

THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2005-75

**Being a By-law to provide for the repair and improvement of the White Drain in the Town of Amherstburg and for the temporary borrowing on the credit of the Town the sum of \$57,930.87 to complete said works**

**WHEREAS** the drainage works were initiated by Flynn Developments and Dunn Paving Ltd., developers of the Kingsbridge Subdivision, who have requested that the existing White Drain be extended to a sufficient outlet pursuant to Section 78 of the *Drainage Act*, in order to accommodate the storm drainage requirements for Phase 4 of their development. As well, pursuant to Section 66 of the *Drainage Act*, a request was also made by the developers to provide for subsequent connection of lands into the White Drain;

**AND WHEREAS** the Council of the Corporation of the Town of Amherstburg has procured a report made by Stantec Consulting Ltd. dated July 18, 2005 and said report is attached hereto and forms part of this By-law;

**AND WHEREAS** the estimated total cost of the said repairs and improvements is \$57,930.87;

**AND WHEREAS** Flynn Developments and Dunn Paving Ltd. have agreed to cover the cost of the said works;


**AND WHEREAS** Council is of the opinion that the said repairs and improvements are necessary and desirable;

**NOW THEREFORE THE COUNCIL OF THE CORPORATION OF  
THE TOWN OF AMHERSTBURG HEREBY ENACTS AS FOLLOWS**

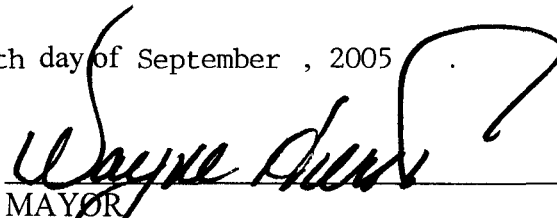
1. That the report of Stantec Consulting Ltd. dated July 18, 2005 is hereby adopted and the drainage works therein shall be completed in accordance therewith.
2. The Corporation of the Town of Amherstburg may temporarily borrow on the credit of the Town the sum of \$57,930.87.
3. That this By-law comes into force on the final day of passage thereof and may be cited as the White Drain By-Law.

Read a first and second time and provisionally adopted this 22 day of August, 2005.

  
MAYOR

  
CLERK

Read a third time and finally passed this 26th day of September, 2005.

  
MAYOR

  
CLERK



**Stantec**

September 2, 2005  
File: 165600874

671 Front Road North  
Amherstburg, Ontario  
N9V 2V6

**Attention: Mrs. Deanna McDowall**

Dear: Mrs. McDowall

**Reference: White Drain  
Town of Amherstburg**

We are writing in response to your August 18, 2005 letter submitted to the Town of Amherstburg with regards to the White Drain Report. The letter was received at the consideration meeting of August 22, 2005. In regards to the questions pertaining to the stormwater management pond, it should be noted that the pond is part of the Kingsbridge Residential Development and is not part of the White Drain Drainage Report.

**Q: *What is the timetable for work on the drain?***

**A:** The existing 750mm dia. corrugated steel pipe (CSP) experienced a structural failure in late Fall 2004 creating a sinkhole between 636 Front Road North and 640 Front Road North. Upon further review of the pipe and sinkhole on June 2, 2005 it was deemed that the situation was becoming dangerous and that the pipe needed to be replaced immediately. The 750mm dia. CSP is located completely on private property and not legally part of the White Drain. A '2005 Application for Permit' was completed by the property owners at 636 and 640 Front Road North and submitted to the Essex Regional Conservation Authority (ERCA) for improvements to be made to the pipe prior to the completion of the Drainage Report. With the approval from the Town of Amherstburg Council, the 750mm CSP was replaced with a 900mm dia. concrete pipe on June 23, 2005.

Clearing, grubbing and brushing of the drain and approximately a 20-foot width south and east of the drain between Sta. 0+065 and Sta. 0+475 should be completed by Fall 2005.

Reference: **White Drain**  
Town of Amherstburg

**Q: *What is the plan for heavy equipment access for the proposed work on the drain?***

A: The only equipment required will be for the 'clearing, grubbing, and brushing'. Access to the site shall be through the existing 30-foot right-of-way located on Lot 420-18300, or through the Kingsbridge Residential Development.

**Q: *Where will entry be obtained for future maintenance on the drain or stormwater retaining pond?***

A: Access to the pond shall be through the Kingsbridge Residential Development.

Access to the Drain will be through the existing 30-foot right-of-way located on Lot 420-18300, or through the Kingsbridge Residential Development.

**Q: *How do you intend to address the control of mosquito growth in this large pool of standing water?***

A: The stormwater management pond for the Kingsbridge Development is designed for both quantity and quality control. There will be a permanent pool of water in excess of 0.975 hectares. The normal water depth will be from 0.5 metres to 1.5 metres. During storm events, the water levels will rise for a short period of time to as much as an additional 1.5 metres. Mosquitoes generally require shallow, stagnant water for breeding. Some of the water in the pond will be flushed into the White Drain and ultimately the Detroit River during storm events and this change in water and varying water depths during rain events should help control the mosquito problems.

**Q: *How do you intend to address security / safety around this open pool?***

A: There are a number of practices to address the security of the pond ranging from gentle side slopes (5:1 to 7:1 slopes at the upper level), signage, planting bushes with thorns around the perimeter, and fencing. The Town is currently reviewing options to ensure that all measures are taken to ensure a safe retention pond is constructed.

**Q: *How will the drainage of my property be affected by the work? Will there be a negative impact and how do you intend to handle any negative impact to my property?***

A: The installation of the 900mm dia. concrete pipe did not impact the drainage of any one property during the 3 day construction period. There shall be no negative impact during the clearing, grubbing, and brushing of the drain and easement located at the eastern end of your property. The removal of debris and vegetation from the drain will increase its capacity and decrease the chance of temporary flooding during heavier storm events caused by obstructions. Sediment control (i.e. silt fences, straw bails, etc) will be placed

**Reference: White Drain  
Town of Amherstburg**

downstream of the site being cleared, grubbed, and brushed to mitigate the negative impact any additional sediment would have.

**Q: *How do you intend to deal with any drain and pond flooding?***

A: The pond has been designed to handle a 1:100 year storm event. Stormwater from the pond will be released into the existing White Drain at pre-development flow rates. The Drain has sufficient capacity within the ravine to the east of County Road No.20 for temporary storage during an extreme storm event.

**Q: *Will property boundary markers be suitably identified prior to work commencing?***

A: Property boundaries shall be verified prior to construction and any in the work zone will be marked with flagging and stakes.

**Q: *Who can we call with issues?***

A: Contact information:

Mr. Lou Zarlenga, P. Eng.  
Manager of Public Works  
Town of Amherstburg  
271 Sandwich Street  
Amherstburg, Ontario  
N9V 2Z3  
Tel: (519) 736-3664  
Fax: (519) 736-7080  
lzarlenga@town.amherstburg.on.ca

Mr. Don Joudrey, P. Eng.  
Project Manager  
Stantec Consulting Ltd.  
3260 Devon Drive  
Windsor, Ontario  
N8X 4L4  
Tel: (519) 966-2250  
Fax: (519) 966-5523  
djoudrey@stantec.com

**Q: *Has consideration not been brought forth to the developer to reroute the drain through properties owned by the developer thereby alleviating inconvenience to private property owners?***

A: The upper reaches of the drain are already established as a Municipal Drain. Development to the east will have no impact on magnitude of flows in the drain. All excess water caused by the development will be stored in the pond and released at rates at or below what would have occurred prior to development. Consideration was not given to moving the drain.

