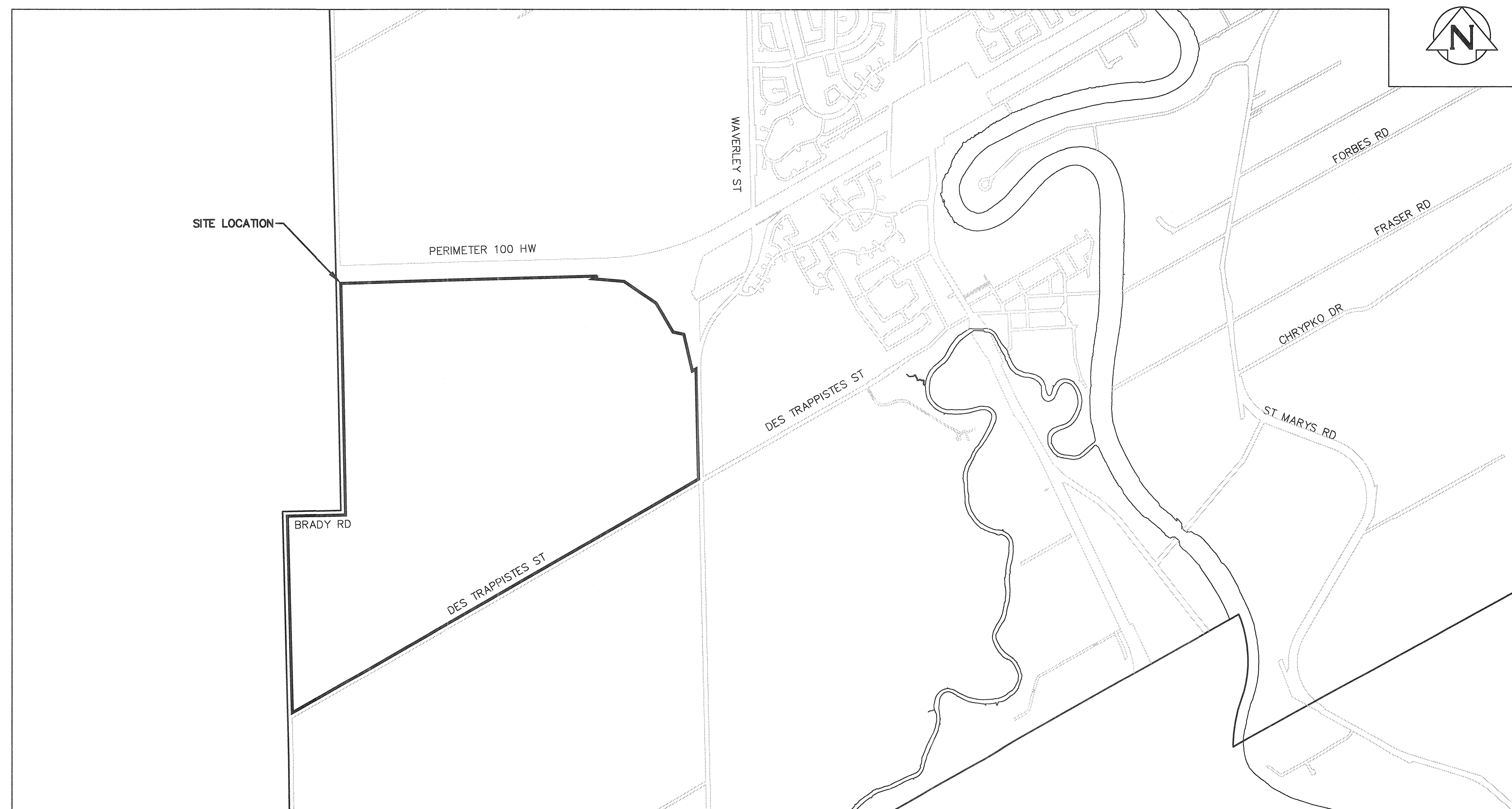




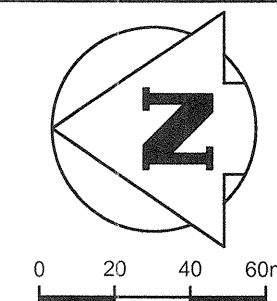
THE CITY OF WINNIPEG

WATER AND WASTE DEPARTMENT
SOLID WASTE SERVICES

BRADY ROAD RESOURCE MANAGEMENT FACILITY AREA A CONSTRUCTION - CELL 32 TENDER NO. #188-2019

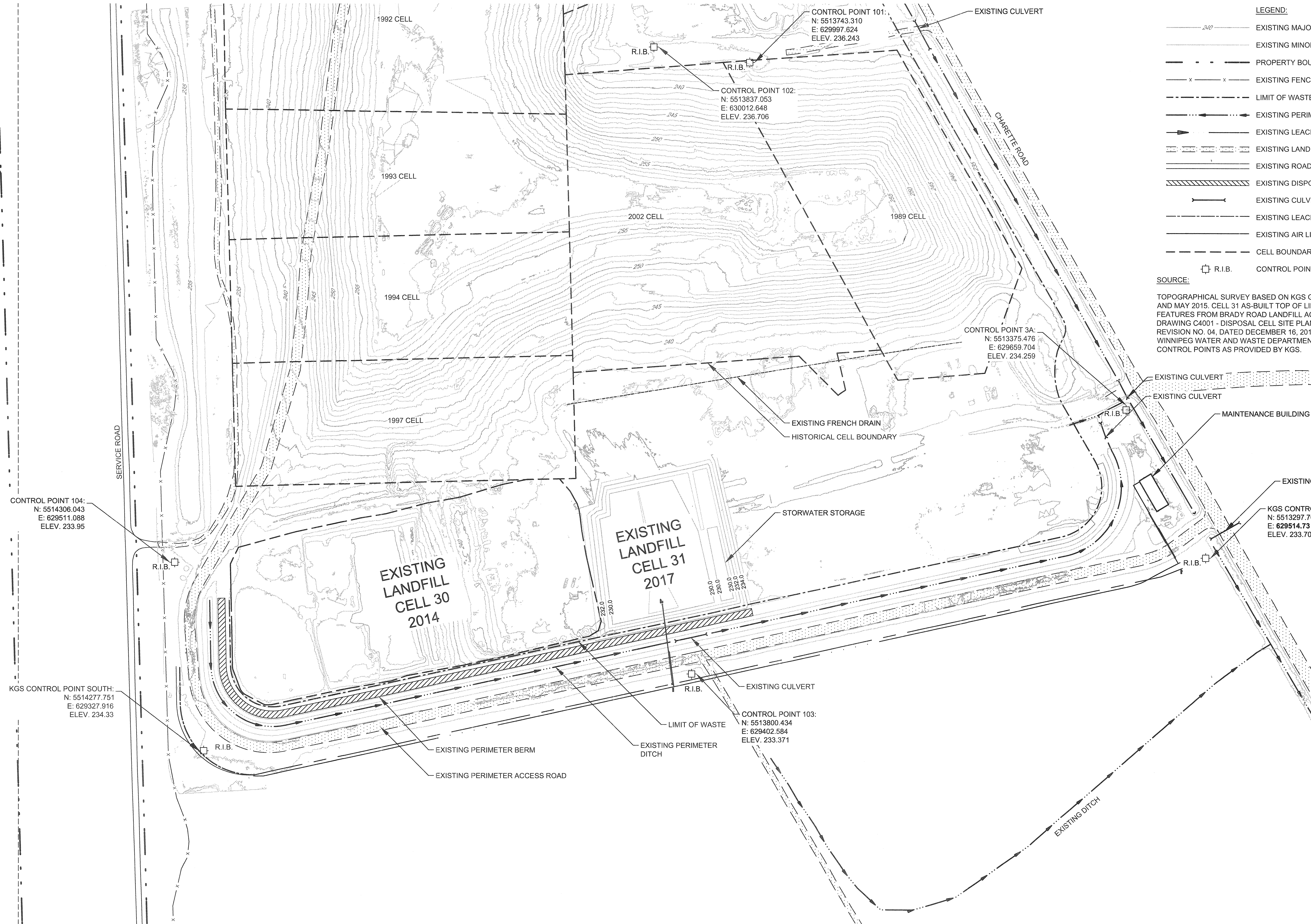


KEY MAP



- LEGEND:**
- 240 — EXISTING MAJOR CONTOUR
 - 250 — EXISTING MINOR CONTOUR
 - - - - - PROPERTY BOUNDARY
 - x - x - EXISTING FENCE LINE
 - - - - - LIMIT OF WASTE
 - - - - - EXISTING PERIMETER DITCH
 - - - - - EXISTING LEACHATE INTERCEPTOR TRENCH
 - - - - - EXISTING LANDFILL ACCESS ROAD
 - - - - - EXISTING ROADWAYS
 - - - - - EXISTING DISPOSAL CELL BERM
 - - - - - EXISTING CULVERT
 - - - - - EXISTING LEACHATE COLLECTION HEADER
 - - - - - EXISTING AIR LINE
 - - - - - CELL BOUNDARY
 - R.I.B. CONTROL POINT

SOURCE:
 TOPOGRAPHICAL SURVEY BASED ON KGS GROUP UAV DEM, COMPLETED MAY 2013 AND MAY 2015. CELL 31 AS-BUILT TOP OF LINER AS PROVIDED BY KGS. SITE FEATURES FROM BRADY ROAD LANDFILL ACCESS ROAD AND DISPOSAL CELL. DRAWING C4001 - DISPOSAL CELL SITE PLAN (CITY DRAWING NUMBER SWD-D-439), REVISION NO. 04, DATED DECEMBER 16, 2014, BY TETRA TECH, FOR THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT. HISTORIC CELL BOUNDARIES AND CONTROL POINTS AS PROVIDED BY KGS.



METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

WARNING

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
3. SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES COMMITTEE	DATE

NOTE:
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

CONSTRUCTION COMPLETION DATE:	

NO.	REVISIONS	DATE	BY
1	ISSUED FOR TENDER	02/25/2019	DB

GHD
 651 Colby Drive
 Waterloo Ontario N2V 1C2 Canada
 T 519 884 0510 F 519 884 0525 W www.ghd.com

DESIGNED BY: D. BARTON	CHECKED BY: M. ZUCKWEILER
DRAWN BY: K. DHALIWAL	APPROVED BY: D. BARTON

SCALE:
 HORIZONTAL: 1:2000
 VERTICAL: —

DATE: 2019 02 27

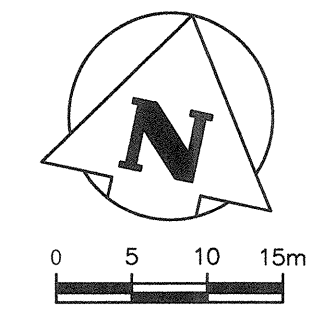
ENGINEER'S SEAL

CONSULTANT DRAWING NUMBER

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 SOLID WASTE SERVICES

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
 AREA A CONSTRUCTION
 EXISTING CONDITIONS (2017)

SHEET 03 OF 29
 CITY DRAWING NUMBER
 1-0400A- C0048-001



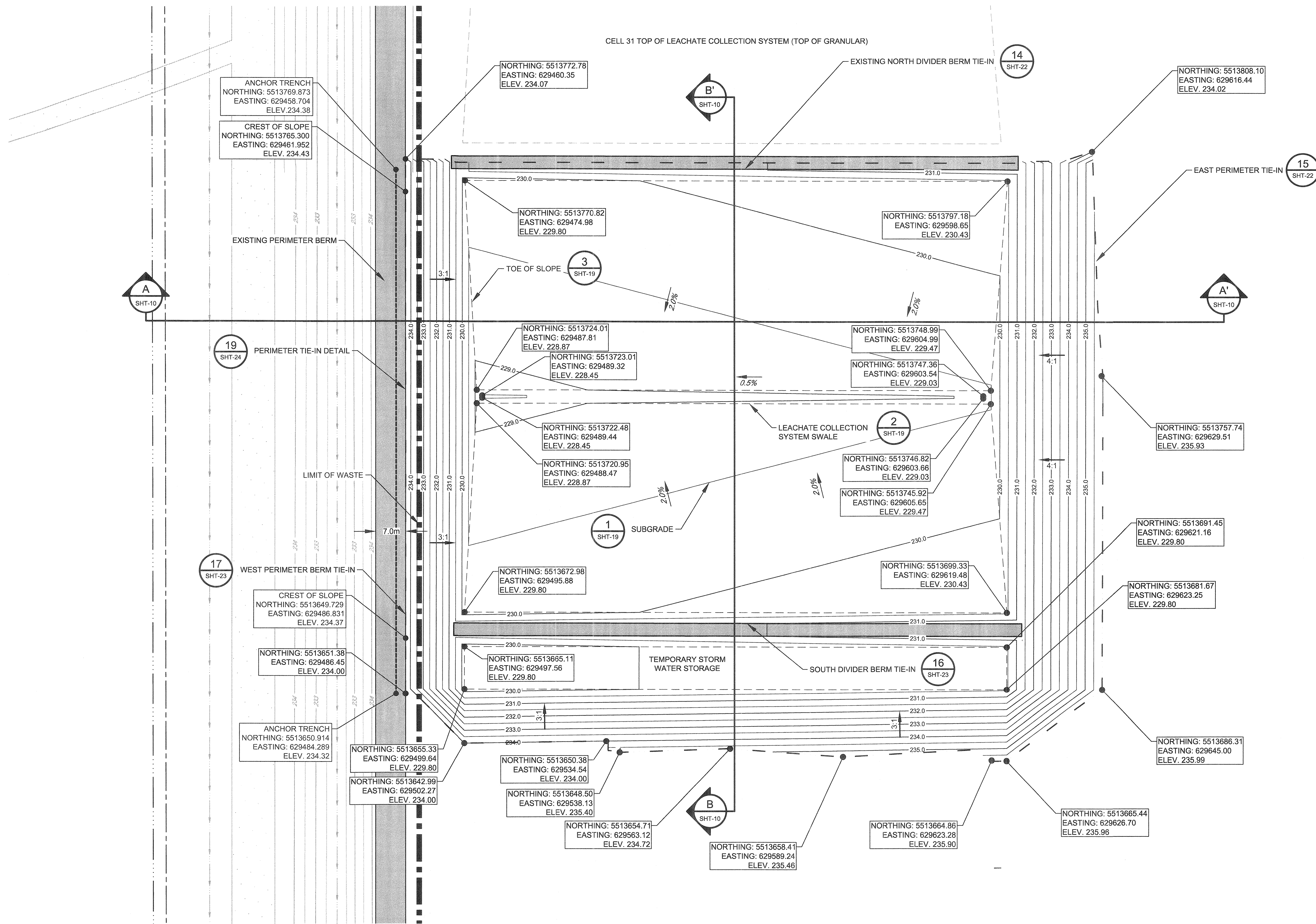
LEGEND:

