

SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

April 26, 2011

To: Hamilton County Drainage Board

Re: Pebble Brook Drain – North Reconstruction

Attached are reconstruction plans prepared by Clark Dietz Engineers, along with drain map, drainage shed map and assessment roll for the proposed reconstruction of the north phase of the Pebble Brook Drain across Pebble Brook Place.

The proposed reconstruction will address the roadway flooding that occurs frequently at Pebble Brook Place, within the Pebble Brook development. The Pebble Brook development is located on the North side of State Road 32 between Hazel Dell and Moontown Roads in Section 33, Township 19 North, Range 04 East, of Noblesville Township.

The office has had fourteen (14) complaints on the drain since 2000. Those are as follows:

<u>DATE</u>	<u>APPLICANT</u>	<u>LOCATION</u>	<u>PROBLEM</u>
March 29, 2000	Steve Baitz	1156 Pebble Brook Dr.	Overgrow blocking flow
Jan. 11, 2002	Stan Hasty	Pebble Brook Place	Culvert under road plugged
April 29, 2002	Stan Hasty	1090 Pebble Brook Dr.	Debris on culvert
April 29, 2002	Bob Harreld	720 Pebble Brook Place	Culvert has debris in it
May 16, 2003	Jerry Liston	1156 Pebble Brook Dr.	Debris on triple pipes
Aug. 4, 2003	Tim Weaver	550 Pitney Drive	Debris against culvert
Aug. 27, 2003	Vicky Smith	1156 Pebble Brook Dr.	Culvert full of debris

Nov. 19, 2003	Ken Weaver	1156 Pebble Brook Dr.	Culvert blocked
Mar. 16, 2004	Vicky Smith	1156 Pebble Brook Dr.	Culvert silting in
Jan. 13, 2005	Mary Wright	730 Pebble Brook Place	Culvert clogged – water over roadway
May 24, 2006	Tim Stottlemeyer	1090 Pebble Brook Dr.	Debris in creek
May 29, 2007	Greg Morgan	775 Pebble Brook Place	Culvert blocked with debris
June 8, 2007	Sharie Morgan	775 Pebble Brook Place	Debris and tree stump blocking drain
July 10, 2008	Vicky Smith	1060 Pebble Brook Dr.	Debris collected on pipes

Pebble Brook Drainage Improvements – North Phase

The North Phase proposal is to replace the triple 30” RCP pipe with a 12 foot x 7 foot concrete box culvert and re-grade 238 feet of open channel. The triple culverts have a history of plugging issues because of the pipe geometry. The single span concrete box culvert should allow debris to pass through the structure, along with providing additional capacity. The existing triple pipes under Pebble Brook Place where installed when Pebble Brook Section 8 was constructed. Pebble Brook Section 8 was approved by the Drainage Board on September 25, 2000 (Hamilton County Drainage Board Minute Book 5, Pages 456 and 457).

The reconstruction of the drain will consist of the following:

- 70 feet - 6” SSD
- 238 feet - Open Ditch
- 72 feet – 12’ x 7’ 3 sided concrete box structure

The reconstruction of this drain will result in no change to the Pebble Brook Drain length. The footage replaces the same footage of the existing drain.

The work to install the new crossing will occur within City of Noblesville street right-of-way and existing platted easement on parcels:

<u>Parcel</u>	<u>Owner</u>
11-06-33-02-01-012.000	Stefanie S Mazur
11-06-33-02-01-013.000	Palmer Properties LLC
11-06-33-02-01-014.000	Palmer Properties LLC
11-06-33-02-01-015.000	Palmer Properties LLC
11-06-33-02-05-007.000	Gregory A. & Sharon T. Morgan
Pebble Brook Place ROW	City of Noblesville

This project will restrict access to a single lane at a time during the duration of the project. This will affect the following parcels:

<u>Parcel</u>	<u>Owner</u>
11-06-33-02-05-001.000	Gregory J. & Kristie A. Campbell
11-06-33-02-05-002.000	John T. & Kari L. Kirk
11-06-33-02-05-003.000	Scott A. & Barbara D. Read
11-06-33-02-05-004.000	William H. & Mary Kathryn Wright
11-06-33-02-05-005.000	Gary L. & Patricia R. Stebbins
11-06-33-02-05-006.000	John M. & Madonna S. Arrivo
11-06-33-02-05-007.000	Gregory A. & Sharon T. Morgan

The following is a breakdown of the proposed engineer's estimate for the Pebble Brook Place box culvert replacement and sanitary sewer relocation.

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
Temporary Erosion and Sediment Control	1	LS	\$9300.00	\$9300.00
Construction Engineering	1	LS	\$5600.00	\$5600.00
Concrete Box Culvert 12 ft. x 7 ft.	72	LF	\$1,400.00	\$100,800.00
Wing walls	1	LS	\$28,000.00	\$28,000.00
Flowable Fill	15	CYS	\$75.00	\$1,125.00
Tree Removal	2	EA	\$1000.00	\$2000.00
Install Bench Tab on Wing wall	1	LS	\$300.00	\$300.00
Mulched Seeding	1080	SYS	\$5.00	\$5,400.00
Concrete Curb, Remove and Replace	136	LF	\$75.00	\$10,200.00
HMA Pavement for Patching, Local Street	136	Ton	\$75.00	\$10,200.00
6" Underdrain	75	LF	\$25.00	\$1,875.00
Core Holes for 6" Underdrain	2	EA	\$800.00	\$1,600.00
Ditch Regrading	238	LF	\$60.00	\$14,280.00
			Sub Total	\$190,680.00
			15% Contingency	\$28,602.00
			Pebble Brook Place Crossing Total	\$219,282.00

<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
Sanitary Sewer, 8 inch	135	FT	\$40.00	\$5,400.00
Sanitary Sewer Lateral, 6 inch	25	FT	\$35.00	\$875.00
Manhole, 4 foot	1	EA	\$2000.00	\$2000.00
Drop Manhole, 4 foot	1	EA	\$2,500.00	\$2,500.00
			Sub Total	\$10,775.00
			15% Contingency	\$1,616.00
			Sanitary Sewer Relocation Total	\$12,391.00

The reconstruction falls within Pebble Brook Place Right of Way, owned by the City of Noblesville. Per Indiana Code 36-9-27-71, the entire cost of the Pebble Brook Place Crossing reconstruction shall be assessed to the City of Noblesville.

The sanitary sewer relocation for this project is running the sewer line over the top of the concrete box structure, instead of just below the existing triple 30" RCP. The sewer pipe would be a conflict with the footings and concrete box structure and must be relocated to allow the regulated drain to function properly. Per Indiana Code 36-9-27-48, the entire cost of the sanitary sewer relocation shall be assessed to the City of Noblesville.

I recommend the Board set a hearing for this proposed reconstruction for June 27, 2011.

A handwritten signature in black ink, appearing to read 'K. Ward', written over the printed name below.

Kenton C. Ward, CFM
Hamilton County Surveyor

KC/grh

PEBBLE BROOK DRAIN, NORTH RECONSTRUCTION

Property Owner	Parcel Number	Benefit	Recons. Assessment	% of Total
City of Noblesville	99-99-99-99-99-999.008	Road	\$231,673.00	100.00%
TOTALS		Road	\$231,673.00	100.00%



CITY OF NOBLESVILLE
JOHN DITSLEAR, MAYOR June 21, 2011

Steven A. Holt
Hamilton County Commissioner
One Hamilton County Square
Noblesville, IN 46060

Re: Proposed Notice of Assessment for replacement of culvert pipes under
Pebblebrook Place in the Pebblebrook drain

OFFICE OF
THE MAYOR

Dear Commissioner Holt:

The City has received the Notice from the Hamilton County Surveyor dated May 17, 2011, concerning the proposal to replace the triple 30" culvert pipes under Pebblebrook Place in the Pebblebrook subdivision. The proposal is to replace these three pipes with a 5x7 box culvert at a proposed cost of \$219,000, all of which the Surveyor requests the City to pay.