Additional comments regarding your questions and concerns are as follows:

- An on-site meeting was held with the Essex Regional Conservation Authority (ERCA) on June 23, 2005 to identify trees they would like to see remain within the 30 foot easement. Smaller vegetation not identified by ERCA shall be removed as described in the Drainage

**Stantec**

September 2, 2005  
Mrs. Deanna McDowall  
Page 4 of 4

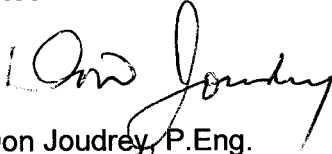
**Reference: White Drain  
Town of Amherstburg**

Report. With regards to your Lots 420-17800 and 420-17900, clearing, brushing and grubbing will only take place within the drain and easement on the east side of the drain. The proposed two (2) trees mentioned in the Report was to compensate the property owner at 420-10500 for the removal of four (4) large aesthetic trees planted within his front and side yard. The developer and property owner have a privately signed agreement between them that is not part of this Report.

If you have additional questions or concerns please feel free to contact the undersigned.

Sincerely,

**STANTEC CONSULTING LTD.**



Don Joudrey, P.Eng.  
Project Manager  
Tel: (519) 966-2250  
Fax: (519) 966-5523  
djoudrey@stantec.com

Attachment:

- c. David McDowall – 669 Front Road North  
Lou Zarlenga – Town of Amherstburg  
Dave Mailloux – Town of Amherstburg  
Bill Docherty – Kingsbridge Subdivision

**WHITE DRAIN OUTLET**

**DRAINAGE REPORT**

Prepared by:

Stantec Consulting Ltd.  
3260 Devon Drive  
Windsor, Ontario N8X 4L4  
Tel: (519) 966-2250  
Fax: (519) 966-5523

July 18, 2005  
Project No. 165600874



---

**Stantec**

Stantec Consulting Ltd.  
3260 Devon Drive  
Windsor ON N8X 4L4  
Tel: (519) 966-2250 Fax: (519) 966-5523  
  
stantec.com



**Stantec**

July 18, 2005  
File: 165600874

Town of Amherstburg  
271 Sandwich Street  
Amherstburg, Ontario  
N9V 2Z3

**Attention: Mayor Hurst & Members of Council**

**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

As authorized by Council resolution passed on February 28, 2005, we submit this Drainage Report to provide the White Drain with a sufficient outlet and the subsequent connection of lands into the White Drain.

### **Background**

This issue was initiated by Flynn Developments and Dunn Paving Ltd., developers of the Kingsbridge Subdivision, who have requested that the existing White Drain be extended to a sufficient outlet pursuant to Section 78 of the Drainage Act, in order to accommodate the storm drainage requirements for Phase 4 of their development. As well, pursuant to Section 66 of the Drainage Act, a request was also made by the developers to provide for subsequent connection of lands into the White Drain. Council, by resolution, approved the appointment of an Engineer to consider these matters on February 28, 2005.

Our review of the history of the White Drain has confirmed that the existing White Drain was established as a municipal drain through a drainage report prepared by N.K. Becker and Associates Ltd. in 1983, with subsequent approval pursuant to the Ontario Drainage Act and by Town of Amherstburg By-Law 2465. As outlined in the previous report, the White Drain limits ends at Sta. 0+365 draining an area of 47.28 hectares from the east, as depicted in Figure 6. At the present time the White Drain does not extend completely to the Detroit River. The outlet for the White Drain to the Detroit River is through lands under private ownership from Sta. 0+000 to Sta. 0+365. Further, a portion of this privately owned area of the watercourse located downstream of the White Drain has recently experienced a structural failure in a 750mm diameter corrugated steel pipe, thus creating a sinkhole and likely an obstruction to the drainage. Because this area is not currently part of the municipal drain the Town is unable to

**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

make repairs to this 750mm pipe since there currently is no right of passage along this portion of the drain.

The White Drain drainage area generally consists of residential properties along County Road No.20, and farmland to the east where development for the Kingsbridge Subdivision is occurring. The existing drainage area for the White Drain is depicted in Figure 2 attached to this report. Proposed alterations to the drainage area for the White Drain and adjacent municipal drains are as depicted in Figure 3.

Our survey of the drain included a video inspection of the existing 900x900mm box culvert under County Road No. 20. This inspection was carried out on May 10, 2005. In our review of the video the following problems were noted:

- i) A large amount of debris had accumulated on the grate at the access entrance point on the east side.
- ii) The video inspection had to be abandoned after approximately 10 metres into the culvert due to high water levels. These levels could have been caused by accumulation of debris in the 750mm downstream pipe in the area of the sinkhole mentioned previously.

Representatives from the Town of Amherstburg, Stantec Consulting, and Dunn Paving met on site on Thursday June 2, 2005 to review the condition of the existing 750mm dia. CSP. Upon visual and video inspections that were carried out by Dunn Paving it was determined that the 900x900mm box culvert connects to a 900mm dia. concrete pipe (4.8m in length), which in turn connects to the 750mm dia. CSP that outlets into the Detroit River. The sinkhole, which had developed, had occurred due to the poor condition and structural failure of the 750mm pipe.

**On Site Meeting**

Further to notices being sent out by the clerk, an on-site meeting was held on Thursday April 7, 2005 at 3:30 p.m. In attendance were the following:

Maureen Byrne	Resident	Anthony Hall	Resident
Clemence Bell	Resident	Bill Docherty	Flynn Dunn
Floyd Bell	Resident	Tom Robson	Dunn Group
David McDowall	Resident	Wayne Cox	Essex County Highways
Deanna McDowall	Resident	Lou Zarlenga	Town of Amherstburg
Shannon Gosselin	Resident	Dwayne Grondin	Town of Amherstburg
Doug Murray	Resident	Don Joudrey	Stantec Consulting
Ron Wigle	Resident	Phil Bartnik	Stantec Consulting
Brian P. Ralston	Resident		



**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

It was explained to those in attendance that the existing White Drain drainage area is as outlined in the 1983 Drainage Report by N.K. Becker and Associates Ltd. and at that time there was no provision in the report to legally extend the White Drain to the Detroit. The drain now requires a sufficient outlet to accommodate existing and future development in the Kingsbridge Subdivision.

Residents at the on-site meeting stated that a portion of the privately owned watercourse downstream of the White Drain, between County Road No. 20 and the Detroit River, experienced a structural failure in the 750mm dia. corrugated steel pipe, creating a sinkhole. It was indicated by the Town that the Kingsbridge Development cannot proceed with construction until a Drainage Report has been completed giving the White Drain a sufficient outlet to the Detroit River including a maintenance easement for future access, and also outlining the revised drainage areas for the three drains affected (Ouellette Drain West, Morgan Drain, and White Drain). It was further noted that the structural failure that has occurred in the 750mm downstream pipe needed to be addressed.

**Essex Regional Conservation Authority (ERCA) Meetings**

A meeting was held on-site Friday April 22, 2005 at 9:00 a.m. to review the site and discuss any actions that might be taken to improve the drain without compromising the surrounding vegetation that has developed over time. In attendance were the following:

John Henderson	ERCA
Dan Lebedyk	ERCA
Lou Zarlenga	Town of Amherstburg
Dwayne Grondin	Town of Amherstburg
Don Joudrey	Stantec Consulting Ltd.
Phil Bartnik	Stantec Consulting Ltd.

In discussing the matter with ERCA, it was decided that the existing low flow, meandering channel of the drain should remain in its present state. The Town requested that a 30-foot (9.144m) easement along the south side of the drain be provided for future maintenance access, with approximately 20 feet (6.096m) of the easement to be selectively cleared of debris and vegetation (i.e. dead tree limbs, shrubs, bricks, etc.). It was discussed that prior to any clearing, grubbing, and brushing the Engineer, Town and ERCA will meet on site to identify the vegetation that will be removed and the trees that ERCA would like to remain.

