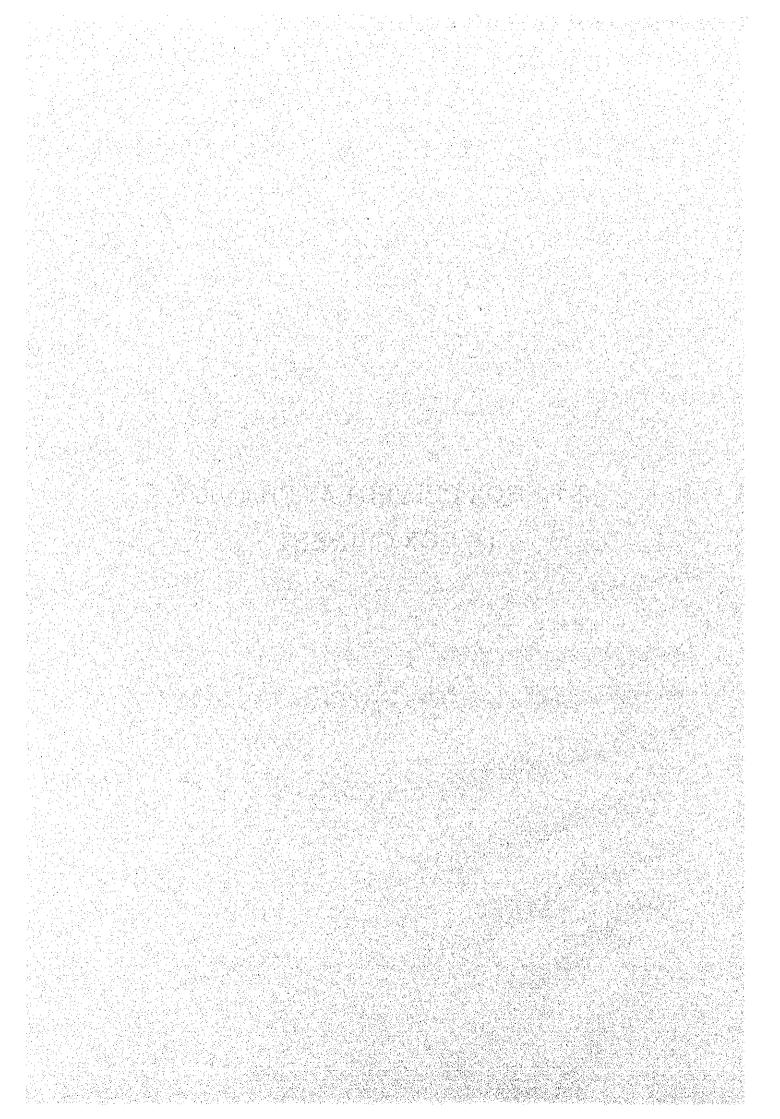
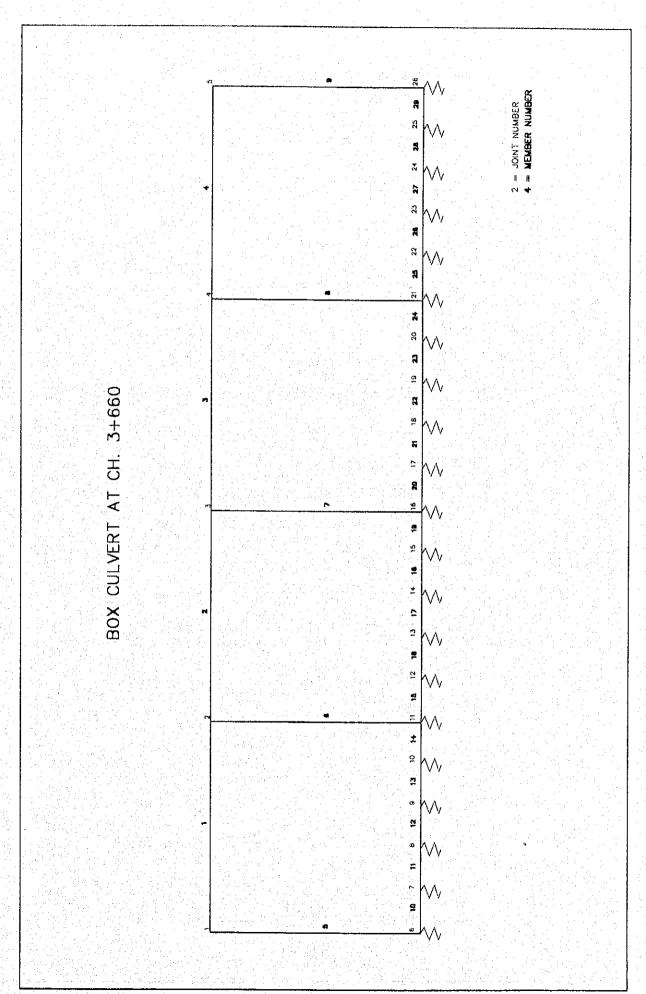
2-1-3 BOX CULVERT AT CH.4+660 (1) BOX CULVERT





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STAAD-III
                    Revision 22.3a
                    Proprietary Program of
                    Research Engineers, Inc.
                    Date=
                             JAN 30, 2000
                    Time=
                            .11:36:56
               USER ID: Development Design Consultants L
1. STAAD PLANE DESIGN OF BOX CULVERT AT CH. 3+660 (4 X 4.75 X 4.75)
2. UNIT METER KNS
3. PAGE EJE
 4. PAGE LEN 80
 5. JOINT COORD
 6.
    1
        0.00 5.16 0.00
 7.
        4.98
              5.16 0.00
      9.96
              5.16 0.00
    3
9.
       14.94
              5.16
                    0.00
    4
10.
    5
        19.92
               5:16
                    0.00
11. 6
                                 4.98 0.00 0.00
        0.00 0.00 0.00
12. 12
         5.97 0.00 0.00
                           16
                                 9.96 0.00 0.00
13. 17 10.95 0.00 0.00
                                14.94
                                       0.00
                           21
                                             0.00
14. 22 15.93 0.00
                    0.00
                           26
                               19.92
                                       0.00
                                             0.00
15. MEMBER INCI
16.
      1
           1
                6
17.
      5
            1
                11
18.
      6
19.
      7
            3
                16
20.
     : 9
            5
21.
                 26
22.
    10
            6
                      29
23. MEMBER PROPERTY
                         0.400 ZD 1.0
24. 1 TO 4 PRIS
                     YD
                         0.400 ZD 1.0
25. 5 9
              PRIS
                     YD
                     YD 0.300 ZD 1.0
26.
    6 7 8
             PRIS
27. 10 TO 29
                           0.400 ZD 1.0
              PRIS
                      ΥD
29. CONSTANT
30. E 23.667E6 ALL
31. DENSITY 23.56 ALL
32. SUPPORT
33. *7 TO 25 FIXED BUT MZ KFY
34. *6
          26 FIXED BUT MZ KFY
35. *
36.6 7 8
               FIXED BUT MZ
                             KFY
                                  3500
37. 9 TO 23 FIXED BUT MZ KFY
38. 24 25 26
               FIXED BUT MZ KFY
                                 3500
40. *
41. LOAD 1 : SELFWEIGHT
42. SELFWEIGHT Y -1
43. LOAD 2 : FILL WEIGHT
44, MEMBER LOAD
45. 1 TO 3 UNI GY -13.95
46. LOAD 3 : BACK FILL (MINIMUM)
47. MEMBER LOAD
             GX
48. 5 TRAP
                   28.83 4.44
49. 9 TRAP
               GX -28.83 -4.44
50. LOAD 4 : BACK FILL (MAXIMUM)
 51. MEMBER LOAD
 52. 5 TRAP
               GΧ
                    31.61 12.71 3.16 5.16
                   71.46 31.61 0.00 3.16
 53. 5 TRAP
               GX
                   -31.61 -12.71 3.16
-71.46 -31.61 0.00
 54. 9 TRAP
               GX
                                        5.16
 55. 9 TRAP
               GX
                                        3.16
              : LL IN ADJACENT SPANS
 56. LOAD 5
 57. MEMBER LOAD
                  -56.84
-56.84
 58. 1 UNI
               GY
                           1.84 3.14
```

2 UNI

GY

1.84

3.14

59.

```
60. LOAD 6 : LL IN ALTERNATE SPAN
 61. MEMBER LOAD
62. 1 UNI GY -56.84 1.84 3.14 63. 3 UNI GY -56.84 1.02 2.32 64. LOAD 7 : LL IN SPAN 1
 65. MEMBER LOAD
            GY -56.84 1.84 3.14
 66. 1 UNI
 67. LOAD 8 : LL IN SPAN 2
 68. MEMBER LOAD
            GY -56.84 1.84 3.14 : LL IN MIDDLE OF CULVERT
 69. 2 UNI
 70. LOAD 9
 71. MEMBER LOAD
 72. 2 UNI GY -35.34
73. 2 UNI GY -35.34
                            2.46 3.72
                              3.72 4.98
 74. LOAD 10 : MILITARY LOADING IN SPAN 1
 75. MEMBER LOAD
            GY -35.34 1.23 2.49
GY -35.34 2.49 3.75
 76. 1 UNI
 77. 1 UNI
 78. LOAD 11 : MILITARY LOADING IN SPAN 2
 79. MEMBER LOAD
 80. 2 UNI GY -35.34 1.23 2.49
81. 2 UNI GY -35.34 2.49 3.75
 82. LOAD 12 : LL IN SPAN 1 FOR MAX. SHEAR
 83. MEMBER LOAD
             GY -56.84 0.00 1.30
 84. 1 UNI
 85. LOAD 13 : MILITARY LOADING IN SPAN 1 FOR MAX. SHEAR
 86. MEMBER LOAD
             GY -35.34 0.00 1.26
GY -35.34 1.26 2.52
 87. 1 UNI
 88. 1 UNI
 89. *
 90. LOAD COMB 14
 91. 1 1.3 2 1.3 4 1.3 12
 92. LOAD COMB 15
 93. 1 1.3 2 1.3 4 1.3 13 2.171
 94 *
 95. LOAD COMB 16
 96. 1 1.3 2 1.3 4 1.3 5 2.171
 97. LOAD COMB 17
 98. 1 1.3 2 1.3
                     4 1.3 6 2.171
 99. LOAD COMB 18
100. 1 1.3 2 1.3 4 1.3 7
                                 2.171
101. LOAD COMB 19
102. 1 1.3 2 1.3 4 1.3 8 2.171
103. LOAD COMB 20
104 1 1.3 2 1.3
                     4 1.3 9 2.171
105. LOAD COMB 21
106. 1 1.3 2 1.3 4 1.3 10 2.171 107. LOAD COMB 22 108. 1 1.3 2 1.3 4 1.3 11 2.171
109. *
110. LOAD COMB 23
111. 1 1.3 2 1.3 3 1.3 5 2.171
112. LOAD COMB 24
113. 1 1.3 2 1.3 3 1.3 6 2.171
114. LOAD COMB 25
115. 1 1.3 2 1.3 3 1.3 7
                                 2.171
116. LOAD COMB 26
117. 1 1.3 2 1.3 3 1.3
                              8
                                2.171
118. LOAD COMB 27
119. 1 1.3 2 1.3 3 1.3 9 2.171
120. LOAD COMB 28
121. 1 1.3 2 1.3 3 1.3 10
                                  2.171
122. LOAD COMB 29
123. 1 1.3 2 1.3 3 1.3 11 2.171
124. LOAD COMB 30
125. 1 1.3 4 1.3
126. *
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There was a property of the same of

127. PERFORM ANALYSIS

PROBLEM STATISTICS

NUMBER OF JOINTS/MEMBER+ELEMENTS/SUPPORTS = 26/ 29/ 21
ORIGINAL/FINAL BAND-WIDTH = 21/ 5
TOTAL PRIMARY LOAD CASES = 13, TOTAL DEGREES OF FREEDOM = 57
SIZE OF STIFFNESS MATRIX = 741 DOUBLE PREC. WORDS
REQRD/AVAIL. DISK SPACE = 12.07/ 217.3 MB, EXMEM = 1960.5 MB

++	Processing I	Element Stiffness Matrix.	11:36:56
++	Processing (Global Stiffness Matrix.	11:36:56
++	Processing '	Triangular Factorization.	11:36:56
++	Calculating	Joint Displacements.	11:36:56
++	Calculating	Member Forces.	11:36:56

128. LOAD LIST 14 TO 30 129. PRINT MAXFORCE ENVELOP LIST 1 2 4 5 8 TO 17

MEMBER FORCE ENVELOPE

ALL UNITS ARE KNS METE

MAX AND MIN FORCE VALUES AMONGST ALL SECTION LOCATIONS

MEMB		FY/	DIST	LD	MZ/	DIST		1717	DTOM	TD
		FZ	DIST	LD.	MY	DIST	ĽD	ř.X	DIST	יים
1	MAX	226.81	.00	15	219.30	.00	16			
		.00	.00	14	.00	.00	14	201.54 C	.00	16
	MIN	-165.50	4.98	. 28	-146.78	2.49	25	No de Cop No e a		a Carre
		.00	4.98	30	.00	4.98	30	88.34 C	4.98	25
										e jazzi erri. Arrikaria
2	MAX	182.50	.00	29	152.08	.00	23	222 22 2	00	22
	MIN	.00	4 00	14	.00 -174.40	2.49	14 22	232.73 C	.00	22
	MIN	-202.25 .00	4.98 4.98	20 30	.00	4.98	30	89.85 C	4.98	28
	ta se	.00	3.30	- 30		4.70		03.03		- T
4	MAX	23.49	.00	28	141.32	4.98	20			
		.00	.00	14	.00	.00	14	187.40 C	.00	17
Territoria.	MIN	~59.05	4.98	20	-6.10	.83	30			
		.00	4.98	30	.00	4.98	30	74.59 C	4.98	28
		105.00			00 77	0.16	20			Servedia.
5	XAM	106.03	5.16	14	82.77	2.15	30	290.03 C	5.16	15
	A6 T 3 1	.00 -201.54	.00	14 16	.00 -219.30	.00	14 16	290.03 C	3.10	13
	MIN	.00	5.16	30	.00	5.16	30	50.59 C	4 73	30
	1 7	.00	3.10	30		3.10		30.35 0		
8	MAX	32.99	.00	20	88.47	.00	20			
44,1		.00	.00	14	.00	.00	14	204.87 C	5.16	24
	MIN	5.44	5.16	14	-83.48	5.16	27		200	
100		.00	5.16	30	.00	5.16	30	41.15 C	4.73	30
						0.0				
9	MAX	187.40		17	141.32	.00	20 14	122,27 C	5.16	20
	MIN	.00 -99.23	5.16	14 14	.00 -84.69	2.15	15	122.21 C	5.10	20
	PIIN	-99.23 .00	5.16	30	.00	5.16	30	37.52 C	nn	28
100		.00	3.10			3.10		37.32		
10	MAX	-64.89	.00	30	119.19	1.00	23			
1.5	行います	.00	.00	14	.00	.00	14	.00	.00	14
	MIN	-180.09	1.00	15	-140.20	.00	14			
18 6		.00	1.00	30	.00	1.00	30	.00	1.00	30
11	MAX	-4.84	.00	29	145.25	1.00	23	00		
		.00	.00	14	.00	.00	14	.00	.00	14

