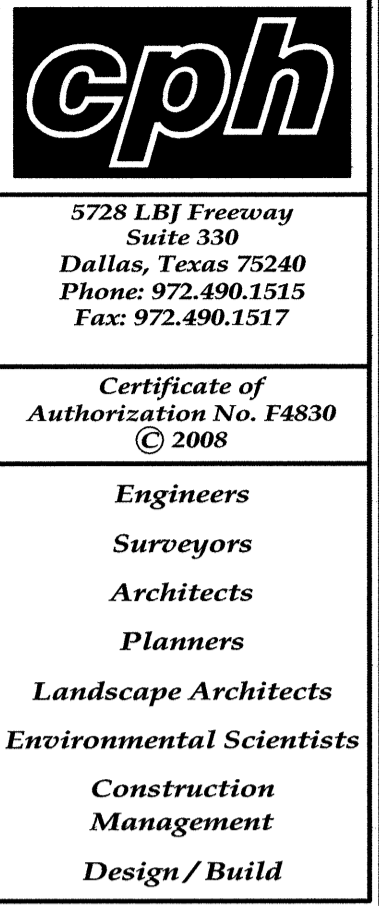


NOTE
REFER TO SHEET C-9 FOR
OFF-SITE DRAINAGE AREAS

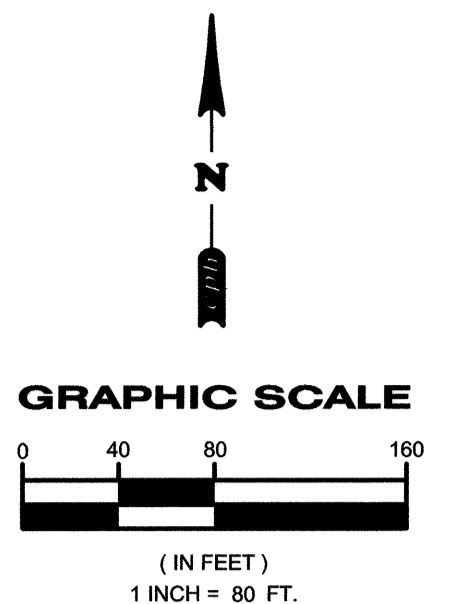
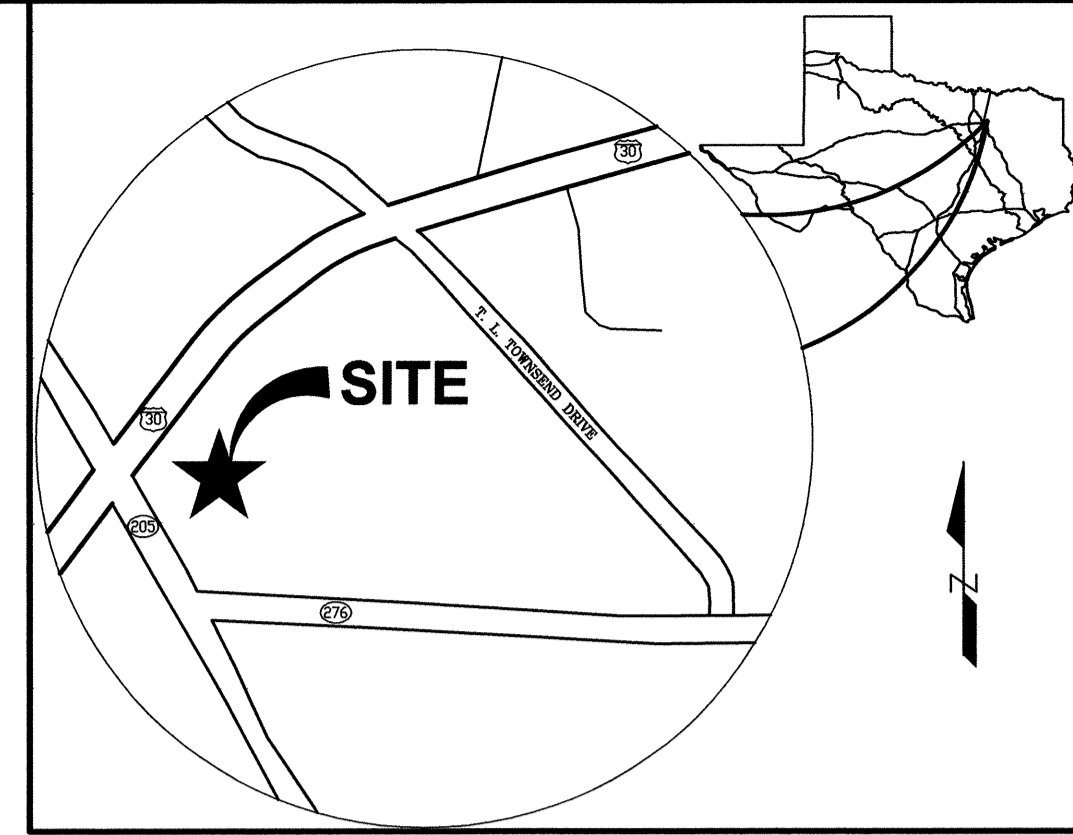


