



Kenton C. Ward, Surveyor Phone (317) 776-8495 Fax (317) 776-9628

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

December 29, 2005

To: Hamilton County Drainage Board

Re: Bellewood Drain, Glen Oaks Arm

Attached is a petition filed by Langston Development Company along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Glen Oaks Arm, Bellewood 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	8,422 ft.	18" RCP	1,519 ft.	30" RCP	71 ft.
12" RCP	1,600 ft.	21" RCP	509 ft.	27"x 42" RCP	40 ft.
15" RCP	1,546 ft.	24" RCP	316 ft.	Open Ditch	5 ft.

The total length of the drain will be 14,028 feet.

The open ditch listed above is the open ditch between Structures 700 and 769.

The retention ponds located in Common Areas B & F and dry detention basin located in Common Area A are 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 and dry detention basin, 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 and dry detention basin 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. 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. The portion of the SSD which will be regulated, other than those under curbs, is the SSD in the dry detention basin within Common Area A. The SSD drains into Structure 701.

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 \$50.00 per platted lot, \$10.00 per acre for roadways, and \$10.00 per acre for Common Areas, with a \$50.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$3,038.40.

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

Agent: Bond Safeguard Insurance Company

Date: April 15, 2005 Number: 5016096

For: Storm Sewers Amount: \$308,524.00 Agent: Bond Safeguard Insurance Company

Date: April 15, 2005 Number: 5016097 For: Erosion Control Amount: 39,300.00

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 Glen Oaks as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for June 26, 2006.

Kenton C. Ward

Hamilton County Surveyor

KCW/pll

		(Revised 06/08/04)
STATE OF INDIANA )		
COUNTY OF HAMILTON )		
TO: HAMILTON COUNTY D	RAINAGE BOARD	
% Hamilton County Surve		
One Hamilton County S	•	
Noblesville, IN. 46060-	•	
In the matter of _	Glen Oaks	Subdivision, Section
Glen Oaks	Drain Petition.	
drainage will affect various lots	in Glen Oaks oute of such drainage shall be	the proposed new regulated drain. The, a subdivision in Hamilton in existing easements and along public

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.
- 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.

This copy is from the Digital Archive of the Hamilton County Surveyor's Office; Noblesville, In 46060

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

## RECORDED OWNER(S) OF LAND INVOLVED

- The	
Signed	Signed
James R. Langston	
Printed Name	Printed Name
Date	Date
Signed	Signed
Printed Name	Printed Name
Date	Date

## FINDINGS AND ORDER

## CONCERNING THE MAINTENANCE OF THE

## Bellewood Drain, Glen Oaks Arm

On this **26th** day of June 2006, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Bellewood Drain**, **Glen Oaks 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

Presidente

Member

Member

# BEFORE THE HAMILTON COUNTY DRAINAGE BOARD IN THE MATTER OF

## Bellewood Drain, Glen Oaks Arm

NOTICE

То	Whom	It	May	Concern	and:_			
								_

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the Bellewood Drain, Glen Oaks Arm on June 26, 2006 at 9:20 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

## Bellewood Drain, Glen Oaks Arm

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **January 23**, 2006 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

## CERTIFICATE OF COMPLETETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Glen Oaks Subdivision

## 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 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: Man A. Ma	Date: 2-2-06
Type or Print Name: Allan H. Weihe	
Business Address: 10505 N. Colleg	ge Ave.
<u>Indianapolis, IN</u>	N 46280
Telephone Number: 317-846-6611	·
SEAL  NO.  8827  STATE OF  WOJANA  WOJ	INDIANA REGISTRATION NUMBER #8827



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

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

To: Hamilton County Drainage Board

**February 2, 2007** 

Re: Bellewood Drain: Glen Oaks

Attached are as-builts, certificate of completion & compliance, and other information for Glen Oaks. 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 December 28, 2005. The report was approved by the Board at the hearing held June 26, 2006. (See Drainage Board Minutes Book 9, Pages 279-280) The changes are as follows:

				Up			
Structure:	Length:	Size	Material:	Invert:	Dn_Invert	Grade:	Changes(ft):
765-764	40	12	RCP	894.22	893.97	0.63	
763-762	128	12	RCP	899.78	895.54	3.31	
762-761	76	12	RCP	895.54	895.15	0.51	
761-760	24	12	RCP	895.15	895.13	0.08	
760-759	26	18	RCP	895.13	894.95	0.5	
759-758	210	18	RCP	894.95	893.99	0.46	
753-752	204	15	RCP	904.51	907.56	0.59	
757-756	17	12	RCP	899.14	899.01	0.76	
756-755	26	12	RCP	899.01	898.92	0.35	
755-751	207	15	RCP	898.92	897.99	0.45	
711-710	59	12	RCP	893.79	892.86	1.58	
710-709	207	18	RCP	892.86	891.21	0.72	
709-708	218	18	RCP	891.21	888.12	1.42	
708-707	82	18	RCP	888.12	885	3.8	
707-701	108	18	RCP	885	884.22	0.72	
706-701	36	18	RCP	884.22	883.93	0.5	
720-719	143	12	RCP	897.02	896	0.72	
719-718	112	15	RCP	896	895.43	0.51	
718-717	22	24	RCP	903.23	902.55	0.36	
717-716	44	24	RCP	895.35	895.09	0.59	
716-715	118	24	RCP	902.54	898.05	0.54	
715-714	132	24	RCP	894.45	894.04	0.31	

713-705	104	12	RCP	892.68	889.82	2.75	1
705-704	122	15	RCP	889.82	887.15	2.19	
704-703	107	15	RCP	887.15	886.59	0.52	
703-712	89	15	RCP	886.59	885.87	0.8	
702-701A	12	12	RCP	884.85	884.38	3.92	
701A-701	34	30	RCP	883.93	883.72	0.88	
701-700	24	30	RCP	883.93	883.72	0.88	
728-726	29	12	RCP	900.47	900.25	0.76	
726-725	26	12	RCP	900.25	900.22	0.70	
727-726	60	12	RCP	901.07	900.25	1.37	
725-718	184	12	RCP	900.22	895.43	2.6	
724-721	55	15	RCP	896.71	896.52	0.35	
723-722	66	12	RCP	887.07	896.74	0.55	
722-721	38	15	RCP	896.74	896.52	0.58	
721-718	204	21	RCP	895.43	896.52	0.53	
730-729	254	12	RCP	899.24	893.46	2.28	
734-733	144	15	RCP	895.49	895.06	0.3	
733-732	26	15	RCP	895.06	894.99	0.27	
732-731	137	18	RCP	894.99	893.52	1.07	
752-751	204	15	RCP	902.11	900.91	0.59	
750-749	45	15	RCP	897.58	897.52	0.13	
749-748	132	18	RCP	897.52	896.53	0.75	
748-747	224	18	RCP	896.53	894.11	1.08	
746-745	90	21	RCP	894.44	893.95	0.54	
745-744	207	21	RCP	893.95	893.41	0.26	
765A-766	93	15	RCP	890.04	886.97	3.89	
766-766A	9	15	RCP	886.97	886.88	1	
766A-767	37	30	RCP	886.88	886.46	1.13	
743-742	24	12	RCP	898.02	897.02	4.17	
742-741	28	12	RCP	897.02	895.91	3.96	
741A-741	15	12	RCP	896.12	895.91	1.4	-
741-740	85	12	RCP	895.91	895.44	0.55	
740-739	91	12	RCP	895.44	894.99	0.49	
739-738	45		RCP	894.99	894.04	2.11	
738-736	24	15	RCP	894.04	893.9	0.58	
736-735	95	18	RCP	893.9	893.49	0.43	
737-736	54	15	RCP	893.9	894.05	0.43	
751-750	61	15	RCP	897.99	897.58	0.43	
700-769A	40	42" x 27"	RCP	883.61	883.59	0.05	
6" SSD Streets				1 230.01	550.03	0.00	