- 231.0 — PROPOSED MAJOR CONTOUR
- 230.0 — PROPOSED MINOR CONTOUR
- 230.0 — EXISTING MAJOR CONTOUR
- 230.0 — EXISTING MINOR CONTOUR
- - - - - EXISTING PERIMETER DITCH
- - - - - TOE OF SLOPE
- - - - - PERIMETER DITCH
- - - - - EXISTING ACCESS ROAD
- - - - - LIMIT OF CONSTRUCTION
- - - - - LIMIT OF WASTE
- - - - - ANCHOR TRENCH
- - - - - PERIMETER BERM
- - - - - EXISTING LEACHATE COLLECTION HEADER
- - - - - EXISTING AIR LINE

SOURCE:
 TOPOGRAPHICAL SURVEY BASED ON KGS GROUP UAV DEM, COMPLETED MAY 2013 AND MAY 2015. CELL 31 AS-BUILT TOP OF LINER AS PROVIDED BY KGS

NOTE 1:
 TEMPORARY STORMWATER REMOVAL PRIOR TO SUB-GRADE CONSTRUCTION

NOTE 2:
 TEMPORARY STORMWATER STORAGE AREA CONTROLS NOT IN CONTRACT



METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

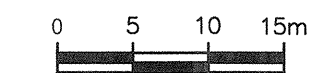
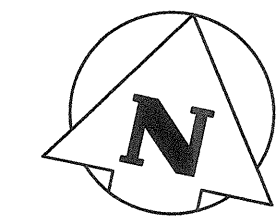
WARNING
 1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
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DESIGNED BY: D. BARTON DRAWN BY: K. DHALIWAL SCALE: HORIZONTAL 1:500, VERTICAL - DATE: 2019 02 27	CHECKED BY: M. ZUCKWEILER APPROVED BY: D. BARTON RELEASED FOR CONSTRUCTION DATE:	1 ISSUED FOR TENDER 02/25/2019 DB NO. REVISIONS DATE BY	PLOT DATE: 2019 02 27 BID OPPORTUNITY CONTRACT NUMBER:	FILE PATH: P:\drawings\1110000a\11102893\11102893-REPORT\11102893-00(013)\11102893-00(013)C\11102893-00(013)C1-WA005.dwg

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 SOLID WASTE SERVICES

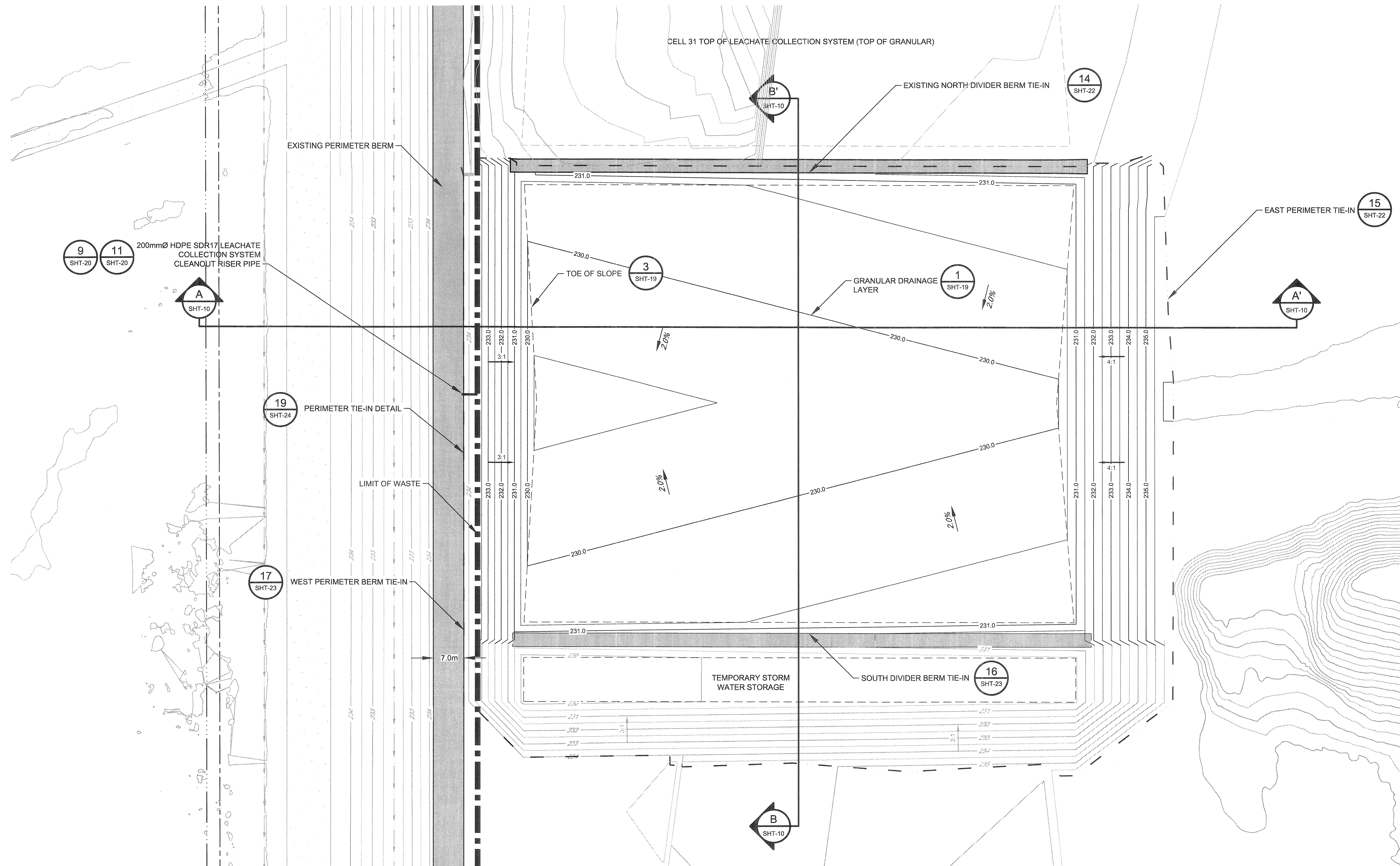
BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
 AREA A CONSTRUCTION - CELL 32
 CELL 32 SUBGRADE

SHEET 07 OF 29
 CITY DRAWING NUMBER
 1-0400A- C0050-001



- LEGEND:**
- 231.0 — PROPOSED MAJOR CONTOUR
 - — PROPOSED MINOR CONTOUR
 - 230 — EXISTING MAJOR CONTOUR
 - — EXISTING MINOR CONTOUR
 - - - EXISTING PERIMETER DITCH
 - - - TOE OF SLOPE
 - - - PERIMETER DITCH
 - - - EXISTING ACCESS ROAD
 - - - LIMIT OF CONSTRUCTION
 - - - LIMIT OF WASTE
 - █ PERIMETER BERM
 - - - EXISTING LEACHATE COLLECTION HEADER
 - - - EXISTING AIR LINE

SOURCE:
TOPOGRAPHICAL SURVEY BASED ON KGS GROUP UAV DEM, COMPLETED MAY 2013 AND MAY 2015. CELL 31 AS-BUILT TOP OF LINER AS PROVIDED BY KGS

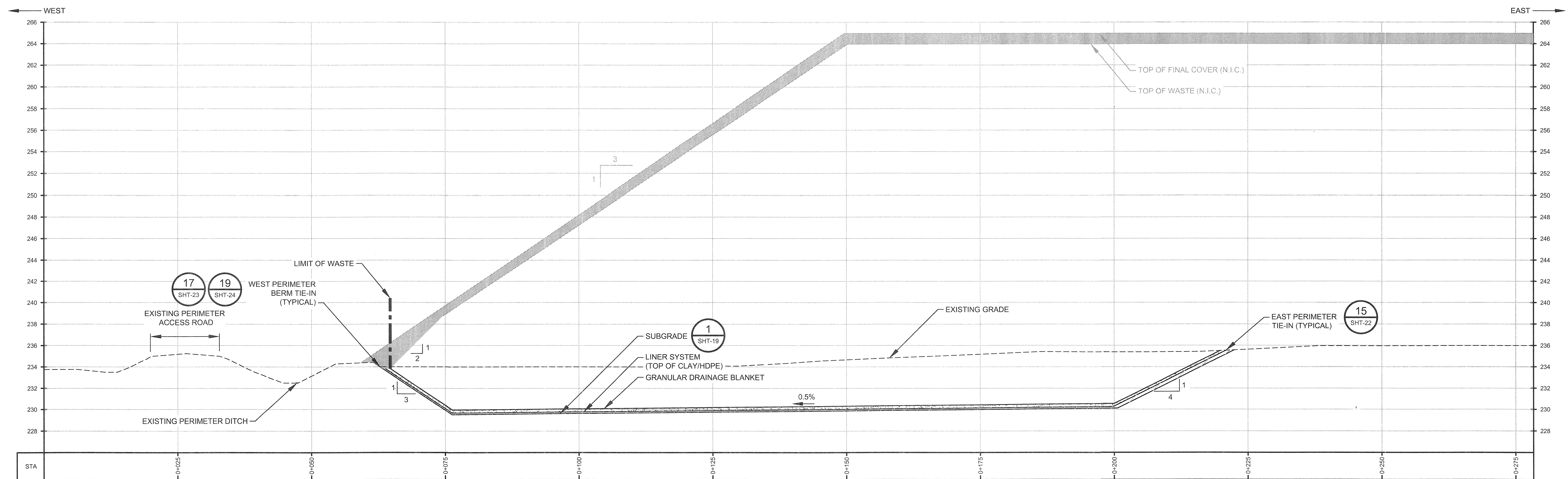


METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

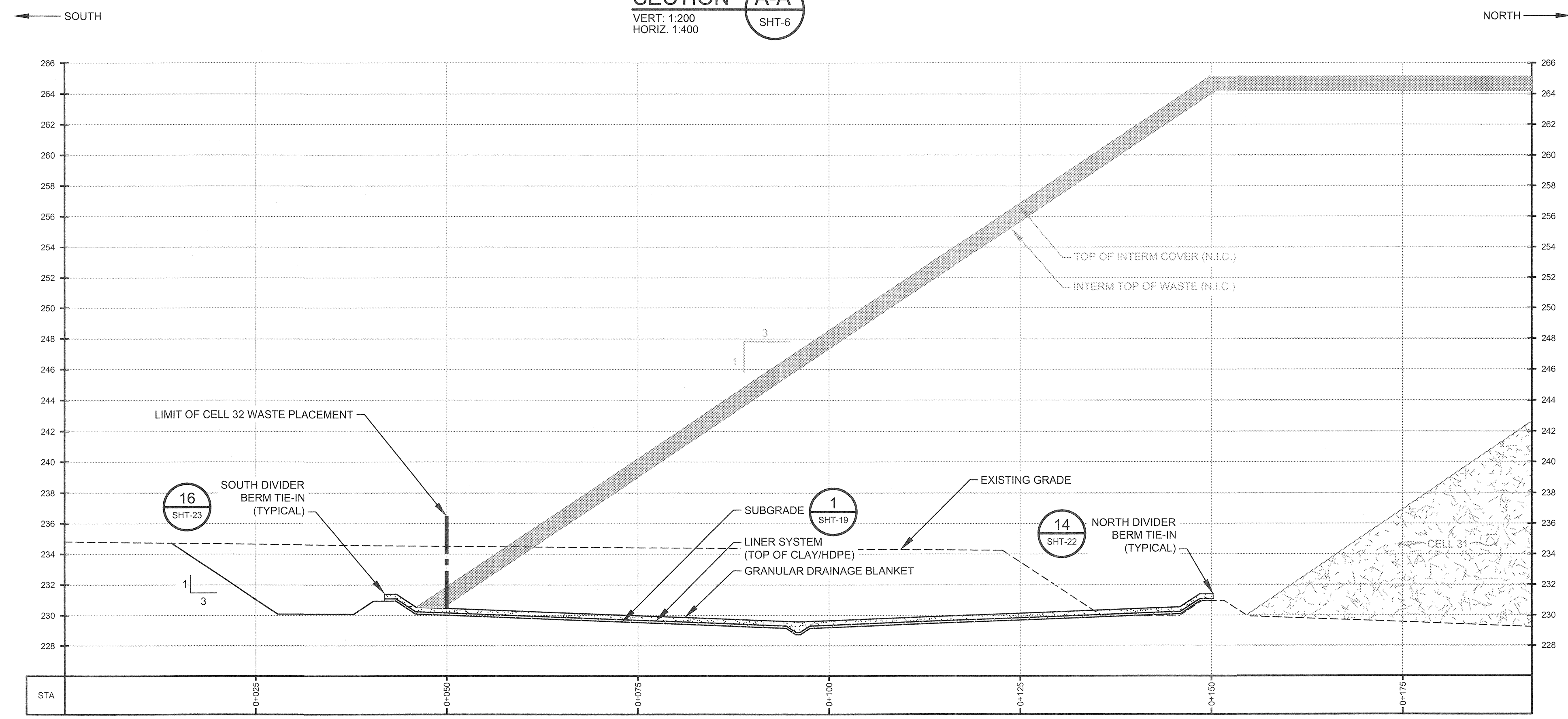
WARNING

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
3. SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.

