

UMA Engineering Ltd.
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June 5, 2007

File Name: FOX-M (3.6)

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Phyllis:

Re: Water Use License 1BR-HAL0308

UMA Engineering Ltd. is submitting a request to withdraw the amendment application dated January 31, 2007 regarding the above-noted water use license. The request is being submitted on behalf of Defence Construction Canada and the Department of National Defence.

However, as per Section H.1 of the existing license, the following modifications are being proposed to include the clean up of the area referred to as the West Communications Area (WCA):

- The excavation, transport, and disposal of soil from two contaminated areas in the WCA.
- The completion of all work associated with the excavation of six buried debris areas in the WCA.
- The completion of surface debris removal from the WCA and disposal of the debris in the Non-Hazardous Waste Landfill.
- The demolition and/or regrade of several concrete tower bases and anchor bases in the WCA.

The specific work components associated with the identified clean up requirements are described in the following sections.

Contaminated Soil Removal: Contaminated soils removal will be completed, including supply and placement of backfill, as shown in the areas delineated on the drawings. The disposal requirements for the excavated soils are outlined in Section 3.4 of the 2003 Project Description.

Surface Debris Removal: Removal and disposal of surface debris will be completed as delineated on the attached drawings. The estimated volume of surface debris is 250 cubic metres. It was noted that some surface debris may contain asbestos. In addition, there appears to be some debris that could contain PCBs in the form of fluorescent light ballasts, which will be handled according to Section 4.5.1 of the 2003 Project Description. Site debris is to be disposed of as per Section 4.4 of the 2003 Project Description.

Buried Debris Excavation: Primary landfill excavation includes excavation of all materials to the lateral and vertical extents of the designated landfill area. The depth of the primary landfill excavation extends to competent bedrock or where debris is no longer visible. Secondary landfill excavation includes the excavation of the landfill area beyond the primary landfill excavation limits.

Buried debris excavation at the WCA of the FOX-M site, which is estimated at 8700 cubic metres, will include the following:

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- Installation/construction of erosion, drainage and sediment control, as required.
- Development of the landfill survey grid.
- Excavation of all waste materials from the landfill area.
- Development, operation and removal of a materials processing area (MPA).

Once excavated, the materials are transported to the MPA for sorting into hazardous and non-hazardous components. Excavated soils are sorted into the contaminated soil classifications (Section 3.4 in the 2003 Project Description), based on the results of sampling and analysis.

Once the debris and contaminated soils have been removed and all confirmatory samples have been collected and analysed, the area is to be regraded with clean soil/gravel and restored to natural drainage patterns and topography, as much as practical. Drainage controls such as diversion ditches and sediment filters are to be provided, as required, to prevent runoff from reaching water bodies during closure, remediation and construction of landfills. The debris will be collected, sorted into hazardous and non-hazardous materials and disposed of accordingly.

Any ponded water in the excavation will be dewatered. Prior to dewatering, a sample will be collected and analysed to ensure it meets the discharge criteria (see **Contact Water** below). Any meltwater/groundwater/leachate will be collected at the low point of the excavation. The water will be allowed to settle prior to sampling and testing of the water.

At the conclusion of the excavation, all sediment, erosion and drainage control measures will be removed from the worksite.

Demolition: Demolition includes the removal and disposal of 20 concrete tower foundations in the Non-Hazardous Waste Landfill. Demolition is to be completed as per Section 4.6 of the 2003 Project Description.

Borrow Pit Development: In order to fulfill the backfill and grading requirements for the clean up of the WCA, additional borrow material is required. It is estimated 5000 cubic metres of gravel will be extracted from the existing, permitted borrow area.

Road Construction and Maintenance: There is an existing road to the WCA, however, it will require upgrading such as fill placement and regrading. Emphasis on the preservation of the permafrost regime, vegetation patterns, existing surface drainage patterns, water quality and stream flows shall be maintained. Establishment of new roads off-site is subject to the terms of the land use permit and the approval of the DCC Contract Coordinator. Roads shall not be sited within 30 m of any ecologically sensitive areas. Ice-rich soils, especially peatlands, are also to be avoided during road maintenance. The road-bed shall be prepared with a sufficient thickness of fill to prevent terrain damage. Culverts, if required, shall be installed to maintain natural cross-drainage and prevent ponding. Any culverts installed shall be removed from the roads and drainage restored at the end of the clean up operations. Access roads shall be monitored for signs of erosion and remedial action is to be taken only where necessary. Dust suppression, if required, is to be maintained with water or calcium chloride only.

