



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

July 2, 2015

To: Hamilton County Drainage Board

Re: Williams Creek Drain, Jackson's Grant Section 1A Arm

Attached is a petition filed by Silvara Development Company, LLC., along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for Jackson's Grant Section 1A 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	4,229 ft.	48" RCP	48 ft.
15" RCP	1,191 ft.	36" CMP	40 ft.
18" RCP	906 ft.	6" SDR 35	32 ft.
24" RCP	865 ft.	6" SSD	20,223 ft.
27" RCP	496 ft.	12" SSD	650 ft.
30" RCP	158 ft.	15" SSD	449 ft.
Open Ditch	220 ft.	18" SSD	667 ft.

The total length of the drain will be 30,174 feet.

The open ditch listed above is 40 feet from Str. 441 to Str. 535, 5 feet from Str. 531 to Str. 461, and 175 feet from Str. 519 to the confluence with Williams Creek Regulated Drain.

The dry detention basins (BMPs) located as listed below are 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 dry detention basins (BMPs) 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.

D	Landin
Basin	Location
BMP 34	Common Area #20
BMP 30	Common Area #19
BMP 27	Common Area #18
BMP 21A	Common Area #17
BMP 21B	Common Area #12
BMP 26A	Common Area #13
BMP 26B	Common Area #13
BMP 24	Common Area #13
BMP 25	Common Area #13
BMP 22B	Common Area #14
BMP 22A	Common Area #14
BMP 20A	Common Area #12
BMP 20B	Common Area #12
BMP 18A	Common Area #10
BMP 18B	Common Area #9
BMP 33A	Common Area #9
BMP 33B	Common Area #9
BMP 33C	Common Area #9
BMP 17A	Future Common Area
BMP 17B	Future Common Area
BMP 16	Future Common Area

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs, those main lines in 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:
Bookwalter Drive
Skytag Drive
Frenzel Parkway
Jackson's Grant Blvd.
Ams Court
Ams Run
Domino Drive
King Richard Drive

Rear Yard SSDs:

Common Area #20 from Str. 457 to Str. 454 Common Area #20 from Str. 454 to Str. 453 Common Area #20 from Str. 454 to Tee Rear yard lots 90 to 92 from riser to riser Rear yard lots 101 to 104 from Str. 449 to Str. 432 Rear yard lots 72 and 73 from Str. 434 to riser Common Area #18 from Str. 433 to Str. 429 Common Area #18 from Str. 429 to Str. 426 Rear yard lots 99 and 98 from Str. 447 to riser Rear yard lots 99 and 100 from Str. 447 to Str. 446 Common Area #18 from Str. 426 to Str. 425 Common Area #13 from Str. 418 to riser Common Area #14 from Str. 411 to tee Common Area #12 from Str. 477 to Str. 482 Common Area #12 from Str. 482 to Str. 478 Rear yard lots 126 to 128 from riser to riser Common Area #13 from Str. 413 to riser Common Area #14 from Str. 407 to Tee Rear yard lots 117 to 120 from riser to riser Common Area #14 from Str. 407 to riser Common Area #9 from Str. 463 to riser

Common Area #9 from Str. 503 to Str. 504
CA #9, Lots 147 and 146 from Str. 504 to Str. riser
Common Area #10 from Str. 507 to Str. 508
Rear yard lots 133 & 134 from Str. 508 to riser
Rear yard lots 131 & 132 from Str. 510 to Str. 537
Common Area #12 from Str. 537 to Str. 538
Common Area #12 from Str. 538 to Str. 472
Common Area #12 from Str. 467 to riser
Rear yard lots 142 & 143 from Str. 514 to riser
Rear yard lots 144 & 145 from Str. 514 to riser
Future Common Area from Str. 528 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 \$6,416.30.

The petitioner has submitted surety for the proposed drain at this time. The sureties which are in the form of an Irrevocable Letter of Credit are as follows:

Agent: Standard Financial Corporation

Date: October 21, 2014 Number: 1143JG1A For: Storm Sewers Amount: \$643,277.58

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.

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 Jackson's Grant, Section 1A as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for August 24, 2015.

Kenton C. Ward, CFM Hamilton County Surveyor

KCW/pll

STATE OF INDIANA				
)			
COUNTY OF HAMILTON)			

FILED MAY 14 2014

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	Jackson's Grant on Williams Creek aka Silvara	Subdivision, Section
1A	Drain Petition.	/%

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:

- 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.

Adobe PDF Fillable Form

RECORDED OWNER(S) OF LAND INVOLVED

SILVARA REAL ESTATE Co., LLC

Long Coo B. Wayney Dr. Res. Dev.

Signed S. Wayney Dev. Coluc, Manager

Printed Name

Printed Name

APRIL 17, 2014

Date

Signed

Signed

Signed

Printed Name

Date

The Petitioner further requests that the Drain be classified as an Urban Drain as per IC 36-9-27-

69(d).

Printed Name

Date

Adobe PDF Fillable Form

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

Williams Creek Drain, Jackson's Grant Section 1A Arm

On this 24th day of August, 2015, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Williams Creek Drain, Jackson's Grant Section 1A 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: Knette Moskung Executive Secretary

ofc: 317.849.5935 fax: 317.849.5942 7965 East 106th Street Fishers, IN 46038-2505 www.stoeppelwerth.com

October 7, 2014

Hamilton County Surveyor's Office One Hamilton County Square Suite 188 Noblesville, Indiana 46060

Attention: Greg Hoyes

Re: Jackson's Grant on Williams Creek, Section 1A

Dear Mr. Hoyes:

On behalf of the developer Silvara Real Estate Company, LLC by Silvara Development Co., LLC its manager, please accept this Engineer's Estimate for Jackson's Grant on Williams Creek, Section 1A. The estimate is as follows:

Storm Sewer

	QTY	UNIT	UNIT \$	TOTAL\$
Manholes	10	EA	\$1,447.49	\$14,474.90
Beehoves	17	EA	\$1,133.15	\$19,263.55
Outlet Control Structures (incl. stone at base)	20	EA	\$1,914.08	\$38,281.60
Double Curb Inlet	8	EA	\$2,264.78	\$18,118.24
Curb Inlet	47	EA	\$1,370.98	\$64,436.06
6" PVC	32	EA	\$9.09	\$290.88
12" RCP	3769	LF	\$13.63	\$51,371.47
12" RCP 9' Deep	146	LF	\$15.91	\$2,322.86
15" RCP	922	LF	\$15.15	\$13,968.30
15" RCP 9' Deep	200	LF	\$17.42	\$3,484.00
18" RCP	1253	LF	\$17.42	\$21,827.26
24" RCP	963	LF	\$25.00	\$24,075.00
24" RCP 10' Deep	150	LF	\$28.03	\$4,204.50
24" RCP 11' Deep	120	LF	\$29.54	\$3,544.80
30" RCP	197	LF	\$31.81	\$6,266.57
48" RCP	48	LF	\$65.90	\$3,163.20
Remove CMP/Replace/Flowable Clay Centered	1	LS	\$5,756.62	\$5,756.62
Cap and Seal 12" with Steel Plate Remove and Dispose 48" Farm Crossing and	1	EA	\$340.85	\$340.85
Tile	1	LS	\$757.45	\$757.45
6" End Section w/ Debris Guard	2	EA	\$227.24	\$454.48
12" End Section w/ Debris Guard	17	EA	\$908.94	\$15,451.98

LAND DEVELOPMENT SUPPORT SOLUTIONS

Hamilton County Surveyor				
Greg Hoyes				
October 7, 2014				
Page 2 of 2				
15" End Section w/ Debris Guard	6	EA	\$984.69	\$5,908.14
18" End Section w/ Debris Guard	6	EA	\$1,098.30	\$6,589.80
24" End Section w/ Debris Guard	4	EA	\$1,249.79	\$4,999.16
30" End Section w/ Debris Guard	2	EA	\$1,439.16	\$2,878.32
48" End Section w/ Debris Guard	2	EA	\$2,651.08	\$5,302.16
Lot Services Each	42	EA	\$83.32	\$3,499.44
Swale SSD	2,863	LF	\$5.87	\$16,805.81
Street SSD	17,566	LF	\$7.01	\$123,137.66
Televise Storm	7,800	LF	\$1.51	\$11,778.00
Risers	2	EA	\$196.94	\$393.88
Bedding #8	1,554	TONS	\$12.54	\$19,487.16
Granular Fill #53	1,497	TONS	\$10.15	\$15,194.55
Rip-Rap	290	TONS	\$28.40	\$8,236.00
	Total Price for a	above Storn	Sewer Items	\$536,064.65
Monumentation				
8	QTY	UNIT	UNIT \$	TOTAL\$
Lot Corners	79	EA	\$100.00	\$7,900.00
Centerline Monuments	40	EA	\$150.00	\$6,000.00
	Total Price fo	or above M	onumentation	\$13,900.00
TOTAL	<u> y</u>	Grand Tota	Ĭ	\$549,964.65

If you have any questions or comments regarding this estimate, please call Brett A. Huff at (317) 570-4841.

Witness my signature this 7th day of October, 2014.

David J. Stoeppelwerth Professional Engineer

No. 19358

Cc: Larry Moon
Doug Wagner

BAH/meb S:\60160SIL-S1A\Blue_Book\Agency_Correspondence\HamiltonCountySurveyorHoyesEE10-07-14.doc









October 21, 2014 HCDB-QOI4-DOOS9 Irrevocable Letter of Credit No.: 1143JG1A

TO: Hamilton County Commissioners 1 Hamilton County Square, Suite 157 Noblesville, IN 46060

To Whom It May Concern:

We hereby authorize you to value on us for the account of:

Developer Name:

Jackson's Grant Real Estate Company, LLC

Developer Address:

3150 Republic Blvd., N., #3

Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of <u>Six Hundred Forty-Three Thousand Two Hundred Seventy-Seven and 58/100 Dollars (\$643,277.58)</u> by your draft(s) at sight.

The purpose of this Letter of Credit is for the performance of the installation of storm sewers in Jackson's Grant on Williams Creek, Section 1A.

The condition for payment of any drafts drawn against the Letter of Credit requires that the draft be accompanied by beneficiary's signed statement on Hamilton County letterhead stating that Jackson's Grant Real Estate Company, LLC has not performed or complied with the terms of the construction plan requirements of said project. The statement must also outline the specific deficiencies in construction.

All drafts must be marked, "Drawn under Standard Financial Corporation Letter of Credit No. 1143JG1A."

This credit is subject, so far as applicable, to "The Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Publication No. 600.

This Letter of Credit is effective as of October 21, 2014, and shall expire on October 21, 2015 but such expiration date shall be automatically extended for a period of one year on October 21, 2015, and on each successive expiration date, unless a release is received from the Hamilton County Commissioners, or we notify both the Hamilton County Commissioners and Jackson's Grant Real Estate Company, LLC by certified mail, at least ninety (90) days before the current expiration date, that we have decided not to extend this Letter of Credit beyond the

OCT 2 3 2014





current expiration date. In the event of such notification by us, the credit established by this Letter shall be available to the Hamilton County Commissioners upon its sight draft or demand for payment for ninety (90) days after receipt of such notice by the Hamilton County Commissioners as shown on the signed return receipt.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this credit shall be duly honored on due presentation to the main office of Standard Financial Corporation, 13578 E. 131st Street, Suite 200, Fishers, IN 46037.

Corporate Seal

Eric Roof Authorized Signer

This Letter of Credit is not valid unless the seal of Standard Financial Corporation is affixed hereto.





October 21, 2014

ICDB-2014-0000

Irrevocable Letter of Credit No.: 1144JG1A

TO: Hamilton County Commissioners 1 Hamilton County Square, Suite 157 Noblesville, IN 46060

To Whom It May Concern:

We hereby authorize you to value on us for the account of:

Developer Name:

Jackson's Grant Real Estate Company, LLC

Developer Address: 3150 Republic Blvd., N., #3

Toledo, OH 43615

For a sum or sums in United States of America Dollars not to exceed the aggregate total of <u>Sixteen Thousand Six Hundred Eighty and no/l00 Dollars (\$16,680.00)</u> by your draft(s) at sight.

The purpose of this Letter of Credit is for the performance of the installation of monumentation in Jackson's Grant on Williams Creek, Section 1A.

The condition for payment of any drafts drawn against the Letter of Credit requires that the draft be accompanied by beneficiary's signed statement on Hamilton County letterhead stating that Jackson's Grant Real Estate Company, LLC has not performed or complied with the terms of the construction plan requirements of said project. The statement must also outline the specific deficiencies in construction.

All drafts must be marked, "Drawn under Standard Financial Corporation Letter of Credit No. 1144JG1A."

This credit is subject, so far as applicable, to "The Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Publication No. 600.

