

**130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383**

TYPE I PERMIT APPLICATION

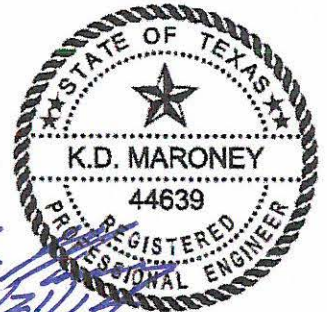
**PART II
EXISTING CONDITIONS AND
CHARACTER OF THE FACILITY AND SURROUNDING AREA**

Prepared for

130 ENVIRONMENTAL PARK, LLC

August 2013
Revised February 2014
Revised June 2014

Revised August 2014



Prepared by

Biggs & Mathews, Inc.
Firm Registration No. F-834

BIGGS & MATHEWS ENVIRONMENTAL

1700 Robert Road, Suite 100 ♦ Mansfield, Texas 76063 ♦ 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

And

BIGGS & MATHEWS, INC.

2500 Brook Avenue ♦ Wichita Falls, Texas 76301 ♦ 940-766-0156

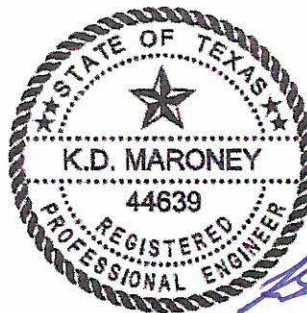
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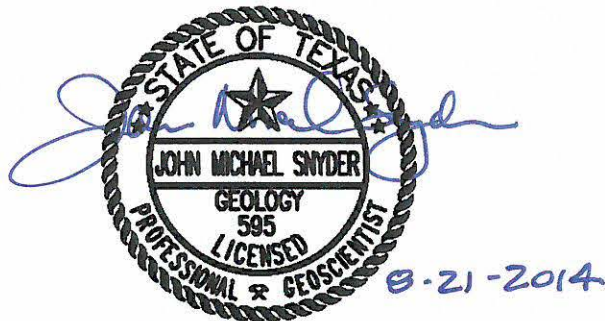
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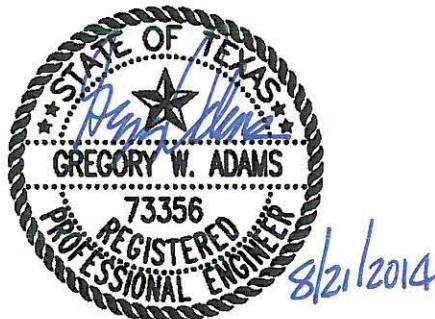
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For Sections 8. 1, 10.1, 10.2, 10.3, 10.4, 10.5, 11.1, 11.2, 12.1, 12.2.



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For Section 10.6.