6" SSD Streets:

Dolan Way	1250.5
Glen Oaks Ct	394
Winter King Ct	423
Box Elder Ct	514
West Letts Ln	670
East Letts Ln	738
x2	

**Total:** 7979

RCP Pipe Totals:

Troi Tipe Totals.					
12	1618				
15	1594				
18	1536				
21	501				
24	316				
27" x					
42"	40				
30	95				

**Total:** \_\_\_\_\_5700

Other Drain:	
Open	5
Total:	5

The length of the drain due to the changes described above is now 13684 feet.

The non-enforcement was approved by the Board at its meeting on June 26, 2006 and recorded under instrument #200600039883.

The following sureties were guaranteed by Bond Safeguard Insurance Company and released by the Board on its April 24, 2006 and October 9, 2006 meetings.

**Bond-LC No:** 5016096 **Insured For:** Storm Sewers

**Amount:** \$308,524.00 **Issue Date:** April 15, 2005

Bond-LC No: 5016097

**Insured For:** Erosion Control

**Amount:** \$39,300.00 **Issue Date:** April 15, 2005

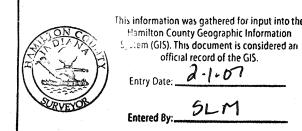
I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward,

Hamilton County Surveyor

KCW/slm



SHEET INDEX

**EXISTING CONDITIONS & DEMOLITION PLAN** 

DESCRIPTION

SHEET

SHEET

ALL

ALL

3,4,11-22,29

TITLE SHEET

**ENTRANCE PLAN** 

SITE DEVELOPMENT PLAN

TRAFFIC CONTROL PLAN

STREET PLAN & PROFILE SHEETS

INTERSECTION & CUL-DE-SAC DETAILS

STORM SEWER PLAN & PROFILE SHEETS

SANITARY SEWER PLAN & PROFILE SHEETS

**EROSION CONTROL PLAN & DETAILS** 

SITE LANDSCAPE PLAN ~~

CONSTRUCTION DETAILS

WATER MAIN PLAN

OFFSITE SANITARY SEWER PLAN & PROFILE SHEETS

**REVISIONS** 

DESCRIPTION

**REV SANITARY PER CTE** 

REV EROSION CONTROL PER HAMILTON COUNTY SOIL & WATER

**REV PER CITY OF CARMEL** 

REV PER H.C.S.W., REV STORM PER LANGSTON

**REV OFFSITE SANITARY SEWER** 

REV PER H.C.S.W., ADD EROSION DETAIL

**REV PER CITY OF CARMEL** 

ADDED SILT BASINS PER HAM, CO. SWCD

REV PER CITY OF CARMEL & HAMILTON CO. SURVEYOR

REV PER CITY OF CARMEL/CROSSROADS COMMENTS

REV PER N. REDDEN/ CITY OF CARMEL ENGINEERING

REV STORM, REV LAKE CONTOURS

DATE

11/08/2004

12/08/2004

12/27/2004

01/05/2005

01/10/2005

01/13/2005

01/21/2005

02/08/2005

02/28/2005

03/21/2005

03/29/2005

1/04/2006

HOLEY MOLEY SAYS

"DIG SAFELY"