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Construction
Management
Design/Build

VICINITY MAP
N.T.S.



ALL POST-DEV. FLOW FROM
TOYOTA SITE HAS BEEN
REDIRECTED TO T.L.
TOWNSEND DR.

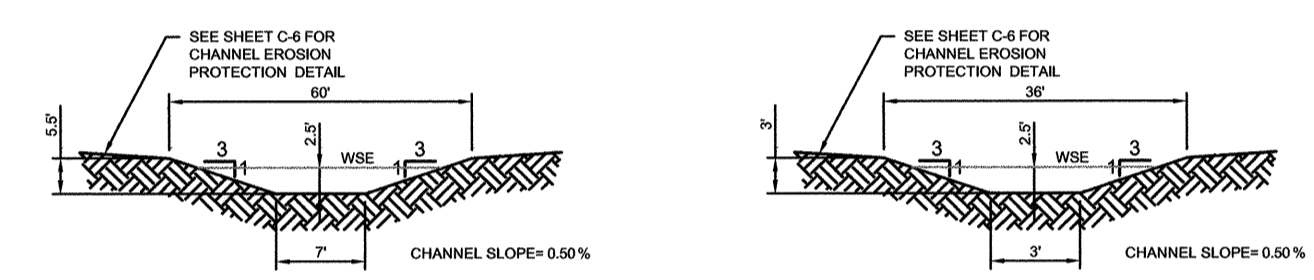
LOT 1, BLOCK 1
TOYOTA OF ROCKWALL
CABINET G, SLIDE 153-155,
P.R.R.C.T.

INTERSTATE HIGHWAY 30
(VARIABLE WIDTH R.O.W.)

HIGHWAY 205
(140' R.O.W.)

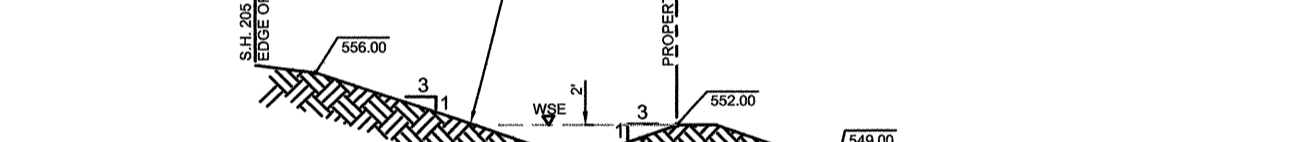
1338
HIGHWAY 276
(120' R.O.W.)