<p>LOCATION APPROVED UNDERGROUND STRUCTURES</p> <p>SUPV. U/G STRUCTURES COMMITTEE _____ DATE _____</p> <p>NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.</p>	<p>B.M. ELEV. _____</p> <p>CONSTRUCTION COMPLETION DATE: _____</p>	<p>GHD 651 Colby Drive Waterloo Ontario N2V 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com</p>	<p>ENGINEER'S SEAL</p> <p>D.B. BARTON Member PROFESSIONAL ENGINEER CONSULTANT REG. NO. _____</p>	<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT SOLID WASTE SERVICES</p> <p>BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF) AREA A CONSTRUCTION - CELL 32 CELL 32 LEACHATE COLLECTION SYSTEM (TOP OF GRANULAR)</p>																				
<p>DESIGNED BY: D. BARTON</p> <p>DRAWN BY: K. DHALIWAL</p> <p>SCALE: HORIZONTAL 1:500 VERTICAL -</p> <p>DATE: 2019 02 27</p>	<p>CHECKED BY: M. ZUCKWEILER</p> <p>APPROVED BY: D. BARTON</p> <p>RELEASED FOR CONSTRUCTION</p> <p>DATE: _____</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>ISSUED FOR TENDER</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>ISSUED FOR TENDER</td> <td>02/25/2019</td> <td>DB</td> </tr> <tr> <td colspan="4">REVISIONS</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	ISSUED FOR TENDER	DATE	BY	1	ISSUED FOR TENDER	02/25/2019	DB	REVISIONS												<p>PLAT DATE: 2019 02 27</p>	<p>SHEET 09 OF 29</p> <p>CITY DRAWING NUMBER 1-0400A-C0052-001</p>
NO.	ISSUED FOR TENDER	DATE	BY																					
1	ISSUED FOR TENDER	02/25/2019	DB																					
REVISIONS																								



SECTION A-A'
VERT: 1:200
HORIZ: 1:400
SHT-6



SECTION B-B'
VERT: 1:200
HORIZ: 1:400
SHT-6

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

WARNING
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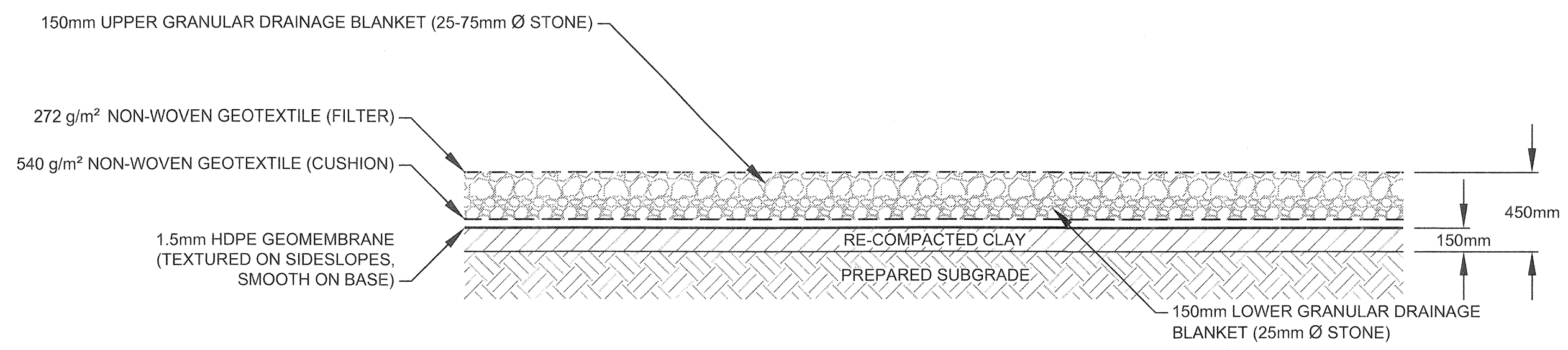
LOCATION APPROVED UNDERGROUND STRUCTURES SUPV. U/G STRUCTURES COMMITTEE DATE NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		B.M. ELEV. CONSTRUCTION COMPLETION DATE: YYYY MM DD
1 ISSUED FOR TENDER 02/25/2019 DB NO. REVISIONS DATE BY		GHD 651 Colby Drive Waterloo Ontario N2V 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com

DESIGNED BY D. BARTON DRAWN BY K. DHALIWAL SCALE: HORIZONTAL 1: 400 VERTICAL 1: 200 DATE 2019 02 27	CHECKED BY M. ZUCKWEILER APPROVED BY D. BARTON RELEASED FOR CONSTRUCTION DATE	ENGINEER'S SEAL
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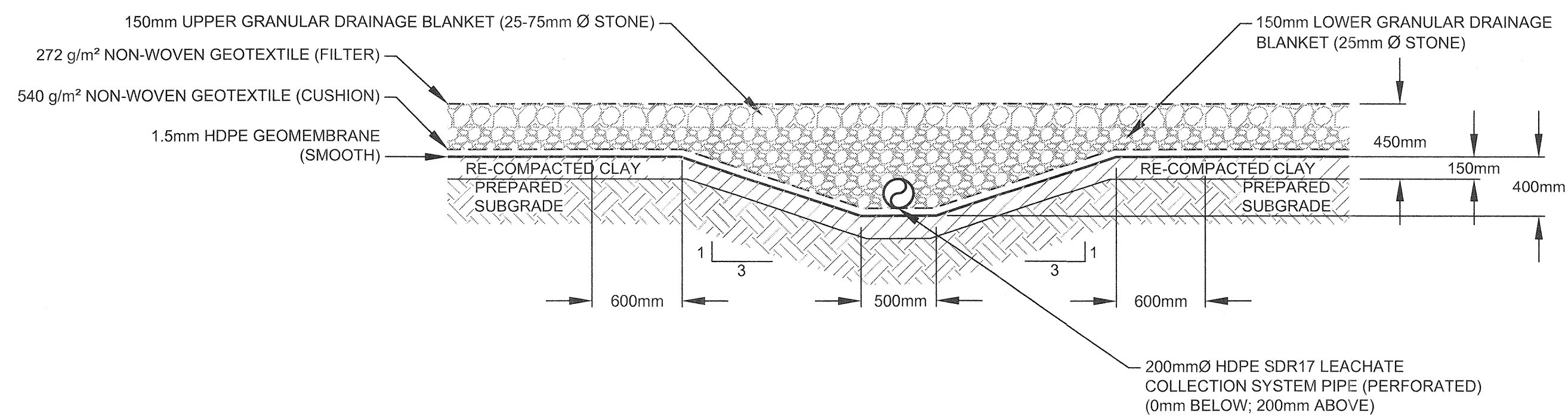
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
SOLID WASTE SERVICES

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
AREA A CONSTRUCTION - CELL 32
CELL 32 CROSS-SECTIONS

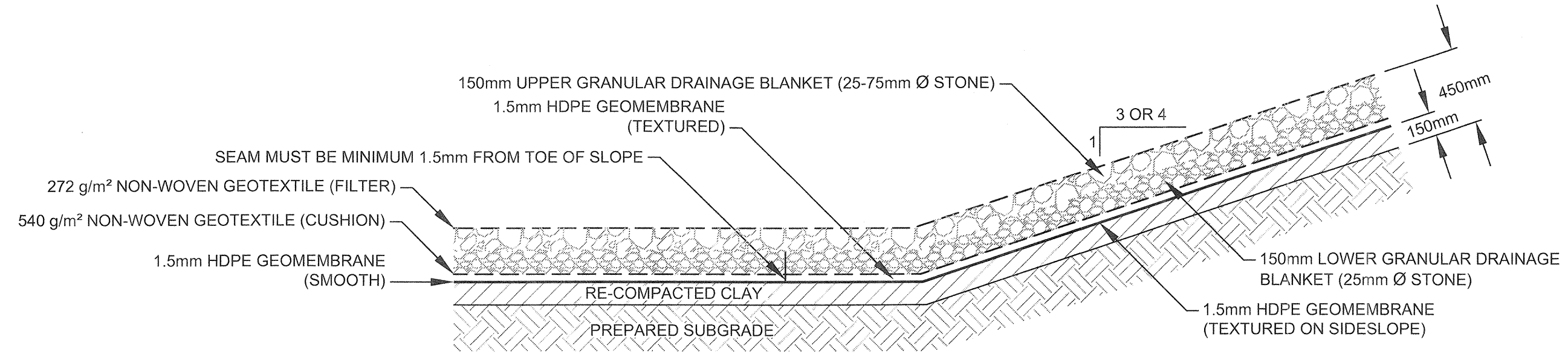
SHEET 10 OF 29
CITY DRAWING NUMBER
1-0400A- C0053-001