The City has reviewed the terms of Indiana Code 36-9-27-71(c), which reads as follows:

- (c) When the board finds that in the construction, reconstruction, or maintenance of a regulated drain it is necessary to:
- (1) alter, enlarge, repair, or replace a crossing; or
 - (2) construct a new crossing where none existed before: the cost of work on the crossing shall be paid by the owner of the public highway. This cost may not be considered by the county surveyor or by the board in determining the cost of the work on the drain or in assessing benefits and damages.

It is the City's understanding that purpose of removing the three pipes and replacing them with a box culvert is to reduce maintenance problems associated with the three 30" pipes. The City does not believe this project is . . . "necessary to alter, enlarge, repair, or replace a crossing." To the contrary the project installed by the developer with approval of the Surveyor and the Drainage Board in 2000 creates a maintenance problem for the Surveyor's office and the Drainage Board. This does not mean the crossing is not working as designed and constructed. It only means that there is a desire to find a design to reduce maintenance costs at the City's expense.



16 South 10th Street, Suite 275
Noblesville, Indiana 46060

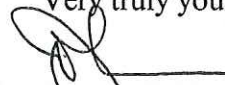
Phone 317.776.6324 • Fax 317.776.6363

The City is aware that the statute requires the owner of the right of way to pay the cost if it is necessary to replace or repair a structure. However, the City had no part in designing the existing structure, nor is there any indication that it is not functioning as designed.

As you are well aware, these are difficult economic times for all units of local government in Hamilton County and in Indiana. The City, like the County, does not have \$219,000 just lying in an account looking for a place to be spent. We understand that the structure as designed and approved by the Drainage Board has turned out to be difficult to maintain. However, that difficulty does not mean that the structure needs to be replaced. If you feel this structure must be replaced, we suggest that it is equitable for the entity which approved the design of the structure to absorb those costs.

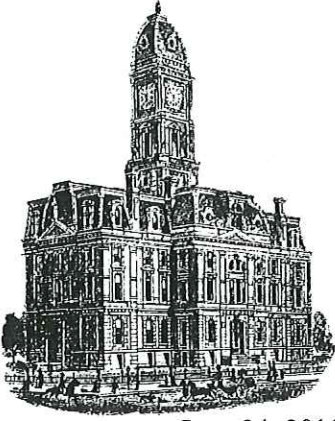
The representatives of the City will be appear at your June 27th meeting to answer any questions. In conclusion, we would ask that either the Board determine that the replacement is not necessary or that the Board find some other fund to pay the cost of this maintenance problem. We understand that the statute allows the Board to mandate these costs on another unit of government, but do not believe that such a mandate is necessary or reasonable under these facts and circumstances.

Very truly yours,



John Ditslear,
Mayor of the City of Noblesville





June 24, 2011

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

Mayor Ditslear
16 S. 10th Street, Suite 275
Noblesville, IN 46060

RE: Pebble Brook Drain, North Reconstruction

I have received your objection to the above referenced hearing. Upon reading it and then reviewing my report to the Board I found that an important element had been left out of the report.

The Drainage Board contracted for a study of the Pebble Brook Drain in 2004. The study was initiated due to homeowner complaints in the Pebble Brook area which include the flooding of Pebble Brook Place. The hydraulic study was completed in March 2005 and presented to the Board on April 11, 2005.

The result of the study was that the triple 30 inch culverts were found to be insufficient. This structure can only handle a 2 year flow. The proposed structure will handle the 100 year storm upon build out of the upstream basin. I have attached pages 18-21 of the study.

Upon reading my report it sounds as if the reason for the culvert replacement is to eliminate debris which collects upon the upstream end. This however is the minor issue which is annoyance more than anything. I would not say that the spending of maintenance funds in the amount of \$5,318.77 since 2000 is a major problem. I was remiss in not include the capacity issue in my report and for this I apologize.

Please reconsider your objection based on the flooding issue. Also, payment for the structure can be spread over a five (5) year period.

Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

Table 3-6 Post-developed Flow Calculations for Andover Basin

Storm Event	Original Andover Report	Modified Andover Report	Pebblebrook Study (HEC-HMS)
10-year	31 cfs	66 cfs	57 cfs
100-year	36 cfs	87 cfs	98 cfs

The modified Andover discharges are higher but are still below the County's detention standard. During the 100-year event the Andover Ponds would discharge to the Pebblebrook Southern Branch at a peak of 87 cfs, which is less than the pre-developed 10-year discharge rate of 165 cfs as calculated by this study. During the 10-year event the Andover Ponds would discharge to the Pebblebrook Southern Branch at a peak of 66 cfs, which is less than the pre-developed 2-year discharge rate of 76 cfs as calculated by this study.

3.5 Problem Identification

Pebblebrook Place Culverts

The existing hydraulic capacity of the triple 30-inch culverts under Pebblebrook Place were analyzed using HY8, a computer model produced by the Federal Highway Administration (FHWA) to calculate culvert hydraulic capacity. The current capacity of the triple 30-inch culverts at Pebblebrook Place is approximately 80 cfs. The existing conditions 2-year flow is 116 cfs (see table 3-4). Hence, the triple 30-inch culverts have less than a 2-year capacity. Photographs below show Pebblebrook Main Channel overflowing the roadway during a recent storm event. The photographs were taken on January 5th, 2005.



Looking southwest at Pebblebrook Place during January 5th, 2005 storm event

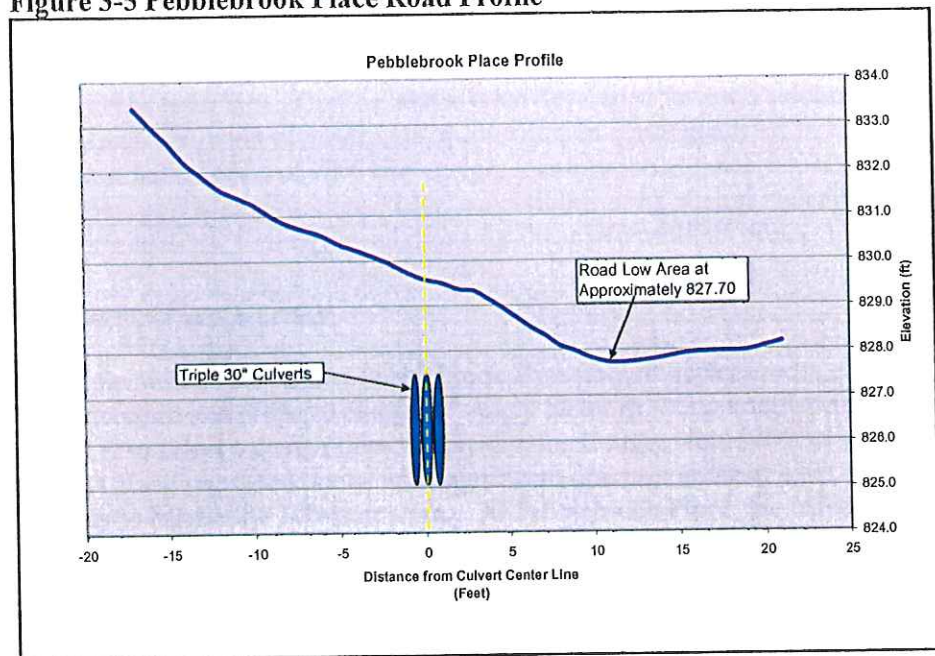


Looking northeast at Pebblebrook Place during January 5th, 2005 storm event

As seen above in the photographs, another problem is the profile of the roadway. Water overtops the road east of the culverts since the elevation of the roadway is considerably lower. The low spot in the roadway is approximately at the same elevation as the crown of the triple 30-inch culverts and allows very little surcharging of the culverts prior to roadway overtopping. A larger culvert replacing the existing at the same inverts would increase the crest elevation of the pipe. Figure 3-5 shows the roadway profile at the culvert

