



SURVEYOR'S OFFICE

Hamilton County

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

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

October 17, 2007

TO: Hamilton County Drainage Board

RE: Stultz & Almond Drain, Lakeside Park Section 6 Arm

Attached is a petition filed by Roehling Enterprises, Inc. along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Lakeside Park Section 6 Arm, Stultz & Almond 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" SSD	1,195 ft.	18" RCP	200 ft.
12" RCP	289 ft.	21" RCP	60 ft.
15" RCP	230 ft.		

The total length of the drain will be 1,974 feet.

The retention pond (Lake #1) located in Common Area #31 is to be considered part of the regulated drain. Pond maintenance shall include the inlet, outlet, sediment removal and erosion control along the banks and bio-swales as part of the regulated drain. The maintenance of the pond (Lake #1) such as mowing and aquatic vegetation control will be the responsibility of the Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the pond (Lake #1) was designed will be retained, thereby, allowing no fill or easement encroachments.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs and those main lines between lots or in rear yard..

Only the main SSD lines, which are located within the right of way and easement, are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain. The portion of the SSD which will be regulated other than those under curbs are as follows:

180 feet running in a south-east direction for Structure 249A behind Lots 170 & 171 in CA #29.

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 and platted lots, \$10.00 per acre for roadways, with a \$30.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$384.50.

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

Agent: Huntington National Bank
Date: June 18, 2007
Number: OSB.004525
For: Storm Sewers
Amount: \$101,784.00

Parcels assessed for this drain may be assessed for the Williams 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 Lakeside Park Section 6 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for November 26, 2007.



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

STATE OF INDIANA)
)
COUNTY OF HAMILTON)

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

In the matter of Lakeside Park Subdivision Subdivision, Section
 6 & 7 Drain Petition.

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in Lakeside Park Subdivision, Section 6 & 7, 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.

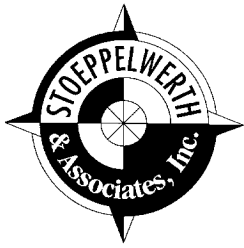
Petitioner believes that the cost, damages and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land likely to be benefited thereby. Petitioner believes the proposed improvements will:

- (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.



STOEPPELWERTH & ASSOCIATES, INC.

CONSULTING ENGINEERS • LAND SURVEYORS

David J. Stoepfelwerth
 President, CEO
 Professional Engineer
 Professional Land Surveyor

June 8, 2007

Curtis C. Huff
 Vice President, COO
 Professional Land Surveyor

Hamilton County Surveyor
 One Hamilton County Square
 Suite 188
 Noblesville, Indiana 46060

R.M. Stoepfelwerth
 Founder
 Professional Engineer
 Professional Land Surveyor

Attention: Kent Ward

Re: Lakeside Park Subdivision, Section 6

Dear Mr. Ward:

Please accept the following Engineer's Estimate for Lakeside Park Subdivision, Section 6. The amounts are as follows:

Lakeside Park Subdivision, Section 6 Engineer's Estimate

Description	Quantity	Unit	Unit Price	Total
ON SITE STORM				
Storm Sewer 12" - 0-6Ft	378	LF	\$16.34	\$6,176.50
Storm Sewer 15" - 0-6Ft	375	LF	\$18.86	\$7,072.50
Storm Sewer 18" - 0-6Ft	230	LF	\$22.07	\$5,076.10
Storm Sewer 21" - 0-6Ft	625	LF	\$22.47	\$14,043.75
24 X 24 Box Structure	13	EA	\$1,164.60	\$15,139.80
Rip-Rap	20	TONS	\$45.00	\$900.00
12" End-Section	2	EA	\$683.00	\$1,366.00
21" End-Section	1	EA	\$650.00	\$650.00
6" Swale Drain	1,180	LF	\$8.50	\$10,030.00
6" Curb Drain	2,540	LF	\$8.50	\$21,590.00
4" Lateral Drain	17	EA	\$45.00	\$765.00
Flush - Video	1	LS	\$2,010.00	\$2,010.00
				\$84,819.65

Description	Quantity	Unit	Unit Price	Total
EROSION CONTROL				
Permanent Seeding	443,687	SQFT	\$0.10	\$44,368.70
R/W Seeding	71,250	SQFT	\$0.10	\$7,125.00

7965 East 106th Street
 Fishers, Indiana
 46038-2505

317.849.5935
 Fax: 317.849.5942
 www.Stoepfelwerth.com

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

Stultz & Almond Drain, Lakeside Park Section 6 Arm

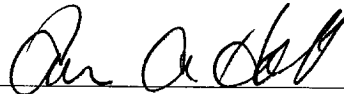
On this **26th day of November, 2007**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Stultz & Almond Drain, Lakeside Park Section 6 Arm**.

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.

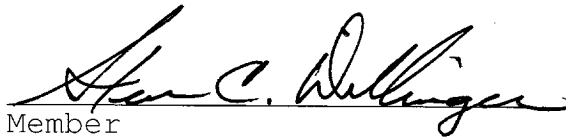
HAMILTON COUNTY DRAINAGE BOARD



President



Member



Member

Attest: 

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF THE

Stultz & Almond Drain, Lakeside Park Section 6 Arm

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **November 26, 2007** 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

**Lakeside Park Section 5, 6, 7
GASB 34 Calculation**

Stultz & Almond Drain- Lakeside Park Section 5: 909 ft
Elliott Creek Drain-Lakeside Park Section 5: 5625

Total Footage = 6534.00
Bond Amount = \$160,633.24

Stultz & Almond Drain- Lakeside Park Section 5: (.14 x \$160,633.24) = \$22,488.66
Elliott Creek Drain-Lakeside Park Section 5: (.86 x \$160,633.24) = \$138,144.58

Stultz & Almond Drain- Lakeside Park Section 6: 1974 ft
Elliott Creek Drain-Lakeside Park Section 6: 650 ft
JW Brendle Drain-Lakeside Park Section 6: 1565 ft

Total Footage = 4189 ft
Bond Amount = \$141,969.35

Stultz & Almond Drain- Lakeside Park Section 6: (.47 x \$141,969.35) = \$66,725.59
Elliott Creek Drain-Lakeside Park Section 6: (.16 x \$141,969.35) = \$22,715.10
JW Brendle Drain-Lakeside Park Section 6: (.37 x \$141,969.35) = \$52,528.66

Stultz & Almond Drain- Lakeside Park Section 7: 1800 ft
JW Brendle Drain-Lakeside Park Section 7: 3612 ft

Total Footage = 5412 ft
Bond Amount = \$101,677.21

Stultz & Almond Drain- Lakeside Park Section 7: (.33 x \$101,677.21) = \$33,553.48
JW Brendle Drain-Lakeside Park Section 7: (.67 x \$101,677.21) = \$68,123.73

Note: Bonds were posted at 120% of the engineers estimate. This dollar amount is based upon the engineer's estimate.

