M3-PN120085
Revision 0

ARCHITECTURE
ENGINEERING
CONSTRUCTION MANAGEMENT

Copper Flat Project

Impoundment

Design Report

Prepared For:

THEMAC RESOURCES

Certified Professional Engineer Seal

This report documents work conducted under the oversight of the following Engineer:

Harry Lewsley, P.E.

Harry Lewsley
Signature

Exp. 12/31/2017

Date 12/7/2015

IMPOUNDMENT DESIGN REPORT
COPPER FLAT PROJECT

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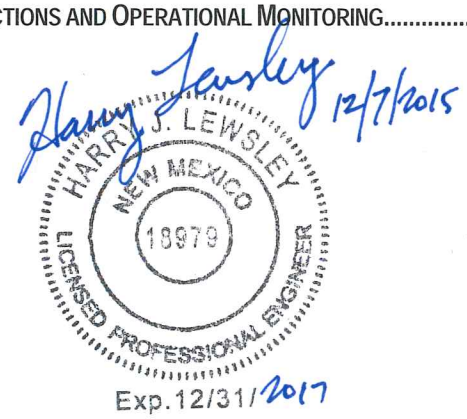

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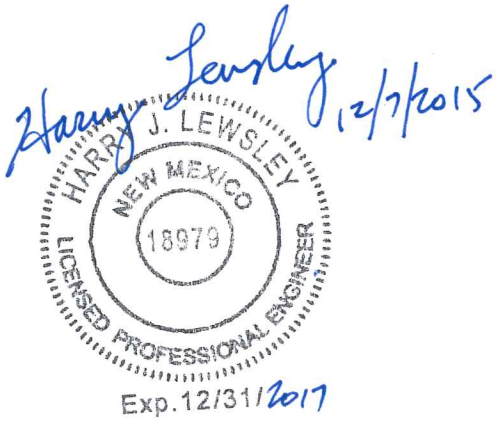


1 INTRODUCTION

The Copper Flat Project is located in South Central New Mexico, near the town of Hillsboro, approximately 150 miles south of Albuquerque, and approximately 20 miles southwest of Truth or Consequences (straight-line distances) (Figure 1). The Project is owned and operated by New Mexico Copper Corporation (NMCC), a wholly owned subsidiary of THEMAC Resources Group Limited.

The State of New Mexico has promulgated regulations pertaining to groundwater protection at copper mining facilities (New Mexico Administrative Code Title 20, Chapter 6, Part 7 [20.6.7 NMAC], the "Copper Rule"), the stated purpose of which is "to control discharges of water contaminants specific to copper mine facilities and their operations to prevent water pollution."

This report provides the design criteria, location, purpose, operation, and performance of certain elements of the project identified in Section 2 of this report to comply with 20.6.7 NMAC. This report excludes the design considerations for the Tailings Storage Facility (TSF), i.e., the tailings impoundment, underdrain collection pond, surge pond and the secondary containment trench from the processing facility to the TSF, which have been completed by others and are reported separately.

2 SYSTEM DESCRIPTIONS

Impacted Stormwater Impoundments are designed to receive surface drainage that potentially has come in contact with water contaminants on a copper mine facility. These systems consist of a network of diversion channels designed to convey to the impoundment at minimum the peak from a 100-year-return-interval storm with at least 6 inches of freeboard per 20.6.7.17.D.(2).(f). The Impacted Stormwater Impoundments are designed to store impacted stormwater for less than 30 days and include an engineered liner system, as described in Section 3.2.

The Process Water Reservoir is designed to receive reclaimed process water from a variety of sources including the TSF, impacted stormwater impoundments and freshwater supply system conveyed via pipelines. The reservoir also receives direct precipitation to the pond surface and embankment crest area. The Process Water Reservoir is designed with an engineered liner system, leak collection system, and subgrade bedding, as described in Section 3.3.

3 BASIS OF DESIGN

3.1 GENERAL

All impoundments for the Copper Flat Project will be considered "new" impoundments as defined by NMAC 20.6.7.17 (D).

Outside Slopes	20.6.7.17.D.(1).(a) NMAC	Maximum 2:1 (H:V)
Static factor of safety	20.6.7.17.D.(1).(a) NMAC	Minimum 1.3
Liner Sidewall seams	20.6.7.17.D.(1).(e) NMAC	Vertical only
Capacity	20.6.7.17.D.(2) NMAC	Contain 100-year return interval storm event plus minimum 2 ft of freeboard

3.2 IMPACTED STORMWATER IMPOUNDMENTS

Impacted stormwater impoundments are designed to hold impacted stormwater for less than 30 days in accordance with NMAC 20.6.7.17 (D) (4) and (7).

Liner system	20.6.7.17.D.(4).(a) NMAC	Compacted minimum 6-inch subbase overlain by 60 mil HDPE liner system
Wind protection	20.6.7.17.D.(4).(d) NMAC	Weighting system to limit liner damage in high winds
Spillway design	20.6.7.17.D.(7) NMAC	Safely discharge peak flow from 24-hour storm event with 25-year return

3.3 PROCESS WATER RESERVOIR

Process Water Impoundments/Reservoirs are designed to hold process water at design capacity plus impacted stormwater for more than 30 days in accordance with NMAC 20.6.7.17 (D) (3).

Liner system	20.6.7.17.D.(3).(a)and 20.6.7.17.D.(3). (c) NMAC	Primary 60 mil HDPE liner over a secondary 60 mil HDPE liner with drainage layer over a compacted minimum 6-inch subbase
Leakage collection system	20.6.7.17.D.(3).(d) NMAC	Drainage layer between primary and secondary liners with fluid removal system
Drainage layer	20.6.7.17.D.(3).(d) NMAC	Granular soil material or geosynthetic drainage net
Drainage layer slope	20.6.7.17.D.(3).(d) NMAC	At least 2 percent
Drainage layer permeability	20.6.7.17.D.(3).(d) NMAC	At least 1 x 10^{-2} centimeters per second (cm/s)
Collection sump	20.6.7.17.D.(3).(d) NMAC	At confluence drainage layer with dedicated automatic pump system with totalizing flow meter and automated failure alarm system
Spillway design	20.6.7.17.D.(7) NMAC	No discharge to ground surface, safely discharge peak process flows

4 DESIGN AND CONSTRUCTION OF IMPACTED STORMWATER IMPOUNDMENTS AND PROCESS WATER RESERVOIR

The Copper Flat Project permit boundary (Figure 2) incorporates the mine pit, processing plant area, waste rock stockpiles (WRSPs), and the TSF. The TSF and related facilities including the cyclone plant, surge pond, and underdrain collection pond are described by others. The mine and process plant area includes five developed watershed (WS) areas (Figure 3) that are managed as part of this plan. The facilities described below are designed to manage process and impacted stormwater to prevent releases from the site to surface water and groundwater (Figure 4).

4.1 FACILITIES

WS A includes the process plant, maintenance, and administrative areas of the Copper Flat Project. It also includes WS E, which is the Process Water Reservoir as a separate, internal area of stormwater and process water management (Sec. 4.1.5). During precipitation events, sheet flow of stormwater is directed (Figure 5) to open channel conveyances designed to convey the peak flow from a 100-year return interval storm event with at least 6 inches of freeboard to Impacted Stormwater Impoundment A (Figures 6 and 7). The impoundment is designed with a spillway that is capable of safely discharging the peak flow from a 25-year, 24-hour precipitation event with a 90 percent chance of not being exceeded during the design life of the impoundment. Design criteria for Impacted Stormwater Impoundment A are presented in Table 1.

WS B includes runoff from the western flank of Animas Peak and proposed new waste rock stockpiles (WRSP-1) (Figure 3). During precipitation events, sheet flow of stormwater is directed (Figure 3) to open channel conveyances designed to convey the peak flow from a 100-year return interval storm event with at least 6 inches of freeboard to Impacted Stormwater Impoundment B (Figures 8 and 9). The impoundment is designed with a spillway to the mine pit that is capable of safely discharging the peak flow from a 25-year, 24-hour precipitation event with a 90 percent chance of not being exceeded during the design life of the impoundment. Design criteria for Impacted Stormwater Impoundment B are presented in Table 1.

WS C includes runoff from the eastern flank of Animas Peak and proposed new waste rock stockpiles (WRSP-2 and 3) (Figure 3). During precipitation events, sheet flow of stormwater is directed (Figure 3) to open channel conveyances designed to convey the peak flow from a 100-year return interval storm event with at least 6 inches of freeboard to Impacted Stormwater Impoundment C (Figures 10 and 11). The impoundment is designed with a spillway that is capable of safely discharging the peak flow from a 25-year, 24-hour precipitation event with a 90 percent chance of not being exceeded during the design life of the impoundment. Design criteria for Impacted Stormwater Impoundment C are presented in Table 1.

WS D includes runoff from uphill slopes and existing waste rock stockpiles (EWRSP-1 and -2b) to the mine pit (Figure 3). During precipitation events, sheet flow of stormwater is directed by natural drainage channels and open channel conveyances designed to convey the peak flow from a 100-year return interval storm event with at least 6 inches of freeboard to the mine pit.

WS E consists of direct precipitation onto the lined surfaces of the Process Water Reservoir and unlined perimeter road that is directed to the reservoir (Figure 3). The amount of direct precipitation to the pond is small (9.5 cubic feet per second [cfs]) in comparison to the design throughput of process solutions through the pond (100,000 cfs). The design freeboard of 2 ft is more than adequate to handle the additional flux from a precipitation event. The design capacity of the pond is 726,400 cubic feet (ft^3) with 2 ft of freeboard and the ultimate capacity is 938,000 ft^3 (Figures 12 and 13). Overtopping of the reservoir is controlled by an alarm system and emergency shutoff system. Overtopping flows, in the event of system failure, are directed to the lined tailings conveyance trench to the lined tailings impoundment. Design criteria for the Process Water Reservoir are presented in Table 1.

4.2 SURFACE WATER CONTROL

Surface areas draining to the Impacted Stormwater Impoundments (A, B, and C), mine pit, and Process Water Reservoir will be shielded from run-on surface drainage by site diversions as described in a separate report.

4.3 GEOLOGIC HAZARDS

No geologic hazards are known to exist in the vicinities of the Impacted Stormwater Impoundments or Process Water Reservoir. Impacted Stormwater Impoundment B is located on the eastern wall of the ultimate mine pit (Figure 11J-3). In the event of a pit slope failure, any liquids contained in Impacted Stormwater Impoundment B would be contained in the mine pit.

4.4 SOLUTION CHARACTERIZATION

Liquids routinely expected to enter the Impacted Stormwater Impoundments (A, B, and C) are direct precipitation and stormwater runoff from areas impacted by mining activities including mining, hauling, waste rock stockpiling, mineral processing, and shipping and receiving of goods and products. The Impacted Stormwater Impoundments will be typically empty. Impacted stormwater collected in the impoundments will be pumped out and used as process makeup water.

Liquids routinely expected to enter the Process Water Reservoir include direct precipitation, water reclaimed from the Copper-Moly (Cu-Mo) Thickener, fresh make-up water from the water supply wellfield, and reclaimed water from the Tailings Impoundment and Underdrain Collection Pond. The Process Water Reservoir is typically maintained at a nearly full operational level at all times to ensure continuity of the process during short-term interruptions of return or makeup flows. The physical characteristics of these constituents are expected to be neutral to slightly alkaline and completely compatible with the liner materials. Flows from upset conditions in the concentrator do not flow directly to the Process Water Reservoir, but would eventually contribute to the water reclaimed from the Tailings Impoundment and Underdrain Collection Pond.

4.5 CAPACITY AND STORAGE DESIGN

The capacity and storage design of the subject impoundments and reservoir are provided in Table 1. The impacted water impoundments are designed to contain the runoff from a 100-year, 24-hour storm event with a minimum of 2 ft of freeboard.

The Process Water Reservoir is designed to contain the maximum design process flow plus stormwater runoff from the reservoir catchment area with a minimum of 2 ft of freeboard.

4.6 SPILLWAY DESIGN

Spillways for Impacted Stormwater Impoundments A, B, and C are designed to safely discharge the peak runoff of a 25-year, 24-hour precipitation event. The spillways for Impacted Stormwater Impoundments A and C are designed as open channel spillways with slopes that are suitable for vehicle access on the perimeter road. The spillway for Impacted Stormwater Impoundment B is designed as a culvert beneath the haul road. The culvert(s) will have sufficient capacity to safely pass peak runoff from the prescribed precipitation event.