8827

STATE OF

AN H. WE No. 8827 STATE OF

MDIANA. ALLAN H. WEIHE P.E. 8827

> NOIS H D. B

S KS

OA

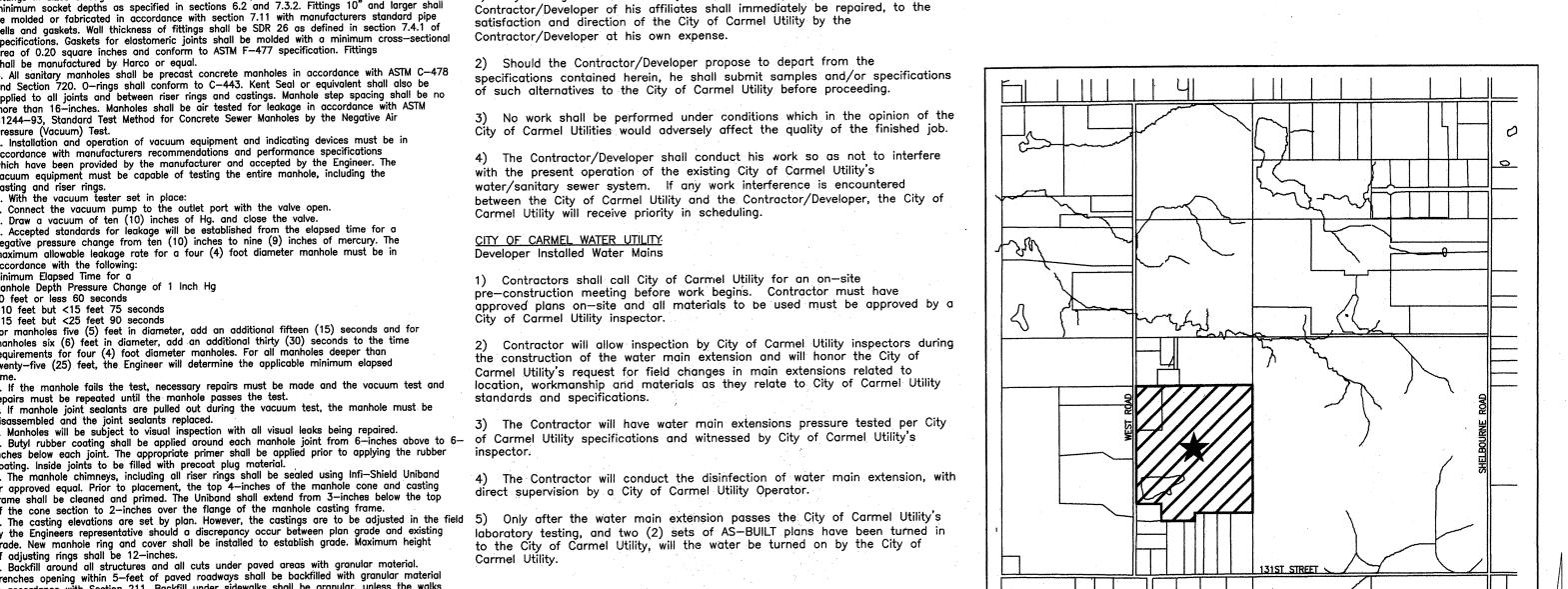
SHEE

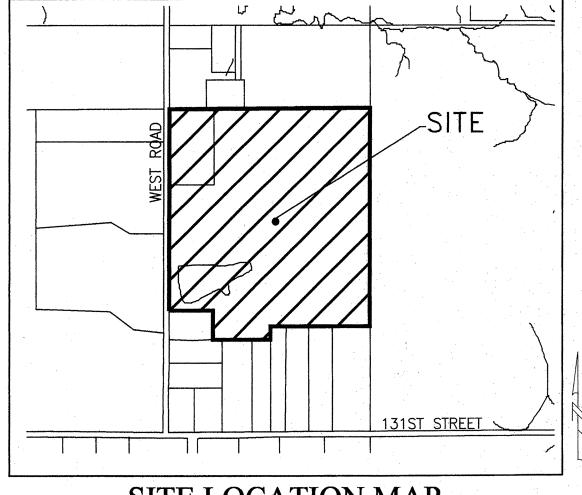
TITLE

IT'S THE LAW WORKING DAYS BEFORE YOU DIG 1-800-382-5544 CALL TOLL FREE PER INDIANA STATE LAW IC8-1-26 IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND

WESTFIELD, INDIANA 46074

13421 WEST ROAD





# SITE LOCATION MAP

# AREA MAP

\* PROJECT LOCATION

# **GENERAL NOTES**

1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION

2) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING

3) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY AND COORDINATE CONSTRUCTION WITH ALL RESPECTIVE UTILITIES.

4) ALL QUANTITIES GIVEN ON THESE PRINTS, VERBALLY OR IN THE SCOPE OF WORK SECTION ARE ESTIMATES AND SHALL BE CONFIRMED BY THE BIDDING CONTRACTORS.

5) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.

6) IN ADDITION, EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.

7) IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THIS PROJECT.

8) TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS.

9) THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

10) ANY FIELD TILES ENCOUNTERED DURING EXCAVATION SHALL BE REPAIRED AND CONNECTED TO NEW STORM SEWERS AND POSITIVE DRAINAGE PRESERVED.

11) IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER THAT ALL LANDSCAPE REQUIREMENTS ARE MET AND CONFORM TO APPLICABLE LOCAL STANDARDS.

12) THE SITE DOES NOT LIE IN A SPECIAL FLOOD HAZARD AREA AS ESTABLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL FLOOD INSURANCE PROGRAM, WHEN PLOTTED BY SCALE ON FLOOD INSURANCE RATE MAP #18057C0205F, DATED FEBRUARY 19, 2003.

13) BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS & PLAT FOR EXACT INFORMATION.

14) THIS SITE DOES CONTAIN ANY WETLANDS AS SHOWN ON THE U.S. DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE; CARMEL, INDIANA, NATIONAL WETLANDS INVENTORY MAP DATED 1990. THE EXISTING POND ON THE SUBJECT REAL ESTATE IS CONSIDERED A WETLANDS AREA.

#### properly protected and/or barricaded when left unattended. 18. No water shall be permitted to flow into the sanitary sewer system during construction. Contractor shall utilize a pump to keep the water level below the pipe. Pump discharge shall be directed to a storm outlet in accordance with state and federal laws and regulations (327) 1929 Set in the top of a concrete post, level with road in the SE quadrant of West 131st Street and IAC 3-6-20). Any pipe entering existing sewers shall be plugged with screw type mechanical, braced plug until such time as all tests on the sewers have been completed and

D.N.R. BM disk stamped "Lee 2 AZI" - N.G.V.D. Shelbourne Road. Near E/4 corner of Sec. 30-T18N-R3E.

All work shall be in the best practices of the water utility industry and the

American Water Works Association, and in accordance with all applicable

Any damage done to the City of Carmel Utility's system by the

satisfaction and direction of the City of Carmel Utility by the

2) Should the Contractor/Developer propose to depart from the

with the present operation of the existing City of Carmel Utility's

1) Contractors shall call City of Carmel Utility for an on-site pre-construction meeting before work begins. Contractor must have

water/sanitary sewer system. If any work interference is encountered

the construction of the water main extension and will honor the City of

Carmel Utility's request for field changes in main extensions related to

of Carmel Utility specifications and witnessed by City of Carmel Utility's

to the City of Carmel Utility, will the water be turned on by the City of

Absolutely no Kennedy Fire Hydrants or Valves are allowed.

3) Ductile Iron Pipe in lengths of 20 feet is the only length allowed.

WATER OPERATIONS MANAGER: PAUL PACE

NOTE: CONTACT DIRECTLY FOR ALL WATER

AND SANITARY SEWER MAIN LOCATIONS.

CITY OF CARMEL WATER-WASTEWATER UTILITIES

BENCHMARK INFORMATION

direct supervision by a City of Carmel Utility Operator.

of such alternatives to the City of Carmel Utility before proceeding.

Contractor/Developer of his affiliates shall immediately be repaired, to the

Federal, State, and local codes and regulations.

Contractor/Developer at his own expense.

Carmel Utility will receive priority in scheduling.

CITY OF CARMEL WATER UTILITY

Developer Installed Water Mains

standards and specifications.

CITY OF CARMEL UTILITY STANDARDS

2) Only Tyler Valve Boxes are allowed

317-571-2648

PPACECCI CARMEL IN.US

Carmel Utility.

ELEVATION = 917.887

## TBM's on site.

TBM # 1 = R/R Spike set north side of Pwp. Approx. 60' south of 131st St. and near the southerly extension of the east line of NW/4. Sec. 30-T18N-R3E

Elevation = 910.30

TBM # 2 = Cut Square 10 feet east of the end of the south curb of Dolan Way.

Elevation = 907.86

TBM # 3 = Cut Square 1.0 feet north of the south endof the east headwall approx. 20 feet north of the southwest corner of surveyed parcel.

Elevation = 890.24

# **OPERATING AUTHORITIES:**

CITY OF CARMEL ONE CIVIC SQUARE CARMEL, IN 46032 PLANNING DIRECTOR: JOHN DOBOSIEWICZ 317-571-2417 DEPT. OF ENGINEERING: DICK HILL

317-571-2441 ASSIST. BUILDING COMMISSIONER: JIM BLANCHARD 1220 WATERWAY BLVD. 317-571-2444

CITY OF CARMEL FIRE DEPARTMENT TWO CIVIC SQUARE CARMEL, INDIANA 46032 GARY HOYT 317-571-2600

building cleanout adjacent to the building.

