PRELIMINARY PLAT

FOR

HARDY T LAND

CITY OF DRIPPING SPRINGS, HAYS COUNTY, TX

VICINITY MAP
SCALE: 1"=1000'

OWNER/TEAM INFORMATION

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
3711 S. MOPAC EXPRESSWAY, BUILDING 1, SUITE 550
AUSTIN, TX 78746
PH: (512) 439-0400
CONTACT: BRIAN ESTES, PE

OWNER / DEVELOPER

HARDY T LAND, LLC
STEVE HARREN
317 GRACE LANE #240
AUSTIN, TEXAS 78746

LAND SURVEYOR

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
3711 S. MOPAC EXPRESSWAY, BUILDING 1, SUITE 550
AUSTIN, TX 78746
PH: (512) 439-0400
CONTACT: SYDNEY SMITH XINOS, R.P.L.S.

SUMMARY

FULL PURPOSE CITY LIMITS
ZONING: SF-2

AREAS

LOTS (75)	63.14 AC	80.93%
POND LOTS (3)	5.66 AC	7.25%
R.O.W.	9.22 AC.	11.82%
TOTAL=	78.02 AC.	

IMPERVIOUS COVER

CONCRETE = 182,836 S.F.
SIDEWALK = 65,483 S.F.
ASSUMED I.C. PER RESIDENTIAL LOT = 8,500 S.F.

IMPERVIOUS COVER TOTAL = 885,819 S.F.
IMPERVIOUS COVER TOTAL = 20.34 AC.
TOTAL AREA = 78.02 AC.

PROPOSED IMPERVIOUS COVER = 26.07%
MAX. ALLOWED IMPERVIOUS COVER = 40%

LOT COUNT

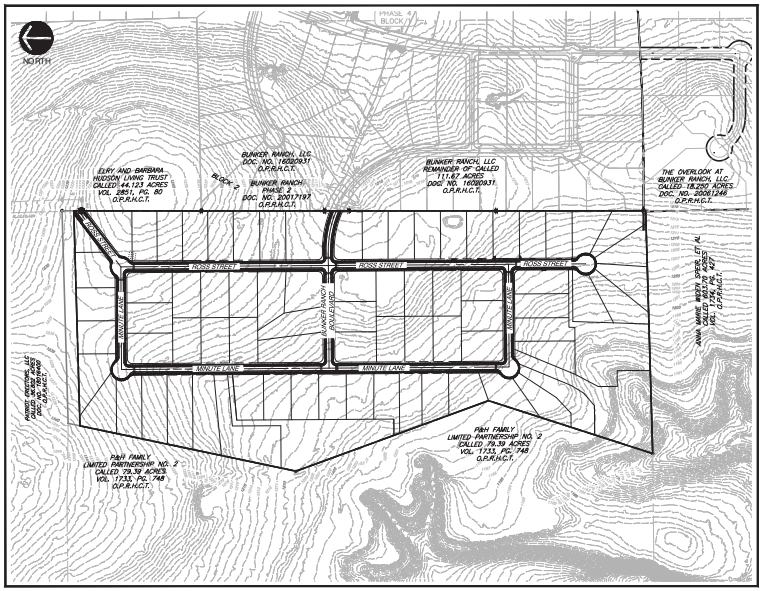
NUMBER OF LOTS = 75
AVERAGE LOT = 0.842 AC
TOTAL = 63.14 AC

BUILDING SETBACKS

FRONT = 25'
BACK = 15'
SIDE = 15'

PLAT NOTES

1. ALL RESPONSIBILITY FOR THE ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY MUST REPLY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. ASSIGNED CITY ADDRESS NUMBERS SHALL BE PERMANENTLY AFFIXED TO ALL STRUCTURES IN SUCH POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET.
3. NO PORTION OF THIS TRACT FALLS WITHIN FEMA 1% ANNUAL CHANCE FLOOD HAZARD AREA PER FEMA PANEL 48209C0085F DATED 9/2/2005.
4. WATER PROVIDER: DRIPPING SPRINGS WATER SUPPLY CORP.
5. A PORTION OF THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
6. THE JURISDICTIONAL AUTHORITY FOR ONSITE SEWAGE FACILITIES (OSSF) FALLS UNDER THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY. THE AUTHORIZED AGENT IS THE CITY OF DRIPPING SPRINGS.
7. THE HOA SHALL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF STORMWATER FACILITIES.
8. DRIPPING SPRINGS WATER SUPPLY CORPORATION WILL OWN AND OPERATE THE WATER FACILITIES AS PER NOTE 4.
9. THE HOA SHALL BE THE OWNER AND OPERATOR OF ROADWAY FACILITIES.



SITE MAP
SCALE: 1"=300'

SHEET LIST

SHEET #	DESCRIPTION
01	COVER SHEET
02	PRELIMINARY PLAT SHEET 1 OF 2
03	PRELIMINARY PLAT SHEET 2 OF 2
04	EXISTING DRAINAGE AREA MAP
05	PROPOSED DRAINAGE AREA MAP
06	DETENTION POND PLAN A
07	DETENTION POND PLAN B
08	DETENTION POND PLAN C
09	WATER & E&S PLAN

LEGAL DESCRIPTION

BEING A 78.021 ACRE TRACT OUT OF THE BENJAMIN F. HANNA SURVEY NO. 28, ABSTRACT NO. 222, SITUATED IN HAYS COUNTY, TEXAS, BEING ALL OF TRACT 1, CONVEYED TO HARDY T LAND, LLC BY SPECIAL WARRANTY DEED OF RECORD IN DOCUMENT NO. 21051171, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS (O.P.R.H.C.T.)

NOTES

1. OWNER WILL BE ABLE TO CONTINUE DEVELOPMENT PROCESS, SUCH AS ROADS, UTILITIES, AND ACCEPTANCE THEREOF, HOWEVER, NO BUILDING CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL CONNECTIVITY IS ESTABLISHED IN CONFORMANCE WITH THE 2018 INTERNATIONAL FIRE CODE, APPENDIX D, SECTION D107.1 AND SECTION D107.2. NO VERTICAL CONSTRUCTION OF BUILDINGS MAY OCCUR WITHOUT COMPLETED FIRE ACCESS ROADS AND WATER SUPPLY PER SECTION 501.4.
2. CONNECTION TO THE EXISTING BUNKER RANCH BOULEVARD STUB AT BUNKER RANCH PHASE 4 MUST BE COMPLETED PRIOR TO APPROVAL OF THE FINAL PLAT FOR HARDY.
3. STREET TREES SHALL BE PLANTED IN EACH LOT PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY PER THE QUANTITY, SIZE AND LOCATION REQUIREMENTS OF SUBDIVISION ORDINANCE 28.06.051.
4. DEVELOPER WILL BUILD SIDEWALKS ADJACENT TO COMMON AREAS; HOME BUILDERS WILL BUILD SIDEWALKS ON RESIDENTIAL LOTS. DEVELOPER WILL BOND SIDEWALKS PRIOR TO CONSTRUCTION.
5. FINAL PLAT SHALL NOT BE RECORDED UNTIL A SECONDARY MEANS OF EGRESS IS CONSTRUCTED AND ACCEPTED BY THE CITY.

APPROVED BY:	APPROVED BY:
CITY ADMINISTRATOR	CITY SECRETARY
CITY ENGINEER	DRIPPING SPRINGS WATER SUPPLY CORPORATION
PLANNING DIRECTOR	HAYS COUNTY ESD #6
PLANNING & ZONING COMMISSION CHAIR	SITE PERMIT NUMBER

SUBMITTED BY : BRIAN ESTES, PE

11/18/2022

STATE OF TEXAS
BRIAN ESTES
89270
LICENSED
PROFESSIONAL ENGINEER

I CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL.

