

Drain: SLY RUN DRAIN Drain #: 330  
Improvement/Arm: RIVERWALK COMMONS - SECTION 1  
Operator: JOH Date: 7-6-04  
Drain Classification: Urban/Rural Year Installed: 2001

### GIS Drain Input Checklist

- Pull Source Documents for Scanning JOH
- Digitize & Attribute Tile Drains \_\_\_\_\_
- Digitize & Attribute Storm Drains \_\_\_\_\_
- Digitize & Attribute SSD \_\_\_\_\_
- Digitize & Attribute Open Ditch \_\_\_\_\_
- Stamp Plans \_\_\_\_\_
- Sum drain lengths & Validate \_\_\_\_\_
- Enter Improvements into Posse \_\_\_\_\_
- Enter Drain Age into Posse \_\_\_\_\_
- Sum drain length for Watershed in Posse \_\_\_\_\_
- Check Database entries for errors \_\_\_\_\_

**Gasb 34 Footages for Historical Cost**  
**Drain Length Log**

Drain-Improvement: SLY RUN DRAIN

Drain Type:	Size:	Length <i>SURROUNDING REARS</i>	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
<i>RCP</i>	<i>12"</i>	<i>450'</i>				
	<i>15"</i>	<i>536'</i>				
	<i>18"</i>	<i>529'</i>				
	<i>24"</i>	<i>2,022'</i>				
	<i>30"</i>	<i>300'</i>				
	<i>36"</i>	<i>175'</i>				
<i>OPEN DITCH</i>		<i>270'</i>				

Sum: 4282'

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

Comments:

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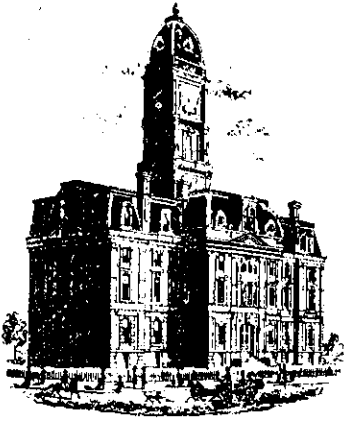
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SURVEYOR'S OFFICE  
**Hamilton County**

*Kenton C. Ward, Surveyor*

*Phone (317) 776-8495*

*Fax (317) 776-9628*

*Suite 146  
One Hamilton County Square  
Noblesville, Indiana 46060-2230*

October 8, 2001

To: Hamilton County Drainage Board

Re: Sly Run Drain, Riverwalk Commons Arm

Attached is a petition, plans, calculations, quantity summary and assessment roll for the Riverwalk Commons Arm, Sly Run Drain. I have reviewed the submittals and petition and have found each to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable; will improve the public health; benefit a public highway and be of public utility; and that the costs, damages, and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited. The drain will consist of the following:

12" RCP - 450 ft	24" RCP - 2,022 ft	Open Ditch 270 ft
15" RCP - 536 ft	30" RCP - 300 ft	
18" RCP - 529 ft	36" RCP - 175 ft	

The total length of the drain will be <sup>4,282'</sup>~~4,595~~ feet.

The detention pond (lake) located in the storm drainage easement in the southwest corner of the site is not to be considered part of the regulated drain. Only the inlet and outlet will be maintained as part of the regulated drain. The maintenance of the pond (lake) will be the responsibility of the Residential Care 7, LLC or any future owners. The board will however, retain jurisdiction for ensuring the storage volume for which the lake was designed will be retained. Thereby, allowing no fill or easement encroachments.

The portions of storm structures D9, D9A, D9B, D9C and D9D will not become part of the regulated drain system for Riverwalk Commons. The maintenance for these sections of the drain will be the responsibility of Residential Care 7, LLC or future owners.

The open ditch listed above is the portion located on the Janus Property (11-10-02-00-00-002.002) from the North side of the S. R. 32 right of way to the West property line of Janus.

I have reviewed the plans and believe the drain will not benefit each lot equally. I recommend an assessment established as follows:

1. Maintenance assessment for roads and streets be set at \$10.00 per acre.
2. Maintenance assessment for agricultural tracts should be set at \$2.00 per acre with a \$15.00 minimum.
3. Maintenance assessment for non platted residential tracts be set at \$2.00 per acre with an increase to a \$15.00 minimum.
4. Maintenance assessment for multi family residential and commercial tracts be set at \$10.00 per acre with a \$50.00 minimum.
5. Maintenance assessment for platted lots in subdivisions whose drainage systems will not be part of the regulated drain (those systems maintained by the City of Noblesville) shall be set at \$35.00 per lot/minimum. Common areas within non-regulated drain subdivisions shall be assessed at \$5.00 per acre with a \$35.00 minimum.
6. Maintenance assessment for platted lots within a subdivision whose drainage systems will be part of the regulated drain shall be set at \$65.00 per lot/minimum. Common areas within regulated drain subdivisions shall be set at \$10.00 per acre with a \$65.00 minimum.

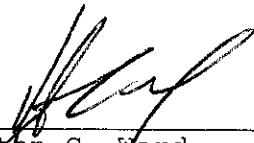
With this assessment the total annual assessment for this drain will be \$406.70.

I also believe that no damages will result to landowners by the construction of this drain.

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 recorded easements. These are recorded in the office of the Hamilton County Recorder as instrument numbers 200100059173, 200100059174 and 200100059175. These instruments were recorded by Residential Care 7, LLC for this proposed project.

I recommend the Board set a hearing for this proposed drain for November 26, 2001.

  
\_\_\_\_\_  
Kenton C. Ward  
Hamilton County Surveyor

KCW/llm



FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

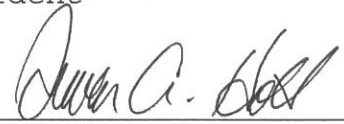
Sly Run Drain, Riverwalk Commons Arm

On this *26th day of November 2001*, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the *Sly Run Drain, Riverwalk Commons 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. 



Nashville, Tennessee 37214 /Telephone 615-234-0300

Bond No. B2 1845809

**SUBDIVISION PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS, THAT WE Residential Care VII, LLC located at 6900 South Gray Road, Indianapolis, IN 46237, as Principal, and GULF INSURANCE COMPANY, authorized to do business in the State of Missouri, and having an office at 3055 Lebanon Road, Suite 3-1100, Building Three, Nashville, Tennessee 37214, as Surety, are held and firmly bound unto Hamilton County Board of Commissioners located at One Hamilton Square, Noblesville, IN 46060, as Obligee, in the penal sum of One Hundred Seventy Eight Thousand Three Hundred Seventy Five Dollars and 00/100 (\$178,375.00) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents;

WHEREAS, the above bounden principal has been granted approval by the above named obligee for Riverwalk Commons Residential Senior Rental Housing - Storm Sewers as set forth at a meeting of the Town of Hamilton Planning Board on August 10, 2001, for final revision.

NOW, THEREFORE, the condition of the above obligation is such, that if the said Principal shall complete the above improvements in accordance with the plans and specifications prepared by Hamilton County Board of Commissioners within two year period from the date thereof; and shall indemnify and save harmless the Town from all costs and damages which it may suffer by reason of failure to do so, and fully reimburse and repay the Obligee any outlay and expense which it may incur in making good any such default, then this obligation shall be null and void, otherwise to remain in full force and effect.

THE FOREGOING OBLIGATION, however, is limited by the following express conditions, the performance of which shall be a condition precedent to any rights of claims or recovery hereunder:

1. Upon the discovery by the Obligee, or by the Obligee's agent or representative, of any act or omission that shall or might involve a loss hereunder, the Obligee shall endeavor to give written notice thereof with the fullest information obtainable at the time to the Surety at its office at Nashville, Tennessee.
2. Legal proceedings for recovery hereunder may not be brought unless begun within twelve (12) months from the date of the discovery of the act or omission of the Principal on account of which claim is made.
3. The Principal shall be made a party of any suit or action for recovery hereunder, and no adjustment shall be rendered against the Surety in excess of the penalty of this instrument.
4. No right of action shall accrue hereunder to or for the use or benefit of anyone other than the Obligee, and the Obligee's right hereunder, may not be assigned without the written consent of the Surety.

IN WITNESS WHEREOF, this instrument has been executed by the duly authorized representative of the Principal and the Surety.

SIGNED, SEALED AND DATED: September 5, 2001

(seal) **BOARD OF COMMISSIONERS OF THE COUNTY OF HAMILTON**  
St. C. Dellinger  
 (seal) Donna K. Jones  
Mason R. Clark  
 DATE 9/24/01

Residential Care VII, LLC  
 Principal  
 By: Donna K. Jones, Man.  
**GULF INSURANCE COMPANY**  
 By: Donna K. Jones  
 Donna K. Jones, Attorney-In-Fact

ATTEST: Robin M. Mills  
HAMILTON COUNTY AUDITOR

ATTEST: Robin M. Mills  
HAMILTON COUNTY AUDITOR

**RELEASE OF MAINTENANCE/PERFORMANCE BOND**  
**RELEASE OF LETTER OF CREDIT**  
**HAMILTON COUNTY BOARD OF COMMISSIONERS**  
 BY: Mason R. Clark  
 BY: St. C. Dellinger  
 BY: \_\_\_\_\_



Nashville, Tennessee 37214 / Telephone 615-234-0300

Bond No. B2 1845807

SUBDIVISION PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE Residential Care VII, LLC located at 6900 South Gray Road, Indianapolis, IN 46237, as Principal, and GULF INSURANCE COMPANY, authorized to do business in the State of Missouri, and having an office at 3055 Lebanon Road, Suite 3-1100, Building Three, Nashville, Tennessee 37214, as Surety, are held and firmly bound unto Hamilton County Board of Commissioners located at One Hamilton Square, Noblesville, IN 46060, as Obligee, in the penal sum of Nine Thousand Two Hundred Sixty one Dollars and 00/100 (\$9,261.00) for the payment of which sum well and truly to be made, we bind ourselves, our heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents;

WHEREAS, the above bounden principal has been granted approval by the above named obligee for Riverwalk Commons Residential Senior Rental Housing - Erosion Control as set forth at a meeting of the Town of Hamilton Planning Board on August 10, 2001, for final revision.

NOW, THEREFORE, the condition of the above obligation is such, that if the said Principal shall complete the above improvements in accordance with the plans and specifications prepared by Hamilton County Board of Commissioners within two year period from the date thereof; and shall indemnify and save harmless the Town from all costs and damages which it may suffer by reason of failure to do so, and fully reimburse and repay the Obligee any outlay and expense which it may incur in making good any such default, then this obligation shall be null and void, otherwise to remain in full force and effect.

THE FOREGOING OBLIGATION, however, is limited by the following express conditions, the performance of which shall be a condition precedent to any rights of claims or recovery hereunder:

- 1. Upon the discovery by the Obligee, or by the Obligee's agent or representative, of any act or omission that shall or might involve a loss hereunder, the Obligee shall endeavor to give written notice thereof with the fullest information obtainable at the time to the Surety at its office at Nashville, Tennessee.
2. Legal proceedings for recovery hereunder may not be brought unless begun within twelve (12) months from the date of the discovery of the act or omission of the Principal on account of which claim is made.
3. The Principal shall be made a party of any suit or action for recovery hereunder, and no adjustment shall be rendered against the Surety in excess of the penalty of this instrument.
4. No right of action shall accrue hereunder to or for the use or benefit of anyone other than the Obligee, and the Obligee's right hereunder, may not be assigned without the written consent of the Surety.

IN WITNESS WHEREOF, this instrument has been executed by the duly authorized representative of the Principal and the Surety.

SIGNED, SEALED AND DATED: September 5, 2001

(seal) BOARD OF COMMISSIONERS OF THE COUNTY OF HAMILTON
H.C. Dellinger
Dana Crabb
Maura Clark
DATE 9/24/01

Residential Care VII, LLC
Principal

By: Mark A. Johnson, Man.

GULF INSURANCE COMPANY
By: Donna K. Jones
Donna K. Jones, Attorney-In-Fact

RELEASE OF MAINTENANCE/PERFORMANCE BOND
RELEASE OF LETTER OF CREDIT

HAMILTON COUNTY BOARD OF COMMISSIONERS

BY: Sharon B. [Signature]
BY: H.C. Dellinger
BY: [Signature]

ATTEST: Robin M. Mills
HAMILTON COUNTY AUDITOR

ATTEST: Robin M. Mills
HAMILTON COUNTY AUDITOR



CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: RIVERWALK COMMONS

I hereby certify that:

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

Signature: Michael S. Deer Date: 6/13/07

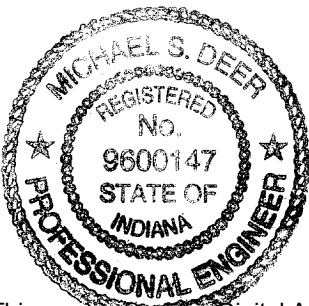
Type or Print Name: Michael S Deer

Business Address: 432 S Emerson Ave  
Greenwood IN 46143

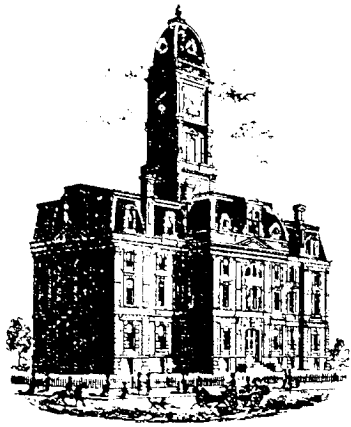
Telephone Number: 317 859 3539

SEAL

INDIANA REGISTRATION NUMBER



9600147



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**

**March 7, 2008**

**Re: Sly Run Drain: Riverwalk Commons**

Attached are as-builts, certificate of completion & compliance, and other information for Riverwalk Commons. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated October 8, 2001. The report was approved by the Board at the hearing held November . (See Drainage Board Minutes Book 6, Pages 212-213)

The changes are as follows:

<b>Structure:</b>	<b>Length:</b>	<b>Size</b>	<b>Material:</b>	<b>Up Invert:</b>	<b>Dn Invert</b>	<b>Grade:</b>	<b>Changes:</b>
D5-D4	183	18	RCP	782.66	781.51	0.64	-5
D4-D3	142	30	RCP	780.93	780.41	0.37	-5
D3-D2	158	30	RCP	780.37	779.49	0.56	-5
D2-D1	65	36	RCP	779.47	779.05	0.65	-3
D1-FE	140	36	RCP	778.95	778.63	0.23	-6
FE2-D2A	88	12	RCP	785.69	782.48	3.64	-2
D2A-D2	123	18	RCP	782.01	779.49	2.05	-3
D2C-D2B	22	12	RCP	783.35	782.3	4.74	-6
D2B-D2	68	12	RCP	782.12	781.17	2.63	-5
D4B-D4A	111	18	RCP	786.81	783.25	2	-3
D4A-D4	123	18	RCP	783.17	781.51	1.77	-4
D5C-D5B	23	12	RCP	783.45	783.13	1.38	-4
D5B-D5	92	15	RCP	783.09	782.76	0.36	-7
D10-D9	194	12	RCP	782.32	781.04	0.66	-3
D9-D8	220	24	RCP	780.27	779.82	0.29	-4
D8-D7	116	24	RCP	779.81	779.47	0.29	-7
D7-D6	150	24	RCP	779.44	779.12	0.21	-3
D6-FE4	28	24	RCP	779.07	778.94	0.45	-6
FE7-D21	14	12	RCP	778.59	778.97	2.63	-2
D15-D16	398	24	RCP	778.5	777.72	0.2	-2
D16-D17	311	24	RCP	777.49	776.4	0.35	-6

D17-D18	48	24	RCP	776.29	776.21	0.16	-9
D18-D19	140	24	RCP	776.2	775.59	0.43	-4
D19-D20	298	24	RCP	775.61	774.64	0.33	-21
D20-FE8	153	24	RCP	771.62	771.02	0.39	
FE6-D14A	18	12	RCP	783	782	5.56	
D14A-D14	58	15	RCP	781.75	781.25	0.86	
D14-D13	137	15	RCP	781	780	0.73	
D13-D12	96	15	RCP	779.9	779	0.94	
D12-D11	292	18	RCP	778.75	776.5	0.77	
D11-FE5	125	24	RCP	776	774.25	1.4	
D7A-D7	69	12	RCP	781.28	780.45	1.19	
D21-D15	23	24	RCP	779.02	778.55	2	-1

**RCP Pipe Totals:**

12	496
15	383
18	832
24	2010
30	300
36	205

**Total:** 4226

<b>Other Drain:</b>	
Open Ditch	303

**Total:** 303

The length of the drain due to the changes described above is now **4529 feet**.