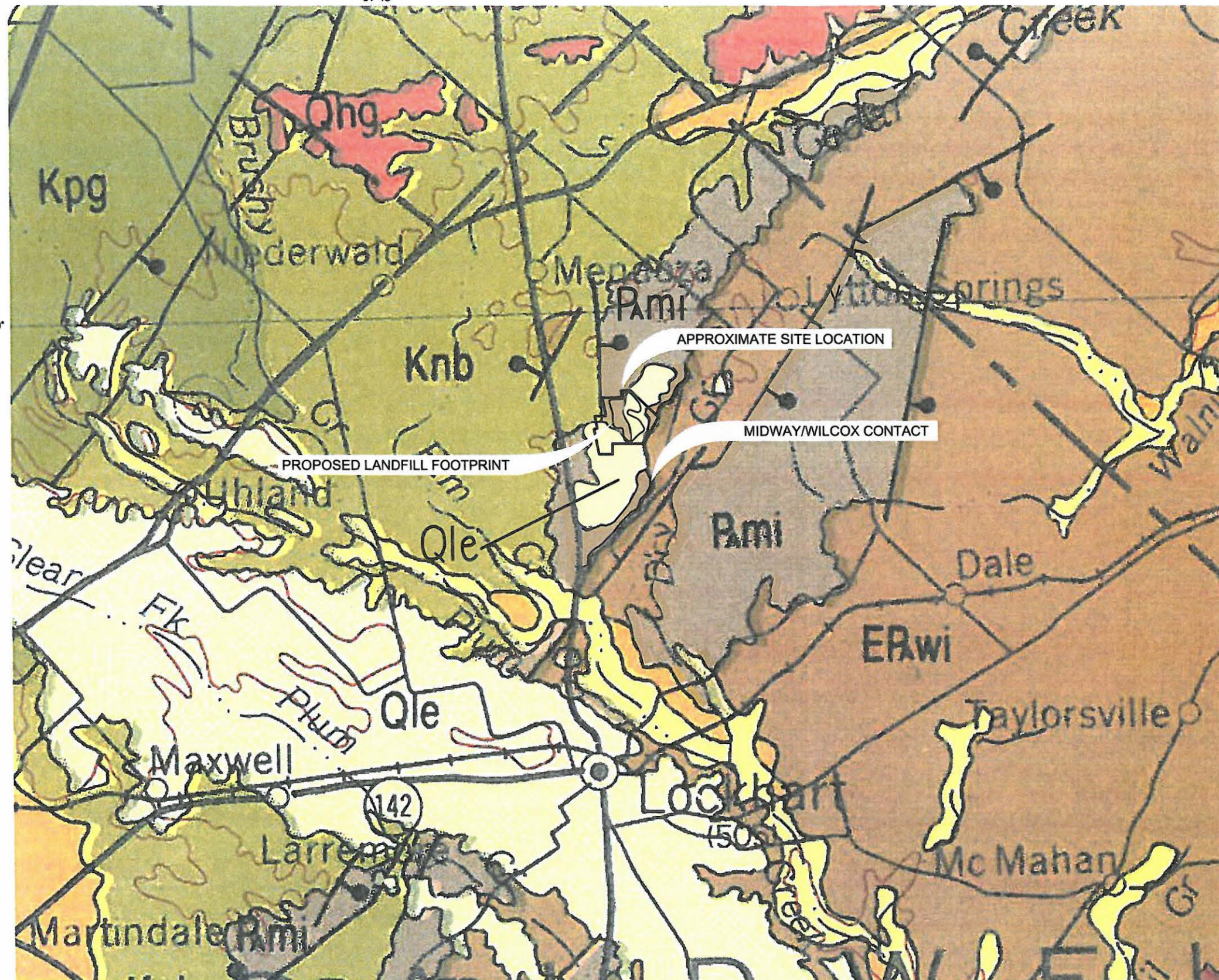
130 ENVIRONMENTAL PARK

**APPENDIX IIA
MAPS AND DRAWINGS**

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J:\129\06 130 Park\102\PART 1\IA.9-GeoVicinity.dwg Layout: IIA.9 User: gwhite



- NOTE:
1. FOR GEOLOGIC LEGEND, SEE DRAWING IIA.9A AND IIA.9B.
 2. MODIFIED FROM FROM BARNES, 1992 BY ADDING:
A. APPROXIMATE SITE LOCATION.
B. PROPOSED LANDFILL FOOTPRINT.
C. MIDWAY/WILCOX CONTACT.
D. LABELED THE PLEISTOCENE LEONA FORMATION.
E. LABELED THE PALEOCENE MIDWAY GROUP.



GEOLOGIC VICINITY MAP
CALDWELL COUNTY

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DATUM IS MEAN SEA LEVEL
CONTOUR INTERVAL 200 FEET
SUPPLEMENTAL 100-FOOT CONTOUR IN COASTAL REGION