It was also noted that a temporary ditch draining the initial phase of the Kingsbridge Development has been constructed and is presently diverted to a stormwater management pond, prior to the water entering the White Drain at pre-development flow rates. This temporary ditch will be filled in as development progresses and the stormwater management pond enlarged to handle the additional runoff and to maintain pre-development flow rates into the White Drain. Sediment control will be in place (i.e. straw bails, silt fencing) until the vegetation has been incorporated along the side slopes.

A second meeting was held on-site Thursday June 23, 2005 at 10:30 a.m. where ERCA identified trees they would like to see remain within the 30 foot easement by having them spray-

**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

painted orange at the base. Clearing, grubbing, and brushing of all other existing trees, shrubs and debris will take place between Sta. 0+065 and Sta. 0+475 within a 20-foot width from the drain. The material will be hauled away and properly disposed of by the Contractor.

**Summary of Recommendations**

Based on our survey of existing conditions, comments received at the on-site meetings and after considering various alternatives, we recommend the following:

1. That the existing drainage areas be revised as follows, pursuant to Section 66 of the Drainage Act:

<b>Drain</b>	<b>Previous Drainage Area</b>	<b>Proposed Drainage Area</b>
White Drain	72.5 hectares	104.65 hectares
Ouellette Drain West	242.8 hectares	225.6 hectares
Morgan Drain	163.0 hectares	148.05 hectares

2. That a 30-foot (9.144m) easement along the south side of the drain exist for future maintenance access from Sta. 0+070 to Sta. 0+475, with approximately 20 feet (6.096m) of the easement to be selectively cleared of debris and vegetation (i.e. dead tree limbs, shrubs, bricks, etc.). In addition, a 20-foot (6.096m) easement also exist over the proposed 900mm concrete pipe from Sta. 0+000 to Sta. 0+040.
3. That clearing, grubbing, and brushing of the drain, and approximately a 20-foot width from the drain should take place between Sta. 0+065 and Sta. 0+475.
4. That any minor excavated material from the drain should be deposited within the 30-foot easement and leveled to the satisfaction of the Town.
5. That the existing box culvert under County Road No. 20 should be cleaned of all debris and inspected, with any deficiencies to be noted.
6. That the existing 750mm dia. CSP should be replaced with a 900mm dia. concrete pipe (approximately 39m in length) as depicted on Figure 5.
7. That any properties affected by the proposed works and easement should be compensated for land and damages as outlined in the following section.
8. That all costs associated with the subject drainage works including the preparation of the necessary drainage reports, repairs and improvement to be assessed totally to the developers of the Kingsbridge Subdivision.
9. That the subject drainage works shall hereinafter be known as the "White Drain Outlet".

**Allowance and Compensation**

In accordance with Section 29 of the Drainage Act, we have made an allowance to the affected landowners for the land required for the maintenance easement along side the entire length of the drain for future access. This allowance is shown in the following Schedule of Allowance

**Startec**

July 18, 2005  
 Mayor Hurst & Members of Council  
 Page 5 of 8

**Reference: White Drain Outlet – Drainage Report  
 Town of Amherstburg**

under the heading "Land". We have applied a rate of \$1,000.00/hectare to these properties for the use of the land.

Allowances have also been provided under Section 30 of the Drainage Act to the property owners for damages to lands, ornamental trees, lawns, and fences, etc. occasioned by the operation of equipment on the properties. A nominal value of \$1 has been awarded to each property affected and are shown in the following Schedule of Allowance under the heading "Damages". All of the lands used for access during construction will be restored to "equal or better" at the cost of the Contractor.

**Schedule of Allowance**

Roll No.	Property Description	Owner's Name(s)	Land (\$)	Damages (\$)	Total (\$)
37-29-420-000-10500	CON 1 PT LOT 12 RP 12R3352 Part 2	Wigle, Thelma Gail	\$ 25.00	\$ 1.00	\$ 26.00
37-29-420-000-17800	CON 1 PT LOT 13	McDowall, Deanna Lynn	\$ 1.00	\$ 1.00	\$ 2.00
37-29-420-000-17900	CON 1 PT LOT 13	McDowall, David John	\$ 15.00	\$ 1.00	\$ 16.00
37-29-420-000-18000	CON 1 PT LOT 13 12R14668 PT 1	1078217 Ontario Limited	\$ 31.00	\$ 1.00	\$ 32.00
37-29-420-000-18100	CON 1 PT LOTS 12&13 12R13657 PT 9	1078217 Ontario Limited	\$ 10.00	\$ 1.00	\$ 11.00
37-29-420-000-18200	CON 1 PT LOTS 12&13 12R2935 PT 3	Byrne, Michael Gerard Byrne, Maureen Patricia	\$ 19.00	\$ 1.00	\$ 20.00
37-29-420-000-18300	CON 1 S PT LOT 13	Tavern Incorporated - Kircos	\$ 116.00	\$ 1.00	\$ 117.00
37-29-420-000-18400	CON 1 PT LOT 12	Ralston, Brian Paul	\$ 156.00	\$ 1.00	\$ 157.00

**Estimate of Cost**

The estimated total cost of the work is **\$57,930.87** made up as follows:

**Part A - Construction**

- |   |  |        |   |             |   |             |
|---|--|--------|---|-------------|---|-------------|
| 1 | Clearing and brushing of the drain and easement from Sta. 0+065 to Sta. 0+475. | I.s.   | @ | \$ 4,000.00 | = | \$ 4,000.00 |
| 2 | Remove and dispose of existing 750mm dia. CSP including excavation.            | I.s.   | @ | \$ 1,000.00 | = | \$ 1,000.00 |
| 3 | Remove and dispose of trees on Lot 420-105                                     | 4 each | @ | \$ 500.00   | = | \$ 2,000.00 |

July 18, 2005

Mayor Hurst &amp; Members of Council

Page 6 of 8

**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

4	Supply and place 50mm dia. Blue Spruce trees. Location to be determined by the Homeowners, with final approval from the Engineer.	2 each	@	\$ 250.00 =	\$ 500.00
5	Supply and install 900mm dia. concrete pipe complete with bedding, backfill and restoration (topsoil and seed)	39.4 m	@	\$ 400.00 =	\$ 15,760.00
6	Connect to existing 900mm concrete pipe as directed by the Engineer in the field	I.s.	@	\$ 500.00 =	\$ 500.00
7	Remove and replace irrigation line as required.	I.s.	@	\$ 500.00 =	\$ 500.00
8	Remove Brick Pavers as required and restore upon completion of construction	I.s.	@	\$ 3,000.00 =	\$ 3,000.00
9	Miscellaneous Manhole work, including but not limited to: providing a 550mm square access hole through the top of the box culvert, relocating ladder rungs to the north side of the manhole, supplying and placing ladder rungs inside the box culvert.	I.s.	@	\$ 4,000.00 =	\$ 4,000.00
10	Clearing debris and cleaning the box culvert under County Road No.20 once construction has been completed.	I.s.	@	\$ 1,500.00 =	\$ 1,500.00
11	Flush, test, and video inspect the mainline sewer.	I.s.	@	\$ 1,000.00 =	\$ 1,000.00
12	Traffic Control & Signage	I.s.	@	\$ 2,000.00 =	\$ 2,000.00
13	Contingency Allowance	I.s.	@	\$ 4,000.00 =	\$ 4,000.00
<b>Total Construction Cost</b>					<b>\$ 39,760.00</b>

Reference: **White Drain Outlet – Drainage Report  
Town of Amherstburg**

**Part B – Allowances**

1	Land (Easements)	Subtotal	\$ 373.00
2	Damages	Subtotal	\$ 8.00
<b>Total Allowances Cost</b>			<b>\$ 381.00</b>

**Part C - Incidental Costs**

1	Engineering Fees include:	\$ 14,000.00
	i) Preliminary examination of site, meetings with property owners and Town staff, review of documents and reports, convening and attending meetings.	
	ii) Detailed survey, preliminary design, preparation of cost estimate and preparation of drawings.	
	iii) Final design and drawings, preparation of report and cost assessment.	
	iv) Meetings to consider report and Court of Revision.	
	v) Preparation of tender documents and inviting tenders, review of tenders, recommendations for award of contract, project administration during construction and inspection.	
	vi) Interim financing, mailing of notices, Court of Revisions, etc.	
<b>Total Incidental Cost</b>		<b>\$ 14,000.00</b>