The easements establishing the drainage easements were recorded under instrument #'s 200100059173, 200100059174, and 200100059175.

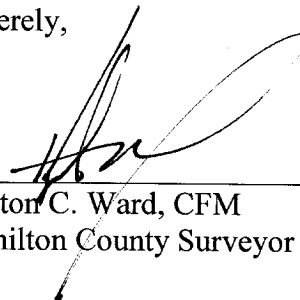
The following sureties were guaranteed by Bond Safeguard Insurance and released by the Board on its September 10, 2007 meeting.

**Bond-LC No:** 5006644  
**Insured For:** Storm Sewers  
**Amount:** \$178,211  
**Issue Date:** September 23, 2003

**Bond-LC No:** 5006645  
**Insured For:** Erosion Control  
**Amount:** \$14,175  
**Issue Date:** September 23, 2003

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

Sincerely,



Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/slm

# RECORD DRAWING

## GENERAL NOTES/SPECIFICATIONS: STORM SEWER SYSTEMS

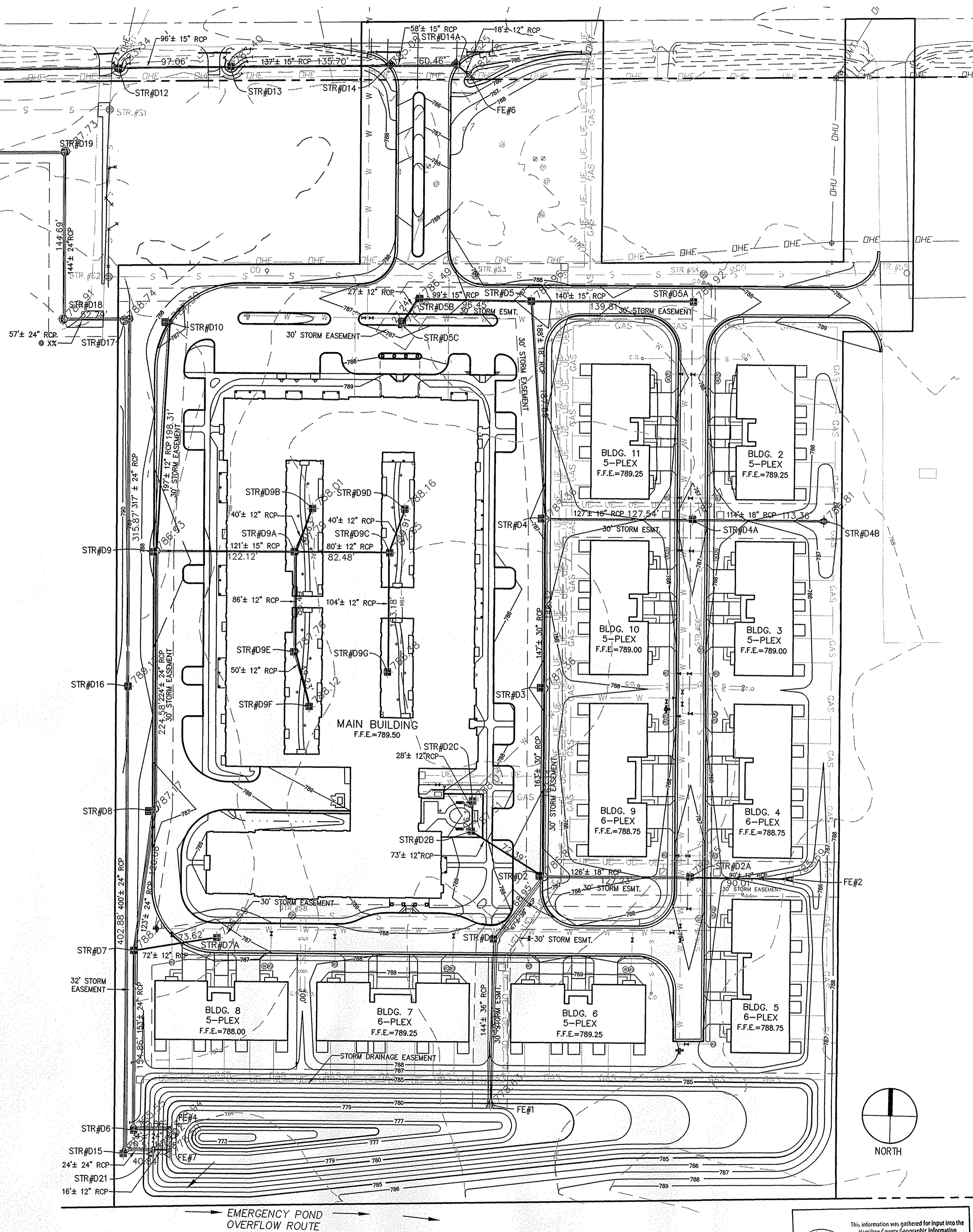
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND THE LOCATION AND INVERT OF THE EXISTING SANITARY AND STORM SEWERS. ANY CONFLICT BETWEEN THE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHOULD BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OPERATIONS.
- MATERIALS AND WORKMANSHIP SHALL MEET THE LATEST SPECIFICATIONS OF THE HAMILTON COUNTY SURVEYORS OFFICE.
- STORM SEWER PIPE 12" IN DIAMETER AND LARGER SHALL BE REINFORCED B-WALL CONCRETE PIPE AND SHALL CONFORM IN ALL RESPECTS TO ASTM C-76. PIPE BEDDING SHALL BE PER DETAIL SHEET C13.
- THE SEWER TRENCH WIDTH SHALL NOT EXCEED THE OUTSIDE DIAMETER OF THE PIPE PLUS 30 INCHES BELOW A POINT WHICH IS 1 FOOT ABOVE THE TOP OF THE PIPE. THE TAP TRENCH SHALL NOT EXCEED 18 INCHES.
- ALL SEWER TRENCH BACKFILL WITHIN THE RIGHT-OF-WAYS AND BENEATH PAVED AREAS SHALL BE FULL DEPTH COMPACTED INDOT No. 53 STONE.
- WHERE WATER LINE CROSSINGS ARE NECESSARY, A MINIMUM OF 18" VERTICAL PIPE CLEARANCE MUST BE MAINTAINED (MEASURED FROM THE BOTTOM OF THE UPPER PIPE TO THE TOP OF THE LOWER PIPE). PREFERABLY WITH THE WATER MAIN ABOVE THE SEWER. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MUST BE MAINTAINED BETWEEN WATER AND SEWER LINES. WHEN IT IS IMPOSSIBLE TO MAINTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION, THE SEWER MUST BE CONSTRUCTED OF WATERWORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS, OR SDR 26 PVC PRESSURE PIPE WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE SEWER CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR AS REQUIRED BY THE HAMILTON COUNTY SURVEYORS OFFICE.
- THE CONTRACTOR SHALL PROVIDE THE HAMILTON COUNTY SURVEYOR'S OFFICE WITH AS-BUILT DRAWINGS INCLUDING ALL FINAL MANHOLE RIM AND INVERT ELEVATIONS, PREPARED AND CERTIFIED BY A REGISTERED LAND SURVEYOR IN THE STATE OF INDIANA IMMEDIATELY UPON THE COMPLETION OF THE SEWER INSTALLATION.

## GENERAL NOTE: UTILITY CONFLICTS

IN INSTANCES OF POTENTIAL CONFLICT BETWEEN PRESSURIZED UTILITY SERVICES (GAS AND WATER DISTRIBUTION SYSTEMS) AND GRAVITY UTILITY SERVICES (SANITARY AND STORM SEWER SYSTEMS) REQUIRED SEPARATION DISTANCES MUST BE MAINTAINED (REFER TO GENERAL NOTES, SEWER SYSTEMS NOTE No. 7). IN CASES OF CONFLICT IN ELEVATION, THE PRESSURIZED UTILITY SERVICE WILL YIELD IN ELEVATION TO THE GRAVITY SYSTEM, AND THE PRESSURIZED SYSTEM WILL BE RAISED OR LOWERED TO ALLEVIATE THE CONFLICT. AT NO TIME SHALL THE MINIMUM DEPTH OF COVER REQUIRED FOR THE PRESSURIZED UTILITIES BE REDUCED TO AVOID CONFLICT.

## SYMBOLS & ABBREVIATIONS

—	NEW BUILDING	FL	FLOW LINE OF GUTTER
—	PROPERTY LINE	RCP	REINFORCED CONCRETE PIPE
— W — W	EXISTING WATER MAIN	T/C	TOP OF CURB/CASTING
— W — W	NEW WATER MAIN	PVC	POLYVINYL CHLORIDE PIPE
— G — G	EXISTING GAS LINE	STR	SEWER SYSTEM STRUCTURE
— G — G	NEW GAS LINE	CO	CLEAN OUT
— S — S	NEW SANITARY SEWER	BM	BENCH MARK
— S — S	EXISTING SANITARY SEWER	R/W	RIGHT-OF-WAY
— ST — ST	NEW STORM SEWER	PERF.	PERFORATED
— ST — ST	EXISTING STORM SEWER	I.E.	INVERT ELEVATION
— SD — SD	NEW SUB DRAIN TILE	R.E.	RIM ELEVATION
— W — W	VALVE & HYDRANT	EXST.	EXISTING
— UT — UT	EXISTING BURIED PHONE LINE	FFE	FINISH FLOOR ELEVATION
— UE — UE	EXISTING UNDERGROUND ELECTRIC LINE	CONC.	CONCRETE
— OE — OE	EXISTING OVERHEAD ELECTRIC LINE	CONC.	DESIGNATES NEW BUILDING
— X — X	EXISTING WOODEN WIRE FENCE	842.50	PROPOSED SPOT ELEVATION
— BOO — BOO	EXISTING GRADE CONTOUR	836.74	EXISTING SPOT ELEVATION
— BOO — BOO	PROPOSED GRADE CONTOUR		



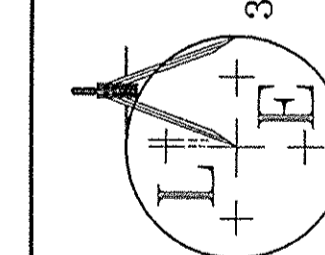
## REVISION DATES

REV. 04/28/03 PER IAC  
12/9/04 RECORD DRAWING IN  
STATE PLANE COORDINATE SYSTEM

STORM SEWER PLAN  
RIVERWALK COMMONS  
RESIDENTIAL CARE VII, LLC  
1455 WESTFIELD BOULEVARD  
CITY OF NOBLESVILLE, INDIANA

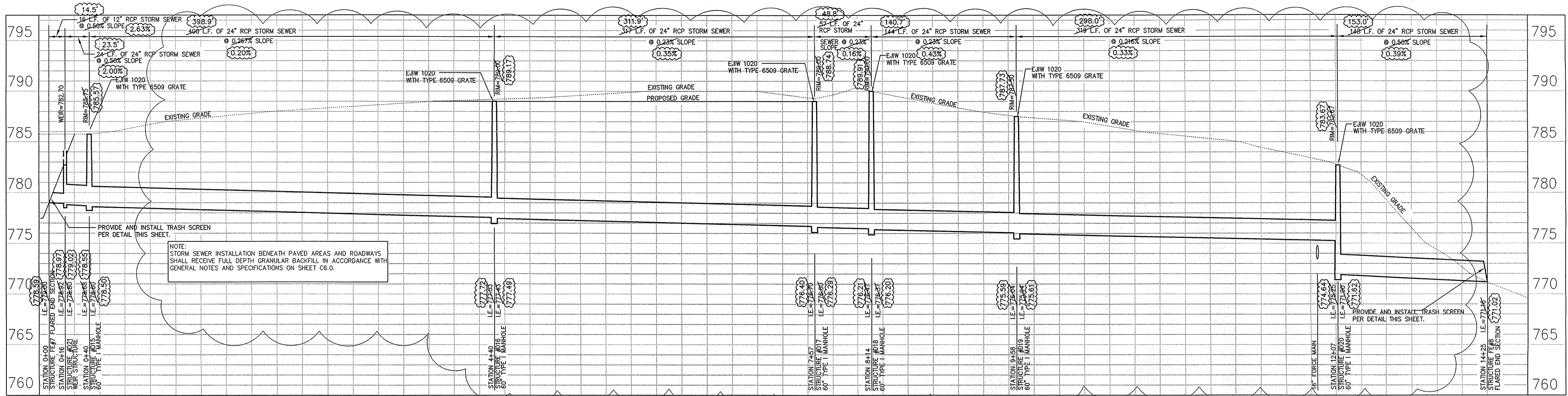
LEWIS ENGINEERING  
a Deer Engineering, Inc. company  
ENGINEERING - SURVEYING - PLANNING

