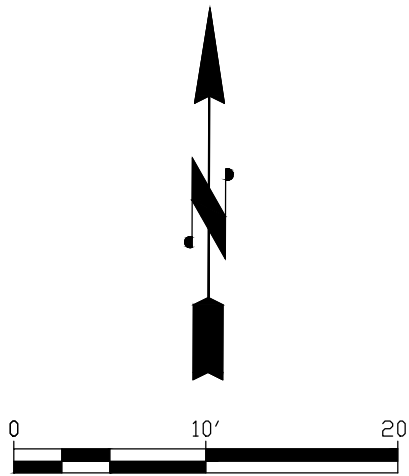


- LEGEND:**
- FL = X-XX FLOW LINE
  - EXISTING ELEVATION
  - T.B.M. TEMPORARY BENCHMARK
  - EXISTING STM. SWR. M.H.
  - EXISTING SAN. SWR. M.H.
  - CLEANOUT
  - FLOW DIRECTION



**DRAINAGE PLAN  
FOR FLOODPLAIN PROJEC**

**FLOODPLAIN GROUP  
APPROVED FOR PLAT**

Date: 01/31/2024  
By: Juan R. Diaz  
Phone:

**ENGINEERING SERVICE SECTION  
APPROVED FOR PLAT**

Date: 01/29/2024  
By: Dina Mohammed

**LEGAL DESCRIPTION:**  
EXISTING CONDITIONS SURVEY OF LOTS 9 & 10, IN BLOCK 41, OF CHAPMAN'S THIRD ADDITION, VOL. 1, PG. 385, H.C.D.R. LOCATED IN THE HARRIS, S. M. SURVEY, A-327, HARRIS COUNTY, TEXAS

**TBM "A":**  
ELEV.: 43.57

**FLOOD NOTE:**  
THIS TRACT LIES IN ZONE "X-SHADED", AREAS DETERMINED TO BE WITHIN THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP PANEL NUMBER 48201C0690N, EFFECTIVE DATE: JANUARY 06, 2017.

100 YEAR BFE = 45.43'  
500 YEAR DFE = 47.13'

**MB&B**  
**ARCHITECTS  
AND ENGINEERS**  
5300 HOLLISTER STREET,  
SUITE 301 HOUSTON, TX 77040  
TEL: 713 370 8750  
TBPELS F-24553



NOTES:

**GREGG STREET  
DRAINAGE FOR PLAT**

2011 GREGG ST, HOUSTON, TEXAS 77026

No.	DESCRIPTION	DATE
1	Issue for Drainage Plat	1/22/2024

SCALE: 1" = 10'-0"

DRAWN BY: LA

CHK BY: DH

APP BY: EHBC

DATE: 1/22/2024

PROJECT NO.: 24103

SHEET TITLE:

**EXISTING  
CONDITIONS**

SHEET NUMBER:

**C100**





FLOODPLAIN GROUP  
APPROVED FOR PLAT

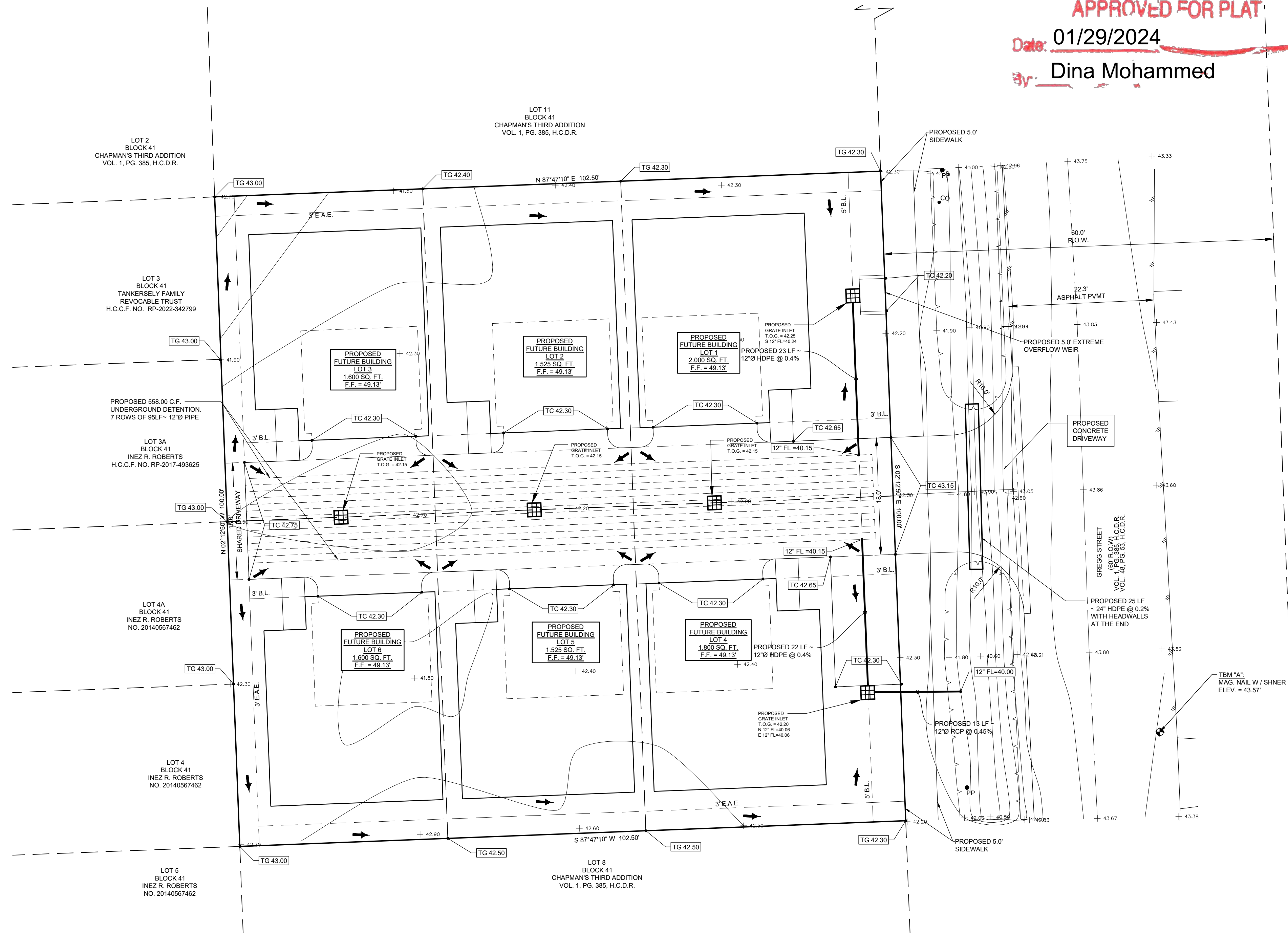
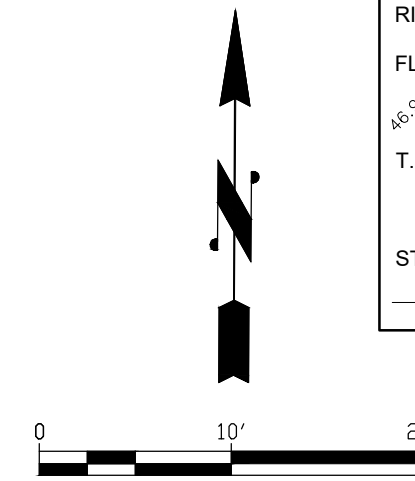
By: Juan R. Diaz

Phone:

Date: 01/29/2024

 Dina Mohammed

TOG = x.xx	TOP OF INLET GRATE
TG = x.xx	TOP OF GRADE
TC = x.xx	TOP OF CURB/CONCRETE
G = x.xx	GUTTER ELEVATION
RIM = x.xx	RIM ELEVATION
FL = x.xx	FLOW LINE
$\frac{1}{4} \times$	EXISTING ELEVATION
T.B.M.	TEMPORARY BENCHMARK
	PROPOSED CATCH BASIN
STM. SWR.	STORM SEWER
	DITCH HIGH BANK