TO BE USED FOR PRIVATE SEWER DEVELOPMENT

. Standard specifications of the District and Indiana Department of Transportation shall apply

Sanitary sewer pipe shall be PVC in accordance with ASTM D-3034 (S.D.R. 35) and ASTM 2.321. PVC pipe shall have grooved bell and gasket. The pipe shall be made of PVC plastic having a cell classification of 12454B. 3. PVC sewer fittings shall conform to the requirements of ASTM D-3034-89 specification.

minimum socket depths as specified in sections 6.2 and 7.3.2. Fittings 10" and larger shall

bells and gaskets. Wall thickness of fittings shall be SDR 26 as defined in section 7.4.1 of

4. All sanitary manholes shall be precast concrete manholes in accordance with ASTM C-478

applied to all joints and between riser rings and castings. Manhole step spacing shall be no nore than 16-inches. Manholes shall be air tested for leakage in accordance with ASTM

and Section 720. O-rings shall conform to C-443. Kent Seal or equivalent shall also be

s. Gaskets for elastomeric joints shall be molded with a minimum cross—sectional

be molded or fabricated in accordance with section 7.11 with manufacturers standard pipe

or all work and materials. Pipe shall be installed in accordance with Section 715.

Fittings in sizes through 8" shall be molded in one piece with elastomeric joints and

area of 0.20 square inches and conform to ASTM F-477 specification. Fittings

C1244-93, Standard Test Method for Concrete Sewer Manholes by the Negative Air

A. Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacturers recommendations and performance specifications which have been provided by the manufacturer and accepted by the Engineer. The

Accepted standards for leakage will be established from the elapsed time for a

For manholes five (5) feet in diameter, add an additional fifteen (15) seconds and for manholes six (6) feet in diameter, add an additional thirty (30) seconds to the time requirements for four (4) foot diameter manholes. For all manholes deeper than

E. If manhole joint sealants are pulled out during the vacuum test, the manhole must be

5. Butyl rubber coating shall be applied around each manhole joint from 6—inches above to 6—inches below each joint. The appropriate primer shall be applied prior to applying the rubber coating. Inside joints to be filled with precoat plug material.

The manhole chimneys, including all riser rings shall be sealed using Infi-Shield Uniband

or approved equal. Prior to placement, the top 4-inches of the manhole cone and casting

frame shall be cleaned and primed. The Uniband shall extend from 3-inches below the top

by the Engineers representative should a discrepancy occur between plan grade and existing grade. New manhole ring and cover shall be installed to establish grade. Maximum height

0. The Contractor shall be required to furnish the developer 's Engineer with a set of prints,

marked in red pencil, showing actual sewer location and invert, to include lateral location,

lepth and length. Such asbuilt prints must be received by the Engineer before the final contract payment can be authorized. The sanitary sewer laterals and stubs termination shall

11. All sanitary sewer lines upon completion will be required to pass a low pressure air test. Said test shall be conducted according to ASTM 1417—92, and shall be witnessed by an Engineer and a representative of the District. The testing shall be in accordance with Table

12. Deflection tests shall be performed on all flexible\* pipe after the final backfill has been in

place at least 30 days. No pipe shall exceed a vertical deflection of 5% deflection test

results. (\*The following are considered non-flexible pipes: concrete pipe, ductile iron pipe, and cast iron pipe). The deflection test shall be performed with a nine-point mandrel.

I mandrel testing shall be observed by a professional engineer representative for

14. The ends of laterals are to be plugged tight with a braced plastic disc or cap capable of withstanding a low pressure air test without leakage.

15. Bedding for flexible pipe shall be No. 8 crushed stone from 6—inches below the pipe to 12—

inches above the pipe. Bedding for rigid pipe shall be No. 8 crushed stone from 6-inches below the pipe to the spring line of the pipe and from this point to 12-inches above shall be fill sand or equivalent. Manholes shall be placed on no less than 6-inches of No. 8 crushed

16. Water and sewer line crossings and separations shall be in accordance with 327 IAC 3—6—9.

17. Trench shall be opened sufficiently ahead of pipe laying to reveal obstruction, and shall be

A. All sewer laterals installed by the mainline Contractor shall be bedded the same as the main

20. Forty-eight (48) hours notice shall be given to the District prior to the start of sewer

construction. Also, 48 hours notice shall be given prior to doing any testing on the sewer. 21. Manhole castings shall be stamped SANITARY SEWER (Neenah Casting R 1642A or

23. The Contractor shall provide measurements of the slope of the sewer for each manhold

section as construction progresses. Such measurements shall be certified by a Registered

24. In the event the Contractor does not meet the minimum slopes, the sewer section and any

5. Laterals are to be traced with a minimum size of 14 gauge wire from the wye to the terminus.

Land Surveyor or Engineer and be available on—site for observation by the District 's Inspector. No more than three manhole sections can be constructed in advance of such

other affected sewer sections shall be reconstructed to meet such minimum slopes.

he contractor for the building or home will extend the wire from this terminus to the

equal) and be self-sealing type. The casting flange shall be 34 inches and the clear opening shall be 24 inches. Waterproof castings shall be Neenah R-1916-F1 and stamped

22. The minimum slope for sewer acceptance by the Clay Township Regional Waste District are:

3. Backfill around all structures and all cuts under paved areas with granular material. Trenches opening within 5—feet of paved roadways shall be backfilled with granular material in accordance with Section 211. Backfill under sidewalks shall be granular, unless the walks

. The Contractor shall be responsible for verifying that all state highways, city, and

be indicated on the surface with a metal fence post set immediately above the said

venty—five (25) feet, the Engineer will determine the applicable minimum elapsed

. Manholes will be subject to visual inspection with all visual leaks being repaired

of the cone section to 2-inches over the flange of the manhole casting frame.

constructed a minimum of 6 months after backfill has been in place.

permits have been obtained by the developer prior to start of construction.

Add 0.5 psig for each foot of water above the sewer line being tested.

negative pressure change from ten (10) inches to nine (9) inches of mercury. The

maximum allowable leakage rate for a four (4) foot diameter manhole must be in

vacuum equipment must be capable of testing the entire manhole, including the

Connect the vacuum pump to the outlet port with the valve open.

Draw a vacuum of ten (10) inches of Hg. and close the valve.

CLAY TOWNSHIP REGIONAL WASTE DISTRICT

shall be manufactured by Harco or equal.

casting and riser rings.

B. With the vacuum tester set in place:

Minimum Elapsed Time for a Manhole Depth Pressure Change of 1 Inch Hg

repairs must be repeated until the manhole passes the test.

embled and the joint sealants replaced.

f adjusting rings shall be 12-inches.

Proving rings shall be available.