crossing of Pebblebrook Place. The culverts are centered at the zero-foot mark on the horizontal axis with an approximate invert of 825.1 feet.

Figure 3-5 Pebblebrook Place Road Profile



Due to construction of upstream detention ponds, peak flows will decrease as the watershed is developed with the County's detention policy. However, even with the reduction in flow at the full buildout with detention scenario, the triple 30-inch culverts would still have less than 10-year capacity. The triple culvert barrel configuration is also prone to clogging with debris, which further reduces capacity.

Moontown Road Improvements

As indicated in Section 2.3, problems were identified at the southern branch of Pebblebrook Main Channel where it crosses Moontown Road. In this area there is significant channel sedimentation partially blocking the 36-inch culvert crossing at Moontown Road. There have been numerous reports of runoff overtopping the road at this location. The primary causes of the overtopping are:

- Sedimentation at the downstream end of the culvert
- Undersized culvert (inadequate hydraulic capacity)

The drainage area tributary to this culvert is from the Andover subbasin. Hydraulic calculations of the culvert using HY8 modeling software show that the existing 36-inch culvert has a capacity of approximately 40 cfs. Flow calculations using HEC-HMS (existing conditions) show 379 cfs for a 100-year storm event at the culvert (Moontown Road). The flow will be greatly reduced due to detention facilities once the Andover Development is complete. Upon full development of Andover, the 100-year peak flows will decrease to 98 cfs,

which is still more than twice the capacity of the 36-inch culvert. Therefore, the culvert should be replaced.

3.6 Solutions

Proposed solutions were developed for the Pebblebrook Place and Moontown Road culvert crossings. Cost estimates were developed for each solution and include a construction cost estimate, a construction contingency of 15%, and non-construction costs of 20% (for design, construction engineering and inspection, and administration). Land acquisitions costs are not included. The following sections present the solutions for these two problem areas.

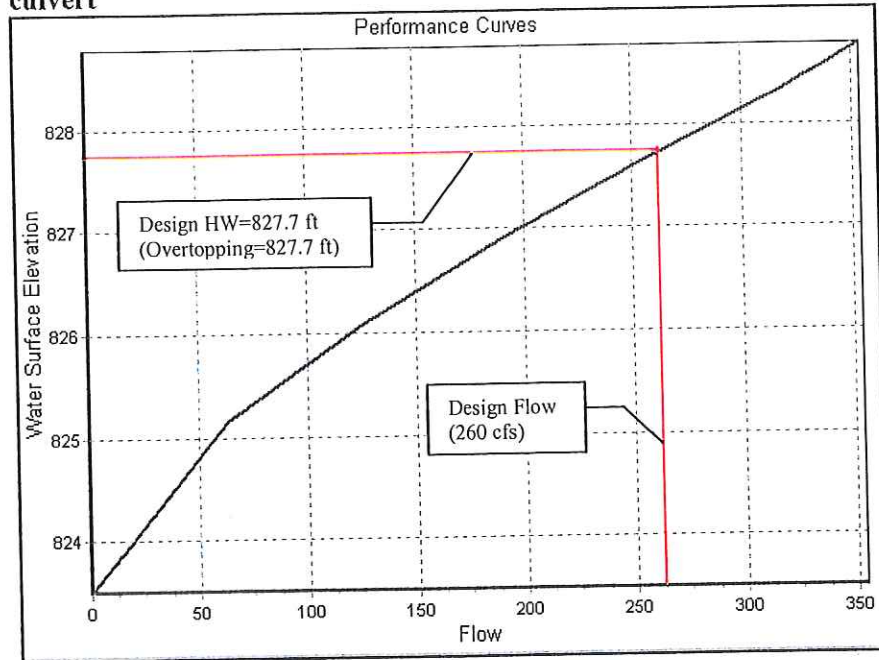
Pebblebrook Place Culverts

The triple 30-inch culverts at Pebblebrook Place require replacement, as they are undersized and prone to clogging. A key factor in sizing a replacement culvert is to select a design flow. Typically, the County would like to see culverts along regulated drains with significant drainage areas to have the capacity to handle the 100-year storm. At Pebblebrook Place, the existing conditions 100-year flow is 695 cfs. Because of the topography at this culvert crossing, a large clear span bridge would be required to provide this level of capacity. This would not be cost-effective given the limited amount of traffic on this residential street.

As mentioned previously, as this watershed develops, the new upstream detention facilities will significantly reduce flows at Pebblebrook Place. For example, once the Andover development is constructed, the 100-year flow at Pebblebrook Place will drop to 357 cfs. Under the full buildout of the watershed with detention scenario, the 100-year flow will drop to 260 cfs. To provide a reasonable culvert size (and cost), the design flow of 260 cfs was selected to size the culvert replacement at Pebblebrook Place.

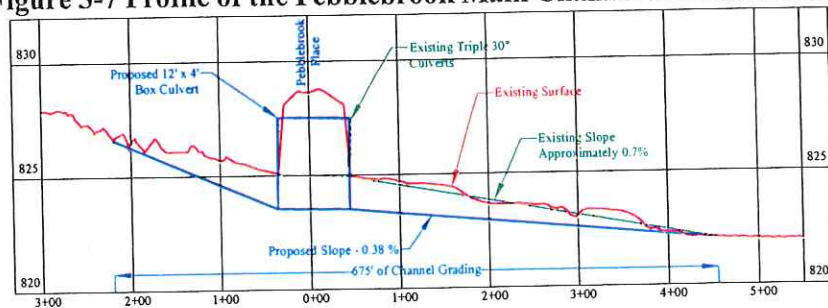
Box culverts were analyzed using the HY8 program to determine the culvert size necessary for a design flow of 260 cfs. The analysis found a 12-foot wide by 4-foot high concrete box culvert would be required to pass 260 cfs without roadway overtopping. Figure 3-6 illustrates the rating curve from HY8 showing the capacity of the proposed culvert.

Figure 3-6 HY8 performance curve of the proposed 12 foot by 4 foot culvert



The proposed culvert has a higher rise than the existing 30-inch culverts and would need to be approximately 1.5 feet lower to fit under the roadway. To accomplish this, the channel would need to be re-graded and lowered upstream and downstream of the culvert. This is possible, as the slopes of the stream in the vicinity of Pebblebrook Place are fairly steep. Figure 3-7 illustrates the impact of the proposed culvert on the channel profile. The installation of the culvert, as proposed, should not require any significant changes to the Pebblebrook Place roadway profile.