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

COVER SHEET

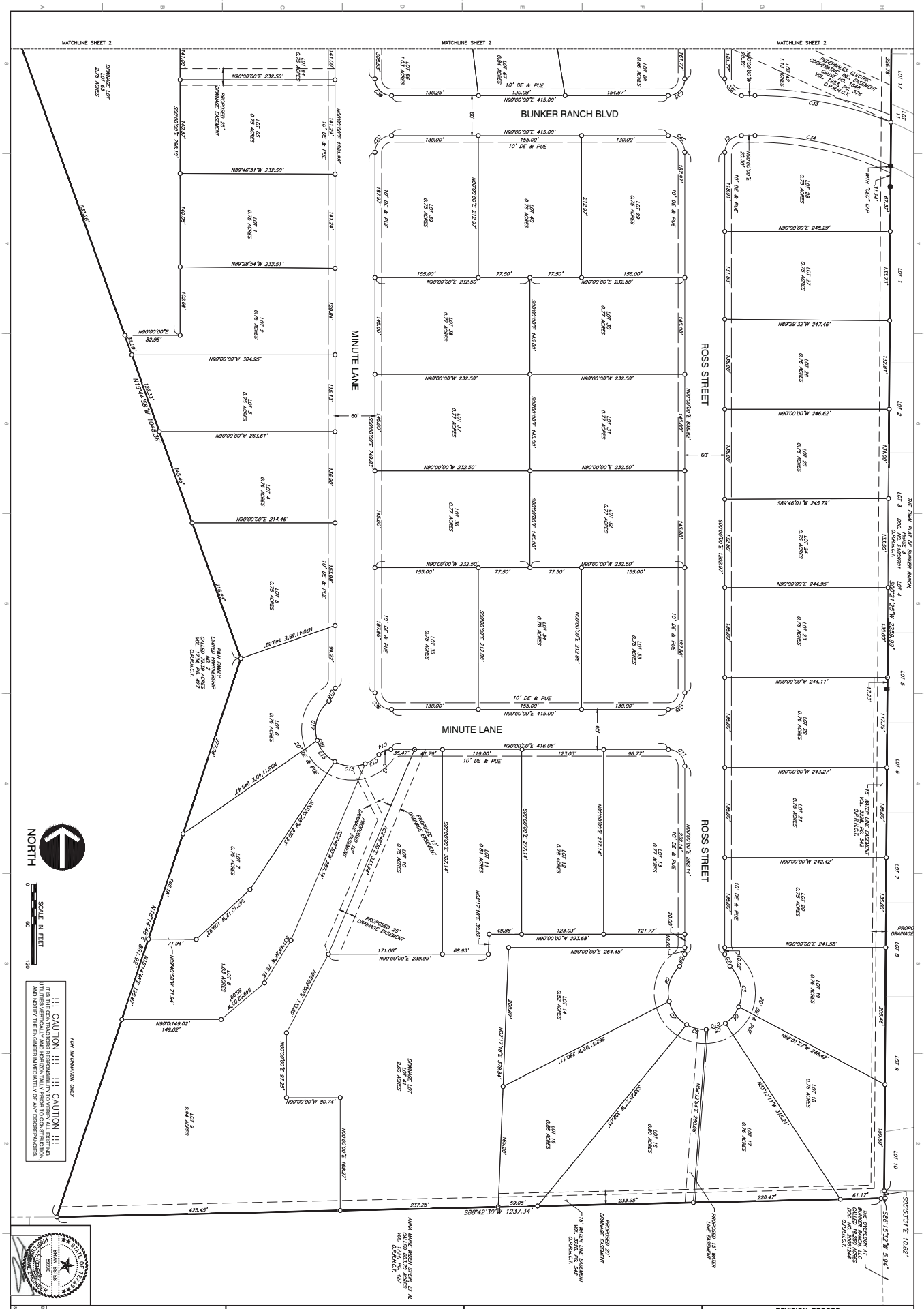
DATE:	11/18/2022
DWG SCALE:	1"=300'
PROJECT NO:	304-065
DRAWN BY:	STAFF
CHECKED BY:	MSC
APPROVED BY:	BE

DRAWING NO.: 01

SHEET 01 OF 09

P:\304-065\304-065\-CESC\dwg\civil\Preliminary Plans\01 304065-CESC-PP01 - COVER SHEET.dwg\DWG\BE-CESC-PP01 - COVER SHEET(11/17/2022 - screenshot) - LM 6/6/2022 4:02 PM

P:\300-000\304-065\-CADD\Dwg\Hardy\CVD3\Preliminary Plans\02-03 304065-CVD3-CP02 - PRELIMINARY PLAT.dwg(PRELIMINARY PLAT SHEET 1 OF 2) LS:(11/18/2022 - ecevazos) - LP: 11/18/2022 1:53 PM



PRELIMINARY PLAT

DATE:	MARCH 24, 2022	DRAWN BY:	AJH
DWG SCALE:	1"=60'	CHECKED BY:	ESH
PROJECT NO:	304-065		
APPROVED BY:			SSX

DRAWING NO. 02

SHEET 02 OF 09

HARDY T LAND LLC
HARDY T LAND

DRIPPING SPRINGS, HAYS COUNTY, TX

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Civil & Environmental Consultants, Inc.
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
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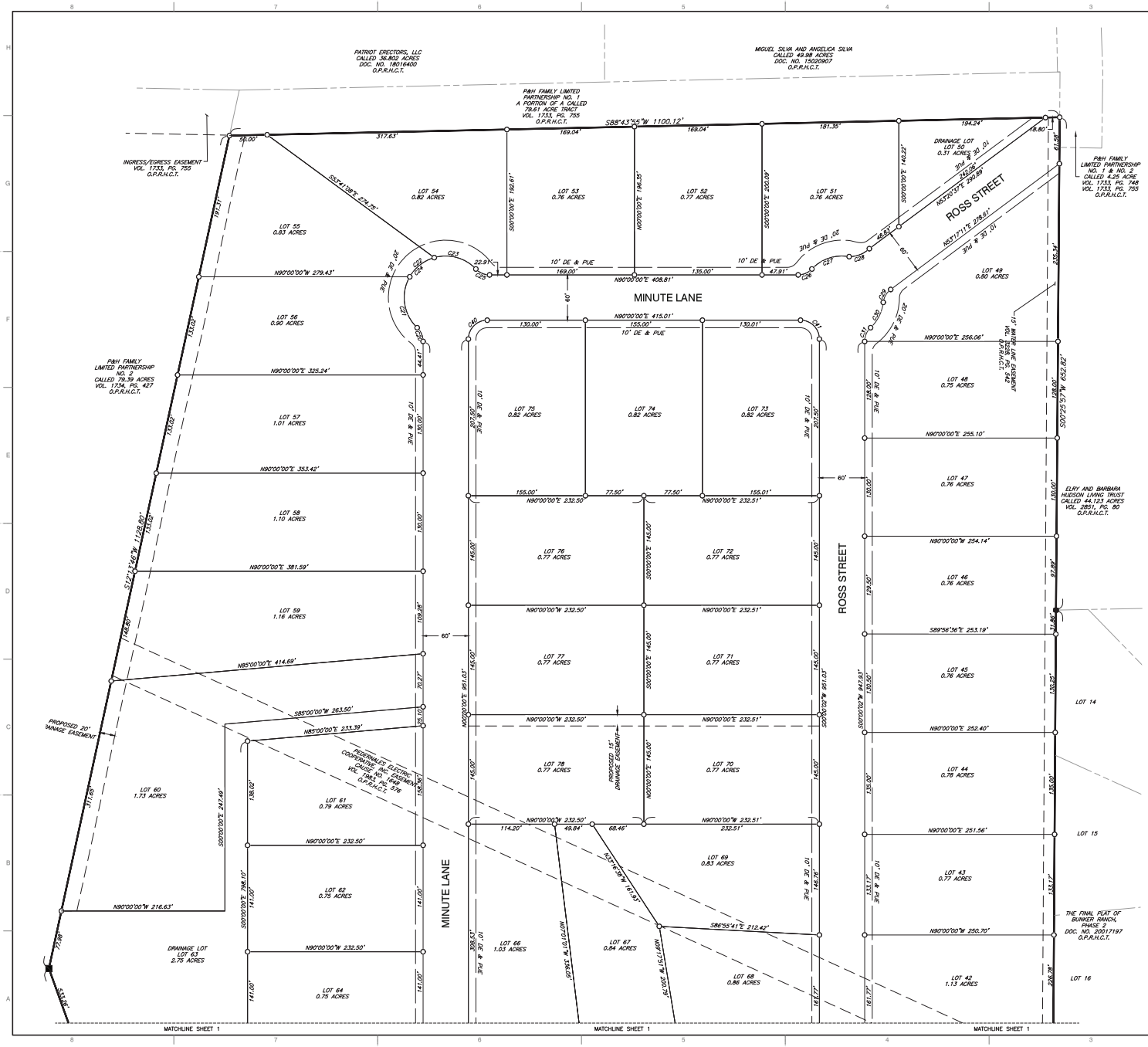
REVISION RECORD

