

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*

March 30, 2017

To: Hamilton County Drainage Board

Re: Williams Creek Drain, Shadow Wood Arm

Attached is a petition filed by Pulte Homes of Indiana, LLC., along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for Shadow Wood Arm, Williams Creek Drain to be located in Clay Township. I have reviewed the submittals and petition and have found each to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway, and be of public utility and that the costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited. The drain will consist of the following:

12" RCP	682 ft.	36" RCP	24 ft.
15" RCP	790 ft.	6" SSD	5,870 ft.
18" RCP	310 ft.	12" HDPE	16 ft.
21" RCP	606 ft.	Open Ditch	485 ft.
24" RCP	206 ft.		

The total length of the drain will be 8,989 feet.

The open ditch listed above is part of the drainage design for the 146<sup>th</sup> Street Improvement Project, but is being installed with this project, as to provide an outlet for this site. The open ditch will be in 146<sup>th</sup> Street ROW, owned by Hamilton County Highway Department, parcel 17-09-21-00-00-001.000, owned by CB Children Partnership, and parcel 17-09-21-00-16-073.000, owned by Saddle Creek Homeowners Association, Inc.

The detention basin (Lake 1) located in Common Area D is not to be considered part of the regulated drain. Basin maintenance assumed by the Drainage Board shall only include the inlets and outlet as part of the regulated drain. The maintenance of the detention basin (Lake 1) such as sediment removal and erosion control along the banks, mowing, aquatic vegetation maintenance and control, and anything required per the Storm Water Quality Maintenance and Operations Manual will be the responsibility of the Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the pond was designed will be retained. Thereby, allowing no fill or easement encroachments.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs, those main lines in front/rear yards, and those in common areas. Only the main SSD lines as described below, which are located within the easement or right of way are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain. The portions of the SSD which will be regulated and maintained are as follows:

Curbline SSD in Streets:

Carlow Run  
Gum Drive  
Burl Way  
Fir Court  
Lacewood Court

Front/Rear Yard SSDs:

Rear yard lots 1 & 2 from Str. 628 west to riser  
Rear yard lots 2 & 3 from Str. 628 south-east to riser  
Rear yard lot 3 from Str. 627 north-west to riser  
Rear yard lot 4 from Str. 627 south to riser  
Rear yard lot 5 from Str. 625 north to riser  
Rear yard lot 6 & 7 from Str. 625 south to riser  
Rear yard lots 8 to 10 from Str. 603 north to riser  
Rear yard lot 11 & 29 from Str. 607 to Str. 608  
Rear yard lots 11 to 14 from Str. 608 north to riser  
Rear yard lots 14 & 15 from Str. 636 south to riser  
Rear yard lot 16 from Str. 636 north to riser  
Front yard lots 17 to 20 from Str. 614 running parallel to curbline SSD to riser  
Front yard lots 21 to 24 from Str. 615 running parallel to curbline SSD to riser  
Front yard lots 25 to 29 from Str. 609 running parallel to curbline SSD to riser  
Common Area B and lots 20 to 21 from existing Str. north to riser

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I also believe that no damages will result to landowners by the construction of this drain. I recommend a maintenance assessment of \$65.00 per lot, \$10.00 per acre for common areas, with \$65.00 minimum, and \$10.00 per acre for roadways. With this assessment the total annual assessment for this drain will be \$2,337.70.

The petitioner has submitted surety for the proposed drain at this time. The sureties which are in the form of a Performance Bond are as follows:

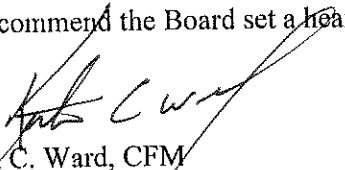
Agent: Hartford Fire Insurance Company  
Date: March 14, 2017  
Number: 59BSBHP7874  
For: Storm Sewers  
Amount: \$370,668.00

I believe this proposed drain meets the requirements for Urban Drain Classification as set out in IC 36-9-27-67 to 69. Therefore, this drain shall be designated as an Urban Drain.

The 55' x 560' off-site easement across parcel 17-09-21-00-00-001.000, was a condemnation order recorded as instrument number 2016010931. The easement on parcel 17-09-21-00-16-073.000, is per the recorded plat for Saddle Creek Section 12, as instrument number 2003122041.

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement request. The request will be for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for Shadow Wood as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for May 22, 2017.



Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/pll

STATE OF INDIANA )  
 )  
COUNTY OF HAMILTON )

**FILED**  
**FEB 02 2017**

TO: HAMILTON COUNTY DRAINAGE BOARD  
% Hamilton County Surveyor  
One Hamilton County Square, Suite 188  
Noblesville, IN. 46060-2230

OFFICE OF HAMILTON COUNTY SURVEYOR

In the matter of Shadow Wood Subdivision, Section  
Drain Petition.

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in Shadow Wood, a subdivision in Hamilton County, Indiana. The general route of such drainage shall be in existing easements and along public roads as shown in the plans on file in the Surveyor's Office.

Petitioner believes that the cost, damages and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land likely to be benefited thereby. Petitioner believes the proposed improvements will:

- (a) improve public health
- (b) benefit a public street
- (c) be of public utility

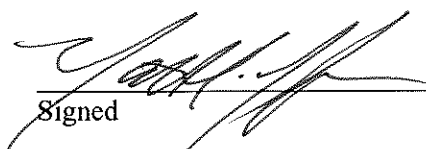
Petitioner agrees to pay the cost of construction of the drainage system and requests periodic maintenance assessments by the Board thereafter.

The Petitioner also agrees to the following:

1. To provide the Drainage Board a Performance Bond or Non-Revocable Letter of Credit for the portion of the drainage system which will be made a regulated drain. The bond will be in the amount of 120% of the Engineer's estimate. The bond will be in effect until construction of 100% of the system is completed and so certified by the Engineer.
2. The Petitioner shall retain an Engineer throughout the construction phase. At completion of the project the Petitioner's Engineer shall certify that the drainage system which is to be maintained as a regulated drain has been constructed as per construction plans.
3. The Petitioner agrees to request in writing to the County Surveyor any changes from the approved plan and must receive written authorization from the County Surveyor prior to implementation of the change. All changes shall be documented and given to the Surveyor to be placed in the Drain file.
4. The Petitioner shall instruct his Engineer to provide a reproducible print on a 24" x 36" Mylar of the final design of the Drainage System. This shall be submitted to the County Surveyor prior to the release of the Performance Bond.
5. The Petitioner shall comply with the Erosion Control Plan as specified on the construction plans. Failure to comply with the Erosion Control Plan shall be determined by the Board as being an obstruction to the drainage system. The County Surveyor shall immediately install or repair the needed measures at Petitioners cost as per IC 36-9-27-46.

The Petitioner further requests that the Drain be classified as an Urban Drain as per IC 36-9-27-69(d).

**RECORDED OWNER(S) OF LAND INVOLVED**

  
\_\_\_\_\_  
Signed  
Matthew Lohmeyer, Pulte Homes  
\_\_\_\_\_  
Printed Name  
1/18/17  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Signed  
\_\_\_\_\_  
Printed Name  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Signed  
\_\_\_\_\_  
Printed Name  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Signed  
\_\_\_\_\_  
Printed Name  
\_\_\_\_\_  
Date

FINDINGS AND ORDER

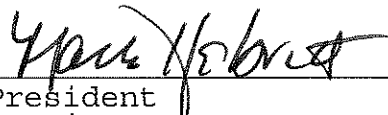
CONCERNING THE MAINTENANCE OF THE

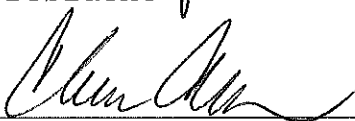
Williams Creek Drain, Shadow Wood Arm

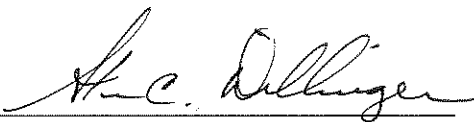
On this 22<sup>nd</sup> day of May, 2017, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the *Williams Creek Drain, Shadow Wood Arm*.

Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessment will be less than the benefits to the landowners and issues this order declaring that this Maintenance Fund be established.