This Letter of Credit is effective as of October 21, 2014, and shall expire on October 21, 2015 but such expiration date shall be automatically extended for a period of one year on October 21, 2015, and on each successive expiration date, unless a release is received from the Hamilton County Commissioners, or we notify both the Hamilton County Commissioners and Jackson's Grant Real Estate Company, LLC by certified mail, at least ninety (90) days before the current expiration date, that we have decided not to extend this Letter of Credit beyond the

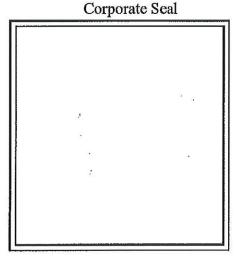
OCT 23 2014



current expiration date. In the event of such notification by us, the credit established by this Letter shall be available to the Hamilton County Commissioners upon its sight draft or demand for payment for ninety (90) days after receipt of such notice by the Hamilton County Commissioners as shown on the signed return receipt.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this credit shall be duly honored on due presentation to the main office of Standard Financial Corporation, 13578 E. 131st Street, Suite 200, Fishers, IN 46037.

Eric Roof
Authorized Signer



This Letter of Credit is not valid unless the seal of Standard Financial Corporation is affixed hereto.

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF

Williams Creek Drain, Jackson's Grant Section 1A Arm

NOTICE

То	Whom	Ιt	May	Concern	and:

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Williams Creek Drain, Jackson's Grant Section 1A Arm on August 24, 2015 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, Jackson's Grant Section 1A Arm

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on August 24, 2015 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





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

June 2, 2016

Re: Williams Creek Drainage Area: Jackson's Grant Section 1A

Attached are as-built, certificate of completion & compliance, and other information for Jackson's Grant Section 1A. 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 July 2, 2015. The report was approved by the Board at the hearing held August 24, 2015. (See Drainage Board Minutes Book 16, Pages 285-288) The changes are as follows:

12" RCP was lengthened from 4,229 to 4,322 feet. The 15" RCP was shortened from 1,191 feet to 979 feet. The 18" RCP was shortened from 906 feet to 802 feet. The 24" RCP was shortened from 865 feet to 692 feet. The 27" RCP was lengthened from 496 feet to 692 feet. The 30" RCP was shortened from 158 feet to 118 feet. The 36" CMP was replaced with 44 feet of 36" RCP. The 6" SDR 35 was lengthened from 32 feet to 33 feet. The 6" SSD was shortened from 20,223 feet to 19,601 feet. The 12" SSD was lengthened from 650 feet to 658 feet. The 15" SSD was lengthened from 4449 feet to 513 feet. The 18" SSD was shortened from 667 feet to 646 feet. The open ditch was lengthened from 220 feet to 228 feet. The length of the drain due to the changes described above is now **29,376 feet**.

The ownership and maintenance for all the BMP's are outlined in the OEM manual and recorded in the Hamilton County Recorder's office under instrument #2016011090.

The non-enforcement was approved by the Board at its meeting on August 24, 2015 and recorded under instrument #2015065358.

The following sureties were guaranteed by Standard Financial Corporation and released by the Board on its June 13, 2016 meeting.

Bond-LC No: 1143JG1A Amount: \$643,277.58 For: Storm Sewers

Issue Date: October 21, 2014

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

Sincerely/

Kenton C. Ward, CFM Hamilton County Surveyor

CERTIFICATE OF COMPLETION AND COMPLIANCE

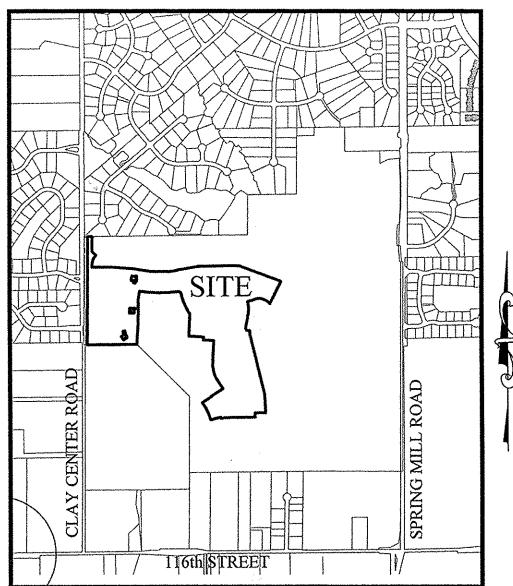
To: Hamilton County Surveyor

Re: Jackson's Grant on Williams Creek, Section 1A

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.

Signature:	Date: <u>January 27, 2016</u>
Type or Print Name: Dennis D. Olmstead	
Business Address: Stoeppelwerth & Associates, In	c.
7965 East 106th Street, Fishers,	Indiana 46038
Telephone Number: (317) 849-5935	
SEAL	INDIANA REGISTRATION NUMBER
NO. 900012 STATE OF WOLAND OR STATE	900012



PLANS PREPARED BY:

PHONE: (317)-849-5935

FAX: (317)-849-5942

STOEPPELWERTH & ASSOCIATES, INC.

CONTACT PERSON: BRETT A. HUFF

PLANS CERTIFIED BY:

PROFESSIONAL LAND SURVEYOR

DESIGN SPEED = 25 M.P.H.

JACKSON'S GRANT BLVD.

OPERATING AUTHORITY

CARMEL, INDIANA 46032

Minimum Lot Minimum Yard Setbacks

Same standards as Bridgecreek

65' 7,750 35' 25' 5'(10')

FRENZEL PARKWAY

SKYTAG DRIVE

DOMIND DRIVE

KING RICHARD DR.

BOOKWALTER DR.

CITY OF CARMEL

PROJECT #07-760

ONE CIVIC SQUARE

AMS RUN

AMS COURT

TOTAL

DESIGN DATA

EMAIL: BHUFF@STOEPPELWERTH.COM

CONSULTING ENGINEERS & LAND SURVEYORS

7965 E. 106TH STREET, FISHERS, INDIANA 46038

1448.14 L.F.

554.37 L.F.

314.09 L.F.

557.21 L.F.

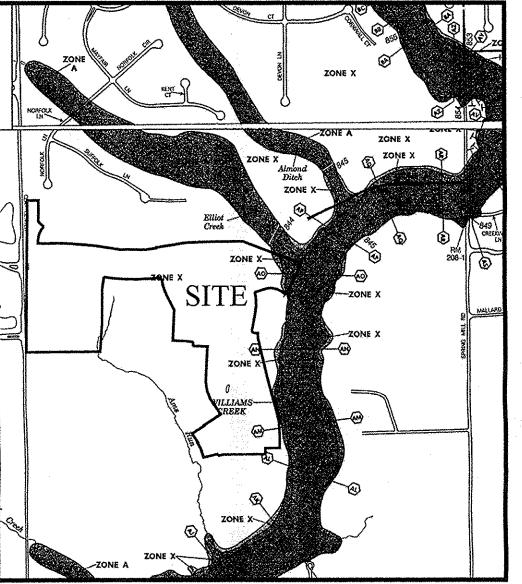
1395.15 L.F.

307.69 L.F.

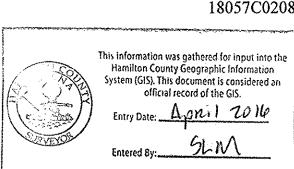
146.47 L.F.

8.374.51 L.F.

LOCATION MAP SCALE: 1"=1200"



FLOOD MAP N.T.S. FIRM #18057C0206F 18057C0208F



STORM SEWER

STREET

L1.0-L1.15 PLANTING PLANS

ADA RAMP

JACKSON'S GRANT

SECTION 1A

Developed by: Silvara Real Estate Co., LLC **13578 East 131st Street Suite 200**

Phone: (317) 770-1818

SINGLE FAMILY LOTS

72-81,88-104

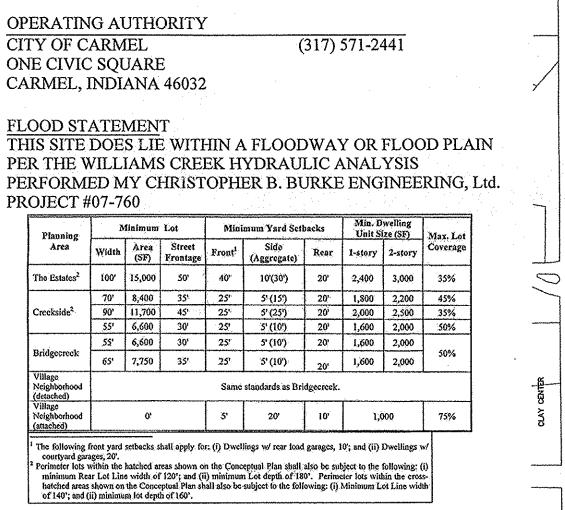
82-87,105-150

(FUTURE SECTION)

(IN FEET)

1 inch = 300 ft.

Fishers, Indiana 46037 Contact Person: DOUG WAGNER RECORD DRAWING 900012



No. 19358

STATE OF

CREEKSIDE

TITLE SHEET C100-C103 TOPOGRAPHICAL SURVEY/TREE CONSERVATION PLAN SITE DEVELOPMENT PLAN/STORM CHART AND PIPE CHART/EMERGENCY FLOOD ROUTE WC-1-WC-14 | WILLIAMS CREEK BMP BASIN SECTIONS EROSION CONTROL PLAN/SWPP DETAILS AND SPECIFICATIONS STREET PLAN AND PROFILES/INTERSECTION DETAILS/TRAFFIC C400-C417 MAINTENANCE/PAVING POLICIES SANITARY SEWER PLAN AND PROFILES C500-C510 LIFT STATION PLANS AND DETAILS STORM SEWER PLAN AND PROFILES/SUMP PLAN WATER PLAN CONSTRUCTION DETAILS AND SPECIFICATIONS C800-C805

INDEX

DESCRIPTION

REVISIONS DESCRIPTIONS REVISED SHEETS PER TAC COMMENTS, ADDED LIFT STATION SHTS. (LS 1-13) - 05/12/14 ALL SHEETS C300-C314 REVISED SHEETS PER SWPPP COMMENTS - 06/03/14 ALL SHEETS REVISED SHEETS PER CTRWD COMMENTS - 06/16/14 C500-C509 REVISED SHEETS PER CTRWD COMMENTS - 07/02/14 REVISED SHEETS PER SWPPP COMMENTS - 09/03/14 ALL SHEETS REVISED PER FINAL CITY OF CARMEL COMMENTS - 09/10/14 C100's &C206& C600's C200-C204, C500-C508 ASBUILTS - 12/28/15 C510, C600-C612, &

UTILITY CONTACTS:

Clay Township Regional Waste District 10701 College Avenue Indianapolis, Indiana 46280

Carmel Water Utilities 3450 West 131st Street Westfield, IN 46074

5858 North College Avenue Indianapolis, Indiana 46220

3030 Roosevelt Avenue Indianapolis, Indiana 46218 Duke Energy

Brighthouse Networks

16475 Southpark Drive

Westfield, Indiana 46074

Indianapolis Power & Light Company 3600 North Arlington Avenue Indianapolis, Indiana 46218

Vectren Energy 16000 Allisonville Road Noblesville, Indiana 46060



Map Unit: Br - Brookston silty clay loam

This poorly drained soil has a seasonal high watertable above the surface or within 1.0 ft. and is in depressions. Slopes are 0 to 2 percent. The native vegetation is water tolerant grasses and hardwoods. The surface layer is silty clay loam and has moderate or high organic matter content (2.0 to 5.0 percent). Permeability is moderately slow (0.2 to 0.6 in/hr) in the most restrictive layer above 60 inches. Available water capacity is high (10.0 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 6.1 to 7.3. This soil is hydric. Wetness is a management concern for crop production. This soil responds well to tile drainage.

Map Unit: CrA - Crosby silt loam, 0 to 2 percent slopes

CrA--Crosby silt loam, 0 to 2 percent slopes This is a somewhat poorly drained soil and has a seasonal high watertable at 0.5 to 2.0 ft. and is on rises on uplands. Slopes are 0 to 2 percent. The native vegetation is hardwoods. The surface layer is silt loam and has moderately low or moderate organic matter content (1.0 to 3.0 percent). Permeability is very slow (< 0.06 in/hr) in the most restrictive layer above 60 inches. Available water capacity is moderate (6.2 inches in the upper 60 inches). The pH of the surface layer in non-limed areas is 5.1 to 6.0. Droughtiness and wetness are management concerns for crop production. This soil responds well to tile drainage.

MmB2 - Miami silt loam, 2 to 6 percent slopes, eroded

MmB2-Miami silt Loam, 2 to 6 percent slopes, eroded This gently sloping, deep, well drained soil is on rises on till plains and along drainageways and streams. The mapped areas range from

In a typical profile the surface layer is dark grayish brown silt loam about 7 inches thick. The subsoil is dark yellowish brown and prown, firm clay loam about 23 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam that contains free carbonates. In a few areas the lower part of the subsoil is stratified sandy loam, loamy sand and sandy clay loam. The depth to till is more than 40 inches in some areas.

Included with this soil in mapping are small areas of Crosby soils, small areas of severely eroded soils that have a surface layer of clay loam, small areas of soils have slopes of more than 6 percent, and small areas of soils that have gravel and cobbles on the surface.

MmC2 - Miami silt loam, 6 to 12 percent slopes

This moderate sloping, deep, well drained soil is on knobs and breaks along streams and drainageways on uplands. The mapped areas are irregular in shape and range from 3 to 25 acres in size. In a typical profile the surface layer is brown silt loam about 5 inches thick. The subsoil is brown or dark yellowish brown, firm clay loam about 22 inches thick. The substratum, to a depth of 60 inches, is yellowish brown calcareous loam. In many areas the solum is less than 24 inches thick. In some areas the subsoil is redder and contains more gravel.