						- , -				-	
MEMB			DIST L			DIST L					
		F2	DIST	LD :	MY	DIST	LD .	FX	DIST	LD	
				. 1:							
		~~ ~~						(P)	1000	97	11
	MIN	-78 .7 8	1.00	1.4	-10.27	.00	30.				
		.00	1.00	30	00	1.00	30	.00	1.00	30	
	4 . 12			. 11							
12	MAX	78.09	.00	23	145.25	.00	23				4.
	11,	.00	.00	14	.00	.00	14	.00	00	14	
	MIN	-1.61	1.00	30	18.47	. 83	30				
F 1 1 1 4 4		.00	1.00	30	.00	1.00	30	.00	1.00	30	
						in the fit	4.154				
13	MAX	130.44	.00	. 23	87.20	.00	24				100
All the second		.00	.00	14	00	.00	14	.00	.00	14	
	MIN	15.17	1.00	30	-54.41	1.00	29			e a transfer	3 L 4 5
		.00	1.00	30	.00	1.00	30	.00	1.00	30	
		100				4 6 6	e and the				
14	MAX	185.59	.00	23	18.34	00	14			e Soletine	ir i
		.00	.00	14		.00	1.4	.00	.00	14	
	MIN	32.66	1.00	30	-229.07	1.00	23		edition in		W. B. S.
	95 Jan 200	.00	1.00	30	.00	1.00	. 30	.00	1.00	30	
							2. 5. 3. 5		2.00		100
15	MAX	-25.58	.00	30	4.36	.99	30			a Milita	(1) 44. m
5.250	distriction of	.00	.00	14	00	00	14	.00	.00	14	
	MIN	-127.87	.99	23	-175.47	00	23		i da		
		.00	99	30	.00	.99	30	.00	99	30	
1.0	147.17	9 19	00	20	27 22						
16	MAX	-7.17	.00	30	37.23	1.00	1.4				
1.4756	14717	.00	.00	14	.00	.00	14	.00	.00	14	
	MIN	-71.45	1.00	23	-54.89	.00	23			J. 18 14	
		.00	1.00	30	.00	1.00	30	.00	1.00	30	
17	MAX	30.43	۸۸	30	27.00	20					
	MAX	30.43	.00	20	37.23	00	14				
	MIN	.00 -20.14	.00	14	.00	00	14	.00	.00	14	Maria Salah
	GITM	.00	1.00	28 30	-1.33	1.00	27	00	1 00	20	
		.00	1.00	30	.00	1.00	30	.00	1.00	30	
		Company of the second	一 」 こうそくなごぎ ラッ	化基金 化二甲基		and the second of the					4

****** END OF FORCE ENVELOPE FROM INTERNAL STORAGE ********

YES

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130. START CONC DESIGN
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131. FC 25000.0

132. TRACK 2

133. MAXMAIN 20.

134. CLEAR 0.05

135. DESIGN BEAM 1 2 3

BEAM NO. 1 DESIGN RESULTS - FLEXURE

LEN - 4980. MM FY - 414. FC - 25. MPA, SIZE - 1000. X 400. MMS

						1		in the table	
LEVEL	HEIGHT	BAR INFO	100	FROM	TO -		A Tree	ANCHOR	į i
	(MM)			(MM)	(MM)		. :	STA EN	D

	1 - 1 - 20MM $\frac{4}{3}$ 20MM $\frac{27}{3}$ $\frac{4980}{3}$ $\frac{80}{3}$ $\frac{1}{3}$
ŀ	CRITICAL POS MOMENT= 148.75 KN-MET AT 2490.MM, LOAD 25
ļ	REQD STEEL= 1252 MM2, ROW= .0038, ROWMX= .0194 ROWMN= .0033
ł	MAX/MIN/ACTUAL BAR SPACING= 878./ 45./ 293. MMS
١	BASIC/REQD. DEVELOPMENT LENGTH = 493./ 596. MMS

	_		
1		CRITICAL NEG MOMENT= 219.30 KN-MET AT 0.MM, LOAD 16	<u>.</u>
1	2.	REOD STEEL= 1895.MM2, ROW= .0058, ROWMX= .0194 ROWMN= .0033	
1	4.	MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 55. MMS	
i		BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS	4
ı		_22	

٠	. 3	•
	CRITICAL NEG MOMENT= 110.81 KN-MET AT 4980.MM, LOAD 28	į
	REOD STEEL= 1104 MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033	
	MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS	
	BASIC/REOD, DEVELOPMENT LENGTH = 177./ 466. MMS	

REQUIRED REINF. STEEL SUMMARY

SECTION	REINF ST	EEL(+VE/~VE)	MOMENTS (+V	E/-VE)	LOAD (+VE/-VE)
(MM)	(SQ.	MM)	(KNS-M	ET)	
	0.7	1027		010	0/ 16
0.	0./	1937.	0./	219.	0/ 16
415.	0./	1269.	0./	147.	0/ 16
830	112./	884.	13./	104.	14/ 22
1245.	471./	610.	56./	72.	15/ 22
1660.	885./	384.	104./	46.	28/ 22
2075.	1155./	205.	134./	25.	28/ 22
2490.	1287./	86.	149./	10.	25/ 30
2905.	1206./	26.	140./	3.	28/ 30
3320.	985./	0.	115./	0.	28/ 0
3735.	607./	18.	72./	2.	28/ 14
4150.	160./	228.	19./	27.	21/ 14
4565.	41./	539.	5./	64.	30/ 15
4980.	14./	948.	2./	111.	30/ 28
*	the second of the second	and the second of the second of the	and the second s		

BEAM NO. 1 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 192.05 KNS Vc= 269.53 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 162 MM C/C FOR 1037 MM AT END SUPPORT - Vu= 155.64 KNS Vc= 269.53 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 162 MM C/C FOR 1452 MM

1J		4979X	: 999X 399_		.: .	2J
========			;=====================================		=====	
17No12 H 33	-		1	0No12 H 331	.3061.TO	4980
	2 1 1 1 1	the second second				
4No20 H 7	3. 27.TO 498	0 82222222				. .
$x = \frac{2N - 2}{2} \left(\frac{2}{N} - \frac{1}{N} \right) = \frac{2}{N} \left(\frac{2}{N} - \frac{1}{N} \right)$						
					·	
	<u> </u>				V 1, 12	
0000000	000000000	900000	00000000000		00000000	00
L7#12		17#12	.5555555555	10#12	and the second second	00
				1311-43		
		1 4#20		4#20	and plant of the	
			0000		0000	4
	<u>i</u>	i malainus				
ВЕ	AM NO.	2 DESI	GN RES	ULTS-	FLEXURE	
			African ar		it ya kada	
LEN - 498	O. MM FY -	414 FC -	25. MPA,	SIZE - 1000	. X 400	MMS
LEVEL H	EIGHT BAR	INFO	FROM	TO	ANC	HOR
s and a factor of a	(MM)		(MM)	(MM)	STA	END
Harristini, steri				<u> </u>		
1	73. 5 -	20MM	47.	4980.	ОИ	YES
	ang transport of the second of					
1						I
	AL POS MOMENT	= 175.88	KN-MET AT			
REQD S	AL POS MOMENT TEEL= 1511.M	= 175.88 M2, ROW= .0	KN-MET AT	.0194 ROWM	N= .0033	
REQD S'	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR	= 175.88 M2, ROW= .0 SPACING=	KN-MET AT 046, ROWMX= 878./ 45.	.0194 ROWM / 220. MMS	N= .0033	
REQD S'	AL POS MOMENT TEEL= 1511.M	= 175.88 M2, ROW= .0 SPACING=	KN-MET AT 046, ROWMX= 878./ 45.	.0194 ROWM / 220. MMS	N= .0033	
REQD S MAX/MI BASIC/	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH	KN-MET AT 1046, ROWMX= 878./ 45. = 493./	.0194 ROWM / 220. MMS 575. MMS	N= .0033	
REQD S MAX/MI BASIC/	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP	= 175.88 M2, ROW= .0 SPACING=	KN-MET AT 1046, ROWMX= 878./ 45. = 493./	.0194 ROWM / 220. MMS	N= .0033	
REQD S MAX/MI BASIC/	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH	KN-MET AT 046, ROWMX= 878./ 45. (= 493./	.0194 ROWM / 220. MMS 575. MMS 2126.	N= .0033 YES	
REQD S MAX/MI BASIC/ C C C C REQD S	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0	KN-MET AT 046, ROWMX= 878./ 45. (= 493./ 0. KN-MET AT 1039, ROWMX=	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM,	N= .0033 YES LOAD 23 N= .0033	
REQD S MAX/MI BASIC/ C CRITIC REQD S MAX/MI	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING=	0. KN-MET AT 046, ROWMX= 878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX= 886./ 37.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS	N= .0033 YES LOAD 23 N= .0033	
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING=	0. KN-MET AT 046, ROWMX= 878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX= 886./ 37.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS	N= .0033 YES LOAD 23 N= .0033	
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING=	0. KN-MET AT 046, ROWMX= 878./ 45. (= 493./ 0. KN-MET AT 1039, ROWMX= 886./ 37. (= 177./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033	
REQD S MAX/MI BASIC/ C CRITIC REQD S MAX/MI	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH	0. KN-MET AT 046, ROWMX= 878./ 45. (= 493./ 0. KN-MET AT 1039, ROWMX= 886./ 37. (= 177./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033	
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ BASIC/ 3	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 -	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH	0. KN-MET AT 046, ROWMX=878./45. 0. Construction of the construct	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033	NO I
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ BASIC/ CRITIC	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91	0. KN-MET AT 0.46, ROWMX= 878./ 45. 0. 0. KN-MET AT 1039, ROWMX= 886./ 37. 1 = 177./ 3476. KN-MET AT	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980.	N= .0033 YES LOAD 23 N= .0033	NO I
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 - AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 -	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0	0. KN-MET AT 0. 45. 0. 493./ 0. KN-MET AT 0. 37. 0. 177./ 3476. KN-MET AT 0. 37. 0. 3476.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980. 4980.MM, .0194 ROWM	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI REQD S	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= .0	0. KN-MET AT 046, ROWMX= 878. / 45. 0. KN-MET AT 039, ROWMX= 886. / 37. 3476. KN-MET AT 033, ROWMX= 886. / 37.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS	YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI REQD S	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= .0	0. KN-MET AT 046, ROWMX= 878. / 45. 0. KN-MET AT 039, ROWMX= 886. / 37. 3476. KN-MET AT 033, ROWMX= 886. / 37.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS	YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ REQD S	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH	0. KN-MET AT 046, ROWMX= 878. / 45. 0. KN-MET AT 039, ROWMX= 886. / 37. 3476. KN-MET AT 033, ROWMX= 886. / 37.	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS	YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO I
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQD S' MAX/MI REQD S' MAX/MI REQD S' MAX/MI	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY :	0. KN-MET AT 1046, ROWMX=878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX=886./ 37. = 177./ 3476. KN-MET AT 1033, ROWMX=886./ 37. = 177./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO L
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ FEQUIRED R SECTION	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI REINF STEEL	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)	KN-MET AT 1046, ROWMX=878./45. 0. 0. KN-MET AT 1039, ROWMX=886./37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX=886./37. KN-MET AT 177./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS	YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO L
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQD S' MAX/MI REQD S' REQUIRED R	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)	KN-MET AT 1046, ROWMX=878./45. 0. 0. KN-MET AT 1039, ROWMX=886./37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX=886./37. 1 = 177./ MOMENTS (KNS	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO I I I I I I I I I I I I I I I I I
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQD S' MAX/MI BASIC/ REQUIRED R SECTION (MM)	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI REINF STEEL SI (SQ. MM 0./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)	0. KN-MET AT 1046, ROWMX=878./45. 0. 0. Constant AT 1039, ROWMX=886./37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX=886./37. 1 = 177./ MOMENTS (KNS	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO
REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ CRITIC REQD S MAX/MI BASIC/ REQD S MAX/MI BASIC/ REQUIRED R SECTION (MM) 0. 415.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI REINF STEEL SI (SQ. MM 0./ 0./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)) 1317. 786.	KN-MET AT 1046, ROWMX=878./45. 0. 0. KN-MET AT 1039, ROWMX=886./37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX=886./37. 1 = 177./ MOMENTS (KNS	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET)	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQUIRED R SECTION (MM) 0. 415. 830.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOP 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOP 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOP EINF. STEEL SI REINF STEEL (SQ. MM 0./ 0./ 173./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)) 1317. 786. 512.	KN-MET AT 1046, ROWMX= 878./ 45. 0. 0. KN-MET AT 1039, ROWMX= 886./ 37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX= 886./ 37. 1 = 177./ MOMENTS((KNS) 0,/ 0./ 21./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 4980. 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQUIRED R SECTION (MM) 0. 415. 830. 1245.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL (SQ. MM 0./ 0./ 173./ 698./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)) 1317. 786. 512. 286.	0. KN-MET AT 1046, ROWMX=878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX=886./ 37. = 177./ 3476. KN-MET AT 1033, ROWMX=886./ 37. = 177./ MOMENTS (KNS-0./ 0./ 21./ 82./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO
REQD S' MAX/MI BASIC/ CRITIC MAX/MI BASIC/ REQUIRED R SECTION (MM) 0. 415. 830. 1245. 1660.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL (SQ. MM 0./ 0./ 173./ 698./ 1131./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)) 1317. 786. 512. 286. 108.	0. KN-MET AT 1046, ROWMX=878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX=886./ 37. = 177./ 3476. KN-MET AT 1033, ROWMX=886./ 37. = 177./ MOMENTS (KNS) 0./ 0./ 21./ 82./ 131./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34. 13.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033 LOAD(+VE 0/ 0/ 22/ 22/ 22/ 22/	NO NO
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ REQUIRED R SECTION (MM) 0. 415. 830. 1245.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL (SQ. MM 0./ 0./ 173./ 698./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: -(+VE/-VE)) 1317. 786. 512. 286. 108. 0. 0.	0. KN-MET AT 1046, ROWMX=878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX=886./ 37. = 177./ 3476. KN-MET AT 1033, ROWMX=886./ 37. = 177./ MOMENTS (KNS-0./ 0./ 21./ 82./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033	NO NO
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQU S' MAX/MI BASIC/ CRITIC REQUIRED R SECTION (MM) 0. 415. 830. 1245. 1660. 2075. 2490. 2905.	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL SI (SQ. MM 0./ 0./ 173./ 698./ 1131./ 1408./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: -(+VE/-VE)) 1317. 786. 512. 286. 108. 0. 0. 0.	0. KN-MET AT 1046, ROWMX=878./ 45. = 493./ 0. KN-MET AT 1039, ROWMX=886./ 37. = 177./ 3476. KN-MET AT 1033, ROWMX=886./ 37. = 177./ MOMENTS (KNS) 0./ 0./ 21./ 82./ 131./ 162./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 4980. 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34. 13. 0.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033 LOAD(+VE 0/ 0/ 22/ 22/ 22/ 22/ 22/	NO NO
REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQD S' MAX/MI BASIC/ CRITIC REQUIRED R MAX/MI BASIC/ CRITIC REQUIRED R CRITIC REQUIRED R CRITIC C	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL SI (SQ. MM 0./ 173./ 698./ 1131./ 1408./ 1533./ 1463./ 1369./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: (+VE/-VE)) 1317. 786. 512. 286. 108. 0. 0. 0. 0. 0.	MN-MET AT 1046, ROWMX= 878./ 45. 1 = 493./ 0. KN-MET AT 1039, ROWMX= 886./ 37. 1 = 177./ 3476. KN-MET AT 1033, ROWMX= 886./ 37. 1 = 177./ MOMENTS((KNS) 0./ 21./ 82./ 131./ 162./ 176./ 168./ 158./	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34. 13. 0. 0. 0. 0. 0.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033 LOAD(+VE 0/ 0/ 22/ 22/ 22/ 22/ 22/ 22/ 22/ 27/	NO NO
REQD S MAX/MI BASIC/	AL POS MOMENT TEEL= 1511.M N/ACTUAL BAR REQD. DEVELOPI 331. 12 AL NEG MOMENT TEEL= 1281.M N/ACTUAL BAR REQD. DEVELOPI 331. 10 AL NEG MOMENT TEEL= 1104.M N/ACTUAL BAR REQD. DEVELOPI EINF. STEEL SI REINF STEEL SI (SQ. MM 0./ 0./ 173./ 698./ 1131./ 1408./ 1533./ 1463./	= 175.88 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 152.08 M2, ROW= .0 SPACING= MENT LENGTH 12MM = 91.91 M2, ROW= .0 SPACING= MENT LENGTH UMMARY: -(+VE/-VE)) 1317. 786. 512. 286. 108. 0. 0. 0.	KN-MET AT 1046, ROWMX	.0194 ROWM / 220. MMS 575. MMS 2126. 0.MM, .0194 ROWM / 81. MMS 466. MMS 4980. 4980.MM, .0194 ROWM / 98. MMS 466. MMS +VE/-VE) -MET) 152. 92. 61. 34. 13. 0. 0. 0.	N= .0033 YES LOAD 23 N= .0033 NO LOAD 16 N= .0033 LOAD(+VE 0/ 0/ 22/ 22/ 22/ 22/ 22/ 22/ 22/ 27/ 27/	NO NO

