December 2nd 2016

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

Re: Water License 2AM-MEL1631 Part D, Items 1&2 - Submission of Final Design and Construction Drawings for Jetty-CP1 and Jetty-CP5

Mr. Kharatyan,

Agnico Eagle Mines Limited (Agnico Eagle) is developing the Meliadine Gold Project (the project). The mine is located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut. A new Type "A" Water Licence (No. 2AM-MEL1631) was recently awarded to Agnico Eagle for the development of the project. Agnico Eagle is developing the mine towards proposed production in 2020.

Agnico Eagle presented the water management plan for the project in 2015. Several infrastructures such as water retention dikes, berms, culverts, channels, collection ponds (CP), a water treatment plant (WTP), jetties and pumping stations are planned to manage the site contact water during pre-production, operation, and interim mine closure.

The proposed Jetty-CP1 is required in order to pump water collected in collection pond CP1 to the Water Treatment Plant (WTP) for treatment prior to discharge to the environment via the diffuser into Meliadine Lake or prior to be reused by the process plant. The proposed Jetty-CP5 is required to pump collected water from the collection pond CP5 to the collection pond CP1. Jetty-CP5 and Jetty-CP1 are required to be constructed before the spring freshet of 2017.

In accordance with Water License 2AM-MEL1631, Part D, Items 1 and 2, please find enclosed with this letter, a copy of the final design and construction drawings for Jetty-CP1 and Jetty-CP5.

Should you have any questions regarding this submission, please contact me or Jamie Quesnel.

Regards,

Agnico Eagle Mines Limited – Meliadine Division

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Environmental Superintendent - Nunavut

cc: *Ian Parsons, Indigenous and Northern Affairs Canada*
Luis Manzo, Kivalliq Inuit Association

TETRA TECH

DESIGN REPORT FOR JETTY-CP1 AND JETTY-CP5 MELIADINE PROJECT, NUNAVUT

PRESENTED TO
Agnico Eagle Mines Ltd.

TETRA TECH

DECEMBER 2016
ISSUED FOR USE
TETRA TECH PROJECT NUMBER: 28920
AGNICO EAGLE DOCUMENT NUMBER: 6515-E-132-005-132-REP-004

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APPENDICES

1.0 INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) is developing the Meliadine Gold Project (the project). The mine is located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut.

A new Type "A" Water Licence (No. 2AM-MEL1631) was recently awarded to Agnico Eagle for the development of the project. Agnico Eagle is developing the mine towards proposed production in 2020.

Agnico Eagle presented the water management plan for the project in 2015 *(Ref : Water Management Plan, 6513-MPS-11, June 2016).* Several infrastructures such as water retention dikes, berms, culverts, channels, collection ponds (CP), a water treatment plant (WTP), jetties and pumping stations are planned to manage the site contact water during pre-production, operation, and interim mine closure.

Figure 1 illustrates the general Site Layout for Proposed Infrastructure during Mine Operation.

The construction of the dikes D-CP1 and D-CP5 has begun in the last quarter of 2016 and is planned to be completed during the first quarter of 2017. As a consequence, Pond H17 will be used as CP1 collection pond and Pond A54 as CP5 collection pond.

The water management infrastructures designated by Jetty-CP1 and Jetty-CP5 are required to be constructed before the spring freshet of 2017:

- The proposed Jetty-CP1 is also named "WTP intake causeway" and is required in order to pump water collected in collection pond CP1 to the Water Treatment Plant (WTP) for treatment prior to discharge to the environment via the diffuser into Meliadine Lake or prior to be reused by the process plant.

- The proposed Jetty-CP5 is required to pump collected water from the collection pond CP5 to the collection pond CP1.

Agnico Eagle retained Tetra Tech to undertake the following tasks associated with Jetty-CP1 and Jetty-CP5:

- Conduct the detailed design of Jetty-CP1 and Jetty-CP5 to produce construction drawings and specifications; and
- Prepare the design report for Jetty-CP1 and Jetty-CP5, in accordance with the requirements in the Type "A" Water License (No. 2AM-MEL1631).

This report summarizes the site conditions, design basis, considerations, criteria, analyses, evaluations and presents the detailed design of Jetty-CP1 and Jetty-CP5, including construction drawings and specifications.

2.0 GENERAL SITE CONDITIONS

2.1 Climate and Meteorology

The project site lies within the Southern Arctic Climatic Region where daylight reaches a minimum of 4 hours per day in winter and a maximum of 20 hours per day in summer. The nearest weather station is Rankin Inlet A (Station 2303401), located approximately 25 km south of the project site. The closest long-term regional evaporation station operated by Environment Canada is in Churchill, Manitoba.

The monthly mean air temperature is typically above 0°C for the months of June to September, and is below 0°C between October and May. July is typically the warmest month and January the coldest. Winters are typically long and cold, while summers are short and cool. Spring and autumn are short. The mean annual temperature for the period of record from 1981 to 2009 was -10.4°C.

The annual average total precipitation at the project site is 412 mm/year and falls almost equally as snow and rainfall (6515-GGD-003, Site Information). Average annual evaporation for small waterbodies in the project area is estimated to be 323 mm between June and September. The average annual loss of snowpack to sublimation and snow redistribution is estimated to vary between 46% and 52% of the total precipitation for the winter period and occurs between October and May (Golder, 2013a).

The region is known for high winds, which are due in part to the broad, flat, uninterrupted expanses offered to moving air masses. The wind blows from the north and north-northwest direction more than 30% of the time. The mean values for wind speed show that the north-northwest, together with north and northwest winds, have the highest speeds and tend to be the strongest. Mean monthly wind speeds are typically between 19 km/hour and 27 km/hour.

The climate in the project region is projected to be warmer for the 2020s, 2050s, and 2080s time horizons when compared to the observed historic values (Agnico Eagle and Golder, 2014). Precipitation shows an increase compared to historical values, but the majority of projections are not significantly different from the annual recorded precipitation values.

2.2 Topography and lakes

The dominant terrain in the project area comprises glacial landforms such as drumlins (glacial till), eskers (gravel and sand), and lakes. A series of low relief ridges are composed of glacial deposits, oriented in a northwest-southeast direction, which control the regional surface drainage patterns. The property is about 60 metres above sea level (masl) in low-lying topography with numerous lakes. Surface waters are usually frozen by early October and remain frozen until early June.

The surveyed lake surface elevations in the project area range from about 51 masl at Meliadine Lake to about 74 masl for local small perched lakes. Lakes formed by glacio-fluvial processes or glacial processes, are common throughout the project area. Most of the perched lakes at the project site are relatively shallow (less than 2 m water depth). Late-winter ice thicknesses on freshwater lakes in the project area range between 1.0 m and 2.3 m with an average thickness of 1.7 m. Ice cover usually appears by the end of October and is completely formed in early November. The spring freshet typically begins in mid-June and is complete by early July (Golder, 2012a).

