

[()] []

()																
				2												
				가								()	()	()	()	
<i>STB[1]</i>		b	a	a	b	a	b	b	b	a	Q	a	a	N/A	N/A	
<i>STB[2]</i>		b	b	a	b	a	b	N/A	a	b	Q	a	a	N/A	N/A	
<i>STB[3]</i>		N/A	N/A	N/A	N/A	N/A	N/A	b	a	a	Q	a	a	N/A	N/A	
		0.200	0.150	0.100	0.200	0.100	0.200	0.200	0.133	0.133	N/A	0.100	0.100	N/A	N/A	
가		18	20	5	7	3	2	9	9	20	N/A	4	3	N/A	N/A	
(X가)/가		0.036	0.030	0.005	0.014	0.003	0.004	0.018	0.012	0.027	N/A	0.004	0.003	N/A	N/A	
1. =		0.156														
2. 가 =		B														

[()] []

()																
				2												
				가								()	()	()	()	
<i>STB[1]</i>		b	a	a	b	a	b	b	b	b	Q	a	a	N/A	N/A	
<i>STB[2]</i>		b	b	a	a	c	b	N/A	b	b	Q	a	a	N/A	N/A	
<i>STB[3]</i>		N/A	N/A	N/A	N/A	N/A	N/A	N/A	a	a	Q	a	a	N/A	N/A	
		0.200	0.150	0.100	0.150	0.250	0.200	0.200	0.167	0.167	N/A	0.100	0.100	N/A	N/A	
가		18	20	5	7	3	2	9	9	20	N/A	4	3	N/A	N/A	
(X가)/가		0.036	0.030	0.005	0.011	0.008	0.004	0.018	0.015	0.033	N/A	0.004	0.003	N/A	N/A	
1. =		0.166														
2. 가 =		B														

[()] [PSC I]

()																
				2												
				가								()	()	()	()	
PSC[1]	PSC I	a	a	a	a	c	b	c	b	b	Q	a	a	N/A	N/A	
PSC[2]	PSC I	b	a	a	a	a	c	N/A	b	a	Q	a	a	N/A	N/A	
PSC[3]	PSC I	b	b	c	a	a	b	b	b	b	Q	a	a	N/A	N/A	
PSC[4]	PSC I	a	b	c	b	a	b	N/A	b	b	Q	a	a	N/A	N/A	
PSC[5]	PSC I	b	b	a	b	a	b	N/A	b	b	Q	a	a	N/A	N/A	
PSC[6]	PSC I	N/A	N/A	N/A	N/A	N/A	N/A	c	b	a	Q	a	a	N/A	N/A	
		0.160	0.160	0.220	0.140	0.160	0.240	0.333	0.200	0.167	N/A	0.100	0.100	N/A	N/A	
가		18	20	5	7	3	2	9	9	20	N/A	4	3	N/A	N/A	
(X가)/가		0.029	0.032	0.011	0.010	0.005	0.005	0.030	0.018	0.033	N/A	0.004	0.003	N/A	N/A	
1. =		0.180														
2. 가 =		B														

[()] [PSC Box]

()															
				2											
				가								()	()	()	()
PSCB[1]	PSC Box	a	b	N/A	b	a	b	b	b	b	Q	a	a	N/A	N/A
PSCB[2]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[3]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[4]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[5]	PSC Box	a	b	N/A	b	a	c	N/A	b	b	Q	a	a	N/A	N/A
PSCB[6]	PSC Box	a	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[7]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[8]	PSC Box	a	b	N/A	a	a	c	N/A	b	b	Q	a	a	N/A	N/A
PSCB[9]	PSC Box	a	b	N/A	a	c	b	N/A	b	a	Q	a	a	N/A	N/A
PSCB[10]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[11]	PSC Box	a	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[12]	PSC Box	b	a	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[13]	PSC Box	b	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[14]	PSC Box	b	a	N/A	b	a	c	N/A	b	b	Q	a	a	N/A	N/A
PSCB[15]	PSC Box	a	b	N/A	b	c	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[16]	PSC Box	b	b	N/A	b	c	b	b	b	b	Q	a	a	N/A	N/A
PSCB[17]	PSC Box	a	a	N/A	a	a	b	N/A	b	c	Q	a	a	N/A	N/A
PSCB[18]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[19]	PSC Box	a	b	N/A	b	a	a	N/A	b	c	Q	a	a	N/A	N/A
PSCB[20]	PSC Box	a	b	N/A	a	c	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[21]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[22]	PSC Box	a	b	N/A	b	c	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[23]	PSC Box	a	a	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[24]	PSC Box	a	a	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[25]	PSC Box	a	a	N/A	b	a	b	N/A	b	a	Q	a	a	N/A	N/A
PSCB[26]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[27]	PSC Box	N/A	N/A	N/A	N/A	N/A	N/A	c	b	b	Q	a	a	N/A	N/A
		0.115	0.169	N/A	0.165	0.158	0.219	0.267	0.200	0.207	N/A	0.100	0.100	N/A	N/A
가		23	20	N/A	7	3	2	9	9	20	N/A	4	3	N/A	N/A
(X가)/가		0.027	0.034	N/A	0.012	0.005	0.004	0.024	0.018	0.041	N/A	0.004	0.003	N/A	N/A
1. =														0.172	
2. 가 =														B	