Overflow protection for the process water reservoir is accomplished via a designed solution conveyance to the lined tailings conveyance trench, which conveys any upset flows that exceed the maximum capacity without compromising the integrity of the structure.

4.7 SITE PREPARATION

The pond areas will be cleared and grubbed of vegetation. Any unsuitable foundation materials within the pond footprint will be excavated and replaced. Bedding soil will be placed, moisture conditioned, and compacted pursuant to 20.6.7.17.D.(3) and (4). The bedding soil must be free of sharp rock, vegetation, and stubble to a depth of at least 6 inches. The bedding surface must be smooth to ensure good contact between the liner and the bedding. The liner must be placed on a layer of sand or fine soil. The floor of the bedding surface will be sloped to collection sump at grades of up to 1 percent to facilitate removal of the contents. Side slopes will be less than 2H:1V to permit proper installation of the liner system. The liner bedding shall have an acceptance certificate prior to installation of the liner.

4.8 LINER SYSTEMS

Pursuant to 20.6.7.17.D.(4), the liner system of the Impacted Stormwater Impoundments consists of a single 60 mil HDPE textured geomembrane liner that is certified as UV resistant in accordance with a Construction Quality Assurance and Construction Quality Control (CQA/CQC) Plan, which will be generated and approved prior to construction. Liner panels shall be oriented such that the seams on the sidewall of the impoundments are vertical. Sufficient slack in the liner will be maintained to accommodate expansion and contraction of the liner material due to changes in temperature. These impoundments are typically empty and the liner will be weighted to prevent wind damage. The liner shall be secured in an anchor trench (Figure 14, Detail 3).

Pursuant to 20.6.7.17.D. (3), the liner system for the Process Water Reservoir consists of a secondary liner, drainage layer, and primary liner. The drainage layer connects directly to the fluid collection sump and fluid removal system to alleviate the need for fluid collection pipes. This reservoir typically contains solution and will not require the liner to be weighted unless there is a prolonged period when the reservoir will be empty and susceptible to wind damage. The liner system shall be secured in an anchor trench (Figure 14, Detail 1).

The lower (secondary) liner consists of a single 60 mil HDPE geomembrane AGRU® drainage liner, or equivalent, that is installed in accordance with an approved CQA/CQC Plan. This type of secondary liner, paired with a primary liner, doubles as a drainage layer with a coefficient of permeability of 1×10^{-2} cm/s on a design slope of 2 percent. Liner panels shall be oriented such that the seams on the sidewall of the impoundments are vertical. Sufficient slack in the liner will be maintained to accommodate expansion and contraction of the liner material due to changes in temperature.

The primary liner for the Process Water Reservoir consists of a single 60 mil HDPE textured geomembrane liner that is certified as UV resistant and installed in accordance with an approved CQA/CQC Plan. Liner panels shall be oriented such that the seams on the sidewall of the impoundments are vertical. Sufficient slack in the liner will be maintained to accommodate expansion and contraction of the liner material due to changes in temperature.

A CQA/CQC plan will be developed by the design engineer and the liner installation contractor and for approval by the appropriate agency as part of the final design prior to construction. The plan includes the following elements.

- Identification of persons and entities responsible for overseeing the program.
- Inspection protocols for subgrade, materials, placement, anchoring, welding, testing, and repairing.
- Identification of field and laboratory testing equipment and testing entities.
- Procedures for observing and testing liner, subgrade, bedding, etc.
- Verification protocol for manufacturer's QC testing.
- Procedures for reviewing results of testing and inspection.
- Corrective actions for material repair, subgrade and bedding deficiencies, weld testing failures, or other construction defects.
- Seaming procedures, qualification, testing, and inspection.
- QA/QC reporting procedures, schedules, and certifications.

- Guidelines, schedules, contents, and certifications for submission of a CQA/CQC report.

4.9 LEAK COLLECTION SYSTEM

Pursuant to 20.6.7.17.D.(3).(d), the liner drainage layer of the process water reservoir discharges directly into a leakage collection sump (Figure 14, Detail 6) which is part of the fluid removal system. The sump contains granular fill materials to convey the drainage fluid to the fluid removal pipe and pump system. The fluid removal pipe consists of a 6" Sch. 80 polyvinyl chloride (PVC) pipe with 3 ft of slotted screen at the bottom for water collection. The fluid removal pipe can be cleaned using conventional pipe cleaning equipment. An automated fluid removal pump is installed at the bottom of the pipe to enable removal of leakage. The pump is activated in the presence of drainage fluid in the sump and is turned off when the fluid has been removed. A totalizing flow meter records the volume of fluid removed from the sump. The pump also has an alarm system to notify the operator of system failure.

4.10 PERFORMANCE INSPECTIONS AND OPERATIONAL MONITORING

Routine inspections of the Process Water Reservoir and Impacted Stormwater Impoundments begin at the time of construction and proceed quarterly. Additional inspections are prescribed in the event of a process upset or a significant stormwater flow event. Inspections include visual assessment of integrity and physical assessment of pond capacity. Water levels in the ponds are noted with respect to the freeboard. Totalizing meter readings are recorded from fluid removal pumps from the leakage collection sump and from the impacted stormwater impoundment pumps.

TABLES

Table 1: Impoundment Design Criteria

Impoundment ID	Stormwater Impoundment A	Stormwater Impoundment B	Stormwater Impoundment C	Process Water Reservoir
Catchment Area (ac)	91.06	98.52	198.66	1.80
Peak Flow, Q100 (cfs)[1]	200.25	176.88	315.76	9.54
Pond Size - Approx, Surface area (ac)	1.98	2.12	6.37	1.80
Freeboard Requirement (ft)	2.0	2.0	2.0	2.0
Capacity at Freeboard (ft^3)	976,800	748,400	1,405,500	726,400
Design Capacity at spillway/crest (ft^3)	1,280,500	913,200	1,802,100	938,000
Primary Liner Specifications[2]	60 mil HDPE or equivalent 6" fine soil subgrade Certified UV resistant	60 mil HDPE or equivalent 6" fine soil subgrade Certified UV resistant	60 mil HDPE or equivalent 6" fine soil subgrade Certified UV resistant	60 mil HDPE or equivalent Certified UV resistant
Secondary Liner Specifications[2]	N/A	N/A	N/A	60 mil HDPE or equivalent 6" fine soil subgrade
Drainage Layer Specifications[3]	N/A	N/A	N/A	Geonet drainage layer Slope min. 2% Perm. min. 1 x 10-2 cm/s
Perforated Fluid Collection System[4]	N/A	N/A	N/A	Geonet drainage layer
Fluid Removal System[2]	N/A	N/A	N/A	Automatic pump Totalizing flow meter Automated failure alarm
Design Flow for Conveyance Structures (cfs)	Q100 = 200.25	Q100 = 176.88	Q100 = 315.76	Q100 = 9.54
Design Storm for Pond & Source	100-yr, 24hr rainfall event, WS A	100-yr, 24hr rainfall event, WS B	100-yr, 24hr rainfall event, WS C	100-yr, 24hr rainfall event, WS E
Design Storm for Spillway & Source	200-yr, 24hr rainfall event, WS A	200-yr, 24hr rainfall event, WS B	200-yr, 24hr rainfall event, WS C	N/A
Peak Flow, Q200 for Spillway (cfs)[5]	6.16	6.37	8.80	N/A
Bank Slopes	2:1 (H:V) Max	2:1 (H:V) Max	2:1 (H:V) Max	2:1 (H:V) Max

[1] Precipitation data is per NOAA Atlas 14, Volume 1, Version 5; Hillsboro, NM, Station ID: 29-4009

[2] Specifications are per 20.6.7.17.D.(3) and (4)(c)

[3] Specifications are per 20.6.7.17.D.(3)(d)

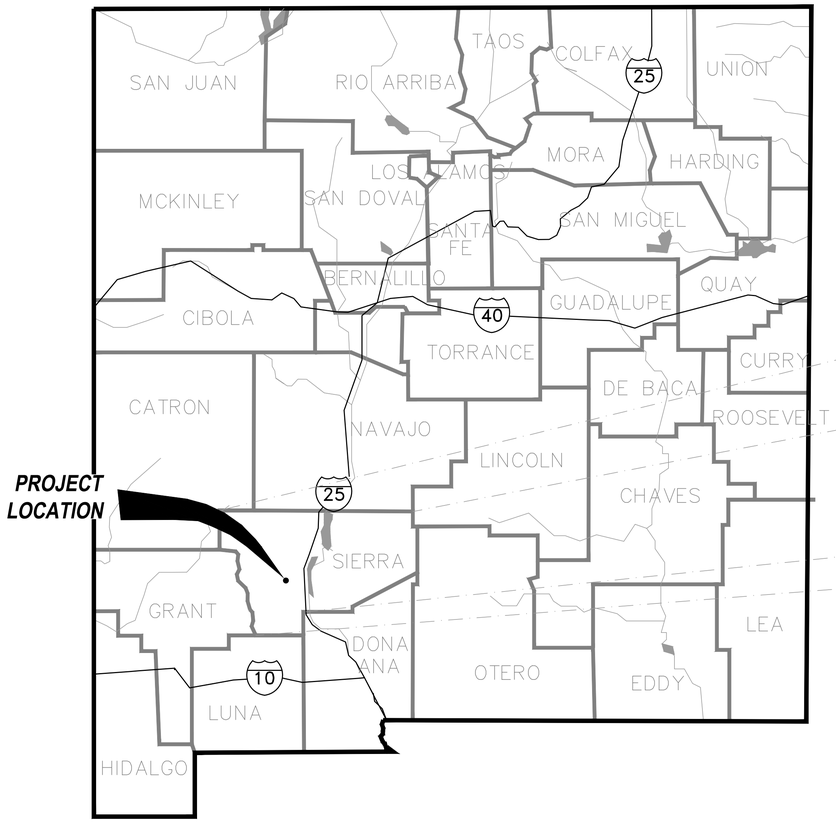
[4] Geonet layer drains directly into collection sump and fluid removal system

[5] Design Flow for spillway is approximate flow from pond to spillway during the 200-yr event assuming the spillway elevation is at the 100-yr WSEL

FIGURES

NEW MEXICO COPPER CORPORATION

COPPER FLAT PROJECT
SIERRA COUNTY, NEW MEXICO



STATE OF NEW MEXICO
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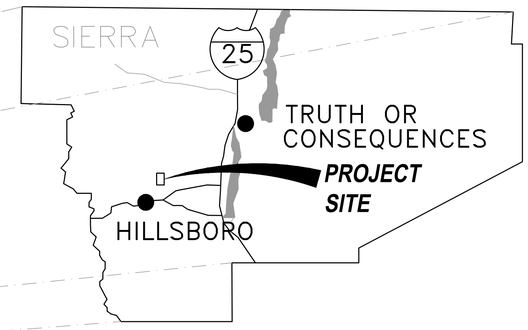

PROJECT LOCATION MAP
NOT TO SCALE

FIGURE 1

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

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REVISIONS					
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DESIGNED BY	SAM	DEC12
DRAWN BY	SAM	DEC12
CHECKED BY	TDL	JAN13
PROJECT MGR	RKZ	
CLIENT APPR.		