NO	DATE	DESCRIPTION



CURVE TABLE					
CURVE	ARC DISTANCE	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD DISTANCE
C1	39.27'	25.00'	90°00'00"	N45°00'00"E	35.36'
C2	20.32'	25.00'	46°34'03"	N23°17'01"W	19.76'
C3	66.05'	55.00'	68°48'09"	N12°09'58"W	62.15'
C4	32.27'	55.00'	33°37'16"	N39°02'44"E	31.81'
C5	30.74'	55.00'	32°01'14"	N71°51'59"E	30.34'
C6	30.73'	55.00'	32°00'39"	S76°07'05"E	30.33'
C7	45.00'	55.00'	46°52'39"	S36°40'26"E	43.75'
C8	57.41'	55.00'	59°48'09"	S16°39'58"W	54.84'
C9	20.32'	25.00'	46°34'03"	S23°17'01"W	19.76'
C10	262.19'	55.00'	273°08'06"	N90°00'00"E	75.63'
C11	39.27'	25.00'	90°00'00"	S45°00'00"E	35.36'
C12	20.32'	25.00'	46°34'06"	S66°42'57"W	19.76'
C13	179.61'	55.00'	187°06'32"	S43°00'50"E	109.79'
C14	20.32'	25.00'	46°34'06"	N66°42'57"E	19.76'
C15	47.04'	55.41'	48°38'26"	S86°10'52"E	45.64'
C16	42.35'	55.00'	44°06'54"	S39°36'40"E	41.31'
C17	179.61'	55.00'	187°06'32"	S43°00'50"E	109.79'
C18	22.05'	25.00'	50°32'26"	S25°16'13"W	21.34'
C19	179.61'	55.00'	187°06'32"	S43°00'50"E	109.79'
C20	20.32'	25.00'	46°34'03"	S23°17'01"E	19.76'
C21	73.50'	55.00'	76°34'03"	S08°17'01"E	68.15'
C22	42.23'	55.00'	43°59'47"	S51°59'53"W	41.20'
C23	60.06'	55.00'	62°34'16"	N74°43'05"W	57.12'
C24	175.80'	55.00'	183°08'06"	S45°00'00"W	109.96'
C25	20.32'	25.00'	46°34'03"	N66°42'59"W	19.76'
C26	20.32'	25.00'	46°34'03"	S66°42'59"W	19.76'
C27	54.16'	55.00'	56°25'17"	S71°38'36"W	52.00'
C28	29.54'	36.34'	46°34'03"	S68°27'57"W	28.73'
C29	20.32'	25.00'	46°34'03"	S30°00'10"W	19.76'
C30	38.24'	55.00'	39°50'09"	S26°38'13"W	37.47'
C31	20.31'	25.00'	46°33'15"	S23°16'40"W	19.76'
C32	39.27'	25.00'	90°00'01"	S44°59'59"E	35.36'
C33	209.18'	540.00'	22°11'41"	N78°54'10"W	207.87'
C34	210.27'	478.54'	25°10'32"	S77°27'12"E	208.58'
C35	39.27'	25.00'	90°00'00"	S45°00'00"W	35.36'
C36	39.27'	25.00'	90°00'00"	N45°00'00"W	35.36'
C37	39.27'	25.00'	90°00'00"	N45°00'00"E	35.36'
C38	39.27'	25.00'	89°59'59"	S45°00'01"W	35.36'
C39	39.27'	25.00'	90°00'00"	N45°00'00"W	35.36'
C40	39.27'	25.00'	90°00'00"	N45°00'00"E	35.36'
C41	39.27'	25.00'	90°00'02"	N44°59'59"W	35.36'
C42	39.27'	25.00'	90°00'00"	S45°00'00"E	35.36'

LEGEND:

- ● 1/2-INCH IRON ROD FOUND UNLESS OTHERWISE NOTED
- ○ 1/2-INCH IRON ROD SET WITH "CEC" CAP
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- DOC. NO. DOCUMENT NUMBER
- VOL., PG. VOLUME, PAGE
- O.P.R.H.C.T. OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS
- TREE AND TREE NUMBER

NORTH

SCALE IN FEET
0 60 120

FOR INFORMATION ONLY

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STATE OF TEXAS
BRIAN ESTES
89270
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION

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HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

PRELIMINARY PLAT

DATE:	MARCH 24, 2022	DRAWN BY:	AJH
DWG SCALE:	1"=60'	CHECKED BY:	ESH
PROJECT NO:			304-065
APPROVED BY:			SSX

DRAWING NO.: 03

SHEET 03 OF 09

P:\304-065\304-065-1001-CIVIL\Dwg\Hardy\PLAT\Preliminary Plat\04-03 304-065-CVD-CPD - PRELIMINARY PLAT.dwg\PRELIMINARY PLAT SHEET 3 OF 9\ LSTY:(1/16.0022 - scaled) - LP: 11/16.0022 1:53 PM

Time of Concentration (TR-55 method) - Existing Site Conditions

Subbasin		Ex_DA 1	Ex_DA 2	Ex_DA 3	Ex_DA 4	Ex_DA 5
Area	sf	115710	357506	2562521	188464	1342434
	ac	2.656	8.207	58.827	4.327	30.818
	sq mi	0.00415053	0.01282376	0.09191779	0.00676022	0.04815319
Impervious	%	0%	6%	1%	2%	2%
Pervious	Cn	83	83	83	83	83
Composite	Cn	83	84	83	83	83
Sheet Flow						
Slope	m/m	0.0100	0.0075	0.0075	0.0150	0.0050
Length	ft.	100	100	100	100	100
Roughness	n	0.24	0.24	0.24	0.24	0.24
Time	hr.	0.28	0.31	0.31	0.24	0.37
Shallow Concentrated						
Slope	m/m	0.0250	0.0282	0.0273	0.0276	0.0297
Length	ft.	360	1000	1000	975	1000
Paved?	p/u	u	u	u	u	u
Time	hr.	0.04	0.10	0.10	0.10	0.10
Channel Flow 1						
Slope	m/m	0.000	0.034	0.034	0.000	0.040
Length	ft.	0	67	1637	0	771
Velocity	fps	0	4	4	0	4
Time	hr.	0.00	0.00	0.11	0.00	0.05
Summary						
Travel Time	hr.	0.41	0.42	0.53	0.34	0.52
Tc	min.	24.57	25.09	31.74	20.21	31.16
Lag Time	min.	14.74	15.06	19.04	12.12	18.69
Existing Run-off Values from HEC-HMS						
2 Year	cfs	4.50	14.10	90.50	8.00	48.10
10 Year	cfs	9.00	27.80	181.20	15.80	96.00
25 Year	cfs	12.40	38.40	251.00	21.80	132.80
100 Year	cfs	19.00	58.30	382.10	33.00	202.00

DRAINAGE LEGEND

- DRAINAGE AREA BOUNDARY
- DRAINAGE FLOW DIRECTION
- XXX — DRAINAGE AREA NAME
- AC XX.XX / CFS XX.XX — DRAINAGE AREA SIZE / CUMULATIVE FLOW