Figure 3-7 Profile of the Pebblebrook Main Channel at Pebblebrook Place



As shown in the profile, 675 feet of channel grading would be required. The channel grading allows the 12-foot by 4-foot concrete box culvert to be set low enough to allow adequate cover for the culvert wall thickness and pavement cross section. Until the upstream watershed is fully developed with detention, the 12-foot by 4-foot box culvert will provide less than 100-year capacity. Under existing conditions, the new culvert will nearly pass a 10-year storm (276 cfs vs. 260 cfs). After the Andover development is in place, the culvert will nearly pass a 50-year storm (271 cfs vs. 260 cfs). Hence, this culvert will

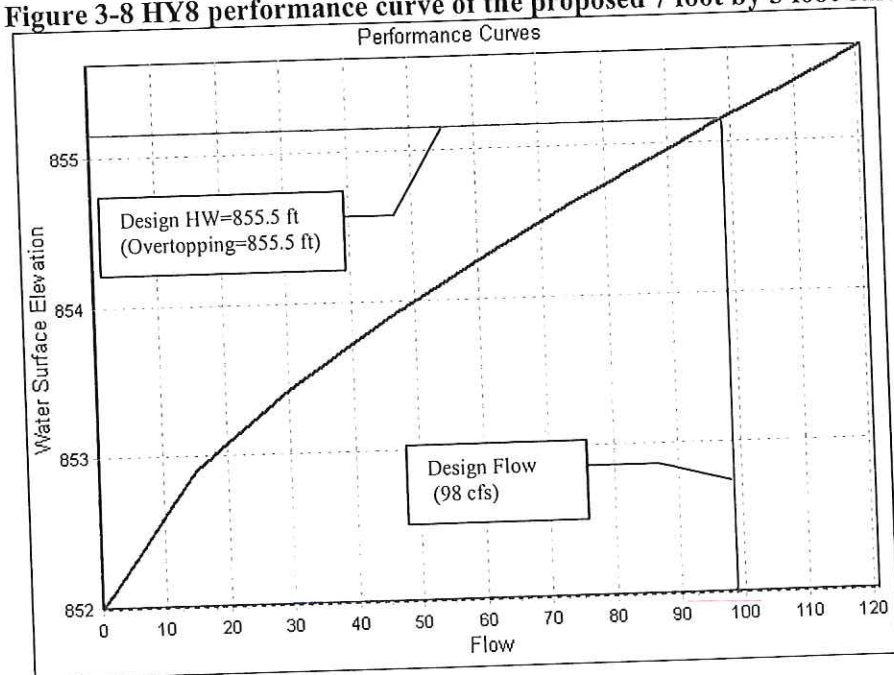
significantly improve performance under current conditions, and ultimately, will provide a 100-year level of protection. The 12-foot by 4-foot box culvert will be much less prone to the debris clogging problems that the existing triple 30-inch culverts experience.

Appendix A shows a detailed total construction cost opinion for the improvements at Pebblebrook Place. The preliminary opinion of total project cost for this improvement is \$132,000.

Moontown Road Improvements

The existing 36-inch culvert at Moontown Road needs to be replaced. The 100-year flow (as computed by the HEC-HMS model) was selected for design of this culvert. Given Andover is currently under construction, the 100-year flow with Andover detention in place was used as the basis for design. This flow is 98 cfs. Using the HY8 program, a 7-foot by 3-foot concrete culvert was found to provide adequate capacity to pass 98 cfs without overtopping. Figure 3-8 is a rating curve from HY8 showing the capacity of the proposed culvert.

Figure 3-8 HY8 performance curve of the proposed 7 foot by 3 foot culvert



In addition to the replacement of the culvert at Moontown Road, downstream channel improvements would be required to utilize the available capacity of the proposed culvert. Approximately 600 feet of channel grading/cleanout would need to be performed downstream of Moontown Road in order to eliminate adverse tailwater conditions for the new culvert.

Appendix A shows a detailed total construction cost opinion for the improvements at Moontown Road. The preliminary opinion of total project cost for this improvement is \$97,000.

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

Pebble Brook Drain, North Reconstruction

NOTICE

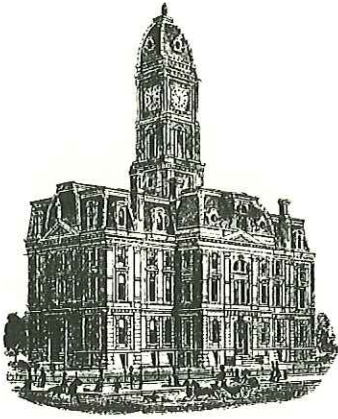
To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **Pebble Brook Drain, North Reconstruction** on **June 27, 2011**, at **9:15 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY



February 5, 2015

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

TO: Hamilton County Drainage Board

RE: Sly Run Drain
Pebble Brook Arm - North Reconstruction
Final Inspection Report

This is the Inspector's Final Report on the Sly Run Drain, Pebble Brook Arm - North Reconstruction, located in Section 33, Township 19 North, Range 4 East in Noblesville Township, Hamilton County, Indiana. This was a drainage reconstruction project completed by the City of Noblesville with approval of the Hamilton County Drainage Board.

The Pebble Brook Arm – North Reconstruction addressed a drainage problem with existing pipes under Pebble Brook Place as identified in the study done by Clark Dietz and presented to the Board on April 11, 2005. (HCSO Minutes Book 8, Pages 253 – 255).

At the June 27, 2011 meeting of the Hamilton County Drainage Board the public hearing for the Pebble Brook Arm - North Reconstruction was held by the Board, the Surveyor's Report dated April 26, 2011 was tabled by the Board at that meeting due to an objection filed by the City of Noblesville. (HCDB Minute Book 13, Pages 449 -453).

At the June 24, 2013 meeting of the Hamilton County Drainage Board the **tabled** hearing for the Sly Run Drain, Pebble Brook Arm – North reconstruction was approved, but the Board did not decide on who would pay what in terms of the overall project costs. As part of the approval "Altman made a motion to borrow against the General Drain Fund until we determine who pays what and get the project moving, seconded by Heirbrandt and approved unanimously.(HCDB Minute Book 15, Pages 69 -73).

After the approval of the hearing by the Board the City of Noblesville requested and was given permission to take over the project. (HCDB Minute Book 15, Pages 104 – 105)

The original engineer's estimate from Clark Dietz for the North reconstruction was \$231,700.00. After the City of Noblesville Engineer's Office took over the project the estimate was amended to \$294,691.00. The bid for the reconstruction was awarded in November 12, 2013 to Hoosier Pride Excavating by the City of Noblesville for the amount of \$243,968.25 (HCDB Minute Book 15, Page 248).

The total construction cost for the Sly Run Drain, Pebble Brook Arm – North Reconstruction, was \$264,650.64 according to records submitted from the City of Noblesville. This included a change order in the amount of \$20,682.39 submitted to the City of Noblesville to balance the contract quantities from the estimated quantities to the final actual constructed quantities to close out the contract.

There were costs accrued by the County for Engineering Services prior to the City taking over the project from the County and for Inspection Services during the reconstruction project. Those costs are listed below:

Engineering (Clark Dietz) -----	\$ 33,500.00
Inspection Services (Clark Dietz) -----	\$ 34,860.50
Permits -----	\$ 1,450.00
	\$ 69,810.50

These costs of \$69,810.50 were paid for by the County out of the Sly Run Drain fund prior to receiving the final bill from the City of Noblesville.

