REPORT

Structural Stability Assessment

San Miguel Electric Cooperative Power Plant
CCR Ponds
Atascosa County, Texas

Submitted to:

San Miguel Electric Cooperative, Inc.
6200 FM 3387
Christine, TX 78012

Submitted by:

Golder Associates Inc.
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October 2021

PROFESSIONAL CERTIFICATION

This document and all attachments were prepared by Golder Associates Inc. under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the Structural Stability Assessment has been prepared in accordance with the requirements of Section 257.73(d) of the CCR Rule.

10/14/21

Jeffrey B. Fassett, P.E.
Associate
Golder Associates Inc.
Firm Registration No. F-2578

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1.0 INTRODUCTION

San Miguel Electric Cooperative, Inc. (SMECI) owns and operates the San Miguel Power Plant (SMPP) located approximately 6 miles south of Christine, Texas in Atascosa County, Texas (Figure 1). The SMPP is a 440-megawatt, lignite-fired electric power plant that was placed into service in 1982. Coal Combustion Residuals (CCR) including fly ash, bottom ash and flue gas desulfurization (FGD) wastewater/solids are generated as part of SMPP operation.

From 1982 through 2020, bottom ash and FGD wastewater/solids were managed in Ash Pond A and Ash Pond B (which were collocated and referred to collectively as the Ash Ponds) and an Equalization Pond (EQ Pond). The Ash Ponds and EQ Pond are located south and southeast of the SMPP generating unit (Figure 2). In 2020, SMECI retrofitted the Ash Ponds by installing a composite liner system meeting the requirements of 40 CFR Section 257.70(b), and subdivided Ash Pond B to create a smaller Retrofitted Ash Pond B and a Retrofitted EQ Pond (See Figure 3). The previous EQ Pond (referred to herein as the Former EQ Pond) was removed from service in 2021 and is undergoing closure.

The U.S. Environmental Protection Agency promulgated 40 C.F.R. Part 257, Subpart D (the CCR Rule) to establish technical requirements for new and existing CCR landfills and surface impoundments. Retrofitted Ash Pond A, Retrofitted Ash Pond B and the Retrofitted EQ Pond have been identified as Existing CCR Surface Impoundments regulated under the CCR Rule.

Section 257.73(d) of the CCR Rule specifies that periodic structural stability assessments must be conducted for each CCR surface impoundment. In accordance with Section 257.73(g) of the CCR Rule, the initial Structural Stability Assessment for the Ash Ponds and Former EQ Pond was completed and placed in the facility operating record in October 2016 (ERM, 2016a). As specified in Section 257.73(f)(3), the structural stability assessment must be updated every five years from the completion date of the initial plan. Golder Associates Inc., member of WSP, was retained by SMECI to prepare this updated Structural Stability Assessment for Ash Pond A, Retrofitted Ash Pond B and the Retrofitted EQ Pond.

1.1 Description of Ash Pond A and Retrofitted Ash Pond B

From 1982 through 2020, bottom ash transport water was managed in Ash Pond A and Ash Pond B, which were constructed as part of the original SMPP construction. The Ash Transport Water Pond Complex (Ash Pond) as originally constructed contained two pond cells, Ash Pond A on the north side and Ash Pond B immediately adjacent to the south. The system was constructed as a side-hill impoundment with the northern dike at or near natural grade and includes a central “splitter dike” that separates the pond into north and south sections with a connecting weir.

The total dike perimeter of the Ash Pond is approximately 6,000 feet, and the approximate surface area is 26 acres. The maximum dike height is approximately 20 feet with side slopes ranging from 2.5 horizontal to 1 vertical (2.5H:1V) to 3.0H:1V, with an average crest width of 20 feet. The elevation of the dike crest is 315 feet with a maximum pool water surface elevation of 313.5 feet (18 inches below crest) (AECOM, 2018).

Both ash ponds were constructed with a clay soil liner consisting of 3 feet of compacted soil with a hydraulic conductivity of no more than 1 x 10^{-7} cm/sec (ERM, 2016b; Zephyr, 2017).

In 2020, SMECI retrofitted Ash Pond A and Ash Pond B as follows:

- A 60-mil HDPE geomembrane was installed in Ash Pond A over the existing clay soil liner. The HDPE geomembrane extends across the floor of the pond and up the interior faces of the perimeter dikes and is secured in anchor trenches at the top of the dikes.

- Ash Pond B was subdivided to create a smaller Retrofitted Ash Pond B and a Retrofitted EQ Pond by constructing a divider dike across the width of Ash Pond B. A 60-mil HDPE geomembrane was installed in Retrofitted Ash Pond B over the existing clay soil liner. The HDPE geomembrane extends across the floor of the pond and up the interior faces of the perimeter dikes and is secured in anchor trenches at the top of the dikes.

The configuration of the existing perimeter dikes of the Ash Ponds was not modified as part of the Ash Pond Retrofit project. Engineering Drawings for the Ash Pond Retrofit project are reproduced in Appendix A (Newfields, 2019).

1.2 Previous Structural Stability Assessment for Ash Ponds

The Initial Structural Stability Assessment concluded that the Ash Ponds were in compliance with the structural stability requirements of Section 257.73(d) of the CCR Rule.

The Initial Structural Stability Assessment referenced a 2012 Geotechnical Engineering Study performed for the Ash Ponds by Arias and Associates (Arias, 2012). The purpose of the engineering study was to investigate the subsurface soil and groundwater conditions present at the Ash Ponds and to perform global stability calculations to assess short-term, long-term, and seismic stability for the embankments and to assess the liquefaction potential of the underlying foundation soils. The engineering study concluded that the Ash Pond embankments exhibited adequate short-term, long-term and seismic stability and that liquefaction of the underlying foundation soils was unlikely.

2.0 SUBSURFACE CONDITIONS

Information from previous subsurface investigations was used to characterize the subsurface site conditions. The surface impoundments were designed using information obtained during a geotechnical investigation prepared for San Miguel by NFS/National Soil Services, Inc. (NFS) in calendar year (CY) 1978.

NFS described the foundation and abutment soils of the surface impoundment as generally consisting of an upper clay stratum ranging from approximately 22 to 30 feet thick. This stratum was encountered at depths from 14 feet below the bottom of Ash Ponds. NFS described the upper clay as consisting of hard, moderately-to-highly plastic, relatively impermeable clays, sandy clays, and silty clays.

NFS described the soil underlying the upper clay stratum as a very dense, silty fine sand. The thickness of the underlying sand stratum at the Ash Ponds was not determined in the NFS geotechnical engineering report.

In 2012, Arias and Associates, Inc. (Arias, 2012) performed an investigation including seven borings along the crest and toe of the Ash Pond abutment. In addition to index testing, multistage triaxial compression testing was performed on both natural and compacted clays to characterize the shear strength of the foundation soils and the abutment fill. Based on the investigation Arias divided the subsurface soils as follows.

Stratum	Depth (ft)	Material Type	PI range	No. 200 Range	Pocket Pen. (tsf)	N range
I	0 to (3-28)	**FILL:** Brown to Dark Brown and Gray to Dark Gray, **Fat CLAY (CH)**, **Fat CLAY (CH) with Sand**, **Lean CLAY (CL)**, **Lean CLAY (CL) with Sand**, **Gravelly Fat CLAY (CH)**, stiff to hard	23 - 59	-	1.25 - 9.0	13 - 29
II	(0 - 28) to (12 – 52)	Brown to Dark Brown and Gray, **Clayey SAND (SC)**, **Fat CLAY (CH)**, **Sandy Fat CLAY (CH)**, **Sandy Lean CLAY (CL)**, **Lean CLAY (CL)**, **Lean CLAY (CL) with Sand**, stiff to hard and medium dense to very dense, some of these soils are Eocene Age deposits	12 - 92	13 to 52	0.75 – 5.75	9 – 100$^+$
III	Below (0-52)	Gray and Brown, **Silty SAND (SM)**, **Sandy SILT (ML)**, **Sandy Fat CLAY (CH)**, **Sandy Lean CLAY (CL)**, **Clayey SAND (SC)**, **Fat CLAY (CH)**, very stiff to hard and loose to very dense, some alluvial soils but mostly Eocene Age deposits	1 - 66	13 to 56	-	8 – 100$^+$

Where: Depth - Depth from existing ground surface at the time of geotechnical study, feet
PI - Plasticity Index, %
No. 200 - Percent passing #200 sieve, %
Pocket Pen - Pocket Penetrometer reading (tons/ft^2)
N - Standard Penetration Test (SPT) value, blows per foot

3.0 SITE RECONNAISSANCE

Following a review of the structural stability assessment and past inspection reports, Golder performed a site reconnaissance on July 15, 2021 to observe conditions at the crest, downstream slopes, and areas beyond the Ash Ponds. It was not feasible to observe the conditions of the upstream slopes below the water level.

During the site visit, items of concern were noted. Table 1 provides a summary of our observations and our recommended remedies.

Table 1: Observed Items of Concern

Area	Observed Condition	Recommendation
Crest	The grade along the northwestern portion of Pond A is low. Temporary measures have been implemented to raise the liner elevation in the area.	Since the date of the site reconnaissance, we understand that the temporary measures have been removed and permanent repairs (i.e., placing fill to raise the area and extending the geomembrane) have be installed to prevent water escaping the pond.
Downstream slopes	Woody vegetation is present along the southern embankment of the Retrofitted EQ Pond and Pond B and is suppressing grass growth.	Continue to control large vegetation and seed denuded areas.

4.0 UPDATED STRUCTURAL STABILITY ASSESSMENT – SECTION 257.73(d)(1)(i)-(vii)

The CCR Rule requires periodic structural stability assessments conducted by a qualified professional engineer to document whether the design, construction, operation and maintenance is consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater that can be impounded therein. The assessment must address:

i. *Stable foundations and abutments;*
ii. *Adequate slope protection to protect against surface erosion, wave action, and adverse effects of sudden drawdown;*
iii. *Dikes mechanically compacted to a density sufficient to withstand the range of loading conditions in the CCR unit;*
iv. *Vegetated slopes of dikes and surrounding areas not to exceed a height of six inches above the slope of the dike, except for slopes which have an alternate form or forms of slope protection;*
v. *A single spillway or a combination of spillways configured as specified in paragraph (d)(1)(v)(A) of [40 CFR Section 257.73];*
vi. *Hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit that maintain structural integrity and are free of significant deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the hydraulic structure; and*
vii. *For CCR units with downstream slopes which can be inundated by the pool of an adjacent water body, such as a river, stream or lake, downstream slopes that maintain structural stability during low pool of the adjacent water body or sudden drawdown of the adjacent water body.*

4.1 Foundations and Abutments

As noted above, the foundation soils consist of native soils and compacted fill. At the time of our site visit, the foundation soils and abutments were visibly stable. The 2012 engineering study concluded that the Ash Pond embankments exhibited adequate short-term, long-term and seismic stability and that liquefaction of the underlying foundation soils was unlikely (Arias, 2012).

4.2 Slope Protection

The downstream slopes of the embankments in the surface impoundments are protected from erosion and deterioration by the establishment of a vegetative cover. The vegetative cover is inspected weekly for erosion, signs of seepage, animal burrows, sloughing, and plants that could negatively impact the embankment.

As noted above, the Ash Ponds have been retrofitted with a composite liner system comprised of a 60-mil HDPE geomembrane overlying a compacted clay liner. The presence of the geomembrane will prevent erosion of the underlying clay soil.

4.3 Dikes (Embankment)

The embankments were constructed from compacted clay rich site soils at 2.5H:1V to 3H:1V slopes. No construction testing of the original embankment fill is available; however, several of the borings conducted by Arias in 2012, penetrated the fill. The borehole logs describe this material as stiff to hard fat clay, with SPT blow counts typically exceeding 20, which is consistent for a compacted clay fill.

A divider dike across the width of Ash Pond B to form the EQ Pond. The dike was constructed with compacted fill at 3H:1V slopes.

Based on this information, we believe that the embankments are sufficient to withstand the range of loading conditions that are subjected to.

4.4 Vegetated Slopes

The exterior slopes of the dikes around the ash ponds are vegetated to control erosion. SMECI maintains the vegetation in a manner that ensures that the weekly inspections required under the CCR Rule can be conducted; however, the height of the vegetation varies depending on the frequency of maintenance.

The US Court of Appeals for the District of Columbia Circuit issued an Order that remanded and vacated the CCR Rule requirement that vegetation on the exterior portions of dikes on CCR surface impoundments be maintained not to exceed 6 inches in height. EPA proposed to address this requirement in 2018 but it has not finalized any new requirements.

4.5 Spillways

San Miguel Plant documentation shows that there a no outfalls or emergency spillways present in Ash Pond A, Ash Pond B, or the EQ Pond.

4.6 Hydraulic Structures

According to drawings prepared by Tippet & Gee, Inc. (included as Appendix B) a 30-inch diameter pipe with an inlet invert elevation of approximately 305 ft, is connected to a drop inlet at the structure connecting Ash Pond A and B located near the eastern end of the interior dike. The 30-inch pipe runs along the interior dike to the ash water pump station west of the ash ponds with an outlet invert elevation of approximately 300 ft. This pipe is still present but is no longer functioning due to sediment blockage.

4.7 Inundation by Adjacent Water Body

San Miguel Plant documentation shows that neither Ash Pond A, Ash Pond B, nor the EQ Pond were constructed with dike exterior sides slopes that are in contact with any adjacent to water body, such as a river, stream or lake, except during an ephemeral flood event. Consequently, the embankment will not be inundated and will maintain structural stability during low pool and will not be subjected to rapid drawdown.

5.0 CONCLUSIONS

Based on our review of the information provided by SMECI and on observations made during a site visit, no structural stability deficiencies were identified in Ash Pond A, Ash Pond B, or the new EQ Pond during this assessment.

6.0 REFERENCES

Arias & Associates, 2012. Ash Water Transport Pond and Equalization Pond Stability Analyses, San Miguel Electric Cooperative Christine, Texas, November 19.

AECOM, 2018. CCR Certification: Seismic Impact Zone §257.63 for the Ash Pond, Equalization Pond and Ash Pile at the San Miguel Plan, Revision 0, October 17.

ERM, 2016a. CCR Surface Impoundment Structural Stability Assessment, San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 17.