2.3 Permafrost

The project site is located within the Southern Arctic terrestrial eco-zone, one of the coldest and driest regions of Canada, in a zone of continuous permafrost. Continuous permafrost to depths of between 360 m to 495 m is expected based on historical and recent ground temperature data from thermistors installed near Tiriganiaq, F-Zone, and Discovery deposits (Golder, 2012b). The measured ground temperature data indicates that the active layer is 1.0 m to 3.0 m in areas of shallow soils and areas away from the influence of lakes. It is anticipated that the active layer adjacent to lakes or below a body of moving water such as a stream could be deeper. The typical permafrost ground temperatures at the depths of zero annual amplitude (typically at a depth of below 15 m) are in the range of -5.0°C to -7.5°C in the areas away from lakes and streams. The geothermal gradient ranges from 0.012°C/m to 0.02°C/m (Golder, 2012b).

2.4 Groundwater

In areas of continuous permafrost, there are generally two groundwater flow regimes: a shallow groundwater flow regime located in the active layer near the ground surface, and a deep groundwater flow regime located beneath permafrost. From late spring to early autumn, when temperatures are above 0˚C, the active layer thaws. Within the active layer, the water table is expected to be a subdued replica of topography, and is expected to parallel the topographic surface. The project area groundwater in the active layer flows to local depressions and ponds that drain to larger lakes.

The permafrost in the rock in the project area would be virtually impermeable to groundwater flow. The shallow groundwater flow regime, therefore, has little to no hydraulic connection with the deep groundwater regime. A numerical hydrogeological model for the deep groundwater flow regime was developed (Golder, 2013b). The results of the hydrogeological model have indicated that the rock at the project site below the base of the permafrost or in taliks is generally of low hydraulic conductivity, on the order of 3 x 10-9 m/s (Golder, 2013c).

To a lesser degree, groundwater beneath the permafrost is influenced by density differences due to the upward diffusion of deep-seated brines (density-driven flow). In the Canadian Shield, concentrations of Total Dissolved Solids (TDS) in groundwater increase with depth, primarily in response to upward diffusion of deep-seated brines. Salinity can induce a freezing point depression, creating a cryopeg in permafrost where water can be unfrozen even though the temperature is below 0°C. At the project site, the freezing point depression was calculated to be equivalent to -3.3°C (Golder, 2012b). The portion of the permafrost, where groundwater may be partially or wholly unfrozen due to the freezing point depression, has been estimated to be at a depth of 350 m to 375 m (Golder, 2012b).

2.5 Subsurface Conditions

A number of site investigation programs were carried out at the project site in 1998, 1999, 2007, 2009, 2011, 2012, 2013, 2014, 2015, and 2016.

In general, the near surface stratigraphy comprises a veneer of organic material, underlain by non-cohesive soils (i.e. silty sand and sandy silt) with cobbles and boulders. The overburden thickness ranges between 1.5 m and 17.8 m and is underlain by greywacke, medium to strong with some fracturing and frost jacking of the upper bedrock surface. A layer of ice-rich overburden (silt or sand) has been observed in some of the boreholes drilled. Overburden soils with excess ice (Vc, Vs, Vx, and Vr) were observed in most of the boreholes. Massive icy beds up to 1.25 m thick were also encountered. The estimated percentage (by volume) of the excess visible ice ranged from 2% to more than 50% in the overburden soils. Limited soil porewater salinity tests (Tetra Tech, 2013) indicated that the overburden soils may have a porewater salinity of 4 parts per thousand (ppt) for shallow sandy soils and up to 12 ppt for deep silty soils.

2.6 Land survey and Lake bathymetric data

The raw land survey data, a 1-m contour digital map of the ground surface and 0.5 m contour lake bathymetric data for selected lakes at the project site were provided to Tetra Tech by Agnico Eagle. Those data were incorporated into the original digital map for the design of infrastructures in this study.

3.0 DESIGN OF THE JETTIES

3.1 Jetties Location and Design concept

The construction of the dikes D-CP1 and D-CP5 has begun in the last quarter of 2016 and is planned to be completed during the first quarter of 2017. As a consequence, Pond H17 will be used as CP1 collection pond and Pond A54 as CP5 collection pond.

Contact water from major infrastructure of the future mine will be diverted and/or collected in the collection ponds (CP1, CP3 to CP6) and the collected water in CP3 to CP6 will eventually be pumped to CP1. Water collected in CP1 will be treated by the Water treatment Plant (WTP) prior to discharge to the environment via the diffuser into Meliadine Lake or prior to be reused by the process plant.

Figure 1 illustrates the general Site Layout for Proposed Infrastructure during Mine Operation.

Jetty-CP1 will be constructed in CP1 to pump out water from CP1 to the WTP.

Jetty-CP5 will be constructed in CP5 to pump out water from CP5 to CP1.

Each jetty will consist of a causeway, intake pits, pumping stations, intake pipes and discharging pipes.

3.2 Intake pits and intake pipes

The design intent is to drain CP1 or CP5 as low as possible during the open-water season each year. Lower pipe intake elevations will help to achieve this design intent.

The lake bathymetric elevations (data from Golder's reports) indicated that the maximum lake depth is 1.7 m for Pond H17 and 1.3 m for Pond A54. Based on that information, the lowest lakebed elevation would be approximately 62.44m for Pond H17 (CP1) and 64.45 m for Pond A54 (CP5). The design was based on these elevations to determine the water intake pipes elevations.

Based on the same assumptions, the intake pits will have an adequate depth to ensure water could be drained from the lowest lakebed elevation.

The intake pits for Jetty-CP1 and Jetty-CP5 are made of HDPE and are respectively 5.8 m and 3.5 m deep.

There will be a typical separation of 150 mm between the invert of the intake pipe and the lake bottom to prevent the movement of sediment from entering into the pipe.

A layer of Rip-Rap (100-350 mm) will be placed at the entry of the intake pipe for erosion and sediment control.

A stainless steel wire mesh will be set at the end of the intake pipes.

A layer of compacted Granular Fill 0-30 mm material will be placed around the intake wells and pipes as recommended by the manufacturer.

The wells, pumping stations and pipe details are designed by Tetra Tech and based on the projected collection pond capacity requirements and conventional engineering design criteria.

3.3 Jetty (Causeway) design

The jetties' causeways will be constructed to provide access to the vehicles for the intake pits construction and later, they will be used occasionally by maintenance vehicles during mine operation.

Jetty-CP1 will extend approximately 140 m in length into CP1, and Jetty-CP5 will extend approximately 110 m in length into CP5.

The jetties will be constructed of non-acid generating (NAG), coarse rock fill from esker or from Run-of-Mine (ROM) waste rock obtained from the development of the mine.

As shown on the construction drawings given in appendix A, both causeways of Jetty-CP1 and Jetty-CP5 will be 11 m wide, including a minimum roadway surface of 8 m plus room for pipelines, power cables as well as suitable safety barriers if required. There will be a widened area surrounding the pump house.

The elevation of the top of the jetties were set to provide a suitable freeboard (about 0.7m) above the maximum operation water level in the ponds to allow protection for wave action.

Lateral slopes into the lakes are 1V:3H minimum for stability.

A compacted final layer of Granular Fill 0-30mm will be placed as a final grade for the road surface.

3.4 Figures and Drawings

Figure 1 in appendix A presents a general site layout plan during mine operation.

The construction drawings for Jetty-CP1 (65-417-230-207) and for Jetty-CP5 (65-417-230-208) are given in appendix A.

