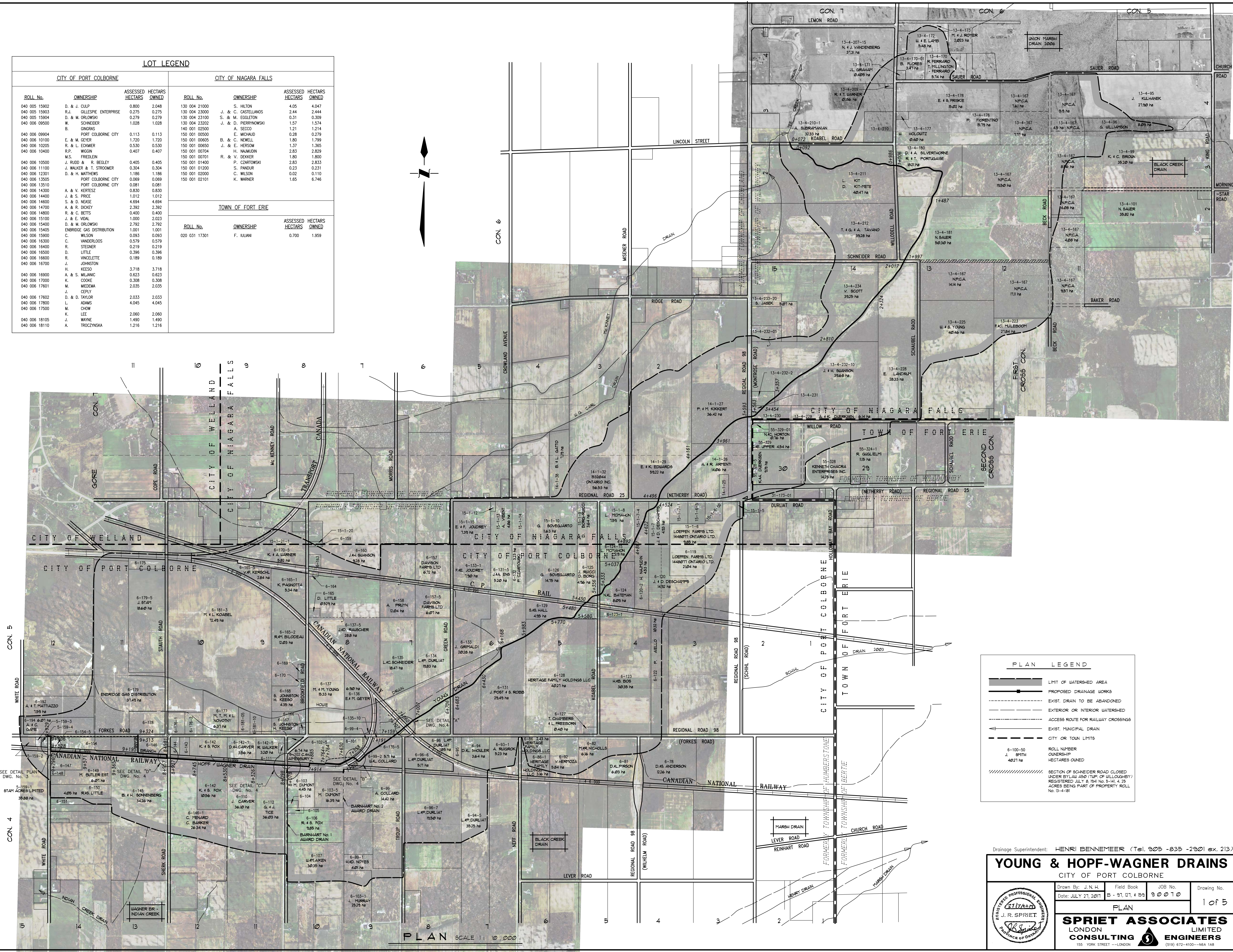


CITY OF PORT COLBORNE				CITY OF NIAGARA FALLS			
ROLL No.	OWNERSHIP	ASSESSED HECTARS	HECTARS OWNED	ROLL No.	OWNERSHIP	ASSESSED HECTARS	HECTARS OWNED
040 005 15902	D. & J. CULP	0.800	2.048	130 004 21000	S. HILTON	4.05	4.047
040 005 15903	R.J. GILLESPIE ENTERPRISE	0.275	0.275	130 004 23000	J. & C. CASTELLANOS	2.44	2.444
040 005 15904	D. & M. ORLOWSKI	0.279	0.279	130 004 23100	S. & M. EGGLETON	0.31	0.309
040 006 09500	W. SCHNEIDER	1.028	1.028	130 004 23202	J. & D. PIERRONOWSKI	1.57	1.574
040 006 09904	B. GANSKI			140 001 02500	A. SECCO	1.21	1.214
040 006 10100	PORT COLBORNE CITY	0.113	0.113	150 001 00500	E. MICHAUD	0.28	0.279
040 006 10100	E. & M. GEYER	1.720	1.720	150 001 00605	B. & C. NEWELL	1.80	1.799
040 006 10205	R. & L. ECKMER	0.530	0.530	150 001 00650	J. & E. HERSOM	1.37	1.365
040 006 10400	R.P. WIGN	1.186	1.186	150 001 00704	H. NAMJON	2.83	2.829
	M.S. FRIEDELIN			150 001 00701	R. & V. DEKKER	1.80	1.800
040 006 10500	J. RUDD & R. BEGLEY	0.405	0.405	150 001 01400	P. CZARTOWSKI	2.83	2.833
040 006 11100	J. WALKER & T. STROOMER	0.304	0.304	150 001 01200	S. PANDUR	0.23	0.231
040 006 12301	D. & H. MATTHEWS	1.069	1.069	150 001 02200	C. WILSON	0.02	0.110
040 006 13505	PORT COLBORNE CITY	0.069	0.069	150 001 02101	K. WARNER	1.65	6.746
040 006 13510	PORT COLBORNE CITY	0.081	0.081				
040 006 14300	A. & V. KERTESZ	0.830	0.830				
040 006 14400	J. & S. PRICE	1.012	1.012				
040 006 14600	S. & D. NIKSE	4.604	4.604				
040 006 14700	A. & R. DICKEY	2.392	2.392				
040 006 14800	R. & C. BETTS	0.400	0.400				
040 006 15100	J. & E. VIDAL	1.000	2.023				
040 006 15400	D. & M. ORLOWSKI	2.792	2.792				
040 006 15405	ENBRIDGE GAS DISTRIBUTION	1.001	1.001				
040 006 15900	C. WILSON	0.093	0.093				
040 006 16300	C. VANDERLOOS	0.579	0.579				
040 006 16400	R. STEGNER	0.219	0.219				
040 006 16500	D. LITTLE	0.396	0.396				
040 006 16600	R. VINCELETTE	0.189	0.189				
040 006 16700	J. JOHNSTON						
	H. KEESO	3.718	3.718				
040 006 16900	A. & S. MILJANIC	0.623	0.623				
040 006 17000	M. COOKE	0.308	0.308				
040 006 17601	M. MEDEMA	2.035	2.035				
	J. CEPLY						
040 006 17602	D. & D. TAYLOR	2.033	2.033				
040 006 17800	L. ADAMS	4.045	4.045				
040 006 17500	M. CHOW						
	K. LEE	2.060	2.060				
040 006 18105	J. WAYNE	1.490	1.490				
040 006 18110	A. TROCCINSKA	1.216	1.216				



PLAN LEGEND	
	LIMIT OF WATERSHED AREA
	PROPOSED DRAINAGE WORKS
	EXIST. DRAIN TO BE ABANDONED
	EXTERIOR OR INTERIOR WATERSHED
	ACCESS ROUTE FOR RAILWAY CROSSINGS
	EXIST. MUNICIPAL DRAIN
	CITY OR TOWN LIMITS
	ROLL NUMBER
	OWNERSHIP
	HECTARES OWNED
	SECTION OF SCHNEIDER ROAD CLOSED UNDER BY-LAW 450 (TWP. OF WILLOUGHBY) REGISTERED JULY 8, 1941 No. 9-41, 4.25 ACRES BEING PART OF PROPERTY ROLL No. 13-4-181

Drainage Superintendent: HENRI BENNEMEER (Tel. 905-835-2901 ex. 213)

YOUNG & HOPF-WAGNER DRAINS
CITY OF PORT COLBORNE

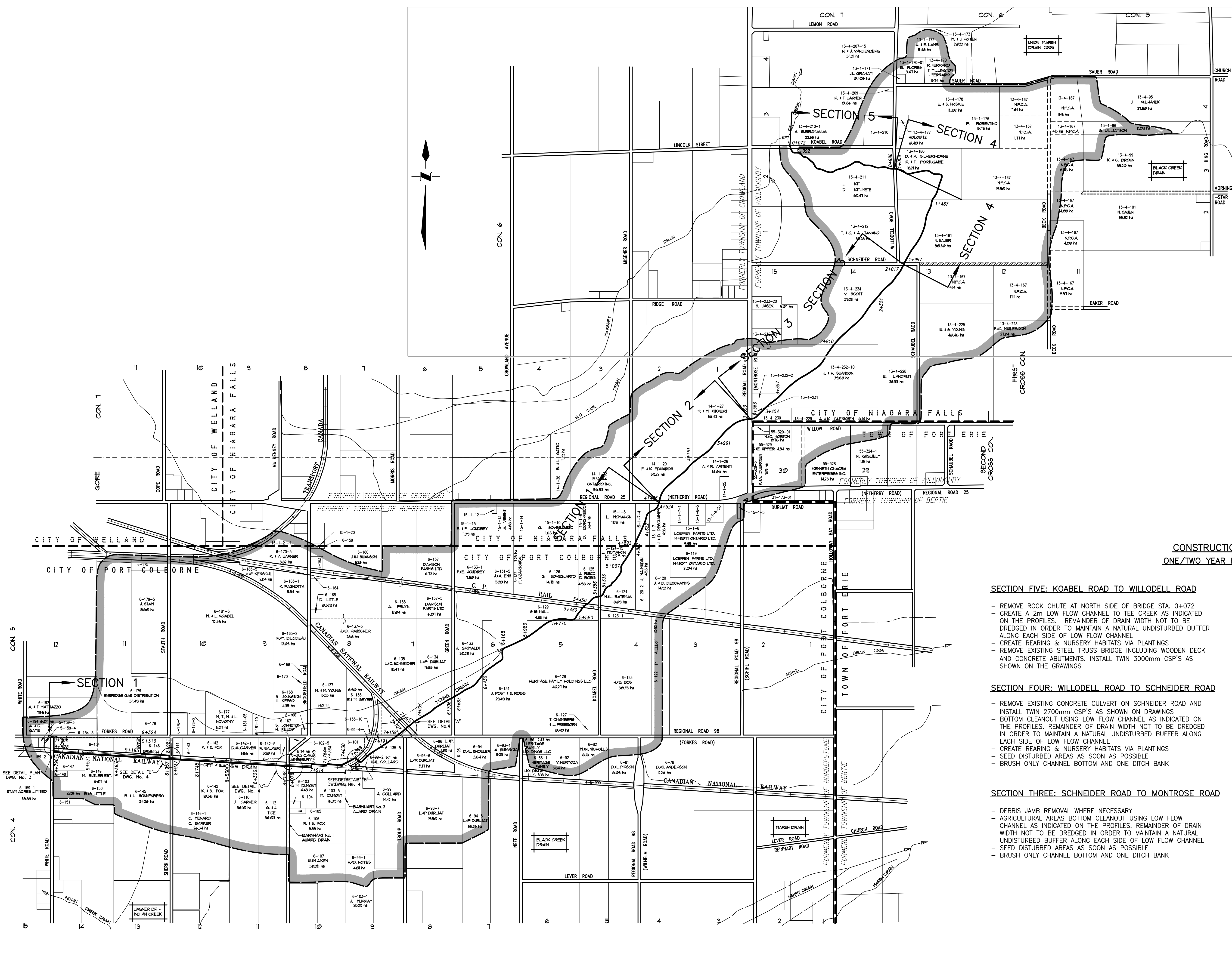
Drawn By: J.N.H.	Field Book	JOB No.	Drawing No.
Date: JULY 27, 2011	B - 91, 121, 4 195	9 0 0 1 0	1 of 5

PLAN

SPRIET ASSOCIATES
LONDON CONSULTING ENGINEERS LIMITED

155 YORK STREET - LONDON (416) 672-6100 - M5A 1A8

PLAN SCALE 1 : 10,000



PLAN SCALE 1 : 12,500

CONSTRUCTION PHASES
ONE/TWO YEAR PHASED WORK PLAN

SECTION FIVE: KOABEL ROAD TO WILLODELL ROAD

- REMOVE ROCK CHUTE AT NORTH SIDE OF BRIDGE STA. 0+072
- CREATE A 2m LOW FLOW CHANNEL TO TEE CREEK AS INDICATED ON THE PROFILES. REMAINDER OF DRAIN WIDTH NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL
- CREATE REARING & NURSERY HABITATS VIA PLANTINGS
- REMOVE EXISTING STEEL TRUSS BRIDGE INCLUDING WOODEN DECK AND CONCRETE ABUTMENTS. INSTALL TWIN 3000mm CSP'S AS SHOWN ON THE DRAWINGS

SECTION FOUR: WILLODELL ROAD TO SCHNEIDER ROAD

- REMOVE EXISTING CONCRETE CULVERT ON SCHNEIDER ROAD AND INSTALL TWIN 2700mm CSP'S AS SHOWN ON DRAWINGS
- BOTTOM CLEANOUT USING LOW FLOW CHANNEL AS INDICATED ON THE PROFILES. REMAINDER OF DRAIN WIDTH NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL
- CREATE REARING & NURSERY HABITATS VIA PLANTINGS
- SEED DISTURBED AREAS AS SOON AS POSSIBLE
- BRUSH ONLY CHANNEL BOTTOM AND ONE DITCH BANK

SECTION THREE: SCHNEIDER ROAD TO MONTROSE ROAD

- DEBRIS JAMB REMOVAL WHERE NECESSARY
- AGRICULTURAL AREAS BOTTOM CLEANOUT USING LOW FLOW CHANNEL AS INDICATED ON THE PROFILES. REMAINDER OF DRAIN WIDTH NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL
- SEED DISTURBED AREAS AS SOON AS POSSIBLE
- BRUSH ONLY CHANNEL BOTTOM AND ONE DITCH BANK

SECTION TWO: MONTROSE ROAD TO NETHERBY ROAD

- NO DITCH CLEANOUT THROUGH WOODS STA. 3+953 TO 4+161
- ONLY DEBRIS JAMB REMOVAL WHERE IMPEDING FLOW
- BRUSHING ONLY WHERE NEEDED FOR ACCESS TO THE DEBRIS JAMBS.
- FROM STA. 4+161 TO NETHERBY ROAD BOTTOM CLEANOUT USING LOW FLOW CHANNEL AS INDICATED ON THE PROFILES. REMAINDER DRAIN NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL
- SEED DISTURBED AREAS AS SOON AS POSSIBLE
- BRUSH ONLY CHANNEL BOTTOM AND ONE DITCH BANK

SECTION ONE: NETHERBY ROAD TO WHITE ROAD

- INSTALL CLOSED DRAIN ALONG THE EAST SIDE OF WHITE ROAD FROM FORKS ROAD TO CNR. TRACKS. CONSTRUCT OPEN DRAIN ALONG THE SOUTH SIDE OF CNR FROM WHITES ROAD TO SHERK ROAD AS SHOWN ON PLAN & PROFILES. CLEAN NORTH BRANCH FROM CNR TRACKS TO FORKS ROAD.
- BOTTOM CLEANOUT USING LOW FLOW CHANNEL AS INDICATED ON THE PROFILES FROM SHERK ROAD TO NETHERBY ROAD INCLUDING RELOCATION STA. 7+558 TO 7+764. REMAINDER OF DRAIN WIDTH NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL
- INSTALL FOUR LOW FLOW STEEL PIPES UNDER CNR TRACKS AS SHOWN ON PLANS & PROFILES AND CULVERT UNDER SHERK ROAD (POSSIBLE FUTURE CULVERT UNDER BROOKFIELD ROAD BY CITY)
- BRUSHING AND CLEANOUT TO OCCUR FROM ONE SIDE ONLY LEAVING THE OPPOSITE SIDE ALONE UNLESS IMPEDING FLOW ALONG SLOPE.

