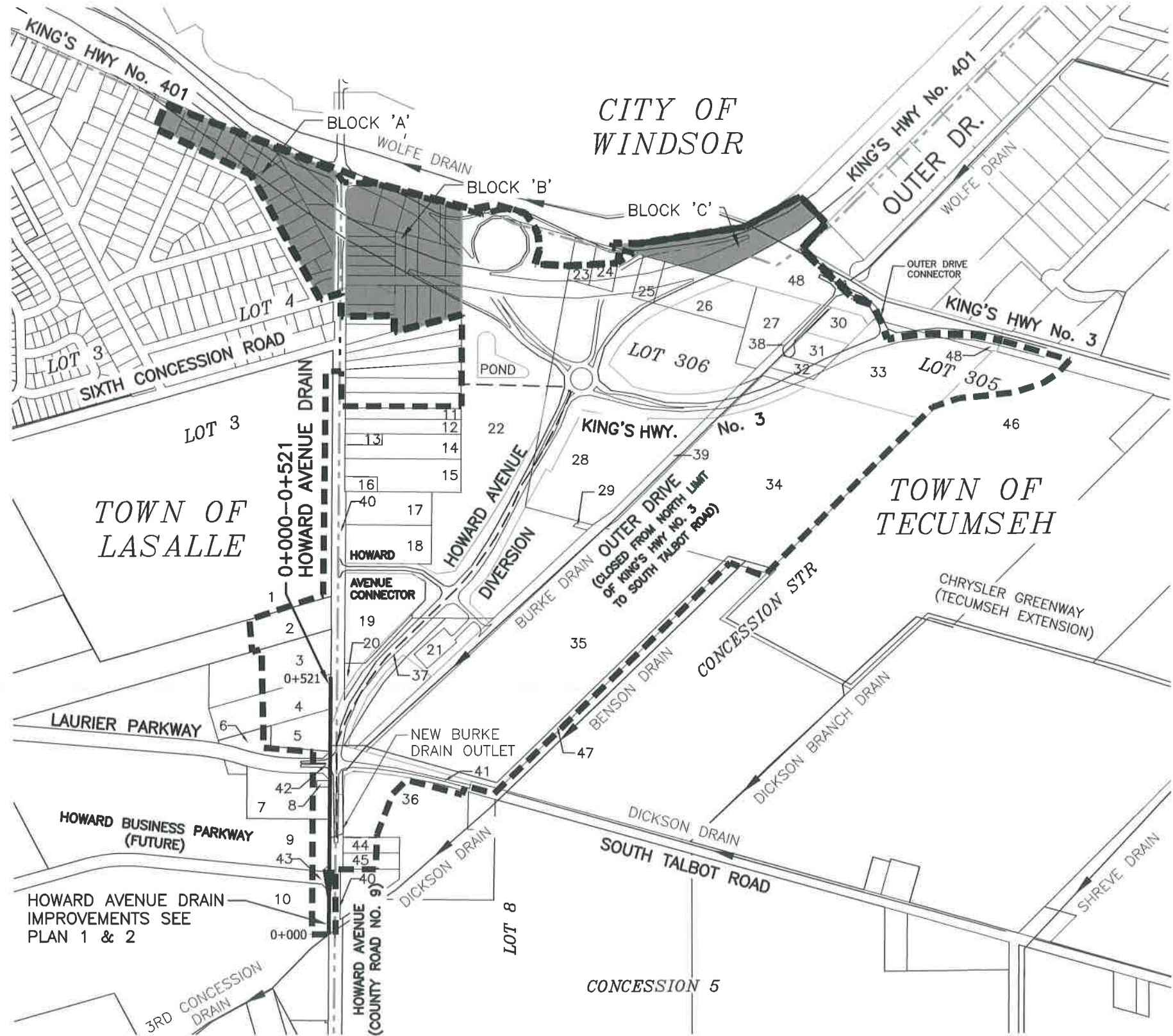


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HOWARD AVENUE DRAIN STATIONING	
STATION	DESCRIPTION
0+068	S. LIMIT HOWARD BUSINESS PARKWAY (FUTURE)
0+124	N. LIMIT HOWARD BUSINESS PARKWAY (FUTURE)
0+218	LINE BETWEEN 290-06250 & 290-16300
0+284	LINE BETWEEN 290-06250 & 290-16350
0+297	S. LIMIT LAURIER PARKWAY
0+357	N. LIMIT LAURIER PARKWAY
0+445	LINE BETWEEN 290-06200 & 290-06100

LEGEND	
	WATERSHED BOUNDARY
	MUNICIPAL BOUNDARY
	HOWARD AVE. DRAIN
	SURROUNDING DRAINS
	SUBWATERSHED FOR BURKE DRAIN & BURKE DRAIN OUTLET

FOR PROPERTY OWNERSHIP INFORMATION ON
NUMBERED LAND PARCELS SEE PAGE 2 OF 9

WATERSHED PLAN
SCALE=1:10,000



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1	CLIENT REVIEW	JAN. 18/16	TRO

DESIGN	TRO	REVIEWED BY	FRF
DRAWN	AJL	CHECKED BY	EPS
DATE	June 6, 2018		
SCALE	1 : 10000		

PROJECT NO.	12-6578-1200
DRAWING SCALES BASED ON A 11" X 17" SHEET	

'SCHEDULE C'	
Drainage Report for the HOWARD AVENUE DRAIN Town of LaSalle	
SHEET TITLE	WATERSHED PLAN
PAGE NO.	1 of 9

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HOWARD AVENUE DRAIN PARCEL INFORMATION			
PARCEL No.	ROLL No.	LANDOWNER	AREA WITHIN WATERSHED (ACRES)
TOWN OF LASALLE			
BLOCK A	N/A	MINISTRY OF TRANSPORTATION	10.60
	HOWARD AVENUE	COUNTY OF ESSEX (TO POND)	0.80
1	290-05800	ROMAN CATHOLIC EPISCOPAL CORPORATION LONDON DIOCESE	3.50
2	290-05900	ST NICHOLAS MACEDONIAN EASTERN ORTHODOX CHURCH	2.70
3	290-06000	TRUSTEES OF THE APOSTOLIC CHRISTIAN CHURCH NAZAREAN	3.30
4	290-06100	TRUSTEES OF THE APOSTOLIC CHRISTIAN CHURCH NAZAREAN	2.36
5	290-06200	FAITH COMMUNITY CHURCH--LASALLE	1.93
6	290-16300	HOWARD BUSINESS CENTRE INC	0.13
7	290-06250	1486192 ONTARIO LIMITED	0.57
8	290-16350	UNION GAS LIMITED	0.10
9	290-16300	HOWARD BUSINESS CENTRE INC	0.77
10	290-16300	HOWARD BUSINESS CENTRE INC	0.80
40 (PART)	HOWARD AVENUE	COUNTY OF ESSEX	3.08
42	LAURIER PARKWAY	TOWN OF LASALLE	0.20
43	HOWARD BUSINESS PARKWAY	TOWN OF LASALLE	0.20
TOWN OF TECUMSEH			
BLOCK B	N/A	MINISTRY OF TRANSPORTATION	16.00
	HOWARD AVENUE	COUNTY OF ESSEX (TO POND)	0.80
BLOCK C	KING'S HWY. NO. 401	MINISTRY OF TRANSPORTATION	5.21
11	470-02000	SHEILA A. DONLON	1.34
12	470-01900	MAZHAR A. KHAN & AALIYA MIR	1.77
13	470-01801	ROBERT B. & DEBORAH A. ARMITAGE	0.43
14	470-01800	GREG P. MORROW	2.60
15	470-01700	MOHAMED KOUGAN	3.50
16	470-01600	ROBERT H.C. SHERMAN	0.50
17	470-01510	ROYAL CANADIAN LEGION METROPOLITAN BRANCH 594	2.99
18	470-01500	WINDSOR COMMUNITY OF CHRIST	3.47