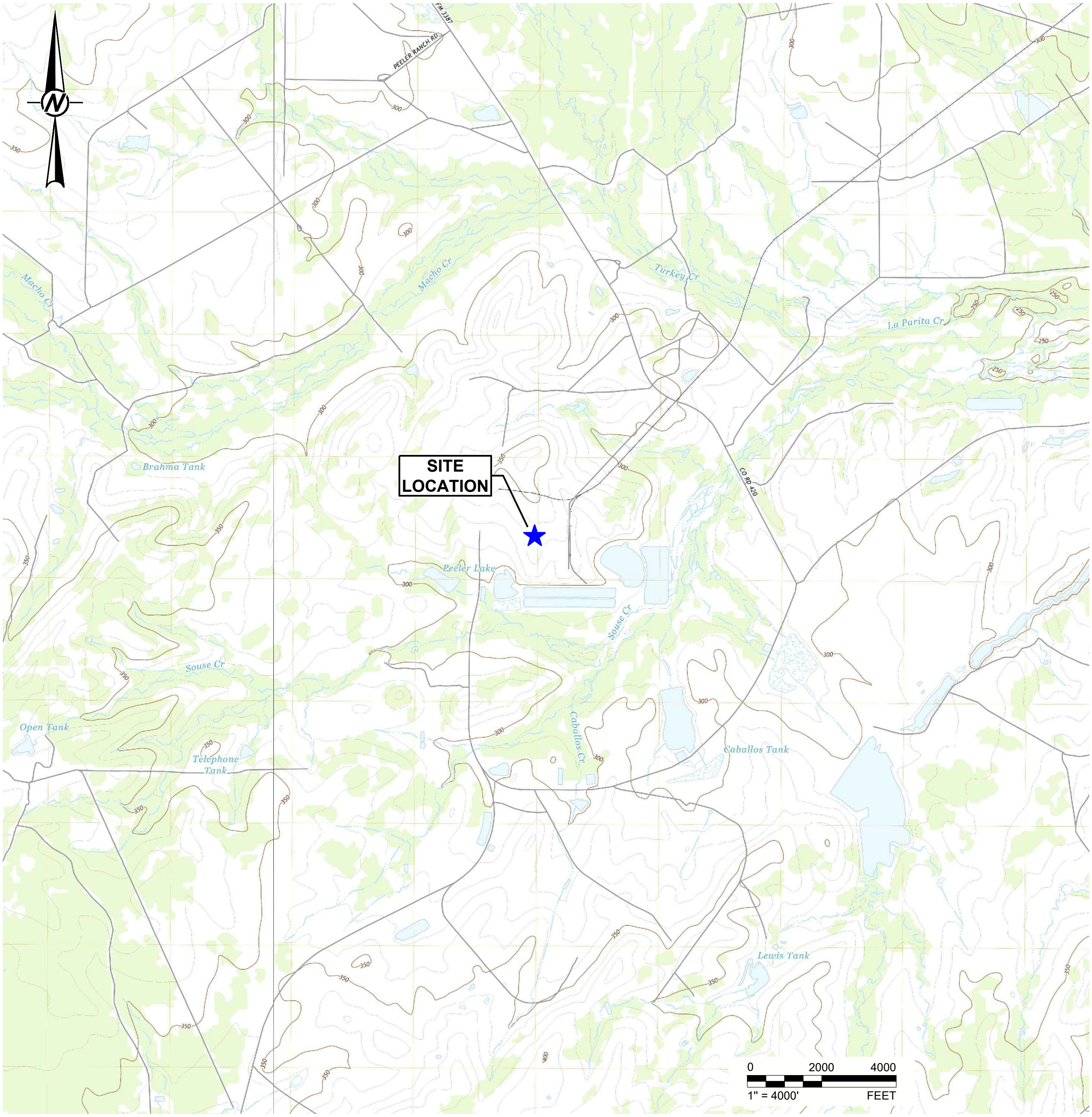
ERM, 2016b. Existing CCR Surface Impoundment Liner Design Criteria – Ash Pond A, San Miguel Electric Cooperative, Inc., Atascosa County, Texas, October 17.

Newfields, 2019. Engineering Drawings for Ash Disposal Pond Retrofit, San Miguel Electric Plant, Atascosa County, Texas, August.

Tippet & Gee, Inc (T&G), 1980b. Site Plan Section No. 6, San Miguel Plant Unit No. 1, Drawing No. 1-C-35, Rev 16, April 1, 1977, revised August 6, 1980.

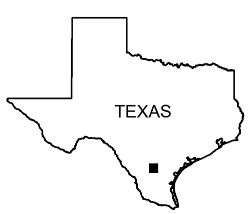
Zephyr Environmental Corporation (Zephyr), 2017. Liner System Certification Report – Ash Water Transport Pond 1-B, San Miguel Electric Cooperative, Inc., San Miguel Plant, Christine, Atascosa County, Texas, November 28.

FIGURES



REFERENCE(S)

BASE MAP TAKEN FROM USGS.GOV, CROSS NE AND CABALLOS CREEK, TX 7.5 MIN. USGS QUADRANGLE DATED 2019.



QUADRANGLE LOCATIONS

CLIENT
SAN NIGUEL ELECTRIC COOPERATIVE, INC.

PROJECT
CCR POND STRUCTURAL STABILITY ASSESSMENT UPDATE

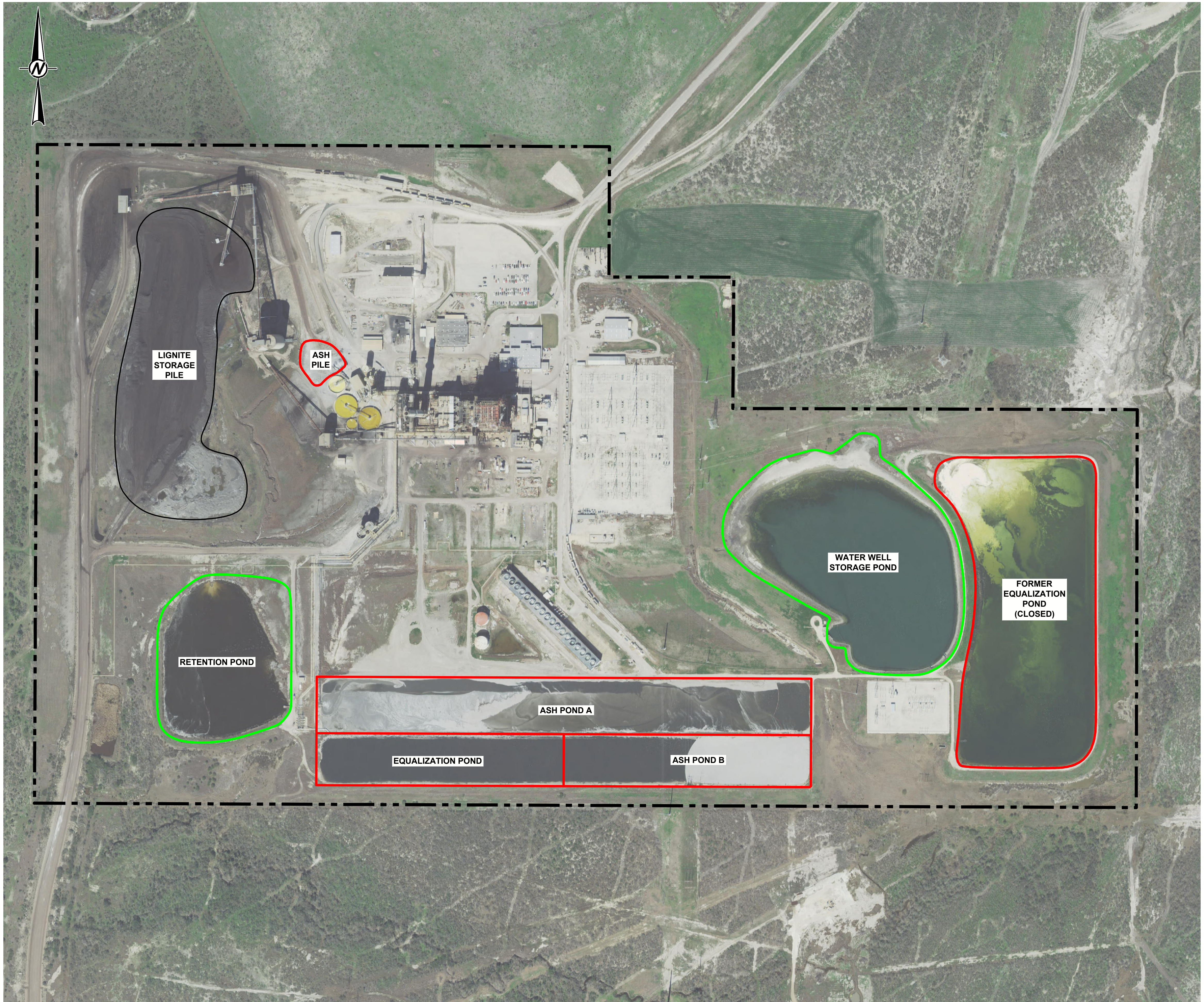
TITLE
SITE LOCATION MAP

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-09-07
DESIGNED	AJD
PREPARED	AJD
REVIEWED	PJB
APPROVED	PJB

PROJECT NO.	CONTROL	REV.	FIGURE
21455682		0	1



LEGEND

- APPROX. PLANT BOUNDARY
- CCR IMPOUNDMENT/UNIT
- NON-CCR IMPOUNDMENT

0 250 500
1" = 500' FEET

REFERENCE(S)

BASE MAP TAKEN FROM TNRIS.ORG, ATASCOSA CO., 2015 PHOTOGRAPHY.
MONITORING WELL LOCATIONS FROM FIGURE 1 - CCR UNIT GROUNDWATER MONITORING SYSTEM, ERM, 10/16/2017.

CLIENT
SAN MIGUEL ELECTRIC COOPERATIVE, INC.

PROJECT
CCR POND STRUCTURAL STABILITY ASSESSMENT UPDATE

TITLE
SITE PLAN

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-09-07
DESIGNED	AJD
PREPARED	AJD
REVIEWED	PJB
APPROVED	PJB

PROJECT NO.	CONTROL	REV.	FIGURE
21455682		0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

LEGEND

- APPROX. PLANT BOUNDARY
- CCR IMPOUNDMENT/UNIT
- NON-CCR IMPOUNDMENT

0 150 300
1" = 300' FEET

REFERENCE(S)

BASE MAP TAKEN FROM TNRIS.ORG, ATASCOSA CO., 2015 PHOTOGRAPHY.
MONITORING WELL LOCATIONS FROM FIGURE 1 - CCR UNIT GROUNDWATER MONITORING SYSTEM, ERM, 10/16/2017.

CLIENT
SAN MIGUEL ELECTRIC COOPERATIVE, INC.

PROJECT
CCR POND STRUCTURAL STABILITY ASSESSMENT UPDATE

TITLE
ASH POND LAYOUT

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-09-23
DESIGNED	AJD
PREPARED	RS
REVIEWED	PJB
APPROVED	PJB

PROJECT NO.	REV.	FIGURE
21455682	0	3

1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

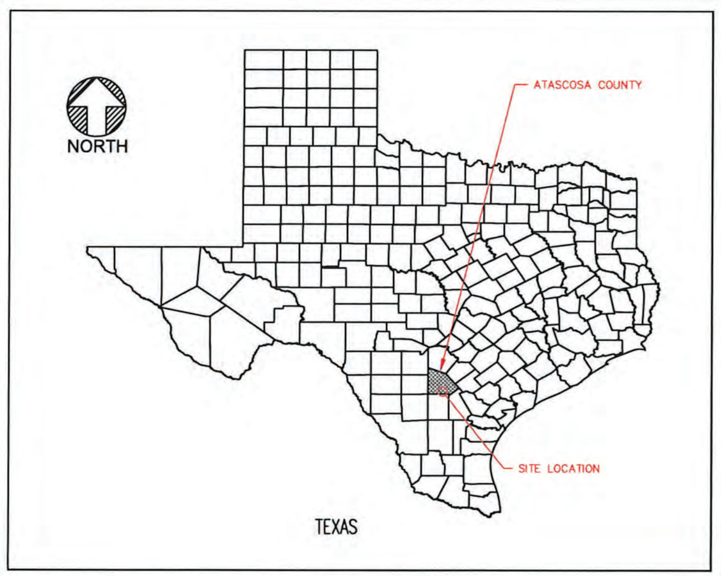
APPENDIX A

Engineering Drawings – 2020 Ash Pond Retrofit Project

SAN MIGUEL ELECTRIC PLANT

ATASCOSA COUNTY, TEXAS

ASH DISPOSAL POND RETROFIT



LOCATION MAP

DRAWING INDEX

SHEET	DRAWING	TITLE
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3	C-102	EXISTING CONDITIONS SITE PLAN
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5	C-104	POND "A" TILLING, GRADING AND COMPACTION PLAN
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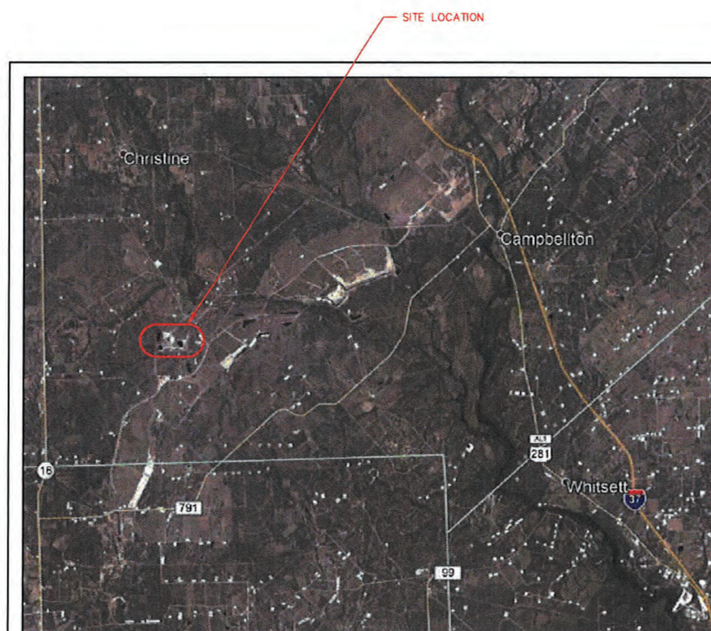
ABBREVIATIONS

ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
BOTT	BOTTOM
DP.	DEEP
E	EAST
EL	ELEVATION
ESC	EROSION AND SEDIMENT CONTROL
F.G.D.	FLUE GAS DESULFURIZATION
FT.	FEET
GAL	GALLON
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
KV	KILOVOLT
MCC	MOTOR CONTROL CENTER
MIN.	MINIMUM
N	NORTH
SEC	SECOND
V	VERTICAL
YD^3	CUBIC YARDS