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: **Lakeside Park Subdivision, Section 6**

I hereby certify that:

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

Signature:  Date: November 16, 2007

Type or Print Name: Dennis D. Olmstead

Business Address: Stoepelwerth & Associates, Inc.

7965 East 106th Street, Fishers, Indiana 46038

Telephone Number: (317) 849-5935



INDIANA REGISTRATION NUMBER

900012



SURVEYOR'S OFFICE

Hamilton County

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

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

To: Hamilton County Drainage Board

September 24, 2008

Re: Stultz & Almond Drain: Lakeside Park 6

Attached are as-builts, certificate of completion & compliance, and other information for Lakeside Park Section 6. 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 17, 2007. The report was approved by the Board at the hearing held November 26, 2007. (See Drainage Board Minutes Book 10, Pages 504-505) The changes are as follows:

Structure:	Length:	Size	Material:	Up Invert:	Dn Invert	Grade:	Changes:
248-247	125	12	RCP	909.97	909.52	0.36	
247-246	156	18	RCP	909.52	909.11	0.26	
246-245	44	18	RCP	909.11	909.02	0.2	
245-244	59	21	RCP	909.02	908.85	0.29	-1
249a-247	228	15	RCP	910.17		0.29	-2
259-258	30	12	RCP	909.19	909.07	0.4	
EX110-262	96	12	RCP	908.67	908.49	0.19	-3
261-260	34	12	RCP	909.19	909.08	0.32	-1

6" SSD Streets:

FOUR SEASONS WAY	481
X2	
Total:	962

RCP Pipe Totals:

12	285
15	228
18	200
21	59
Total:	772

The length of the drain due to the changes described above is now **1734 feet**.

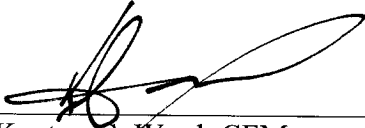
The non-enforcement was approved by the Board at its meeting on November 26, 2007 and recorded under instrument # 2007066455.

The following sureties were guaranteed by Huntington National Bank and released by the Board on its August 13, 2007 meeting.

Bond-LC No: OSB.004525
Insured For: Storm Sewers
Amount: \$101,784.00
Issue Date: June 18, 2007

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

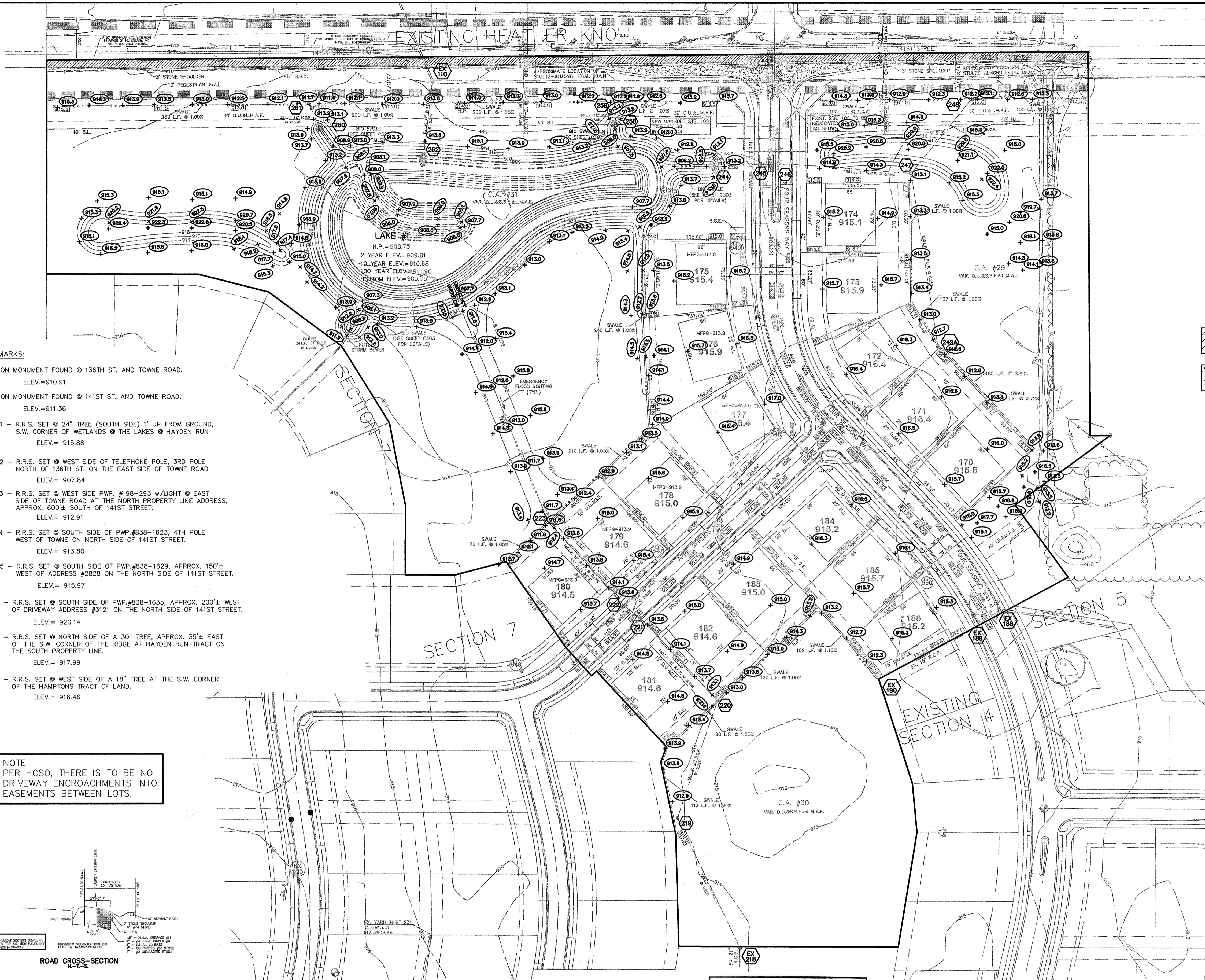
Sincerely,



Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/slm

S:\176056\dwg\C200-Site Development.dwg, Layout1, 11/14/2007 2:45:08 PM, cmiller, 1:1