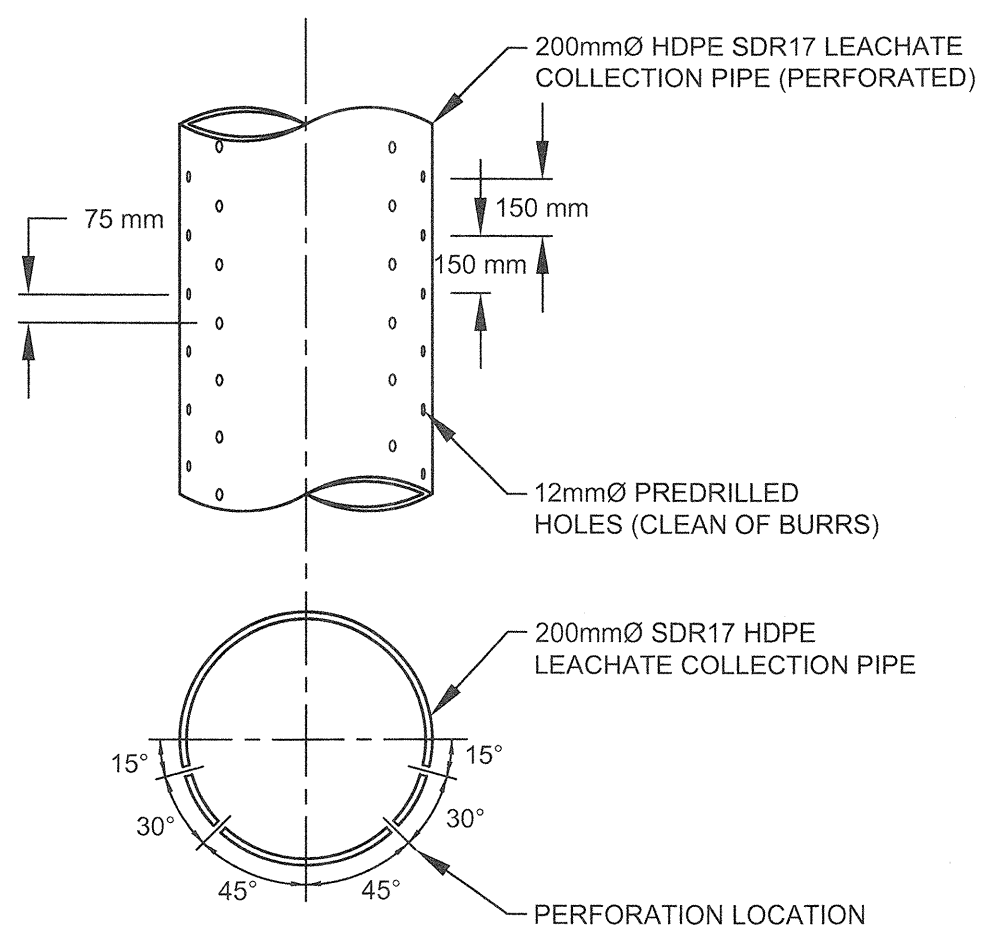
DETAIL 1 LINER SYSTEM
1:30 SHT-07



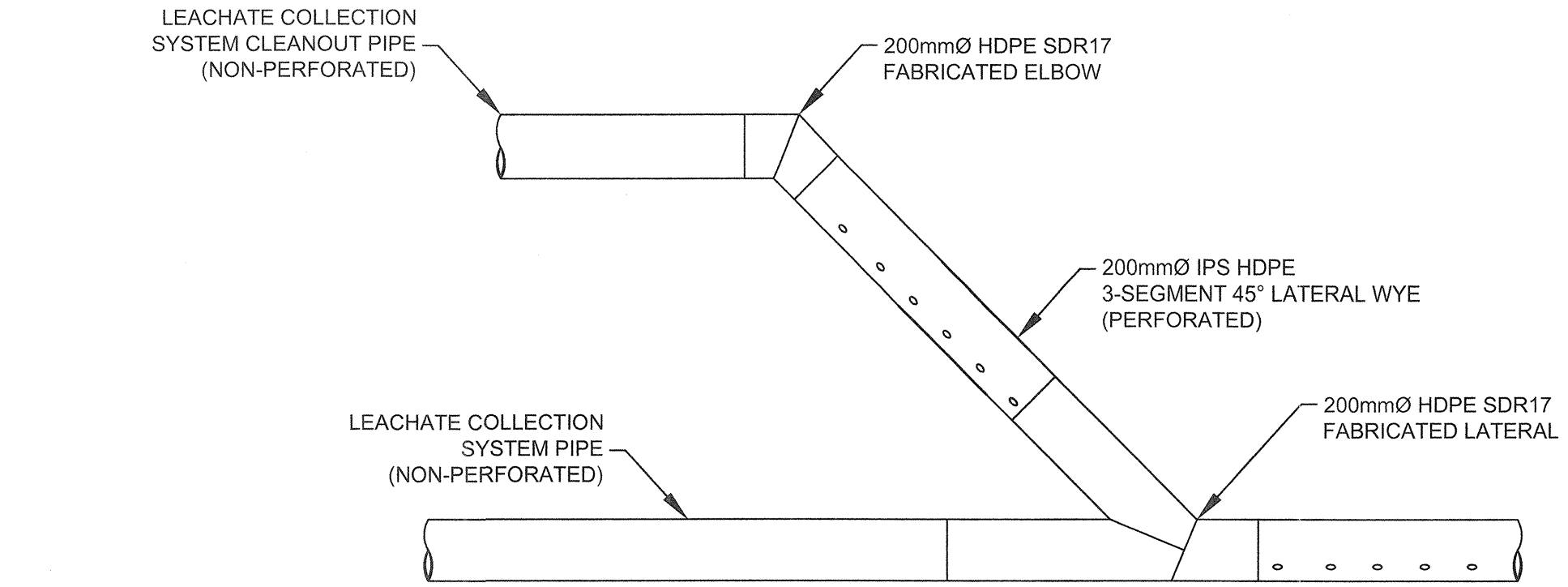
DETAIL 2 LEACHATE COLLECTION SYSTEM PIPE AND SWALE (TYPICAL)
1:30 SHT-07



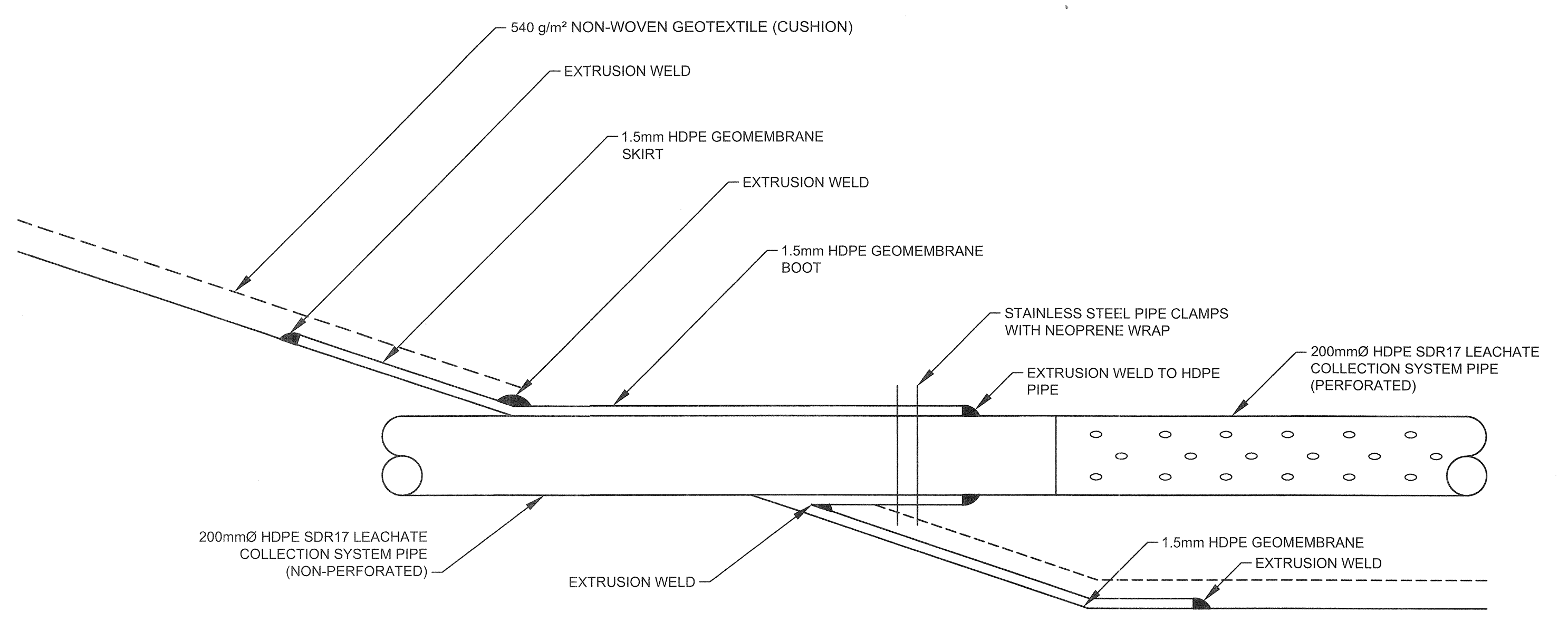
DETAIL 3 LINER SYSTEM (TOE OF SLOPE)
1:30 SHT-07



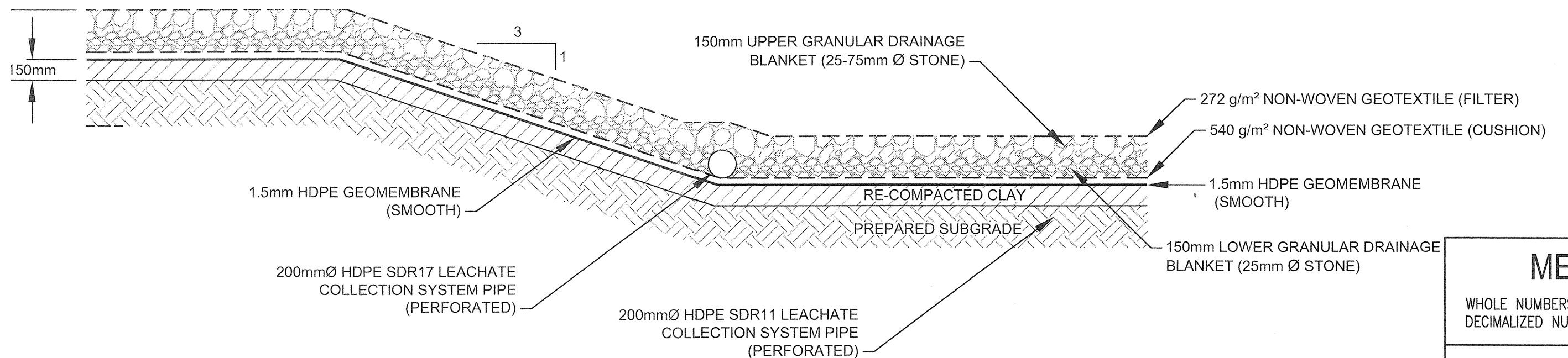
DETAIL 4 200mmØ LEACHATE COLLECTION SYSTEM PIPE PERFORATIONS
NTS SHT-08



DETAIL 5 LEACHATE COLLECTION SYSTEM CLEANOUT RISER PIPE TO LEACHATE COLLECTION SYSTEM PIPE (IN TRENCH)
1:20 SHT-08



DETAIL 6 HDPE GEOMEMBRANE BOOT
NTS SHT-08



DETAIL 7 LEACHATE COLLECTION SYSTEM PIPE ALONG CELL 34A / CELL 34B DIVIDER BERM
1:20 SHT-15

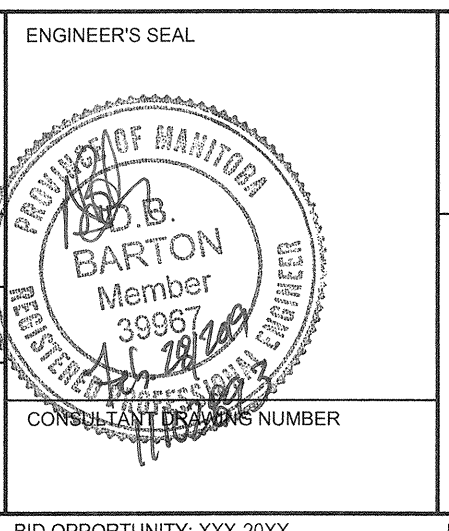
METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

WARNING

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LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.
CONSTRUCTION COMPLETION DATE: YYYY MM DD		
SUPV. U/G STRUCTURES COMMITTEE	DATE	
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.		
1	ISSUED FOR TENDER	02/25/2019 DB
NO.	REVISIONS	DATE BY

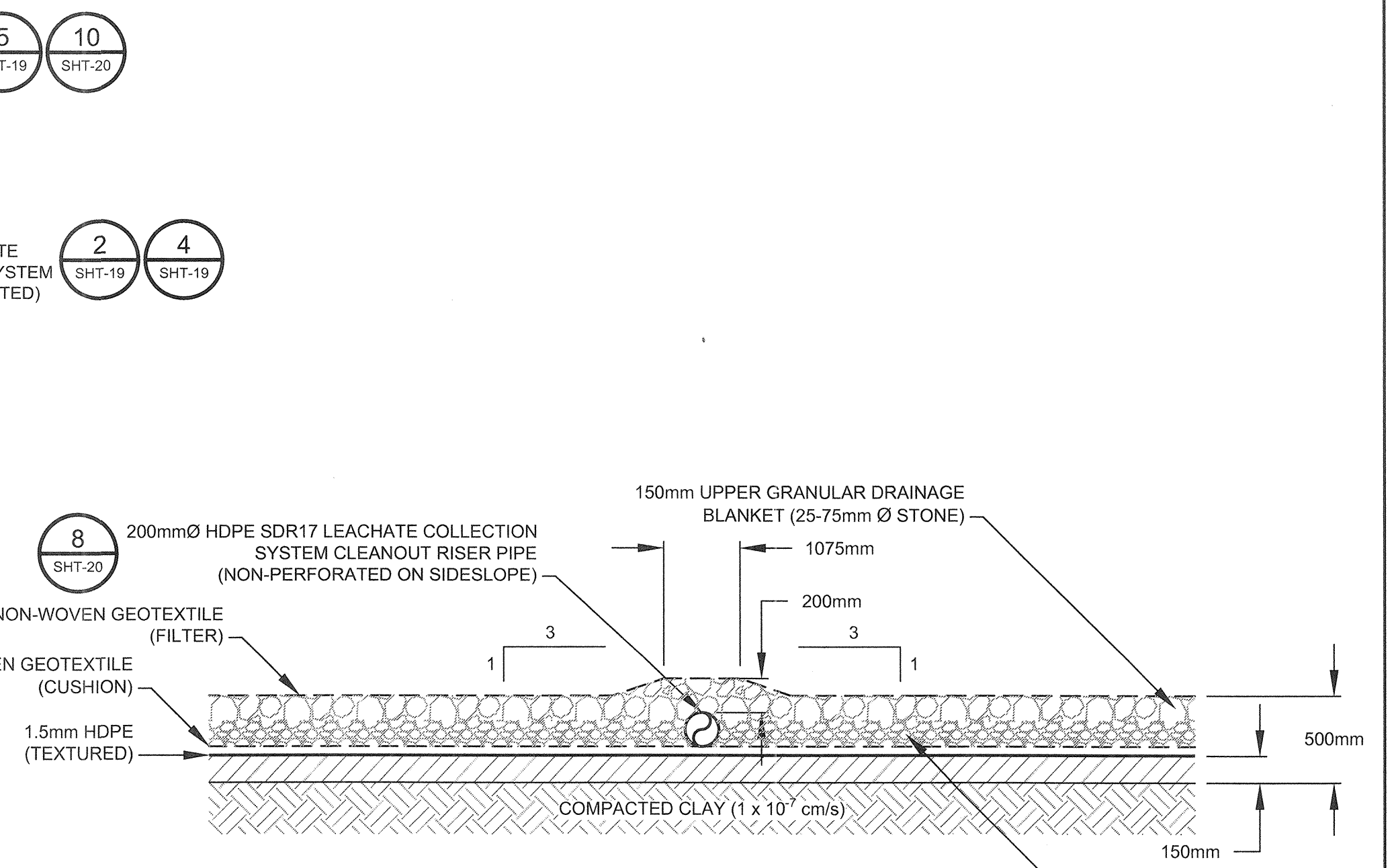
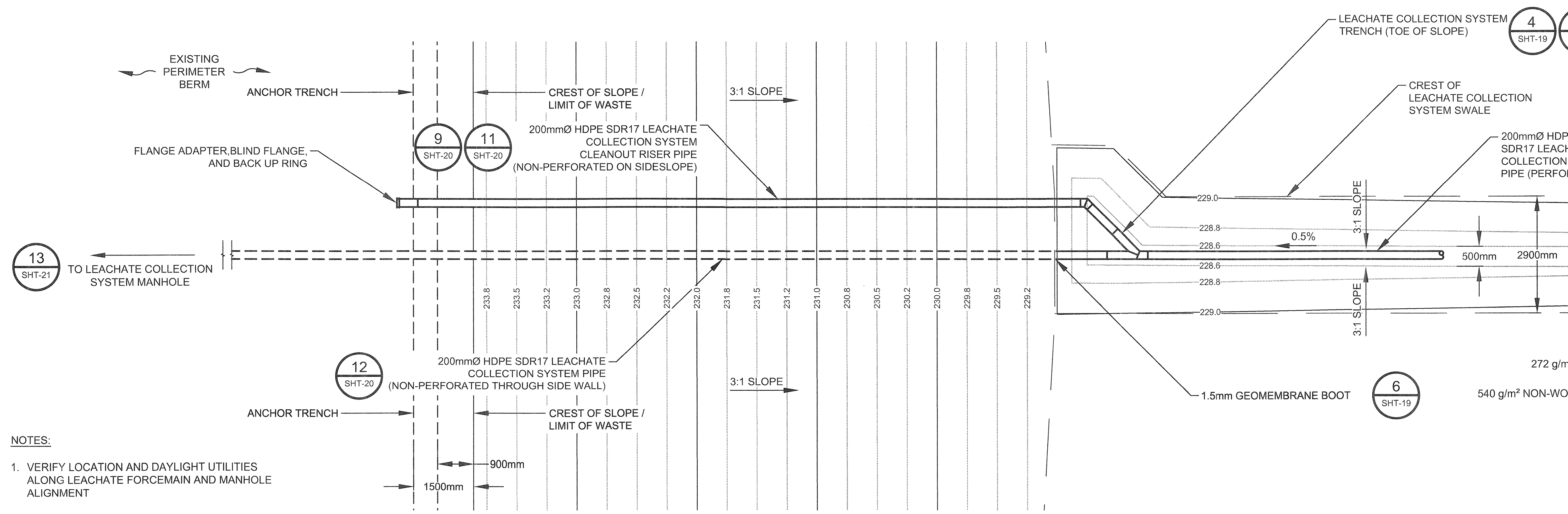
GHD 651 Colby Drive Waterloo Ontario N2V 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com	
DESIGNED BY D. BARTON	CHECKED BY M. ZUCKWEILER
DRAWN BY K. DHALIWAL	APPROVED BY D. BARTON
SCALE: HORIZONTAL AS SHOWN	RELEASED FOR CONSTRUCTION
DATE 2019 02 27	DATE