4.0 CONSTRUCTION

4.1 Construction Material Quantities

The table below presents the material quantities for the construction of the jetties' causeways.

Item	Jetty-CP1	Jetty-CP5	Total
Run-of-Mine or Class A borrow material from Esker (0-600 mm) (m^3)	9425	2291	**11,716**
Granular Fill (0-30 mm) (m^3)	315	313	**628**
Rip-rap Fill (100-350 mm) (m^3)	0.5	0.5	**1**
Total Fill Material Volume (m^3)	**9740,5**	**2604,5**	**12,345**

4.2 Earth Work Construction Material Specifications

The general requirements for the materials are specified below.

4.2.1 Run-of-Mine or Class A borrow material from Esker

The rockfill required for earth work construction can be sourced from Eskers ("Borrow pits") or from non-acid generating (NAG) run-of-mine waste (mine) rock.

The rockfill for the water management earth structures can have a wide variation in gradation, with a maximum particle size of 600 mm. The lift of the rockfill should be no greater than 900 mm. The passes of heavy construction equipment will compact the rockfill. The fill particles shall be angular and shall be derived from hard, durable, NAG rock. Any oversized boulders should be removed before the rockfill is placed into the earth structures.

4.2.2 30 mm Minus Granular Fill (0-30 mm)

30 mm Minus Granular Fill shall consist of, hard durable particles, be free of roots, topsoil and other organic material and have a particle size distribution as presented in the table below. Processing will be required to achieve the specified gradation.

Table: 30 mm Minus Granular Fill – Particle Size Distribution Limits

Particle Size	% Passing
30	100
14	65 – 100
5	45 – 70
0.63	15 – 35
0.08	4 - 10

4.2.3 Rip-rap

Rip-rap shall be used as erosion protection materials. The particle size specifications for the graded rip-rap materials are presented in the table below. The material shall be free of roots, topsoil, and other organic material. Processing may be required to achieve the specified gradation. The material can be processed from hard, durable, NAG rock. Rocks used for rip-rap should generally be blocky and angular or sub angular, with sharp clean edges and relatively flat faces. It is generally recommended that rocks should be close to equi-dimensional rather than elongate, although this is not always possible. Typically, the average ratio of the long axis to the thickness should be less than 2.

Table: Particle Size Specifications for Rip-rap Materials

Rip-rap Types	Minimum Particle Size (mm)	Median Particle Size (mm)	Maximum Particle Size (mm)
Rip-rap for Jetties CP1 and CP5	100	150	350

4.3 Supervision

An Agnico Eagle representative will supervise the construction of the jetties.

4.4 Schedule

The construction of the jetties will be undertaken before freshet 2017, when there is ice of sufficient thickness on CP1 (Pond H17) and CP5 (Pond A54) to support construction equipment and when the water level is low.

5.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. Tetra Tech does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech's Services Agreement.

6.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech

INGÉNIEURE · ENGINEER
Solène Moreau
137890
QUÉBEC

2 déc. 2016

PERMIT TO PRACTICE
TETRA TECH INDUSTRIES, INC.
O/A TETRA TECH
Signature
Date 2016-12-02
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

REGISTERED PROFESSIONAL ENGINEER
J.M.I.F. ALARIE
LICENSEE
NT/NU

2016.12.02

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Reviewed by:
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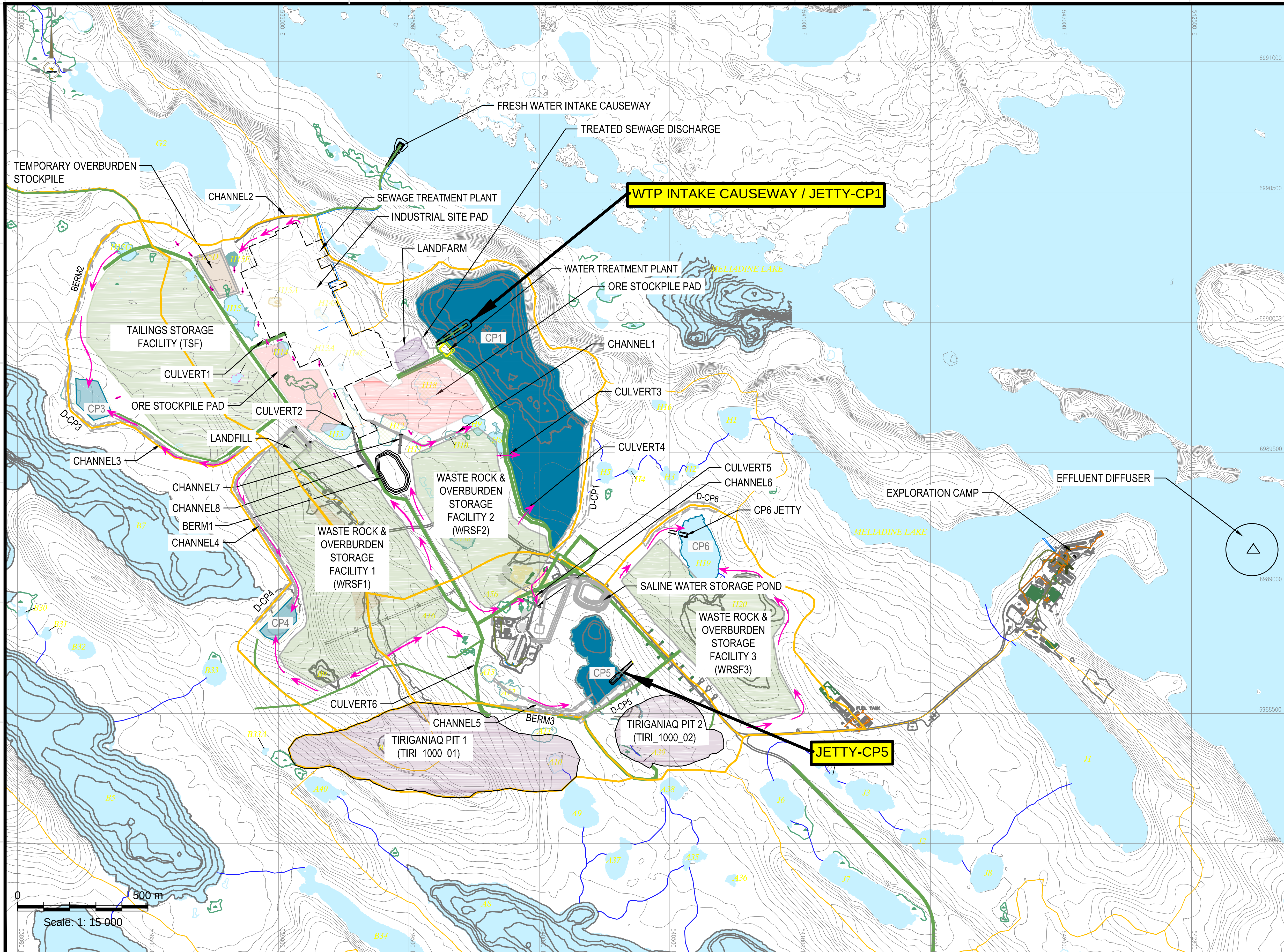
Josee.Alarie@tetratech.com

APPENDIX A

- Figure 1: General Site Layout for Proposed Infrastructure
- Construction Drawing 65-417-230-207
- Construction Drawing 65-417-230-208

NO. DESSIN
DRAWING NO.

