



SURVEYOR'S OFFICE

# Hamilton County

*Kenton C. Ward, Surveyor*

*Phone (317) 776-8495*

*Fax (317) 776-9628*

*Suite 188*

*One Hamilton County Square*

*Noblesville, Indiana 46060-2230*

November 2, 2006

TO: Hamilton County Drainage Board

RE: Lion Creek Drain, the Woods at Lions Creek Arm

Attached is a petition filed by Mono Henderson of J.C. Developers, LLC along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the The Woods of Lions Creek 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" SSD	6,997 ft.	27" RCP	21 ft.
12" RCP	3,466 ft.	30" RCP	242 ft.
15" RCP	882 ft.	Open Ditch	2,600 ft.
18" RCP	1265 ft.		

The total length of the drain will be 15,473 feet.

The open ditch listed above is the following described lengths.

Lion Creek Main Channel: From the eastern Right of Way line of West Road to the western boundary of The Woods at Lions Creek, which also is the Hamilton/Boone County line. This is approximately 2,064 feet of open ditch.

Post Construction BMP Vegetated Swales: From Str. 701 to Lions Creek, Str. 746 to Lions Creek, and Str. 727/742 to Lions Creek. The Vegetated Swales are being regulated to maintain positive drainage but the maintenance of the water quality swales will be the responsibility of the property owner, Homeowners Association, or the City of Carmel as part of their Stormwater Phase II Program.

The retention ponds (Pond SM-N-NE) located in Common Area 1A and 2A, (Pond SM-N-N) located in Common Area 28A, 29A, 30A, and 31A, (Pond SM-N-E) located in Common Area 32A, (Pond SM-S-W) located in Common Area "A", 9A, 10A, and 12A, (Pond SM-S-SW) located in Common Area 13A and 14A, (Pond SM-S-S) located in Common Area 16A and 17A, (Pond SM-S-SE) located in Common Area 19A and 20A, and (Pond SM-S-E) located in Common Area 22A, 23A, and 24A 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 pond, such as mowing and aquatic vegetation control, will be the responsibility of the property owner or Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the pond was designed will be retained. Thereby, allowing no fill or easement encroachments.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs. Only the main SSD lines, which are located within the private street right of way (Ingress/Egress Easement), 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 \$4,279.70.

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: National City Bank  
Date: October 5, 2006  
Number: SCL013027  
For: Storm Sewers & Subsurface Drains  
Amount: \$367,198.00

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 The Woods at Lions Creek as recorded in the Office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for January 22, 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 Woods at Lions Creek Subdivision, Section  
Drain Petition.

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

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

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

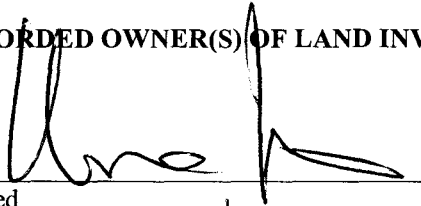
Petitioner agrees to pay the cost of construction of the drainage system and requests periodic maintenance assessments by the Board thereafter.

The Petitioner also agrees to the following:

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

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

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



Signed

MUNO HENNERMAN

Printed Name

3-20-06

Date

Signed

Printed Name

Date

Signed

Printed Name

Date

Signed

Printed Name

Date

# Gasb 34 Asset Price & Drain Length Log

Drain-Improvement: Woods at Lion Creek

Drain Type:	Size:	Length	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
open	—	2064			\$19,551 <sup>f</sup>	\$40,351 <sup>20</sup>

Sum: 2064 \$ 40,351<sup>20</sup>

Final Report: \_\_\_\_\_

Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

**Lion Creek Drain, The Woods at Lions Creek Arm**

On this **22nd day of January 2007**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Lion Creek Drain, The Woods at Lions Creek 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.

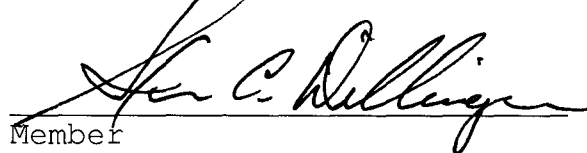
HAMILTON COUNTY DRAINAGE BOARD



\_\_\_\_\_  
President



\_\_\_\_\_  
Member



\_\_\_\_\_  
Member

Attest:



**CERTIFICATE OF COMPLETION AND COMPLIANCE**

To: Hamilton County Surveyor

Re: **Woods at Lions Creek 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: Allan H. Weihe Date: 7/9/07

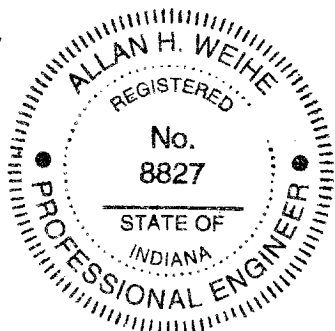
Type or Print Name: **Allan H. Weihe**

Business Address: **Weihe Engineers, Inc.**

**10505 N. College Avenue, Indianapolis, IN 46280**

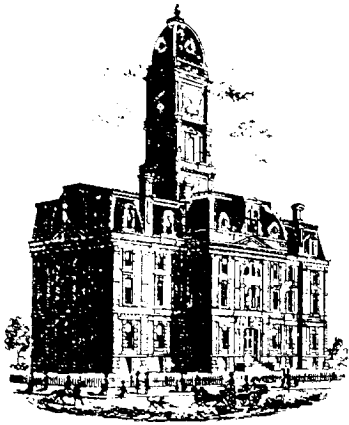
Telephone Number: **317-846-6611**

SEAL



INDIANA REGISTRATION NUMBER

**#8827**



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**

**February 26, 2008**

**Re: Lion Creek Drain: Woods at Lions Creek**

Attached are as-builts, certificate of completion & compliance, and other information for Woods at Lions Creek. 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 November 2, 2006. The report was approved by the Board at the hearing held January 22, 2007. (See Drainage Board Minutes Book 10, Pages 54-55)

The changes are as follows:

Structure:	Length:	Size	Material:	Up Invert:	Dn Invert	Grade:	Changes(ft):
726-724	265	12	RCP	875.79	874.94	0.32	2
723-722	97	12	RCP	874.91	864.87	10.35	3
720-719	260	15	RCP	877.33	876.51	0.32	0
719-718	89	15	RCP	874.79	871.31	3.91	1
718-717	44	15	RCP	870	864.79	11.84	3
707-706	23	27	RCP	865.65	865.62	0.13	2
706-705	26	30	RCP	865.57	865.51	0.23	-2
705-704a	214	30	RCP	865.49	864.75	0.35	0
712-711	28	15	RCP	867.35	867.06	1.04	0
713-707	399	18	RCP	869.19	865.73	0.13	-1
711-710	28	18	RCP	866.96	866.86	0.5	-1
710-709	78	18	RCP	866.76	866.45	0.4	3
709-708	109	18	RCP	866.35	866.04	0.28	0
708-707	86	18	RCP	865.94	865.75	0.22	1
716-715	45	12	RCP	874.76	872.2	5.69	2
715-714	33	15	RCP	872.1	870.19	5.79	-3
714-713	20	18	RCP	870.09	869.29	4	-1
731-730	49	12	RCP	876.79	876.71	0.16	13
730-729	278	12	RCP	876.61	875.26	0.5	-1
729-728	272	12	RCP	875.16	873.88	0.47	-1
728-727	135	12	RCP	873.78	872.96	0.61	4
743-742	54	12	RCP	878.92	873	10.96	9



745-744	41	12	RCP	879.36	878.89	1.15	3
738-737	31	12	RCP	883.62	883.07	1.77	-1
737-736	314	12	RCP	882.97	877.68	1.68	3
736-735	37	12	RCP	877.528	876.81	2.08	7
741-740	35	12	RCP	889.83	889.11	2.06	-1
740-739	223	15	RCP	889.01	884.17	2.17	-17
734-733	26	12	RCP	881.22	880.85	1.42	-2
733-732	272	18	RCP	880.8	876.82	1.46	2
704-703	79	12	RCP	864.79	862.18	3.3	18
703-702a	217	12	RCP	862.08	858.8	1.25	0
702a-702	91	12	RCP	858.67	858.21	0.5	0
702-701	166	12	RCP	858.11	857.2	0.5	-94
769-768	138	12	RCP	865	864.74	0.19	24
750-749	26	12	RCP	873.14	872.61	1.65	-2
749-748	308	12	RCP	872.61	869.59	0.98	4
747-746	189	12	RCP	869.48	868.61	0.46	10
752-751	82	12	RCP	872	869.42	3.14	9
758-757	250	12	RCP	871.49	870.6	0.32	0
757-756	26	12	RCP	870.6	870.53	0.27	-2
756-755	20	12	RCP	870.43	870.27	0.8	-1
755-754	126	12	RCP	870.17	869.84	0.31	9
754-753	75	12	RCP	869.74	869.31	0.57	4
763-762	26	12	RCP	874.28	872.21	0.5	-2
762-761	189	15	RCP	878.99	877.21	1.1	-1
761-760	259	18	RCP	872.11	871.63	0.3	0
760-759	27	18	RCP	872.11	871.63	0.3	2
721-720	26	12	RCP	878.05	877.43	2.38	-2

**RCP Pipe Totals:**

12	3524
15	866
18	1278
27	23
30	240

**Total:** 5931

<b>Other Drain:</b>	
Open Ditch	2064
SWALES	352
6" SSD-Curbs	6787

**Total:** 9203

The length of the drain due to the changes described above is now **15,134 feet**.

The non-enforcement was approved by the Board at its meeting on January 22, 2007 and recorded under instrument #2008002657.

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

**Bond-LC No:** SCL013027

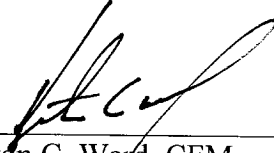
**Insured For:** Storm Sewers

**Amount:** \$367,198.00

**Issue Date:** October 5, 2006

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

Sincerely,

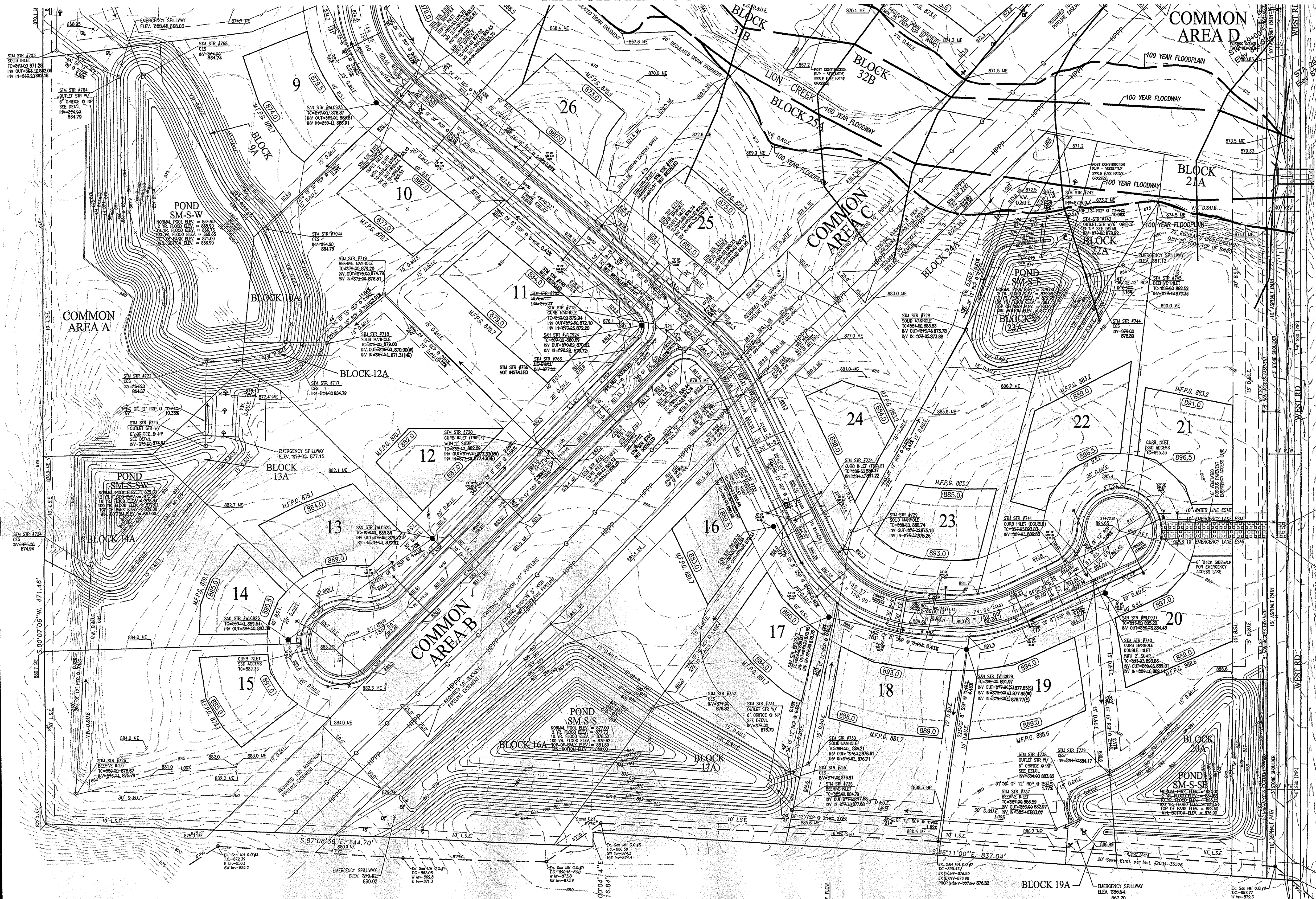
A handwritten signature in black ink, appearing to read 'K. C. Ward', written over a horizontal line.

Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/slm



MATCH PREVIOUS SHEET

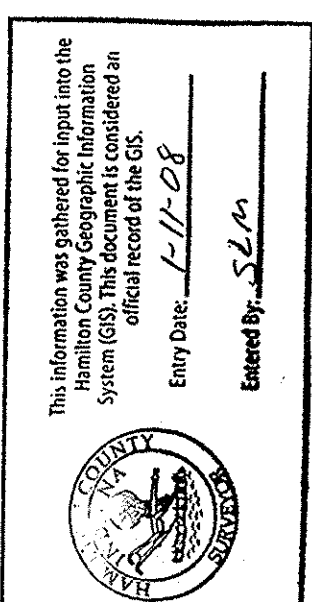


GENERAL NOTES:

1. DRAINAGE EASEMENTS TO BE CLEARED WITH EXCEPTION OF DESIRED TREES WITHIN EASEMENT WITH FLAGGING NOTATION APPROVED BY HAMILTON COUNTY SURVEYORS OFFICE.
2. EXISTING PRIVATE TILE CROSSING TRACT TO BE CRUSHED AND/OR EXCAVATED WHEN EXPOSED DURING CONSTRUCTION OF STREETS OR PADS. UNDISTURBED TILE TO BE PLUGGED & SEALED AT EXPOSED ENDS.
3. BUILDING PADS MARKED WITH AN ASTERISK (\*) WILL BE GRADED ON AN INDIVIDUAL BASIS & WILL BE A MINIMUM OF 2 FEET ABOVE THE 100 YR. FLOOD ELEV.
4. FINISHED FLOOR ELEVATIONS OF ALL STRUCTURES SHALL BE NO LESS THAN 2 FEET ABOVE ANY ADJACENT 100 YEAR LOCAL OR REGIONAL FLOOD ELEVATION (WHICH EVER IS GREATER).
5. ADA RAMP ARE REQUIRED AT ALL LOCATIONS WHERE ANY SIDEWALK INTERSECTS ANY STREET.
6. ALL SUBSURFACE DRAINS TO BE CONSTRUCTED WITH DOUBLE-WALL, SMOOTH BORE PERFORATED (HDPE) PIPE.
7. DECORATIVE SIGNS, SPRINKLER SYSTEMS, TREES, LANDSCAPING MOUNDS, FENCES, LIGHT POLES OR OTHER SUCH AMENITIES ARE NOT PERMITTED IN THE RIGHT OF WAY.
8. NO WATER MAIN VALVES ARE TO BE PLACED UNDER THE STREETS.
9. ALL STREETS ARE TO BE PRIVATE STREETS.

LEGEND

- = RIGHT-OF-WAY LINE
- = STORM SEWER LINE
- = SANITARY SEWER LINE
- = SANITARY SEWER MANHOLE
- = FLOW DIRECTION
- = EXIST. CONTOURS
- = STORM BEEHIVE INLET
- = STORM INLET
- = TOP OF CASTING
- = INVERT
- = REINFORCED CONCRETE PIPE
- = POLYVINYLCHLORIDE SANITARY SEWER PIPE
- = MANHOLE
- = STRUCTURE
- = EXCHANGE AND UTILITY EASEMENT
- = SANITARY SEWER EASEMENT
- = REGULATED DRAIN EASEMENT
- = BUILDING SEWER LINE
- = VARIABLE WIDTH
- = PROPOSED
- = MATCH EXISTING
- = TYPICAL
- = SUBSURFACE DRAIN AND SUMP LINE
- = WATER LINE
- = CONCRETE END SECTION
- = FLOOD ROUTE
- = PROPOSED GRADE
- = PROP. STORM STRUCTURE NO.
- = PROP. SANITARY STRUCTURE NO.
- = EXIST. TREELINE
- = PROPOSED FIRE HYDRANT
- = PROPOSED WATER LINE VALVE
- = PROPOSED PAD GRADE
- = MINIMUM FLOOD PROTECTION GRADE OF PADS. MINIMUM GRADE FOR ANY STRUCTURE OPENING (DOOR, WINDOW WELL, OUTSIDE BASEMENT STAIR ACCESS, ETC.)



This information was prepared by the Hamilton County Geographic Information Systems (GIS). This document is considered an official record of the GIS.

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

**RECORD DRAWING**  
WATER AS-BUILTS  
WATER STRUCTURES ONLY  
7/9/07  
Allan H. Weihe  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

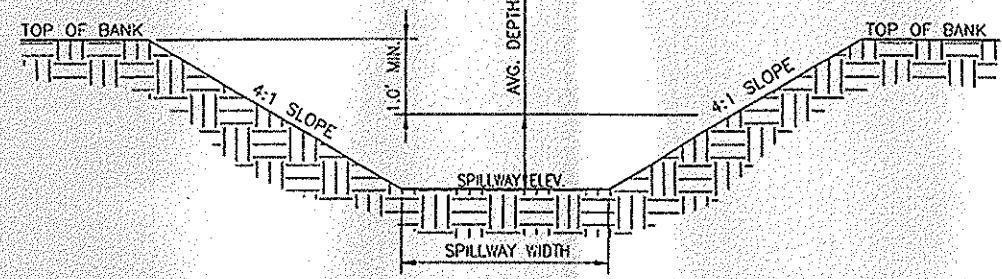
**RECORD DRAWING**  
STORM SEWER AS-BUILTS  
STORM SEWER STRUCTURES ONLY  
7/9/07  
Allan H. Weihe  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

**RECORD DRAWING**  
SANITARY SEWER AS-BUILTS  
SANITARY SEWER STRUCTURES ONLY  
7/9/07  
Allan H. Weihe  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

**BUCKEYE PIPELINE**  
MR. ED GARZA  
BUS. 291-3121 CELL 502-2029  
4527 N. MERIDIAN ROAD  
HUNTINGTON, INDIANA 46750

**MARATHON PIPELINE**  
MR. DEREK SHEETS  
BUS. 291-9460 CELL 432-4356  
10722 EAST C.R. 300 NORTH  
INDIANAPOLIS, INDIANA 46234

- BUCKEYE NOTES:**
1. NO WORK WITHIN 25 FEET OF BUCKEYE'S PIPELINE, INCLUDING DEMOLITION AND CONSTRUCTION ACTIVITIES, SHALL BE CONDUCTED WITHOUT THE PRESENCE OF A BUCKEYE INSPECTOR.
  2. A CURBING SECTION SHALL BE CENTERED ON THE PIPELINE, TO MINIMIZE THE LENGTH OF CURBING THAT WOULD NEED TO BE REMOVED IF MAINTENANCE IS REQUIRED.
  3. ALL WATERLINES SHALL CROSS BENEATH THE PIPELINE WITH A MINIMUM CLEARANCE OF 24 INCHES. THE CONTRACTOR SHALL PROPERLY SUPPORT THE PIPELINES DURING EXCAVATION AND SHALL SUBMIT A SUPPORT PLAN TO BUCKEYE FOR REVIEW PRIOR TO START OF EXCAVATION. A BUCKEYE INSPECTOR SHALL BE PRESENT WHILE THE PROPOSED WATER MAIN IS INSTALLED. ADDITIONALLY, THE DUCTILE IRON WATER LINES SHALL INCLUDE NITRILE GASKETS WITHIN 50 FEET OF THE PIPELINES AND BE COATED WITH A NON-CONDUCTIVE COATING WITHIN 50 FEET OF THE PIPELINES.
  4. SAND SHALL BE INSTALLED AROUND THE PIPELINE AND BETWEEN THE NEW UTILITY AFTER THE INSTALLATION OF THE NEW UTILITY.
  5. ALL UTILITY CABLES ARE TO CROSS BENEATH THE PIPELINE WITH A MINIMUM CLEARANCE OF 24 INCHES.
  6. SEE SHEET C609 FOR ADDITIONAL BUCKEYE REQUIREMENTS AND SPECIFICATION FOR WORK PERFORMED IN PIPELINE EASEMENT.



POND DESIGNATION	TOP OF BANK ELEV.	100YR. ELEV.	SPILLWAY ELEV.	SPILLWAY WIDTH	AVERAGE DEPTH
SM-S-W	871.00	868.65	868.65	30'	0.9'
SM-S-S	879.00	877.02	877.02	20'	0.5'
SM-S-S	881.80	879.62	879.62	25'	0.5'
SM-S-E	886.00	886.54	886.54	22.5'	0.5'
SM-S-E	883.20	881.12	881.12	15'	0.5'
SM-N-E	876.00	874.13	874.13	7.5'	0.5'
SM-N-E	876.80	874.78	874.78	25'	0.6'
SM-N-N	874.80	872.78	872.78	25'	0.6'

**EMERGENCY SPILLWAY TYPICAL SECTION**  
(NO SCALE)

SCALE: 1" = 60'



HOLEY MOLEY SAWS  
"DIG SAFELY"  
"IT'S THE LAW"  
CALL 2 WORKING DAYS BEFORE YOU DIG  
1-800-382-5544  
CALL TOLL FREE  
PER INDIANA STATE LAW IC 8-1-26, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

**WEIHE ENGINEERS INC.**  
10505 NORTH COLLEGE AVENUE  
INDIANAPOLIS, INDIANA 46280  
WWW.WEIHE.NET  
TOLL FREE 800-452-6468  
FAX 317-846-6611  
317-843-0546

ALLAN H. WEIHE, P.E., I.S. - PRESIDENT  
LAND SURVEYORS LANDSCAPE ARCHITECTS  
CIVIL ENGINEERS

PROJECT NO.: W06-0031  
DATE: 6/9/08

DATE: 7/17/06  
BY: [Signature]  
CHECKED BY: [Signature]