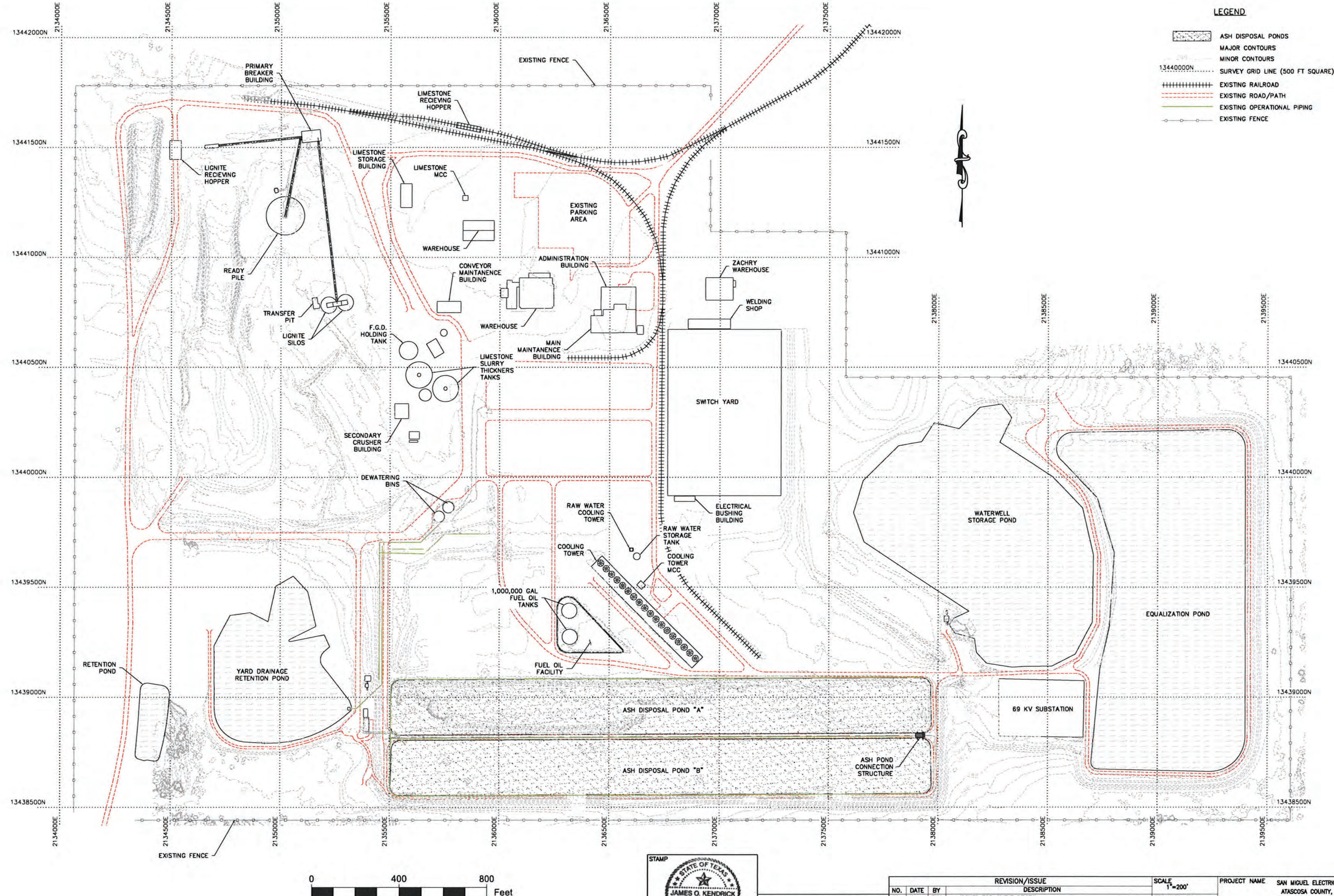


SITE VICINITY MAP

SAN MIGUEL ELECTRIC PLANT
ATASCOSA COUNTY, TEXAS
ASH DISPOSAL POND RETROFIT

PREPARED BY
NewFields

AUGUST, 2019



STAMP

STATE OF TEXAS
JAMES O. KENDRICK
84079
LICENSED
PROFESSIONAL ENGINEER
8/28/19

NewFields
1349 WEST PEACHTREE STREET
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

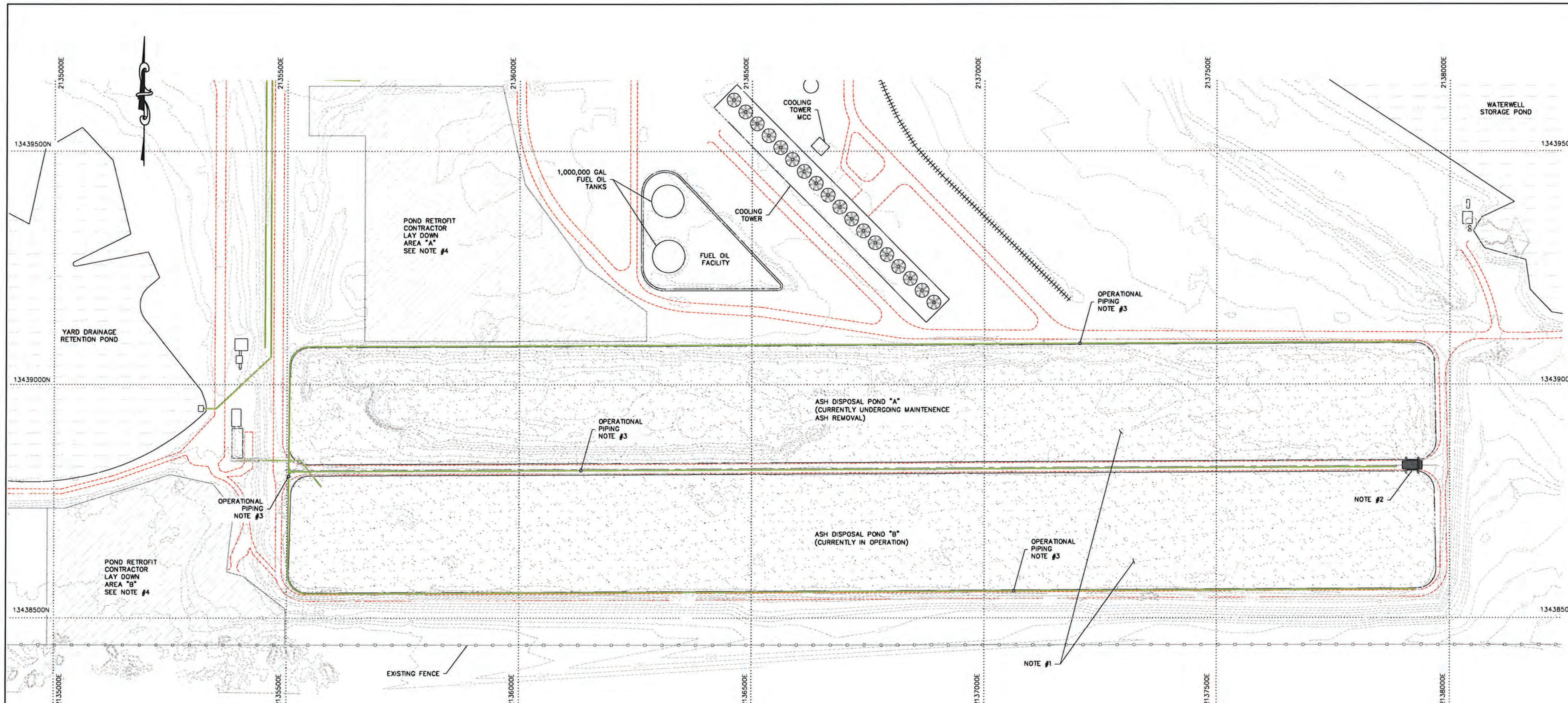
REVISION/ISSUE			
NO.	DATE	BY	DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

SCALE 1"=200'
DESIGNED BY RWG
DRAWN BY FAH
CHECKED BY RWG
DRAWING DATE 8/28/19

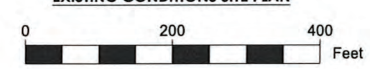
PROJECT NAME SAN MIGUEL ELECTRIC PLANT
ATASCOSA COUNTY, TEXAS
ASH DISPOSAL POND RETROFIT

DRAWING NAME SURVEY MAP

PROJECT NO. 150.0400.000
PROJECT DATE AUGUST 2019
DRAWING NO. C-101
SHEET NO. 2 OF 9



EXISTING CONDITIONS SITE PLAN



LEGEND

- ASH DISPOSAL PONDS
- CONTRACTOR'S LAY DOWN AREA
- MAJOR CONTOURS
- MINOR CONTOURS
- 13440000N SURVEY GRID LINE (500 FT SQUARE)
- EXISTING RAILROAD
- EXISTING ROAD/PATH
- EXISTING FENCE
- EXISTING OPERATIONAL PIPING

NOTES:

1. APPROXIMATELY 3-4 FEET OF ASH WILL REMAIN IN POND A TO BE REMOVED AND STAGED BY THE CONTRACTOR UNDER THIS CONTRACT. POND B IS CURRENTLY IN OPERATION. ONCE POND A HAS BEEN RETROFITTED, THE WATER IN POND B WILL BE TRANSFERRED BY THE CONTRACTOR TO POND A AND POND A WILL BE PUT BACK INTO SERVICE. THE CONTRACTOR SHALL THEN REMOVE AND STAGE ALL ASH FROM POND B.
2. THE CONNECTION STRUCTURE BETWEEN POND A AND POND B IS A CONCRETE SPILLWAY CONTROLLED BY DIVIDER GATES THAT ARE INSTALLED AND REMOVED BY CRANE.
3. OPERATIONAL PIPING OF VARYING SIZES LIE ON THE SURFACE OF THE EXISTING BERMS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR MOVING THESE PIPES TO SUIT THE CONTRACTOR'S STRATEGY FOR ENTRY TO AND EXIT FROM THE PONDS DURING RETROFIT WORK.
4. THE CONTRACTOR SHALL DEVELOP THEIR LAYDOWN AND SUPPORT AREAS IN THE LOCATIONS SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF ACERAGE FOR THEIR USE TO THE FURTHEST EXTENT POSSIBLE AND SHALL UTILIZE THESE AREAS TO ALLOW FOR THE MOST EFFICIENT ACCESS TO AND FROM THE PONDS AND FACILITY AS POSSIBLE.

STAMP

STATE OF TEXAS
JAMES O. KENDRICK
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PROFESSIONAL ENGINEER

James O. Kendrick 8/28/19

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1349 WEST PEACHTREE STREET
SUITE 2000
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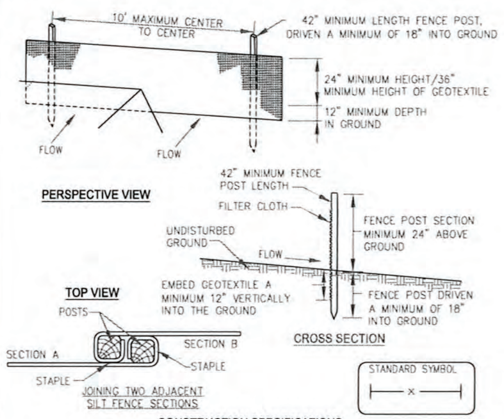
FIRM # F-5735

REVISION/ISSUE			
NO.	DATE	BY	DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

SCALE	1"=100'
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT, ATASCOSA COUNTY, TEXAS, ASH DISPOSAL POND RETROFIT
DRAWING NAME	EXISTING CONDITIONS SITE PLAN / ASH REMOVAL
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-102
SHEET NO.	3 OF 9



CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 42" LONG, DRIVEN 18" MINIMUM INTO THE GROUND.
   WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION OF 1¼" AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION, WEIGHING NOT LESS THAN 1.33 POUND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES (¾" LONG MINIMUM) AT TOP, MID-SECTION, AND BOTTOM AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR CDOT SILT FENCE GEOTEXTILES::

GRAB STRENGTH	90 LBS (MIN.)	TEST: ASTM D4632
PERMITTIVITY	0.05/SEC	TEST: ASTM D4491
ULTRAVIOLET STABILITY	70% (MIN.) STRENGTH RETAINED	TEST: ASTM D4355

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% IF THE FABRIC HEIGHT.