PARCEL No.	ROLL No.	LANDOWNER	AREA WITHIN WATERSHED (ACRES)
19	470-014500	AL-HIJRA MOSQUE	5.40
20	470-01400	MINISTRY OF TRANSPORTATION	0.54
21	470-01410	MINISTRY OF TRANSPORTATION	4.90
22 *	470-01580	MINISTRY OF TRANSPORTATION	41.18
23 *	470-05000	MINISTRY OF TRANSPORTATION	0.40
24 *	470-05003	MINISTRY OF TRANSPORTATION	0.63
25 *	470-05200	MINISTRY OF TRANSPORTATION	1.00
26 *	470-05201	MINISTRY OF TRANSPORTATION	4.29
27	470-05300	MISKA MARTON	3.65
28 *	470-05100	MINISTRY OF TRANSPORTATION	36.06
29	470-05400	MINISTRY OF TRANSPORTATION	0.10
30	470-05412	470698 ONTARIO LTD	1.64
31 *	470-05405	MINISTRY OF TRANSPORTATION	1.13
32 *	470-05401	MINISTRY OF TRANSPORTATION	0.70
33 *	470-05500	MINISTRY OF TRANSPORTATION	10.85
34 *	470-05402	CONGREGATION OF THE ORDER ANTONIN MARONITE IN ONTARIO	32.54
35	470-01300	AMICO INFRASTRUCTURES	37.29
36	450-02500	2484234 ONTARIO INC.	4.00
37	HOWARD AVENUE DIVERSION	MINISTRY OF TRANSPORTATION	4.97
38	OUTER DRIVE	TOWN OF TECUMSEH	1.20
39	OUTER DRIVE (CLOSED)	MINISTRY OF TRANSPORTATION	5.40
40 (PART)	HOWARD AVENUE	COUNTY OF ESSEX	2.50
41	SOUTH TALBOT ROAD	TOWN OF TECUMSEH	2.00
44	450-02400	TRUSTEES OF THE KHEMARA BUDDHIST TEMPLE	0.46
45	450-02300	SYNOD DIOCES OF HURON INC	0.48
46	470-05600	VICTORIA MEMORIAL GARDENS	1.60
47	N/A	CHRYSLER GREENWAY (TOWN OF TECUMSEH)	3.00
48	KING'S HIGHWAY NO. 3	MINISTRY OF TRANSPORTATION	5.45

TOTAL DRAINAGE AREA--HOWARD AVENUE DRAIN=114.53 Ha (283.01 Acres)

* AREAS SHOWN INCLUDE NEW ROADWAY AREAS

'SCHEDULE C'



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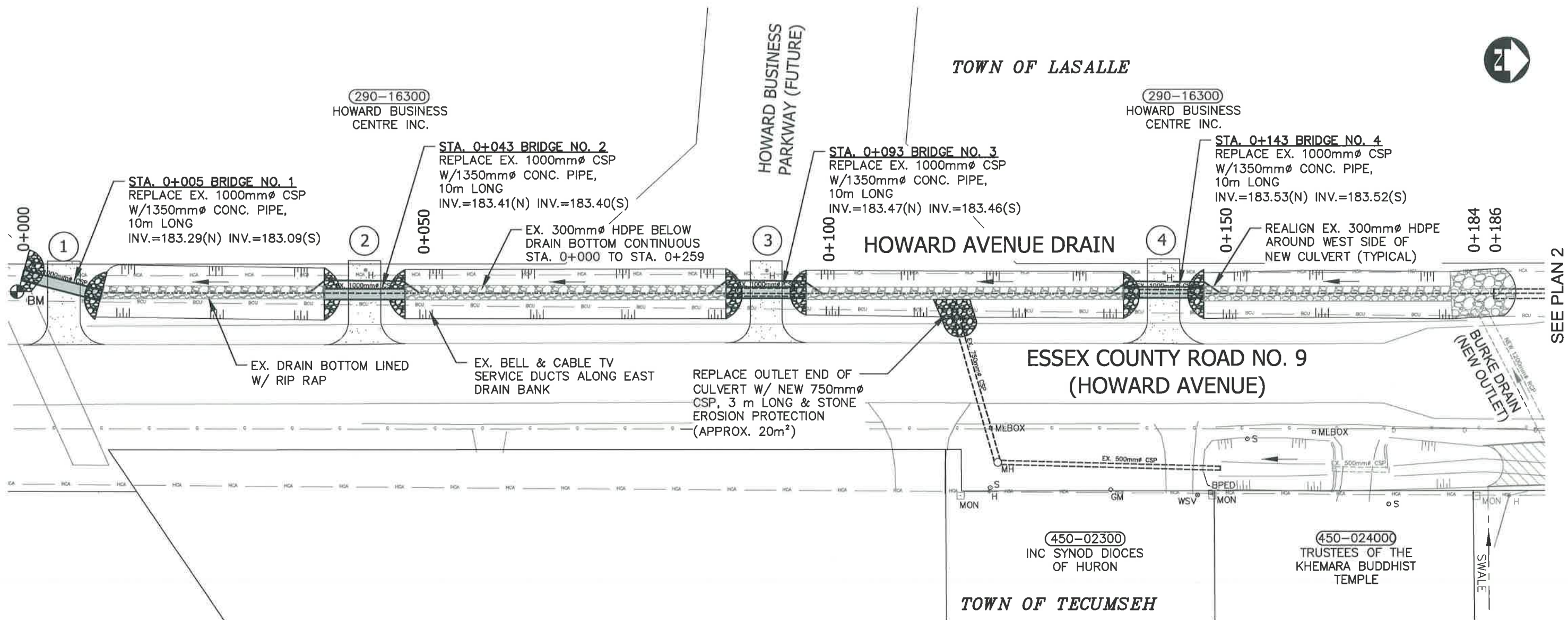
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Drainage Report for the
HOWARD AVENUE DRAIN
Town of LaSalle

SHEET TITLE
PROPERTY INFORMATION

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SEE PLAN 2

PLAN 1 (STA. 0+000 TO STA. 0+186)
HOWARD AVENUE DRAIN
SCALE=1:500

SITE BENCHMARK

BM1—TOP OF WEST END OF CONCRETE
CULVERT UNDER HOWARD AVENUE AT STA.
0+000.