Total Project Cost -----	\$264,650.64
50/50 Cost Share -----	\$132,325.32
50/50 Cost Share (Engineering/Inspection Services/Permits) -----	\$ (-34,905.25)
Total -----	\$ 97,420.07

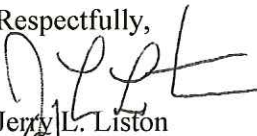
At the November 24, 2014 meeting of the Hamilton County Drainage Board the \$97,420.07 payment to the City of Noblesville was approved by the Board. (HCDB Minutes Book 16, Pages 53 & 54) A claim in the amount of \$97,420.07 in favor of the City of Noblesville was submitted to the Hamilton County Auditor on December 1, 2014 for payment of the County’s portion of the project.

The Office received on January 9, 2015 from the City of Noblesville Form E-1 stating that all expenses incurred for labor and material had been paid in full as per IC-36-9-27-82(b).

As of the date of this report, I hereby attest to and agree that the reconstruction was completed according to the specified plans and have approved such work under IC-36-9-27-82(a). All inspections have been completed and red line drawings were completed and submitted to the Hamilton County Surveyor’s Office.

I recommend the Board approve the drain’s construction as complete and acceptable.

Respectfully,



Jerry L. Liston
 New Construction Inspector
 Hamilton County Surveyor’s Office



November 5, 2014

Hamilton County Surveyor's Office
Attn: Kenton C. Ward, Hamilton County Surveyor (via email: Kenton.Ward@hamiltoncounty.in.gov)
1 Hamilton County Sq, Suite 188
Noblesville, IN 46060

RE: Pebble Brook Place Culvert (EN-211)
Invoice for Cost Share of Culvert Replacement

Mr. Ward,

The construction for the Pebble Brook Culvert replacement is complete. Final records and as-builts were provided to your office. Final quantities, change order, and original estimate were provided to Jerry Liston via email on September 30, 2014. The final project cost limited to the culvert structure was \$227,408.61. Per the 50/50 cost share, the Hamilton County Surveyor's Office share is \$113,704.30. This letter serves as an invoice for \$113,704.30 which is payable to the City of Noblesville.

Please contact me if you have any questions.

Thank you.

Sincerely,
CITY OF NOBLESVILLE

Jim Hellmann, PE, Project Manager
Ph: (317) 776-6330, jhellmann@noblesville.in.us

Enclosures:

1. Copy of Pay Estimate 3, which has final quantities (2 pages)
2. Copy of Change Order 2, which is the final change order to close out the contract (4 pages)
3. Copy of Engineer's Estimate 10/9/2014 (1 page)
4. Marked up copy of Engineer's estimate dated April 2011 by Clark Dietz. Estimate was dated and missing significant pay items (1 page)

CC: John Beery, PE – City Engineer (via email: jbeery@noblesville.in.us)

S:\Capital Projects\Pebblebrook Culvert Replacement\500\Ltr 2014-11-05 eng-HCSO Pebble Brook Culvert Cost Share Invoice EN-211.docx

16 South 10th Street, STE 155, Noblesville, Indiana | P: 317-776-6330 F: 317.776-6322 | cityofnoblesville.org

Progress Pay Estimate

PROJECT: Pebble Brook Place Culvert Replacement
 Contract No: EN-211

DATE: 5/19/2014
 PROGRESS ESTIMATE NO.: 3
 FROM: 4/26/2014
 TO: 5/19/2014

City Use Only	
Contract ID	EN-211
Dept	Engineering
Contractor	Hoosier Pride Excavating, Inc.
Inv #	3.00
Inv Amt	\$ 43,943.28
Inv Date	5/19/2014
Inv Desc	EN-211 CN 4/26/14 - 5/19/14
Enter Date	
Enter By	
Fund	Stormwater 309-001-125
Paid Date	
Approval	

CONTRACTOR:
 Company Hoosier Pride Excavating, Inc.
 Address 9150 N. Prairie Road
 City, State Zip Springport, IN 47386
 Ph#: 765-533-2010
 Contact David Cheesman
 Title: General Manager

OWNER REPRESENTATIVE
 Jim Hellmann, P.E.
 Project Manager

PROJECT MANAGER
 City of Noblesville
 16 S. 10th Street
 Noblesville, IN 46060
 317-77-6330

Item No.	Description	Total Estimated Quantity	Unit	Unit Price	Quantity Previous Estimates	Quantity This Estimate	Amount This Estimate	Quantity To Date	Amount To Date
BASE BID									
1	Temporary Erosion and Sediment Control	1	LSUM	\$2,500.00	1.00	-	\$ -	1.00	\$ 2,500.00
2	Maintaining Traffic	1	LSUM	\$2,500.00	1.00	-	\$ -	1.00	\$ 2,500.00
3	Construction Engineering	1	LSUM	\$3,500.00	1.00	-	\$ -	1.00	\$ 3,500.00
4	Mobilization And Demobilization	1	LSUM	\$6,500.00	1.00	-	\$ -	1.00	\$ 6,500.00
5	Clearing	1	LSUM	\$1,300.00	1.00	-	\$ -	1.00	\$ 1,300.00
6	Temporary Road, #53 Stone w/ Excavation and Removal	222	TON	\$28.00	178.84	152.72	\$ 4,276.16	331.56	\$ 9,283.68
7	Tempory Concrete Traffic Barrier	150	LFT	\$27.00	150.00	-	\$ -	150.00	\$ 4,050.00
8	Temporary Traffic Control Drum	40	EA	\$27.00	40.00	-	\$ -	40.00	\$ 1,080.00
9	Barricade, Type III-B	48	LFT	\$14.00	48.00	-	\$ -	48.00	\$ 672.00
10	Maintaining Sanitary Sewer Service	1	LSUM	\$6,500.00	1.00	-	\$ -	1.00	\$ 6,500.00
11	Structure, Reinforced Concrete, Box Sections, 12' x 5', w/ Structure Backfill	72	LFT	\$2,011.35	72.00	-	\$ -	72.00	\$ 144,817.20
12	Riprap, Class 1	306	TON	\$40.00	98.16	54.84	\$ 2,193.60	153.00	\$ 6,120.00
13	Geotextile for Riprap	153	SYS	\$3.00	153.00	-	\$ -	153.00	\$ 459.00
14	Sanitary Manhole, A, 4' Dia.	1	EA	\$1,680.00	1.00	-	\$ -	1.00	\$ 1,680.00
15	Sanitary Manhole, B, 4' Dia. (Outside Drop)	1	EA	\$3,100.00	1.00	-	\$ -	1.00	\$ 3,100.00
16	PIPE, PVC, SDR-26, 8 IN, Sanitary Sewer w/ Flowable Fill Backfill	140	LFT	\$72.68	175.00	(13.00)	\$ (944.84)	162.00	\$ 11,774.16
17	PIPE, PVC, SDR-26, 6 IN, Sanitary Sewer w/ Flowable Fill Backfill	45	LFT	\$72.68	45.00	69.00	\$ 5,014.92	114.00	\$ 8,285.52
18	Pipe, Underdrain, Circular, 6 IN, Double Wall	76	LFT	\$8.00	76.00	-	\$ -	76.00	\$ 608.00
19	Curb and Gutter, Concrete, Type I (Roll)	60	LFT	\$50.00	290.00	(53.50)	\$ (2,675.00)	236.50	\$ 11,825.00
20	Concrete Road Patch, 7", Class A	162	SYS	\$29.25	162.00	(162.00)	\$ (4,738.50)	-	\$ -
21	Cold Weather Concrete Pouring (Undistributed)	29	CYS	\$30.00	-	-	\$ -	-	\$ -
22	Linear Channel Grading	272	LFT	\$22.00	272.00	-	\$ -	272.00	\$ 5,984.00
23	Sidewalk, Concrete, 4" (Undistributed)	3	SYS	\$75.00	41.00	-	\$ -	41.00	\$ 3,075.00
24	Compacted #53 Stone (Undistributed)	20	TON	\$18.00	-	-	\$ -	-	\$ -
25	Mobilization for Seeding	2.0	EA	\$250.00	-	2.00	\$ 500.00	2.00	\$ 500.00
26	Seeding and Restoration, Type U	1,259.0	SYS	\$0.50	-	1,259.00	\$ 629.50	1,259.00	\$ 629.50
27	Erosion Control Blanket	1,259.0	SYS	\$1.55	-	1,259.00	\$ 1,951.45	1,259.00	\$ 1,951.45
28	Seeding and Restoration, Type Native Plants for Stream	710.0	SYS	\$1.10	-	440.00	\$ 484.00	440.00	\$ 484.00
29	Permenant Turf Reinforcement Mat	710.0	SYS	\$11.00	-	440.00	\$ 4,840.00	440.00	\$ 4,840.00
30	Benchmark on Wingwall, Elevation	1.0	EA	\$1,000.00	-	1.00	\$ 1,000.00	1.00	\$ 1,000.00
31	Wood Safety Railing	104	LFT	\$36.45	-	107.42	\$ 3,915.46	107.42	\$ 3,915.46
32	No. 2 Stone, Construction Entrance (Undistributed)	30	TON	\$18.00	-	-	\$ -	-	\$ -
33	Sediment Bag (Undistributed)	1	EA	\$300.00	1.00	-	\$ -	1.00	\$ 300.00