HAMILTON COUNTY DRAINAGE BOARD

  
\_\_\_\_\_  
President

  
\_\_\_\_\_  
Member

  
\_\_\_\_\_  
Member

Attest:

  
\_\_\_\_\_  
Executive Secretary

Pulte Homes  
 Project: Shadow Wood  
 HWC Project No. 2016-056  
 Date: 03/10/17



**HWC**  
 ENGINEERING

PERFORMANCE BOND - ENGINEERS ESTIMATE						
	ITEM NAME:	UNIT	QUANTITY	UNIT COST	AMOUNT	
STORM SEWER	12" RCP	LF	682	\$ 30.00	\$ 20,460.00	
	15" RCP	LF	790	\$ 35.00	\$ 27,650.00	
	18" RCP	LF	310	\$ 40.00	\$ 12,400.00	
	21" RCP	LF	606	\$ 45.00	\$ 27,270.00	
	24" RCP	LF	206	\$ 50.00	\$ 10,300.00	
	36" RCP	LF	24	\$ 65.00	\$ 1,560.00	
	12" END SECTION	EA	1	\$ 800.00	\$ 800.00	
	21" END SECTION	EA	1	\$ 1,100.00	\$ 1,100.00	
	24" END SECTION	EA	1	\$ 1,200.00	\$ 1,200.00	
	36" END SECTION	EA	1	\$ 1,900.00	\$ 1,900.00	
	12" TRASH GUARD	EA	1	\$ 600.00	\$ 600.00	
	21" TRASH GUARD	EA	1	\$ 700.00	\$ 700.00	
	24" TRASH GUARD	EA	1	\$ 750.00	\$ 750.00	
	36" TRASH GUARD	EA	1	\$ 850.00	\$ 850.00	
	MANHOLE, STANDARD	EA	15	\$ 3,000.00	\$ 45,000.00	
	STANDARD INLET	EA	15	\$ 2,000.00	\$ 30,000.00	
	DOUBLE INLET	EA	15	\$ 4,000.00	\$ 60,000.00	
	CURB SSD	LF	3565	\$ 10.00	\$ 35,650.00	
	SWALE SSD	LF	2210	\$ 10.00	\$ 22,100.00	
	SSD LATERALS	EA	29	\$ 100.00	\$ 2,900.00	
	GRANULAR BACKFILL	TON	475	\$ 12.00	\$ 5,700.00	
	<b>STORM SEWER SUBTOTAL:</b>					<b>\$ 308,890.00</b>
	<b>STORM SEWER PERFORMANCE BOND (120%):</b>					<b>\$ 370,668.00</b>
MONUMENTATION	LOT CORNERS	EA	119	\$ 35.00	\$ 4,165.00	
	CENTERLINE	EA	14	\$ 200.00	\$ 2,800.00	
	CONCRETE 4X4 PROPERTY CORNERS	EA	11	\$ 500.00	\$ 5,500.00	
<b>MONUMENTATION SUBTOTAL:</b>					<b>\$ 12,465.00</b>	
<b>MONUMENTATION PERFORMANCE BOND (120%):</b>					<b>\$ 14,958.00</b>	

This Engineer's Estimate is an opinion of probable construction cost made on the basis of Engineer's experience and represent Engineer's judgement as a qualified professional generally familiar with the industry. However, since Engineer has no control over the cost of materials, equipment, labor or market conditions, Engineer cannot guarantee that actual construction cost will not vary from this Engineer's Estimate.

*Brandon T. Burke*

Brandon T. Burke, P.E.  
 HWC Engineering



**PERFORMANCE BOND**

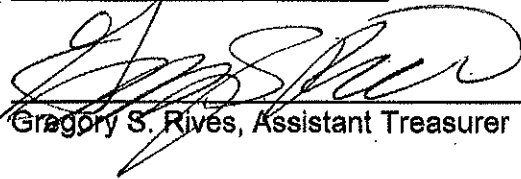
KNOW ALL MEN BY THESE PRESENTS, that Pulte Homes of Indiana, LLC of 11590 N. Meridian, Suite 530, Carmel IN 46032 as Principal, and Hartford Fire Insurance Company a corporation organized and existing under the laws of the State of Connecticut and authorized to transact business in the state of Indiana, as Surety, are held and firmly bound unto the Hamilton County Board of Commissioners, One Hamilton County Square, Noblesville IN 46060 as Obligee, in the penal sum of fourteen thousand nine hundred fifty eight and 00/100 (\$14,958.00) for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has agreed to construct and or install Monumentation in the Shadow Wood Section 1 subdivision.

NOW, THEREFORE, the condition of this obligation is such that if said Principal shall well and truly perform said work in accordance with said standards, then this obligation shall be void, otherwise to remain in full force and effect.

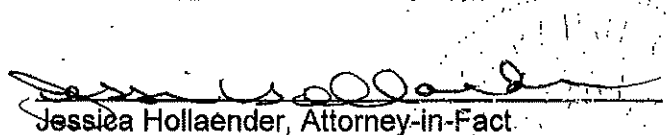
Signed, sealed and dated this 14<sup>th</sup> of March, 2017.

Pulte Homes of Indiana, LLC



Gregory S. Rives, Assistant Treasurer

Hartford Fire Insurance Company



Jessica Hollaender, Attorney-in-Fact



# POWER OF ATTORNEY

Direct Inquiries/Claims to:  
**THE HARTFORD**  
 BOND, T-12  
 One Hartford Plaza  
 Hartford, Connecticut 06155  
 Bond.Claims@thehartford.com  
 call: 888-266-3488 or fax: 860-757-5835

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Name: WELLS FARGO INS SERVICE USA INC  
 Agency Code: 59-300168

- Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of Unlimited :  
 Jessica Hollaender, Jeremy Polk of PHOENIX, Arizona

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on May 6, 2015 the Companies have caused these presents to be signed by its Senior Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



*John Gray*  
 John Gray, Assistant Secretary

*M. Ross Fisher*  
 M. Ross Fisher, Senior Vice President

STATE OF CONNECTICUT }  
 COUNTY OF HARTFORD } ss. Hartford

On this 11th day of January, 2016, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Senior Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.



*Nora M. Stranko*  
 Nora M. Stranko  
 Notary Public

My Commission Expires March 31, 2018

**CERTIFICATE**

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of 03/14/2017  
 Signed and sealed at the City of Hartford.



*Kevin Heckman*  
 Kevin Heckman, Assistant Vice President

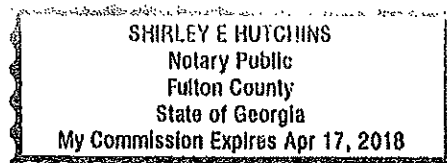
**ACKNOWLEDGEMENT BY PRINCIPAL**

STATE OF GEORGIA )  
  )ss.  
COUNTY OF FULTON )

This record was acknowledged before me on March 15, 2017, by Gregory S. Rives, Assistant Treasurer, of Pulte Homes of Indiana LLC, who appeared before me and is personally known to me.

WITNESS my hand and official seal.

  
Signature of Notary Public



*Shirley E. Hutchins*  
Notary Public State of Georgia  
My Commission Expires: April 17, 2018

**PERFORMANCE BOND**

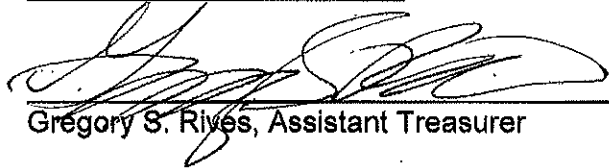
KNOW ALL MEN BY THESE PRESENTS, that Pulte Homes of Indiana, LLC of 11590 N. Meridian, Suite 530, Carmel IN 46032 as Principal, and Hartford Fire Insurance Company a corporation organized and existing under the laws of the State of Connecticut and authorized to transact business in the state of Indiana, as Surety, are held and firmly bound unto the Hamilton County Board of Commissioners, One Hamilton County Square, Noblesville IN 46060 as Obligee, in the penal sum of three hundred seventy thousand six hundred sixty eight and 00/100 (\$370,668.00) for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has agreed to construct storm sewer improvements in the Shadow Wood subdivision.

NOW, THEREFORE, the condition of this obligation is such that if said Principal shall well and truly perform said work in accordance with said standards, then this obligation shall be void, otherwise to remain in full force and effect.

Signed, sealed and dated this 14<sup>th</sup> of March, 2017.

Pulte Homes of Indiana, LLC



Gregory S. Rives, Assistant Treasurer

Hartford Fire Insurance Company



Jessica Hollaender, Attorney-in-Fact

# POWER OF ATTORNEY

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call: 888-266-3488 or fax: 860-757-5835

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Agency Name: WELLS FARGO INS SERVICE USA INC  
Agency Code: 59-300168

- Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
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- Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of Unlimited :  
Jessica Hollaender, Jeremy Polk of PHOENIX, Arizona

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on May 6, 2015 the Companies have caused these presents to be signed by its Senior Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



*John Gray*

John Gray, Assistant Secretary

*M. Ross Fisher*

M. Ross Fisher, Senior Vice President

STATE OF CONNECTICUT }  
COUNTY OF HARTFORD } ss. Hartford

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CERTIFICATE

*Nora M. Stranko*

Nora M. Stranko  
Notary Public

My Commission Expires March 31, 2018

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of 03/14/2017  
Signed and sealed at the City of Hartford.



