

CHARLES G. DOMINGUEZ 4/12/21 SONAL SERVICE STREET STREET

GOLDER ASSOCIATES INC.
TEXAS REGISTRATION F-2578

ISSUED FOR PERMITTING PURPOSES ONLY

IOTE(S)

CLIENT

CONSULTANT

WIND ROSE INFORMATION OBTAINED FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. INFORMATION DATED JANUARY 1, 1992 FROM

https://www.tceq.texas.gov/assets/public/compliance/monops/air/windroses/iahall.gif

DDQ IFOT

HAWTHORN PARK RECYCLING & DISPOSAL FACILITY PERMIT AMENDMENT APPLICATION TCEQ PERMIT NO. MSW-2185A

TITLE

WIND ROSE

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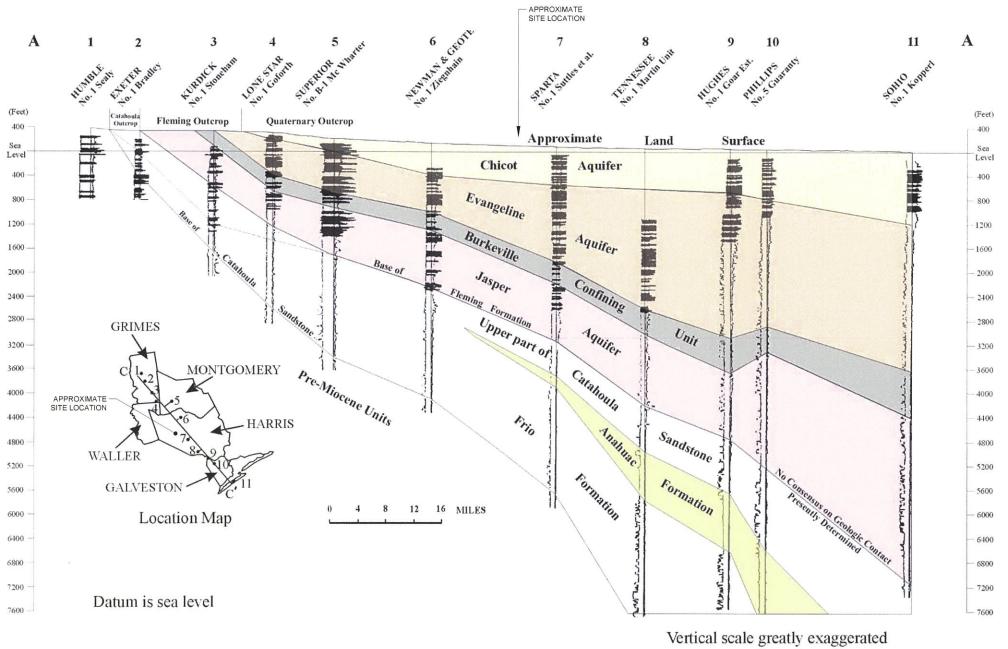
YYYY-MM-DD	2021-02	
DESIGNED	PRM	
PREPARED	TNB	
REVIEWED	JBF	V-1 NG (4 17 A)
APPROVED	CGD	

1894269	Ш	0	II-12
PROJECT NO.	APPLICATION SECTION	REV.	FIGURE

npark199_projects11894269_2020paat001_Dwgs102_PRODUCTION/DWG\; | File Name: 1894269-001-030

THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN,

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REFERENCE(S)

ALI H. CHOWDHURY, PhD., P.G. AND MIKE J. TURCO. TEXAS WATER DEVELOPMENT BOARD, REPORT 365, CHAPTER 2, pp. 42.

https://www.twdb.texas.gov/publications/reports/numbered_reports/doc/R365/ch02-Geology.pdf