LEGEND

- EXISTING EDGE OF WOODS
- EXISTING CONTOUR
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED GRADE
- MATCH EXISTING
- PROPOSED CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED SWALE
- PROPOSED 5' SIDEWALK (BY HOME BUILDER)
(DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
- LOT NUMBER
- PAD ELEVATION
PAD SIZE: 60'x60'
(UNLESS OTHERWISE NOTED)
- MIN. FLOOD PROTECTION GRADE

SCALE: 1" = 60'

- DENOTES 4" SUBSURFACE DRAIN TO LOT
- DENOTES 6" SUBSURFACE DRAIN
- ROLL CURB
- ASBLUT GRADE ELEV.
- DENOTES 1" MILLING WITH 1.5" H.A.C. #11 RESURFACING FOR THE EXISTING ROADWAY ACROSS THE PROPERTY FRONTAGE AS SHOWN
- DENOTES PAVEMENT WIDENING FOR THE EXISTING ROADWAY ACROSS THE PROPERTY FRONTAGE AS SHOWN.

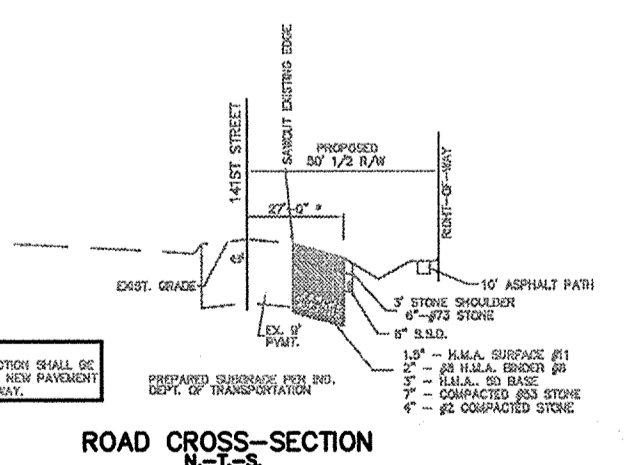
NOTE:
MIN. FLOOD PROTECTION GRADES OF ALL STRUCTURES FRONTING LAKE #1 SHALL BE NO LESS THAN 2 FEET ABOVE ANY ADJACENT 100-YR. LOCAL OR REGIONAL FLOOD ELEVATION (WHICHEVER IS GREATER FOR ALL WINDOWS, DOORS, PIPE ENTRANCES, WINDOW WELLS, ETC.)

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. ANY OF THESE TILES WILL NEED TO BE LOCATED; BREATHERS SET AT THE PROPERTY LINES, CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY TILES EXTEND BEYOND THIS SITE, THEY WILL NEED A POSITIVE OUTLET TO CONTINUE TO FUNCTION.

- BENCHMARKS:**
- HARRISON MONUMENT FOUND @ 136TH ST. AND TOWNE ROAD.
ELEV.=910.91
 - HARRISON MONUMENT FOUND @ 141ST ST. AND TOWNE ROAD.
ELEV.=911.36
 - S&A #1 - R.R.S. SET @ 24" TREE (SOUTH SIDE) 1' UP FROM GROUND, S.W. CORNER OF WETLANDS @ THE LAKES @ HAYDEN RUN
ELEV.= 915.88
 - S&A #2 - R.R.S. SET @ WEST SIDE OF TELEPHONE POLE, 3RD POLE NORTH OF 136TH ST. ON THE EAST SIDE OF TOWNE ROAD
ELEV.= 907.84
 - S&A #3 - R.R.S. SET @ WEST SIDE P.W.P. #198-293 w/LIGHT @ EAST SIDE OF TOWNE ROAD AT THE NORTH PROPERTY LINE ADDRESS, APPROX. 600± SOUTH OF 141ST STREET.
ELEV.= 912.91
 - S&A #4 - R.R.S. SET @ SOUTH SIDE OF P.W.P.#838-1623, 4TH POLE WEST OF TOWNE ON NORTH SIDE OF 141ST STREET.
ELEV.= 913.80
 - S&A #5 - R.R.S. SET @ SOUTH SIDE OF P.W.P.#838-1629, APPROX. 150± WEST OF ADDRESS #2828 ON THE NORTH SIDE OF 141ST STREET.
ELEV.= 915.97
 - S&A #6 - R.R.S. SET @ SOUTH SIDE OF P.W.P.#838-1635, APPROX. 200± WEST OF DRIVEWAY ADDRESS #3121 ON THE NORTH SIDE OF 141ST STREET.
ELEV.= 920.14
 - S&A #7 - R.R.S. SET @ NORTH SIDE OF A 30" TREE, APPROX. 35± EAST OF THE S.W. CORNER OF THE RIDGE AT HAYDEN RUN TRACT ON THE SOUTH PROPERTY LINE.
ELEV.= 917.99
 - S&A #8 - R.R.S. SET @ WEST SIDE OF A 18" TREE AT THE S.W. CORNER OF THE HAMPTONS TRACT OF LAND.
ELEV.= 914.46

NOTE
PER HCSO, THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.