FORMAT ANSI B–11x17



LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- CONTACT WATER FLOW DIRECTION

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
–	–
–	–
–	–
–	–
–	–

DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY
A	ISSUED FOR REVIEW	08–05–2016	GZ

REVISIONS

DESSINÉ PAR DRAWN BY	EP	DATE	08–05–2016
VÉRIFIÉ PAR CHECKED BY	GZ		08–05–2016
APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.	6515		
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 1 GENERAL SITE LAYOUT PLAN
FOR PROPOSED INFRASTRUCTURE
DURING MINE OPERATION (YEAR 7)

ÉCHELLE/ SCALE	1:15000	FICHIER FILE	.DWG
No. DESSIN/ DRAWING NO.		REVISION A	FEUILLE/SHT 1 / 1

AE–CART–ANSI B

P:\28920\DESSIN\CIV-INFRA\DESSINS DE TRAVAIL\AUTOCAD\Aménagement du drainage – Étude\Figure 3.dwg

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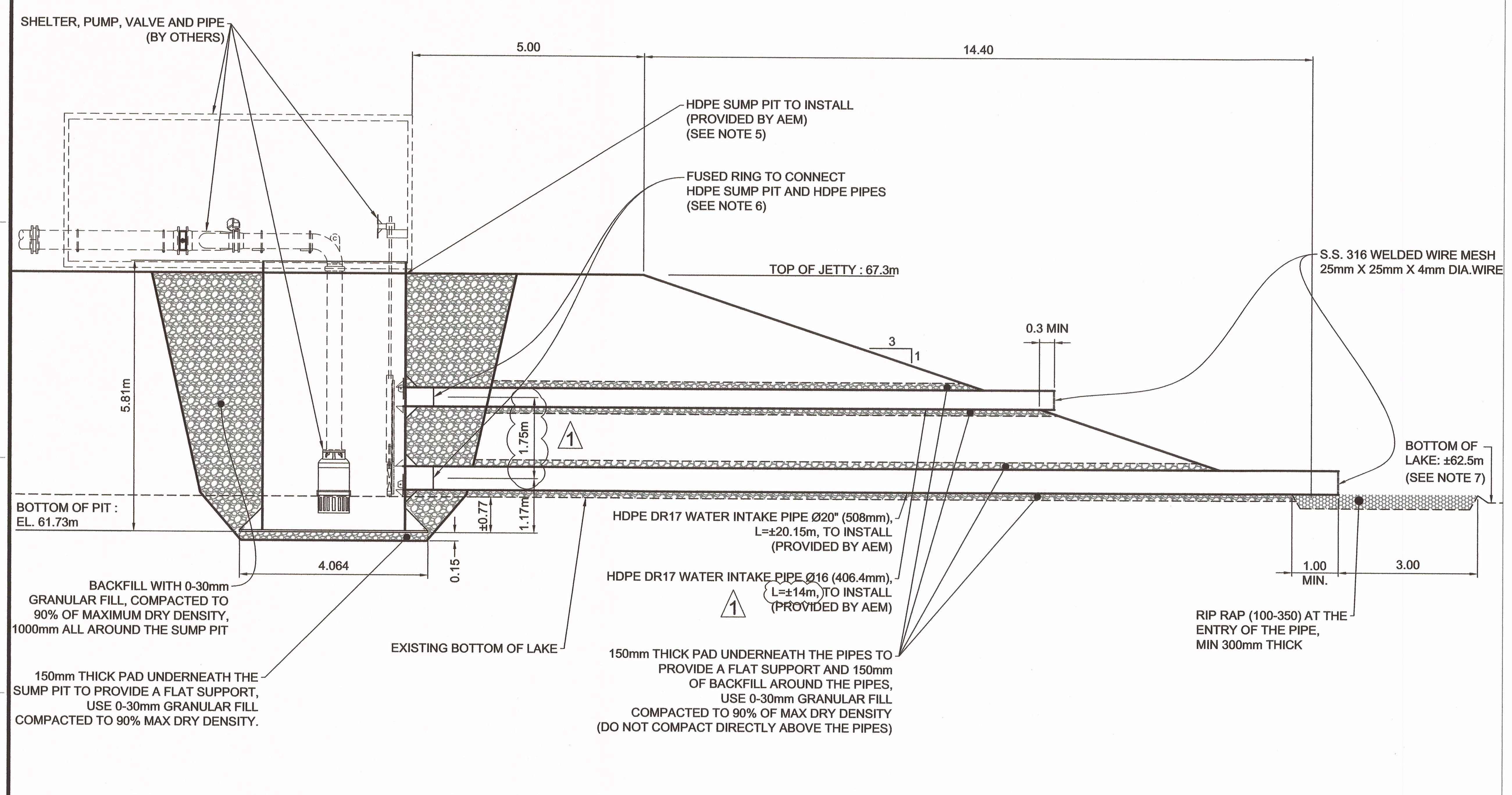