CGD GOLDER ASSOCIATES INC. TEXAS REGISTRATION F-2578



GOLDER

HOUSTON NORTH OFFICE 14950 HEATHROW FOREST PKWY, STE 280 HOUSTON, TEXAS 77032

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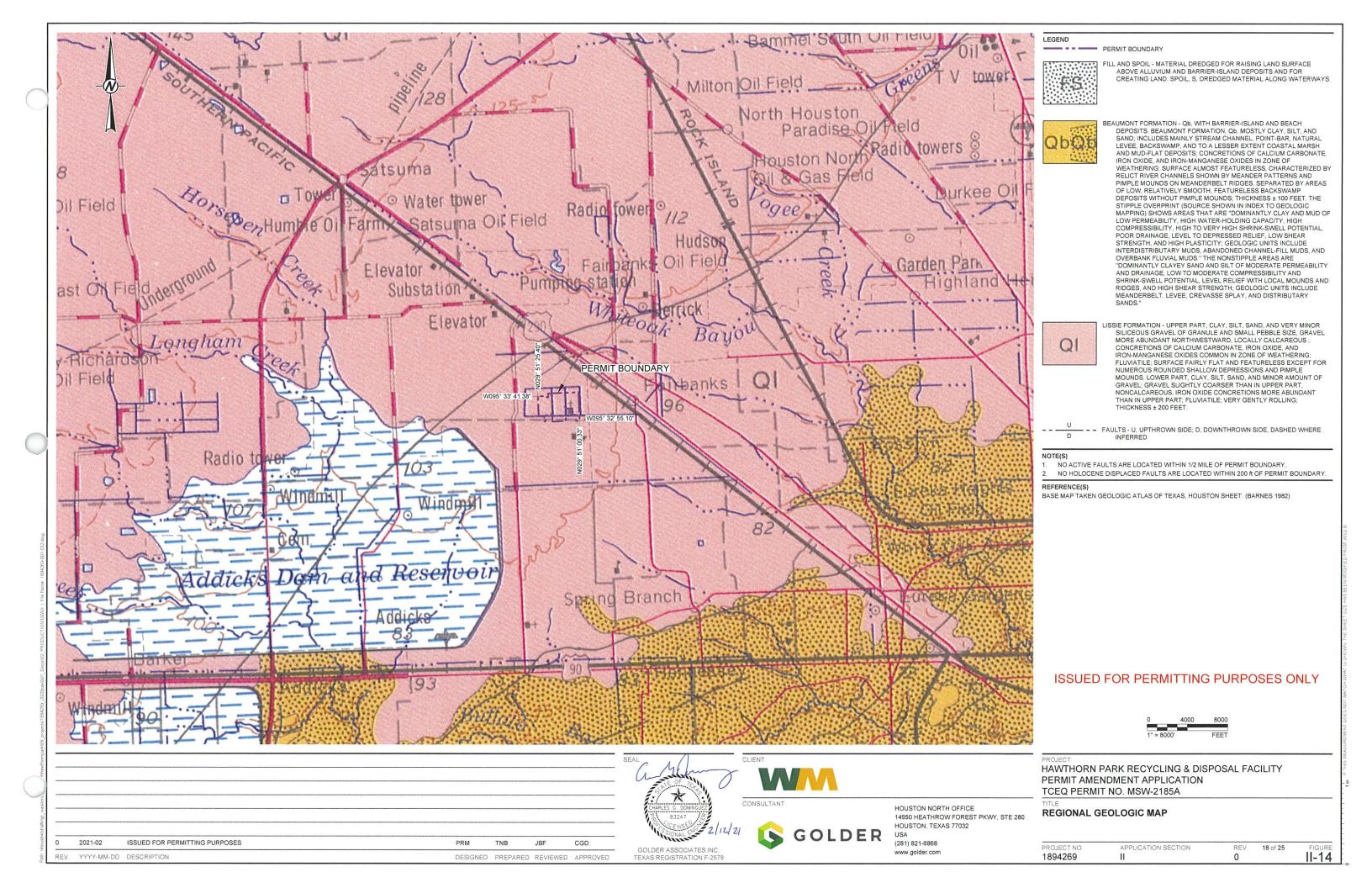