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
SOLID WASTE SERVICES

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
AREA A CONSTRUCTION
LINER AND LEACHATE COLLECTION SYSTEM DETAILS

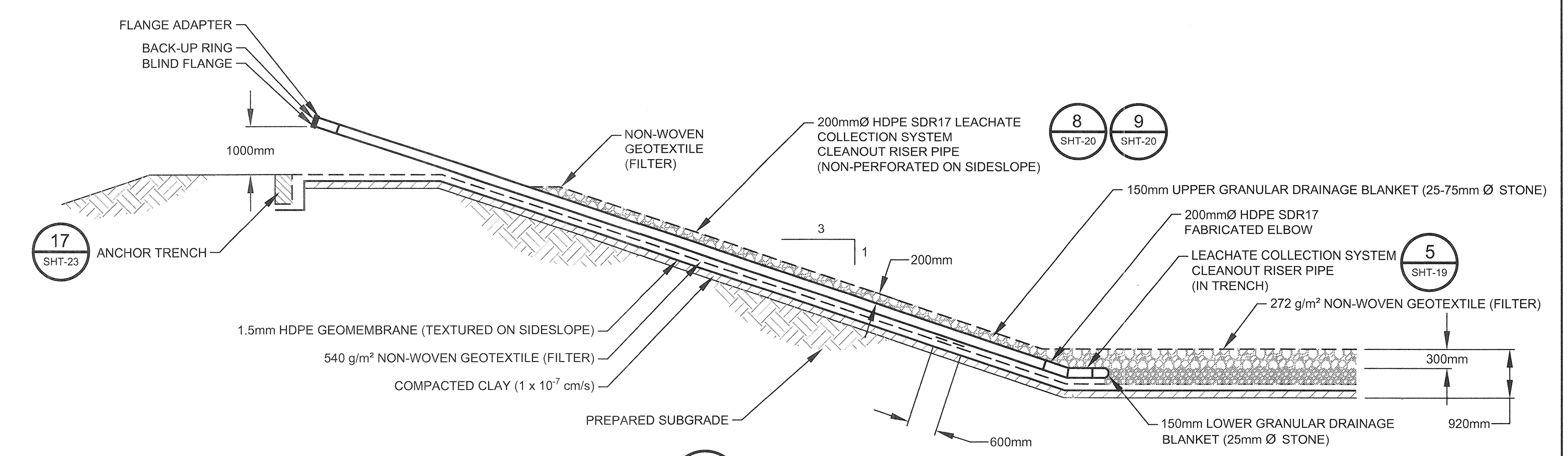
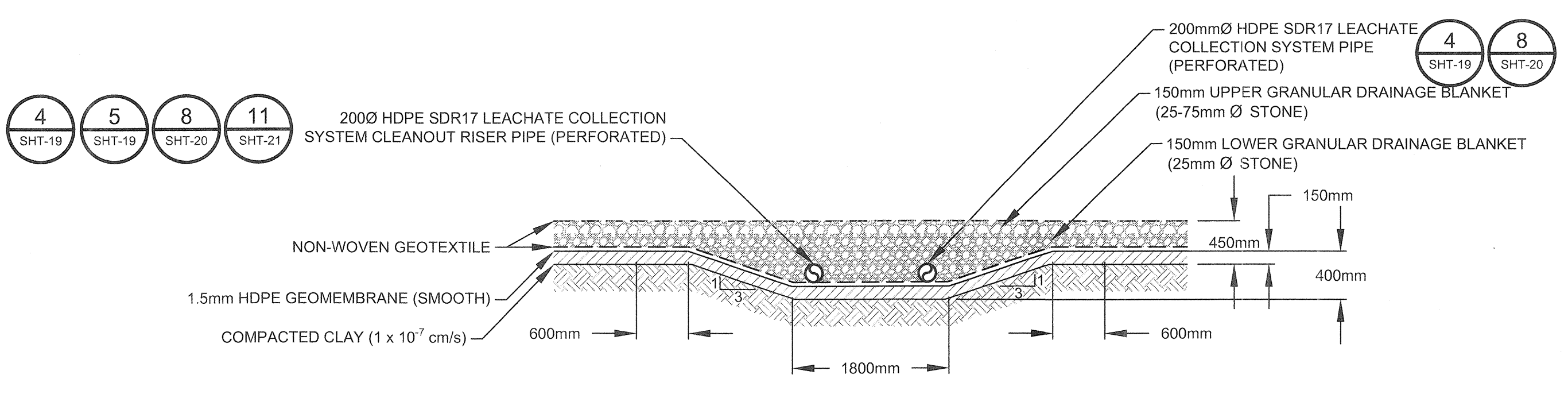
SHEET 19 OF 29
CITY DRAWING NUMBER
1-0400A- C0062-001



NOTES:
1. VERIFY LOCATION AND DAYLIGHT UTILITIES ALONG LEACHATE FORCEMAIN AND MANHOLE ALIGNMENT

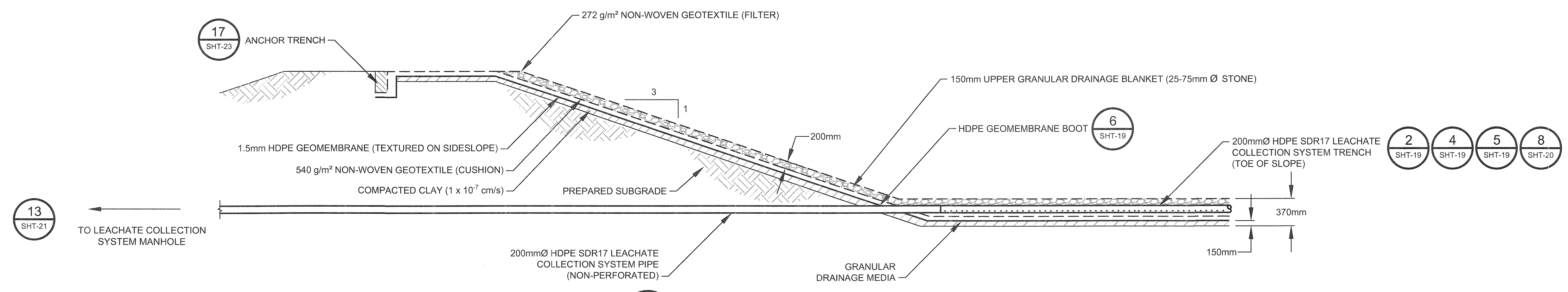
DETAIL 8 LEACHATE COLLECTION SYSTEM (TOE OF SLOPE)
1:50

DETAIL 9 LEACHATE COLLECTION SYSTEM CLEANOUT RISER PIPE ON SIDESLOPE
1:30



DETAIL 10 LEACHATE COLLECTION SYSTEM SWALE (TOE OF SLOPE)
1:50

DETAIL 11 LEACHATE COLLECTION SYSTEM CLEANOUT RISER PIPE
1:75

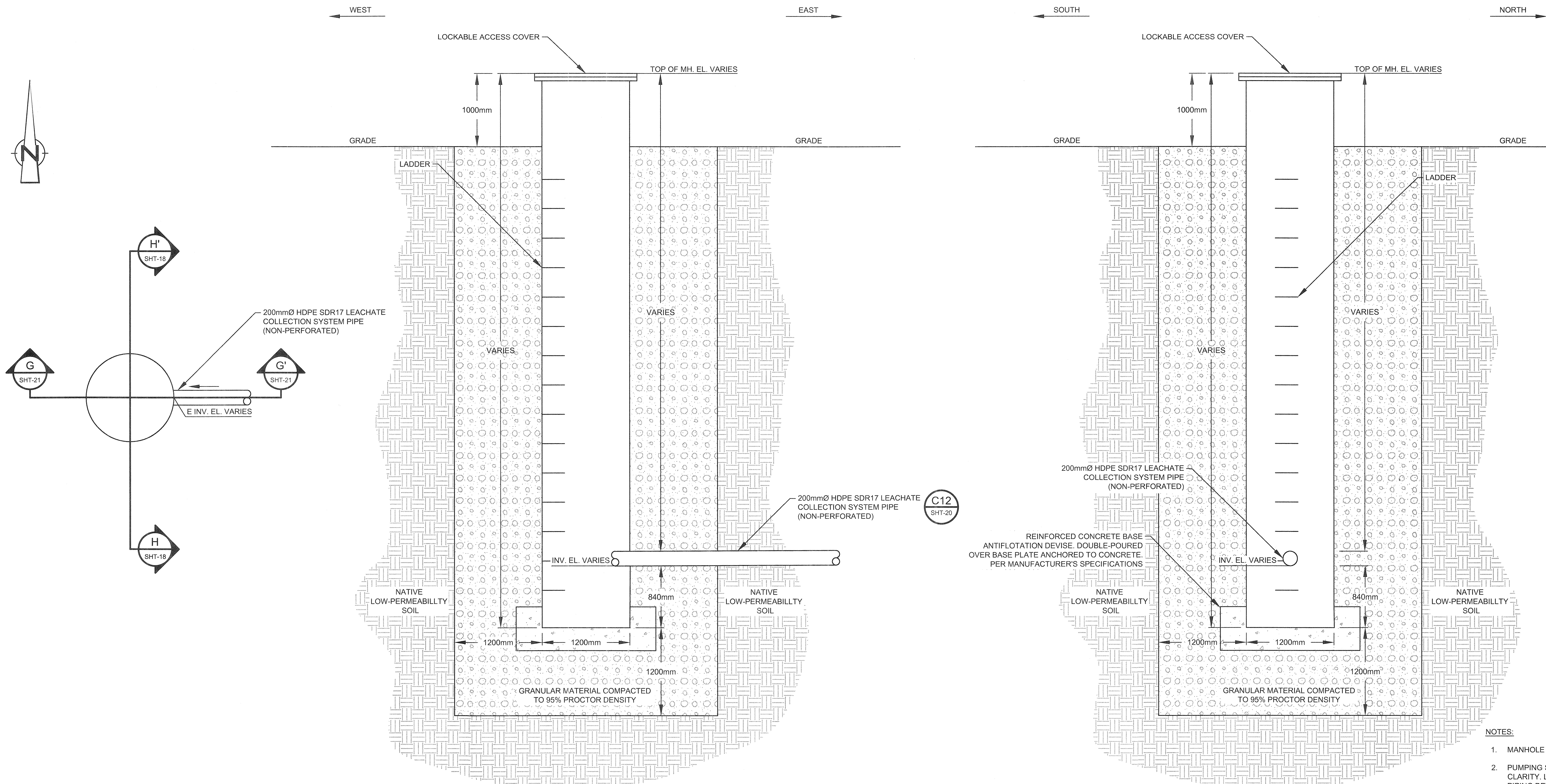


DETAIL 12 LEACHATE COLLECTION SYSTEM PIPE
1:75

METRIC
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DECIMALIZED NUMBERS INDICATE METRES

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	DESIGNED BY: D. BARTON CHECKED BY: M. ZUCKWEILER DRAWN BY: K. DHALWAL APPROVED BY: D. BARTON SCALE: HORIZONTAL AS SHOWN VERTICAL - RELEASED FOR CONSTRUCTION PLOT DATE: 2019 02 27	BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF) AREA A CONSTRUCTION LEACHATE COLLECTION SYSTEM TRENCH AND CLEANOUT RISER PIPE DETAILS I	SHEET 20 OF 29 CITY DRAWING NUMBER 1-0400A- C0063-001	



PLAN

SECTION G-G'

SECTION H-H'

- NOTES:
1. MANHOLE NOT SUITED FOR TRAFFIC LOADING.
 2. PUMPING SYSTEMS NOT SHOWN FOR CLARITY. LEACHATE PUMP AND INTERNAL PIPING DETAILS PROVIDED ON MECHANICAL DRAWINGS AND VERIFY LOCATION AND DAYLIGHT UTILITIES ALONG LEACHATE FORCEMAIN AND MANHOLE ALIGNMENT.