Total Construction Cost	\$ 39,760.00
Total Allowances	\$ 381.00
Total Incidental Cost	\$ 14,000.00
GST (7%)	\$ 3,789.87
<b>TOTAL ESTIMATE</b>	<b>\$ 57,930.87</b>

**Stantec**

July 18, 2005  
Mayor Hurst & Members of Council  
Page 8 of 8

**Reference: White Drain Outlet – Drainage Report  
Town of Amherstburg**

We concur and recommend, as authorized by Council resolution passed on February 28, 2005:  
*"all costs associated with preparation of the necessary drainage reports, repairs and improvement be assessed totally to the developers of the Kingsbridge Subdivision."*

**Future Maintenance**

We further recommend that the White Drain be kept up and maintained by the Town of Amherstburg in accordance with provisions of the Drainage Act (Sec. 74) at the expense of the lands, roads, municipality, and County as outlined in the 'Schedule of Assessment for Maintenance' and in the proportions herein contained until otherwise determined.

Due to the ongoing development within the White Drain drainage area, a Maintenance Assessment Schedule should be completed at the time of the maintenance works are performed in order to ensure proper cost sharing between the affected properties.

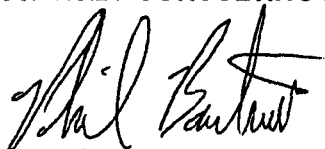
Working areas for future maintenance are described in the 'Summary of Recommendations' section of this report (page 4), and depicted in "Figure 4 – Site Plan".

**Drawings and Specifications**

Included herein as part of this report is Drawing No. 3522, Figures 1 – 7 and Specifications relative to the work to be constructed.

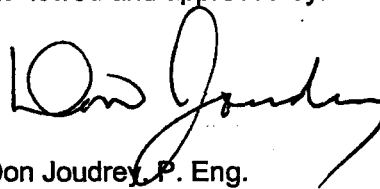
Sincerely,

**STANTEC CONSULTING LTD.**



Phil Bartnik, E.I.T.  
Project Engineer  
pbartnik@stantec.com

Reviewed and approved by:



Don Joudrey, P. Eng.  
Project Manager  
djoudrey@stantec.com



- Attachment:
- Specifications
  - Schedule of Assessment for Maintenance
  - Figure 1 – Key Plan
  - Figure 2 – Previous Drainage Area Plan
  - Figure 3 – Proposed Drainage Area Plan
  - Figure 4 – Site Plan
  - Figure 4A – White Drain Outlet / White Drain Profile
  - Figure 5 – Plan and Profile
  - Figure 6 – 1983 Drainage Report Assessment Plan
  - Figure 7 – Assessment Plan

**TOWN OF AMHERSTBURG**  
**SPECIFICATIONS FOR THE**  
**WHITE DRAIN OUTLET / WHITE DRAIN IMPROVEMENTS**

**1. GENERAL**

The work generally consists of replacing the existing 750mm diameter CSP with 39.4 metres of 900 mm diameter concrete pipe (65-D) in the Town of Amherstburg as shown on Drawing No.3522, Figures 1 to 7 attached hereto. The work includes, but is not restricted to, miscellaneous works within the existing manhole, the supply and installation of 900 mm diameter concrete pipe (65-D) complete with excavation, Granular 'A' bedding to OPSD 802.010, native backfill, cleanup and restoration, as well as clearing, brushing, and grubbing alongside of the drain.

The whole of the works shall be constructed in accordance with the plans, profile, cross sections, details and other information provided on Figures 1 to 7 attached to these specifications, or in accordance with any other plans, specifications or details which may be provided by the Engineer from time to time during the course of construction.

**2. REMOVAL OF TREES, BRUSH, SHRUBS AND DEBRIS**

ERCA has identified the trees they would like to see remain within the 30 foot easement by having them spray-painted orange at the base. Clearing, grubbing, and brushing of all other existing trees, shrubs and debris will take place between Sta. 0+065 and Sta. 0+475 within a 20-foot width from the drain. The material will be hauled away and properly disposed of by the Contractor. The Contractor will make every effort to avoid damaging any remaining trees, shrubs and/or vegetation.

**3. ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD)**

The current Ontario Provincial Standard Specifications and Standard Drawings, adopted by the Ontario Municipal Engineers Association, shall apply to these works. The Contractor should avail himself of these Standards and Specifications, and amendments thereto, for reference purposes in performing any work under this project.

**4. CLEAN UP AND RESTORATION (HYDRAMULCH SEEDING)**

The whole of the works shall be satisfactory cleaned up during the course of construction and no portion shall be left in an untidy or incomplete state. Where the Contractor disturb any existing lawns or landscaped area, he shall restore them to the same condition which existed prior to construction.

When fill has been placed and properly compacted, and the covered portion of the drain has been constructed, the Contractor shall supply and place not less than 100 mm of

approved topsoil and shall carefully spread and fine grade same over the designated fill area. The fill should be mounded slightly to accommodate any settlement.

All fill areas shall then be restored by a hydraulic application of seed and fertilizer applied at the appropriate time for the best chance of successful germination and growth and a straw mulch. The hydramulch application shall comply with Ontario Provincial Standard Specification 572 for the application of seeding, mulching, temporary cover and erosion control blanket. The seed mixture and rate of fertilizer shall be as designated by the Engineer and notice will be given for the precise type of operation required.

If any area fails to germinate, the Contractor will be required to return to the site and refertilize and seed same at no additional cost. The engineer shall be the sole determinant of the necessity to re-seed any area or provide additional clean up or restoration.

Upon final completion of the work, the Engineer will inspect the work to ensure that all property has been restored its former condition and any required restoration work after construction has been completed satisfactory. In the event the Contractor fails to satisfactory clean up or restore any portion of the work, the Engineer may order such clean up or restoration to be carried out by others, with the cost of the same being borne by the Contractor.

## **5. CONNECTING TO EXISTING DRAIN**

The proposed 900mm diameter concrete storm sewer shall be connected to the existing pipe as directed by the Engineer in the field. If the end of the existing 900mm diameter concrete pipe is in good condition, a gasketed joint may be possible. Otherwise, a concrete collar or other connection may be required.

## **6. PROTECTION AND RESTORATION OF PRIVATE PROPERTY**

The Contractor shall protect private property at all times during the course of the work and any damage caused by his failure to do so shall be made good at his expense. The Contractor will not be permitted to work beyond the limits of the defined working areas and in the event that he trespasses on any private lands, he shall be liable for any charges and expense resulting there from.

Restoration of private lands and public road allowances used by the Contractor shall be carried out immediately after use. All roads and access to property shall be maintained in a fully operational and satisfactory state during construction. No piles of construction materials, equipment or debris will be permitted to remain on private lands or along any highway or public right-of-way.

All private property which must be disrupted as a part of the contract requirements shall be fully restored to its former condition. Any fine lawn areas on private property which are disturbed as a part of the work shall be fully restored with topsoil and hydramulch seed as specified herein. No trees, brush, bushes, shrubs or any other feature of landscaping shall be touched or moved by the Contractor without the consent of the Owner of the property affected.



## **7. ENVIRONMENTAL PROTECTION**

In addition to any other requirement of this specification, the Contractor will be required to ensure that adverse environmental impacts are minimized by taking the following actions:

- (1) Silt and sedimentation traps shall be constructed downstream of working areas to reduce pollution and turbidity.
- (2) Dust and noise control measures shall be maintained at all times.
- (3) No trees, bushes or shrubbery shall be removed or disturbed except where required and only within the limits of the prescribed working areas.
- (4) Hours of work shall be between 7:00 a.m. and 6:00 p.m. local time, Monday to Saturday. No work will be permitted on Sundays or legal holidays.
- (5) Proper vehicles and equipment shall be used at all times to ensure proper workmanship and to minimize property damage and environmental destruction.