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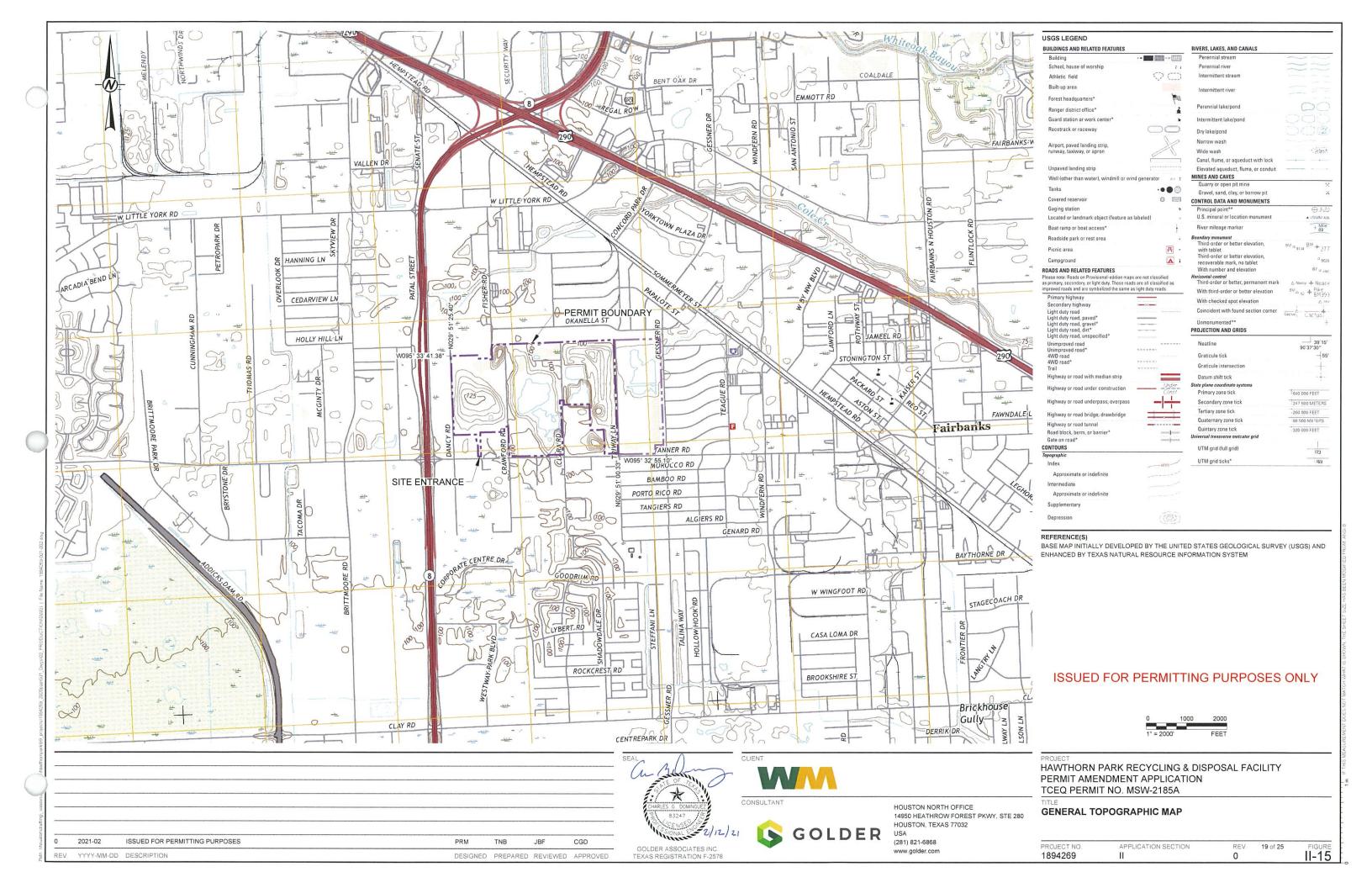
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STRATIGRAPHIC CROSS-SECTION