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COPPER FLAT PROJECT

SITE GENERAL
CIVIL
PROJECT AREA
SITE LOCATION PLAN

JOB NO. M3 PN-120085
DWG NO. **0000-CI-001**
REV NO. P4
DATE 05 MAR 13

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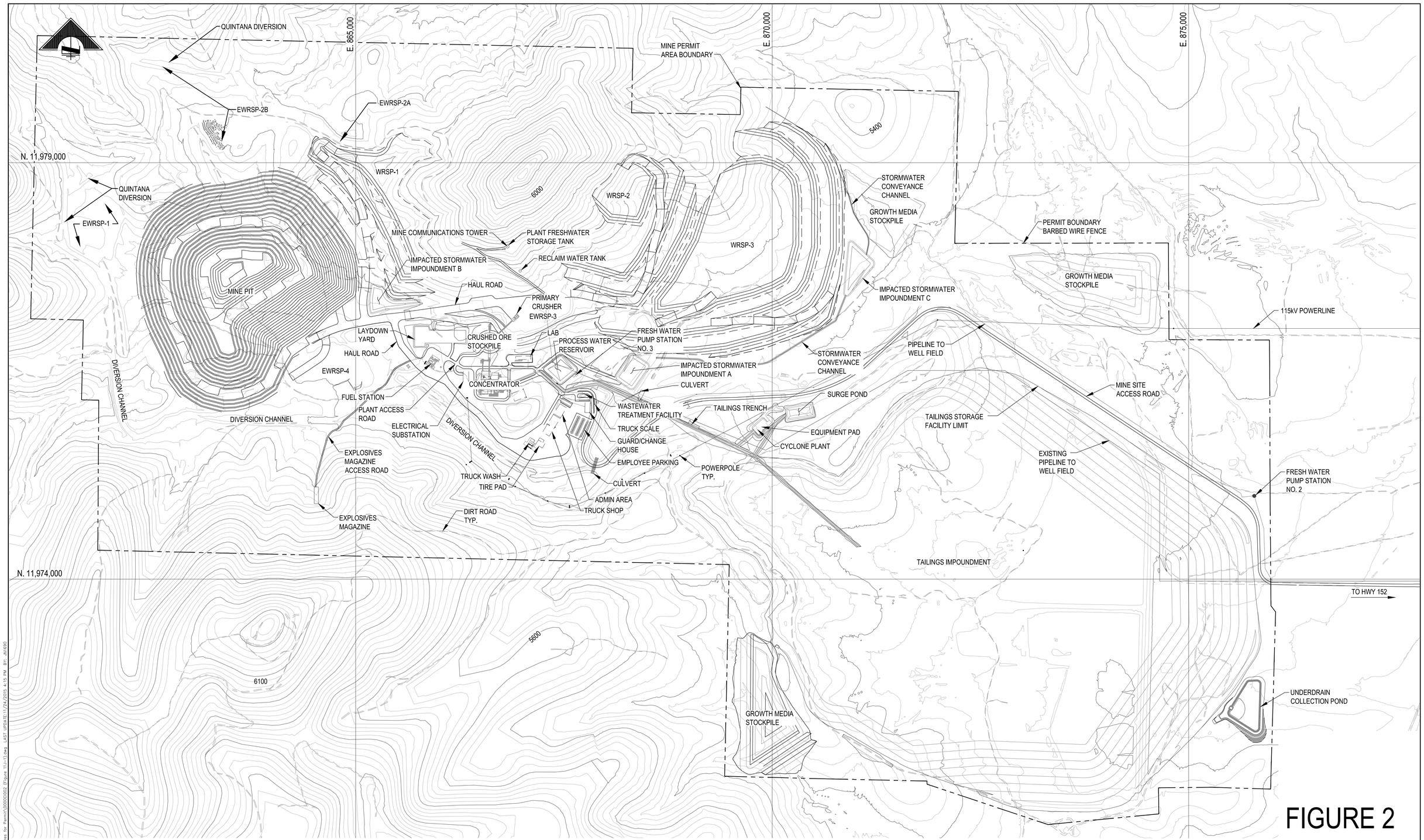

FIGURE 2

EWRSP = EXISTING WASTE ROCK STOCKPILE
WRSP = WASTE ROCK STOCKPILE

SITE PLAN
SCALE: 1:500

500' 250' 0' 500' 1000'
1" = 500'
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

REFERENCES		REFERENCES	
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DESIGNED BY	SAM	DEC12
DRAWN BY	SAM	DEC12
CHECKED BY	TDL	JAN13
PROJECT MGR	RKZ	
CLIENT APPR.		

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COPPER FLAT PROJECT

SITE GENERAL
CIVIL
PROJECT AREA
PROPOSED SITE PLAN

JOB NO. M3 PN-120085
DWG NO. **FIGURE 11J-1**
REV NO. P18
DATE 16 NOV 15

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E. 865,000

E. 869,000

N. 11,979,500

N. 11,975,500

EXISTING QUINTANA DIVERSION

EWRSP-2B

EWRSP-2A

MINE PERMIT AREA BOUNDARY

STORMWATER CONVEYANCE CHANNEL

WRSP-1

ANIMAS PEAK

PROPOSED DIVERSION SWALE

WS B

WS D

WRSP-2

EXISTING QUINTANA DIVERSION

EWRSP-1

ULTIMATE PIT EXTENTS

6100

6000

5900

5800

5700

5600

WRSP -3

497.35 CFS

OVERFLOW CULVERT TO OPEN PIT

IMPACTED STORMWATER IMPOUNDMENT B SEE SHEET 0000-CI-021 FOR DETAILS

MINE PIT

4.5' BERM

202.55 CFS

WS C

IMPACTED STORMWATER IMPOUNDMENT C SEE SHEET 0000-CI-027 FOR DETAILS

315.76 CFS

EWRSP-3

WS A

IMPACTED STORMWATER IMPOUNDMENT A SEE SHEET 0000-CI-023 FOR DETAILS

PROCESS WATER RESERVOIR SEE SHEET 0000-CI-025 FOR DETAILS

STORMWATER CONVEYANCE CHANNEL

GRAYBACK ARROYO

EWRSP-4

WS E

171.62 CFS

CONCENTRATOR

GRAYBACK ARROYO

GRAYBACK ARROYO

EXISTING CULVERTS

5500

5600

GRAYBACK ARROYO

EXISTING QUINTANA DIVERSION

MINE PERMIT AREA BOUNDARY

WATERSHED SUMMARY

WATERSHED ID	AREA (AC)	Q100 (CFS)
WS A	95.71	171.82
WS B	92.12	202.55
WS C	198.66	315.76
WS D	233.81	497.35
WS E	1.80	9.54

LEGEND:

- FLOW ARROW
- WATERSHED BOUNDARY
- RUNOFF CONCENTRATION POINT
- DRAINAGE SWALE

EWRSP = EXISTING WASTE ROCK STOCKPILE
WRSP = WASTE ROCK STOCKPILE

PLAN VIEW
SCALE: 1" = 300'

300 150 0 300 600
SCALE IN FEET
CONTOUR INTERVAL = 5FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 3

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-021	IMPACTED STORMWATER IMPOUNDMENT A PLAN VIEW		
0000-CI-023	IMPACTED STORMWATER IMPOUNDMENT B PLAN VIEW		
0000-CI-025	PROCESS WATER RESERVOIR PLAN VIEW		
0000-CI-027	IMPACTED STORMWATER IMPOUNDMENT D PLAN VIEW		

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	1" = 300'	DATE
DESIGNED BY	SAM	NOV 12
DRAWN BY	SAM	NOV 12
CHECKED BY	TDL	NOV 12
PROJECT MGR	RKZ	NOV 12
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL SITE
CIVIL
MINE AREA
DEVELOPED WATERSHED AREAS

JOB NO. M3 PN-120085
DWG NO. **FIGURE 11J-3**
REV NO. P10
DATE 29 OCT 15

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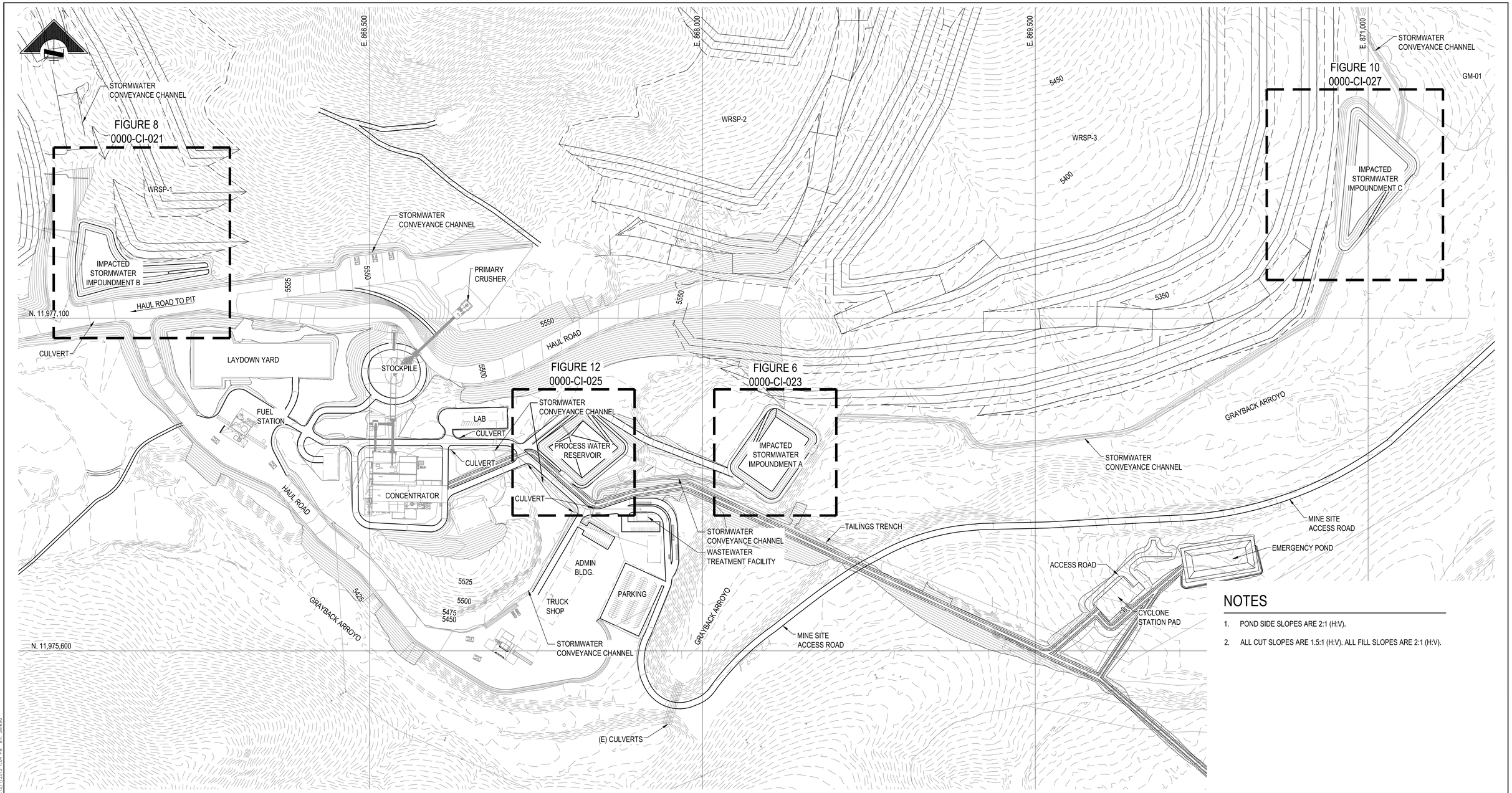

SITE PLAN

SCALE: 1:200

NOTES

1. POND SIDE SLOPES ARE 2:1 (H:V).
2. ALL CUT SLOPES ARE 1.5:1 (H:V). ALL FILL SLOPES ARE 2:1 (H:V).

FIGURE 4

200 100 0 200 400 600

SCALE IN FEET
CONTOUR INTERVAL = 5.0FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

THEMAC RESOURCES

REFERENCES		REFERENCES	
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0000-CV-023	IMPACTED STORMWATER IMPOUNDMENT A, PLAN VIEW		
0000-CV-025	PROCESS WATER RESERVOIR PLAN VIEW		
0000-CV-027	IMPACTED STORMWATER IMPOUNDMENT C, PLAN VIEW		

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REVISIONS					
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DRAWN BY	SAM	JUL 15
CHECKED BY	JPN	JUL 15
PROJECT MGR	RKZ	JUL 15
CLIENT APPR.		