*Kevin Heckman*

Kevin Heckman, Assistant Vice President

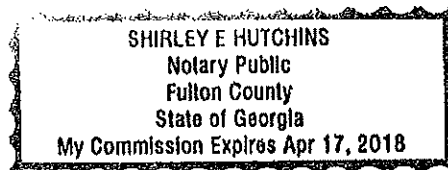
**ACKNOWLEDGEMENT BY PRINCIPAL**

STATE OF GEORGIA )  
                          )ss.  
COUNTY OF FULTON )

This record was acknowledged before me on March 15, 2017, by Gregory S. Rives, Assistant Treasurer, of Pulte Homes of Indiana LLC, who appeared before me and is personally known to me.

WITNESS my hand and official seal.

  
\_\_\_\_\_  
Signature of Notary Public



*Shirley E. Hutchins*  
*Notary Public State of Georgia*  
*My Commission Expires: April 17, 2018*

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD  
IN THE MATTER OF

Williams Creek Drain, Shadow Wood Arm

NOTICE

To Whom It May Concern and: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Williams Creek Drain, Shadow Wood Arm on May 22, 2017 at 9:05 A.M. in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana, and which construction and maintenance reports of the Surveyor and the Schedule of Assessments made 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

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD  
IN THE MATTER OF THE

Williams Creek Drain, Shadow Wood Arm

NOTICE

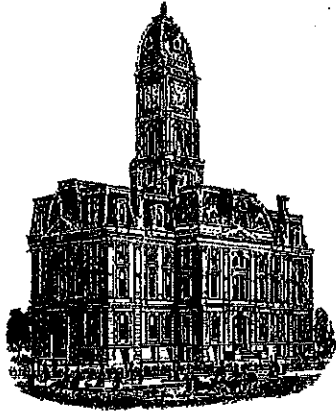
Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **May 22 2017** has issued an order adopting the Schedule of Assessments, filed the same and made public announcement thereof at the hearing and ordered publication. If judicial review of the findings and order of the Board is not requested pursuant to Article Eight of this code within twenty (20) days from the date of this publication, the order shall be conclusive.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

KLW



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

February 13, 2018

Re: Williams Creek Drain: Shadow Wood

Attached are as-built, certificate of completion & compliance, and other information for Shadow wood. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated March 30, 2017. The report was approved by the Board at the hearing held May 22, 2017. (See Drainage Board Minutes Book 17, Pages 360-362)  
The changes are as follows: the 12" RCP was shortened from 682 feet to 650 feet. The 15" RCP was shortened from 790 feet to 787 feet. The 18" RCP was shortened from 311 feet to 310 feet. The 21" RCP was shortened from 606 feet to 604 feet. The 24" RCP was shortened from 207 feet to 206 feet. The 36" RCP was not installed as the existing 36" RCP under Towne Road will be addressed with the 146<sup>th</sup> Road improvement project. The 12" HDPE was shortened from 16 feet to 10 feet. The open ditch was lengthened from 485 feet to 487 feet. The 6" SSD was shortened from 5, 870 feet to 5,788 feet. The length of the drain due to the changes described above is now **8,845 feet**.

The non-enforcement was approved by the Board at its meeting on May 22, 2017 and recorded under instrument #2017049042.

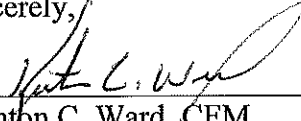
The following sureties were guaranteed by Hartford Fire Insurance Company and released by the Board on its February 12, 2018 meeting.

Bond-LC No:59BSBHP7874  
Amount: \$370,668.00  
For: Storm Sewers & SSD  
Issue Date: March 14, 2017



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

Sincerely,

A handwritten signature in black ink, appearing to read "Kenton C. Ward". The signature is written in a cursive style with a large, sweeping initial "K".

---

Kenton C. Ward, CFM  
Hamilton County Surveyor

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Shadow Wood Subdivision (near 146th & Towne Road, Carmel)

I hereby certify that:

1. I am a Registered Land Surveyor or Engineer in the State of Indiana.
2. I am familiar with the plans and specifications for the above referenced subdivision.
3. I have personally observed and supervised the completion of the drainage facilities for the above referenced subdivision.
4. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been installed and completed in conformity with all plans and specifications.
5. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been correctly represented on the Record Drawings, Digital Record Drawings and the Structure Data Spreadsheet.

Signature:  Date: 12/18/2017

Type or Print Name: Luke A. Jahn

Business Address: 135 N. Pennsylvania Street  
Suite #2800

Telephone Number: 317-981-1269



INDIANA REGISTRATION NUMBER

PS #20900171

OVERALL GENERAL PROJECT NOTES

1. NOT ALL GAS, POWER, OR TELEPHONE LINES... 2. SAFETY PROVISIONS FOR THE WORK SHALL BE IN FULL COMPLIANCE...

TEMPORARY WALKWAYS, AND TRAFFIC CONTROL DURING CONSTRUCTION... 3. WHERE PROPERTY MARKERS, SECTION CORNERS...

13. STRUCTURAL FILL SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR... 14. THE CITY OF CARMEL REQUIRES THAT DEVELOPERS PROVIDE INDOT APPROVED...

CARMEL GENERAL NOTES:

1. UTILITY RELOCATIONS REQUIRED BY THE PROJECT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER... 2. NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT...

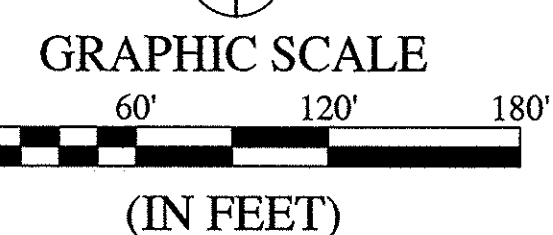


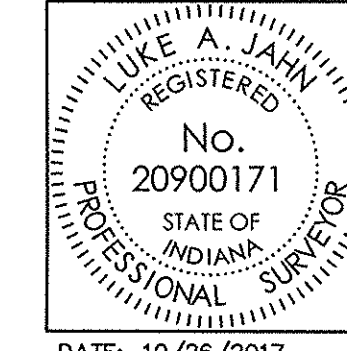
Table listing symbols for street cross sections, typical swale section details, wet pond shelf plantings, emergency spillway detail, and storm sewer for public.

LEGEND:

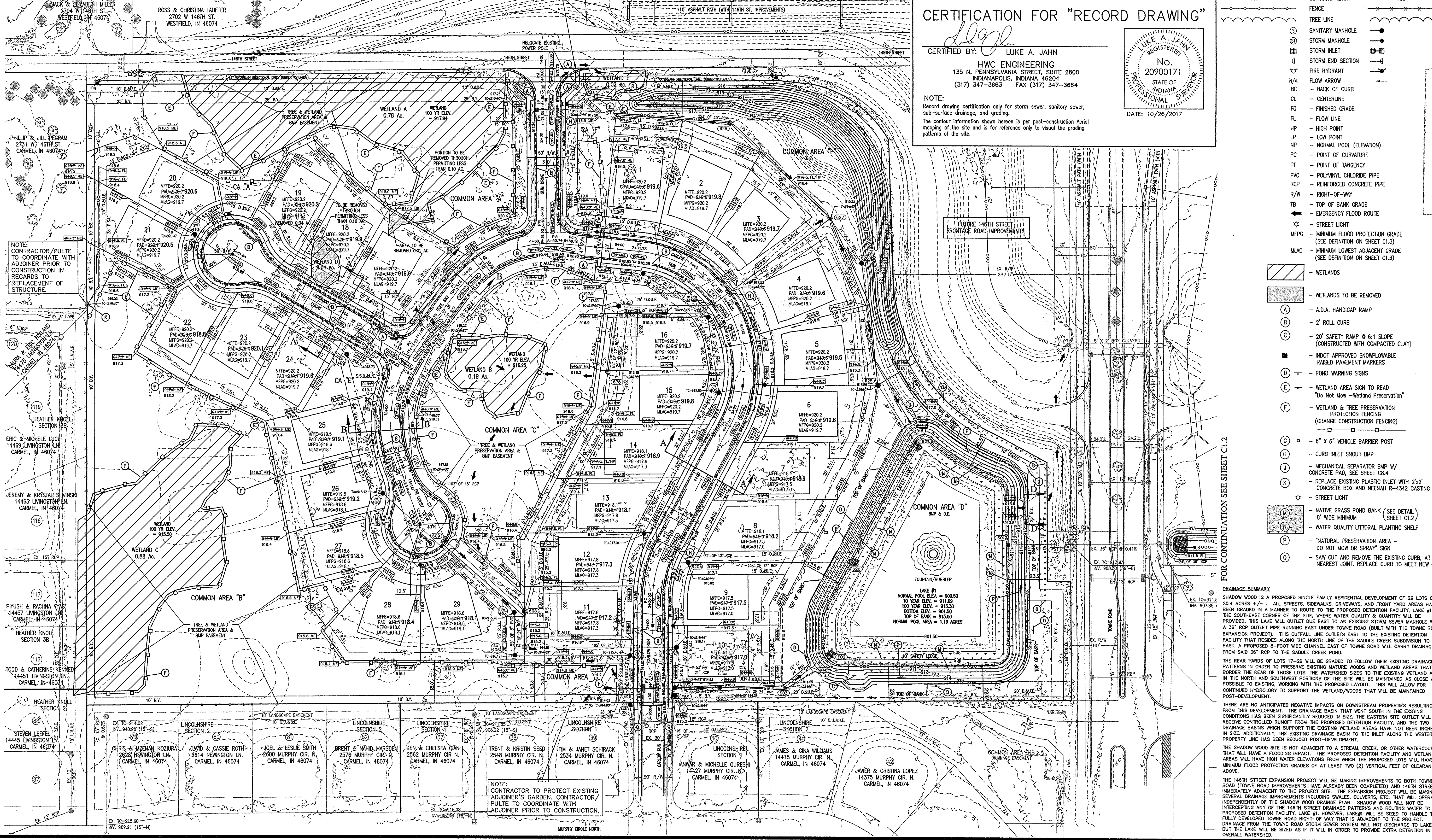
Legend table with columns for EXISTING and PROPOSED, listing symbols for right-of-way line, easement line, setback line, centerline, swale, drainage, sewer, storm sewer, culvert, water main, contour, fence, tree line, manholes, inlets, hydrant, flow arrows, curbs, grades, wetlands, ramps, signs, and preservation areas.