IMPROVEMENT TYPE	AREA OF EXISTING IMPERVIOUS COVER (Sq Ft.)	AREA OF FINAL IMPERVIOUS COVER (Sq Ft.)
BUILDING	0.00	4,890.00
PARKING LOT / DRIVEWAY	0.00	2,298.00
SIDEWALK / PATIO	0.00	168.00
<b>TOTAL IMPERVIOUS AREA</b>	<b>0.00</b>	<b>7,356.00</b>

$V_T = 0.75 \text{ ac-ft/ac} \times \text{IMPERVIOUS AREA IN EXCESS OF 65\% OF TRACT}$	SECTION 9.2.01(h)(3)(b) OF THE 2023 IDM
$V_T = \text{TOTAL DETENTION VOLUME FOR THE PROPOSED PROJECT (C.F.)}$	520
$A_{65} = \text{AREA IN EXCESS OF 65\% OF TRACT}$	0.068

PROJECT AREA IN ACRES (A)	0.235
EXISTING CONDITIONS:	
AREA PERVIOUS (acres)	0.24
AREA IMPERVIOUS (acres)	0.000
$i_a$ = IMPERVIOUS AREA/TOTAL AREA	0.00
$C = 0.6i_a + 0.2$	0.20
PROPOSED CONDITIONS:	
AREA PERVIOUS (acres)	0.07
AREA IMPERVIOUS (acres)	0.164
$i_a$ = IMPERVIOUS AREA/TOTAL AREA	0.70
$C = 0.6i_a + 0.2$	0.62
$T_c \text{ (min)} = 10A^{0.775} + 15$	22.8

STORMEVENT FREQUENCY		2 YEAR 50%	100 YEAR 1%
INTENSITY COEFFICIENTS	b	48.35	60.66
	d	9.07	4.44
	e	0.7244	0.5797
RAINFALL INTENSITY (i) (in/hr) = $b/(d-Tc)^e$		3.94	8.94
EXISTING FLOW Q = C <sub>i</sub> A (cfs)		0.19	0.42
PROPOSED FLOW Q = C <sub>i</sub> A (cfs)		0.57	1.30

MAXIMUM WATER ELEVATION:		41.25	
PIPE DETENTION			
PIPE DIAMETER (in)	PIPE AREA (sq)	LENGTH (ft)	VOLUME (cft)
a	b	c	d = bxc
12	0.79	710	558
			0
UNDERGROUND DETENTION SYSTEM			
SUBTOTALS			558
<b>TOTAL PROVIDED WATER DETENTION = PIPE DETENTION</b>			<b>558</b>

PIPE DETENTION		PIPE DETENTION	
PIPE DIAMETER (in)	PIPE AREA (sq ft)	LENGTH (ft)	VOLUME (cf)
a	b	c	d = bxc
12	0.79	710	558
			0
UNDERGROUND DETENTION SYSTEM			
SUBTOTALS			558
TOTAL PROVIDED WATER DETENTION = PIPE DETENTION			558

1. ALL PROPOSED STRUCTURES ARE ABOVE THE 500-YEAR WSE.
2. THE DRAINAGE PLAN IS CONCEPTUAL IN NATURE AND THE FINAL DRAINAGE PLAN SHALL BE IN CONFORMANCE WITH THE LATEST CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL

SURVEY OF LOTS 9 & 10, IN BLOCK 41, OF CHAPMAN'S THIRD ADDITION, VOL. 1, PG. 385, H.C.D.R. LOCATED IN THE HARRIS, S. M. SURVEY, A-327, HARRIS COUNTY, TEXAS

ELEV.: 43.57

THIS TRACT L

TO BE WITHIN THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP PANEL NUMBER 48201C0690N, EFFECTIVE DATE: JANUARY 06, 2017.