NORTH

SCALE IN FEET 0 150 300

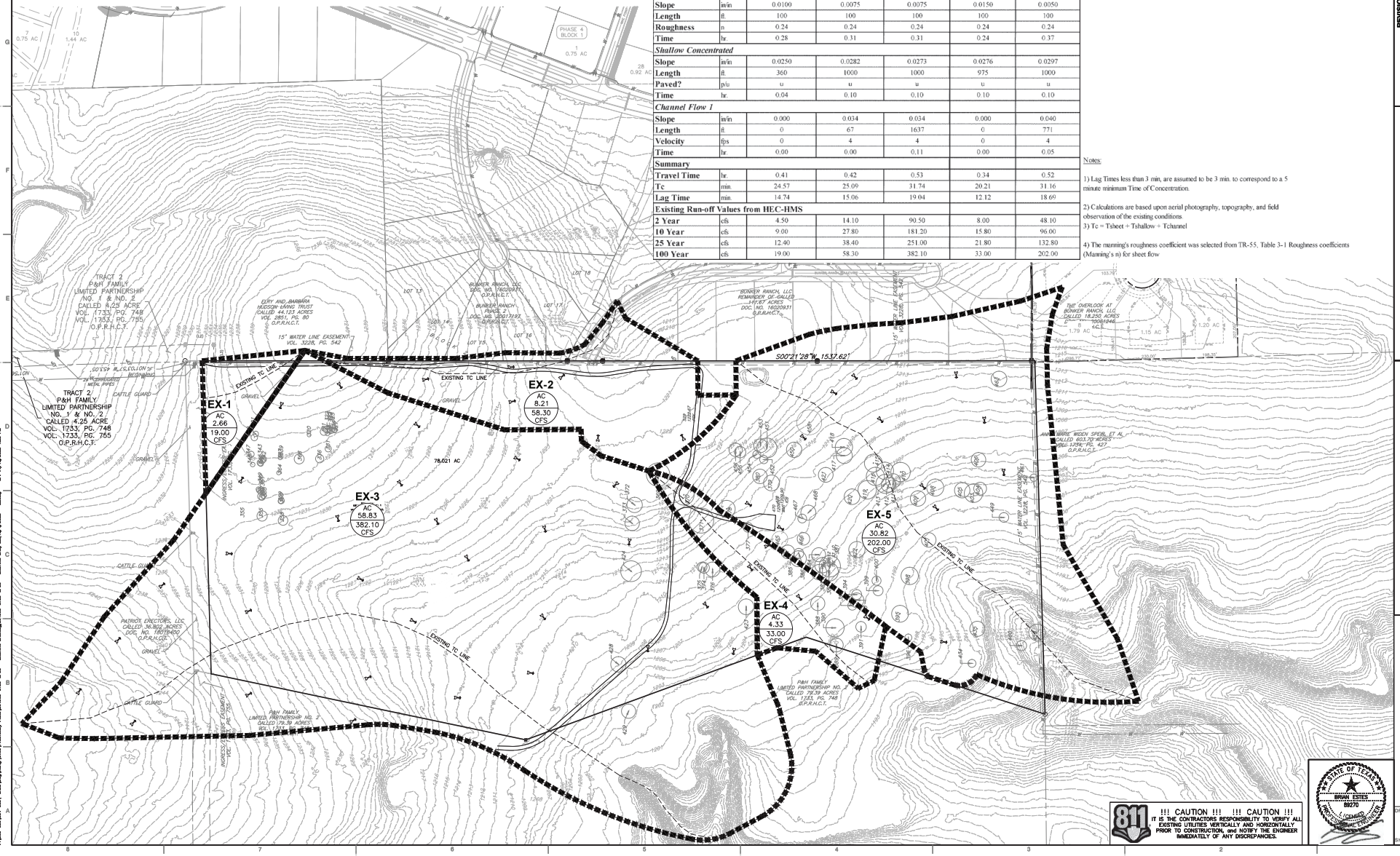
Notes:

1) Lag Times less than 3 min. are assumed to be 3 min. to correspond to a 5 minute minimum Time of Concentration.

2) Calculations are based upon aerial photography, topography, and field observation of the existing conditions.

3) Tc = Tsheet + Tshallow + Tchannel

4) The manning's roughness coefficient was selected from TR-55, Table 3-1 Roughness coefficients (Manning's n) for sheet flow



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STATE OF TEXAS
BRIAN ESTES
86070
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION

Texas Registered Engineering Firm F-38
3711 South MoPac Expressway · Building 1, Suite 500 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cacinc.com

HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

EXISTING DRAINAGE AREA MAP

DATE:	MARCH 2022
DWG SCALE:	1" = 150'
PROJECT NO:	304-065
DRAWN BY:	STAFF
CHECKED BY:	MSC
APPROVED BY:	BE

DRAWING NO.: 04

SHEET 04 OF 09

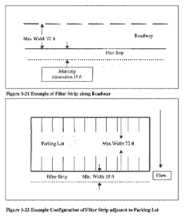
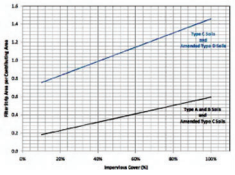


Figure 3-21 Example of Filter Strip along Roadway

Figure 3-22 Example Configuration of Filter Strip adjacent to Parking Lot

SCHEMATIC FILTER STRIP DESIGN



FILTER STRIP SIZING CHART

Time of Concentration (TR-55 method) - Proposed Site Conditions

Subbasin		PR-DA1	PR-DA2	PR-DA3	PR-DA3A	PR-DA4	PR-DA5
Area	sf	1082338.8021	209068.5914	1875176.652	579293.059	134340.3096	1657096.732
	ac	2.48	4.80	43.05	13.30	3.08	38.04
	sq mi	0.00388253	0.007499	0.067263	0.020779	0.004819	0.059440
Impervious	%	12%	25%	21%	1.46%	21%	21%
Pervious	Cn	83	83	83	83	83	83
Composite	Cn	85	87	86	83	86	86
Sheet Flow							
Slope	in/in	0.0100	0.0215	0.0100	0.0200	0.0136	0.0045
Length	ft.	100	100	100	100	100	100
Roughness	n	0.24	0.24	0.24	0.24	0.24	0.24
Time	hr.	0.28	0.20	0.28	0.21	0.25	0.38
Shallow Concentrated							
Slope	in/in	0.0281	0.0273	0.0196	0.0277	0.0207	0.0025
Length	ft.	169	176.83	214	432	593	143
Paved?	p/u	u	u	u	u	u	u
Time	hr.	0.02	0.02	0.03	0.04	0.07	0.05
Channel Flow 1							
Slope	in/in	0.0150	0.0320	0.0146	0.0366	0.0000	0.0306
Length	ft.	72	200.49	1915	1802	0	1981
Velocity	fps	6	6	6	6	0	6
Time	hr.	0.00	0.01	0.09	0.08	0.00	0.09
Summary							
Travel Time	hr.	0.30	0.27	0.39	0.34	0.32	0.52
Tc	min.	17.88	16.11	23.53	20.29	18.97	31.38
Lag Time	min.	10.73	9.66	14.12	12.18	11.38	18.83
Proposed Run-off Values from HEC-HMS							
2 Year	cfs	4.90	10.40	81.30	24.40	6.20	64.50
10 Year	cfs	9.50	19.70	154.90	48.40	11.80	122.90
25 Year	cfs	13.00	26.80	211.40	66.80	16.10	167.80
100 Year	cfs	19.70	40.10	317.70	101.30	24.10	252.20

NORTH

SCALE IN FEET

0 150 300

DRAINAGE LEGEND

- DRAINAGE AREA BOUNDARY
- DRAINAGE FLOW DIRECTION
- XXX — DRAINAGE AREA NAME
- AC XX.XX / XX.XX CFS — DRAINAGE AREA SIZE / CUMULATIVE FLOW

Notes:

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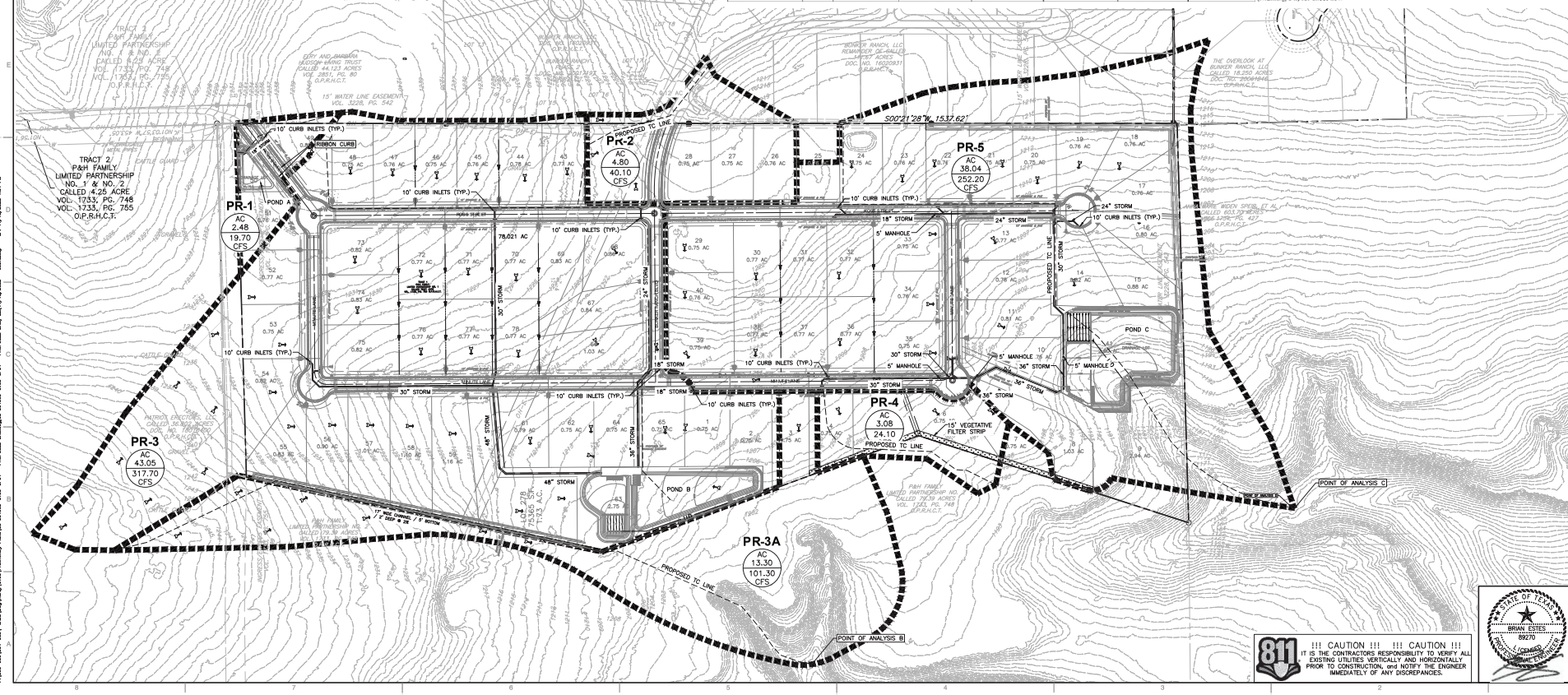
2) Calculations are based upon aerial photography, topography, and field observation of the existing conditions.

3) Tc = Tsheet + Tshallow + Tchannel

4) The manning's roughness coefficient was selected from TR-55, Table 3-1 Roughness coefficients (Manning's n) for sheet flow



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STATE OF TEXAS
BRIAN ESTES
89270
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

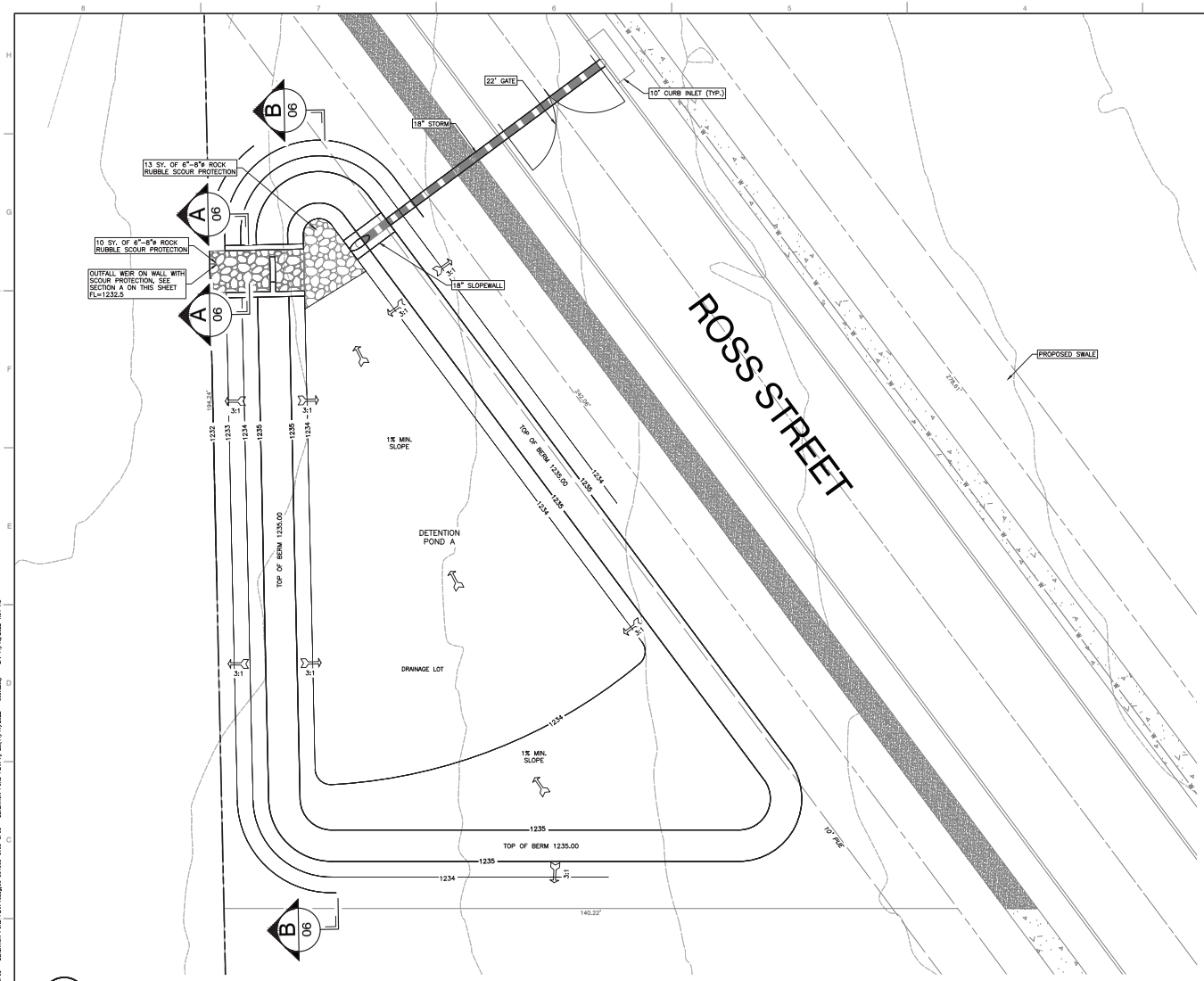
HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

PROPOSED DRAINAGE AREA MAP

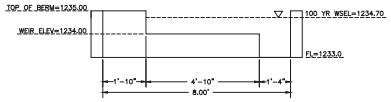
DATE:	11/18/2022
DRAWN BY:	STAFF
DWG SCALE:	1"=150'
CHECKED BY:	MSC
PROJECT NO:	304-065
APPROVED BY:	BE

