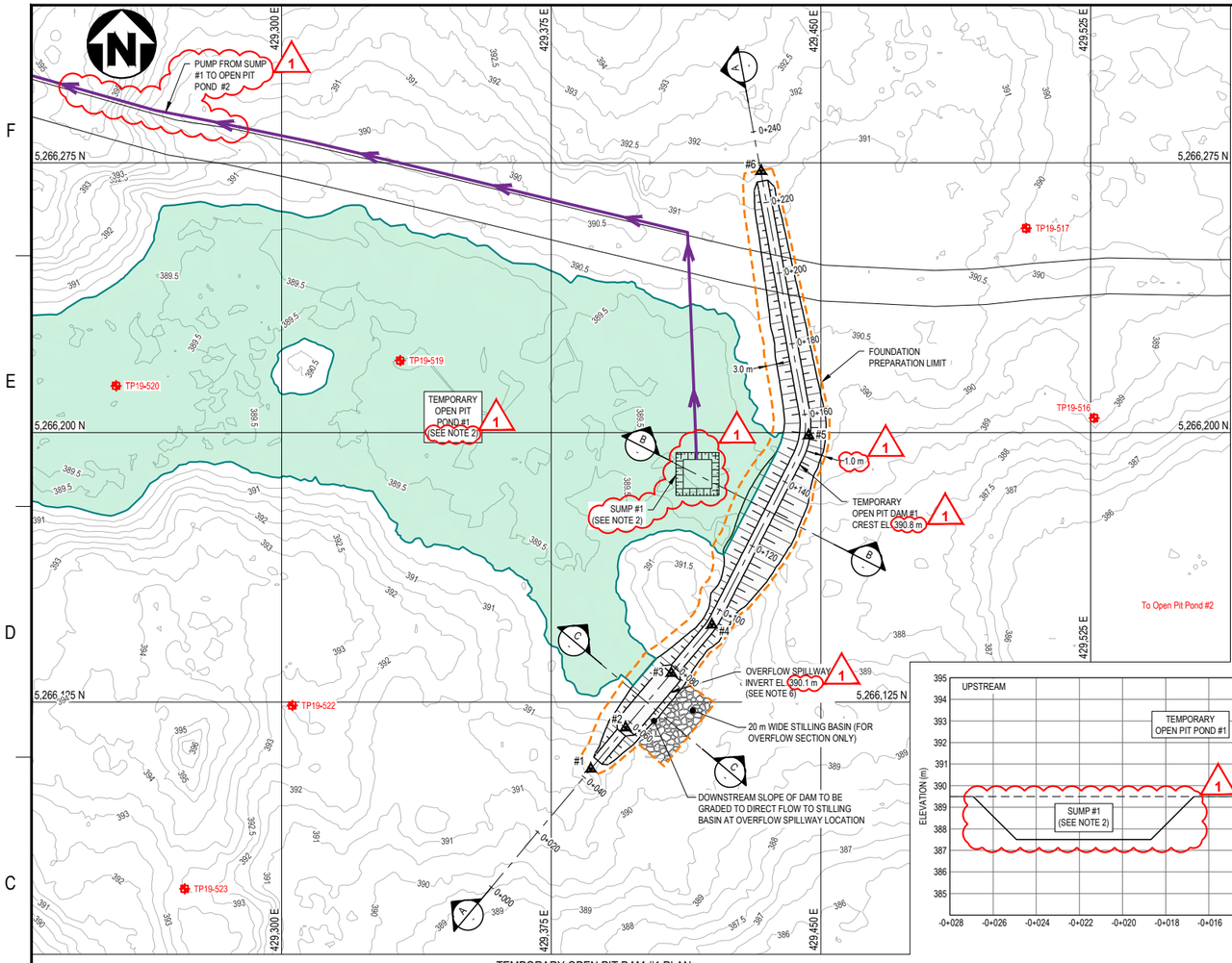
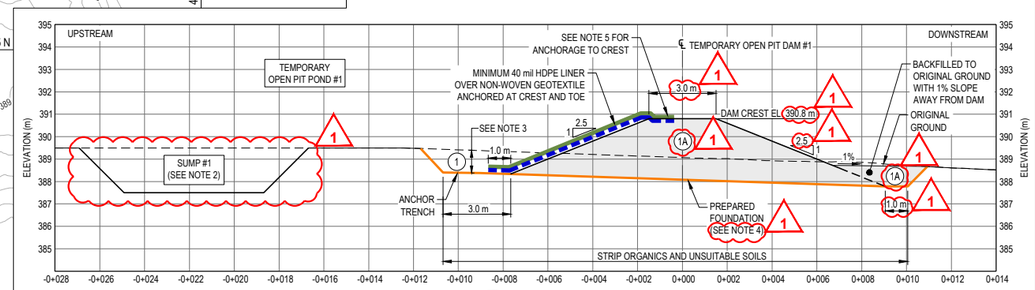
Appendix Q Temporary Open Pit Quarry Pond Dam Designs (for the Construction Phase)