ELEVATION=184.75m



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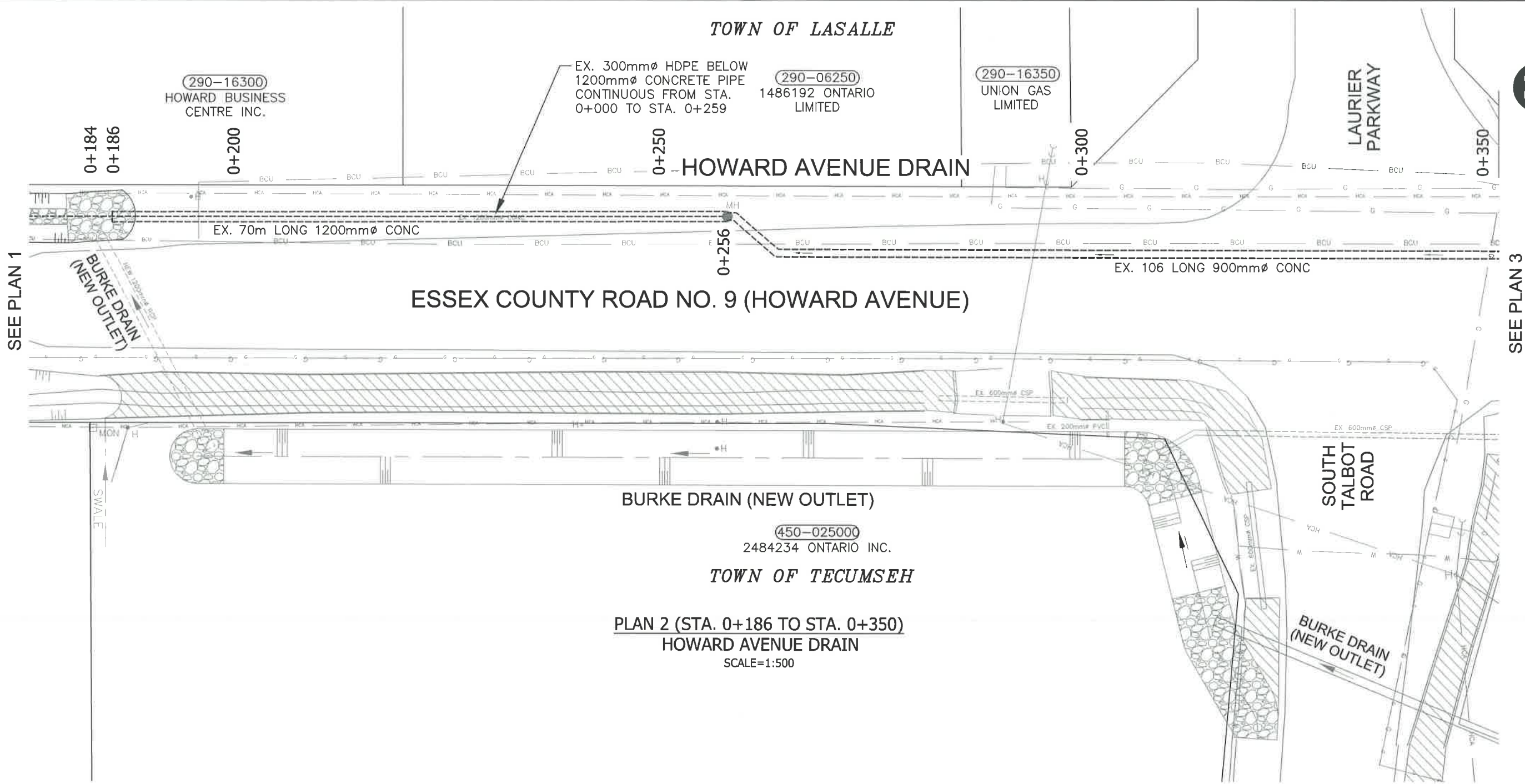
'SCHEDULE C'

Drainage Report for the
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Town of LaSalle

SHEET TITLE
PLAN 1
STA. 0+000 TO STA. 0+186

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ESSEX COUNTY ROAD NO. 9 (HOWARD AVENUE)

BURKE DRAIN (NEW OUTLET)

PLAN 2 (STA. 0+186 TO STA. 0+350)
HOWARD AVENUE DRAIN
SCALE=1:500



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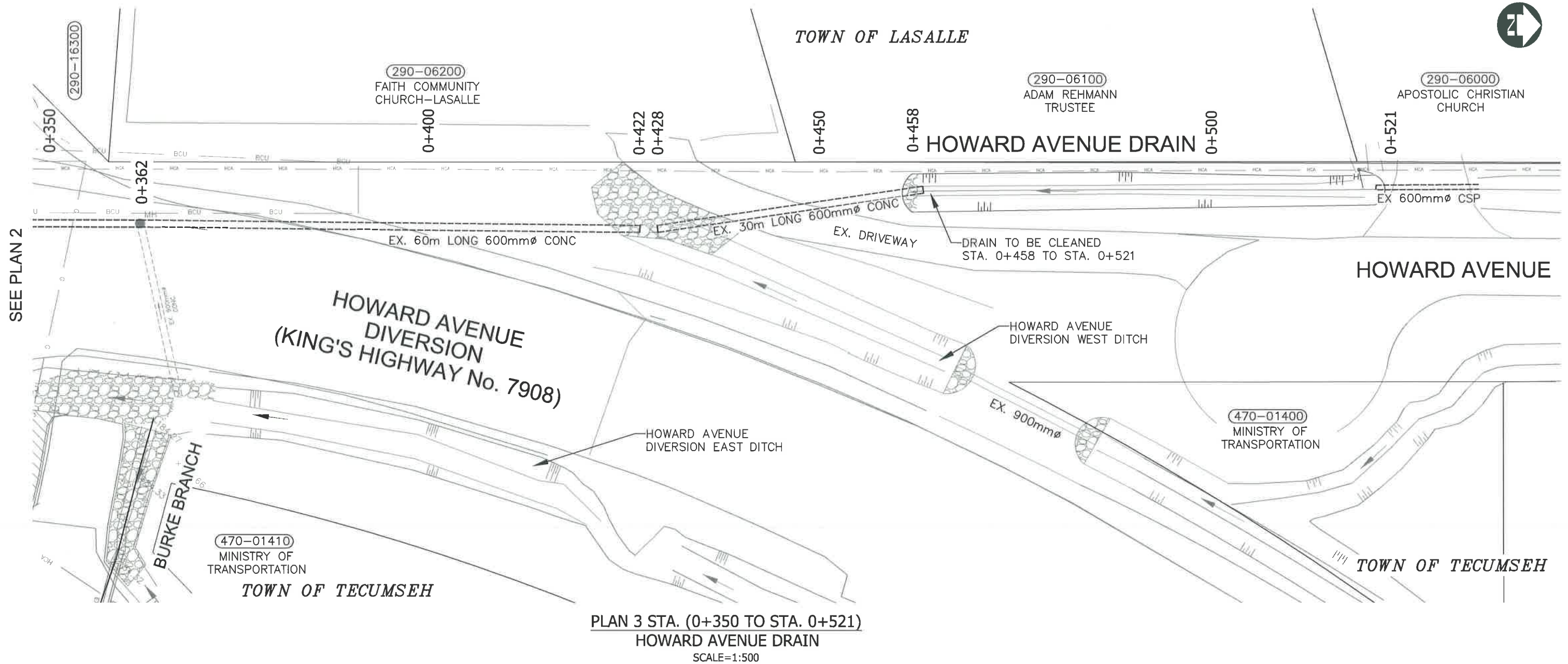
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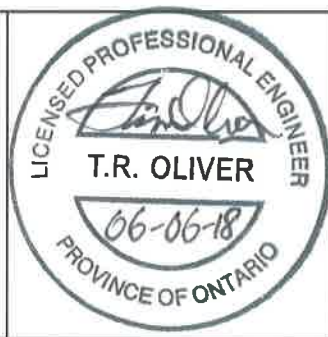
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'SCHEDULE C'	
Drainage Report for the HOWARD AVENUE DRAIN Town of LaSalle	
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PLAN 3 STA. (0+350 TO STA. 0+521)
HOWARD AVENUE DRAIN
SCALE=1:500