001 **SILT FENCE DETAILS**
NOT TO SCALE

SOIL EROSION AND SEDIMENT CONTROL NOTES

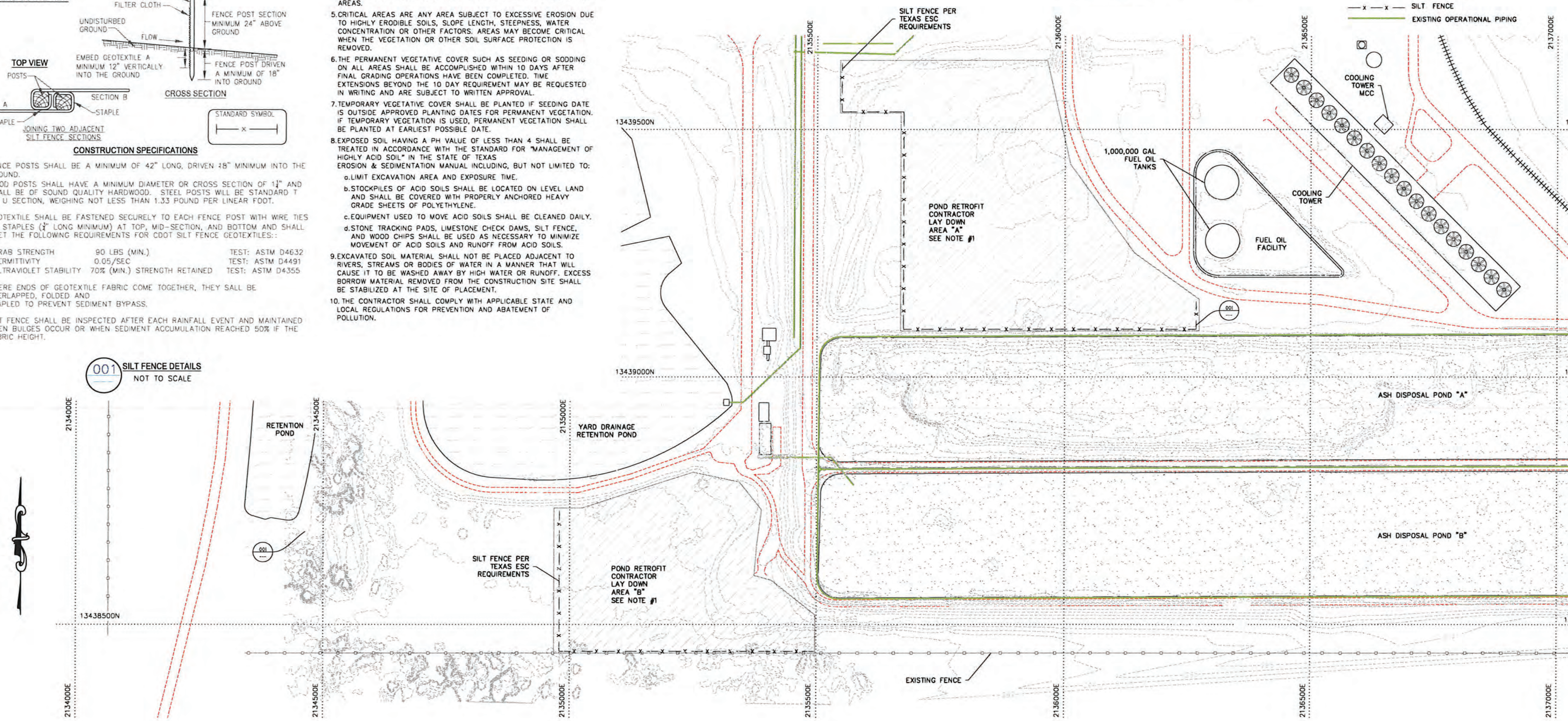
1. THE CONTRACTOR SHALL CONFORM TO STATE OF TEXAS EROSION & SEDIMENTATION MANUAL LATEST EDITION AND ALL APPLICABLE LOCAL REGULATIONS CONCERNING SOIL EROSION AND SEDIMENT CONTROL.
2. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND MINIMIZE LOSS OF SEDIMENT FROM THE CONSTRUCTION SITE.
3. THE CONTRACTOR SHALL ADHERE TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHOWING THE METHODS TO BE USED FOR CONTROLLING EROSION DURING CONSTRUCTION WHICH INCLUDES SEQUENCE FROM THE CONSTRUCTION OPERATIONS.
4. THE CONTRACTOR SHALL INSTALL EROSION CONTROLS ON ALL DISTURBED CRITICAL AREAS OR DISTURBANCES ADJACENT TO CRITICAL AREAS.
5. CRITICAL AREAS ARE ANY AREA SUBJECT TO EXCESSIVE EROSION DUE TO HIGHLY ERODIBLE SOILS, SLOPE LENGTH, STEEPNESS, WATER CONCENTRATION OR OTHER FACTORS. AREAS MAY BECOME CRITICAL WHEN THE VEGETATION OR OTHER SOIL SURFACE PROTECTION IS REMOVED.
6. THE PERMANENT VEGETATIVE COVER SUCH AS SEEDING OR SODDING ON ALL AREAS SHALL BE ACCOMPLISHED WITHIN 10 DAYS AFTER FINAL GRADING OPERATIONS HAVE BEEN COMPLETED. TIME EXTENSIONS BEYOND THE 10 DAY REQUIREMENT MAY BE REQUESTED IN WRITING AND ARE SUBJECT TO WRITTEN APPROVAL.
7. TEMPORARY VEGETATIVE COVER SHALL BE PLANTED IF SEEDING DATE IS OUTSIDE APPROVED PLANTING DATES FOR PERMANENT VEGETATION. IF TEMPORARY VEGETATION IS USED, PERMANENT VEGETATION SHALL BE PLANTED AT EARLIEST POSSIBLE DATE.
8. EXPOSED SOIL HAVING A PH VALUE OF LESS THAN 4 SHALL BE TREATED IN ACCORDANCE WITH THE STANDARD FOR "MANAGEMENT OF HIGHLY ACID SOIL" IN THE STATE OF TEXAS EROSION & SEDIMENTATION MANUAL INCLUDING, BUT NOT LIMITED TO:
   a. LIMIT EXCAVATION AREA AND EXPOSURE TIME.
   b. STOCKPILES OF ACID SOILS SHALL BE LOCATED ON LEVEL LAND AND SHALL BE COVERED WITH PROPERLY ANCHORED HEAVY GRADE SHEETS OF POLYETHYLENE.
   c. EQUIPMENT USED TO MOVE ACID SOILS SHALL BE CLEANED DAILY.
   d. STONE TRACKING PADS, LIMESTONE CHECK DAMS, SILT FENCE, AND WOOD CHIPS SHALL BE USED AS NECESSARY TO MINIMIZE MOVEMENT OF ACID SOILS AND RUNOFF FROM ACID SOILS.
9. EXCAVATED SOIL MATERIAL SHALL NOT BE PLACED ADJACENT TO RIVERS, STREAMS OR BODIES OF WATER IN A MANNER THAT WILL CAUSE IT TO BE WASHED AWAY BY HIGH WATER OR RUNOFF. EXCESS BORROW MATERIAL REMOVED FROM THE CONSTRUCTION SITE SHALL BE STABILIZED AT THE SITE OF PLACEMENT.
10. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR PREVENTION AND ABATEMENT OF POLLUTION.

NOTES:

1. THE CONTRACTOR SHALL DEVELOP THEIR LAYDOWN AND SUPPORT AREAS IN THE LOCATIONS SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF ACERAGE FOR THEIR USE TO THE FURTHEST EXTENT POSSIBLE AND SHALL UTILIZE THESE AREAS TO ALLOW FOR THE MOST EFFICIENT ACCESS TO AND FROM THE PONDS AND FACILITY AS POSSIBLE.
2. ALL ESC MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AFTER COMPLETION OF USE OF THE LAYDOWN AREAS. ALL AREAS USED FOR CONTRACTOR LAYDOWN SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

LEGEND

- ASH DISPOSAL PONDS
- CONTRACTOR'S LAY DOWN AREA
- MAJOR CONTOURS
- MINOR CONTOURS
- 13440000N SURVEY GRID LINE (500 FT SQUARE)
- EXISTING RAILROAD
- EXISTING ROAD/PATH
- EXISTING FENCE
- SILT FENCE
- EXISTING OPERATIONAL PIPING



LAY DOWN YARD, EROSION AND SEDIMENT CONTROL PLAN

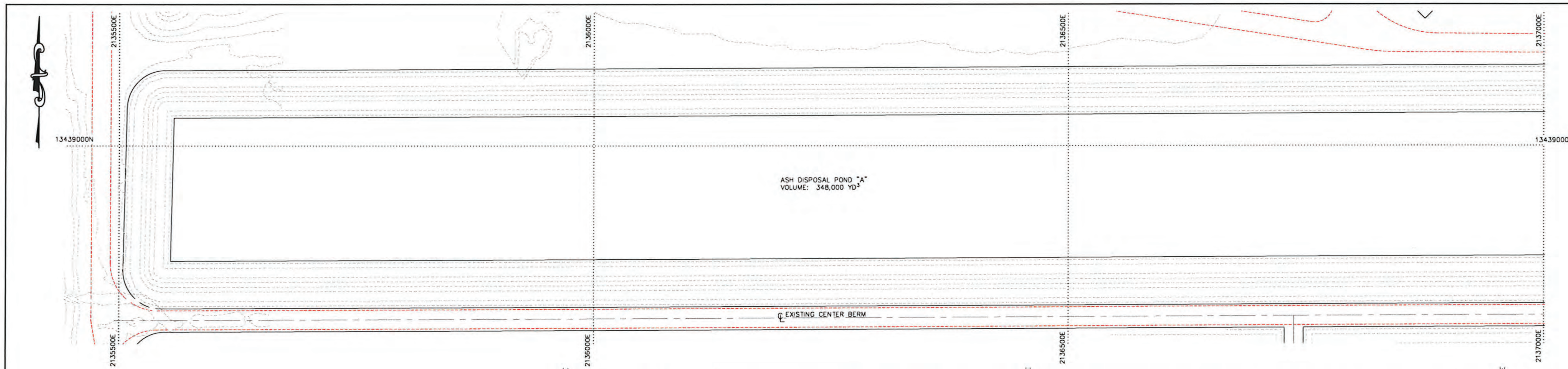
0 200 400 Feet

STAMP
STATE OF TEXAS
JAMES O. KENDRICK
84079
LICENSED
PROFESSIONAL ENGINEER
8/28/19

NewFields
1349 WEST PEACHTREE STREET
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

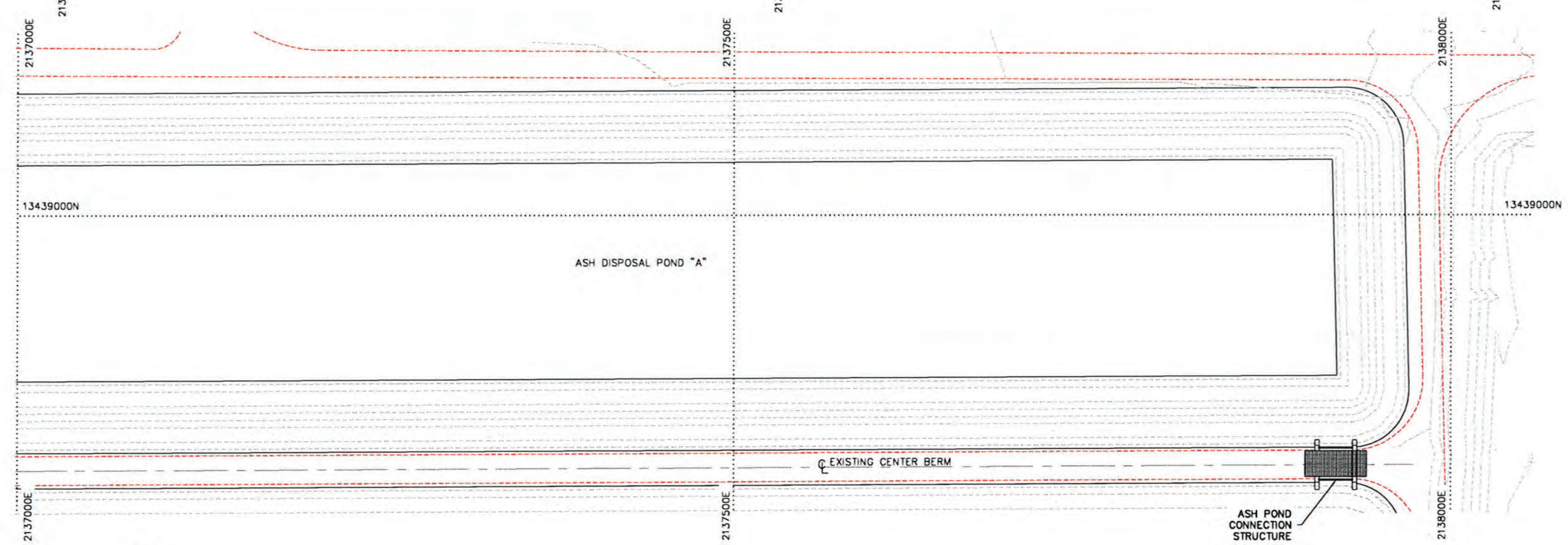
REVISION/ISSUE			
NO.	DATE	BY	DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

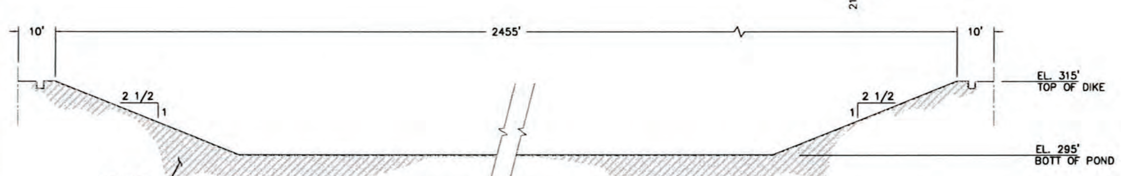
SCALE	1"=100'
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT ATASCOSA COUNTY, TEXAS ASH DISPOSAL POND RETROFIT
DRAWING NAME	LAY DOWN YARD, EROSION AND SEDIMENT CONTROL PLAN
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-103
SHEET NO.	4 OF 9



NOTES:

1. CONTRACTOR SHALL TILL, GRADE AND COMPACT POND "A" TO THE LINES AND ELEVATIONS ON THIS DRAWING IN ACCORDANCE WITH THE RETROFIT PLAN.
2. ALL TILLING, GRADING AND COMPACTION WORK WILL BE PERFORMED BY THE CONTRACTOR ON THE INSIDE OF THE PONDS. NO EARTHWORK WILL BE PERFORMED ON THE OUTSIDE BERMS.
3. THE ROAD BETWEEN THE 2 EXISTING PONDS WILL BE GRADED AND COMPACTED IN ACCORDANCE WITH THE RETROFIT PLAN IN PREPARATION FOR LINER PLACEMENT.
4. CONTOURS SHOWN ARE FINAL CONTOURS AFTER TILLING, GRADING AND COMPACTION ARE COMPLETED.
5. NO GARBAGE, ROCKS OR OBJECTIONABLE MATERIALS SHALL REMAIN ON THE SURFACE THAT COULD PUNCTURE THE LINER (SECTION 6.0 OF THE RETROFIT PLAN)
6. THE ROUGH GRADED POND SURFACE SHALL BE ROLLED AT LEAST TWO PASSES.
7. THE CONTRACTOR SHALL GRADE SLOPES TO NO STEEPER THAN 1 V AND 2.5 H.





