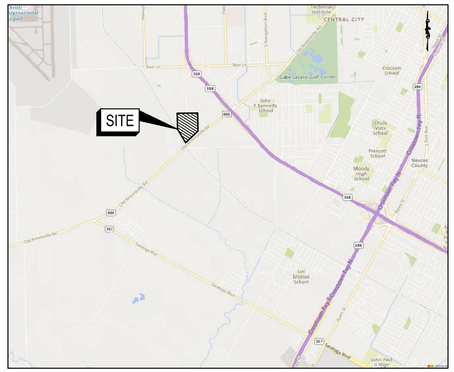
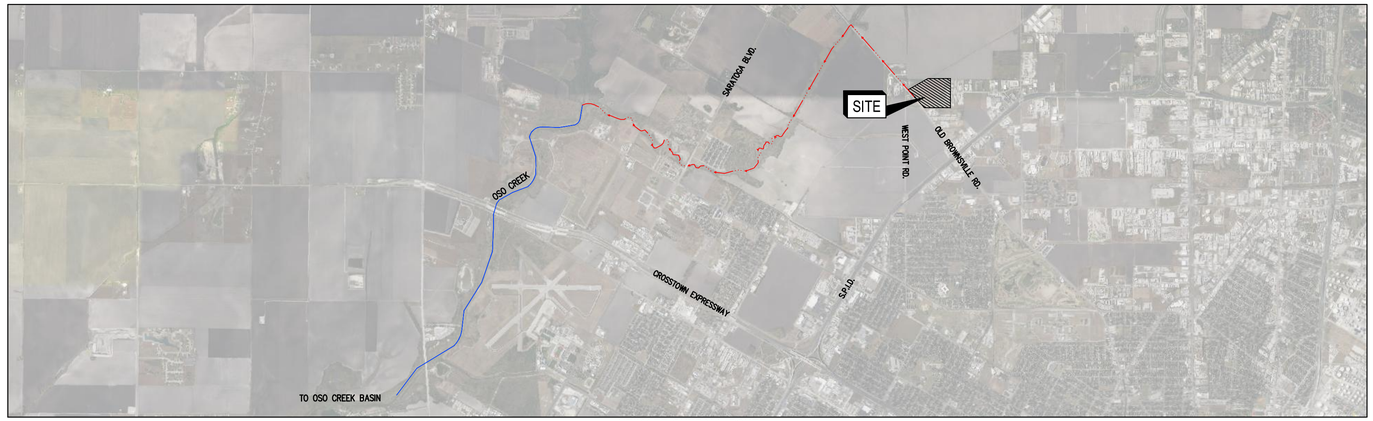


LOCATION MAP
SCALE: 1" = 5,000'



UTIMATE OUTFALL ROUTE
SCALE: 1" = 3,500'

0 50 100 200
GRAPHIC SCALE
1"=100'

LEGEND

A	AREA
i	RAINFALL INTENSITY
C	RUN-OFF COEFFICIENT
Tc	TIME OF CONCENTRATION
Q	FLOW RATE
	DRAINAGE BOUNDARY
	FLOW ARROW

General Notes:

1. Total platted area contains 52.0 Acres of Land.
2. The receiving water for the storm water runoff from this property is the Oso Creek Basin. The TCEQ has classified the aquatic life use for Oso Creek Basin as "fully supported". TCEQ also categorized the Oso Creek Basin as "contact recreation" use.
3. By graphic plotting only, this property is in Zone "X" of the Flood Insurance Rate Map, Map Panel 48355C0315G, with effective date of 10/13/2022. The subject site is not located within a Special Flood Hazard Area.
4. There are no known natural water bodies, jurisdictional wetlands, endangered species habitat, State of Texas Submerged Lands or Critical Dunes on the site.
5. This development meets the City's Master Drainage Plan and the proposed drainage will not adversely affect the drainage pattern or design of the adjacent properties.