MANHOLE SCHEDULE				
CELL #	MANHOLE #	EAST INVERT	TOP OF MANHOLE ELEVATION	DEPTH OF MANHOLE
CELL 32	MANHOLE 2	228.19	235.00	5.97
CELL 33	MANHOLE 3	228.20	234.94	5.91
CELL 34a	MANHOLE 4	228.20	234.68	5.65
CELL 34b	MANHOLE 5	229.59	234.64	4.21

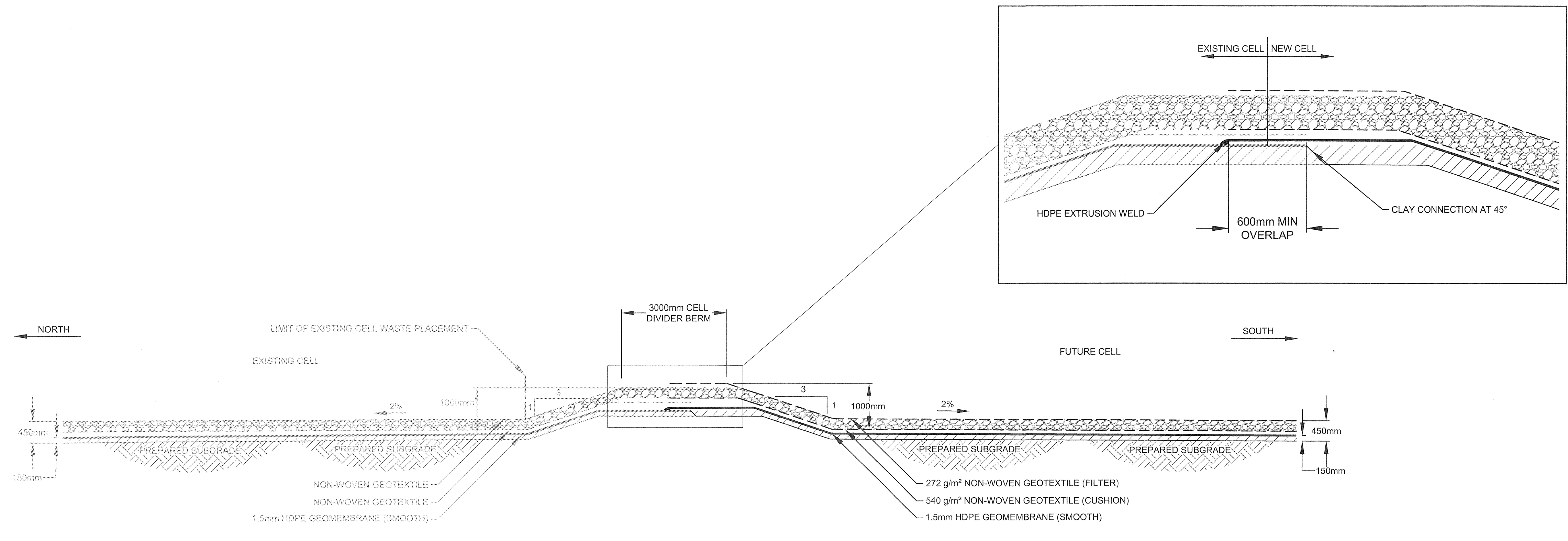
DETAIL 13 LEACHATE COLLECTION SYSTEM MANHOLE

METRIC
 WHOLE NUMBERS INDICATE MILLIMETRES
 DECIMALIZED NUMBERS INDICATE METRES

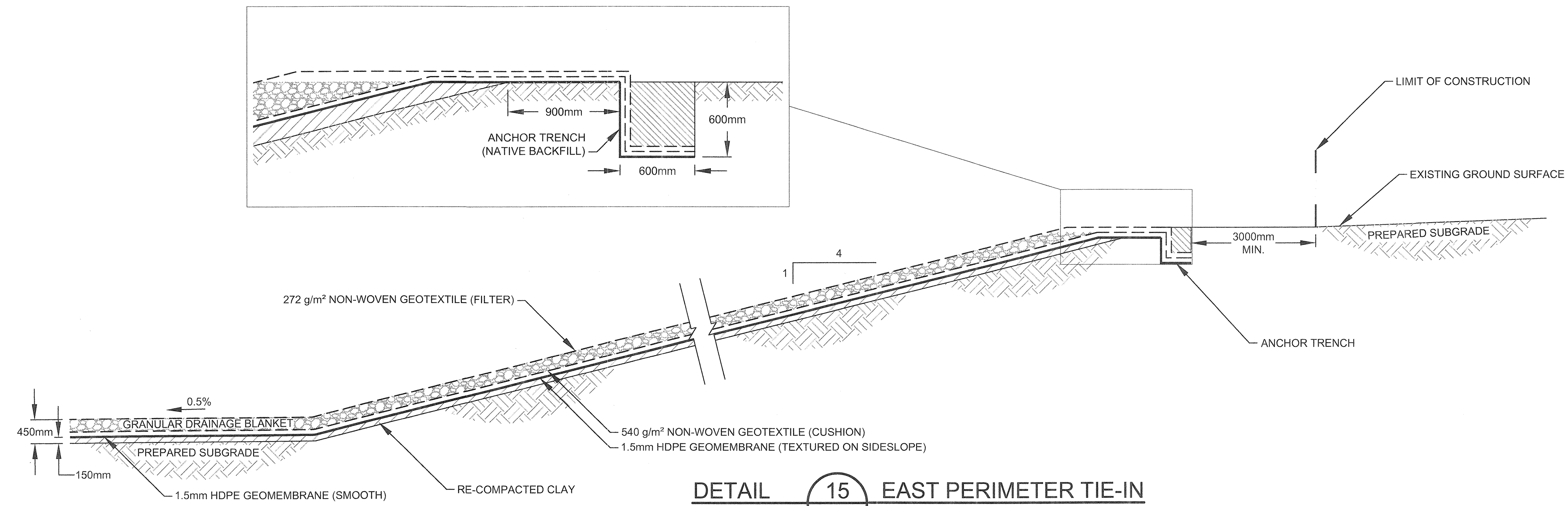
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	1 ISSUED FOR TENDER 02/25/2019 DB NO. REVISIONS DATE BY	DESIGNED BY D. BARTON CHECKED BY M. ZUCKWEILER DRAWN BY K. DHALIWAL APPROVED BY D. BARTON SCALE: HORIZONTAL AS SHOWN VERTICAL - DATE 2019 02 27 PLOT DATE: 2019 02 27	RELEASED FOR CONSTRUCTION DATE		



DETAIL 14 NORTH DIVIDER BERM TIE-IN (TYPICAL)
NTS SHT-07



DETAIL 15 EAST PERIMETER TIE-IN (TYPICAL)
1:75 SHT-07

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DECIMALIZED NUMBERS INDICATE METRES

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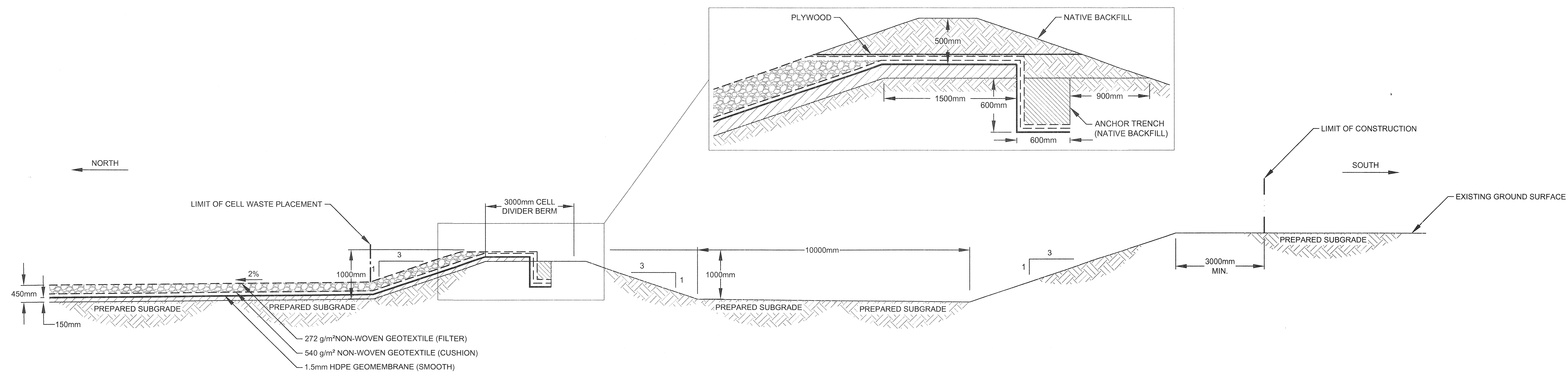
LOCATION APPROVED UNDERGROUND STRUCTURES		B.M. ELEV.	
SUPV. U/G STRUCTURES COMMITTEE	DATE	CONSTRUCTION COMPLETION DATE: YYYY MM DD	
NOTE:			
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.			
1	ISSUED FOR TENDER	02/25/2019	DB
NO.	REVISIONS	DATE	BY

GHD 651 Colby Drive Waterloo Ontario N2Y 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com		ENGINEER'S SEAL
DESIGNED BY: D. BARTON	CHECKED BY: M. ZUCKWEILER	
DRAWN BY: K. DHALIWAL	APPROVED BY: D. BARTON	
SCALE: HORIZONTAL AS SHOWN	RELEASED FOR CONSTRUCTION	
DATE: 2019 02 27		

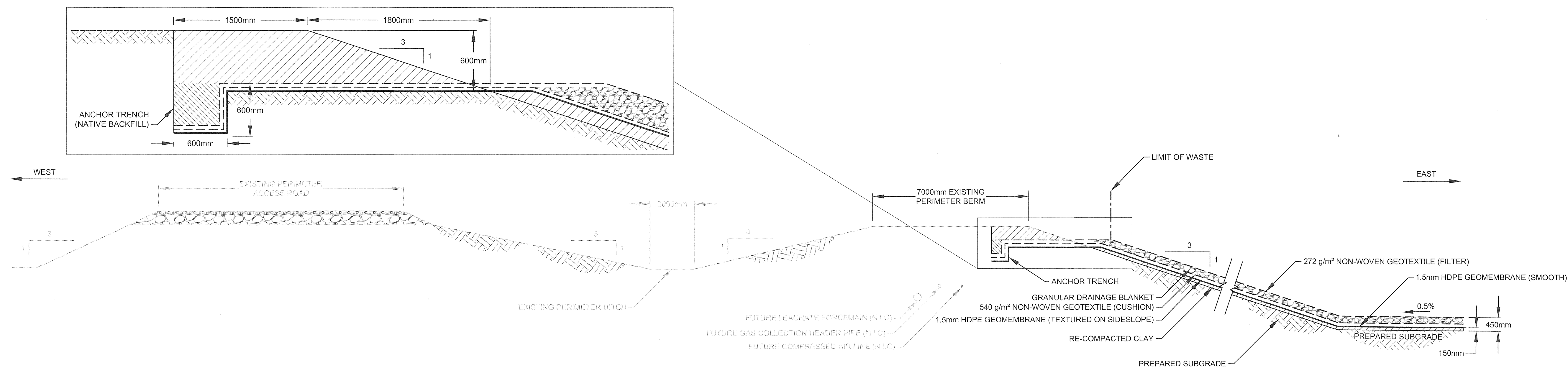
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
SOLID WASTE SERVICES

