

TO: Hamilton County Drainage Board

October 12, 2005

RE: Lion Creek Drain, Long Ridge Estates Arm

Attached is a petition filed by Platinum Properties LLC along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Long Ridge Estates Arm, Lion 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:

6" SCH 40 PVC	60 ft.	15" RCP	629 ft	27" RCP	999 ft.
6" SSD	10,682 ft.	18" RCP	631 ft.	30" RCP	656 ft
12" CMP	60 ft.	21" RCP	677 ft.	Open Ditch	777 ft.
12" RCP	1,049 ft.	24" RCP	985 ft.		

The total length of the drain will be 17,205 feet.

The 60 feet of 12" CMP are two 30 foot culverts that cross Shelborne Road. The first culvert is approximately 2,050 feet south of the intersection of 141<sup>st</sup> Street and Shelborne Road and the second culvert is approximately 2,577 feet south of the intersection. The open ditch listed is three (3) separate segments of drain. The first being 25 feet from the western end of the north culvert to Structure 120. The second segment being 12 feet, from the western end of the southern culvert to Structure 120B.

The final segment is 740 feet of existing channel that is located within Common Area #1. The drain starts at the northern property line of Common Area #1 approximately 151 feet east of the northwest corner of the common area and follows the existing channel south, then turning east and turning back north to the shared property line between Long Ridge Estates and Edgewood Subdivision. This drain is to provide a future outlet point to the regulated drain if drainage improvements are made to Edgewood Subdivision at or near the southwest corner of Lot 6, Edgewood Subdivision. Although this open ditch does not drain to Lion Creek, it is included with the Drain at this time. As development occurs in the drainage shed for this unnamed tributary of Little Eagle Creek in the future, this drain should be included into the maintenance for that drain.

The Agri-Drain pond leveling structure, shown on the plans as Structures 97 to 99 and detailed on Sheet C602, is to be maintained as part of the regulated drain and is included in the footage calculations above. This structure is designed to control the water level between the retention pond and the existing

pond and the levels of the pond have an effect of the storage volume the ponds can hold. The control of the detention pond volume is the basis for this structure becoming part of the regulated drain, to ensure proper functionality and any required maintenance.

The retention ponds (lakes) located in Common Area #3 is to be considered part of the regulated drain. Pond maintenance shall include the inlet, outlet, sediment removal and erosion control along the banks as part of the regulated drain. The maintenance of the ponds (lakes), such as mowing and aquatic vegetation control, will be the responsibility of the Homeowners Association as set out on pages 6 and 21 in the Declaration of Covenants, Conditions and Restrictions of Long Ridge Estates. This document is recorded in the Office of the Hamilton County Recorder as Instrument Number 200500063315. The Board will also retain jurisdiction for ensuring the storage volume for which the ponds (lakes) were 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 and those main lines between lots or in rear yards. Only the main SSD lines which are located within the easement (right of way) are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain.

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 \$10.00 per acre for common areas, \$65.00 per platted lot, \$10.00 per acre for roadways, with a \$65.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$4,553.90.

The petitioner has submitted surety for the proposed drain at this time. Surety shall be submitted prior to the approval of the Hamilton County Board of Commissioners/commencement of construction. The sureties which are in the form of a Performance Bond are as follows:

Agent: Bond Safeguard Insurance Company	Agent: Bond Safeguard Insurance Company
Date: May 17, 2005	Date: May 17, 2005
Number: 5016607	Number: 5016606
For: Storm Sewers	For: Erosion Control
Amount: \$302,805.60	Amount: \$10,200.00

Parcels assessed for this drain may be assessed for the Little Eagle Creek Drain at sometime in the future.

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 is for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for Long Ridge Estates Section 1 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for December 22, 2005.

Kenton C. Ward Hamilton County Surveyor

KCW/pll

	(Revised 06/08/04)
STATE OF INDIANA )	
)	
COUNTY OF HAMILTON )	
TO: HAMILTON COUNTY DRAINAG	JAN 8.6 2005
% Hamilton County Surveyor	
One Hamilton County Square, Su	ite 188
Noblesville, IN. 46060-2230	
In the matter of LongRidge Esta	ates Subdivision, Section
	ain 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 <u>LongRidge Estates, Section 1</u>, 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).

Signed

Signed

Printed Name

CHRISTOPHER	W. WERTH,	MEMBER
Printed Name	BOOMERANG	DEVELOPMENT, LLC

RECORDED OWNER(S) OF LAND INVOLVED Date \_\_\_\_\_\_ /-7-64

### FINDINGS AND ORDER

### CONCERNING THE MAINTENANCE OF THE

Lion Creek Drain, Long Ridge Estates Arm

On this **22nd day of December 2005**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Lion Creek Drain**, **Long Ridge Estates 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

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# **CONSULTING ENGINEERS • LAND SURVEYORS**

David J. Stoeppelwerth, P.E., P.L.S. President, C.E.O.

Curtis C. Huff, P.L.S. Vice-President, C.O.O.

R.M. Stoeppelwerth, P.E., P.L.S. President Emeritus

May 18, 2005

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

Attention: Steve Cash

Re: Long Ridge, Section 1

Dear Mr. Cash:

On behalf of the developer Platinum Properties, L.L.C., I wish to submit the following Engineer's Estimate for Long Ridge, Section 1. The estimate is as follows:

Storm Sewer	\$252,338.00
Erosion Control	\$8,500.00
Monumentation	\$8,100.00

If you have any questions regarding these estimates, please contact Edward E. Fleming at (317) 577-3400, ext. 22.

Very truly yours,

STOEPPELWERTH & ASSOCIATES, INC.

NO. 19358 STATE OF WDIANA NO. 19358 David J. Stoeppelwerth **Professional Engineer** No. 19358

EEF/meb S:\47425S1\Blue\_Book\Agency Correspondence\HamiltonCountySurveyorCashEE05-18-05.doc

9940 Allisonville Road • Fishers, Indiana 46038-2005 • (317) 849-5935 • 1-800-728-6917 • FAX: (317) 849-5942

### BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF Lion Creek Drain, Long Ridge Estates Arm

#### NOTICE

To Whom It May Concern and:

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Lion Creek Drain, Long Ridge Estates Arm on December 22, 2005 at 10:40 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

### Lion Creek Drain, Long Ridge Estates Arm

### NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **December 22, 2005** 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



# **CONSULTING ENGINEERS • LAND SURVEYORS**

David J. Stoeppelwerth, P.E., P.L.S. President, C.E.O.