10-inch 0.28%

accordance with the following:

10 feet or less 60 seconds

10 feet but <15 feet 75 seconds

>15 feet but <25 feet 90 seconds

CLAY TOWNSHIP REGIONAL WASTE DISTRICT 10701 NORTH COLLEGE AVENUE, SUITE A INDIANAPOLIS, IN 46280-1098 CANDY FELTNER 317-844-9200

HAMILTON COUNTY HEALTH DEAPARTMENT HAMILTON COUNTY JUDICIAL CENTER, SUITE 30 NOBLESVILLE, INDIANA 46060-2229 JASON LEMASTER 317-776-8500

VEOLIA WATER INDIANAPOLIS INDIANAPOLIS, INDIANA 46202 317-263-6347

CARMEL CITY UTILITIES 760 3RD AVENUE S.W. CARMEL, INDIANA 46032 JOHN DUFFY 317-571-2443

HAMILTON COUNTY SURVEYOR'S OFFICE ONE HAMILTON SQUARE, SUITE 188 HAMILTON COUNTY JUDICIAL CENTER NOBLESVILLE, INDIANA 46060 GREG HOYES 317-776-8495

1441 SOUTH GUILFORD CARMEL, INDIANA 46032 RON BOOHER 317-581-3041

VECTREN ENERGY P.O. BOX 1700 NOBLESVILLE, INDIANA 46061-1700 CHUCK SHUPPERD 317-776-5535

5858 NORTH COLLEGE AVENUE INDIANAPOLIS, INDIANA 46220 317-265-2727

# LAND DESCRIPTION

A part of the East Half of the Northwest Quarter of Section 30, Township 18 North, Range 3 East of the Second Principal Meridian in Clay Township of Hamilton County, Indiana, being more particularly described as follows:

Commencing at the Southwest corner of the East Half of the Northwest Quarter of Section 30, Township 18 North, Range 3 East of the Second Principal Meridian in Clay Township of Hamilton County, Indiana, said point being South 89 degrees 31 minutes 42 seconds East 1481.06 feet from the Southwest corner of said quarter section and South 89 degrees 45 minutes 57 seconds West 1316.95 feet from the Southeast corner of said quarter section; thence North 00 degrees 08 minutes 11 seconds East (Assumed Bearing) along the west line of said East half 810.30 feet to the POINT OF BEGINNING of the following described

Thence continue along said west line North 00 degrees 08 minutes 11 seconds East 1301.85 feet to a point being 533.60 feet south along said line from the Northwest corner of said East half; thence North 89 degrees 54 minutes 59 seconds East parallel with and 533.60 feet south of the North line of said East half a distance of 1312.67 feet to a point on the East line of the Northwest Quarter of said Section 30; thence South 00 degrees 01 minutes 14 seconds West along said East line 1410.68 feet to a point 698.00 feet north along said line from the Southeast corner of said Northwest Quarter; thence South 89 degrees 45 minutes 57 seconds West parallel with and 698.00 feet north of the South line of said East half a distance of 644.20 feet; thence South 00 degrees 08 minutes 11 seconds West parallel with the West line of said East half 87.71 feet; thence South 89 degrees 45 minutes 57 seconds West parallel with said south line 383.34 feet; thence North 00 degrees 08 minutes 11 seconds East parallel with the West line of said East half 200.00 feet; thence South 89degrees 45 minutes 57 seconds West parallel with said south line 288.00 feet to the Point of Beginning.

Containing 42.649 Acres, more or less.

Subject to the right-of-way of West Road being an apparent 16.5 feet (1-rod) off the entire west side of the above described parcel.

Subject to all other easement, restrictions and rights-of-way

# PLANS PREPARED FOR

LANGSTON DEVELOPMENT COMPANY, INC 1132 S. RANGELINE RD, SUITE 100 CARMEL, INDIANA 46032 TELEPHONE: 317-846-7017 FAX: 317-846-0217 CONTACT PERSON: JIM LANGSTON

\*SUBMITTAL UNDER OPEN SPACE STANDARDS CARMEL/CLAY SUBDIVISION CONTROL ORDINANCE.