CERTIFICATION FOR "RECORD DRAWING"

CERTIFIED BY: LUKE A. JAHN, HWC ENGINEERING, 135 N. PENNSYLVANIA STREET, SUITE 2800, INDIANAPOLIS, INDIANA 46204...



FOR CONTINUATION SEE SHEET C1.2



DRAINAGE SUMMARY: SHADOW WOOD IS A PROPOSED SINGLE FAMILY RESIDENTIAL DEVELOPMENT OF 29 LOTS OVER 20.4 ACRES +/-...

THERE ARE NO ANTICIPATED NEGATIVE IMPACTS ON DOWNSTREAM PROPERTIES RESULTING FROM THIS DEVELOPMENT...

THE SHADOW WOOD SITE IS NOT ADJACENT TO A STREAM, CREEK, OR OTHER WATERCOURSE THAT WILL HAVE A FLOODING IMPACT...

REVISIONS table with columns for DATE, DESCRIPTION, and BY, listing revisions on 01/31/17, 06/14/17, and 10/26/17.

HWC ENGINEERING logo and contact information: INDIANAPOLIS - TERRE HAUTE, LAFAYETTE - MUNCIE - NEW ALBANY.

SHADOW WOOD DEVELOPMENT PLAN

Professional Engineer seal for Luke A. Jahn, No. 20900171, State of Indiana, and a 'DRAWN BY' stamp for DC.

C1.1 DEVELOPMENT PLAN

File Name: W:\Pulte Homes\2016-056-B Pulte-Shadow Wood\Design\CAD\16056-B Storm Plan-Asbuilt.dwg, Layout: C6.0 By: LJohn Plot Date: Nov 03, 2017 Plot Time: 3:05pm

**LEGEND:**

EXISTING	PROPOSED
RIGHT-OF-WAY LINE	RIGHT-OF-WAY LINE
EASEMENT LINE	EASEMENT LINE
SETBACK LINE	SETBACK LINE
CENTERLINE	CENTERLINE
SWALE / FLOWLINE	SWALE / FLOWLINE
SUBSURFACE DRAIN	SUBSURFACE DRAIN
SANITARY SEWER	SANITARY SEWER
STORM SEWER	STORM SEWER
STORM CULVERT	STORM CULVERT
WATER MAIN	WATER MAIN
SANITARY MANHOLE	SANITARY MANHOLE
STORM MANHOLE	STORM MANHOLE
STORM INLET	STORM INLET
STORM END SECTION	STORM END SECTION
FIRE HYDRANT	FIRE HYDRANT
PROFILLED PIPELINE	PROFILLED PIPELINE
EX - EXISTING	INV - INVERT ELEVATION
INV - INVERT ELEVATION	MH - MANHOLE
MH - MANHOLE	RCP - REINFORCED CONCRETE PIPE
RCP - REINFORCED CONCRETE PIPE	TC - TOP OF CASTING GRADE
TC - TOP OF CASTING GRADE	

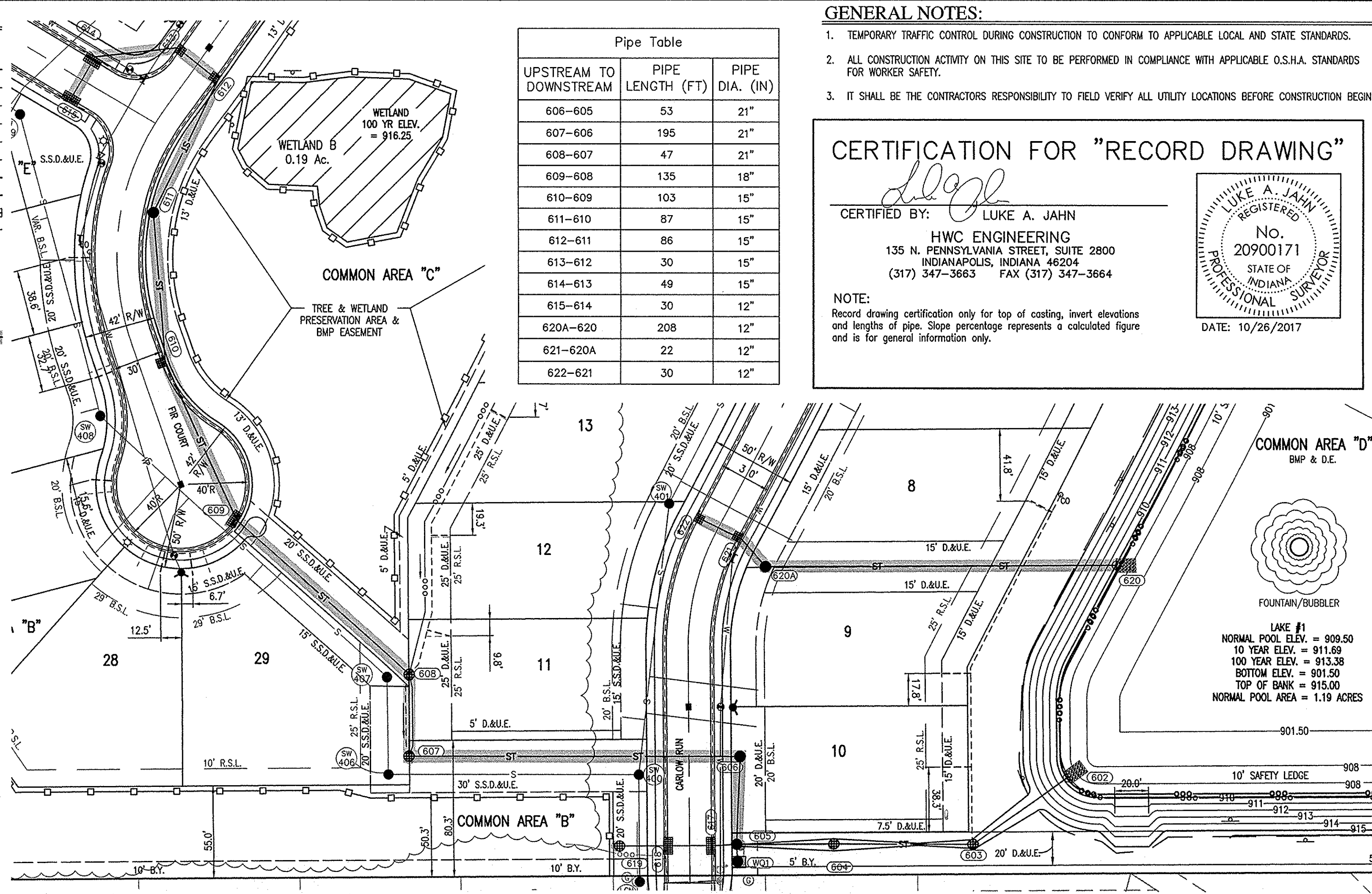
**BENCHMARK INFORMATION:**

ORIGINATING BENCHMARK:  
DEPARTMENT OF NATURAL RESOURCES BRASS TABLET, STAMPED "LEE 7 AZI", SET IN THE TOP OF A CONCRETE POST, 0.1' BELOW THE GROUND, LOCATED APPROXIMATELY 1,415 FEET NORTH OF W. 151ST STREET, ON THE WEST SIDE OF TOWNE ROAD.  
ELEVATION: 923.74 (NAVD 88)