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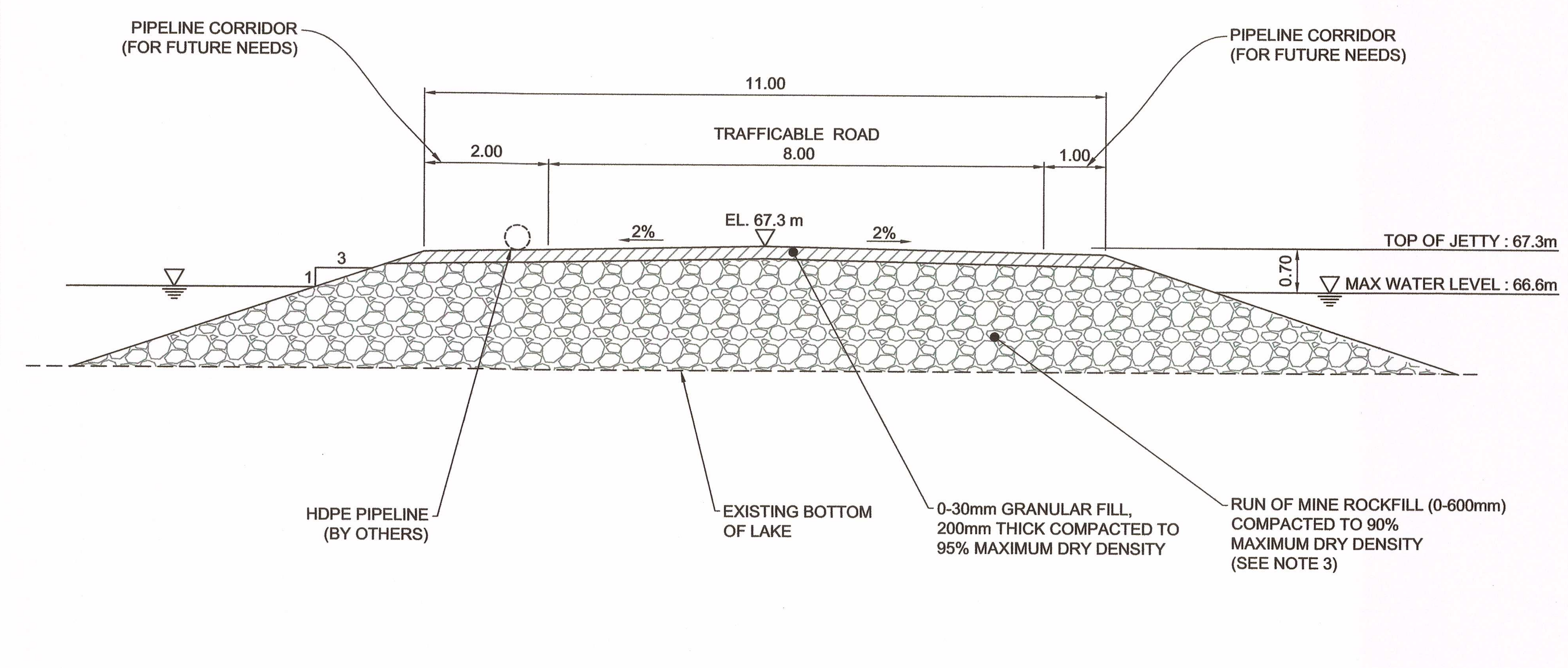
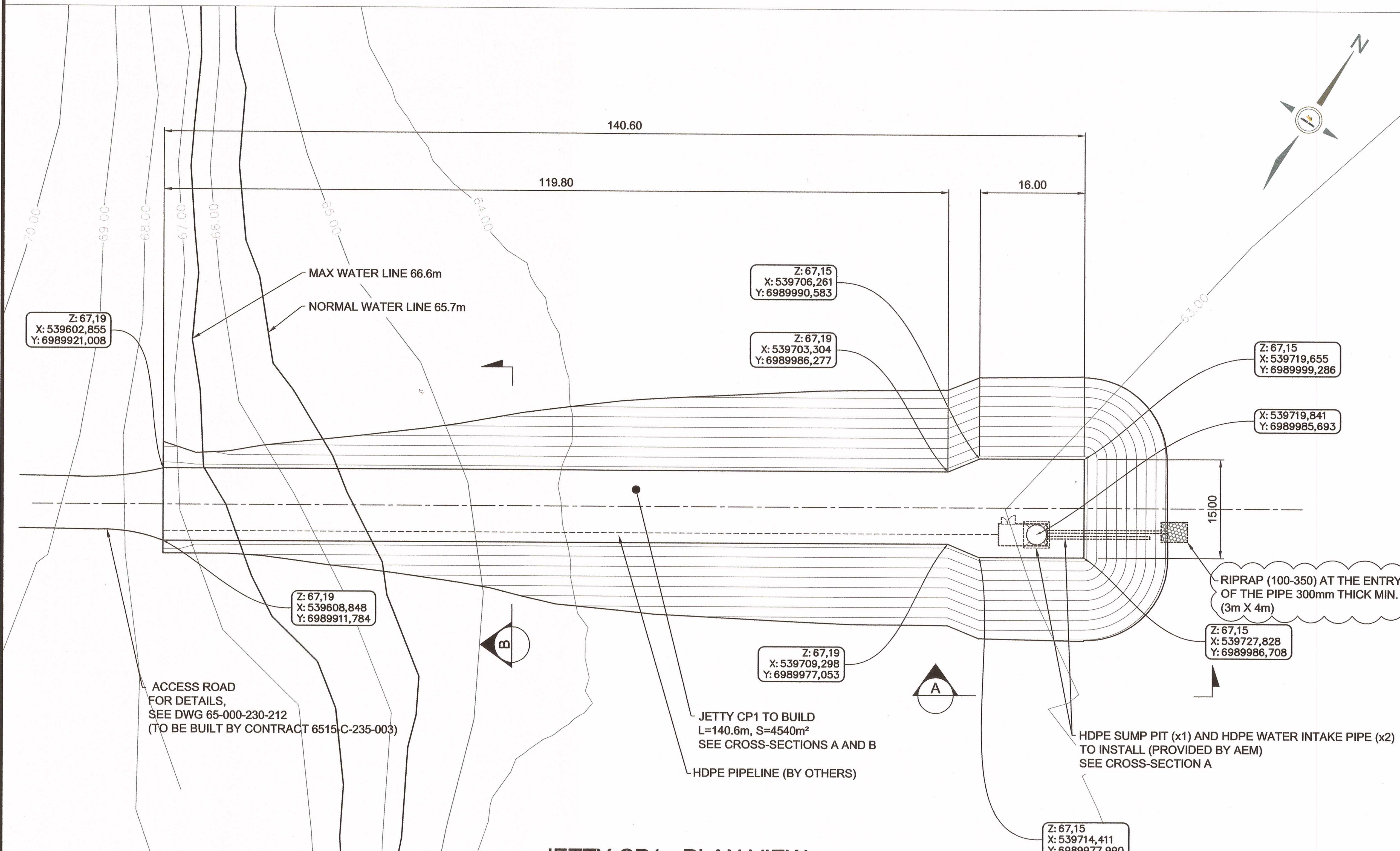


CROSS-SECTION B

1:75

NOTES:

- SAFETY BERMS MADE OF BOULDERS OR CONCRETE BLOCKS COULD BE INSTALLED AT THE EDGE OF THE JETTY.



JETTY CP1 - PLAN VIEW

1:500

ESTIMATED IN-PLACE QUANTITIES		
Construction - Jetty CP-1		
Aggregate Material	Thickness (mm)	Required (m^3)
Granular fill, 0-30mm (final grade)	200	325
0-30mm (around sump pit)	1000	75
0-30mm (around pipes)	150	15.5
RIP RAP, 100-350mm (at the entry of the pipe)	300	4
ROM, 0-600mm	±2140	9421

NOTES:

- THE GIVEN MATERIAL QUANTITIES ARE BARE-BONE, IN-PLACE QUANTITIES AFTER PLACEMENT AND COMPACTION.
- THE QUANTITIES DO NOT INCLUDE ANY EXTRAS TO COMPENSATE FOR POTENTIAL MATERIAL WASTED, MATERIAL LOSS INTO THE TUNDRA, AND ADDITIONAL MATERIAL REQUIRED DUE TO FOUNDATION SETTLEMENT DURING CONSTRUCTION.
- THE QUANTITIES INDICATED ARE AFTER COMPACTION. FOR MATERIAL PREPARATION, EXTRA QUANTITIES SHOULD BE ADDED TO CONSIDER THE BULKING FACTOR.