DRAINAGE NOTES:

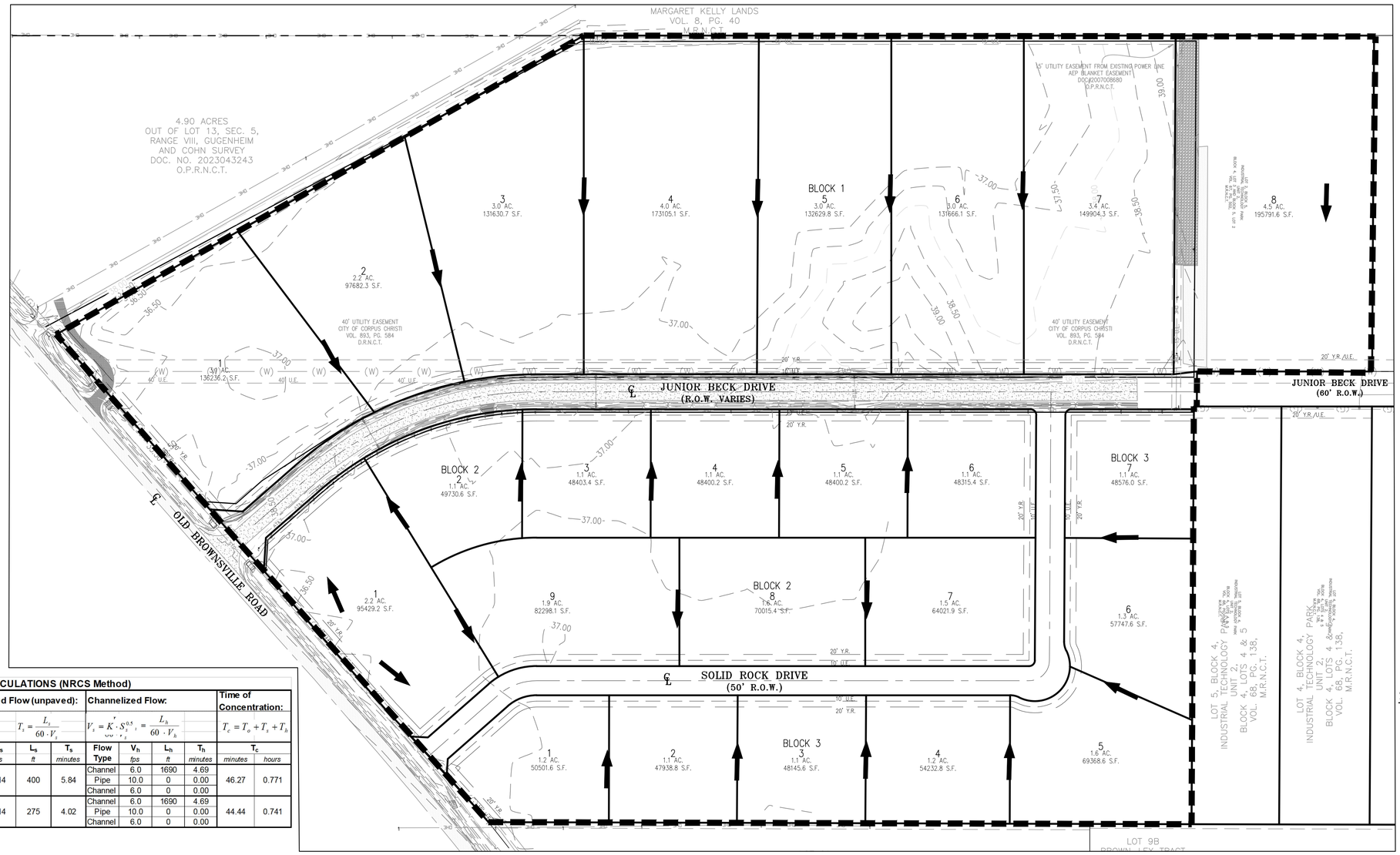
1. THE SUBJECT SITE IS CURRENTLY CULTIVATED FARM LAND THAT IS ZONED IL (LIGHT INDUSTRIAL). THE PROPOSED DEVELOPMENT WILL CREATE AN INDUSTRIAL SUBDIVISION.
2. THE SITE CURRENTLY DRAINS W.Z SURFACE DRAINAGE TO THE ROAD SIDE DITCHES ALONG JUNIOR BECK DRIVE WHICH CONVEY DRAINAGE TO THE ROADSIDE DITCHES ALONG OLD BROWNSVILLE ROAD.
3. THE PROPOSED DEVELOPMENT WILL CONSTRUCT INDUSTRIAL LOTS WHICH WILL CONVEY DRAINAGE TO THE EXISTING ROAD SIDE DITCHES ALONG JUNIOR BECK AS WELL AS THE PROPOSED ROADSIDE DITCHES ALONG SOLID ROCK DRIVE. THE ROADSIDE DITCHES WILL CONVEY DRAINAGE TO OLD BROWNSVILLE ROAD AS IS DONE CURRENTLY.
4. TO MITIGATE THE INCREASE IN RUN-OFF, EACH LOT IN THE PROPOSED SOLID ROCK INDUSTRIAL PARK SUBDIVISION WILL BE REQUIRED BY PLAT NOTE TO INSTALL ON-SITE STORMWATER DETENTION. DETENTION PONDS FOR EACH LOT SHALL BE SIZED TO HOLD THE 5-YEAR STORM EVENT AND RELEASE RUN-OFF AT A CONTROLLED RATE EQUAL TO OR LESS THAN THE PRE-DEVELOPMENT RATE. ALL CALCULATIONS SHALL BE PER THE VALUES SHOWN ON THIS SHEET.
5. DRAINAGE CALCULATIONS FOR THIS PROJECT ARE BASED ON THE CURRENT CITY OF CORPUS CHRISTI DRAINAGE MASTER PLAN AS WELL AS THE INFRASTRUCTURE DESIGN MANUAL.
6. RAINFALL INTENSITIES ARE INTERPOLATED FROM DATA OBTAINED FROM THE NOAA ATLAS 14, VERSION 2.
7. FOR PURPOSES OF DETERMINING THE COEFFICIENT OF RUNOFF, THE LAND USE OF CULTIVATED FIELDS WAS USED FOR PRE-DEVELOPMENT CONDITIONS, WHILE HEAVY INDUSTRIAL WAS CHOSEN FOR THE POST-DEVELOPMENT CONDITIONS.