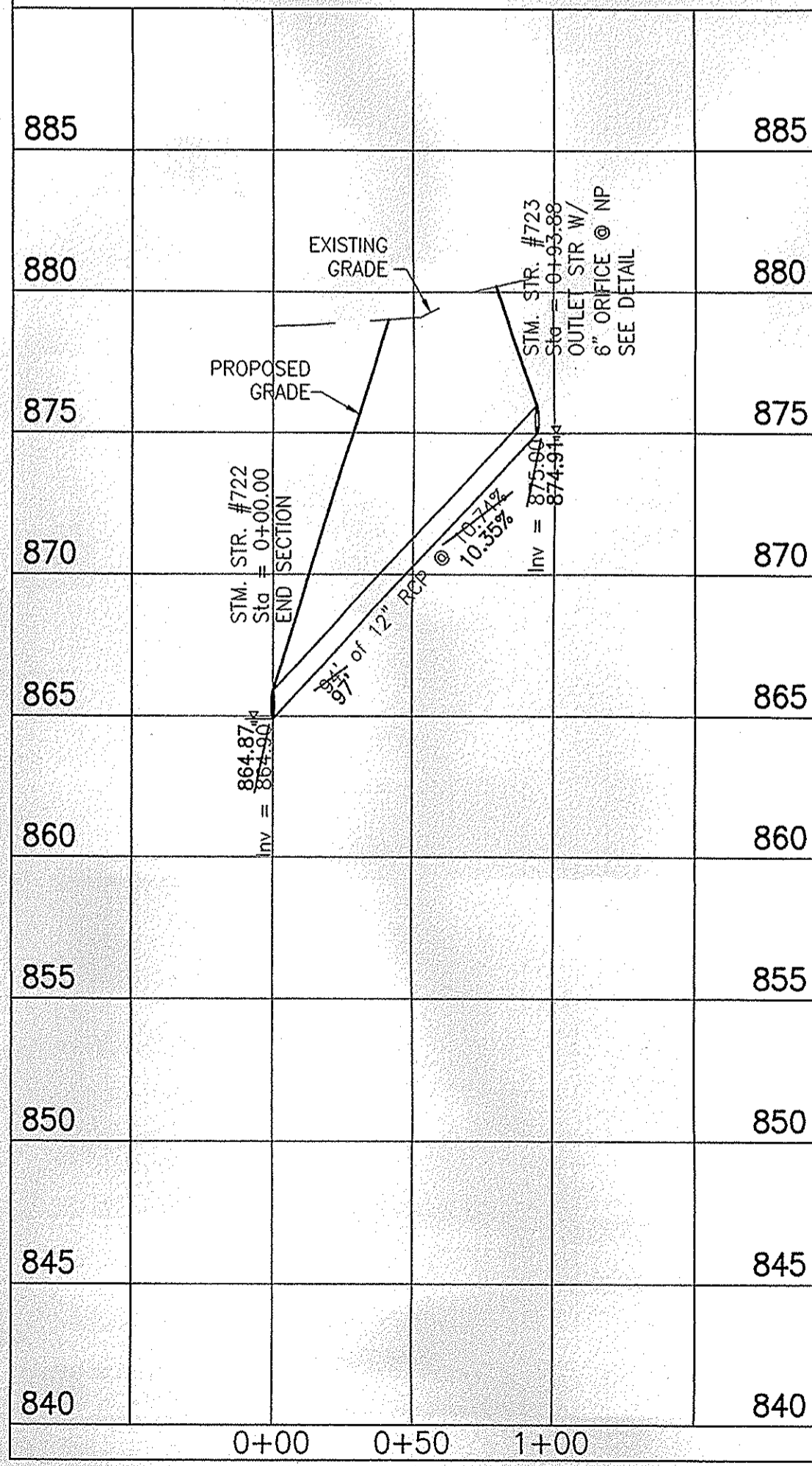
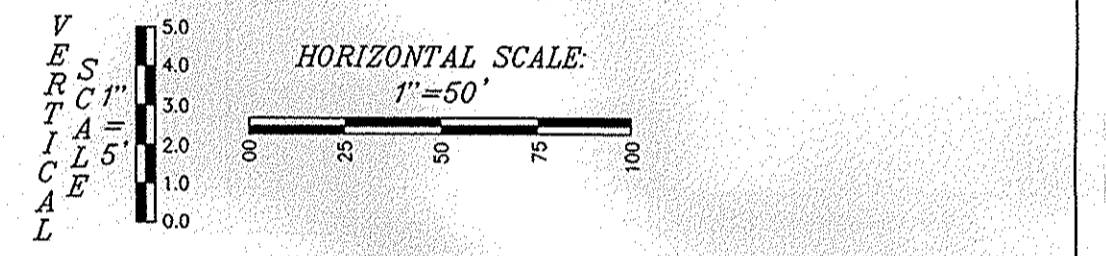
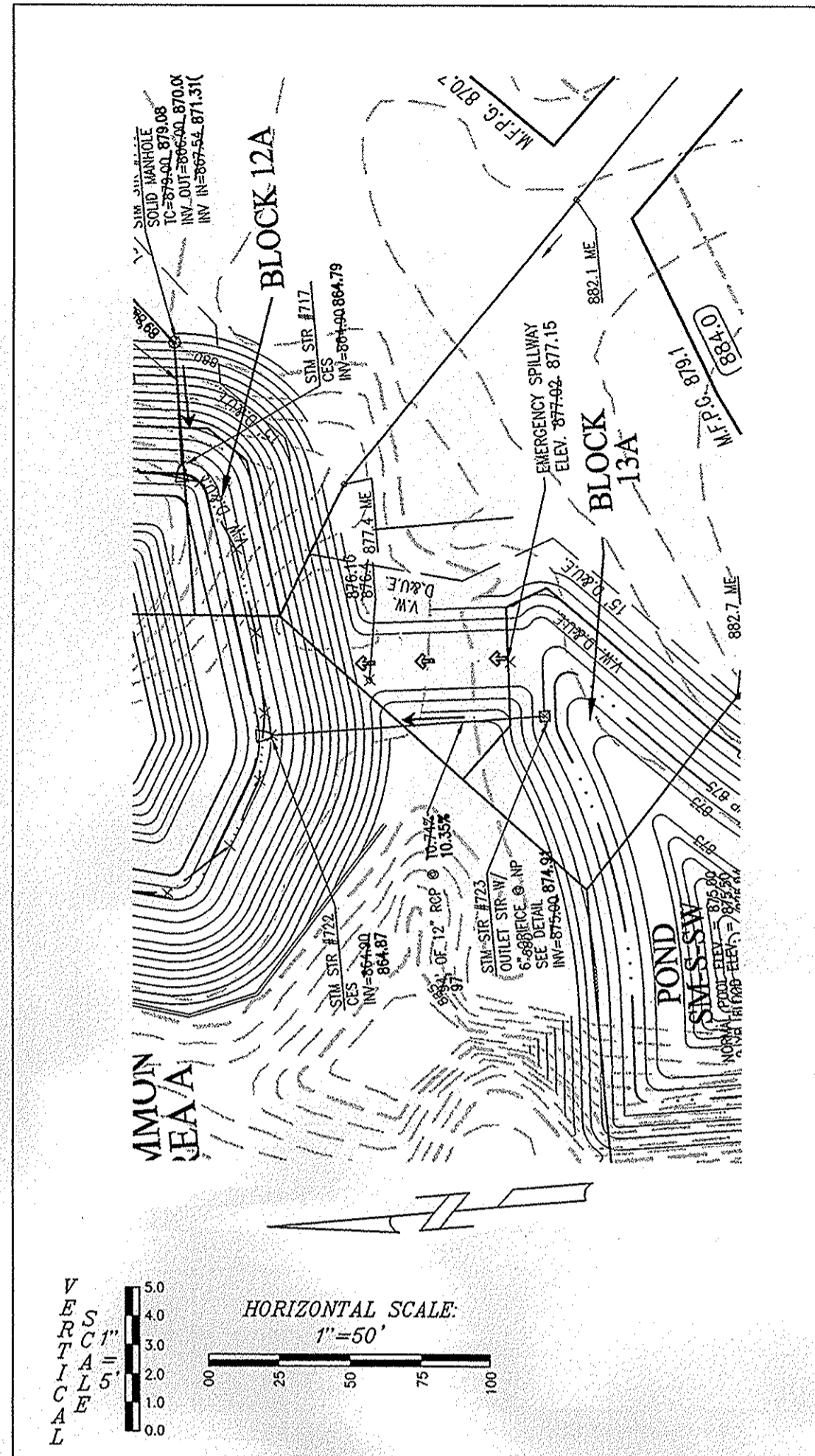
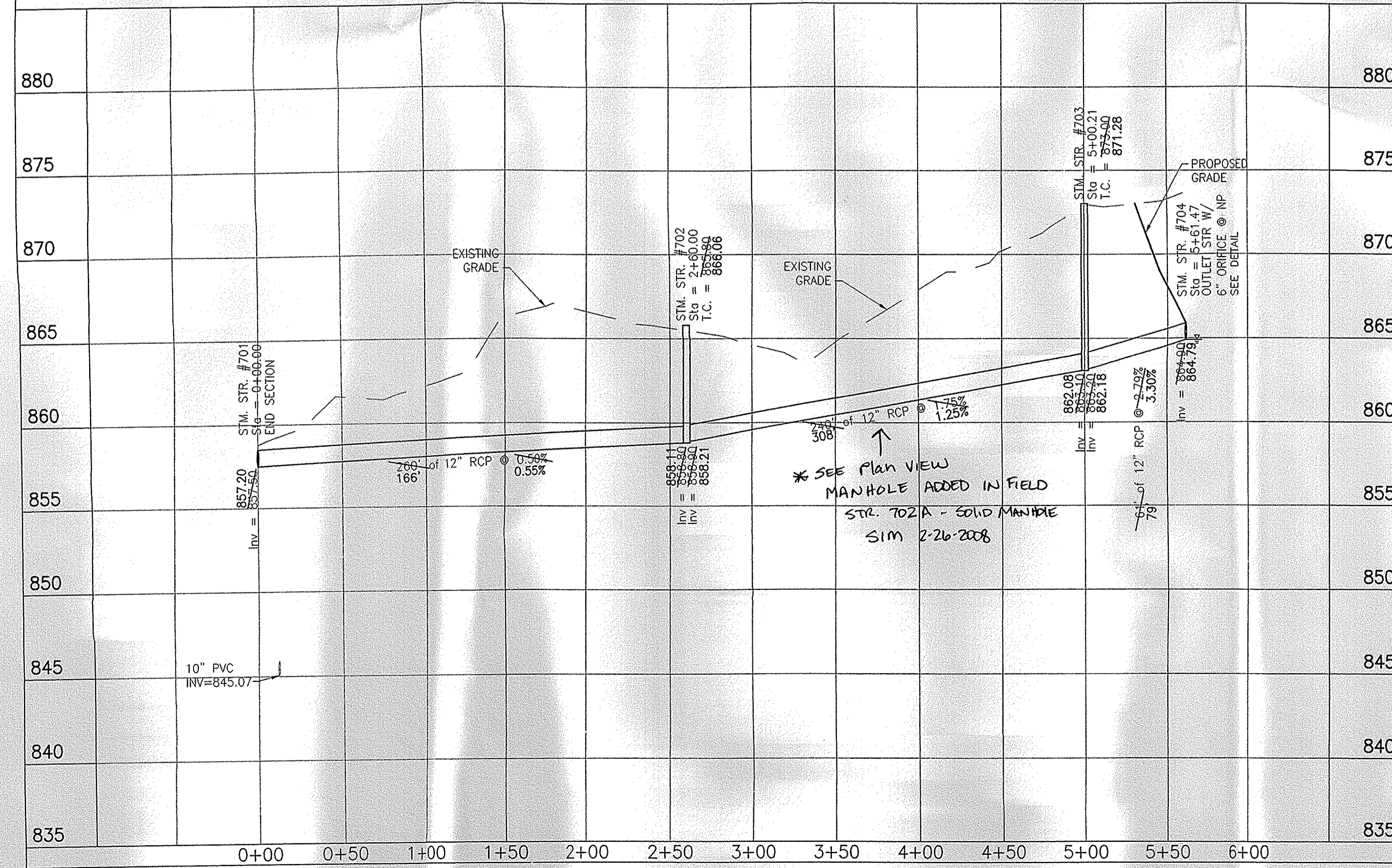
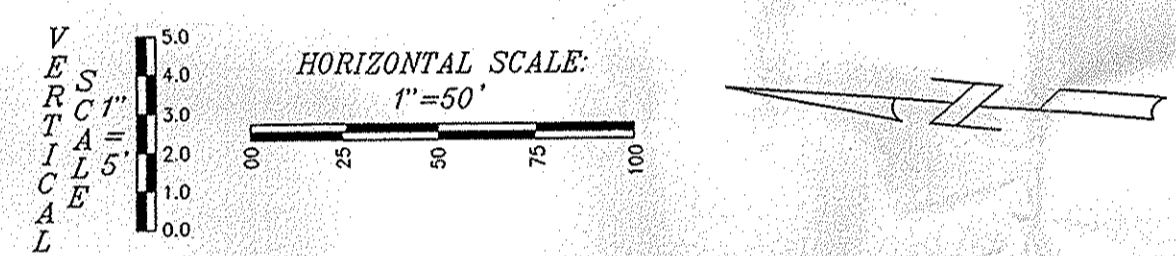
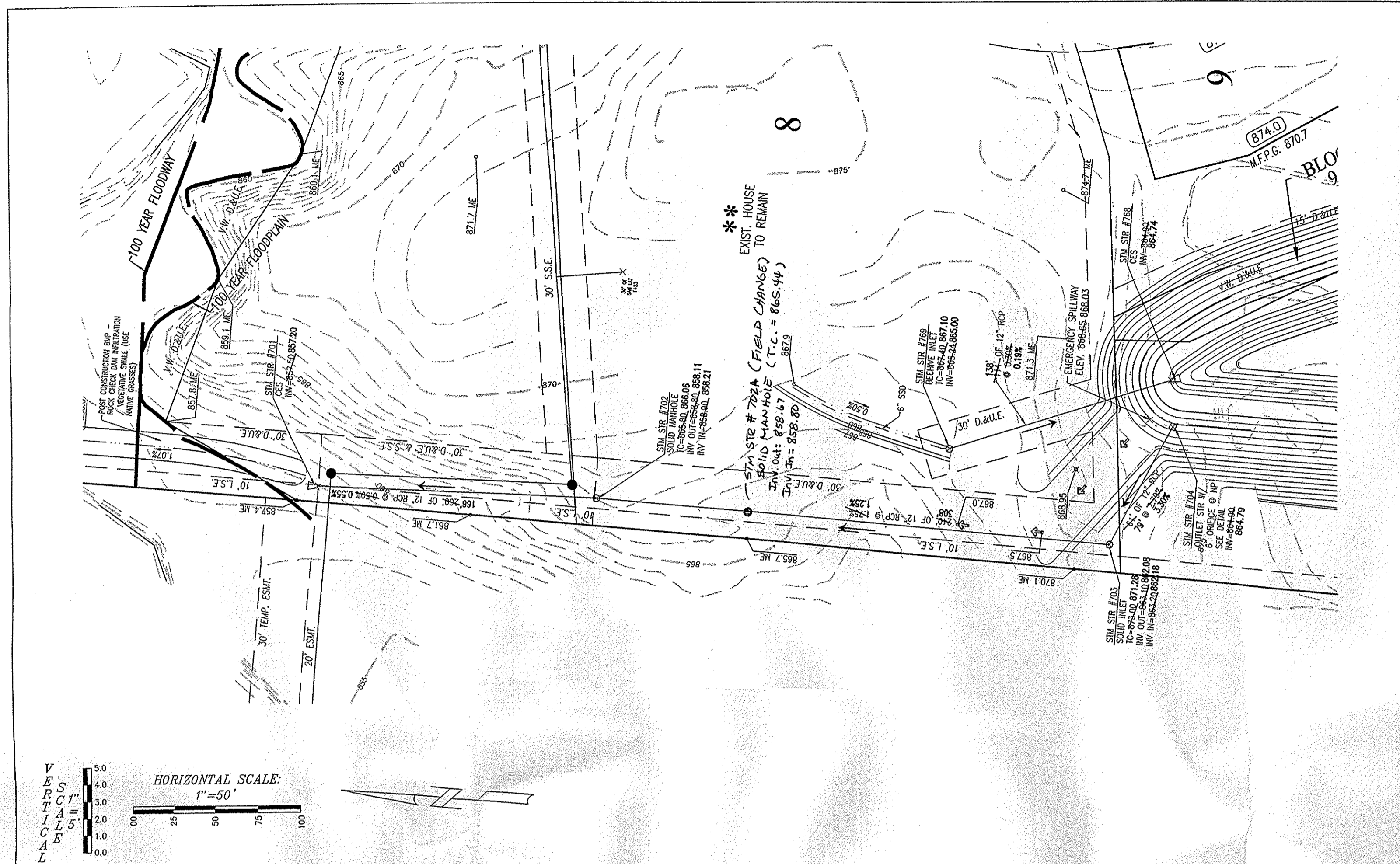
REVISIONS AND ISSUES:  
7/17/06 ADDED FINISHING NOTES PER CITY OF CARMEL  
8/14/06 GENERAL REVISIONS PER CITY OF CARMEL  
9/29/06 WATER RESOURCES PER CITY OF CARMEL  
9/29/06 WELLS OUTSIDE PER CITY OF CARMEL  
9/29/06 REVISIONS PER CITY OF CARMEL  
9/29/06 REVISIONS PER HAMILTON COUNTY SURVEYORS OFFICE  
9/29/06 MAJOR REVISIONS PER CROSBORO  
7/16/07 STORM, SANITARY AND WATER AS-BUILTS

**RECORD DRAWING**  
REGISTERED NO. 8827  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

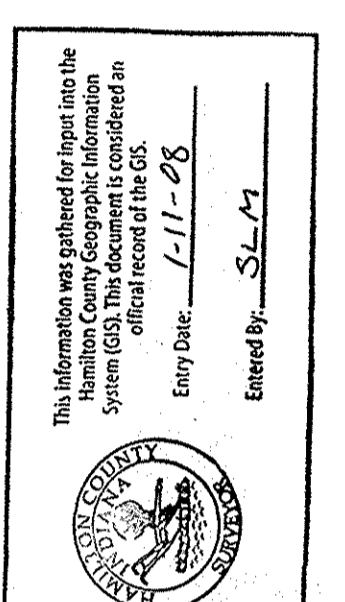
**RECORD DRAWING**  
REGISTERED NO. 8827  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

**RECORD DRAWING**  
REGISTERED NO. 8827  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

**THE WOODS AT LIONS CREEK**  
J.C. DEVELOPERS, LLC  
DEVELOPMENT PLAN  
SHEET NO. C104  
PROJECT NO. W06-0031



- LEGEND**
- = RIGHT-OF-WAY LINE
  - = STORM SEWER LINE
  - = SWALE
  - = SANITARY SEWER LINE
  - = SANITARY SEWER MANHOLE
  - = FLOW DIRECTION
  - = EXIST. CONDUITS
  - = STORM BEEHIVE INLET
  - = STORM INLET
  - = TOP OF CASTING
  - = INVERT
  - = RCP
  - = REINFORCED CONCRETE PIPE
  - = POLYETHYLENE GLASS FIBRE SANITARY SEWER PIPE
  - = M.H.
  - = STRUCTURE
  - = DRAINAGE AND UTILITY EASEMENT
  - = D.A.U.E.
  - = SANITARY SEWER EASEMENT
  - = REGULATED DRAIN EASEMENT
  - = B.S.L.
  - = BUILDING SETBACK LINE
  - = VARIABLE WIDTH
  - = PROPOSED
  - = MATCH EXISTING
  - = TYP.
  - = SUBSURFACE DRAIN AND SUMP LINE
  - = WATER LINE
  - = CONCRETE END SECTION
  - = FLOOD ROUTE
  - = PROPOSED GRADE
  - = PROP. STORM STRUCTURE NO.
  - = PROP. SANITARY STRUCTURE NO.
  - = EXIST. TREELINE
  - = PROPOSED FIRE HYDRANT
  - = PROPOSED WATER LINE VALVE
  - = PROPOSED PAD GRADE
  - = M.F.P.G.
  - = MINIMUM FLOOD PROTECTION GRADE OF PADS. MINIMUM GRADE FOR ANY STRUCTURE OPENING (DOOR, WINDOW WELL, OUTSIDE EGRESSMENT STAIR ACCESS, ETC.)



**CITY OF CARMEL STANDARD BACKFILL NOTES:**  
**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 60-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 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 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 Density.

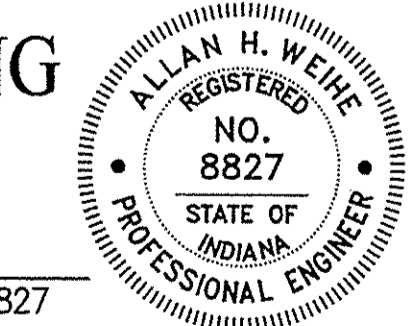
**Final Backfill**  
 Final backfill for all RCP installations greater than 5-feet of pavement shall be clean fill material free of rocks larger than 6-inches in diameter, frozen lumps of soil, wood or other extraneous material, compacted in 12-inch maximum lifts to not less than 90% Standard Proctor Density for the entire depth of the excavation.

**CITY OF CARMEL STANDARD BACKFILL NOTES:**  
**WATER AND SEWER UNDER CITY STREETS**  
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**RECORD DRAWING**  
 STORM SEWER AS-BUILTS  
 STORM SEWER STRUCTURES ONLY  
 7/9/2007  
 Allan H. Weihe  
 ALLAN H. WEIHE, REG. P.E. - INDIANA #8227



FILED  
 JUL 13 2007  
 OFFICE OF PUBLIC WORKS

**WEIHE ENGINEERS INC.**  
 10505 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET  
 317.846.6611  
 FAX 317.843.0546  
 TOLL FREE 800.452.6408  
 ALLAN H. WEIHE, P.E., L.S., PRESIDENT  
 CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

PROJECT NO.: W06-0031  
 DATE: 7/9/07  
 BY: [Signatures]  
 CHECKED BY: [Signatures]

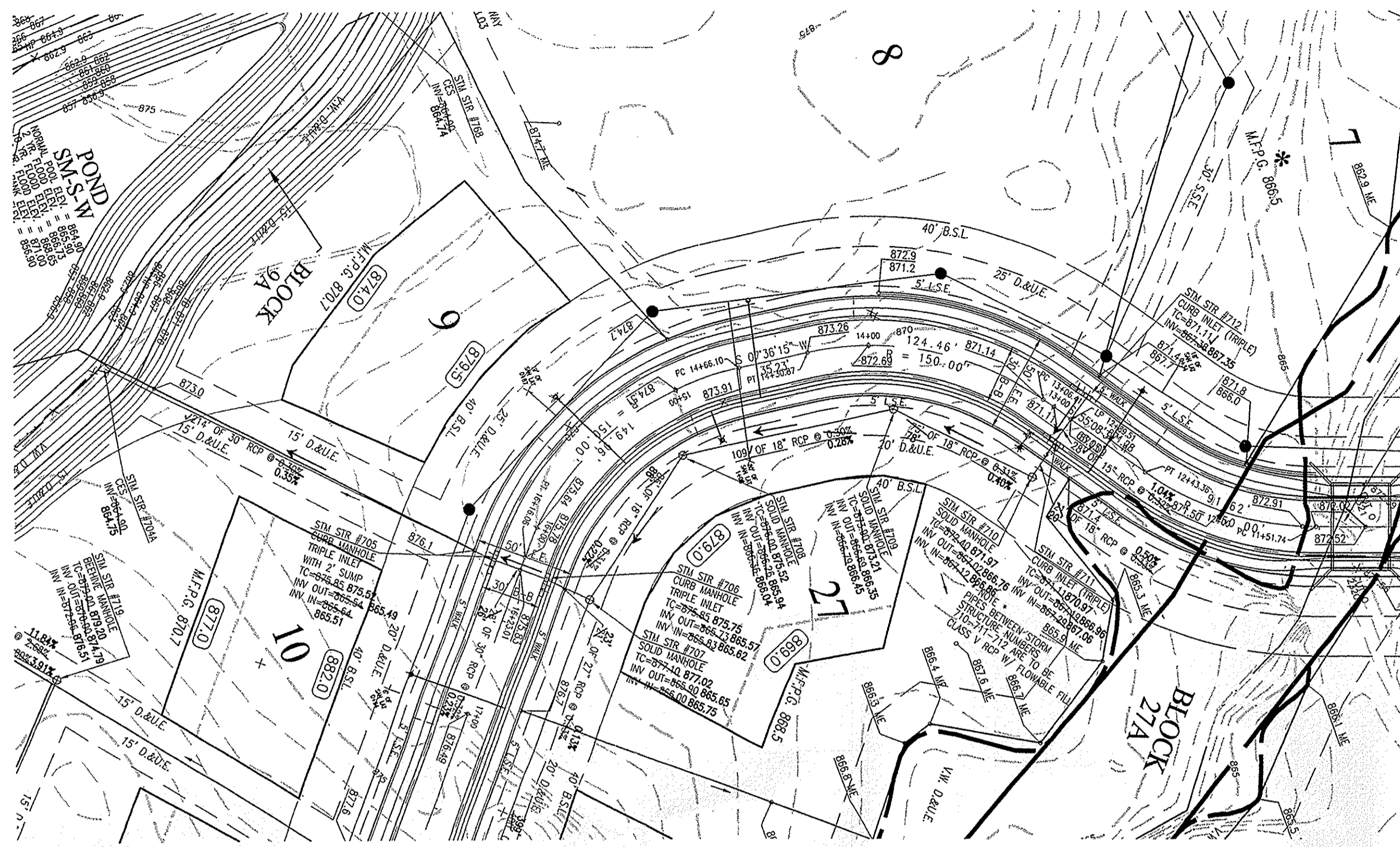
REVISIONS AND ISSUES:  
 ADDED EXISTING TOPO...  
 GENERAL REVISIONS...  
 WATER REVISIONS...  
 SEWER REVISIONS...  
 MINOR REVISIONS...  
 STORM, SANITARY AND WATER AS-BUILTS

**ALLAN H. WEIHE**  
 REGISTERED  
 NO. 8227  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

PREPARED FOR:  
**THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES  
 Part of the SWP Sec. 19-710V-02E, a Part of the 1974 Sec. 30-710V-001, City of Carmel, Hamilton County, Indiana

SHEET NO. **C301**  
 PROJECT NO. W06-0031

LOCATION: H:\2006\0620\01\City\Comm\W060031\_SWP.dwg  
 DATE: 7/9/07 10:58 AM  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]



- ### LEGEND
- RIGHT-OF-WAY LINE
  - SANITARY SEWER LINE
  - SANITARY SEWER MANHOLE
  - FLOW DIRECTION
  - EXIST. CONTOURS
  - STORM INLET
  - TOP OF CASTING
  - INVERT
  - RCP
  - REINFORCED CONCRETE PIPE
  - POLYVINYLCHLORIDE SANITARY SEWER PIPE
  - MANHOLE STRUCTURE
  - DRAINAGE AND UTILITY EASEMENT
  - SANITARY SEWER EASEMENT
  - REGULATED DRAIN EASEMENT
  - B.S.L.
  - BUILDING SETBACK LINE
  - V.W.
  - PROP.
  - ME
  - TYP.
  - SUBSURFACE DRAIN AND SUMP LINE
  - WATER LINE
  - CONCRETE END SECTION
  - FLOOD ROUTE
  - PROPOSED GRADE
  - STM STR #700
  - SAN STR #800
  - EXIST. TREE LINE
  - PROPOSED FIRE HYDRANT
  - PROPOSED WATER LINE VALVE
  - (857.3)
  - PROPOSED PAD GRADE
  - M.F.P.G.