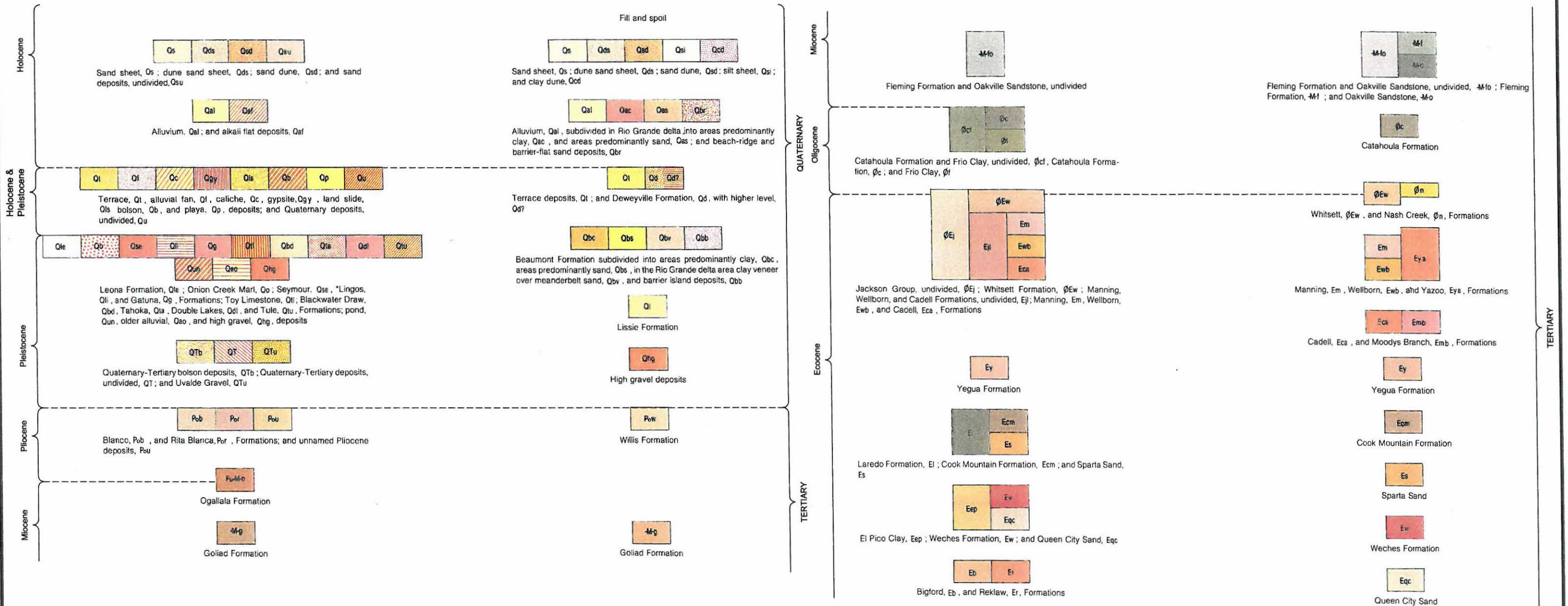
GEOLOGIC MAP OF TEXAS

1992

REFERENCE:
BARNES, V.E., 1992, GEOLOGIC MAP OF TEXAS,
BUREAU OF ECONOMIC GEOLOGY, UNIVERSITY OF
TEXAS, AUSTIN, TEXAS.

ISSUED FOR PERMITTING PURPOSES

REVISIONS				TBPE FIRM NO. F-256				TBPG FIRM NO. 50222			
2	8/14	N.O.D. NO. 2 RESPONSE	GLW	ESF	ESF	JMS	DSN.	ESF	DATE :	6/13	FIGURE IIA.9
1	6/14	N.O.D. NO. 1 RESPONSE	GLW	ESF	JMS	JMS	DWN.	GLW	SCALE :	GRAPHIC	
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	CHK.	JMS	DWG :	IIA.9-GeoVicinity.dwg	