TBM #1:  
NORTH RIM OF SANITARY MANHOLE APPROXIMATELY 30 FEET WEST OF CARLOW RUN AND APPROXIMATELY 162 FEET NORTH OF MURPHY CIRCLE NORTH IN LINCONSHIRE SECTION 1.  
ELEVATION: 916.03 (NAVD 88)

TBM #2:  
NORTH RIM OF STORM MANHOLE ON THE EAST SIDE OF TOWNE ROAD, APPROXIMATELY 57 FEET NORTH OF CHARIOTS WHISPER DRIVE IN SADDLE CREEK, SECTION 12.  
ELEVATION: 915.55 (NAVD 88)

HORIZONTAL INFORMATION:  
STATE PLANE COORDINATES—EAST ZONE, NAD83



**Pipe Table**

UPSTREAM TO DOWNSTREAM	PIPE LENGTH (FT)	PIPE DIA. (IN)
606-605	53	21"
607-606	195	21"
608-607	47	21"
609-608	135	18"
610-609	103	15"
611-610	87	15"
612-611	86	15"
613-612	30	15"
614-613	49	15"
615-614	30	12"
620A-620	208	12"
621-620A	22	12"
622-621	30	12"

**GENERAL NOTES:**

- TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.

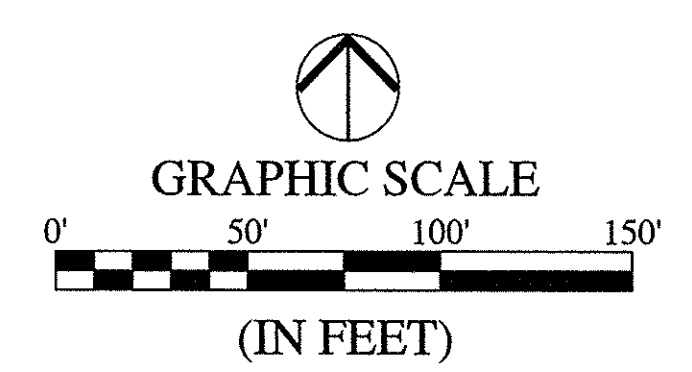
**CERTIFICATION FOR "RECORD DRAWING"**

CERTIFIED BY: LUKE A. JAHN

HWC ENGINEERING  
135 N. PENNSYLVANIA STREET, SUITE 2800  
INDIANAPOLIS, INDIANA 46204  
(317) 347-3663 FAX (317) 347-3664

NOTE: Record drawing certification only for top of casting, invert elevations and lengths of pipe. Slope percentage represents a calculated figure and is for general information only.

DATE: 10/26/2017



**STORM SEWER STRUCTURE DATA TABLE**

STR. #	TC	INV. IN (ELEV.)	INV. OUT (ELEV.)	PIPE IN DIA. (INCH)	PIPE OUT DIA. (INCH)	PIPE IN MATERIAL	PIPE OUT MATERIAL	STR. & CASTING TYPE	DETAIL REFERENCE
605	915.12	910.30 (N) 910.85 (W)	910.10 (E)	21"	24"	RCP	RCP	DIVERSION MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.4
606	915.96	910.70 (W)	910.60 (S)	21"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
607	914.80	911.20 (N)	911.10 (E)	21"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET C8.5
608	914.80	911.40 (NW)	911.30 (S)	18"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET C8.5
609	916.61	912.00 (NW)	911.80 (SE)	15"	18"	RCP	RCP	DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
610	917.88	912.50 (N)	912.40 (SE)	15"	15"	RCP	RCP	2' X 2' BOX INLET NEENAH R-3501-TR	SEE DETAIL SHEET C8.2
611	918.66	912.95 (NE)	912.85 (S)	15"	15"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
612	918.15	913.35 (NW)	913.25 (SW)	15"	15"	RCP	RCP	2' X 2' BOX INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
613	918.15	913.55 (W)	913.45 (SE)	15"	15"	RCP	RCP	2' X 2' BOX INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
614	917.96	913.90 (SW)	913.70 (E)	12"	15"	RCP	RCP	DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
615	917.96		914.00 (NE)	12"		RCP		DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
620	911.25	910.00 (W)		12"		RCP		END SECTION	SEE DETAIL SHEET C8.2
620A	916.90	912.00 (NW)	911.90 (E)	12"	12"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
621	916.53	912.30 (NW)	912.20 (SE)	12"	12"	RCP	RCP	4' DIA. MANHOLE W/SUMP NEENAH R-3501-TR	SEE DETAIL SHEET C8.5
622	916.53		912.50 (SE)	12"		RCP		2' X 2' BOX INLET NEENAH R-3501-TL	SEE DETAIL SHEET C8.2

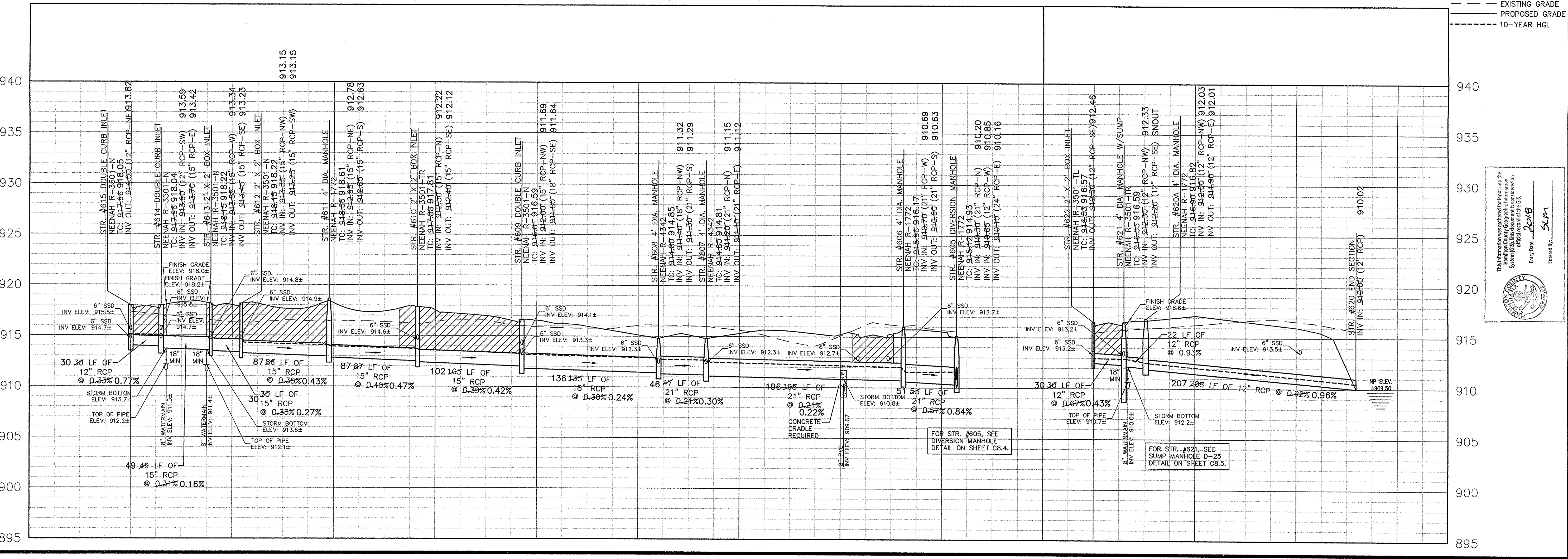
**REVISIONS**

DATE	DESCRIPTION	BY
01/31/17	REVISED PER TAC COMMENTS	DC/KS
09/19/17	RECORD DRAWINGS	SD



**STORM PROFILE**

VERTICAL SCALE: 1" = 5'  
HORIZONTAL SCALE: 1" = 50'



**SHADOW WOOD**

**STORM SEWER PLAN & PROFILE**

GRANULAR BACKFILL PER CITY OF CARMEL TRENCH DETAIL ON SHEET C8.3

EXISTING GRADE

PROPOSED GRADE

10-YEAR HGL

This information was published for digital use in the Hamilton County Geographic Information System (GIS) under the official record of the CO.