2 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 172.64 KNS Vc= 269.53 KNS Vs= PROVIDE 12 MM BARS AT 162, MM C/C FOR 1867, MM SUPPORT - Vu= 167.48 KNS Vc= 269.53 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 162, MM C/C FOR 1037. MM

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No12 H 331. 0 3*12c/c162					H 331.3476 8*12c.	
3*12C/C162 1 No20 H 73 47				. 1 1 . 1 1	0.120	1.2
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BEAM	ио. 3	DES	IGN RES	ULTS-	FLEXURE	
LEN - 4980. MM	FY - 41	.4. FC	- 25. MPA,	SIZE - 100	0. X 400.	MMS
TEVET BETCHE	י חודם	MEO	EDOM	m ^	2.514	uop.
LEVEL HEIGHT (MM)	BAK	.141.0	FROM (MM)	TO (MM)	ANC STA	2000
((#4)			(****)			
				AT 1892 MM,		
<pre>! REQD STEEL= ! MAX/MIN/ACT</pre>	1487 MM2 UAL BAR SI	2, ROW= PACING=	20 KN-MET 7 .0045, ROWMY 878./ 45 TH = 493.,	<= .0194 ROW 5./ 220. MM	MN= .0033 IS	
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487.MM2 UAL BAR SI DEVELOPMI	2, ROW= PACING= ENT LENG	.0045, ROWMY 878./ 45 TH = 493.,	K= .0194 ROW 5./ 220. MM / 566. MMS	MN= .0033 IS	
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487.MM2 UAL BAR SI DEVELOPMI	2, ROW= PACING= ENT LENG	.0045, ROWMX 878./ 45	K= .0194 ROW 5./ 220. MM / 566. MMS	MN= .0033 IS	
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487.MMZ UAL BAR SI DEVELOPMI 10 -	2, ROW= PACING= ENT LENG	.0045, ROWMY 878./45 TH = 493./	K= .0194 ROW 5./ 220. MM / 566. MMS 881.	MN= .0033 IS YES	
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 -	2, ROW= PACING= ENT LENG 12MM	.0045, ROWMY 878./45 TH = 493./ 0.	<pre><= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM,</pre>	MN= .0033 IS YES	l l l NO
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MMM UAL BAR S	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING=	.0045, ROWMY 878./45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY 886./3	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MN	MN= .0033 IS YES LOAD 17 IMN= .0033	l l l NO
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MMM UAL BAR S	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING=	.0045, ROWMY 878./45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY 886./3	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MN	MN= .0033 IS YES LOAD 17 IMN= .0033	l l l NO
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 G MOMENT= 1104 MMM UAL BAR S	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING=	.0045, ROWMY 878./45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY 886./3	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MN	MN= .0033 IS YES LOAD 17 IMN= .0033	l l l NO
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET / .0033, ROWMY 886./ 3° TH = 177.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MN	MN= .0033 IS YES LOAD 17 IMN= .0033	l l l NO
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REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 -	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113.	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET // .0033, ROWMY 886./ 3° TH = 177. 3061.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM / 466. MMS 4980.	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO	NO 1
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW=	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET / .0033, ROWMY 886./ 3 TH = 177. 3061. 89 KN-MET .0033, ROWM	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM, / 466. MMS 4980. AT 4980.MM, X= .0194 ROW	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 VMN= .0033	NO 1
REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING=	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET / .0033, ROWMY 886./ 3 TH = 177. 3061. 89 KN-MET .0033, ROWM 886./ 3	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, X= .0194 ROW 7./ 98. MM / 466. MMS 4980. AT 4980. MM, X= .0194 ROW 7./ 98. MM	MN= .0033 IS YES LOAD 17 IMN= .0033 IS S NO LOAD 24 IMN= .0033 IS	NO 1
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REQD STEEL= MAX/MIN/ACT BASIC/REQD.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM VAL BAR S DEVELOPM STEEL SU	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING= ENT LENG	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY. 886./ 3. TH = 177. 3061. 89 KN-MET .0033, ROWM. 886./ 3. TH = 177.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM / 466. MMS 4980. AT 4980.MM, X= .0194 ROW 7./ 98. MM	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 IMN= .0033 IS	NO YES
REQUIRED REINF	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM STEEL SU UAL STEEL SU	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING= ENT LENG ENT LENG ###################################	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY. 886./ 3. TH = 177. 3061. 89 KN-MET .0033, ROWM. 886./ 3. TH = 177.	S= .0194 ROW 5./ 220. MM 7 566. MMS 881. AT 0.MM, X= .0194 ROW 7./ 98. MM 4980. AT 4980.MM, X= .0194 ROW 7./ 98. MM 7./ 98. MM	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 IMN= .0033 IS	NO YES
REQUIRED REINF	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM VAL BAR S DEVELOPM STEEL SU	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING= ENT LENG ENT LENG ###################################	.0045, ROWMY 878./ 45 TH = 493./ 0. 10 KN-MET 2. .0033, ROWMY. 886./ 3. TH = 177. 3061. 89 KN-MET .0033, ROWM. 886./ 3. TH = 177.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM / 466. MMS 4980. AT 4980.MM, X= .0194 ROW 7./ 98. MM	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 IMN= .0033 IS	NO YES
REQUIRED REINF.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM VAL BAR S DEVELOPM VAL BAR S DEVELOPM VAL BAR S DEVELOPM 46./	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING= ENT LENG +VE/-VE) 559.	.0045, ROWMY 878./ 45 TH = 493., 0. 10 KN-MET 2. .0033, ROWMS 886./ 3 TH = 177. 3061. 89 KN-MET .0033, ROWMS 886./ 3 TH = 177.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM / 466. MMS 4980. AT 4980.MM, X= .0194 ROW 7./ 98. MM / 466. MMS	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 IMN= .0033 IS LOAD (+VI	YES
REQUIRED REINF.	1487 MMM UAL BAR SI DEVELOPMI 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM 10 - G MOMENT= 1104 MM UAL BAR S DEVELOPM VAL BAR S DEVELOPM VAL BAR S DEVELOPM VAL BAR S DEVELOPM VAL BAR S DEVELOPM	2, ROW= PACING= ENT LENG 12MM 66. 2, ROW= PACING= ENT LENG 12MM 113. 2, ROW= PACING= ENT LENG +VE/-VE) 559. 198.	.0045, ROWMY 878./ 45 TH = 493., 0. 10 KN-MET 2. .0033, ROWMS 886./ 3 TH = 177. 3061. 89 KN-MET .0033, ROWMS 886./ 3 TH = 177.	K= .0194 ROW 5./ 220. MM / 566. MMS 881. AT 0.MM, K= .0194 ROW 7./ 98. MM 466. MMS 4980. AT 4980.MM, X= .0194 ROW 7./ 98. MM / 466. MMS / 466. MMS	MN= .0033 IS YES LOAD 17 IMN= .0033 IS NO LOAD 24 IMN= .0033 IS LOAD (+VI)