REFERENCE:
BARNES, V.E., 1992, GEOLOGIC MAP OF TEXAS,
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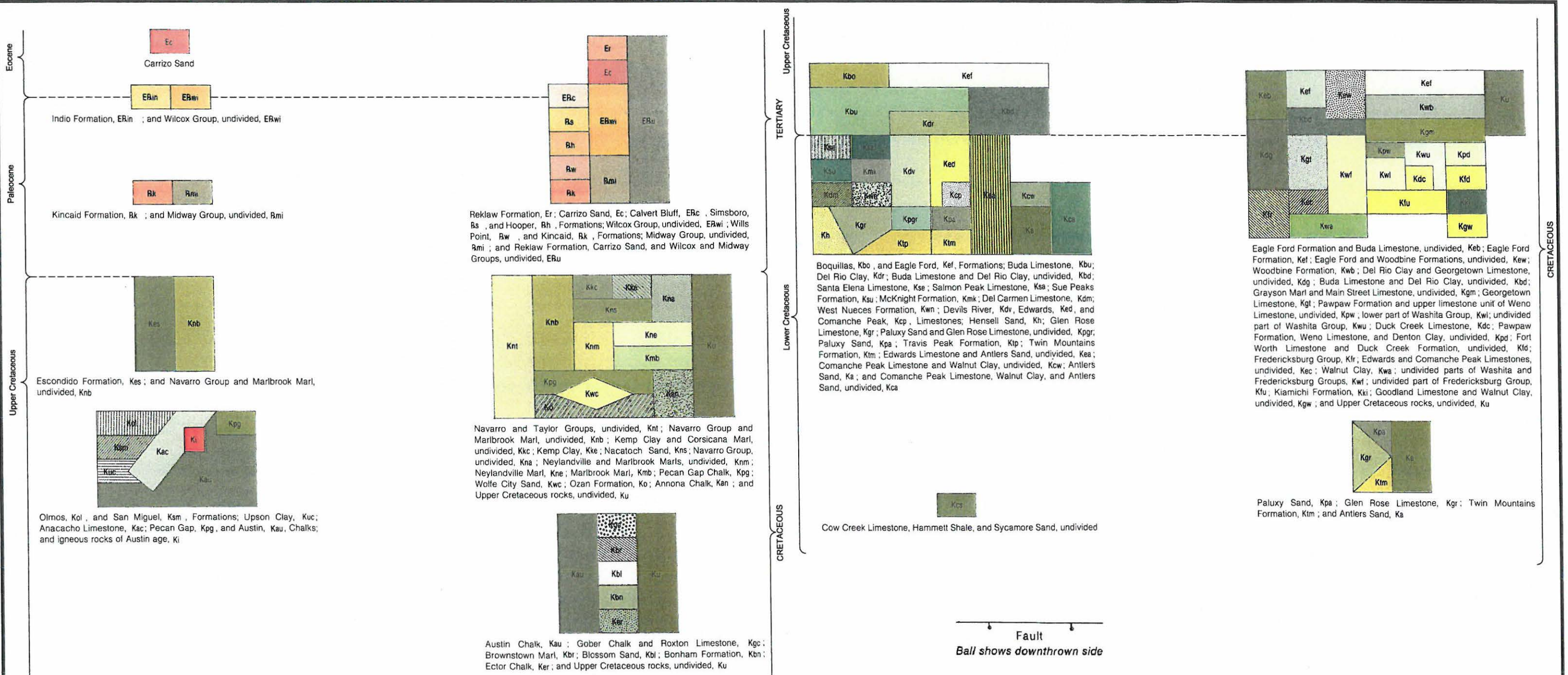
REVISIONS				TBPE FIRM NO. F-256				TBPG FIRM NO. 50222			
2	8/14	N.O.D. NO. 2 RESPONSE	GLW	ESF	JMS	JMS	DSN.	ESF	DATE : 6/13	FIGURE	
1	6/14	N.O.D. NO. 1 RESPONSE	GLW	ESF	JMS	JMS	DWN.	GLW	SCALE : GRAPHIC	IIA.9A	
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	CHK.	JMS	DWG : E1_1_GenVin.dwg		

GEOLOGIC VICINITY MAP LEGEND

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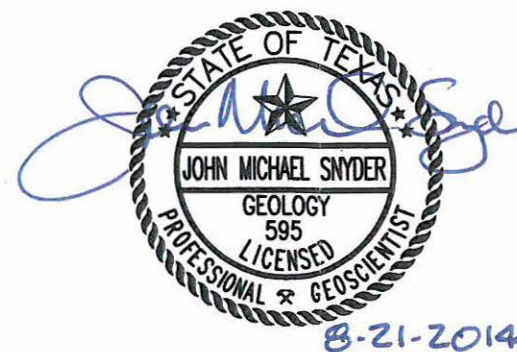
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2	8/14	N.O.D. NO. 2 RESPONSE	GLW	ESF	JMS	JMS	DSN.	ESF	DATE :	6/13	FIGURE
1	6/14	N.O.D. NO. 1 RESPONSE	GLW	ESF	JMS	JMS	DWN.	GLW	SCALE :	GRAPHIC	IIA.9B
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	CHK.	JMS	DWG :	E1_1_GenVn.dwg	