## **8. PRESERVATION OF UTILITIES, PIPES, DRAINS, IRRIGATION SYSTEMS, ETC.**

All existing utilities, power supply lines, drains, water pipes, irrigation systems, etc. shall be preserved and/or restored after completion of the work. Where it is necessary to take up or remove any such item, the Contractor shall carefully preserve and store same until the work is completed and then reconstruct or replace the item in its former position in proper working order. If the Contractor fails to exercise due care and diligence in preserving or replacing any such item he shall replace same at his expense.

The Contractor shall preserve all public utilities located on private lands or public road allowances. It will be his obligation to contact any utility company to determine the actual location of utilities or plant and to make arrangements to protect same in accordance with the requirements of that utility. Scheduling of the work will take into account the requirements of any utility company if it requires removal or relocation of any of its plant.

## **9. TRAFFIC AND ROAD AUTHORITY**

The Contractor will be required to conform with any of the requirements of the Road Authority having jurisdiction. This may include provisions of detours, traffic control lights, fencing, signs and other requirements properly requested and required by the Road Authority.

## **10. SCHEDULING**

Scheduling of the work will be under the direction of the Engineer. A preconstruction meeting will be held with the Engineer, the Town of Amherstburg and the Contractor to review the Contractor's proposed schedule for constructing the work. If the Engineer deems any concerns warrant revisions to the schedule, he may require the Contractor to make such changes as will accommodate the interest of all parties concerned.

**11. STANDARD SPECIFICATIONS**

The work shall be constructed to the standard specifications of the Town of Amherstburg. Detailed specifications and further instructions, if required, will be issued to the Contractor prior to construction commencing. The intent of such detailed specifications and further instructions is to amplify and clarify any of the matters relating to work to ensure the intent of these specifications is fulfilled.

**12. INSURANCE**

The Contractor will be required to carry adequate insurance to protect against damage and public liability from his operations or activities. Such insurance will be in a form and in an amount satisfactory to the Town of Amherstburg to ensure the proper protection of all parties concerned including the property owners, the Town or its agents and the Engineer. The cost of all insurance is the Contractor's price of the work.

**13. BONDS**

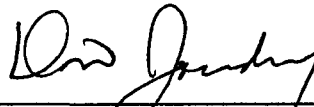
The Contractor will be required to furnish a 100% Performance Bond to ensure the due and proper performance of the work.

**STANTEC CONSULTING LTD.**



Phil Bartnik, E.I.T.  
Project Engineer  
July 18, 2005

Reviewed and approved by:

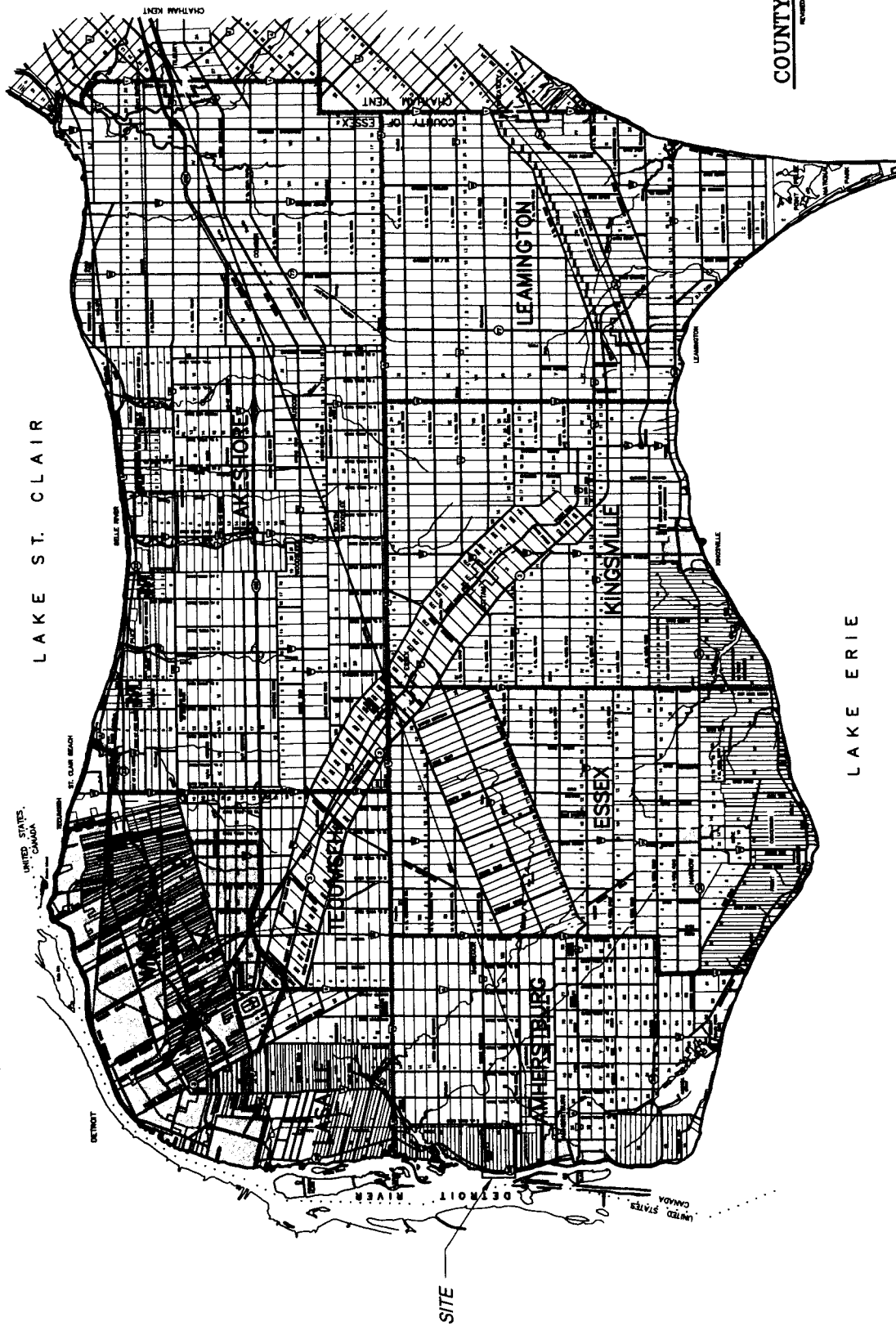


Don Joudrey, P. Eng.  
Project Manager  
July 18, 2005

**SCHEDULE OF ASSESSMENT FOR MAINTENANCE  
WHITE DRAIN  
TOWN OF AMHERSTBURG**

Maintenance Cost: \$ 10,000.00 (Example Only)