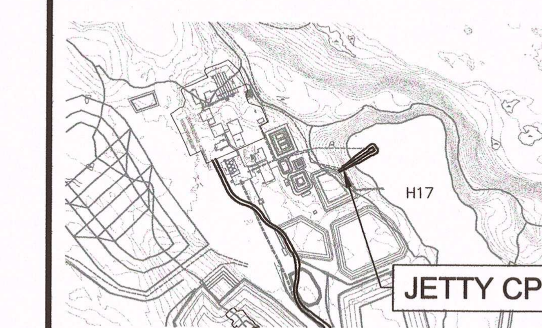
PERMIT TO PRACTICE
TETRA TECH INDUSTRIES, INC. O/A TETRA TECH
Signature
Date 2016-12-02
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

LEGEND

Z: 73,40 X: 539565,397 Y: 6989056,827 — PROPOSED ELEVATIONS AND COORDINATES

POUR CONSTRUCTION
FOR CONSTRUCTION
DATE : 2016-12-01

PLAN CLÉ KEY PLAN



TETRA TECH

NOTES GÉNÉRALES / GENERAL NOTES

GENERAL NOTES:

1. EXISTING GROUND DTM PROVIDED BY AEM.
2. ALL UNITS ARE IN METERS.
3. GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED AS INDICATED. BORROW PIT OR RUN OF MINE MATERIAL SHALL BE PLACED WITH LIFTS NOT EXCEEDING 900mm AND COMPACTED TO A MIN. OF 90% OF MAXIMUM DRY DENSITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY SECURITY AND SLOPES OF ALL EXCAVATIONS, BACKFILL AND SHALL ABIDE BY ALL RELEVANT STANDARDS AND REGULATIONS. THE STABILITY, DEWATERING AND MAINTENANCE OF ALL EXCAVATIONS OR BACKFILL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
5. THE SUMP PIT AND HDPE PIPES ARE PROVIDED BY AEM AND ARE STORED ON SITE (CUTTING / FUSING TO THE SPECIFIED PIPE LENGTH WILL BE NECESSARY). SPEC DRAWINGS ARE AVAILABLE AND SHALL BE CONSULTED FOR DIMENSIONS CHECKS. BLIND FLANGES ARE INSTALLED ON THE ENTRY OF THE PIPES INSIDE THE SUMP PIT.
6. THE CONNECTION BETWEEN THE SUMP PIT AND THE HDPE WATER INTAKE PIPE SHALL BE A FUSED RING. RESPECT APPLICABLE STANDARDS TO ENSURE THE QUALITY OF THE RING.
7. THE BOTTOM OF LAKE ELEVATION IS APPROXIMATE AND SHALL BE CONFIRMED ON SITE. THE FINAL ELEVATION OF THE PIPES AND SUMP PIT WILL BE DETERMINED BY THE 150mm REQUIREMENT SPACE BETWEEN THE BOTTOM OF THE LOWER PIPE AND THE LAKE BED.
8. THE CONSTRUCTION METHODOLOGY SHALL BE DEFINED BY THE CONTRACTOR. WORKS SHALL BE DONE WHEN THE WATER LEVEL IS VERY LOW AND/OR ICED. THE JETTY SHALL BE LEVELLED PROGRESSIVELY IN ORDER TO INSTALL THE SUMP PIT WITH APPROPRIATE EQUIPMENT AND MATERIAL.
9. AN AS-BUILT DRAWING SHALL BE PROVIDED AFTER CONSTRUCTION.

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG
GENERAL CIVIL WORKS 2016	65-000-230-212

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
1	2016-12-01	ISSUED FOR CONSTRUCTION	D.R.	J.A.	
0	2016-09-19	ISSUED FOR CONSTRUCTION	JG.M	J.A.	
A	2016-08-23	ISSUED FOR COMMENTS	D.R.	J.A.	

REVISIONS

PROFESSIONAL ENGINEER — J.M.I.F. ALARIE — LICENSEE

TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
417 – JETTIES
230-GENERAL EARTH WORKS
JETTY CP1
PLAN / CROSS-SECTIONS

DESSINÉ PAR DRAWN BY	DANIEL ROSALES	DATE 2016-06-16
VÉRIFIÉ PAR CHECKED BY	SOLÈNE MOREAU	2016-06-16
APPROUVÉ PAR APPROVED BY	JOSÉE ALARIE	2016-09-08
ÉCHELLE SCALE	AS INDICATED	DATE 2016-06-16
NO. DESSIN DRAWING NO.	65-417-230-207	
NO. PROJET PROJECT NO. 6515/28920	REVISION 1	FEUILLE / SHT 1 / 1