Contact Water: The FOX-M site has little elevation, and as such, seepage of water into excavations is a common occurrence. Because of the presence of contaminated soils in the excavations, there is potential for the contact water to be impacted. In order to reduce and/or prevent the accumulation of contact water from the excavations, the excavations are to be left open as minimal amount of time as possible. All contact water is to

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be tested prior to being released to the ground surface at a location that is a minimum of 30 metres from natural drainage courses and 100 metres from fish bearing waters. The criteria for the wastewater are provided in the following table:

Parameter	Monitoring Plan Criteria	NWT Guidelines (1992)	Nunavut Effluent Guidelines (2000)	Chlorobiphenyls Regulations (CEPA 1991)
pH	6-9 pH units	N.G.	N.G.	N.G.
Oil & Grease	5	None Visible	N.G.	N.G.
Arsenic (total)	0.05	0.05	0.5	N.G.
Cadmium (dissolved)	0.005	0.005	0.0017	N.G.
Chromium (total)	0.1	0.1	0.89 (trivalent)	N.G.
Cobalt (dissolved)	0.1	0.1	N.G.	N.G.
Copper (dissolved)	0.2	0.2	N.G.	N.G.
Lead (total)	0.05	0.05	N.G.	N.G.
Mercury (total)	0.0006	0.0006	0.01	N.G.
Nickel (dissolved)	0.3	0.3	N.G.	N.G.
PCB (total)	1	N.G.	N.G.	5*
Zinc (total)	0.5	0.5	3	N.G.

All units are in mg/L unless otherwise stated.

N.G. – No Guidelines

* In respect of application to a road surface.

Any contact water which does not meet these guidelines is to be treated so that it does meet the guidelines.

We trust the information provided is sufficient to meet the requirements of Section H.1 of the water use license. Please feel free to contact the undersigned if you have any questions or comments.

Sincerely,

UMA Engineering Ltd.

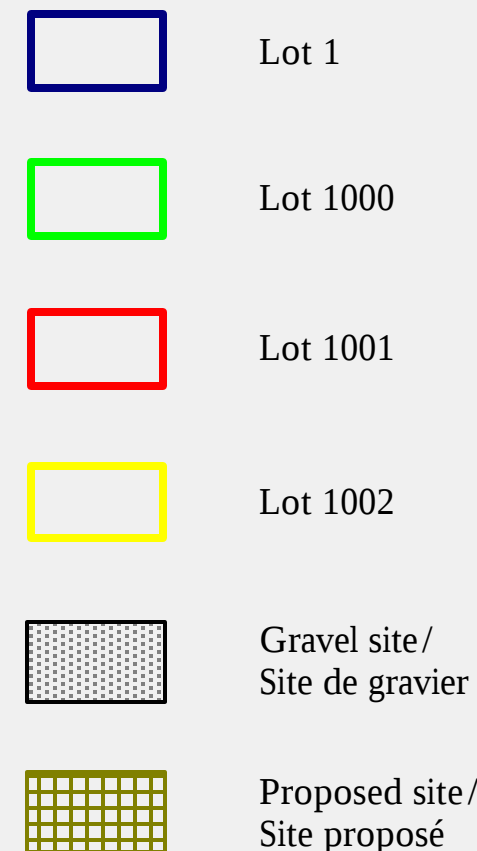


Eva Schulz, P.Ag.
Environmental Scientist
Eva.Schulz@uma.aecom.com

EMS:ma

Encl. Drawings

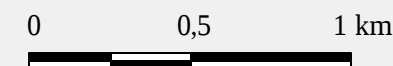
cc: Douglas Craig, DCC



Carte de base : cartes topographiques 47 A/10 et 47 A/15 (Échelle 1 : 50 000). Zone UTM 17.
Publié par le Service de la cartographie, ministère de la Défense nationale, 1971.



Scale / Échelle : 1 : 23 500



This map is to be used for presentation purposes only.
This map is not a legal survey document.

Cette carte devrait être utilisé à des fins de présentation seulement.
Celle-ci n'est pas un document d'arpentage légal.