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF)
AREA A CONSTRUCTION
PERIMETER TIE-IN
DETAILS I

SHEET 22 OF 29
CITY DRAWING NUMBER
1-0400A- C0065-001



DETAIL 16 SOUTH DIVIDER BERM TIE-IN (TYPICAL)
1:75



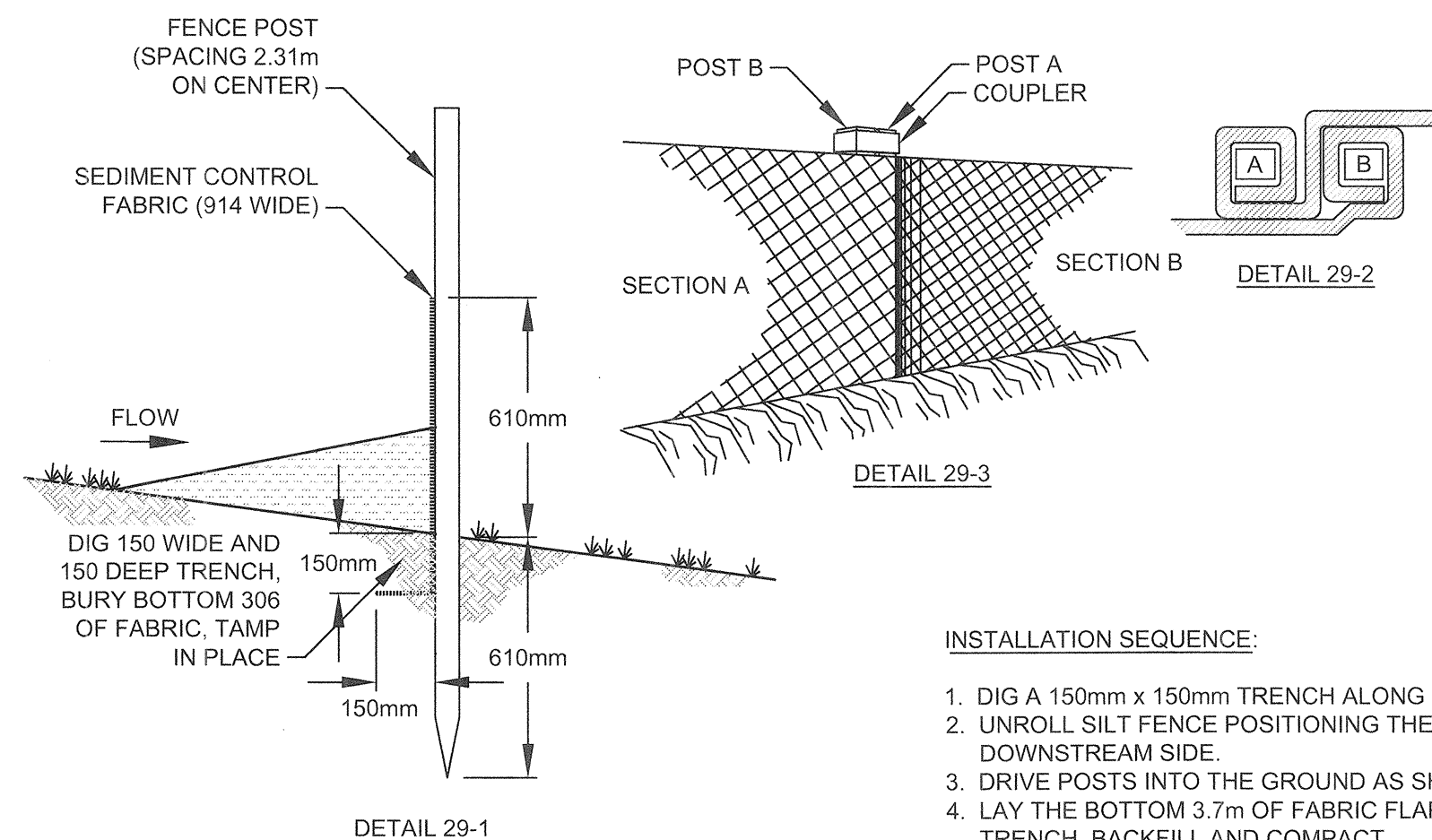
DETAIL 17 WEST PERIMETER BERM TIE-IN (TYPICAL)
1:100

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

WARNING

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.
3. SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.

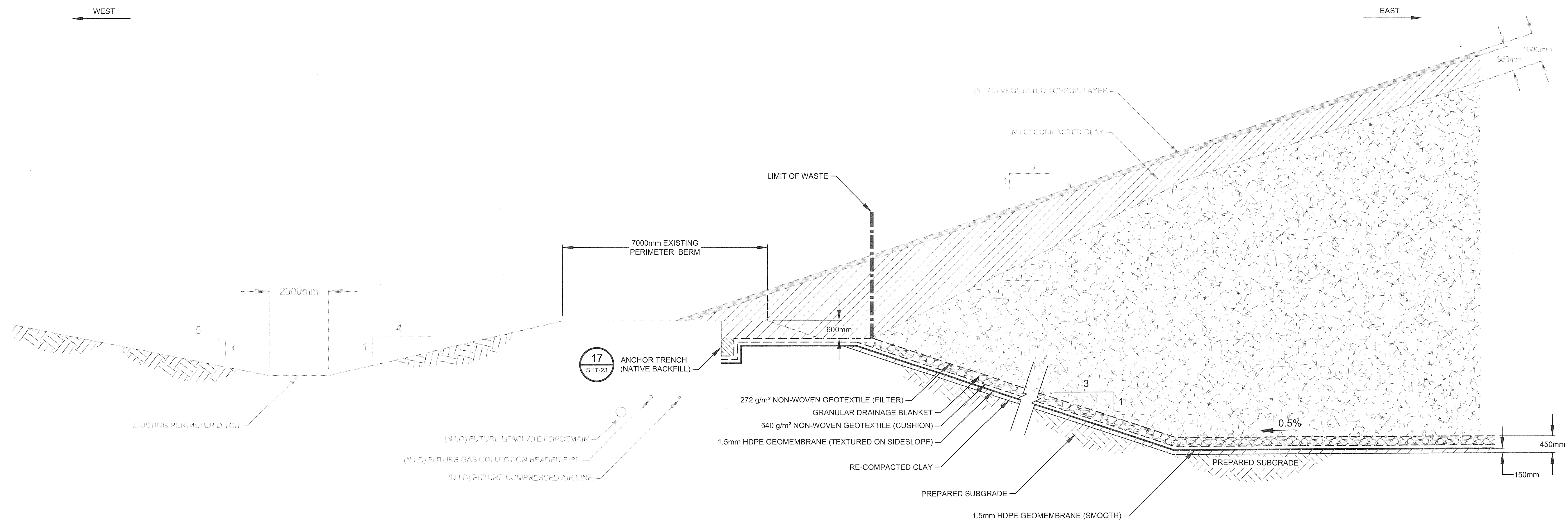
<p>LOCATION APPROVED UNDERGROUND STRUCTURES</p> <p>SUPV. U/G STRUCTURES COMMITTEE DATE</p> <p>NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.</p>	<p>B.M. ELEV.</p> <p>CONSTRUCTION COMPLETION DATE: YYYY MM DD</p>	<p>GHD</p> <p>GHD 651 Colby Drive Waterloo Ontario N2V 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com</p>	<p>ENGINEER'S SEAL</p> <p>PROVINCE OF MANITOBA D. B. BARTON Member 13997 2018/12/20 REGISTERED PROFESSIONAL ENGINEER CONTRACT NUMBER</p>	<p>THE CITY OF WINNIPEG</p> <p>Winnipeg WATER AND WASTE DEPARTMENT SOLID WASTE SERVICES</p>							
	<table border="1"> <tr> <th>NO.</th> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>ISSUED FOR TENDER</td> <td>02/25/2019</td> <td>DB</td> </tr> </table>	NO.	REVISIONS	DATE	BY	1	ISSUED FOR TENDER	02/25/2019	DB	<p>DESIGNED BY D. BARTON</p> <p>CHECKED BY M. ZUCKWEILER</p> <p>DRAWN BY K. DHALIWAL</p> <p>APPROVED BY D. BARTON</p> <p>SCALE: HORIZONTAL AS SHOWN</p> <p>VERTICAL -</p> <p>DATE 2019 02 27</p> <p>PLOT DATE: 2019 02 27</p>	<p>RELEASED FOR CONSTRUCTION</p> <p>DATE</p>
NO.	REVISIONS	DATE	BY								
1	ISSUED FOR TENDER	02/25/2019	DB								
<p>BID OPPORTUNITY: 448-2017 CONTRACT NUMBER:</p>		<p>FILE PATH: P:\drawings\11100000a\1102893\1102893-REPORT\1102893-00(013)\1102893-00(013)C\ FILE NAME: 11102893-00(013)C-WA021.dwg</p>									



- NOTES:**
- SILT FENCE HEIGHT TO BE 600mm ABOVE GROUND. CONSTRUCTED OF FABRIC WITH MINIMUM TENSILE STRENGTH OF 54.43 kg (MIRAFI ENVIROFENCE, TERRAFIX TERRAFENCE OR APPROVED EQUIVALENT).
 - SILT FENCE TO HAVE FACTORY ATTACHED FENCE POSTS.

- INSTALLATION SEQUENCE:**
- DIG A 150mm x 150mm TRENCH ALONG SILT FENCE LOCATIONS SHOWN
 - UNROLL SILT FENCE POSITIONING THE POSTS ON THE DOWNSTREAM SIDE.
 - DRIVE POSTS INTO THE GROUND AS SHOWN ON DETAIL 29-1.
 - LAY THE BOTTOM 3.7m OF FABRIC FLAP IN THE BOTTOM OF THE TRENCH, BACKFILL AND COMPACT.
 - ADJACENT SECTIONS OF THE SILT FENCE ARE JOINED AS SHOWN IN DETAIL 29-2. A COUPLER CAN BE USED TO SECURE ADJACENT POSTS AS SHOWN IN DETAIL 29-3.

