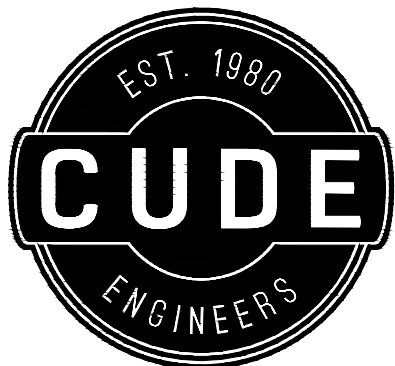


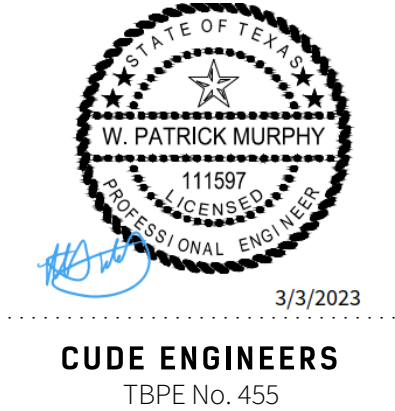


4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

GEORGE'S RANCH
UNIT 1
DRAINAGE PLAN & PROFILE -
DRAIN 'N'

DATE
04/22/2022
PROJECT NO.
03546.001
DRAWN BY
AB/RR
CHECKED BY
WPM

REVISIONS
1.
2.
3.
4.
5.
6.
7.
8.
9.

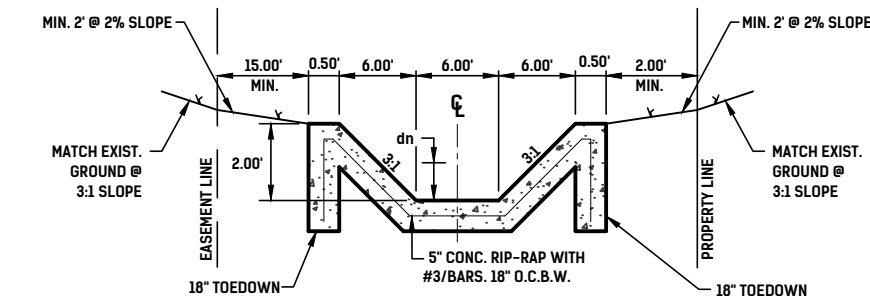
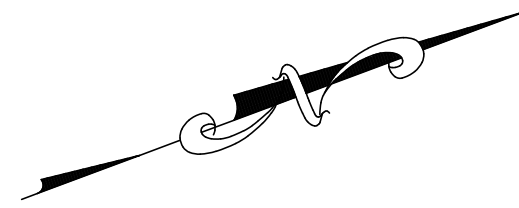