Curtis C. Huff, P.L.S. Vice-President, C.O.O.

R.M. Stoeppelwerth, P.E., P.L.S. President Emeritus

# CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Longridge Estates, Section One

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

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.

Δ

Signature: Marling	Date: July 24, 2006
Type or Print Name: Jeffory W. Darling	
Business Address: Stoeppelwerth & Associates, I	nc.
9940 Allisonville Road, Fisher	rs, Indiana 46038
Telephone Number: (317) 849-5935	
SEAL	INDIANA REGISTRATION NUMBER
No. 900017 STATE OF SURVE MUNICIPALITY SURVE MUNICIPALITY	900017
Business Address: <u>Stoeppelwerth &amp; Associates, I</u> <u>9940 Allisonville Road, Fisher</u> Telephone Number: <u>(317) 849-5935</u> SEAL SEAL <u>No.</u> 900017 STATE OF <u>SUBNE WIN</u>	nc. rs. Indiana 46038 

EEF/jag

S:\47425S1\Blue\_Book\Applications - Notice\CERTIFICATE OF COMPLETION AND COMPLIANCE007-24-06.doc

9940 Allisonville Road • Fishers, Indiana 46038-2005 • (317) 849-5935 • 1-800-728-6917 • FAX: (317) 849-5942





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

March 3, 2008

# Re: Lion Creek Drain: Long Ridge Estates Sec. 1

Attached are as-builts, certificate of completion & compliance, and other information for Long Ridge Estates Section 1. 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 October 12, 2005. The report was approved by the Board at the hearing held December 22, 2005. (See Drainage Board Minutes Book 8, Pages 565-567) The changes are as follows:

Structure:	Length:	Size	Material:	Up invert:	Dn_Invert	Grade:	Changes(ft):
124-123	162	27	RCP	901.8	901.06	0.46	1
131-130a	51	12	RCP	905.96	905.45	1	1
<u>130A-130</u>	30	12	RCP	905.45	904.05	0.53	· · · ·
130-129	58	24	RCP	904.05	903.79	0.45	
129-128	30	24	RCP	903.79	903.48	1.03	
128-126	161	24	RCP	903.48	902.74	0.46	
126-125	164	24	RCP	902.74	902.04	0.43	-1
125-124	30	24	RCP	902.04	901.8	0.8	· · · ·
141-140	30	12	RCP	907.79	907.75	0.13	
140-139	75	15	RCP	907.75	906.97	1.04	-1
139-137	328	18	RCP	906.97	905.45	0.46	
137-136	56	18	RCP	905.45	905.38	0.13	1
136-134	58	18	RCP	905.38	905.25	0.22	
101-102	30	12	RCP	906.09	905.82	0.9	
102-103	145	15	RCP	905.82	904.47	0.93	3
135-134	30	12	RCP	906.8	906.35	1.5	
134-132	162	21	RCP	905.25	904.5	0.46	1
132-130	129	21	RCP	904.5	904.05	0.35	
133-132	108	12	RCP	907.1	905.79	1.21	1
127-126	66	12	RCP	907.01	906.56	0.68	1
120b-116	233	15	RCP	909.57	907.1	1.06	-5
116-115	152	24	RCP	907.1	906.5	0.39	-3

						Other	
148-149	361	21	RCP	897.1	894.91	0.61	-26
151-150	81	27	RCP	900.08	899.86	0.27	-5
118-112	159	18	RCP	906.07	905.35	0.45	-1
119-118	30	18	RCP	906.3	906.07	0.77	
120-119	109	15	RCP	907	906.3	0.64	1
120A-120	23	12	RCP	910.04	908.53	6.56	-2
122-121	77	30	RCP	900.38	900	0.49	-60
123-122	160	27	RCP	901.06	900.38	0.43	
142-123	31	15	RCP	901.55	901.06	1.58	
143-142	105	12	RCP	902.45	901.55	0.86	
144-143	142	12	RCP	902.91	902.45	0.32	19
146-145	201	12	RCP	904.41	900.06	2.16	
147-146	30	12	RCP	904.59	904.41	0.6	
101A-100	104	30	RCP	900.33	899.97	0.35	-1
103-101a	205	30	RCP	901.48	900.33	0.56	
104-103	145	30	RCP	902.06	901.48	0.4	
105-104	138	30	RCP	902.83	902.06	0.56	
106-105	49	30	RCP	903.06	902.83	0.47	
107-106	30	27	RCP	903.27	903.06	0.7	
108-107	159	27	RCP	903.78	903.27	0.32	
109-108	243	12	RCP	905.51	903.78	0.71	-:
110-108	161	27	RCP	904.61	903.78	0.52	
111-110	31	27	RCP	904.76	904.61	0.37	
112-111	161	27	RCP	905.35	904.76	0.30	
113-112	231	24	RCP	906.19	905.35	0.36	
114-113	41	24	RCP	906.41	906.19	0.54	
115-114	30	24	RCP	906.5	906.41	0.3	

# 6" SSD Streets:

1532.5
1613
2066
10423

0.45	-1
0.27	-5
0.61	-26
Other	
Drain:	
6" PVC	60
12" CMP	73
Open	
Ditch	773
Total:	906

## RCP Pipe Totals:

	12	1089
	15	593
	18	631
	21	652
	24	897
	27	945
	30	718
Total:		5525

The length of the drain due to the changes described above is now 16,854 feet.

The non-enforcement was approved by the Board at its meeting on December 22, 2005 and recorded under instrument # 200500084918.

The following sureties were guaranteed by Bond Safeguard Insurance Company and released by the Board on its November 27, 2006 meeting.