Item No.	Description	Total Estimated Quantity	Unit	Unit Price	Quantity Previous Estimates	Quantity This Estimate	Amount This Estimate	Quantity To Date	Amount To Date
33	Sediment Bag (Undistributed)	1	EA	\$300.00	1.00	-	\$ -	1.00	\$ 300.00
34	Rock Check Dam (Undistributed)	20	LFT	\$16.00	-	-	\$ -	-	\$ -
CO1.1	Forest Park Pedestrian Bridge over SR19 End Bent	1	LSUM	\$8,810.00	1.00	-	\$ -	1.00	\$ 8,810.00
CO2.1	Road Patch, Asphalt	169.34	SYS	\$37.09	-	169.34	\$ 6,280.82	169.34	\$ 6,280.82
CO2.2	Riprap, Revelement	111.50	TON	\$29.00	-	111.50	\$ 3,233.50	111.50	\$ 3,233.50
CO2.3	Yard Repair (Sod)	1	LSUM	\$1,993.60	-	1.00	\$ 1,993.60	1.00	\$ 1,993.60
CO2.4	Irrigation Repair	1	LSUM	\$2,450.50	-	1.00	\$ 2,450.50	1.00	\$ 2,450.50
CO2.5	Sand (to cover Gas Line)	10.76	TON	\$14.76	-	10.76	\$ 158.82	10.76	\$ 158.82
CO2.6	Water Grass	18.25	HOURS	\$60.00	-	18.25	\$ 1,095.00	18.25	\$ 1,095.00
CO2.7	Repair Stone Landscaping	1	LSUM	\$204.43	-	1.00	\$ 204.43	1.00	\$ 204.43

THIS ESTIMATE		TO DATE	
TOTAL:	\$ 31,863.42	TOTAL:	\$ 273,460.64
DEDUCTIONS:	\$ -12,079.86	DEDUCTIONS:	
AMOUNT DUE:	\$ 43,943.28	NET DUE:	\$ 273,460.64
		% Complete	100%
DEDUCTIONS			
	PREVIOUS ESTIMATES	THIS ESTIMATE	TO DATE
Retainage	\$ 12,079.86	\$ (12,079.86)	\$ -

Contract Price		
Date	Description	Price
11/12/2013	Original Contract	\$ 243,968.25
2/6/2014	Change Order 1 (Forest Park Pedestrian Bridge over SR19 End Bent)	\$ 8,810.00
Pending	Change Order 2	\$ 20,682.39
TOTAL		\$ 273,460.64

Pay Estimate	Amount	Date
Pay Est 1	\$ 44,497.05	3/25/2014
Pay Est 2	\$ 185,020.31	5/13/2014
Pay Est 3	\$ 43,943.28	Pending
	\$ 273,460.64	

Approval of Progress Estimate

	Contractor	Owner Representative / Project Manager
Signature		
Printed	David Cheesman	James J. Hellmann
Title	General Manager	Project Manager
Date	9-24-14	

Change Order



Change Order No: 2

Project: Pebble Brook Culvert Replacement

Contract Number: EN-211

Description / Justification

Change order is to balance the contract quantities from the estimated quantities to the final actual constructed quantities, to close out the contract, and release retainage to the contractor. See attached page for details of new pay items and pay items with a change of 15% from planned to actual quantities.

Change to Contract Price:

Original Contract Price	\$ 243,968.25
Net Changes from Previous Change Orders	\$ 8,810.00
Contract Price prior to this Change Order	\$ 252,778.25
Net Change of this Change Order	\$ 20,682.39
Contract Price with all Change orders	\$ 273,460.64

Change to Contract Time

None

Requested By:

Hoosier Pride Excavating, Inc.
Ron Brown or David Cheesman

Recommended By:

Noblesville Department of Engineering
Jim Hellmann

4-24-14

Date

_____ Date

Approved By:

City of Noblesville Board of Public Works & Safety

John Ditslear, Mayor

Lawrence Stork, Member

Jack Martin, Member

Attest:

Clerk-Treasurer

Janet S. Jaros

_____ Date

PROJECT: Pebble Brook Place Culvert Replacement

Change Order 2

Contract No: EN-211

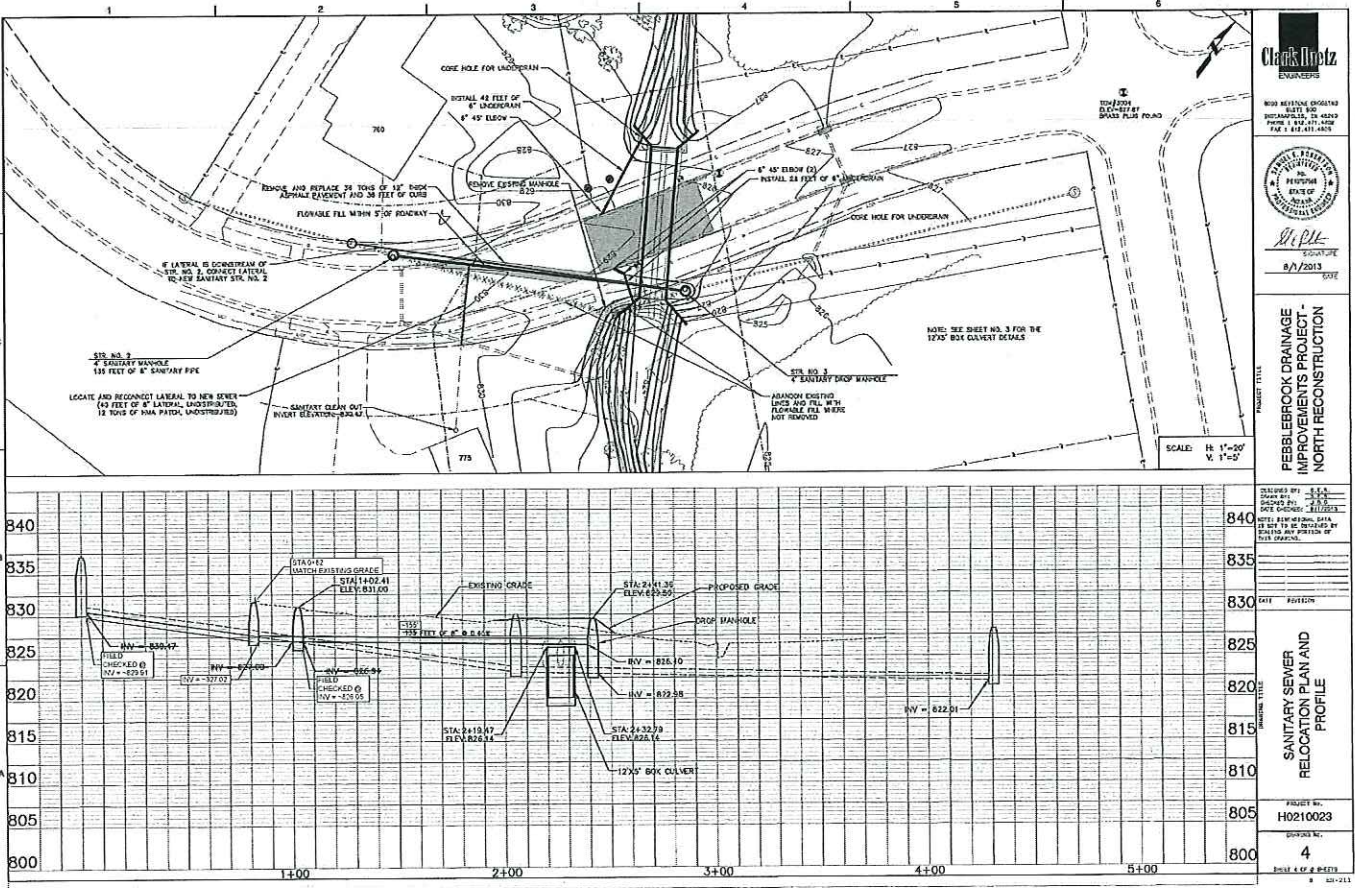
Summary of Pay Items with a change of 15% between estimated and actual quantities

Item No.	Description	Total Estimated Quantity	Unit	Unit Price	Quantity To Date	Net Change, Quantity	Net Change, Percent	Net Change, Cost
BASE BID								
6	Temporary Road, #53 Stone w/ Excavation and Removal	222.00	TON	\$28.00	331.56	109.56	49.4%	\$ 3,067.68
12	Riprap, Class 1	306.00	TON	\$40.00	153.00	(153.00)	-50.0%	\$ (6,120.00)
16	PIPE, PVC, SDR-26, 8 IN, Sanitary Sewer w/ Flowable Fill Backfill	140.00	LFT	\$72.68	162.00	22.00	15.7%	\$ 1,598.96
17	PIPE, PVC, SDR-26, 6 IN, Sanitary Sewer w/ Flowable Fill Backfill	45.00	LFT	\$72.68	114.00	69.00	153.3%	\$ 5,014.92
19	Curb and Gutter, Concrete, Type I (Roll)	60.00	LFT	\$50.00	236.50	176.50	294.2%	\$ 8,825.00
20	Concrete Road Patch, 7", Class A	162.00	SYS	\$29.25	-	(162.00)	-100.0%	\$ (4,738.50)
23	Sidewalk, Concrete, 4" (Undistributed)	3.00	SYS	\$75.00	41.00	38.00	1266.7%	\$ 2,850.00
CO2.1	Road Patch, Asphalt	-	SYS	\$37.09	169.34	169.34		\$ 6,280.82
CO2.2	Riprap, Revetment	-	TON	\$29.00	111.50	111.50		\$ 3,233.50
CO2.3	Yard Repair (Sod)	-	LSUM	\$1,993.60	1.00	1.00		\$ 1,993.60
CO2.4	Irrigation Repair	-	LSUM	\$2,450.50	1.00	1.00		\$ 2,450.50
CO2.5	Sand (to cover Gas Line)	-	TON	\$14.76	10.76	10.76		\$ 158.82
CO2.6	Water Grass	-	HOURS	\$60.00	18.25	18.25		\$ 1,095.00
CO2.7	Repair Stone Landscaping	-	LSUM	\$204.43	1.00	1.00		\$ 204.43

Reasons for Change

GENERAL NOTE: Designed location for STR 1 (Sanitary Manhole) had to be moved upstream because sanitary line would have conflicted with box culvert. The flow line elevation indicated on the plan was lower than actual elevation at STR 1 in field. The sewer had to be intercepted at an elevation so the sewer could clear over the new box culvert. The new sanitary main was higher than the lateral connections, so laterals had to be reran until grade was met. Per original plan, the lateral for 760 Pebble Brook was not thought to be affected, but moving STR 1 upstream made it part of the reconstruction area. Therefore the lateral to 760 Pebble Brook Place had to be replaced and 775 Pebble Brook Place went from a partial lateral replacement to a full lateral replacement because the new sewer was above the prior lateral grades. Reconstructed laterals were in established well-manicured front yards with irrigation systems which required full restoration. Reconstruction of the lateral required additional sidewalk and curbs needing repaired, as well as increased number of patches and area of patches.

- Item 6 Significant cold weather and snow resulted in additional maintenance to maintain traffic. Repairs after snow plowing. (Culvert built half at a time with one lane of traffic open.)
- 12 Related to item CO2.2, reduced amount of this item and added item CO2.2
- 16 Refer to General Note. Additional quantity required because of relocated STR 1
- 17 Refer to General Note. Additional quantity required because of relocated STR 1
- 19 Refer to General Note. Additional quantity required because of relocated STR 1
- 20 Due to multiple patch areas and the existing roadway being asphalt, patch was changed to asphalt. See item CO2.1
- 23 Refer to General Note. Additional quantity required because of relocated STR 1
- CO2.1 Refer to General Note and Item 20 notes
- CO2.2 Refer to Note for Item 12.
- CO2.3 Repair front front yards from lateral construction.
- CO2.4 Repair front front yards from lateral construction.
- CO2.5 Sanitary lateral cross close a gas main. Gas company required sand between gas main and sanitary because large aggregate can damage gas line.
- CO2.6 Watering required to establish sod. Hourly rate includes labor rate, labor burden, truck, pump, and generator to run pump.
- CO2.7 Lateral construction impacted landscaping at 775 Pebble Brook.



Clark Ditzel
ENGINEERS

1800 WESTINGHOUSE DRIVE
SUITE 800
INDIANAPOLIS, IN 46240
PHONE 317.477.4200
FAX 317.477.4205

REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA
NO. 12533

W. P. Clark
SIGNATURE
8/1/2013
DATE

PROJECT TITLE
**REBEL CREEK DRAINAGE
IMPROVEMENTS PROJECT -
NORTH RECONSTRUCTION**

SCALE: H: 1"=20'
V: 1"=5'

DESIGNED BY: L. J. ...
CHECKED BY: ...
DATE CHECKED: ...