1894269	II	0		II-13
PROJECT NO.	APPLICATION SECTION	REV.	17 of 25	FIGURE

ISSUED FOR PERMITTING PURPOSES 2021-02 TNB JBF YYYY-MM-DD DESCRIPTION DESIGNED PREPARED REVIEWED APPROVED





PERMIT BOUNDARY
SOIL TYPE BOUNDARY

SOIL TYPES

SYMBOL	MAP UNIT NAME
Ak	ADDICKS - URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
Ce	CLODINE - URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
CyuA	CYFAIR - URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
DAM	DAMS
Gp	PITS, GRAVEL
Gu	GESSNER OCCASIONALLY PONDED - URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES
KauA	KATY - URBAN LAND COMPLEX, 0 TO 1 PERCENT SLOPES

REFERENCE(S)

BASE MAP TAKEN FROM NATIONAL AGRICULTURE IMAGERY PROGRAM (NAIP) DIGITAL ORTHO PHOTO IMAGE PUBLISHED BY USDA-FSA-APFO DATED XXXXXXXXX.

SOIL DATA TAKEN FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICES. NATIONAL SOIL SURVEY HANDBOOK, TITLE 430-VI. (http://soils.usda.gov) ACCESSED JULY 2020.

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SOILS MAP

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PROJECT NO.	APPLICATION SEC
1894269	II

REV. 20 of 25 II-16

ISSUED FOR PERMITTING PURPOSES REV. YYYY-MM-DD DESCRIPTION

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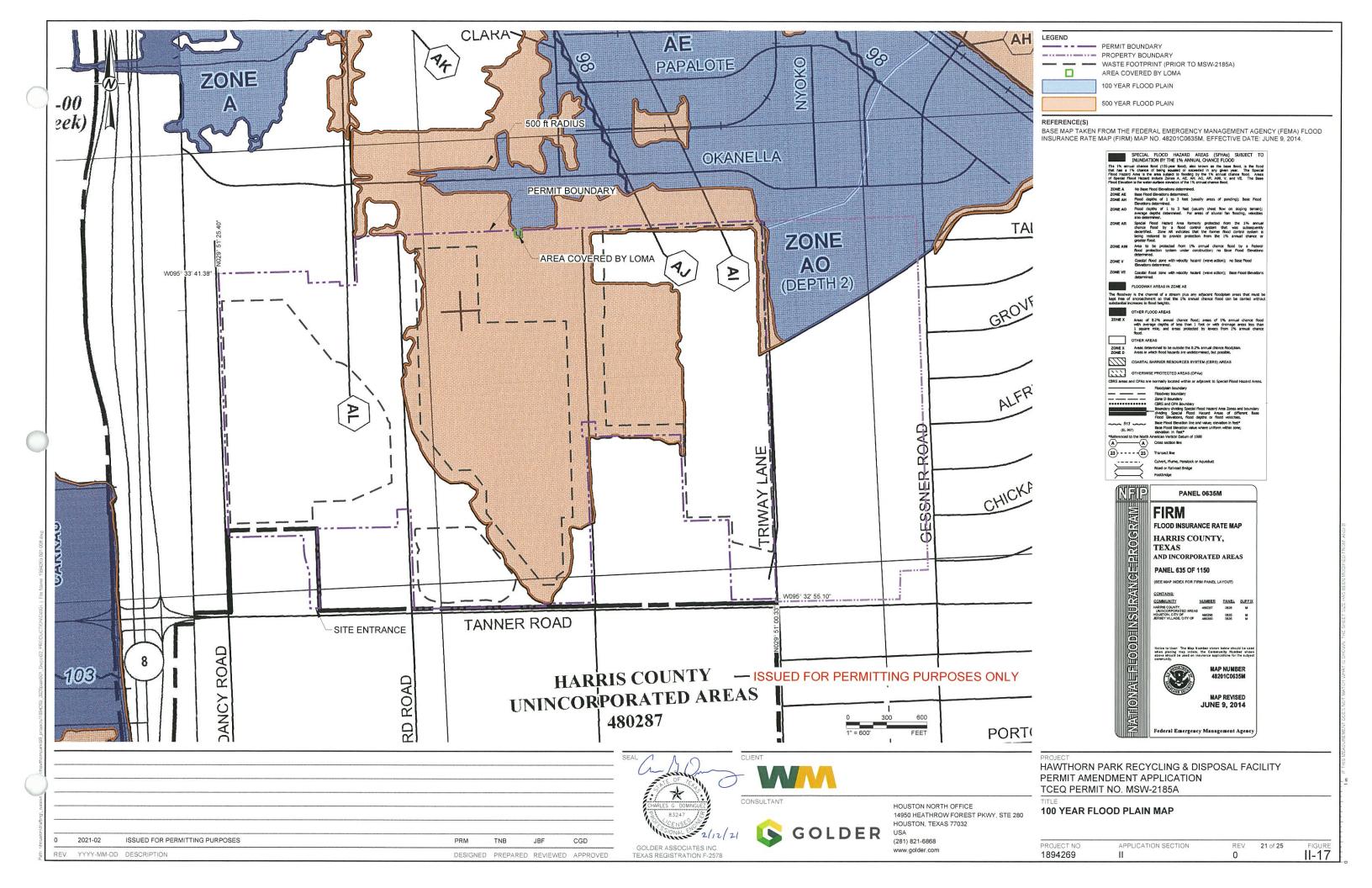
JBF