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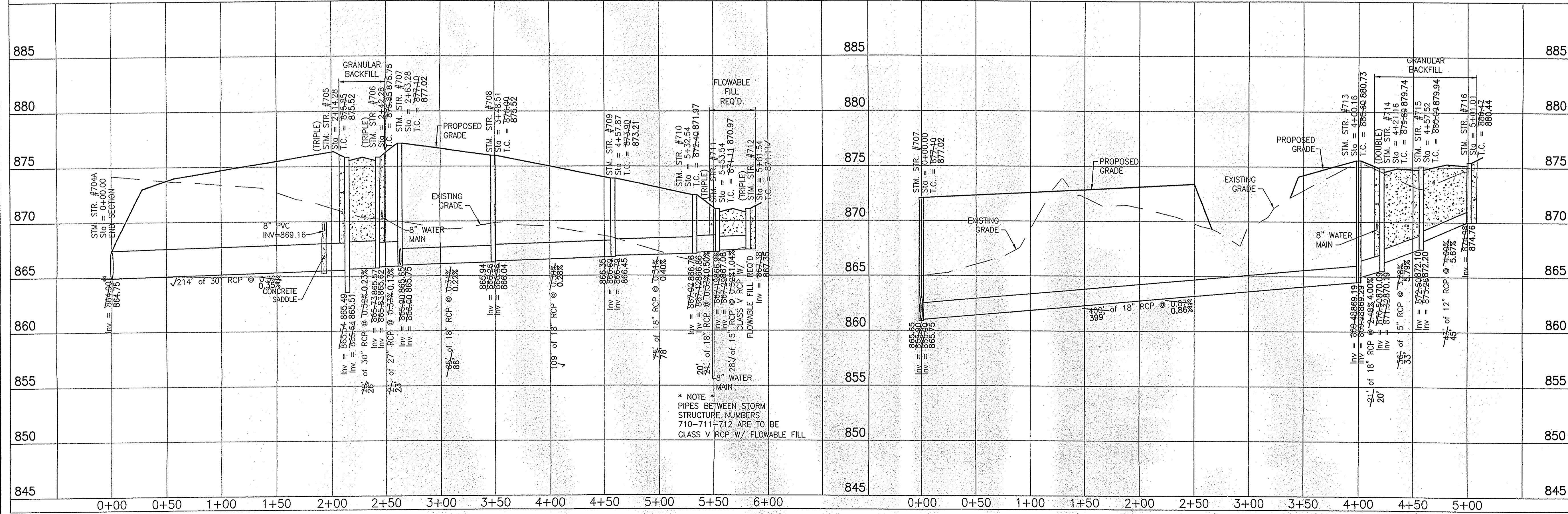
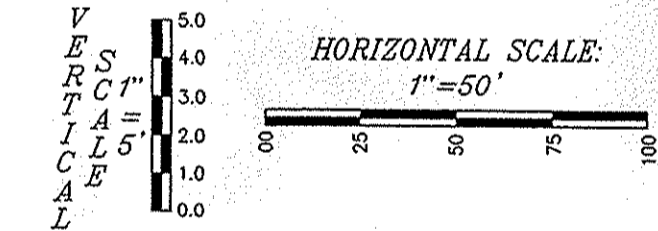
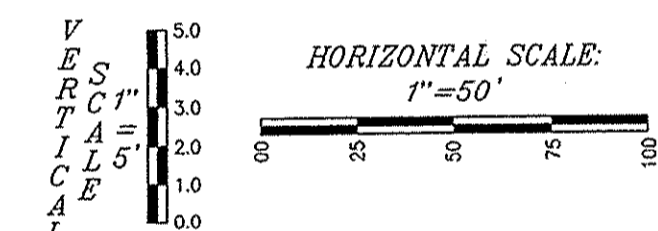
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This Information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.  
 Entry Date: 1-11-09  
 Entered By: SLM

### RECORD DRAWING

STORM SEWER AS-BUILTS  
 STORM SEWER STRUCTURES ONLY  
 7/9/2007  
 Allan H. Weihe  
 ALLAN H. WEIHE, REG. P.E. - INDIANA #8827



\* NOTE \*  
 PIPES BETWEEN STORM STRUCTURE NUMBERS 710-711-712 ARE TO BE CLASS V RCP W/ FLOWABLE FILL

FILED  
 JUL 13 2007  
 OFFICE OF HAMILTON COUNTY ENGINEER

**WEIHE ENGINEERS INC.**  
 10505 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET

317.846.6611  
 FAX 317.845.4246  
 TOLL FREE 800.452.6408

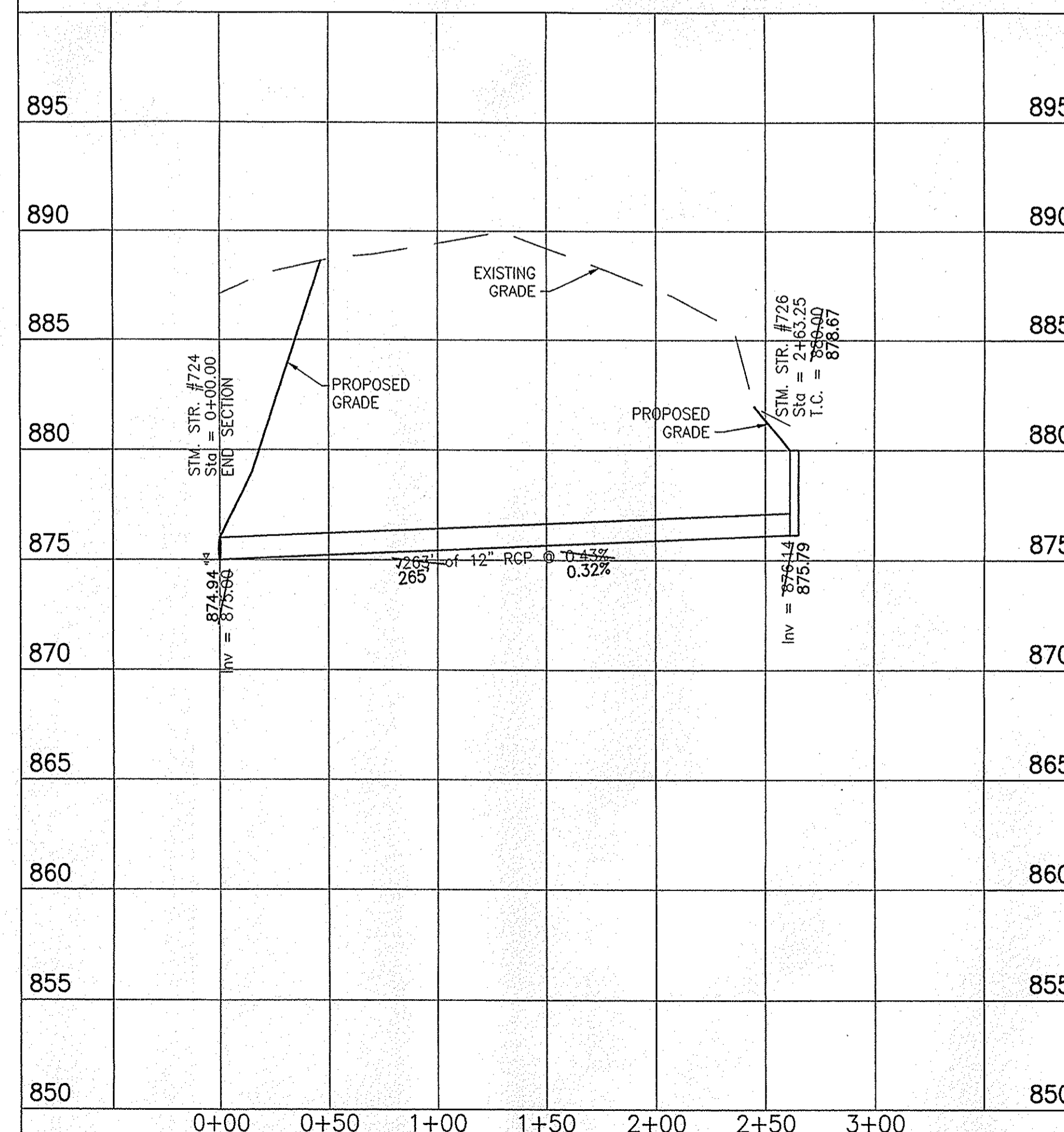
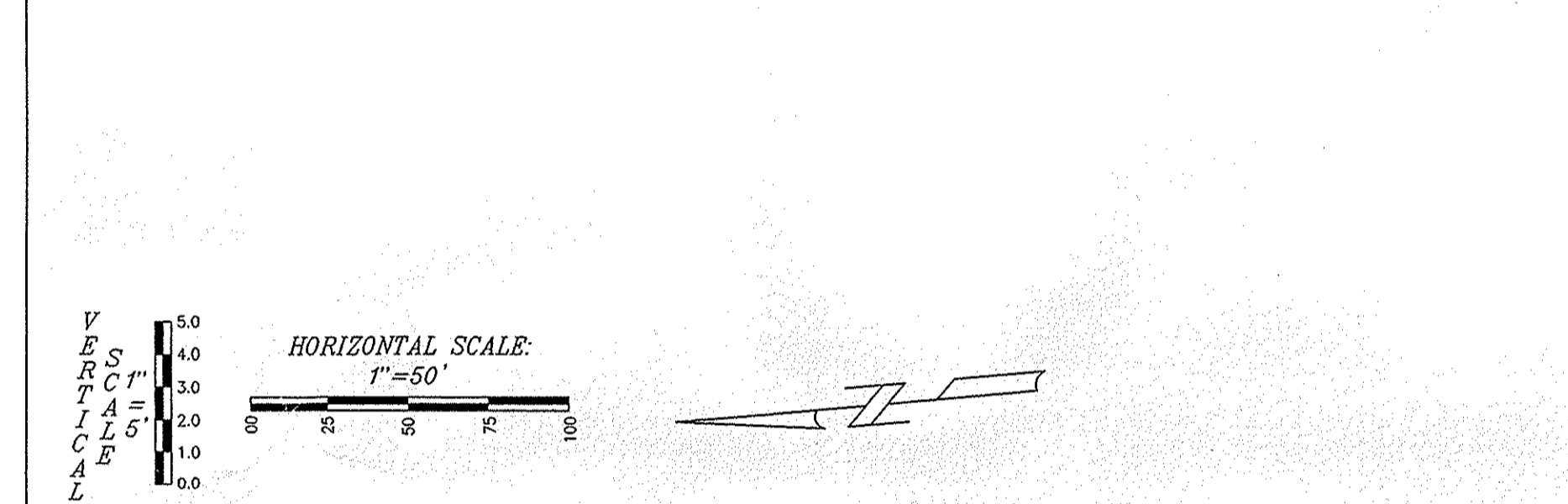
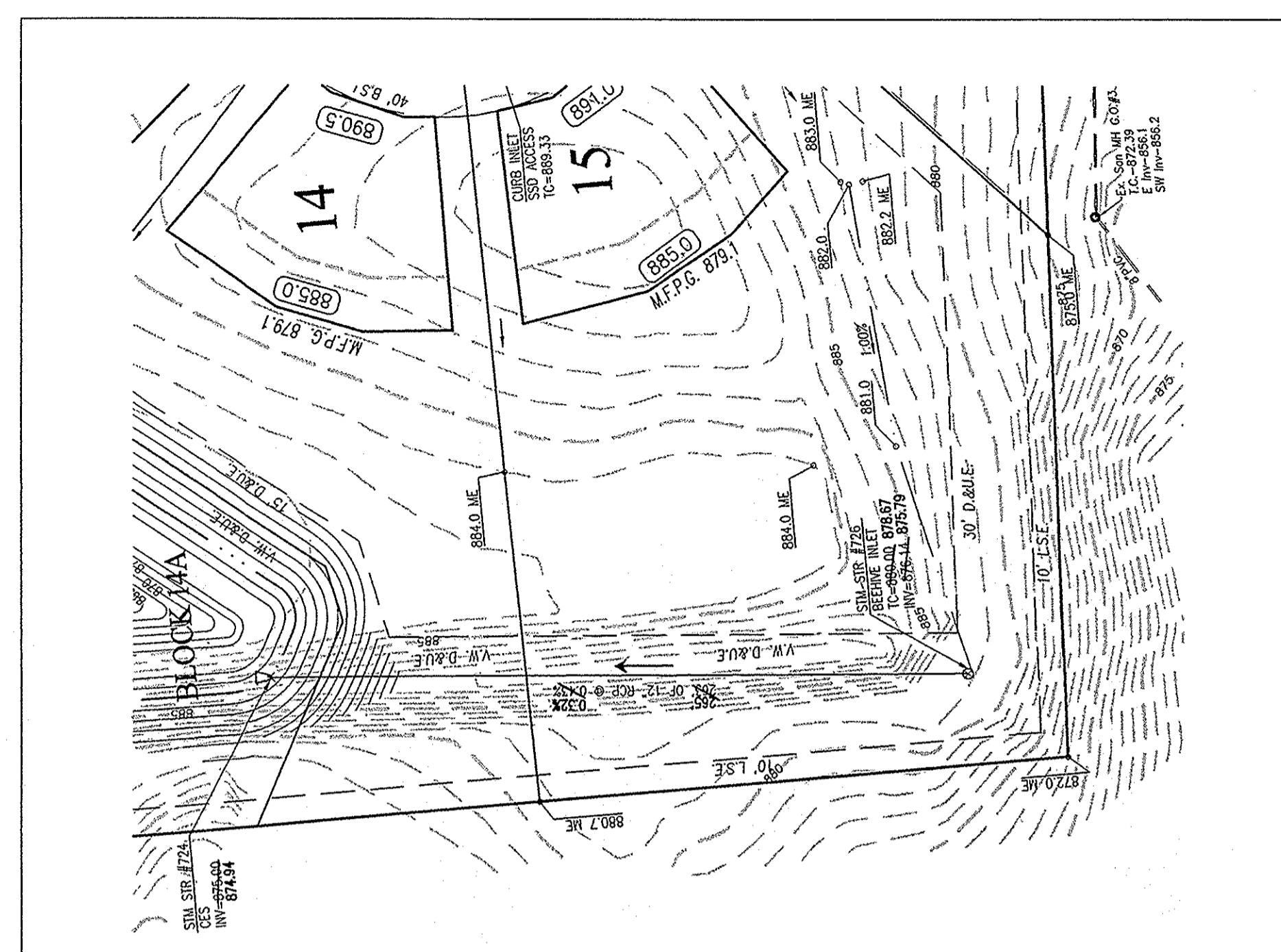
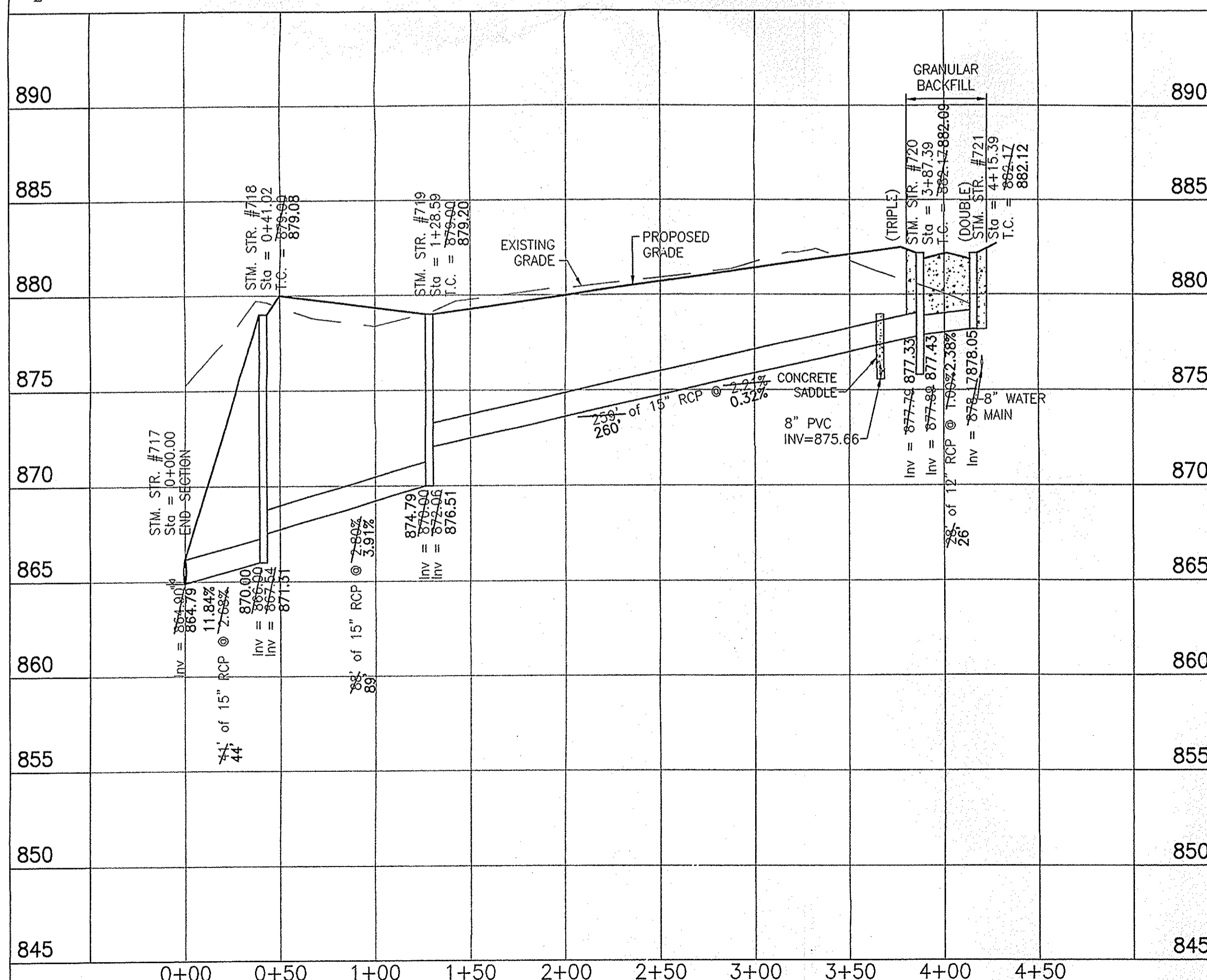
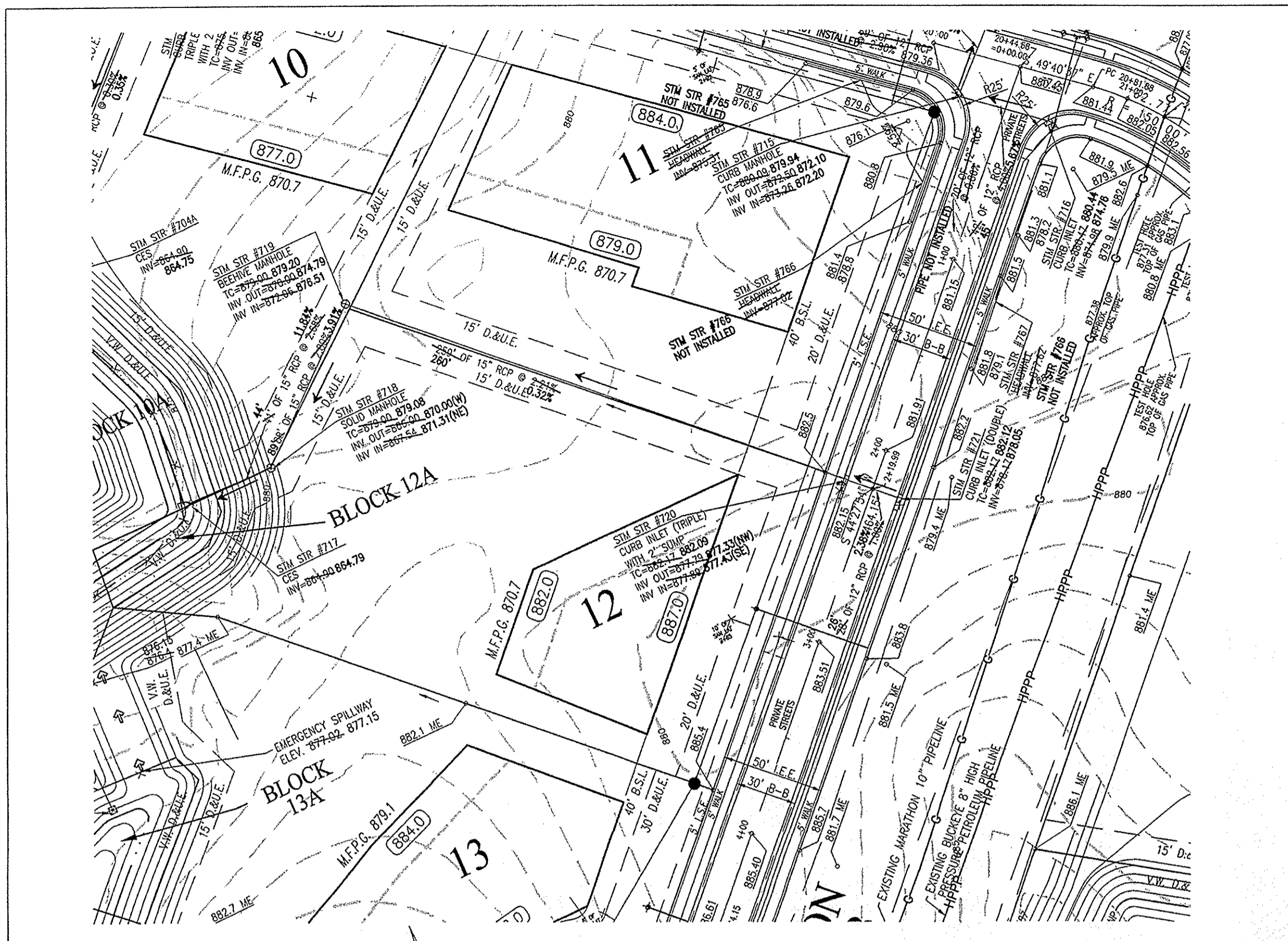
ALLAN H. WEIHE, P.E., I.S., PRESIDENT  
 CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

REVISIONS AND ISSUES	
DATE	BY
9/17/06	DH
10/16/06	DH
11/15/06	DH
12/18/06	DH
1/15/07	DH
2/27/07	DH
3/27/07	DH
4/23/07	DH
5/17/07	DH
7/10/07	DH

THE WOODS AT LIONS CREEK  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES

PROJECT NO.  
**C302**  
 W06-0031

LOCATION: 10,000 WINGSDALE (E) / 10001 WINGSDALE (W)  
 DATE: 7/11/07  
 DRAWN BY: SLM  
 CHECKED BY: SLM  
 PLOTTED BY: SLM



- LEGEND**
- RIGHT-OF-WAY LINE
  - STORM SEWER LINE
  - SANITARY SEWER LINE
  - SHWALE
  - SANITARY SEWER MANHOLE
  - SANITARY SEWER MANHOLE
  - FLOW DIRECTION
  - DIST. CONTOURS
  - STORM BEEHIVE BUILT
  - STORM INLET
  - TOP OF CASTING
  - INVERT
  - REINFORCED CONCRETE PIPE
  - POLYVINYLCHLORIDE SANITARY SEWER PIPE
  - MANHOLE
  - STRUCTURE
  - DRAINAGE AND UTILITY EASEMENT
  - SANITARY SEWER EASEMENT
  - REGULATED DRAIN EASEMENT
  - BUILDING SETBACK LINE
  - VARIABLE WIDTH
  - PROPOSED
  - EXISTING
  - TYPICAL
  - SUBSURFACE DRAIN AND SUMP LINE
  - WATER LINE
  - CONCRETE END SECTION
  - FLOOD ROUTE
  - PROPOSED GRADE
  - PROP. STORM STRUCTURE NO.
  - PROP. SANITARY STRUCTURE NO.
  - EXIST. TRELLINE
  - PROPOSED FIRE HYDRANT
  - PROPOSED WATER LINE VALVE
  - PROPOSED PAD GRADE
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 STORM SEWER STRUCTURES ONLY  
 7/9/2007  
 Allan H. Weihe  
 ALLAN H. WEIHE, REG. P.E. - INDIANA #8827



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 Entered by: SLm

FILED  
 JUL 13 2007  
 OFFICE OF HAMILTON COUNTY

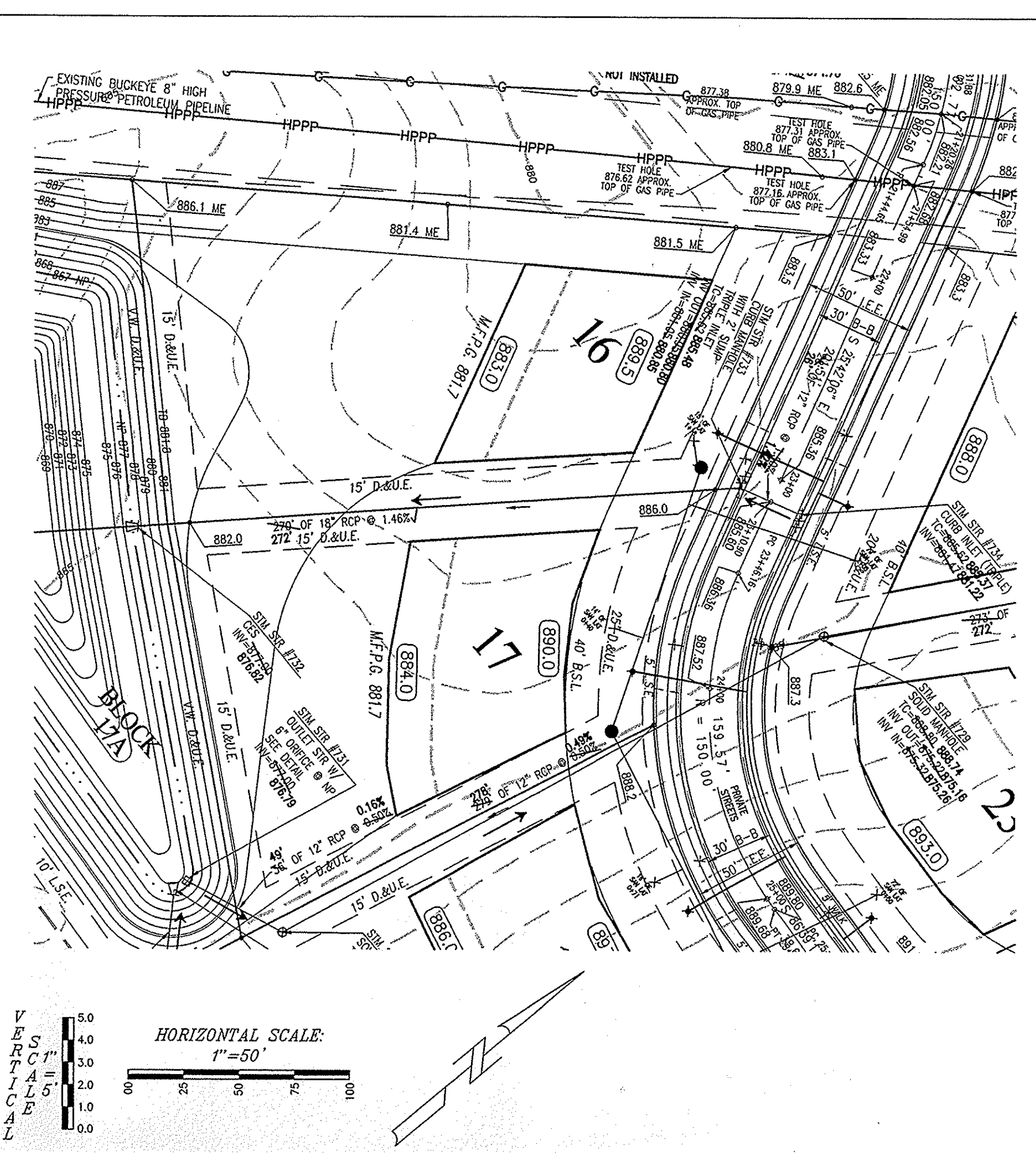
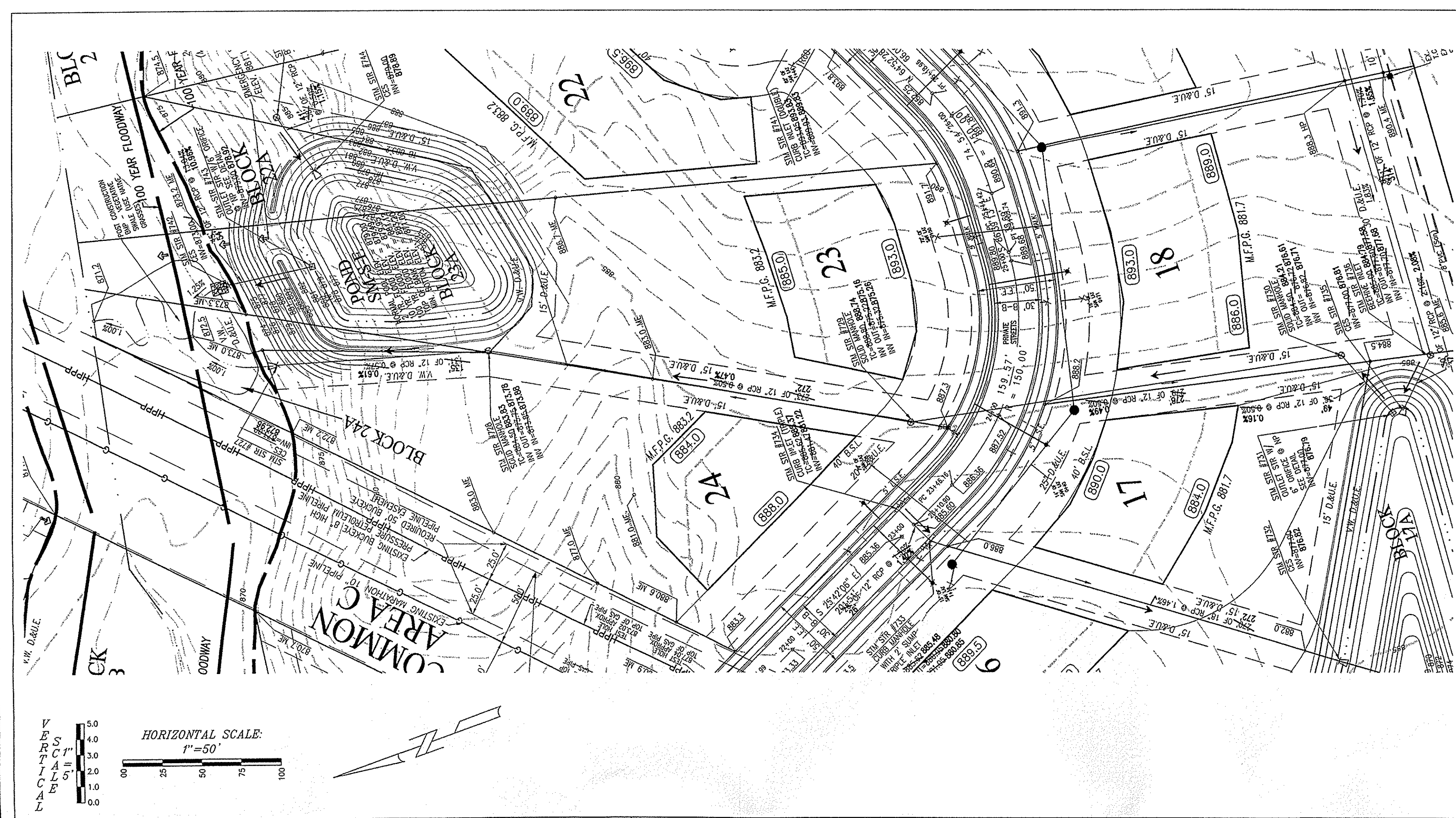
**WEIHE ENGINEERS INC.**  
 10505 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET  
 317.846.6611  
 FAX 317.843.0546  
 TOLL FREE 800.452.6408