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CLION	REINF STEEL (+V	E/-VE)	MOMENTS (+V	E/-VE) LO	AD(+VE/-VE)
(MM).		1)		S-MET)	
1245.	1075./	0.	125./	0.	24/ 0
1660.	1359./	0	157./	0	17/ 0
2075.	1509./	0	173./	0	17/ 0
2490,	1237./	0	143./	0	17/ 0
2905.	986./	0	115./	o.	17/ 0
3320.	694./	0	82./	o.	17/ 0
3735.	363./		43./	3.	17/ 29
4150.	154./	236.	18./	28.	14/ 27
4565.	0./	509	0./		0/ 27
4980.	- · ·	976.	0./	114.	0/ 24
					0/ 23
В	EAM NO.	3 DES	IGN RES	ULTS-SE	IEAR
	a neset vi miki				
AT START	SUPPORT - Vu=	164.84	KNS Vc= 26	9.53 KNS Vs	= .00 KNS
	PRC	VIDE 12 M	M BARS AT 16	2. MM C/C FO	OR 1037. MM
AT END		129.97	KNS Vc= 26	9.53 KNS Vs	= .00 KNS
Attended to the	PRC	VIDE 12 M	M BARS AT 16	2. MM C/C FO	OR 1037, MM
				and the second second	
3J	<u>, all the second of the secon</u>	497	9X 999X 399	The Rough Car	4.
	and the second of the second o				
10No12 H 3	331. 0.TO 88	1		10No12 H 331	.3061.TO 4980
8*12c/c1	.62				8*12c/c162
5No20 H	73. 0.TO 471	.6			4 (4 - 1 - 1 - 1
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	AR 0.065 IGN BEAM 5 TO 8	10 TO 22			
		10 TO 22			
137. DESI	IGN BEAM 5 TO 8				
137. DESI			I G N R E S	ULTS-1	FLEXURE
137. DESI	IGN BEAM 5 TO 8 EAM NO.	5 DES			
137. DESI	IGN BEAM 5 TO 8	5 DES			
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY -	5 DES 414. FC	- 25. MPA,	SIZE - 1000	. X 400. MMS
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR	5 DES 414. FC	- 25. MPA, FROM	SIZE - 1000	. X 400. MMS
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY -	5 DES 414. FC	- 25. MPA,	SIZE - 1000	. X 400. MMS
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR	5 DES 414. FC	- 25. MPA, FROM	SIZE - 1000	. X 400. MMS
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR	5 DES 414. FC	- 25. MPA, FROM	SIZE - 1000	. X 400. MMS
B LEN - 51 LEVEL	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM)	5 DES 414. FC (INFO	- 25. MPA, FROM (MM)	SIZE - 1000 TO (MM)	X 400. MMS ANCHOR STA END
137. DESI B LEN - 51	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR	5 DES 414. FC (INFO	- 25. MPA, FROM (MM)	SIZE - 1000	. X 400. MMS
137. DESI B LEN - 51 LEVEL	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM)	5 DES 414. FC (INFO	- 25. MPA, FROM (MM)	TO (MM) 5160.	X 400. MMS ANCHOR STA END YES YES
B LEN - 51 LEVEL 1 CRITI	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 -	5 DES 414. FC (INFO) 16MM	- 25. MPA, FROM (MM) 0. 30 KN-MET A	TO (MM) 5160.	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M	5 DES 414. FC (INFO) 16MM 2= 219. IM2, ROW=	- 25. MPA, FROM (MM) 0. 30 KN-MET A0063, ROWMX	TO (MM) 5160. T 0.MM, I 0.0194 ROWM	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD MAX/M	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M	5 DES 414. FC (INFO) 16MM 2= 219. IM2, ROW= SPACING=	- 25. MPA, FROM (MM) 0. 30 KN-MET A .0063, ROWMX. 882./ 41	TO (MM) 5160. T 0.MM, I = .0194 ROWMS./ 98. MMS	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD MAX/M	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M	5 DES 414. FC (INFO) 16MM 2= 219. IM2, ROW= SPACING=	- 25. MPA, FROM (MM) 0. 30 KN-MET A .0063, ROWMX. 882./ 41	TO (MM) 5160. T 0.MM, I = .0194 ROWMS./ 98. MMS	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD MAX/M	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M	5 DES 414. FC (INFO) 16MM 2= 219. IM2, ROW= SPACING=	- 25. MPA, FROM (MM) 0. 30 KN-MET A .0063, ROWMX. 882./ 41	TO (MM) 5160. T 0.MM, I = .0194 ROWMS./ 98. MMS	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD MAX/M	E A M N O. E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M AIN/ACTUAL BAR C/REQD. DEVELOR	5 DES 414. FC INFO 16MM 2 219. IM2, ROW= SPACING= MENT LENG	- 25. MPA, FROM (MM) 0. 30 KN-MET A .0063, ROWMX. 882./ 41 TH = 316./	TO (MM) 5160. T 0.MM, I = .0194 ROWM ./ 98. MMS ./ 98. MMS	ANCHOR STA END YES YES LOAD 16
B LEN - 51 LEVEL 1 CRITI REQD MAX/M	EGN BEAM 5 TO 8 E A M N O. 60. MM FY - HEIGHT BAR (MM) 86. 10 - ICAL POS MOMENT STEEL= 1983.M AIN/ACTUAL BAR C/REQD. DEVELOR	5 DES 414. FC INFO 16MM 2 219. IM2, ROW= SPACING= MENT LENG	- 25. MPA, FROM (MM) 0. 30 KN-MET A .0063, ROWMX. 882./ 41 TH = 316./	TO (MM) 5160. T 0.MM, I = .0194 ROWM ./ 98. MMS ./ 98. MMS	ANCHOR STA END YES YES LOAD 16

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CRITICAL NEG MOMENT= 82.77 KN-MET AT 2150.MM, LOAD 30 | REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS |

BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS

MM)	REINF STEEL (SQ. MM		MOMENTS (+V (KNS-M		LOAD(+VE/-VE)
0.	2044 /	0.	219./	0.	16/ 0
	1281./	0.	141./	0.	16/ 0
860.	889./	144.	99./	16.	23/ 30
1290.	636./	455	72./	51.	23/ 30
1720.	427./	651.	48./	73.	23/ 30
2150.	270./	739.	31./	83.	28/ 30
2580.	209./	728.	24./	82.	28/ 30
3010.	178./	633.	2∩ /	71	20/ 20
3440.			21./	64.	28/ 22
	211./	445.	24./	50. 31.	28/ 22
4300	499./	271.	56./	31. 23.	14/ 22
4730.	863./ 1274./	206.			14/ 29 14/ 29
	EAM NO.		GN KESU	ьтз-	SHEAR
					s= .00 KNS
					FOR 1075. MM
AT END			S Vc= 257.0 OT REQUIRED.	O7 KNS V	/s= .00 KNS
1J		5159X	999x 399		6J
ar digarily and	And the second of the second of the second				
8*12c/c1	316. 179.TO 51				
8*12c/c1 0No16 H		60 j0			
8*12c/c1 0No16 H	55 86. 0.TO 516	60 j0			
8*12c/c1 .0No16 H	55 86. 0.TO 516	60	0000000		000000000
8*12c/c1 0No16 H	55 86. 0.TO 516	60	0000000		000000000 12
8*12c/c1 0No16 H	55 86. 0.TO 516	60 :0 Ooc 10#12 	0000000	 10# 10#	000000000 12
8*12c/c1 0No16 H	55 86. 0.TO 516	60 :0 Ooc 10#12 	0000000	 10# 10#	000000000 12
8*12c/c1 0No16 H 	55 86. 0.TO 516	60 10 10#12 10#16 10#16 10#16	0000000 00000000 G N R E S U	 1 10# 10# 1 1 	000000000 12 16 0000000000 FLEXURE
8*12c/c1 0No16 H 	55 86. 0.TO 516	60 10 10#12 10#16 10#16 10#16	0000000 00000000 G N R E S U	 1 10# 10# 1 1 	000000000 12 16 000000000
8*12c/c1 0No16 H 0#16 0000 B LEN - 51	55 86. 0.TO 516	60 i0 OOC 10#12 10#16 OOC 1	0000000 00000000 G N R E S U	 1 10# 10# 1 1 	000000000 12 16 0000000000 FLEXURE
8*12c/c1 0No16 H 0#16 0000 B LEN - 51	55	60 i0 OOC 10#12 10#16 OOC 1	00000000 G N R E S U 25. MPA, S	 10# 10# 1 	oooooooooooooooooooooooooooooooooooooo

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2	214. 0	TOTAL			YES YES
REQD STI	EEL= 1160. /ACTUAL BAR	MM2, ROW= SPACING=	55 KN-MET AT .0054, ROWMX= 882./ 41.	.0194 ROWM / 176. MMS	· .0033
BASIC/R	EQD. DEVELO	PMENT LENG	TH = 316./	478. MMS	
EQUIRED RE	INF. STEEL	SUMMARY :			
			MOMENTS (LOAD (+VE/-VE)
MM)	(SQ. M	IM)	(KNS	-MET)	
0.	1328./	104.	96./	8.	20/ 28
430.	1105./	112.	81./	9.	20/ 28
860.		120.	66./	9.	20/ 28
1290.	681./	128.		-7. 10. 10.	22/ 28
1720. 2150.	483./ 289./	136. 145.	37./	11.	22/ 28
2580.	98./	140.	22./ 8./	11. 12.	22/ 28 22/ 28
3010.		238.	0./	18.	0/ 24
3440.	0./	365.	0.7	28.	0/ 27
3870.	0./ 🦼	570.	0./	43.	0/ 27
4300.	0./	779. 993.	0./	58.	0/ 27
4730.			0./	73.	0/ 27
5160.	0./	1212.	0./	89.	0/ 27
ВЕ.	AM NO.	6 DES	IGN RES	ULTS - SE	IEAR
*** ****** **	OEFORT - AN	.= 35.52 .=	KNS $Vc = 174$.U4 KNS VS=	- CMA 00 -
	ST UPPORT - Vu	IRRUPS ARE 35.52	KNS VC= 174 NOT REQUIRED KNS VC= 174 NOT REQUIRED	.04 KNS Vs=	
	ST UPPORT - Vu ST	IRRUPS ARE = 35.52 IRRUPS ARE	NOT REQUIRED KNS Vc= 174 NOT REQUIRED	.04 KNS Vs=	00 KNS
AT END S	ST UPPORT - Vu ST	IRRUPS ARE = 35.52 IRRUPS ARE	NOT REQUIRED KNS Vc= 174	.04 KNS Vs=	
AT END S	ST UPPORT - Vu ST	IRRUPS ARE = 35.52 IRRUPS ARE 515	NOT REQUIRED KNS Vc= 174 NOT REQUIRED	.04 KNS Vs=	00 KNS
AT END S	ST UPPORT - Vu ST . 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
AT END SI 2J	ST UPPORT - Vu ST . 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
AT END SI 2J	UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
2J	UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
2J	ST UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515 16	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
2J	ST UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515 16	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
AT END SI 2J No12 H 284	ST UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515 16	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
AT END SI 2J No12 H 284	ST UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515 16	NOT REQUIRED KNS Vc= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
2J 2J No12 H 284	UPPORT - Vu ST 0.TO 29	IRRUPS ARE = 35.52 IRRUPS ARE 515 16	NOT REQUIRED KNS VC= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS
2J No12 H 284 0000 #16 000000	OOOOOO	TRRUPS ARE = 35.52 TRRUPS ARE 515 16	NOT REQUIRED KNS VC= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS - 11J
2J 2J No12 H 284 0000 i#16 000000	OOOOOO	TRRUPS ARE = 35.52 TRRUPS ARE 515 16	NOT REQUIRED KNS VC= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS - 11J
2J No12 H 284 0000 #16 000000 B E EN - 5160 EVEL HE	OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO	TRRUPS ARE = 35.52 TRRUPS ARE 515 16	NOT REQUIRED KNS VC= 174 NOT REQUIRED 9X 999X 299	.04 KNS Vs=	00 KNS - 11J
2J No12 H 284 0000 #16 000000 B E EN - 5160 EVEL HE ()	O.TO 29 O.TO 29 O.TO 29 O.TO 29 IGHT BAMM)	TRRUPS ARE = 35.52 TRRUPS ARE 515 16	NOT REQUIRED KNS VC= 174 NOT REQUIRED 9X 999X 299 OOOOOO OOOOOOOOO I G N R E S II Z5. MPA, S FROM	.04 KNS Vs= .04 KNS Vs= .04 KNS Vs= .05 L T S - E	00 KNS - 11J - OOOOOO - OOOOOO - CLEXURE - X 300. MMS - ANCHOR

REQD S MAX/MI	CAL NEG MOM STEEL= 72 IN/ACTUAL B	ENT= 53. 1.MM2, ROW= AR SPACING=	08 KN-MET AT .0033, ROWMX= 886./ 37./ ETH = 177./	0.MM, .0194 ROW / 148. MM	MN= .0033 S	1 1, 3
EQUIRED F	REINF. STEE	L SUMMARY :				
ECTION MM)		EEL(+VE/~VE) MM)		-VE/-VE) -MET)	LOAD (+VE	/-VE)
0	404./	709.	31./	53.	24/	22
430.		603.	27./	45.	24/	
860.	307./	498.	23./		24/	
1290.	259./		20./	30.		
1720.		292.	16./	22.	24/	
2150.	164./	190.	13./	15.	24/	4.7
2580.	117./ 70./		9./ 5./	7. 2.	17/ 17/	
3010.	/0./ 141./		11 /	Annual Control of the	16/	
3440. 3870.		93.	19./	7.	16/	
4300.		130.	26./	10.	16/	
4730.	447./	167.	34./	13.	16/	
5160.	551./	204.	42./		16/	
ВІ	EAM NO.	7 DES	IGN RES	ULTS-	SHEAR	
AT START	SUPPORT -	Vu= 17.89	KNS Vc= 174	.04 KNS V	's= .00	KNS
1.545		STIRRUPS AR	E NOT REQUIRED KNS Vc= 174			
MI DND	20 FLOW 1 -	7u- 1/02	UNO AC- T.A	.04 KNO 4	3-	, idia
			E NOT REQUIRED			
3J		STIRRUPS ARI	E NOT REQUIRED			16J_
3J /No12 H 2	84. 0.TO	STIRRUPS ARI	E NOT REQUIRED			16J
3J_/No12 H 2	84. 0.TO	51:05 STIRRUPS ARI	E NOT REQUIRED		00000	16J_
3J /No12 H 2 //No12 H	84. 0.TO	5160 5160 5160	E NOT REQUIRED 59X 999X 299 0000000		000000	16J_
3J 7No12 H 2 7#12 oo	84. 0.TO	5160 5160 5160 5160 5160 5160 5160 5160	E NOT REQUIRED 59X 999X 299 0000000 0000000		00000 12 00000 FLEXURE	16J
3J 7No12 H 2 7#12 oo B LEN - 51	00000 00000 00000 E A M N O	5160 5160 5160 5160 5160 5160 5160 5160	E NOT REQUIRED 59X 999X 299 0000000 00000000		00000 12 00000 FLEXURE 00. X 300	16J
3J 7No12 H 2 7#12 oo B LEN - 51	84. 0.TO 00000 00000 E A M N O 60, MM FY HEIGHT (MM)	5160 5160 5160 5160 5160 5160 5160 5160	E NOT REQUIRED 59X 999X 299 0000000 0000000 SIGN RES - 25. MPA, FROM (MM)		000000 12 000000 FLEXURE 00. X 300 AN STA	16J

Page 11 of 27

MAX/MI	rEEL= 1159.0 N/ACTUAL BAR	MM2, ROW= .0 SPACING=	KN-MET AT 054, ROWMX= 882./ 41./ = 316./	.0194 ROWM 176. MMS	N= 0033
RF CRRTING	EINF. STEEL :	STIMMARY •			
ECTION		 L(+VE/-VE)	MOMENTS (+) (KNS-)	VE/-VE) MET)	LOAD(+VE/-VE)
0.	0./	1211	0./	88.	0/ 20
430.	0./	1011	0./	75.	0/ 17
860.	0./	828	0./	62.	0/ 17
1290.	0./		0./	49.	0/ 17
1720.		471.	0./	36.	0/ 17
2150.		298.	0./	23.	0/ 17
2580.	0./	127.	0./	10	0/ 17
3010.	168./	32.	13./	2.	27/ 14
3440. 3870.	355./	2.	27./		27/ 14
4300.	545./ 739./	0. 0.	41./	0.	27/ 0
4300. 4730.	937./	0.	55./ 69./	0.	27/ 0 27/ 0
5160.	1139./	0.	83./	0.	27/ 0
AT END S	SUPPORT - Vu	= 32.99 KN IRRUPS ARE N	S Vc= 174. OT REQUIRED.	04 KNS Vs	= .00 KNS
4J		5159X	999x 299		21J_
er alle green and the second					
No16 H 214	ι. ο.το 39	18	10No12 H 84	.2446.TO 5	160
No16 H 214	1. 0.то 39	18 o	10No12 H 84	.2446.TO 5	00000000

1

84

11 - 12MM

0.