3315 EAST MAIN STREET, SUITE D, PLAINFIELD, IN 46168  
PHONE: (317)839-2412 - FAX: (317)839-2437



DATE: 01/13/03  
DRAWN BY: MRB  
CHECKED BY:  
SCALE: 1" = 50'  
DRAWING FILE: 02-437  
JOB NO: 02-437

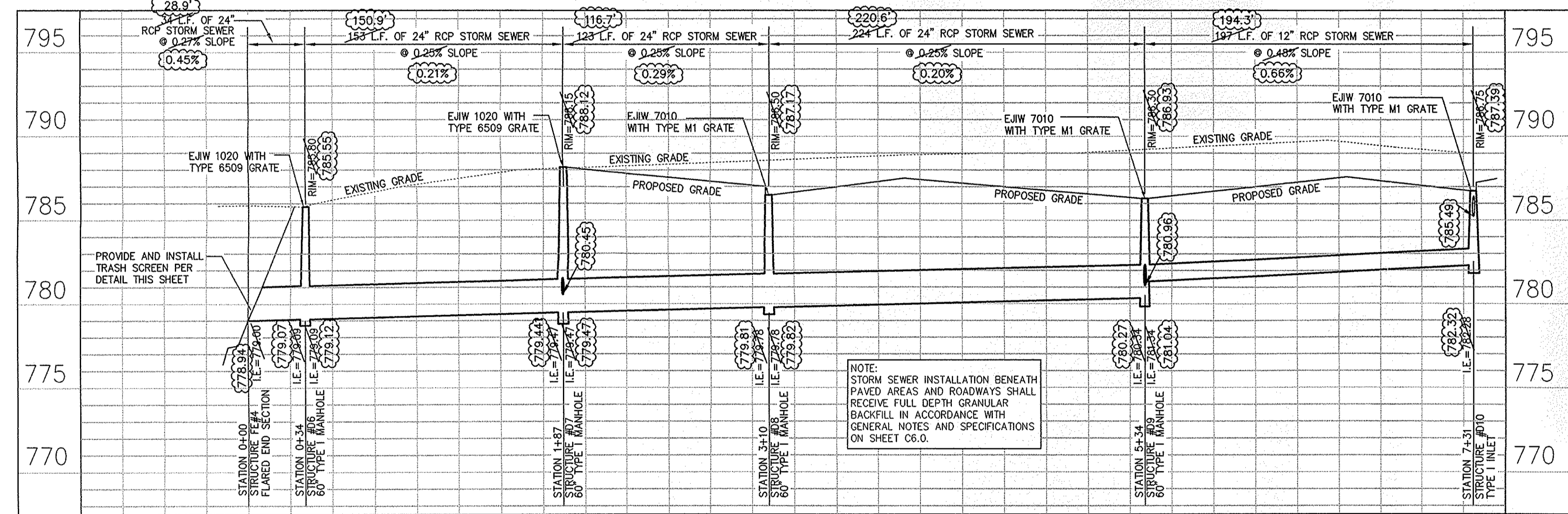
SHEET NO. 66.0  
MAY 15 2007



**STR. FE#7 TO STR. FE#8 - PROFILE**

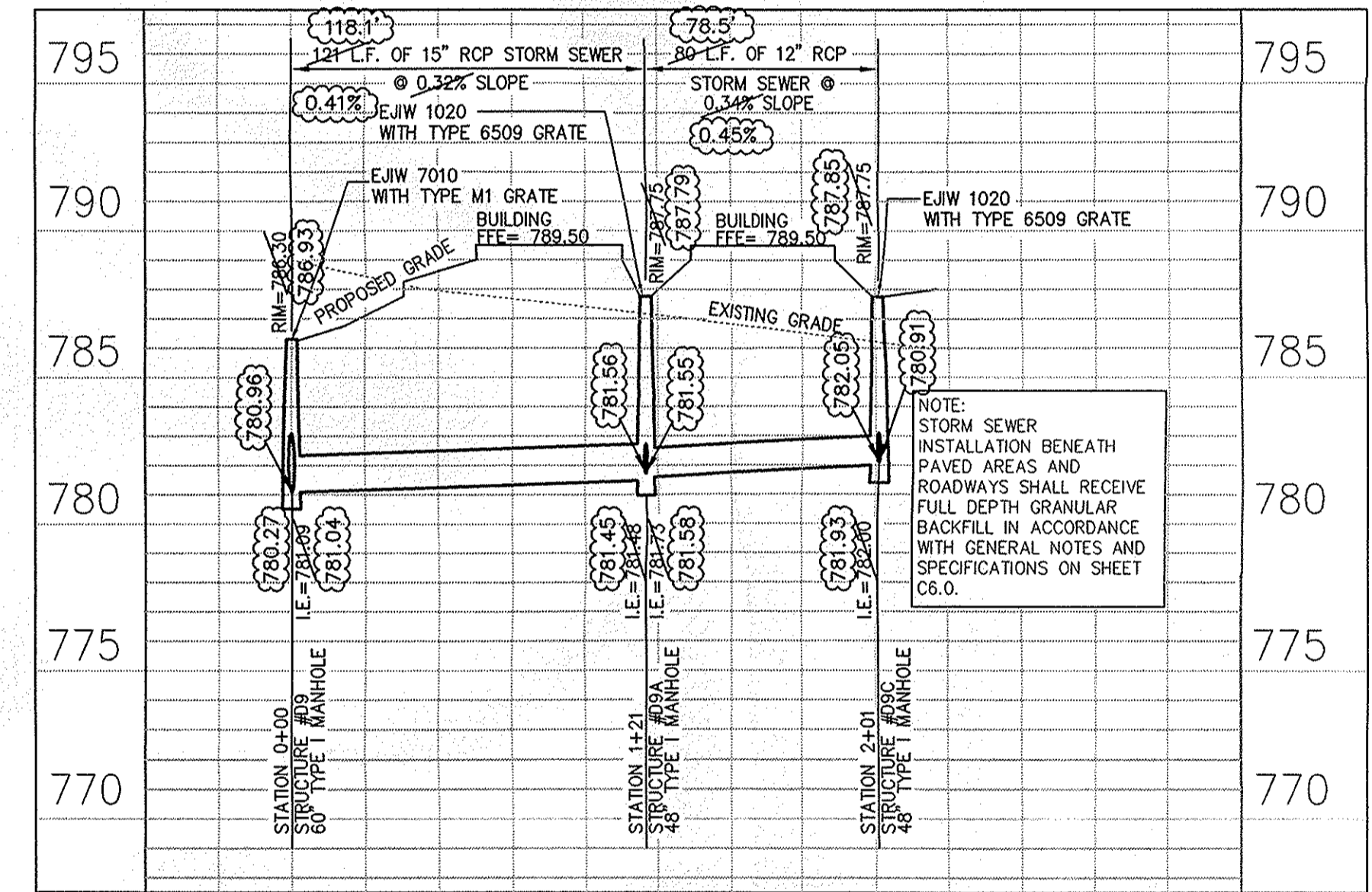
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL

**RECORD DRAWING**



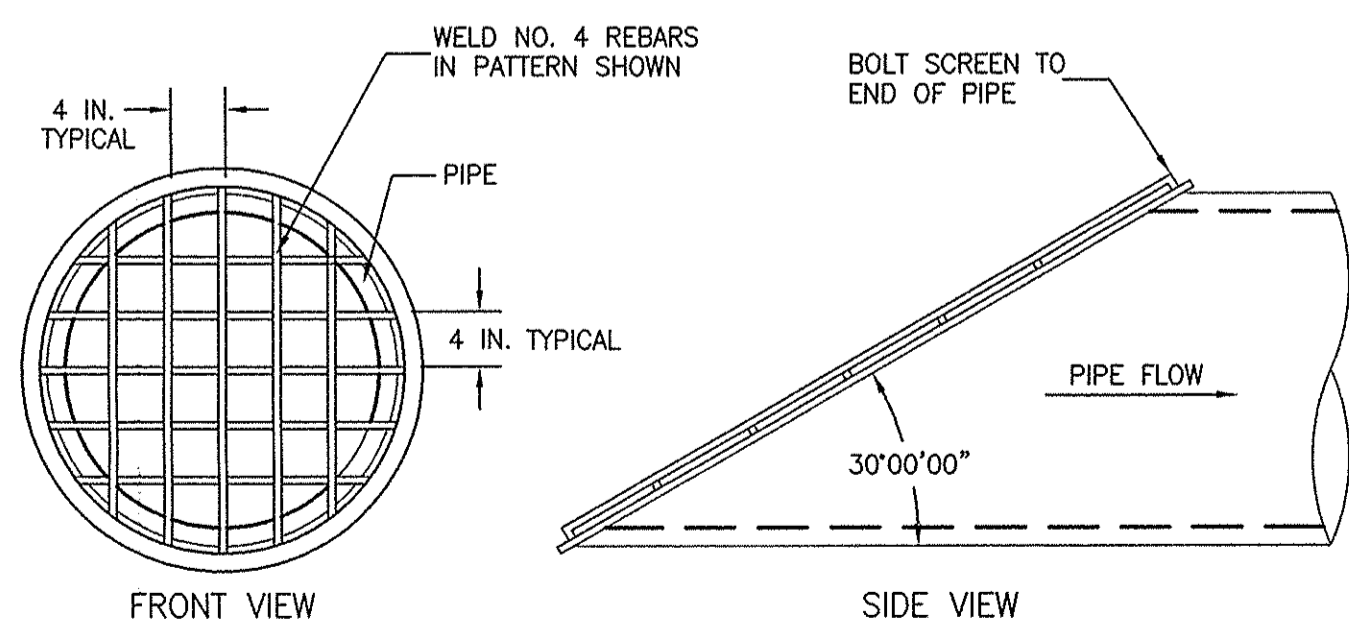
**STR. FE#4 TO STR.# D10 - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**STR. # D9A TO STR.# D9C - PROFILE**

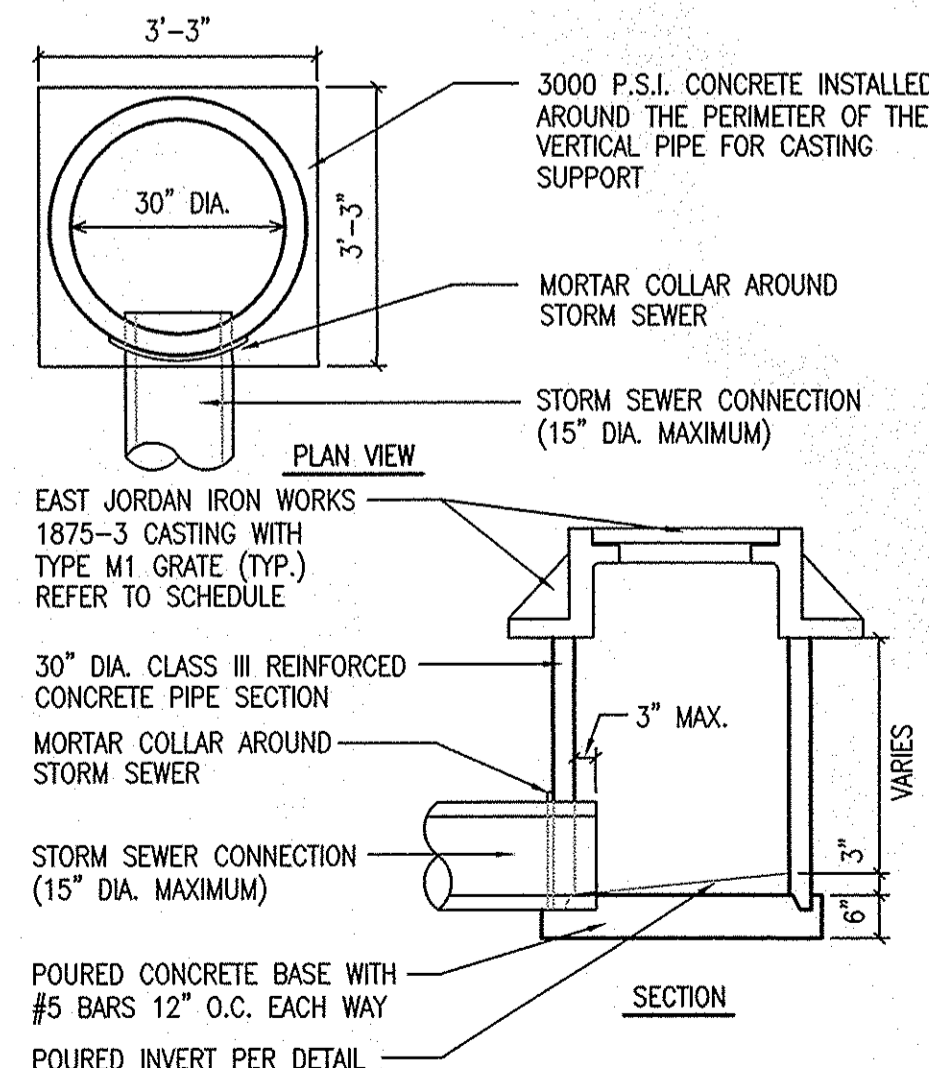
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



NOTE:  
DETAIL SHOWN IS FOR A 12" OUTLET STRUCTURE. PROVIDE ADDITIONAL VERTICAL AND HORIZONTAL BARS TO MAINTAIN A 6" OR 4" MAXIMUM SPACING BETWEEN BARS, DEPENDENT ON OPTION.

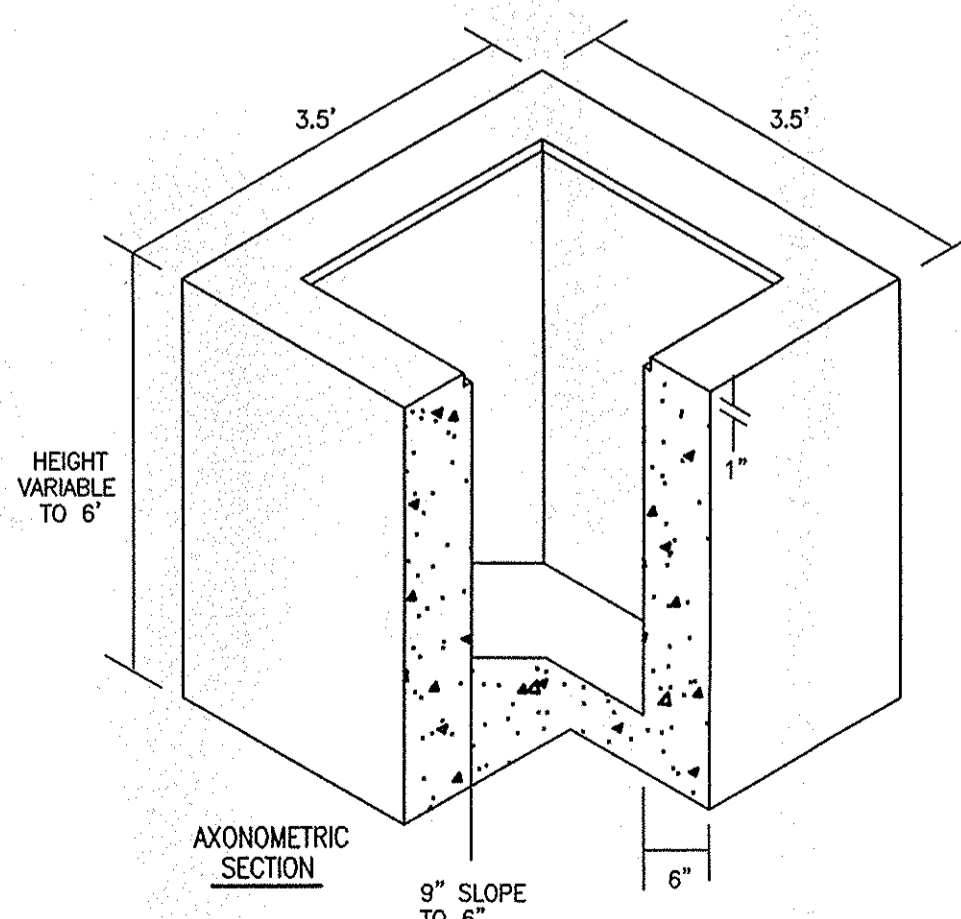
**FLARED END SECTION TRASH SCREEN**

NTS



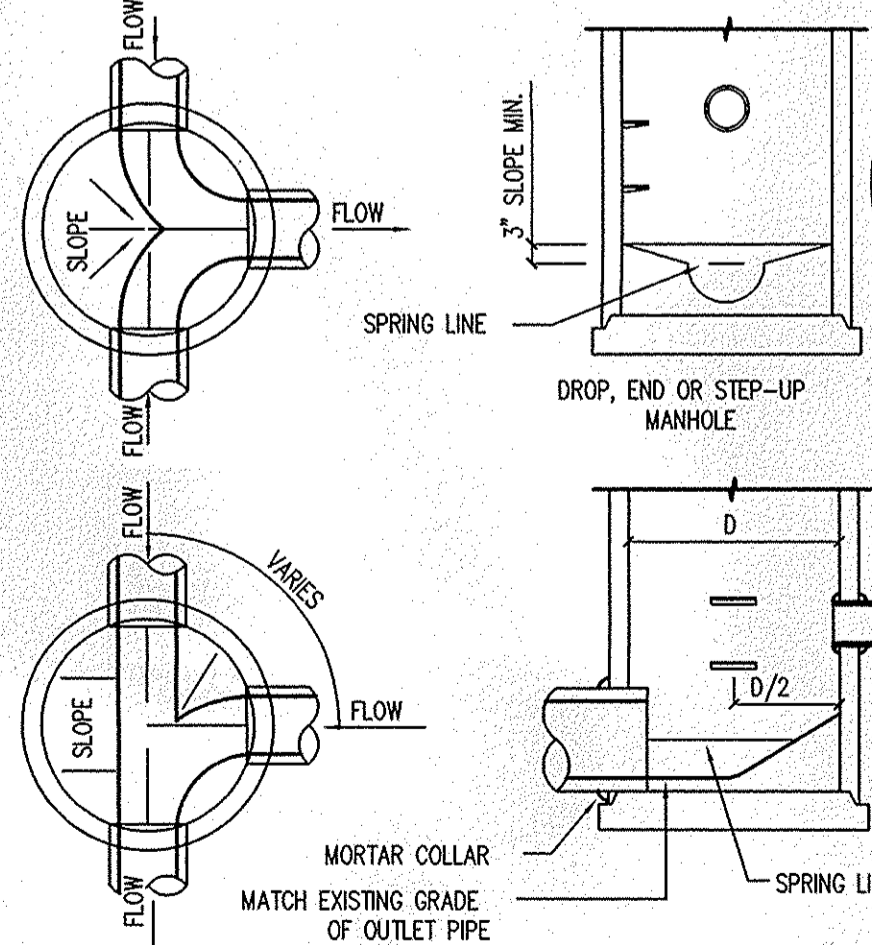
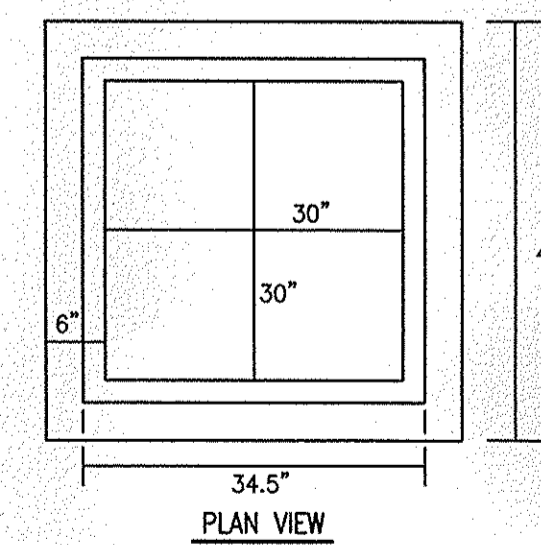
**TYPE I INLET DETAIL**

NOT TO SCALE



**TYPE III INLET DETAIL**

NTS



NOTE: THE CENTERLINE OF ALL PIPE TO INTERSECT THE CENTERLINE OF THE MANHOLE. ALL INCOMING PIPE SHALL HAVE A SMOOTH FINISH. INVERTS TO BE POURED UNDER DRY CONDITIONS.