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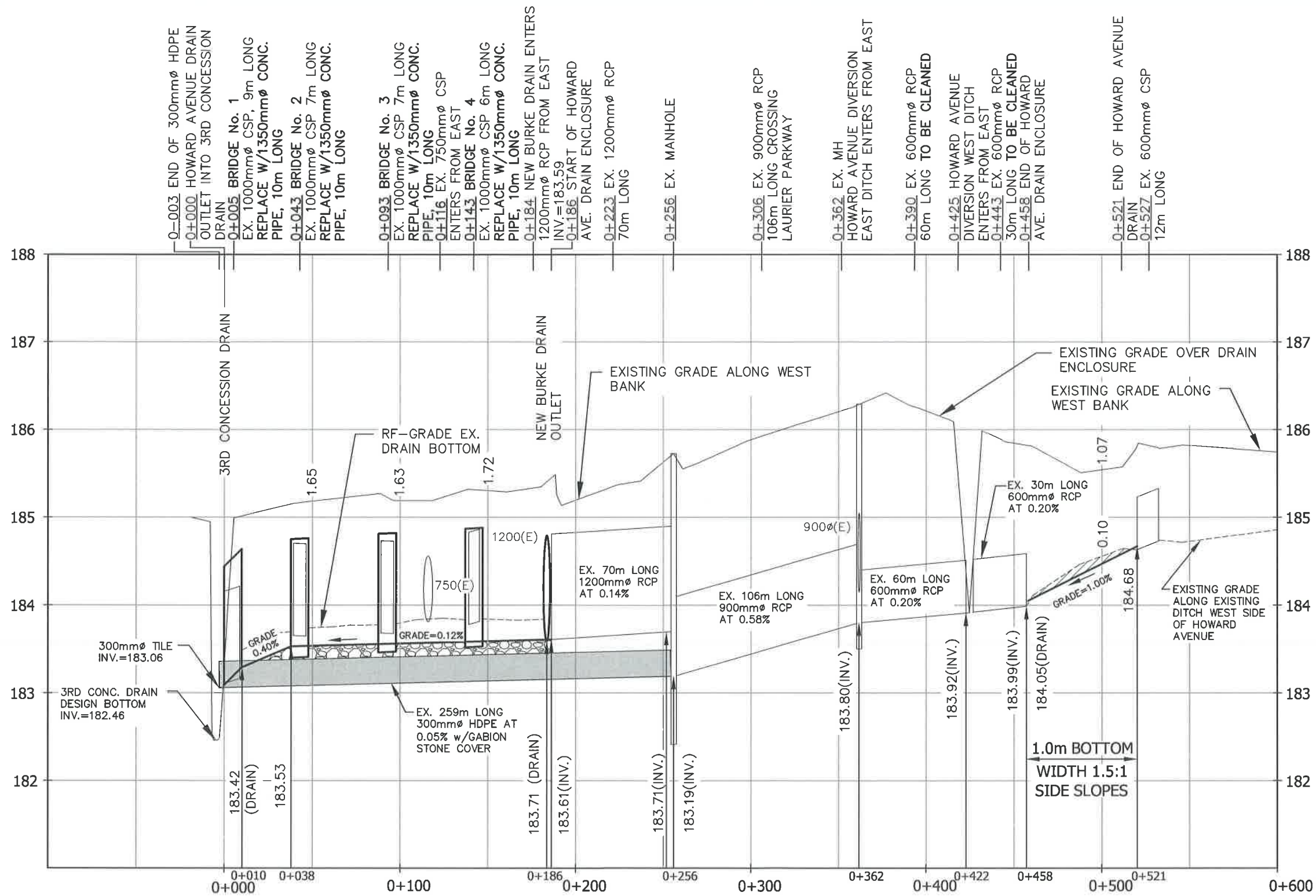
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'SCHEDULE C'	
Drainage Report for the HOWARD AVENUE DRAIN Town of LaSalle	
SHEET TITLE	PLAN 3 STA. 0+350 TO STA. 0+521
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PROFILE STA. 0+000 TO 0+600
SCALE-HORIZ.=1:2500
VERT.=1:50