Défense nationale

DRAWING INDEX			
DRAWING No.	TITLE	DRAWING No.	TITLE
SITING		SITING	
H-H11/1-9101-101	OVERALL SITE PLAN	H-H11/1-9101-118	EAST BEACH LANDFILL CROSS - SECTIONS
H-H11/1-9101-102	PROJECT LAYOUT	H-H11/1-9101-119	MISCELLANEOUS DETAILS
H-H11/1-9101-103	STATION AREA NORTH SITE PLAN	H-H11/1-9101-120	MISCELLANEOUS DETAILS
H-H11/1-9101-104	STATION AREA EAST SITE PLAN	H-H11/1-9101-121	WEST COMMUNICATIONS AREA SITE PLAN
H-H11/1-9101-105	STATION AREA WEST SITE PLAN	H-H11/1-9101-122	WEST COMMUNICATIONS AREA CROSS SECTIONS
H-H11/1-9101-106	EAST BEACH AREA SITE PLAN	STRUCTURAL	
H-H11/1-9101-107	SEWAGE LAGOON AREA SITE PLAN	H-H11/1-9101-201	MAIN CAMP AREA DEMOLITION SITE PLAN
H-H11/1-9101-108	WEST BEACH LANDFILL AREA SITE PLAN	H-H11/1-9101-202	AIRSTRIIP, NORTH BEACH AND COMMUNICATIONS AREAS DEMOLITION SITE PLANS
H-H11/1-9101-109	WEST BEACH BORROW AREA SITE PLAN	H-H11/1-9101-203	ARMCO DORMITORY PLAN, SECTIONS AND ELEVATION
HH11/1-9101-110	NORTH BEACH AREA SITE PLAN	H-H11/1-9101-204	WAREHOUSE B13A PLAN AND SECTION
H-H11/1-9101-111	AIRSTRIIP AREA SITE PLAN	H-H11/1-9101-205	WAREHOUSE B13B PLAN AND SECTION
H-H11/1-9101-112	SURFACE AND SUBMERGED DEBRIS AREAS	H-H11/1-9101-206	CURLING RINK PLAN AND ELEVATION
H-H11/1-9101-113	LANDFILL AREAS OVERALL LAYOUT	H-H11/1-9101-207	FUEL TANKS PLAN AND ELEVATIONS
H-H11/1-9101-114	NON-HAZARDOUS WASTE LANDFILL CROSS - SECTIONS AND DETAIL	H-H11/1-9101-208	POL PUMPHOUSE PLANS AND ELEVATIONS
H-H11/1-9101-115	TIER II LANDFILL CROSS - SECTIONS	© COPYRIGHT HER MAJESTY THE QUEEN IN RIGHT OF CANADA 2006, AS REPRESENTED BY THE MINISTER OF NATIONAL DEFENCE.	
H-H11/1-9101-116	EAST BEACH LANDFILL OVERALL LAYOUT		
H-H11/1-9101-117	EAST BEACH LANDFILL EXCAVATION		



FOX-M HALL BEACH CHANGE REQUEST No. XX



UMA Engineering Ltd.

 SGE Acres Ltd.

DRAFT

MAY, 2006



Headquarters
Quartier général

General Notes:

1. ALL ELEVATIONS ARE REFERENCED TO CONTROL MONUMENTS.
2. ARCHAEOLOGICAL FEATURES LOCATED AS PER ENVIRONMENTAL CLEAN UP STUDY OF 21 DEW LINE SITES IN CANADA, VOL. 18, UMA 1991.
3. HORIZONTAL CONTROL REFERENCED TO SURVEY CONTROL MONUMENTS.
4. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
5. ALL LONG RANGE RADAR (LRR) FACILITIES ARE CURRENTLY OPERATIONAL AND ARE NOT TO BE DISTURBED. SEE DWGS. H-H11/1-9101-201 AND 202 FOR ADDITIONAL DETAILS.

Legend:

- | | | |
|---|-------|-------------------------|
|  | CMX | SURVEY CONTROL MONUMENT |
|  | TBMXX | TEMPORARY BENCHMARK |
|  | | BODY OF WATER |
|  | | PROPERTY LINE |

1	06-05-01	CHANGE REQUEST No. XX		GRH
No.	DATE	REVISION	REVISION	APPR

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES

PERMIT NUMBER

P 131



SCALE - ECHELLE 100 50 0 100 200 300m

PROJECT – PROJET

FOX-M HALL BEACH

DEW LINE CLEAN UP

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HER MAJESTY THE QUEEN IN RIGHT OF
CANADA 2006, AS REPRESENTED BY THE
MINISTER OF NATIONAL DEFENCE.