Entered By: *SLM*

DATE: 2018

**BRANDON T. BURR**  
REGISTERED PROFESSIONAL SURVEYOR  
No. 2075  
INDIANA PROFESSIONAL ENGINEER

DRAWN BY: DC

CHECKED BY: BB

DATE: DECEMBER 16, 2016

SCALE: AS SHOWN

JOB NUMBER: 2016-056-B

**C6.0**

STORM SEWER PLAN & PROFILE

© 2016

File Name: W:\Pulte Homes\2016-056-B-Pulte-Shadow Wood\Design\CA0\16056-B-Storm\_Plan-Asbuilt.dwg, Layout: C6.1  
Plot Date: Nov. 03, 2017  
Plot Time: 3:06pm  
By: L. Jahn

### LEGEND:

**EXISTING**

- RIGHT-OF-WAY LINE
- EASEMENT LINE
- SETBACK LINE
- CENTERLINE
- SWALE / FLOWLINE
- SUBSURFACE DRAIN
- SANITARY SEWER
- STORM SEWER
- STORM CULVERT
- WATER MAIN

**PROPOSED**

- SANITARY MANHOLE
- STORM MANHOLE
- STORM INLET
- STORM END SECTION
- FIRE HYDRANT
- PROFILED PIPELINE
- EX - EXISTING
- INV - INVERT ELEVATION
- MH - MANHOLE
- RCP - REINFORCED CONCRETE PIPE
- TC - TOP OF CASTING GRADE

### BENCHMARK INFORMATION:

ORIGINATING BENCHMARK:  
DEPARTMENT OF NATURAL RESOURCES BRASS TABLE, STAMPED "LEE 7 AZ", SET IN THE TOP OF A CONCRETE POST, 0.1' BELOW THE GROUND, LOCATED APPROXIMATELY 1,415 FEET NORTH OF W. 151ST STREET, ON THE WEST SIDE OF TOWNE ROAD.  
ELEVATION: 923.74 (NAVD 88)

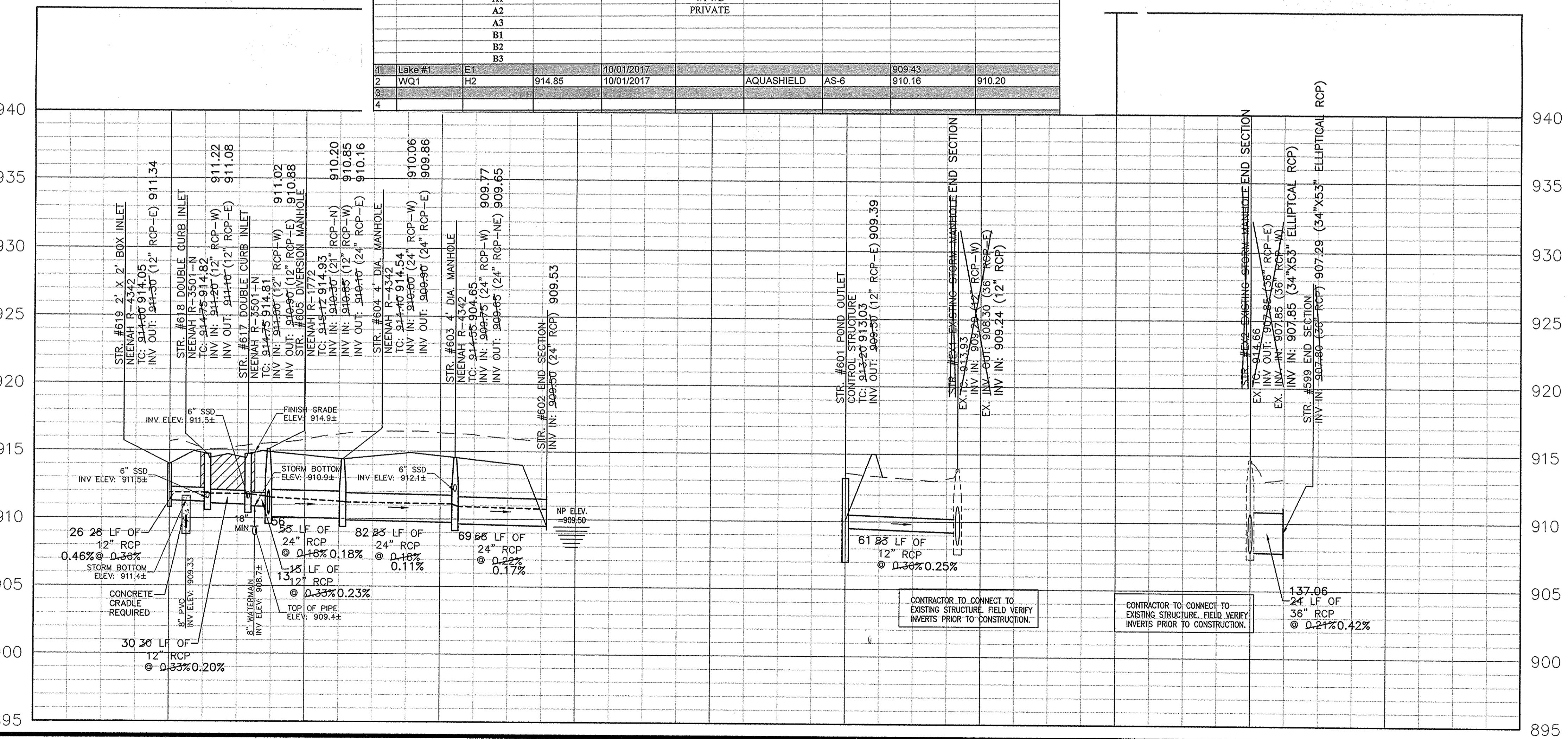
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ELEVATION: 915.55 (NAVD 88)

HORIZONTAL INFORMATION:  
STATE PLANE COORDINATES-EAST ZONE, NAD83

### STORM PROFILE

VERTICAL SCALE: 1" = 5'  
HORIZONTAL SCALE: 1" = 50'



LAKE #1	NORMAL POOL ELEV. = 909.50
	10 YEAR ELEV. = 911.69
	100 YEAR ELEV. = 913.38
	BOTTOM ELEV. = 901.50
	TOP OF BANK = 915.00
	NORMAL POOL AREA = 1.19 ACRES

LAKE #1	NORMAL POOL ELEV. = 909.50
	10 YEAR ELEV. = 911.69
	100 YEAR ELEV. = 913.38
	BOTTOM ELEV. = 901.50
	TOP OF BANK = 915.00
	NORMAL POOL AREA = 1.19 ACRES

10-YR HIGH WATER ELEV. = 909.47
100-YR HIGH WATER ELEV. = 910.06
TOP OF BANK ELEV. = 913.00

INSTR. # 2016010531
---------------------

NORMAL POOL ELEV. = 909.50
10 YEAR ELEV. = 911.69
100 YEAR ELEV. = 913.38
BOTTOM ELEV. = 901.50
TOP OF BANK = 915.00
NORMAL POOL AREA = 1.19 ACRES

UPSTREAM TO DOWNSTREAM	PIPE LENGTH (FT)	PIPE DIA. (IN)
601-EX1	83	12"
603-602	68	24"
604-603	83	24"
605-604	55	24"
617-605	15	12"
618-617	30	12"
619-618	28	12"
EX2-599	24	36"
605-WQ1	10	12"
WQ1-605	10	12"

STR. #	TC	INV. IN (ELEV.)	INV. OUT (ELEV.)	PIPE DIA. (INCH)	PIPE OUT DIA. (INCH)	PIPE MATERIAL	PIPE OUT MATERIAL	STR. & CASTING TYPE	DETAIL REFERENCE
599	911.22	907.80 (W)		36"		RCP		END SECTION	SEE DETAIL SHEET CB.2
601	913.20		909.50 (E)		12"		RCP	POND OUTLET CONTROL STRUCTURE	SEE DETAIL SHEET CB.4
602	911.83	909.50 (SW)		24"			RCP	END SECTION	SEE DETAIL SHEET CB.2
603	914.55	909.75 (W)	909.65 (NE)	24"	24"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET CB.5
604	914.40	910.00 (W)	909.90 (E)	24"	24"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET CB.5
605	915.12	910.30 (N) 910.85 (W)	910.10 (E)	21" 12"	24"	RCP	RCP	DIVERSION MANHOLE NEENAH R-1772	SEE DETAIL SHEET CB.4
617	914.75	911.00 (W)	910.90 (E)	12"	12"	RCP	RCP	DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET CB.2
618	914.75	911.20 (W)	911.10 (E)	12"	12"	RCP	RCP	DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET CB.2
619	914.00		911.30 (E)		12"		RCP	2' X 2' BOX INLET NEENAH R-4342	SEE DETAIL SHEET CB.2
EX1	913.93	909.20 (W)		12"			RCP	EXISTING STORM MANHOLE	
EX2	914.66		907.85 (E)		36"		RCP	EXISTING STORM MANHOLE	
WQ1	915.24	910.20 (N)	910.20 (N)	12"	12"	HDPE	HDPE	AQUA-SWIRL MANHOLE	SEE DETAIL SHEET CB.4
605	915.12	910.10 (S)	910.30 (S)	12"	12"	HDPE	HDPE	DIVERSION MANHOLE NEENAH R-1772	SEE DETAIL SHEET CB.4

**CERTIFICATION FOR "RECORD DRAWING"**

CERTIFIED BY: LUKE A. JAHN

HWC ENGINEERING  
135 N. PENNSYLVANIA STREET, SUITE 2800  
INDIANAPOLIS, INDIANA 46204  
(317) 347-3663 FAX (317) 347-3664

NOTE: Record drawing certification only for top of casting, invert elevations and lengths of pipe. Slope percentage represents a calculated figure and is for general information only.