AE-CART-ARCH D

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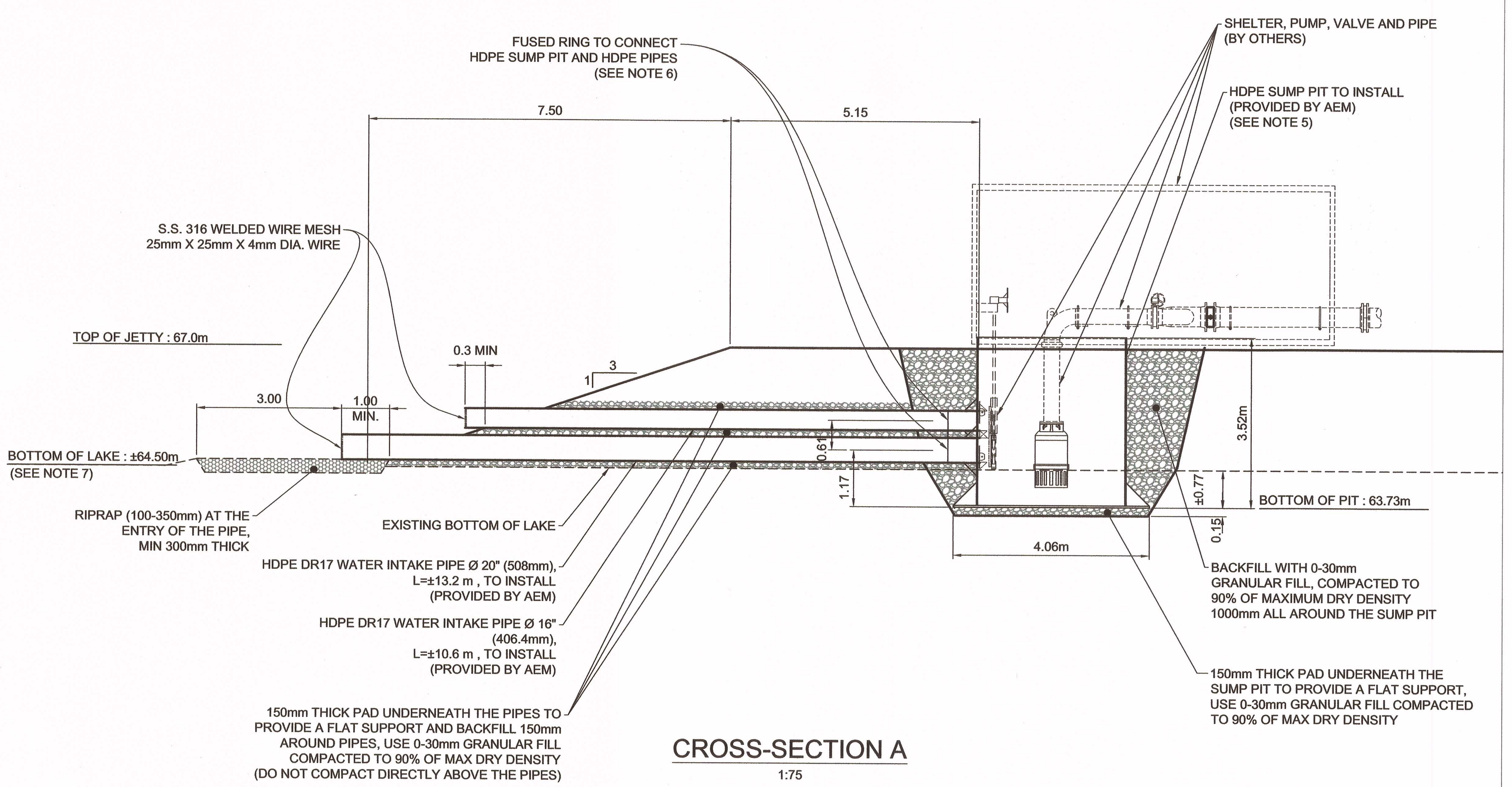
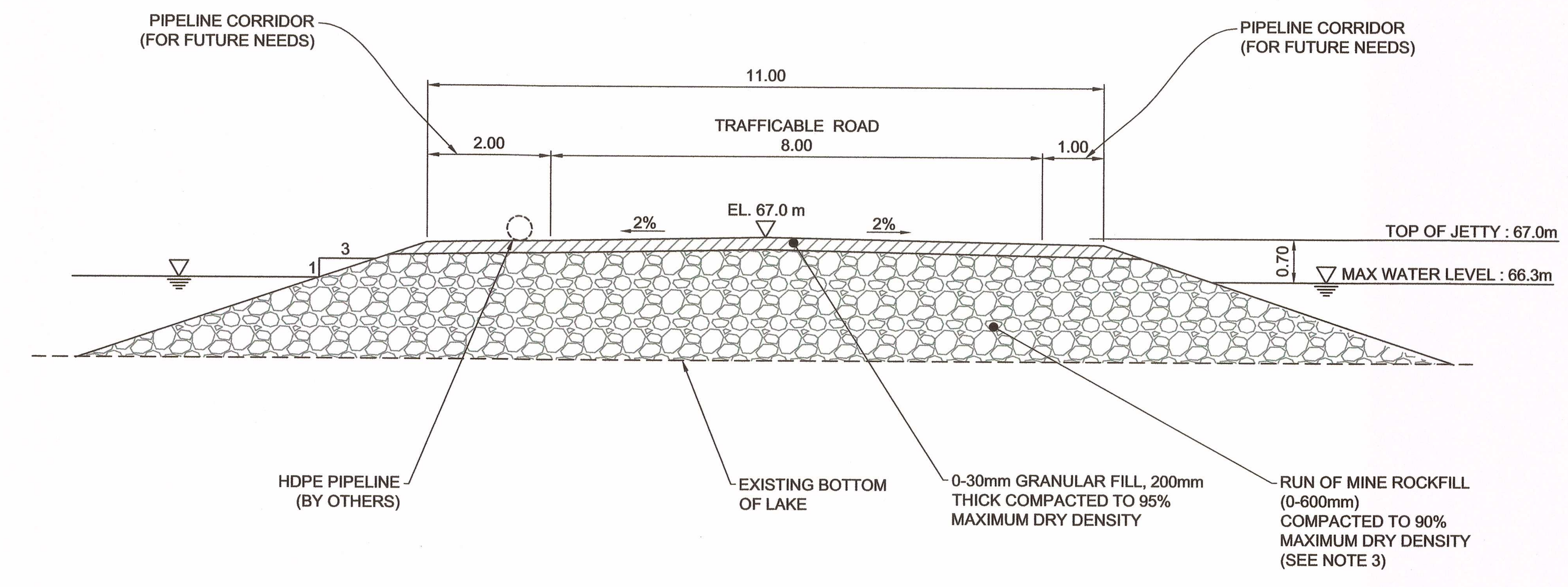
NO. DESSIN DRAWING NO. 65-417-230-207-208_R1

FORMAT ARCHD



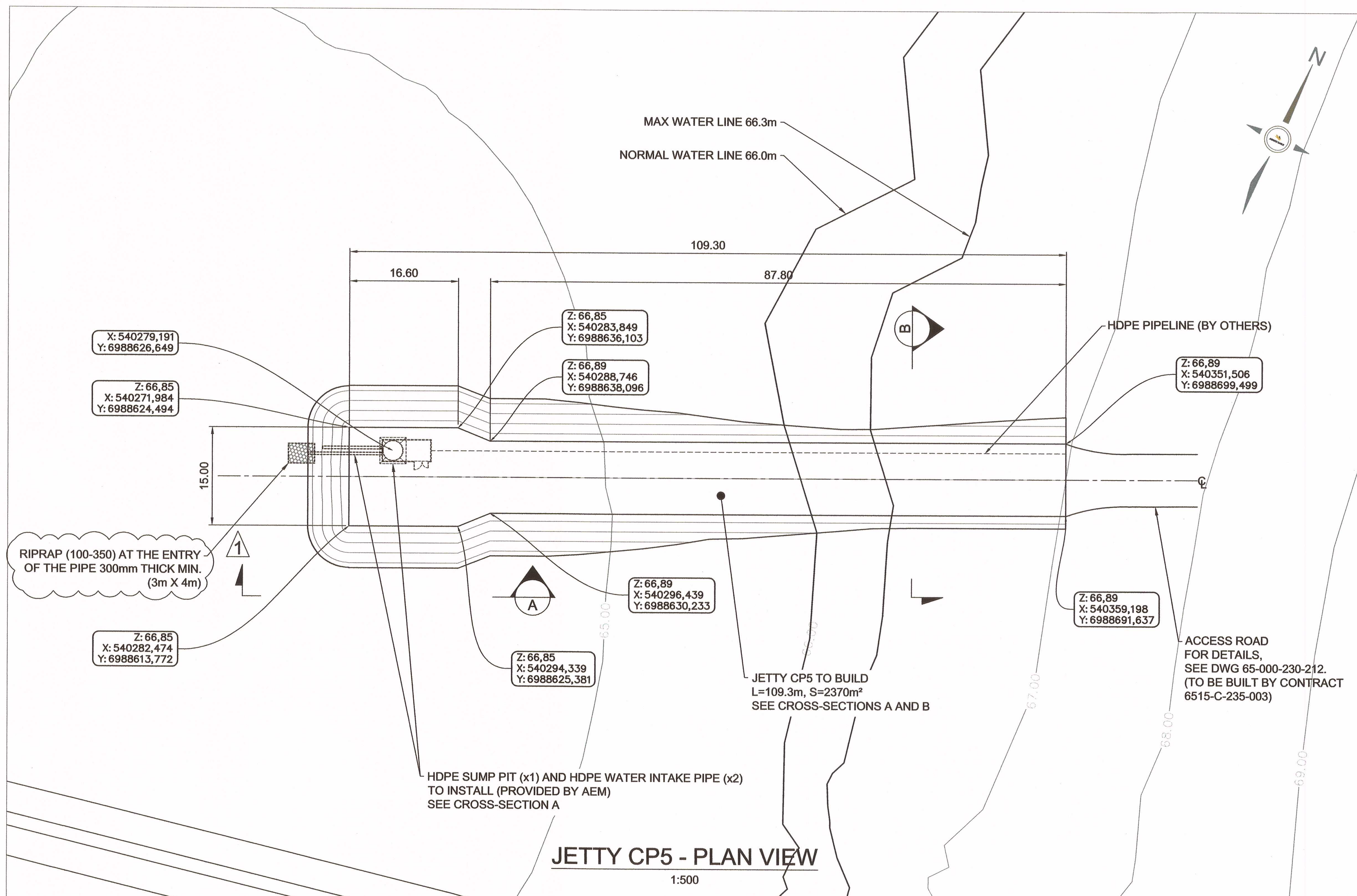
CROSS-SECTION A
1:75



CROSS-SECTION B
1:75

NOTES:

- SAFETY BERMS MADE OF BOULDERS OR CONCRETE BLOCKS COULD BE INSTALLED AT THE EDGE OF THE JETTY.