MNR REQUIREMENTS

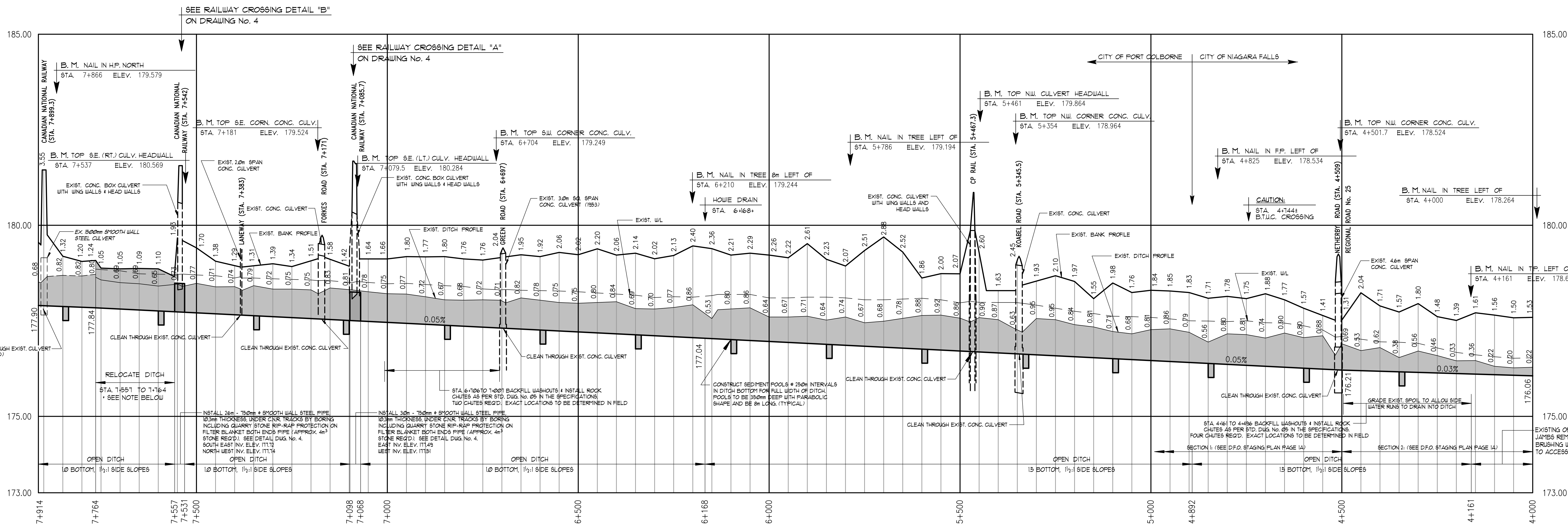
RECOMMENDATIONS FOR TURTLES:

- BOTTOM CLEAN-OUT AND DREDGING CANNOT OCCUR DURING THE TURTLES HIBERNATION PERIOD WHICH IS FROM OCTOBER 1 TO APRIL 1. WORK TO BE AVOIDED DURING THE NESTING SEASON WHICH OCCURS BETWEEN THE LAST WEEK OF MAY UNTIL THE END OF JUNE.
- MNR TO BE NOTIFIED OF THE START AND COMPLETION OF THE WORKS, AND IF ANY SAR ARE ENCOUNTERED AT KARINE.BERIAULT@ONTARIO.CA PH: 905-562-0041
- TURTLES THAT MAY BE ENCOUNTERED DURING THE DRAINAGE WORKS INCLUDE: PAINTED TURTLE, SNAPPING TURTLE AND BLANDING'S TURTLE.
- CONTACT FOR INJURED TURTLES: KAWARTHA TURTLE TRAUMA CENTRE <http://www.kawarthaturtle.org>

Drainage Superintendent: HENRI BENNEMEER (Tel: 905-835-2901 ex. 213)

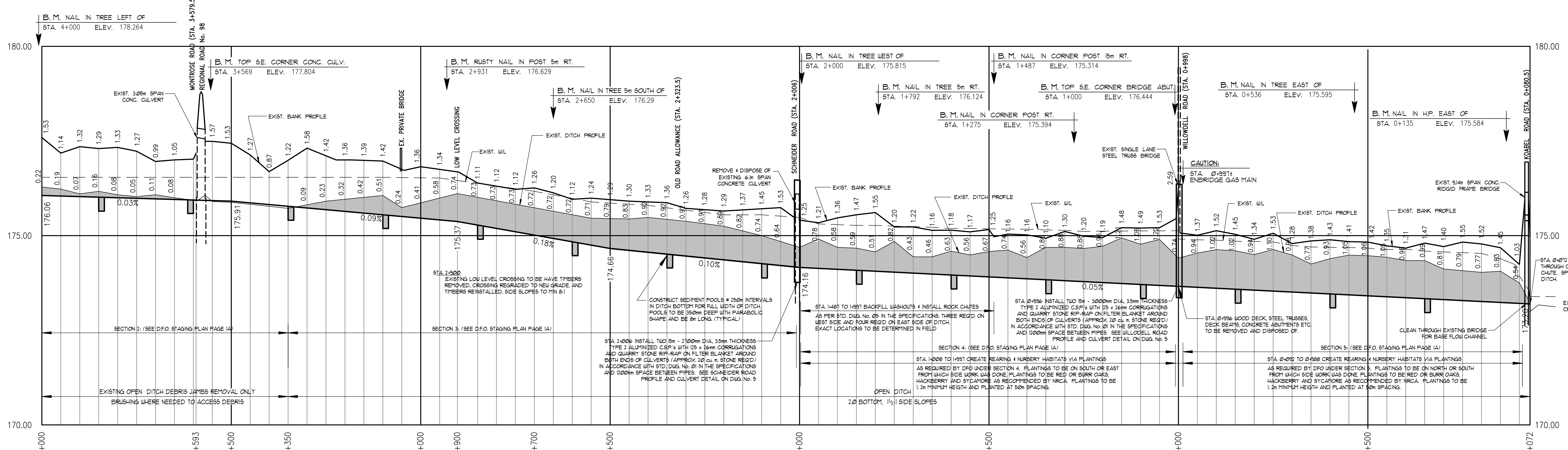
YOUNG & HOPF-WAGNER DRAINS
CITY OF PORT COLBORNE

Drawn By: J.N.H.	Field Book	JOB No.	Drawing No.
Date: JULY 27, 2011	B - 91, 121, 4 195	9 0 0 1 0	1A of 5
D.F.O. STAGING PLAN			
SPRIET ASSOCIATES LONDON CONSULTING ENGINEERS LIMITED 155 YORK STREET - LONDON ONTARIO (519) 672-6100 - M6A 1A8			



HOFF WAGNER DRAIN

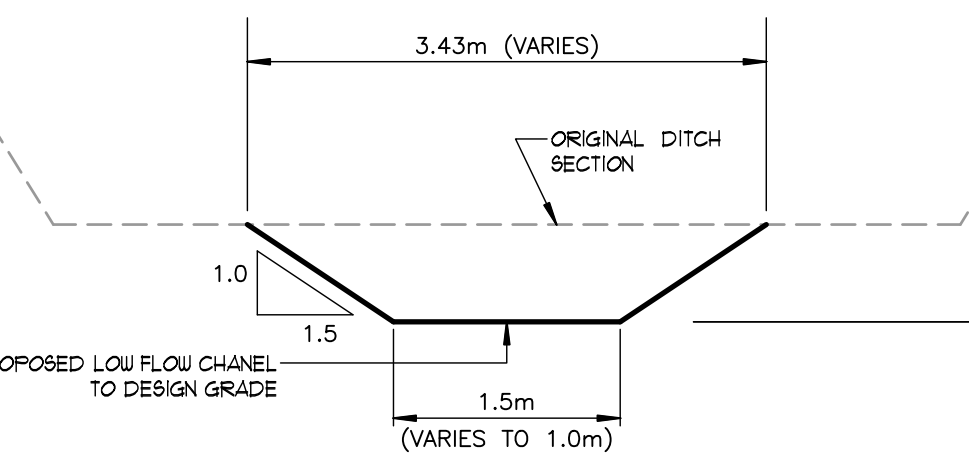
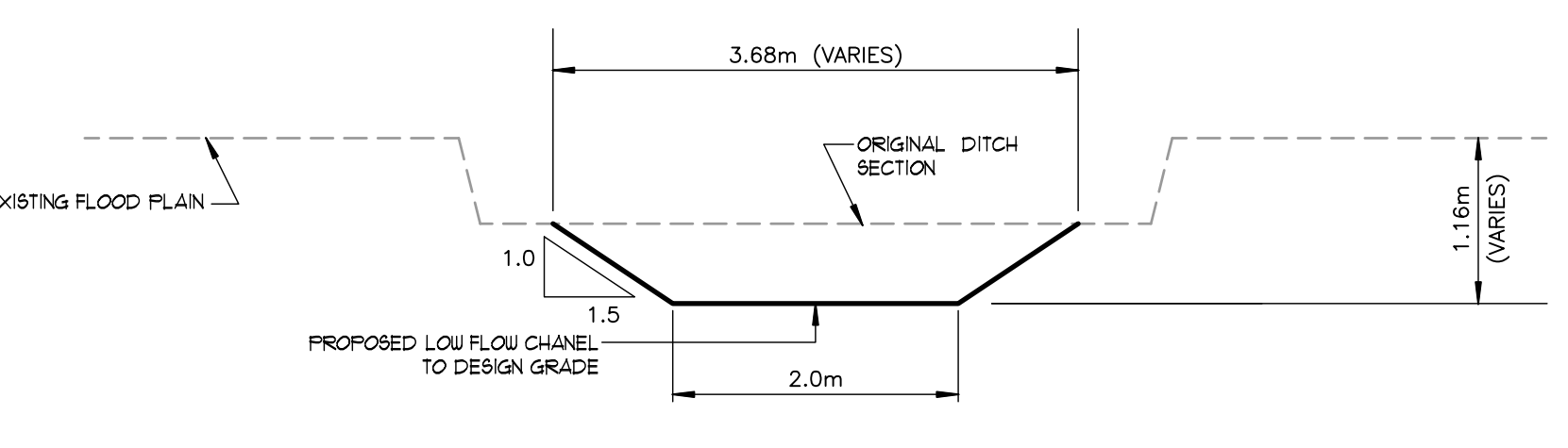
* RELOCATE DITCH STA. 1+950 TO 1+164.
 DITCH TO BE RELOCATED ADJACENT TO RAILWAY FENCE. STRIP TOPSOIL ALONG NEW ROUTE & STOCKPILE FOR REDISTRIBUTION ON BACKFILLED DITCH. USE EXCAVATED MATERIAL FROM NEW DITCH TO BACKFILL EXISTING DITCH TO BE ABANDONED. RESTORE BACKFILLED DITCH WITH STOCKPILED TOPSOIL. STA. 1+950 TO STA. 1+914.
 ACCESS ACROSS RAILWAY TO BE GAINED VIA THE RAILWAY LANDS TO BROOKFIELD ROAD.