STORM CHART

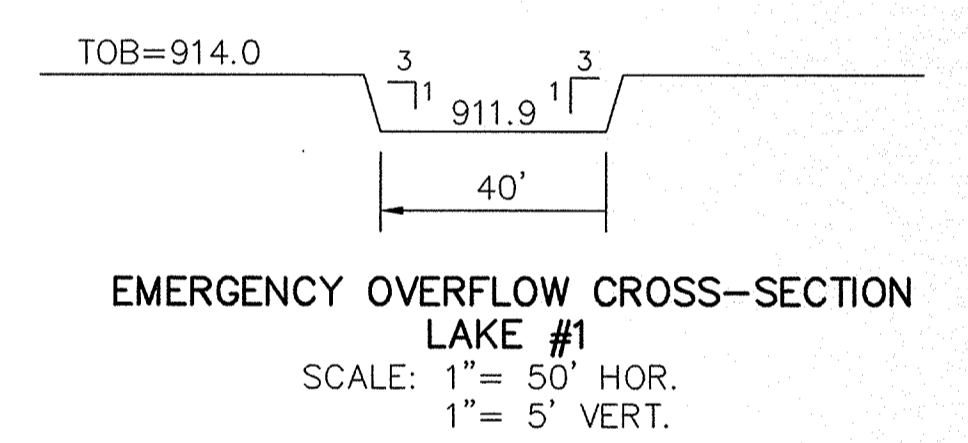
STR. NO.	TYPE	T.C.	RIM	INVERT	DIRECTION
219	STORM INLET	912.50	909.11	NE, SE	
220	YARD INLET	913.00	909.48	NW, SW	
221	CURB INLET	913.30	909.71	NW, SE	
222	DOUBLE CURB INLET	913.00	909.77	NW, SE	
223	YARD INLET	912.50	910.01	SE	
244	CONCRETE END SECTION		908.92	E	
245	CURB INLET w/MH	913.45	909.07	E, W	
246	CURB INLET w/MH	913.45	909.07	E, W	
247	YARD INLET	913.00	909.99	NW, SE, W	
248	YARD INLET	912.00	909.95	E, W	
249A	YARD INLET	912.50	910.15	E, W	
258	CONCRETE END SECTION		909.10	N	
259	STORM INLET	912.00	909.25	S	
260	CONCRETE END SECTION		909.10	NW	
261	STORM INLET	912.00	909.29	SE	
262	CONC. END SEC. w/T.G.		908.75	NE	

RECORD DRAWING

D.D.O.
DENNIS D. OLMSTEAD
Registered Land Surveyor
No. 900012
DATE: 11/14/07



This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.
Entry Date: October 2007
Entered By: SLM



NOTE:
WIDEN SOUTH SIDE OF 141ST STREET AND THE WEST SIDE OF TOWNE ROAD TO 15'-0" FROM THE EXISTING CENTER OF PAVEMENT WITH A 3'-0" STONE SHOULDER ACROSS ENTIRE FRONTAGE. A 6" SSD IS TO BE INSTALLED UNDER AND ADJACENT TO THE STONE SHOULDER ALONG 141ST STREET.

NOTE TO CONTRACTOR:
CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ON-SITE 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.

NOTE:
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 THE WORK AND TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND PROPOSED CITY RIGHT-OF-WAY.

"HOLEY MOLEY" SAYS:

1-800-382-5544
CALL TOLL FREE

1-800-428-5200
FOR CALLS OUTSIDE OF INDIANA

CAUTION
LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, & marks made upon the ground by others.) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

STOEPPELWERTH & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
9940 Allisonville Rd., Fishers, IN 46038-2005
Phone: (317) 849-9335 Fax: (317) 849-5942
Toll Free: (800) 726-6917

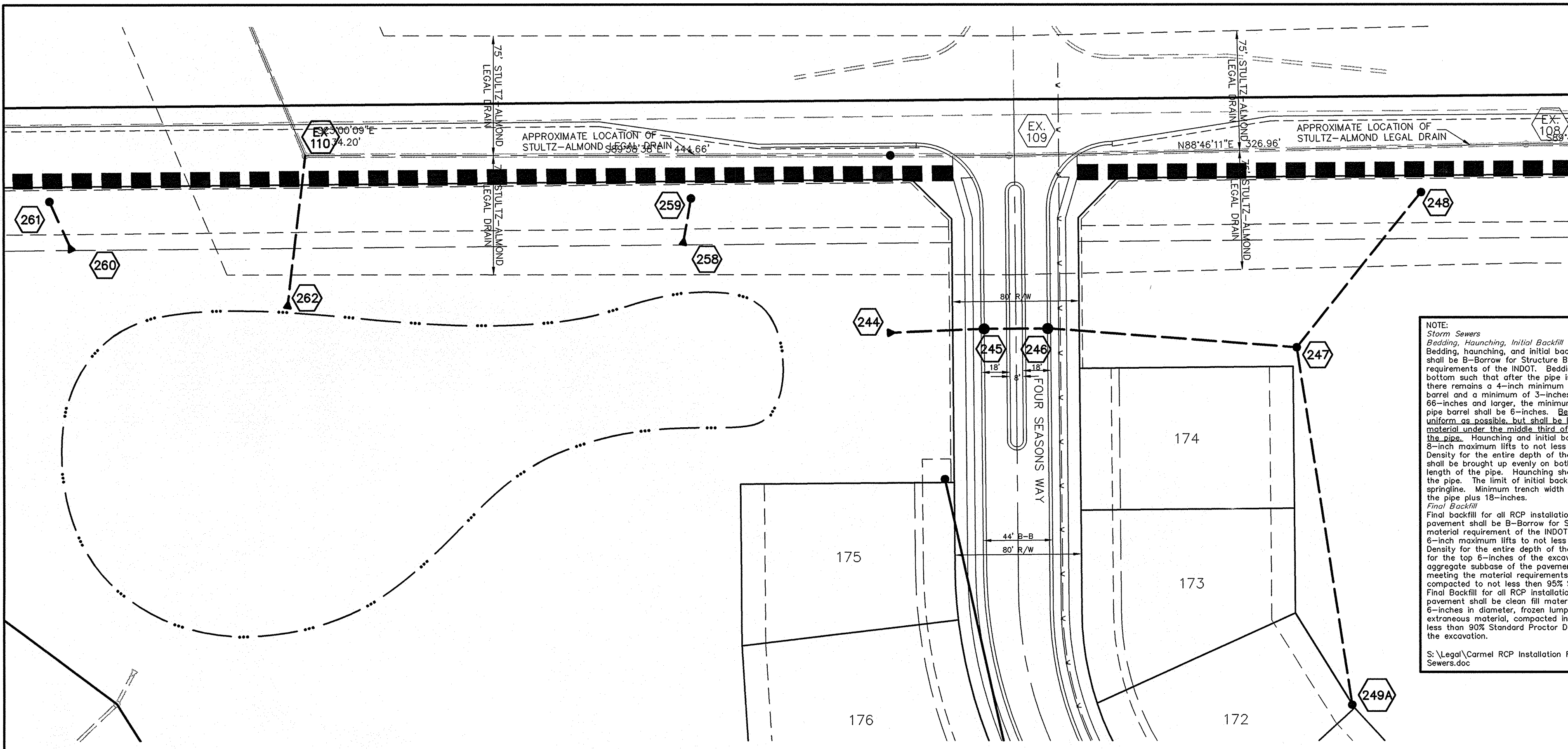
DAVID J. STOEPPELWERTH
REGISTERED PROFESSIONAL ENGINEER
No. 19358
STATE OF INDIANA

CERTIFIED: 9/1/06

INDIANA

SITE DEVELOPMENT PLAN
LAKESIDE PARK
SECTION SIX

DRAWN BY: JDH CHECKED BY: EEF
SHEET NO. **C200**
S & A JOB NO. 4176056



CURB 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"x24"		DESIGN APPROVAL	No	Yes	Yes
12" to 21"	30"x30"		DESIGN APPROVAL	No	Yes	Yes
18" to 21"		MH/BOX	DESIGN APPROVAL	Yes	Yes	Yes
21" to 27"	24"x36"		DESIGN APPROVAL	No	No	Yes
12" to 24"	36"x36"		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

* PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX
 ** ROOMING AND GUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE

SPECIAL NOTE:
 STRUCTURES GREATER THAN 48" FROM T/C TO INVERT WILL BE A MH OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED.