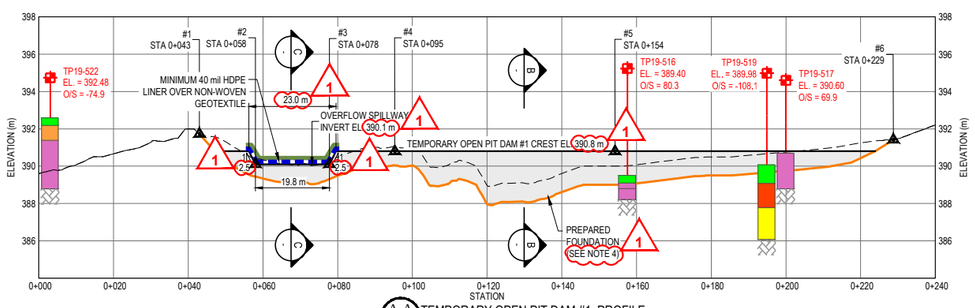
TEMPORARY OPEN PIT DAM #1 PLAN
SCALE 1:750

CONSTRUCTION MATERIALS	
1	LOW PERMEABILITY TILL
1A	SELECT COMMON FILL
2	BEDDING SAND
3	SAND AND GRAVEL FILTER
4	TRANSITION
5A	ROCKFILL
5B	COARSE ROCKFILL
6A	RIPRAP
6B	COARSE RIPRAP
GEOSYNTHETICS	
	GEOMEMBRANE (COLETANCHE ES3 OR EQUIVALENT)
	HDPE LINER (40 mil)
	GEOTEXTILE (540 g/m²)

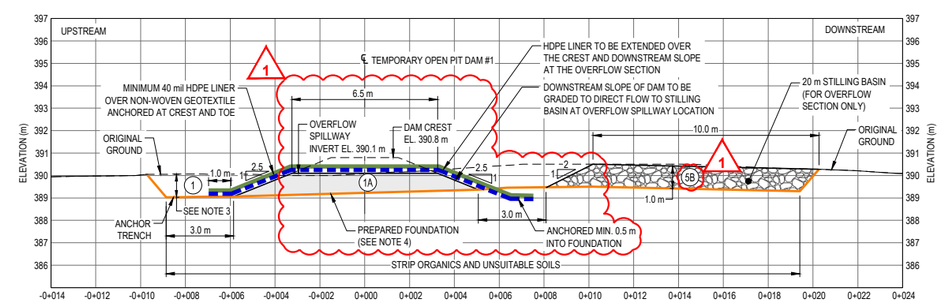
SETTING OUT POINTS				
POINT ID	STATION	NORTHING (m)	EASTING (m)	RADIUS (m)
#1	0+043	5,266,106	429,386	
#2	0+058	5,266,118	429,396	
#3	0+078	5,266,133	429,408	
#4	0+095	5,266,146	429,420	20
#5	0+154	5,266,199	429,447	20
#6	0+229	5,266,273	429,433	



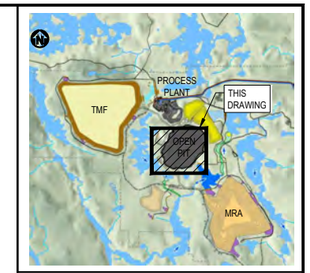
B-B TEMPORARY OPEN PIT DAM #1 TYPICAL SECTION
SCALE 1:125



A-A TEMPORARY OPEN PIT DAM #1 PROFILE
SCALE 1:750 (HOR.)
1:125 (VER.)