E	100 YEAR BFE = 45.43'
L	500 YEAR DFE = 47.13'

5300 HOLLISTER STREET,  
SUITE 301 HOUSTON, TX 77040  
TEL: 713 370 8750  
**TBPELS F-24553**



**GREGG STREET  
DRAINAGE FOR PLAT**

2011 GREGG ST, HOUSTON, TEXAS 77026

[illegible]

SCALE: 1" = 10'-0"

DRAWN BY: LA

CHK BY: DH

APP BY: EHBC

DATE: 1/22/2024

PROJECT NO.: 24103

# DRAINAGE/ GRADING PLAN

# C200



Drainage Plan  
for Floodplain Project

Floodplain Group  
Approved for Plat

Date: 01/31/2024

By: Juan R. Diaz Ortiz

Phone:

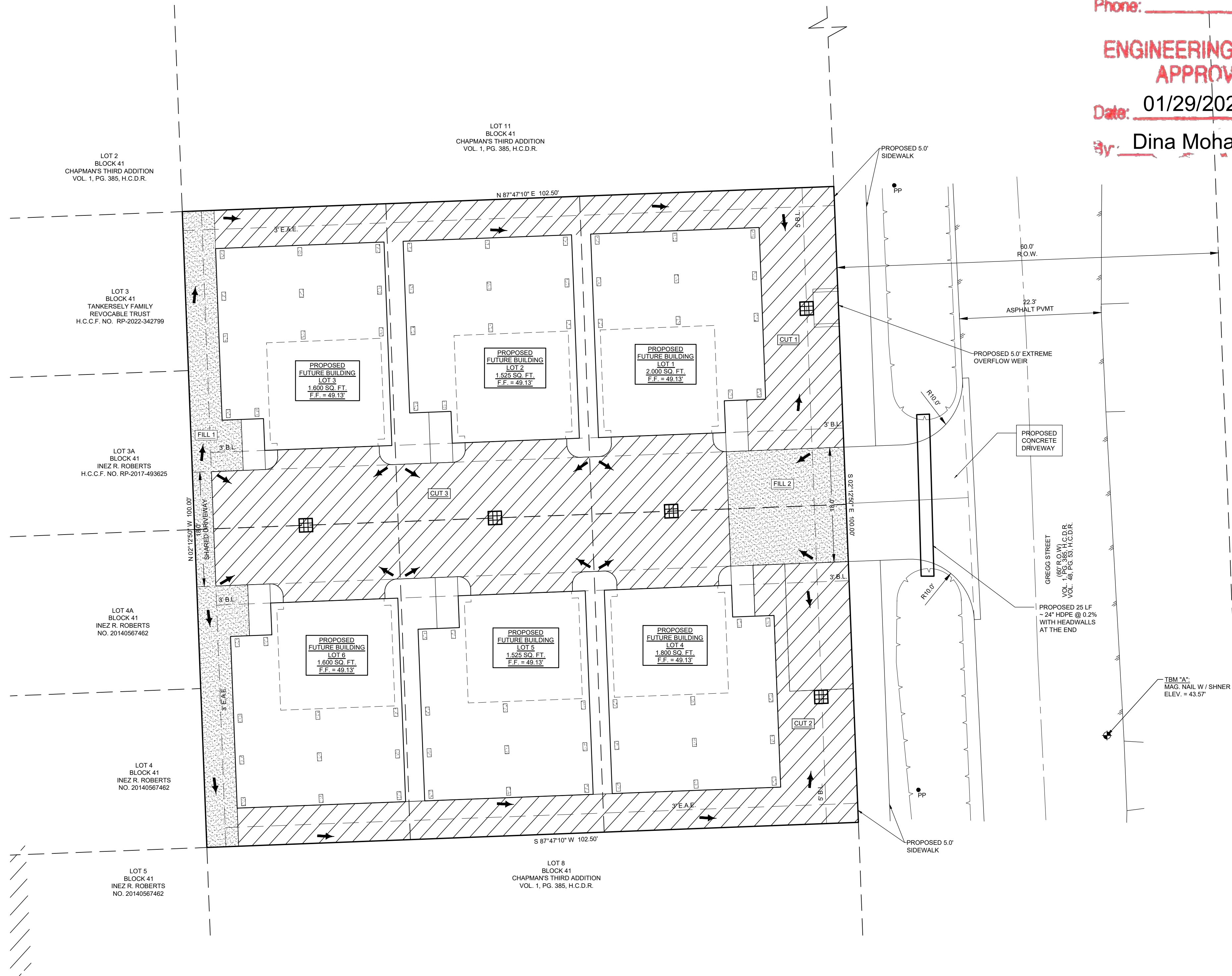
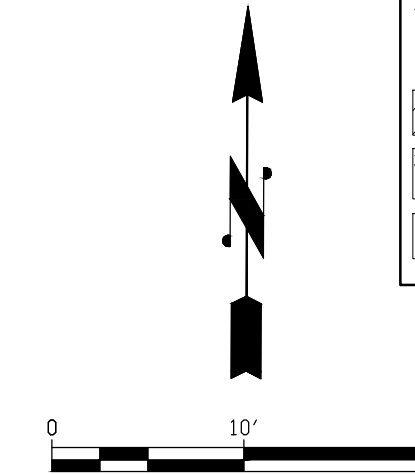
Engineering Service Section  
Approved for Plat