Roll No.	Property Description	Owner's Name(s)	Address	Area (ha.)	Area Afftd. (ha.) (A)	Runoff Coeff. (C)	AC	AC / AC <sub>total</sub> (%)	Benefit (\$)	Outlet (\$)	Total (\$)
<b>PART A: PRIVATELY OWNED LANDS</b>											
37-29-420-000-16200	CON 1 PT 112 12R13568 PT PT 1 12R14132 PT 1-6	1078217 Ontario Limited	Front Road North	64.855	38.910	0.30	11.673	43.74%	\$ -	\$ 4,374.33	\$ 4,374.33
37-29-420-000-17400	CON 1 PT LOT 13	Ouellette, Donald Ouellette, Camille	693 Front Road North	0.482	0.017	0.30	0.005	0.02%	\$ -	\$ 1.91	\$ 1.91
37-29-420-000-17500	CON 1 PT LOT 13	Thrasher, Cynthia Ann	687 Front Road North	0.494	0.130	0.30	0.039	0.15%	\$ -	\$ 14.61	\$ 14.61
37-29-420-000-17600	CON 1 PT LOT 13	Gosselin, Mark Gosselin, Shannon Ann	681 Front Road North	0.219	0.120	0.30	0.036	0.13%	\$ -	\$ 13.49	\$ 13.49
37-29-420-000-17700	CON 1 PT LOT 13	Rasila, Catherine Anne	677 Front Road North	0.448	0.410	0.30	0.123	0.46%	\$ -	\$ 46.09	\$ 46.09
37-29-420-000-17800	CON 1 PT LOT 13	McDowall, Deanna Lynn	671 Front Road North	0.749	0.749	0.30	0.225	0.84%	\$ -	\$ 84.20	\$ 84.20
37-29-420-000-17900	CON 1 PT LOT 13	McDowall, David John	669 Front Road North	0.360	0.360	0.30	0.108	0.40%	\$ -	\$ 40.47	\$ 40.47
37-29-420-000-18000	CON 1 PT LOT 13 12R14668 PT 1	1078217 Ontario Limited	659 Front Road North	0.761	0.761	0.30	0.228	0.86%	\$ -	\$ 85.55	\$ 85.55
37-29-420-000-18100	CON 1 PT LOTS 12&13 12R13657 PT 9	1078217 Ontario Limited	Front Road North	38.384	36.620	0.20	7.324	27.45%	\$ -	\$ 2,744.59	\$ 2,744.59
37-29-420-000-18200	CON 1 PT LOTS 12&13 12R2935 PT 3	Byrne, Michael Gerard Byrne, Maureen Patricia	641 Front Road North	0.397	0.397	0.30	0.119	0.45%	\$ -	\$ 44.63	\$ 44.63
37-29-420-000-18300	CON 1 S PT LOT 13	Tavern Incorporated - Kircos	639 Front Road North	2.307	2.307	0.30	0.692	2.59%	\$ -	\$ 259.36	\$ 259.36
37-29-420-000-18400	CON 1 PT LOT 12	Ralston, Brian Paul	615 Front Road North	1.667	1.667	0.30	0.500	1.87%	\$ -	\$ 187.41	\$ 187.41
37-29-420-000-18500	CON 1 PT LOT 12	Purdie, Margo Ann Purdie, Earl Francis	609 Front Road North	0.599	0.599	0.30	0.180	0.67%	\$ -	\$ 67.34	\$ 67.34
37-29-420-000-18600	CON 1 PT LOT 12	Boshart, Robert Bruce Boshart, Patricia Elaine	607 Front Road North	0.180	0.180	0.30	0.054	0.20%	\$ -	\$ 20.24	\$ 20.24
37-29-420-000-18700	CON 1 PT LOT 12	Purdie, Linda Hall, Anthony	603 Front Road North	0.180	0.180	0.30	0.054	0.20%	\$ -	\$ 20.24	\$ 20.24
37-29-420-000-18800	CON 1 PT LOT 12 12R17980 PT 1&2	Gatti, Christina	Front Road North	0.180	0.180	0.30	0.054	0.20%	\$ -	\$ 20.24	\$ 20.24
37-29-420-000-18900	CON 1 PT LOT 11 12R1252 PT 1	Bailey, Catherine Louise	593 Front Road North	0.090	0.090	0.30	0.027	0.10%	\$ -	\$ 10.12	\$ 10.12
37-29-420-000-19000	CON 1 PT LOT 11	Hunt, Francis Joseph	589 Front Road North	0.955	0.955	0.30	0.287	1.07%	\$ -	\$ 107.36	\$ 107.36
37-29-420-000-19100	CON 1 PT LOT 11 12R7931 PT 1	Kendell, Scott Norman	581 Front Road North	0.510	0.510	0.30	0.153	0.57%	\$ -	\$ 57.34	\$ 57.34
37-29-420-000-19200	CON 1 PT LOT 11	Mitchell, Donald Mitchell, Anne Marie	571 Front Road North	0.534	0.534	0.30	0.160	0.60%	\$ -	\$ 60.03	\$ 60.03
37-29-420-000-24200	CON 1 PT LOT 11&12 12R13059 PT of PT 1	Flynn Development Limited	Knobb Hill Drive	18.891	16.870	0.20	3.374	12.64%	\$ -	\$ 1,264.37	\$ 1,264.37
<b>TOTAL FOR PART A: PRIVATELY OWNED LANDS</b>					<b>102.546</b>				\$ -	\$ 9,523.93	\$ 9,523.93
<b>PART B: TOWN OF AMHERSTBURG</b>					<b>1.012</b>	<b>0.50</b>	<b>0.506</b>	<b>1.90%</b>	\$ -	\$ 189.62	\$ 189.62
<b>PART C: ESSEX COUNTY</b>					<b>1.092</b>	<b>0.70</b>	<b>0.764</b>	<b>2.86%</b>	\$ -	\$ 286.45	\$ 286.45
<b>TOTAL ASSESSMENT</b>										<b>\$ 10,000.00</b>	