PROJECT NO.: W06-0031  
 DATE: 6/16/06  
 DESIGNED BY: [Signature]  
 CHECKED BY: [Signature]

**ALLAN H. WEIHE**  
 REGISTERED  
 NO. 8827  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER

**THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES  
 SHEET NO. **C303**  
 PROJECT NO. W06-0031

Location: H:\2006\w06031\City\Coord\160031\_STW.dwg  
 Author: CHS Storm Map  
 Plotted By: [Name]  
 Date: 7/9/2007 10:59 AM



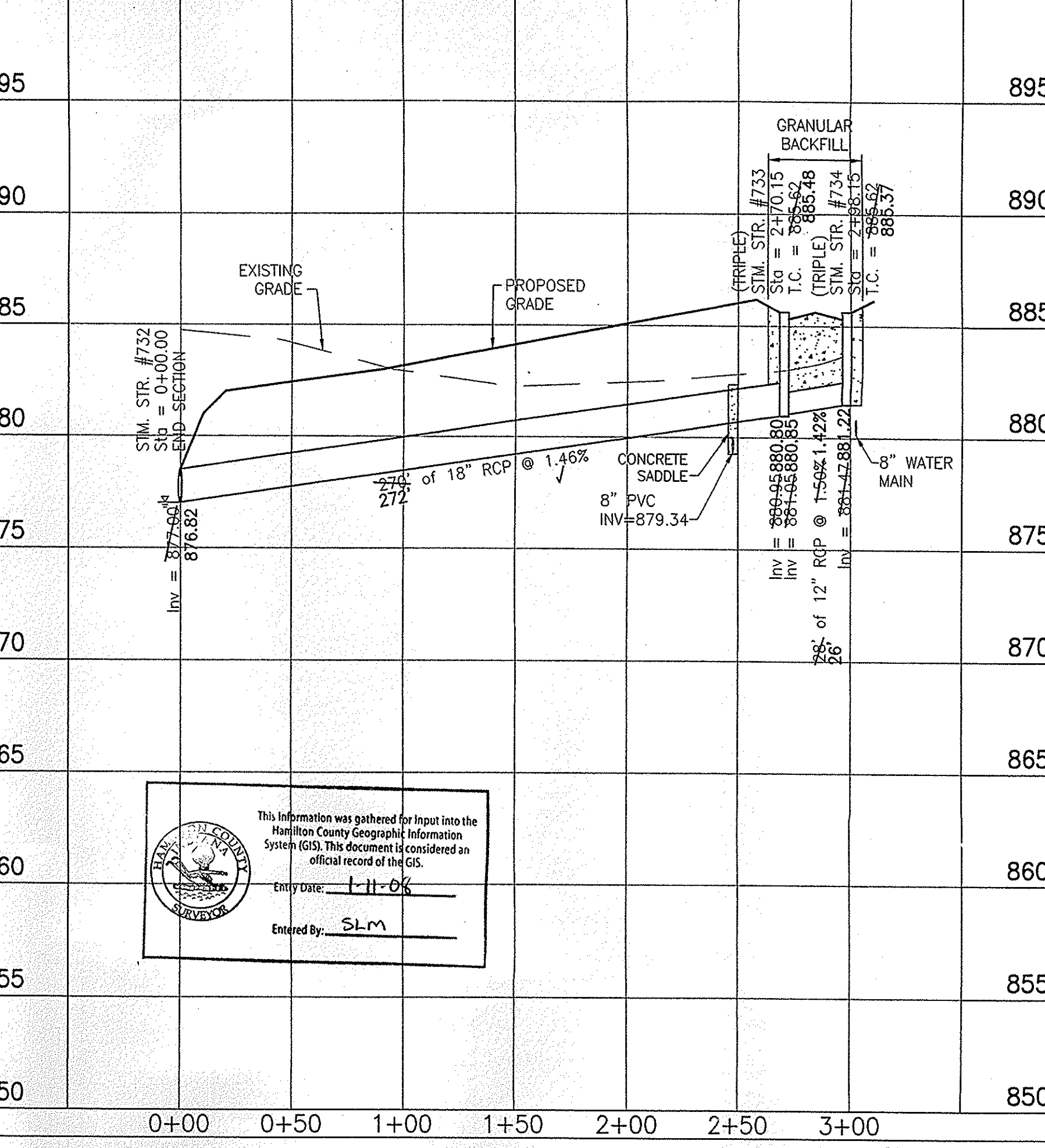
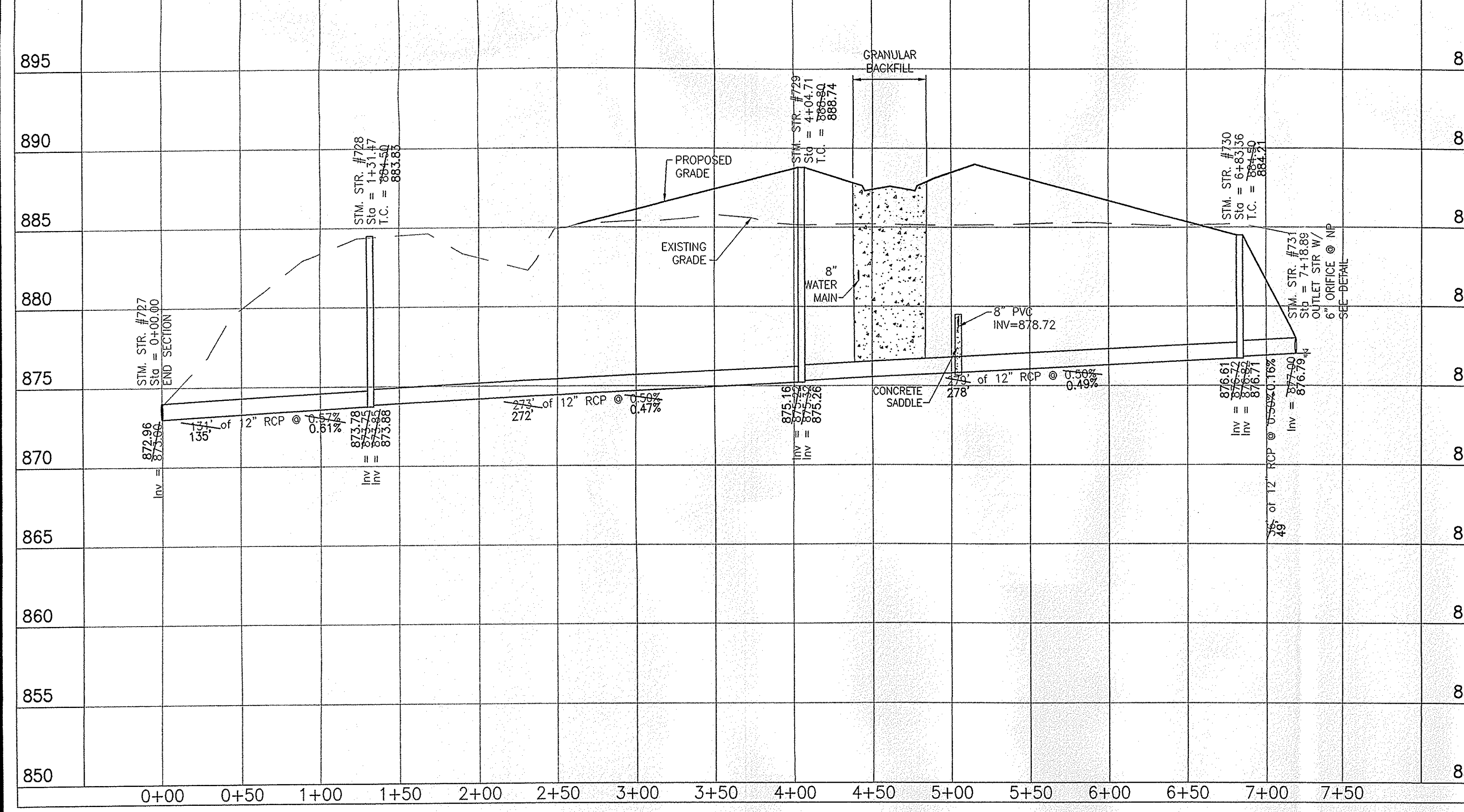
- LEGEND**
- RIGHT-OF-WAY LINE
  - STORM SEWER LINE
  - SANITARY SEWER LINE
  - FLOW DIRECTION
  - EXIST. CONTOURS
  - STORM BEAVER INLET
  - STORM INLET
  - T.C.
  - INV.
  - RCP
  - POLYVINYLCHLORIDE SANITARY SEWER PIPE
  - MANHOLE
  - STRUCTURE
  - DRAINAGE AND UTILITY EASEMENT
  - SANITARY SEWER EASEMENT
  - R.O.W. EASEMENT
  - BUILDING SETBACK LINE
  - VARIABLE WIDTH
  - PROPOSED
  - MATCH EXISTING
  - TYPICAL
  - SUBSURFACE DRAIN AND SUMP LINE
  - WATER LINE
  - CONCRETE END SECTION
  - FLOOD ROUTE
  - PROPOSED GRADE
  - PROPOSED STORM STRUCTURE NO.
  - SAN STR #900
  - PROPOSED SANITARY STRUCTURE NO.
  - EXIST. TREE LINE
  - PROPOSED FIRE HYDRANT
  - PROPOSED WATER LINE VALVE
  - PROPOSED PAD GRADE
  - M.F.P.G.

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 STORM SEWER STRUCTURES ONLY  
 7/9/2007

ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

JUL 13 2007  
 OFFICE OF REGULATION AND ADMINISTRATION

**WEIHE ENGINEERS INC.**  
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 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET

317.846.6611  
 FAX 317.845.0546  
 TOLL FREE 800.452.6408

ALLAN H. WEIHE, P.E., L.S. - PRESIDENT  
 CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

PROJECT NO.: W06-0031  
 DATE: 7/9/07  
 DRAWN BY: JCH  
 CHECKED BY: JCH  
 DATE: 7/9/07

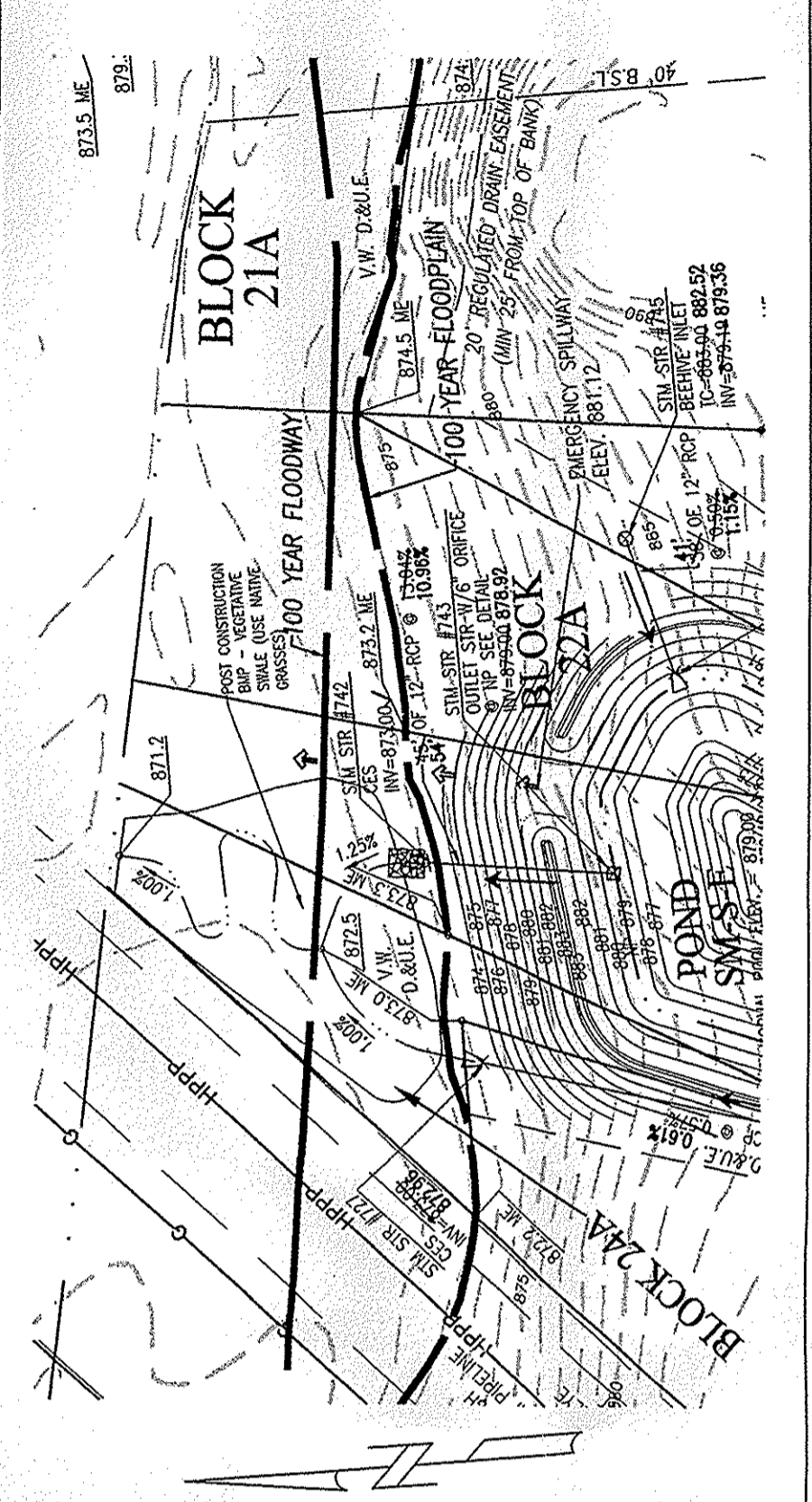
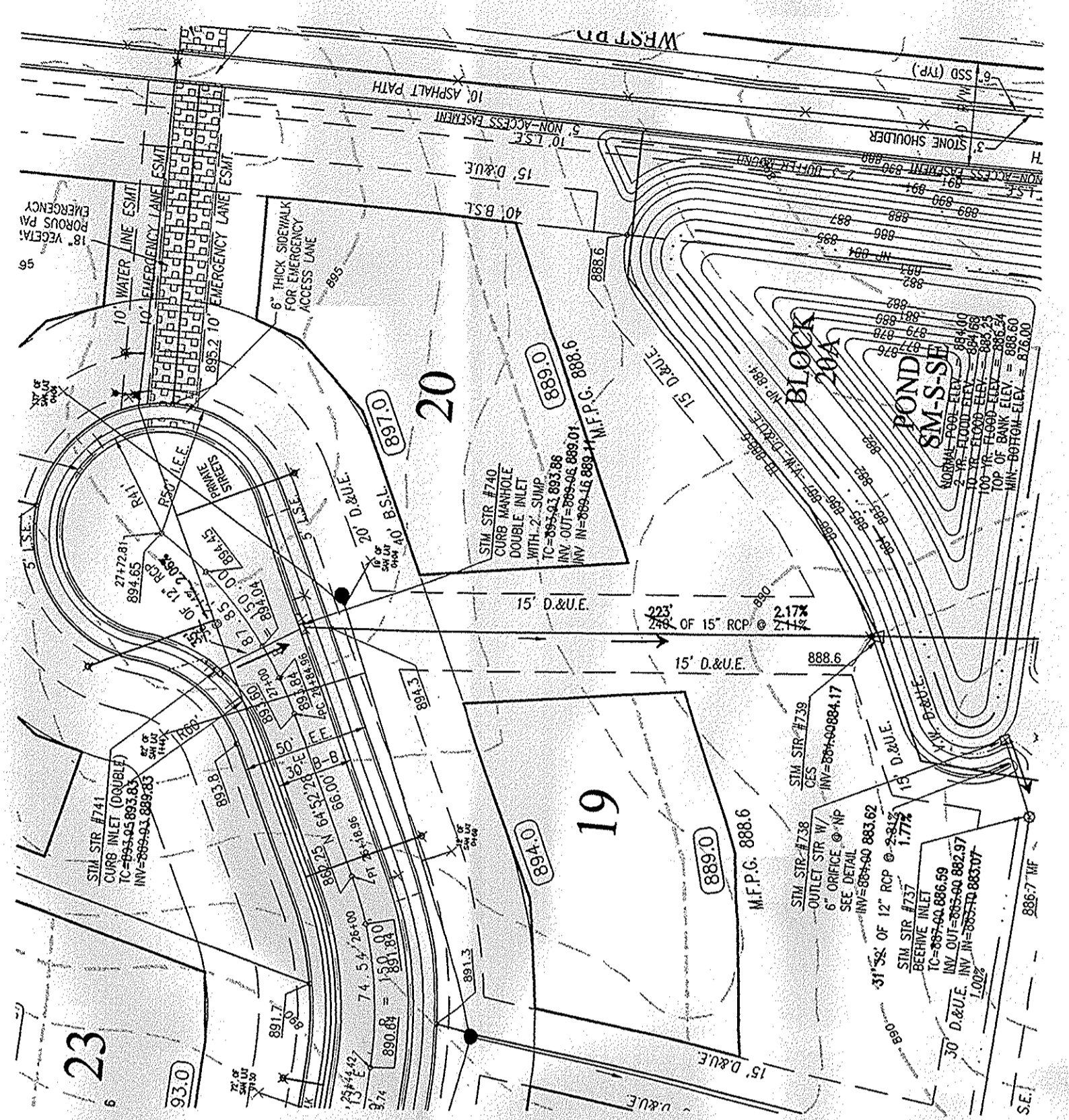
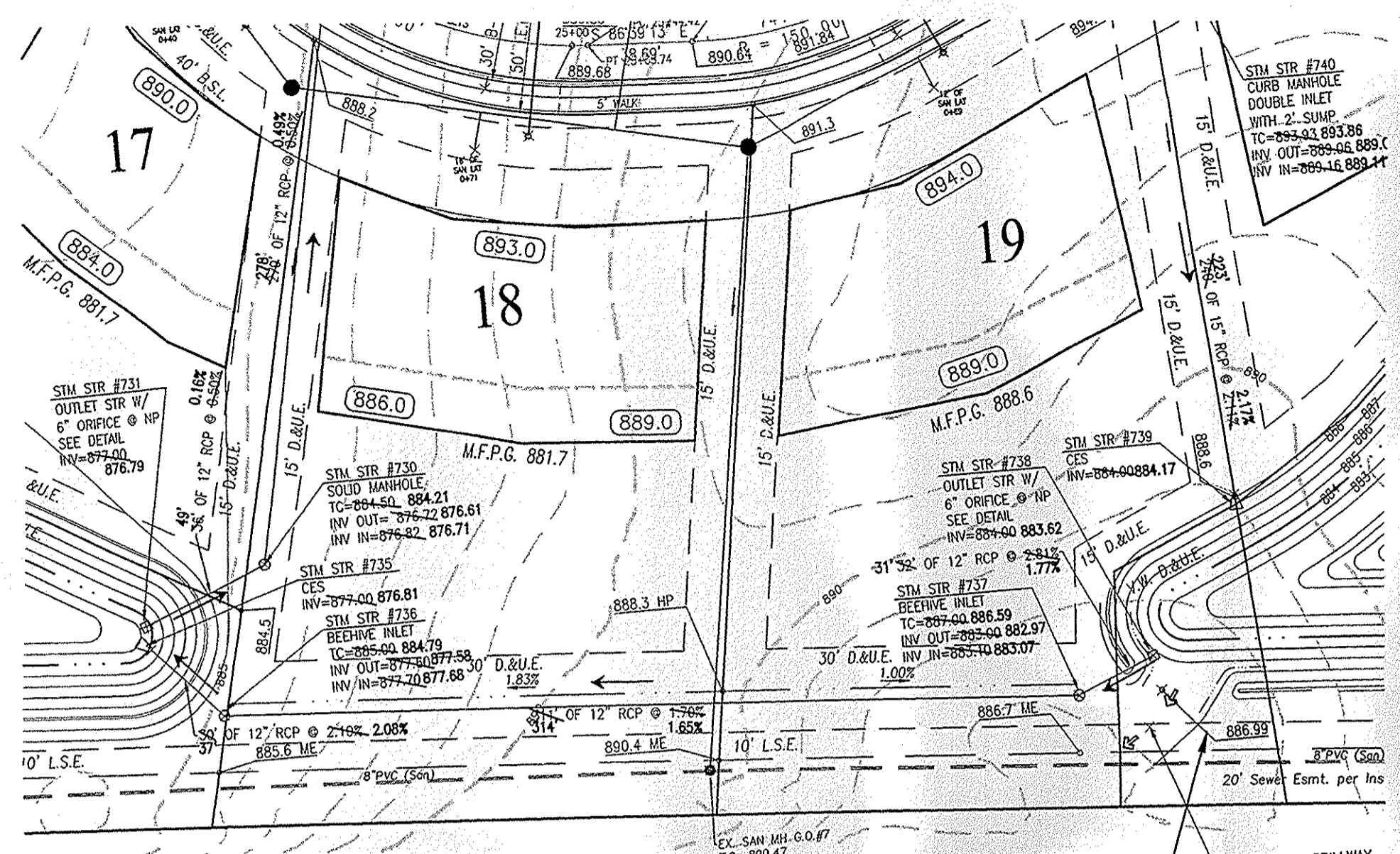
REVISIONS AND ISSUES:  
 1. AS-BUILTS PER CITY OF CARMEL  
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PREPARED FOR:  
**THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES  
 Part of the SW/6 Sec. 13-7168-022, a Part of the SW/6 Sec. 30-7161-022, Clay Twp., Hamilton County, Indiana

SHEET NO.: **C304**  
 PROJECT NO.: W06-0031

LOCATION: I:\2005\100001\100001.dwg  
 USER: JCH  
 PLOT DATE: 7/9/07  
 PLOT TIME: 10:00 AM





- LEGEND**
- RIGHT-OF-WAY LINE
  - STORM SEWER LINE
  - SWALE
  - SANITARY SEWER LINE
  - SANITARY SEWER MANHOLE
  - FLOW DIRECTION
  - EXIST. CONTOURS
  - STORM BEHNE INLET
  - STORM INLET
  - T.C.
  - TOP OF CASTING
  - RIBERT
  - REINFORCED CONCRETE PIPE
  - POLYVINYLCHLORIDE SANITARY SEWER PIPE
  - MANHOLE
  - STRUCTURE
  - D.U.U.E.
  - DRAINAGE AND UTILITY EASEMENT
  - S.S.E.F.
  - SANITARY SEWER EASEMENT
  - REGULATED DRAIN EASEMENT
  - B.S.L.
  - BUILDING SETBACK LINE
  - V.M.
  - VARIABLE WIDTH
  - PROP.
  - PROPOSED
  - ME
  - MATCH EXISTING
  - TYP.
  - SUBSURFACE DRAIN AND SUMP LINE
  - WATER LINE
  - CONCRETE END SECTION
  - FLOOD ROUTE
  - PROPOSED GRADE
  - STIM STR #700
  - SAN STR #900
  - EXIST. TREELINE
  - PROPOSED FIRE HYDRANT
  - PROPOSED WATER LINE VALVE
  - (857.3)
  - PROPOSED PAD GRADE
  - M.F.P.G.
  - MINIMUM FLOOD PROTECTION GRADE OF PADS; MINIMUM GRADE FOR ANY STRUCTURE OPENING (DOOR, WINDOW, WELL, OUTSIDE BASEMENT STAIR ACCESS, ETC.)

**CITY OF CARMEL STANDARD BACKFILL NOTES:**

**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 backfill shall be 6-inches above the springline. Minimum trench width shall be the outside diameter of the pipe plus 18-inches.