**POURED INVERT SHAPES DETAIL**

NTS

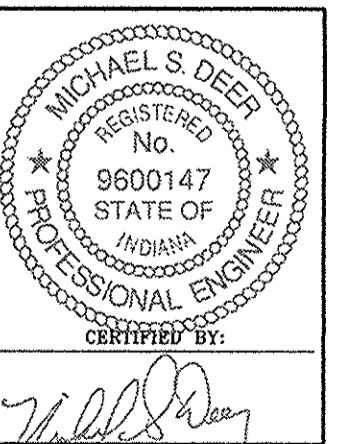
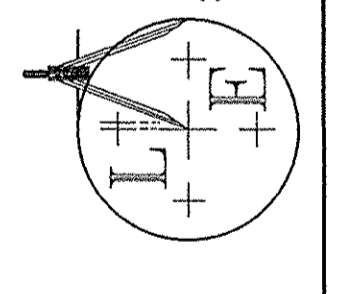
NOTE:

DUE TO CHANGE IN GRADING PLAN, THE TOP OF CASTING ELEVATIONS FOR STRUCTURES #D1, D2, D2A, D3, D4, D4A, D5, D5A, D5B, D5C, D7A, D8, D9, D9A, D9B, D9C, D9D, D9E, D9F, D9G, AND FE2 NEED TO BE ADJUSTED UP 0.3'. INVERTS ARE TO REMAIN AS PLANNED, INVERTS WERE NOT ADJUSTED.

REVISION DATES	
REV. 06/06/03 PER DIRT. CALCS	
REV. 12/02/03 PER STORM SEWER CHANGE DUE TO FORCE MAIN	
12/17/04 "RECORD DRAWING" IN STATE PLANE COORDINATE SYSTEM	

**STORM SEWER PROFILES**  
**RIVERWALK COMMONS**  
RESIDENTIAL CARE VII, LLC  
1455 WESTFIELD BOULEVARD  
CITY OF NOBLESVILLE, INDIANA

**LEWIS ENGINEERING**  
a Deer Engineering, Inc. company  
ENGINEERING - SURVEYING - PLANNING  
3315 EAST MAIN STREET, SUITE D, PLAINFIELD, IN 46168  
PHONE: (317)839-2412 - FAX: (317)839-2437

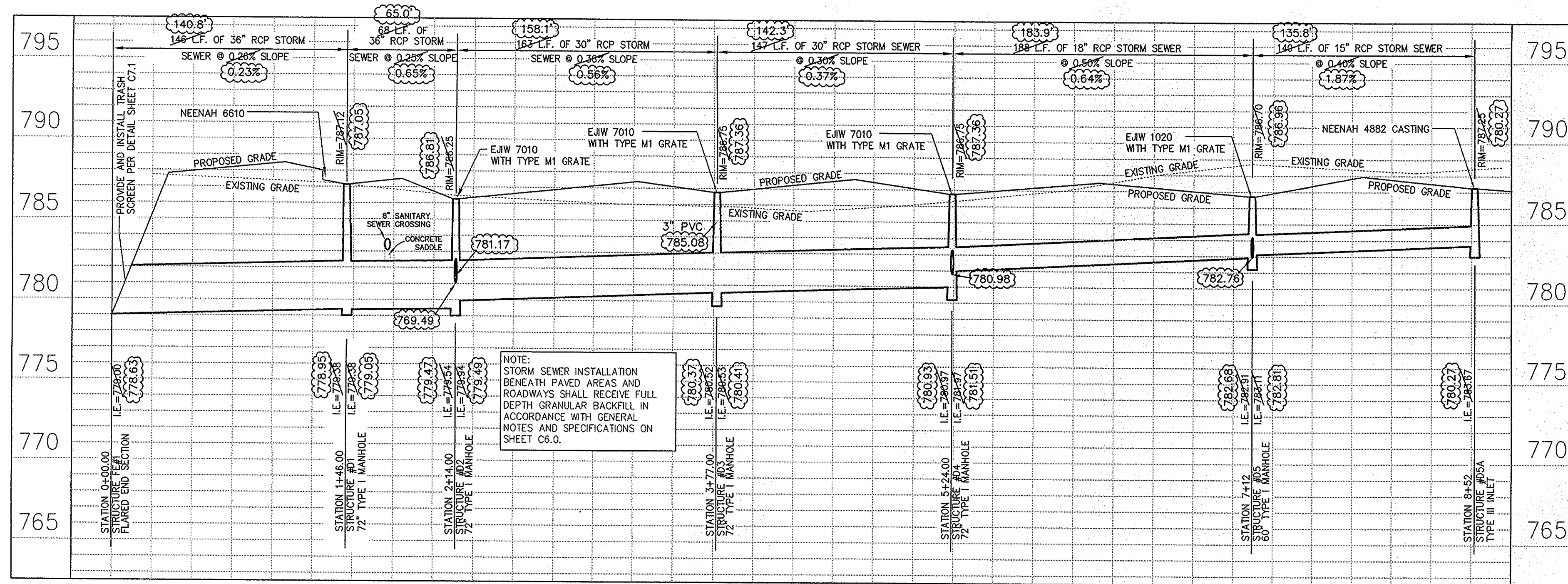


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CHECKED BY:	
SCALE:	1" = 50'
DRAWING FILE:	02-437
JOB NO.:	02-437

SHEET NO.

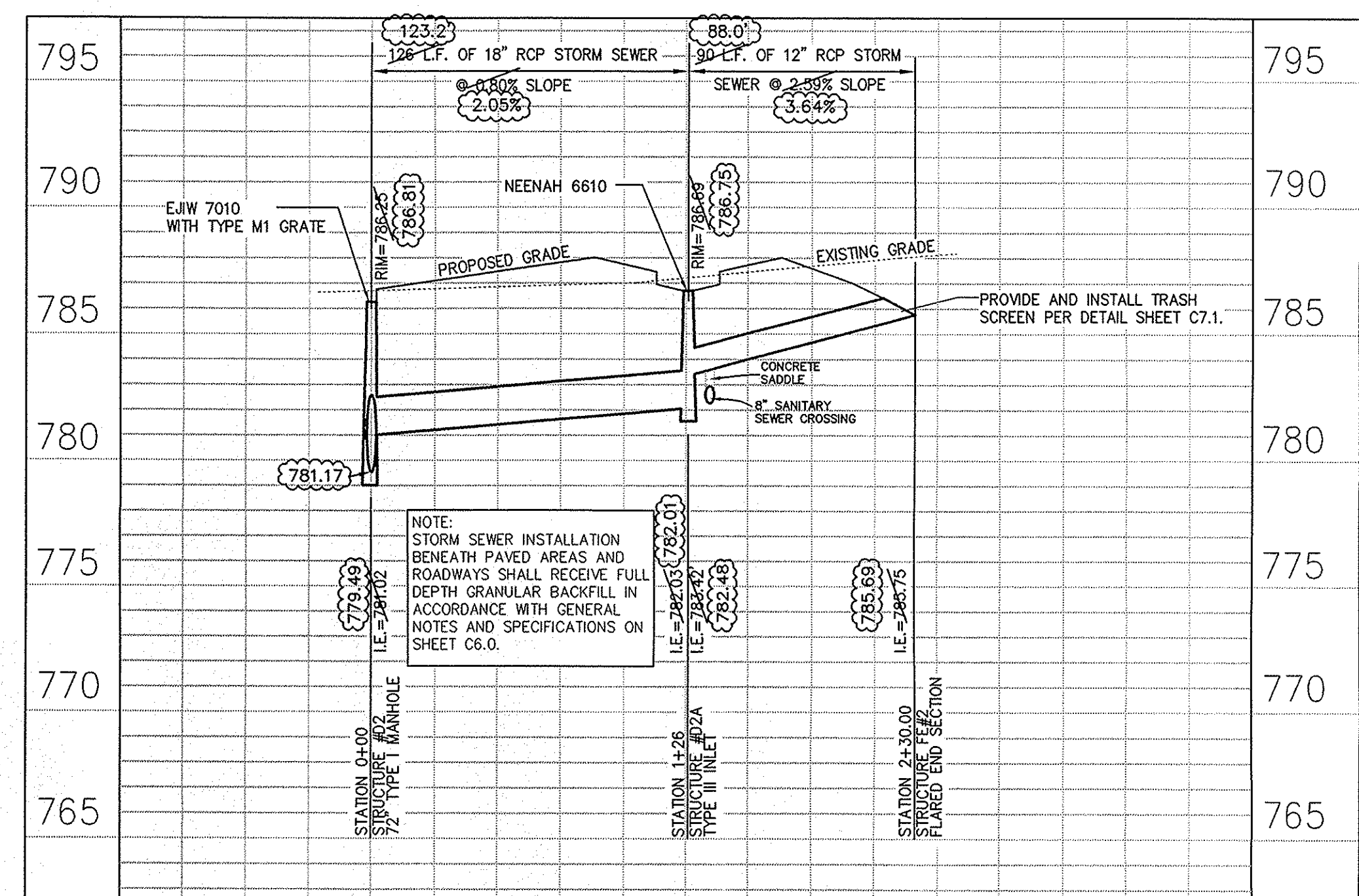
**C7 FILED**  
MAY 5 2007

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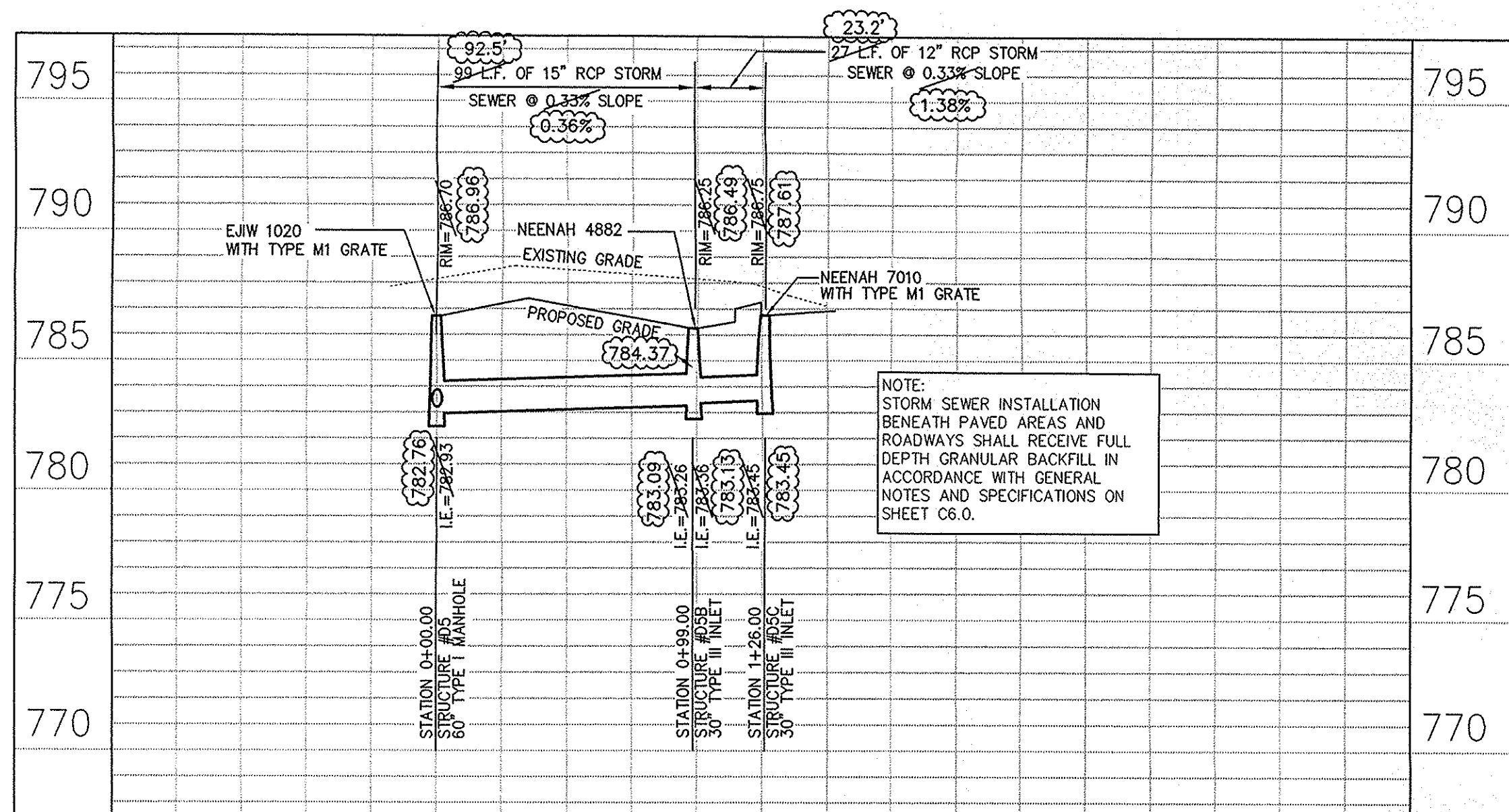
**STR. FE#1 TO STR.#D5A - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