YOUNG DRAIN PROFILE

SCALE: HOR 1:5000
 VERT. 1:50

NOTE: SEE DRAWING No. 5 FOR GENERAL & CONSTRUCTION NOTES



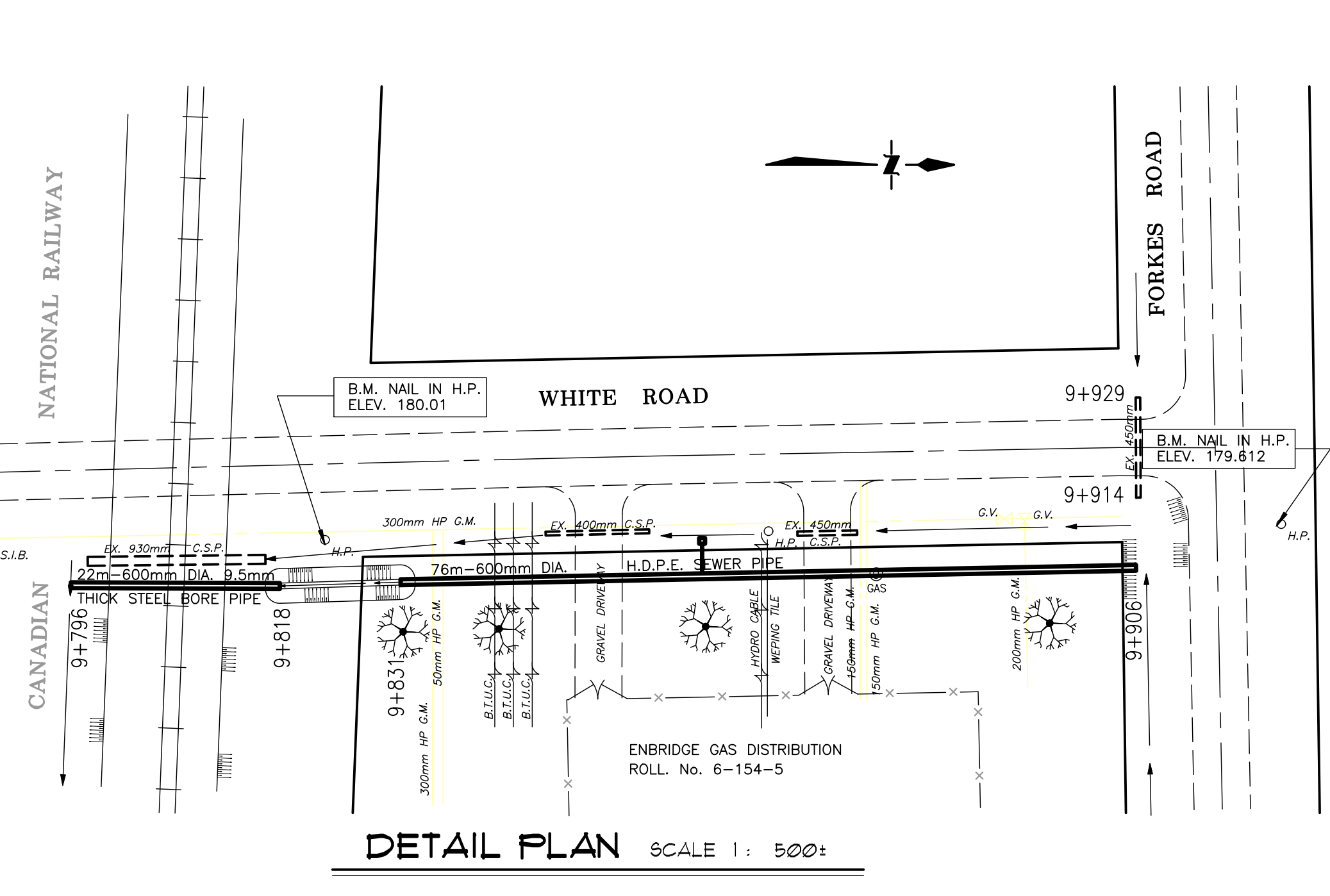
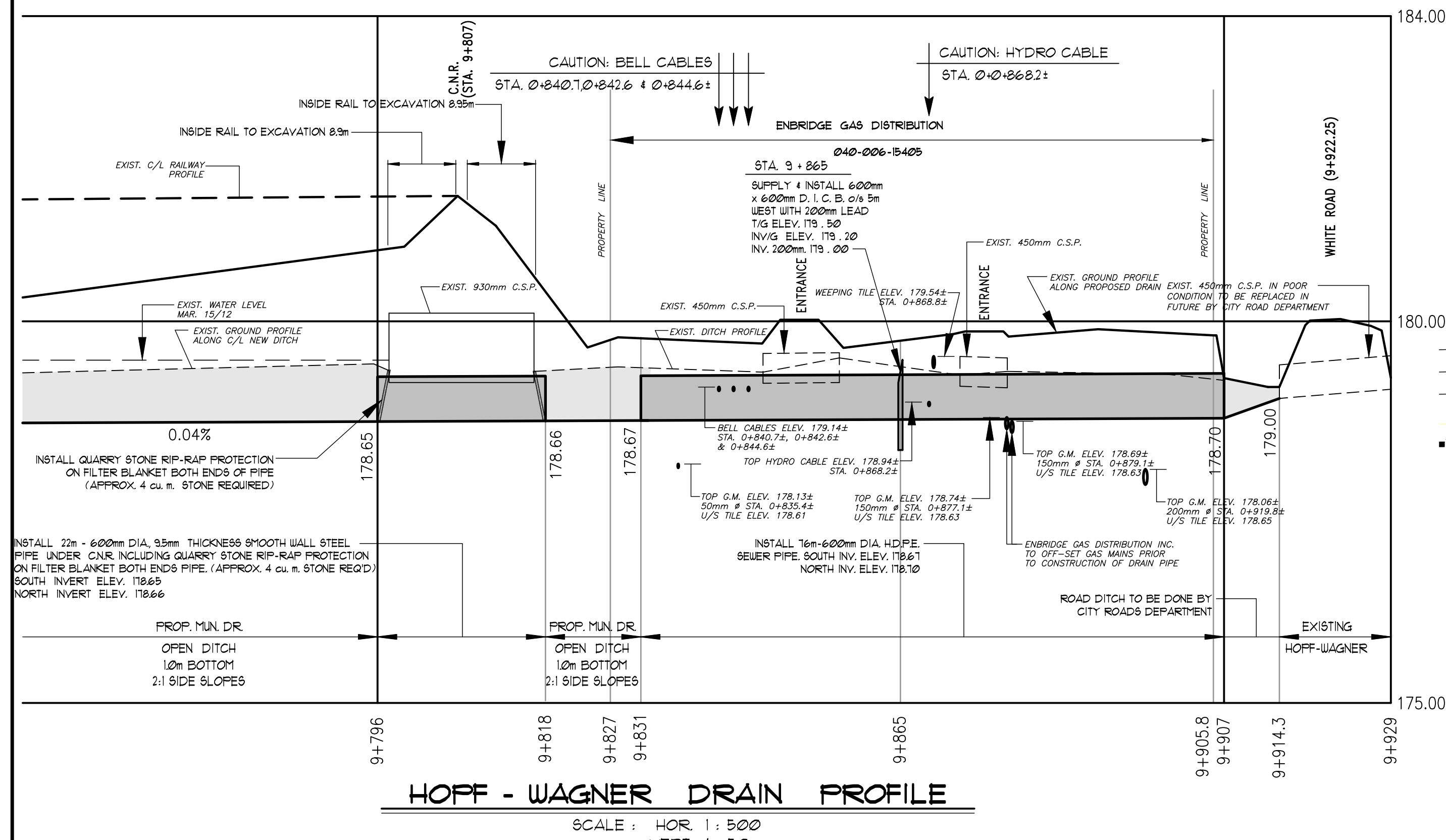
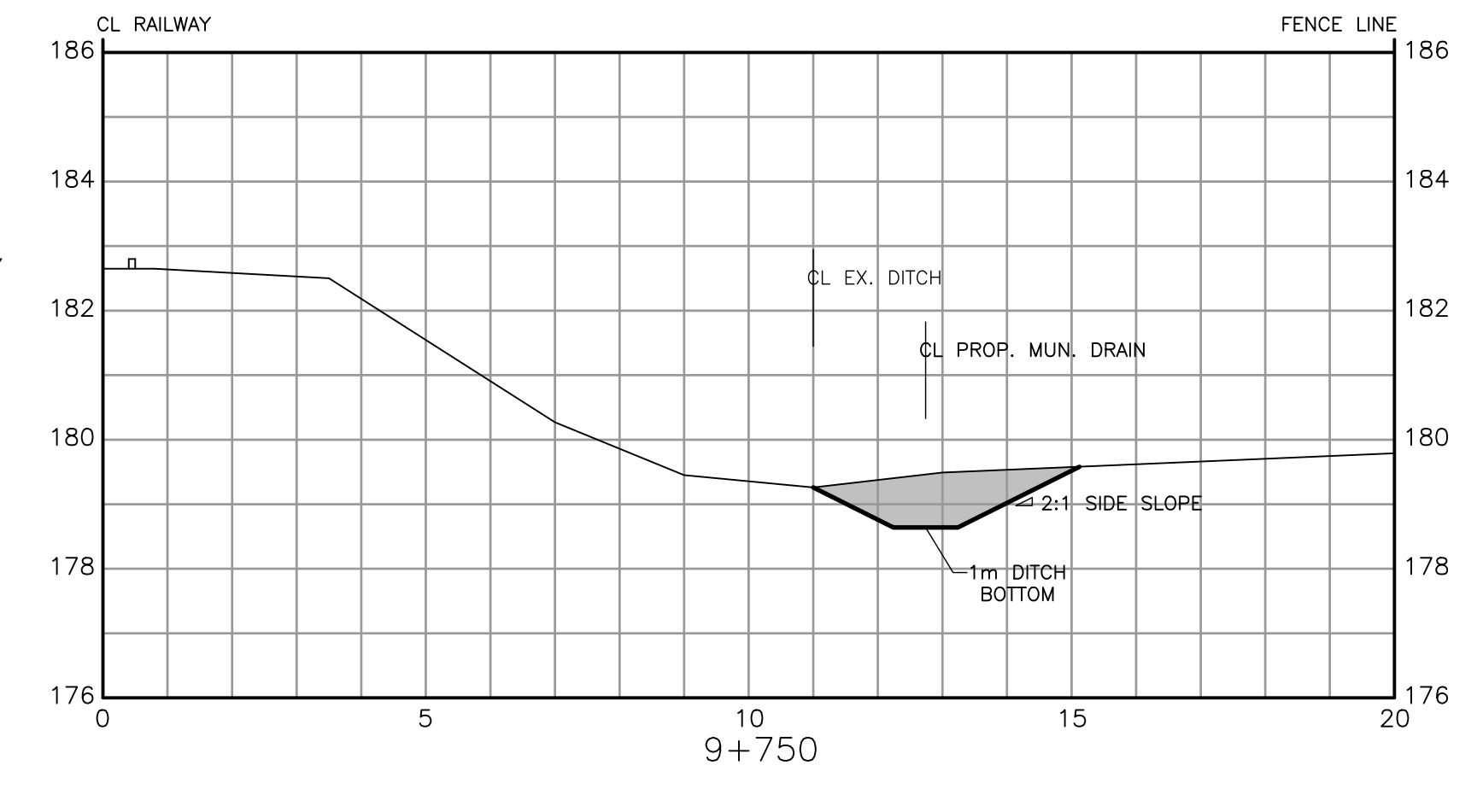