NOTE:
RCP denotes REINFORCED CONCRETE PIPE
CSP denotes CORRUGATED STEEL PIPE



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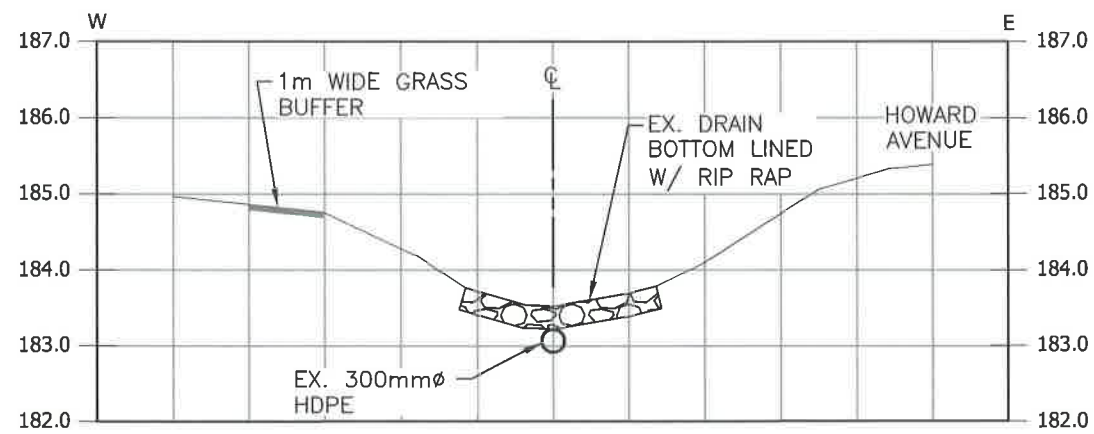
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Drainage Report for the
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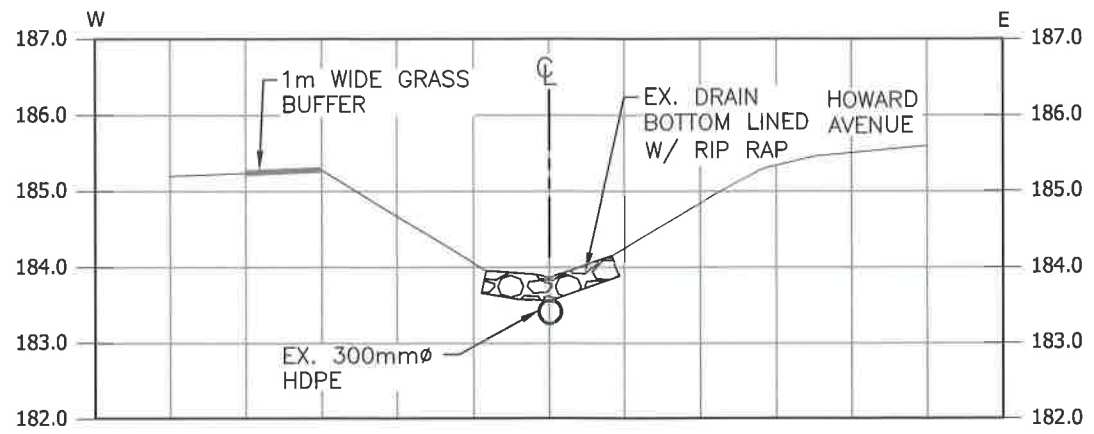
SHEET TITLE
PROFILE
STA. 0+000 TO STA. 0+600

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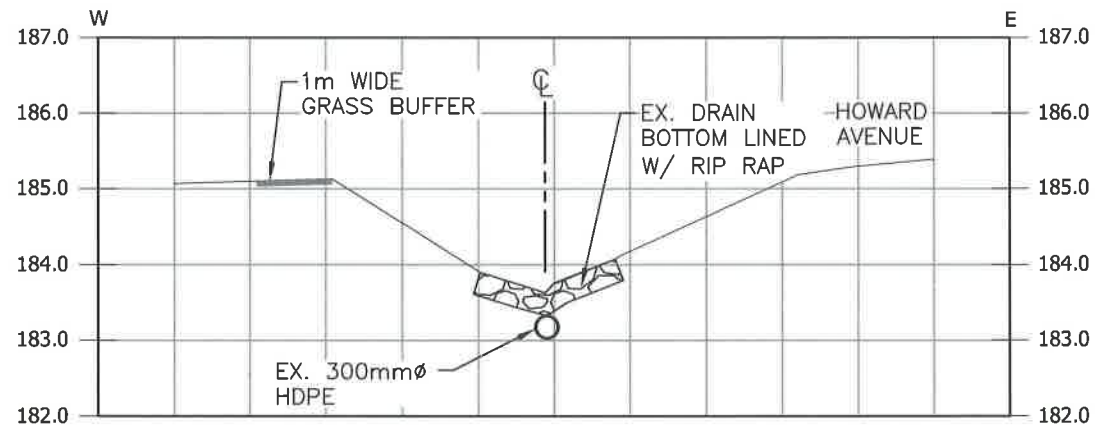
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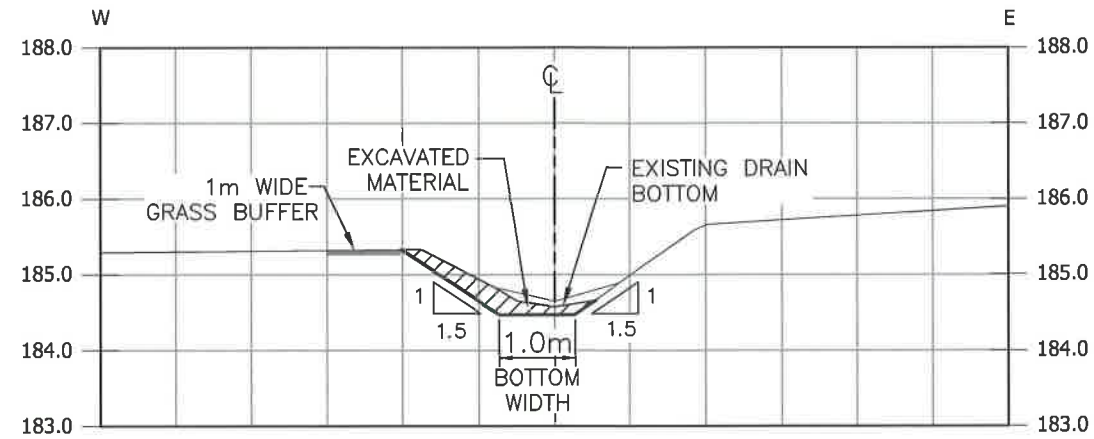
CROSS SECTION 0+020
HOWARD AVENUE DRAIN LOOKING UPSTREAM
SCALE=1:100