COUNTY OF ESSEX  
REVISED JANUARY 1998

TOWN OF AMHERSTBURG  
WHITE DRAIN



Stantec

KEY PLAN



PROJECT NO.  
1:2000000

DATE  
2005-07-22

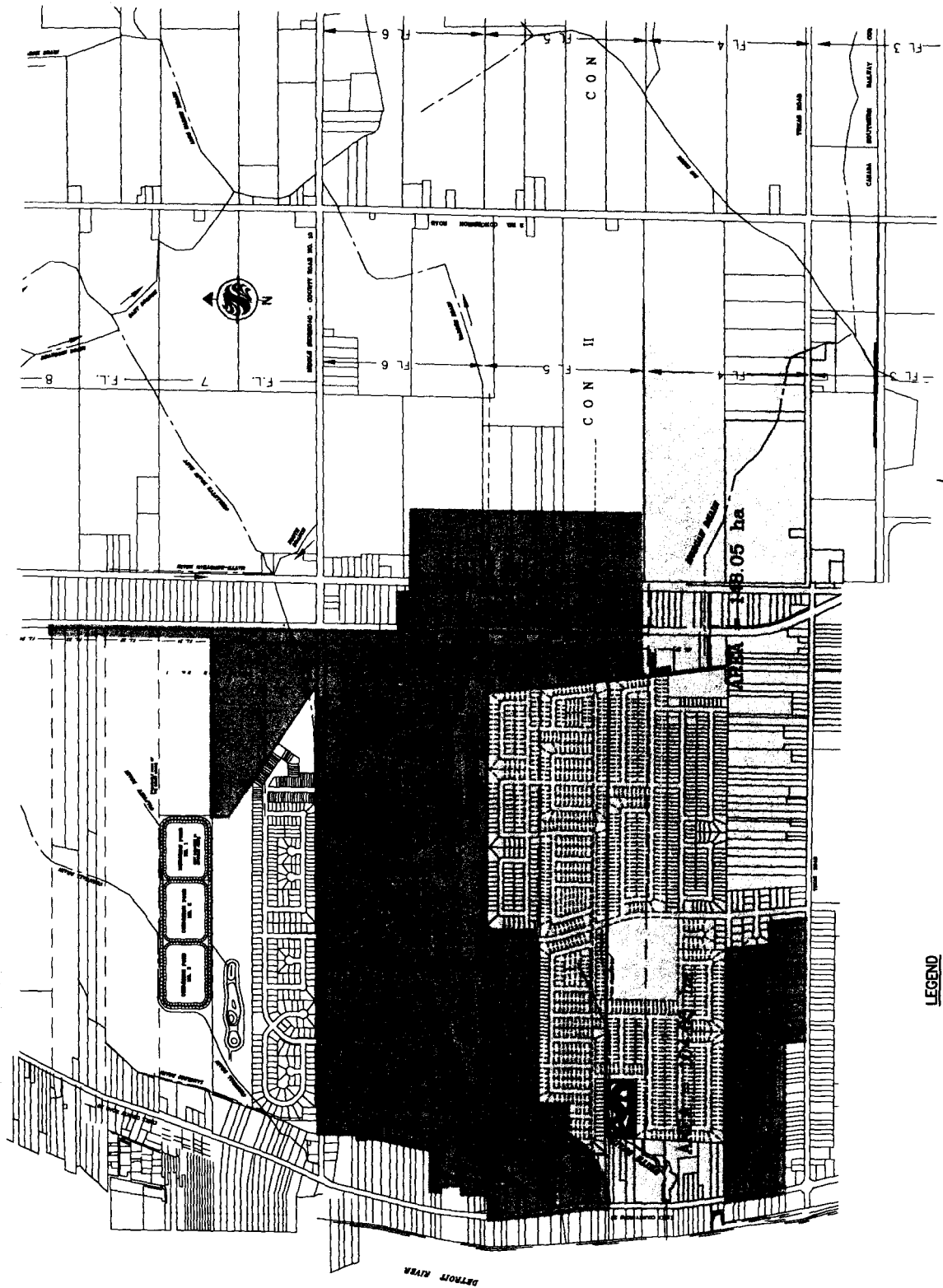
FIGURE 1

LAKE ST. CLAIR

LAKE ERIE

SITE





TOWN OF AMHERSTBURG  
WHITE DRAIN OUTLET



Scanlon

PROPOSED DRAINAGE AREA PLAN  
0 150 450 750m

FIGURE 3

- LEGEND**
- WHITE DRAIN
  - JETHS DRAIN
  - OUELLETTE DRAIN WEST
  - MORGAN DRAIN



STORMWATER MANAGEMENT POND TO BE CONSTRUCTED AS PART OF THE KINGSBRIDGE DEVELOPMENT

420-18100

PROPERTIES AFFECTED BY EASEMENT	
ROLL NO.	EASEMENT AREA (ha)
420-10500	0.025
420-17800	0.001
420-17900	0.015
420-18000	0.031
420-18100	0.010
420-18200	0.019
420-18300	0.116
420-18400	0.156

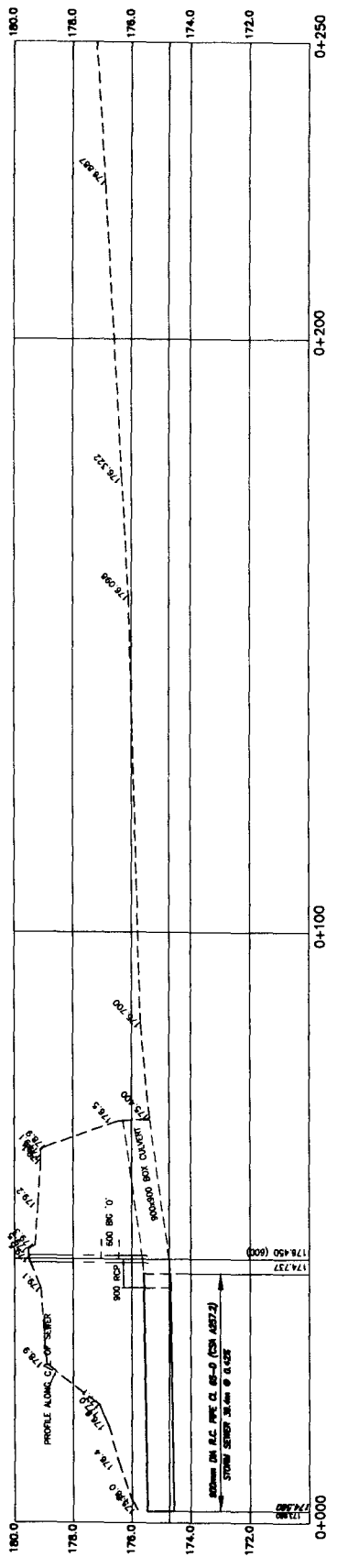
420-24200

 MAINTENANCE CORRIDOR

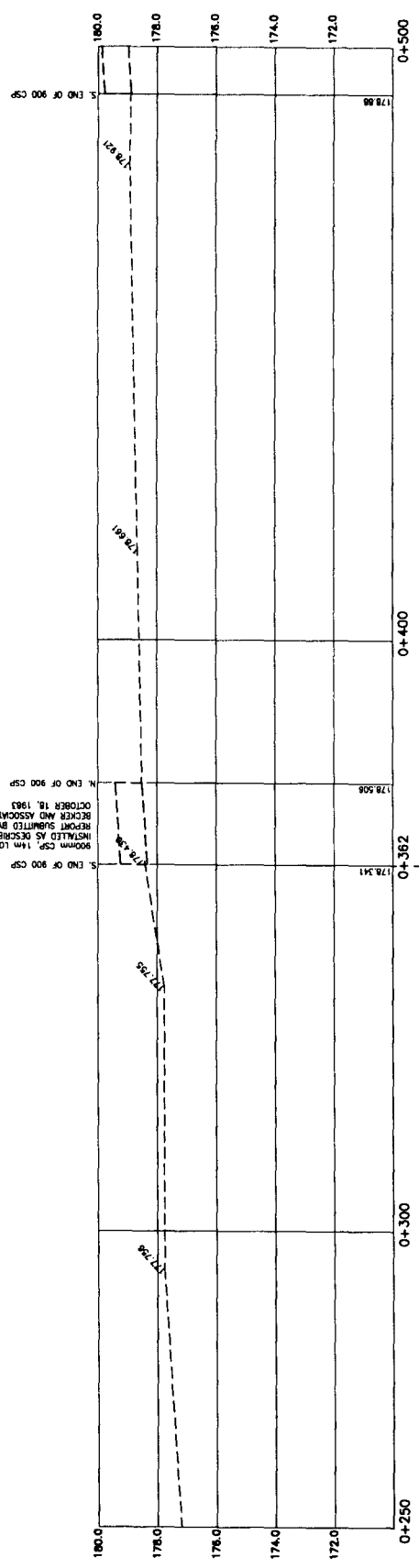


TOWN OF AMHERSTBURG  
 WHITE DRAIN OUTLET





900mm CSP 14th LANE CULVERT  
 INSTALLED AS DESCRIBED IN THE  
 REPORT SUBMITTED BY N.K.  
 BECKER AND ASSOCIATES LTD. ON  
 OCTOBER 18, 1983