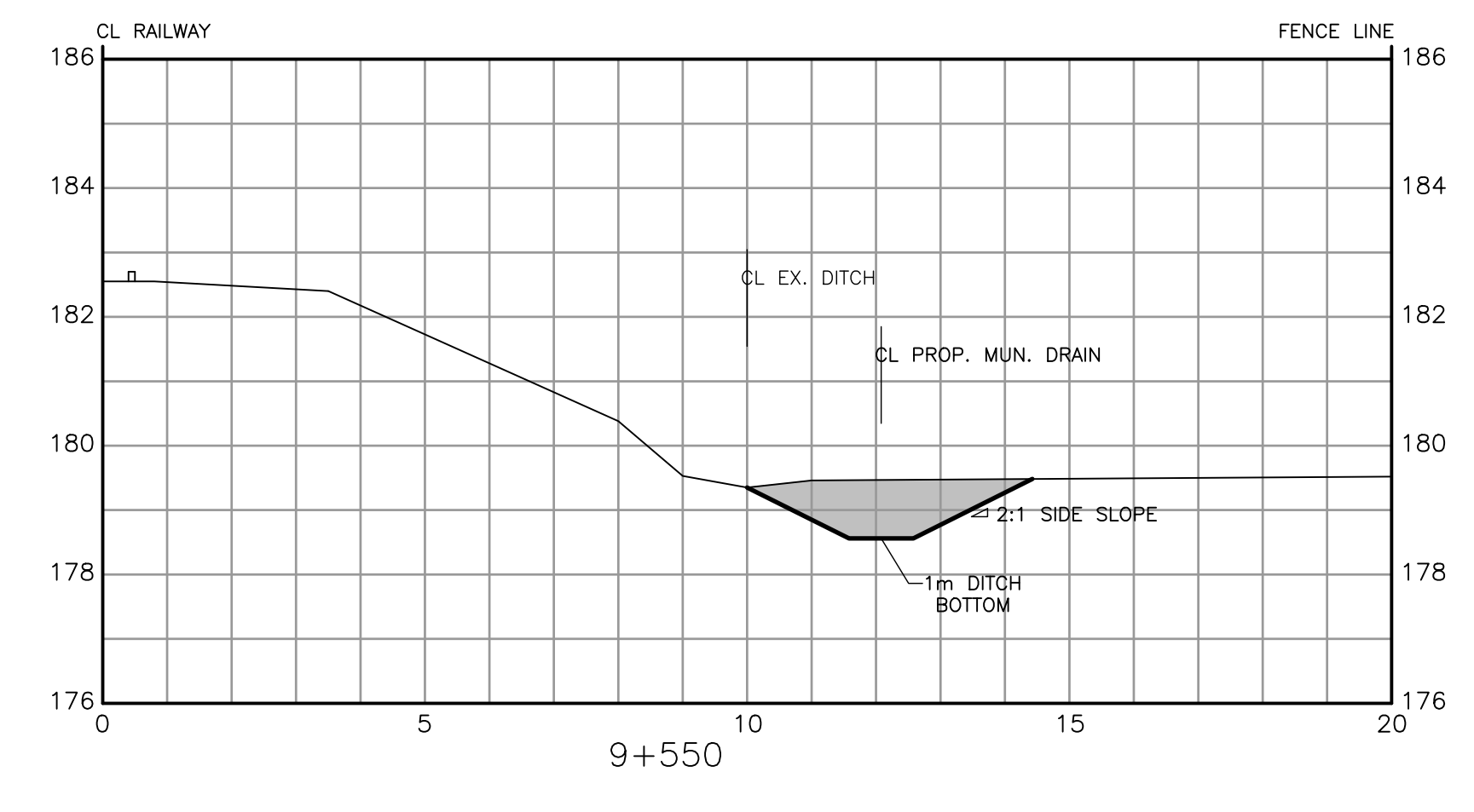
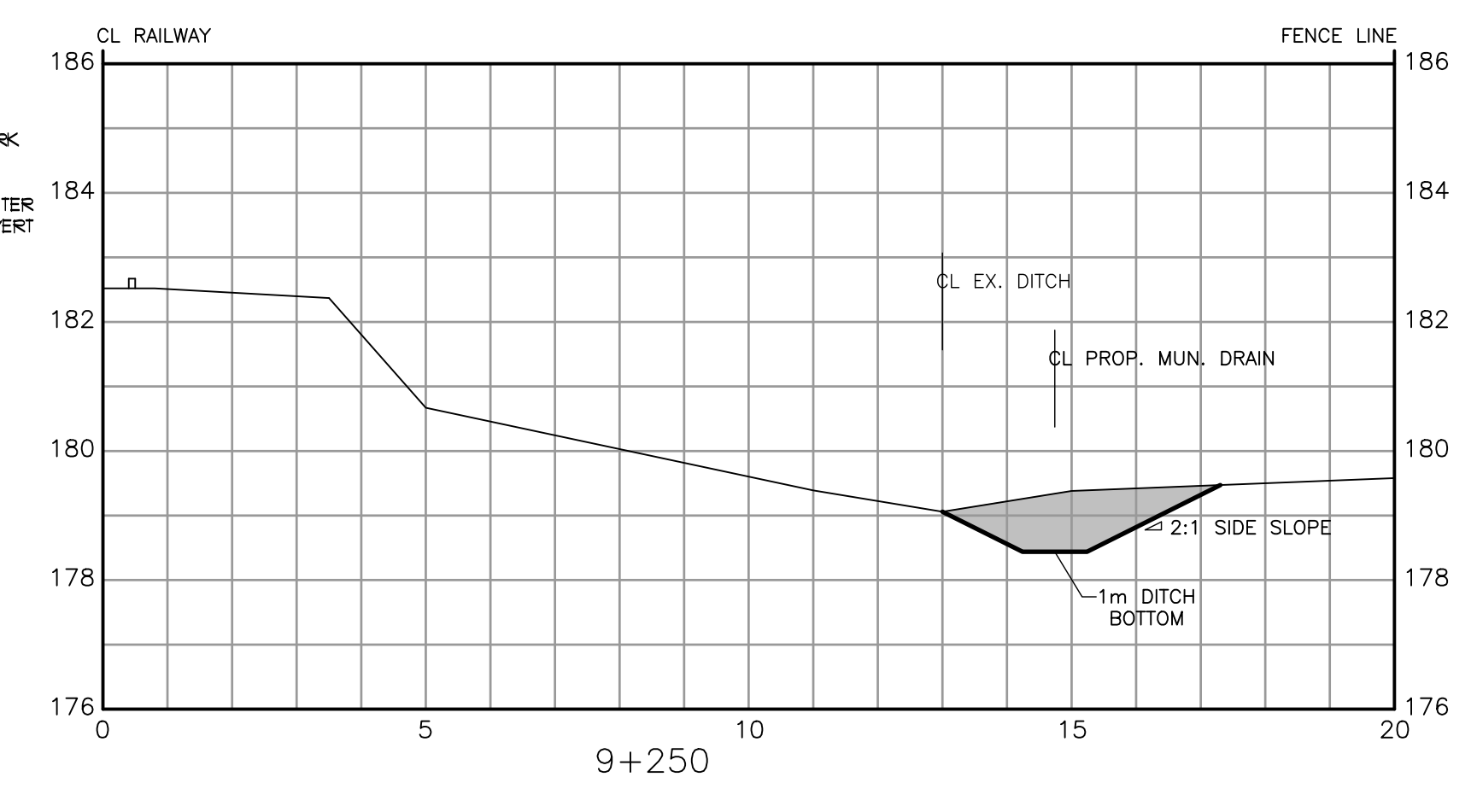
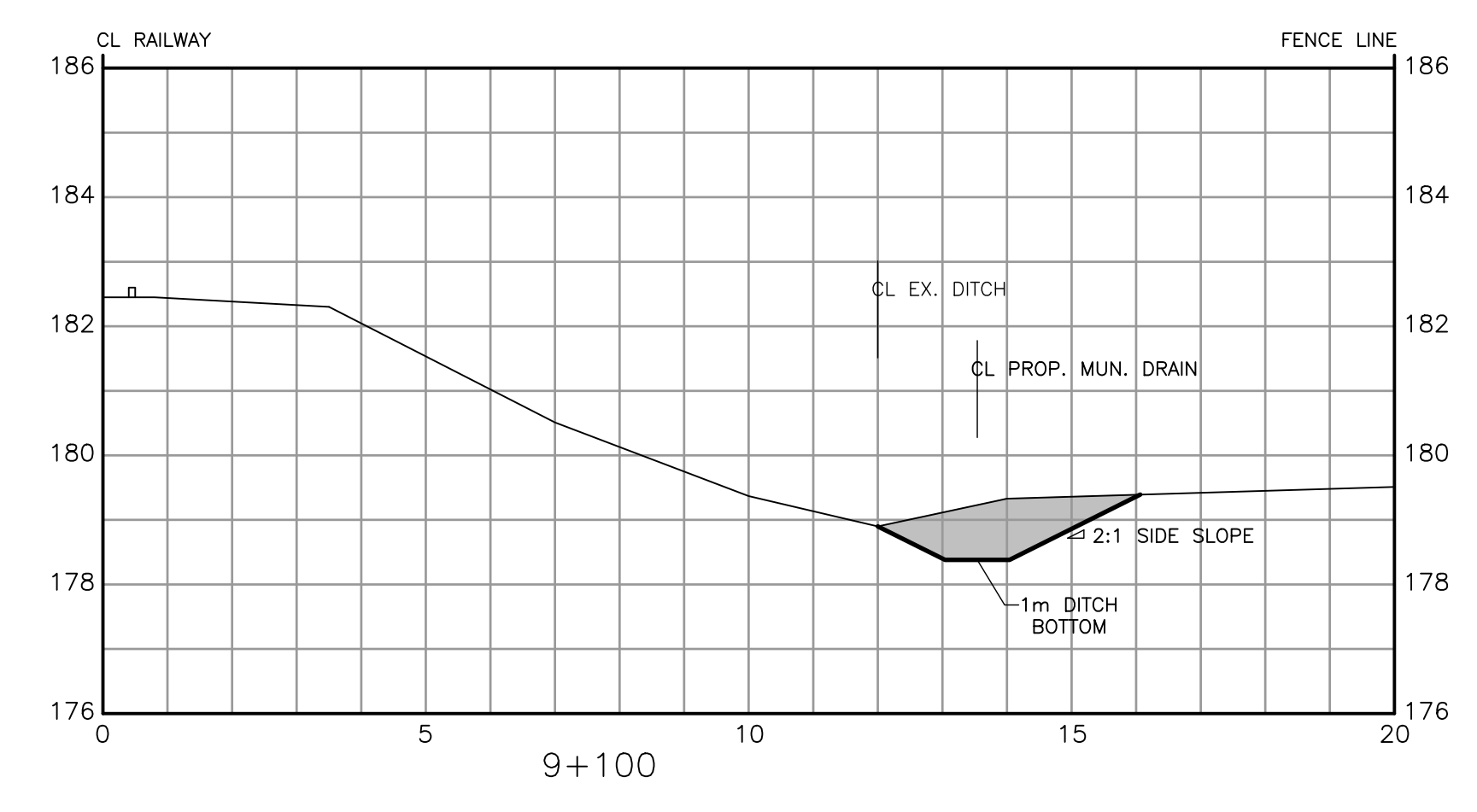
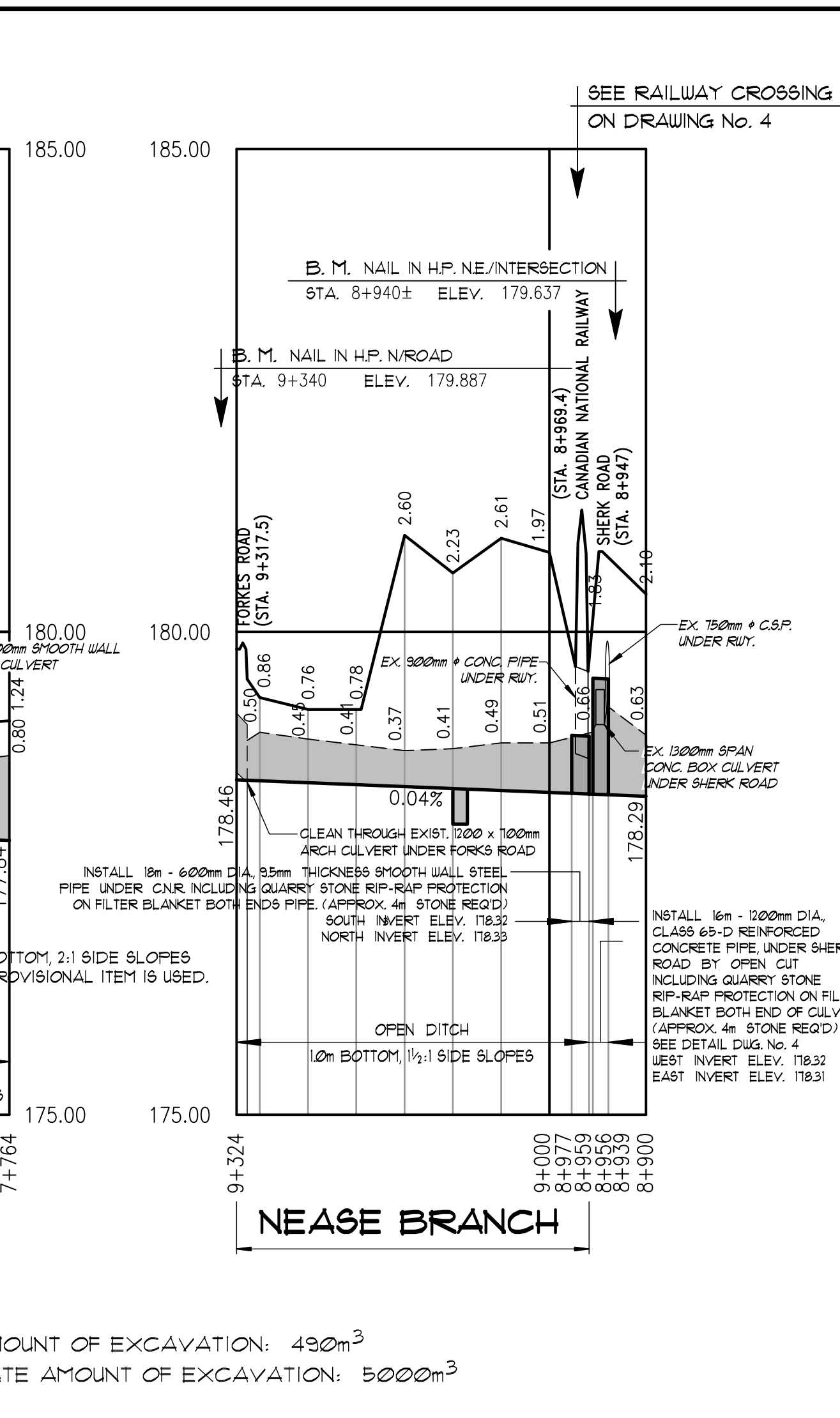
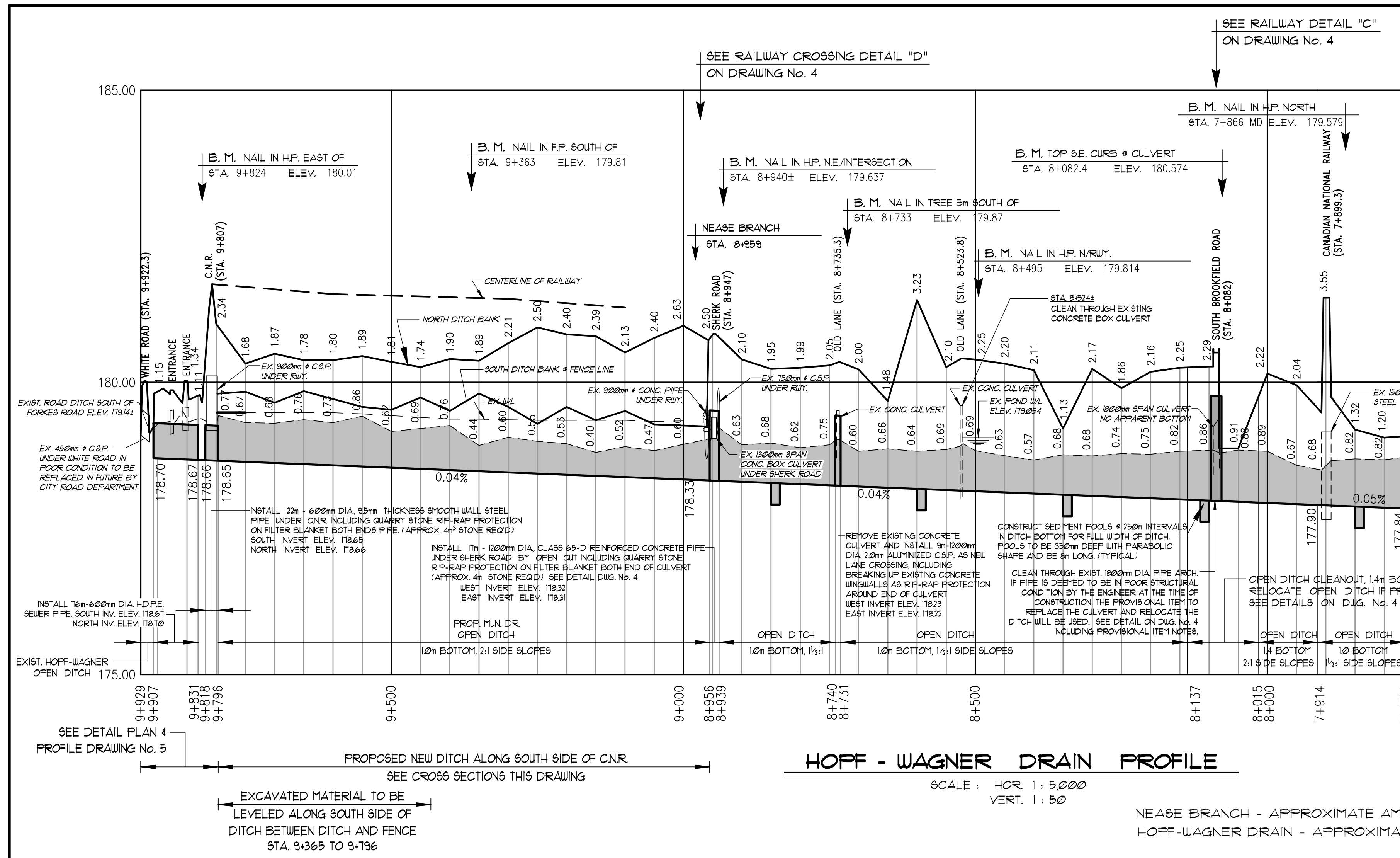
APPROXIMATE AMOUNT OF EXCAVATION: 10,000 m³