DETAIL 18 SILT FENCE
NTS



DETAIL 19 PERIMETER TIE-IN DETAIL (TYPICAL)
1:75

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

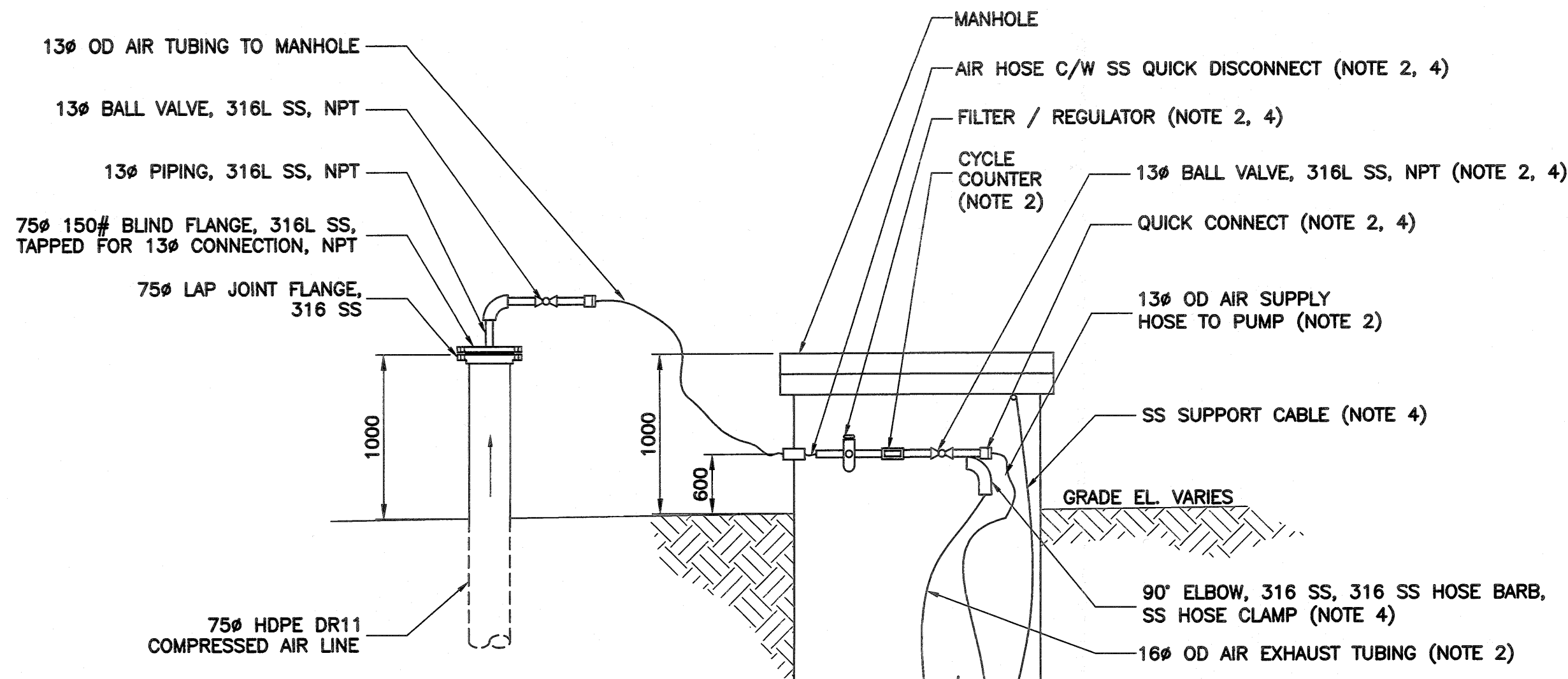
WARNING

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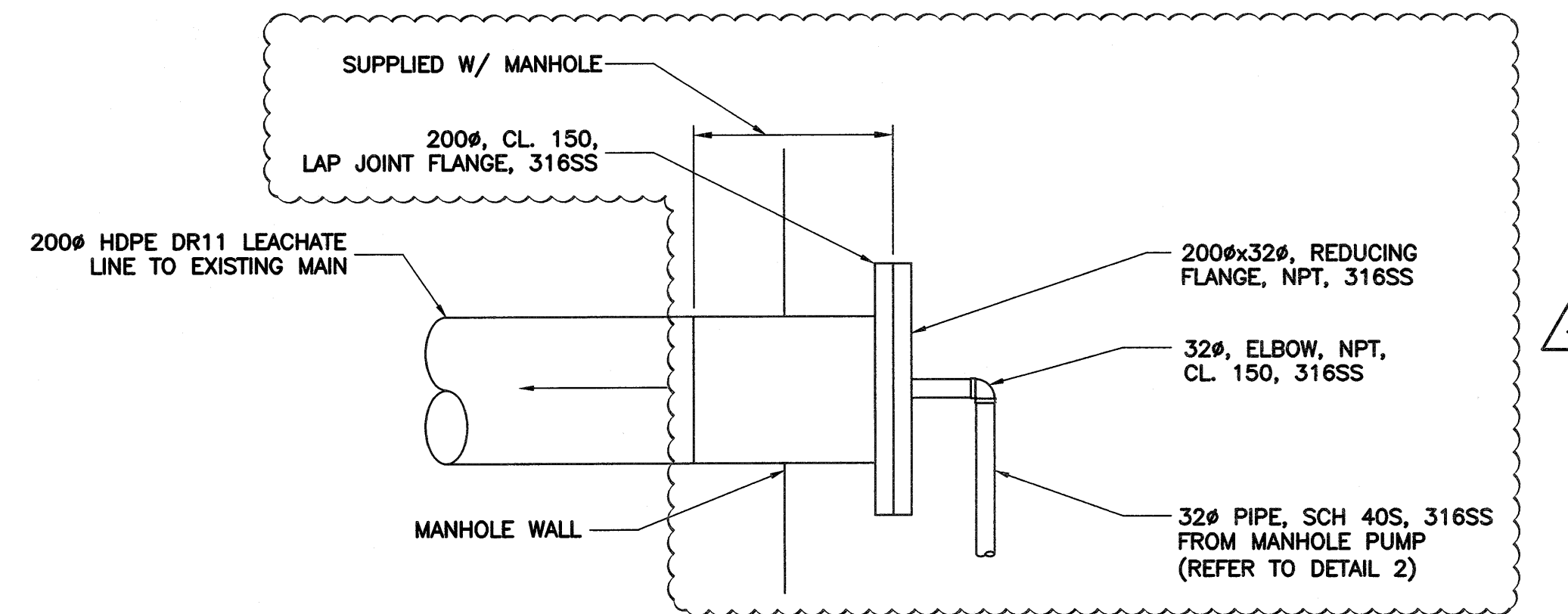
<p>LOCATION APPROVED UNDERGROUND STRUCTURES</p> <p>SUPPLY U/S STRUCTURES COMMITTEE DATE</p> <p>NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.</p>	<p>B.M. ELEV.</p> <p>CONSTRUCTION COMPLETION DATE: YYYY MM DD</p>	<p>GHD</p> <p>GHD 651 Colby Drive Waterloo Ontario N2V 1C2 Canada T 519 884 0510 F 519 884 0525 W www.ghd.com</p>	<p>ENGINEER'S SEAL</p> <p>D. B. BARTON Member 3906719</p>	<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT SOLID WASTE SERVICES</p>														
	<table border="1"> <tr> <td>DESIGNED BY</td> <td>D. BARTON</td> <td>CHECKED BY</td> <td>M. ZUCKWEILER</td> </tr> <tr> <td>DRAWN BY</td> <td>K. DHALIWAL</td> <td>APPROVED BY</td> <td>D. BARTON</td> </tr> <tr> <td>SCALE:</td> <td>HORIZONTAL AS SHOWN</td> <td>RELEASED FOR CONSTRUCTION</td> <td></td> </tr> <tr> <td>DATE</td> <td>2019 02 27</td> <td>DATE</td> <td></td> </tr> </table>	DESIGNED BY	D. BARTON	CHECKED BY	M. ZUCKWEILER	DRAWN BY	K. DHALIWAL	APPROVED BY	D. BARTON	SCALE:	HORIZONTAL AS SHOWN	RELEASED FOR CONSTRUCTION		DATE	2019 02 27	DATE		<p>BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRRMF) AREA A CONSTRUCTION MISCELLANEOUS DETAILS</p>
DESIGNED BY	D. BARTON	CHECKED BY	M. ZUCKWEILER															
DRAWN BY	K. DHALIWAL	APPROVED BY	D. BARTON															
SCALE:	HORIZONTAL AS SHOWN	RELEASED FOR CONSTRUCTION																
DATE	2019 02 27	DATE																
<p>BID OPPORTUNITY: 448-2017 CONTRACT NUMBER:</p>		<p>FILE PATH: C:\CAD\Temp\AcPublish_2908\ FILE NAME: 11102893-00(013)CI-WA022.dwg</p>																

GENERAL NOTES:

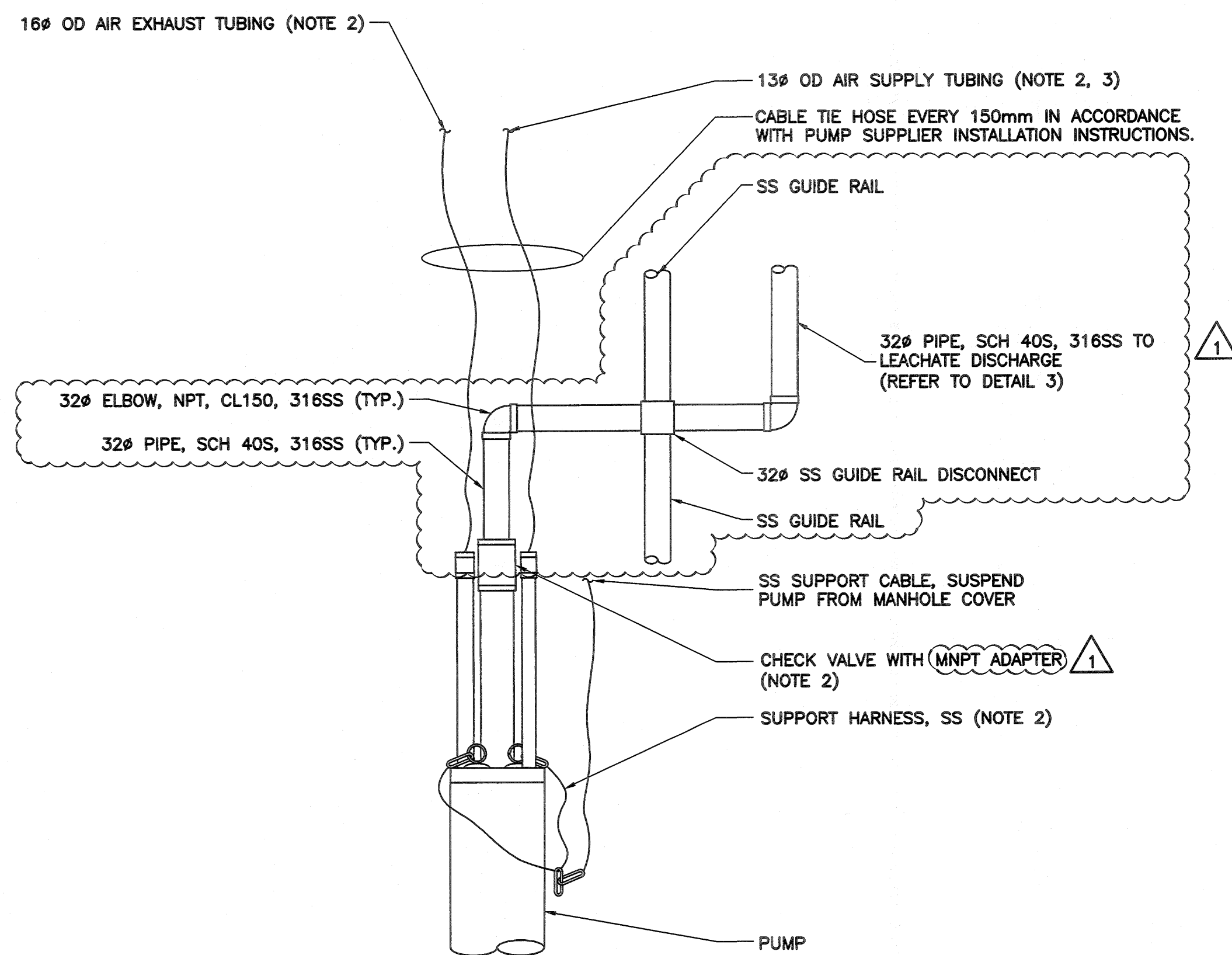
1. REFER TO SH. 23 FOR MECHANICAL GENERAL NOTES.
2. SUPPLIED WITH PUMP.
3. PROVIDE SUFFICIENT LENGTH OF TUBING TO ALLOW REMOVAL OF PUMP FROM SUMP.
4. INSTALL INSIDE MANHOLE NEAR COVER, SECURE TO WALL.
5. ALL DETAILS ARE TYPICAL FOR CELL 32, 33 AND 34 U.N.O.



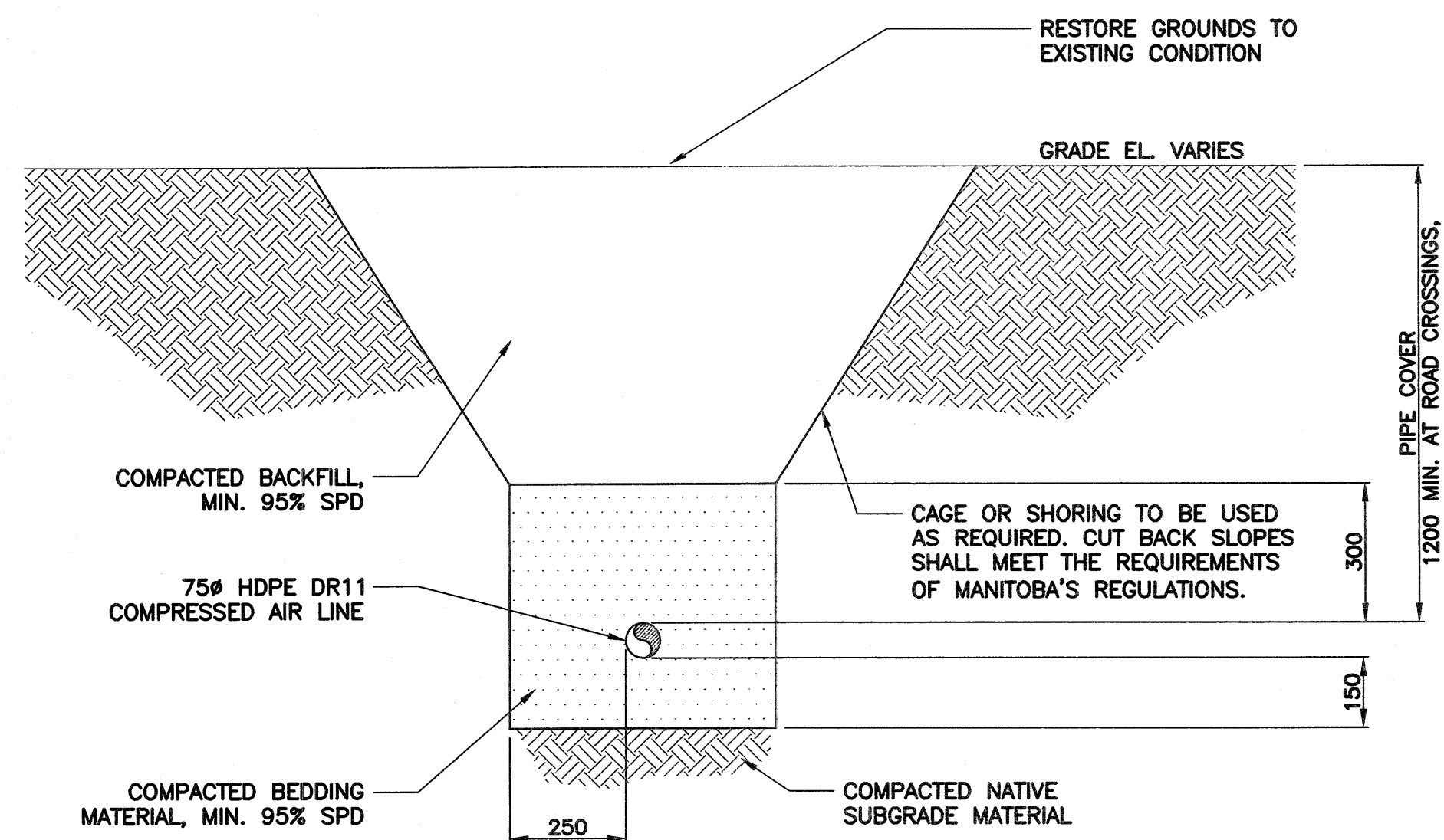
1 **DETAIL - COMPRESSED AIR SUPPLY**
SCALE: NTS



3 **DETAIL - LEACHATE DISCHARGE FROM MANHOLE**
SCALE: NTS



2 **DETAIL - MANHOLE PUMP**
SCALE: NTS



4 **DETAIL - COMPRESSED AIR PIPE TRENCH**
SCALE: N.T.S.

LOCATION APPROVED UNDERGROUND STRUCTURES	
SUPV. U/G STRUCTURES COMMITTEE	DATE
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B.M. ELEV.	
CONSTRUCTION COMPLETION DATE: YYYY MM DD	
DESIGNED BY	MSK
CHECKED BY	HW
DRAWN BY	ML
APPROVED BY	MSK
RELEASED FOR CONSTRUCTION	
SCALE: HORIZONTAL AS NOTED VERTICAL AS NOTED	
DATE	2018 18 12
DATE	

KGS GROUP CONSULTING ENGINEERS & PROJECT MANAGERS
WINNIPEG (204) 896-1209
THUNDER BAY (807) 345-2233

DESIGNED BY: MSK
CHECKED BY: HW
DRAWN BY: ML
APPROVED BY: MSK
RELEASED FOR CONSTRUCTION

SCALE:
HORIZONTAL AS NOTED
VERTICAL AS NOTED
DATE: 2018 18 12

PLOT DATE: 2019 03 25

ENGINEER'S SEAL

M.S. KOZARSKY
Member
23991

CONSULTANT DRAWING NUMBER
15-0107-014_M18

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

BRADY ROAD RESOURCE MANAGEMENT FACILITY (BRMF) AREA A CONSTRUCTION

MECHANICAL DETAILS

SHEET 29 OF 29
CITY DRAWING NUMBER
1-0400A-M0021-001

APEGM
Certificate of Authorization
KGS Group
No. 245