 25 resurfacing project. Below is a table that summarizes the unit prices submitted by the low bidder for each project:

	Village of Barrington Hills 2017 Road Program	IDOT IL 25 Resurfacing Project
<b>Quantity Description</b>	HMA Surface Course, Mix D, N50	HMA Surface Course, Mix D, N70
<b>Tonnage</b>	4,955 TN	8,391 TN
<b>Unit Price</b>	\$54/TN	\$50/TN
<b>Quantity Description</b>	HMA Binder Course, IL 19.0, N50	Polymerized Leveling Binder, Machine Method, IL 4.75, N50
<b>Tonnage</b>	2,158 TN	4,196 TN
<b>Unit Price</b>	\$49/TN	\$55/TN

4813 Plote Construction, Inc.  
 1100 Brandt Drive  
 Hoffman Estates, IL 60192  
 1,296,238.50

5378 Schroeder Asphalt Services, Inc.  
 11022 Grant Hwy.  
 Marengo, IL 60152  
 P.O. Box 831  
 Huntley, IL 60142

\*\*\*\*\*  
 015 CONTRACT: 62C93 DISTRICT: 01 COUNTY: COOK  
 KEY RT: FAP 339 MARKED RT: IL 62  
 SECTION: 116Y(1&2)R-RS-6 EST: (YES)  
 PROJECT: NHPP-0339/035/000  
 NBR FOR BID PROPOSALS ISSUED: 5 NBR FOR BID PROPOSALS RECEIVED: 3

Resurfacing and pedestrian ramps on IL 62 from E/O Roselle Road to IL 58 in the Villages of Arlington Heights, Palatine and Schaumburg and the City of Rolling Meadows.

AS READ BID	CORRECTED BID	LOW BIDR	DEV PCT
-------------	---------------	----------	---------

0231 Arrow Road Construction Co.  
 3401 S. Busse Road  
 Mt. Prospect, IL 60056-0334  
 P.O. Box 334  
 Mt. Prospect, IL 60056-0334  
 2,696,565.15

1560 R. W. Dunteman Company  
 600 S. Lombard Road  
 Addison, IL 60101  
 P.O. Box 1129  
 Addison, IL 60101-1129  
 2,597,909.13

3020 J. A. Johnson Paving Company  
 1025 East Addison Court  
 Arlington Heights, IL 60005

3505 Lorig Construction Company  
 250 East Touhy Ave.  
 Des Plaines, IL 60018

4813 Plote Construction, Inc.  
 1100 Brandt Drive  
 Hoffman Estates, IL 60192

2,485,336.11	*
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\*\*\*\*\*  
 016 CONTRACT: 62C99 DISTRICT: 01 COUNTY: KANE  
 KEY RT: FAP 360 MARKED RT: IL 25  
 SECTION: 93RS-2 EST: (YES)  
 PROJECT: NHPP-0360/015/000  
 NBR FOR BID PROPOSALS ISSUED: 4 NBR FOR BID PROPOSALS RECEIVED: 3

Resurfacing and pedestrian ramps (ADA) on IL 25 from IL 72 to Bolz Road in the villages of East Dundee, Barrington Hills and Carpentersville.

AS READ BID	CORRECTED BID	LOW BIDR	DEV PCT
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0231 Arrow Road Construction Co.  
 3401 S. Busse Road  
 Mt. Prospect, IL 60056-0334  
 P.O. Box 334  
 Mt. Prospect, IL 60056-0334  
 1,915,695.05

3505 Lorig Construction Company  
 250 East Touhy Ave.  
 Des Plaines, IL 60018  
 1,773,201.22

4813 **Plote Construction, Inc.**  
 1100 Brandt Drive  
 Hoffman Estates, IL 60192  
 -----  
**1,765,602.28** \*

5378 Schroeder Asphalt Services, Inc.  
 11022 Grant Hwy.  
 Marengo, IL 60152  
 P.O. Box 831  
 Huntley, IL 60142

\*\*\*\*\*

017 CONTRACT: 62D01 DISTRICT: 01 COUNTY: MCHENRY  
 KEY RT: FAP 336 MARKED RT: IL 31  
 SECTION: 112RS-1 EST: (YES)  
 PROJECT: NHPP-0336/052/000  
 NBR FOR BID PROPOSALS ISSUED: 7 NBR FOR BID PROPOSALS RECEIVED: 4

Pavement resurfacing and pedestrian ramps (ADA) on IL 31 from Park Place to  
 IL 120 in the City of McHenry.