# ALLAN H. WEIHE-REG P.E.-IN #8827

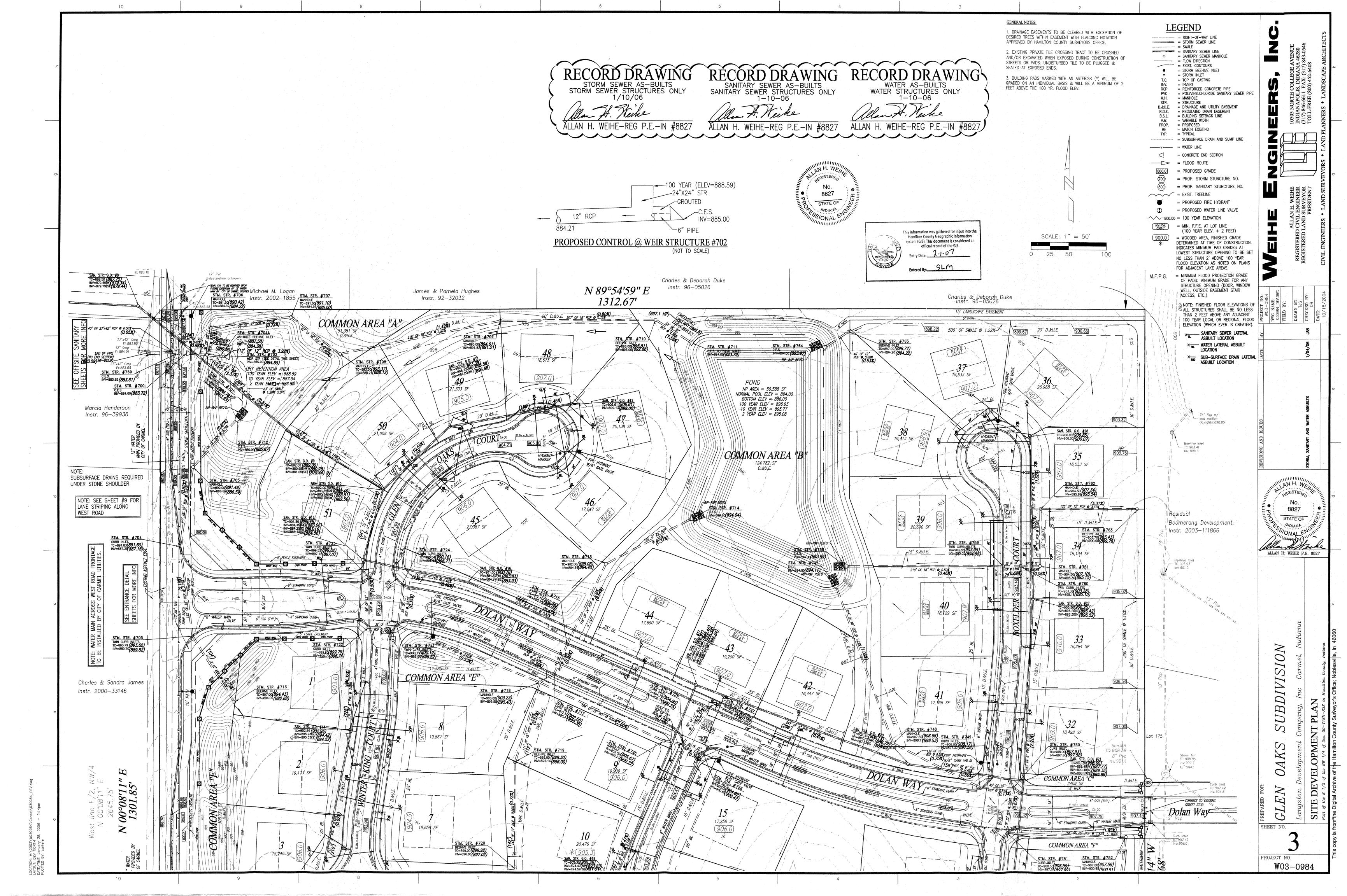
STORM SEWER STRUCTURES ONLY

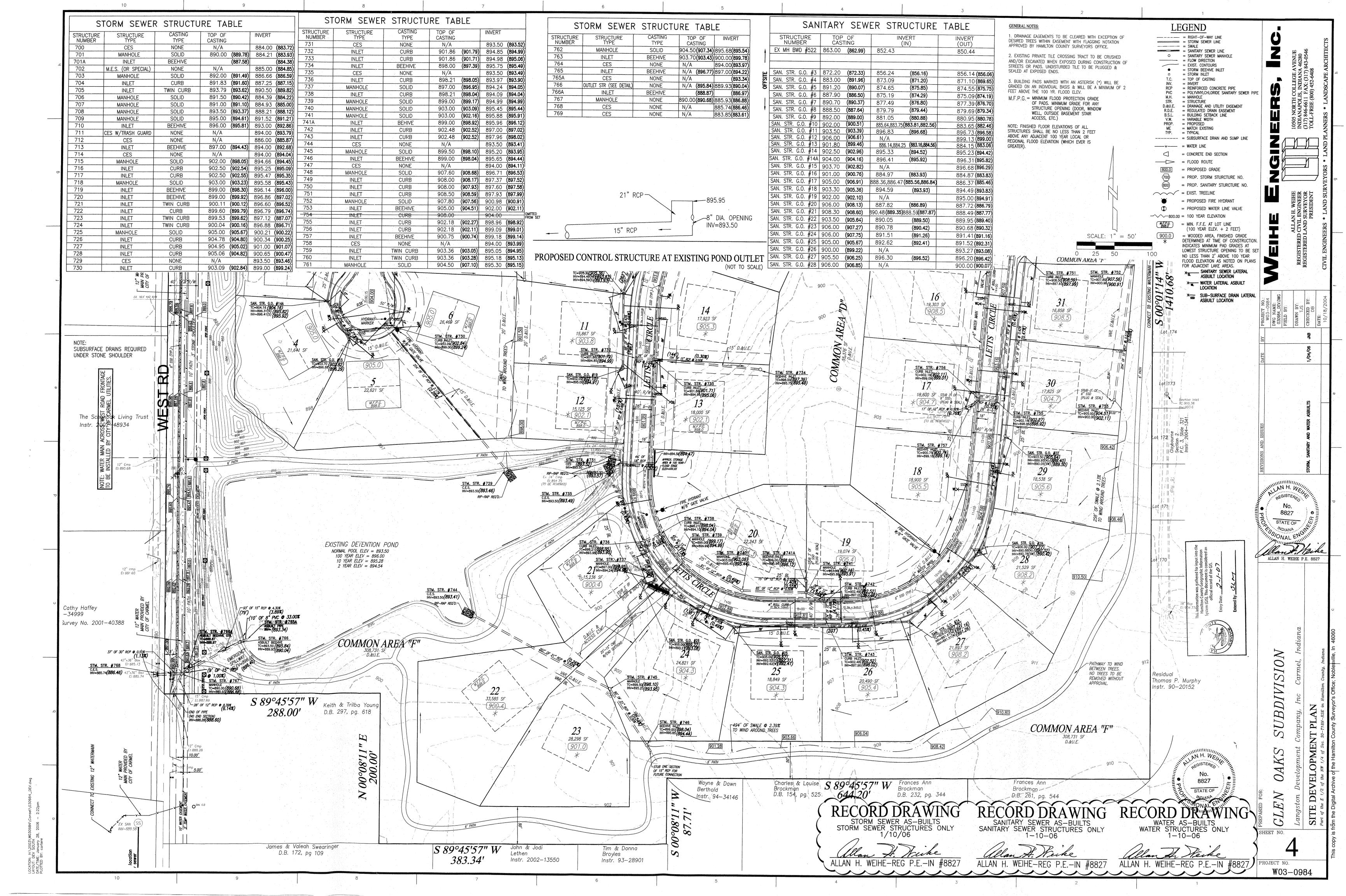
neine ALLAN H. WEIHE-REG P.E.-IN #8827

WATER STRUCTURES ONLY

LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

LE ROJECT NO. W03 - 0984









## STORM SEWERS

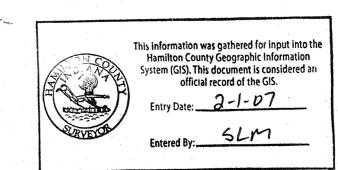
Bedding, Haunching, Initial Backfill
Bedding, haunching and initial backfill for all RCP installations shall be B—Borrow for Structure
Backfill meeting the material requirements of the INDOT. Bedding shall be placed in the trench
bottom such that after the pipe is installed to grade and line, there remains 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, haunching and initial backfill 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 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 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 for all RCP installations under and within 5-feet of pavement shall be B-Borrow 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 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

## MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS

Proctor Density for the entire depth of the excavation.

For installation of Storm Mains, Water Mains, Sanitary Mains, Water Service Laterals, Sanitary Sewer 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 a more stringent cover requirement, the more stringent requirement shall govern.

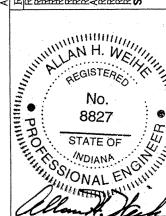


NOTE: ALL CASTINGS SHOULD BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY'

The storm sewer system shall be constructed per design specified and as approved by the Hamilton County Surveyor's Office on the final approved construction plans.\* Deviations from the approved design shall only be permitted due to special circumstances or difficulty during designated representative of the Hamilton County Surveyor's Office 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 shall require as—built certification at the time of

\*The contractor shall field check each section of storm pipe as it is being installed to ensure

compliance with the design plans.