C-C TEMPORARY OPEN PIT DAM #1 SPILLWAY SECTION
SCALE 1:125



KEY PLAN
NTS

NOTES:

1. THIS DRAWING ILLUSTRATES TEMPORARY OPEN PIT DAM #1 PLAN, PROFILE AND SECTION WITH THE SITE GEOTECHNICAL INVESTIGATION.
2. THE POND UPSTREAM OF THE DAM IS TO BE MAINTAINED AT GROUND LEVEL DURING NORMAL OPERATIONS AND WATER IS TO BE MANAGED IN A LOCAL SUMP. THE DAM WILL PROVIDE CAPACITY TO STORE A 1:2 YEAR 24 HOUR STORM EVENT BELOW THE SPILLWAY INVERT.
3. BACKFILL ANCHOR TRENCH WITH A MINIMUM OF 1.0 m.
4. PEAT AND OTHER UNSUITABLE SOILS TO BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE WHICH MAY VARY FROM WHAT IS SHOWN ON THE DRAWING.
5. THE ANCHORAGE OF THE GEOTEXTILE AND GEOMEMBRANE LAYERS AT THE CREST OF THE DAM WILL BE AS PER DIRECTION OF OWNER'S REPRESENTATIVE IN THE FIELD.
6. THE SPILLWAY LOCATION MAY BE RELOCATED TO SUIT ACTUAL FIELD CONDITIONS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. THE SURFACE OF ZONE 1A SHALL BE SMOOTH AND COMPACT PRIOR TO PLACEMENT OF GEOTEXTILE.
8. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING DESIGN MEMO.

LEGEND:

- EXISTING ROAD
- TEMPORARY OPEN PIT POND
- PREPARED FOUNDATION
- LIMIT OF FOUNDATION PREPARATION (APPROX.)
- INFERRED BEDROCK
- PUMPING DIRECTION

GEOTECHNICAL LEGEND:

- TP19-401 TEST PIT (WOOD, 2019)

STRATIGRAPHY LEGEND:

- GROUND WATER LEVEL
- ORGANICS
- SANDY SILT TO SILT
- CLAY TO SILT
- SILTY SAND TO SAND
- SAND AND GRAVEL
- BEDROCK
- TILL
- SNOW / WATER / ICE
- COBBLES AND BOULDERS
- SILTY SAND AND GRAVEL (FILL)

0m 10 20 30 40
1:750

0m 1 2 3 4 5 6
1:125

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REV	DDMMMYY	REVISION / ISSUE DESCRIPTION	DRN	CHK	APP	APP	APP	APP
1	17JUL20	ISSUED FOR CONSTRUCTION						
0	24APR20	ISSUED FOR CONSTRUCTION						
A	06APR20	ISSUED FOR SQUAD CHECK / REVIEW	NK	MV	BW			

REF	NUMBER	TITLE

REFERENCES

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STAMP/SEAL

LICENSED PROFESSIONAL ENGINEER B. W. WANG 2020-07-17 PROVINCE OF ONTARIO

APPROVED FOR _____

CLIENT PROJECT MGR | DEPARTMENT MGR | PROJECT MGR

PROJECT PHASE: EPCM

PROJECT NO.: TC180316

SCALE: AS SHOWN

	BY	DDMMMYY
DES	MV	06APR20
DRN	NK	06APR20
CHK	MV	06APR20
APP	BW	06APR20

CÔTÉ GOLD

SUBJECT: OPEN PIT CONSTRUCTION WATER MANAGEMENT TEMPORARY OPEN PIT DAM #1 PLAN, PROFILE AND SECTION

wood.