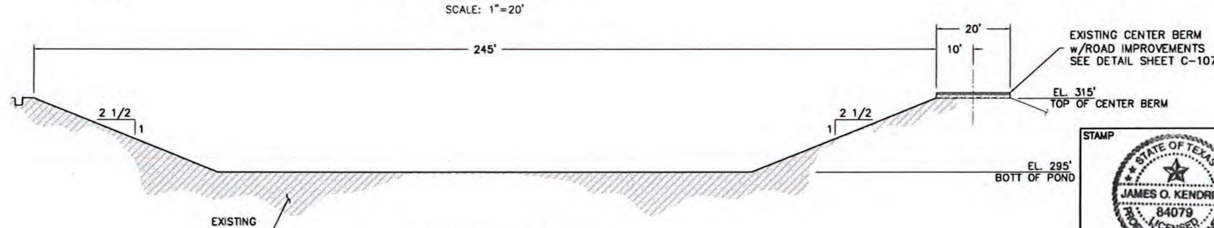
ASH DISPOSAL POND "A" PROFILE
LOOKING NORTH
SCALE: 1"=20'

ASH DISPOSAL POND "A" TILLING, GRADING AND COMPACTION PLAN

0 100 200 Feet

LEGEND

- MAJOR CONTOURS
- MINOR CONTOURS
- 13440000N SURVEY GRID LINE (500 FT SQUARE)
- EXISTING ROAD/PATH



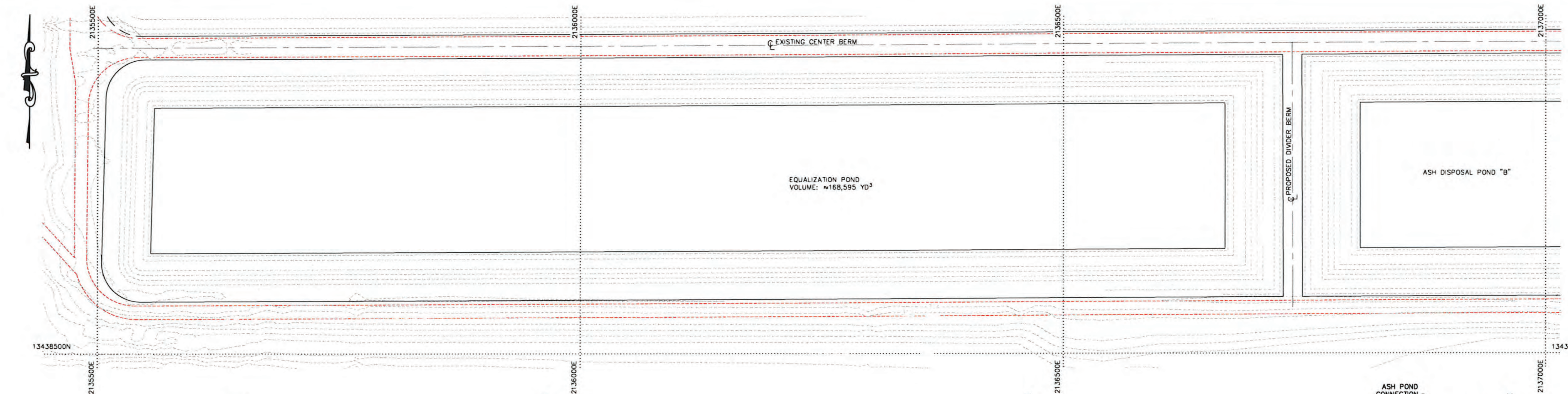
ASH DISPOSAL POND "A" PROFILE
LOOKING EAST
SCALE: 1"=20'

STAMP
STATE OF TEXAS
JAMES O. KENDRICK
84079
LICENSED
PROFESSIONAL ENGINEER
8/28/19

NewFields
1349 WEST PEACHTREE STREET
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

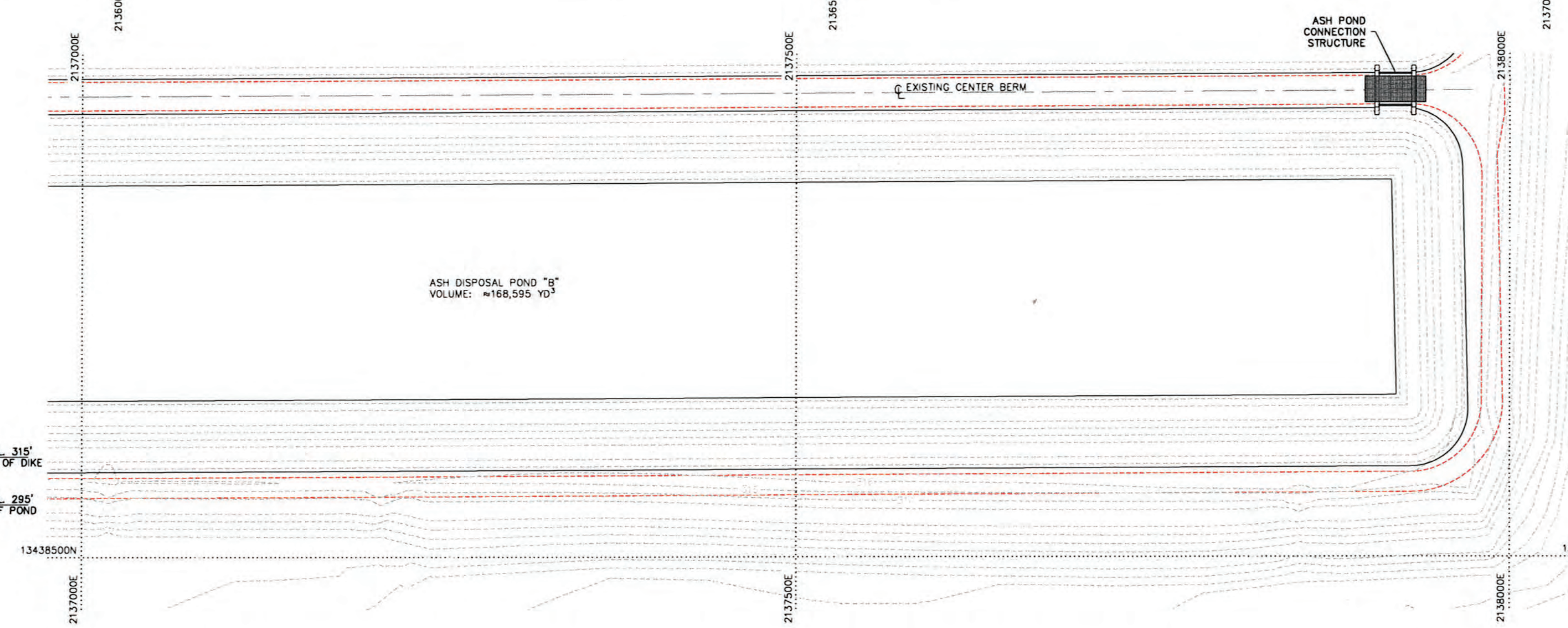
NO.	DATE	BY	REVISION/ISSUE DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

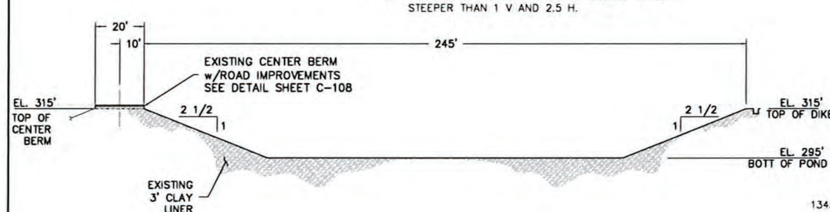
SCALE	AS NOTED
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT, ATASCOSA COUNTY, TEXAS, ASH DISPOSAL POND RETROFIT
DRAWING NAME	POND "A" TILLING, GRADING AND COMPACTION PLAN
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-104
SHEET NO.	5 OF 9



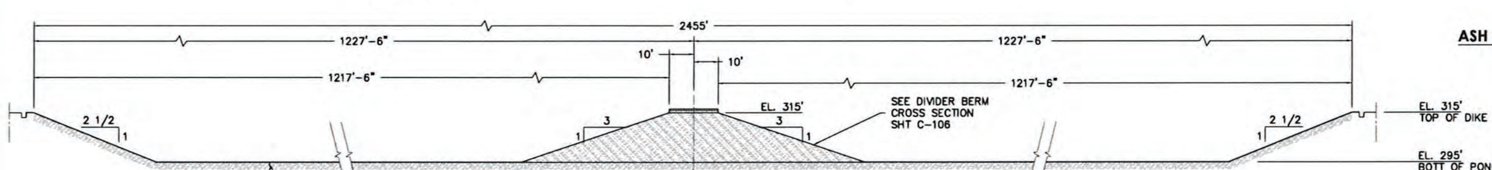
NOTES:

1. CONTRACTOR SHALL TILL, GRADE AND COMPACT POND "B" TO THE LINES AND ELEVATIONS ON THIS DRAWING IN ACCORDANCE WITH THE RETROFIT PLAN.
2. ALL TILLING, GRADING AND COMPACTION WORK WILL BE PERFORMED BY THE CONTRACTOR ON THE INSIDE OF THE PONDS. NO EARTHWORK WILL BE PERFORMED ON THE OUTSIDE BERMS.
3. THE ROAD BETWEEN THE 2 EXISTING PONDS WILL BE GRADED AND COMPACTED IN ACCORDANCE WITH THE RETROFIT PLAN IN PREPARATION FOR LINER PLACEMENT.
4. CONTOURS SHOWN ARE FINAL CONTOURS AFTER TILLING, GRADING AND COMPACTION ARE COMPLETED.
5. NO GARBAGE, ROCKS OR OBJECTIONABLE MATERIALS SHALL REMAIN ON THE SURFACE THAT COULD PUNCTURE THE LINER (SECTION 6.0 OF THE RETROFIT PLAN)
6. THE ROUGH GRADED POND SURFACE SHALL BE ROLLED AT LEAST TWO PASSES.
7. THE CONTRACTOR SHALL GRADE SLOPES TO NO STEEPER THAN 1 V AND 2.5 H.





ASH DISPOSAL POND "B"/ EQUALIZATION POND PROFILE
LOOKING EAST
SCALE: 1"=30'



ASH DISPOSAL POND "B" / EQUALIZATION POND PROFILE
LOOKING NORTH
SCALE: 1"=30'

ASH DISPOSAL POND "B" TILLING, GRADING AND COMPACTION PLAN

0 100 200 Feet

LEGEND

MAJOR CONTOURS
MINOR CONTOURS
13440000N SURVEY GRID LINE (500 FT SQUARE)
EXISTING ROAD/PATH

STAMP
STATE OF TEXAS JAMES O. KENDRICK 84079 LICENSED PROFESSIONAL ENGINEER
8/28/19

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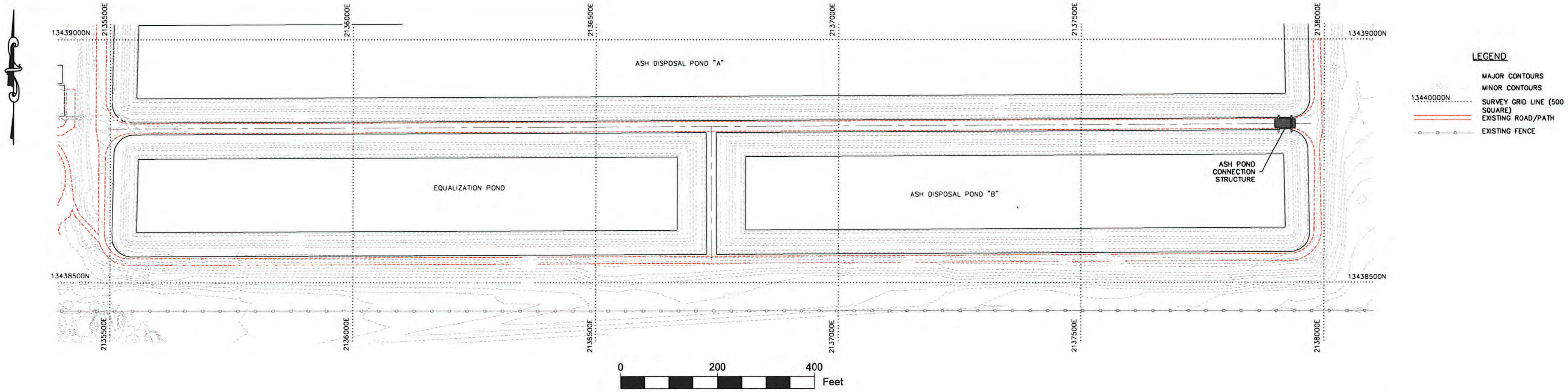
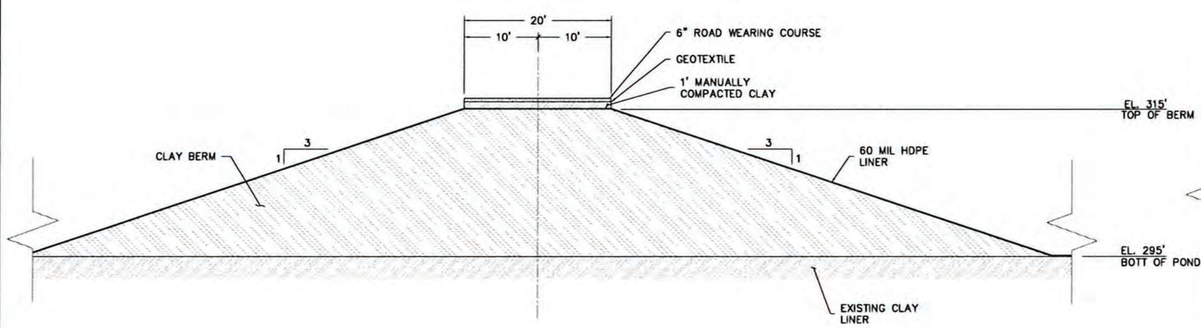
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

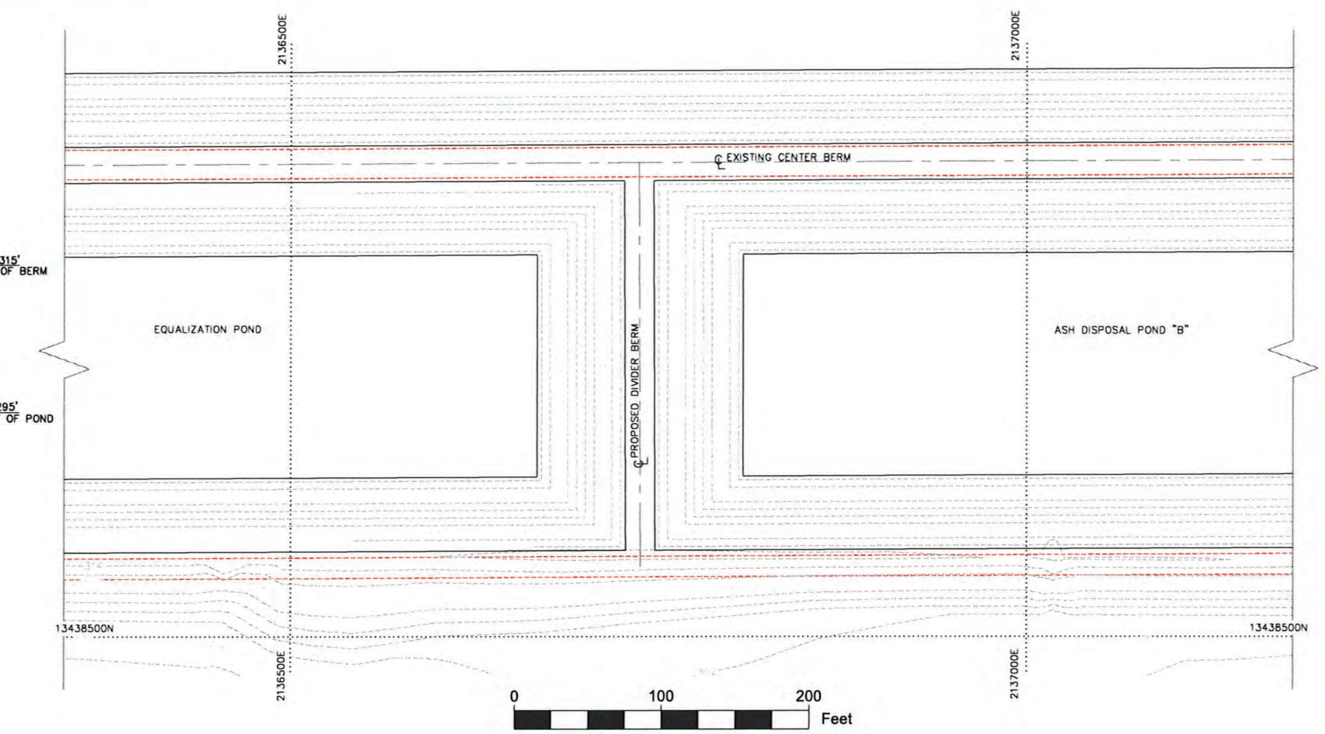
NO.	DATE	BY	REVISION/ISSUE DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