ALLAN H. WEIHE P.E. 882

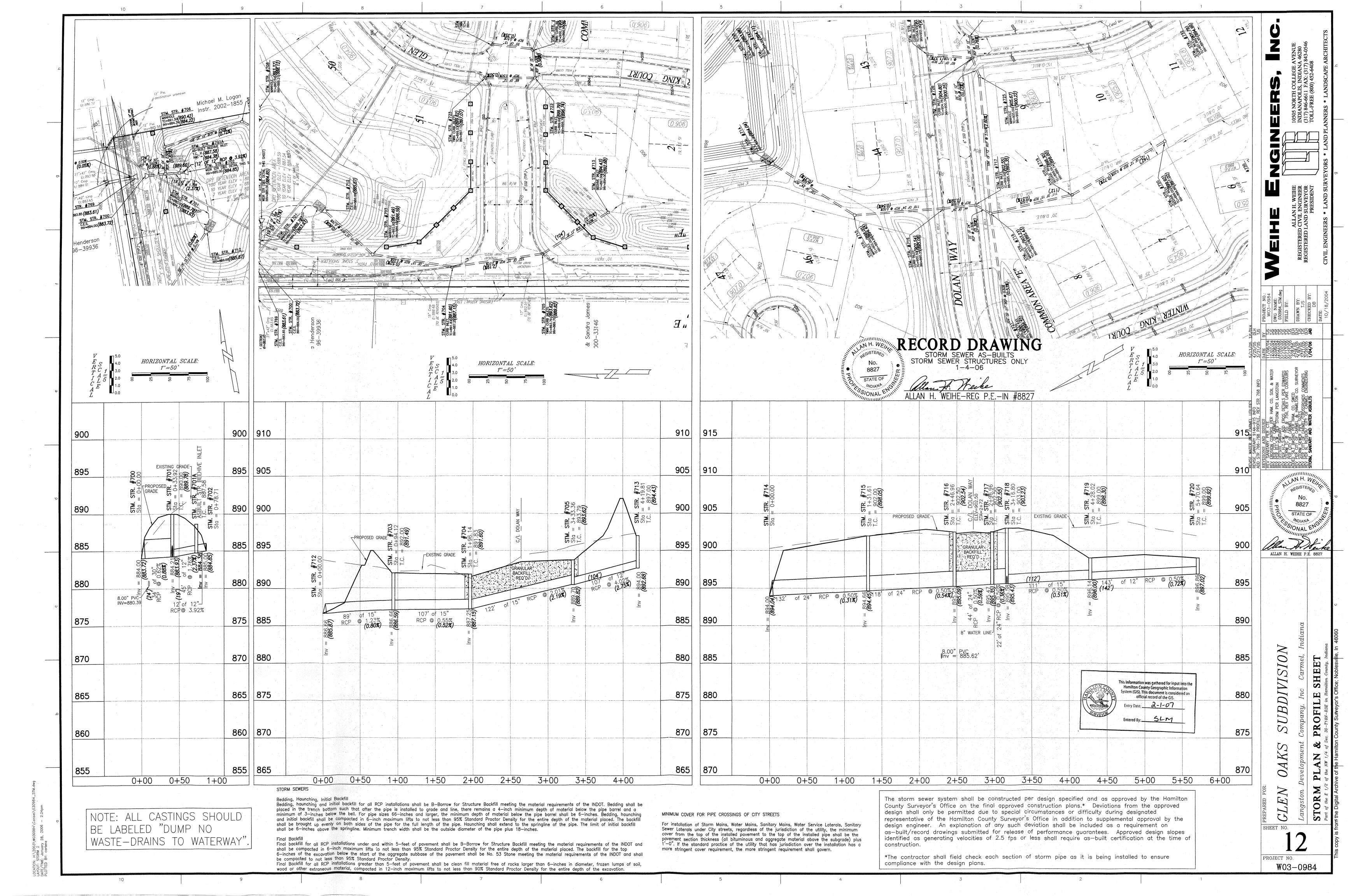
SUBDIVISION SHEET

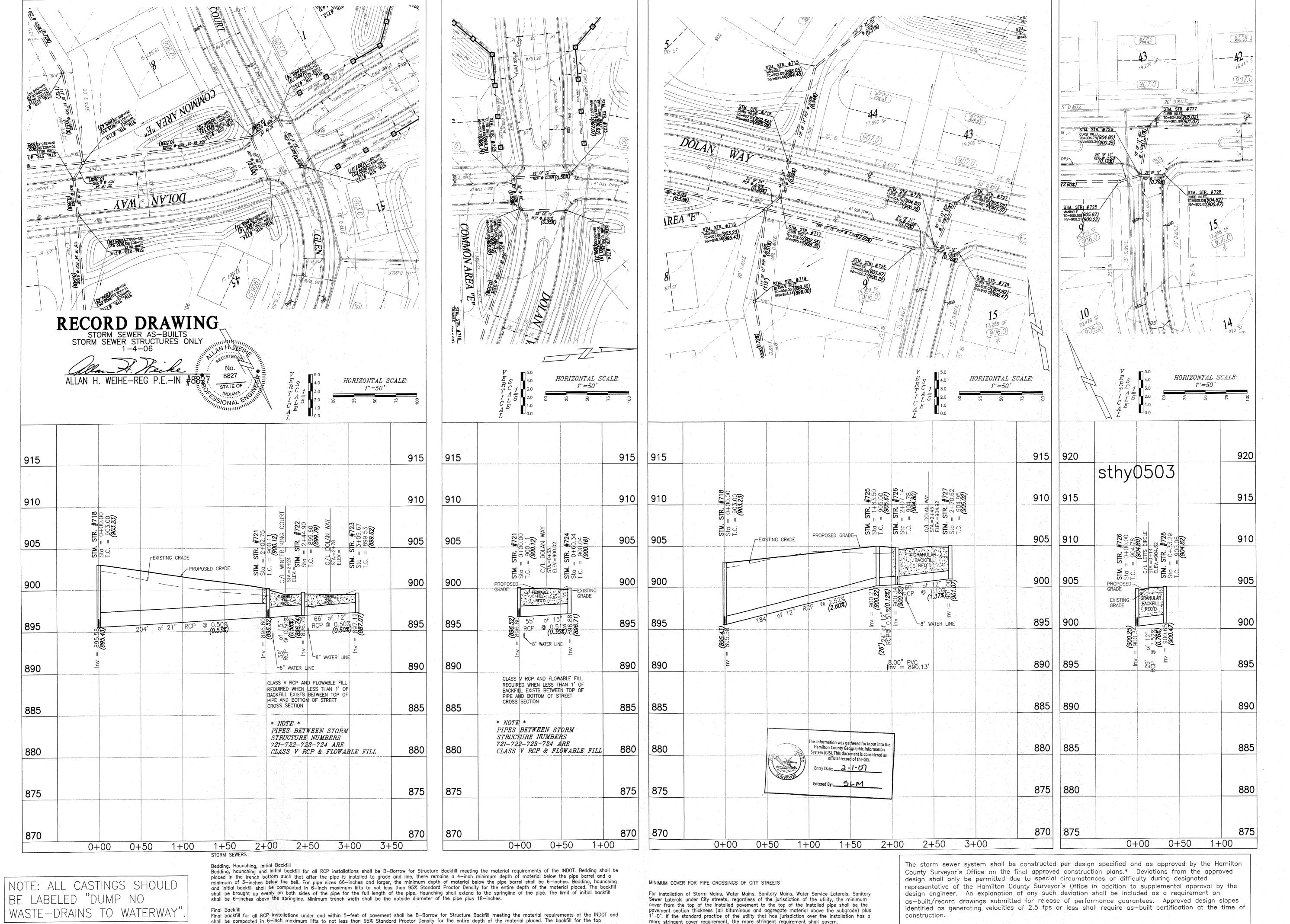
PROFILE PLAN
of the NW 1/4

STORM ... EN $G\Gamma$ SHEET NO.