AREA 905 — CÔTÉ GOLD PROJECT CACO-A

CLIENT DWG NO. 905-G-2102 — REV 1

DRAWING NO. 100264-905-DT00-LYD-2102 — REV 1

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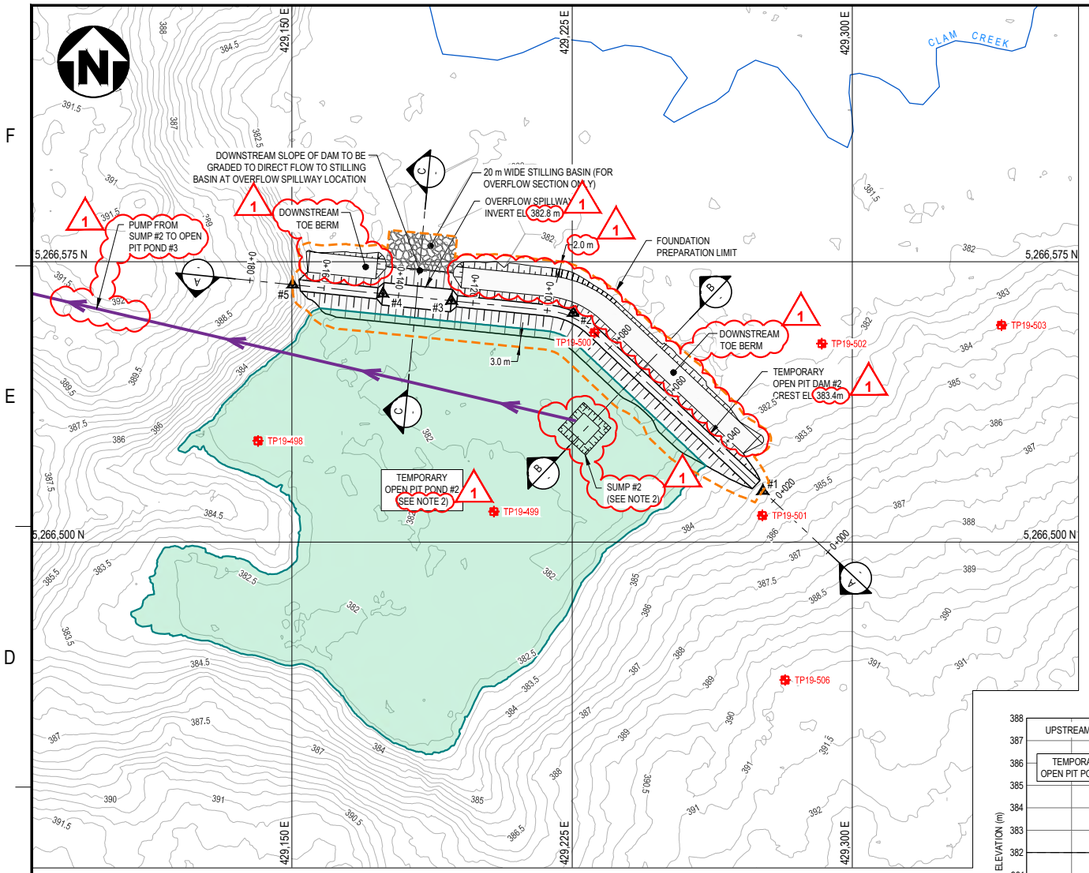
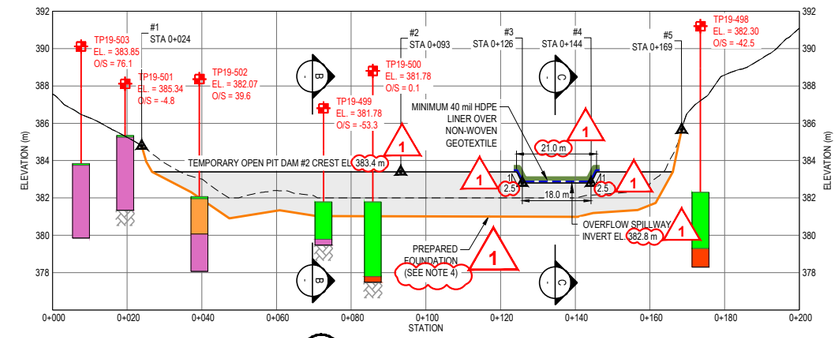
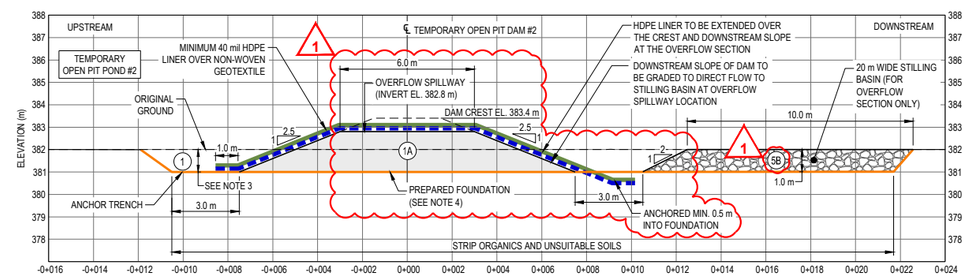


TEMPORARY OPEN PIT DAM #2 PLAN
SCALE 1:750

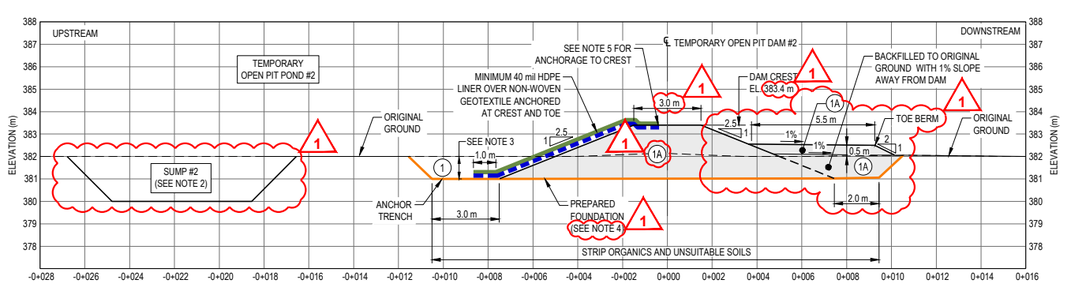


A-A TEMPORARY OPEN PIT DAM #2 PROFILE
SCALE 1:750 (HOR.)
1:125 (VER.)