MoC3 - Miami clay loam, 6 to 12 percent slopes, severely eroded

This moderately sloping, deep, well drained soil is on knobs and breaks along streams drainageways on uplands. The mapped areas are irregular in shape and range from 3 to 35 acres in size. In a typical profile the surface layer is dark brown clay loam about 5 inches thick. The subsoil is dark yellowish brown, firm clay loam about 19 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam. Combined thickness of the surface layer and subsoil is less than 24 inches. Calcareous glacial till is at the surface on about 15 percent of the acreage of this map unit. In some areas cobbles and gravel are in the surface layer. In some small

MoD3 - Miami clay loam, 12 to 18 percent

areas the surface layer is uneroded and is silt or loam.

This strongly sloping, deep, well drained soil is on breaks along streams and drainageways. The mapped areas are irregular in shape and range from 3 to 15 acres in size.

In a typical profile the surface layer is dark brown, clay loam about 5 inches thick. The subsoil is dark yellowish brown, firm clay loam about 19 inches thick. The substratum, to a depth of 60 inches, is yellowish brown loam. In some areas calcareous glacial till is at the surface. Cobbles and gravel are in the surface layer in most areas. In many areas the subsoil is gravelly loam or clay loam.

OcA - Ockley silt loam, 0 to 2 percent slopes

This nearly level, deep, well drained soil is mainly on broad terraces. It is also on small rises on uplands. Most of the mapped areas are elongated and are parallel to major streams. Some areas on uplands are irregular in shape. The mapped areas range from 2 to 250 acres in size.

In a typical profile the surface layer is dark yellowish brown silt loam about 10 inches thick. The subsoil is about 46 inches thick. The upper part of the subsoil is brown, friable loam; the next part is dark yellowish brown and brown, firm clay loam; the next part is dark yellowish brown, firm loam; and the lower part is dark reddish brown, firm gravelly sandy clay loam. The underlying material to a depth of 70 inches, is stratified sand and gravelly sand. The depth to loose sand and gravel is as much as 80 inches in places. The combined thickness of the surface layer and the part of the subsoil that formed in silty material is as much as 30 inches in some places. In the east-central part or the county, many limestone fragments that are as much as 12 inches in diameter are in the soil. In some areas on uplands, the underlying material is sand and silt and the subsoil has little or no gravel. Thickness of the sand and gravel ranges from a few feet along minor streams and on uplands to more than 50 feet along White River.

This nearly level, deep, and somewhat poorly drained soil is on floodplains. It is subject to frequent flooding. The mapped areas are mostly elongated and are parallel to streams. Many areas are in narrow valleys along small streams. The mapped areas range in size from 3 to 100 acres in size.

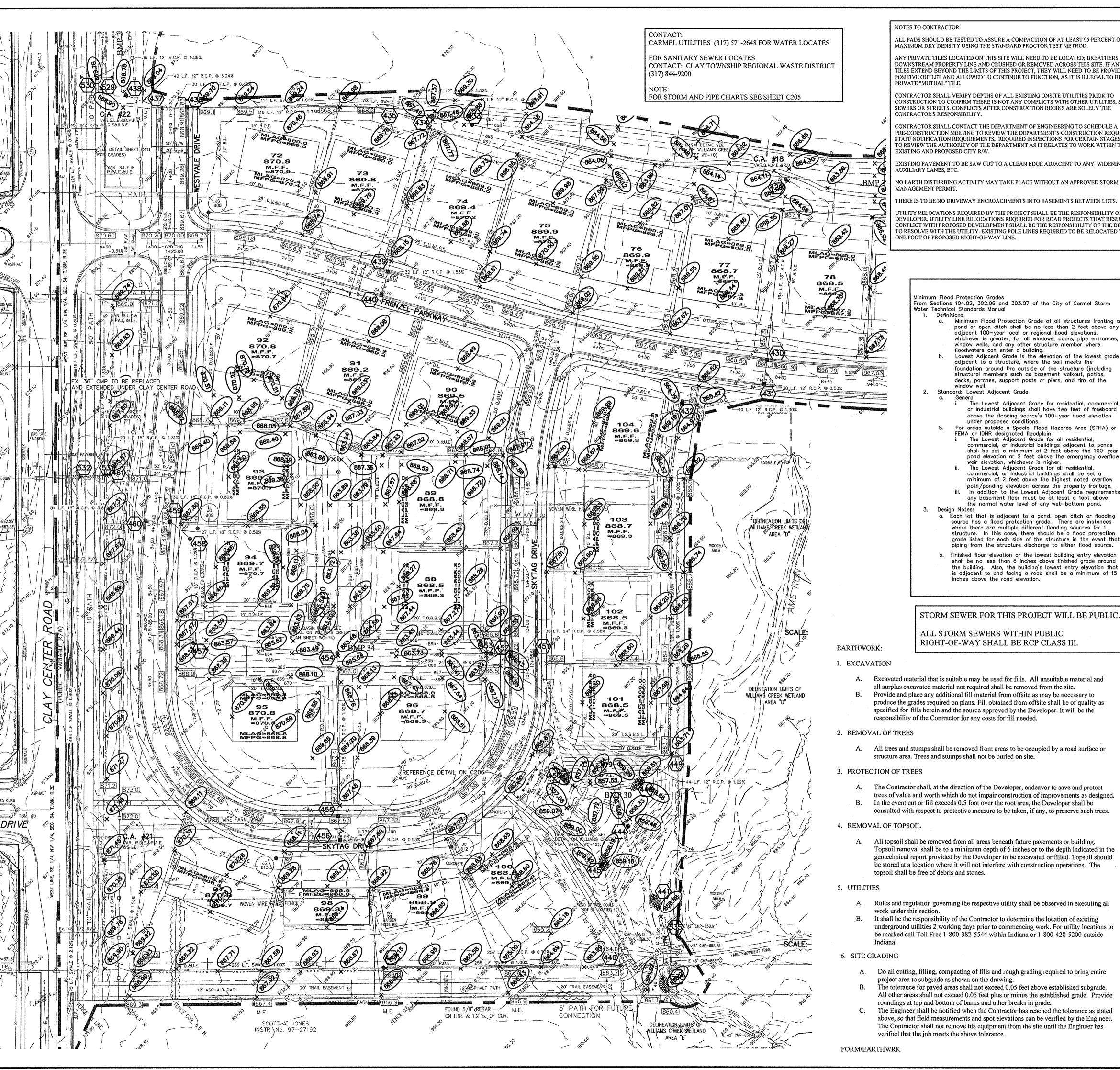
In a typical profile the surface layer is dark grayish brown silt loam about 11 inches thick. The underlying material, to a depth of 39 inches is dark grayish brown and grayish brown, mottled silt loam and loam. Below this to a depth of 56 inches, it is gray and very dark gray sandy loam and sandy clay loam. Below this, to a depth of 60 inches, it is grayish brown fine gravel and coarse sand. In small areas scattered throughout the county, this soil has darker surface layer; in some of these areas it is near Ross soils. In some places the underlying material has more gravel. This soil has carbonates throughout the profile in some areas. In some small areas in the upper reaches of small streams, this soil has firm loam till at a depth of 45 to 60 inches. In some small areas it has less clay and more sand between a depth of 10 and 40 inches. In some areas sand and gravelly sand are at a depth of only 40 inches.

JACKSON'S GRANT SECTION

part of Section 34, Township 18 North, Range 3 East, Clay Township, Hamilton County, Indiana, more particularly

Beginning at the Southwest corner of the Southeast Quarter of the Northwest Quarter of said Section; thence

North 00 degrees 20 minutes 44 seconds East along the West line of said Quarter, Quarter Section 1,314.57 feet; thence North 89 degrees 33 minutes 14 seconds East 99.87 feet; thence South 00 degrees 20 minutes 44 seconds West 186.67 feet; thence South 46 degrees 11 minutes 58 seconds East 66.27 feet to a point on a curv concave easterly, the radius point of said curve being South 46 degrees 11 minutes 58 seconds East 175.00 feet from said point; thence southerly along said curve 132.73 feet to a point on said curve, said point being North 89 degrees 39 minutes 16 seconds West 175.00 feet from the radius point of said curve; thence South 00 degrees 20 minutes 44 seconds West 27.63 feet; thence South 89 degrees 39 minutes 16 seconds East 50.00 feet; thence North 89 degrees 34 minutes 53 seconds East 171.40 feet; thence South 86 degrees 44 minutes 43 seconds East -98.65 feet; thence South 84 degrees 50 minutes 19 seconds East 198.35 feet; thence South 81 degrees 19 minutes 22 seconds East 220.60 feet; thence South 89 degrees 43 minutes 06 seconds East 235.33 feet; thence North 81 degrees 29 minutes 45 seconds East 97.63 feet; thence North 08 degrees 30 minutes 15 seconds West _5.77 feet; thence North 81 degrees 29 minutes 45 seconds East 50.00 feet; thence North 80 degrees 48 minutes 02 seconds East 215.94 feet; thence North 88 degrees 01 minutes 57 seconds East 212.87 feet; thence North 89 degrees 30 minutes 51 seconds East 293.43 feet; thence South 69 degrees 27 minutes 24 seconds East 558.43 feet; thence South 26 degrees 34 minutes 50 seconds West 312.87 feet to a point on a curve concave southerly, the radius point of said curve being South 49 degrees 25 minutes 48 seconds West 178.00 feet from said point; thence westerly along said curve 209.03 feet to a point on said curve, said point being North 17 degrees 51 minutes 11 seconds West 178.00 feet from the radius point of said curve; thence South 72 degrees 08 minutes 4 seconds West 89.63 feet to a point on a curve concave westerly, the radius point of said curve being South 75 degrees 30 minutes 37 seconds West 375.00 feet from said point; thence southerly along said curve 162.18 feet to a point on said curve, said point being South 79 degrees 42 minutes 40 seconds East 375.00 feet from the radius point of said curve; thence South 10 degrees 17 minutes 21 seconds West 176.05 feet to the point of curvature of a curve concave northeasterly, the radius point of said curve being South 79 degrees 42 minutes 39 seconds East 25.00 feet from said point; thence southeasterly along said curve 45.13 feet to the point of tangency of said curve, said point being South 03 degrees 08 minutes 49 seconds East 25.00 feet from the radiu point of said curve; thence North 86 degrees 51 minutes 11 seconds East 25.59 feet; thence South 03 degrees 0 minutes 49 seconds East 50.00 feet; thence South 13 degrees 25 minutes 48 seconds East 765.67 feet; thence South 03 degrees 05 minutes 48 seconds East 166.25 feet; thence South 00 degrees 28 minutes 13 seconds East 66.62 feet; thence South 89 degrees 31 minutes 47 seconds West 130.00 feet; thence South 00 degrees 28 minutes 13 seconds East 55.00 feet; thence South 89 degrees 31 minutes 47 seconds West 375.57 feet; thence South 77 degrees 17 minutes 12 seconds West 50.00 feet to a point on a curve concave westerly, the radius poin of said curve being South 77 degrees 17 minutes 12 seconds West 675.00 feet from said point; thence northerly along said curve 17.03 feet to a point on said curve, said point being North 75 degrees 50 minutes 29 seconds East 675.00 feet from the radius point of said curve; thence South 75 degrees 50 minutes 29 seconds West 130.00 feet; thence North 19 degrees 25 minutes 12 seconds West 94.86 feet; thence North 30 degrees 08 minutes 38 seconds West 50.00 feet; thence North 59 degrees 51 minutes 22 seconds East 4.31 feet; thence North 32 degrees 45 minutes 48 seconds West 94.94 feet; thence North 57 degrees 14 minutes 12 seconds East 130.00 feet; thence North 32 degrees 45 minutes 48 seconds West 6.02 feet; thence North 57 degrees 14 minutes 12 seconds East 180.00 feet; thence North 32 degrees 45 minutes 48 seconds West 85.00 feet; thence North 31 degrees 38 minutes 37 seconds West 76.95 feet; thence North 20 degrees 56 minutes 56 seconds West 77.66 feet; thence North 07 degrees 34 minutes 59 seconds West 77.60 feet; thence North 01 degrees 29 minutes 25 seconds East 77.27 feet; thence North 02 degrees 36 minutes 44 seconds East 241.00 feet; thence North 87 degrees 23 minutes 16 seconds West 130.00 feet to a point on a curve concave easterly, the radius point of said curve being South 87 degrees 23 minutes 16 seconds East 275.00 feet from said point; thence northerly along said curve 32.97 feet to a point on said curve, said point being North 80 degrees 31 minutes 03 seconds West 275.00 feet from the radius point of said curve; thence North 80 degrees 31 minutes 03 seconds West 50.00 feet; thence North 87 degrees 23 minutes 16 seconds West 132.33 feet; thence North 02 degrees 36 minutes 44 seconds East 273.38 feet to a point on a curve concave northeasterly, the radius point of said curve being North 60 degrees 59 minutes 58 seconds East 525.00 feet from said point; thence northwesterly along said curve 16.36 feet to a point on said curve, said point being South 62 degrees 47 minutes 07 seconds West 525.00 feet from the radius point of said curve; thence North 27 degrees 12 minutes 52 seconds West 118.92 feet to th point of curvature of a curve concave easterly, the radius point of said curve being North 62 degrees 47 minutes 08 seconds East 525.00 feet from said point; thence northerly along said curve 153.19 feet to the point of tangency of said curve, said point being South 79 degrees 30 minutes 13 seconds West 525.00 feet from the radius point of said curve, said point also being the point of curvature of a curve concave southwesterly, the radius point of said curve being South 79 degrees 30 minutes 13 seconds West 25.00 feet from said point; thence northwesterly along said curve 37.97 feet to the point of tangency of said curve, said point being North 07 degrees 31 minutes 06 seconds West 25.00 feet from the radius point of said curve, said point also being the point of curvature of a curve concave northerly, the radius point of said curve being North 07 degrees 31 minutes 06 seconds West 1,725.00 feet from said point; thence westerly along said curve 491.57 feet to the point of tangency of said curve, said point being South 08 degrees 48 minutes 33 seconds West 1,725.00 feet from the radius point of said curve; thence South 08 degrees 48 minutes 33 seconds West 102.34 feet; thence South 00 degrees 17 minutes 26 seconds West 300.36 feet; thence South 03 degrees 59 minutes 45 seconds West 261.23 feet; thence South 89 degrees 33 minutes 54 seconds West 662.97 feet; thence North 00 degrees 23 minutes 3 seconds East 33.00 feet to the place of beginning, containing 51.1469 acres, more or less, subject to all legal highways, rights-of-ways, easements, and restrictions of record.



ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A

> CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE

CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS. STAFF NOTIFICATION REQUIREMENTS. REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK O REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING,

IO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER

IERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.

IILITY RELOCATIONS REQUIRED BY THE PROJECT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A ONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER O RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED TO WITHIN

Minimum Flood Protection Grades From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm Water Technical Standards Manual

- Minimum Flood Protection Grade of all structures fronting of pond or open ditch shall be no less than 2 feet above any adjacent 100-year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where
- loodwaters can enter a building. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the
- The Lowest Adjacent Grade for residential, commercial or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation
- under proposed conditions. For areas outside a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain
 i. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings adjacent to ponds shall be set a minimum of 2 feet above the 100—year
- pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a minimum of 2 feet above the highest noted overflow path/ponding elevation across the property frontage. iii. In addition to the Lowest Adjacent Grade requirement
- any basement floor must be at least a foot above the normal water level of any wet-bottom pond. a. Each lot that is adjacent to a pond, open ditch or flooding source has a flood protection grade. There are instances where there are multiple different flooding sources for 1 structure. In this case, there should be a flood protection
- piping from the structure discharge to either flood source. Finished floor elevation or the lowest building entry elevation shall be no less than 6 inches above finished grade around the building. Also, the building's lowest entry elevation that is adjacent to and facing a road shall be a minimum of 15 inches above the road elevation.

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

- A. Excavated material that is suitable may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the site.
- B. Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the

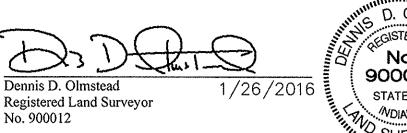
A. All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.

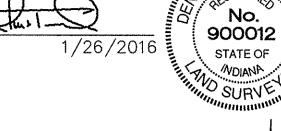
- A. The Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.
- B. In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be

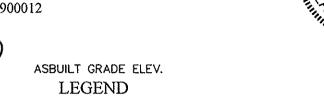
A. All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The

- A. Rules and regulation governing the respective utility shall be observed in executing all
- It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside
- Do all cutting, filling, compacting of fills and rough grading required to bring entire
- The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
- The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.

RECORD DRAWING







--- EXISTING CONTOUR

PROPOSED SWALE

REAR R

— S— — EXISTING SANITARY SEWER ■ EXISTING STORM SEWER PROPOSED GRADE

— —870— PROPOSED CONTOUR PROPOSED SANITARY SEWER GRAPHIC SCALE

> PROPOSED STORM SEWER PROPOSED WATER LINE

PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)

1 inch = 50 ft.

DENOTES REAR PROTECTION GRADES LOT NUMBER XXX.X PAD ELEVATION MFPG=XXX.X DENOTES FRONT PROTECTION GRADES

FRONT R/W UNDERDRAINS UNDER CURB. SEE SUMP PLAN SHEETS

MIN. FINISH FLOOR ELEV. IS BASED OFF OF THE BELOW

CRITERIA, WHICHEVER IS HIGHER: MFF=XXX.X 1. (1) FOOT ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE WHICH EVER IS LOWEST.

2. 15" (1.25') ABOVE THE ROAD ELEVATION 3. 6" (0.5') ABOVE THE M.L.A.G

MFPG=XXX.X MINIMUM FLOOD PROTECTION GRADE

C609-C611 FOR CLARITY & LABELS

MLAG=XXX.X MINIMUM LOWEST ADJACENT GRADE

4" SSD TO LOT RISER TC

--- ··· --- EXISTING WETLAND

SEE SUMP PLAN SHEETS DUAL WALL, HANCOR C609-C611 FOR CLARITY HI-Q TYPE 4 SSD & LABELS (SIZE NOTED ON PLANS)

CONSTRUCTION LIMITS

840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE

APPROXIMATE LIMITS OF THE 100YR. FLOODPLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

— — — — (FWF) — APPROXIMATE LIMITS OF FLOODWAY PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760 DRAINAGE SUMMARY

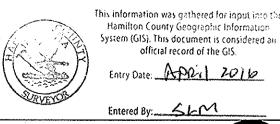
ENGINEERING, Ltd. PROJECT #07-760

REFERENCE SHEET C206 FOR DRAINAGE SUMMARY INFORMATION.

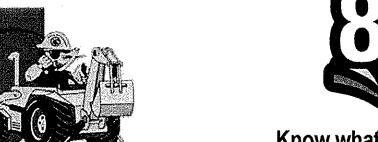
FLOOD STATEMENT THIS SITE DOES LIE WITHIN A FLOODWAY OR FLOOD PLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

VEGETATIVE COVER EXISTING SITE CONSIST MOSTLY OF GRASS AND WEEDS WITH WOODS ON THE SITE.

ADJACENT PROPERTIES **NORTH: AGRICULTURE** EAST: AGRICULTURE SOUTH: AGRICULTURE WEST: RESIDENTIAL



official record of the GIS. Entry Date: APRIL 2016





No.

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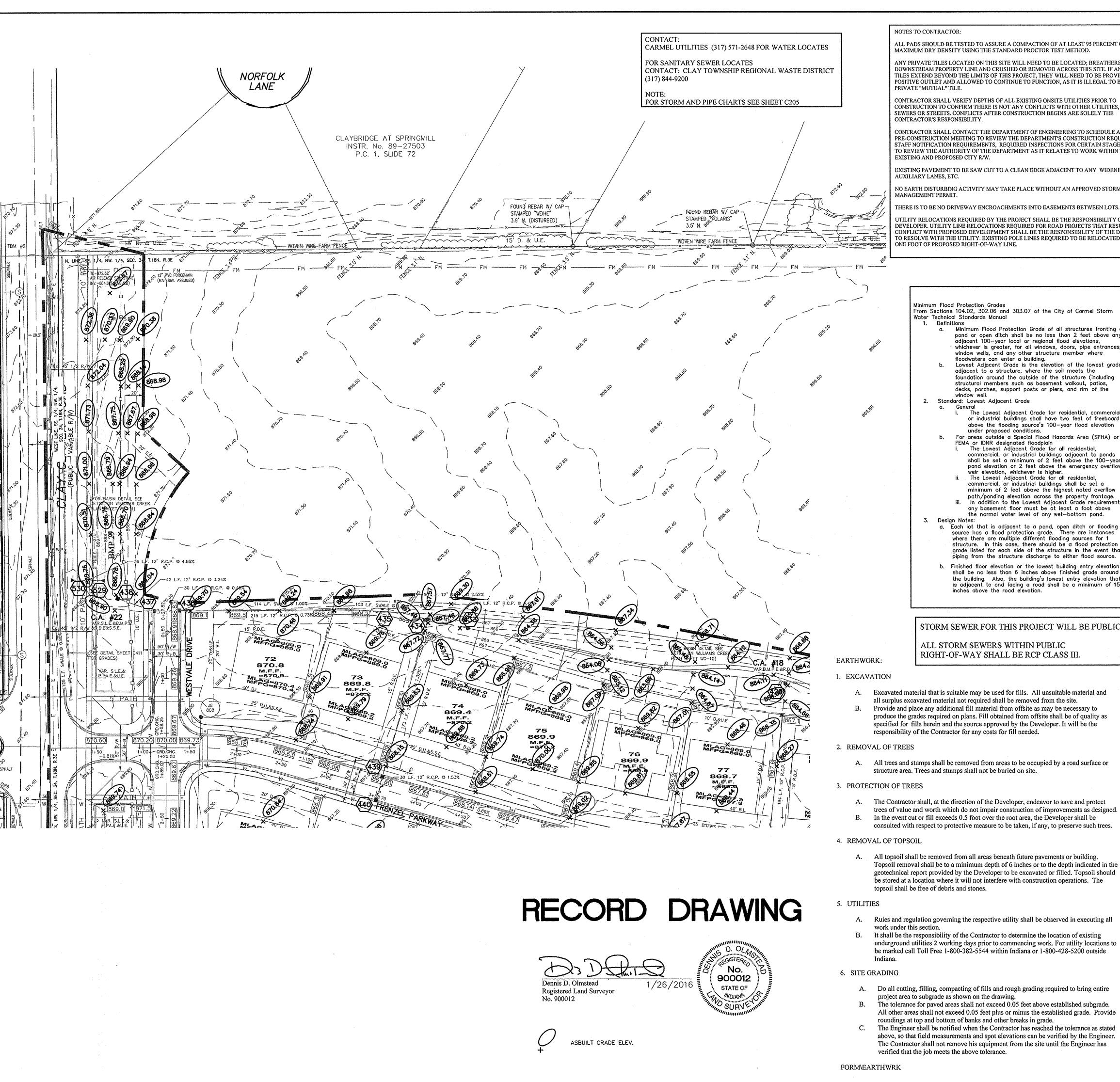
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NOTES TO CONTRACTOR:

ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD.

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE

CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING, AUXILIARY LANES, ETC.

NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

UTILITY RELOCATIONS REQUIRED BY THE PROJECT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A CONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED TO WITHIN

From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm Water Technical Standards Manual

- Minimum Flood Protection Grade of all structures fronting pond or open ditch shall be no less than 2 feet above an adjacent 100—year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where
- floodwaters can enter a building. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the window well.
- The Lowest Adjacent Grade for residential, commercial, or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation under proposed conditions.

Standard: Lowest Adjacent Grade

- For areas outside a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain The Lowest Adjacent Grade for all residential, commercial, or industrial buildings adjacent to ponds shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow
- weir elevation, whichever is higher ii. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a minimum of 2 feet above the highest noted overflow
- path/ponding elevation across the property frontage. iii. In addition to the Lowest Adjacent Grade requirement any basement floor must be at least a foot above the normal water level of any wet-bottom pond.
- a. Each lot that is adjacent to a pond, open ditch or flooding source has a flood protection grade. There are instances where there are multiple different flooding sources for 1 structure. In this case, there should be a flood protection arade listed for each side of the structure in the event that piping from the structure discharge to either flood source.
- Finished floor elevation or the lowest building entry elevation shall be no less than 6 inches above finished grade around the building. Also, the building's lowest entry elevation that is adjacent to and facing a road shall be a minimum of 15 inches above the road elevation.

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC

A. Excavated material that is suitable may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the site.

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the responsibility of the Contractor for any costs for fill needed.

2. REMOVAL OF TREES

A. All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.

3. PROTECTION OF TREES

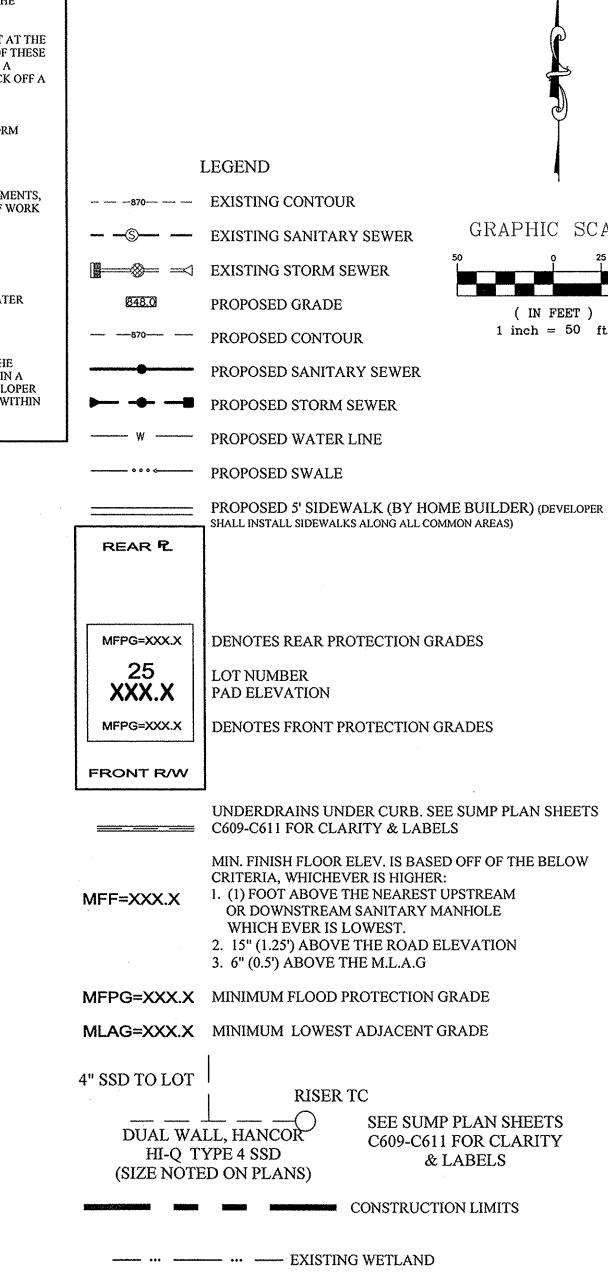
- The Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.
- In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.