WHITE DRAIN OUTLET WHITE DRAIN



TOWN OF AMHERSTBURG  
 WHITE DRAIN OUTLET

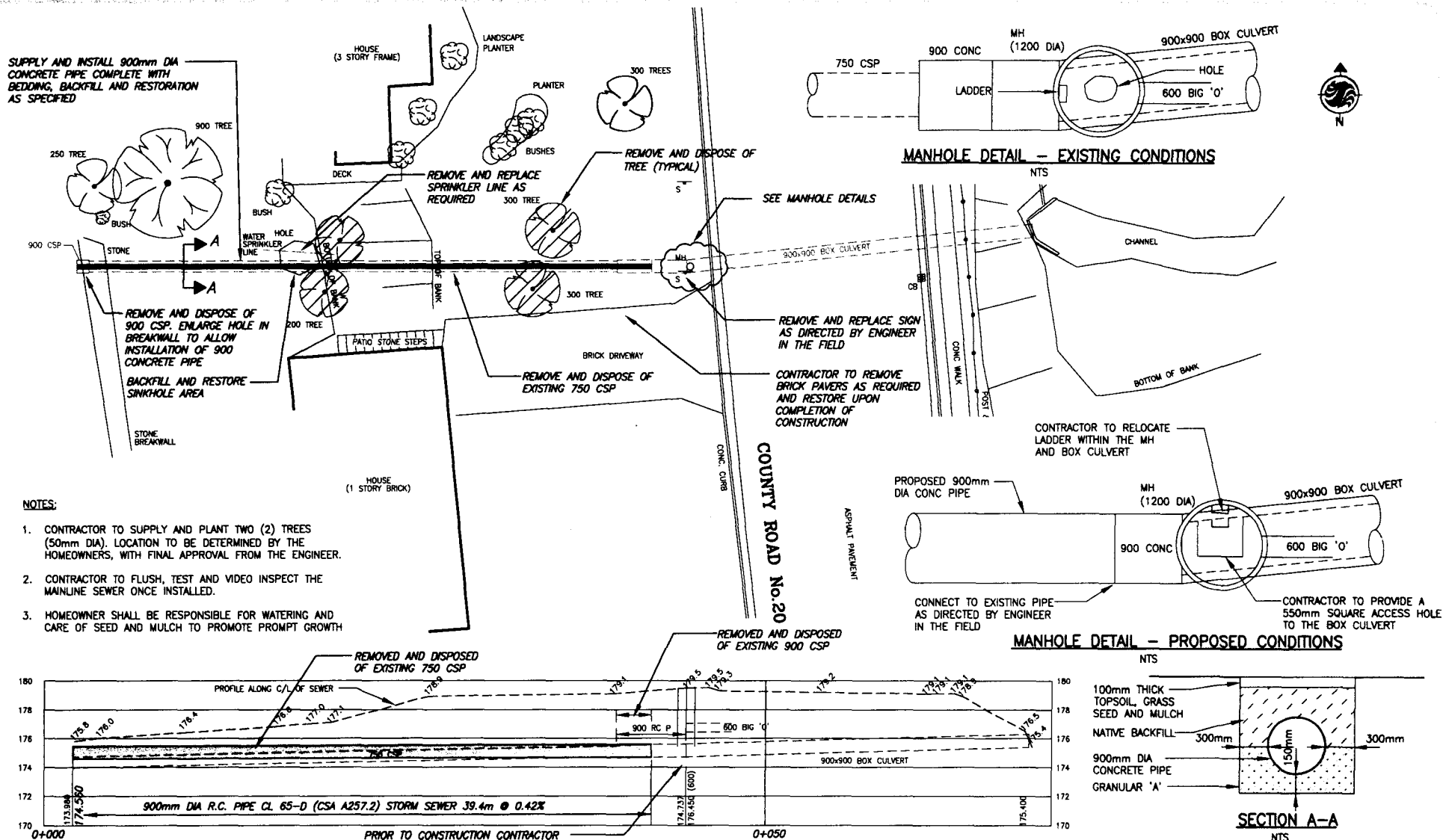
PROJECT NO.	1750	DATE	37.5m
ISSUED FOR	1:750	SCALE	37.5m
WHITE DRAIN OUTLET / WHITE DRAIN PROFILE			

Stantec

FIGURE 4A



W:\active\165600874 White Drain Report Amherstburg\design\report\FIGURE 5.DWG  
 2005-07-22 09:33AM By: klor



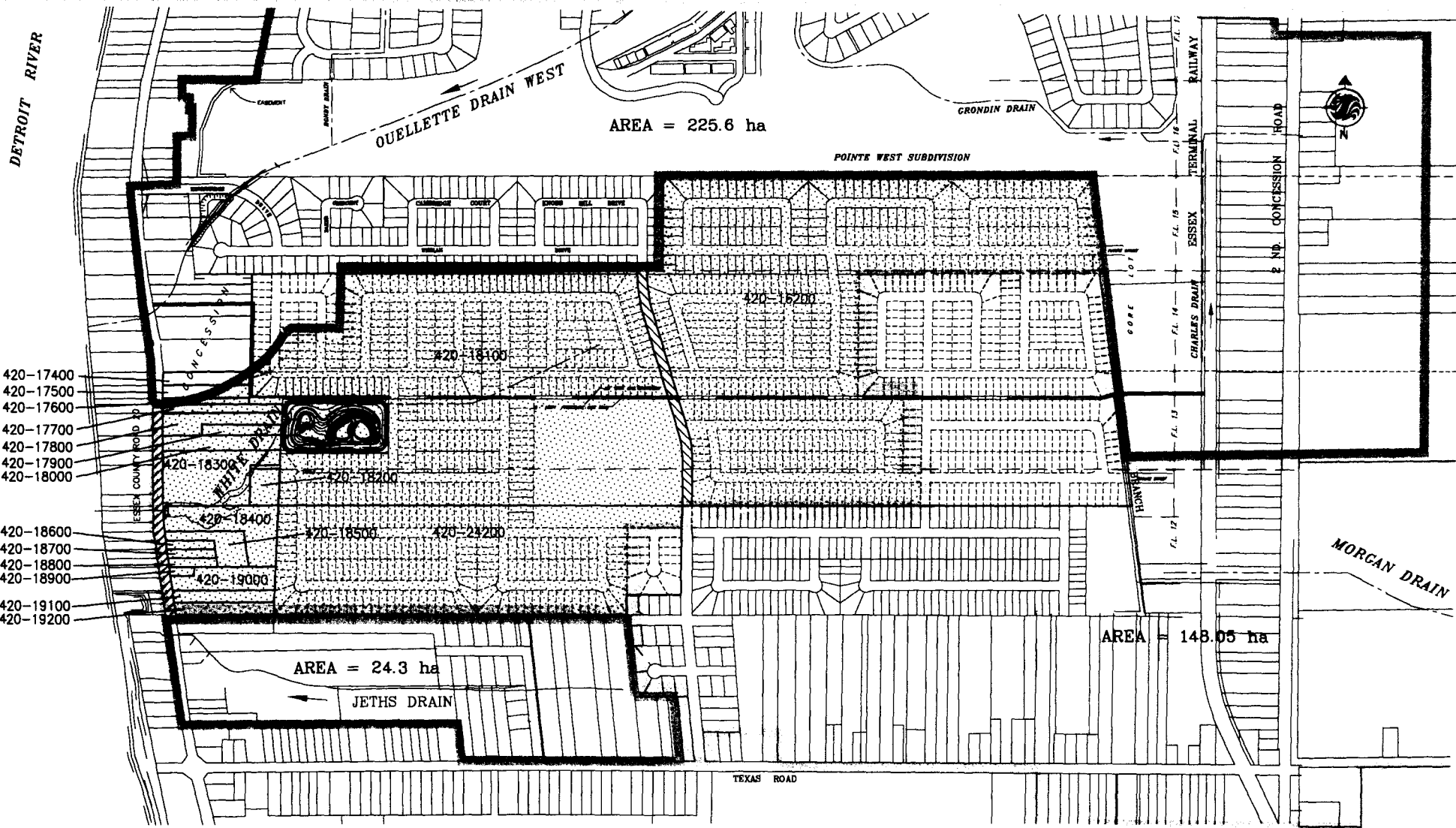
**TOWN OF AMHERSTBURG  
 WHITE DRAIN OULET**

PLAN AND PROFILE








PROJECT NO. 165600874  
 SCALE 1:250  
 DRAWING NO. 0001  
 DATE 2005

**FIGURE 5**





**LEGEND**

- |   |   |   |                   |  |                           |
|---|---|---|-------------------|--|---------------------------|
|  | TOWN OF AMHERSTBURG - AFFECTED PROPERTY |  | WHITE DRAIN LIMIT |  | QUELETTE DRAIN WEST LIMIT |
|  | COUNTY OF ESSEX - AFFECTED PROPERTY     |  | JETHS DRAIN LIMIT |  | MORGAN DRAIN LIMIT        |
|  | PROPERTY OWN - AFFECTED PROPERTY        |   |                   |  |                           |



Starbuc

**TOWN OF AMHERSTBURG  
 WHITE DRAIN OUTLET**

**ASSESSMENT PLAN**