Drainage Superintendent: HENRI BENNEMEER (Tel. 905-235-2900 ex. 213)

YOUNG & HOPF-WAGNER DRAINS
 CITY OF PORT COLBORNE

Drawn By: JNH	Field Book: B-91, 121 & 199	JOB No.: 90070	Drawing No.: 2 of 5
Date: JULY 21, 2011	PROFILES		

SPRIET ASSOCIATES
 LONDON CONSULTING ENGINEERS
 155 YORK STREET - LONDON (919) 672-6100 - REG. 148



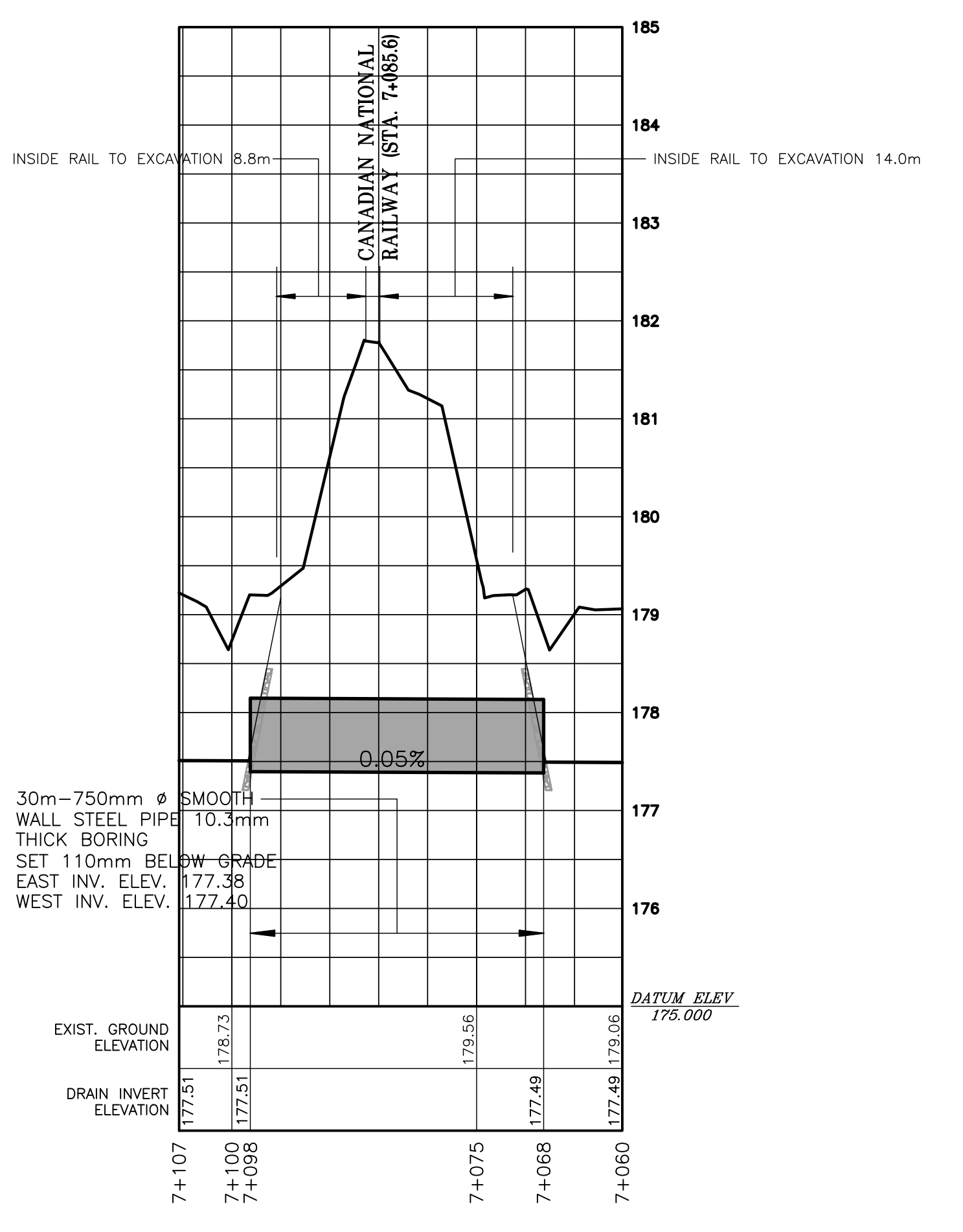