GEOLOGIC VICINITY MAP LEGEND

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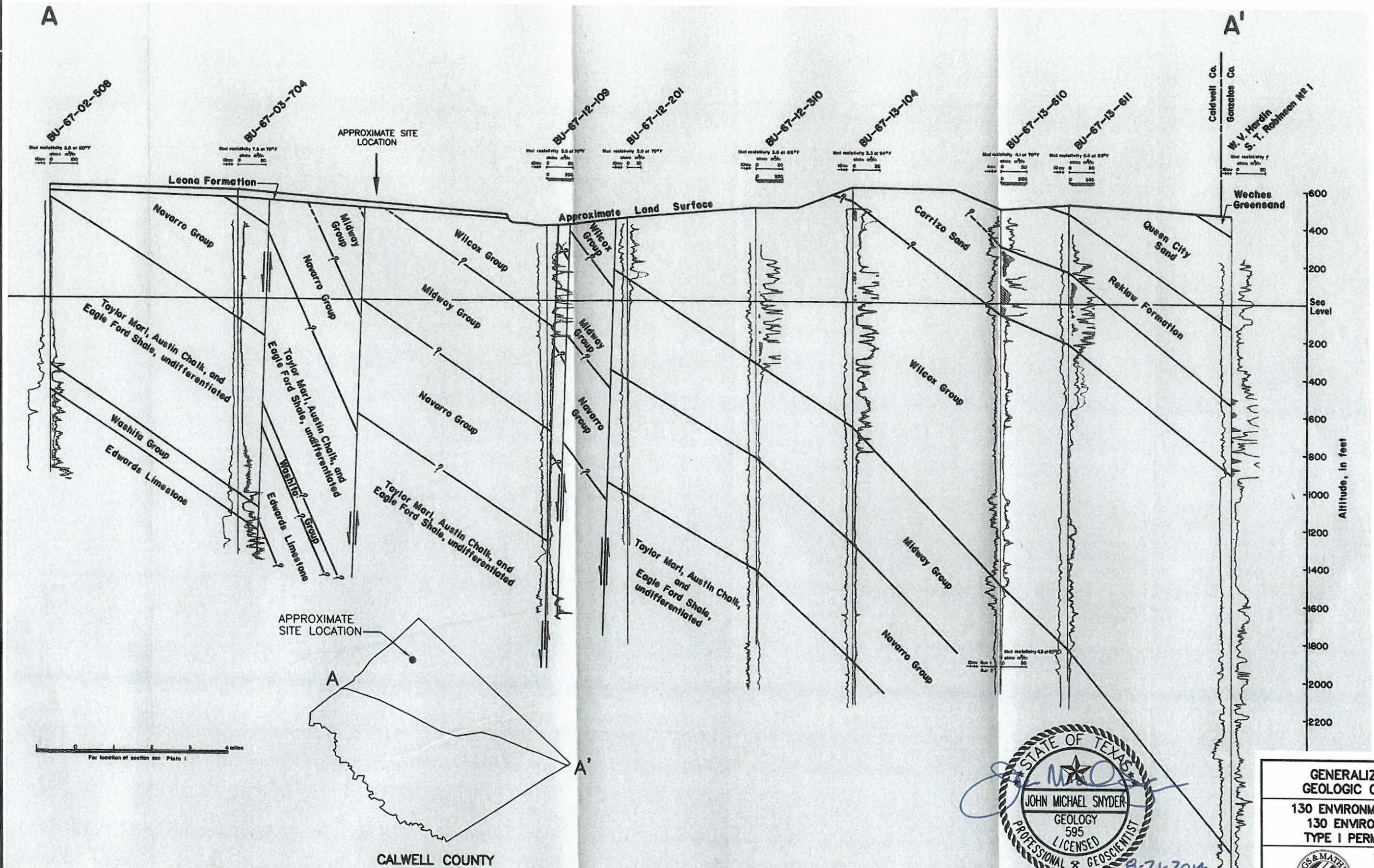
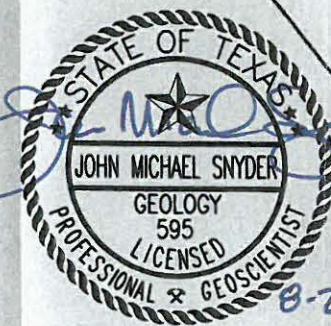