DATE: 10/26/2017

SHADOW WOOD STORMWATER BMP

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC.

KNOW WHAT'S BELOW.  
CALL BEFORE YOU DIG!  
Call 811 or 800-382-5544 Before you Dig!

GRAPHIC SCALE  
0' 50' 100' 150'  
(IN FEET)

DATE	DESCRIPTION	BY
01/31/16	REVISED PER TAC COMMENTS	DC/KS
09/19/17	RECORD DRAWINGS	SD

**HWC ENGINEERING**

INDIANAPOLIS - TERRE HAUTE  
LAFAYETTE - MUNICIE - NEW ALBANY  
www.hwceengineering.com

**SHADOW WOOD STORM SEWER PLAN & PROFILE**

**GENERAL NOTES:**

- TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL EXISTING ELEVATIONS BEFORE CONSTRUCTION BEGINS.
- THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL CIRCUMSTANCES OR DIFFICULTY DURING CONSTRUCTION AND WILL REQUIRE PRIOR FIELD APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL. IN ADDITION TO SUPPLEMENTAL APPROVAL BY THE DESIGN ENGINEER, AN EXPLANATION OF ANY SUCH DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION. PRIOR TO BACKFILLING THE PIPE, THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.
- NO EARTH DISTURBING ACTIVITY MAY COMMENCE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.
- ALL STORMWATER DRAINAGE CASTINGS SHALL BE LABELED WITH ENVIRONMENTAL MESSAGING "DUMP NO WASTE"
- ALL CONCRETE PIPE JOINTS SHALL BE CONTINUOUS O-RING RUBBER GASKET CONFORMING TO ASTM C 443
- 18" OF VERTICAL SEPARATION MUST BE MAINTAINED FOR ALL UTILITY CROSSINGS.
- FOR STORM SEWER BACKFILL SPECIFICATIONS, REFER TO STORM SEWER TRENCH DETAIL STANDARD DRAWING 10-28 ON SHEET CB.3

INDIANAPOLIS, INDIANA REGISTERED PROFESSIONAL ENGINEER  
No. 100775  
J. B. BURTON

DRAWN BY: DC  
CHECKED BY: BB  
DATE: DECEMBER 16, 2016  
SCALE: AS SHOWN  
JOB NUMBER: 2016-056-B  
SHEET

**C6.1**  
STORM SEWER PLAN & PROFILE

© 2016

File Name: W:\Pulte Homes\2016-056-B-Pulte-Shadow Wood\Design\CAD\16056-B-Storm-Plan-As-built.dwg, Layout: C6.2  
 Plot Time: 3:08pm  
 Plot Date: Nov 03, 2017

**LEGEND:**

<b>EXISTING</b>	RIGHT-OF-WAY LINE	<b>PROPOSED</b>
---	EASEMENT LINE	---
---	SETBACK LINE	---
---	CENTERLINE	---
---	SWALE / FLOWLINE	---
---	SUBSURFACE DRAIN	---
---	SANITARY SEWER	---
---	STORM SEWER	---
---	STORM CULVERT	---
---	WATER MAIN	---
---	SANITARY MANHOLE	---
---	STORM MANHOLE	---
---	STORM INLET	---
---	STORM END SECTION	---
---	FIRE HYDRANT	---
---	PROFILED PIPELINE	---
---	EX - EXISTING	---
---	INV - INVERT ELEVATION	---
---	MH - MANHOLE	---
---	RCP - REINFORCED CONCRETE PIPE	---
---	TC - TOP OF CASTING GRADE	---

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**BENCHMARK INFORMATION:**

ORIGINATING BENCHMARK:  
 DEPARTMENT OF NATURAL RESOURCES BRASS TABLET, STAMPED "LEE 7 AZ1", SET IN THE TOP OF A CONCRETE POST, 0.1' BELOW THE GROUND, LOCATED APPROXIMATELY 1.415 FEET NORTH OF W. 151ST STREET, ON THE WEST SIDE OF TOWNE ROAD.

ELEVATION: 923.74 (NAVD 88)

TBM #1:  
 NORTH RIM OF SANITARY MANHOLE APPROXIMATELY 30 FEET WEST OF CARLOW RUN AND APPROXIMATELY 162 FEET NORTH OF MURPHY CIRCLE NORTH IN LINCOLNSHIRE SECTION 1.

ELEVATION: 916.03 (NAVD 88)

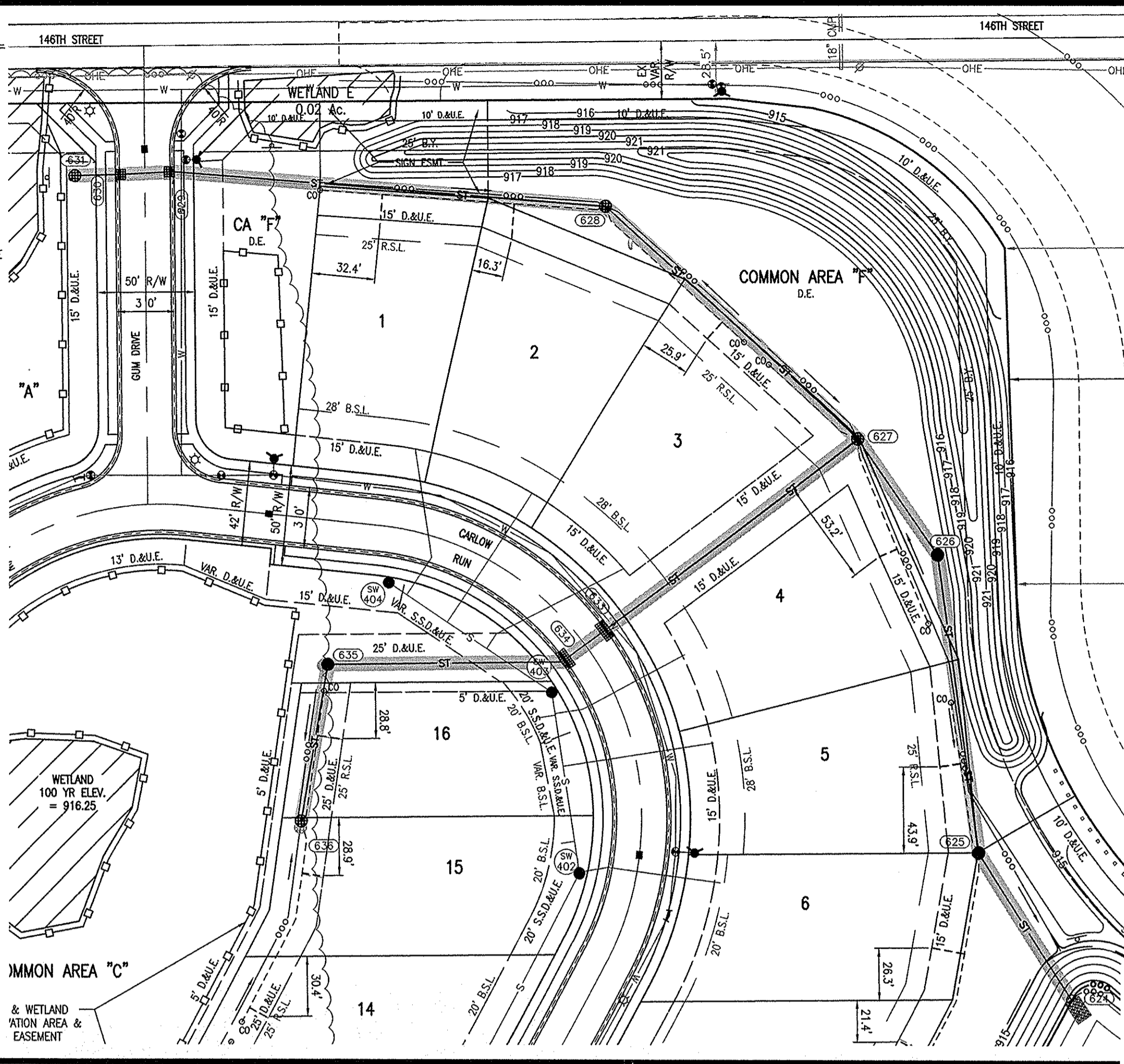
TBM #2:  
 NORTH RIM OF STORM MANHOLE ON THE EAST SIDE OF TOWNE ROAD, APPROXIMATELY 57 FEET NORTH OF CHARIOTS WHISPER DRIVE IN SADDLE CREEK, SECTION 12.