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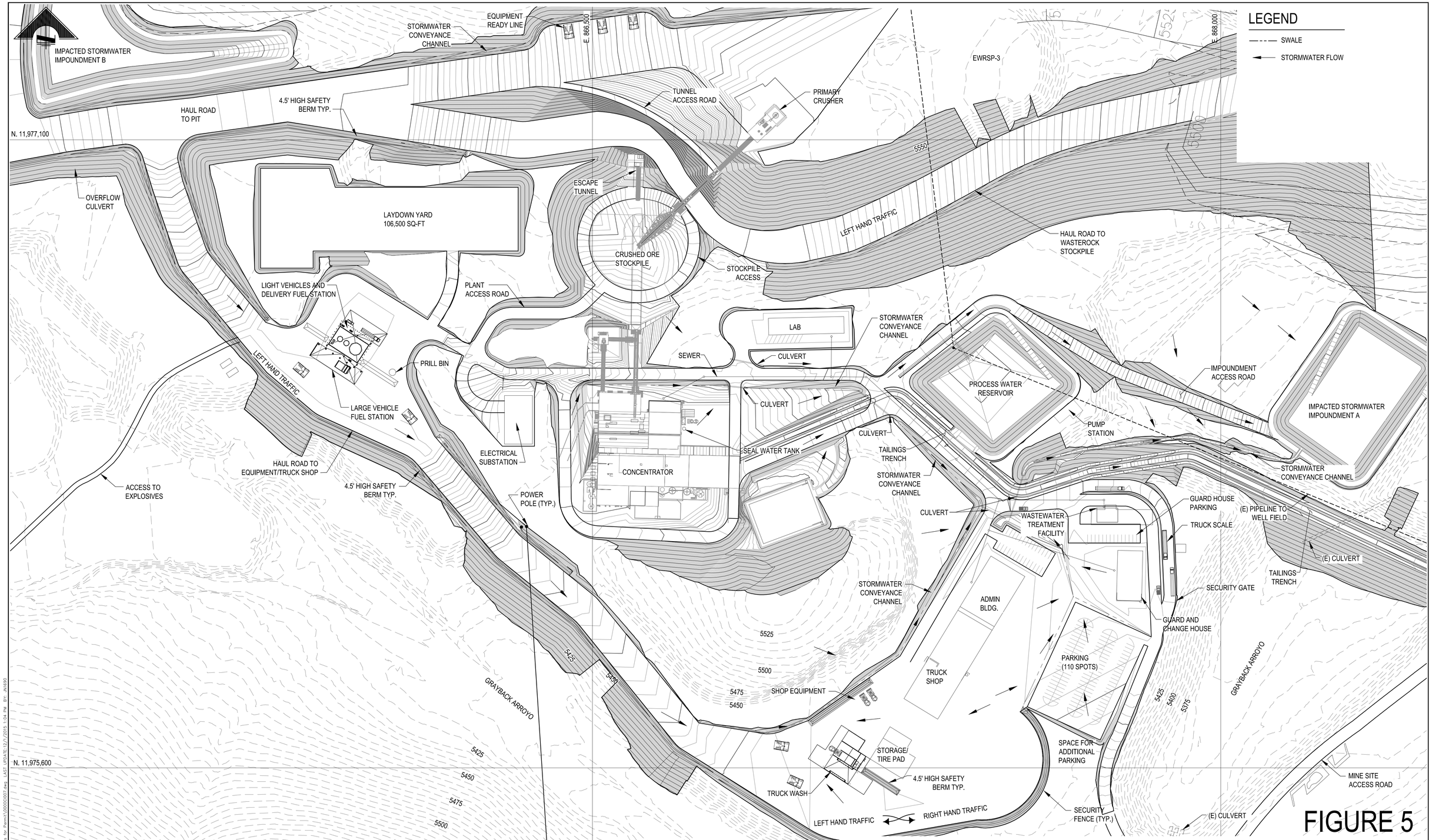
COPPER FLAT PROJECT

SITE GENERAL
CIVIL
STORMWATER & PROCESS WATER PONDS
OVERALL PLAN

JOB NO. M3 PN-120085
DWG NO. **0000-CI-020**
REV NO. P3
DATE 09 OCT 15

File: P:\2012\120085\CIVIL (344)\344.2 Dwgs\Figures for Permit\0000CI020.dwg LAST UPDATE:12/1/2015 1:04 PM BY: JN1690



SITE PLAN
SCALE: 1:100

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 5

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	1"= 100'	DATE
DESIGNED BY	SAM	FEB 13
DRAWN BY	SAM	FEB 13
CHECKED BY	TDL	FEB 13
PROJECT MGR	RKZ	FEB 13
CLIENT APPR.		

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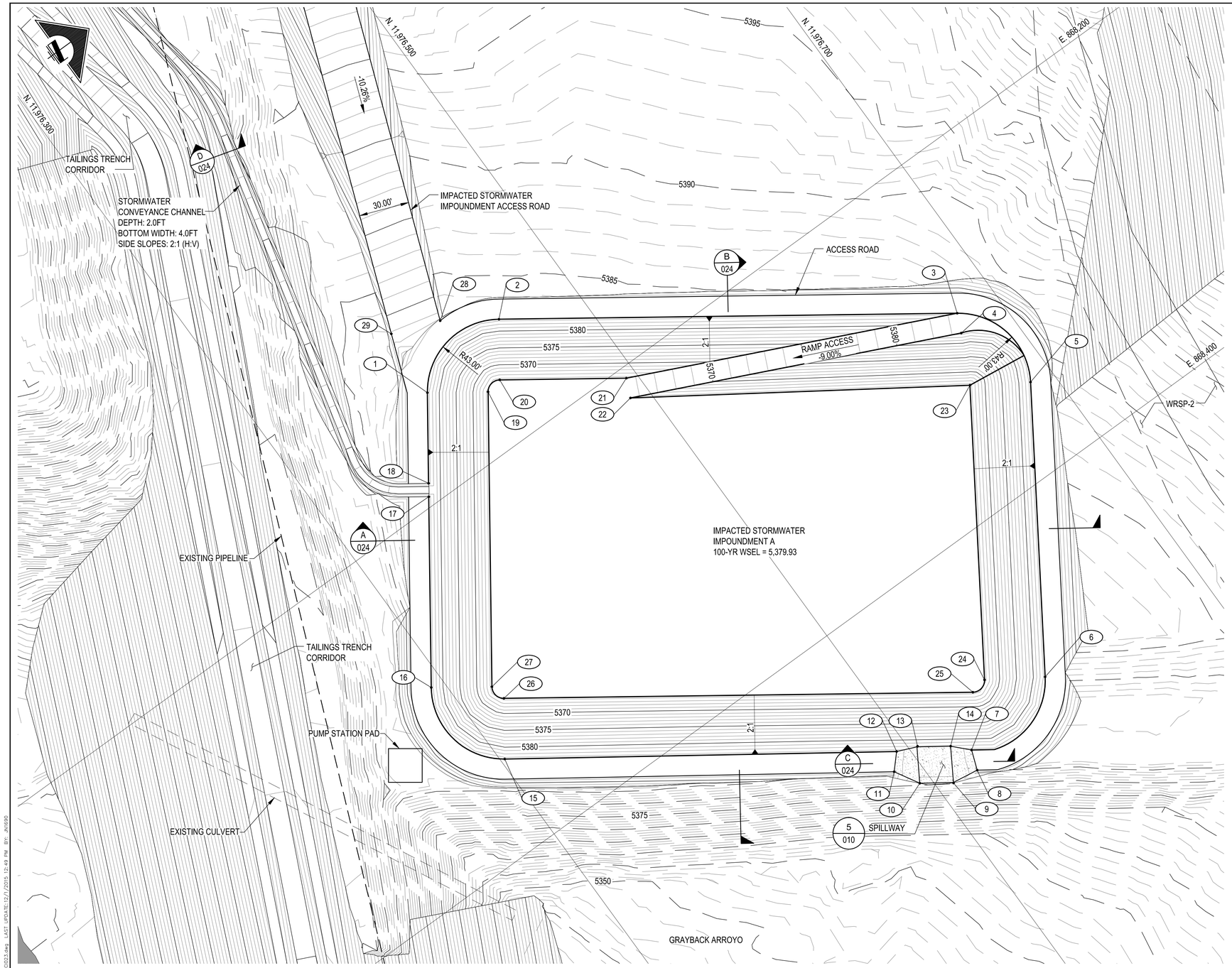
COPPER FLAT PROJECT

SITE GENERAL CIVIL PROJECT AREA PROCESS AREA SITE PLAN

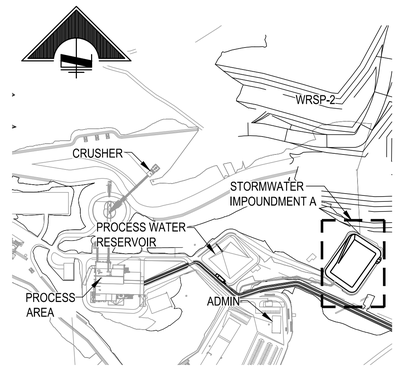
JOB NO. M3 PN-120085
DWG NO. 0000-CI-007
REV NO. P9
DATE 09 OCT 15

File: P:\2013\120085\CIVIL (S44)\S44.2 Dwgs\Figures for Permit\0000CI007.dwg LAST UPDATE:12/1/2015 1:04 PM BY: JN690



PLAN
SCALE: 1" = 30'

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
1	11976393.13	868144.02	5383.50
2	11976453.06	868133.72	5383.50
3	11976675.02	868290.57	5383.50
4	11976670.08	868301.51	5383.50
5	11976686.19	868349.21	5383.50
6	11976590.39	868495.80	5383.50
7	11976529.56	868505.28	5383.50
8	11976525.25	868516.90	5383.50
9	11976509.58	868514.53	5381.96
10	11976493.13	868503.16	5381.96
11	11976484.86	868488.73	5383.50
12	11976493.10	868479.86	5383.50
13	11976504.45	868484.69	5382.18
14	11976520.85	868496.13	5382.18
15	11976302.43	868346.86	5383.50
16	11976292.13	868286.93	5383.50
17	11976357.47	868194.48	5383.50
18	11976362.08	868187.95	5383.50
19	11976422.53	868164.79	5365.50
20	11976432.28	868163.12	5365.50
21	11976493.65	868206.42	5365.50
22	11976488.60	868217.31	5365.50
23	11976656.01	868329.59	5365.50
24	11976560.26	868476.10	5365.50
25	11976550.36	868477.99	5365.50
26	11976323.21	868317.47	5365.50
27	11976321.53	868307.71	5365.50
28	11976424.35	868113.97	5383.50
29	11976396.34	868103.21	5383.50



KEY MAP
SCALE: 1" = 500'

NOTES:

1. STORMWATER IMPOUNDMENT A IS INTENDED TO CAPTURE STORMWATER RUNOFF FROM THE MINE SITE PROCESS AREA.
2. STORMWATER IMPOUNDMENT IS SIZED TO CONTAIN THE 100-YR, 24-HR RAINFALL EVENT WITH A MINIMUM OF 2.0 FEET OF FREEBOARD.
3. STORMWATER IMPOUNDMENT SHALL BE SINGLE LINED WITH 60MIL HDPE LINER, PER DETAIL 4 ON SHEET 0000-CI-010, OR APPROVED EQUAL.
4. STORMWATER SPILLWAY IS DESIGNED FOR THE 25-YR, 24-HR RAINFALL EVENT AT MINIMUM.
5. SPILLWAY IS DESIGNED TO ALLOW FOR VEHICULAR TRAFFIC.

IMPOUNDMENT SUMMARY		
CAPACITY AT 100-YR WSEL	976,772	CU-FT
ULTIMATE CAPACITY	1,280,516	CU-FT

30 15 0 30 60
SCALE IN FEET
CONTOUR INTERVAL = 1.0FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 6

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-024	IMPACTED STORMWATER IMPOUNDMENT A, SECTIONS		
0000-CI-010	STANDARD DETAILS SHEET 3		

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE: AS NOTED		DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	AUG 15
PROJECT MGR	RKZ	AUG 15
CLIENT APPR.		