[()] [PSC Box]

()															
				2											
				가								()	()	()	()
PSCB[1]	PSC Box	a	b	N/A	a	a	b	c	b	b	Q	a	a	N/A	N/A
PSCB[2]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[3]	PSC Box	b	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[4]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[5]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[6]	PSC Box	b	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[7]	PSC Box	b	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[8]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[9]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[10]	PSC Box	a	a	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[11]	PSC Box	b	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[12]	PSC Box	b	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[13]	PSC Box	b	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[14]	PSC Box	b	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[15]	PSC Box	b	a	N/A	a	c	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[16]	PSC Box	b	b	N/A	b	c	b	b	b	b	Q	a	a	N/A	N/A
PSCB[17]	PSC Box	a	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[18]	PSC Box	a	a	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[19]	PSC Box	a	b	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[20]	PSC Box	a	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[21]	PSC Box	a	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[22]	PSC Box	a	a	N/A	a	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[23]	PSC Box	b	a	N/A	b	c	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[24]	PSC Box	b	b	N/A	b	a	b	N/A	b	a	Q	a	a	N/A	N/A
PSCB[25]	PSC Box	b	b	N/A	b	a	b	N/A	b	b	Q	a	a	N/A	N/A
PSCB[26]	PSC Box	N/A	N/A	N/A	N/A	N/A	N/A	b	b	b	Q	a	a	N/A	N/A
		0.148	0.168	N/A	0.148	0.136	0.200	0.267	0.200	0.196	N/A	0.100	0.100	N/A	N/A
가		23	20	N/A	7	3	2	9	9	20	N/A	4	3	N/A	N/A
(X가)/가		0.034	0.034	N/A	0.010	0.004	0.004	0.024	0.018	0.039	N/A	0.004	0.003	N/A	N/A
1. = 0.174															
2. 가 = B															

■ 삼량진다발 상행진 상태평가 결과표

1. 상행진 (1차)

SPAN NO.	차수	구분	차량 종류/속도	차량종류						합계	평균 차수	구분	비고
				전차	승용차 (승용차)	노면	자전거 (자전거)	보행자	전차/화물				
1	3									3	0.08	a	1차 3차 6
2	1									1	0.11	a	1차 3차 6
3	6									6	0.17	a	1차 3차 6
70	6									6	0.17	a	1차 3차 6
80	1									1	0.11	a	1차 3차 6
81	1									1	0.11	a	1차 2차 6
합계	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.15	a	

2. 상행진 (2차 1차)