Plate 2
Geologic Section A-A'

REFERENCE:
C.R. FOLLET, 1975, GROUND-WATER RESOURCES
OF CALDWELL COUNTY, TEXAS, TEXAS WATER
DEVELOPMENT BOARD REPORT 12

U.S. Geological Survey in cooperation with the Texas Water Development Board,
Caldwell County Commissioners' Court and Guadalupe-Blanco River Authority



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REVISIONS							TBPE FIRM NO. F-256		TBPG FIRM NO. 50222		FIGURE IIA.9C
1	1/14	N.O.D. NO. 1 RESPONSE	GLW	JMS	JMS	JMS	DSN.	ESF	DATE : 1/14		
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	DWN.	GLW	SCALE : GRAPHIC		
							CHK.	JMS	DWG : IIA.9C-RegSec.dwg		

GENERALIZED REGIONAL
GEOLOGIC CROSS SECTION

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V o l u m e 2

**130 ENVIRONMENTAL PARK
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VOLUME 2 OF 5

Prepared for

130 ENVIRONMENTAL PARK, LLC

August 2013
Revised February 2014
Revised June 2014

Revised August 2014



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**130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 2383**

TYPE I PERMIT APPLICATION

VOLUME 2 OF 5

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Attachment C3 – Drainage System Plans and Details



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8/21/14

**130 ENVIRONMENTAL PARK
CALDWELL COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2383**

TYPE I PERMIT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN

**ATTACHMENT C
FACILITY SURFACE WATER DRAINAGE REPORT**

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014
Revised June 2014

Revised August 2014

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL

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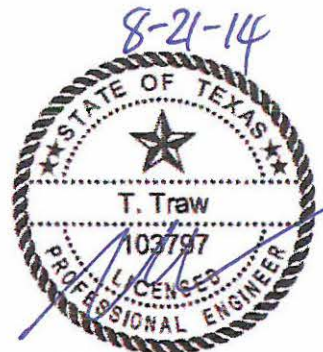
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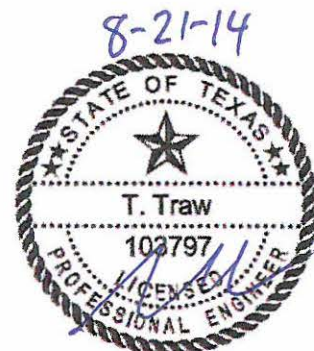


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PART III – FACILITY INVESTIGATION AND DESIGN

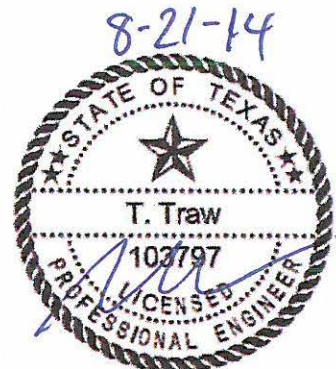
**ATTACHMENT C1
DRAINAGE ANALYSIS AND DESIGN**

Prepared for

130 ENVIRONMENTAL PARK, LLC

February 2014
Revised June 2014

Revised August 2014



Prepared by

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Perimeter Drainage System Design



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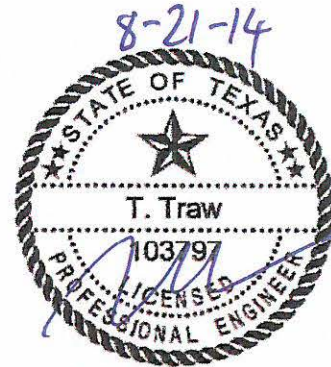
Final Cover Drainage Structure Design