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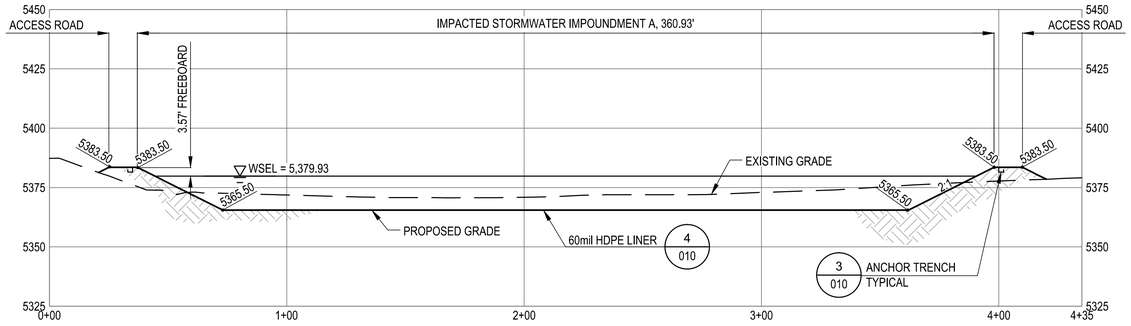
COPPER FLAT PROJECT

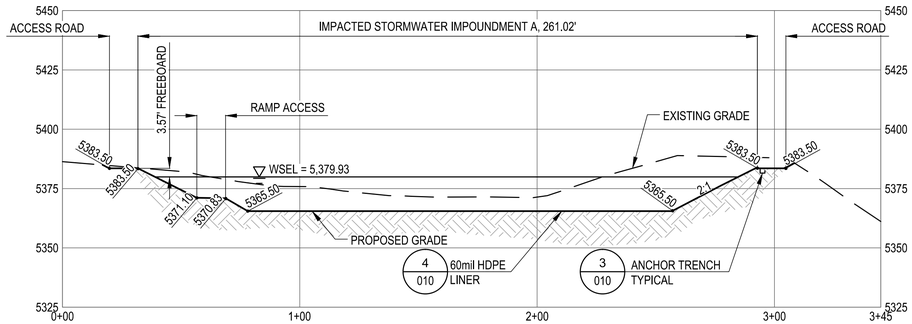
GENERAL SITE
CIVIL
IMPACTED STORMWATER IMPOUNDMENT A
PLAN VIEW

JOB NO. M3 PN-120085
DWG NO. **0000-CI-023**
REV NO. P3
DATE 09 OCT 15

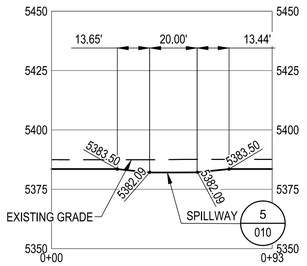
File: P:\2012\120085\CIVIL (344)\344.2 Dwgs\Figures for Permit\0000023.dwg LAST UPDATE:12/1/2015 12:49 PM BY: JN1690



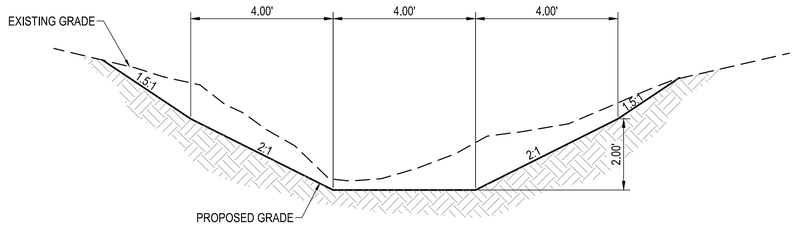
SECTION A
SCALE: 1" = 30'



SECTION B
SCALE: 1" = 30'



SECTION C
SCALE: 1" = 30'



SECTION D
SCALE: NTS

NOTES:

1. STORMWATER CONVEYANCE CHANNEL WILL BE DESIGNED TO CONVEY, AT A MINIMUM, THE PEAK FLOW FROM A 100 YEAR RETURN INTERVAL STORM EVENT WHILE PRESERVING NO LESS THAN 6 INCHES OF FREEBOARD.
2. CONVEYANCE STRUCTURE WILL BE DESIGNED TO MINIMIZE PONDING AND INFILTRATION OF STORMWATER.

30 15 0 30 60
SCALE IN FEET

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 7

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-023	IMPACTED STORMWATER IMPOUNDMENT A, PLAN VIEW		
0000-CI-010	STANDARD DETAILS SHEET 3		

REVISIONS						REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE: AS NOTED		DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	AUG 15
PROJECT MGR	RKZ	AUG 15
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL SITE
CIVIL
IMPACTED STORMWATER IMPOUNDMENT A SECTIONS

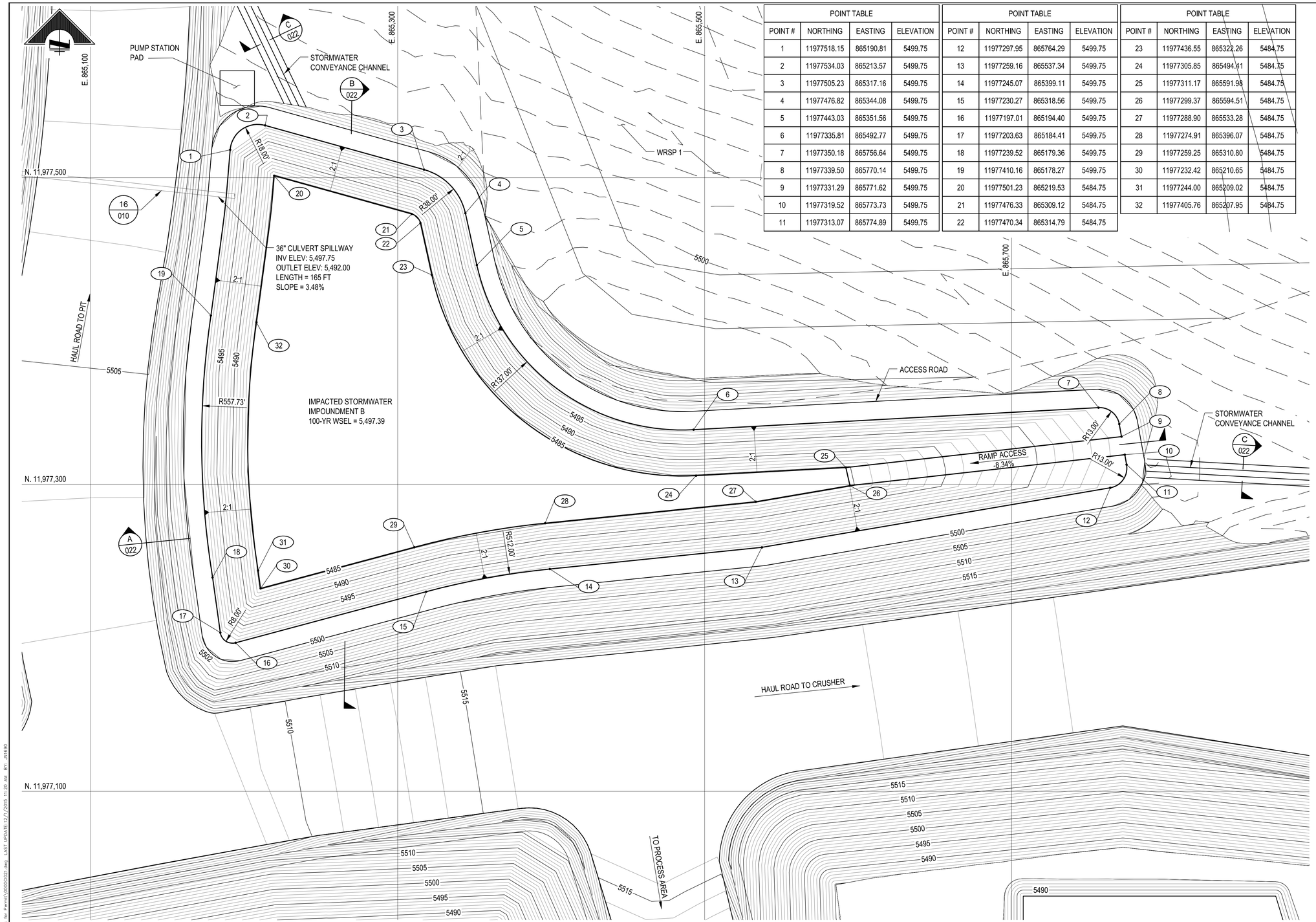
JOB NO. M3 PN-120085
DWG NO. **0000-CI-024**
REV NO. P3
DATE 09 OCT 15

File: P:\2012\120851\CIVIL (544)\544.2 Dwgs\Figures for Permit\000000024.dwg LAST UPDATE:12/1/2015 11:20 AM BY: JW1690

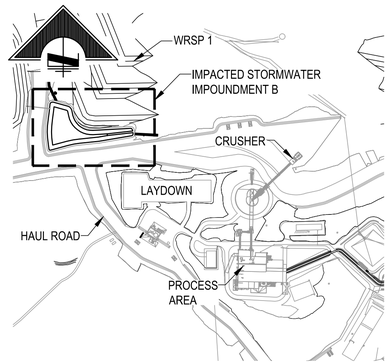
POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
1	11977518.15	865190.81	5499.75
2	11977534.03	865213.57	5499.75
3	11977505.23	865317.16	5499.75
4	11977476.82	865344.08	5499.75
5	11977443.03	865351.56	5499.75
6	11977335.81	865492.77	5499.75
7	11977350.18	865756.64	5499.75
8	11977339.50	865770.14	5499.75
9	11977331.29	865771.62	5499.75
10	11977319.52	865773.73	5499.75
11	11977313.07	865774.89	5499.75

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
12	11977297.95	865764.29	5499.75
13	11977259.16	865537.34	5499.75
14	11977245.07	865399.11	5499.75
15	11977230.27	865318.56	5499.75
16	11977197.01	865194.40	5499.75
17	11977203.63	865184.41	5499.75
18	11977239.52	865179.36	5499.75
19	11977410.16	865178.27	5499.75
20	11977501.23	865219.53	5484.75
21	11977476.33	865309.12	5484.75
22	11977470.34	865314.79	5484.75

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
23	11977436.55	865322.26	5484.75
24	11977305.85	865494.41	5484.75
25	11977311.17	865591.98	5484.75
26	11977299.37	865594.51	5484.75
27	11977288.90	865533.28	5484.75
28	11977274.91	865396.07	5484.75
29	11977259.25	865310.80	5484.75
30	11977232.42	865210.65	5484.75
31	11977244.00	865209.02	5484.75
32	11977405.76	865207.95	5484.75



PLAN
SCALE: 1" = 30'



KEY MAP
SCALE: 1" = 500'

NOTES:

1. STORMWATER IMPOUNDMENT B IS INTENDED TO CAPTURE STORMWATER RUNOFF FROM THE WASTE ROCK STOCK PILE 1 (WRSP-1).
2. STORMWATER IMPOUNDMENT IS SIZED TO CONTAIN THE 100-YR, 24-HR RAINFALL EVENT WITH A MINIMUM OF 2.0 FEET OF FREEBOARD.
3. STORMWATER CULVERT SPILLWAY IS DESIGNED FOR THE 25-YR, 24HR RAINFALL EVENT AT MINIMUM.
4. STORMWATER IMPOUNDMENT SHALL BE SINGLE LINED WITH 60mil HDPE LINER PER DETAIL 4 ON DWG. 0000-CI-010, OR APPROVED EQUIVALENT.

IMPOUNDMENT SUMMARY		
CAPACITY AT 100-YR WSEL	748,445	CU-FT
ULTIMATE CAPACITY	913,160	CU-FT

30 15 0 30 60
SCALE IN FEET
CONTOUR INTERVAL = 1.0FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 8

THEMAC RESOURCES

REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT
0000-CI-022	IMPACTED STORMWATER IMPOUNDMENT B SECTIONS														
0000-CI-005	STANDARD DETAILS SHEET 2														

SCALE:	AS NOTED	
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	JUN 15
PROJECT MGR	RKZ	JUN 15
CLIENT APPR.		