Final Backfill  
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**CITY OF CARMEL STANDARD BACKFILL NOTES:**

**WATER AND SEWER UNDER CITY STREETS**

Bedding, Haunching, Initial Backfill  
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**MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS**

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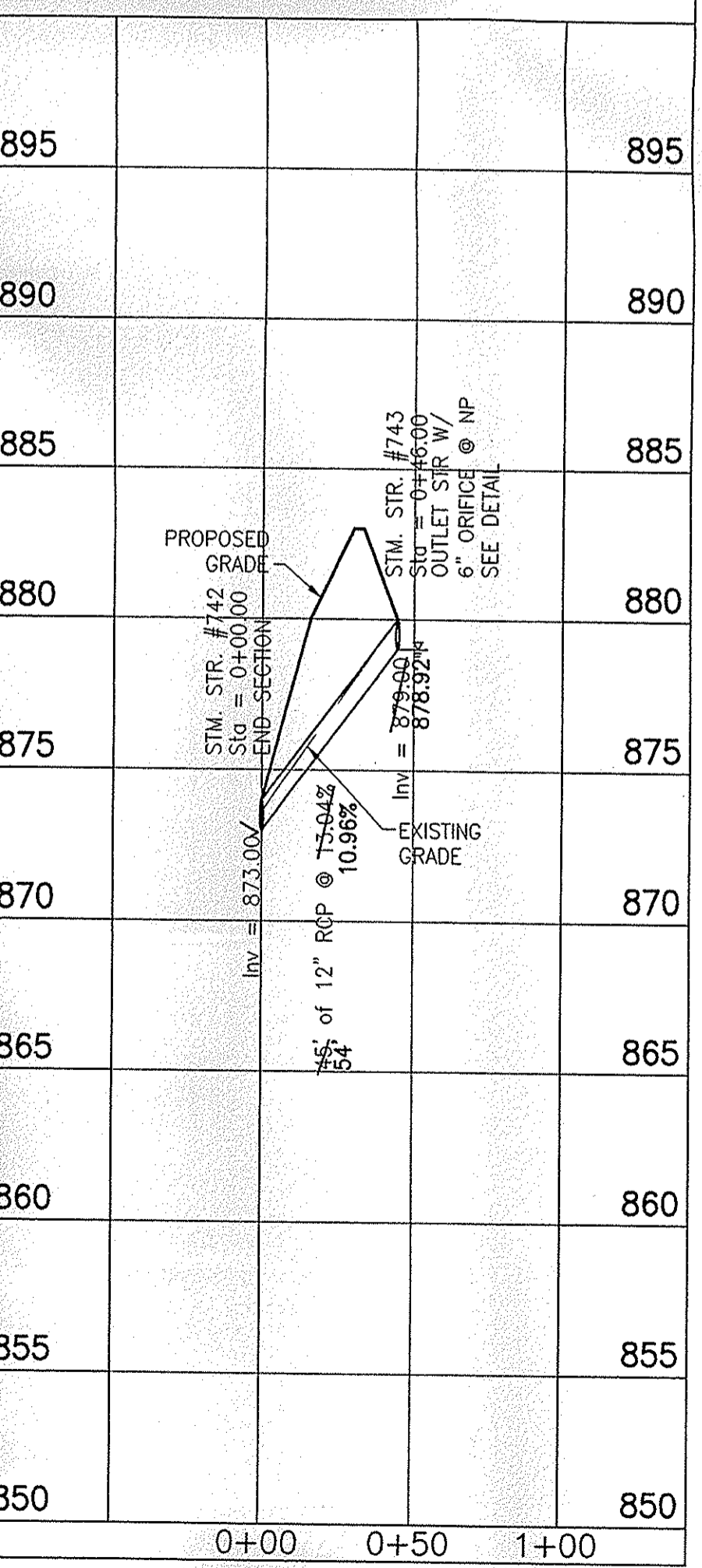
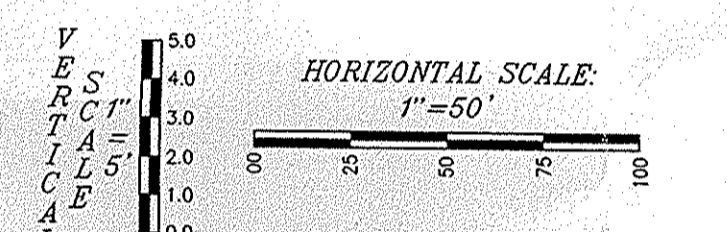
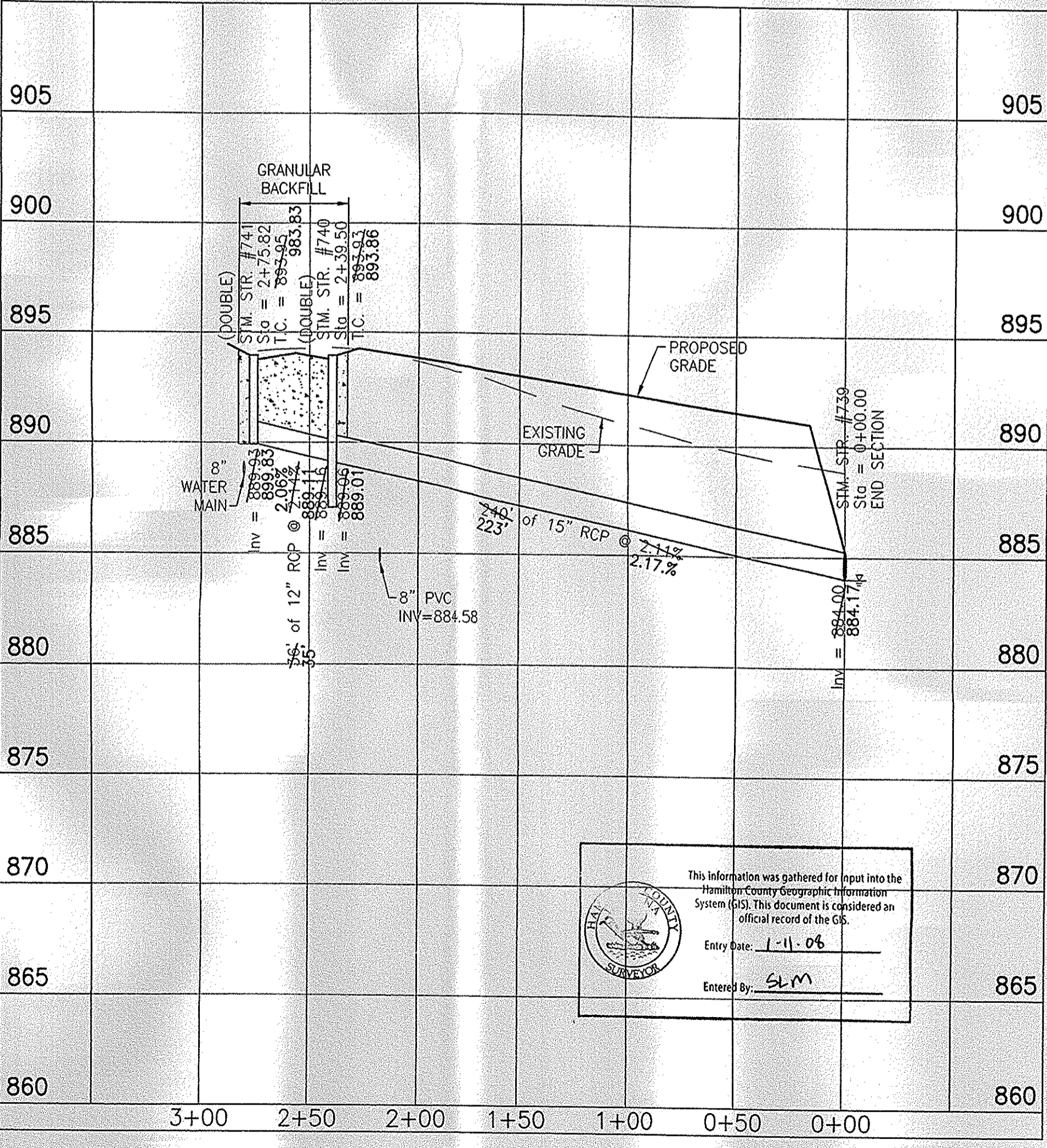
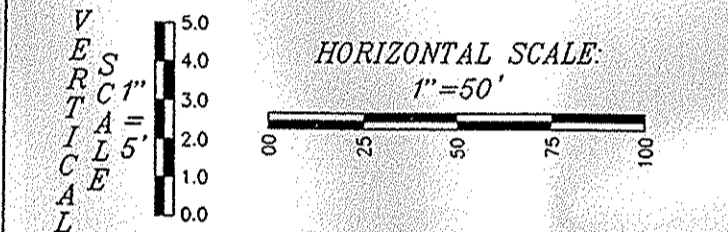
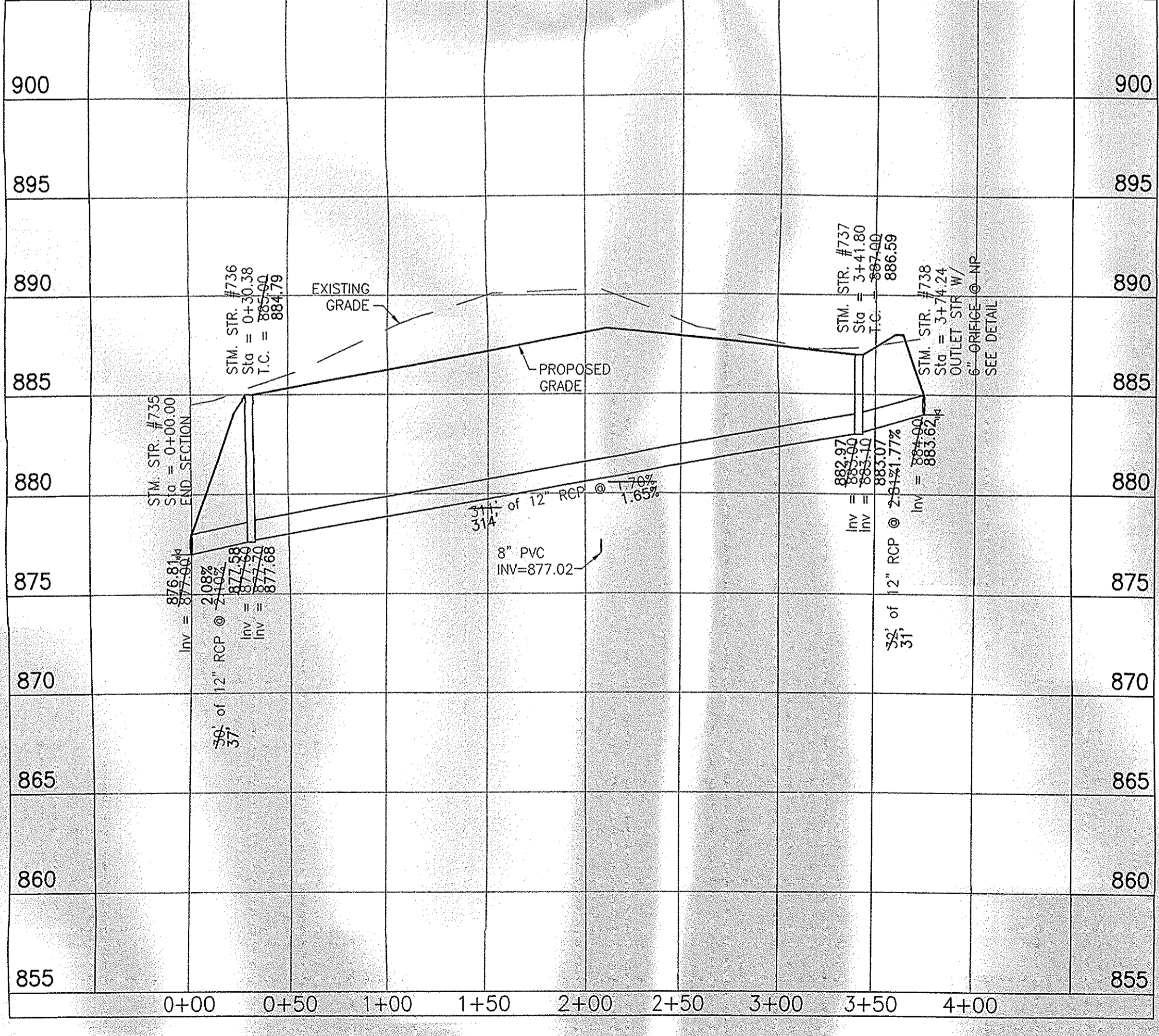
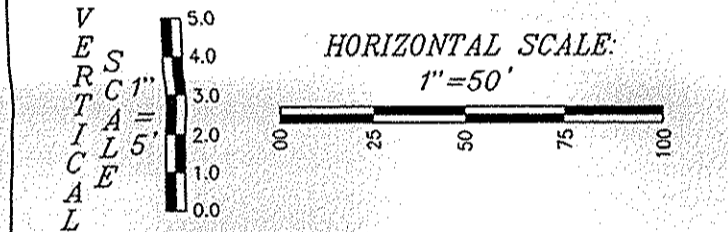
**RECORD DRAWING**  
 STORM SEWER AS-BUILTS  
 STORM SEWER STRUCTURES ONLY  
 7/9/2007

ALLAN H. WEIHE, REG. P.E. - INDIANA #8827



JUL 13 2007

OFFICE OF PLANNING & COMMUNITY DEVELOPMENT



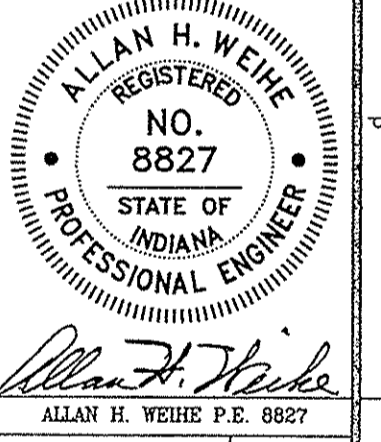
**WEIHE ENGINEERS INC.**  
 10505 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET

317.846.6611  
 FAX 317.843.0346  
 TOLL FREE 800.452.6408

ALLAN H. WEIHE, P.E., I.S. - PRESIDENT  
 CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

PROJECT NO.: 06-0031  
 DATE: 7/11/07  
 DESIGNED BY: JHW  
 CHECKED BY: JHW  
 DRAWN BY: JHW  
 DATE: 7/11/07

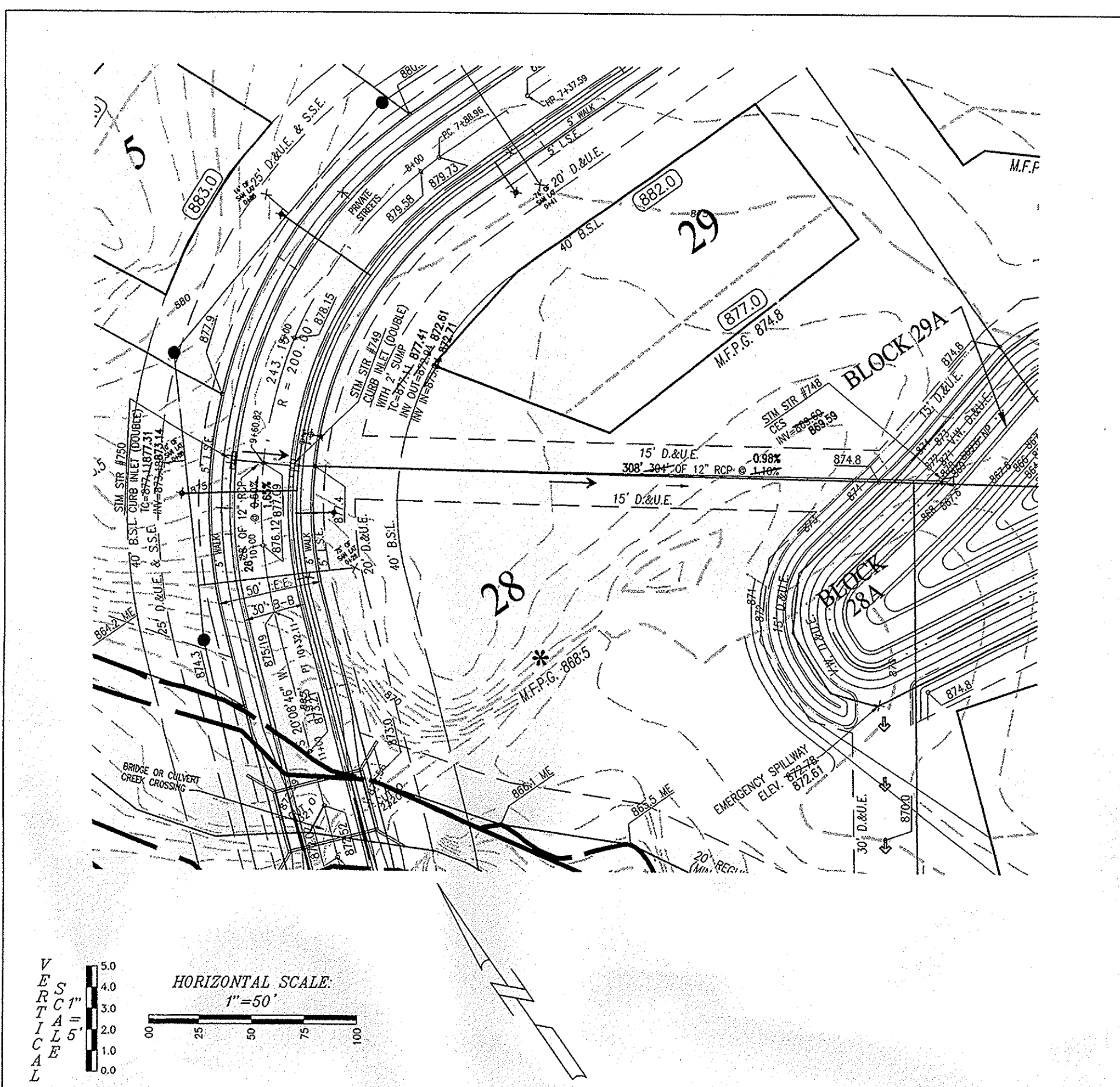
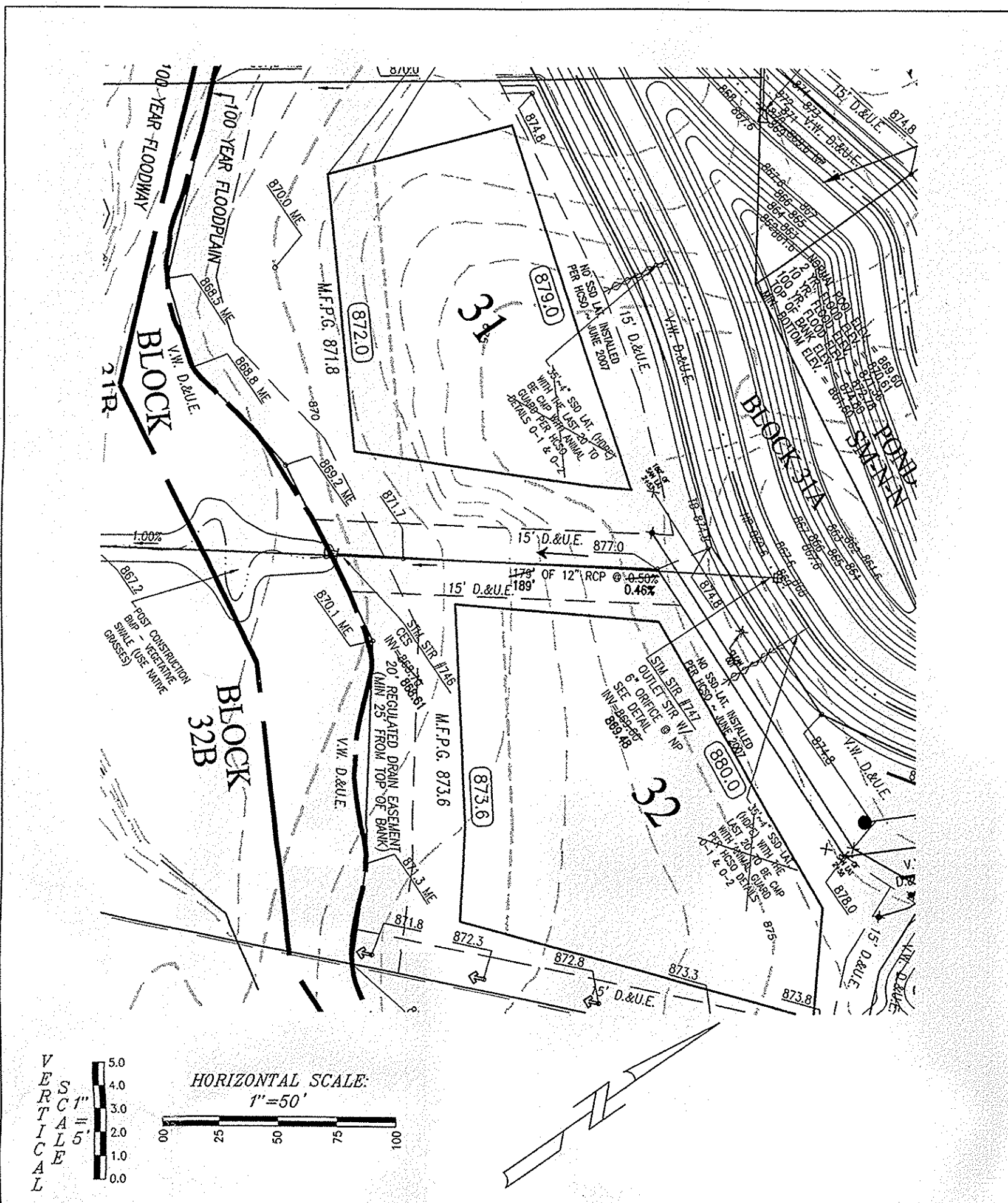
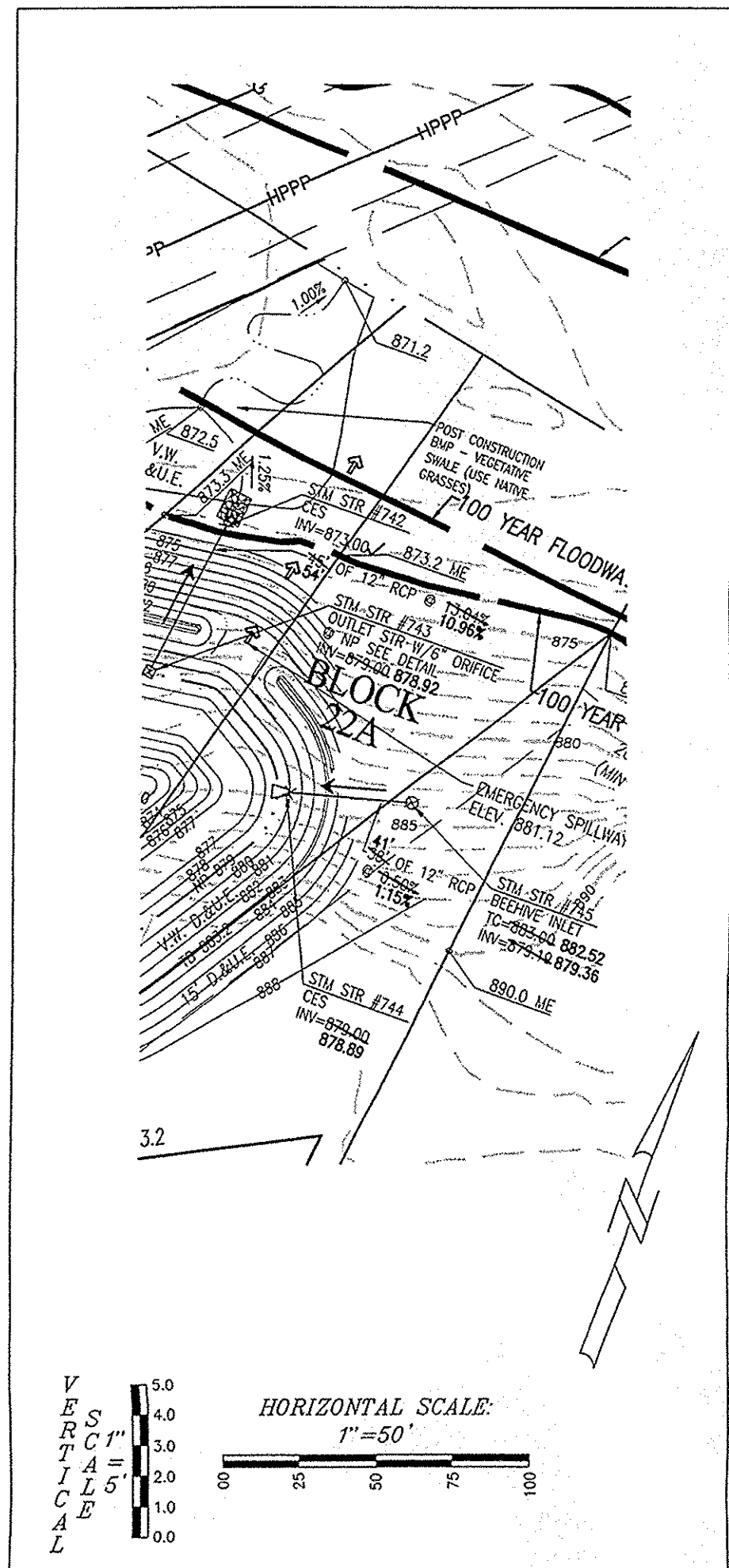
RESUME AND ISSUES  
 DESIGN REVIEW: JHW  
 DESIGN: JHW  
 CHECKED: JHW  
 DRAWN: JHW  
 DATE: 7/11/07



ALLAN H. WEIHE, P.E. #8827

PREPARED FOR:  
**THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES  
 Part of the 3814 Sec. 19-7188-008, a Part of the NW/4 Sec. 36-7188-008, Clay Twp., Hamilton County, Indiana.

SHEET NO. **C305**  
 PROJECT NO. W06-0031



895		895
890		890
885	EXISTING GRADE STM. STR. #744 Sig = 0+00.00 END SECTION	885
880	PROPOSED GRADE STM. STR. #745 Sig = 0+00.00 END SECTION	880
875	878.894 Inv = 879.560 12" of 12" RCP @ 1.15% Sig = 0+00.00 END SECTION	875
870		870
865		865
860		860
855		855
850		850

885		885
880		880
875	STM. STR. #746 Sig = 0+00.00 END SECTION	875
870	PROPOSED GRADE STM. STR. #747 Sig = 0+00.00 END SECTION	870
865	868.40 Inv = 869.40 12" of 12" RCP @ 0.46% Sig = 0+00.00 END SECTION	865
860		860
855		855
850		850
845		845
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890		890
885		885
880	GRANULAR BACKFILL STM. STR. #750 Sig = 3+31.85 (DOUBLE) T.C. = 877.31 STM. STR. #749 Sig = 3+00.00 END SECTION	880
875	EXISTING GRADE STM. STR. #748 Sig = 0+00.00 END SECTION	875
870	869.59 Inv = 869.59 12" of 12" RCP @ 0.98% Sig = 0+00.00 END SECTION	870
865		865
860		860
855		855
850		850
845		845

**LEGEND**

- RIGHT-OF-WAY LINE
- STORM SEWER LINE
- SANITARY SEWER LINE
- SWALE
- SANITARY SEWER MANHOLE
- SANITARY SEWER INLET
- FLOW DIRECTION
- EXIST. CONTOURS
- STORM BEHIVE INLET
- STORM INLET
- T.C.
- TOP OF CASTING
- RCP
- REINFORCED CONCRETE PIPE
- POLYVINYLCHLORIDE SANITARY SEWER PIPE
- MANHOLE
- STRUCTURE
- DRAINAGE AND UTILITY EASEMENT
- SANITARY SEWER EASEMENT
- REGULATED DRAIN EASEMENT
- BUILDING SETBACK LINE
- VARIABLE WIDTH
- PROPOSED
- MATCH EXISTINGS
- TYP.
- SUBSURFACE DRAIN AND SUMP LINE
- WATER LINE
- CONCRETE END SECTION
- FLOOD ROUTE
- PROPOSED GRADE
- PROP. STORM STRUCTURE NO.
- PROP. SANITARY STRUCTURE NO.
- EXIST. TREETLINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE VALVE
- PROPOSED PAD GRADE
- M.F.P.G.
- MINIMUM FLOOD PROTECTION GRADE OF PADS. MINIMUM GRADE FOR ANY STRUCTURE OPENING (DOOR, WINDOW WELL, OUTSIDE BASEMENT STAIR ACCESS, ETC.)