AREA DESIGNATION	TIME OF CONCENTRATION (MINUTES)	INTENSITY INHRS.	FULLY DEVELOPED RUN-OFF COEFFICIENT	ACRES (AC)	FULLY DEVELOPED Q100 (CFS)	DRAINS TO
2	10	9.8	0.9	1.32	11.64	WYE INLET
3	10	9.8	0.9	1.22	10.76	WYE INLET
4	10	9.8	0.9	0.92	8.11	WYE INLET
5	10	9.8	0.9	0.98	8.64	WYE INLET
6	10	9.8	0.9	0.37	3.26	WYE INLET
7	10	9.8	0.9	0.86	7.59	WYE INLET
8	10	9.8	0.9	0.33	2.91	WYE INLET
9	10	9.8	0.9	0.83	7.20	WYE INLET
10	10	9.8	0.9	0.21	1.85	WYE INLET
11	10	9.8	0.9	0.89	7.85	WYE INLET
12	10	9.8	0.9	0.81	7.14	WYE INLET
13	10	9.8	0.9	17.84	157.35	TEMP. SWALE
14	10	9.8	0.9	1.93	17.02	DETENTION BASIN
B-1	10	9.8	0.9	0.83	7.20	DETENTION BASIN
15	10	9.8	0.9	1.5	13.23	BUFFALO CREEK TRB
16	10	9.8	0.9	4.5	39.69	BUFFALO CREEK TRB
OS-1	10	9.8	0.9	7.41	65.36	WYE INLET
OS-2	10	9.8	0.9	0.41	3.62	CONC. CULVERT



TEMPORARY DRAINAGE CHANNEL SECTION A-A
N.T.S.

TEMPORARY DRAINAGE CHANNEL SECTION B-B
N.T.S.



DRAINAGE CHANNEL SECTION C-C
N.T.S.

TRAPEZOIDAL CHANNEL CAPACITY CALCULATIONS

NOTE 1
TOTAL PRE-DEVELOPED FLOW TO THIS POINT = 67.83 CFS (Sheet C-9)

TOTAL DEVELOPED FLOW
DRAINAGE AREA #1 = 18.70
DRAINAGE AREA #2 = 11.64
DRAINAGE AREA #3 = 10.76
DRAINAGE AREA #15 = 13.23
OFFSITE AREA OS-1 = 7.41
OFFSITE AREA OS-2 = 3.62
65.36 cfs

SINCE THE PREDEVELOPED FLOW IS GREATER THAN THE DEVELOPED FLOW, NO DETENTION IS REQUIRED FOR THIS OUTFALL.

Q(actual) 90.26 cfs < Q(capacity) 173.36 cfs

TOTAL Q actual = 90.26 cfs
Q(actual) 90.26 cfs < Q(capacity) 173.36 cfs

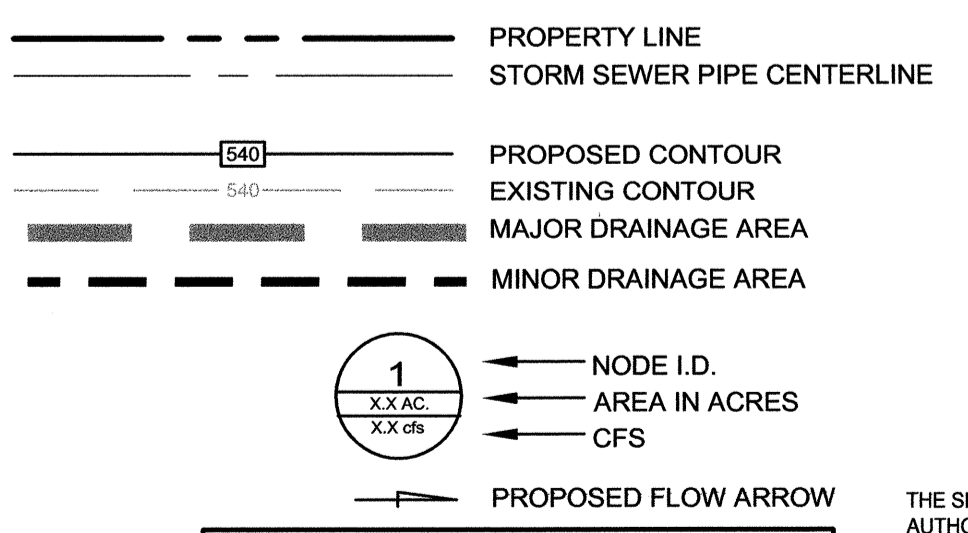
NOTE 2
TEMPORARY DRAINAGE CHANNEL WILL BE REPLACE WITH AN ENCLOSED PIPE SYSTEM UPON THE DEVELOPMENT OF LOT 1. CHANNEL IS SIZED TO CARRY PRE-DEVELOPED FLOWS FROM LOT 1.
SEE SHEET C-6 FOR CHANNEL EROSION PROTECTION DETAIL.