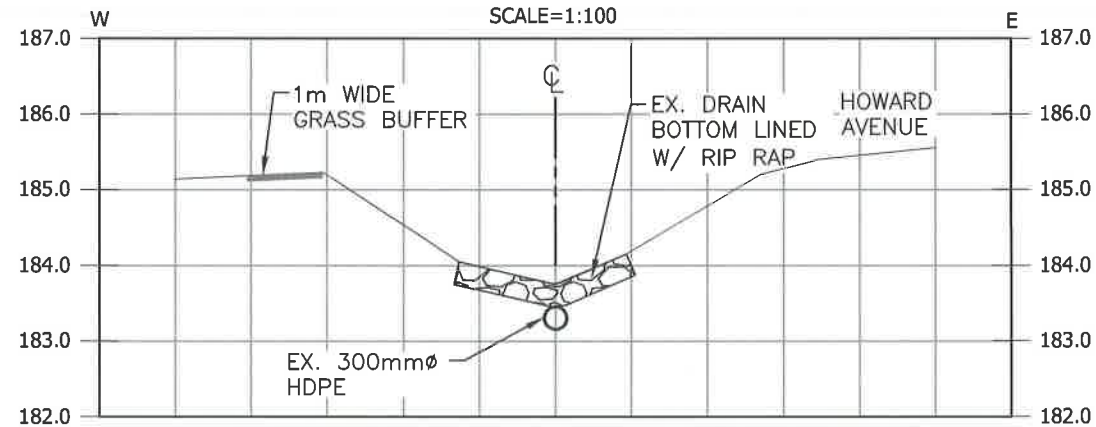
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HOWARD AVENUE DRAIN LOOKING UPSTREAM
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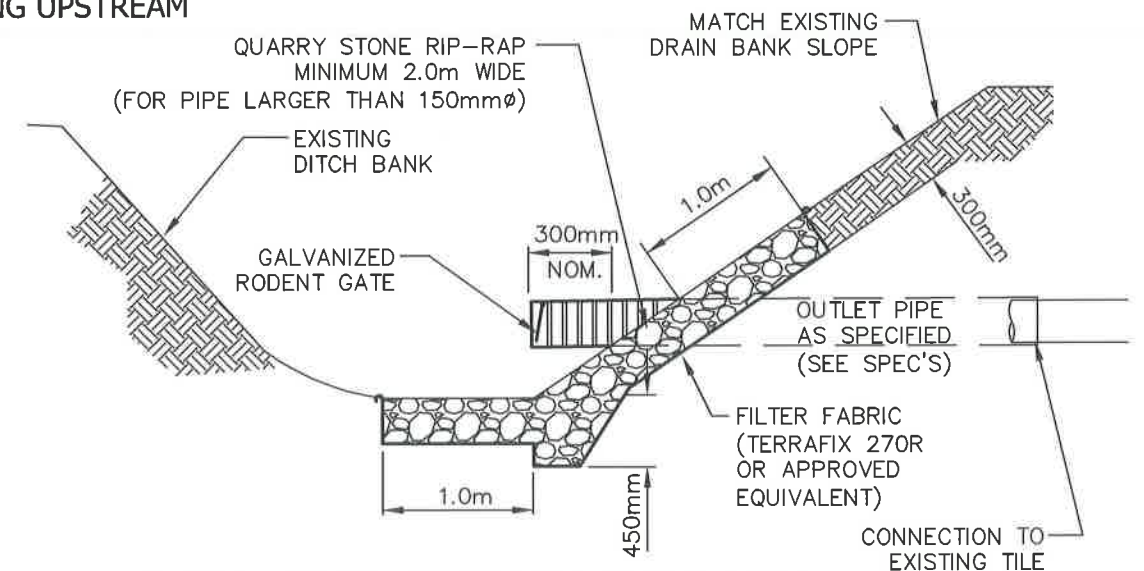
CROSS SECTION 0+050
HOWARD AVENUE DRAIN LOOKING UPSTREAM
SCALE=1:100



CROSS SECTION 0+500
HOWARD AVENUE DRAIN LOOKING UPSTREAM
SCALE=1:100



CROSS SECTION 0+120
HOWARD AVENUE DRAIN LOOKING UPSTREAM
SCALE=1:100



TYPICAL CSP TILE INLET REPLACEMENT DETAIL
NOT TO SCALE



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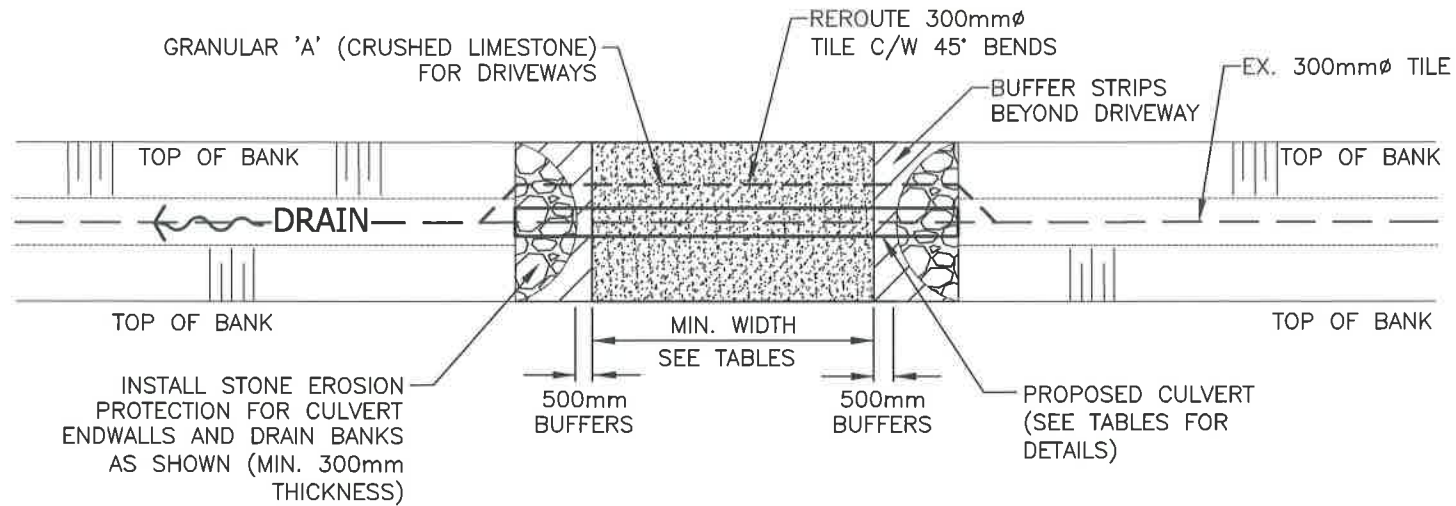
'SCHEDULE C'

Drainage Report for the
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Town of LaSalle