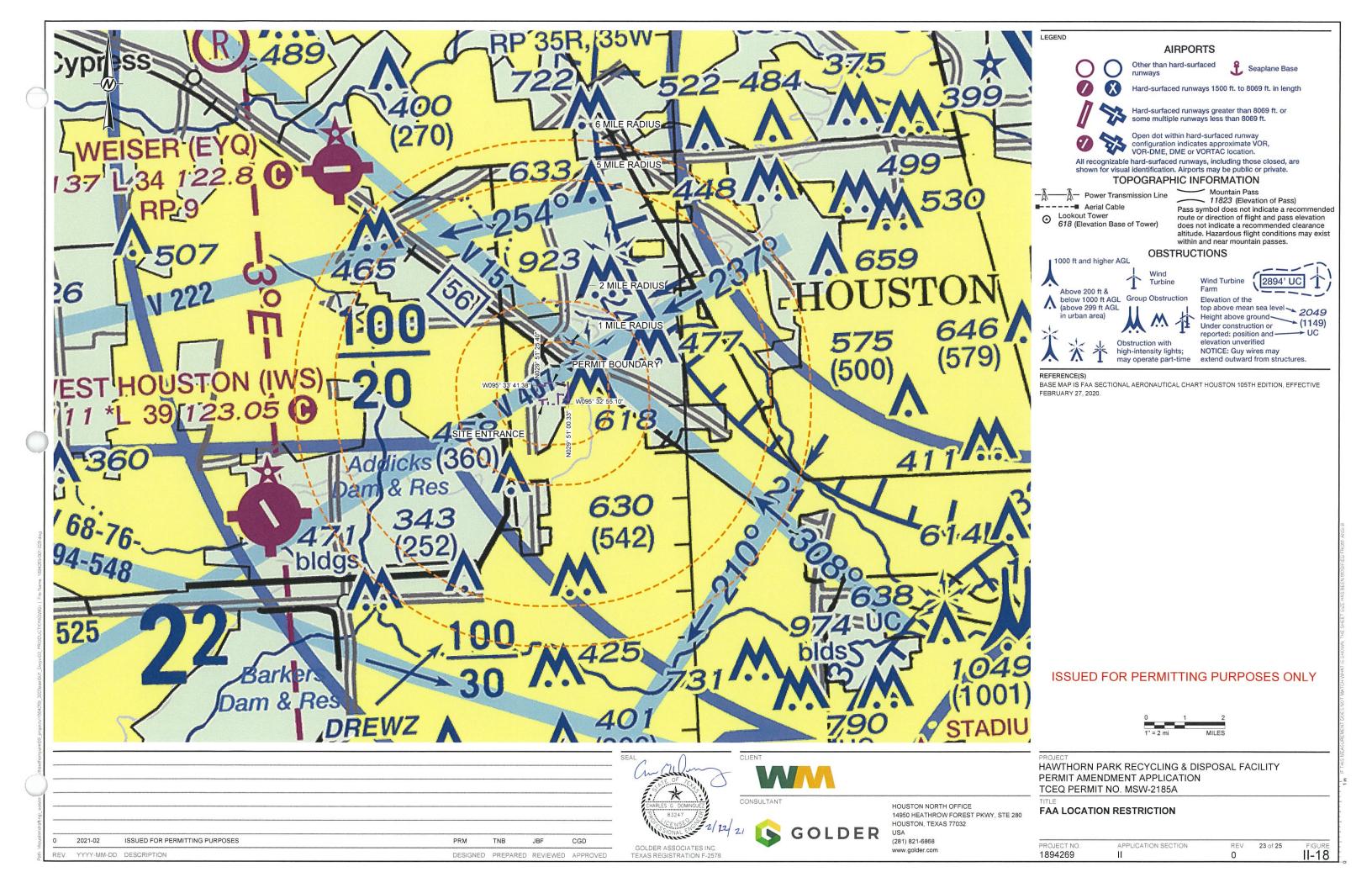
CGD

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CANADA SITE LOCATION MEXICO Seismic-Hazard Maps for the Conterminous United States, 2014 Peak Horizontal Acceleration with 2 Percent Probability of Exceedance in 50 Years Mark D. Petersen, Morgan P. Moschetti, Peter M. Powers, Charles S. Mueller, Kathleen M. Haller, Arthur D. Frankel, Yuehua Zeng, Sanaz Rezaeian, Stephen C. Harmsen, 1 Oliver S. Boyd, 1 Edward H. Field, 1 Rui Chen, 2 Nicolas Luco, 1 Russell L. Wheeler, 1 Robert A. Williams, 1 Anna H. Olsen, 1 and Kenneth S. Rukstales 1 2015

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JBF

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REV. YYYY-MM-DD DESCRIPTION

NOTE(S)

- THE FACILITY LIES IN AN AREA WHERE THE PGA, WITH A 2% PROBABILITY OF EXCEEDED IN 50 YEARS, IS LESS THAN 10% OF GRAVITY (LESS THAN 0.1g). THIS IS EQUIVALENT TO A 10% PROBABILITY IN 250 YEARS.
- 2. THE MAP PRESENTED HERE IS INTENDED TO ONLY DEPICT THE IMPACT ZONE IN WHICH THE FACILITY LIES. PLEASE REFER TO PETERSON, M.D., ET AL., 2015, SEISMIC HAZARDS MAPS FOR THE CONTERMINOUS UNITED STATES, 2014: U.S. GEOLOGICAL SURVEY SCIENTIFIC INVESTIGATION MAP 3325, 6 SHEETS, SCALE 1:7,000,000.

 HTTPS://PUBS.USGS.GOV/SIM3325_SHEET2.PDF FOR A FULLY LEGIBLE VERSION.