APPENDIX C1-F

Intermediate Cover Erosion and Sedimentation Control Plan

APPENDIX C1-G

Intermediate Cover Erosion Control Structure Design



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At CP5 the peak discharge will increase from 255.5 cfs to 257.5 cfs, a change of less than 0.8%, and at CP6 the peak discharge will decrease from 2121.3 cfs to 2033.6 cfs, a change of approximately 4%. At CP5, the runoff volume will increase from 58.5 acre-feet to 59.4 acre-feet, a change of only 1.5%, and at CP6, the runoff volume will increase from 659.3 acre-feet to 676.0 acre-feet, a change of less than 2.5%. CP5 and CP6 are located in channels of unnamed tributaries on the west side of the 130 Environmental Park site. These tributaries merge approximately 350 feet south of the permit boundary and flow into SCS Reservoir Site 21. CP5 and CP6 are both located within the 100-year floodplain, as are the tributaries that flow from them in to the SCS reservoir site. The slight decreases in peak flow rates at CP5 and CP6, and in the stream channels between them and the reservoir site will not result in an adverse alteration of existing drainage patterns. The slight increases in runoff volumes at and below CP5 and CP6 will occur in stream channels and within the reservoir site, all of which are located within the 100-year floodplain, will not reduce total streamflows or increase the 100-year flood water surface elevation. The changes at CP5 and CP6 will not result in adverse alterations of existing drainage patterns.

At CP7 the 25-year storm peak discharge will decrease from 243.4 cfs to 141.8 cfs, a reduction of approximately 42%, and at CP8 the peak discharge will decrease from 372.4 cfs to 327.2 cfs, a reduction of approximately 12.1%. At CP7, the 25-year storm runoff volume will increase from 38.5 acre-feet to 61.8 acre-feet, an increase of approximately 60.5%, and at CP8 the runoff volume will decrease from 63.8 acre-feet to 53.3 acre-feet, a decrease of approximately 16.5%. CP7 and CP8 are both located within the same water body, 100-year floodplain of SCS Reservoir Site 21, in the eastern portion of the site during the 25-year storm event. The reductions in peak flow rates at CP7 and CP8 will not result in adverse alterations of existing drainage patterns. The 25-year storm runoff volume will increase at CP7; however, because the peak discharge rate will be reduced and the runoff volume will be distributed over a longer time period, that increase will not result in an adverse alteration of existing drainage patterns. And, while the 25-year storm runoff volume will increase at CP7 and decrease at CP8 (a net increase of 12.8 acre feet, approximately 12.5%), these changes will not reduce total streamflows or increase the 100-year flood water surface elevation be insignificant compared to the receiving body, SCS Reservoir Site 21. For example, the peak storage volume of the SCS Reservoir Site 21 and peak inflow to the reservoir from Dry Creek exceed 2,300 ac-ft and 3,800 cfs, respectively, during the 25-year storm event. Considering the proposed net changes within the water body of less than 4% decrease in peak discharge rate and less than 1% increase in volume, the changes at CP7 and CP8 will not result in adverse alterations of existing drainage patterns.

Drawing C1-A-2 – Existing Condition Runoff Summary: This drawing depicts the existing locations (comparison points) where surface water enters or exits the facility and property boundaries. Each comparison point is shown on the drawing and the peak flow rate and runoff volume is provided in the summary table for each comparison point.

Drawing C1-A-4 – Postdeveloped Runoff Summary: This drawing depicts the locations (comparison points) where surface water enters or exits the facility and property boundaries. Each comparison is shown on the drawing and the peak flow rate and runoff volume is provided in the summary table for each comparison point.

A table comparing the existing condition runoff summary and the postdeveloped runoff summary is provided on page C1-A-5. The existing condition and postdeveloped peak flow rate, runoff volume, and velocity at each comparison point for both the 25- and 100-year, 24-hour rainfall event is provided. The difference, if any, between the existing and postdeveloped runoff results is also provided in the table.

Conclusion

Because: (1) the postdevelopment stormwater discharge points are consistent with the existing site configuration, and (2) development of the 130 Environmental Park Landfill will not adversely alter peak flow rates, velocities, or runoff volumes, the proposed landfill development will not adversely alter existing drainage patterns consistent with §330.305(a).