TRADE - METIER SITING

DATE 2007 04 25

SUBJECT - SUJE

PROJECT LAYOUT

PRODUCTION	CONCURRENCE – ASSENTIMENT	
DESIGNED ETUDE <i>RAW/GRH</i>		DES OFF AGENT CONCEPT
DRAWN DESSINE <i>OPB/RGM</i>		SECT HD CHEF SECT
CHECKED VERIFIE <i>RRM</i>		DES MGR GEST CONCEPT
COORDINATION <i>SMS</i>	REVIEWED – REVU	

DWG. NO. — DESSIN NO.
11 111 /1 2121 122

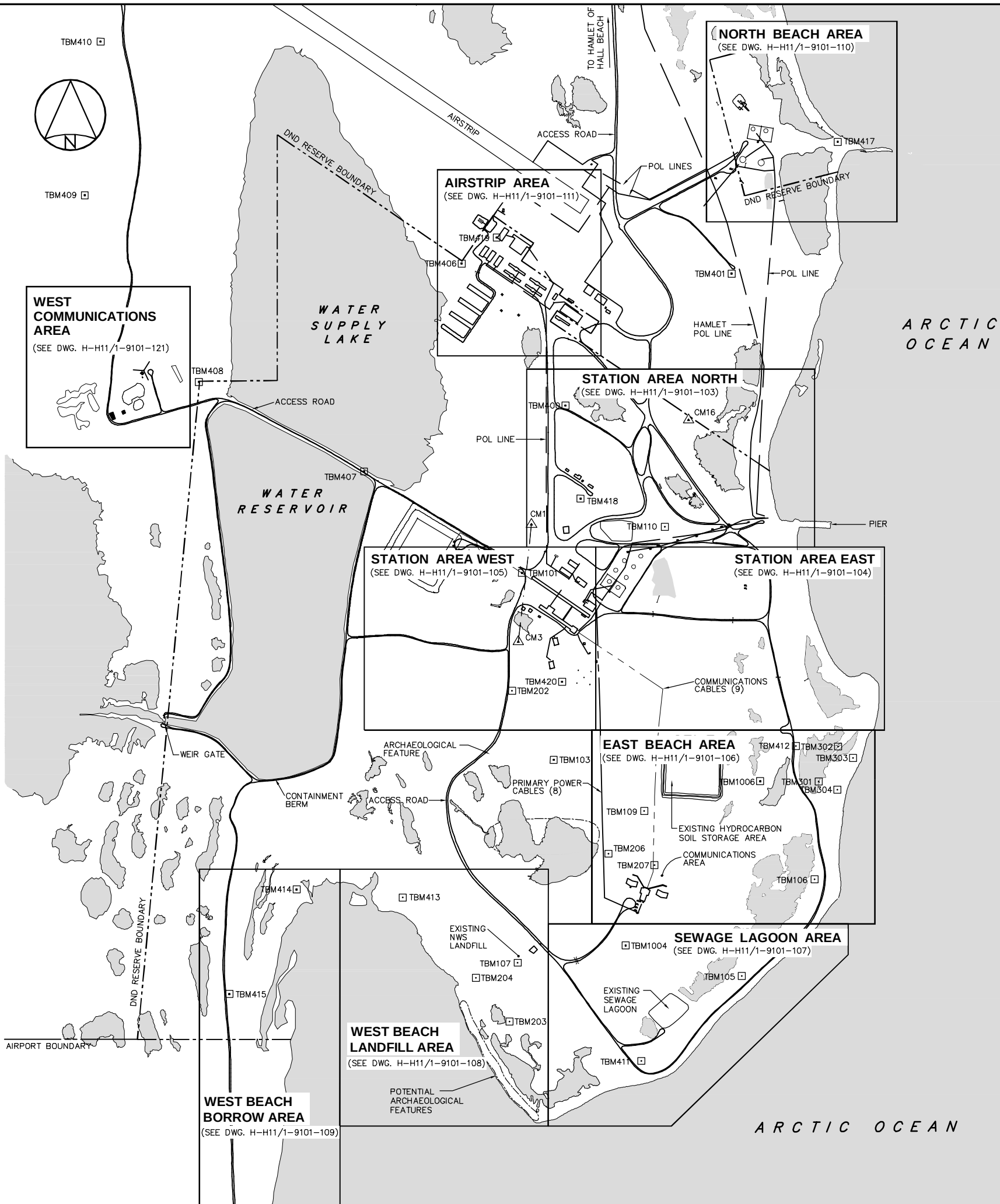
H-H11/1-9101-102

Canada

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM1	7 628 008.274	490 743.723	3.577	FOX-M BASELINE STA. 36+00
CM3	7 627 675.453	490 706.281	5.291	FOX-M BASELINE STA. 47+00
CM16	7 628 305.218	491 189.319	1.190	C.L.S. MONUMENT

NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

TEMPORARY BENCHMARKS			
NO.	UTM COORDINATES		ELEV.
	NORTHING	EASTING	
TBM101	7 627 870.922	490 716.700	5.546
TBM103	7 627 340.587	490 806.813	5.279
TBM105	7 626 726.544	491 340.829	-0.279
TBM106	7 627 001.134	491 547.332	-1.054
TBM107	7 626 764.025	490 704.156	2.123
TBM109	7 627 194.665	491 063.587	5.078
TBM110	7 628 002.026	491 122.279	3.374
TBM212	7 627 536.239	490 688.266	4.032
TBM203	7 626 597.111	490 681.163	-0.810
TBM204	7 626 721.348	490 585.708	-0.380
TBM206	7 627 073.668	490 961.909	3.494
TBM207	7 627 040.990	491 092.969	3.263
TBM301	7 627 278.353	491 558.971	-0.925
TBM302	7 627 377.783	491 614.115	-1.473
TBM303	7 627 345.7141	491 656.398	-0.705
TBM304	7 627 255.400	491 612.301	-0.409
TBM400	7 628 346.073	490 840.095	3.239
TBM401	7 628 720.567	491 311.749	-0.053
TBM402	7 629 228.179	491 288.892	2.059
TBM406	7 628 748.903	490 545.530	0.906
TBM407	7 628 159.014	490 268.286	2.430
TBM408	7 628 412.983	489 799.394	1.635
TBM409	7 628 943.311	489 475.210	5.844
TBM410	7 629 379.210	489 519.972	6.090
TBM411	7 626 485.282	491 055.174	-0.112
TBM412	7 627 379.535	491 494.186	1.384
TBM413	7 626 949.470	490 377.891	-0.465
TBM414	7 626 972.504	490 076.649	-0.118
TBM415	7 626 675.859	489 885.983	2.901
TBM417	7 629 094.857	491 613.037	-0.874
TBM418	7 628 081.738	490 882.902	3.277
TBM419	7 628 822.926	490 644.673	4.288
TBM420	7 627 562.060	490 830.450	6.578
TBM1004	7 626 813.376	491 010.970	1.525
TBM1006	7 627 279.849	491 392.894	2.199

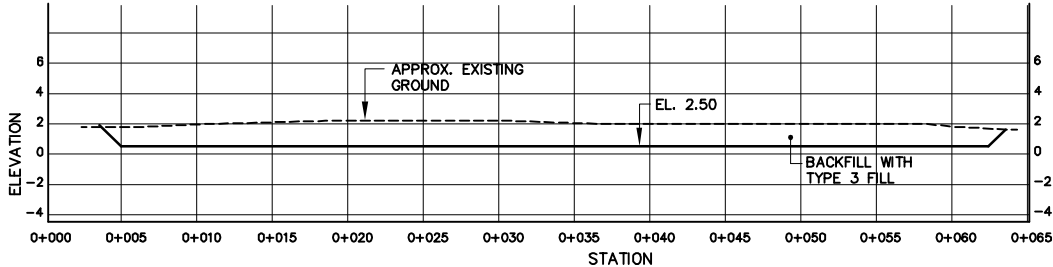


- General Notes:
- SIDE SLOPES ON ALL PRIMARY LANDFILL EXCAVATION AREAS ARE TO BE NO STEEPER THAN 1H:1V.
 - AVERAGE DEPTH OF PRIMARY LANDFILL EXCAVATION = 1.5m.