CUDE ENGINEERS
TBPE No. 455

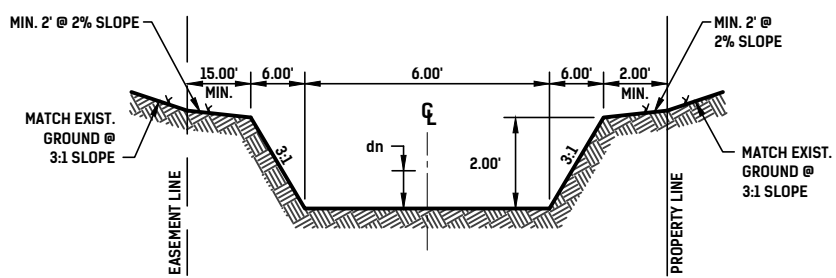
PLAT NO.
N/A

C34A

34A OF 55



DRAIN "N" SECTIONS (N.T.S.)
"N-1" STA. 2+25.65 TO STA. 2+28.65



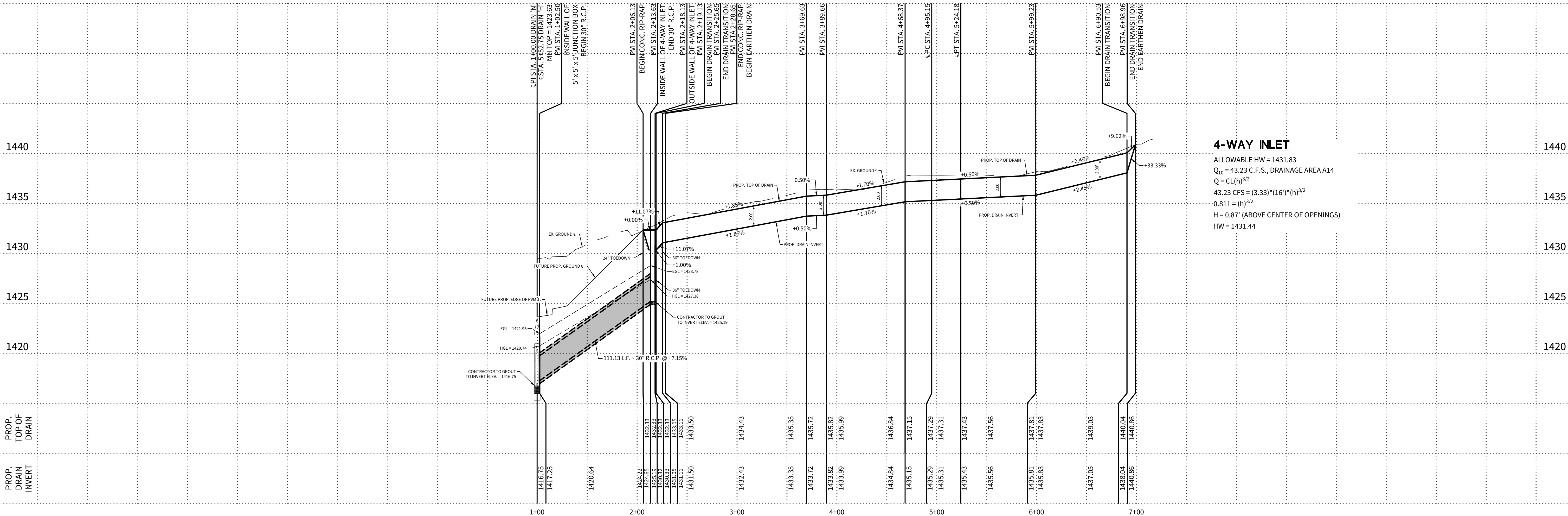
DRAIN "N" SECTIONS (N.T.S.)
"N-2" STA. 2+28.65 TO STA. 3+69.63
"N-3" STA. 3+69.63 TO STA. 3+99.66
"N-4" STA. 3+99.66 TO STA. 4+68.37
"N-5" STA. 4+68.37 TO STA. 5+99.23
"N-6" STA. 5+99.23 TO STA. 6+98.53

	"N-1"	"N-2"	"N-3"	"N-4"	"N-5"	"N-6"
Q ₁₀ (cfs)	43.23	43.23	43.23	43.23	43.23	43.23
B _u (ft)	6.00	6.00	6.00	6.00	6.00	6.00
z	3:1	3:1	3:1	3:1	3:1	3:1
n	0.013	0.035	0.035	0.035	0.035	0.035
S (%)	1.85	1.85	0.50	1.70	0.50	2.45
d ₅₀ (ft)	0.64	1.02	1.43	1.04	1.43	0.95
V (fps)	8.53	4.68	2.94	4.56	2.94	5.14
DRAIN AREA #	A14	A14	A14	A14	A14	A14

DRAIN 'N'
STA. 1+00.00 TO STA. 6+98.96

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

- NOTES:
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.



4-WAY INLET
ALLOWABLE HW = 1431.83
 $Q_{10} = 43.23 \text{ C.F.S., DRAINAGE AREA A14}$
 $Q = CL(h)^{3/2}$
 $43.23 \text{ CFS} = (3.33)(16')^{3/2}(h)^{3/2}$
 $0.811 = (h)^{3/2}$
 $H = 0.87' \text{ (ABOVE CENTER OF OPENINGS)}$
HW = 1431.44