SCALE	AS NOTED
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT, ATASCOSA COUNTY, TEXAS, ASH DISPOSAL POND RETROFIT
DRAWING NAME	POND "B" TILLING, GRADING AND COMPACTION PLAN
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-105
SHEET NO.	6 OF 9





PROPOSED DIVIDER BERM CROSS SECTION
SCALE: 1"=10'



NOTES:

1. CONTRACTOR SHALL PERFORM NUCLEAR DENSITY TESTING ON THE NEW BERM CONSTRUCTION IN ACCORDANCE WITH THE RETROFIT PLAN

STAMP

STATE OF TEXAS
JAMES O. KENDRICK
84079
LICENSED
PROFESSIONAL ENGINEER
8/28/19

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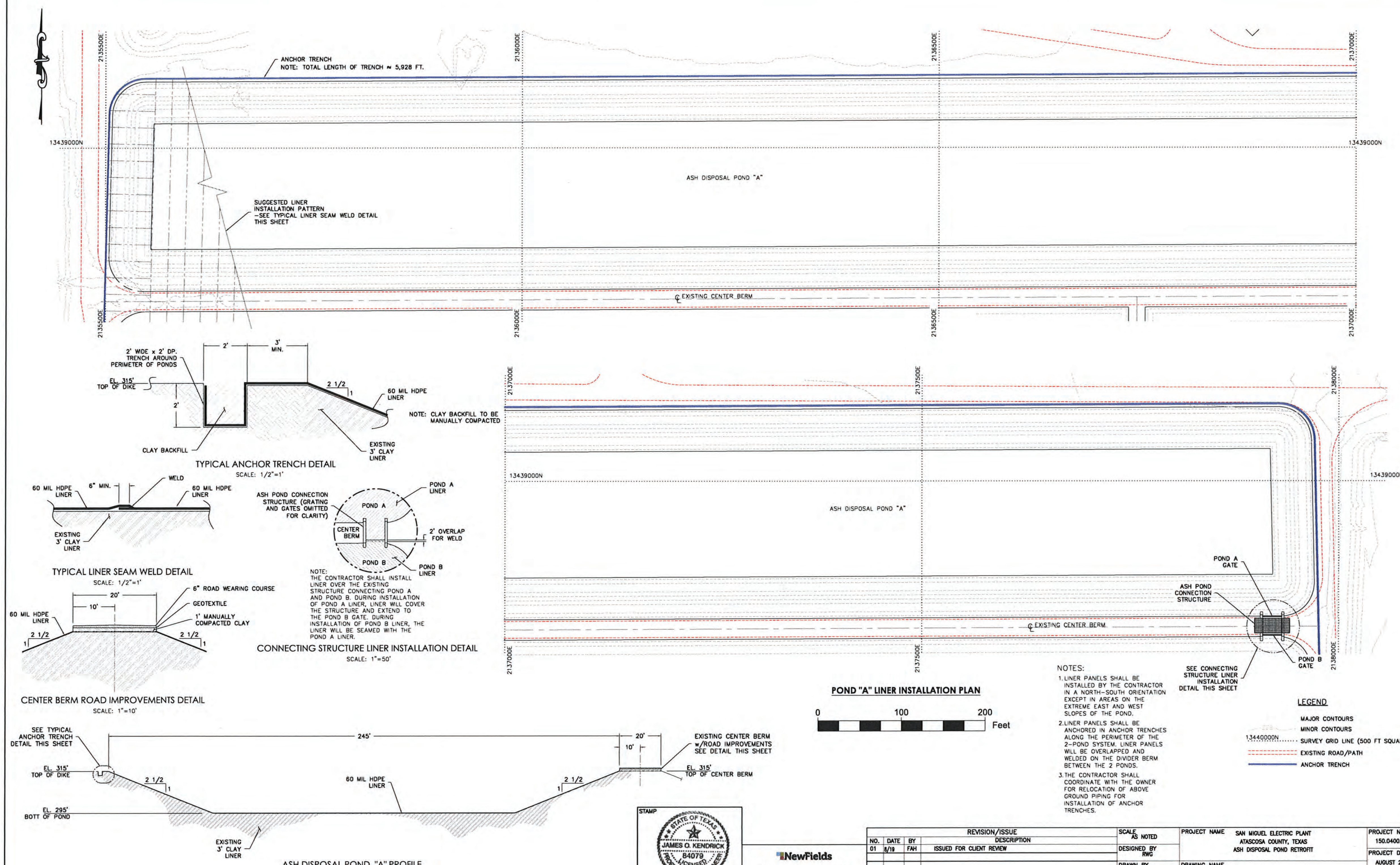
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

REVISION/ISSUE			
NO.	DATE	BY	DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

SCALE	AS NOTED
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT, ATASCOSA COUNTY, TEXAS, ASH DISPOSAL POND RETROFIT
DRAWING NAME	POND "B" DIVIDER BERM PLAN AND DETAILS
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-106
SHEET NO.	7 OF 9



NOTES:

1. LINER PANELS SHALL BE INSTALLED BY THE CONTRACTOR IN A NORTH-SOUTH ORIENTATION EXCEPT IN AREAS ON THE EXTREME EAST AND WEST SLOPES OF THE POND.
2. LINER PANELS SHALL BE ANCHORED IN ANCHOR TRENCHES ALONG THE PERIMETER OF THE 2-POND SYSTEM. LINER PANELS WILL BE OVERLAPPED AND WELDED ON THE DIVIDER BERM BETWEEN THE 2 PONDS.
3. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR RELOCATION OF ABOVE GROUND PIPING FOR INSTALLATION OF ANCHOR TRENCHES.

LEGEND

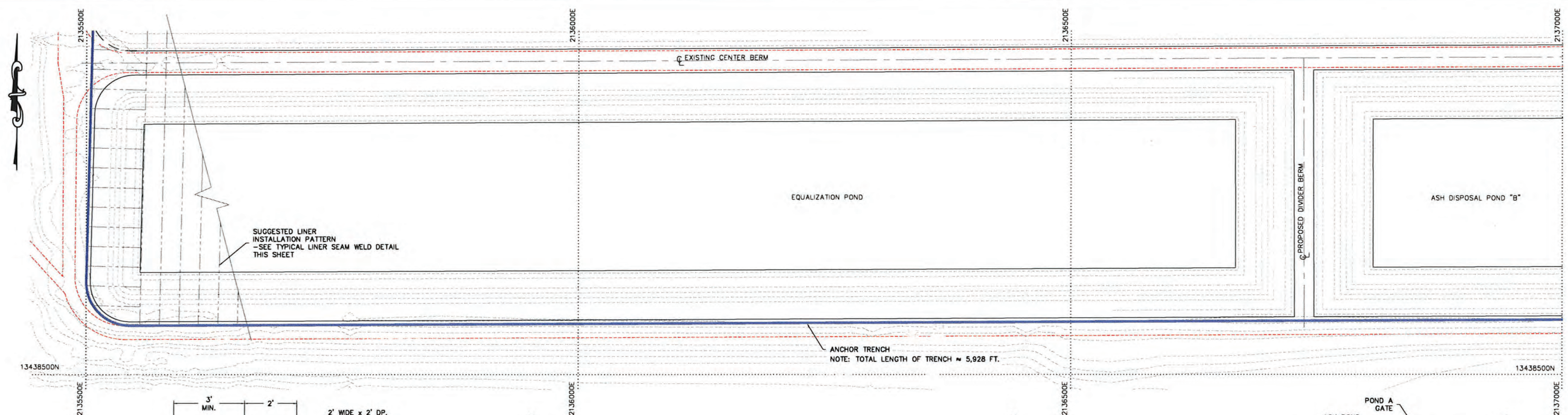
- MAJOR CONTOURS
- MINOR CONTOURS
- 13440000N .... SURVEY GRID LINE (500 FT SQUARE)
- EXISTING ROAD/PATH
- ANCHOR TRENCH

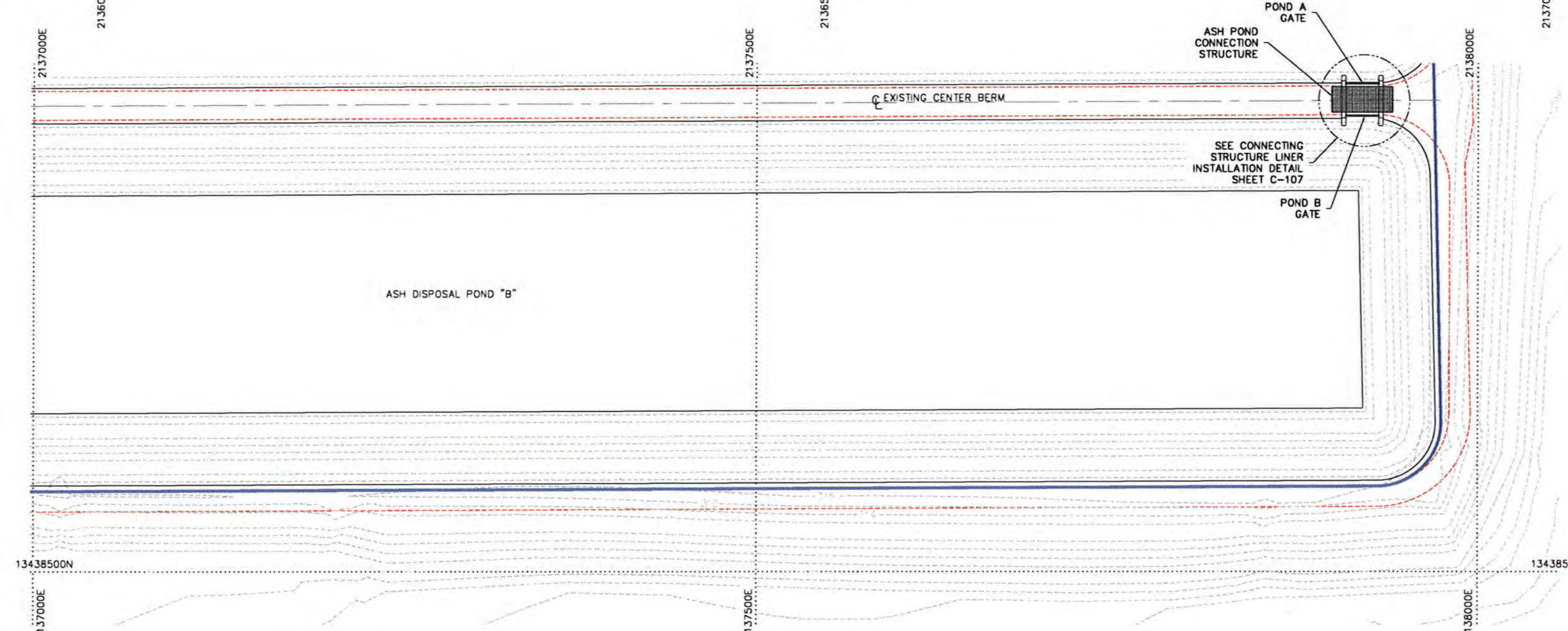
STAMP: STATE OF TEXAS — JAMES O. KENDRICK — 84079 — LICENSED PROFESSIONAL ENGINEER
8/28/19

NewFields
1349 WEST PEACHTREE STREET
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

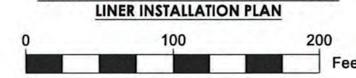
NO.	DATE	BY	REVISION/ISSUE DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

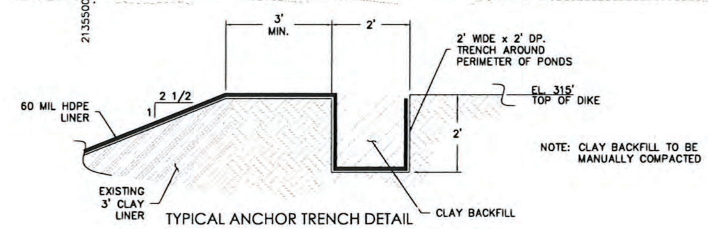
SCALE	AS NOTED
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19
PROJECT NAME	SAN MIGUEL ELECTRIC PLANT ATASCOSA COUNTY, TEXAS ASH DISPOSAL POND RETROFIT
DRAWING NAME	POND "A" LINER INSTALLATION PLAN
PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-107
SHEET NO.	8 OF 9



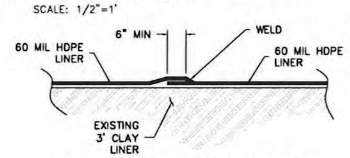


NEW POND "B" AND EQUALIZATION POND LINER INSTALLATION PLAN



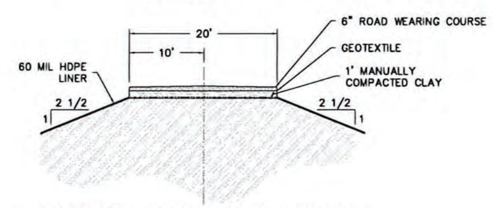


TYPICAL ANCHOR TRENCH DETAIL
SCALE: 1/2"=1'

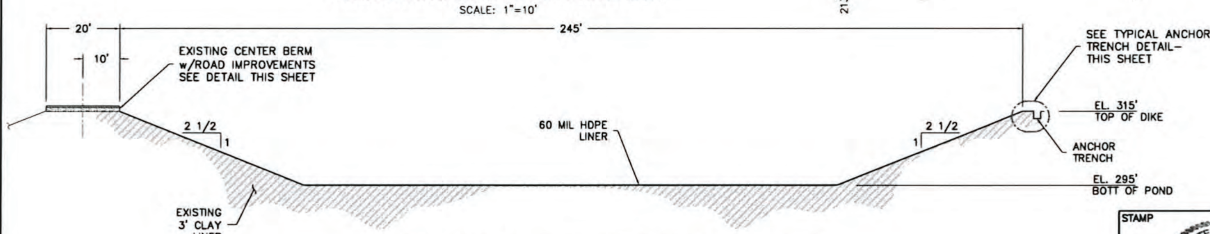


TYPICAL LINER SEAM WELD DETAIL
SCALE: 1/2"=1'

NOTES:
1. LINER PANELS SHALL BE INSTALLED BY THE CONTRACTOR IN A NORTH–SOUTH ORIENTATION EXCEPT IN AREAS ON THE EXTREME EAST AND WEST SLOPES OF THE POND.
2. LINER PANELS SHALL BE ANCHORED IN ANCHOR TRENCHES ALONG THE PERIMETER OF THE 2–POND SYSTEM. LINER PANELS WILL BE OVERLAPPED AND WELDED ON THE DIVIDER BERM BETWEEN THE 2 PONDS.
3. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR RELOCATION OF ABOVE GROUND PIPING FOR INSTALLATION OF ANCHOR TRENCHES.