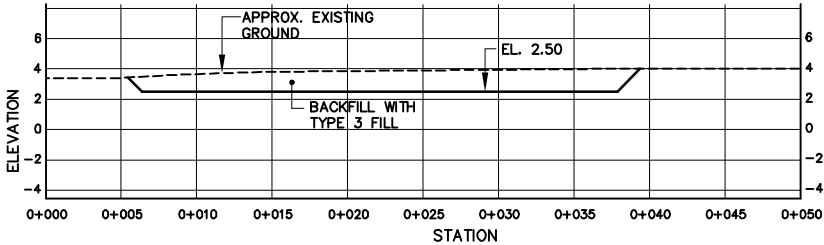
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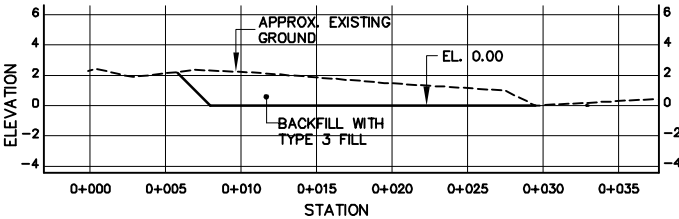
1	06-05-01	CHANGE REQUEST No. XX	GRH
No.	DATE	REVISION	APPR.
		THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS and GEOPHYSICISTS OF THE NORTHWEST TERRITORIES PERMIT NUMBER P 151 SGE ACRES LIMITED	
		uma SGE Acres Ltd.	
SCALE - ECHELLE		20 10 0 20 40 60m	
PROJECT - PROJET		FOX-M HALL BEACH	
		DEW LINE CLEAN UP	
		© COPYRIGHT HER MAJESTY THE QUEEN IN RIGHT OF CANADA 2006, AS REPRESENTED BY THE MINISTER OF NATIONAL DEFENCE.	
TRADE - METIER		SITING	DATE 2006-05-01
SUBJECT - SUJET		WEST COMMUNICATIONS AREA CROSS - SECTIONS	
PRODUCTION		CONCURRENCE - ASSENTIMENT	
DESIGNED ETUDIE	RAW/GRH	DES OFF AGENT CONCEPT	
DRAWN DESSINE	OPB/RGM	SECT HD CHEF SECT	
CHECKED VERIFIE	RRM	DES MGR GEST CONCEPT	
COORDINATION	SMS	REVIEWED - REVU	
DWG. NO. - DESSIN NO.		H-H11/1-9101-122	



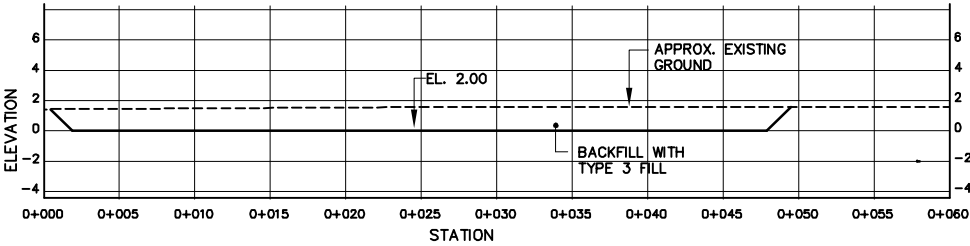
SECTION A-A
(FM-WCA-C01)



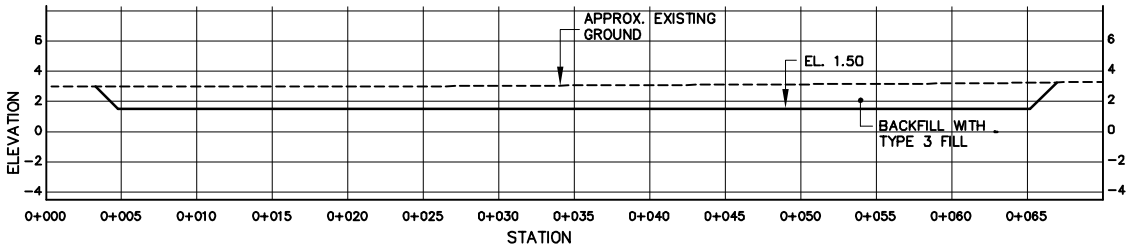
SECTION B-B
(FM-WCA-C01)



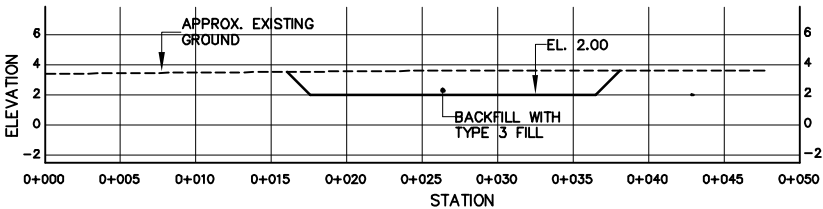
SECTION C-C
(FM-WCA-C02)