SPAN NO.	차수	구분	차량 종류/속도	차량종류						합계	평균 차수	구분	비고
				전차	승용차 (승용차)	노면	자전거 (자전거)	보행자	전차/화물				
1										0	0.00	a	1차 3차 6
3	1									1	0.15	a	1차 3차 6
6	1									1	0.15	a	1차 3차 6
7	1									1	0.15	a	1차 3차 6
8	6									6	0.22	a	1차 3차 6
9	6			1						7	0.26	a	1차 3차 6
10										0	0.00	a	1차 3차 1
11										0	0.00	a	1차 3차 1
12	6									6	0.22	a	1차 3차 1
12										0	0.00	a	1차 3차 1
14										0	0.00	a	1차 3차 1
15	1									1	0.15	a	1차 3차 1
16	1									1	0.15	a	1차 3차 1
17	1									1	0.15	a	1차 3차 1
18	6									6	0.22	a	1차 3차 1
19	1									1	0.15	a	1차 3차 1
20	1									1	0.15	a	1차 3차 1
22	1									1	0.15	a	1차 3차 1
23	1									1	0.15	a	1차 3차 1
24	6									6	0.22	a	1차 3차 1
25	6									6	0.22	a	1차 3차 1
26	6									6	0.22	a	1차 3차 1
27	6									6	0.22	a	1차 3차 1
28	1									1	0.15	a	1차 3차 1
29	6									6	0.22	a	1차 3차 1
30	6									6	0.22	a	1차 3차 1
31	6									6	0.22	a	1차 3차 2
32	1									1	0.15	a	1차 3차 2
33	1									1	0.15	a	1차 3차 2
34	1									1	0.15	a	1차 3차 2
35	1									1	0.15	a	1차 3차 2
36	1									1	0.15	a	1차 3차 2
37	1									1	0.15	a	1차 3차 2
38	1									1	0.15	a	1차 3차 2
39	1									1	0.15	a	1차 3차 2
40	1									1	0.15	a	1차 3차 2
41										0	0.00	a	1차 3차 2
42										0	0.00	a	1차 3차 2
43										0	0.00	a	1차 3차 2
44										0	0.00	a	1차 3차 2

Table 1: Input data

SPAN NO.	SPAN LENGTH (m)	SPAN TYPE	SPAN MATERIAL	SPAN GEOMETRY						SPAN AREA (m ²)	SPAN VOLUME (m ³)	SPAN WEIGHT (kN)	SPAN CENTER OF GRAVITY (m)
				SPAN WIDTH (m)	SPAN DEPTH (m)	SPAN RADIUS (m)	SPAN CHORD LENGTH (m)	SPAN CURVATURE (m)	SPAN TORSION (m)				
1										0	0.00	0	1.5 m
2										0	0.00	0	1.5 m
3										0	0.00	0	1.5 m
4	6									6	0.00	0	1.5 m
5										0	0.00	0	1.5 m
6										0	0.00	0	1.5 m
7										0	0.00	0	1.5 m
8										0	0.00	0	1.5 m
9										0	0.00	0	1.5 m
10										0	0.00	0	1.5 m
11										0	0.00	0	1.5 m
12	1									1	0.15	0	1.5 m
13	1									1	0.15	0	1.5 m
14	1									1	0.15	0	1.5 m
15	1									1	0.15	0	1.5 m
16	1									1	0.15	0	1.5 m
17	1									1	0.15	0	1.5 m
18										0	0.00	0	1.5 m
19	1									1	0.15	0	1.5 m
20										0	0.00	0	1.5 m
21										0	0.00	0	1.5 m
22	6									6	0.00	0	1.5 m
23	6									6	0.00	0	1.5 m
24	6									6	0.22	0	1.5 m
25	1									1	0.15	0	1.5 m
26	6									6	0.22	0	1.5 m
27										0	0.00	0	1.5 m
28	1									1	0.15	0	1.5 m
29										0	0.00	0	1.5 m
30	6									6	0.00	0	1.5 m
31	6									6	0.00	0	1.5 m
32	1									1	0.10	0	1.5 m
33	6									6	0.00	0	1.5 m
34										0	0.00	0	1.5 m
35	1									1	0.15	0	1.5 m
36	7									7	0.00	0	1.5 m
37	7									7	0.00	0	1.5 m
38	6									6	0.00	0	1.5 m
39	3, 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3, 7	0.15	0	

■ 삼량진다발 하행선 상태평가 결과표

1. 상행선

SPAN NO.	제1차	제2차	제3차 이상	하중상태						제1차	제2차 이상	제3차	제4차 이상
				무중	하중미달(%)	하중	하중불균	하중불	하중불				
1	6									6	0.17	5	1%생6
2	6									6	0.17	5	1%생6
3										0	0.00	0	1%생6
81	1									1	0.11	0	1%생6
82										0	0.00	0	1%생6
83										0	0.00	0	1%생6
합계	23.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.07	0.07	0	

2. 하행선 (제1차)