**Bond-LC No:** 5016607 **Insured For:** Storm Sewers **Amount:**\$302,805.60 **Issue Date:** May 17, 2005

Bond-LC No: 5016606 Insured For: Erosion Control Amount: \$10,200.00 Issue Date: May 17, 2005

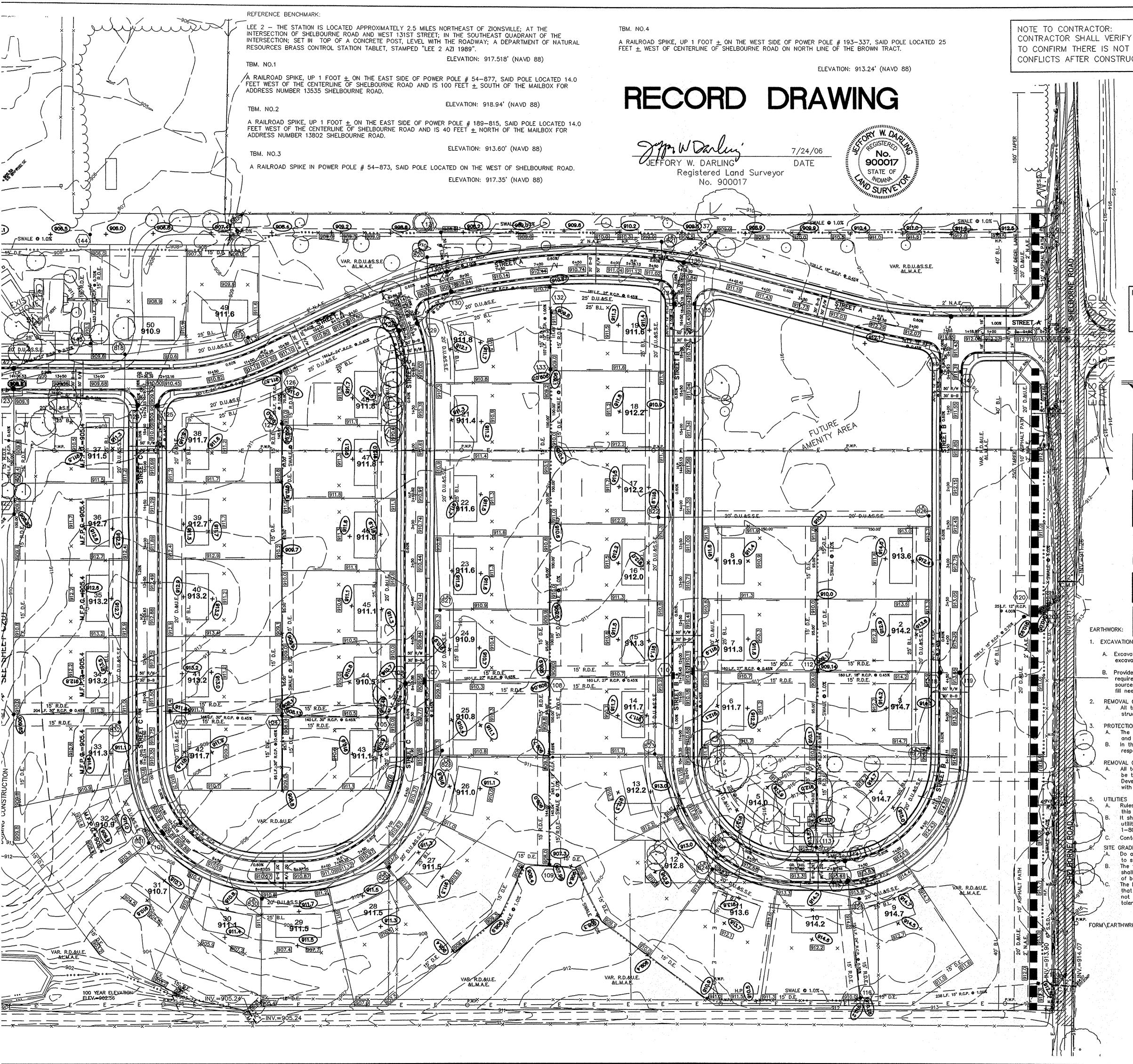
I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

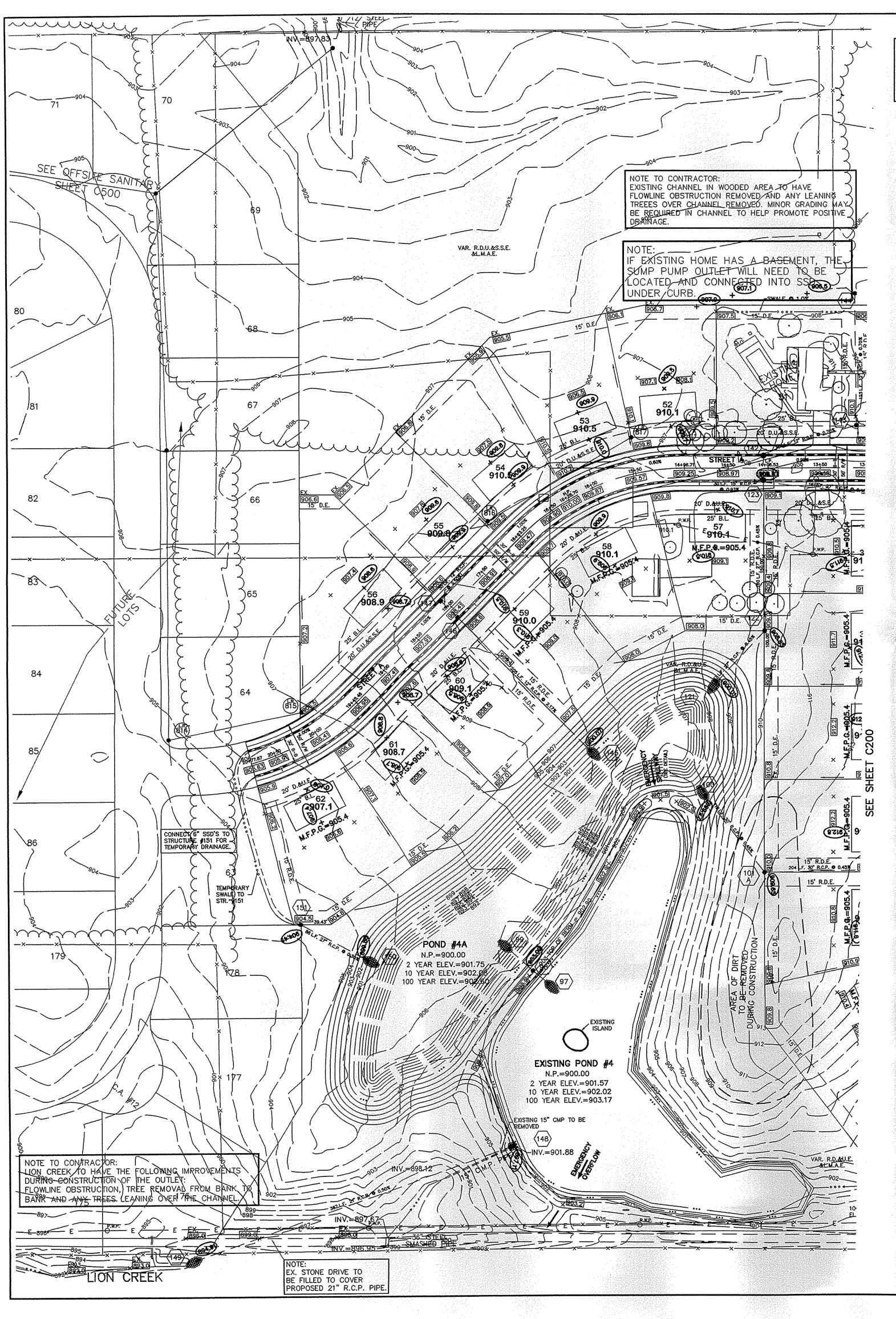
Kentoh C. Ward, CFM Hamilton County Surveyor