			LOW	DEV
AS	READ	BID	CORRECTED	BID
			BIDR	PCT

0103 Alliance Contractors, Inc.  
 1166 Lake Avenue  
 Woodstock, IL 60098

0231 Arrow Road Construction Co.  
 3401 S. Busse Road  
 Mt. Prospect, IL 60056-0334  
 P.O. Box 334  
 Mt. Prospect, IL 60056-0334

0280 Peter Baker & Son Co.  
 1349 Rockland Road  
 Lake Bluff, IL 60044-0187  
 P.O. Box 187  
 Lake Bluff, IL 60044-0187

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784,116.63 \*

1305 Curran Contracting Company  
 286 Memorial Court  
 Crystal Lake, IL 60014  
 921,453.05

3505 Lorig Construction Company  
 250 East Touhy Ave.  
 Des Plaines, IL 60018  
 803,744.24

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
360	93RS-2	KANE	52	1
		ILLINOIS	CONTRACT NO. 62C99	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

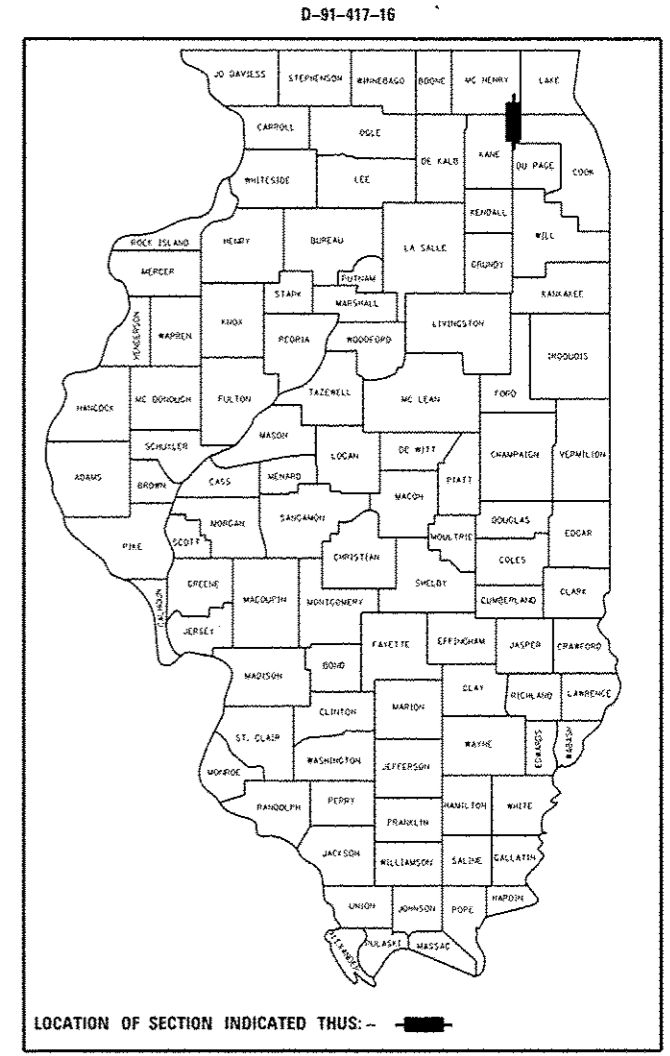
# PROPOSED HIGHWAY PLANS

THIS PROJECT IS LOCATED IN  
THE VILLAGE OF EAST DUNDEE  
THE VILLAGE OF CARPENTERSVILLE  
THE VILLAGE OF BARRINGTON HILLS

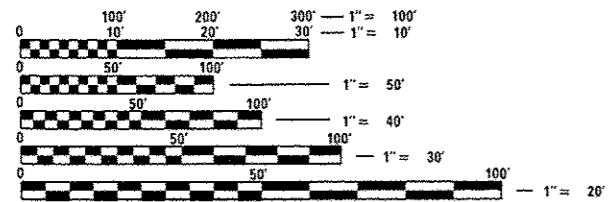
2015 ADT: 22,800  
POSTED SPEED: 25-45 MPH