DRAWING NO.: 05

SHEET 05 OF 09

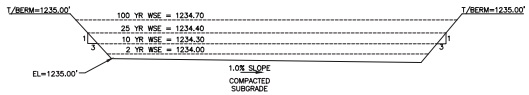


P POND – DETENTION POND A
SCALE: 1"=10'



A OUTFALL CROSS SECTION – DETENTION POND A
SCALE: NTS

SEE PLAN FOR DIMENSIONS



B DETENTION POND A SECTION
SCALE: NTS

NORTH

SCALE IN FEET
0 10 20

Existing and Proposed Conditions at Points of Analysis		
	Existing Drainage Area	Proposed Drainage Area
	Ex_Point of Analysis	Pr_Point of Analysis
Contributing Drainage Areas	*EX_DA1*	*PR-POND A-routed*
2-Yr Peak Discharge, Q_2	4.50	4.50
10-Yr Peak Discharge, Q_{10}	9.00	8.80
25-Yr Peak Discharge, Q_{25}	12.40	12.40
100-Yr Peak Discharge, Q_{100}	19.00	19.00

Detention Pond Values from HEC-HMS Hydrologic Modeling Software				
Storm Event	Q-Ex (cfs)	Q-Pr (cfs)	PR-POND-Routed (cfs)	WS Elevation (ft)
2-yr	4.50	4.90	4.5	1234.0
10-yr	9.00	9.50	8.8	1234.3
25-yr	12.40	13.00	12.4	1234.4
100-yr	19.00	19.70	19.0	1234.7

Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
1233.0	0 sf	0	0 cf	0 cf	0.0000
1234.0	3,966	0.091046832	1,983	1,983	0.0455
1235.0	6,233	0.143089991	5,100	7,083	0.1626

NOTES:

1. EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATER TIGHT SEALS AS NEEDED [ECM 1.6.3(B)(4)].
2. ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO NINETY–FIVE (95) PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH COA STANDARD SPECIFICATIONS. SIDE SLOPES FOR EARTHEN EMBANKMENTS SHALL NOT EXCEED THREE TO ONE (3H:1V). ROCK SLOPES MAY EXCEED THESE LIMITS IF A GEOTECHNICAL REPORT WARRANTS A DEVIATION. ACTUAL FIELD CONDITIONS MAY OVERRIDE THE GEOTECHNICAL REPORT. CONCRETE WALLS SHALL BE BUILT TO COA STANDARD SPECIFICATIONS. EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATER TIGHT SEALS AS NEEDED.

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STATE OF TEXAS
BRIAN ESTES
89270
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

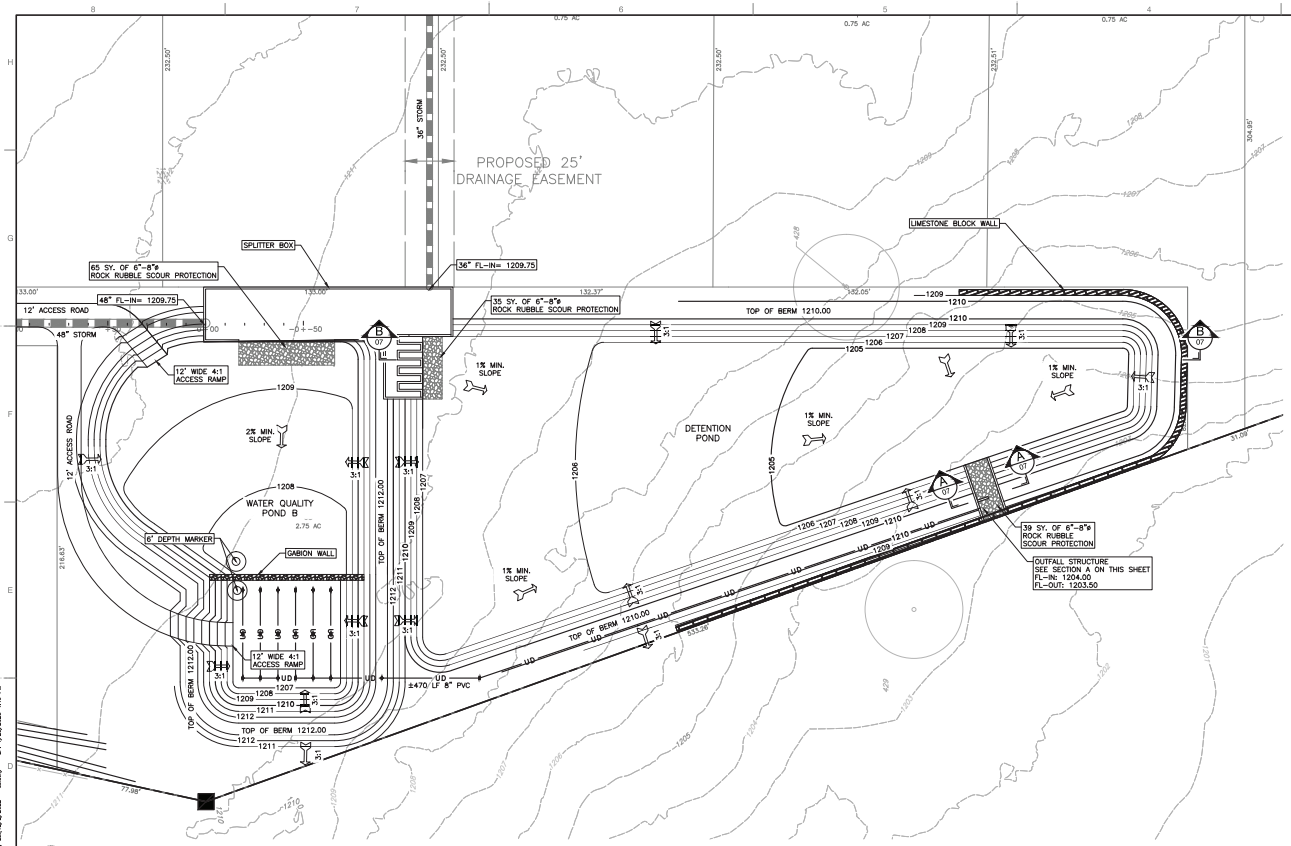
DETENTION POND PLAN A

DATE:	6.23.2022
DWG SCALE:	1"=10'
PROJECT NO:	304-065
DRAWN BY:	GU
CHECKED BY:	MSC
APPROVED BY:	BE

DRAWING NO.: 06

SHEET 06 OF 09

P:\300-0001\304-0065\-CADD\dwg\cover\01\01\Preliminary Plans\04 304065-CV01-PP06 - DETENTION POND PLAN A.dwg\04 304065-CV01-PP06 - DETENTION POND PLAN A(LS(1/1/2022 - sunesong) - LT: 11/18/2022 1:04 PM



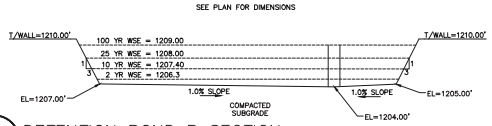
P POND – DETENTION POND B
SCALE: 1"=30'

NORTH
SCALE IN FEET
0 30 60

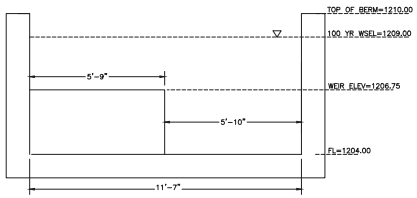
Existing and Proposed Conditions at Points of Analysis		
	Existing Drainage Area	Proposed Drainage Area
	Ex_Point of Analysis	Pr_Point of Analysis
Contributing Drainage Areas	*EX_DA3*	*PR-POND B-routed, PR_DA3A*
2-Yr Peak Discharge, Q_2	90.50	89.50
10-Yr Peak Discharge, Q_{10}	181.20	173.20
25-Yr Peak Discharge, Q_{25}	251.00	242.70
100-Yr Peak Discharge, Q_{100}	382.10	373.50