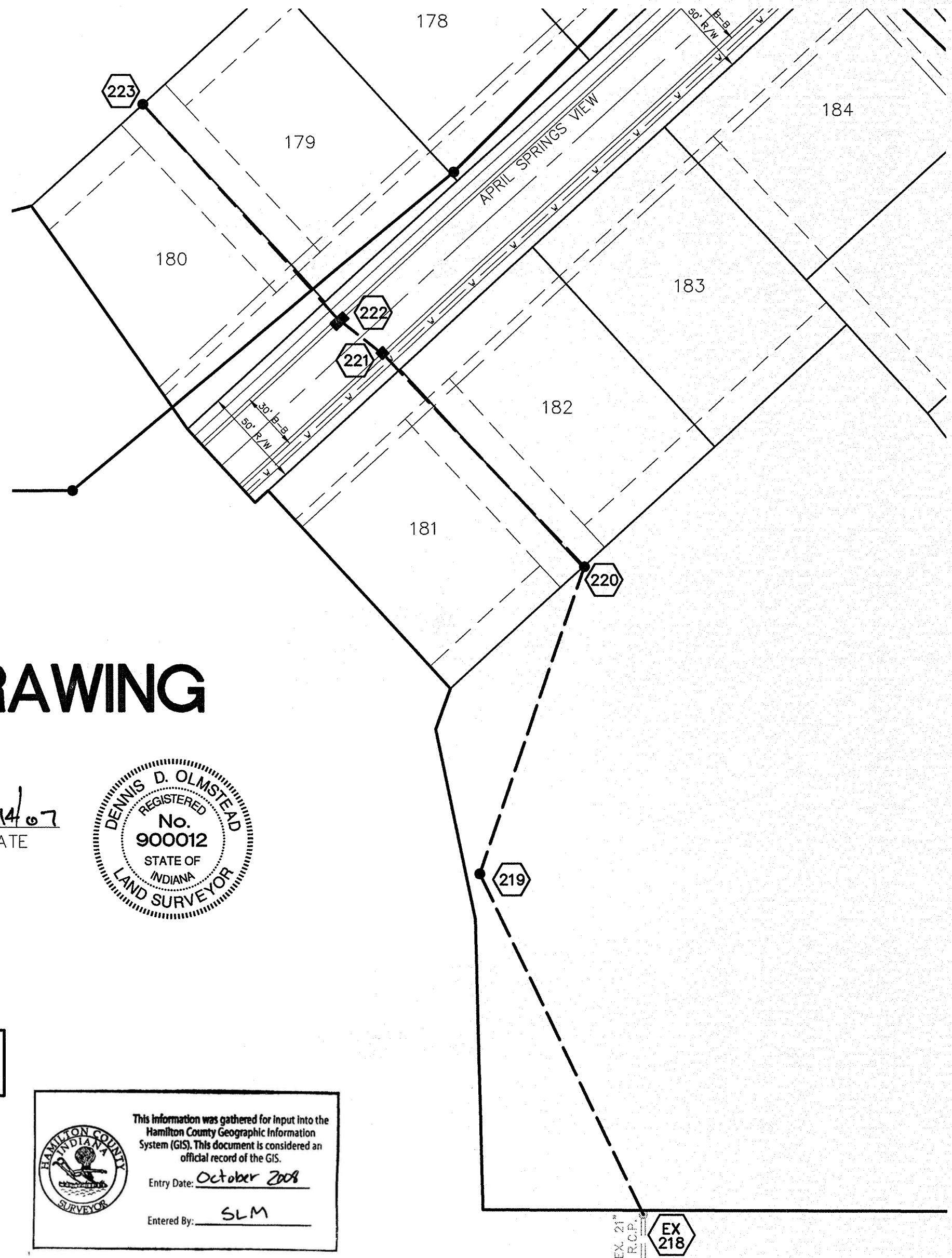
SPECIAL NOTE:
 STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES

SPECIAL NOTE:
 COUNTY MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS.

NOTE:
Storm Sewers
 Bedding, haunching, and initial backfill for all RCP installations shall be 5-barrow for Structure Backfill meeting the material requirements of the INDOT. Bedding shall be placed in the trench bottom such that after the pipe is installed to grade and line, there remains a 4-inch minimum depth of material below the pipe barrel and a minimum of 3-inches below the bell. For pipe sizes 66-inches and larger, the minimum depth of material below the pipe barrel shall be 6-inches. Bedding shall be placed to be uniform as possible, but shall be loosely placed uncompacted material under the middle third of the pipe prior to placement of the pipe. Haunching and initial backfill shall be compacted in 8-inch maximum lifts to not less than 90% Standard Proctor Density for the entire depth of the material placed. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Haunching shall extend to the springline of the pipe. The limit of initial backfill shall be 6-inches above the springline. Minimum trench width shall be the outside diameter of the pipe plus 18-inches.

Final Backfill
 Final backfill for all RCP installations under and within 5-feet of pavement shall be 5-barrow for Structure Backfill meeting the material requirements of the INDOT and shall be compacted in 6-inch maximum lifts to not less than 95% Standard Proctor Density for the entire depth of the material placed. The backfill for the top 6-inches of the excavation below the start of the aggregate subbase of the pavement shall be No. 53 Stone meeting the material requirements of the INDOT and shall be compacted to not less than 95% Standard Proctor Density. Final Backfill for all RCP installations greater than 5-feet of pavement shall be clean fill material free of rocks larger than 6-inches in diameter, frozen lumps of soil, wood or other extraneous material, compacted in 12-inch maximum lifts to not less than 90% Standard Proctor Density for the entire depth of the excavation.