CENTER BERM ROAD IMPROVEMENTS DETAILS
SCALE: 1"=10'

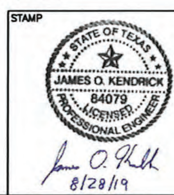


ASH DISPOSAL POND "B" / EQUALIZATION POND PROFILE
LOOKING EAST
SCALE: 1"=20'

LEGEND

- MAJOR CONTOURS
- MINOR CONTOURS
- 13440000N SURVEY GRID LINE (500 FT SQUARE)
- EXISTING ROAD/PATH
- ANCHOR TRENCH

STAMP



NewFields
1349 WEST PEACHTREE STREET
SUITE 2000
ATLANTA, GEORGIA 30309
PHONE: 404-347-9050
FIRM # F-5735

NO.	DATE	BY	REVISION/ISSUE DESCRIPTION
01	8/19	FAH	ISSUED FOR CLIENT REVIEW

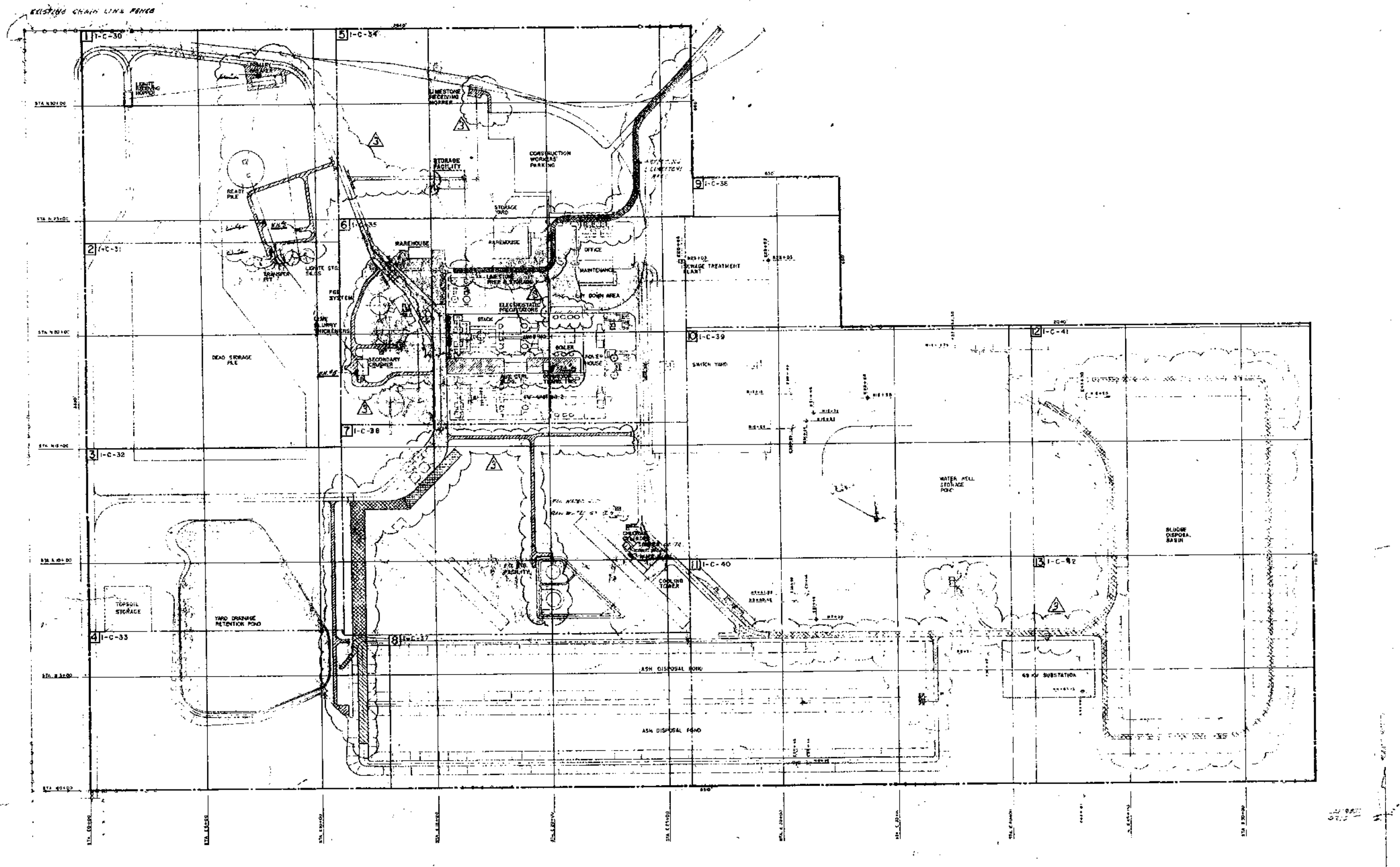
SCALE	1"=50'
DESIGNED BY	RWG
DRAWN BY	FAH
CHECKED BY	RWG
DRAWING DATE	8/28/19

PROJECT NAME	SAN MIGUEL ELECTRIC PLANT ATASCOSA COUNTY, TEXAS ASH DISPOSAL POND RETROFIT
DRAWING NAME	NEW POND "B" AND EQUALIZATION POND LINER INSTALLATION PLAN

PROJECT NO.	150.0400.000
PROJECT DATE	AUGUST 2019
DRAWING NO.	C-108
SHEET NO.	9 OF 9

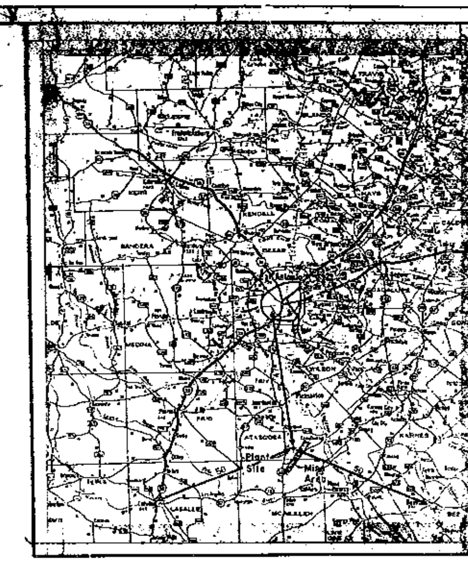
APPENDIX B

Tippet & Gee, Inc.
San Miguel Plan, Unit No. 1
Drawings: I-C-I-C, 1-C-33, I-C-37, I-C-40, C-?



PLANT SITE PLAN

SCALE: 1" = 200'



VICINITY MAP

NO SCALE

REV	DATE	BY	DESCRIPTION
A	5-10-77	NL	REVISED PER ADDENDUM NO. 1
B	7-8-77		REVISED PER ADDENDUM NO. 4
C	8-18-77		FINAL BID SET
1		RLN	EXTENDED ROAD AT WAREHOUSE
2		AW	CORRECTED TO AGREE W/OTHER DWGS., ADDED LANSERT. ARID.
3			ADD TYPE "A" FLEX. BASE RDS., NOTED EXISTING FLEX. BASE RDS. REV. LEACHATE AREA SOUTH OF BOILER BLDG.

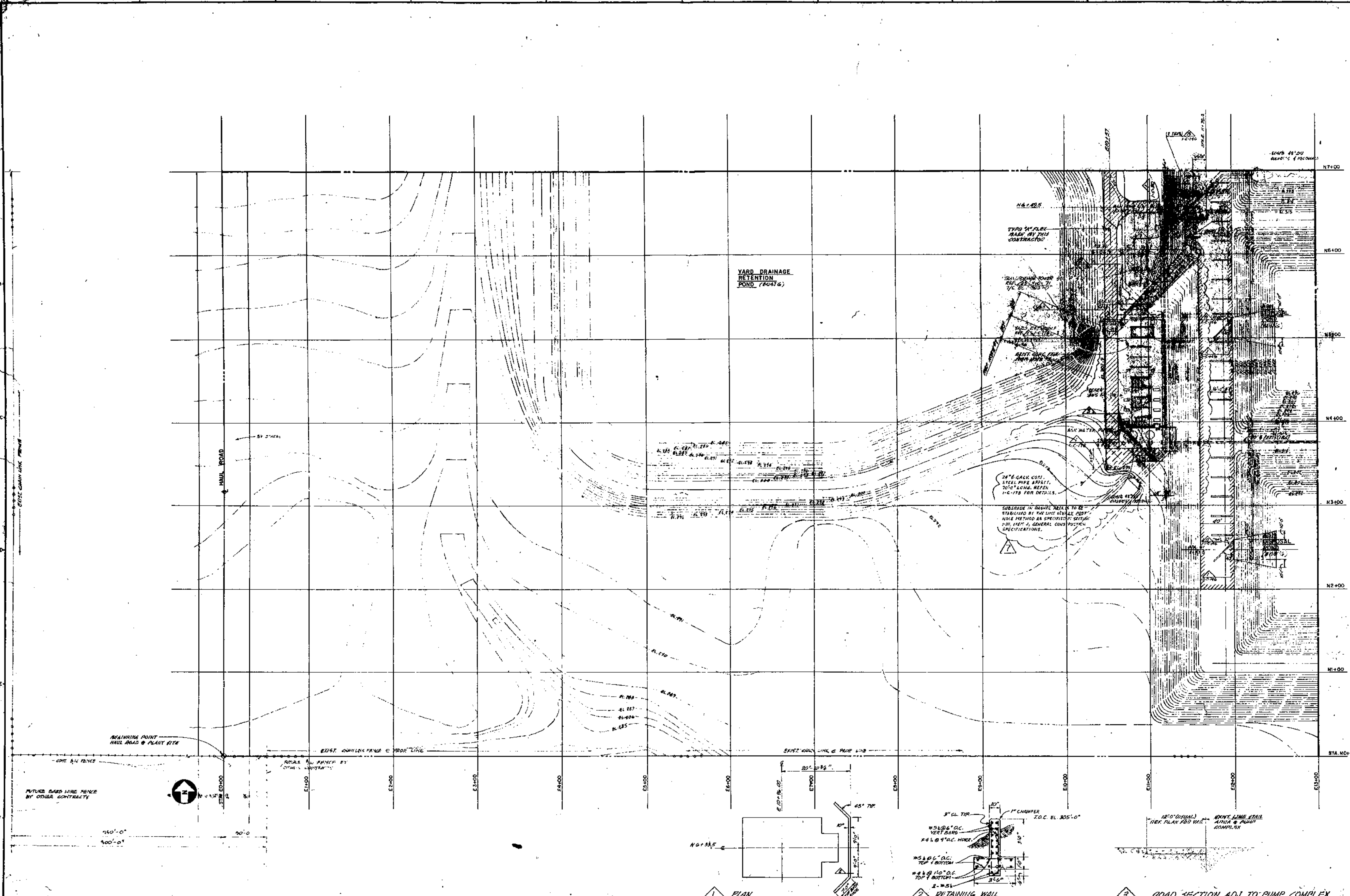
SCALE: AS NOTED
DRAWN:
DATE: 4-1-77
CHECKED:
APPROVED:

TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE, TEXAS

SAN MIGUEL PLANT
UNIT NO. 1
B.E.P.C. S.T.E.C.

PLANT SITE PLAN AND VICINITY MAP

JOB NO.: SM-406
REV.: 3
DRAWING NUMBER: 1-C-1-C



NOTES

1. THIS CONTRACTOR TO FURNISH & INSTALL 12" RIPRAP ALONG SLOPE AROUND CONC. PUMP SUPPORT STRUCT. AS SHOWN. RIPRAP SHALL EXTEND FULL HT. OF SLOPE EL. 285' TO EL. 300'.
2. EXISTING CONC. FOUNDATION TO BE REMOVED TO TOP OF PIER, EL. 299'-0"

REV.	DATE	BY	DESCRIPTION
6	4-14-80	JB	REV. CONTOURS @ YARD RETENTION POND, ADDED TYPE "A" FLEX BASE ROAD, INDICATED FLEX. BASE BY THIS CONTR. @ ASH POND DIKE, DEFINED & NOTED AREA TO RECEIVE RIPRAP, INDICATED & NOTED FDN. TO BE REMOVED, ADD.
7	5-13-81	LB	REV. CONTOURS & ADDED RETAINING WALL, ADDED FLEX BASE ROAD

REV.	DATE	BY	DESCRIPTION
A	5-18-77		REVISED PER ADDENDUM NO. 1
B	6-5-77	JLF	REVISED PER ADDENDUM NO. 3
C	7-7-77	JLF	REVISED PER ADDENDUM NO. 4
0	8-18-77		FINAL BID SET
1	1-25-77	RLH	REVISED REF. NOTE, ADDED REF. NOTE
2	6-9-78	GHM	REVISED PIPE FOUNDATIONS
3	8-24-78	LK	CORRECTED PULLBOX LOCATION.
4	6-1-79	LB	CHG'D. 1 TO 2, REVISED ELEV. OF TRANSFORMER POWER STA. REMOVED MOTOR CONTROL CENTER FDN., REVISED STATION COORDINATE
5	1-23-80	LB	REV. PIPE SUPPORTS AS NOTED.