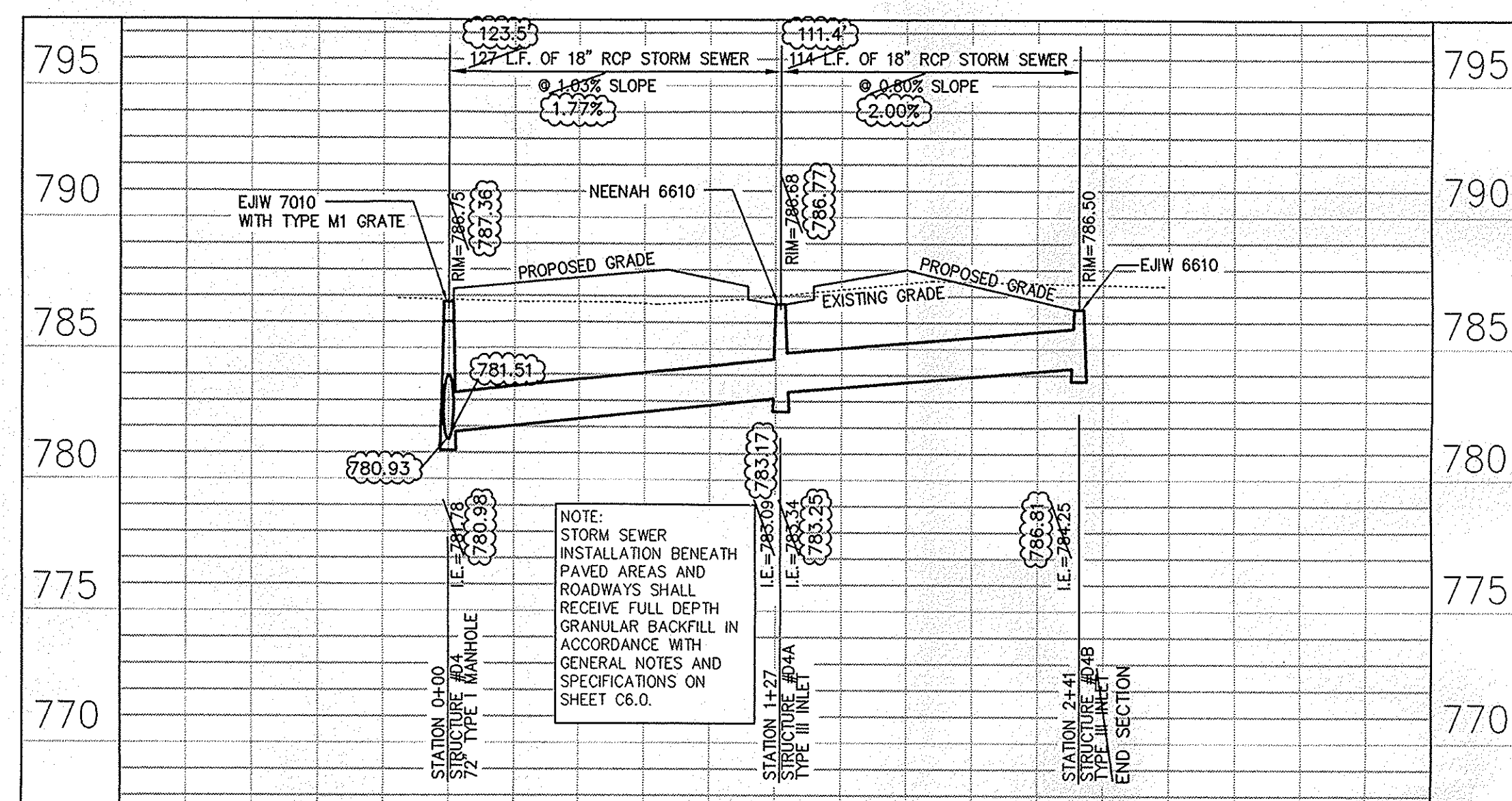
**STR. #D2 TO STR. FE#2 - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**STR. #D5 TO STR. #D5C - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**STR. #D4 TO STR. #D4A - PROFILE**

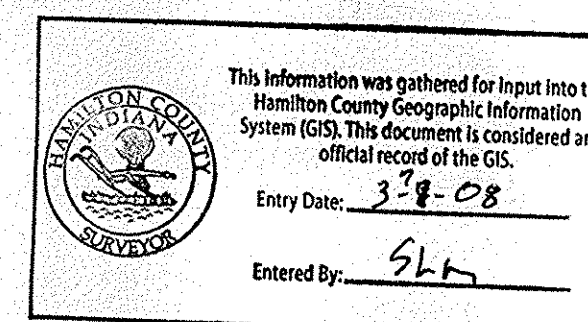
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL

Storm\_Pipe

Per submitted Spreadsheet by Engineer. SLM 3-10-2008 04-394 Riverwalk Commons GIS Data Hamilton County.xls

UPS_STR_ID	DOW_STR_ID	SLOPE	DIAM	PIPE_LEN	MATER	PIPE_CLASS	LEN_GRA_FI	AVG_DEPTH	UPST_INVER	DOW_INVER	SLOPE_CHCC
FE6	D14A	6.56	12	18	RCP	III		2.00	783	782	0.05566
D14A	D14	0.86	15	56	RCP	III		3.46	781.75	781.25	0.00862
D14	D13	0.73	15	137	RCP	III		3.71	781	780	0.0073
D13	D12	0.94	15	96	RCP	III		4.05	779.9	779	0.00937
D12	D11	0.77	18	292	RCP	III		4.89	778.75	778.5	0.00771
D11	FE5	1.4	24	126	RCP	III		3.76	776	774.25	0.014

**RECORD DRAWING**

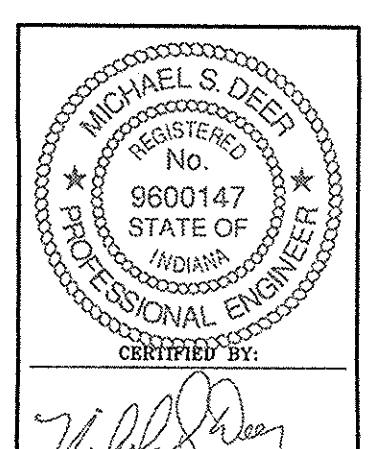


REVISION DATES

12/10/04	RECORD DRAWING IN STATE PLANE COORDINATE SYSTEM
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**STORM SEWER PROFILE**  
**RIVERWALK COMMONS**  
RESIDENTIAL CARE VII, LLC  
1455 WESTFIELD BOULEVARD  
CITY OF NOBLESVILLE, INDIANA

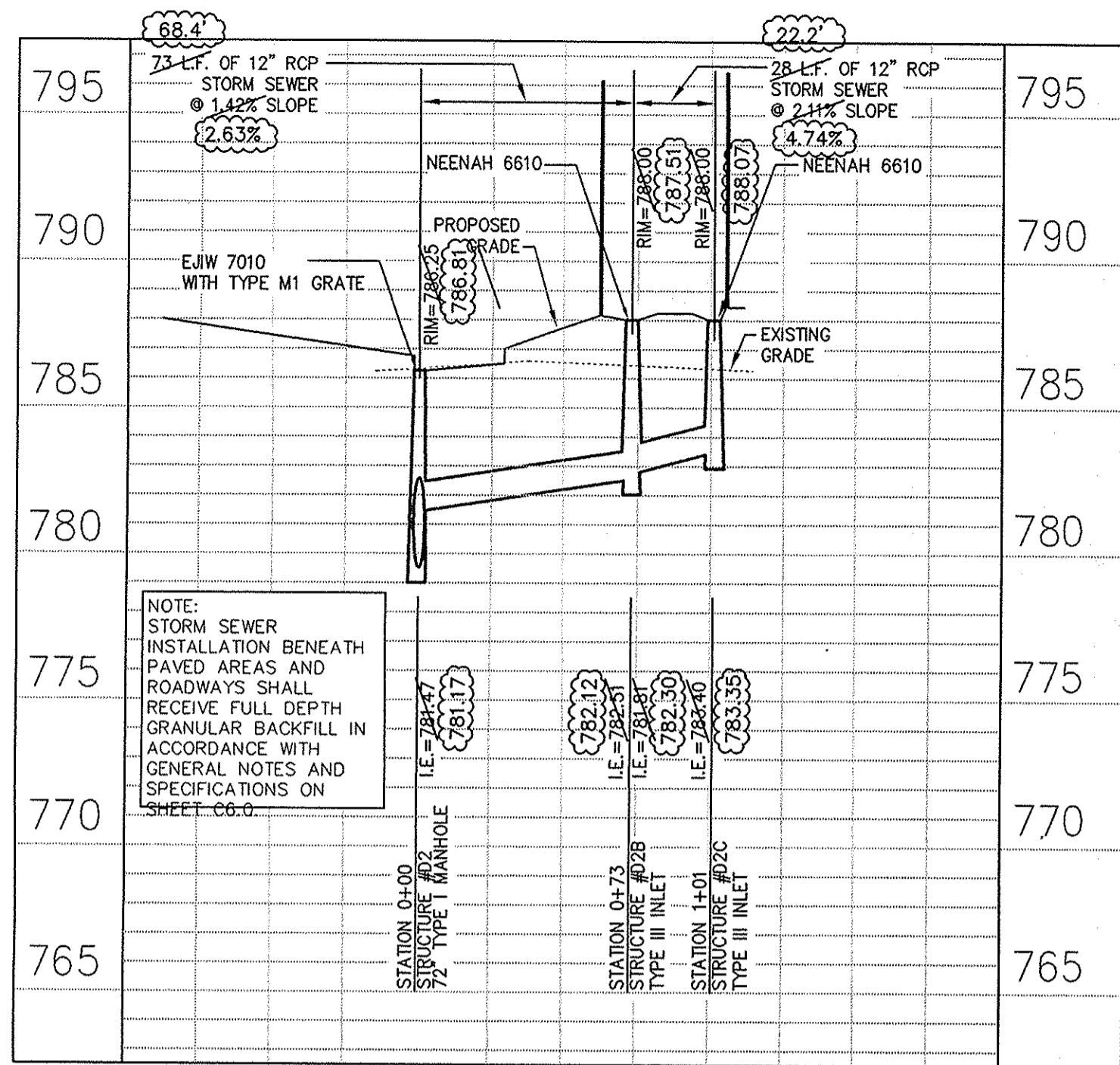
**LEWIS ENGINEERING**  
a Deer Engineering, Inc. company  
ENGINEERING - SURVEYING - PLANNING  
3315 EAST MAIN STREET, SUITE D, PLAINFIELD, IN 46168  
PHONE: (317) 859-2412 - FAX: (317) 839-2437



DATE: 01/13/03  
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CHECKED BY:  
SCALE: 1" = 50'  
DRAWING FILE: 02-437  
JOB NO: 02-437

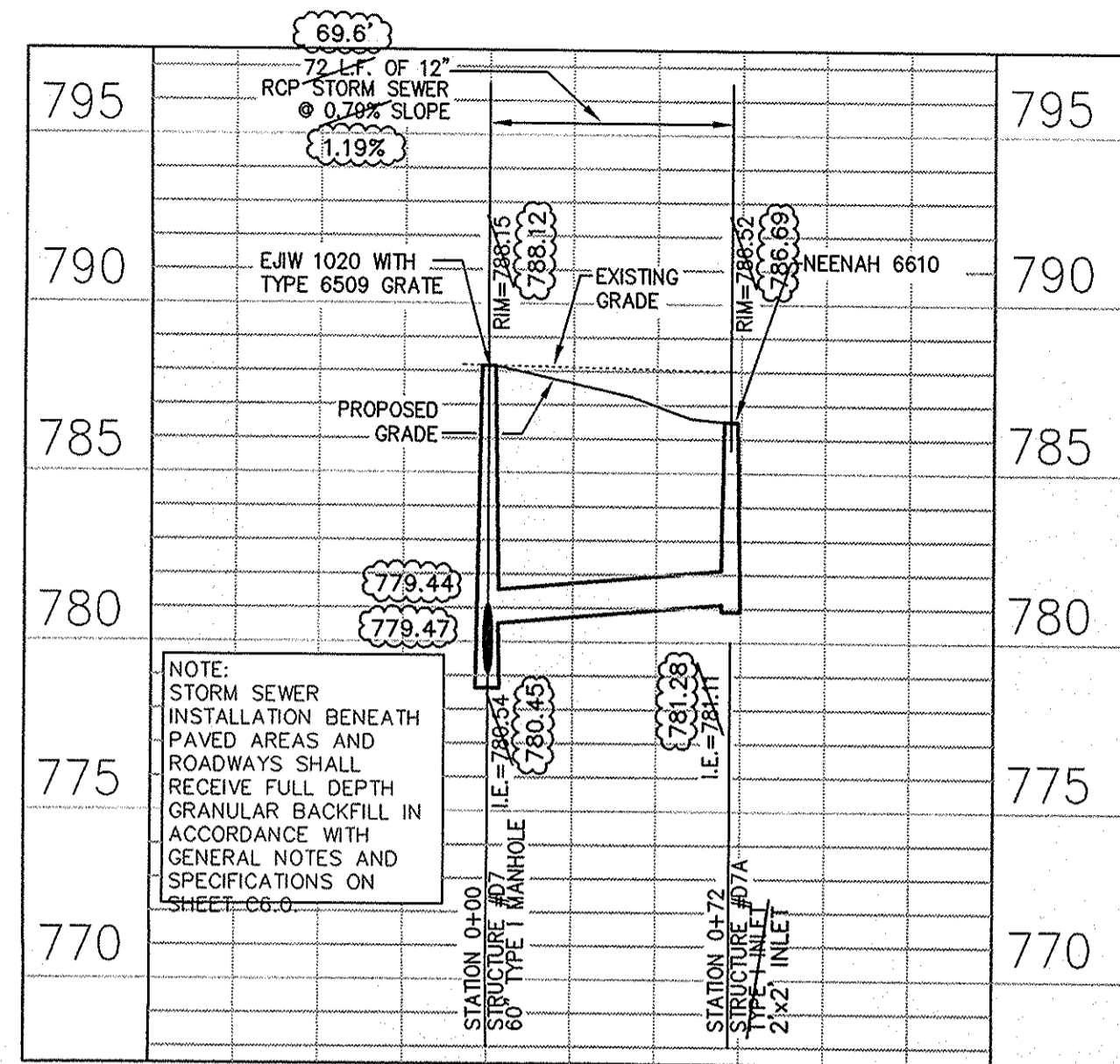
SHEET NO.  
**C7.2**  
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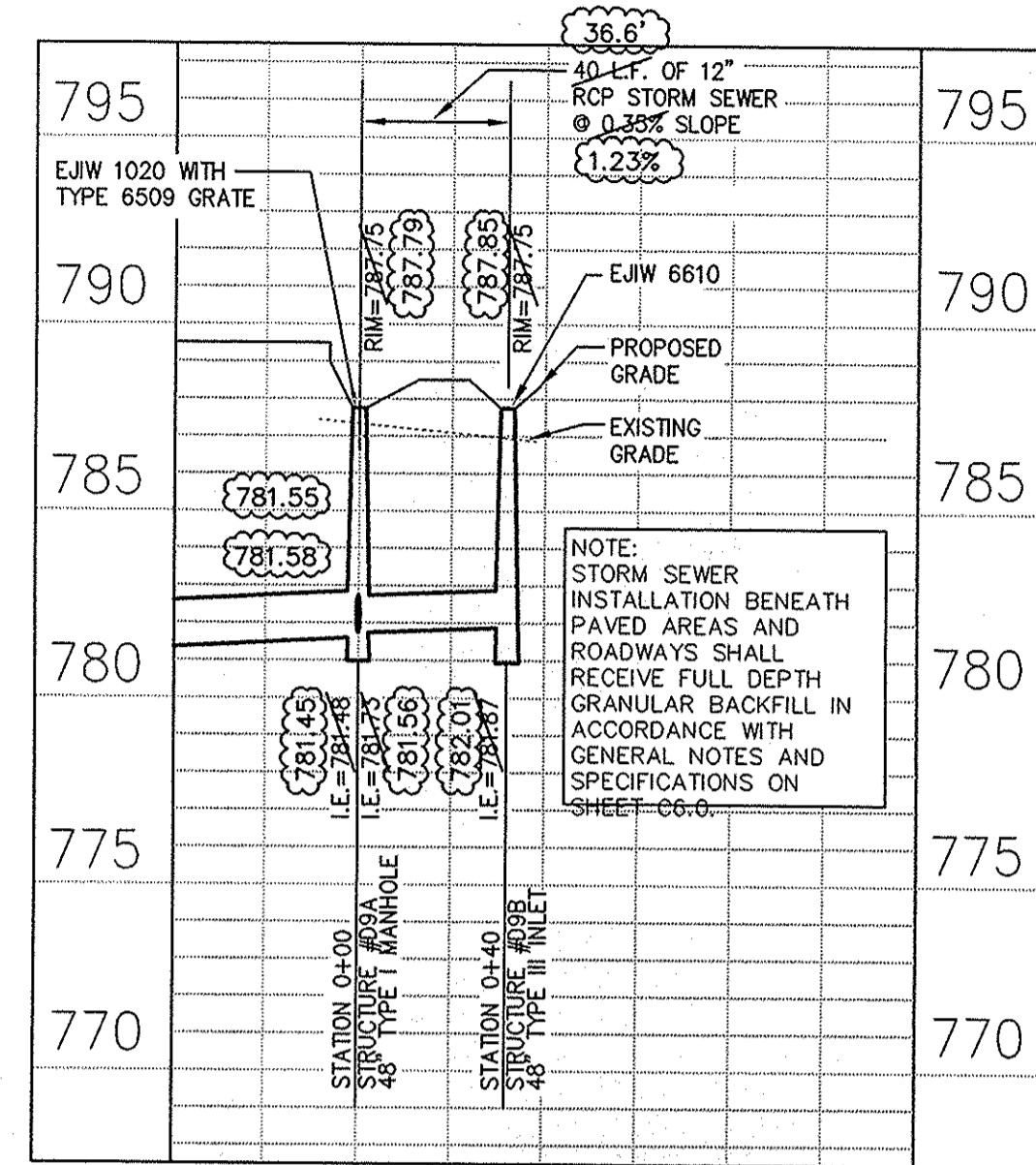
**STR. D2 TO D2C - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