996.

YES

YES

```
CRITICAL POS MOMENT= 140.20 KN-MET AT 0.MM, LOAD 14 | REQD STEEL= 1238.MM2, ROW= .0039, ROWMX= .0194 ROWMN= .0033 | MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 89. MMS | BASIC/REQD. DEVELOPMENT LENGTH = 177./ 357. MMS |
                   10 - 12MM
                                                   996.
            316.
   CRITICAL NEG MOMENT= 119.19 KN-MET AT 996.MM, LOAD 23 |
 | REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS
BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS
 REQUIRED REINF. STEEL SUMMARY :
                                    MOMENTS (+VE/-VE) LOAD (+VE/-VE)
 SECTION REINF STEEL (+VE/-VE)
                (SQ MM)
                                       (KNS-MET )
                      165.
                                       140./ 19.
126./ 25.
113./ 32.
                                                            14/ 29
14/ 29
    . 0 .
              1274./
                          222.
                                                     25.
               1144./
                                              32. 33
38. 4
              1014 /
                          279
                                                               14/ 29
   166.
                                        99./
               885./
                                        38.
38.
45.
71./
52.
56./
58.
42./
35./
                                                              14/ 29
   249
                          337
               756./
                       396.
456.
   332.
                                                               14/ 29
   415.
                628./
                                                               14/ 29
                499./
                         517.
                                                               14/
   498
                                         35./ 66.
29./
                        586
               371./
                310./
                          681.
                                                               30/
                                                                    23
   664.
                                                 87
                256./ --
                                                               30/ 23
                                         29./
   747.
                                                    98.
                                                                   23
               201./
                                                               30/
   830.
                          876.
                                         23./
                                                             30/ 23
                          975.
               146./
                                                  108.
   913.
                                         17./
                                         10./ 119.
                                                              30/ 23
                90./
                          1076.
   996.
        BEAM NO. 10 DESIGN RESULTS - SHEAR
  AT START SUPPORT - Vu= 171.68 KNS Vc= 257.07 KNS Vs=
                     PROVIDE 12 MM BARS AT 155. MM C/C FOR 996. MM
            SUPPORT - Vu= 176.30 KNS Vc= 257.07 KNS Vs=
                      PROVIDE 12 MM BARS AT 155. MM C/C FOR 996. MM
                                 995X 999X 399
|10No12 H 316.| 0.TO 996|
  8*12c/c155 |
[11No12 H 84.] 0.TO 996]
                                  000000000
                                                            000000000
10#12
                        | |10#12
                                                    1 110#12
                        | |11#12
                                                   | |11#12
                                                             000000000
       0000000000
                                  00000000000
         BEAM NO. 11 DESIGN RESULTS - FLEXURE
          996. MM FY - 414. FC - 25. MPA, SIZE - 1000. X 400. MMS
                                                                  ANCHOR
  LEVEL
           HEIGHT
                      BAR INFO
                                      FROM
                                                    OT
                                                                 STA END
                                      (MM)
                                                    (MM)
            (MM)
```

REQD STE	EL= 1054 ACTUAL BAR	MM2, ROW= . SPACING=	27 KN-MET AT 0033, ROWMX= . 886./ 37./ TH = 177./	0194 ROWN 98. MM:	MN≃ .0033 S	#
2	12	- 12MM	0.	996.	YES	
CRITICAI REQD STE MAX/MIN/	. NEG MOMEN CEL= 1284. 'ACTUAL BAR	T= 145.2 MM2, ROW= . SPACING=	25 KN-MET AT 0041, ROWMX= . 886./ 37./	996.MM, 0194 ROW 81. MM	MN= .0033	1
REQUIRED RE	NF. STEEL	SUMMARY :				
	REINF STEE (SQ. M		MOMENTS (+V (KNS-M		LOAD (+VE	/-VE)
0.	90./	1076.	10./	119.	30/	23
83.	70./	1092.	8./	121	307	23
166.	49./	1109	6./		30/	23
249.		1126.	3./	125.	30/	23
332.	5./	1145.	1./	127.		23
415.	0./	1164.	0./	129	. 07	23
498.		1184.	0.7	131	0/	23
581.	0./	1205.	0./	133.	: · · · · 0/	23
664.	0.7	1227	0./	135	0/	23
747		1249.	0./	138	0/	23
830.	0./	1272. 1297.	0./	140.	0/	23
913.	0./	1297		143	0/_1	
996.	0./	1322	0./	145.	0/	23
8 E 1	AM NO.	11 DES 1	IGN RESU	LTS-:	SHEAR	
	ST	IRRUPS ARE	ONS Vc= 257.0 NOT REQUIRED.		The war Age	
AT END SO			TNS VC= 257.0 NOT REQUIRED.	07 KNS V	.00	KNS
7J		995	5x 999x 399		Average Control	8J_
				 	=======	
No12 H 316	. 0.то 9	96				
No12 H 84	0.то 6	66				
	St. 100 Aug. 1		and the state of the second second second			100
	to the section of the section of			<u> </u>		

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EN - 996.	MM FY -	414. FC -	25. MPA, S	IZE - 1000.	X 400. MMS
EVEL HEI (%		R INFO	FROM (MM)	TO (MM)	ANCHOR STA END
1 3	16. 12	- 12MM	0.	996.	YES YES
REQD STE	EL≕ 1284. ACTUAL BAR	MM2, ROW= .0 SPACING=	KN-MET AT 041, ROWMX= 886./ 37./ = 177./	.0194 ROWMN 81. MMS	.0033
EQUIRED REJ	NF. STEEL	SUMMARY :			
		L(+VE/-VE) M)			LOAD(+VE/-VE)
0.	0./	1322.	0./	145.	0/ 23
83.	0./	1261.	0./	139.	0/ 23
166.	0.7	1201	0./	132.	0/ 23
249	0./	1141.	0.7	126.	0/ 23
332.	0./	1083.	0./	120.	0/ 23
415.		1040.	0./	115.	0/ 24
498.		1000.	0./	111.	0/ 24
581.	the state of the s	961.	0./	107.	0/ 24
664.	0./	923.	0./	103.	
747.		886.	0./	99. 95.	0/ 24 0/ 24
830. 913.	0.7	850. 814.	0./	93. 91.	0/ 24
996.		780.	0./	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0/ 24
ВЕ	AM NO.	12 DEST	GN RESU	LTS-SF	IEAR
AT START S		1.	NS Vc= 257.		.00 KNS
AT END S	UPPORT - Vu	i= 69.69 KI	NOT REQUIRED. NS Vc= 257. NOT REQUIRED.	07 KNS Vs=	.00 KNS
8J		995	x 999x 399		9J
2No.10 U 216		 .06			
2No12 H 316	. 0.10	96			
		化二二甲基甲基二二二甲基甲二甲			
					

BEA	M	NO.	13	D	E	S	Ι	G	N	R	E.	S	[]	Ť.	Т	S	~	FLEXURE
-----	---	-----	----	---	---	---	---	---	---	---	----	---	----	----	---	---	---	---------

		The state of the s				
LEN -	996. MM	FY ~ 414.	FC - 25.	MPA, SIZE	- 1000	X 400 MMS

LEVEL	HEIGHT BAI	R INFO	FROM	TO	ANCHOR
	(MM)		(MM)	(MM)	STA END

	1		84.	10 -	1.2MM		122.		996		NO	YES
⁻ 				MOMENT= 1054.MN								
1		MAX/MI	N/ACTU	AL BAR S DEVELOPN	PACING	= {	386./	37./	98.	MMS		

	2 316. 10 - 12MM 0. 996.	YES	YE
1	CRITICAL NEG MOMENT= 87.20 KN-MET AT 0.MM, LOAD		ł
i	REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .00 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS	333 	
ŀ	BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS		

REQUIRED REINF. STEEL SUMMARY :

SECTION (MM)	REINF STEEL	4 2 4 5 5 5	MOMENTS (+1		LOAD(+VE/-VE)
(PP4)	(SQ. MM		(KNS-N	ier)	
		700			
0.	0.7	780	0./	87.	0/ 24
83.	0./	704	0./	79.	0/ 15
166.	0./	644	0./	72.	0/ 15
249.	0./	586.	0./	66.	0/ 15
332.	0./	534.	0./	60.	0/ 14
415	0./	484	0./	55.	0/ 14
498.	60./	435	7.7	49.	22/ 14
581.	128./	387	15./	44	22/ 14
664	195./	340.	22./	39.	22/ 14
747.	262./	294.	30./	33.	29/ 14
830.	336./	249.	38./	28.	29/ 14
913.	409./	204.	46./	23.	29/ 14
996.	482./	161.	54./	18	29/ 14

BEAM NO. 13 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 126.64 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 996. MM

AT END SUPPORT - Vu= 122.03 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 996. MM

9J	995	x 999x 399		10J
10No12 H 316. 0.	то 9961			
8*12c/c155		Victoria Estado	∛a i a Populeja	8*12c/c155
10No12 H	84. 122.TO 996			

00000000	000	0000	0000000		00000000	00
)#12		10#12		10#12		
		10"10				
		10#12		10#12		
	ation by	l 000	0000000		0000000	00
BEA	M NO. 1	4 DESI	GN RESU	LTS - FI	LEXURE	
LEN - 996.	MM FY -	414. FC -	25. MPA, SI	ZE - 1000.	x 400.	MMS
	מאַר מעצר	TNIEVO	FROM	mo.	ANC	u () P
	SHT BAR	INFO	FROM	TO	ANC STA	
(MI			(MM)	(MM)	SIA	CND
1	34. 19 -	12MM	0.	996.	YES	YES
			KN-MET AT			
REQUISTED	sL= 2078.М	MZ, KOW≖ .0	066, ROWMX= .	OL94 ROWMN	= .0033	100
			886./ 37./ i = 177./			1
BMSIC/KE	uevelor	TENI BENGIN	. = - 4.7.7	Jar. eP15 -:		i
				alika gina		
2 3	16. 10 -	12MM	0.	549.	YES	ИО
[
•	10 to	A CONTRACTOR OF THE PARTY OF TH	KN-MET AT	and the second s	and the second second	
REQD STE	EL= 1054 M	1M2, $ROW = .0$	033, ROWMX=	.0194 ROWMN	= 0033	1
MAX/MIN/	ACTUAL BAR	SPACING=	886./ 37./	98. MMS		1
MAX/MIN/ BASIC/RE	ACTUAL BAR QD. DEVELOS	SPACING= PMENT LENGTH	886./ 37./ i = 177./	98. MMS 466. MMS		1
MAX/MIN/ BASIC/RE	ACTUAL BAR QD. DEVELOS	SPACING= PMENT LENGTH	886./ 37./ H = 177./	98. MMS 466. MMS		
MAX/MIN/ BASIC/RE	ACTUAL BAR QD. DEVELOS	SPACING= PMENT LENGTH	886./ 37./ i = 177./	98. MMS 466. MMS		
MAX/MIN/ BASIC/RE 	QD. DEVELOR	PMENT LENGTH	886./ 37./ i = 177./	98. MMS 466. MMS		
BASIC/RE	QD. DEVELOS	PMENT LENGTH	i = 177./	466. MMS		
BASIC/RE	QD. DEVELOR NF. STEEL S REINF STEEI	PMENT LENGTH SUMMARY : L(+VE/-VE)	MOMENTS (+'	466. MMS 	LOAD (+VE	
BASIC/RE	QD. DEVELOR NF. STEEL S REINF STEEI	PMENT LENGTH SUMMARY : L(+VE/-VE)	i = 177./	466. MMS 	LOAD (+VE	
BASIC/RE	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MA	PMENT LENGTH SUMMARY : L(+VE/-VE)	MOMENTS (+)	466. MMS 	LOAD (+VE	
BASIC/RE REQUIRED REI SECTION (MM) 0.	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MN 482./	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161.	MOMENTS (+'	466. MMS VE/-VE) MET)		
BASIC/RE REQUIRED REI SECTION (MM) 0.	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MM 482./ 597./ 722./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0.	MOMENTS (+' (KNS-1	466. MMS VE/-VE) MET) 18.	29/	14
BASIC/RE REQUIRED REI SECTION (MM) 0. 83.	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MM 482./ 597./ 722./ 862./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77.	MOMENTS(+' (KNS-1) 54./ 67./ 81./ 96./	466. MMS VE/-VE) MET) 18. 9.	29/ 29/ 23/ 23/	14 14
BASIC/RE REQUIRED REI SECTION (MM) 0. 83. 166.	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MM 482./ 597./ 722./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0.	MOMENTS(+' (KNS-1) 54./ 67./ 81./	466. MMS VE/-VE) MET) 18. 9. 0. 0.	29/ 29/ 23/	14 14 0
BASIC/RE REQUIRED REI SECTION (MM) 0. 83. 166. 249.	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MM 482./ 597./ 722./ 862./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0. 0.	MOMENTS(+' (KNS-1) 54./ 67./ 81./ 96./	466. MMS VE/-VE) MET) 18. 9. 0. 0.	29/ 29/ 23/ 23/	14 14 0 0
BASIC/RE I	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MN 482./ 597./ 722./ 862./ 1002./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0. 0. 0.	MOMENTS(+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0.	29/ 29/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MN 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0.	MOMENTS(+' (KNS-1) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0.	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MN 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./	PMENT LENGTH SUMMARY : L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0.	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MN 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+ (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0.	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MA 482./ 597./ 722./ 1002./ 1142./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+) (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0.	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MN 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+' (KNS- 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MA 482./ 597./ 722./ 1002./ 1142./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+) (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/	14 14 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MA 482./ 597./ 722./ 1002./ 1142./ 1142./ 1142./ 1145./ 1567./ 1710./ 1854./ 1998./ 2143./	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0.	MOMENTS(+' (KNS- 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ A M N O.	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 0. 14 D E S I	MOMENTS (+' (KNS- 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./ 229./ G N R E S U	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 1. 1. 1. 2. 3. 4. 4. 5. 6. 6. 7. 8. 9. 1. 1. 1. 1. 1. 1. 1. 1. 1	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEI (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ A M N O. JPPORT - Vu	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 14 D E S I = 181.80 Ki	MOMENTS(+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./ 229./ G N R E S U	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 1. 1. 1. 2. 3. 4. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MM 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ A M N O. JPPORT - Vu. PRO	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 0. 14 DESI = 181.80 Ki OVIDE 12 MM	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 1. T S - SF	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ AM NO. JPPORT - Vu	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 14 D E S I = 181.80 Ki OVIDE 12 MM = 177.19 Ki	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155. NS VC= 257.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ AM NO. JPPORT - Vu	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 14 D E S I = 181.80 Ki OVIDE 12 MM = 177.19 Ki	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ AM NO. JPPORT - Vu	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 14 DESI = 181.80 Ki OVIDE 12 MM T77.19 Ki OVIDE 12 MM	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155. NS VC= 257.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ AM NO. JPPORT - Vu	PMENT LENGTH SUMMARY: L(+VE/-VE) 161. 77. 0. 0. 0. 0. 0. 0. 0. 14 DESI = 181.80 Ki OVIDE 12 MM T77.19 Ki OVIDE 12 MM	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155. NS VC= 257. BARS AT 155.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ AM NO. JPPORT - Vu. PR. JPPORT - Vu. PR.	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 0. 14 DESI = 181.80 Ki OVIDE 12 MM = 177.19 Ki OVIDE 12 MM 995	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155. NS VC= 257. BARS AT 155.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
BASIC/RE 	QD. DEVELOR NF. STEEL S REINF STEEL (SQ. MA 482./ 597./ 722./ 862./ 1002./ 1142./ 1283./ 1425./ 1567./ 1710./ 1854./ 1998./ 2143./ A M N O. JPPORT - Vu. PR. JPPORT - Vu. PR. JPPORT - Vu. PR.	PMENT LENGTH SUMMARY: L(+VE/-VE) 4) 161. 77. 0. 0. 0. 0. 0. 0. 0. 14 DESI = 181.80 Ki OVIDE 12 MM = 177.19 Ki OVIDE 12 MM 995:	MOMENTS (+' (KNS-) 54./ 67./ 81./ 96./ 111./ 126./ 141./ 156./ 171./ 186./ 200./ 215./ 229./ G N R E S U NS VC= 257. BARS AT 155. NS VC= 257. BARS AT 155.	466. MMS VE/-VE) MET) 18. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0	29/ 29/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	14 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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[4] A. A. A. Markett, Phys. Lett. B 48, 120 (1997).		1