SPAN NO.	제1차	제2차	제3차 이상	하중상태						제1차	제2차 이상	제3차	제4차 이상
				무중	하중미달(%)	하중	하중불균	하중불	하중불				
1										0	0.00	0	1%생1
3										0	0.00	0	1%생1
6										0	0.00	0	1%생1
7										0	0.00	0	1%생1
8										0	0.00	0	1%생1
9										0	0.00	0	1%생1
10										0	0.00	0	1%생1
11										0	0.00	0	1%생1
12	1									1	0.15	0	1%생1
13	1									1	0.15	0	1%생1
14										0	0.00	0	1%생1
15										0	0.00	0	1%생1
16	6									6	0.22	5	1%생1
17										0	0.00	0	1%생1
18	1									1	0.15	0	1%생1
19	1									1	0.15	0	1%생1
20										0	0.00	0	1%생1
21										0	0.00	0	1%생1
22	1									1	0.15	0	1%생1
23										0	0.00	0	1%생1
24	1									1	0.15	0	1%생1
25	1									1	0.15	0	1%생1
26	1									1	0.15	0	1%생1
27	1									1	0.15	0	1%생1
28	1									1	0.15	0	1%생1
29										0	0.00	0	1%생1
30										0	0.00	0	1%생1
31										0	0.00	0	1%생1
32	1									1	0.15	0	1%생2
33	6									6	0.22	5	1%생2
34	1									1	0.15	0	1%생2
35	1									1	0.15	0	1%생2
36	1									1	0.15	0	1%생2
37	1									1	0.15	0	1%생2
38										0	0.00	0	1%생2
39	1									1	0.15	0	1%생2
40	1									1	0.15	0	1%생2
41	1									1	0.15	0	1%생2
42	1									1	0.15	0	1%생2
43	1									1	0.15	0	1%생2

Table 1: Data for Figure 1

SPAN NO.	SPAN LENGTH (m)	SPAN TYPE	SPAN MATERIAL	SPAN DATA						SPAN STATUS	SPAN AGE (years)	SPAN CONDITION	SPAN NOTES
				SPAN AREA (m²)	SPAN VOLUME (m³)	SPAN WEIGHT (kN)	SPAN STRENGTH (MPa)	SPAN DUCTILITY	SPAN DEFLECTION (mm)				
1	1									1	0.15	a	1A 9E 2
2										0	0.00	a	1A 9E 3
3										0	0.00	a	1A 9E 3
7	6			1						7	0.36	s	1A 9E 3
8	1									1	0.15	a	1A 9E 3
9	1									1	0.15	a	1A 9E 1
10	1									1	0.15	a	1A 9E 1
11										0	0.00	a	1A 9E 1
12										0	0.00	a	1A 9E 1
13										0	0.00	a	1A 9E 1
14	6									6	0.36	s	1A 9E 1
15	1									1	0.15	a	1A 9E 1
16										0	0.00	a	1A 9E 1
17	6									6	0.36	s	1A 9E 1
18	1									1	0.15	a	1A 9E 1
19	7									7	0.36	s	1A 9E 1
20	1									1	0.15	a	1A 9E 1
21	6									6	0.36	s	1A 9E 1
22	1									1	0.15	a	1A 9E 3
23	1									1	0.15	a	1A 9E 2
24										0	0.00	a	1A 9E 3
25	6									6	0.22	y	1A 9E 2
26	6									6	0.36	s	1A 9E 3
27	6									6	0.22	y	1A 9E 2
28	6									6	0.36	s	1A 9E 3
29	6									6	0.36	s	1A 9E 3
30	6									6	0.36	s	1A 9E 3
71				1						1	0.0	a	1A 9E 2
72	1			1						1	0.19	s	1A 9E 2
73	6									6	0.36	s	1A 9E 2
74	1									1	0.15	a	1A 9E 2
75	1									1	0.15	a	1A 9E 2
76	6									6	0.36	s	1A 9E 2
77	6									6	0.36	s	1A 9E 2
78	6									6	0.36	s	1A 9E 1
79	6									6	0.36	s	1A 9E 1
80	1									1	0.15	a	1A 9E 1
81	3108	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	3113	0.15	a	

Segment 0~20

[illegible]

Segment 20~40

[illegible]

Segment 40~60

[illegible]

Segment 60~80

[illegible]

Segment 80~81

[illegible]

Segment 0~20

[illegible]

Segment 20~40

[illegible]

Segment 40~60

[illegible]

Segment 60~80

[illegible]

Segment 80~83

[illegible]