NOTES:
1. SEE SHEET NO. 3 FOR THE 12x12 BOX CULVERT DETAILS

CITY: ...

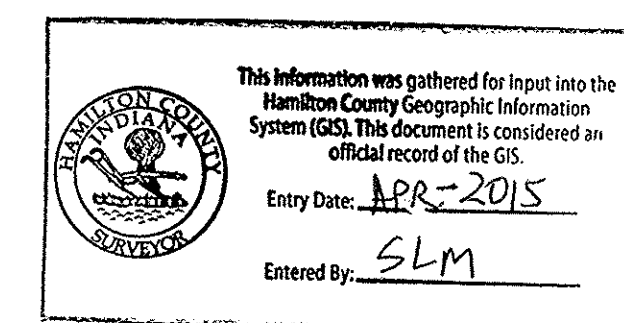
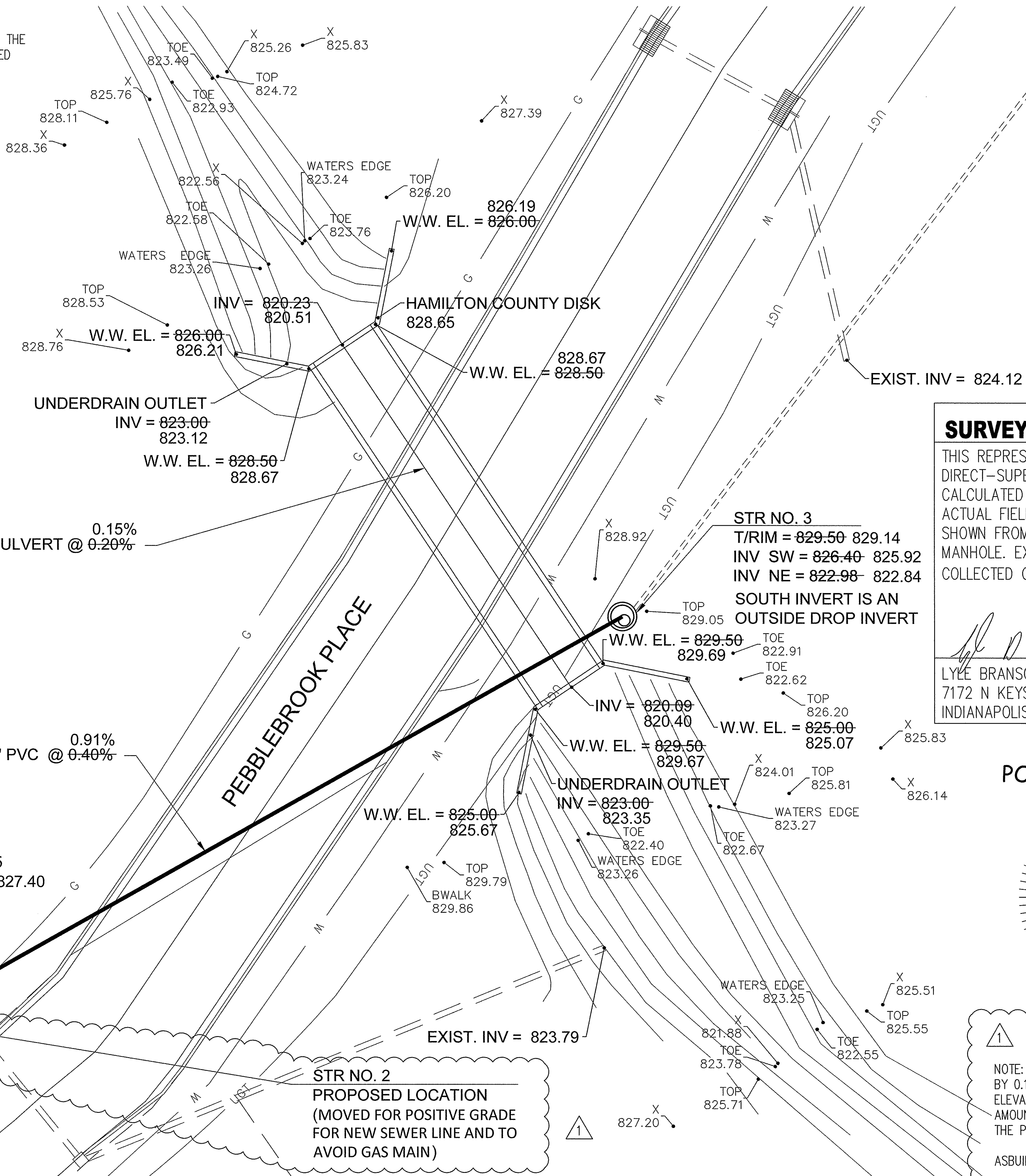
**SANITARY SEWER
RELOCATION PLAN AND
PROFILE**

PROJECT NO.:
H0210023

SHEET NO.:
4

DATE: 8/1/2013

1 ON 5/23/2014 ADDED A NOTE THAT EXPLAINS THE DATUM DIFFERENCE AND SHOWED THE PROPOSED LOCATION FOR STR NO 2.



SURVEYORS CERTIFICATE

THIS REPRESENTS A SURVEY COMPLETED UNDER MY DIRECT-SUPERVISION. PIPE PERCENTAGE IS A CALCULATED VALUE AND MIGHT NOT REPRESENT ACTUAL FIELD CONDITIONS. STORM PIPE DISTANCE IS SHOWN FROM CENTERLINE MANHOLE TO CENTERLINE MANHOLE. EXIST. STORM INVERTS SHOWN WHERE COLLECTED ON 5/15/2014.

Lyle Branson

LYLE BRANSON
7172 N KEYSTONE AVE#J
INDIANAPOLIS, IN 46203

DATE: 05/15/14
LS#930007
STATE OF INDIANA

POST CONSTRUCTION



SURVEY

NOTE: ASBUILT ELEVATIONS SHOWN HAVE BEEN RAISED BY 0.13 FEET FROM TBM 3006 DUE TO REVISED ELEVATION BROUGHT IN FROM STATION #104 HCSO. THE AMOUNT OF ERROR BETWEEN TBM 3004, PROVIDED ON THE PLANS, AND THE REVISED DATUM IS 0.21 FEET.

ASBUILT ELEV MINUS 0.13 FEET = PLAN DATUM

72 LF OF 12'X5' BOX CULVERT @ 0.20%

162 135-LF OF 8" PVC @ 0.40%

STR NO. 2
T/RIM = 831.00- 833.05
INV NE+SW = 826.94- 827.40

STR NO. 3
T/RIM = 829.50- 829.14
INV SW = 826.40- 825.92
INV NE = 822.98- 822.84
SOUTH INVERT IS AN OUTSIDE DROP INVERT

STR NO. 2
PROPOSED LOCATION
(MOVED FOR POSITIVE GRADE FOR NEW SEWER LINE AND TO AVOID GAS MAIN)

<p>Drawn : DLM Check : LDB Date : 5/15/2014 Scale : 1" = 20'</p>	<p>PAGE 1 OF 1 Job # 14-002</p>
<p>Prepared for: Hoosier Pride Excavating, Inc. 9150 North Prairie Road Springport, IN 47386</p>	
<p>PEBBLEBROOK PLACE POST CONSTRUCTION SURVEY</p>	
<p>Prepared by: Survey Tech PC. 7172 North Keystone Ave #J Indianapolis, IN, 46240</p>	