BEAM NO. 15 DESIGNRESULTS - FLEXURE LEN - 990 MM FY - 414 FC - 25 MPA, SIZE - 1000 X 400 MMS LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) (MM) STA END

	1	88. 5 - 20MM 0. 990. YES	YES
	1	CRITICAL POS MOMENT= 175.47 KN-MET AT 0.MM, LOAD 23 REQD STEEL= 1565.MM2, ROW= .0049, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 878./ 45./ 220. MMS BASIC/REQD. DEVELOPMENT LENGTH = 493./ 596. MMS	
-	2	316. 10 - 12MM 400. 990. NO CRITICAL NEG MOMENT= 4 36 KN-MET AT 990 MM LOAD 30 1	YES

CRITICAL NEG MOMENT= 4.36 KN-MET AT 990.MM, LOAD 30 |
REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 |
MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS |
BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS

REQUIRED REINF. STEEL SUMMARY :

SECTION	REINF STEEL (+VE/-VE)	MOMENTS (+V)	3/-VE)	LOAD(+V	E/-VE)
(MM)	(SQ. MM)	(KNS-M	ET)		and State
		Kalendari ya Tangi				1000
0.	1612./	0.	175./	0.	23/	0
82.	1519./	0.	166./	0.	23/	0
165.	1426./	0.	156./	0.	23/	0
247.	1333./	0.	146./	0.	23/	0
330.	1240./	0.	137./	0.	23/	0
412.	1146./	0.	127./	0.	23/	0 11
495.	1052./	0.	117./	0.	23/	0
577.	959./	0.	107./	0.	23/	0
660.	864./	0.	96./	0.	23/	0
742.	770./	0.	86./	0.	23/	0
825.	676./	0.	76./	0.	23/	0 .
907.	581./	11.	65./	1.	23/	30
990.	486./	38.	55./	4.	23/	30

BEAM NO. 15 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 119.53 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 990. MM AT END SUPPORT - Vu= 124.07 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 990. MM

S*12c/c155 10No12 H 316. 400.TO 990 8*12c/c15	8*12c/c155 5MC20 R 88 0.TO 990 8*12c/c15 5MC20 R 88 0.TO 990	11J		989X				
10#12	10#12	•		Aller of a		990	 8*12c; 	/c15
10#12	10#12							
BEAM NO. 16 DESIGN RESULTS - FLEXURE LEN - 997. MM FY - 414. FC - 25. MPA, SIZE - 1000. X 400. MMS LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) STA ENT 1 84. 10 - 12MM 0. 997. YES YES 1 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033	BEAM NO. 16 DESIGN RESULTS - FLEXURE LEN - 997. MM FY - 414. FC - 25. MPA, SIZE - 1000. X 400. MM: LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) (MM) STA EN 1 84. 10 - 12MM 0. 997. YES YE. 1 CRITICAL POS MOMENT= 54.89 KN-WET AT 0.MM, LOAD 23 1 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 1 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS 1 BASIC/REOD. DEVELOPMENT LENGTH = 177./ 334. MMS 1 CRITICAL NEG MOMENT= 37.23 KN-WET AT 997.MM, LOAD 14 1 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWNN= .0033 1 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS 1 BASIC/REOD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 DASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 DASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS 1 AND MIN (SQ. MM) (KNS-MET) 0 486./ 38. 55./ 4. 23/ 30 83. 441./ 50. 50./ 6. 23/ 14 166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 4499. 209./ 164. 24./ 19. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 5831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 831. 12./ 270. 1./ 31. 23/ 34 914. 0./ 299. 0./ 34. 0/ 14			10#12 	000000	10#12 	0000000	00
LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) STA ENI 1 84. 10 - 12MM 0. 997. YES YES TO STEEL 1054.MM2, ROW= .0033, ROWMX= .0194 ROWN= .0033 RROD STEEL= 1054.MM2, ROW= .0033, ROWNX= .0194 ROWN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 334. MMS CRITICAL NEG MOMENT= 37.23 KN-MET AT 997.MM, LOAD 14 REQD STEEL= 1054.MM2, ROW= .0033, ROWNX= .0194 ROWN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 334. MMS BASIC/REQD. DEVELOPMENT= 37.23 KN-MET AT 997.MM, LOAD 14 REQD STEEL= 1054.MM2, ROW= .0033, ROWNX= .0194 ROWN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS CRITICAL NEG MOMENT= 37.23 KN-MET AT 997.MM, LOAD 14 REQUIRED REINF. STEEL SUMMARY : **REQUIRED REINF. STEEL SUMMARY :** **REQUIRED REINF. STEEL SUMMARY :** **REQUIRED REINF. STEEL SUMMARY :** **A 441./ 50. 50./ 6. 23/ 14 166. 396./ 71. 45./ 8. 23/ 14 167. 396./ 71. 45./ 8. 23/ 14 168. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 257./ 140. 29./ 16. 23/ 14 169. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 140. 29./ 16. 23/ 14 160. 257./ 243. 7.// 28. 23/ 14 160. 257./ 243. 7.// 28. 23/ 14 160. 257./ 248. 62.// 243. 7.// 28. 23/ 14 160. 257./ 241. 7.// 25. 2	LEVEL HEIGHT BAR INFO FROM TO ANCHOR (MM) STA ENI 1 84. 10 - 12MM 0. 997. YES YE.			•	00000	5#20 	00000	
CRITICAL POS MOMENT=	CRITICAL POS MOMENT=	LEVEL H	7. MM FY - EIGHT BAR	414. FC -	25. MPA, SI	ZE - 1000. TO	X 400.	HOR
CRITICAL POS MOMENT=	CRITICAL POS MOMENT=	1	04 10					
CRITICAL NEG MOMENT= 37.23 KN-MET AT 997.MM, LOAD 14 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS REQUIRED REINF. STEEL SUMMARY : SECTION REINF STEEL(+VE/-VE) MOMENTS(+VE/-VE) LOAD(+VE/-V) (MM) (SQ. MM) (KNS-MET) 0. 486./ 38. 55./ 4. 23/ 30 83. 441./ 50. 50./ 6. 23/ 14 166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 583. 12./ 216. 13./ 25. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	CRITICAL NEG MOMENT= 37.23 KN-MET AT 997.MM, LOAD 14 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466. MMS							1
SECTION REINF STEEL(+VE/-VE) MOMENTS(+VE/-VE) LOAD(+VE/-VE) (MM) (SQ. MM) (KNS-MET) 0. 486./ 38. 55./ 4. 23/30 83. 441./ 50. 50./ 6. 23/14 166. 396./ 71. 45./ 8. 23/14 249. 350./ 93. 40./ 11. 23/14 332. 304./ 116. 35./ 13. 23/14 416. 257./ 140. 29./ 16. 23/14 499. 209./ 164. 24./ 19. 23/14 582. 161./ 190. 18./ 22. 23/14 582. 161./ 190. 18./ 22. 23/14 665. 112./ 216. 13./ 25. 23/14 748. 62./ 243. 7./ 28. 23/14 831. 12./ 270. 1./ 31. 23/14 914. 0./ 299. 0./ 34. 0/14	SECTION REINF STEEL(+VE/-VE) MOMENTS(+VE/-VE) LOAD(+VE/-V (MM) (SQ. MM) (KNS-MET) (KNS-MET) 0. 486./ 38. 55./ 4. 23/30 83. 441./ 50. 50./ 6. 23/14 166. 396./ 71. 45./ 8. 23/14 249. 350./ 93. 40./ 11. 23/14 332. 304./ 116. 35./ 13. 23/14 416. 257./ 140. 29./ 16. 23/14 499. 209./ 164. 24./ 19. 23/14 582. 161./ 190. 18./ 22. 23/14 665. 112./ 216. 13./ 25. 23/14 748. 62./ 243. 7./ 28. 23/14 831. 12./ 270. 1./ 31. 23/14 914. 0./ 299. 0./ 34.	REQD S	CAL POS MOMENT STEEL= 1054.N	= 54.89 M2, ROW= .0 SPACING=	KN-MET AT 033, ROWMX= . 886./ 37./	0.MM, L 0194 ROWMN 98. MMS	OAD 23	
83. 441./ 50. 50./ 6. 23/ 14 166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	83. 441./ 50. 50./ 6. 23/ 14 166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MI BASIC, BASIC, CRITIC REQD S MAX/MI	CAL POS MOMENT STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENT STEEL= 1054.N IN/ACTUAL BAR	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 MM2, ROW= .0 SPACING=	KN-MET AT 1033, ROWMX= 1033, ROWMX= 1037./ 1037./ 0. 1033, ROWMX= 1033, ROWMX= 1033, ROWMX=	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033	YE
166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	166. 396./ 71. 45./ 8. 23/ 14 249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQUIRED	CAL POS MOMENT STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENT STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR REINF. STEEL	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE)	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033	(1.5) 1.5)
249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	249. 350./ 93. 40./ 11. 23/ 14 332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MJ BASIC, CRITIC REQU S MAX/MJ BASIC, CRITIC REQUIRED SECTION MM O.	CAL POS MOMENT STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENT IN/ACTUAL BAR /REQD. DEVELOR REINF. STEEL: REINF STEEL (SQ. MI 486./	S4.89 M2, ROW= .0 SPACING= MENT LENGTH - 12MM C= 37.23 M2, ROW= .0 SPACING= PMENT LENGTH SUMMARY : L(+VE/-VE) M) 38.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, L 0194 ROWMN 98. MMS 466. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033	YE:
332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	332. 304./ 116. 35./ 13. 23/ 14 416. 257./ 140. 29./ 16. 23/ 14 499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MJ BASIC, CRITIC REQU S MAX/MJ BASIC, CRITIC REQUIRED SECTION MM O. 83.	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF STEEL: (SQ. MI 486./ 441./	S4.89 M2, ROW= .0 SPACING= MENT LENGTH - 12MM C= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 6 KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, L 0194 ROWMN 98. MMS 466. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE	YE!
499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	499. 209./ 164. 24./ 19. 23/ 14 582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MI BASIC, CRITIC REQU S MAX/MI BASIC, CRITIC REQUIRED SECTION MM O 83. 166.	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF STEEL (SQ. MI 486./ 441./ 396./	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 M2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 6 KN-MET AT 10033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, L 0194 ROWMN 98. MMS 466. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE	YE: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	582. 161./ 190. 18./ 22. 23/ 14 665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MI BASIC, CRITIC REQUIRED BASIC, CREQUIRED SECTION MM O 83. 166. 249.	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF STEEL (SQ. MI 486./ 441./ 396./ 350./	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 3 KN-MET AT 10033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/	YE: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	665. 112./ 216. 13./ 25. 23/ 14 748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MJ BASIC, CRITIC REQD S MAX/MJ BASIC, CRITIC REQUIRED SECTION MM O 83. 166. 249. 332. 416.	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF STEEL: (SQ. MI 486./ 441./ 396./ 350./ 304./ 257./	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93. 116. 140.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 6 KN-MET AT 10033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./ 35./ 29./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS E/-VE) ET) 4. 6. 8. 11. 13. 16.	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/	YES 30 14 14 14 14 14
748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	748. 62./ 243. 7./ 28. 23/ 14 831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MJ BASIC, 	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF. STEEL: REINF. STEEL: (SQ. MI 486./ 441./ 396./ 350./ 304./ 257./ 209./	Y= 54.89 MM2, ROW= .0 SPACING= PMENT LENGTH - 12MM Y= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93. 116. 140. 164.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 3 KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./ 35./ 29./ 24./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS E/-VE) ET) 4. 6. 8. 11. 13. 16. 19.	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	YE: 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	831. 12./ 270. 1./ 31. 23/ 14 914. 0./ 299. 0./ 34. 0/ 14	REQD S MAX/MJ BASIC,	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316. 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF. STEEL: REINF. STEEL: REINF STEEL: (SQ. MI 486./ 441./ 396./ 350./ 304./ 257./ 209./ 161./	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 M2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93. 116. 140. 164. 190.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 3 KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./ 35./ 29./ 24./ 18./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS E/-VE) ET) 4. 6. 8. 11. 13. 16. 19. 22.	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	YES 14 14 14 14 14 14 14
		REQD S MAX/MJ BASIC,	CAL POS MOMENTO STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR 316 10 CAL NEG MOMENTO STEEL= 1054.N IN/ACTUAL BAR /REQD. DEVELOR REINF. STEEL: REINF STEEL: REINF STEEL: 486./ 441./ 396./ 350./ 304./ 257./ 209./ 161./ 112./	S4.89 M2, ROW= .0 SPACING= PMENT LENGTH - 12MM C= 37.23 M2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93. 116. 140. 164. 190. 216.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 3 KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./ 35./ 29./ 24./ 18./ 13./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS E/-VE) ET) 4. 6. 8. 11. 13. 16. 19. 22. 25.	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	YES 14 14 14 14 14 14 14 14
	Here 997 , which is 0.7 , and 328 . The results of 0.7 , the first 37 . The second 97 , 14 , we have the first 37 . The second 37 is the second 37 .	REQD S MAX/MJ BASIC,	CAL POS MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR 316 10 CAL NEG MOMENTO STEEL= 1054 N IN/ACTUAL BAR /REQD. DEVELOR REINF STEEL (SQ. MI 486./ 441./ 396./ 350./ 304./ 257./ 209./ 161./ 112./ 62./	Y= 54.89 MM2, ROW= .0 SPACING= PMENT LENGTH - 12MM Y= 37.23 MM2, ROW= .0 SPACING= PMENT LENGTH SUMMARY: L(+VE/-VE) M) 38. 50. 71. 93. 116. 140. 164. 190. 216. 243.	KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ 0. 3 KN-MET AT 1033, ROWMX= 886./ 37./ 1 = 177./ MOMENTS(+V (KNS-M 55./ 50./ 45./ 40./ 35./ 29./ 24./ 18./ 13./ 7./	0.MM, L 0194 ROWMN 98. MMS 334. MMS 997. 997.MM, I 0194 ROWMN 98. MMS 466. MMS E/-VE) ET) 4. 6. 8. 11. 13. 16. 19. 22. 25. 28.	OAD 23 I= .0033 YES OAD 14 I= .0033 LOAD(+VE 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23/ 23	YES 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