**CITY OF CARMEL STANDARD BACKFILL NOTES:**

**STORM SEWERS**  
Bedding, Haunching, 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 backfill shall be 6-inches above the springline. Minimum trench width shall be the outside diameter of the pipe plus 18-inches.

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**CITY OF CARMEL STANDARD BACKFILL NOTES:**

**WATER AND SEWER UNDER CITY STREETS**  
Bedding, Haunching, Initial Backfill for water mains, water service laterals, sanitary mains and sanitary service laterals shall be in accordance with the standard practice of the utility that has jurisdiction over the installation.

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**RECORD DRAWING**  
STORM SEWER AS-BUILTS  
STORM SEWER STRUCTURES ONLY  
7/9/2007

ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

REGISTERED PROFESSIONAL ENGINEER  
NO. 8827  
STATE OF INDIANA

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: 1-11-08  
Entered By: SLM

FILED  
JUL 13 2007  
OFFICE OF HAMILTON COUNTY SURVEYOR

**WEIHE ENGINEERS INC.**  
3178466611  
FAX 3178430546  
INDIANAPOLIS, INDIANA 46280  
WWW.WEIHE.NET  
TOLL FREE 800.452.6408

ALLAN H. WEIHE, P.E., I.S. - PRESIDENT  
CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

PROJECT NO.: W06-0031  
DATE: 8/26/08

DATE: 6/21/08  
BY: [Signatures]

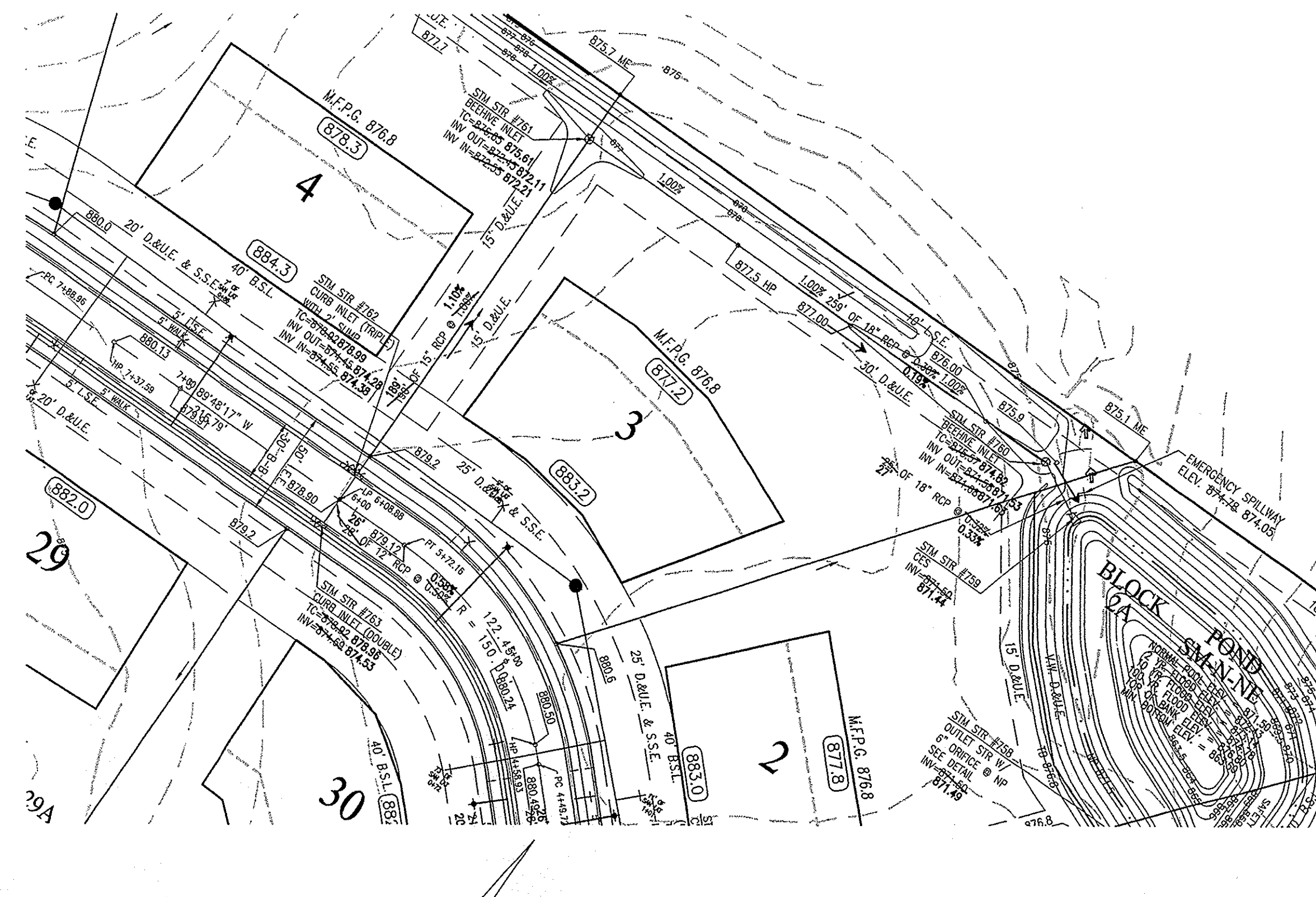
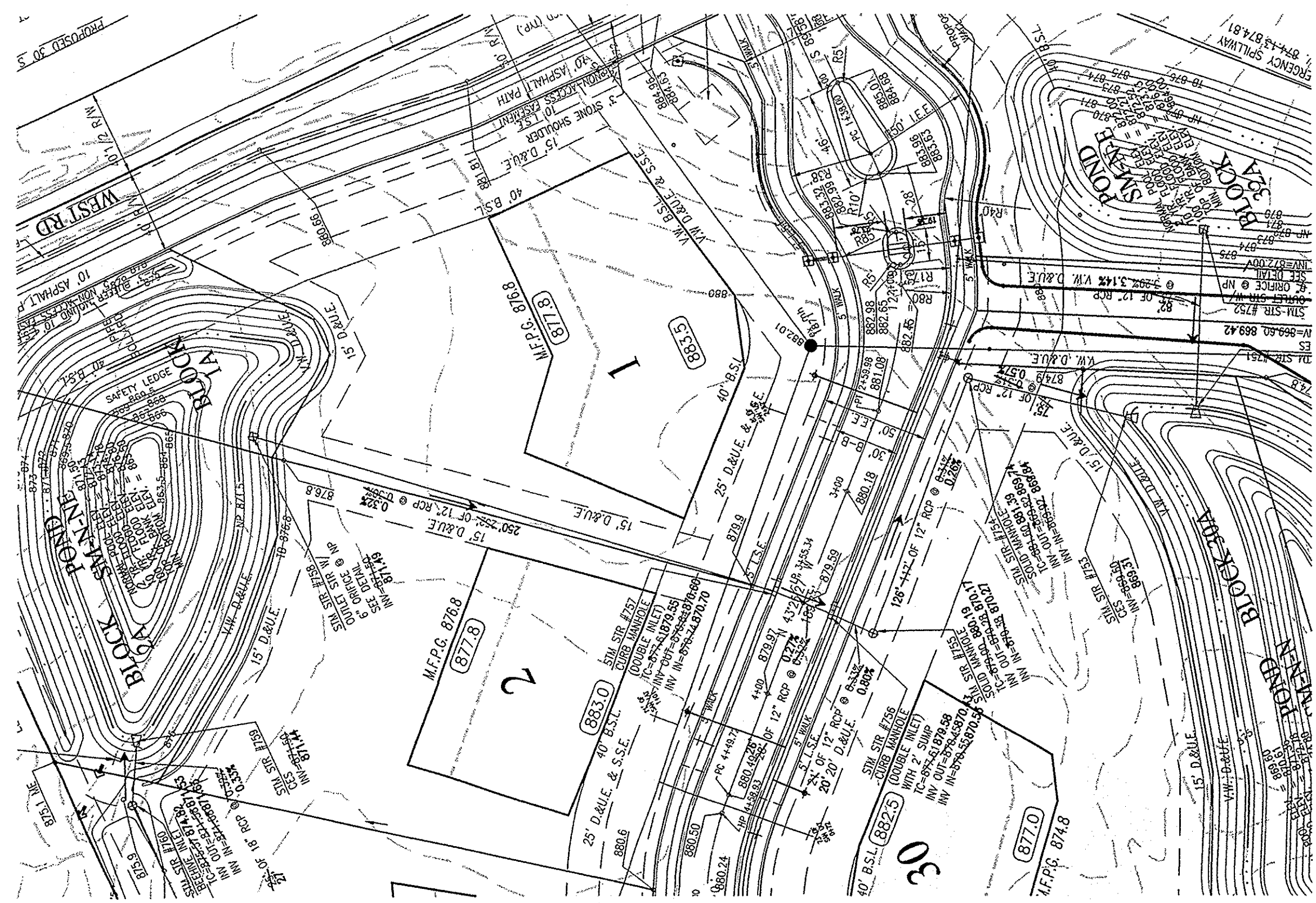
REVISIONS AND ISSUES:  
ADDED EXISTING TYPED REVISIONS PER CITY OF CARMEL GENERAL ENGINEERING DEPARTMENT. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING. REVISIONS FOR BRIDGE PILING.

REGISTERED PROFESSIONAL ENGINEER  
ALLAN H. WEIHE  
NO. 8827  
STATE OF INDIANA

THE WOODS AT LIONS CREEK  
I.C. DEVELOPERS, LLC  
STORM PLAN & PROFILES  
Part of the 874/4 Sec. 10-17618-02E, & Part of the 874/4 Sec. 30-17618-02E, Day Twp., Hamilton County, Indiana

SHEET NO.: **C306**  
PROJECT NO.: W06-0031

LOCATION: H:\2006\W06031\City\Case\A\06031\_Storm.dwg  
DATE: 8/26/08  
DRAWN BY: [Signature]  
PLOTTED BY: [Signature]



- ### LEGEND
- RIGHT-OF-WAY LINE
  - STORM SEWER LINE
  - SANITARY SEWER LINE
  - SANITARY SEWER MANHOLE
  - FLOW DIRECTION
  - EXIST. CONTOURS
  - STORM BEEHIVE INLET
  - STORM INLET
  - T.C. TOP OF CASTING
  - INV. INVERT
  - RCP REINFORCED CONCRETE PIPE
  - P.V.C. POLYVINYLCHLORIDE SANITARY SEWER PIPE
  - M.H. MANHOLE
  - S.S. STRUCTURE
  - D.&U.E. DRAINAGE AND UTILITY EASEMENT
  - S.S.E. SANITARY SEWER EASEMENT
  - R.O.E. REGULATED IRON EASEMENT
  - B.S.L. BUILDING SETBACK LINE
  - V.W. VARIABLE WIDTH
  - PROP. PROPOSED
  - ME MATCH EXISTING
  - TYP. TYPICAL
  - SUBSURFACE DRAIN AND SUMP LINE
  - WATER LINE
  - CONCRETE END SECTION
  - FLOOD ROUTE
  - PROPOSED GRADE
  - SIM STR #700 = PROP. STORM STRUCTURE NO.
  - SAN STR #800 = PROP. SANITARY STRUCTURE NO.
  - EXIST. TREELINE
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  - PROPOSED WATER LINE VALVE
  - PROPOSED PAD GRADE
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**CITY OF CARMEL STANDARD BACKFILL NOTES:**

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**CITY OF CARMEL STANDARD BACKFILL NOTES:**

**MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS**

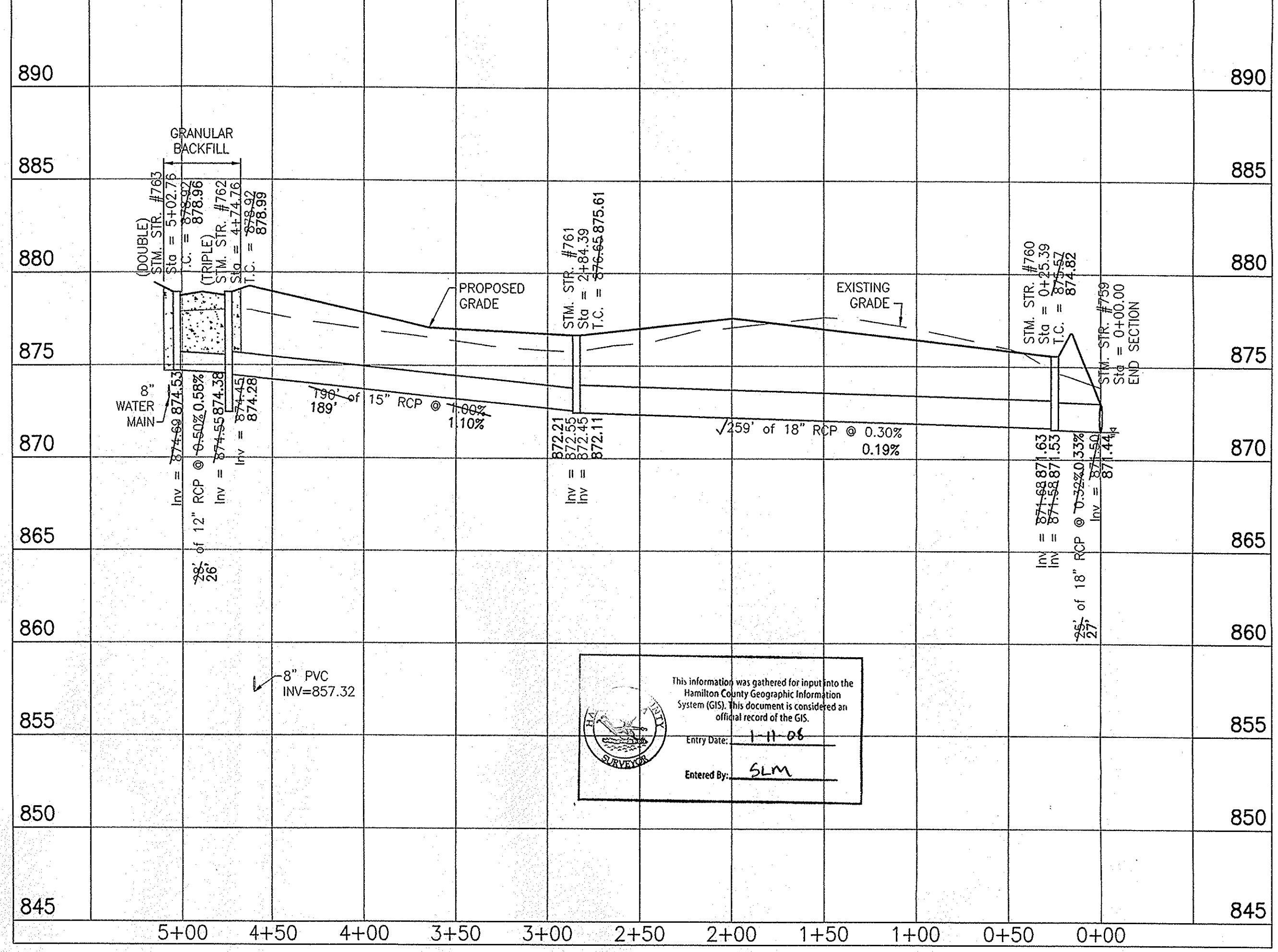
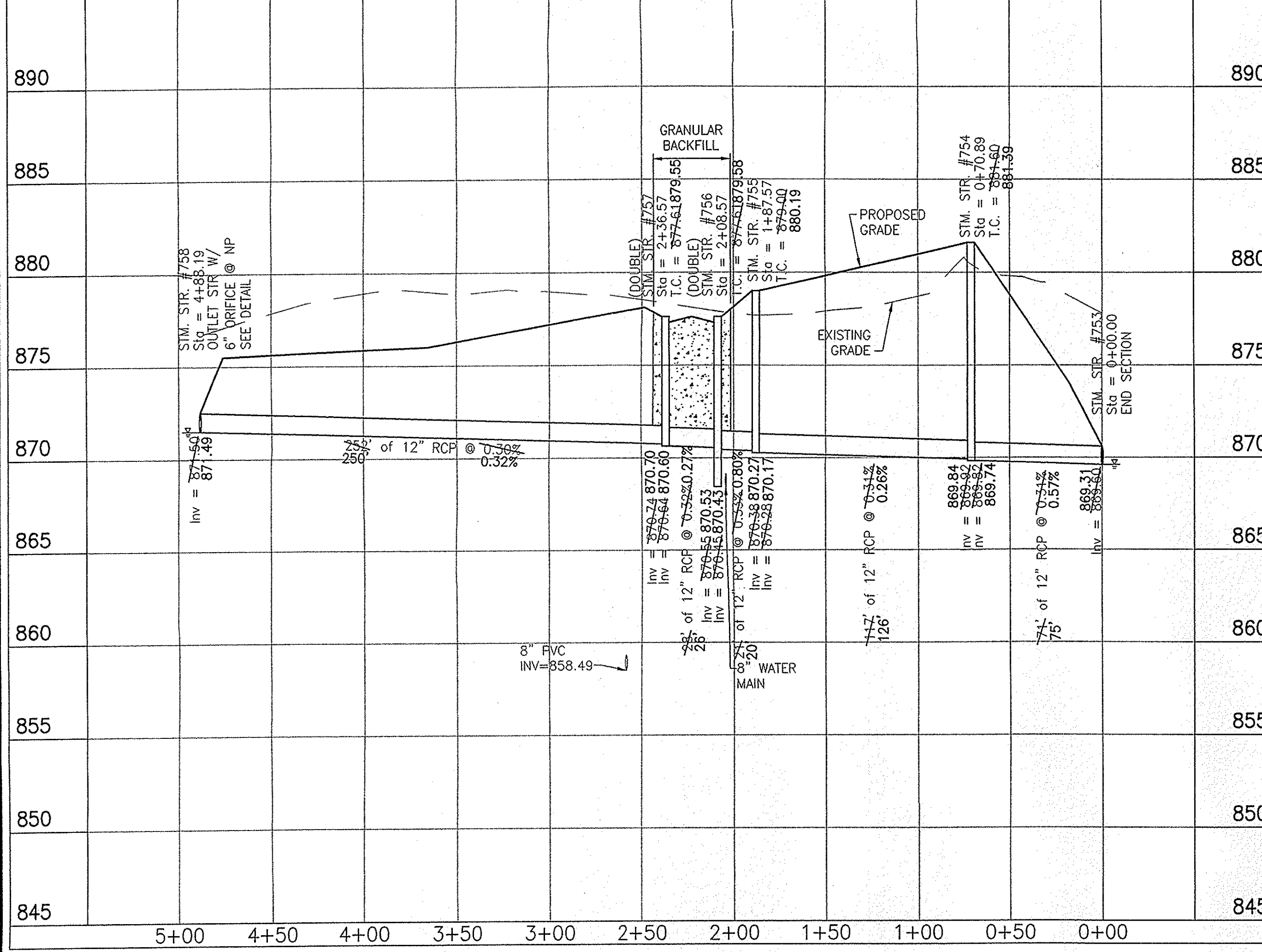
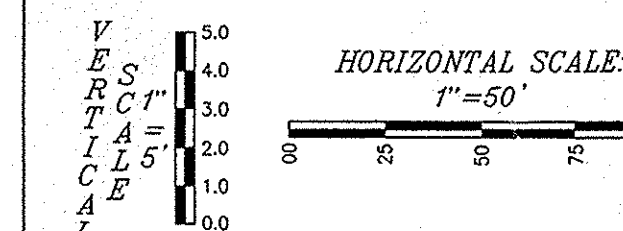
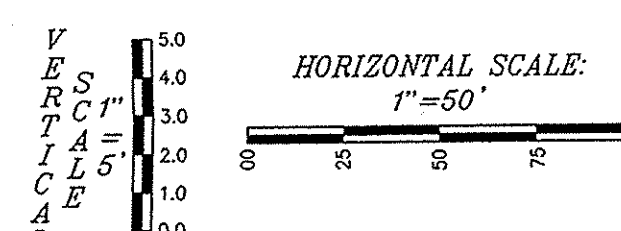
For installation of Storm Mains, Water Mains, Sanitary Mains, Water Service Laterals, Sanitary Sewer Laterals under City streets, regardless of the jurisdiction of the utility, the minimum cover from the top of the installed pavement to the top of the installed pipe shall be the pavement section practice of the utility that has jurisdiction over the installation has a more stringent cover requirement, the more stringent requirement shall govern.

**RECORD DRAWING**  
 STORM SEWER AS-BUILTS  
 STORM SEWER STRUCTURES ONLY  
 7/9/2007

ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

Prepared For: **THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES

PROJECT NO.: **W06-0031**
 SHEET NO.: **C307**



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: 1-11-06  
 Entered By: SLM

**WEIHE ENGINEERS INC.**  
 10605 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENET

317.846.6611  
 FAX 317.845.0346  
 TOLL FREE 800.452.6408

ALLAN H. WEIHE, P.E., L.S. - PRESIDENT  
 CIVIL ENGINEERS LAND SURVEYORS LANDSCAPE ARCHITECTS

PROJECT NO.: W06-0031  
 SHEET NO.: C307  
 DATE: 7/9/07

DESIGNED BY: [Signature]  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]

REVISIONS AND ISSUES:  
 ADDED DRAINING TOP TO [Signature] 7/9/07  
 GENERAL REVISIONS PER CITY OF CARMEL 7/9/07  
 REVISIONS PER CDM GROUP 7/9/07  
 REVISIONS PER HAMILTON COUNTY SURVEYOR'S OFFICE 7/9/07  
 REVISIONS PER JERRY CROSSROAD 7/9/07  
 REVISIONS PER ALAN AND WATER AS-BUILTS 7/9/07

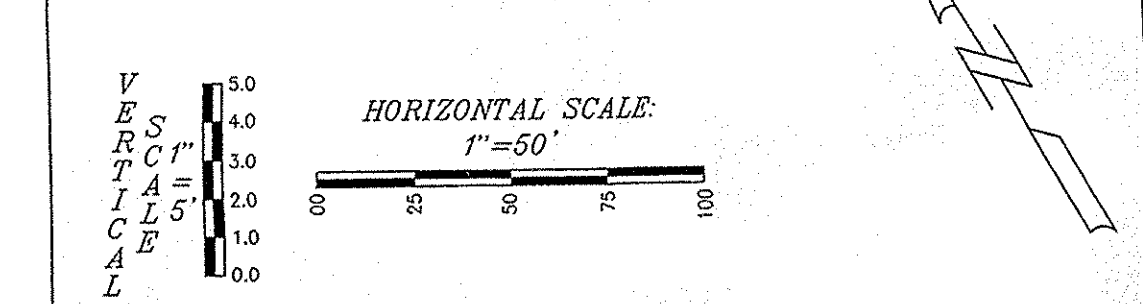
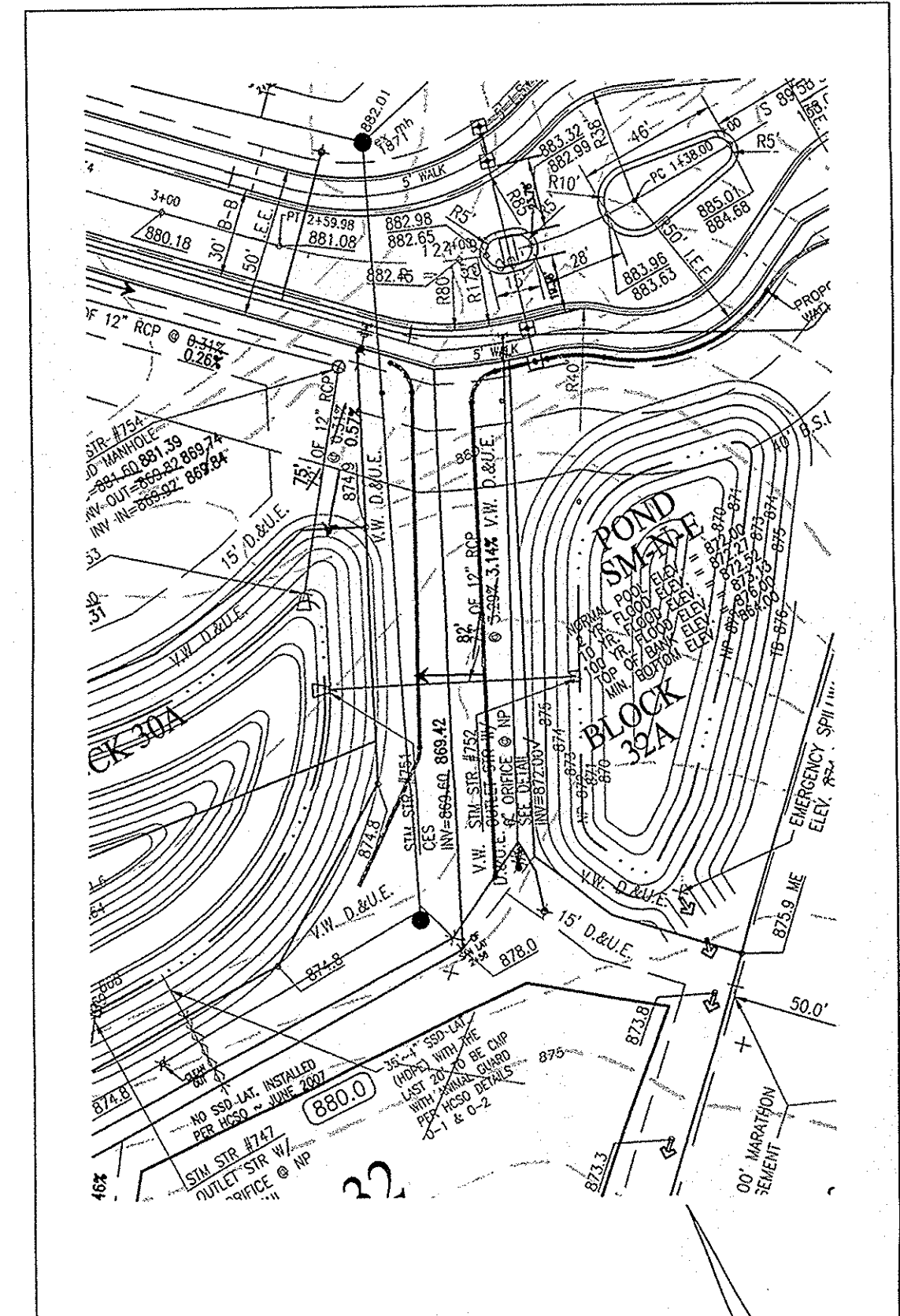
REGISTERED PROFESSIONAL ENGINEER  
 NO. 8827  
 STATE OF INDIANA  
 ALLAN H. WEIHE P.E. 8827