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KCW/slm



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DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS.	BMK BMK BMK	BAH JDH BAH	BY
LEGEND CONTRACTOR'S RESPONSIBILITY. LEGEND CONTOUR EXISTING EDGE OF WOODS EXISTING CONTOUR EXISTING SANITARY SEWER EXISTING STORM SEWER ROPOSED GRADE	REVISED PER ENGINEER COMMENTS REVISED PER ENGINEER COMMENTS REVISED PER CITY COMMENTS	REVISED PER DEVELOPER REVISED PER C.T.E. COMMENTS REVISED PER TAC COMMENTS	REVISIONS
ME MATCH EXISTING   B70 PROPOSED CONTOUR   PROPOSED SANITARY SEWER PROPOSED STORM SEWER   PROPOSED STORM SEWER PROPOSED SWALE   SCALE: 1"= 60'   PROPOSED 5' SIDEWALK (BY HOME BUILDER)   (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)   LOT NUMBER		4/01/05 2/10/05 0 <sup>2</sup> 2/2/05	01/04/05 DATE MARK
M.F.P.G.= PAD SIZE: 60'X60' (UNLESS OTHERWISE NOTED) MIN. FLOOD PROTECTION GRADES NOTE: MIN. FLOOD PROTECTION GRADES OF ALL STRUCTURES FRONTING POND #4 SHALL BE NO LESS THAN 2 FEET ABOVE ANY ADJACENT 100-YR. LOCAL OR REGIONAL FLOOD ELEVATION (WHICHEVER IS GREATER FOR ALL WINDOWS, DOORS, PIPE ENTRANCES, WINDOW WELLS ETC.)	CERTIFIED: 01/04/05	wid J. The opelwerth	*
PROPOSED 6" UNDERDRAINS DENOTES 4" SUBSURFACE DRAIN TO LOT DENOTES 6" SUBSURFACE DRAIN ROLL CURB RE: SURFACING LIMITS TO BE COUSTRUCTED	CER	849-5942	INDIANA
NOTE: THE EXISTING WELLS AND SEPTIC SYSTEMS WILL NEED TO BE PROPERLY LOCATED; ABANDONED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS. ALL PADS SHALL BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD. ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SEWER SYSTEM WITH A POSITIVE OUTFLOW NOTE: EX. 12" C.M.P. TO BE CLEANED OUT TO ALLOW FOR DRAINAGE TO STR. #120. NOTE: A 6" S.S.D IS TO BE INSTALLED UNDER TO THE STONE SHOULDER ALONG SHELBORNE RD.	CONSULTING ENGINEERS _ I AND SUBV	1-800-728-6917 FAX: ()	FISHERS
ated material that is suitable (topsoil and/or clay) may be used for fills. All unsuitable material and all surplus ated material not required shall be removed from the site. e and place any additional fill material from offsite as may be necessary to produce the grades ed on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the e approved by the Developer. It will be the responsibility of the Contractor for any costs for seded. OF TREES	Contraction of the second	S S S S S S S S S S S S S S S S S S S	
Of TREES trees and stumps shall be removed from areas to be occupied by a road surface or Jature area. Trees and stumps shall not be buried on site. ON OF TREES Contractor shall, at the direction of the Developer, endeavor to save and protect trees of value is worth which do not impair construction of improvements as designed. The event cut of fill exceeds 0.5 foot over the root area, the Developer shall be consulted with peet to protective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. OF TOPSOIL to architective measure to be taken, if any, to preserve such trees. The topsoil shall be the responsibility of the Contractor to determine the location of existing underground tiles 2 working days prior to commencing work. For utility locations to be marked coll Toll Free 500–325–5544 within indiano or 1–800–428–5200 uside indiano. Tensore his equipment from the site until the Engineer has verified by the Engineer. The Contractor shall inclease as shall not exceed 0.05 feet powe established subgrade. All other areas 1–800–428–5200 uside finding the trees of the location on the preserve AND Area mede upon the ground by the there may and public the solution on this public the taken and the find measurements and spot elevations can be verified by the Engineer. The Contractor shall public the solution on the site until the Engineer has verified that th	SITE DEVELOPMENT PLAN	LONGRIDGE ESTATES	CARMEL JUNION CINC INDIANA
FOR CALLS OUTSIDE OF INDIANA (317) 571-2648 FOR WATER LOCATES	JOB NO. 4	7425S1	



NOTE TO CONTRACTOR: 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.

**REFERENCE BENCHMARK:** LEE 2 - THE STATION IS LOCATED APPROXIMATELY 2.5 MILES NORTHEAST OF ZIONSVILLE; AT THE INTERSECTION OF SHELBOURNE ROAD AND WEST 131ST STREET: IN THE SOUTHEAST QUADRANT OF THE INTERSECTION; SET IN TOP OF A CONCRETE POST, LEVEL WITH THE ROADWAY; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED "LEE 2 AZI 1989".

ELEVATION: 917.518' (NAVD 88) TBM. NO.1

A RAILROAD SPIKE, UP 1 FOOT  $\pm$  ON THE EAST SIDE OF POWER POLE # 54-877, SAID POLE LOCATED 14.0 FEET WEST OF THE CENTERLINE OF SHELBOURNE ROAD AND IS 100 FEET  $\pm$  SOUTH OF THE MAILBOX FOR ADDRESS NUMBER 13535 SHELBOURNE ROAD.