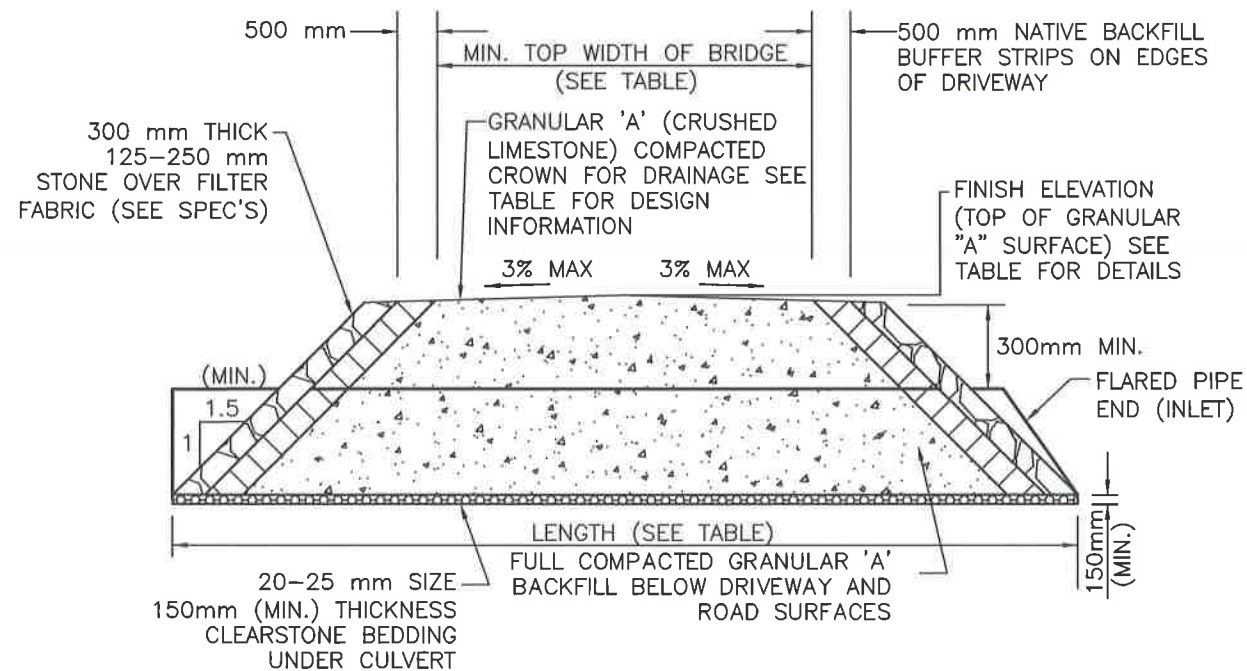
SHEET TITLE
CROSS SECTIONS

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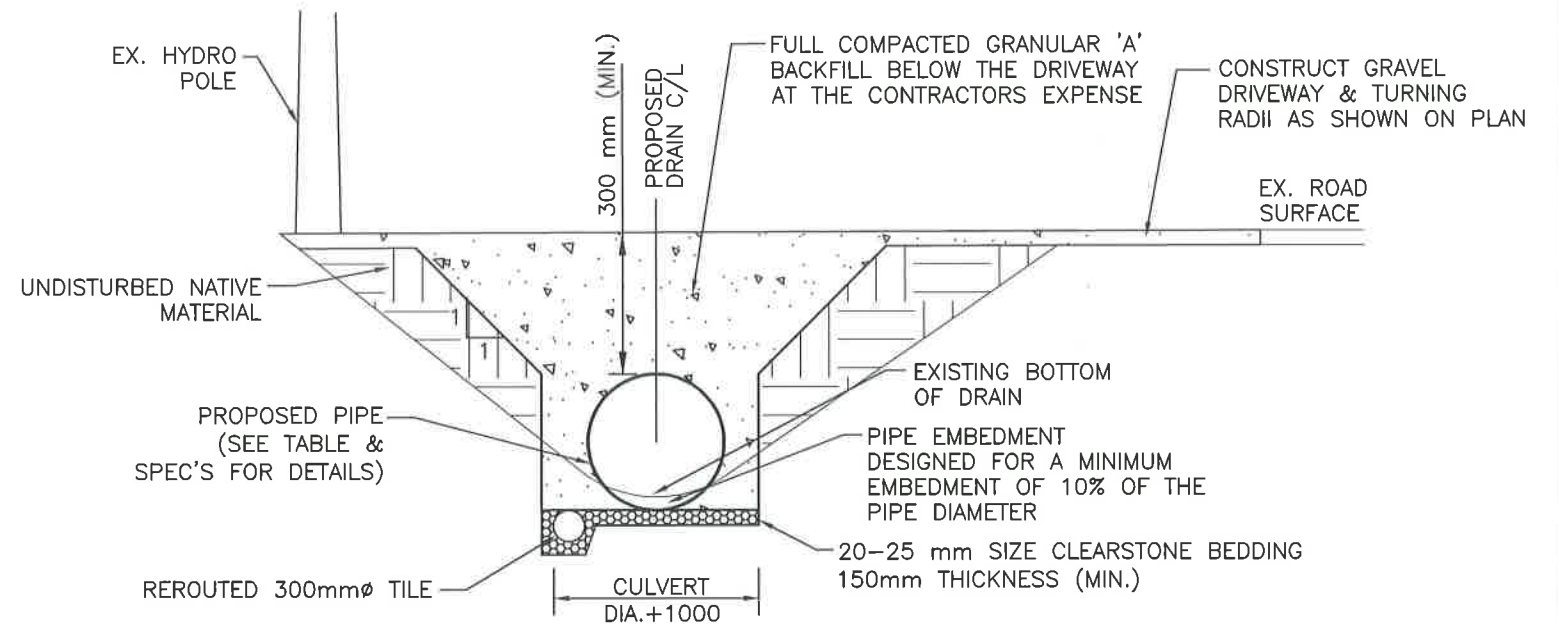
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BRIDGE PLAN
N.T.S.



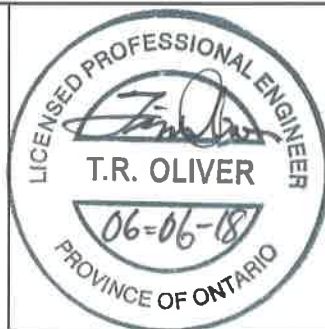
LONGITUDINAL SECTION
N.T.S.



CROSS SECTION
N.T.S.

TABLE 1 – ACCESS CULVERT DESIGN INFORMATION

DESCRIPTION	BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4
PIPE INVERT ELEV. U/S SIDE(m)	183.29	183.41	183.47	183.53
PIPE INVERT ELEV. D/S SIDE(m)	183.09	183.40	183.46	183.52
TOP OF $\varnothing$ DRIVEWAY SURFACE ELEV. (m)	185.01	185.18	185.25	185.30
DRAIN BOTTOM (m) (DESIGN) (AT CENTRELINE OF CULVERT)	183.32	183.54	183.60	183.66
MIN. TOP WIDTH OF DRIVEWAY (m)	3.0	3.0	3.0	3.0
MIN. CULVERT GRADE (%)	2.00	0.10	0.10	0.10
CULVERT MATERIAL	CONC.	CONC.	CONC.	CONC.
CULVERT LENGTH (m)	10.0	10.0	10.0	10.0
PIPE SIZE (mm)	1350	1350	1350	1350
CULVERT ENDWALL TYPE	SLOPING STONE	SLOPING STONE	SLOPING STONE	SLOPING STONE