S:\Legal\Carmel RCP Installation Review02-01-05\Storm Sewers.doc



NOTE:
 FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF THE JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0". IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

NOTE:
 CONSTRUCTION TOLERANCE FOR YARD INLETS WILL BE +0.0' TO -0.20'

NOTE:
 *EXCEPT FOR FORCE MAINS, CONTRACTOR TO INSTALL CONCRETE CRADLES WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWER FACILITIES AND STORM SEWERS IS 18" OR LESS."

ALL MANHOLES TO BE CONSTRUCTED WITH ONE 4" RISER RING TO ESTABLISH PLAN CASTING GRADE.

ALL STORM SEWER CASTINGS SHALL BE STAMPED "DUMP NO WASTE - DRAINS TO WATERWAY"

THERE SHALL BE NO MANHOLES OR WATER VALVES WITHIN THE STREET PAVEMENT, CURBS, SIDEWALKS, OR ASPHALT PATHS

RECORD DRAWING

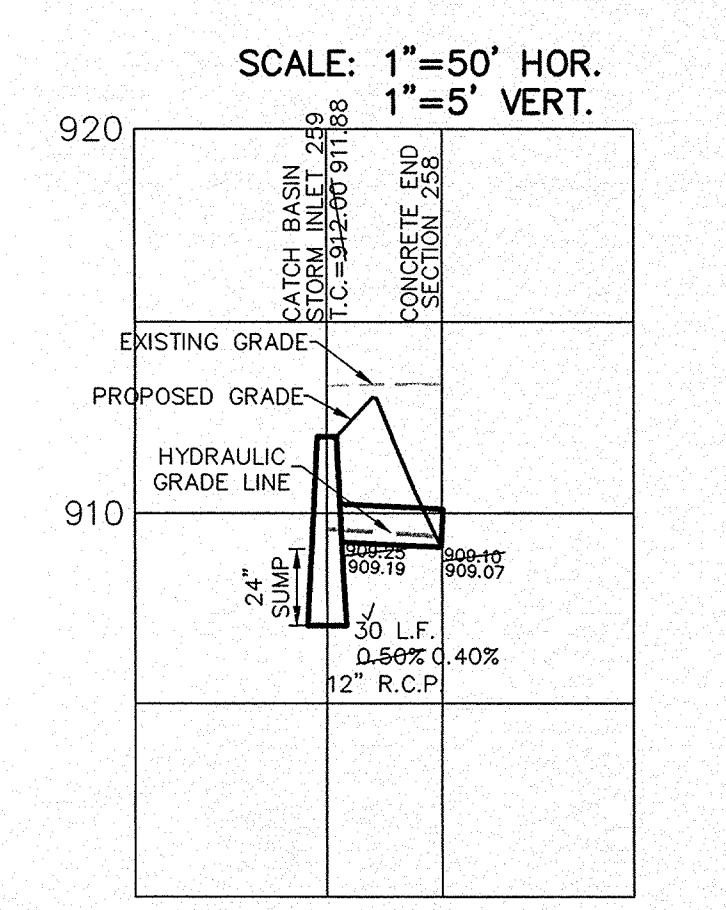
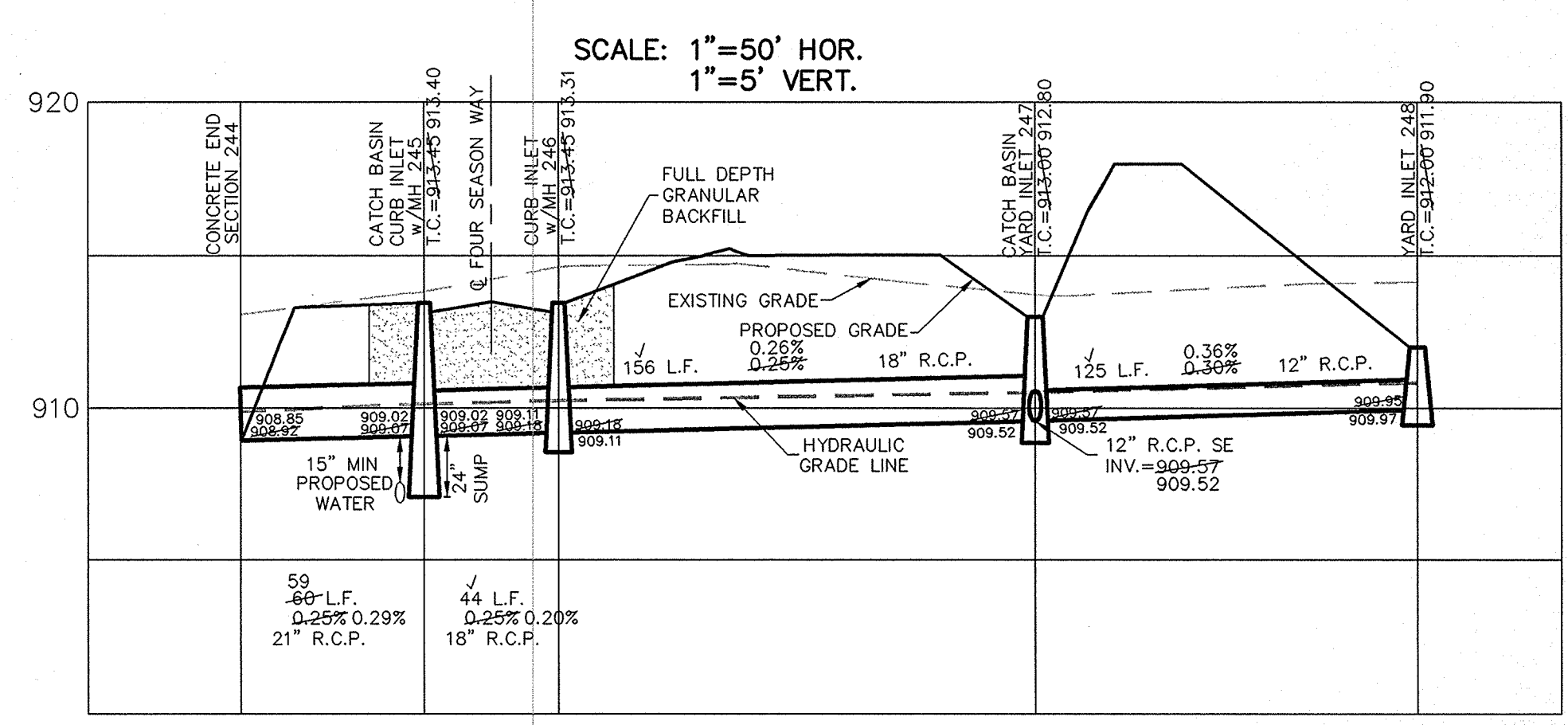
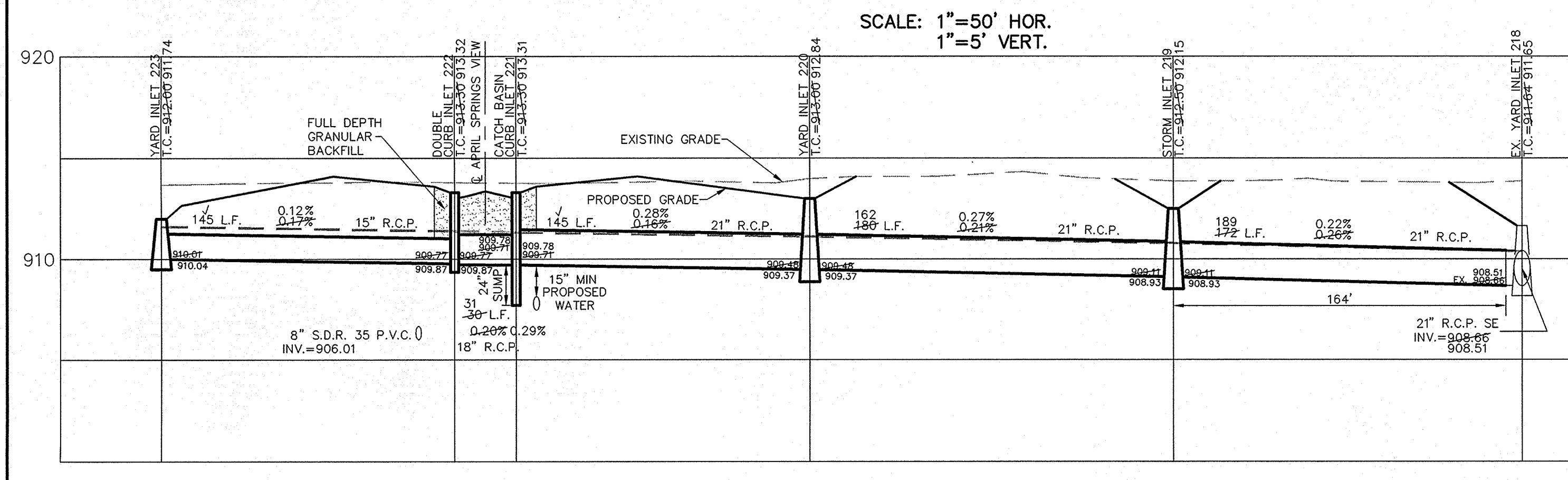
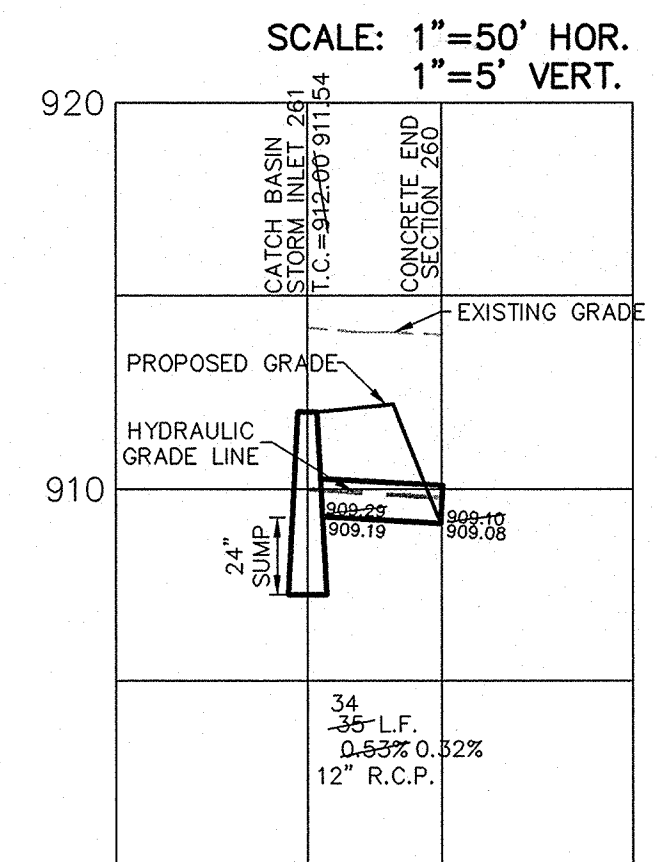
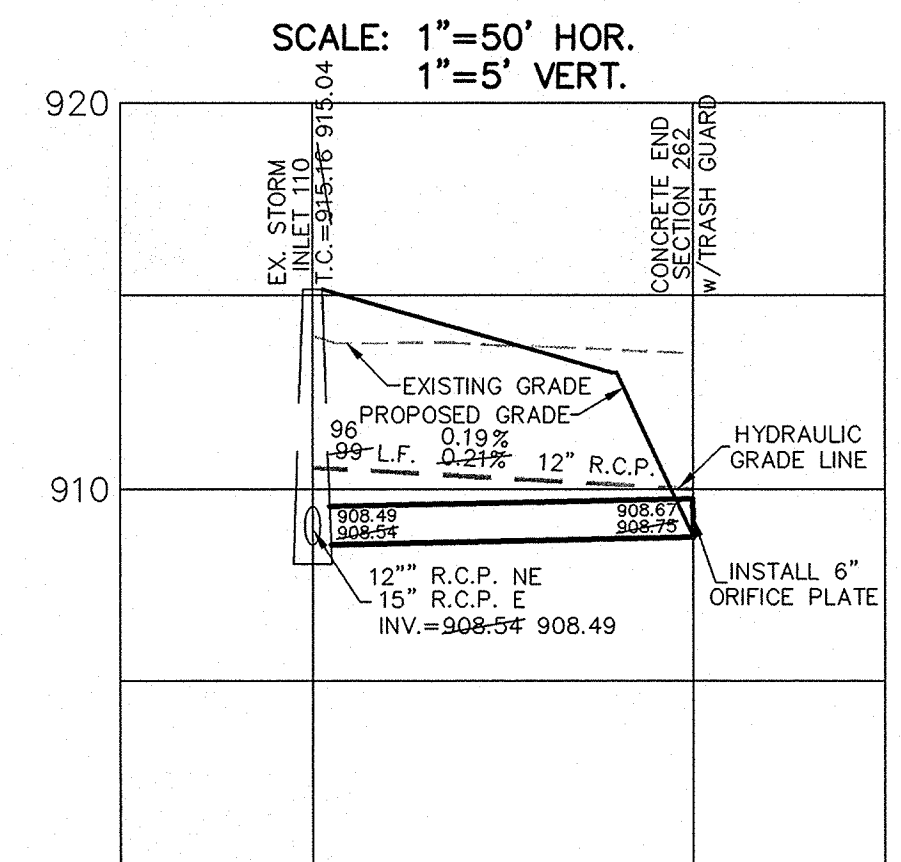
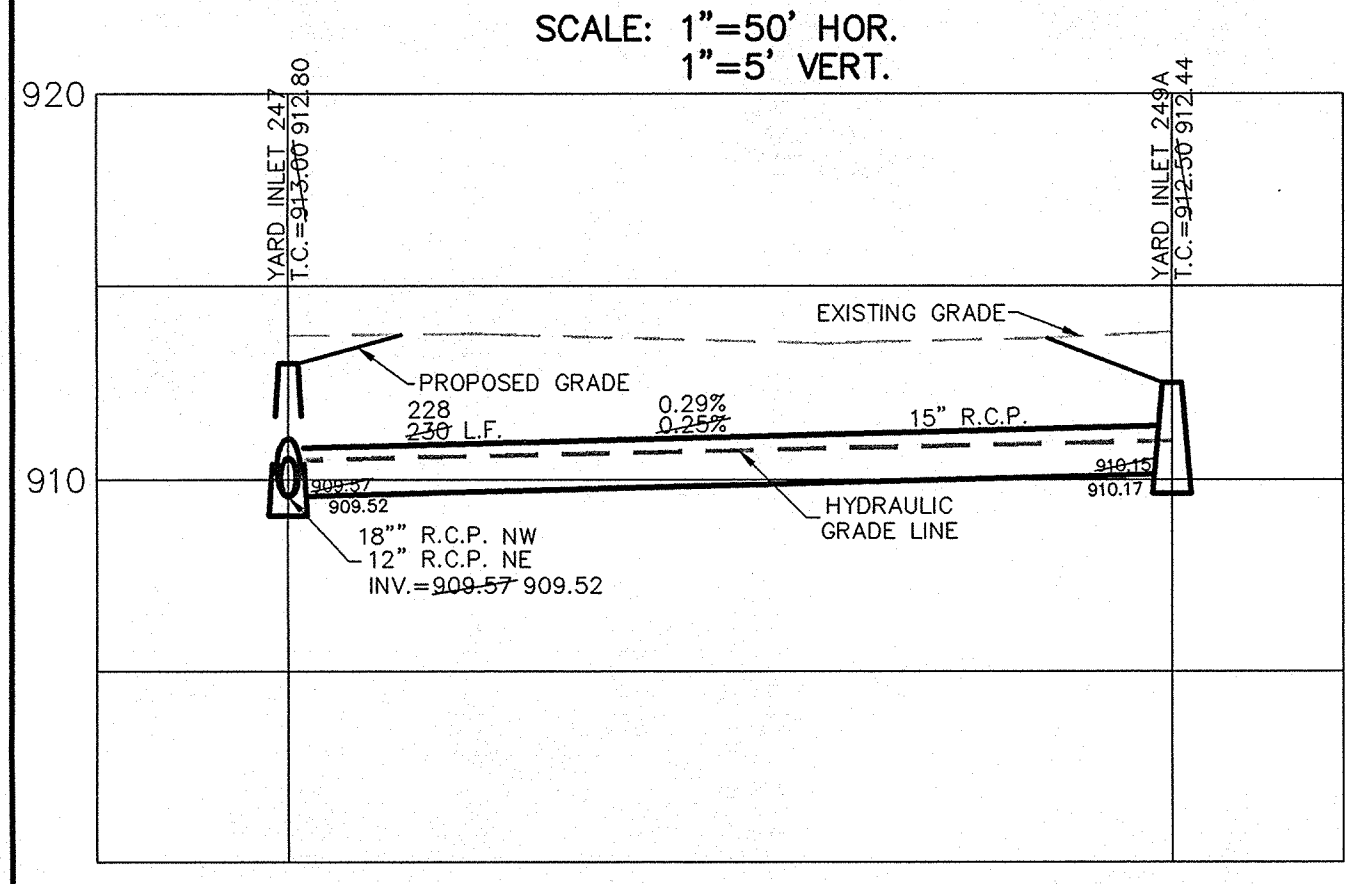
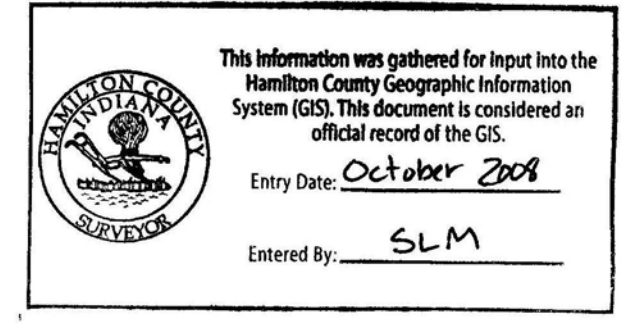
D.D.O.
 DENNIS D. OLMSTEAD
 Registered Land Surveyor
 No. 900012

11/14/07
 DATE



ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SEWER SYSTEM WITH A POSITIVE OUTFLOW

NOTE:
 ALL 24" SUMP CATCH BASIN TO BE 48" MANHOLES PER H.C.S.O.



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ASBULTS 10/14/07
 REVISE PER ENGINEER COMMENTS 10/20/07
 REVISED PER ENGINEERS COMMENTS 10/25/07
 REMOVE PUMPS NOT NEEDED PER H.C.S.O. 12/7/06
 REVISED PER TAC COMMENTS 11/7/06

MARK

DATE

REGISTERED PROFESSIONAL ENGINEER
 No. 19358
 STATE OF INDIANA
David J. Stoppelwerth

CERTIFIED: 9/1/06

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INDIANA

CARMEL

STORM PLAN & PROFILES
 LAKESIDE PARK
 SECTION SIX

DRAWN BY: JDH CHECKED BY: EEF
 SHEET NO. C600
 S & A JOB NO. 4176056