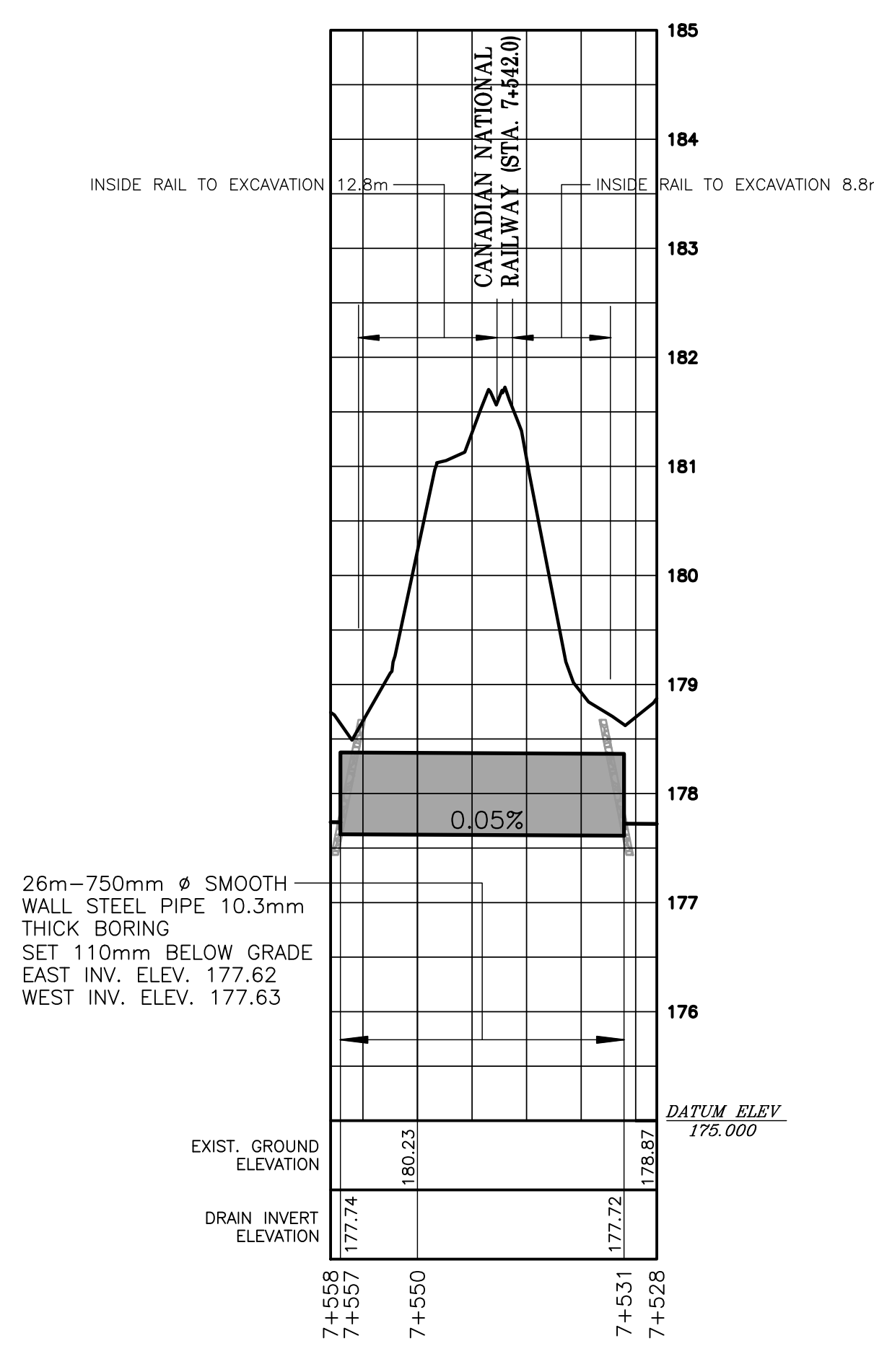
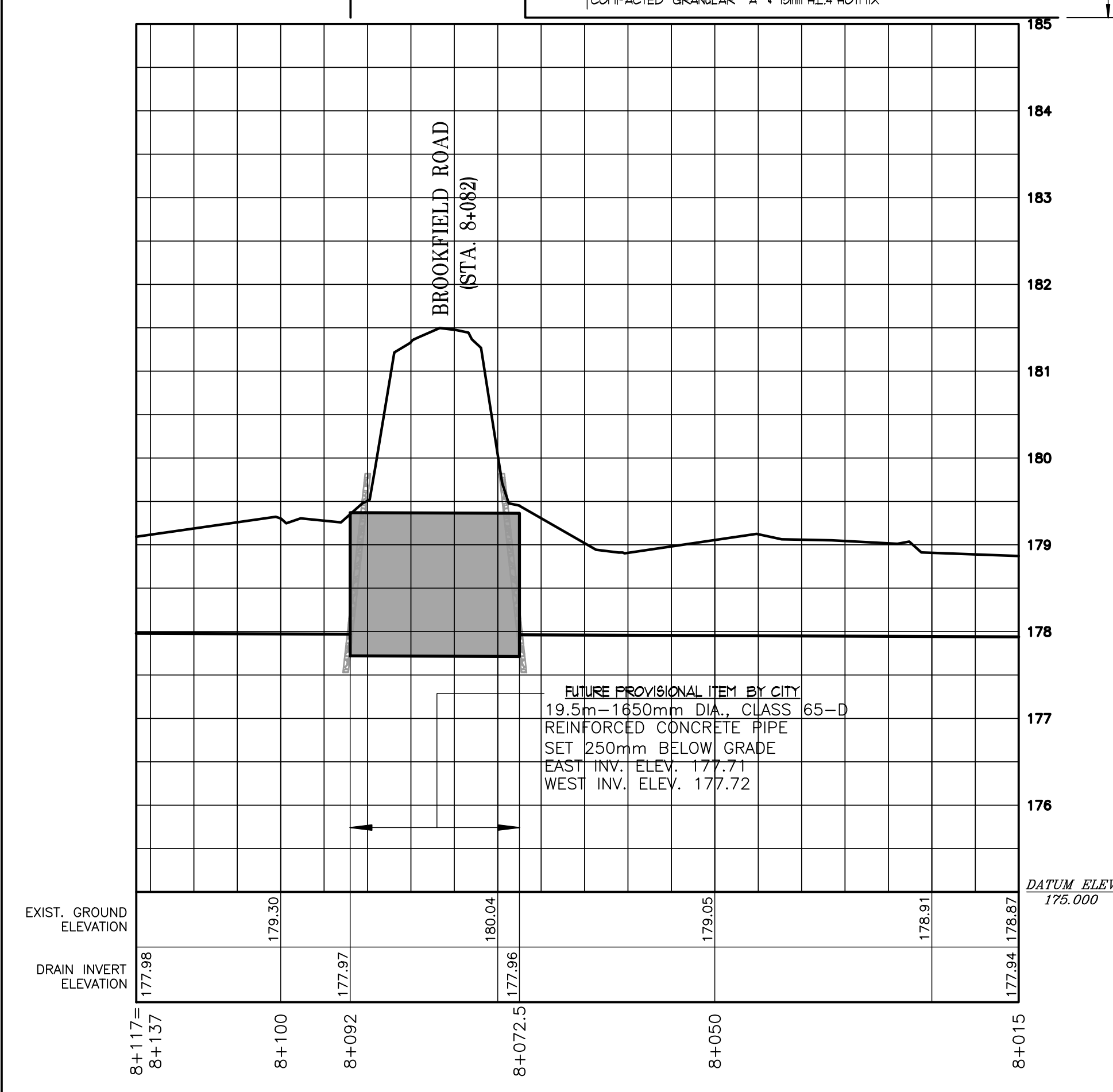
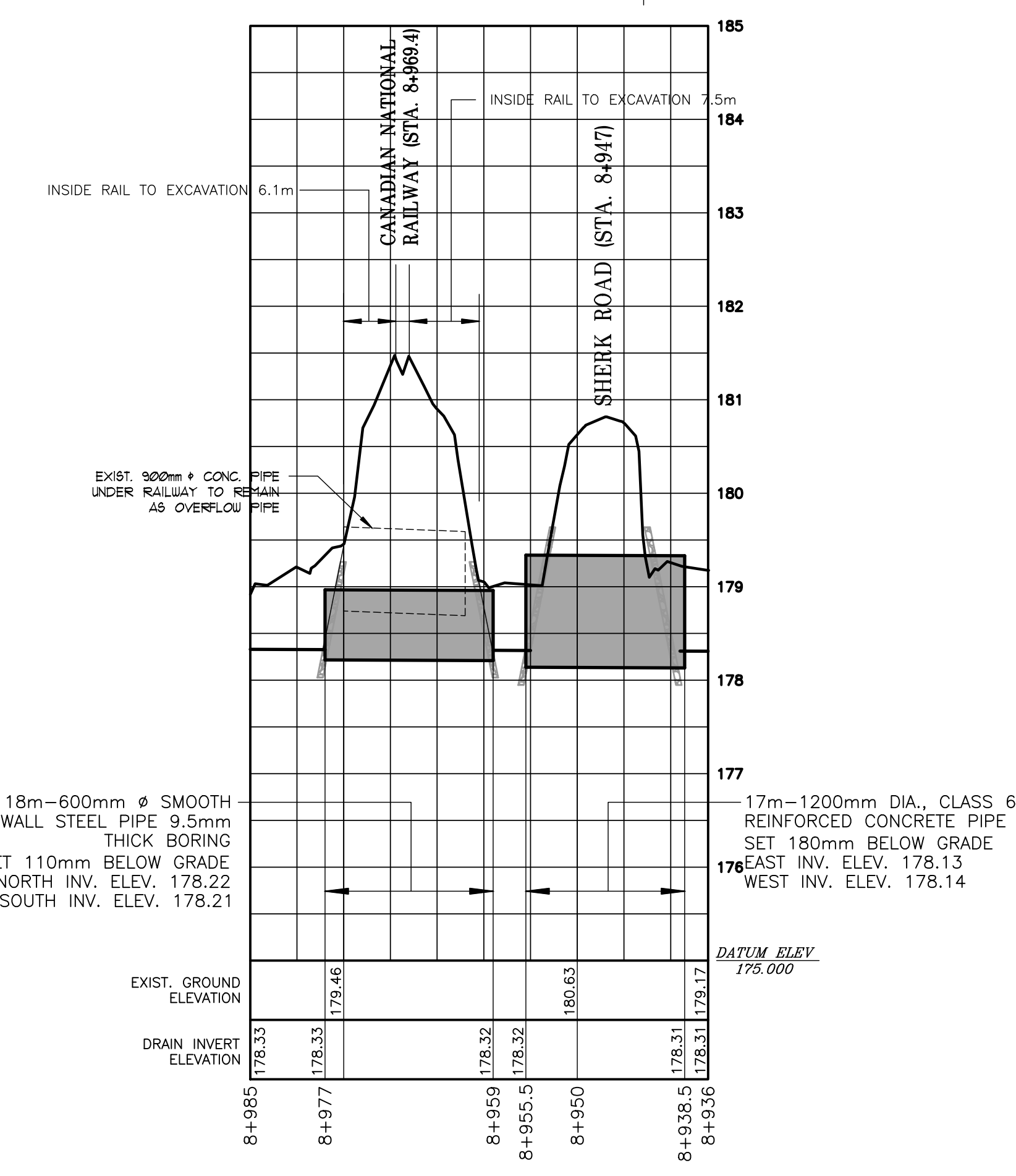
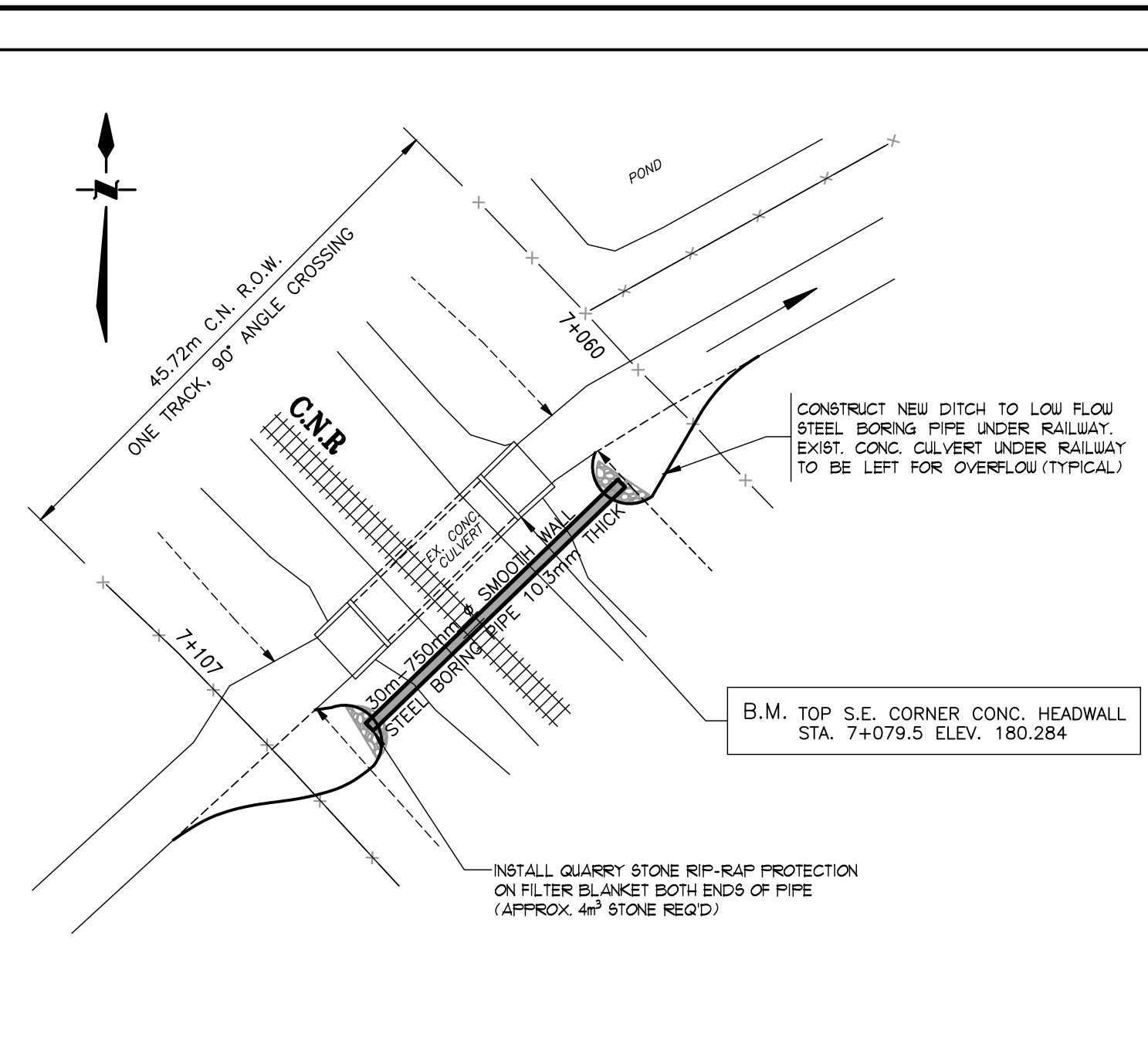
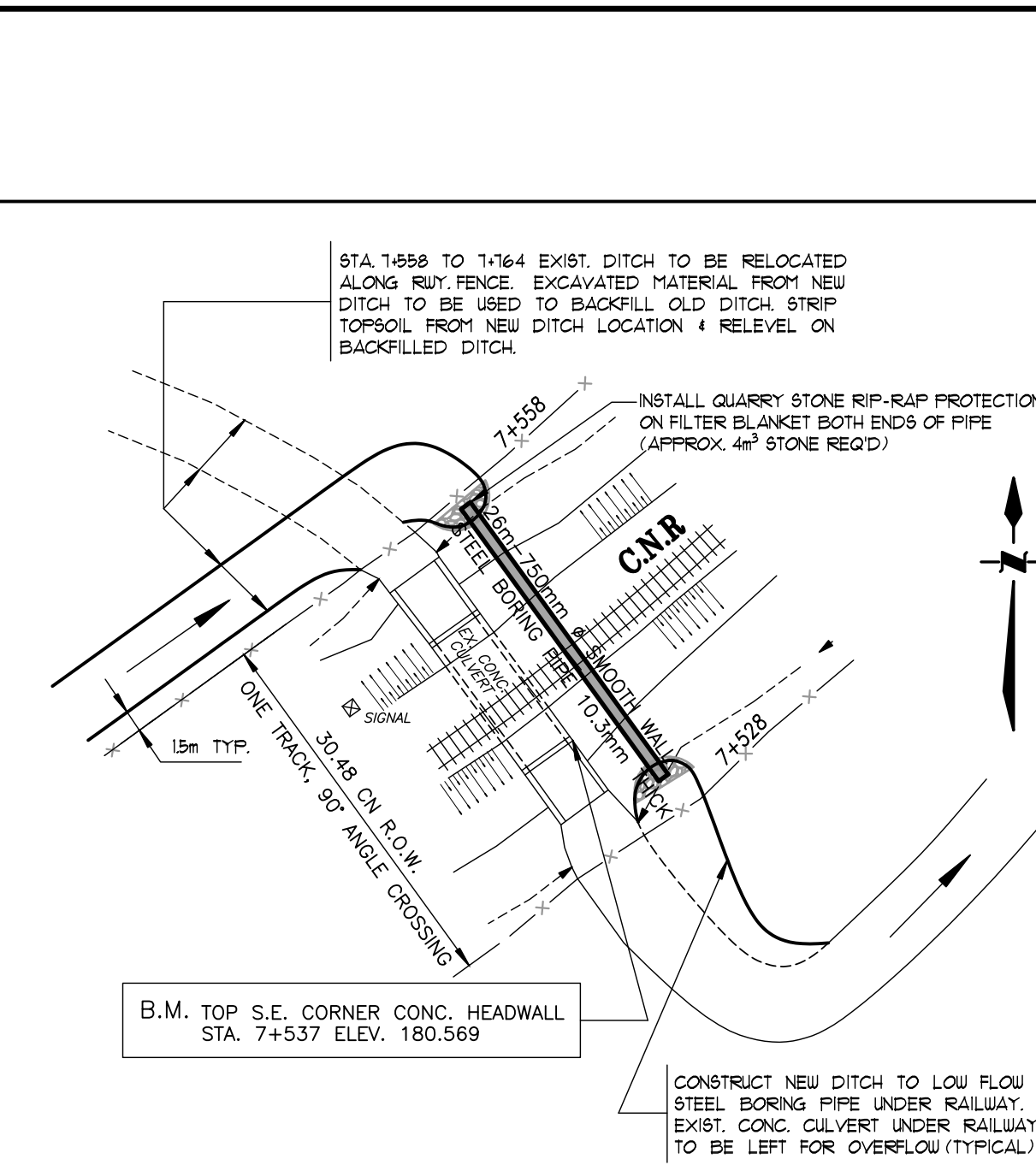
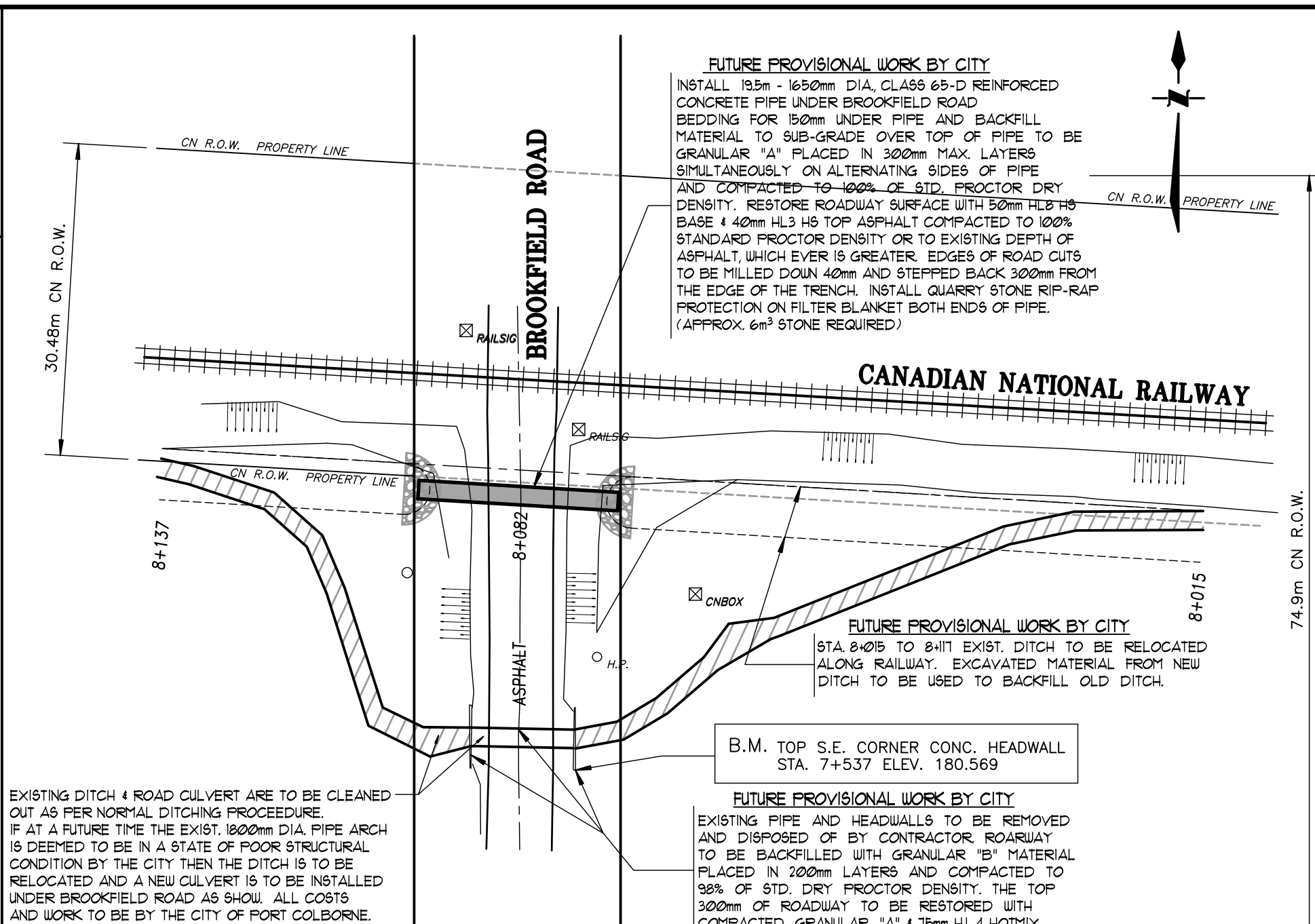
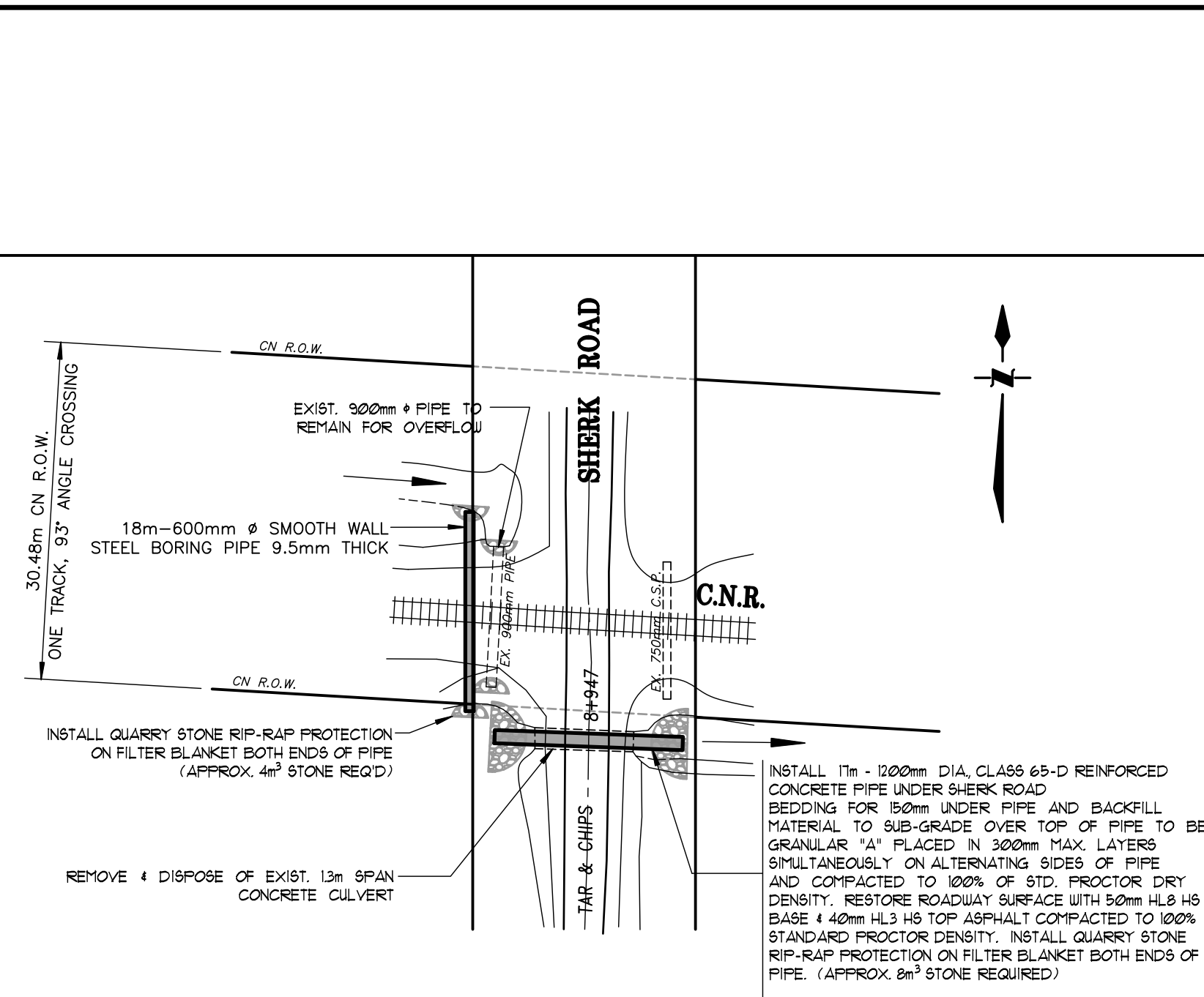
NEW DITCH ALONG SOUTH SIDE OF CN. RAIL FROM SHERK ROAD TO WHITE ROAD
CROSS SECTIONS
 SCALE: 1:100