F.A.P. ROUTE 360 (IL 25)  
SECTION 93RS-2  
IL 72 TO BOLZ ROAD  
PROJECT NHPP-0360(015)  
RESURFACING (3P), PEDESTRIAN RAMPS (ADA)  
KANE COUNTY

C-91-417-16

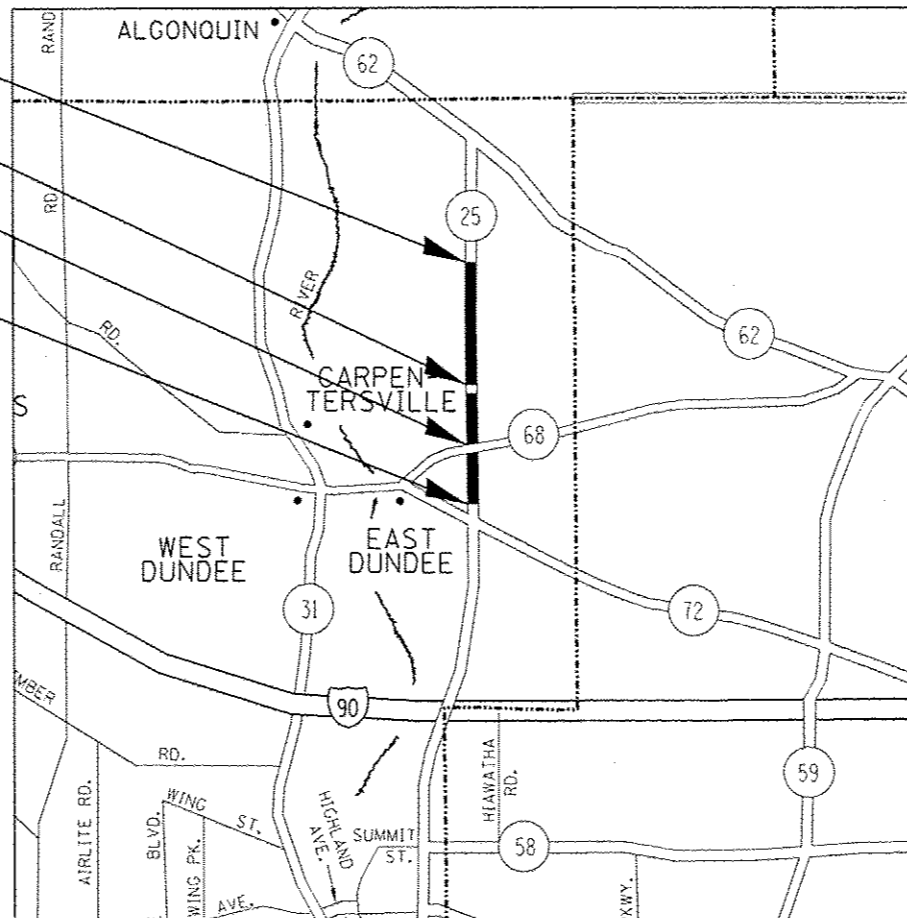


LIMITS OF IMPROVEMENT  
ENDS AT STA. 184+25.43  
OMISSION  
STA. 96+46.13 TO STA. 102+71.13  
OMISSION  
STA. 60+18.88 TO STA. 62+32.87  
LIMITS OF IMPROVEMENT  
BEGINS AT STA. 27+75.09



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811



GROSS LENGTH = 15,650.34 FT. = 2.964 MILE  
NET LENGTH = 14,811.35 FT. = 2.805 MILE

PROJECT ENGINEER DAN WILGREEN (847) 705-4240  
PROJECT MANAGER FAWAD AQUEEL (847) 705-4247

CONTRACT NO. 62C99

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED February 6 20 17  
Regional Engineer

Mar 24 20 17  
Maureen M. Addis P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Mar 24 20 17  
Director of Program Development