DRAINAGE CHANNEL SECTION D-D
N.T.S.

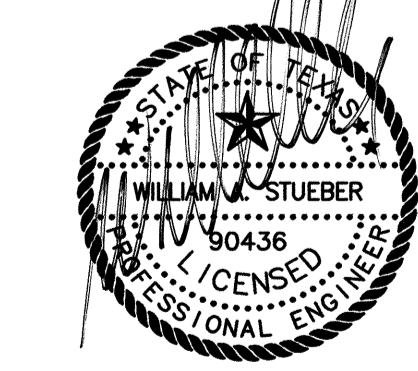
DESIGNED BY: H.M.H. DRAWN BY: M.H.W. CHECKED BY: W.A.S. APPROVED BY: W.A.S. DATE: 10/19/2007 JOB NO.: S13217 FILE: DAM II

Q = VA R = AP
V = $knR^{2/3}S^{1/2}$ $A = yz(6y+T)$
Q = FLOW IN cfs
V = VELOCITY
K = CONSTANT = 149
n = MANNINGS COEFFICIENT = 0.030
A = CROSS SECTION AREA = 36.25 ft²
P = WETTED PERIMETER = 22.81 feet
b = BOTTOM WIDTH = 7 feet
T = TOP WIDTH = 22 feet
S = CHANNEL SLOPE = 0.5% = 0.005^{ft/ft}
R = HYDRAULIC RADIUS = 1.589
 $V = (1.49 / n) (R^{2/3}) (S^{1/2})$
V = 4.78 ft/s
 $Q_{min} = VA = 4.27 \times 23.73$
 $Q_{min} = 173.36$ cfs

POST - DRAINAGE AREA MAP LEGEND



RECORD DRAWING
TO THE BEST OF OUR KNOWLEDGE CPH ENGINEERS, INC. HEREBY STATES THAT THIS PLAN IS A REPRESENTATION OF THE AS-BUILT CONDITIONS OF THE SUBJECT PROJECT. THE INFORMATION PRESENTED IS BASED ON INFORMATION PROVIDED BY THE CONTRACTOR ALONG WITH DATA PROVIDED BY THE PROJECT LAND SURVEYOR.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM A. STUEBER, P.E. 90436 ON 05/04/2009 - ALTERATION OF A SEALED DOCUMENT TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

NOTICE
THE SIZE OF THIS PLAN MAY HAVE BEEN SLIGHTLY ALTERED BY REPRODUCTION PROCESSES. THIS MUST BE CONSIDERED WHEN SCALING ANY REPRODUCED PLAN FOR THE PURPOSE OF COLLECTING DATA.

SEE SHEET C-10A FOR DETENTION VOLUME & OUTLET STRUCTURE CALCULATIONS

Date	Revision	Description
10/19/07	No	Revision
10/31/07	No	Revision
12/05/07	No	PER CITY COMMENTS 10/22/07
03/07/08	No	PER CITY COMMENTS 02/01/08
05/19/08	No	PER CITY COMMENTS 02/01/08
06/03/08	No	PER CITY COMMENTS 02/01/08
06/26/08	No	PER CITY COMMENTS 02/01/08
08/04/08	No	PER CITY COMMENTS 02/01/08
09/23/08	No	PER CITY COMMENTS 02/01/08
11/06/08	No	PER CITY COMMENTS 02/01/08
01/09/09	No	PER CITY COMMENTS 02/01/08
05/04/09	No	PER CITY COMMENTS 02/01/08

POST - DRAINAGE AREA MAP
ROCKWALL CENTRE CORNERS
INTERSTATE HIGHWAY 30 AND S.H. 205
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

Sheet No.
C-10