BEAM NO. 16 DESIGN RESULTS - SHEAR

AT START SUPPORT	- Vu= 63.02 KNS	Vc= 257.07 KNS Vs=	.00 KNS
	STIRRUPS ARE NOT	REQUIRED.	
AT END SUPPORT	- Vu= □ 67.66 KNS	Vc= 257.07 KNS Vs=	.00 KNS
	STIRRUPS ARE NOT	REOUIRED.	

12J 997X 999X 399		13J
10No12 H 316. 0.TO 997 10No12 H 84. 0.TO 997		
		=======
	Automotive Laboratoria	
000000000 1 1 0000000000	 00000000	000
自動性性性學院 医多色性主菌属 医多种毒素 经证的	10#12 1 110#12	
0000000000 0000000000	00000000	000

BEAM NO. 17 DESIGN RESULTS - FLEXURE

LEN -	997. MM	FY -	414.	FC -	25.	MPA,	SIZE -	1000.	Χ	400. MMS
i girang							# 5 12 S	380 M		
LEVEL	HEIGHT	BAL	RINFO		FROM	3.37.43	TO			ANCHOR
	(MM)			2020	(MM)	100	(MM)	4.7		STA END

1 84. 10 - 12M	M 538.	997. NC	YES
CRITICAL POS MOMENT= REQD STEEL= 1054.MM2, MAX/MIN/ACTUAL BAR SPAC BASIC/REQD. DEVELOPMENT	ROW= .0033, ROWMX= ING= 886./ 37./	.0194 ROWMN= .003 / 98. MMS	
2 316. 10 - 12M	М 0.	997. YE	S YES
CRITICAL NEG MOMENT= REQD STEEL= 1054.MM2, MAX/MIN/ACTUAL BAR SPAC BASIC/REQD. DEVELOPMENT	ROW= .0033, ROWMX= ING= 886./ 37./	.0194 ROWMN= .003 / 98. MMS	

REQUIRED REINF. STEEL SUMMARY :

SECTION	REINF STEEL	(+VE/-VE)	MOMENTS (+)	/E/-VE)	LOAD(+VE/~VE)
(MM)	(SQ. MM		(KNS-1		
0.	0./	328.	0./	37.	0/ 14
83.	0./	319.	0./	36.	0/ 14
166.	0./	311.	0./	35.	0/ 14
249.	0./	304.	0./	35.	0/ 14
332.	0./	298.	0./	34.	0/ 14
416.	0./	292.	0 /	33.	0/ 14
499.	0./	287.	0./	33.	0/ 14
582.	0./	283.	0 /	32.	0/ 14
665.	0./	280.	0./	32.	0/ 14
748.	0./	280.	0./	32.	0/ 15
831.	7.0	283.	0./	32.	0/ 15

	(\$Q.		MOMENTS(+VE/ (KNS-		/D(+VE/-VE)
914. 997.		287. 291.	0./	33. 33.	27/ 1 27/ 1	
В	EAM NO.	17 DES	EGN RESU	LTS-SF	IEAR	
Salaha e	SUPPORT -	STIRRUPS ARE Vu= 16.35	KNS Vc= 257. NOT REQUIRED. KNS Vc≈ 257. NOT REQUIRED.	07 KNS Vs=		1.11
13J_		99	7x 999x 399_			14J
	316. 0.TO	997		Н 84.538	.TO 997	
0000	0000000	0 10#12 	00000000	10#12 10#12	00000000	
LEN -	997. MM FY		I G N R E S I - 25. MPA, FROM (MM)			ior
LEN -	997. MM FY HEIGHT (MM)	- 414 FC BAR INFO	- 25. MPA, FROM (MM)	SIZE - 1000 TO (MM)	. X 400. ANCH STA	ior End
LEN -	997. MM FY HEIGHT (MM)	- 414. FC	- 25. MPA, FROM (MM)	SIZE - 1000 TO (MM) 997	. X 400. ANCH STA YES	ior End YES
LEN - LEVEL 1	997. MM FY HEIGHT (MM) 84. FICAL POS MOD STEEL= 109	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING=	- 25. MPA, FROM (MM)	SIZE - 1000 TO (MM) 997. 997.MM, .0194 ROWM	. X 400. ANCH STA YES LOAD 20 N= .0033	ior End YES
LEN - LEVEL 1	997. MM FY HEIGHT (MM) 84. FICAL POS MOD D STEEL= 109 /MIN/ACTUAL FICAL POS DEVI	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG	- 25. MPA, FROM (MM) 0. 92 KN-MET AT .0033, ROWMX= 886./ 37.	SIZE - 1000 TO (MM) 997. 997.MM, .0194 ROWM / 98. MMS 334. MMS	. X 400. ANCH STA YES LOAD 20 N= .0033	OR END
LEN - LEVEL 1	997. MM FY HEIGHT (MM) 84. FICAL POS MON D STEEL= 109 /MIN/ACTUAL FIC/REQD. DEVI	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG 10 - 12MM MENT= 33. 54.MM2, ROW= BAR SPACING=	- 25. MPA, FROM (MM) 0. 92 KN-MET AT .0033, ROWMX= 886./ 37. TH = 177./	997. 997.MM, 997. 998. MMS 334. MMS 997. 0.MM, 997.	. X 400. ANCH STA YES LOAD 20 N= .0033 YES LOAD 15 N= .0033	OR END YES
LEN - LEVEL 1 CRIT REQI MAX, BAS CRIT REQ	997. MM FY HEIGHT (MM) 84. FICAL POS MON D STEEL= 109 /MIN/ACTUAL FIC/REQD. DEVI 316. TICAL NEG MON D STEEL= 109 /MIN/ACTUAL FIC/REQD. DEVI	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG 10 - 12MM MENT= 33. 54.MM2, ROW= BAR SPACING=	- 25. MPA, FROM (MM) 0. 92 KN-MET AT .0033, ROWMX= 886./ 37. 177./ 0. 04 KN-MET AT .0033, ROWMX= 886./ 37.	997. 997.MM, 997. 998. MMS 334. MMS 997. 0.MM, 997.	. X 400. ANCH STA YES LOAD 20 N= .0033 YES LOAD 15 N= .0033	OR END YES
LEN - LEVEL 1	997. MM FY HEIGHT (MM) 84. FICAL POS MON D STEEL= 109 /MIN/ACTUAL I IC/REQD. DEVI 316. TICAL NEG MON D STEEL= 10 /MIN/ACTUAL I IC/REQD. DEVI D REINF. STE	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG 10 - 12MM MENT= 33. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG	- 25. MPA, FROM (MM) 0. 92 KN-MET AT .0033, ROWMX= 886./ 37. TH = 177./ 0. 04 KN-MET AT .0033, ROWMX= 886./ 37. TH = 177./	997. 997.MM, 997. 997.MM, 0194.ROWM 997. 00.MM, 0194.ROWM 998.MMS	. X 400. ANCH STA YES LOAD 20 N= .0033 YES LOAD 15 N= .0033	YES
LEN - LEVEL 1	997. MM FY HEIGHT (MM) 84. FICAL POS MON D STEEL= 109 /MIN/ACTUAL I IC/REQD. DEVI 316. TICAL NEG MON D STEEL= 10 /MIN/ACTUAL I IC/REQD. DEVI D REINF. STE	- 414. FC BAR INFO 10 - 12MM MENT= 73. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG 10 - 12MM MENT= 33. 54.MM2, ROW= BAR SPACING= ELOPMENT LENG ELOPMENT LENG ELOPMENT LENG ELOPMENT LENG MM)	- 25. MPA, FROM (MM) 0. 92 KN-MET AT .0033, ROWMX= 886./ 37. TH = 177./ 0. 04 KN-MET AT .0033, ROWMX= 886./ 37. TH = 177./	997. 997.MM, 997. 997.MM, 0194.ROWM 997. 00.MM, 0194.ROWM 998.MMS	. X 400. ANCH STA YES LOAD 20 N= .0033 YES LOAD 15 N= .0033	YES

ECTION REINF STEEL (+VE/-VE) MOMENTS (+VE/-VE) (MM) (SQ. MM) (KNS-MET) 249. 179./ 191. 20./ 22. 20/ 15 332. 234./ 160. 27./ 18. 20/ 15 416. 289./ 134. 33./ 15. 20/ 28 499. 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 10No12 H 316. 0.TO 997 11 110No12 H 84. 0.TO 997 11 110No12 H 84. 0.TO 997 11 110#12 10#12 110#12	(MM)		'-VE)	MOMENING (LUE /	(777)		
249. 179./ 191. 20./ 22. 20/ 15 332. 234./ 160. 27./ 18. 20/ 15 416. 289./ 134. 33./ 15. 20/ 28 499. 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 831. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 10No12 H 316. 0.TO 997 110No12 H 34. 0.TO 997 110No12 H 34. 0.TO 997 110No12 H 34. 0.TO 997						AD(+VE/-	JE)
249. 179./ 191. 20./ 22. 20/ 15 332. 234./ 160. 27./ 18. 20/ 15 416. 289./ 134. 33./ 15. 20/ 28 499. 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED.		(ag. ma)		(KNS-	MET)		٠, ٠
332. 234./ 160. 27./ 18. 20/ 15 416. 289./ 134. 33./ 15. 20/ 28 499. 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 100012 H 316. 0.TO 997 110012 H 316. 0.TO 997 110012 H 316. 0.TO 997	249	179 /	101	20 /	22	20/	1.5
416. 289./ 134. 33./ 15. 20/ 28 499. 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 10No12 H 316. 0.TO 997 110No12 H 34. 0.TO 997 110No12 H 34. 0.TO 997 110No12 H 34. 0.TO 997						-	
499, 344./ 113. 39./ 13. 20/ 28 582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN							
582. 398./ 92. 45./ 11. 20/ 28 665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 B E A M N O. 18 D E S I G N R E S U L T S - SHEAR AT START SUPPORT - Vu= 75.40 kNS Vc= 257.07 kNS Vs= .00 kN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 kNS Vc= 257.07 kNS Vs= .00 kN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 10No12 H 316. 0.TO 997 110No12 H 84. 0.TO 997 110No12 H 84. 10.TO 997 110No12 H 84. 10.TO 997							
665. 451./ 72. 51./ 8. 20/ 28 748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 BEAMNO. 18 DESIGNRESULTS - SHEAR AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN						-	
748. 504./ 53. 57./ 6. 20/ 28 831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 B E A M N O. 18 D E S I G N R E S U L T S - SHEAR AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN		451./	72	The state of the s	· •		
831. 556./ 35. 63./ 4. 20/ 28 914. 607./ 17. 68./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 B E A M N O. 18 D E S I G N R E S U L T S - SHEAR AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN		5 A /	c n			,	
914. 607./ 17. 688./ 2. 20/ 28 997. 658./ 0. 74./ 0. 20/ 28 BEAM NO. 18 DESIGN RESULTS - SHEAR AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN							
997. 658./ 0. 74./ 0. 20/ 28 BEAM NO. 18 DESIGN RESULTS - SHEAR AT START SUPPORT - Vu= 75.40 kNs Vc= 257.07 kNs Vs= .00 kN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 kNs Vc= 257.07 kNs Vs= .00 kN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 10No12 H 316. 0.TO 997 110No12 H 84. 0.TO 997 1 0000000000 000000000 000000000 10#12 10#12			- + -				
BEAM NO. 18 DESIGN RESULTS - SHEAR AT START SUPPORT - Vu= 75.40 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. AT END SUPPORT - Vu= 70.77 KNS Vc= 257.07 KNS Vs= .00 KN STIRRUPS ARE NOT REQUIRED. 14J 997X 999X 399 1 1	and the first of the control of the						
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10No12 H 316.				X 999X 399			_ 15
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110#12		"					
10#12		<u>and the spirit</u>					
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1 0000000000 1 1 0000000000 1 1 1 000000					夏11 水红		