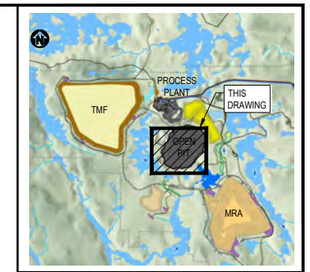
SETTING OUT POINTS				
POINT ID	STATION	NORTHING (m)	EASTING (m)	RADIUS (m)
#1	0+024	5,266,514	429,276	
#2	0+093	5,266,561	429,225	20
#3	0+126	5,266,565	429,193	
#4	0+144	5,266,566	429,174	
#5	0+169	5,266,569	429,150	



C-C TEMPORARY OPEN PIT DAM #2 SPILLWAY SECTION
SCALE 1:125



B-B TEMPORARY OPEN PIT DAM #2 TYPICAL SECTION
SCALE 1:125



KEY PLAN
NTS

NOTES:

1. THIS DRAWING ILLUSTRATES TEMPORARY OPEN PIT DAM #2 PLAN, PROFILE AND SECTION WITH THE SITE GEOTECHNICAL INVESTIGATION.
2. THE POND UPSTREAM OF THE DAM IS TO BE MAINTAINED AT GROUND LEVEL DURING NORMAL OPERATIONS AND WATER IS TO BE MANAGED IN A LOCAL SUMP. THE DAM WILL PROVIDE CAPACITY TO STORE A 1:2 YEAR 24 HOUR STORM EVENT BELOW THE SPILLWAY INVERT.
3. BACKFILL ANCHOR TRENCH WITH A MINIMUM OF 1.0 m.
4. PEAT AND OTHER UNSUITABLE SOILS TO BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE WHICH MAY VARY FROM WHAT IS SHOWN ON THE DRAWING.
5. THE ANCHORAGE OF THE GEOTEXTILE AND GEOMEMBRANE LAYERS AT THE CREST OF THE DAM WILL BE AS PER DIRECTION OF OWNER'S REPRESENTATIVE IN THE FIELD.
6. THE SURFACE OF ZONE 1A SHALL BE SMOOTH AND COMPACT PRIOR TO PLACEMENT OF GEOTEXTILE.
7. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING DESIGN MEMO.

LEGEND:

- EXISTING ROAD
- EXISTING CREEK
- TEMPORARY OPEN PIT POND
- PREPARED FOUNDATION
- LIMIT OF FOUNDATION PREPARATION (APPROX.)
- INFERRED BEDROCK
- PUMPING DIRECTION

GEOTECHNICAL LEGEND:

- TP19-401 TEST PIT (WOOD, 2019)

STRATIGRAPHY LEGEND:

- GROUND WATER LEVEL
- ORGANICS
- SANDY SILT TO SILT
- CLAY TO SILT
- SILTY SAND TO SAND
- SAND AND GRAVEL
- BEDROCK
- TILL
- SNOW / WATER / ICE
- COBBLES AND BOULDERS
- SILTY SAND AND GRAVEL (FILL)

0m 10 20 30 40
1:750

0m 1 2 3 4 5 6
1:125

CONSTRUCTION MATERIALS
1 LOW PERMEABILITY TILL
1A SELECT COMMON FILL
2 BEDDING SAND
3 SAND AND GRAVEL FILTER
4 TRANSITION
5A ROCKFILL
5B COARSE ROCKFILL
6A RIPRAP
6B COARSE RIPRAP
GEOSYNTHETICS
GEOMEMBRANE (COLETANCHE ES3 OR EQUIVALENT)
HDPE LINER (40 mil)
GEOTEXTILE (540 g/m²)