4. REMOVAL OF TOPSOIL

A. All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.

- A. Rules and regulation governing the respective utility shall be observed in executing all
- It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside
- A. Do all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawing.
- The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
- The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.

FORM\EARTHWRK



840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

> APPROXIMATE LIMITS OF THE 100YR. FLOODPLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

SEE SUMP PLAN SHEETS

C609-C611 FOR CLARITY

& LABELS

GRAPHIC SCALE

(IN FEET) 1 inch = 50 ft.

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_ _ _ _ _ _ _ _ _ _ APPROXIMATE LIMITS OF FLOODWAY PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

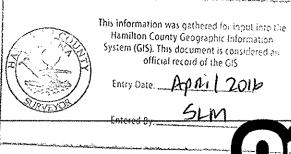
DRAINAGE SUMMARY

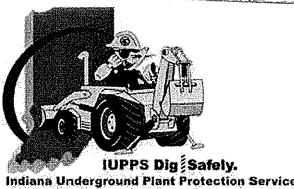
REFERENCE SHEET C206 FOR DRAINAGE SUMMARY INFORMATION.

FLOOD STATEMENT THIS SITE DOES LIE WITHIN A FLOODWAY OR FLOOD PLAIN PER THEWILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

VEGETATIVE COVER EXISTING SITE CONSIST MOSTLY OF GRASS AND WEEDS WITH WOODS ON THE SITE.

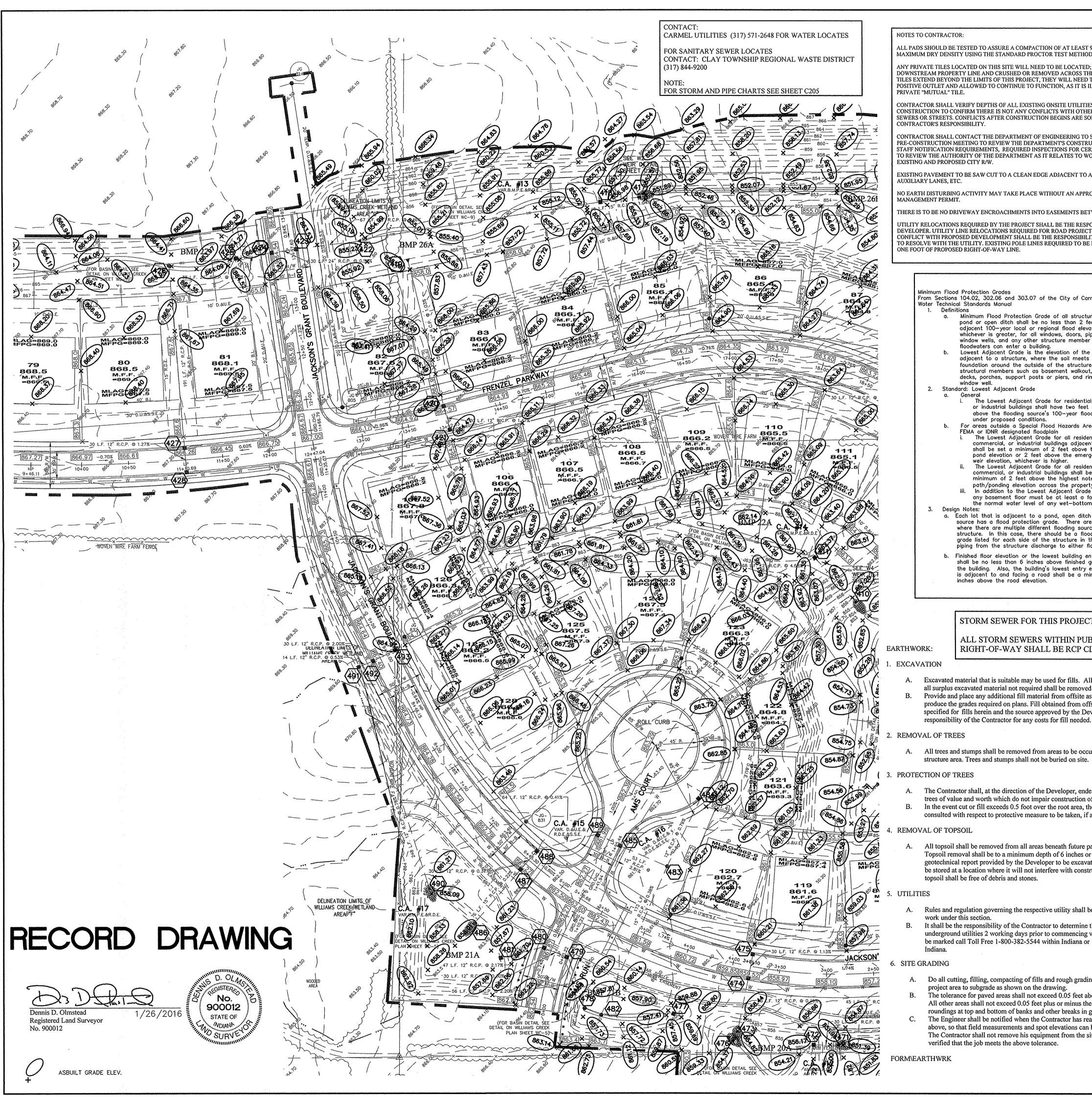
ADJACENT PROPERTIES **NORTH: AGRICULTURE** EAST: AGRICULTURE SOUTH: AGRICULTURE WEST: RESIDENTIAL







СНЕСКЕЙ ВУ: ВАН DRAWN BY: KRG



ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD.

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM EWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE

CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A RE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS STAFF NOTIFICATION REQUIREMENTS. REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND PROPOSED CITY R/W.

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING,

NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER

THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.

DEVELOPER. UTILITY LINE RELOCATIONS REQUIRED FOR ROAD PROJECTS THAT RESULT IN A CONFLICT WITH PROPOSED DEVELOPMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RESOLVE WITH THE UTILITY. EXISTING POLE LINES REQUIRED TO BE RELOCATED TO WITHIN ONE FOOT OF PROPOSED RIGHT-OF-WAY LINE.

Minimum Flood Protection Grades From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm

> a. Minimum Flood Protection Grade of all structures fronting of pond or open ditch shall be no less than 2 feet above any adjacent 100-year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where loodwaters can enter a building.

Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the

Standard: Lowest Adjacent Grade

- The Lowest Adjacent Grade for residential, commercial or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation under proposed conditions.
- For areas outside a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain The Lowest Adjacent Grade for all residential, commercial, or industrial buildings adjacent to ponds shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher. ii. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a
- minimum of 2 feet above the highest noted overflow path/ponding elevation across the property frontage. In addition to the Lowest Adjacent Grade requirements any basement floor must be at least a foot above
- the normal water level of any wet-bottom pond. source has a flood protection grade. There are instances where there are multiple different flooding sources for 1 structure. In this case, there should be a flood protection grade listed for each side of the structure in the event that piping from the structure discharge to either flood source.
- Finished floor elevation or the lowest building entry elevation shall be no less than 6 inches above finished grade around the building. Also, the building's lowest entry elevation that

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

- Excavated material that is suitable may be used for fills. All unsuitable material and
- all surplus excavated material not required shall be removed from the site. Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the

REMOVAL OF TREES

All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.

3. PROTECTION OF TREES

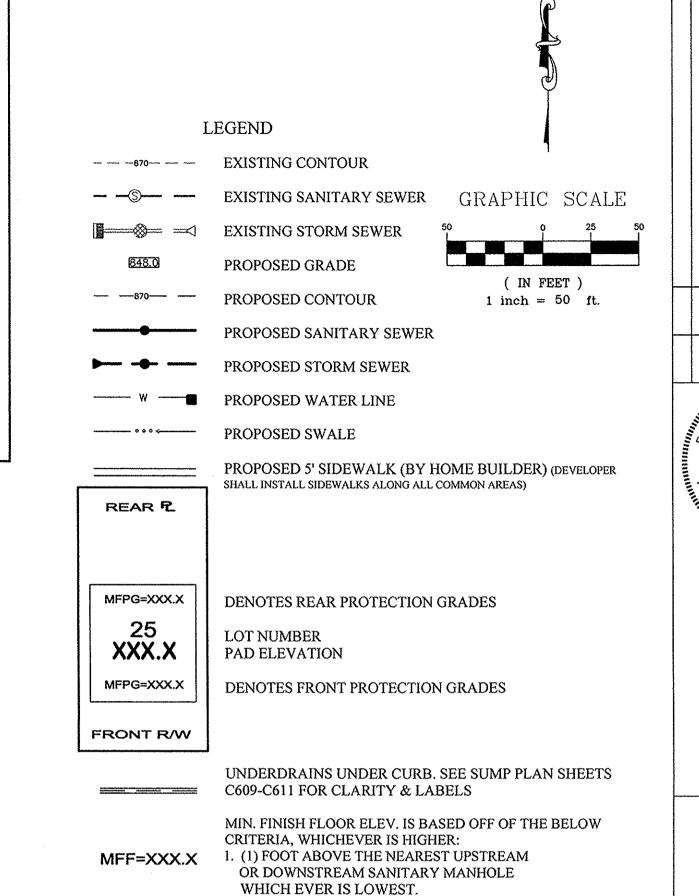
- The Contractor shall, at the direction of the Developer, endeavor to save and protect
- trees of value and worth which do not impair construction of improvements as designed. In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.

REMOVAL OF TOPSOIL

All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should THIS SITE DOES LIE TO be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.

- Rules and regulation governing the respective utility shall be observed in executing all
- It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside

- A. Do all cutting, filling, compacting of fills and rough grading required to bring entire
- project area to subgrade as shown on the drawing. B. The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide
- roundings at top and bottom of banks and other breaks in grade. The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.



3. 6" (0.5') ABOVE THE M.L.A.G MFPG=XXX.X MINIMUM FLOOD PROTECTION GRADE

MLAG=XXX.X MINIMUM LOWEST ADJACENT GRADE

4" SSD TO LOT

RISER TC DUAL WALL, HANCOR

HI-Q TYPE 4 SSD

(SIZE NOTED ON PLANS)

SEE SUMP PLAN SHEETS C609-C611 FOR CLARITY & LABELS

CONSTRUCTION LIMITS

2. 15" (1.25') ABOVE THE ROAD ELEVATION

--- ··· --- EXISTING WETLAND

840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

> APPROXIMATE LIMITS OF THE 100YR. FLOODPLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

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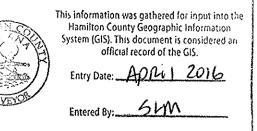
DRAINAGE SUMMARY

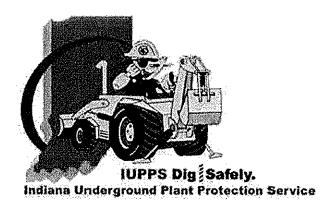
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ADJACENT PROPERTIES **NORTH: AGRICULTURE** EAST: AGRICULTURE SOUTH: AGRICULTURE WEST: RESIDENTIAL







Know what's below. Call before you dig.