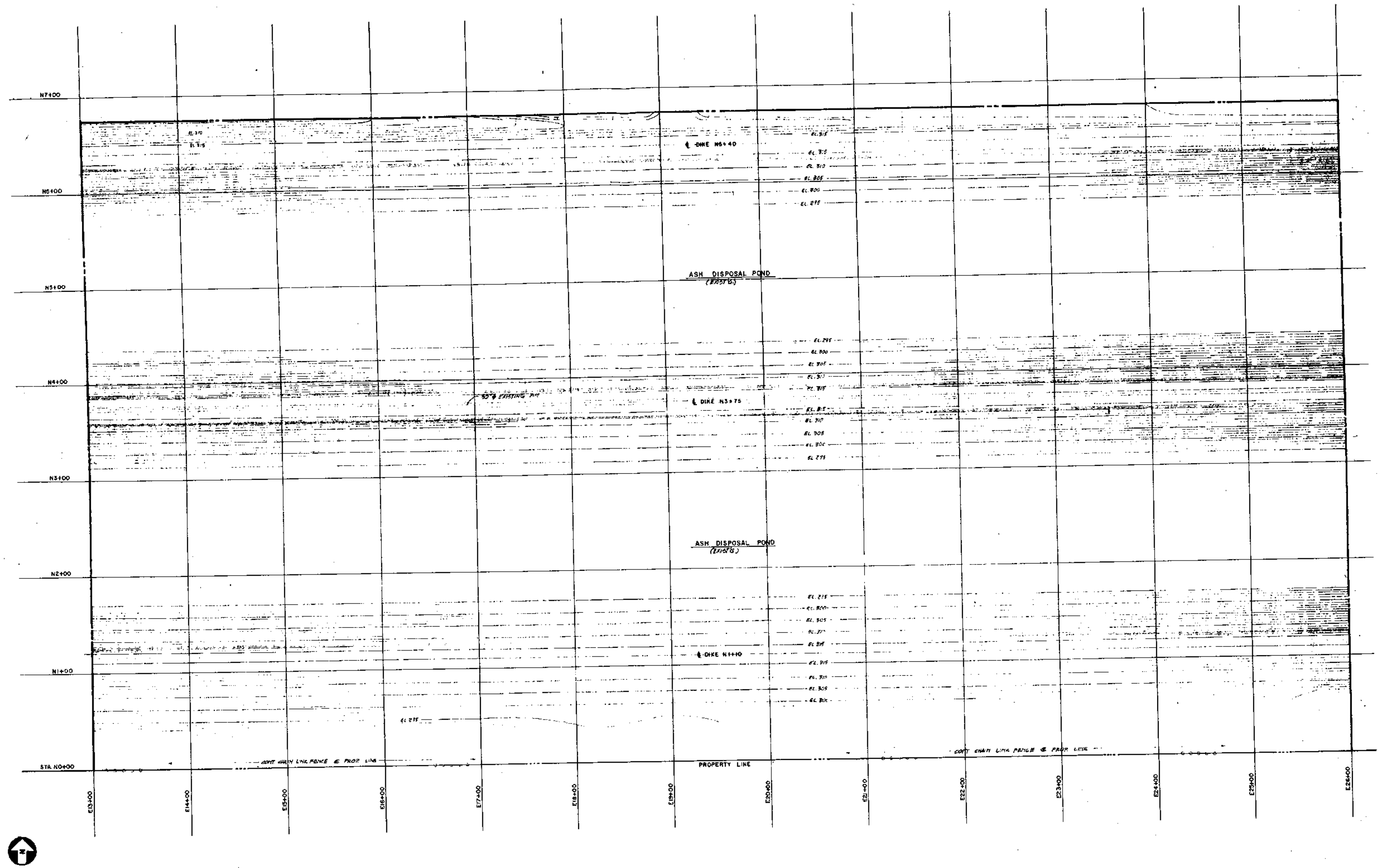
SCALE 1" = 40
DRAWN F.G.M.
DATE 4-1-77
CHECKED C.A.L.
APPROVED M.A., W.G.H.

TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE TEXAS

SAN MIGUEL PLANT
UNIT NO. 1
S.E.P.C. S.T.E.C.

SITE PLAN
SECTION NO. 4

JOB NO. SMI-406
REV. 7
DRAWING NUMBER 1-C-33



NOTES

REV	DATE	BY	DESCRIPTION
A	5-18-77		REVISED PER ADDENDUM NO. 1
O	5-16-77		FINAL BID SET

SCALE 1"=40'
DRAWN PGM
DATE 4-1-77
CHECKED CAD
APPROVED MLH, WGN

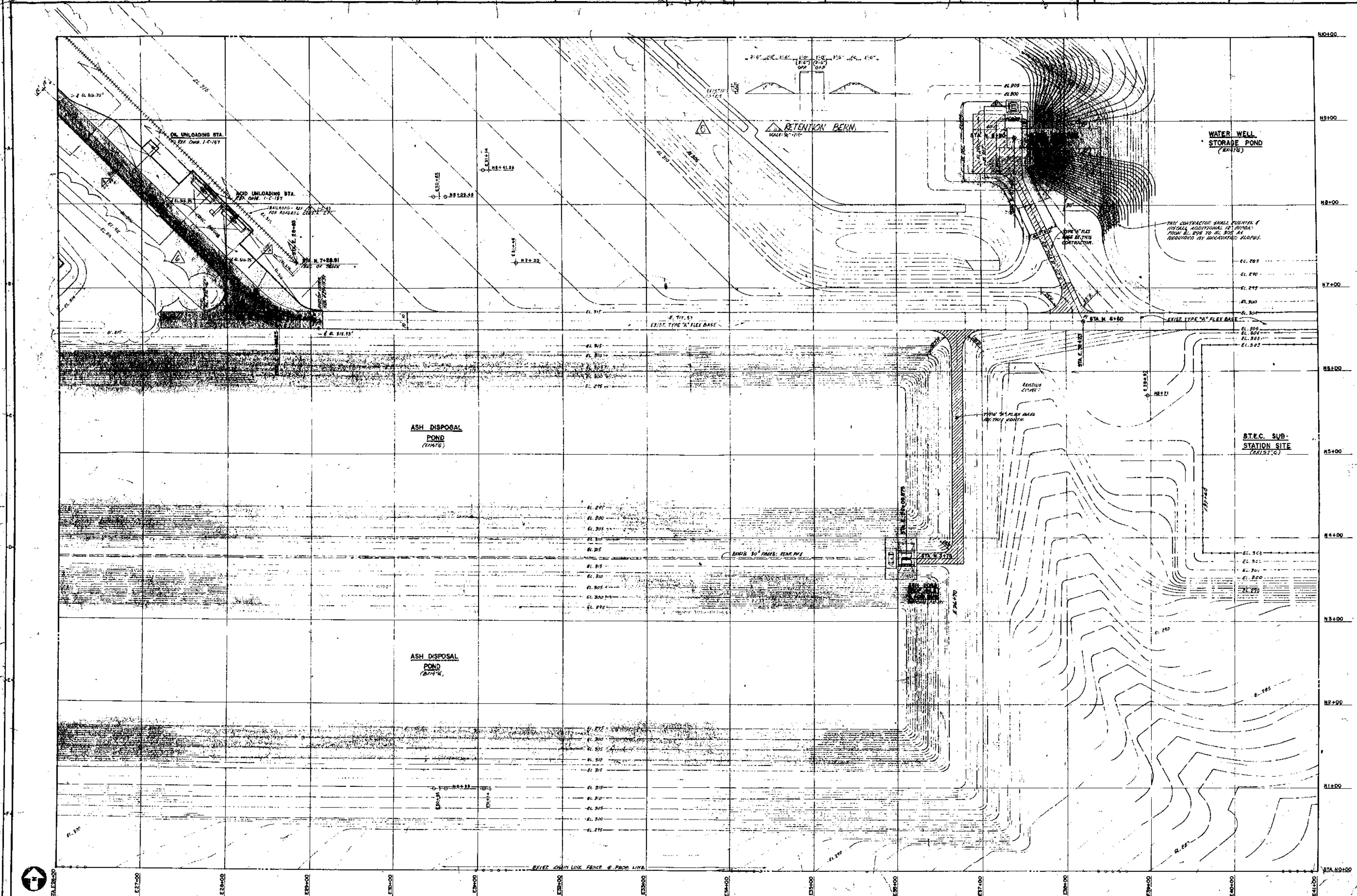
M.L. HUGHES 28324
William G. Holloway 25137
CHARLES A. DOBY 37903

TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE TEXAS

SAN MIGUEL PLANT
UNIT NO. 1
B.E.P.C. S.T.E.C.

SITE PLAN
SECTION NO. 8

JOB NO. SMI-406
REV. 0
DRAWING NUMBER 1-C-37



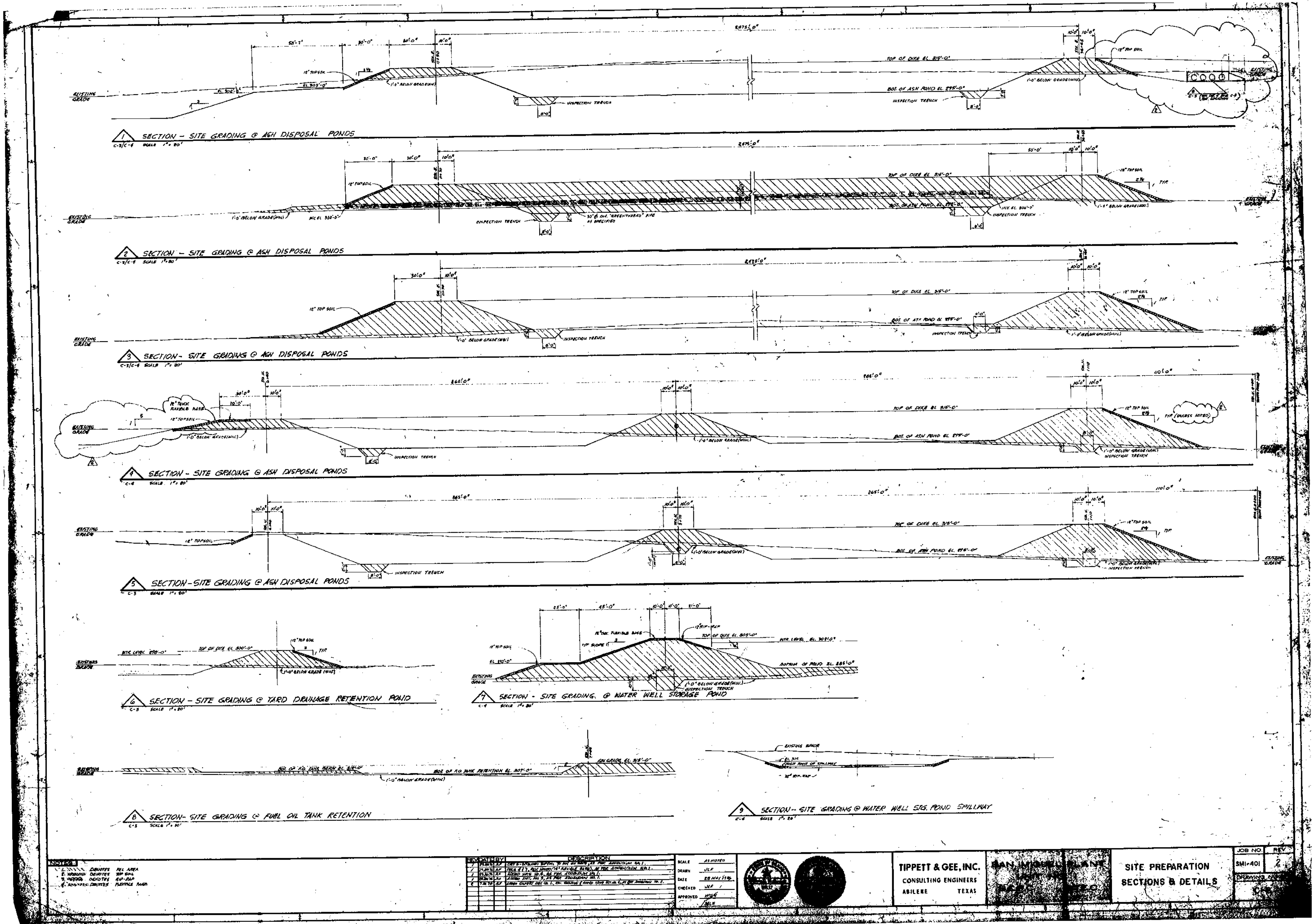
SCALE	1"=40'
DRAWN	P.G.H.
DATE	4-1-77
CHECKED	E.A.D.
APPROVED	M.L.H., W.G.H.

TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE TEXAS

SAN MIGUEL PLANT
UNIT NO. 1
S.E.P.C. S.T.E.C.

SITE PLAN
SECTION NO. 11

JOB NO.	REV.
SMI-406	6
DRAWING NUMBER	
I-C-40	



SECTION - SITE GRADING @ ASH DISPOSAL PONDS
SCALE 1" = 80'
TOP OF DIKE EL 315'-0"
BOT. OF ASH POND EL 275'-0"
INSPECTION TRENCH
12" TOP SOIL
EXISTING GRADE
1'-0" BELOW GRADE (MIN)
SECTION - SITE GRADING @ YARD DRAINAGE RETENTION POND
SECTION - SITE GRADING @ WATER WELL STORAGE POND
SECTION - SITE GRADING @ FUEL OIL TANK RETENTION
SECTION - SITE GRADING @ WATER WELL STG. POND SPILLWAY
NOTES
SCALE AS NOTED
DRAWN JLF
DATE 28 MAY 1976
CHECKED JLF
APPROVED
REV DATE BY DESCRIPTION
TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE TEXAS
SITE PREPARATION
SECTIONS & DETAILS
JOB NO. SMI-401
REV. 2
DRAWING NO.

NOTES

1. REFER TO GENERAL NOTES 1-C-70 FOR FOUNDATION REQUIREMENTS.
2. COMPACTED STRUCTURAL BACKFILL. CONTRACTOR MAY USE EXCAVATED CLAY. LIME STABILIZATION IS NOT REQUIRED AT THIS AREA.

REV	DATE	BY	DESCRIPTION
A	18MAY77	JLF	REVISED PER ADDENDUM NO. "1"
B	8-3-77		REVISED PER ADDENDUM NO. "5"
0	8-18-77		FINAL BID SET
1	1-13-78	JB	ADDED SOIL NOTES FOR CLARIFICATION AT DET. "2" & "4".
2	5-19-78	BLA	ADDED NOTES & DIMEN. @ PLAN "1", SECT. "2", "3", "5" REV. DIMEN @ 12, 13, 14.
3	4-6-79	JB	ADD. DIM. @ 7 ; CORR. DIM. @ 8

SCALE	AS NOTED
DRAWN	J.B., J.L.F.
DATE	4-1-77
CHECKED	B.R., C.A.D.
APPROVED	M.L.H., W.G.H.

STATE OF TEXAS — M.L. HUGHES — 25324 — REGISTERED PROFESSIONAL ENGINEER

STATE OF TEXAS — William G. Hollowell — 15137 — REGISTERED PROFESSIONAL ENGINEER

STATE OF TEXAS — CHARLES A. DOBY — 37593 — REGISTERED PROFESSIONAL ENGINEER

TIPPETT & GEE, INC.
CONSULTING ENGINEERS
ABILENE TEXAS

SAN MIGUEL PLANT
UNIT NO. 1
B.E.P.C. S.T.E.C.

ASH POND DROP INLET, FOUND. PLAN & DETAILS
ASH POND ACID TANK PIER, FOUND. PLAN & DETAILS

JOB NO. SMI-406
REV. 3F3
DRAWING NUMBER 1-C-177

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