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REV	DDMMMYY	REVISION / ISSUE DESCRIPTION	DRN	CHK	APP	APP	APP	APP
1	17JUL20	ISSUED FOR CONSTRUCTION	NK	MV	BW			
0	24APR20	ISSUED FOR CONSTRUCTION	NK	MV	BW			
A	06APR20	ISSUED FOR SQUAD CHECK / REVIEW	NK	MV	BW			

REF	NUMBER	TITLE

REFERENCES

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STAMP/SEAL

LICENSED PROFESSIONAL ENGINEER B. W. WANG 2020-07-17 PROVINCE OF ONTARIO

APPROVED FOR _____

CLIENT PROJECT MGR | DEPARTMENT MGR | PROJECT MGR

PROJECT PHASE: EPCM

PROJECT NO.: TC180316

SCALE: AS SHOWN

	BY	DDMMMYY
DES	MV	06APR20
DRN	NK	06APR20
CHK	MV	06APR20
APP	BW	06APR20

CÔTÉ GOLD

wood.

SUBJECT: OPEN PIT CONSTRUCTION WATER MANAGEMENT TEMPORARY OPEN PIT DAM #2 PLAN, PROFILE AND SECTION

AREA 905 — CÔTÉ GOLD PROJECT CACO-A

CLIENT DWG NO. 905-G-2103 — REV 1

DRAWING NO. 100264-905-DT00-LYD-2103 — REV 1

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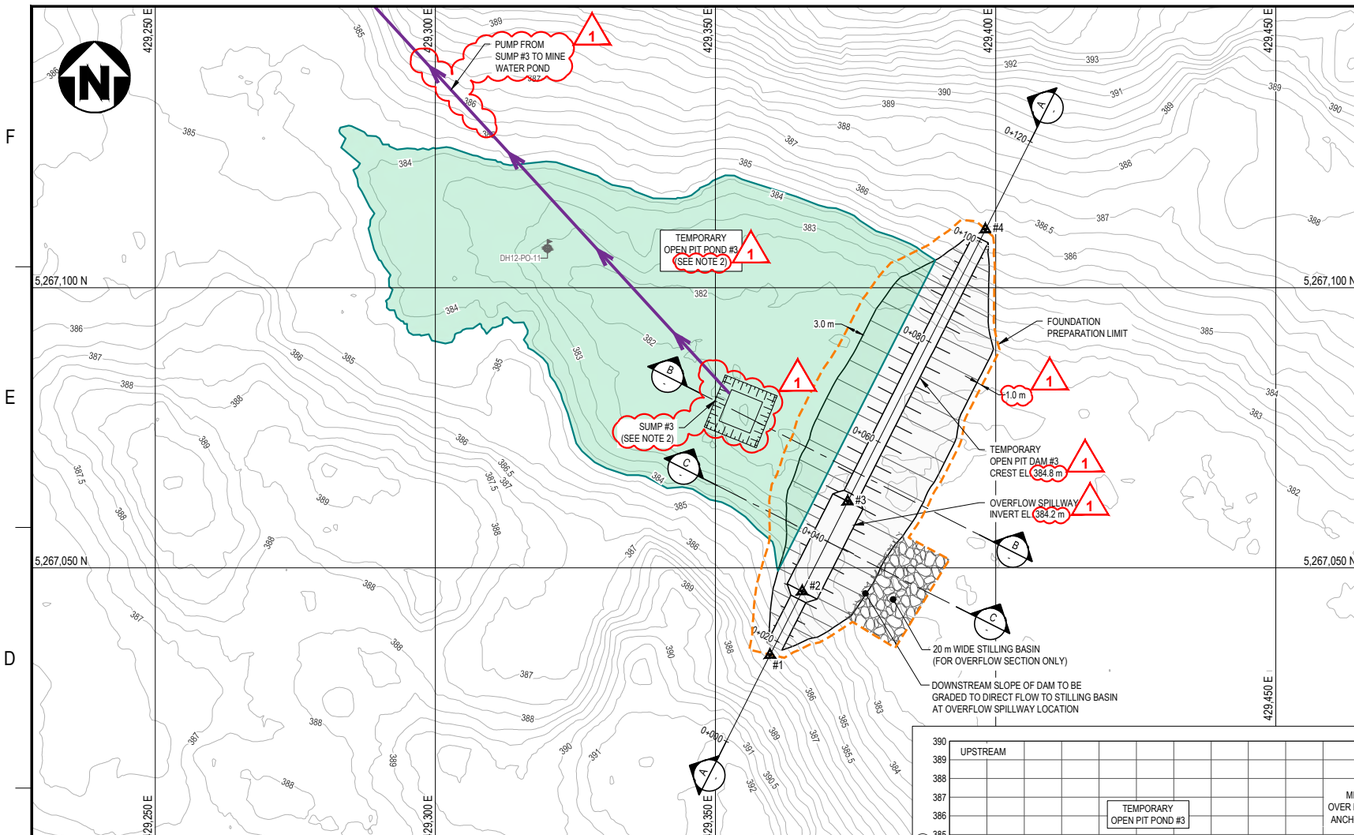
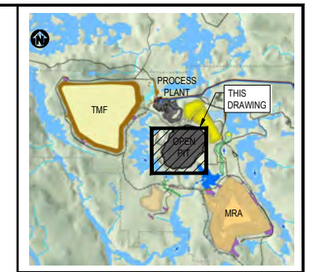