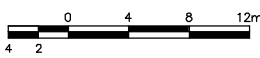
SECTION D-D
(FM-WCA-C03)

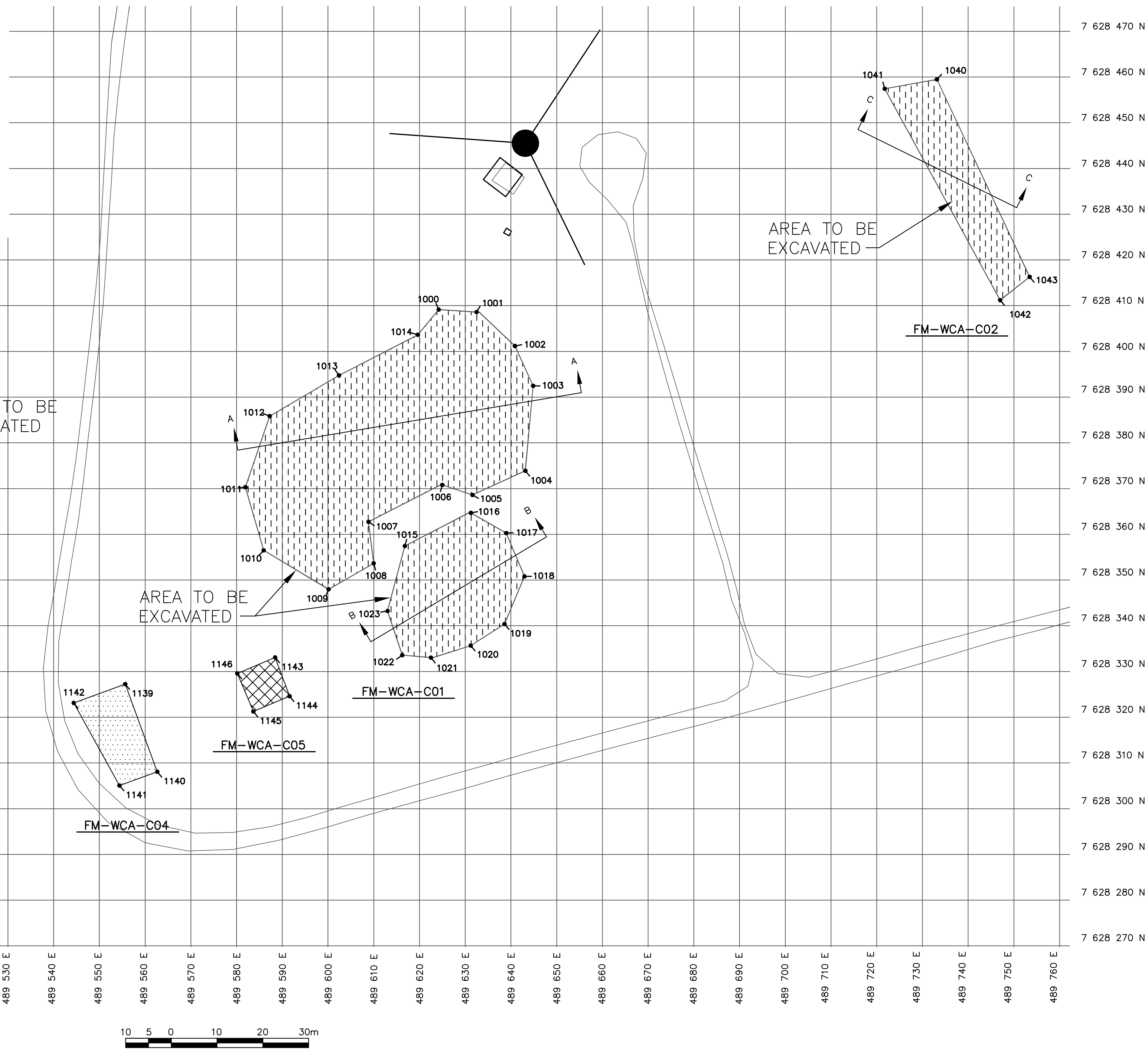


SECTION E-E
(FM-WCA-C03)



SECTION F-F
(FM-WCA-C03)



[illegible]

National
Defence

Défense
nationale

Headquarters
Quartier général