TBM. NO.2 A RAILROAD SPIKE, UP 1 FOOT + ON THE EAST SIDE OF POWER POLE # 189-815, SAID POLE LOCATED 14.0 FEET WEST OF THE CENTERLINE OF SHELBOURNE ROAD AND IS 40 FEET + NORTH OF THE MAILBOX FOR ADDRESS NUMBER 13802 SHELBOURNE ROAD.

ELEVATION: 913.60' (NAVD 88)

ELEVATION: 918.94' (NAVD 88)

ELEVATION: 913.24' (NAVD 88)

A RAILROAD SPIKE IN POWER POLE # 54-873, SAID POLE LOCATED ON THE WEST OF SHELBOURNE ROAD.

TBM. NO.3

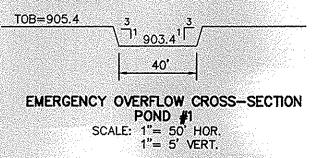
TBM. NO.4

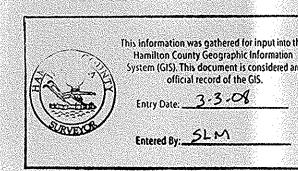
ELEVATION: 917.35' (NAVD 88)

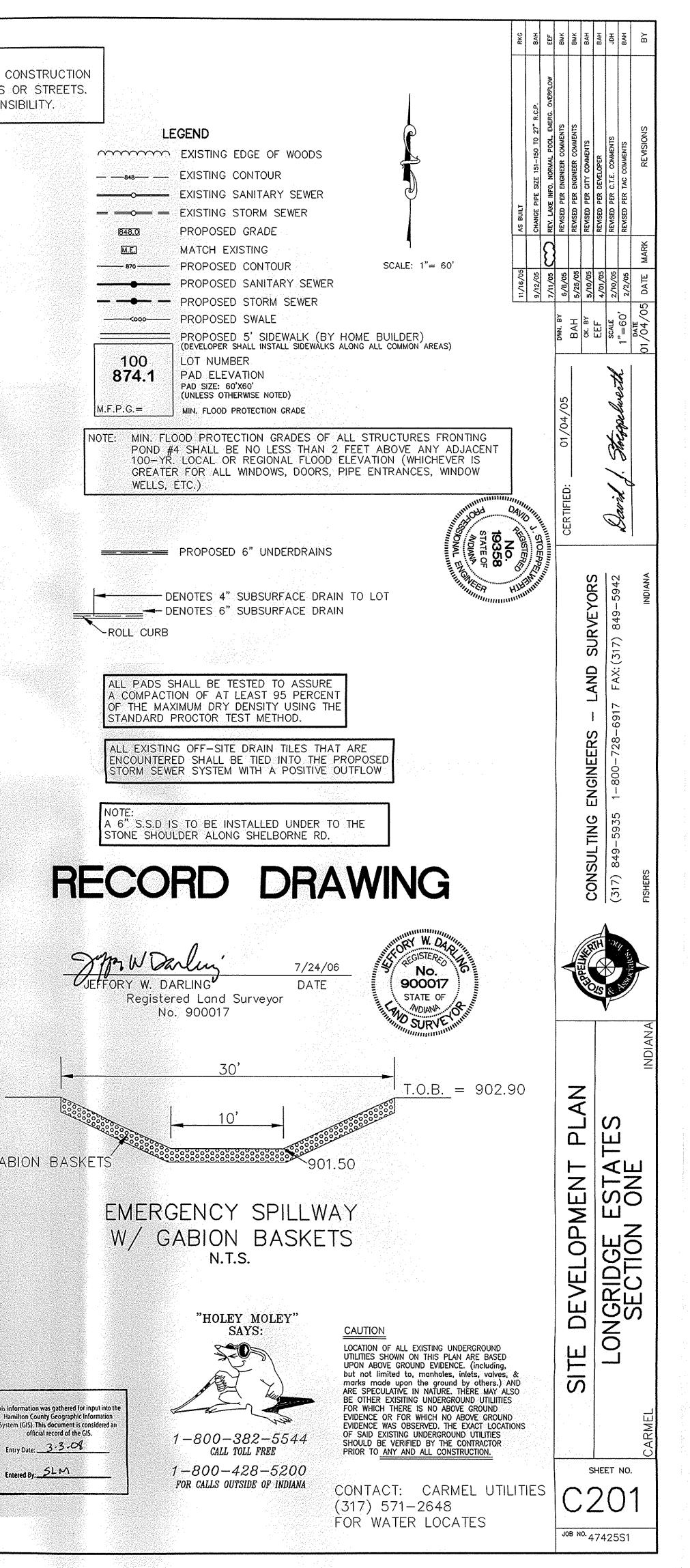
A RAILROAD SPIKE, UP 1 FOOT  $\pm$  ON THE WEST SIDE OF POWER POLE # 193-337, SAID POLE LOCATED 25 FEET  $\pm$  WEST OF CENTERLINE OF SHELBOURNE ROAD ON NORTH LINE OF THE BROWN TRACT.