Detention Pond Values from HEC-HMS Hydrologic Modeling Software				
Storm Event	Q-Ex (cfs)	Q-Pr (cfs)	PR-POND-Routed (cfs)	WS Elevation (ft)
2-yr	90.50	81.30	69.7	1206.3
10-yr	181.20	154.90	134.1	1207.4
25-yr	251.00	211.40	186.1	1208.0
100-yr	382.10	317.70	283.3	1209.0

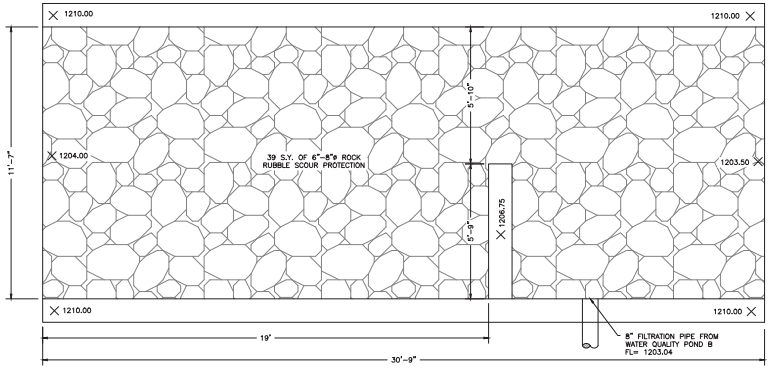
Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
1204.0	0 sf	0	0 cf	0 cf	0.0000
1205.0	10,965	0.251721763	5,483	5,483	0.1259
1206.0	23,793	0.546212121	17,379	22,862	0.5248
1207.0	38,057	0.873668503	30,925	53,787	1.2348
1208.0	40,919	0.939370983	39,488	93,275	2.1413
1209.0	43,838	1.006382002	42,379	135,653	3.1142
1210.0	46,813	1.074678604	45,326	180,979	4.1547



B DETENTION POND B SECTION
SCALE: NTS



A OUTFALL CROSS SECTION – DETENTION POND B
SCALE: NTS



OUTFALL PLAN – DETENTION POND B
SCALE: NTS

NOTES:

1. EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATER TIGHT SEALS AS NEEDED [ECM 1.6.3(B)(4)].
2. ALL POND BOTTOMS, SIDE SLOPES, AND EARTHEN EMBANKMENTS SHALL BE COMPACTED TO NINETY–FIVE (95) PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH COA STANDARD SPECIFICATIONS. SIDE SLOPES FOR EARTHEN EMBANKMENTS SHALL NOT EXCEED THREE TO ONE (3H:1V). ROCK SLOPES MAY EXCEED THESE LIMITS IF A GEOTECHNICAL REPORT WARRANTS A DEVIATION. ACTUAL FIELD CONDITIONS MAY OVERRIDE THE GEOTECHNICAL REPORT. CONCRETE WALLS SHALL BE BUILT TO COA STANDARD SPECIFICATIONS. EXPANSION JOINTS ON FREE STANDING WALLS SHALL HAVE WATER TIGHT SEALS AS NEEDED.

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STATE OF TEXAS
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NO	DATE	DESCRIPTION

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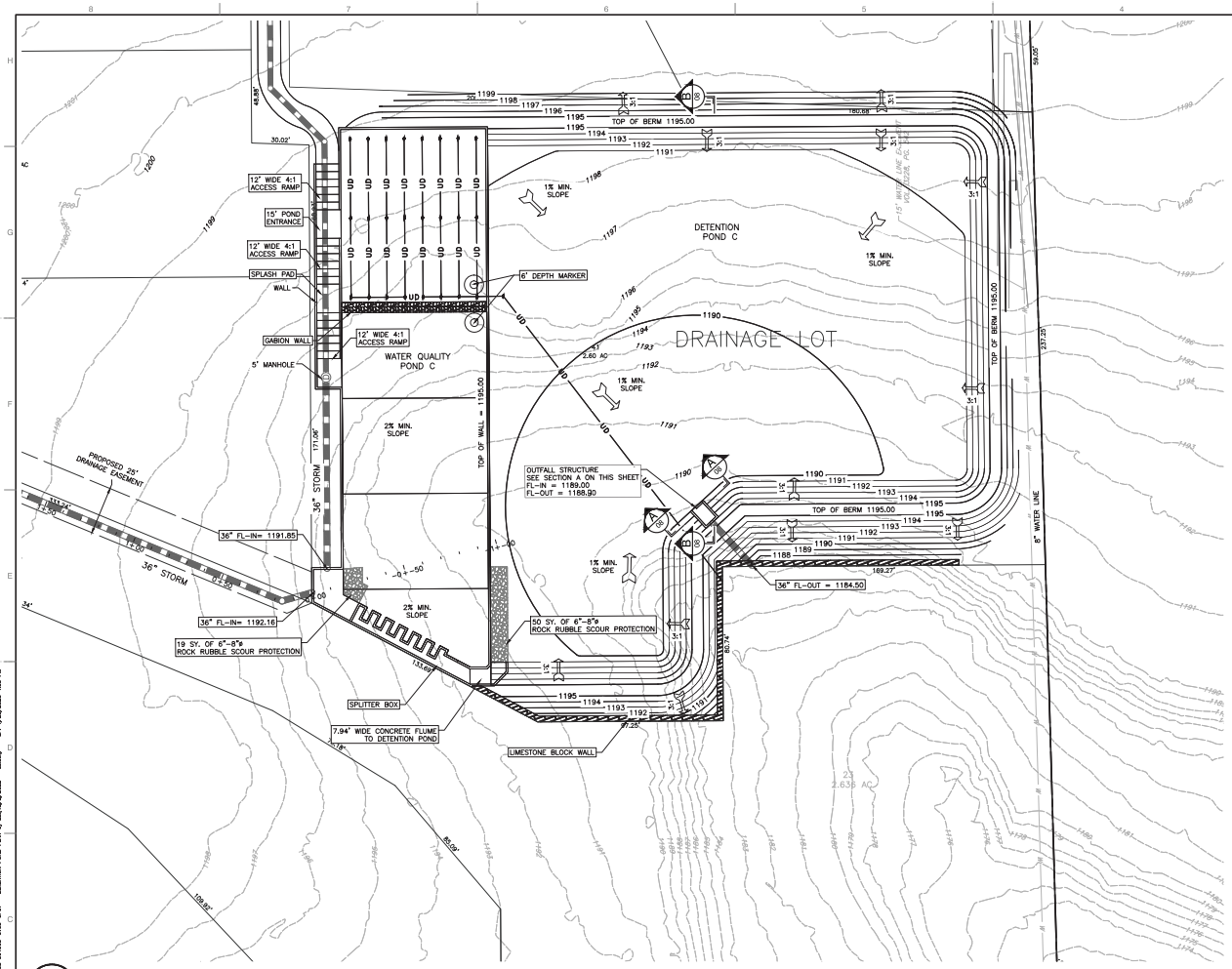
www.cecinc.com

HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

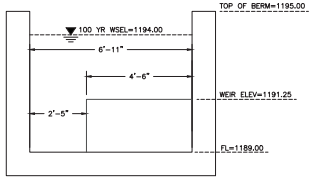
DETENTION POND PLAN B

DATE:	1/25/2023
DWG SCALE:	1"=30'
DRAWN BY:	GU
CHECKED BY:	MSC
PROJECT NO:	30-1265
APPROVED BY:	BE

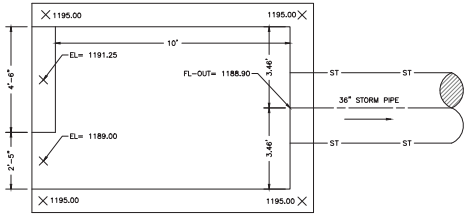
DRAWING NO. 07
SHEET 07 OF 09



P POND – DETENTION POND C
SCALE: 1"=30'



