REINFORCED CONCRETE COLUMN DESIGN
GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE DESIGN

PORTLAND CEMENT ASSOCIATION

INPUT FORM FOR R.C. COLUMN DESIGN PROGRAM

ULTIMATE STRENGTH THEORY

IDENTIFICATION AND HEADING INFORMATION

1.

1	PGM	PROB. NO.	9–80
*	B 1 8		
*			
*			

2.

1	2	3	4

PROBLEM TYPE: D=DESIGN; I=INVESTIGATION

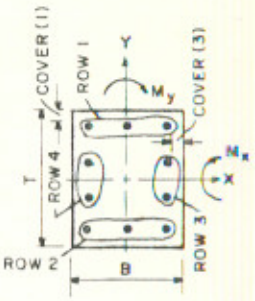
COLUMN TYPE: R=ROUND; S=SPIRAL; T=TIED

REQUIRED INPUT

OPTIONAL INPUT

3.

COLUMN SIZE		STRESSES		CAPACITY REDUCTION FACTORS		DESIGN REINFORCEMENT			MODIFIABLE CONSTANTS			
B in.	T in.	f'_c ksi.	f_y ksi.	ϕ_C	ϕ_B	MIN. RATIO	MAX. RATIO	MIN. CLEAR SPACING	f_c ksi.	E_c ksi.	E_s ksi.	ϵ_u in./in.
1–6	7–12	13–18	19–24	25–28	29–32	33–37	38–42	43–47	48–53	54–59	60–65	66–70
•	•	•	•	•	•	•	•	•	•	•	•	•



4.

R MODE	NO. OF BARS	BAR SIZE	COVER (IF SAME ALL AROUND)	ROW 1 OR LOWER LIMIT (1,2)			ROW 2 OR UPPER LIMIT (1,2)			ROW 3 OR LOWER LIMIT (3,4)			ROW 4 OR UPPER LIMIT (3,4)		
				NO.	SIZE	COVER	NO.	SIZE	COVER	NO.	SIZE	COVER	NO.	SIZE	COVER
1	2–3	4–5	6–10	11	12–13	14–15	16–20	21	22–25	26–30	31	32–35	36–40	41	42–45	46–50
			•			•			•			•			•

IF INVST. TIED RMODE 2.

IF DESIGN.

IF INVST. RMODE 3, ENTER AREA AND LOCATION OF EACH BAR

A_i	X_i	Y_i	A_j	X_j	Y_j	A_k	X_k	Y_k	A_n	X_n	Y_n
1–6	7–13	14–20	21–26	27–33	34–40	41–46	47–53	54–60	61–66	67–73	74–80
•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•

5.

L MODE	NO. OF CARDS	IOX ?	IOY ?
1	2–3	4	5

AXIAL LOADS (P) IN KIPS, MOMENTS IN K-FT, RIGHT JUSTIFIED, NO DECIMAL POINT

6.

IF 1	NO. OF P's / CARD	P_i	P	P	P	P	P	P	P	P	P	P	P	P	P_n
IF 2	NO. OF GPS / CD	IP_i	FP_i	ΔP_i	IP_j	FP_j	ΔP_j	IP_k	FP_k	ΔP_k	IP_m	FP_m	ΔP_m	IP_n	FP_n	ΔP_n
IF 3	NO. OF LOADS/CD	P_i	MX_i	MY_i	P_j	MX_j	MY_j	P_k	MX_k	MY_k	P_m	MX_m	MY_m	P_n	MX_n	MY_n
1–5	6–10	11–15	16–20	21–25	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66–70	71–75	76–80

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