 - 1_				 			1			
	LEN -						U L T			MMS
	LEVEL	HEIG (MM)		BAR	INFO	FROM (MM)	T (M	7	 ANCH STA	
	1	. 8	34.	16 -	12MM	0.	9	97.	YES	YES

2 316. 10 - 12MM 0. 466. YES NO CRITICAL NEG MOMENT= .03 KN-MET AT 0.MM, LOAD 28 REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98.MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 466.MMS		REQD STEEL= 1795.MM2, ROW= .0057, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 59. MMS BASIC/REQD. DEVELOPMENT LENGTH = 177./ 356. MMS	
REQD STEEL= 1054 MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS	1-	2 316. 10 - 12MM 0. 466. YES	NO
		REQD STEEL= 1054.MM2, ROW= .0033, ROWMX= .0194 ROWMN= .0033 MAX/MIN/ACTUAL BAR SPACING= 886./ 37./ 98. MMS	

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					For the State of t
SECTION	REINF STEEL(+	VE/-VE)	MOMENTS (+VE/	'-VE} LO	AD(+VE/-VE)
(MM)	(SQ. MM)	and the second	(KNS-MET	·)	Algebra and the
(the)	(50: 111.7		,,,,,,		
0.	658./	0.	74./	0.	20/ 28
83.	756./	0.	85./	0.	20/ 0
166.	854./	0.	95./	0.	20/ 0
249.	951./	0.	106./	0.	20/ 0
332	1049./	0.	116./	0.	20/ 0
416.	1146./	0.	127./	0.	20/ 0
499	1243./	0.	137./	0.	20/ 0
582.	1340./	0.	. 147./	0.	20/ 0
665.	1437./	0.	157 /	0.	20/ 0
748.	1534./	0.	167./	0.	20/ 0
831.	1630./	0.	177./	0.	20/ 0
914.	1727./	0.	187 /	0.	20/ 0
997.	1823./	0.	197./	0.	20/ 0

BEAM NO. 19 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 125.70 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 997. MM

AT END SUPPORT - Vu= 121.06 KNS Vc= 257.07 KNS Vs= .00 KNS PROVIDE 12 MM BARS AT 155. MM C/C FOR 997. MM

15J	997X	999X 399_		16J	
10No12 H 316. 0.TO 46 8*12c/c155 16No12 H 84. 0.TO 99				8*12c/c155	ि । ५५ । १५ ।
	the growth and	tyrif oder eiti	<u> </u>		
 000000000 10#12 16#12					
1 00000000000000		000000000	1 000	0000000000000	

BEAM NO. 20 DESIGN RESULTS - FLEXURE

LEN - 990. MM FY - 414. FC - 25. MPA, SIZE - 1000. X 400. MMS

LEVEL HEIGHT BAR INFO FROM TO ANCHOR
(MM) (MM) (MM) STA END

1 86. 10 - 16MM 0. 990. YES YES

| CRITICAL POS MOMENT= 221.50 KN-MET AT 0.MM, LOAD 20 |
| REQD STEEL= 2005.MM2, ROW= .0063, ROWMX= .0194 ROWMN= .0033 |
| MAX/MIN/ACTUAL BAR SPACING= 882./ 41./ 98. MMS |
| BASIC/REQD. DEVELOPMENT LENGTH = 316./ 477. MMS |

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ECTION (MM)	REINF STEEL (SQ. MM		MOMENTS (+V (KNS-M		LOAD (+VE/-VE)
0.	2066./	0.	221./	0.	20/ 0
82.	1961./	o o	211./	0.	20/ 0
165.	1856./	0	200./	0	20/ 0
247	1750./	0	190./	0.	20/ 0
330.	1645./	0	179./	0.	20/ 0
412.	1539./	0	168./	0.	20/ 0
495.	1434./	0.	157./	0.	20/ 0
577.	1328./	0.	146./	0.	20/ 0
660.	1222./	0.	135./	0.	
742	1117./	and the second second second	124./	0.	20/ 0
825.	1011./	0	112./	0.	20/ 0
907. 990.	905./ 800./	0.	101./ 89./	0.	20/ 0 20/ 0
8 E	AM NO. 20	DESI	GN RESU	LTS-	SHEAR
AT START			S Vc= 257.0 BARS AT 155.		s= .00 KNS FOR 990. MM
AT END			S Vc= 257.0 BARS AT 155.		s= .00 KNS FOR 990. MM
267					
8*12c/c15	5 6. 0.TO 990		999X 399		8*12c/c155
16J 8*12c/c15 No16 H 8	5 6. 0.TO 990		999X 399		
8*12c/c15 No16 H 8	5 6. 0.TO 996	10#16		 10#1	8*12c/c155
8*12c/c15)No16 H 8 0#16 0000c	6. 0.TO 996)	occooco G N R E S U	 10#1 	8*12c/c155
8*12c/c15 No16 H 8 #16 0000c	A M N O. 2	1 10#16 000	G N R E S U 25. MPA, SI		8*12c/c155 6 ccccccccccccccccccccccccccccccccc
8*12c/c15 No16 H 8 0#16 000000	6. 0.TO 996	1 10#16 000	occooco G N R E S U	 10#1 	8*12c/c155 6 000000000
8*12c/c15 No16 H 8 0#16 000000	A M N O. 2: 7. MM FY - 4 EIGHT BAR	D 10#16 000 1 1 1 1 1 1 1 1	GNRESU 25. MPA, SI		8*12c/c155 6

REQD STE	CEL= 1054.N ACTUAL BAR	M2, ROW≃ .0 SPACING=	7 KN-MET AT 0033, ROWMX= . 886./ 37./ H = 177./	0194 ROWMN 98. MMS	.0033 -	
	ENF. STEEL S					
ECTION MM)		.(+VE/-VE) ()	MOMENTS (+V (KNS-M		LOAD (+VE/	(-VE)
ries)	(3Q. th		. VAND G			
0.	800./	0.	89./	0.	20/	0
	739./	0.	83./		20/	
	678./	0.	76./		20/	
249.	616./	2.	69./			28
332.	554./ 491./	27.	62./ 55./	3. 6.	20/ 2	28 28
416. 499.		33. 80.	55./ 48./	9.	20/ 2	
	364./			4.0	20/ 2	28
	299./		34./ 27./	16.	20/	28
748.	235./	166.	27./	19.	20/ 2	28
831.	169./	196.	19./	22.		28
914.	104./	227.	the first and a second control of the		27/ 2	
997.	40./	261.	5./	30.	27/ 2	21
AT START S	UPPORT - Vu ST UPPORT - Vu ST	IRRUPS ARE 1 = 87.64 K1 IRRUPS ARE 1	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED.)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J DNo12 H 316	UPPORT - Vu ST UPPORT - Vu ST	= 83.01 Ki IRRUPS ARE 1 = 87.64 Ki IRRUPS ARE 1	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J	UPPORT - Vu: ST UPPORT - Vu: ST O:TO 9	= 83.01 KM IRRUPS ARE N = 87.64 KM IRRUPS ARE N 997	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J DNo12 H 316	UPPORT - Vu: ST UPPORT - Vu: ST O:TO 9	= 83.01 Ki IRRUPS ARE 1 = 87.64 Ki IRRUPS ARE 1 997	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J DNo12 H 316	UPPORT - Vu: ST UPPORT - Vu: ST O:TO 9	= 83.01 KM IRRUPS ARE N = 87.64 KM IRRUPS ARE N 997	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J DNo12 H 316	UPPORT - Vu: ST UPPORT - Vu: ST O:TO 9	= 83.01 KM IRRUPS ARE N = 87.64 KM IRRUPS ARE N 997	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399)7 KNS Vs=)7 KNS Vs=	= .00 = .00	KNS
AT START S AT END S 17J DNo12 H 316	UPPORT - Vu: ST UPPORT - Vu: ST . 0.TO 9	= 83.01 KM IRRUPS ARE N = 87.64 KM IRRUPS ARE N 997 97	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399	07 KNS Vs=	= .00 = .00	KNS 18J
AT START S AT END S 17J DNo12 H 316 DNo12 H 84	UPPORT - Vui ST UPPORT - Vui ST . 0.TO 9	= 83.01 KM IRRUPS ARE N = 87.64 KM IRRUPS ARE N 9977 97 97	NS Vc= 257.0 NOT REQUIRED. NS Vc= 257.0 NOT REQUIRED. X 999X 399	07 KNS Vs= 07 KNS Vs= 1 1 1 1 1 1 1 1 1 1	= .00 00	KNS 18J
AT START S AT END S 17J DNo12 H 316 DNo12 H 84 000000 0#12 0#12 0#12 0#12	UPPORT - Vui ST UPPORT - Vui ST . 0.TO 9 . 0.TO 9	= 83.01 KM IRRUPS ARE M = 87.64 KM IRRUPS ARE M 997 97	NS VC= 257.0 NOT REQUIRED. NS VC= 257.0 NOT REQUIRED. X 999X 399 OOOOOOOO	07 KNS Vs= 07 KNS Vs= 07 KNS Vs= 1	= .00 = .00 00 00 00 00 00 00 00 00 00	KNS 18J
AT START S AT END S 17J DNo12 H 316 DNo12 H 84 000000 0#12 0#12 0#12 0#12	UPPORT - Vui ST UPPORT - Vui ST . 0.TO 9 . 0.TO 9	= 83.01 KM IRRUPS ARE M = 87.64 KM IRRUPS ARE M 997 97	NS VC= 257.0 NOT REQUIRED. NS VC= 257.0 NOT REQUIRED. X 999X 399	07 KNS Vs= 07 KNS Vs= 07 KNS Vs= 1	= .00 = .00 00 00 00 00 00 00 00 00 00	KNS 18J
AT START SI AT END S 17J DNo12 H 316 DNo12 H 84 000000 #12 0#12 0#12 0#12 LEN - 997 LEVEL HE	UPPORT - Vusual ST UPPORT - Vusual ST	= 83.01 KM IRRUPS ARE M = 87.64 KM IRRUPS ARE M 997 97	NS VC= 257.0 NOT REQUIRED. NS VC= 257.0 NOT REQUIRED. X 999X 399 OOOOOOOO	07 KNS Vs= 07 KNS Vs= 07 KNS Vs= 1	= .00 = .00 00 00 00 00 00 00 00 00 00	KNS 18J OO MMS HOR
AT START SI AT END S 17J DNo12 H 316 DNo12 H 84 000000 #12 0#12 0#12 0#12 LEN - 997 LEVEL HE	UPPORT - Vu ST UPPORT - Vu ST O.TO 9 O.TO 9 O.TO 9 O.TO 9 CIGHT BA (MM)	= 83.01 Ki IRRUPS ARE I = 87.64 Ki IRRUPS ARE I 997: 97 97	NS VC= 257.0 NOT REQUIRED. NS VC= 257.0 NOT REQUIRED. X 999X 399 COOCOCOCO COCCOCOCOCOCOCOCOCOCOCOCOC	07 KNS Vs= 07 KNS Vs= 07 KNS Vs= 1	= .00 = .00 0000000 00000000 FLEXURE . X 400. ANC	KNS 18J 00 MMS HOR END

	1.10	and the second s	100	
2 316. 10 -	1.2MM 0.	997	YES	YES
CRITICAL NEG MOMENT= REQD STEEL= 1054.MM MAX/MIN/ACTUAL BAR S BASIC/REQD. DEVELOPM	2, ROW= .0033, ROWMX PACING= 886./ 37	= .0194 ROWMN= ./ 98. MMS		

REQUIRED REINF. STEEL SUMMARY :

		and the state of the sales.	Sept. Earlie	Strain East	4 5 5
SECTION REINF STEEL (+VE/-VE)	MOMENTS (+VE/-	-VE)	LOAD (+VE	(-VE)
(MM) (SQ. MM) that is a still	(KNS-MET)		100
0. 40./	261.	5./	30	27/	21
83. 16./	262.	2./	30	27/	21
166. 0./	263.	0./	30	. 0/	21
249.	266.	0./	30.	0/	21
332.	269.	0./	31.	0/	21
416. 0./	273.	0./	31.	0/	21
499. 0./	278.	0./	32	0/	16
582. 0./	299.	0./	34	0/	16
665. 0./	320.	0./	36	0/	16
748.	342.	0./	39	0/	16
831.	365	0./	41.	0/	16
914. 0./	388	0./	44	0/	16
997.	413.	0./	47.	0/	16
	and the second second		467.1 To 14.4		

BEAM NO. 22 DESIGN RESULTS - SHEAR

AT START SUPPORT - Vu= 38.93 KNS Vc= 257.07 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.

AT END SUPPORT - Vu= 43.57 KNS Vc= 257.07 KNS Vs= .00 KNS STIRRUPS ARE NOT REQUIRED.

18J	<u> Paragonal (a</u>	997X 999X	399		19J
10No12 H 316. C	.то 997				
10No12 H 84. 0).TO 418				
000000000 10#12		000000000 2		0000000	0000
110#12					
000000000 					

138. END CONC DESIGN

139. FINISH