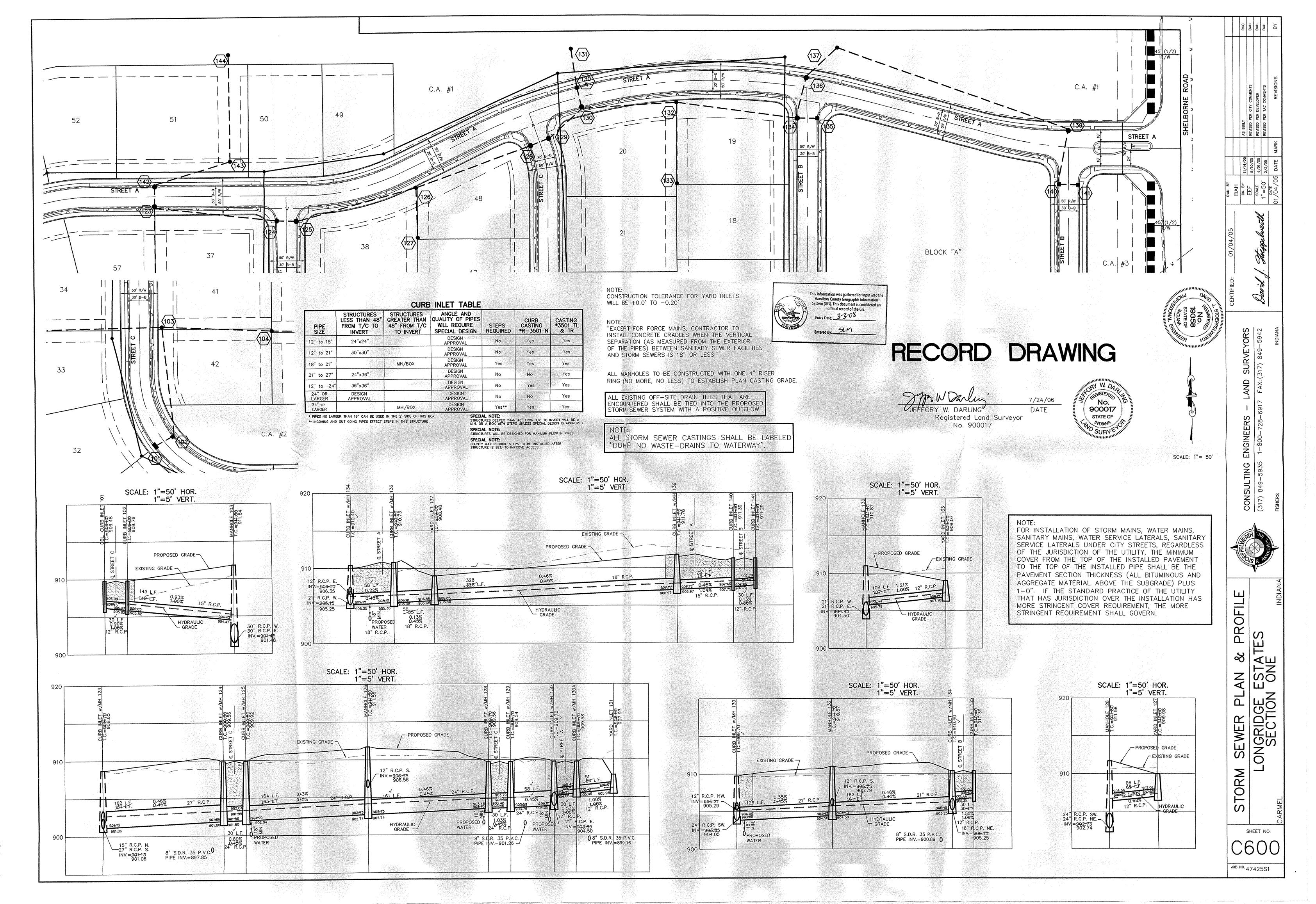
	STORM C	CHART		
TR. NO.	TYPE	T.C. / RIM	INVERT	DIRECTIO
97	AGRI-DRAIN RAT GUARD		894.00	NW
98	AGRI-DRAIN STRUCTURE	903.09	898.25	NW&SE
99	AGRI-DRAIN RAT GUARD		898.00	SE
100	CONCRETE END SECTION		899.97	SE
101A	MANHOLE	909.65	900.33	NW&E
101	CURB INLET	909.48	906.09	NE
102	CURB INLET	909.76	905.82	SW&N
103	MANHOLE	911.84	904.47 901.48	W&S&E
104	YARD INLET	908.13	902.06	W&E
105	MANHOLE	910.49	902.83	W&NE
106	CURB INLET W/MH	909.65	903.06	SW&E
107	DOUBLE CURB INLET	909.22	903.27	W&E
108	YARD INLET	909.04	903.78	W&E&S
109	YARD INLET	907.98	905.51	N
110	DOUBLE CURB INLET	910.02	904.61	NE&W
<u>110</u> 111	DOUBLE CURB INLET	910.02	904.76	SW&E
<u>111</u> 112	YARD INLET	909.14	905.35	W&S&E
	MANHOLE		in germania and a second s	
<u>113</u>	CURB INLET W/MH	913.87	906.19	N&SE
<u>114</u>		913.77	906.41	NW&S
<u>115</u>	CURB INLET	913.64	906.50	<u>N&amp;S</u>
<u>116</u>	YARD INLET	910.26	907.10	N&E
118	CURB INLET w/MH	913.62	906.07	E&W
119	CURB INLET w/MH	<u>913.52</u>	906.30	NE&W
120	YARD INLET	910.92	907.32	SW
120A	CONCRETE END SECTION		910.04	W
120B	YARD INLET	912.55	909.57	W
<u>121</u>	CONCRETE END SECTION	PAULA CRAS	900.00	NE
122	MANHOLE	908.85	900.38	SW&N
123	CURB INLET W/MH	908.65	901.06	S&N&E
124	CURB INLET W/MH	909.56	901.80	E&W
125	CURB INLET W/MH	909.42	902.04	NE&W
126	MANHOLE	911.56	906.56 902.74	SW&S&N
127	YARD	909.98	907.01	N
128	CURB/INLET w/MH	909.56	903.48	SW&NE
129	CURB INLET w/MH	909.54	903 79	SW&NE
130	CURB INLET w/MH	909.70	905.29 904.05	SW&E&
130A	CURB INLET W/MH	909.58	905.45	S&N
131	YARD INLET	907.93	905.96	S
132	MANHOLE	910.87	905.79 904.50	E&W&S
133	YARD INLET	909.07	907.10	N N
134	CURB INLET W/MH	910.40	906.35 905.25	NE&E&N
135			906.80	W
	CURB INLET W/MH	910.39	905.38	
136		910.73		SW&NE
137	YARD INLET	908.48	905.45	SW&SE
139	CURB INLET W/MH	911.78	906.97	NW&SV
140	CURB INLET	911.39	907.75	NE&E
141	CURB INLET W/MH	911.29	907.79	W
142	CURB INLET w/MH	908.73	901.55	S&NE
143	MANHOLE	910.28	902.45	SW&N
144	YARD INLET	905.68	902.91	<u> </u>
145	CONC. END SECTION	1000	900.06	NW
146	CURB INLET	908.38	904.41	SE&NW
147	CURB INLET	908.32	904.59	SE
148	SPECIAL BOX STRUCTURE	901.39	897.10	SW
149	CONC. END SECTION	AND CONTRACTOR	894.91	NE
150	CONC. END SECTION		899.86	NW
151	YARD INLET	904.41	900.08	SE