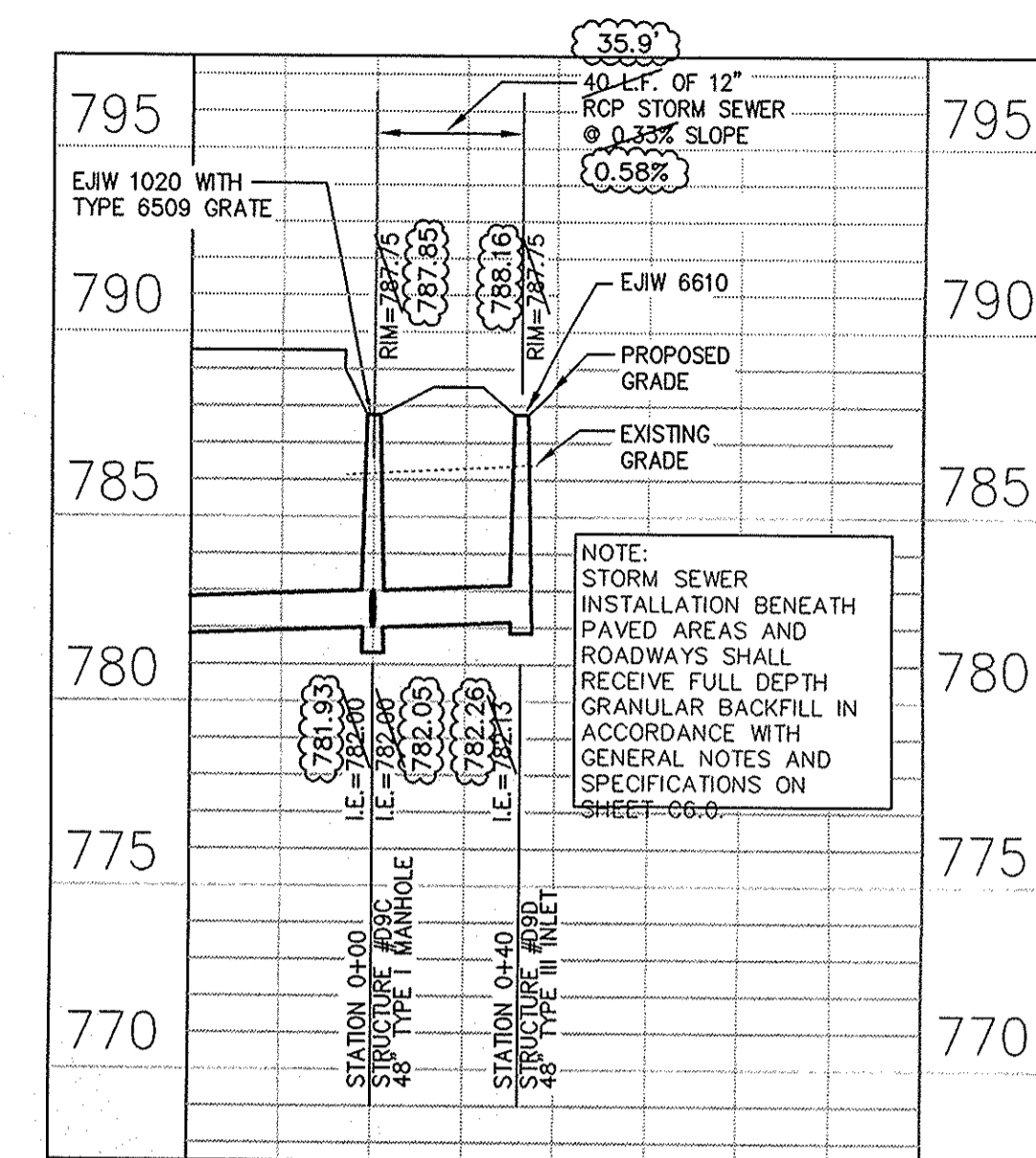
**STR. #D7 TO D7A - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



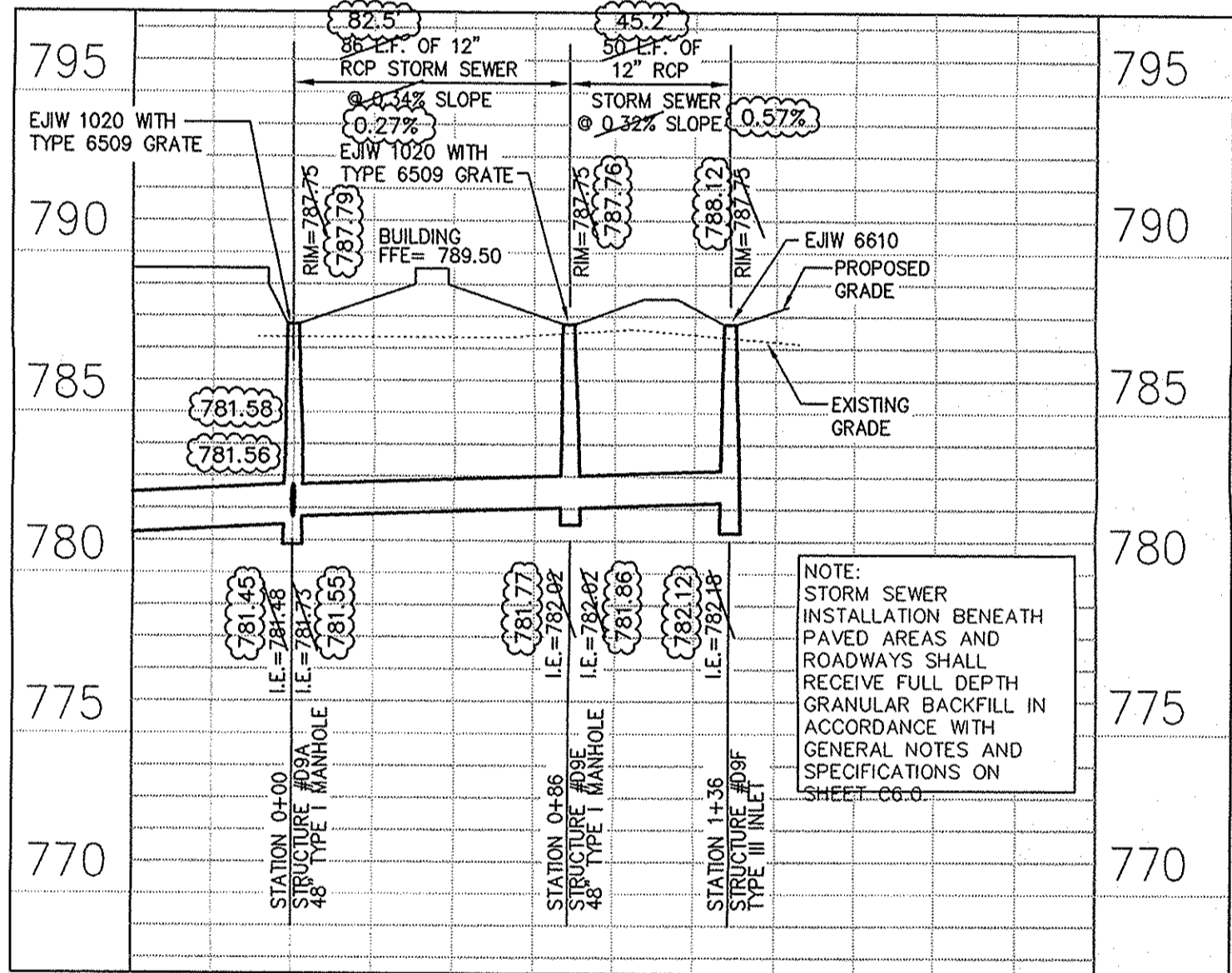
**STR. #D9A TO D9B - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



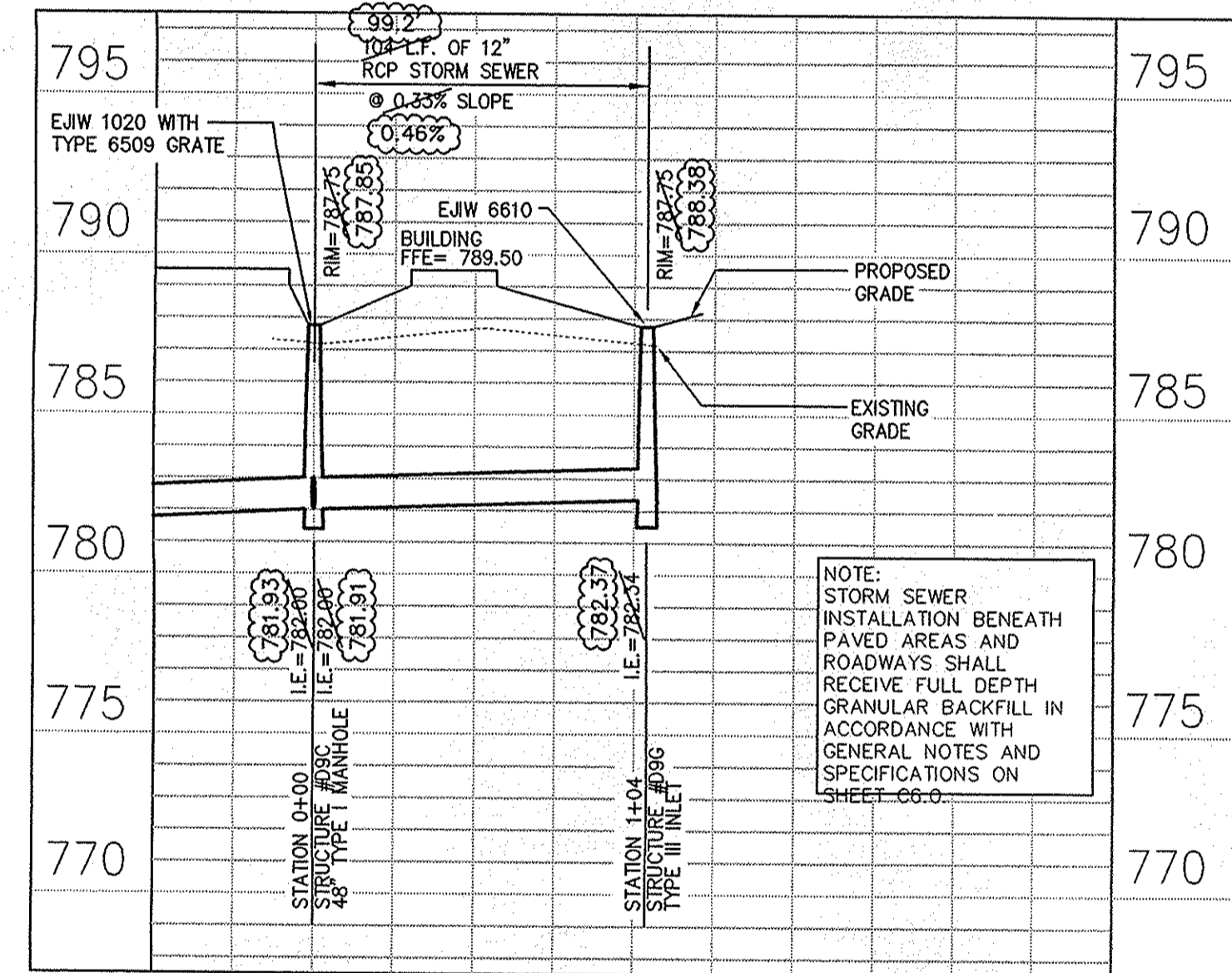
**STR. #D9C TO D9D - PROFILE**

SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**STR. D9A TO D9F - PROFILE**

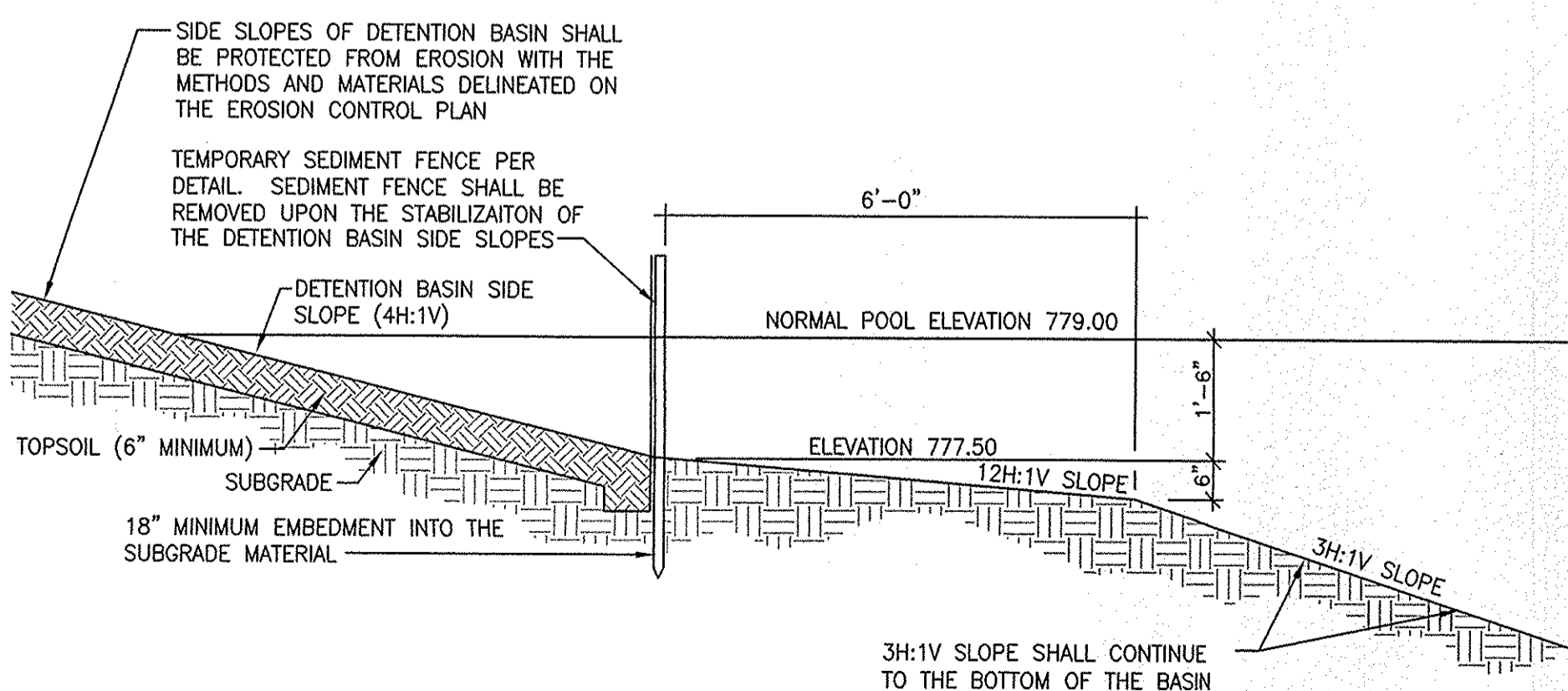
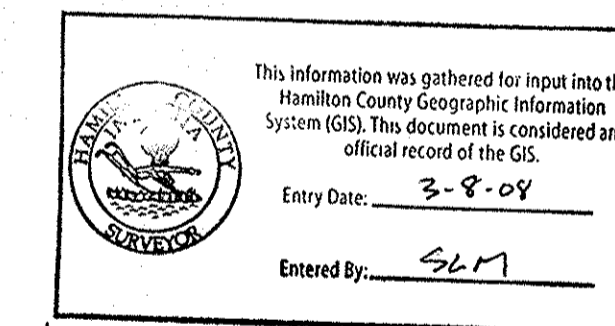
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL



**STR. D9C TO D9G - PROFILE**

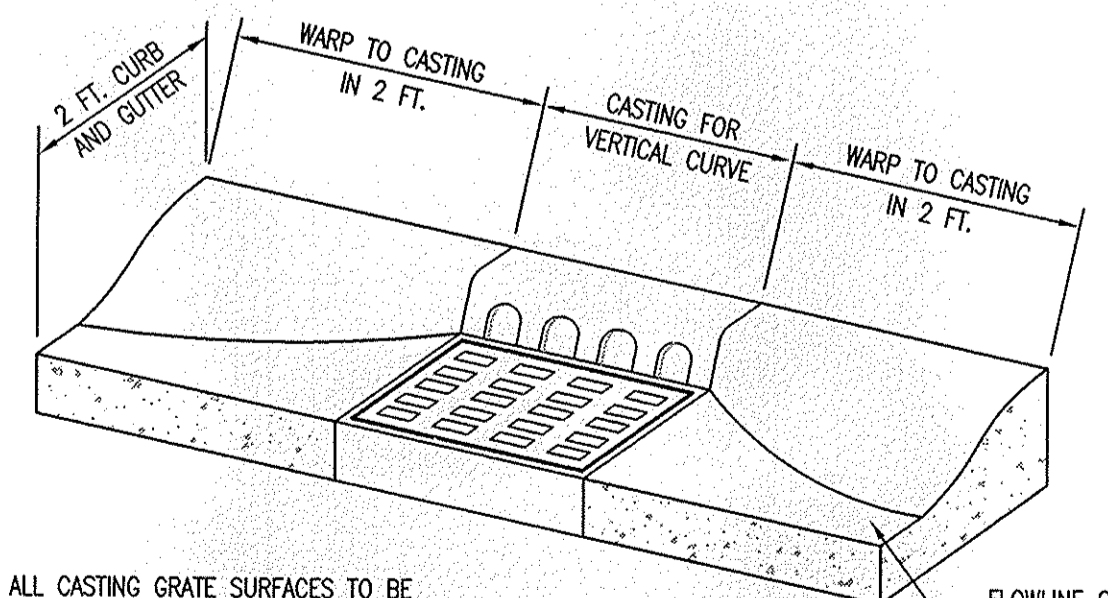
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL

# RECORD DRAWING



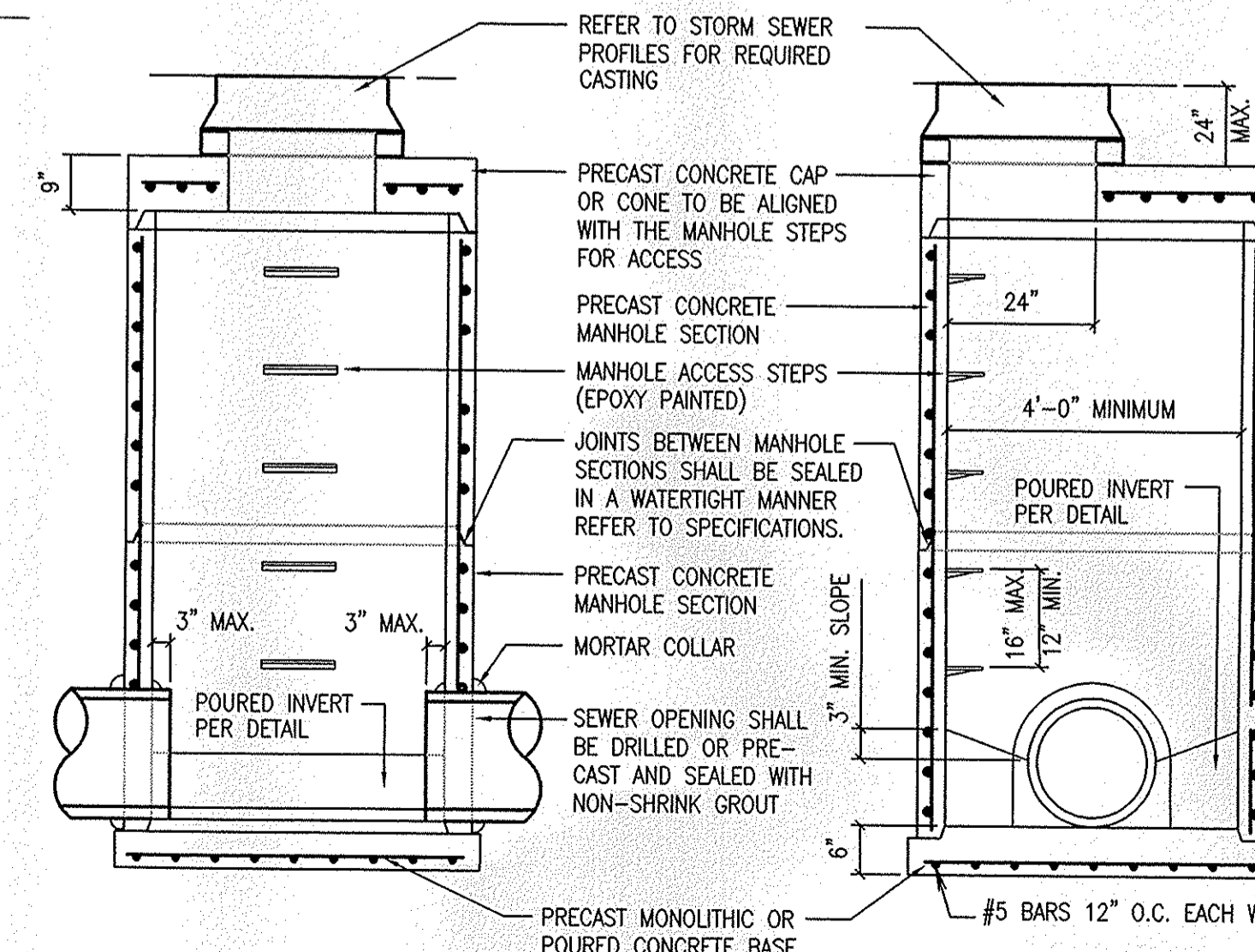
**RETENTION BASIN PERIMETER DETAIL**

NTS



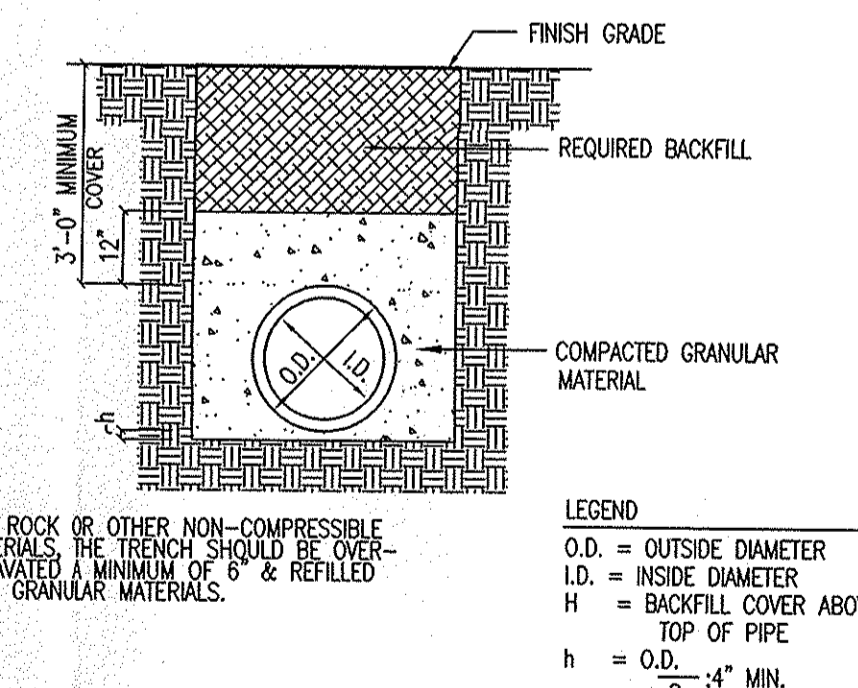
**WARP PATTERN CURB AND GUTTER INTO CASTING DETAIL**

NTS



**TYPE I MANHOLE DETAIL (STORM)**

NOT TO SCALE



FOR ROCK OR OTHER NON-COMPRESSIBLE MATERIALS THE TRENCH SHOULD BE OVER-EXCAVATED A MINIMUM OF 6" & FILLED WITH GRANULAR MATERIALS.

LEGEND  
O.D. = OUTSIDE DIAMETER  
I.D. = INSIDE DIAMETER  
H = BACKFILL COVER ABOVE TOP OF PIPE  
h = O.D. - 4" MIN.  
8

SIEVE SIZES	COURSE AGGREGATES SIZES (PERCENTS PASSING SIEVE)		
	#5	#8	#9
1 1/2"	100	100	100
1"	85-98	100	100
3/4"	60-85	75-95	100
1/2"	30-60	40-70	60-85
3/8"	15-45	20-50	30-60
NO. 4	0-15	0-15	0-15
NO. 8	0-10	0-10	0-10

NOTE: STONE CHIPS ARE PERMITTED INLIEU OF CRUSHED STONE PROVIDED THAT NO MORE THAN 20% OF STONE CHIPS PASS THE NO. 4 SIEVE.

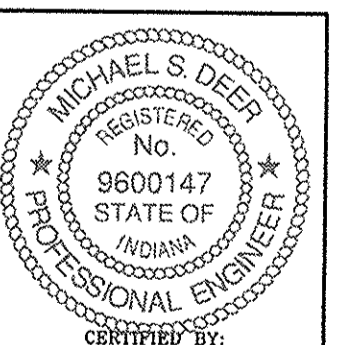
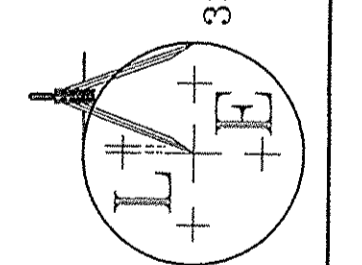
**RCP PIPE BEDDING DETAIL**

NTS

REVISION DATES	
12/10/04	RECORD DRAWING IN STATE PLANE COORDINATE SYSTEM

**STORM SEWER PROFILE**  
**RIVERWALK COMMONS**  
RESIDENTIAL CARE VII, LLC  
1455 WESTFIELD BOULEVARD  
CITY OF NOBLESVILLE, INDIANA

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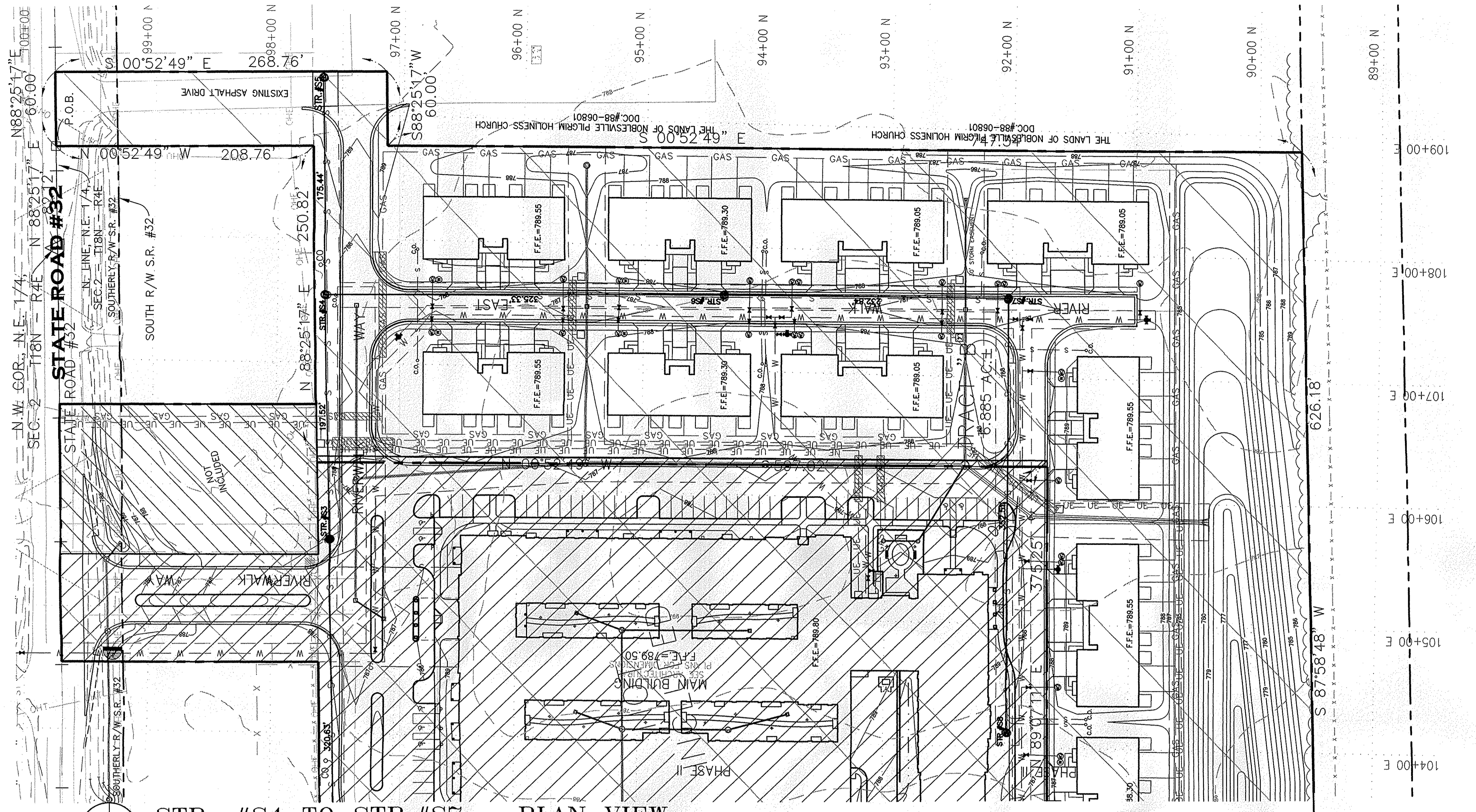


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DRAWN BY: MRB  
CHECKED BY:  
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JOB NO: 02-437