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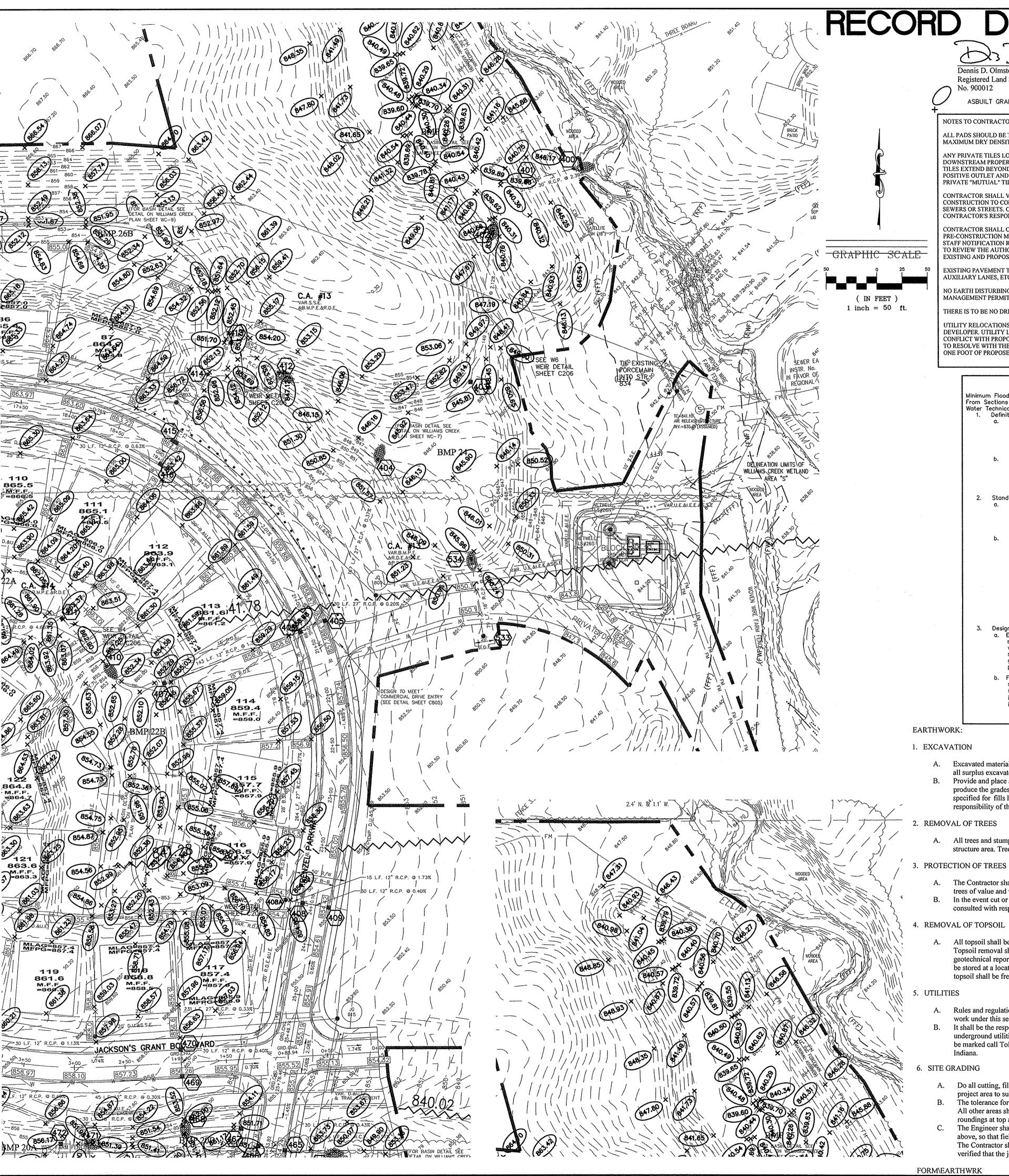
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SECTION

No. 19358

STATE OF



900012

Registered Land Surveyor

No. 900012 ASBUILT GRADE ELEV.

NOTES TO CONTRACTOR:

ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE, IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT. THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A

STATE OF

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE

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From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm a. Minimum Flood Protection Grade of all structures fronting of pond or open ditch shall be no less than 2 feet above any adjacent 100-year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where oodwaters can enter a building. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the window well.

2. Standard: Lowest Adjacent Grade

i. The Lowest Adjacent Grade for residential, commercial, or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation under proposed conditions.

For areas outside a Special Flood Hazards Area (SFHA) or

- FEMA or IDNR designated floodplain The Lowest Adjacent Grade for all residential, commercial, or industrial buildings adjacent to ponds shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher. The Lowest Adjacent Grade for all residential,
- commercial, or industrial buildings shall be set a minimum of 2 feet above the highest noted overflow path/ponding elevation across the property frontage. In addition to the Lowest Adjacent Grade requirements any basement floor must be at least a foot above

grade listed for each side of the structure in the event that

- the normal water level of any wet-bottom pond. a. Each lot that is adjacent to a pond, open ditch or flooding source has a flood protection grade. There are instances where there are multiple different flooding sources for 1 structure. In this case, there should be a flood protection
- piping from the structure discharge to either flood source. b. Finished floor elevation or the lowest building entry elevation shall be no less than 6 inches above finished grade around the building. Also, the building's lowest entry elevation that is adjacent to and facing a road shall be a minimum of 15 inches above the road elevation.

- A. Excavated material that is suitable may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the site.
- Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by the Developer. It will be the responsibility of the Contractor for any costs for fill needed.

A. All trees and stumps shall be removed from areas to be occupied by a road surface or structure area. Trees and stumps shall not be buried on site.

3. PROTECTION OF TREES

- A. The Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value and worth which do not impair construction of improvements as designed.
- In the event cut or fill exceeds 0.5 foot over the root area, the Developer shall be consulted with respect to protective measure to be taken, if any, to preserve such trees.

A. All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.

- A. Rules and regulation governing the respective utility shall be observed in executing all work under this section.
- It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside
- Do all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawing.
- The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
- The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.

CARMEL UTILITIES (317) 571-2648 FOR WATER LOCATES FOR SANITARY SEWER LOCATES CONTACT: CLAY TOWNSHIP REGIONAL WASTE DISTRICT (317) 844-9200

STORM SEWER FOR THIS PROJECT WILL BE PUBLIC

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

FOR STORM AND PIPE CHARTS SEE SHEET C205

LEGEND

---- EXISTING CONTOUR **EXISTING SANITARY SEWER**

EXISTING STORM SEWER

PROPOSED CONTOUR PROPOSED SANITARY SEWER

PROPOSED GRADE

PROPOSED STORM SEWER PROPOSED WATER LINE

PROPOSED SWALE PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER

SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)

19358

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DRAWN BY: KRG

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CKSONS (SECTION

MFPG=XXX.X MFPG=XXX.X

REAR R

DENOTES REAR PROTECTION GRADES

LOT NUMBER PAD ELEVATION **DENOTES FRONT PROTECTION GRADES**

FRONT R/W

C609-C611 FOR CLARITY & LABELS MIN. FINISH FLOOR ELEV. IS BASED OFF OF THE BELOW

UNDERDRAINS UNDER CURB. SEE SUMP PLAN SHEETS

CRITERIA, WHICHEVER IS HIGHER: 1. (1) FOOT ABOVE THE NEAREST UPSTREAM MFF=XXX.X OR DOWNSTREAM SANITARY MANHOLE

WHICH EVER IS LOWEST. 2. 15" (1.25') ABOVE THE ROAD ELEVATION 3. 6" (0.5') ABOVE THE M.L.A.G

MFPG=XXX.X MINIMUM FLOOD PROTECTION GRADE

MLAG=XXX.X MINIMUM LOWEST ADJACENT GRADE 4" SSD TO LOT

RISER TC SEE SUMP PLAN SHEETS DUAL WALL, HANCOR C609-C611 FOR CLARITY HI-Q TYPE 4 SSD & LABELS (SIZE NOTED ON PLANS)

CONSTRUCTION LIMITS

--- ··· --- EXISTING WETLAND

APPROXIMATE LIMITS OF THE 100YR. FLOODPLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

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840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

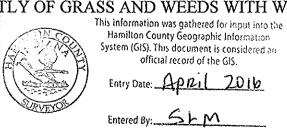
DRAINAGE SUMMARY

REFERENCE SHEET C206 FOR DRAINAGE SUMMARY INFORMATION.

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ADJACENT PROPERTIES NORTH: AGRICULTURE EAST: AGRICULTURE SOUTH: AGRICULTURE WEST: RESIDENTIAL

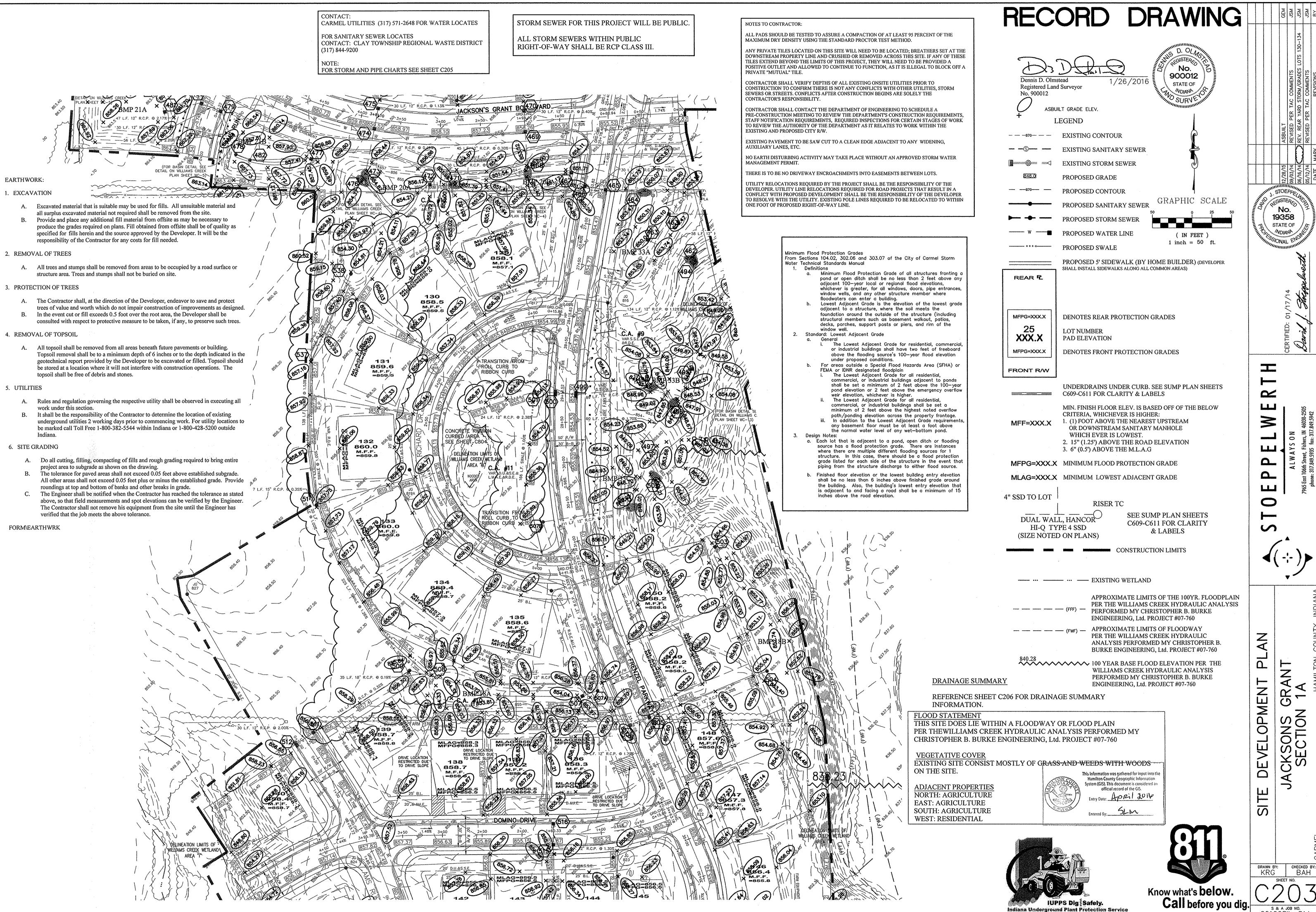


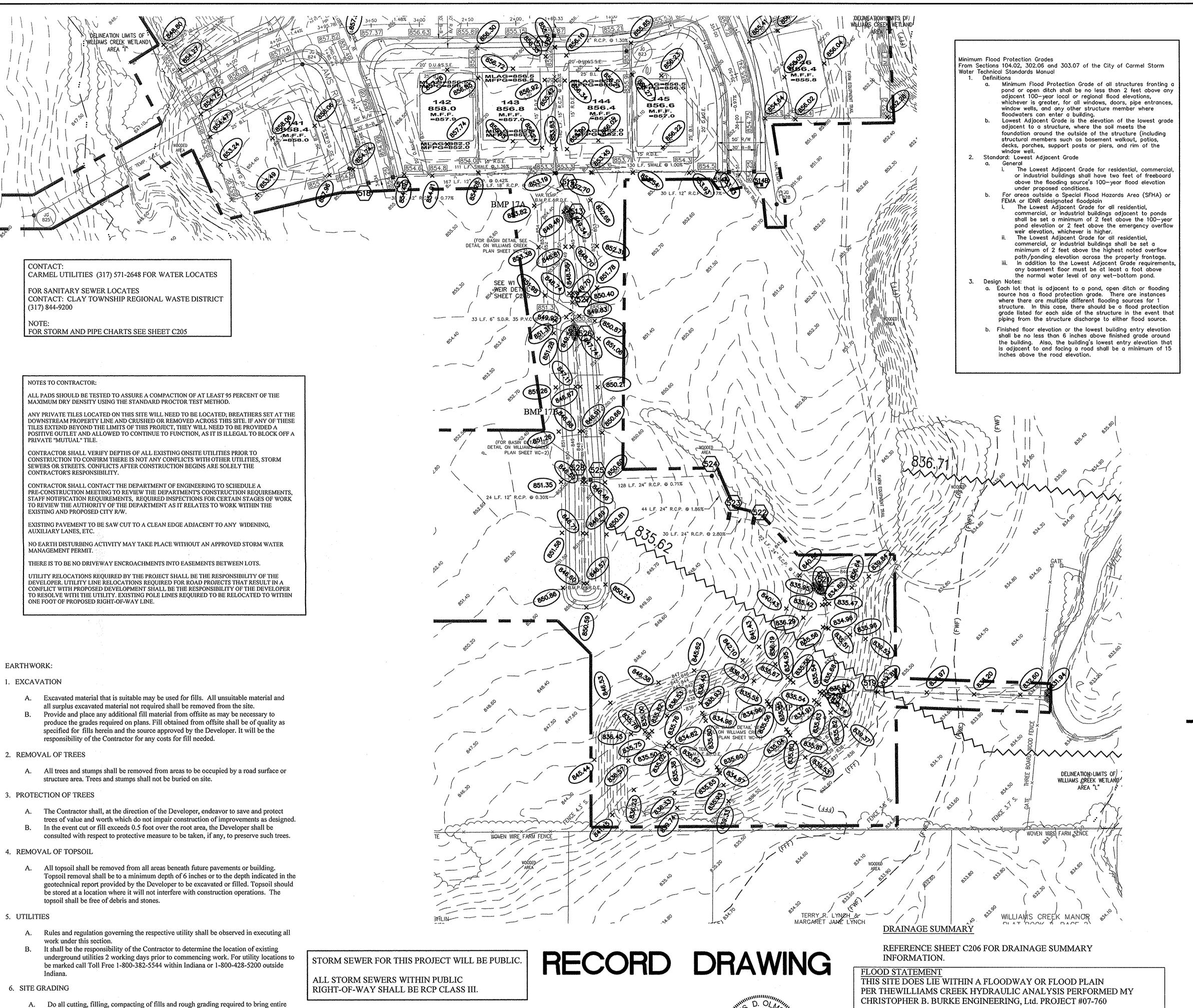
Hamilton County Geographic Information ystem (GIS). This document is considered an official record of the GIS. Entry Date: APRI 2016 Entered By: 5kM



Know what's **below**.