TEMPORARY OPEN PIT DAM #3 PLAN
SCALE 1:500

SETTING OUT POINTS			
POINT ID	STATION	NORTHING (m)	EASTING (m)
#1	0+017	5,267,034	429,360
#2	0+030	5,267,046	429,365
#3	0+048	5,267,062	429,374
#4	0+102	5,267,110	429,398

CONSTRUCTION MATERIALS	
1	LOW PERMEABILITY TILL
1A	SELECT COMMON FILL
2	BEDDING SAND
3	SAND AND GRAVEL FILTER
4	TRANSITION
5A	ROCKFILL
5B	COARSE ROCKFILL
6A	RIPRAP
6B	COARSE RIPRAP

GEOSYNTHETICS
- GEOMEMBRANE (COLETANCHE ES3 OR EQUIVALENT)
- HDPE LINER (40 mil)
- GEOTEXTILE (540 g/m²)



KEY PLAN
NTS

NOTES:
1. THIS DRAWING ILLUSTRATES TEMPORARY OPEN PIT DAM #3 PLAN, PROFILE AND SECTION WITH THE SITE GEOTECHNICAL INVESTIGATION.
2. THE POND UPSTREAM OF THE DAM IS TO BE MAINTAINED AT GROUND LEVEL DURING NORMAL OPERATIONS AND WATER IS TO BE MANAGED IN A LOCAL SUMP. THE DAM WILL PROVIDE CAPACITY TO STORE A 1:2 YEAR 24 HOUR STORM EVENT BELOW THE SPILLWAY INVERT.
3. BACKFILL ANCHOR TRENCH WITH A MINIMUM OF 1.0 m.
4. PEAT AND OTHER UNSUITABLE SOILS TO BE REMOVED AS DIRECTED BY THE OWNER'S REPRESENTATIVE WHICH MAY VARY FROM WHAT IS SHOWN ON THE DRAWING.
5. THE ANCHORAGE OF THE GEOTEXTILE AND GEOMEMBRANE LAYERS AT THE CREST OF THE DAM WILL BE AS PER DIRECTION OF OWNER'S REPRESENTATIVE IN THE FIELD.
6. THE SURFACE OF ZONE 1A SHALL BE SMOOTH AND COMPACT PRIOR TO PLACEMENT OF GEOTEXTILE.
7. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE ACCOMPANYING DESIGN MEMO.

LEGEND:
- EXISTING ROAD
- EXISTING CREEK
- TEMPORARY OPEN PIT POND
- PREPARED FOUNDATION
- LIMIT OF FOUNDATION PREPARATION (APPROX.)
- INFERRED BEDROCK
- PUMPING DIRECTION

GEOTECHNICAL LEGEND:
- DH12-PO-01 BOREHOLE (KNIGHT PIESOLD, 2012)

STRATIGRAPHY LEGEND:
- GROUND WATER LEVEL
- ORGANICS
- SANDY SILT TO SILT
- CLAY TO SILT
- SILTY SAND TO SAND
- SAND AND GRAVEL
- BEDROCK
- TILL
- SNOW / WATER / ICE
- COBBLES AND BOULDERS
- SILTY SAND AND GRAVEL (FILL)