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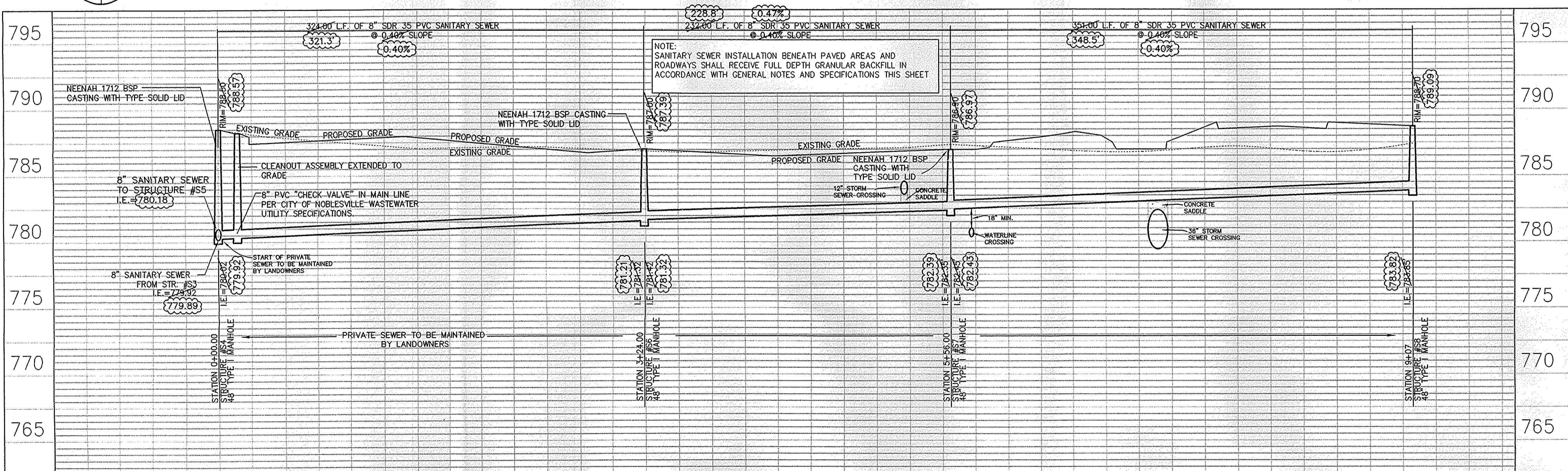
OFFICE OF HAMILTON COUNTY SURVEYOR



STR. #S4 TO STR. #S7 - PLAN VIEW  
SCALE: 1" = 50'

# RECORD DRAWING

(13) All sanitary sewer manholes shall be air tested in accordance with ASTM C1244-33, Standard Test Method for concrete sewer manholes by negative air pressure (vacuum) test.

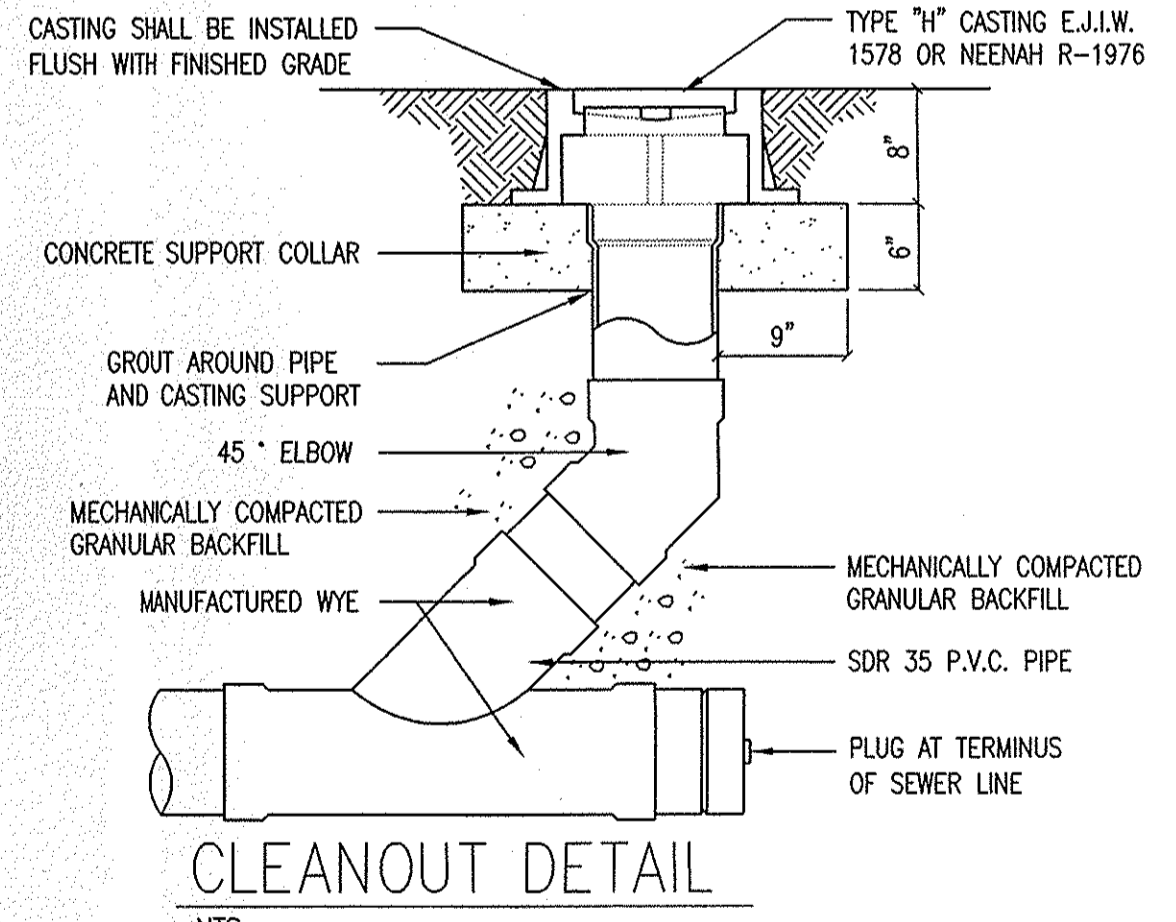


STR. #S4 TO STR. #S7 - PROFILE  
SCALE: 1" = 50' HORIZONTAL  
1" = 5' VERTICAL

RIVERWALK COMMONS SANITARY SEWER DESIGN DATA		
<b>SANITARY SEWER WASTELOAD CALCULATIONS</b>		
PROJECT SITE:	13.009 ACRES	
BUILDING COMPONENTS	QUANTITY	WASTELOAD
ASSISTED LIVING/MEMORY CARE	115 BEDS	100 gpd/bed = 11,500 gpd
ONE BEDROOM GARDEN APARTMENT	*8 UNITS	200 gpd/unit = 1,600 gpd
TWO BEDROOM GARDEN APARTMENT	*32 UNITS	300 gpd/unit = 9,600 gpd
* EACH 5-PLEX UNIT CONTAINS 1 ONE BEDROOM UNIT AND 4 TWO BEDROOM UNITS		
AVERAGE WASTELOAD:		22,700 gpd
PEAK WASTELOAD:		93,694 gpd
* PEAK WASTELOAD CALCULATED USING A PEAKING FACTOR OF 4.100 BASED ON POPULATION EQUIVALENTS		

**GENERAL NOTES/SPECIFICATIONS: SANITARY SEWER SYSTEMS**

- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES, AND THE LOCATION AND INVERT OF THE EXISTING SANITARY AND STORM SEWERS. ANY CONFLICT BETWEEN THE EXISTING UTILITIES AND THE PROPOSED CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OPERATIONS.
- MATERIALS AND WORKMANSHIP SHALL MEET THE LATEST SPECIFICATIONS OF THE ENGINEERING DEPARTMENT OF THE CITY OF NOBLESVILLE WASTEWATER UTILITY.
- SANITARY SEWER PIPE 15" IN DIAMETER AND SMALLER SHALL BE POLYVINYL CHLORIDE SOLID WALL PIPE SDR 35 AND SHALL CONFORM IN ALL RESPECTS WITH ASTM D 3034. PIPE BEDDING FOR SDR 35 PVC SANITARY SEWER SHALL BE PER DETAIL THIS SHEET AND THE CITY OF NOBLESVILLE WASTEWATER UTILITY SPECIFICATIONS.
- ALL SANITARY SEWER MAIN LINES SHALL BE 8" SDR 35 PVC SANITARY SEWER WITH A MINIMUM 0.40% SLOPE. ALL BUILDING SEWER SERVICES SHALL BE 6" SDR 35 PVC SANITARY SEWER AND SHALL HAVE A MINIMUM OF 2.00% SLOPE PROVIDING A MINIMUM OF 3' OF COVER AT THE BUILDING SEWER SERVICE CONNECTION.
- THE SEWER TRENCH WIDTH SHALL NOT EXCEED THE OUTSIDE DIAMETER OF THE PIPE PLUS 30 INCHES BELOW A POINT WHICH IS 1 FOOT ABOVE THE TOP OF THE PIPE. THE TAP TRENCH SHALL NOT EXCEED 18 INCHES.
- ALL SEWER TRENCH BACKFILL WITHIN THE STREET RIGHT-OF-WAY AND BENEATH ROADWAYS, PARKING AREAS AND PAVEMENTS SHALL BE COMPACTED INDOT No. 53 STONE.
- ALL MANHOLES SHALL BE TYPE I MANHOLE AS SHOWN IN THE DETAIL THIS SHEET. MANHOLE CASTINGS SHALL BE NEENAH 1712 BSP CASTING WITH SOLID LID PER THE CITY OF NOBLESVILLE WASTEWATER UTILITY SPECIFICATIONS.
- WHERE WATER LINE CROSSINGS ARE NECESSARY, A MINIMUM OF 18 VERTICAL PIPE CLEARANCE MUST BE MAINTAINED (MEASURED FROM THE BOTTOM OF THE UPPER PIPE TO THE TOP OF THE LOWER PIPE), PREFERABLY WITH THE WATER MAIN ABOVE THE SEWER. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET MUST BE MAINTAINED BETWEEN WATER AND SEWER LINES. WHEN IT IS IMPOSSIBLE TO MAINTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION, THE SEWER MUST BE CONSTRUCTED OF WATERWORKS GRADE DUCTILE IRON PIPE WITH MECHANICAL JOINTS, OR SDR 21 PVC PRESSURE PIPE WITH COMPRESSION FITTINGS, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAPPING AND CONNECTION FEES ASSOCIATED WITH THE SEWER CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL PAY FOR A FULL TIME INSPECTOR AS REQUIRED BY THE CITY OF NOBLESVILLE.
- MAXIMUM ALLOWABLE INFILTRATION/EXFILTRATION SHALL BE 200 GPD PER MILE OF TRENCH PER INCH DIAMETER OF PIPE.
- FLEXIBLE CONDUITS SHALL BE TESTED BY ANY TWO OR MORE OF THE FOLLOWING METHODS BEFORE ACCEPTANCE BY THE CITY OF NOBLESVILLE:
  - INFILTRATION/EXFILTRATION TEST: 200 GPD/MILE/INCH OF DIAMETER NOT TO EXCEED 1 PSI LOSS IN AIR PRESSURE FROM 3.5 PSI IN 4 MINUTES
  - "MANDREL" TEST: 5% MAXIMUM DEFLECTION OF ACTUAL INSIDE DIAMETER (GO/NO GO)
  - TV: VISUAL ACCEPTANCE
- THE CONTRACTOR SHALL PROVIDE THE CITY OF NOBLESVILLE WASTEWATER UTILITY WITH AS-BUILT DRAWINGS INCLUDING ALL FINAL MANHOLE RIM AND INVERT ELEVATIONS, PREPARED AND CERTIFIED BY A REGISTERED LAND SURVEYOR IN THE STATE OF INDIANA IMMEDIATELY UPON THE COMPLETION OF THE SEWER INSTALLATION.



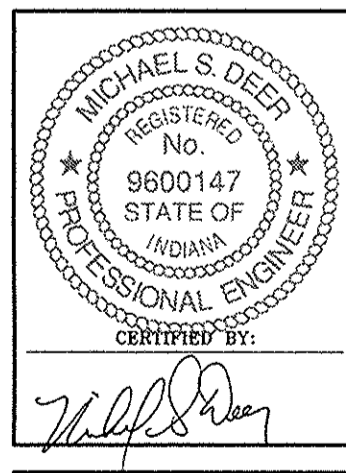
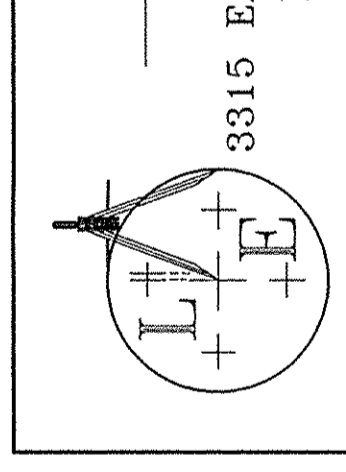
**SYMBOLS & ABBREVIATIONS**

— W —	EXISTING WATER MAIN	RCP	REINFORCED CONCRETE PIPE
— W —	NEW WATER MAIN	PVC	POLYVINYL CHLORIDE PIPE
— C —	EXISTING GAS LINE	STR	SEWER SYSTEM STRUCTURE
— C —	NEW GAS LINE	CO	CLEAN OUT
— S —	NEW SANITARY SEWER	BM	BENCH MARK
— S —	EXISTING SANITARY SEWER	R/W	RIGHT-OF-WAY
— ST —	NEW STORM SEWER	I.E.	INVERT ELEVATION
— ST —	EXISTING STORM SEWER	R.E.	RIM ELEVATION
— ST —	NEW STORM SEWER	F.F.E.	FINISH FLOOR ELEVATION
— UT —	NEW SUB DRAM TILE	+	VALVE AND BOX
— UE —	EXISTING UNDERGROUND ELECTRIC LINE	+	FIRE HYDRANT
— UE —	EXISTING UNDERGROUND ELECTRIC LINE	+	FINISH
— OC —	EXISTING OVERHEAD ELECTRIC LINE	+	POWER POLE
— X —	EXISTING WOVEN WIRE FENCE	+	SPRINKLER HEAD
— 000 —	EXISTING CONTOUR	+	CONFEROUS TREE
— 800 —	PROPOSED CONTOUR	+	DECIDUOUS TREE
— 842.50 —	PROPOSED SPOT ELEVATION		
— 836.74 —	EXISTING SPOT ELEVATION		

REVISION DATES	
REV. 04/28/03	PER TAC
REV. 10/14/03	REVISE DRAWING PER CLIENT W/ HUD COMMENTS
9/27/04	RECORD DRAWING
12/7/04	RECORD DRAWING IN STATE PLNG. COORDINATE SYSTEM

**SANITARY PLAN & PROFILE**  
**RIVERWALK COMMONS**  
**GARDEN HOMES**  
RESIDENTIAL CARE VII, LLC  
1455 WESTFIELD BOULEVARD  
CITY OF NOBLESVILLE, INDIANA

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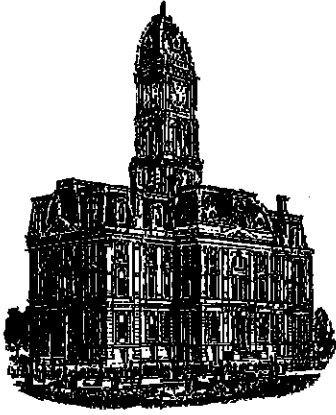


DATE:	01/13/03
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CHECKED BY:	
SCALE:	1" = 50'
DRAWING FILE:	02-437A
JOB NO.:	02-437A

SHEET NO. **C10**  
MAY 15 2007

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: 3-7-08  
Entered By: SLM





*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:** 330

**Drain Length:** 4529

**Drain Name:** Sly Run – Riverwalk Commons

**Change + / - :** 135

**Date:** 12-30-2016

**New Length:** 4636

**Verified By:** SLM

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**Notes & Sketch:**

Structure D5A to D5 was left off the final report. This consisted of 135 feet of 15" RCP.

**Suzanne L. Mills**  
GIS Specialist