PROJECT NO.

W03-0984





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.

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 a more stringent cover requirement, the more stringent requirement shall govern.

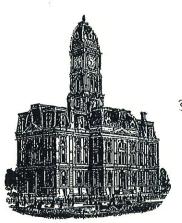
\*The contractor shall field check each section of storm pipe as it is being installed to ensure compliance with the design plans.

8827 STATE OF Man A. Ja ALLAN H. WEIHE P.E. 8827

> SUBDIVISION SHEET

PROFILE OAKS PL STORM
Part of the E 1/2 GLEN

PROJECT NO. W03 - 0984





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

## Map Correction-Field Verification

**Drain Number: 348** 

Drain Length: 13,684

Drain Name: Bellewood - Glen Oaks Arm

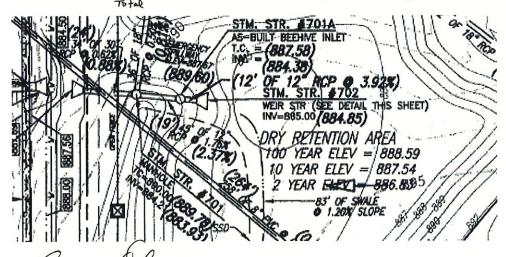
Change +/-:-134

Date: 02-10-2017

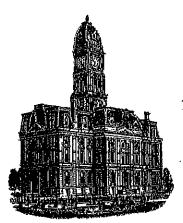
New Length: 13,570

Verified By: SLM

Notes & Sketch: Str. 701A to 701 was incorrectly reported. This drain segment consists of 19' of 12" RCP. Also the 12" RCP was incorrectly tallied on the final report -The correct total of 12" RCP is now 1555 feet. The 18" RCP was incorrect as well. It should be 1519 feet. The 30" RCP is now 61 feet – as the above mentioned segment was reported as 30" RCP.



Suzanne L. Mills GIS Specialist





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

## Map Correction-Field Verification

Drain Number: 348 Bellewood Drain

Drain Length: 13,570

Drain Name: Glen Oaks

Change +/-:9

Date: 12-17-2019

New Length: 13,579

Verified By: SAB, BRK (WO-2019-00252)

Notes & Sketch: SEE ASBUILTS

A 15" Stub pipe was removed from existing inlet structure #746 and 9 feet of 21" RCP was placed upstream of the inlet. Also added onto the 21" RCP was a concrete endsection with animal guard.

Suzanne L. Mills GIS Specialist

# HAMILTON COUNTY SURVEYOR'S OFFICE

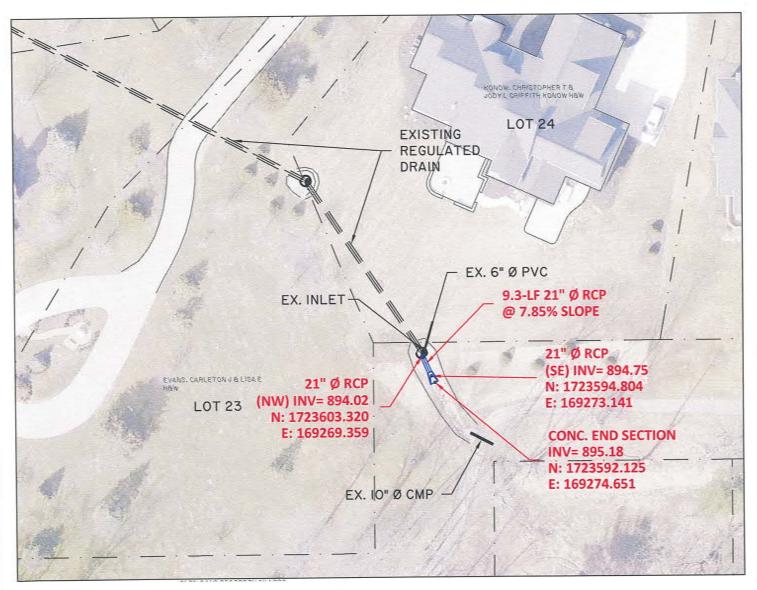
# "AS-BUILT" RECORD DRAWING **BELLEWOOD DRAIN, GLEN OAKS ARM**

**END SECTION** INV.= 895.18 (LOOKING NORTHWEST)



(LOOKING NORTH)





EX. INLET (N) RIM= 897.35 (NW) 21" Ø RCP INV= 894.02



SCALE: 1" = 40'

F.B. #12, PAGES 14-15 DRAWN BY: REUBEN Q. ARVIN, SI

## DATUM

THE AS-BUILT SURVEY USED THE FOLLOWING DATUM: HORIZONTAL DATUM: NAD 1983 (CONUS) INDIANA EAST 1301 VERTICAL DATUM: (NAVD 88) (GEOID 12A)

## "AS-BUILT" CERTIFICATION

"AS BUILT" INFORMATION COLLECTED BY HAMILTON COUNTY SURVEYOR'S OFFICE. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF, A TRUE AND CORRECT REPRESENTATION OF THE LOCATIONS AND ELEVATIONS OF THE "AS-BUILT" REGULATED DRAIN IMPROVEMENTS, INFORMATION OBTAINED BY FIELD SURVEY ON 10/31/2019; FIELD BOOK #12 PAGES 14-15.

**CERTIFIED BY:** 

BRIAN K. RAYL, PS PROFESSIONAL SURVEYOR INDIANA LICENSE NO. 20100070

DATE: DECEMBER 4, 2019

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR SURVEYOR LOCATION REPORT



No. 20100070



## HAMILTON COUNTY, INDIANA

HAMILTON COUNTY SURVEYOR'S OFFICE HAMILTON COUNTY GOVERNMENT/JUDICIAL CENTER ONE HAMILTON COUNTY SQUARE, SUITE 188 NOBLESVILLE, IN 46060 PHONE: (317) 776-8495 FAX: (317) 776-9628 SURVEYOR@HAMILTONCOUNTY.IN.GOV

SHEETIOFI

S:\E-Surv\Projects\Regulated Drains\Bellewood Drain\Civil 3D\Production Drawings\\ Bellewood Drain As-Built II2II9.dwg
PLOT DATE: Dec 04, 2019 - 8:28 am