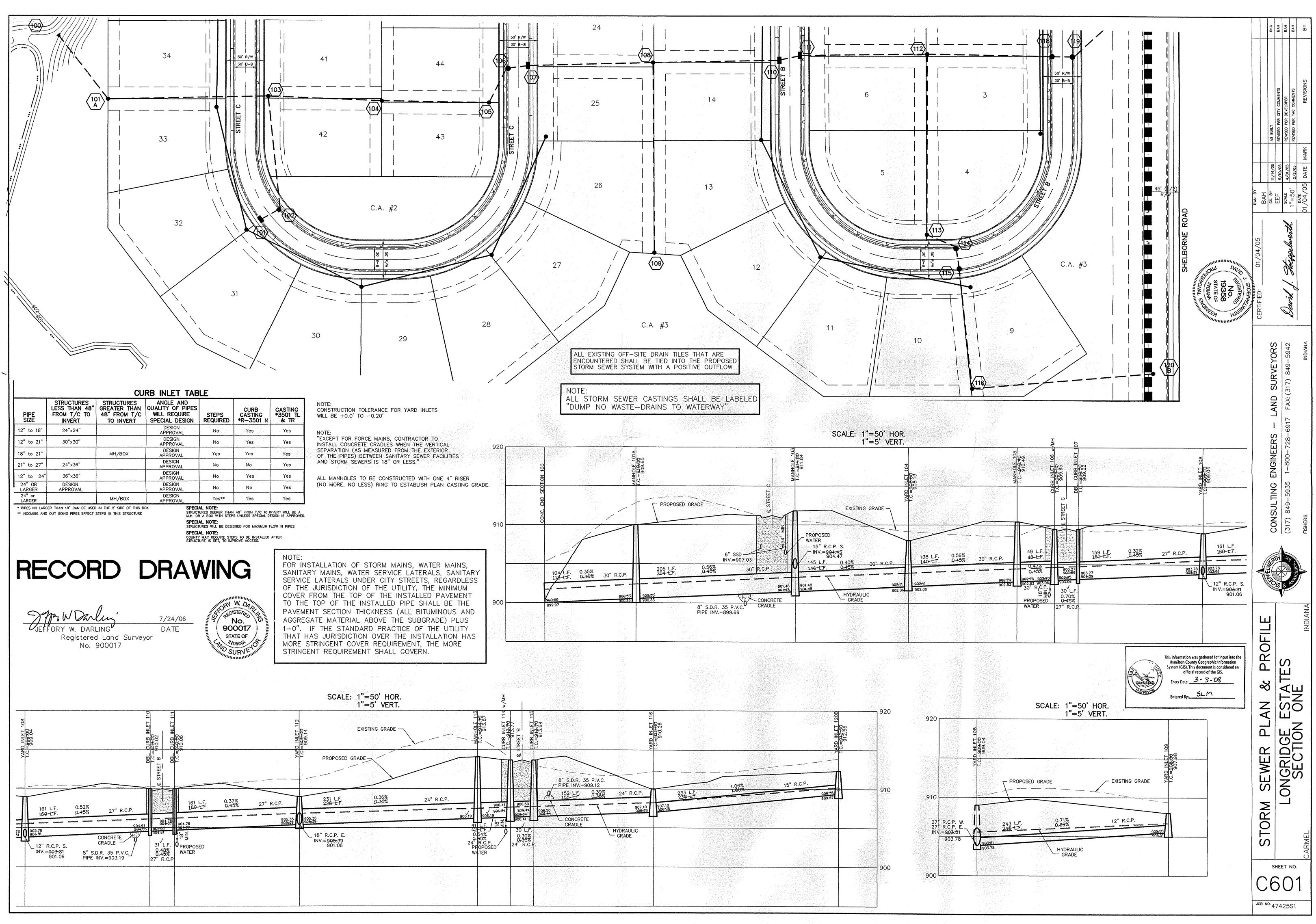
GABION BASKETS

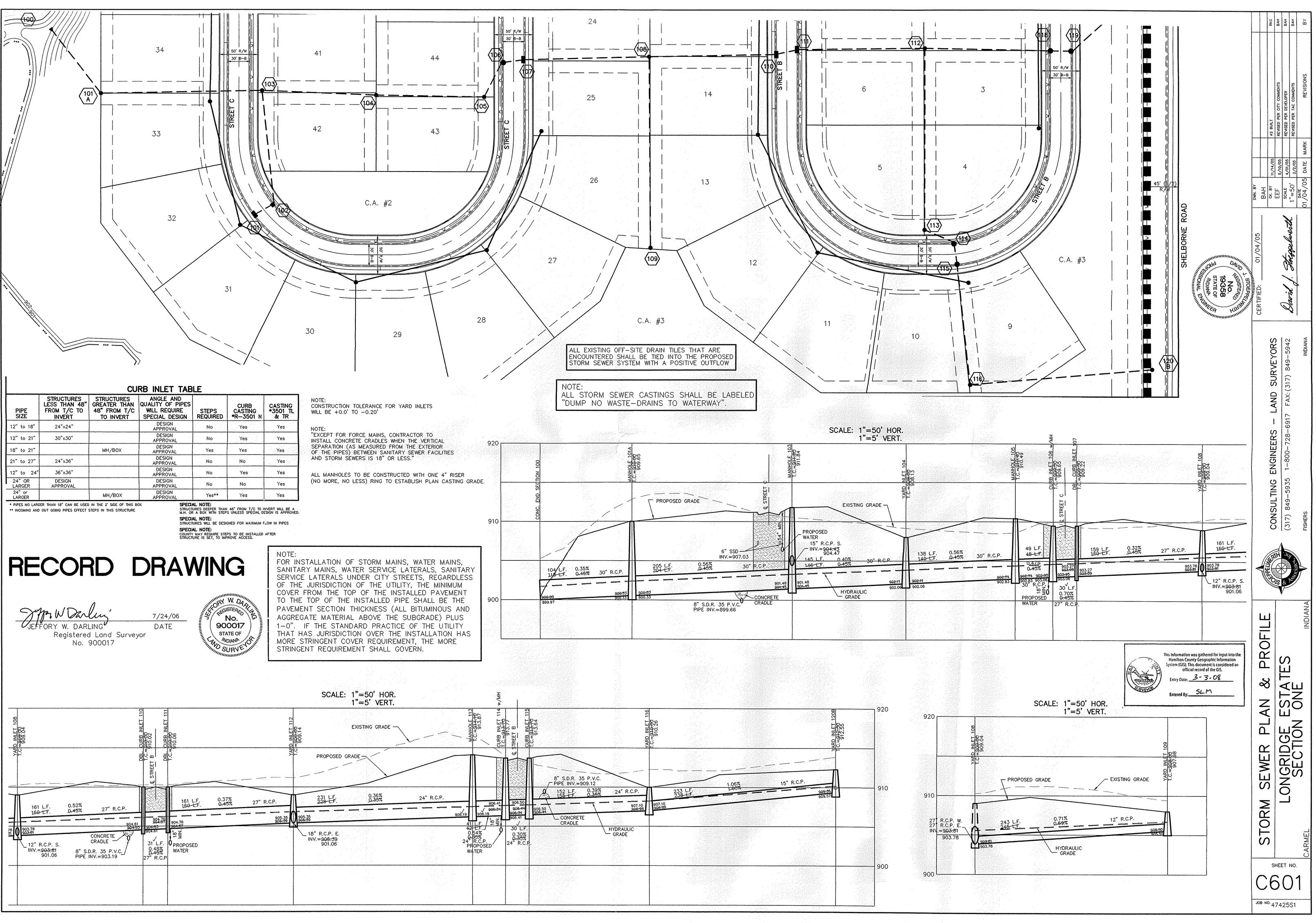


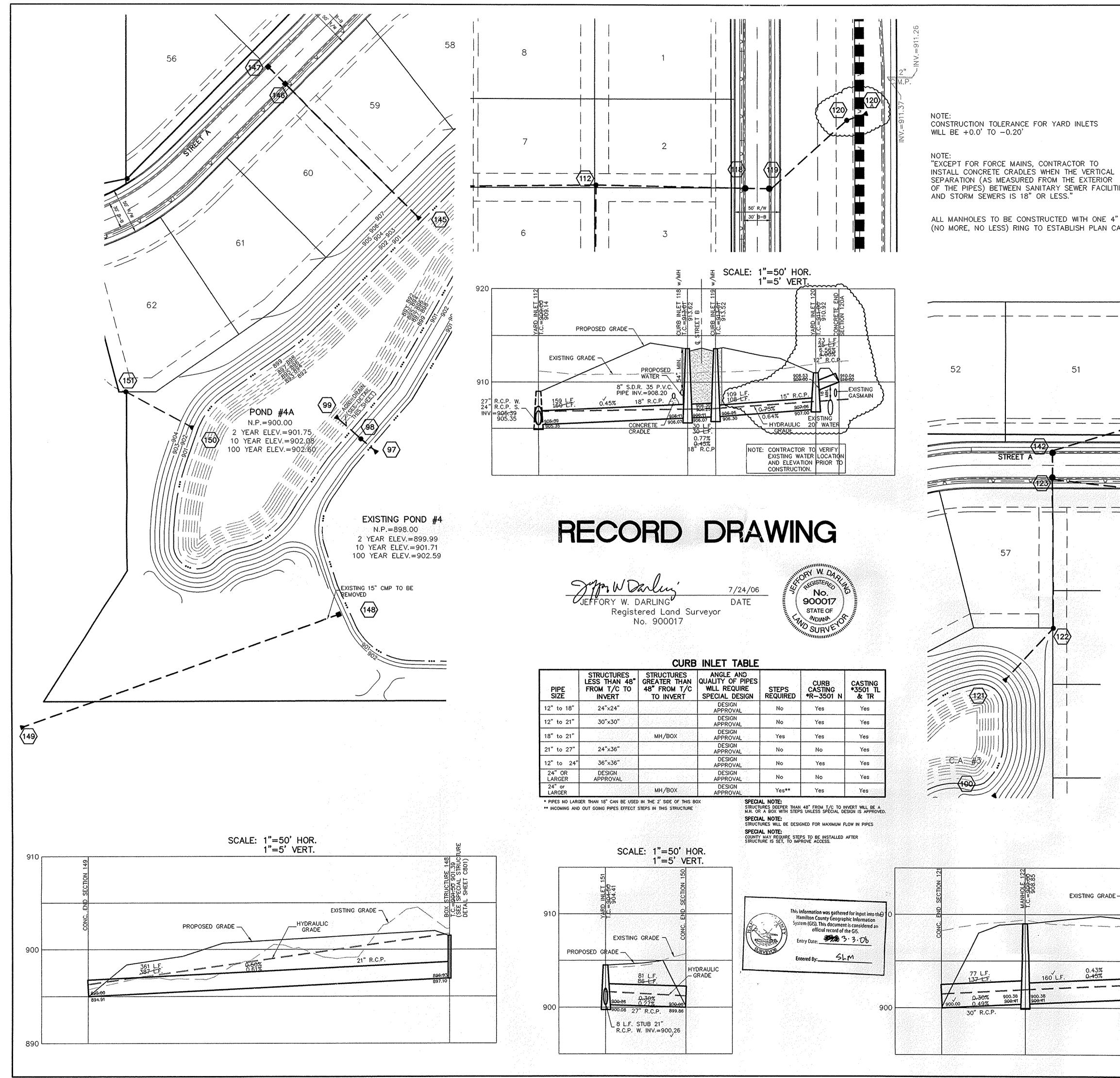












CU	IRB	INLET	TABLE

PIPE SIZE	STRUCTURES LESS THAN 48" FROM T/C TO INVERT	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-3501 N	CASTING *3501 TL & TR
12" to 18"	24"×24"		DESIGN APPROVAL	No	Yes	Yes
12" to 21"	30"×30"		DESIGN APPROVAL	No	Yes	Yes
18" to 21"		мн/вох	DESIGN APPROVAL	Yes	Yes	Yes
21" to 27"	24"×36"		DESIGN APPROVAL	No	No	Yes
12" to 24"	36"×36"		DESIGN APPROVAL	No	Yes	Yes
24" OR LARGER	DESIGN APPROVAL		DESIGN APPROVAL	No	No	Yes
24" or LARGER		MH/BOX	DESIGN APPROVAL	Yes**	Yes	Yes

(NO MORE, NO LESS) RING TO ESTABLISH PLAN CASTING GRADE.

ALL MANHOLES TO BE CONSTRUCTED WITH ONE 4" RISER

INSTALL CONCRETE CRADLES WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWER FACILITIES

"EXCEPT FOR FORCE MAINS, CONTRACTOR TO

CONSTRUCTION TOLERANCE FOR YARD INLETS