Call before you dig.





Registered Land Surveyor

ASBUILT GRADE ELEV.

No. 900012

(IN FEET) 1 inch = 50 ft.

GRAPHIC SCALE

LEGEND

- - - 870-- - EXISTING CONTOUR EXISTING SANITARY SEWER

PROPOSED CONTOUR

PROPOSED GRADE

PROPOSED SANITARY SEWER PROPOSED STORM SEWER

PROPOSED WATER LINE

PROPOSED SWALE

MFPG=XXX.X

MFPG=XXX.X

FRONT R/W

REAR R

DENOTES REAR PROTECTION GRADES

LOT NUMBER PAD ELEVATION

DENOTES FRONT PROTECTION GRADES

UNDERDRAINS UNDER CURB. SEE SUMP PLAN SHEETS

C609-C611 FOR CLARITY & LABELS

PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER

SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)

MIN. FINISH FLOOR ELEV. IS BASED OFF OF THE BELOW CRITERIA, WHICHEVER IS HIGHER: 1. (1) FOOT ABOVE THE NEAREST UPSTREAM MFF=XXX.X OR DOWNSTREAM SANITARY MANHOLE

WHICH EVER IS LOWEST. 2. 15" (1.25') ABOVE THE ROAD ELEVATION 3. 6" (0.5') ABOVE THE M.L.A.G

MFPG=XXX.X MINIMUM FLOOD PROTECTION GRADE

MLAG=XXX.X MINIMUM LOWEST ADJACENT GRADE

4" SSD TO LOT

RISER TC

DUAL WALL, HANCOR HI-Q TYPE 4 SSD (SIZE NOTED ON PLANS)

SEE SUMP PLAN SHEETS C609-C611 FOR CLARITY & LABELS

No.

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DRAWN BY: KRG

60160SIL-S1A

CONSTRUCTION LIMITS

--- ··· --- EXISTING WETLAND

APPROXIMATE LIMITS OF THE 100YR. FLOODPLAIN PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

— — — — (FWF) — APPROXIMATE LIMITS OF FLOODWAY PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE ENGINEERING, Ltd. PROJECT #07-760

ENGINEERING, Ltd. PROJECT #07-760

840.28 100 YEAR BASE FLOOD ELEVATION PER THE WILLIAMS CREEK HYDRAULIC ANALYSIS PERFORMED MY CHRISTOPHER B. BURKE



VEGETATIVE COVER

ADJACENT PROPERTIES

NORTH: AGRICULTURE

SOUTH: AGRICULTURE

EAST: AGRICULTURE

WEST: RESIDENTIAL

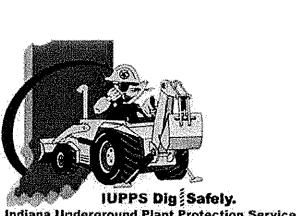
ON THE SITE.

900012

STATE OF

EXISTING SITE CONSIST MOSTLY OF GRASS AND WEEDS WITH WOODS

This Information was gathered for input into the Hamilton County Geographic Information stem (GIS). This document is considered an official record of the GIS. ntry Date: Apoil 2016





FORM\EARTHWRK

This copy printed from Digital Archive of the Hamilton County Surveyor's Office; One Hamilton Co. Square, Ste., Noblesville, In 46060

verified that the job meets the above tolerance.

project area to subgrade as shown on the drawing.

B. The tolerance for paved areas shall not exceed 0.05 feet above established subgrade.

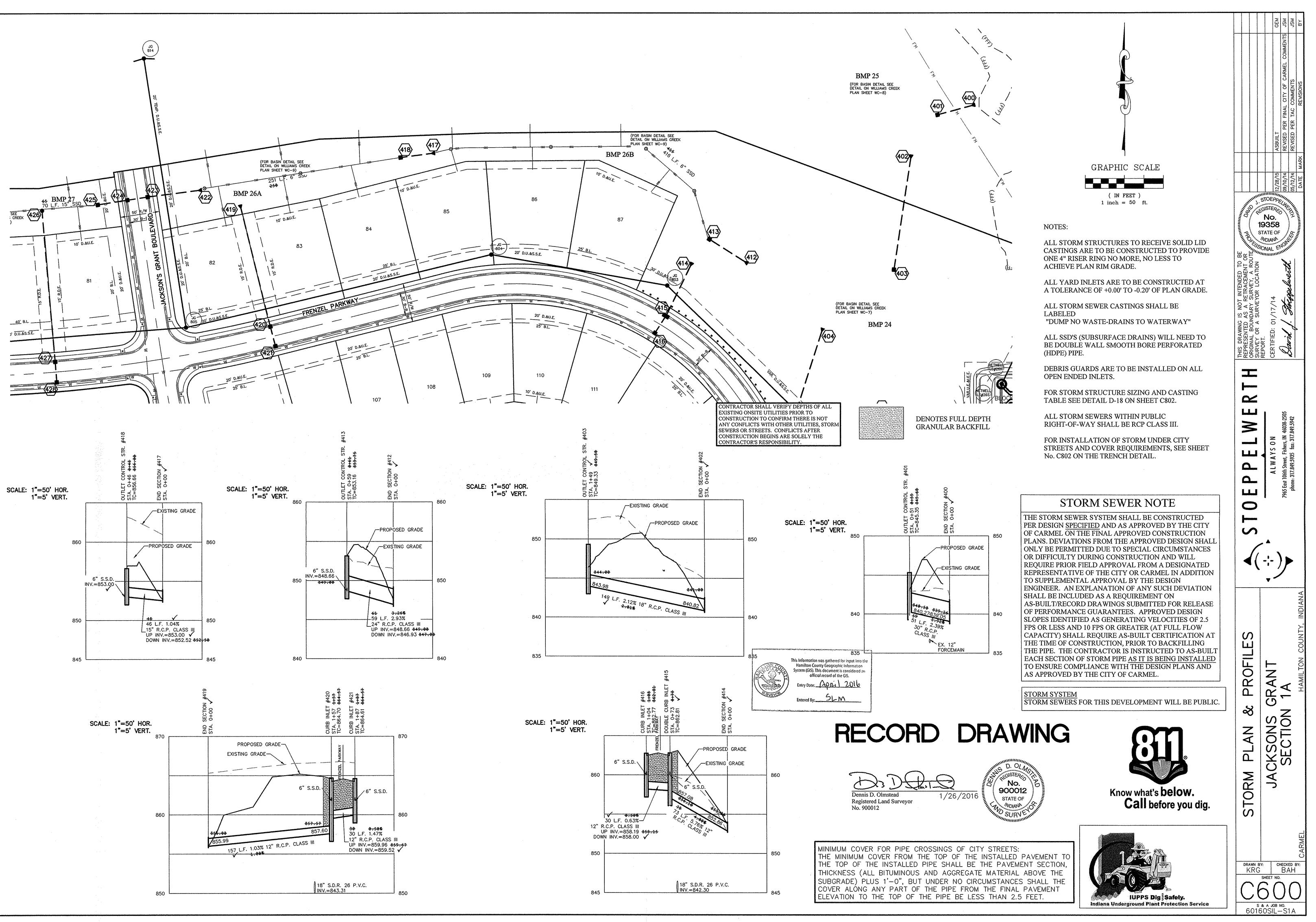
C. The Engineer shall be notified when the Contractor has reached the tolerance as stated

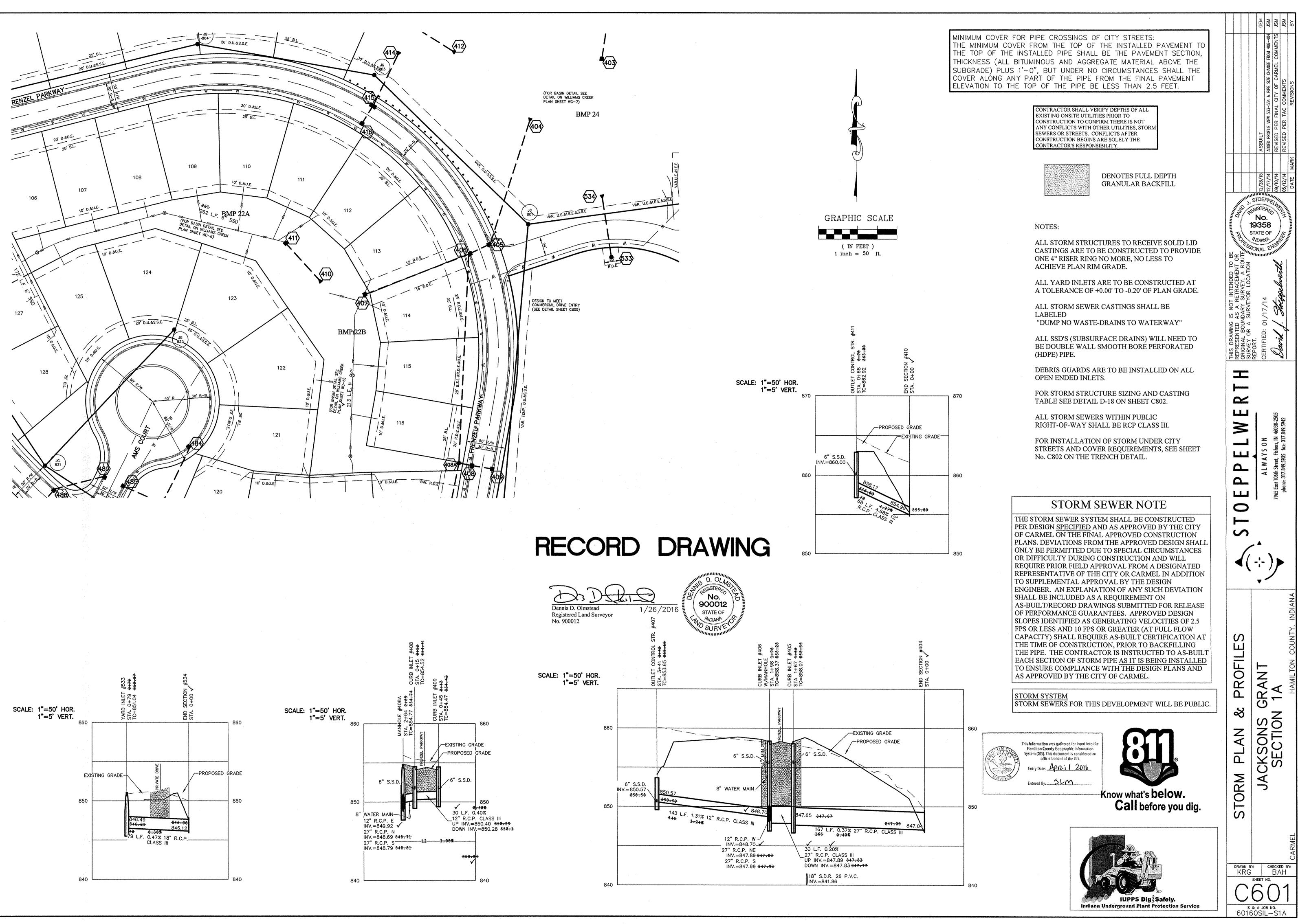
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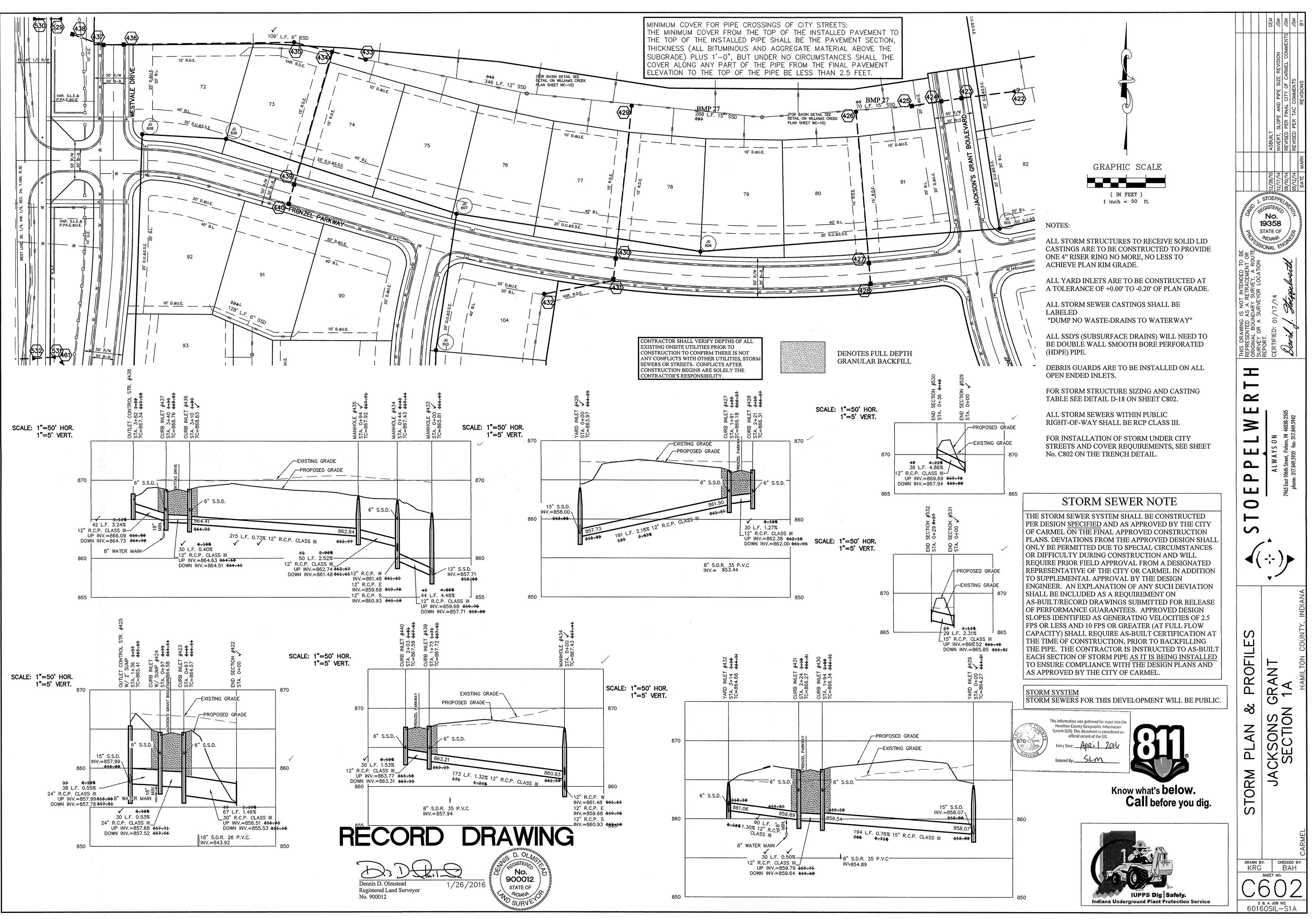
All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide