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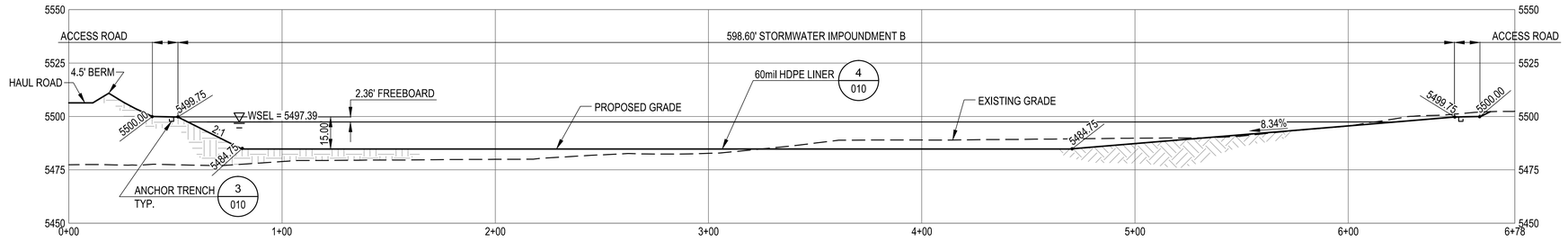
COPPER FLAT PROJECT

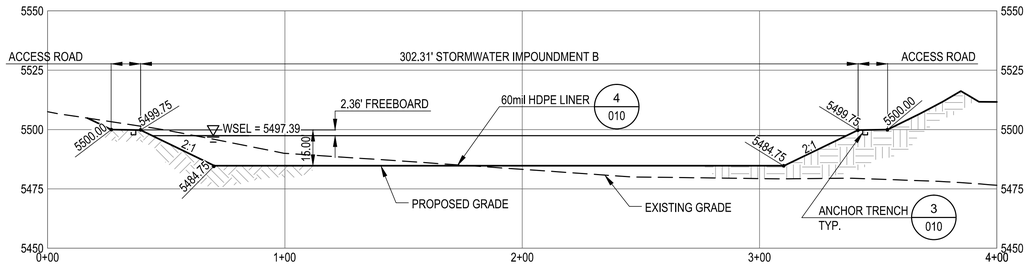
GENERAL SITE
CIVIL
IMPACTED STORMWATER IMPOUNDMENT B
PLAN VIEW

JOB NO. M3 PN-120085
DWG NO. 0000-CI-021
REV NO. P4
DATE 27 OCT 15



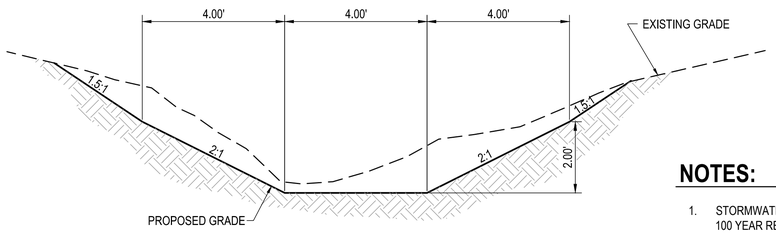
SECTION A
SCALE: 1" = 30'

021



SECTION B
SCALE: 1" = 30'

021



SECTION C
SCALE: 1" = 30'

C
021

NOTES:

1. STORMWATER CONVEYANCE CHANNEL WILL BE DESIGNED TO CONVEY, AT A MINIMUM, THE PEAK FLOW FROM A 100 YEAR RETURN INTERVAL STORM EVENT WHILE PRESERVING NO LESS THAN 6 INCHES OF FREEBOARD.
2. CONVEYANCE STRUCTURE WILL BE DESIGNED TO MINIMIZE PONDING AND INFILTRATION OF STORMWATER.

30 15 0 30 60
SCALE IN FEET

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
NOT FOR CONSTRUCTION

FIGURE 9

THEMAC RESOURCES

REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT
0000-CI-021	IMPACTED STORMWATER IMPOUNDMENT B PLAN VIEW														
0000-CI-010	STANDARD DETAILS SHEET 3														

SCALE:	AS NOTED	DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	AUG 15
PROJECT MGR	RKZ	AUG 15
CLIENT APPR.		

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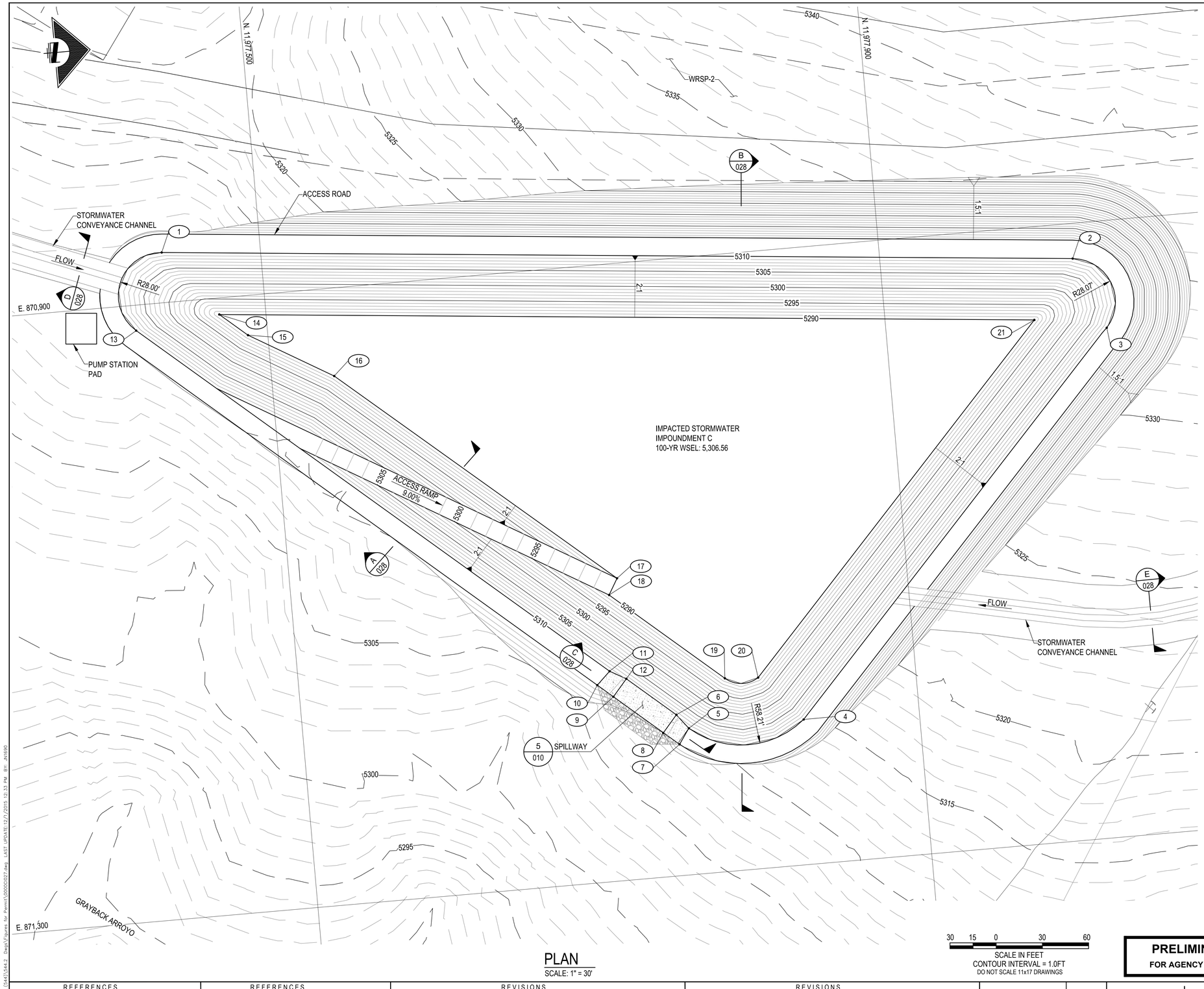
COPPER FLAT PROJECT

GENERAL SITE
CIVIL
IMPACTED STORMWATER IMPOUNDMENT B
SECTIONS

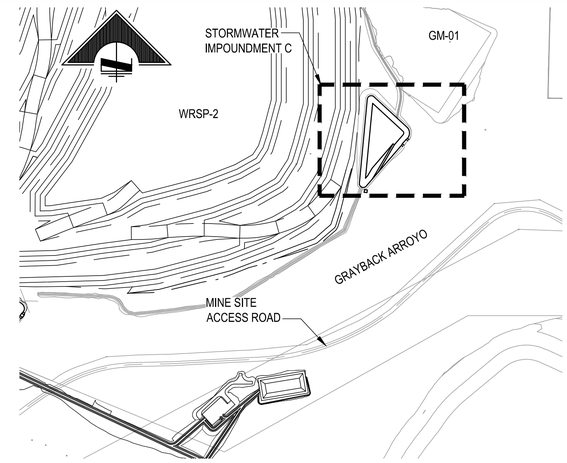
JOB NO. M3 PN-120085
DWG NO. **0000-CI-022**
REV NO. P3
DATE 09 OCT 15

File: P:\2012\120085\CIVIL (3441)\3442 Design\Figures for Permit\0000CI022.dwg LAST UPDATE:12/1/2015 11:20 AM BY: JN1690



PLAN
SCALE: 1" = 30'

30 15 0 30 60
SCALE IN FEET
CONTOUR INTERVAL = 1.0FT
DO NOT SCALE 11x17 DRAWINGS



KEY MAP
SCALE: 1" = 500'

NOTES:

1. IMPACTED STORMWATER IMPOUNDMENT C IS INTENDED TO COLLECT AND RETAIN STORMWATER RUNOFF FROM WASTE ROCK STOCKPILE 2 (WRSP-2) AND WASTE ROCK STOCKPILE 3 (WRSP-3).
2. STORMWATER IMPOUNDMENT IS SIZED TO CONTAIN THE 100-YR, 24-HR RAINFALL EVENT WITH A MINIMUM OF 2.0 FEET OF FREEBOARD.
3. STORMWATER IMPOUNDMENT SHALL BE SINGLE LINED WITH 60mil HDPE PER DETAIL 4 ON SHEET 0000-CI-010, OR APPROVED EQUIVALENT.
4. STORMWATER SPILLWAY IS DESIGNED FOR THE 25-YR, 24-HR RAINFALL EVENT AT MINIMUM.
5. SPILLWAY IS DESIGNED TO ALLOW FOR VEHICULAR TRAFFIC.

IMPOUNDMENT SUMMARY		
CAPACITY AT 100-YR WSEL	1,405,507	CU-FT
ULTIMATE CAPACITY	1,802,067	CU-FT

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
1	11977436.02	870867.41	5310.00
2	11978024.85	870922.90	5310.00
3	11978042.98	870969.57	5310.00
4	11977824.76	871205.86	5310.00
5	11977750.03	871205.03	5310.00
6	11977742.72	871195.59	5308.81
7	11977743.12	871214.89	5310.00
8	11977733.33	871206.49	5308.67
9	11977703.03	871180.38	5308.67
10	11977693.25	871171.96	5310.00
11	11977702.00	871163.65	5310.00

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
12	11977712.41	871169.49	5308.81
13	11977415.12	870916.50	5310.00
14	11977469.75	870910.76	5290.00
15	11977487.16	870925.76	5290.00
16	11977540.59	870957.08	5290.00
17	11977712.07	871103.95	5290.00
18	11977706.00	871114.30	5290.00
19	11977776.14	871174.73	5290.00
20	11977797.74	871176.15	5290.00
21	11977996.59	870960.41	5290.00

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 10

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-028	IMPACTED STORMWATER IMPOUNDMENT C SECTIONS		
0000-CI-005	STANDARD DETAILS SHEET 2		
0000-CI-010	STANDARD DETAILS SHEET 3		

REVISIONS						
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS						
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	AS NOTED	DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	AUG 15
PROJECT MGR	RKZ	AUG 15
CLIENT APPR.		