Drainage Superintendent: HENRI BENNEMEER (Tel. 905-835-2300 ex. 213)

YOUNG & HOPF-WAGNER DRAINS
 CITY OF PORT COLBORNE

Drawn By: JNH	Field Book: B-91, 121 & 159	JOB No.: 90070	Drawing No.: 3 of 5
Date: JULY 27, 2011	PROFILE		

SPRIET ASSOCIATES
 LONDON CONSULTING ENGINEERS LIMITED
 155 YORK STREET - LONDON (519) 672-6100 - M6A 1A8



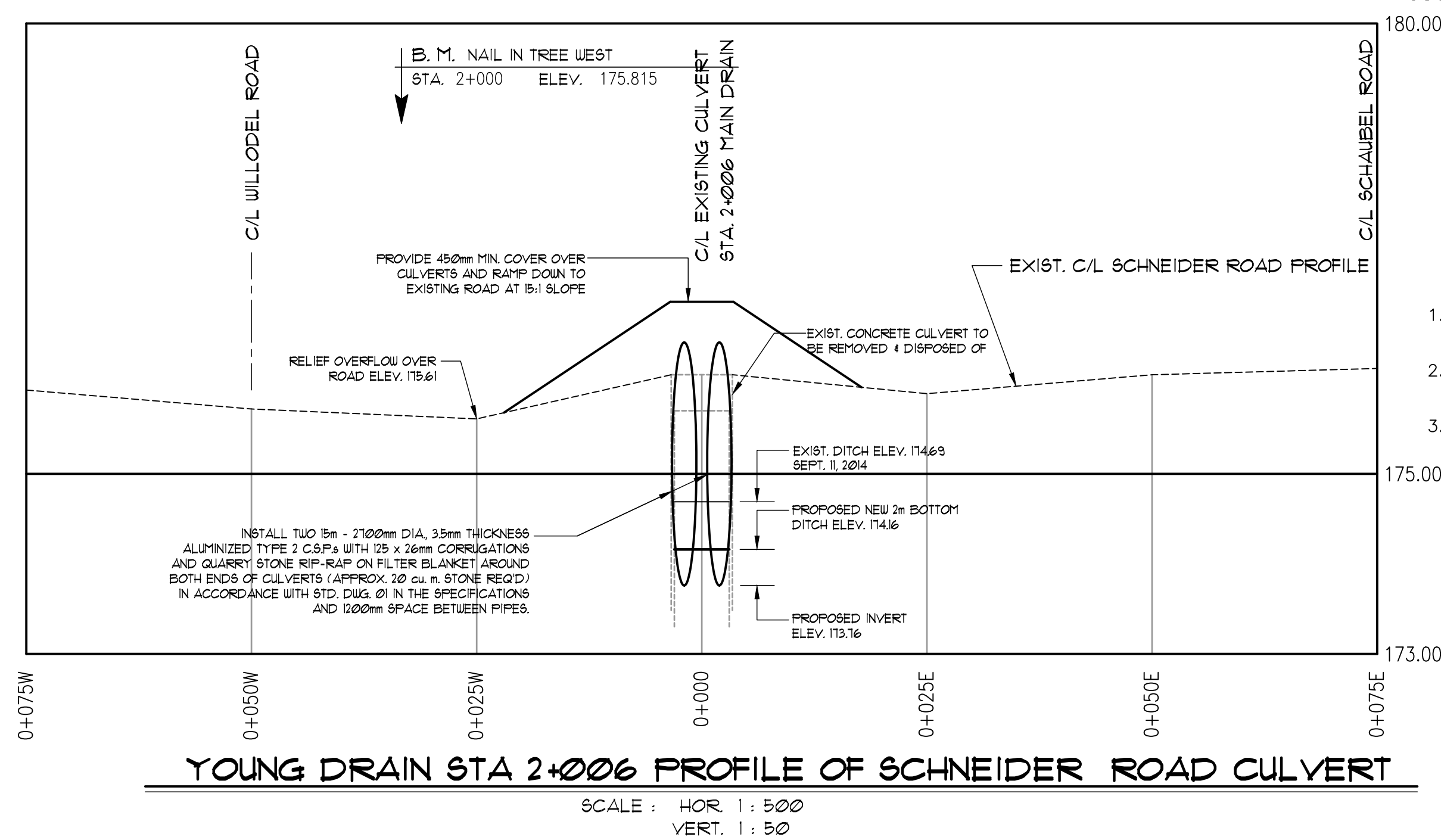
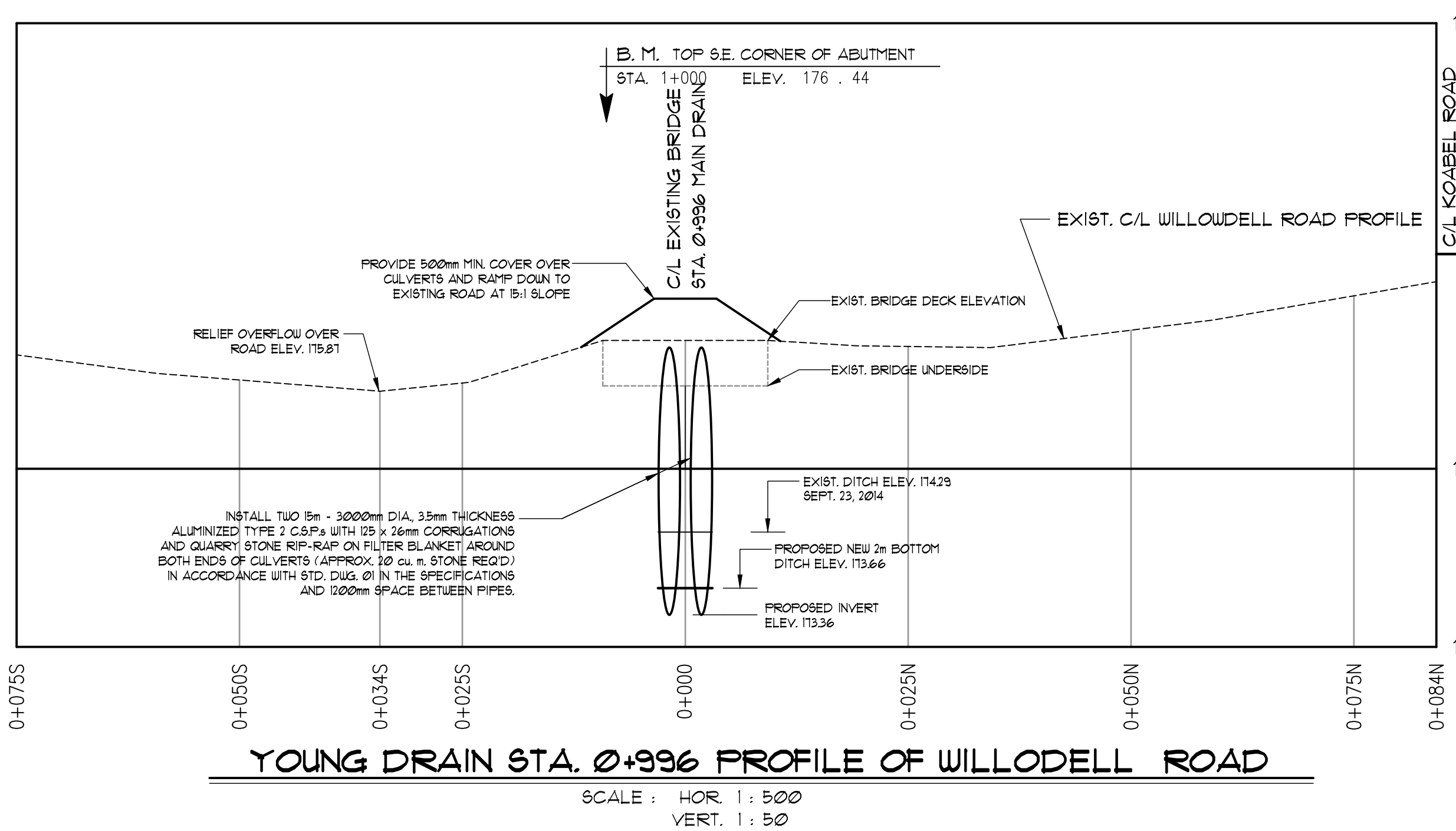
**HOFF - WAGNER DRAIN
DETAIL "D"**
N. T. S.

**HOFF - WAGNER DRAIN
DETAIL "C"**
N. T. S.

PROFILES
SCALE: HOR. 1:50
VERT. 1:50

**MAIN DRAIN
DETAIL "B"**
N. T. S.

**MAIN DRAIN
DETAIL "A"**
N. T. S.



- CROSSINGS UNDER RAILWAYS**
- CONSTRUCTION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH TRANSPORT CANADA STANDARDS RESPECTING PIPELINE CROSSINGS UNDER RAILWAYS.
 - ALL STEEL PIPES BORED UNDER RAILWAYS WILL NOT ALTER THE DRAINAGE PATTERNS BUT WILL INCREASE THE OUTLET CAPABILITIES FOR SURFACE & SUB-SURFACE WATER.
 - GEO TECHNICAL INVESTIGATION WAS COMPLETED BY COLDER ASSOCIATES FOR THE FOUR C.N.R. LOW FLOW PIPES UNDER REPORT No. 11-1132-0186-R01.

Drawn By: J. N. H. Approved By: J. R. SPRIET
Date: JULY 27, 2017 B-91, 121 & 159 JOB No. 90070 Drawing No. 4 of 5

ROAD & RAILWAY CROSSINGS

SPRIET ASSOCIATES
LONDON CONSULTING ENGINEERS LIMITED
155 YORK STREET - LONDON (519) 672-4100 - N5W 2S8

CONSTRUCTION NOTES

Young and Hopf-Wagner Drains

Location	Description	Work to be completed from
Sta. to	Sta.	
Young Drain		
0+072	0+092	Koabel Road
0+072	0+092	Clean through existing bridge, and create a low flow channel through existing rock check dam
0+092	0+986	L. Kit & D. Kit-Mets (Roll No. 130-004-211-00)
0+092	0+300	Work from & material to be levelled on
0+300	0+986	Work from & material to be levelled on
0+092	0+986	Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Levelling of excavated material beside ditch, one side Seeding of ditch banks and buffer strips covered with excavated material Rearing and nursery plantings as required by D.F.O.
0+986	1+006	Willodell Road
0+986	1+006	Remove and dispose of the Steel truss bridge, including wood deck and abutments Installation of Twin-3000mm dia. Culverts complete with quarry stone rip-rap protection around ends of culverts
1+006	1+487	D. & A. Silverthorne & R. T. Portuguese (Roll No.130-004-180-00)
1+006	1+325	Work from & material to be levelled on
1+325	1+487	Work from & material to be levelled on
1+006	1+487	Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Rearing and nursery plantings as required by D.F.O.
1+487	1+997	W. & C. Sauer (Roll No. 130-004-181-00)
1+487	1+997	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Rearing and nursery plantings as required by D.F.O. Backfill washouts and install quarry stone rock chute along the drain (3 locations)
1+997	2+017	Schneider Road
1+997	2+017	Remove and dispose of the existing concrete culvert Installation of Twin-2700mm dia. Culverts complete with quarry stone rip-rap protection around ends of culverts
2+017	2+324	E. Landrum (Roll No. 130-004-228-00)
2+017	2+324	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
2+324	2+810	V. Scott (Roll No 130-004-234-00)
2+324	2+810	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
2+810	3+357	J. & H. Swanson (Roll No 130-004-232-10)
2+810	3+357	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
2+900		Existing low level crossing to be lowered and regraded
3+357	3+454	J. & D. Pierrynowski (Roll No. 130-004-232-02)
3+357	3+454	Work from (if required) Debris jam (removal where required) Brushing to access debris to be to be done if necessary
3+454	3+563	J. & C. Castellanos (Roll No. 130-004-230-00)
3+454	3+563	Work from (if required) Debris jam (removal where required) Brushing to access debris to be to be done if necessary
3+563	3+593	Regional Road 98 (Montrose Road)
3+563	3+593	No work required
3+593	3+961	P. & M. Kikkert (Roll No. 140-001-027-00)
3+593	3+961	Work from (if required) Debris jam (removal where required) Brushing to access debris to be to be done if necessary
3+961	4+161	A. & R. Armenti (Roll No 140-001-026-00)
3+961	4+161	Work from (if required) Debris jam (removal where required) Brushing to access debris to be to be done if necessary
4+161	4+496	E. & K. Edwards (Roll No. 140-001-029-00)
4+161	4+496	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Backfill washouts and install quarry stone rock chute along the drain (4 locations)
4+496	4+524	Regional Road 25 (Netherby Road)
4+496	4+524	Clean through culvert to grade (excavated material to be trucked away) Footings to be inspected once culvert is cleaned out to ensure stability
4+524	4+622	J. & D. Deschamps (Roll No. 150-001-007-00)
4+524	4+622	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
4+622	4+867	H. Najmudin (Roll No. 150-001-007-04)
4+622	4+867	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material