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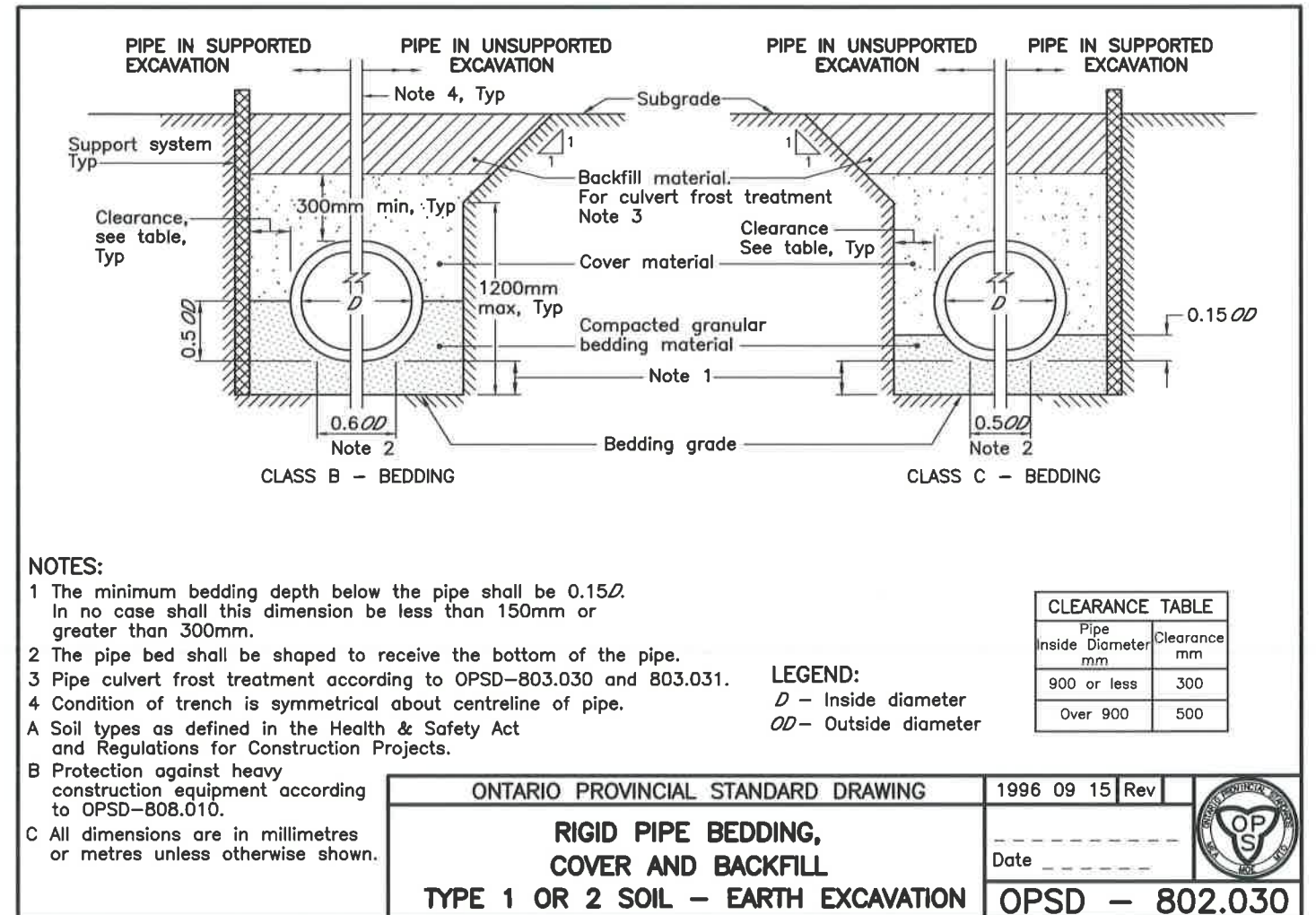
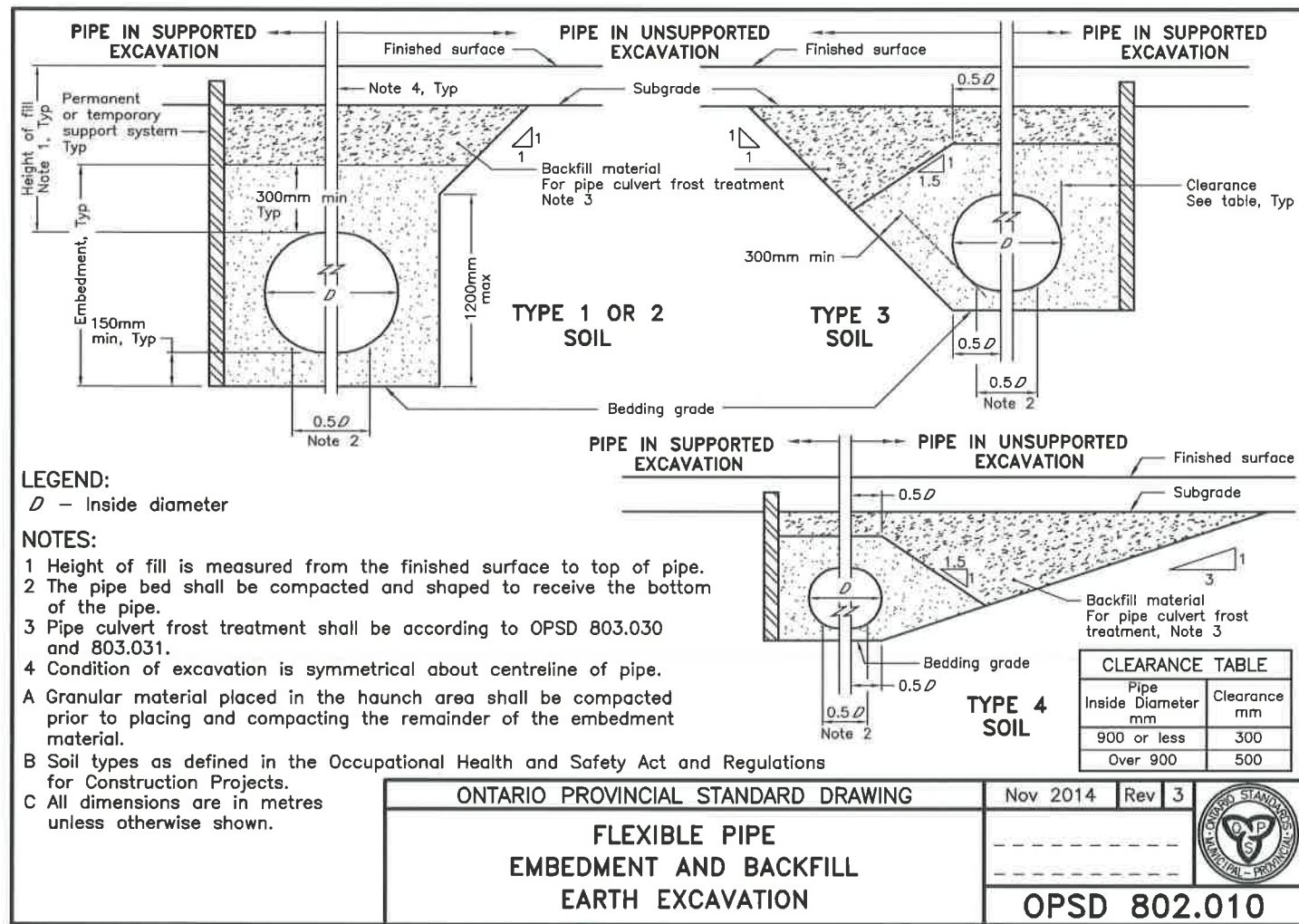
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Drainage Report for the
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SHEET TITLE
UTILITY ACCESS BRIDGE DETAILS

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SHEET TITLE

OPSD DETAILS

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