RUN-OFF CALCULATIONS

PRE-DEVELOPMENT	POST-DEVELOPMENT
A=52.0 AC.	A=52.0 AC.
C=0.30	C=0.65
Tc=45 min.	Tc=45 min.
i_5=3.30 in./hr.	i_5=3.30 in./hr.
i_{25}=4.57 in./hr.	i_{25}=4.57 in./hr.
i_{100}=5.76 in./hr.	i_{100}=5.76 in./hr.
Q_5=51.48 cfs	Q_5=111.54 cfs
Q_{25}=71.29 cfs	Q_{25}=154.47 cfs
Q_{100}=89.86 cfs	Q_{100}=194.69 cfs

TIME OF CONCENTRATION CALCULATIONS (NRCS Method)

Basin ID	Overland Flow: $T_o = 0.42 \cdot \frac{(n_o \cdot L_o)^{0.8}}{P_2^{0.5} \cdot S_o^{0.4}}$					Shallow Concentrated Flow (unpaved): $V_s = K \cdot S_s^{0.5}$ $T_s = \frac{L_s}{60 \cdot V_s}$					Channelized Flow: $V_s = K \cdot S_s^{0.5}$ $T_h = \frac{L_h}{60 \cdot V_h}$				Time of Concentration: $T_c = T_o + T_s + T_h$	
	L_o	n_o	S_o	P_2	T_o	K	S_s	V_s	L_s	T_s	Flow Type	V_h	L_h	T_h	T_c	
	ft	NA	ft/ft	inches	minutes	NA	ft/ft	fps	ft	minutes		fps	ft	minutes	minutes	hours
PRE-DEV	300	0.15	0.005	4.23	35.73	16.1345	0.005	1.14	400	5.84	Channel	6.0	1690	4.69	46.27	0.771
											Pipe	10.0	0	0.00		
											Channel	6.0	0	0.00		
POST-DEV	300	0.15	0.005	4.23	35.73	16.1345	0.005	1.14	275	4.02	Channel	6.0	1690	4.69	44.44	0.741
											Pipe	10.0	0	0.00		
											Channel	6.0	0	0.00		



05 DECEMBER 2023

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL C. YORK, P.E. 124938. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

STORM WATER QUALITY MANAGEMENT PLAN FOR SOLID ROCK INDUSTRIAL PARK

45.2 ACRES CONSISTING OF A 23.013 ACRE TRACT, CALLED TRACT I, AND A 22.189 ACRE TRACT, CALLED TRACT II, BOTH BEING OUT OF A 66.88 ACRE TRACT, CALLED TRACT VII, AS DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2004049018, OFFICIAL PUBLIC RECORDS NUECES COUNTY, TEXAS.
AND
A 2.826 ACRE TRACT AS DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2021033866, OFFICIAL PUBLIC RECORDS NUECES COUNTY, TEXAS.
AND
3.96 ACRES BEING OUT OF LOT 2, BLOCK 5, INDUSTRIAL TECHNOLOGY PARK UNIT 2, AS RECORDED IN VOLUME 67, PAGE 502, MAP RECORDS NUECES COUNTY, TEXAS.

YORK ENGINEERING
CIVIL • PLANNING • CONSULTING
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PROJECT NO. 1088-23-01
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