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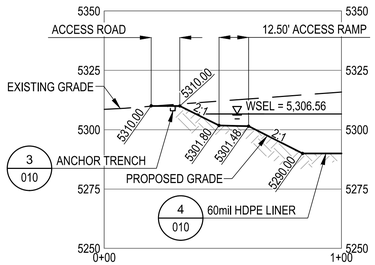
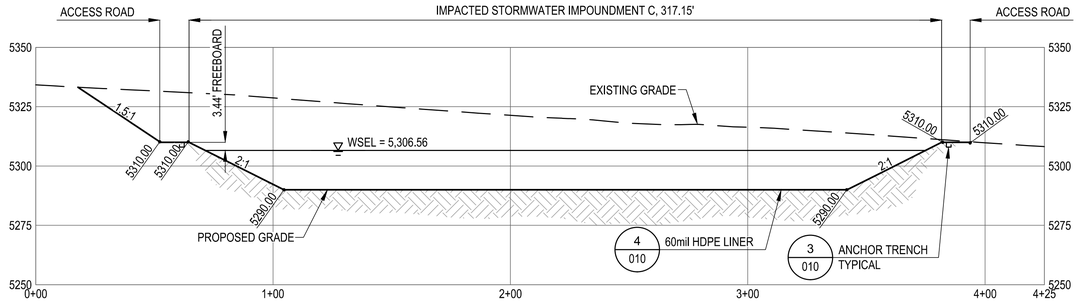
GENERAL SITE
CIVIL
IMPACTED STORMWATER IMPOUNDMENT C
PLAN VIEW

JOB NO. M3 PN-120085
DWG NO. 0000-CI-027
REV NO. P3
DATE 09 OCT 15

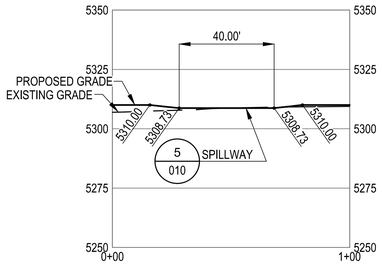
File: P:\2012\120085\CIVIL (5441)\5442 Dwgs\Figures for Permit\0000027.dwg LAST UPDATE:12/1/2015 12:33 PM BY: JN1690



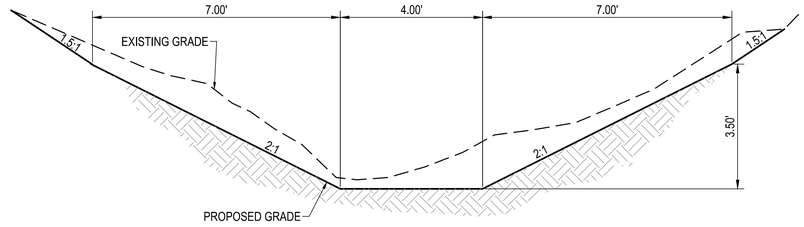
SECTION A
SCALE: 1" = 30'



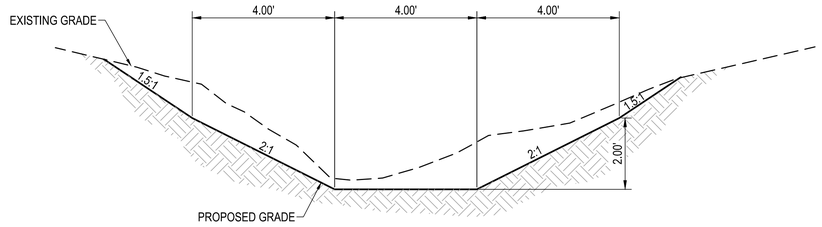
SECTION B
SCALE: 1" = 30'



SECTION C
SCALE: 1" = 30'



SECTION D
SCALE: NTS



SECTION E
SCALE: NTS

NOTES:

1. STORMWATER CONVEYANCE CHANNEL WILL BE DESIGNED TO CONVEY, AT A MINIMUM, THE PEAK FLOW FROM A 100 YEAR RETURN INTERVAL STORM EVENT WHILE PRESERVING NO LESS THAN 6 INCHES OF FREEBOARD.
2. CONVEYANCE STRUCTURE WILL BE DESIGNED TO MINIMIZE PONDING AND INFILTRATION OF STORMWATER.

30 15 0 30 60
SCALE IN FEET

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 11

THEMAC RESOURCES

REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT
0000-CI-027	IMPACTED STORMWATER IMPOUNDMENT C, PLAN VIEW														
0000-CI-010	STANDARD DETAILS SHEET 3														

SCALE:	AS NOTED	
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	
PROJECT MGR	RKZ	
CLIENT APPR.		

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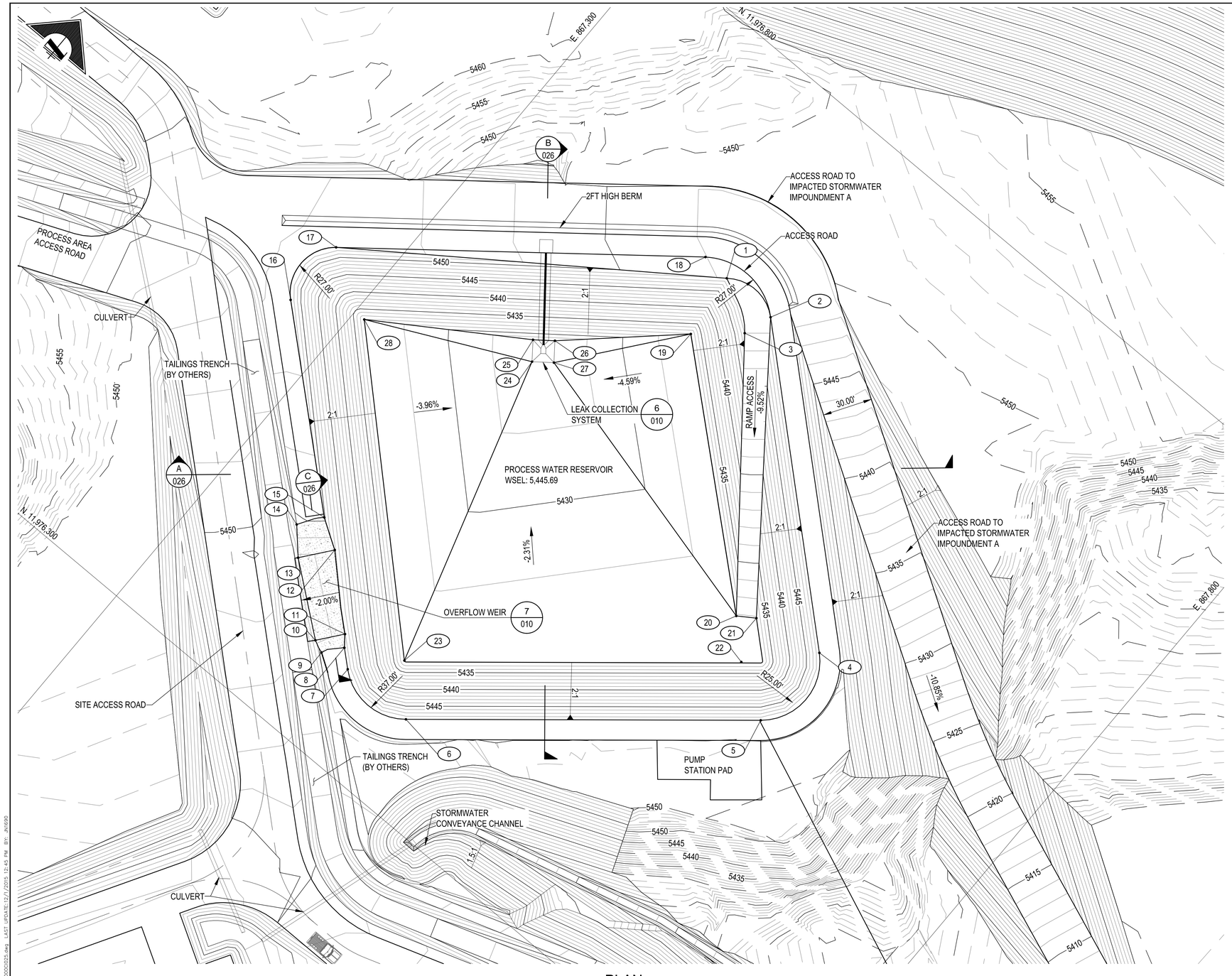
COPPER FLAT PROJECT

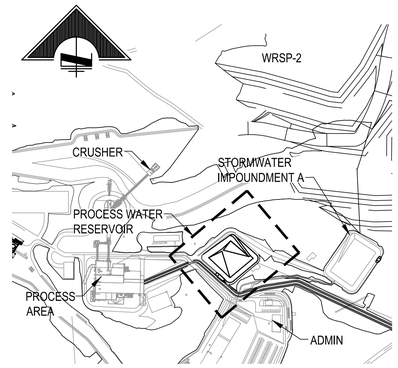
GENERAL SITE CIVIL IMPACTED STORMWATER IMPOUNDMENT C SECTIONS

JOB NO. M3 PN-120085
DWG NO. **0000-CI-028**
REV NO. P3
DATE 09 OCT 15



PLAN
SCALE: 1" = 30'

POINT TABLE			
POINT #	NORTHING	EASTING	ELEVATION
1	11976677.01	867456.22	5448.90
2	11976676.01	867490.99	5448.90
3	11976658.90	867485.30	5448.00
4	11976525.20	867641.13	5444.30
5	11976488.75	867638.96	5448.61
6	11976354.25	867478.64	5448.90
7	11976354.80	867433.15	5448.90
8	11976363.32	867423.40	5448.90
9	11976352.45	867414.83	5448.90
10	11976355.69	867407.41	5447.80
11	11976369.69	867418.41	5448.16
12	11976404.09	867381.76	5448.24
13	11976386.62	867368.04	5447.80
14	11976401.16	867354.74	5449.81
15	11976414.90	867364.55	5450.22
16	11976500.94	867266.34	5452.92
17	11976542.17	867266.96	5452.92
18	11976678.55	867438.45	5449.02
19	11976637.98	867461.15	5431.90
20	11976519.41	867579.10	5431.84
21	11976526.05	867589.10	5431.90
22	11976508.16	867609.15	5431.90
23	11976380.38	867455.56	5431.90
24	11976564.87	867399.57	5428.10
25	11976575.19	867391.67	5428.10
26	11976583.10	867401.99	5428.10
27	11976572.78	867409.89	5428.10
28	11976520.09	867307.24	5431.90



KEY MAP
SCALE: 1" = 500'

NOTES:

1. THE PROCESS WATER RESERVOIR IS INTENDED TO RETAIN PROCESS WATER, STORMWATER THAT FALLS DIRECTLY ON THE POND SURFACE, AND STORMWATER TRANSFERED FROM OTHER IMPACTED STORMWATER IMPOUNDMENTS.
2. THE PROCESS WATER RESERVOIR IS SIZED TO RETAIN 12 HRS OF 7,200GPM INFLOW AND THE 100-YR, 24-HR RAINFALL EVENT PLUS 2 FEET OF FREEBOARD.
3. THE PROCESS WATER WATER RESERVOIR SHALL BE DOUBLE LINED WITH 60mil HDPE PER DETAIL 2 SHEET 0000-CI-010.
4. THE PROCESS WATER RESERVOIR OVERFLOW WEIR IS DESIGNED FOR THE 25-YR, 24-HR RAINFALL EVENT AT CAPACITY (SEE NOTE 2) AT MINIMUM. THE WEIR CONVEYS PROCESS WATER INTO THE TAILINGS TRENCH AND TO THE TAILINGS IMPOUNDMENT.
5. OVERFLOW WEIR IS DESIGNED TO ALLOW FOR VEHICULAR TRAFFIC.

IMPOUNDMENT SUMMARY		
CAPACITY AT 100-YR WSEL	726,365	CU-FT
ULTIMATE CAPACITY	937,998	CU-FT

30 15 0 30 60
SCALE IN FEET
CONTOUR INTERVAL = 1.0FT
DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 12

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-026	PROCESS WATER RESERVOIR SECTIONS		
0000-CI-010	STANDARD DETAILS SHEET 3		

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	AS NOTED	DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	AUG 15
PROJECT MGR	RKZ	AUG 15
CLIENT APPR.		