A OUTFALL CROSS SECTION – DETENTION POND C
SCALE: NTS



OUTFALL PLAN – DETENTION POND C
SCALE: NTS

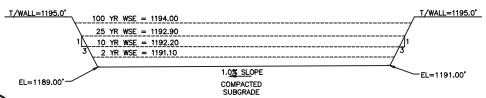
NORTH
SCALE IN FEET
0 30 60

Existing and Proposed Conditions at Points of Analysis		
	Existing Drainage Area	Proposed Drainage Area
	Ex_Point of Analysis	Pr_Point of Analysis
Contributing Drainage Areas	*EX_DA5*	*PR-POND C-routed*
2-Yr Peak Discharge, Q_2	48.10	47.50
10-Yr Peak Discharge, Q_{10}	96.00	92.10
25-Yr Peak Discharge, Q_{25}	132.80	129.60
100-Yr Peak Discharge, Q_{100}	202.00	201.50

Detention Pond Values from HEC-HMS Hydrologic Modeling Software				
Storm Event	Q-Ex (cfs)	Q-Pr (cfs)	PR-POND-Routed (cfs)	WS Elevation (ft)
2-yr	48.10	64.50	47.5	1191.1
10-yr	96.00	122.90	92.1	1192.2
25-yr	132.80	167.80	129.6	1192.9
100-yr	202.00	252.20	201.5	1194.0

Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
1189.0	0 sf	0	0 cf	0 cf	0.0000
1190.0	19,638	0.450826446	9,819	9,819	0.2254
1191.0	50,923	1.169031221	35,281	45,100	1.0353
1192.0	58,655	1.346533517	54,789	99,889	2.2931
1193.0	62,086	1.425298439	60,371	160,259	3.6790
1194.0	65,575	1.505394858	63,831	224,090	5.1444
1195.0	69,120	1.586776866	67,348	291,437	6.6905

SEE PLAN FOR DIMENSIONS



B DETENTION POND C SECTION
SCALE: NTS

NOTES:

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BRIAN ESTES
89270
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO.	DATE	DESCRIPTION

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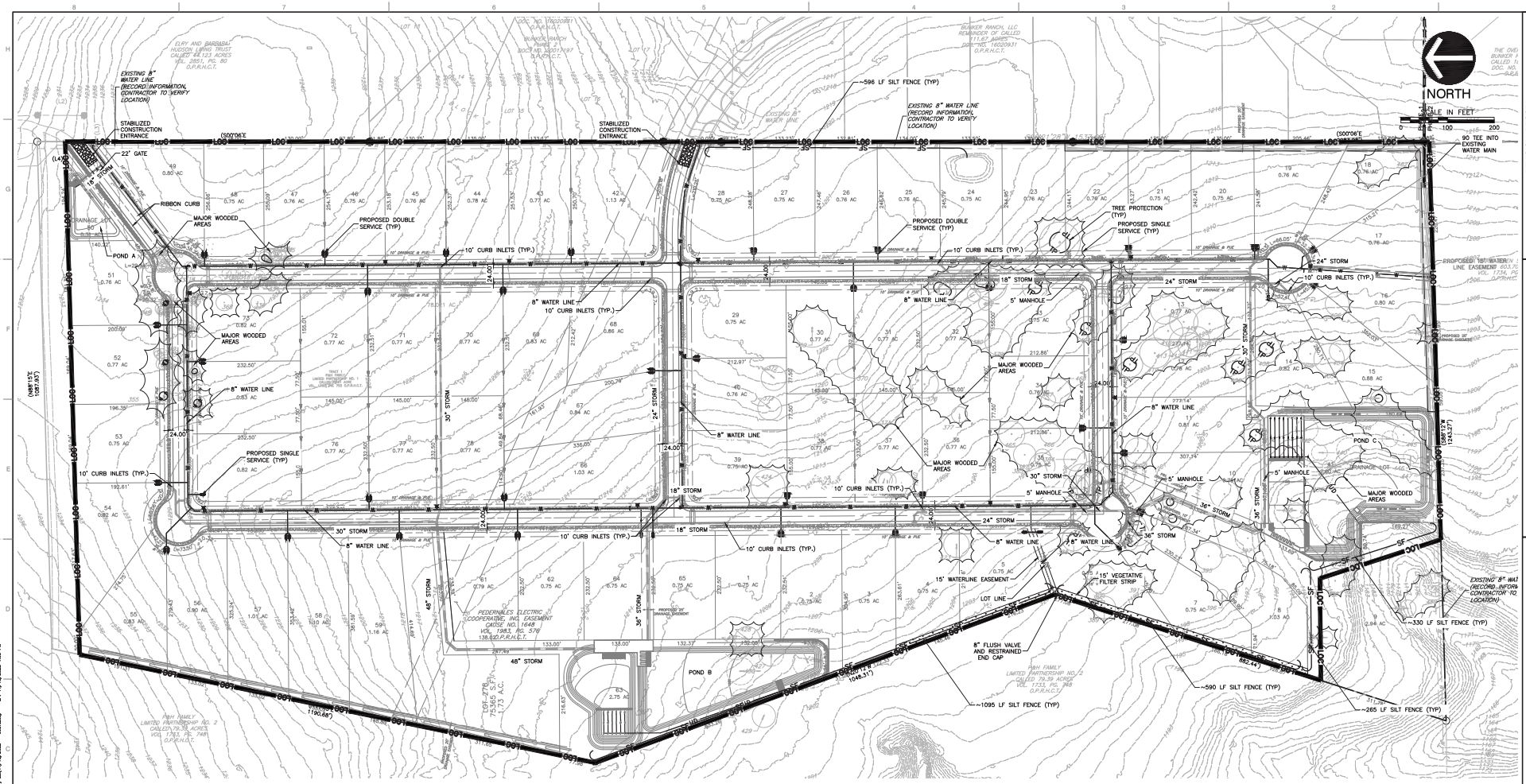
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

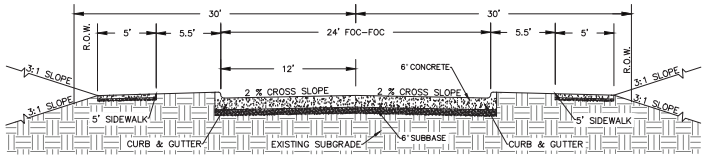
HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

DETENTION POND PLAN C

DATE:	12/2/2022
DWG SCALE:	1"=30'
DRAWN BY:	STAFF
CHECKED BY:	MSC
PROJECT NO:	30H065
APPROVED BY:	BE

DRAWING NO. 08
SHEET 08 OF 09





TYPICAL ROAD SECTION

NOTE:

1. TYPICAL SECTION IS NOT TO SCALE.
2. FOR EXACT WIDTHS SEE DIMENSIONS.
3. ROADWAY ALIGNMENT IS SUBJECT TO CHANGE
4. PER GEO-TECHNICAL RECOMMENDATIONS AN ALTERNATIVE HMAC SECTION MAY BE USED.
5. ROADWAY SECTION MAY VARY IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING REPORT.

LEGEND:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE
- W — WATER LINE
- COTTON SPINDLE FOUND
- 1/2-INCH IRON ROD SET WITH "CEC" CAP
- 1/2-INCH IRON ROD FOUND UNLESS OTHERWISE NOTED
- 8-INCH CEDAR FENCE POST
- DOC. NO. — DOCUMENT NUMBER
- VOL., PG. — VOLUME, PAGE
- O.P.R.H.C.T. — OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS
- SINGLE SERVICE METER
- DOUBLE SERVICE METER
- MAJOR WOODED AREAS

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89270
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REVISION RECORD

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HARDY T LAND LLC
HARDY T LAND
DRIPPING SPRINGS, HAYS COUNTY, TX

WATER & E&S PLAN

DATE:	11/18/2022
DWG SCALE:	1"=100'
PROJECT NO.	304-065
DRAWN BY:	STAFF
CHECKED BY:	MSC
APPROVED BY:	BE

DRAWING NO.: 09

SHEET 09 OF 09

P:\304-065\304-065\-CADD\dwg\civil3\Preliminary Plans\WQ & E&S PLAN.dwg\WATER\ LAST:11/18/2022 - sunsong - LY: 11/18/2022 1:05 PM