0m 5 10 15 20 25 — 1:500
0m 1.5 3 4.5 6 7.5 — 1:150
0m 1 2 3 4 5 — 1:100

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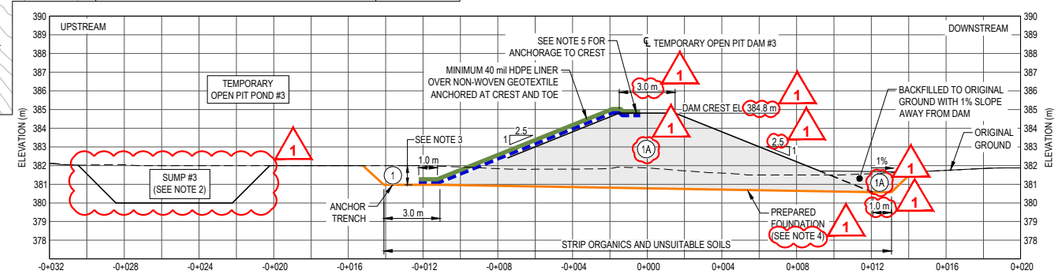
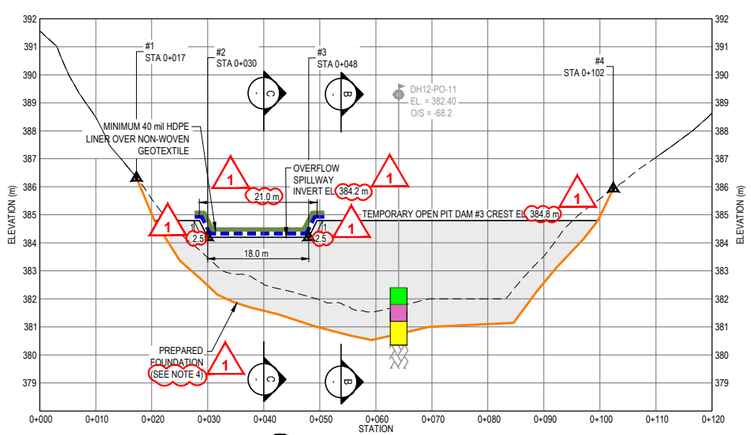
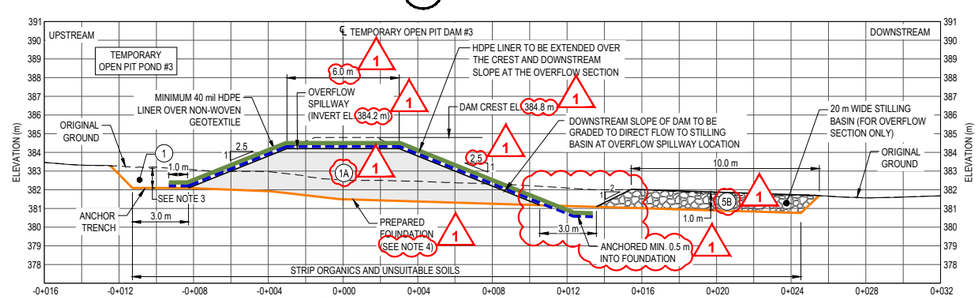


B-B TEMPORARY OPEN PIT DAM #3 TYPICAL SECTION
SCALE 1:150



A-A TEMPORARY OPEN PIT DAM #3 PROFILE
SCALE 1:500 (HOR.)
1:100 (VER.)



C-C TEMPORARY OPEN PIT DAM #3 SPILLWAY SECTION
SCALE 1:150

REV	DDMMMYY	REVISION / ISSUE DESCRIPTION	DRN	CHK	APP	APP	APP	APP
1	17JUL20	ISSUED FOR CONSTRUCTION	NK	MV	BW			
0	24APR20	ISSUED FOR CONSTRUCTION	NK	MV	BW			
A	06APR20	ISSUED FOR SQUAD CHECK / REVIEW	NK	MV	BW			

REF	NUMBER	TITLE

REFERENCES

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LICENSED PROFESSIONAL ENGINEER B. W. WANG 2020-07-17 PROVINCE OF ONTARIO

APPROVED FOR _____

CLIENT PROJECT MGR | DEPARTMENT MGR | PROJECT MGR

PROJECT PHASE: EPCM

PROJECT NO.: TC180316

SCALE: AS SHOWN

	BY	DDMMMYY
DES	MV	06APR20
DRN	NK	06APR20
CHK	MV	06APR20
APP	BW	06APR20

CÔTÉ GOLD

wood.

SUBJECT: OPEN PIT CONSTRUCTION WATER MANAGEMENT TEMPORARY OPEN PIT DAM #3 PLAN, PROFILE AND SECTION

AREA 905 — CÔTÉ GOLD PROJECT CACO-A

CLIENT DWG NO. 905-G-2104 — REV 1

DRAWING NO. 100264-905-DT00-LYD-2104 — REV 1

SAVED: 17-Jul-20 2:11 PM PLOTTED: 17-Jul-20 5:23 PM USER: KORNEEVA, NATALIA

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