PREPARED FOR:  
**THE WOODS AT LIONS CREEK**  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES

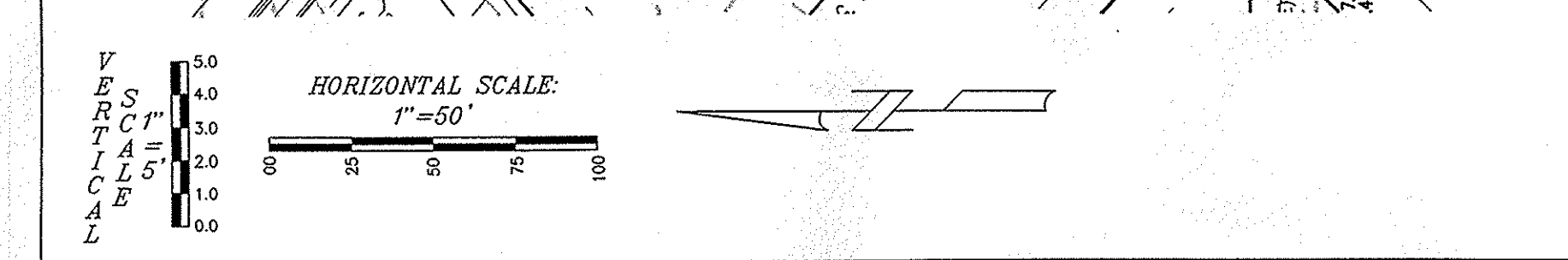
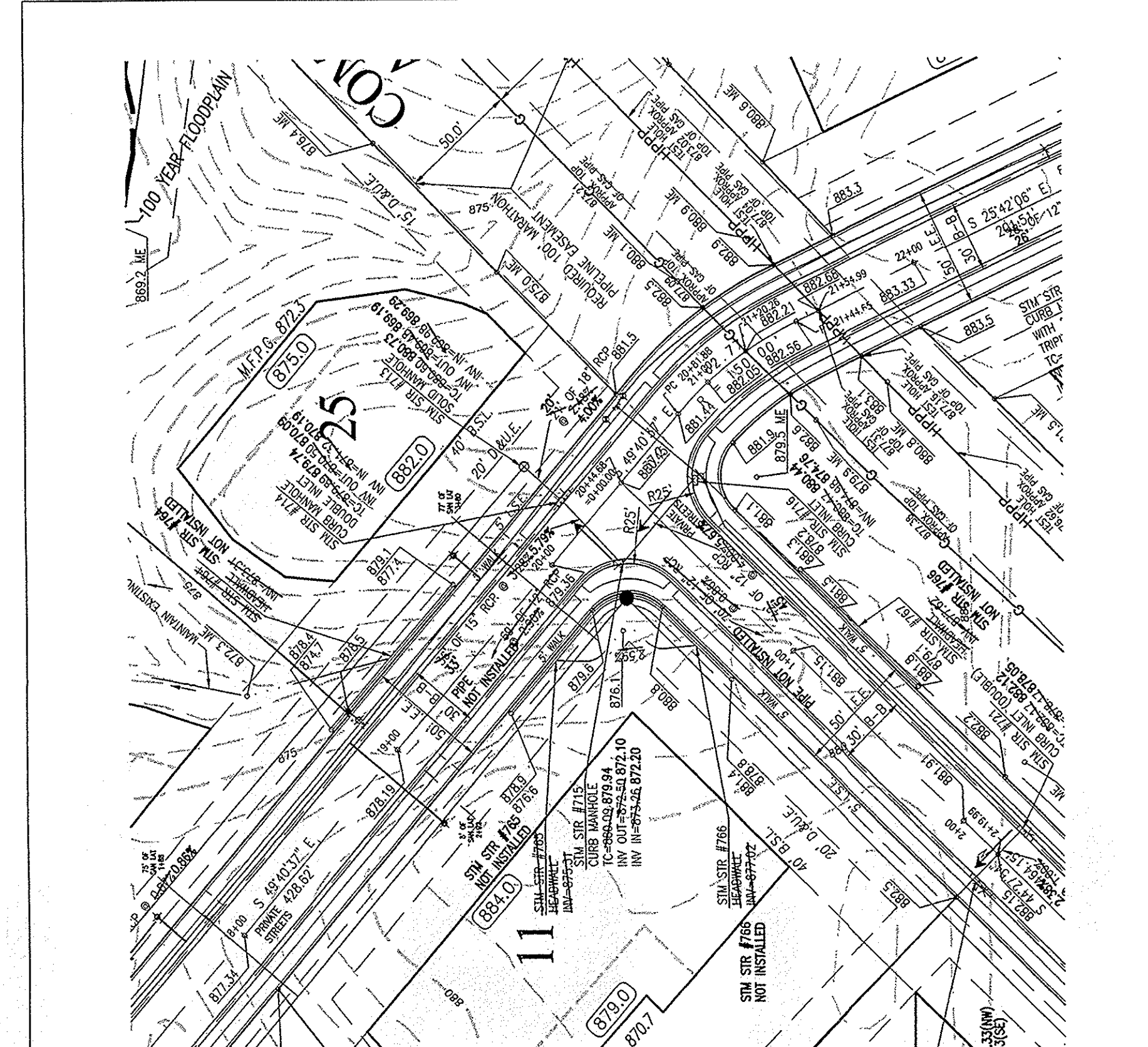
Part of the 304/1 Sts. 19-1784-EBB, & Part of the 304/1 Sts. 19-1784-EBE, City Prop., Hamilton County, Indiana.

JUL 13 2007  
 OFFICE OF HAMILTON COUNTY SURVEYOR

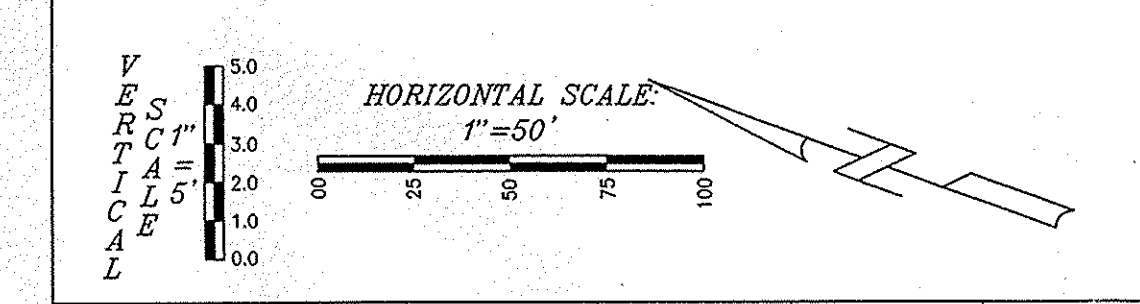
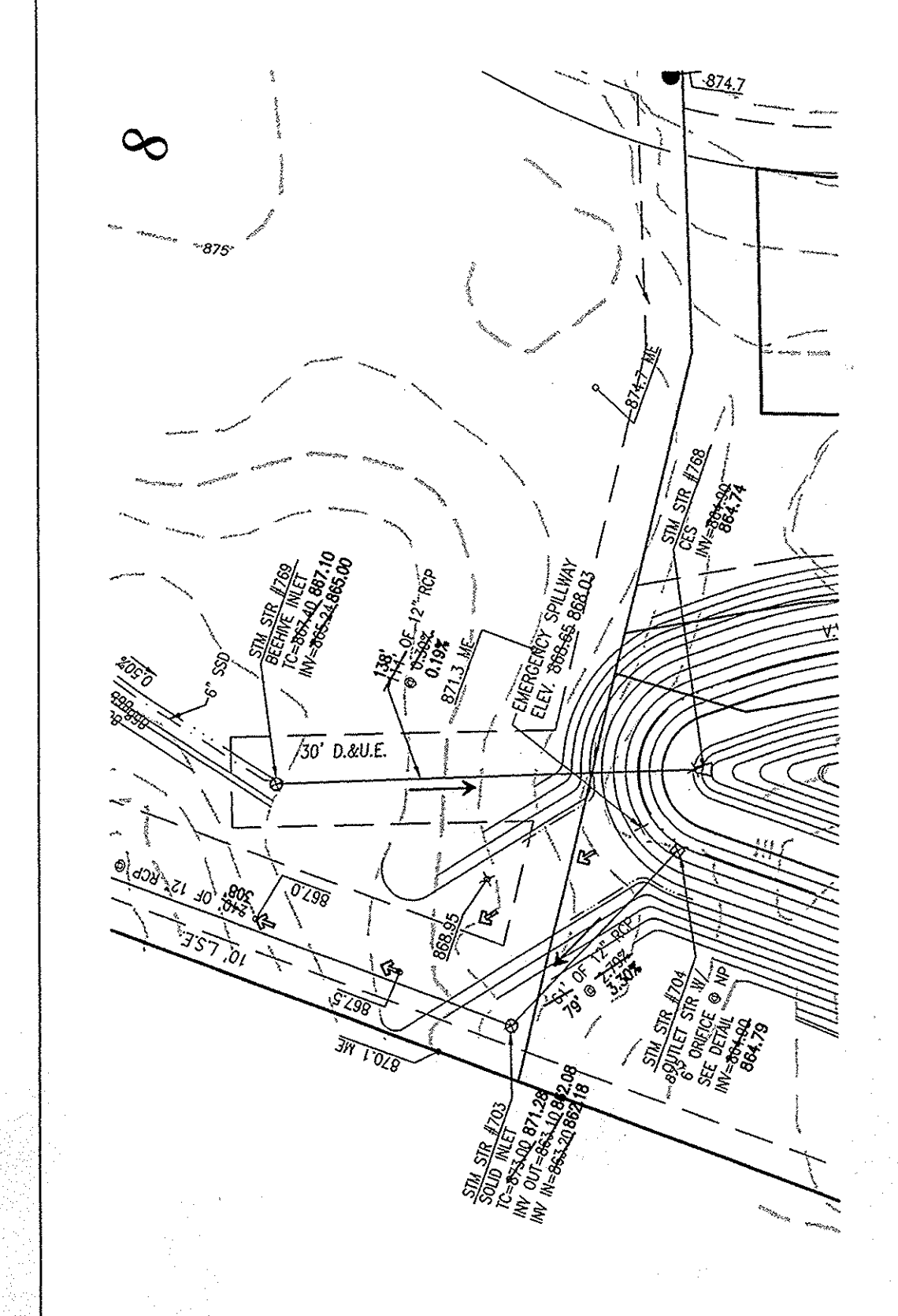
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 DATE: 7/9/07 11:58 AM  
 DRAWN BY: SLM  
 CHECKED BY: [Signature]



890		890
885		885
880	EXISTING GRADE STM. STR. #751 Sta = 0+00.00 END SECTION	880
875	PROPOSED GRADE STM. STR. #752 Sta = 0+75.00 OUTLET STR. W/ 6" ORIFICE @ NP SEE DETAIL	875
870	CONCRETE SADDLE STM. STR. #753 Sta = 0+75.00 Inv = 872.00	870
865	8" PVC Inv = 867.47 7.5' of 12" RCP @ 2.30% Inv = 869.74	865
860		860
855		855
850		850
845		845
	0+00 0+50 1+00	



890		890	895		895
885		885	890		890
880	EXISTING GRADE STM. STR. #766 Sta = 0+00.00 HEADWALL	880	885		885
875	EXISTING GRADE STM. STR. #765 Sta = 0+00.00 HEADWALL	875	880		880
870	8" WATER MAIN Inv = 873.31 68' of 12" RCP @ 2.30% Inv = 875.3	870	875		875
865	12" RCP & HEADWALLS NOT INSTALLED (STM STR #764 & #765)	865	870		870
860		860	865		865
855		855	860		860
850		850	855		855
845		845	850		850
	0+00 0+50 1+00		0+00 0+50 1+00		



885		885
880		880
875	EXISTING GRADE STM. STR. #768 Sta = 0+00.00 END SECTION	875
870	EXISTING GRADE STM. STR. #769 Sta = 0+14.11 Inv = 865.00 T.C. = 867.40 867.10	870
865	12" RCP @ 0.30% Inv = 865.00 864.74	865
860		860
855		855
850		850
845		845
840		840
	1+50 1+00 0+50 0+00	

### LEGEND

- RIGHT-OF-WAY LINE
- - - - STORM SEWER LINE
- - - - SANITARY SEWER LINE
- - - - FLOW DIRECTION
- - - - EXIST. CONTOURS
- o STORM INLET
- o T.C.
- o TOP OF CASTING
- o INV.
- o RCP
- o SSP
- o MANHOLE
- o STR.
- o D.U.E.
- o S.S.E.
- o R.D.E.
- o B.S.L.
- o V.W.
- o PROP.
- o EX.
- o TYP.
- o SUBSURFACE DRAIN AND SUMP LINE
- o WATER LINE
- o CONCRETE END SECTION
- o FLOOD ROUTE
- o PROPOSED GRADE
- o STM STR #700
- o SAN STR #900
- o EXIST. TREELINE
- o PROPOSED FIRE HYDRANT
- o PROPOSED WATER LINE VALVE
- o (857.3)
- o M.F.P.G.

**CITY OF CARMEL STANDARD BACKFILL NOTES:**  
 Bedding, haunching, 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 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 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 Density.

**Final Backfill**  
 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, from 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.

**CITY OF CARMEL STANDARD BACKFILL NOTES:**  
 WATER AND SEWER UNDER CITY STREETS  
 Bedding, haunching, initial backfill materials, placement and compaction for water mains, water service laterals, sanitary mains and sanitary service laterals shall be in accordance with the standard practice of the utility that has jurisdiction over the installation.

**Final Backfill**  
 Final backfill for water mains, water service laterals, sanitary mains and sanitary service laterals 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 Density. If the standard practice of the utility that has jurisdiction over the installation has a more stringent final backfill requirement, the more stringent requirement shall govern.

**MINIMUM COVER FOR PIPE CROSSINGS OF CITY STREETS**  
 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 practice of the utility that has jurisdiction over the installation has a more stringent cover requirement, the more stringent requirement shall govern.

## RECORD DRAWING

STORM SEWER AS-BUILTS  
 STORM SEWER STRUCTURES ONLY  
 7/9/2007

*Allan H. Weihe*  
 ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

REGISTERED PROFESSIONAL ENGINEER  
 NO. 8827  
 STATE OF INDIANA

INFORMATION FOR INPUT INTO THE HAMILTON COUNTY GEOGRAPHIC INFORMATION SYSTEM (GIS). THIS DOCUMENT IS CONSIDERED AN OFFICIAL RECORD OF THE GIS.  
 Entry Date: 7-11-08  
 Entered By: SLM

FILED  
 JUL 13 2007  
 CITY OF CARMEL

**WEIHE ENGINEERS INC.**  
 317.846.6611  
 317.843.0546  
 10505 NORTH COLLEGE AVENUE  
 INDIANAPOLIS, INDIANA 46280  
 WWW.WEIHENGINEERS.COM  
 TOLL FREE 800.452.6408

ALLAN H. WEIHE, P.E., I.S. - PRESIDENT  
 LAND SURVEYORS LANDSCAPE ARCHITECTS  
 CIVIL ENGINEERS

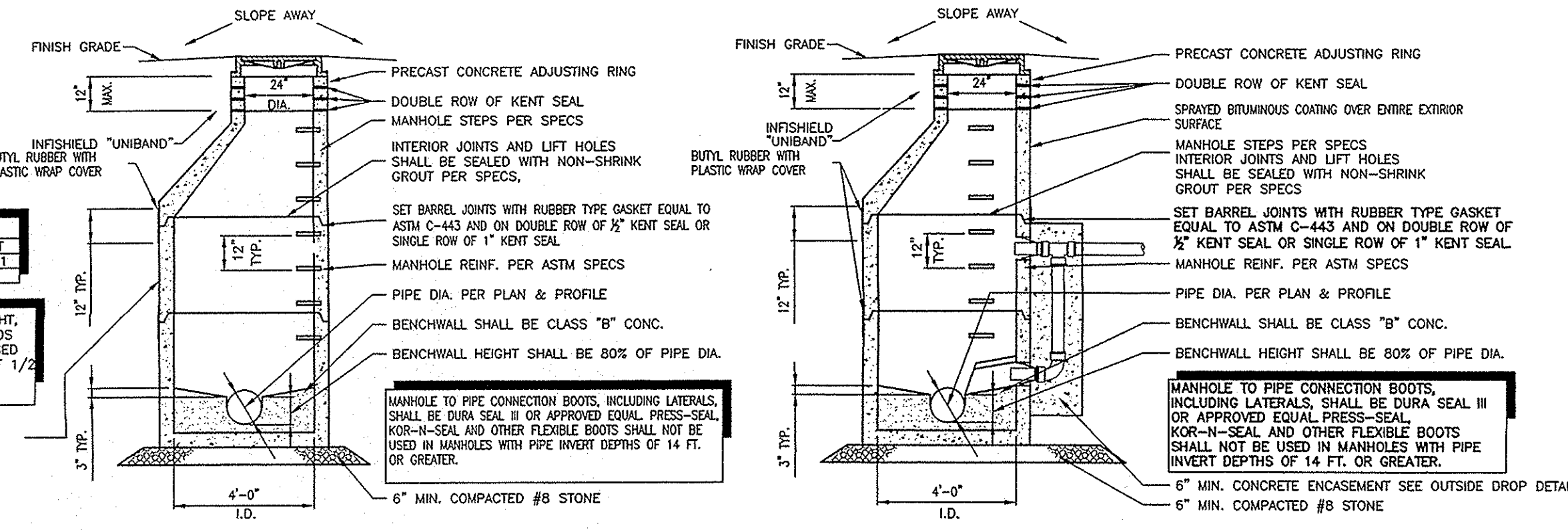
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8/21/08	DLH	W06-0031	06001	DLH	DLH	DLH	8/11/08
8/22/08	DLH			DLH	DLH	DLH	8/11/08
8/23/08	DLH			DLH	DLH	DLH	8/11/08
8/26/08	DLH			DLH	DLH	DLH	8/11/08
9/11/08	DLH			DLH	DLH	DLH	8/11/08
10/17/08	DLH			DLH	DLH	DLH	8/11/08
7/9/07	DLH			DLH	DLH	DLH	8/11/08

REVISIONS AND ISSUES:  
 ADDED EXISTING 12" RCP PER CITY OF CARMEL  
 GROUND CONDITIONS PER BRUCKER PIPELINE  
 EXISTING PER BRUCKER PIPELINE  
 REVISIONS PER CLIENT AND CHAD  
 REVISIONS PER LOCAL COUNTY SURVEYOR'S OFFICE  
 REVISIONS PER CHAD  
 REVISIONS PER CHAD CROSSROAD  
 REVISIONS PER CLIENT  
 STORM, SANITARY AND WATER AS-BUILTS

REGISTERED PROFESSIONAL ENGINEER  
 NO. 8827  
 STATE OF INDIANA  
*Allan H. Weihe*  
 ALLAN H. WEIHE P.E. #8827

THE WOODS AT LIONS CREEK  
 J.C. DEVELOPERS, LLC  
 STORM PLAN & PROFILES  
 Part of the 94/4-Sub. 19-7188-Sub. & Part of the 94/4-Sub. 19-7188-Sub. City Prop., Hamilton County, Indiana

SHEET NO. **C308**  
 PROJECT NO. W06-0031



SANITARY MANHOLE - TYPE "A"  
NOT TO SCALE

SANITARY MANHOLE - TYPE "B"  
NOT TO SCALE

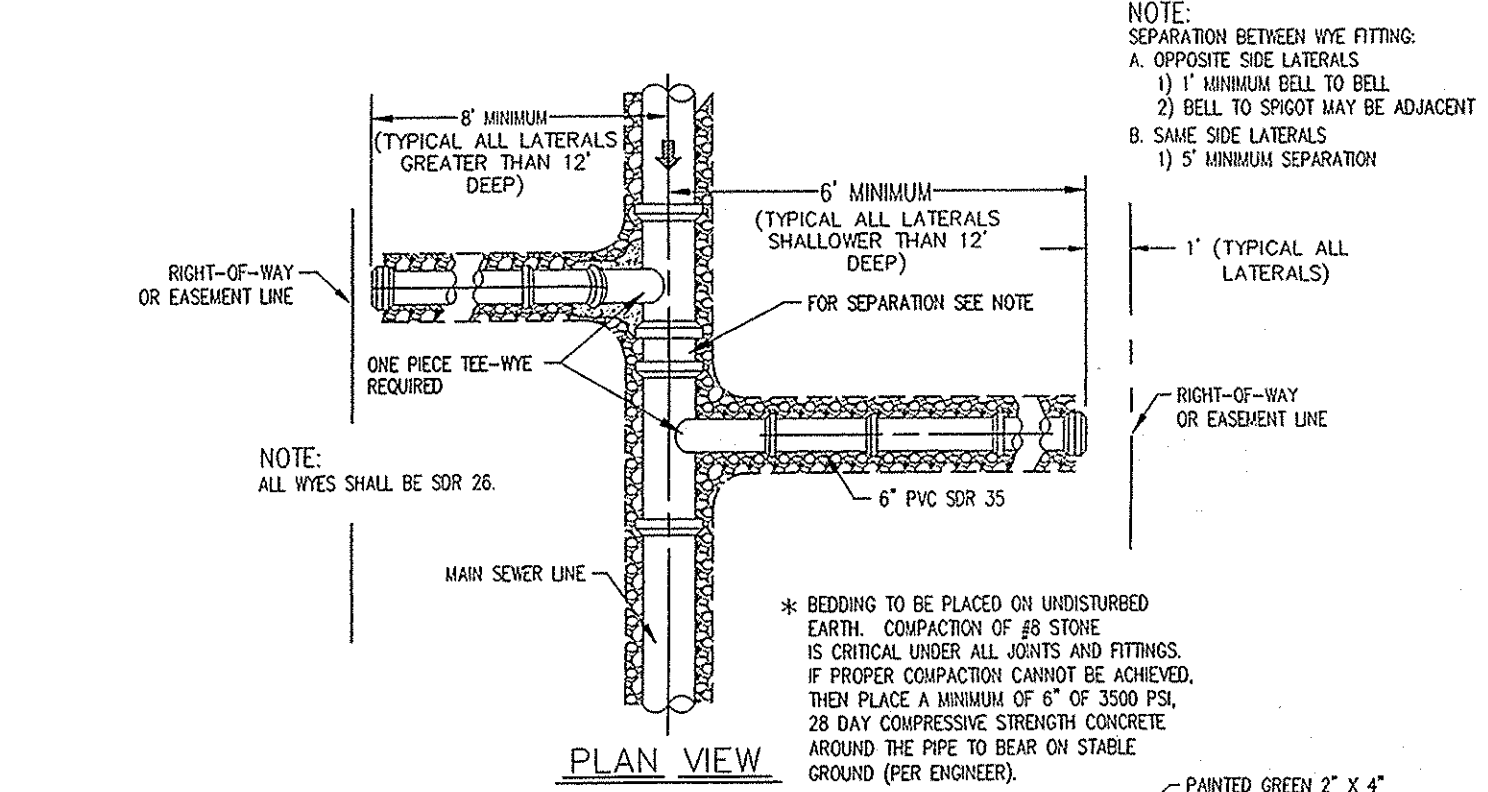
**MANHOLE CASTING SCHEDULE**

MANUFACTURER	SET SEALING	WATERTIGHT
NEUMAN	R-1842A	R-1916-F1
EAST JORDAN	10452Z	1045W

CASTING SHALL BE EITHER SELF-SEALING OR WATERTIGHT. (SEE PLAN & PROFILE SHEETS FOR CASTING TYPE). LIDS SHALL BE STAMPED "SANITARY SEWER" AND HAVE CLOSED PICKLES FRAME SHALL BE SET ON DOUBLE ROW OF 1/2 KENT SEAL, OR SINGLE ROW OF 1" KENT SEAL (SEE MANHOLE CASTING SCHEDULE).

BENCHWALL SHALL BE CLASS "B" CONC.  
BENCHWALL HEIGHT SHALL BE 80% OF PIPE DIA.

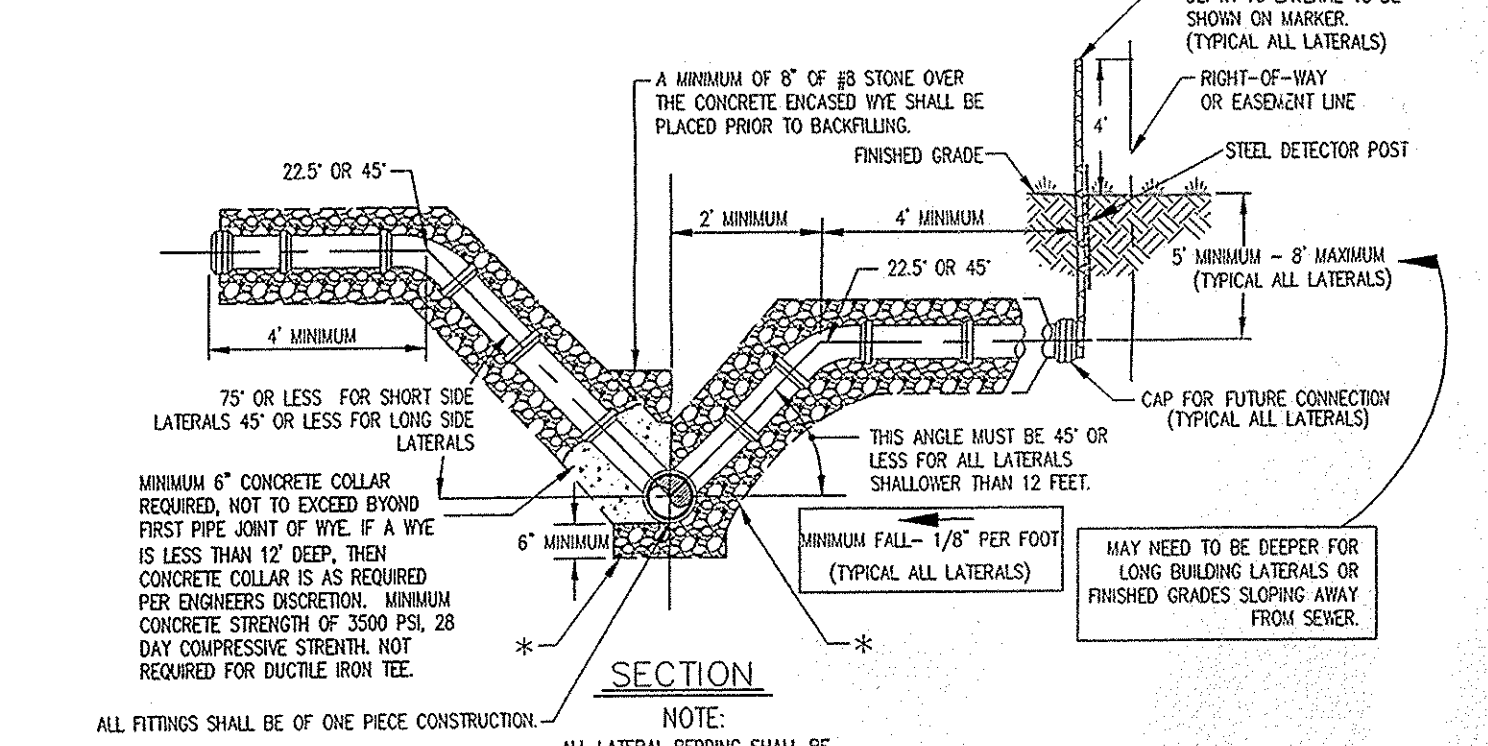
MANHOLE TO PIPE CONNECTION BOOTS, INCLUDING LATERALS, SHALL BE DURA SEAL III OR APPROVED EQUAL PRESS-SEAL KOR-N-SEAL AND OTHER FLEXIBLE BOOTS SHALL NOT BE USED IN MANHOLES WITH PIPE INVERT DEPTHS OF 14 FT. OR GREATER.