Location	Description	Work to be completed from
Sta. to	Sta.	
Young Drain (cont'd)		
4+867	4+892	L. McMahon (Roll No. 150-001-008-00)
4+867	4+892	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
4+892	5+037	L. McMahon (Roll No 040-006-124-15)
4+892	5+037	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
5+037	5+333	N. & L. Bateman (Roll No. 004-006-124)
5+037	5+333	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
5+333	5+356	Koabele Road
5+333	5+356	Clean through culvert to grade Excavated material to be trucked away Footings to be inspected once culvert is cleaned out to ensure stability
5+356	5+450	J. Ruicci & D. Borg (Roll No. 004-006-125-00)
5+356	5+450	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
5+450	5+480	Canadian Pacific Railway (Roll No. 004-006-996-00)
5+450	5+480	Clean through the C.P. Rail culvert to grade, excess material to be hauled
5+480	5+770	S. & S. Hall (Roll No. 040-006-129-00)
5+480	5+380	Work from & material to be levelled on
5+580	5+770	Work from & material to be levelled on
5+480	5+770	Access to the drain to be along the South Limit of the property Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
5+555		Existing crossing to no be disturbed
5+770	5+983	Heritage Family Holdings LLC (Roll No. 004-006-128-00)
5+770	5+983	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
5+983	6+430	J. Post & S. Robb (Roll No. 004-006-131-00)
5+983	6+430	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
6+430	6+683	J. Grimaldi (Roll No. 004-006-133-00)
6+430	6+683	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
6+683	6+706	Green Road
6+683	6+706	Clean through culvert to grade Excavated material to be trucked away Footings to be inspected once culvert is cleaned out to ensure stability
6+706	7+007	L. & P. Durlit (Roll No. 004-006-134-00)
6+706	7+007	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
7+007	7+060	L. & C. Schneider (Roll No. 040-006-135-00)
7+007	7+060	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
7+060	7+107	Canadian National Railway (Roll No. 004-006-999-00)
7+060	7+107	Installation of 30m length - 750mm dia. steel pipe under railway by boring Access to be gained through the L & C. Schneider property (Roll No. 040-006-135-00) Bore to be done from the south side of the railway
7+107	7+159	L. & C. Schneider (Roll No. 040-006-135-00)
7+107	7+159	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
7+159	7+191	Forbes Road
7+159	7+191	Clean through culvert to grade Excavated material to be trucked away Footings to be inspected once culvert is cleaned out to ensure stability
7+191	7+528	W. & L. Collard (Roll No.004-006-099-02)
7+191	7+528	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
7+528	7+558	Canadian National Railway (Roll No. 004-006-999-00)
7+528	7+558	Installation of 30m length - 750mm dia. steel pipe under railway by boring Access to be gained through the E. & M. Geyer property (Roll No. 040-006-101-00) Bore to be done from the west side of the railway
7+558	7+630	E. & M. Geyer (Roll No. 040-006-101-00)
7+558	7+630	Relocate drain and backfill existing ditch including stripping and redistributing topsoil Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Future maintenance excavated material to be spread adjacent to drain
7+630	7+764	C. & H. Aimesbury (Roll No. 040-006-102-00)
7+630	7+764	Relocate drain and backfill existing ditch including stripping and redistributing topsoil Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Future maintenance excavated material to be spread adjacent to drain

Location	Description	Work to be completed from
Sta. to	Sta.	
Hopf-Wagner Drain		
7+764	7+885	C. & H. Aimesbury (Roll No. 040-006-102-00) & Canadian National Railway
7+764	7+885	Work from & material to be levelled on Ditch to be located on the C.N. lands work to be done/material levelled on the Aimesbury lands Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Excavated material to be relocated to backfill existing ditch Future maintenance excavated material to be spread adjacent to drain
7+885	8+078	Canadian National Railway (Roll No. 004-006-999-00)
7+885	7+891	Work from & material to be levelled on
7+891	7+914	Clean through existing culvert (if required)
7+914	8+078	Work from & material to be levelled on
7+885	8+078	Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Excavated material to be relocated to backfill existing ditch Future maintenance excavated material to be spread adjacent to drain (on railway property)
8+078	8+098	Brookfield Road
8+078	8+098	Clean through existing Brookfield Road culvert Excavated material to be trucked away Culvert to be inspected once culvert is cleaned out to verify condition, provisionally if in poor condition then culvert will be replaced and ditch relocated
8+098	8+326	G. & J. Tice (Roll No.004-006-112-00) & Canadian National Railway
8+098	8+326	Work from & material to be levelled on Ditch located on the C.N. Railway property Material to be spread on the South Side (G. & J. Tice property Roll No. 004-006-112-00) Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
8+326	8+530	E. Carver (Roll No. 040-006-110-00) & Canadian National Railway
8+326	8+530	Work from & material to be levelled on Ditch located on the C.N. Railway property Material to be spread on the South Side (G. & J. Tice property Roll No. 004-006-112-00) Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Clean through existing concrete box culvert
8+530	8+745	K. & S. Fox (Roll No. 040-006-142-00) & Canadian National Railway
8+530	8+745	Work from & material to be levelled on Ditch located on the C.N. Railway property Material to be spread on the South Side (K. & S. Fox property Roll No. 004-006-110-00) Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material New 1200mm dia. C.S.P. culvert to be installed and existing concrete culvert to be broke up and used as rip-rap protection
8+727	8+937	C. Menard & C. Barker (Roll No. 040-006-146-01) & Canadian National Railway
8+727	8+937	Work from & material to be levelled on Ditch located on the C.N. Railway property Material to be spread on the South Side (C. Menard & C. Barker property Roll No. 004-006-110-00) Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
8+937	8+957	Sherk Road
8+937	8+957	Remove and dispose exist conc. culvert Installation of 17m length-1200mm dia. concrete culvert by open cut Quarry stone rip-rap protection around ends of culvert Surface restoration of road with Hot Mix Asphalt
8+957	9+365	B. & H. Sonnenberg (Roll No. 040-006-145-00) & Canadian National Railway
8+957	9+365	Work from & material to be levelled on (existing fences to be left undisturbed) Material to be spread on B. & H. Sonnenberg (Roll No. 040-006-145-00) property and Railway lands Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
9+365	9+571	M. Butler Est (Roll No. 040-006-149-00) & Canadian National Railway
9+365	9+571	Work from & material to be levelled on (existing fences to be left undisturbed) Material to be spread on M. Butler (Roll No. 040-006-149-00) property and Railway lands Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
9+571	9+796	A. & R. Dickey (Roll No. 040-006-147-00) & Canadian National Railway
9+571	9+796	Work from & material to be levelled on (within Railway property) Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material Buffer only on Dickey property (4m) all material to be levelled on railway
9+796	9+828	Canadian National Railway (Roll No. 004-006-999-00)
9+796	9+828	Installation of 22m length - 600mm dia. steel pipe under railway by boring
9+828	9+906	Enbridge Gas Distribution (Roll No. 004-006-154-05)
9+828	9+906	Excavate open ditch between new railway bore pipe and new H.D.P.E. pipe Installation of 600mm dia. H.D.P.E. sewer pipe parallel to White Road Excavate three Bell cables and one Hydro cable and relocate over and under new pipe
9+906	9+914	Forbes Road
9+906	9+914	No work required
Nease Branch		
8+959	8+981	Canadian National Railway (Roll No. 004-006-999-00)
8+959	8+981	Installation of 18m length-600mm dia. steel pipe under railway by boring
8+981	9+195	S. & D. Nease (Roll No. 040-06-146-00) & Canadian National Railway
8+981	9+195	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
9+195	9+313	S. & D. Nease (Roll No. 040-06-146-00)
9+195	9+313	Work from & material to be levelled on Mechanical brushing and clearing of trees on one side for excavation work and levelling Low flow channel excavation from the bottom of the existing drain including sediment pools Seeding of ditch banks and buffer strips covered with excavated material
9+313	9+324	Forbes Road
9+313	9+324	Clean through exist C.S.P. under Forbes Road and dispose of excavated material

GENERAL NOTES

- OUR SPECIFICATIONS DATED JANUARY 2009 APPLY TO THIS PROJECT.
- THE WORKING WIDTH AVAILABLE TO THE CONTRACTOR TO CONSTRUCT THE NEW DRAINS SHALL CONSIST OF THOSE LANDS IMMEDIATELY ADJACENT TO THE DRAIN AND CONNECTIONS AND SHALL NOT EXCEED THE FOLLOWING AVERAGE WIDTHS -
OPEN PORTIONS - 18 meters (INCLUDING 3m BUFFER)
OPEN PORTIONS-BUSH AREAS - 15 meters TOTAL (REMOVE ONLY TREES ALONG BANK AND THOSE ABSOLUTELY NECESSARY TO COMPLETE CONSTRUCTION)
THE WORKING WIDTH FOR PURPOSES OF FUTURE MAINTENANCE SHALL BE THE SAME AS ABOVE
- FOR FUTURE MAINTENANCE ALL OWNERS ALONG THE COURSE OF THE DRAIN SHALL MAKE AN ACCESS ROUTE FROM THE NEAREST ROAD TO THE DRAIN LOCATION AVAILABLE (SPOT REPAIRS) DEBRIS REMOVAL THE AVERAGE WIDTH OF THIS ACCESS ROUTE SHALL NOT EXCEED 8 METERS FOR FUTURE CLEANOUTS THE ACCESS SHALL BE ALONG THE DRAIN AS LAID OUT IN THE CONSTRUCTION NOTES ON THIS PAGE.
- ALL UTILITIES TO BE LOCATED AND EXPOSED PRIOR TO CONSTRUCTION SO THAT THE NEW DITCH GRADES CAN BE CONFIRMED. IF THERE IS A CONFLICT IN ELEVATION BETWEEN THE PROPOSED DRAIN AND THE UTILITY, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY. b) CONTRACTOR TO NOTIFY ALL UTILITIES 72 HOURS PRIOR TO HIS SCHEDULED TIME FOR STARTING THE ABOVE WORK.
- ALL TREES, SCRUB, BUSH, ETC. TO BE CLEARED AND GRUBBED IN ACCORDANCE WITH SECTION B.3 AND C.4 SPECIFICATIONS.
- RIP-RAP TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH SECTION A.29 IN THE SPECIFICATIONS.
- CONTRACTOR TO ARRANGE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, DRAINAGE SUPERINTENDENT AND THE AFFECTED OWNERS. ALL PARTIES SHALL RECEIVE 48 HOURS NOTICE TO THE MEETING.
- EXISTING DITCH TO BE CLEANED OUT IN ACCORDANCE WITH SECTION B.4 IN THE SPECIFICATIONS. DITCH BOTTOM CLEANOUT TO BE LOW FLOW CHANNEL ONLY AS INDICATED ON THE PROFILES. REMAINDER OF DITCH WIDTH NOT TO BE DREDGED IN ORDER TO MAINTAIN A NATURAL UNDISTURBED BUFFER ALONG EACH SIDE OF LOW FLOW CHANNEL.
- EXCAVATED MATERIAL TO BE DEPOSITED AND LEVELLED ON THE SIDE OF THE DITCH IN ACCORDANCE WITH SECTION B.5 IN THE SPECIFICATIONS WITH THE EXCEPTION THAT THE MATERIAL MAY BE LEVELLED TO AN MAXIMUM DEPTH OF 600mm. SEE NOTES BELOW.
- AN 8 METER WIDE BUFFER STRIP OF EXISTING VEGETATION BETWEEN THE TOP OF THE BANK AND THE CULTIVATED LANDS ON BOTH SIDES OF THE DITCH SHALL BE MAINTAINED AS PART OF THE OPEN PORTION OF THE DRAIN.
- NEWLY RECONSTRUCTED AND NEWLY EXPOSED DITCH BANKS ARE TO BE HAND SEEDED UPON COMPLETION OF CONSTRUCTION IN ACCORDANCE WITH SECTION B.11 IN THE SPECIFICATIONS.
- SILT FENCE TO BE PLACED ACROSS DITCH BOTTOM AT STA. 0 + 072. DURING CONSTRUCTION TO PREVENT SILT FROM FLOODING DOWNSIDE. SILT FENCE AND SILT TO BE REMOVED AND DISPOSED OF AFTER CONSTRUCTION.
- CONSTRUCT SEDIMENT POOLS IN DITCH BOTTOM FOR FULL WIDTH OF DITCH BOTTOM. SEDIMENT POOLS TO BE 350mm DEEP WITH PARABOLIC SHAPE, 8m LONG AND BE CONSTRUCTED AT 250m INTERVALS ALONG DITCH.

Drainage Superintendent: HENRI BENNEMEER (Tel. 905-835-2900 ex. 213)

YOUNG & HOPF-WAGNER DRAINS
CITY OF PORT COLBORNE

Drawn By: JNH, Field Book: J09 No. B-91, 121 & 159, 9 0 0 7 0, Drawing No. 5 of 5
Date: JULY 27, 2011

CONSTRUCTION NOTES

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