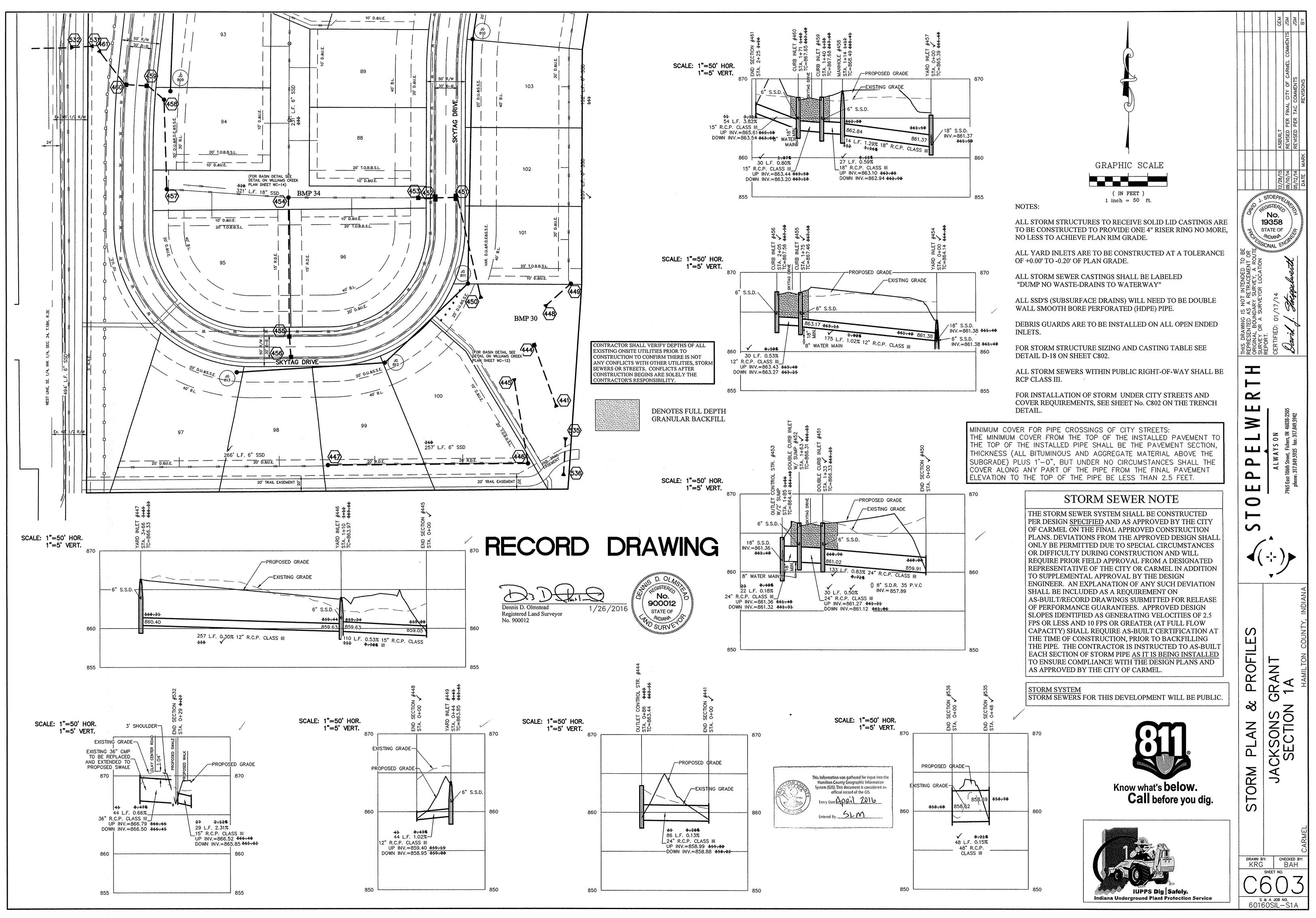
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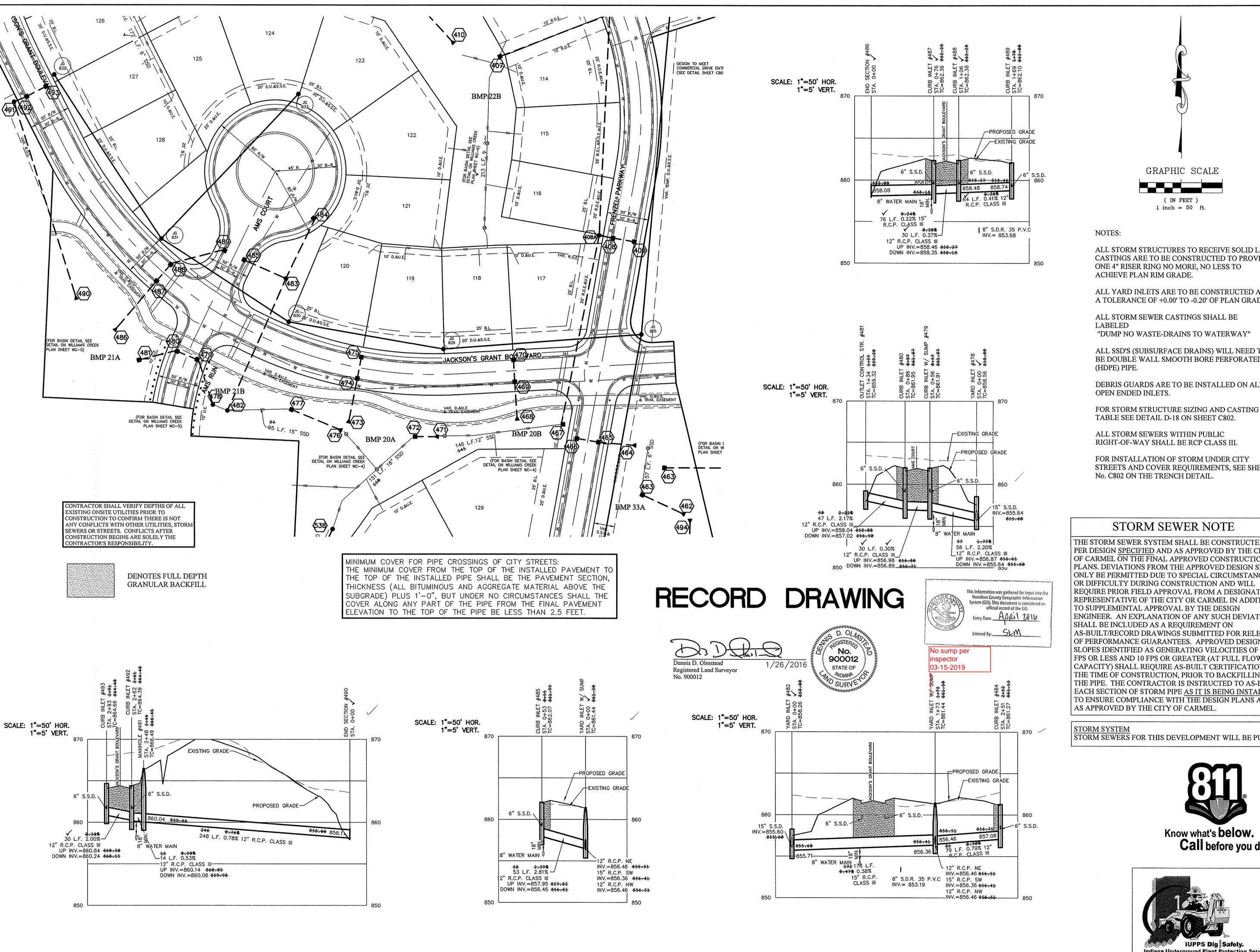
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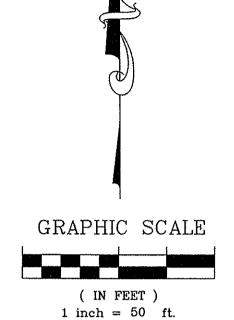












NOTES:

ALL STORM STRUCTURES TO RECEIVE SOLID LID CASTINGS ARE TO BE CONSTRUCTED TO PROVIDE ONE 4" RISER RING NO MORE, NO LESS TO ACHIEVE PLAN RIM GRADE.

ALL YARD INLETS ARE TO BE CONSTRUCTED AT A TOLERANCE OF +0.00' TO -0.20' OF PLAN GRADE.

ALL STORM SEWER CASTINGS SHALL BE LABELED

"DUMP NO WASTE-DRAINS TO WATERWAY"

ALL SSD'S (SUBSURFACE DRAINS) WILL NEED TO BE DOUBLE WALL SMOOTH BORE PERFORATED (HDPE) PIPE.

DEBRIS GUARDS ARE TO BE INSTALLED ON ALL OPEN ENDED INLETS.

TABLE SEE DETAIL D-18 ON SHEET C802.

ALL STORM SEWERS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE RCP CLASS III.

FOR INSTALLATION OF STORM UNDER CITY STREETS AND COVER REQUIREMENTS, SEE SHEET No. C802 ON THE TRENCH DETAIL.

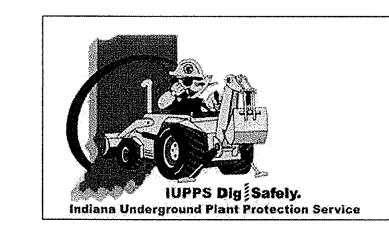
STORM SEWER NOTE

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 OR 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 AND 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

STORM SEWERS FOR THIS DEVELOPMENT WILL BE PUBLIC



Know what's **below**. Call before you dig.



DRAWN BY: KRG CHECKED BY: 60160SIL-S1A

No.

19358

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THIS DRAWING REPRESENTED ORIGINAL BOUN SURVEY OR A REPORT.

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