PLAN VIEW

NOTE: SEPARATION BETWEEN WYE FITTINGS:  
A. OPPOSITE SIDE LATERALS  
1) 1" MINIMUM BELL TO BELL  
2) 2" TO SPOUT MAY BE ADJACENT  
B. SAME SIDE LATERALS  
1) 5" MINIMUM SEPARATION

\* BEDDING TO BE PLACED ON UNDISTURBED EARTH. COMPACTION OF #8 STONE IS CRITICAL UNDER ALL JOINTS AND FITTINGS. IF PROPER COMPACTION CANNOT BE ACHIEVED, THEN PLACE A MINIMUM OF 6" OF 3500 PSI, 28 DAY COMPRESSIVE STRENGTH CONCRETE AROUND THE PIPE TO BEAR ON STABLE GROUND (PER ENGINEER).



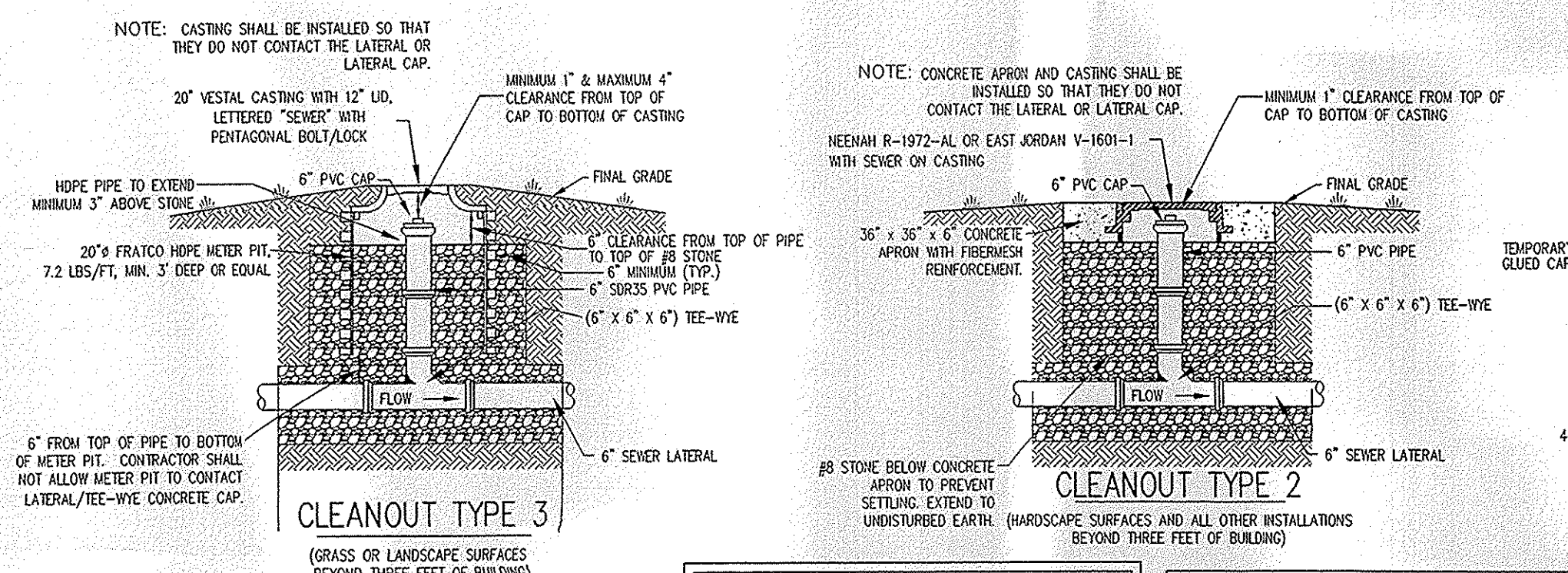
SECTION

NOTE: ALL FITTINGS SHALL BE OF ONE PIECE CONSTRUCTION. ALL LATERAL SECTIONS SHALL BE AGAINST UNDISTURBED TRENCH.

12' DEEP AND GREATER LESS THAN 12' DEEP

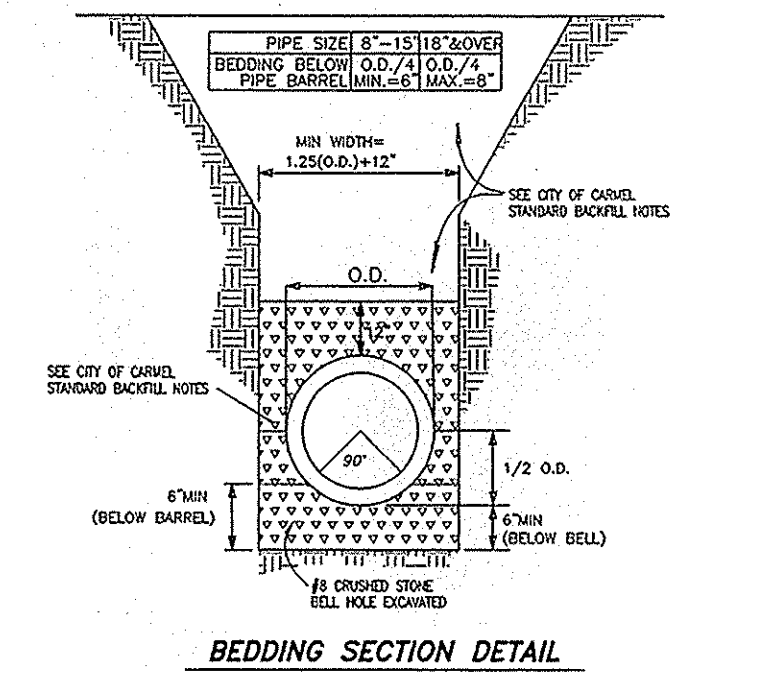
NOTE: DEPTH OF SERVICE LATERAL SHALL BE MEASURED FROM FINISHED GRADE TO THE TOP OF MAIN SEWER LINE.

SERVICE LATERAL DETAIL

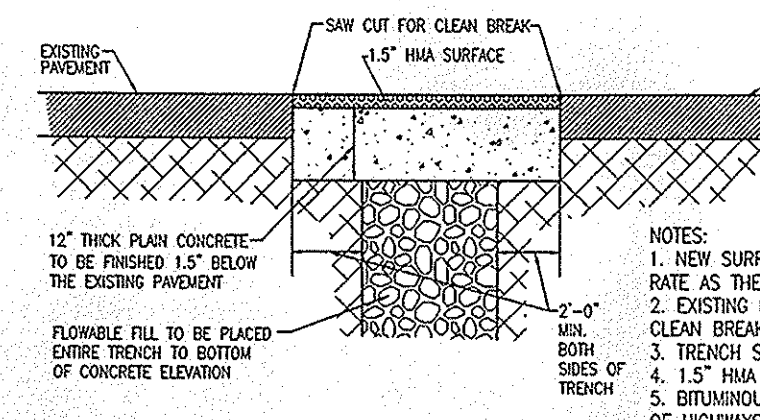


NOTE: TOP OF CASTING OR CLEANOUT CAP SHALL EXTEND 0.20 FEET MINIMUM ABOVE FINISHED GRADE UNLESS CONSTRUCTED WITH PEDESTAL OR VERTICAL TRAFFIC FIN. UNLESS APPROVED BY ENGINEER, SANITARY SEWER CASTINGS OR CLEANOUTS MUST NOT BE WITHIN ONE (1) FOOT HORIZONTAL DISTANCE OF ANY PAVED OR CONCRETE SURFACES.

TYPICAL CLEANOUT DETAILS



BEDDING SECTION DETAIL  
(NO SCALE)



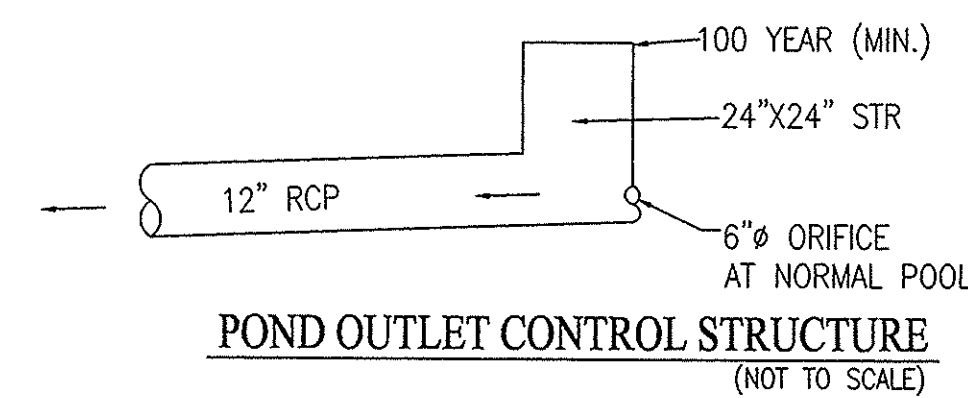
ROAD CUT PATCH DETAIL  
(NO SCALE)

NOTES:  
1. NEW SURFACE IS TO BE SLOPED AT THE SAME RATE AS THE EXISTING SURFACE.  
2. EXISTING PAVEMENT IS TO BE SAW CUT FOR A CLEAN BREAK.  
3. TRENCH SPOIL IS TO BE REMOVED FROM SITE.  
4. 1.5" HMA #11 SURFACE.  
5. BITUMINOUS TACK APPLIED AS PER INDIANA DEPT. OF HIGHWAYS STANDARD SPECIFICATION 409 & 902.  
6. ALL LANE MARKINGS, STRIPING, STOP BARS, ETC. DISTURBED OR REMOVED DURING EXCAVATION ACTIVITIES, SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.  
7. PLAN CONCRETE IS TO BE FINISHED 1.5" BELOW THE EXISTING PAVEMENT.  
8. CUT SHALL BE STEEL PLATED DURING CONCRETE CURE TIME AND UNTIL ASPHALT IS APPLIED.

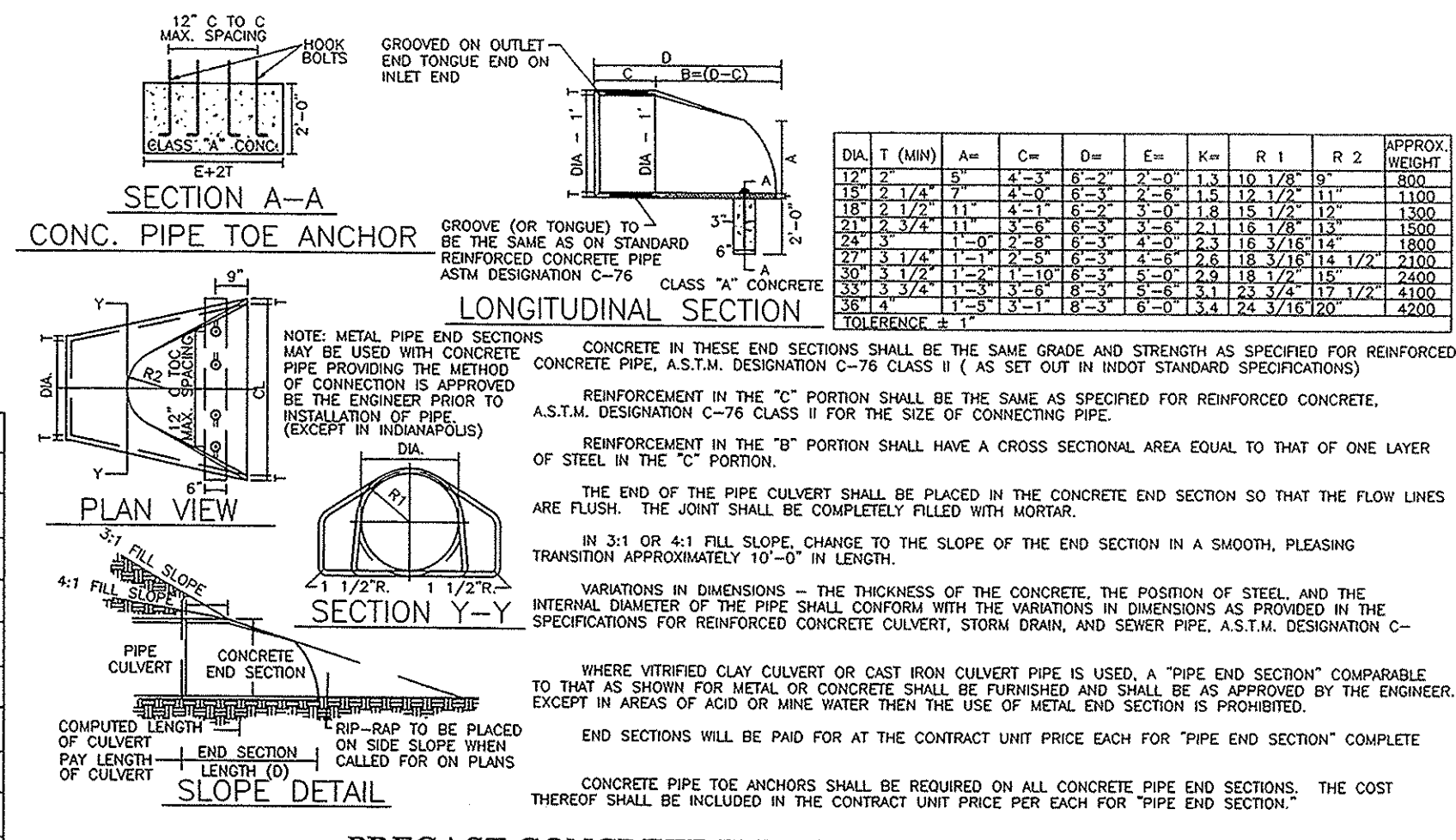
**RECORD DRAWING**  
STORM SEWER AS-BUILTS  
STORM SEWER STRUCTURES ONLY  
7/9/07  
*Allen H. Weihe*  
ALLAN H. WEIHE, REG. P.E. - INDIANA #8827

**ALLAN H. WEIHE**  
REGISTERED  
NO. 8827  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

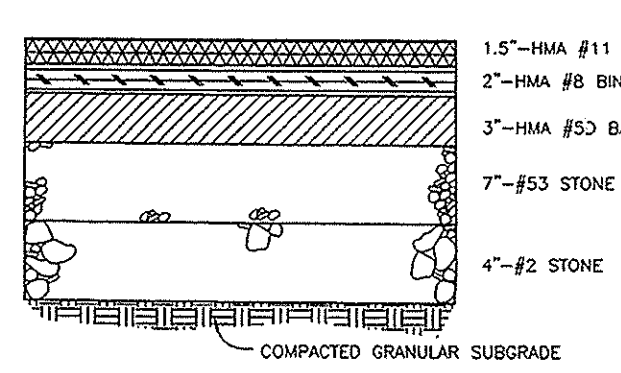
Storm Water Management Area (Str. #)	NORMAL (elev)	6-inch orifice (elev)	100 Year FLOOD (elev)	RCP INV (elev)	STR top (elev)
(704) SM-S-W	864.90	864.90 864.87	868.65	864.79	868.05
(723) SM-S-SW	875.00	875.00 875.36	877.02	874.91	876.30
(731) SM-S-S	877.00	877.00 876.66	879.62	876.79	878.99
(738) SM-S-SE	884.00	884.00 883.62	886.54	883.62	885.92
(743) SM-S-E	879.00	879.00 878.88	881.12	878.92	880.65
(752) SM-N-E	872.00	872.00 872.09	873.13	872.00	873.52
(758) SM-N-NE	871.50	871.50 871.63	874.78	871.49	874.07
(747) SM-N-N	869.60	869.60 869.50	872.78	869.48	872.14



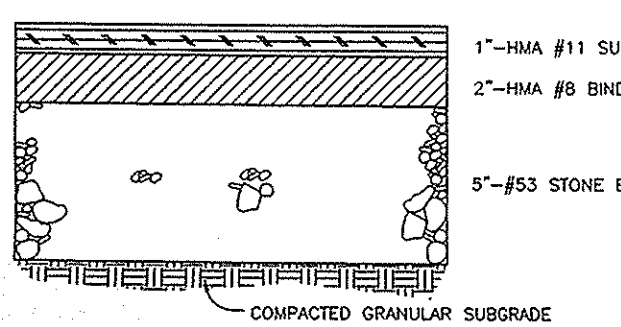
POND OUTLET CONTROL STRUCTURE  
(NOT TO SCALE)



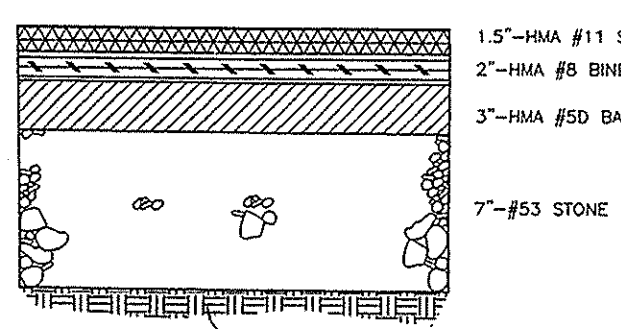
PRECAST CONCRETE END SECTION DETAIL  
(NO SCALE)



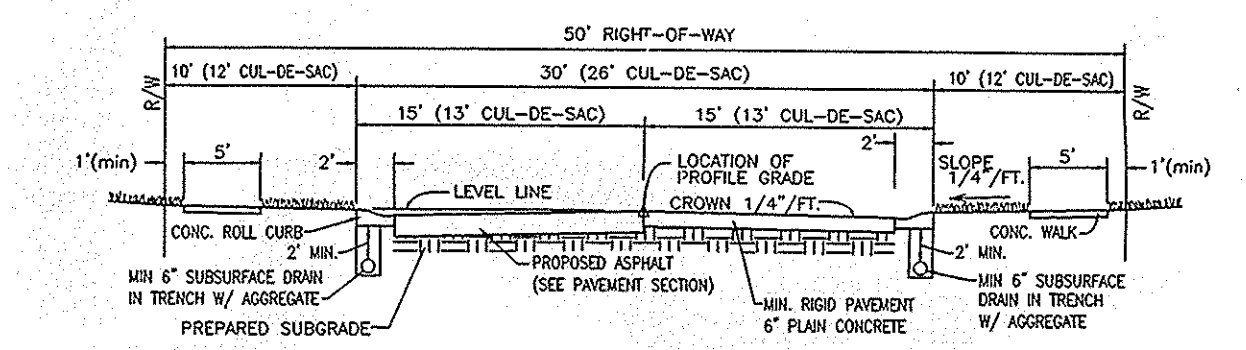
WEST ROAD RIGHT-OF-WAY PAVEMENT SECTION  
(NO SCALE)



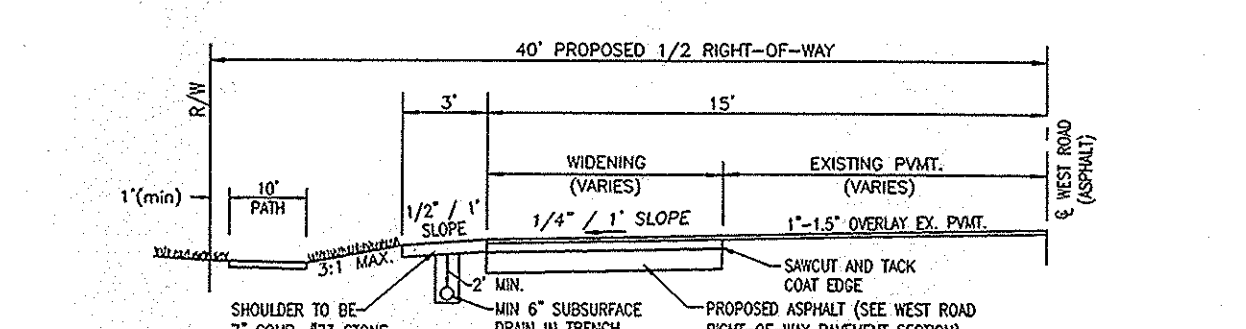
ASPHALT PATH PAVEMENT SECTION  
(NO SCALE)



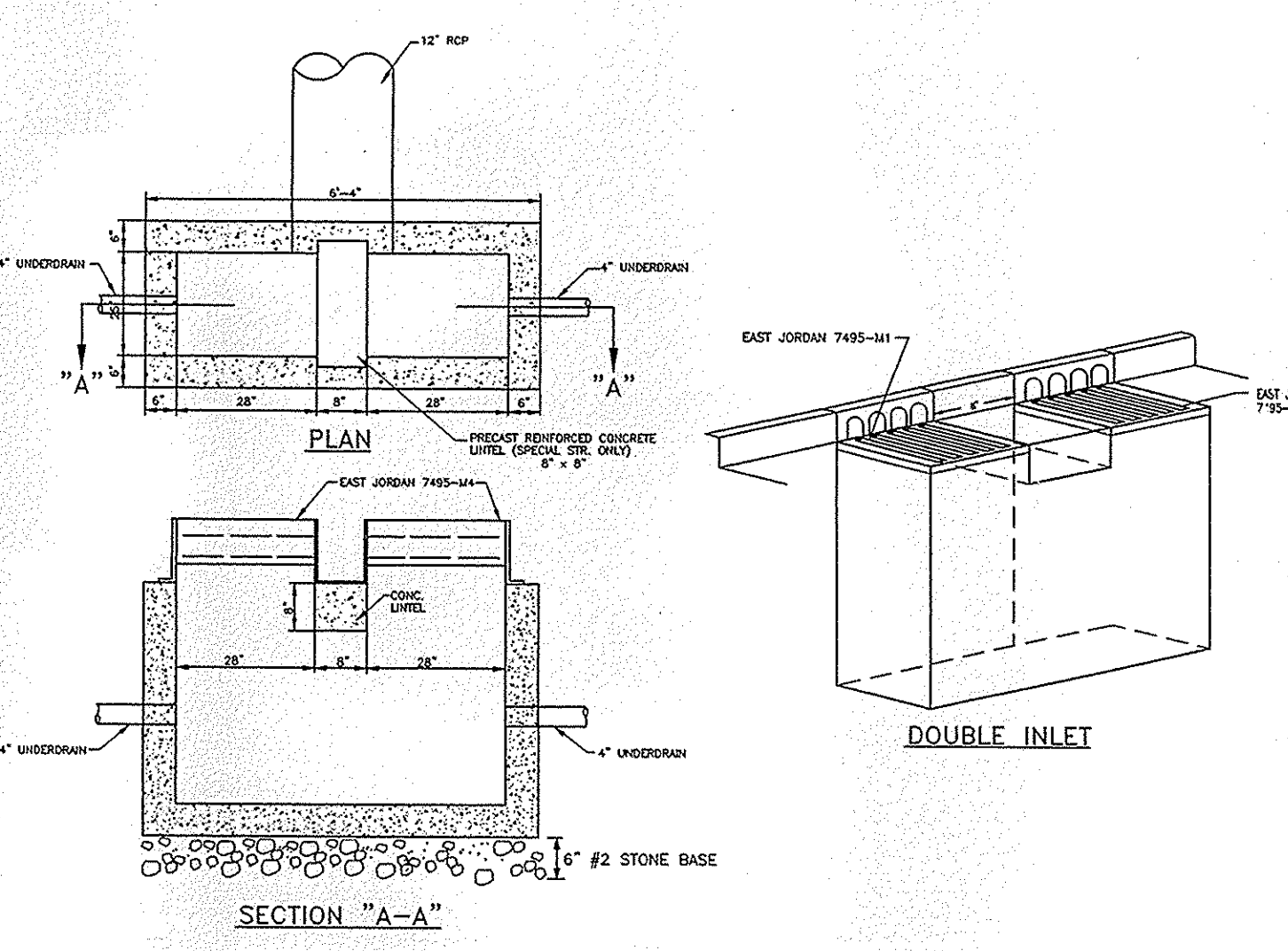
LOCAL STREET PAVEMENT SECTION  
(NO SCALE)



TYPICAL SECTION-LOCAL STREET  
(NO SCALE)



WEST ROAD IMPROVEMENT SECTION  
(NO SCALE)



DOUBLE CURB INLET DETAIL  
(NO SCALE)

**WEIHE ENGINEERS INC.**  
317.846.6611  
FAX 317.843.0546  
TOLL FREE 800.452.6408  
10505 NORTH COLLEGE AVENUE  
INDIANAPOLIS, INDIANA 46280  
WWW.WEIHE.NET

ALLAN H. WEIHE, P.E., I.S. - PRESIDENT  
LAND SURVEYORS  
LANDSCAPE ARCHITECTS  
CIVIL ENGINEERS

PROJECT NO. DATE BY REVISIONS AND ISSUES

DWG. NAME: 66001.DTD  
DESIGNED BY: DB/DAH  
DRAWN BY: DB/DAH  
CHECKED BY: DB/DAH  
DATE: 6/9/06

**ALLAN H. WEIHE**  
REGISTERED  
NO. 8827  
STATE OF INDIANA  
PROFESSIONAL ENGINEER

ALLAN H. WEIHE, P.E. 0607

**THE WOODS AT LIONS CREEK**  
J.C. DEVELOPERS, LLC  
CONSTRUCTION DETAILS  
SHEET NO. **C604**  
PROJECT NO. W06-0031

FILED JUL 13 2007  
OFFICE OF INDIANA COUNTY SURVEYOR

**HOLEY MOLEY SAYS**  
"DIG SAFELY"  
"IT'S THE LAW"  
CALL 2 WORKING DAYS BEFORE YOU DIG  
1-800-302-5544  
CALL TOLL FREE  
PER INDIANA STATE LAW IC. 8-1-28,  
IT IS AGAINST THE LAW TO EXCAVATE  
WITHOUT NOTIFYING THE UNDERGROUND  
LOCATION SERVICE TWO (2) WORKING  
DAYS BEFORE COMMENCING WORK.

PREPARED FOR: J.C. DEVELOPERS, LLC

LOCATION: C:\Users\jweihel\Documents\WoodsAtLionsCreek\WoodsAtLionsCreek\C604.dwg  
DATE/TIME: July 09, 2007 - 6:19pm  
PLOTTER: HP DesignJet 5000