JETTY CP5 - PLAN VIEW
1:500

ESTIMATED IN-PLACE QUANTITIES

Construction - Jetty CP-5

Aggregate Material	Thickness (mm)	Required (m³)
Granular fill, 0-30mm (final grade)	200	256
0-30mm (around sump pit)	1000	47
0-30mm (around pipes)	150	10
RIP RAP, 100-350mm (at the entry of the pipe)	300	4
ROM, 0-600mm	±1010	2288

1

NOTES:

- THE GIVEN MATERIAL QUANTITIES ARE BARE-BONE, IN-PLACE QUANTITIES AFTER PLACEMENT AND COMPACTION.
- THE QUANTITIES DO NOT INCLUDE ANY EXTRAS TO COMPENSATE FOR POTENTIAL MATERIAL WASTED, MATERIAL LOSS INTO THE TUNDRA, AND ADDITIONAL MATERIAL REQUIRED DUE TO FOUNDATION SETTLEMENT DURING CONSTRUCTION.
- THE QUANTITIES INDICATED ARE AFTER COMPACTION. FOR MATERIAL PREPARATION, EXTRA QUANTITIES SHOULD BE ADDED TO CONSIDER THE BULKING FACTOR.

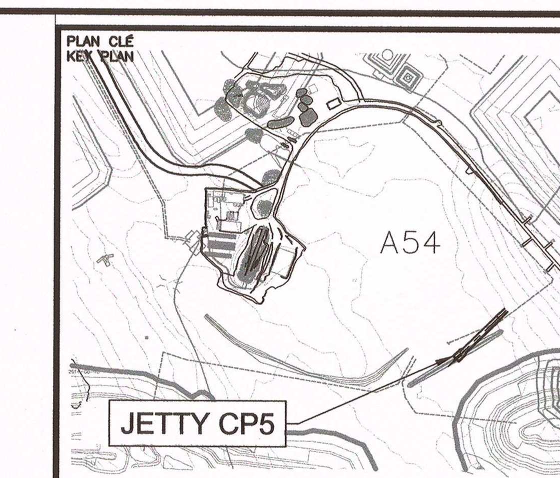
LEGEND

Z: 73,40 X: 539565,397 Y: 6989056,827	PROPOSED ELEVATIONS AND COORDINATES

PERMIT TO PRACTICE
TETRA TECH INDUSTRIES, INC.
O/A TETRA TECH
Signature
Date 2016-12-02
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

POUR CONSTRUCTION
FOR CONSTRUCTION
AGNICO EAGLE
DATE : 2016-12-01

PLAN CLÉ KEY PLAN



TETRA TECH

NOTES GÉNÉRALES / GENERAL NOTES

GENERAL NOTES:

1. EXISTING GROUND DTM PROVIDED BY AEM.
2. ALL UNITS ARE IN METERS.
3. GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED AS INDICATED. BORROW PIT OR RUN OF MINE MATERIAL SHALL BE PLACED WITH LIFTS NOT EXCEEDING 900mm AND COMPACTED TO A MIN. OF 90% OF MAXIMUM DRY DENSITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY SECURITY AND SLOPES OF ALL EXCAVATIONS, BACKFILL AND SHALL ABIDE BY ALL RELEVANT STANDARDS AND REGULATIONS. THE STABILITY, DEWATERING AND MAINTENANCE OF ALL EXCAVATIONS OR BACKFILL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
5. THE SUMP PIT AND HDPE PIPES ARE PROVIDED BY AEM AND ARE STORED ON SITE (CUTTING / FUSING TO THE SPECIFIED PIPE LENGTH WILL BE NECESSARY). SPEC DRAWINGS ARE AVAILABLE AND SHALL BE CONSULTED FOR DIMENSIONS CHECKS. BLIND FLANGES ARE INSTALLED ON THE ENTRY OF THE PIPES INSIDE THE SUMP PIT.
6. THE CONNECTION BETWEEN THE SUMP PIT AND THE HDPE WATER INTAKE PIPE SHALL BE A FUSED RING. RESPECT APPLICABLE STANDARDS TO ENSURE THE QUALITY OF THE RING.
7. THE BOTTOM OF LAKE ELEVATION IS APPROXIMATE AND SHALL BE CONFIRMED ON SITE. THE FINAL ELEVATION OF THE PIPES AND SUMP PIT WILL BE DETERMINED BY THE 150mm REQUIREMENT SPACE BETWEEN THE BOTTOM OF THE LOWER PIPE AND THE LAKE BED.
8. THE CONSTRUCTION METHODOLOGY SHALL BE DEFINED BY THE CONTRACTOR. WORKS SHALL BE DONE WHEN THE WATER LEVEL IS VERY LOW AND/OR ICED. THE JETTY SHALL BE LEVELLED PROGRESSIVELY IN ORDER TO INSTALL THE SUMP PIT WITH APPROPRIATE EQUIPMENT AND MATERIAL.
9. AN AS-BUILT DRAWING SHALL BE PROVIDED AFTER CONSTRUCTION.

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG
GENERAL CIVIL WORKS 2016	65-000-230-212
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AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
1	2016-12-01	ISSUED FOR CONSTRUCTION	D.R.	J.A.	
0	2016-09-19	ISSUED FOR CONSTRUCTION	JG.M	J.A	
A	2016-08-23	ISSUED FOR COMMENTS	D.R.	J.A.	

REVISIONS

REGISTERED PROFESSIONAL ENGINEER
J.M.I.F. ALARIE
LICENSEE
2016.12.01

TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
417– JETTIES
230–GENERAL EARTH WORKS
JETTY CP5
PLAN / CROSS–SECTIONS

DESSINÉ PAR DRAWN BY	DANIEL ROSALES	DATE	2016–06–16
VERIFIÉ PAR CHECKED BY	SOLÈNE MOREAU		2016–06–16
APPROUVÉ PAR APPROVED BY	JOSÉE ALARIE		2016–09–08
ÉCHELLE SCALE	AS INDICATED	DATE	2016–06–16

NO. DESSIN DRAWING NO. 65–417–230–208

NO. PROJET PROJECT NO.	REVISION	FEUILLE / SHT
6515/28920	1	1 / 1

AE-CART-ARCH D

P:\28920\DESSIN\CIV-INFRA\DESSINS DE TRAVAIL\AUTOCAD\65-417-230-207-208_R1.dwg