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS



## MEMORANDUM

To: Robert Kosin, VBH Director of Administration  
Brain Cecola, VBH Chairman Roads & Bridges

From: Daniel J. Strahan, P.E., CFM  
Gewalt Hamilton Associates

Date: June 15, 2017

Re: 2017 Roadside Mowing Update

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Horcher Brothers Enterprises, Inc. has been retained to complete the 2017 Roadside Mowing. The scope of work is to mow the roadside grass on approximately 22 miles of Village roads, to include the following: Old Hart Road, Oak Knoll Road, Merri Oaks Road, Cuba Road, Ridge Road, Steeplechase Road, Plum Tree Road, Spring Creek Road, Meadow Hill Road, Hills and Dales Road, Old Dundee Road, Hawley Woods Road, Healy Road, Helm Road, Haeger's Bend Road, Chapel Road, and Church Road. Roadways that are not included in the program are generally those with lower traffic volumes that either don't have roadside grass along the edges (such as where wooded areas adjoin the roadway) or where the roadside grass is maintained by the property owners.

The initial mowing will occur with the next few weeks. A second mowing, if necessary, is typically scheduled around Labor Day.

# 2017 Culvert Inventory Report

## Village of Barrington Hills

GHA Job Number 9355.152



Prepared by:

Gewalt Hamilton Associates, Inc.  
625 Forest Edge Dr.  
Vernon Hills, IL 60061  
Tel. (847) 478-9700  
Fax: (847) 478-9701

DATED: June 2017



## INTRODUCTION

The following report summarizes the results of a comprehensive review of the condition of existing roadway culverts within the Village of Barrington Hills. Field work was completed during February and March of 2017, with analysis and review of the results completed in May and June of 2017. The culvert inventory report was completed in order to better assist the Village in organizing culvert maintenance and replacement operations.

A previous culvert inventory was completed in 2010, which resulted in preparation of a bound culvert/storm sewer atlas utilized by Village staff. Since 2010, the paper atlas has migrated to a an interactive GIS webmap application, which allows Village staff and others to view culver locations alongside other GIS data such as parcel boundaries, aerial photographs, topography, floodplains, etc. As a result the primary work produce associated with this effort is an updated GIS layer that will be integrated with the previous culvert and storm sewer data. The purpose of this report is to provide a summary of our findings with regard to the conditions of roadway culverts on Village maintained roads within the Village of Barrington Hills.



Spring Creek Crossing at Rock Ridge Road

## STATISTICAL DATA

A total of 227 roadway culverts were inspected as part of the culvert inventory. For each culvert, observations were made and an inspection report was generated for each visible end of the culvert. Physical features such as material type, diameter, depth below the roadway, and location were noted and a GPS data point was generated. In addition, field personnel assessed the level of deterioration as well as the amount of sediment in and around the pipe.

### *Material Type*

Generally the material types present within the Village are corrugated metal pipes (CMP) or reinforced concrete pipes. Since 2002 the Village has adopted the standard of utilizing only RCP for new or replacement roadway culverts. This practice has resulted in the percentage of concrete culverts increasing from approximately 40% during the 2010 inventory to 72% during the current culvert inventory.



Typical RCP End Section Treatment

While metal or plastic culverts can be less expensive and easier to handle, concrete roadway culverts are much more durable and last longer. When the Village first initiated the practice of replacing metal culverts with concrete in 2002, the Village had an annual fall work package that was needed to replace metal culverts that had failed and resulted

in potholes over the course of the year, typically affecting 4-7 locations. As the number of remaining metal culverts has decreased, this occurrence has decreased dramatically as well.