Date: 01/29/2024

By: Dina Mohammed

LEGEND:

T.B.M.	TEMPORARY BENCHMARK
PROPOSED CATCH BASIN	
STM. SWR.	STORM SEWER
DITCH HIGH BANK	
B.F.E.	BASE FLOOD ELEVATION
NET CUT	
NET FILL	
NO NET FILL OR CUT	



FILL MITIGATION CALCULATIONS									
100 YEAR BFE:	45.43								
500 YEAR DFE:	47.13								
AVERAGE EXISTING GRADE ELEVATION:	42.50								
ITEM	TOP ELEVATION <sup>(1)</sup>	AREA	DEPTH	VOLUME	AREA	DEPTH	VOLUME		
PIERS	48.00	54.61	4.63	252.83					
FILL 1	42.75	512.17	0.25	128.04					
FILL 2	42.75	332.86	0.25	83.21					
CUT 1	42.30				1028.90	0.20	205.78		
CUT 1	42.30				1029.67	0.20	205.93		
CUT 2	42.35				1756.35	0.15	263.45		
		TOTAL FILL =		464.00	TOTAL CUT =		675.17		

<sup>(1)</sup> MAXIMUM AT 500 YEAR WSEL FOR MITIGATION CALCULATION PURPOSES  
<sup>(2)</sup> CALCULATIONS BASED ON WEIGHTED AVERAGES

TOTAL CUT > TOTAL FILL (OK)

LEGAL DESCRIPTION:  
SURVEY OF LOTS 9 & 10, IN BLOCK 41, OF CHAPMAN'S THIRD ADDITION, VOL. 1, PG. 385, H.C.D.R. LOCATED IN THE HARRIS, S. M. SURVEY, A-327, HARRIS COUNTY, TEXAS  
TBM SET:  
ELEV.: 43.57  
FLOOD NOTE:  
THIS TRACT LIES IN SHADED ZONE "X-SHADED", AREAS DETERMINED TO BE WITHIN THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP NUMBER 48201C0690N, EFFECTIVE DATE: JANUARY 06, 2017.  
100 YEAR BFE = 45.43'  
500 YEAR DFE = 47.13'

MB&B  
ARCHITECTS  
AND ENGINEERS  
5300 HOLLISTER STREET,  
SUITE 301 HOUSTON, TX 77040  
TEL: 713 370 8750  
TBPELS F-24553



NOTES:

GREGG STREET  
DRAINAGE FOR PLAT  
2011 GREGG ST. HOUSTON, TEXAS 77026

No.	DESCRIPTION	DATE
1	Issue for Drainage Plat	1/22/2024

SCALE:  
1" = 10'-0"

DRAWN BY:  
DH

CHK BY:  
EHBC

APP BY:  
EHBC

DATE:  
1/22/2024

PROJECT NO.:  
24103

SHEET TITLE:

MITIGATION  
PLAN

SHEET NUMBER:

C201