ELEVATION: 915.55 (NAVD 88)

**HORIZONTAL INFORMATION:**  
 STATE PLANE COORDINATES—EAST ZONE, NAD83

**Pipe Table**

UPSTREAM TO DOWNSTREAM	PIPE LENGTH (FT)	PIPE DIA. (IN)
625-624	87	21"
626-625	153	21"
627-626	71	21"
628-627	175	18"
629-628	223	15"
630-629	30	15"
631-630	22	15"
633-627	160	15"
634-633	30	12"
635-634	122	12"
636-635	84	12"



**STORM SEWER STRUCTURE DATA TABLE**

STR. #	TC	INV. IN (ELEV.)	INV. OUT (ELEV.)	PIPE IN DIA. (INCH)	PIPE OUT DIA. (INCH)	PIPE IN MATERIAL	PIPE OUT MATERIAL	STR. & CASTING TYPE	DETAIL REFERENCE
624	914.13	909.50 (NW)		21"		RCP		END SECTION	SEE DETAIL SHEET C8.2
625	916.70	909.90 (N)	909.80 (SE)	21"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
626	916.96	910.40 (NW)	910.30 (S)	21"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
627	915.30	910.80 (NW)	910.60 (SE)	18"	21"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET C8.5
628	915.25	911.50 (W)	911.25 (SE)	15"	18"	RCP	RCP	4' DIA. MANHOLE NEENAH R-4342	SEE DETAIL SHEET C8.5
629	917.33	913.00 (W)	912.90 (E)	15"	15"	RCP	RCP	4' DIA. MANHOLE W/SUMP NEENAH R-3501-N	SEE DETAIL SHEET C8.2
630	917.33	913.30 (W)	913.20 (E)	15"	15"	RCP	RCP	2' X 2' BOX INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
631	917.20		913.45 (E)		15"		RCP	2' X 2' BOX INLET NEENAH R-4342	SEE DETAIL SHEET C8.2
633	917.50	912.80 (SW)	912.60 (NE)	12"	15"	RCP	RCP	DOUBLE CURB INLET W/SUMP NEENAH R-3501-N	SEE DETAIL SHEET C8.2
634	917.50	913.10 (W)	913.00 (NE)	12"	12"	RCP	RCP	DOUBLE CURB INLET NEENAH R-3501-N	SEE DETAIL SHEET C8.2
635	917.05	913.50 (S)	913.50 (E)	12"	12"	RCP	RCP	4' DIA. MANHOLE NEENAH R-1772	SEE DETAIL SHEET C8.5
636	915.90		913.75 (N)		12"		RCP	2' X 2' BOX INLET NEENAH R-4342	SEE DETAIL SHEET C8.2

**GRAPHIC SCALE**  
 0' 50' 100' 150'  
 (IN FEET)

**INDIANA 811**  
 KNOW WHAT'S BELOW.  
 CALL BEFORE YOU DIG!  
 Call 811 or 800-382-5544 Before you Dig!

**Lake #1**  
 NORMAL POOL ELEV. = 909.50  
 10 YEAR ELEV. = 911.69  
 100 YEAR ELEV. = 913.38  
 BOTTOM ELEV. = 901.50  
 TOP OF BANK = 915.00  
 NORMAL POOL AREA = 1.19 ACRES

This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.  
 Entry Date: 8/16  
 Entered By: JLM

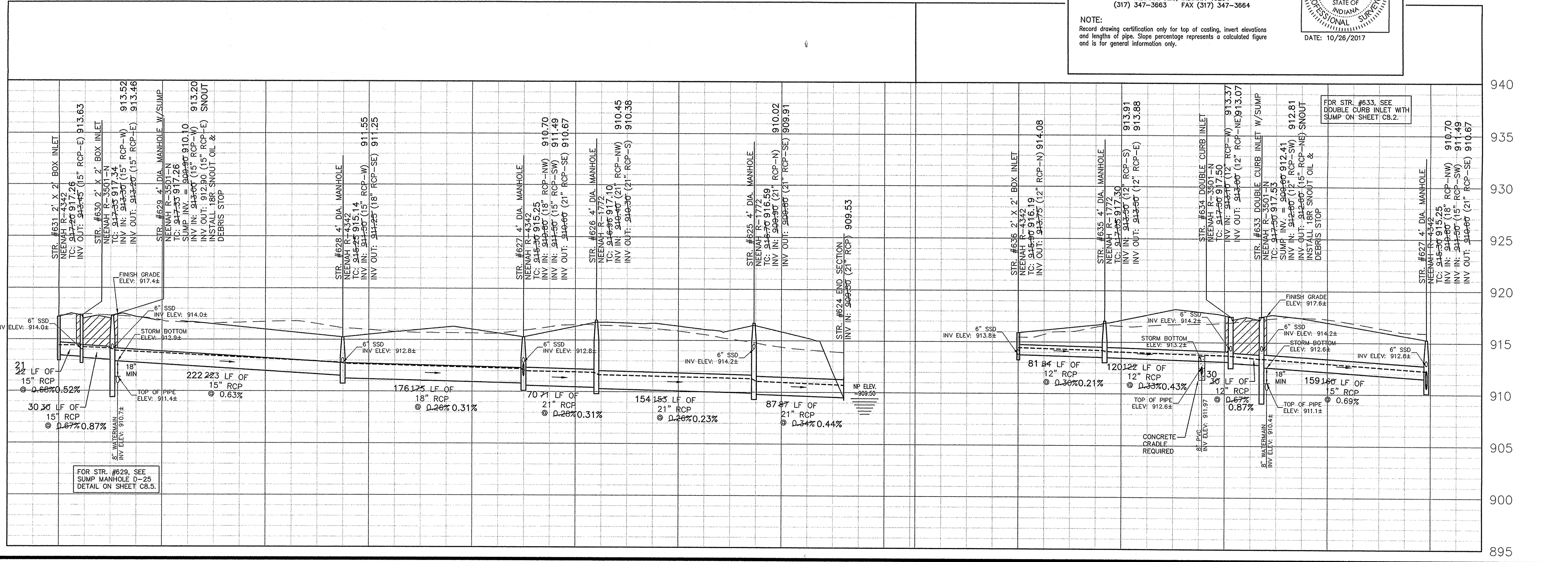
**CERTIFICATION FOR "RECORD DRAWING"**

CERTIFIED BY: *LUKE A. JAHN*  
 LUKE A. JAHN  
 REGISTERED  
 No. 20900171  
 STATE OF INDIANA  
 PROFESSIONAL SURVEYOR  
 DATE: 10/26/2017

HWC ENGINEERING  
 135 N. PENNSYLVANIA STREET, SUITE 2800  
 INDIANAPOLIS, INDIANA 46204  
 (317) 347-3663 FAX (317) 347-3664

GRANULAR BACKFILL PER CITY OF CARMEL TRENCH DETAIL ON SHEET C8.3  
 --- EXISTING GRADE  
 --- PROPOSED GRADE  
 --- 10-YEAR HGL

**STORM PROFILE**  
 VERTICAL SCALE: 1" = 5'  
 HORIZONTAL SCALE: 1" = 50'



**REVISIONS**

DATE	DESCRIPTION	BY
01/31/17	REVISED PER TAC COMMENTS	DC/KS
08/19/17	RECORD DRAWINGS	SD

**HWC ENGINEERING**  
 INDIANAPOLIS - TERRE HAUTE  
 LAFAYETTE - MUNCIE - NEW ALBANY  
 www.hwceengineering.com

**SHADOW WOOD**  
**STORM SEWER PLAN & PROFILE**

ANDREW T. BURNETT  
 REGISTERED PROFESSIONAL SURVEYOR  
 No. 1000075  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

DRAWN BY: DC  
 CHECKED BY: BB  
 DATE: DECEMBER 16, 2016  
 SCALE: AS SHOWN  
 SHEET: C6.2  
 STORM SEWER PLAN & PROFILE

JOB NUMBER: 2016-056-B