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PROJECT
HAWTHORN PARK RECYCLING & DISPOSAL FACILITY
PERMIT AMENDMENT APPLICATION
TCEQ PERMIT NO. MSW-2185A

SEISMIC IMPACT ZONE MAP

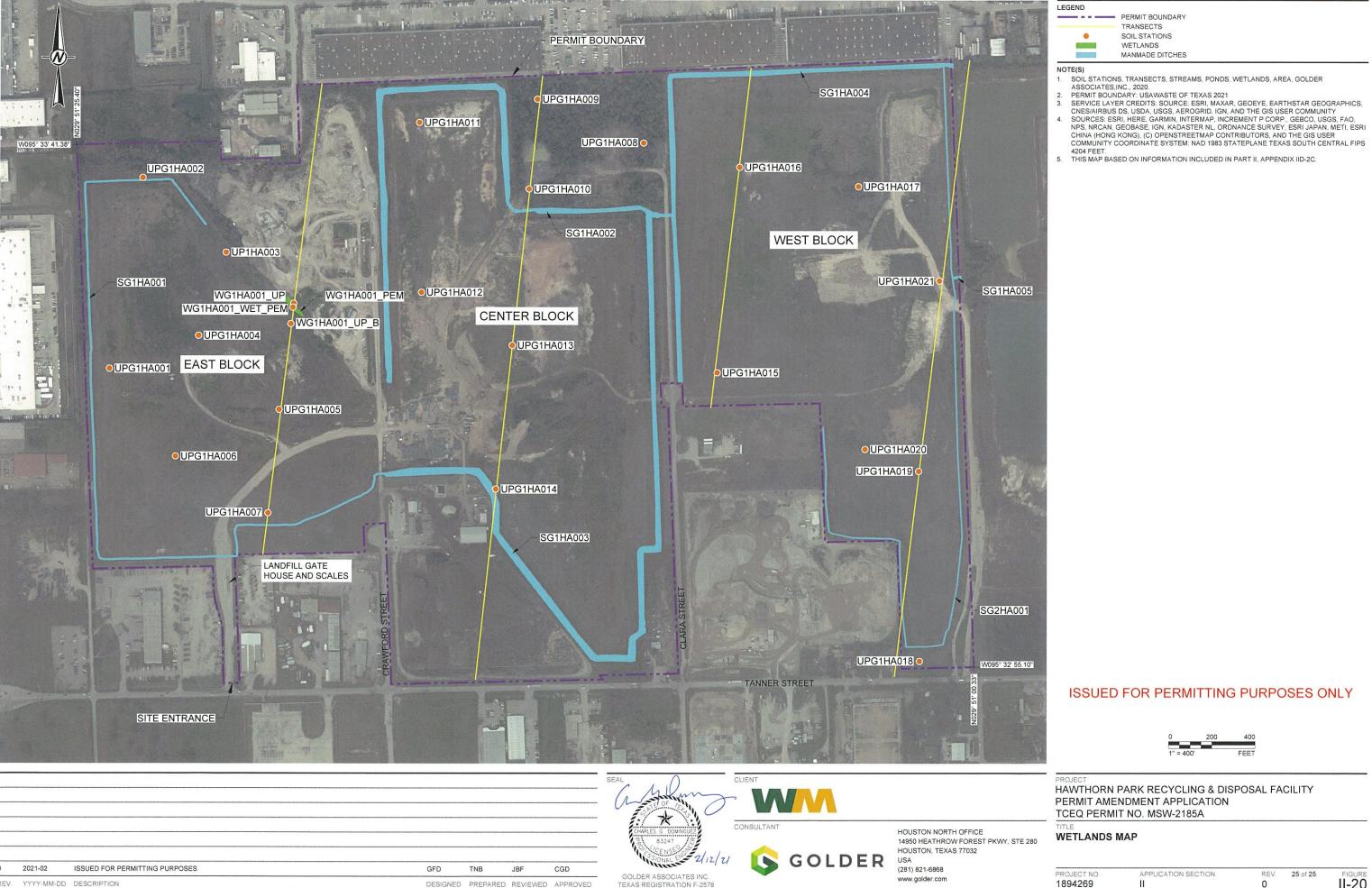
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PROJECT NO. APPLICATION SECTION REV. 24 of 25 FIGURE 1894269 II 0 II-19



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1894269

REV. 25 of 25 11-20