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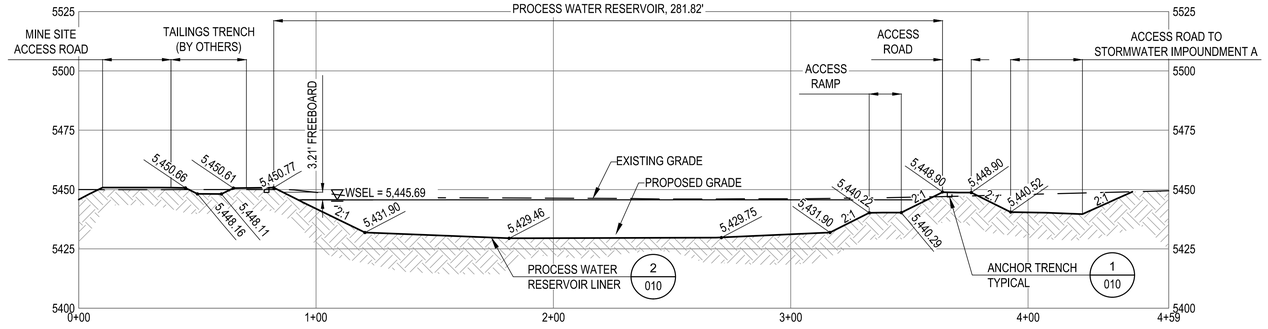
COPPER FLAT PROJECT

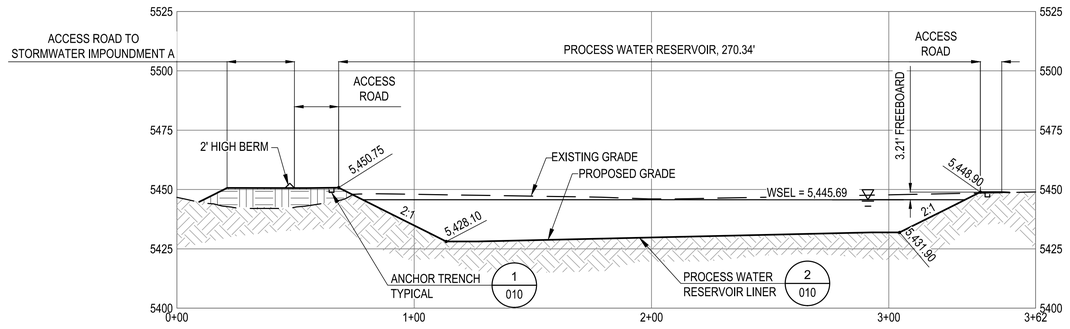
GENERAL SITE CIVIL
PROCESS WATER RESERVOIR PLAN VIEW

JOB NO. M3 PN-120085
DWG NO. **0000-CI-025**
REV NO. P3
DATE 09 OCT 15

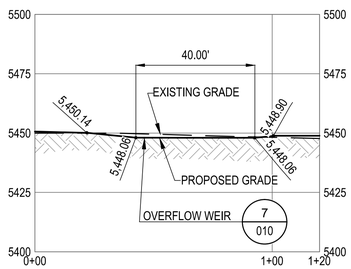
File: P:\2012\12008\CIVIL (3441)\3442 Dwgs\Figures for Permit\0000025.dwg LAST UPDATE:12/1/2015 12:45 PM BY: JN1690



SECTION A
SCALE: 1" = 30'



SECTION B
SCALE: 1" = 30'



SECTION C
SCALE: 1" = 30'

30 15 0 30 60
SCALE IN FEET

DO NOT SCALE 11x17 DRAWINGS

PRELIMINARY
FOR AGENCY REVIEW

FIGURE 13

THEMAC RESOURCES

REFERENCES		REFERENCES	
DWG. NO.	TITLE	DWG. NO.	TITLE
0000-CI-025	PROCESS WATER RESERVOIR PLAN VIEW		
0000-CI-010	STANDARD DETAILS SHEET 3		

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

REVISIONS					
NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT

SCALE:	AS NOTED	DATE
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	
PROJECT MGR	RKZ	
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL SITE CIVIL PROCESS WATER RESERVOIR SECTIONS

JOB NO. M3 PN-120085
DWG NO. **0000-CI-026**
REV NO. P3
DATE 09 OCT 15

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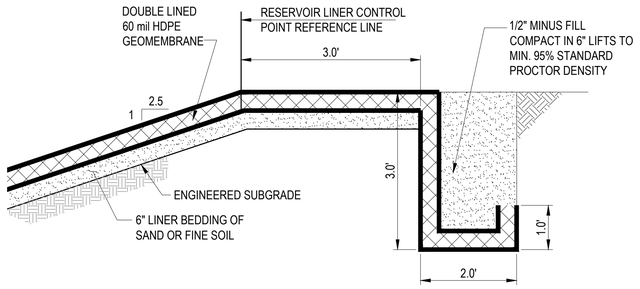
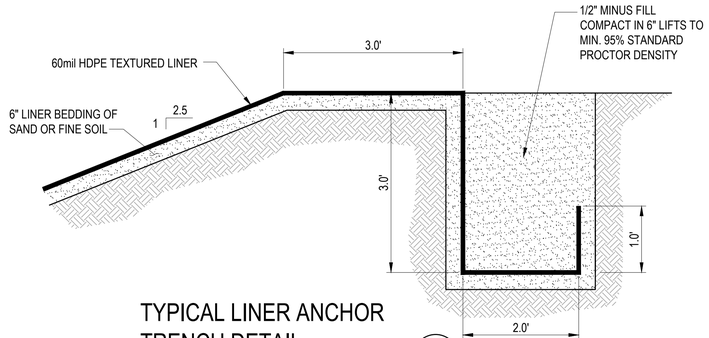


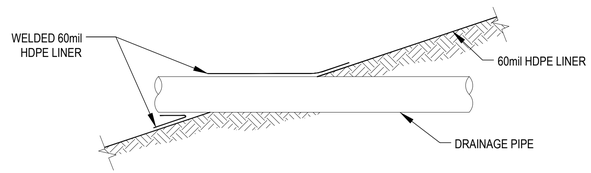
PROCESS WATER RESERVOIR LINER ANCHOR DETAIL

N.T.S. — 1 / 026



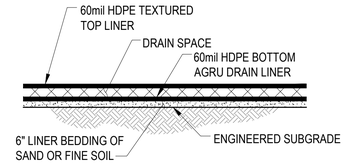
TYPICAL LINER ANCHOR TRENCH DETAIL

N.T.S. — 3 / 022, 024, 028



PIPE PENETRATING LINER

N.T.S. — 16 / -

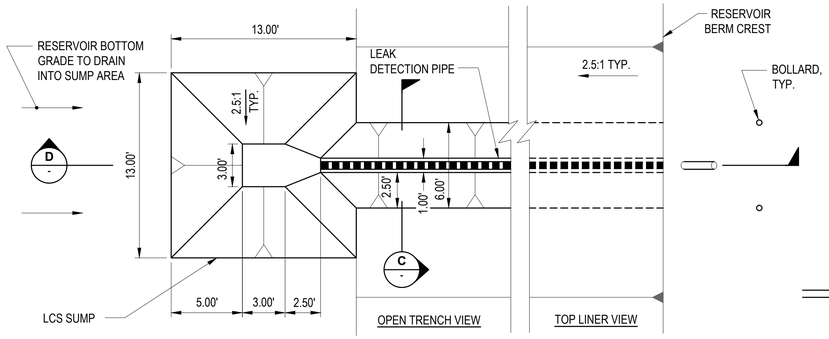


TYPICAL PROCESS WATER RESERVOIR LINER

N.T.S. — 2 / 026

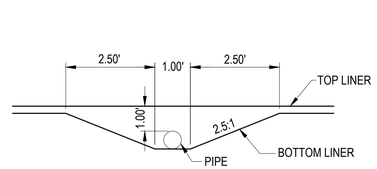
TYPICAL STORMWATER IMPOUNDMENT LINER

N.T.S. — 4 / 022, 024, 028

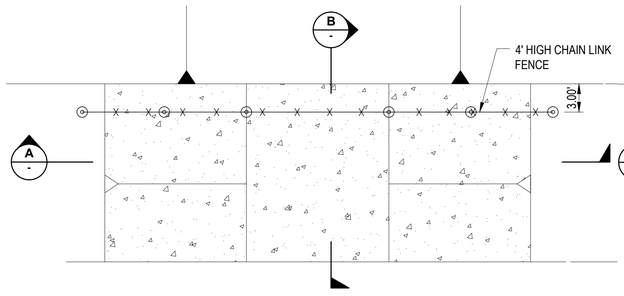


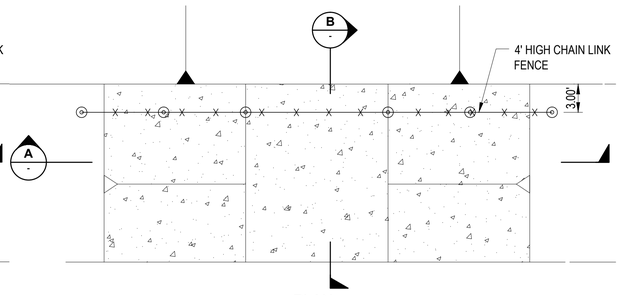
PROCESS WATER RESERVOIR - LCS PLAN

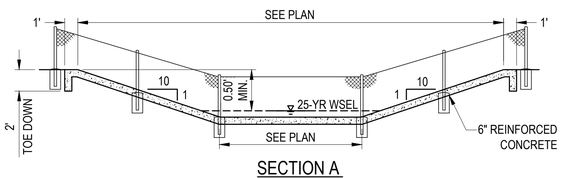
N.T.S. — 6 / 025



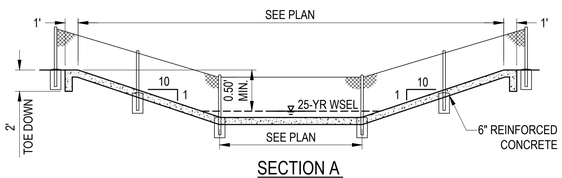
SECTION C



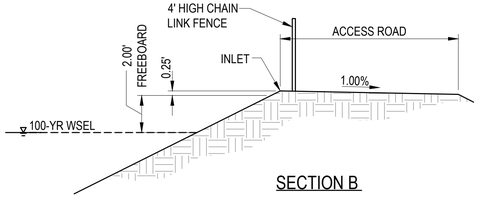




SECTION A



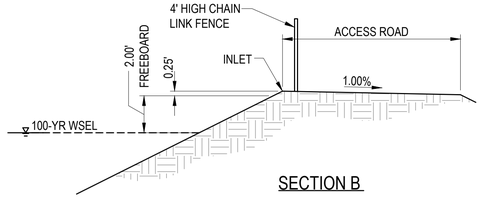
SECTION A



SECTION B

SPILLWAY

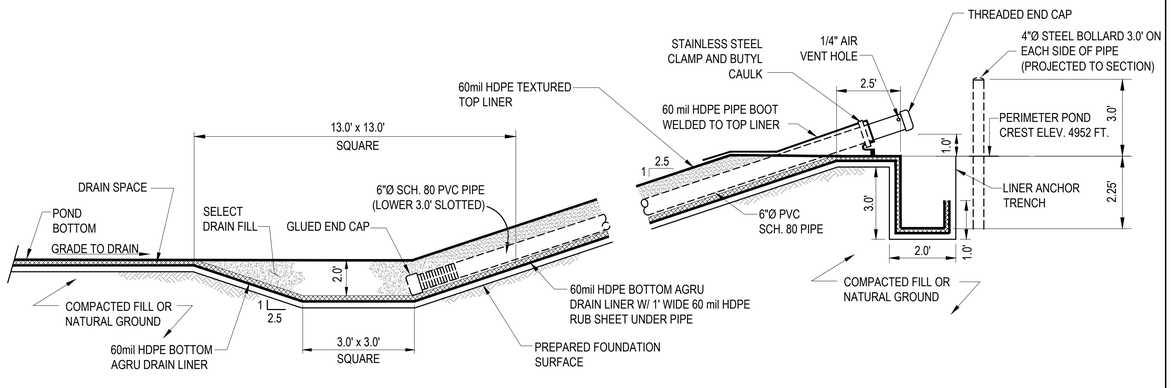
N.T.S. — 5 / 021, 023, 027



SECTION B

OVERFLOW WEIR

N.T.S. — 7 / 025



SECTION D

FIGURE 14

PRELIMINARY
FOR AGENCY REVIEW

DO NOT SCALE 11x17 DRAWINGS

THEMAC RESOURCES

REFERENCES		REFERENCES		REVISIONS						REVISIONS					
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT	NO.	DESCRIPTION	BY	APP'D	DATE	CLIENT
0000-CI-023	IMPACTED STORMWATER IMPOUNDMENT A, PLAN VIEW														
0000-CI-025	PROCESS WATER RESERVOIR PLAN VIEW														
0000-CI-027	IMPACTED STORMWATER IMPOUNDMENT C, PLAN VIEW														

		DATE
SCALE:	NONE	
DESIGNED BY	SAM	JUN 15
DRAWN BY	SAM	JUN 15
CHECKED BY	JPN	JAN 13
PROJECT MGR	RKZ	
CLIENT APPR.		

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COPPER FLAT PROJECT

GENERAL/STANDARDS
CIVIL
STANDARD DETAILS
SHEET 3

JOB NO. M3 PN-120085
DWG NO. 0000-CI-010
REV NO. P3
DATE 09 OCT 15

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