Table 1 below shows the material type for the 227 roadway culverts surveyed, while Table 2 provides a breakdown by material type of the condition of each culvert type:

**Table 1: Material Type**

<b>Material Type</b>	<b>Number</b>	<b>Percentage</b>
<b>CMP</b>	56	24.7%
<b>CPP</b>	3	1.3%
<b>RCP</b>	164	72.3 %
<b>PVC</b>	1	0.4%
<b>DIP</b>	3	1.3%

**Table 2: Culvert Condition by Material Type**

<b>Material</b>	<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Other</b>
<b>CMP</b>	3.6%	3.6%	87.3%	5.5%
<b>CPP</b>	33.3%	66.7%	-	-
<b>RCP</b>	0.6%	3.6%	94%	1.8%
<b>PVC</b>	-	-	100%	-
<b>DIP</b>	33.3%	-	66.7%	-

### *Breakdown by County*

As the Village is located in four separate counties, residents may request justification of the rationale as to how the Village allocates money for drainage improvements and maintenance expenditures. One basis for this, at least in terms of how funding is allocated to drainage improvements and maintenance, could be the number and condition of culverts in each county. Table 3 below examines how the culverts are distributed throughout the Village. It is noted that as there are no Village roadways located in the Kane County portion of the Village, there are no Village maintained roadway culverts located in Kane County.



**Table 3: Culvert by Location**

<b>County</b>	<b>Number of Culverts</b>	<b>Fair/ Poor Condition</b>	<b>Non- RCP Culverts</b>
<b>Cook</b>	96	9	19
<b>Lake</b>	47	6	13
<b>McHenry</b>	84	6	31
<b>Total</b>	<b>227</b>	<b>21</b>	<b>63</b>

### CONDITION REPORT

#### *Required Maintenance*

Six culvert locations were found to be either buried, clogged, or full of water during the time of the inspection. Those locations are summarized below:

- Hills N' Dales Road- 36" RCP Culvert- Inlet on the upstream side clogged, causing overtopping of the driveway and roadway. Inlet to be replaced with more maintenance friendly end treatment as part of 2017 Road Program.



Hills N' Dales Culvert Inlet after removal of leaves/debris

- 10440 River Road (Culvert ID 3735)- 15" CMP Culvert- Inlet lid was covered by leaves at the time of inspection. We would recommend this location be forwarded to Cuba Township to jet out the culvert and catch basin.



Downstream End- River Rd. Culvert



Upstream Inlet- River Rd. Culvert

- Dundee Lane- North of Sara Lane- 36" CMP Culvert- Under water at time of inspection. Re-inspected and found to be in fair condition; however, the roadway overtops on a regular basis. Consideration should be given to further review of this area to determine the feasibility of upsizing this culvert or modifying the downstream pipe.



Dundee Lane Culvert- Overtopping after April 2017 Storm Event



- Chapel Road (Culvert ID 920)- 18" RCP- The culvert was under water at the time of the first inspection and is under water most of the year as it serves to hydraulically connect two wetland areas (Photo not included due to heavy vegetation).
- Three Lakes Road (Culvert ID 1680)- 12" RCP- The culvert was under water at the time of the first inspection; the roadside ditches along the east side of Three Lakes Road are frequently inundated during seasonal storm events due to the lack of downstream capacity.



Three Lakes Road Ditch Inundation- April 2017



### *Required Replacements*

Four roadway culverts were found to be in “Poor” condition, indicative that plans should be made to replace them within the next few years. These locations are discussed in further detail below:

- Ridge Road- South of Oak Knoll (Culvert ID 1935)- 12” CMP- This culvert is schedule to be replaced as part of the 2017 Road Program. (Photo not included due to heavy vegetation).
- 12 Little Bend Road (Culvert ID 1140)- 24” CMP- This culvert should be replaced as part of the resurfacing of Little Bend Road, tentatively planned for resurfacing in 2019.



24” CMP @ 12 Little Bend Road

- 20 Creekside Lane (Culvert ID 3890)- 48"x63" Elliptical CMP- This culvert was initially identified for replacement as part of the 2013 Drainage Program along with a similarly sized culvert at 8/9 Creekside; however, it was removed from the project due to budget constraints and it was determined it could last a few more years. It is recommended that this culvert be replaced prior to or as part of the resurfacing of Creekside Lane, anticipated to be part of the 2019 Road Program.



48"x63" Elliptical CMP @ 20 Creekside Lane



- Springwood Lane @ IL 62 (Culvert ID 4715)- 18" RCP- This culvert was installed in 2010. While generally in good condition, the west end of this culvert appears to have been damaged, perhaps by an overweight vehicle leaving the roadway. The upstream flared end section should be repaired in the near future.



Damaged Flared End Section- Springwood Lane