GEORGIA DEPARTMENT OF TRANSPORTATION

GDOT Project No: NH000-0575-01(028)

PI No: 713640

JBT Project No. 255717

Bridge No. 35
I-575 REVERSIBLE OVER BARRETT PKWY

November, 2009

COBB COUNTY

DESIGN CALCULATIONS

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience prior to the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.

(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not complete and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.

(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to pertinent factors and without proper regard for their purpose, could lead to erroneous conclusions.

(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work activity, a complete confirmation of the information contained herein should be performed prior to any such use.

(d) GTP has no responsibility for the use of this information not under its direct control.

Prepared for Georgia Transportation Partners
Atlanta, Georgia

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Purpose of Calculation

Bridge design calculations for Bridge #35 were made for costing purposes.

1. Specifications and References

AASHTO 17th Edition, 2002
GDOT Bridge Design Manual, 2008

2. Computer

Computer Type Used: PC
Operating System: Windows XP, Pentium 4, 2GB RAM (min.)

3. Computer Programs (Standard Computer Program)

Excel, Microsoft Office 2003 – JBT Calculation Spreadsheets
BRLLCA, 2008 – Live Load Case Program, by GDOT
BRPIER, 2008 – Pier Design and Analysis, by GDOT
BRPSBM1, 2008 – PSC Beam Design and Analysis, by GDOT
LEAP Geomath 08.01.00.01 – Bridge and Structure Geometry, by Bentley Systems Inc.

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Bridge Geometry Output	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	LEAP GEOMATH	08.01.00.01

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	87	87	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bridge Geometry Output
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Alignment ID: 575align

Start Station: 1068+96.1808

P.I.	North	East	Trans	Spiral-In	Spiral-Out	Radius
1	1,458,761.0400	2,177,556.0741	None			
2	1,460,955.9477	2,178,042.1224	Arc			11,599.9986
3	1,463,173.5218	2,177,673.0317	None			

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Alignment ID: 575align

Element # 1 Shape: Arc Radius 11,599.9986

	Station	North	East	Direction	Radius
Start:	1068+96.1808	1,458,761.0400	2,177,556.0741	N 12 29 10.641275	11,599.9986
End:	1113+37.2862	1,463,173.5218	2,177,673.0317	N 350 33 01.342644	11,599.9986
Length:	4,441.1054	Sense: Left		Delta: 21 56 09.298631	

Transition Point: CT Station: 1113+37.2862

Element # 2 Shape: Tangent

	Station	North	East	Direction	Radius
Start:	1113+37.2862	1,463,173.5218	2,177,673.0317	N 350 32 59.897186	INFINITY
End:	1113+37.2862	1,463,173.5218	2,177,673.0317	N 350 32 59.897186	INFINITY
Length:	0.0000			Delta: 0 00 00.000000	

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

XSection ID: 575xsect

SLOPE BREAK POINTS: 5

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
1084+00.0000	0.0000	1	-35.5000		
				0.020000	BAR
		2	-34.0000		
				0.020000	IFBAR-HOVB
		3	-8.0000		
				0.020000	HOVB
		4	-6.0000		
				0.020000	HOVB-PGL
		5	0.0000		

SLOPE BREAK POINTS: 5

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
1087+00.0000	0.0000	1	-35.5000		
				0.020000	BAR
		2	-34.0000		
				0.020000	IFBAR-HOVB
		3	-8.0000		
				0.020000	HOVB
		4	-6.0000		
				0.020000	HOVB-PGL
		5	0.0000		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: 575vert

VPI	Station	Elevation	Trans	Parabola-1	Parabola-2
1	1080+85.5300	1,006.1350	None		
2	1090+35.5300	980.3900	Parabola	1,900.0000	
3	1099+85.5300	969.8450	None		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: 575vert

Elem		Start	End	Apex		Transition
1	Sta	1080+85.5300	1080+85.5300	None	Length	0.0000
	Elev	1,006.1350	1,006.1350	None	Type	Tangent
	Grade	-0.0271	-0.0271			
2	Sta	1080+85.5300	1099+85.5300	None	Length	1,900.0000
	Elev	1,006.1350	969.8450	None	Type	Parabola
	Grade	-0.0271	-0.0111			
3	Sta	1099+85.5300	1099+85.5300	None	Length	0.0000
	Elev	969.8450	969.8450	None	Type	Tangent
	Grade	-0.0111	-0.0111			

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Alignment ID: Barrettalign

Start Station: 196+45.8330

P.I.	North	East	Trans	Spiral-In	Spiral-Out	Radius
1	1,460,433.9816	2,177,445.3730	None			
2	1,460,403.4810	2,178,119.4600	None			

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Alignment ID: Barrettalign

Element # 1 Shape: Tangent

	Station	North	East	Direction	Radius
Start:	196+45.8330	1,460,433.9816	2,177,445.3730	N 92 35 26.559120	INFINITY
End:	203+20.6097	1,460,403.4810	2,178,119.4600	N 92 35 26.559120	INFINITY
Length:	674.7767		Delta:	0 00 00.000000	

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

XSection ID: BarrettxsectLT

SLOPE BREAK POINTS: 3

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
197+00.0000	-8.0000	1	-36.0000		
				0.020000	
		2	0.0000		
				0.020000	
		3	8.0000		

SLOPE BREAK POINTS: 3

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
202+00.0000	-8.0000	1	-36.0000		
				0.020000	
		2	0.0000		
				0.020000	
		3	8.0000		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

XSection ID: BarrettxsectRT

SLOPE BREAK POINTS: 3

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
197+00.0000	8.0000	1	-8.0000		
				-0.020000	
		2	0.0000		
				-0.020000	
		3	36.0000		

SLOPE BREAK POINTS: 3

STATION	PGL-OFFSET	POINT	DIST-FR-PGL	GRADE	DESCRIPTION
202+00.0000	8.0000	1	-8.0000		
				-0.020000	
		2	0.0000		
				-0.020000	
		3	36.0000		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: BarrettLTvert

VPI	Station	Elevation	Trans	Parabola-1	Parabola-2
1	198+48.8753	975.3205	None		
2	198+98.8753	973.5017	None		
3	199+48.8753	971.5803	None		
4	199+98.8753	969.8263	None		
5	200+48.8753	968.2757	None		
6	200+98.8753	966.8495	None		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: BarrettLTvert

Elem		Start	End	Apex		Transition
1	Sta	198+48.8753	198+98.8753	None	Length	50.0000
	Elev	975.3205	973.5017	None	Type	Tangent
	Grade	-0.0364	-0.0364			
3	Sta	198+98.8753	199+48.8753	None	Length	50.0000
	Elev	973.5017	971.5803	None	Type	Tangent
	Grade	-0.0384	-0.0384			
5	Sta	199+48.8753	199+98.8753	None	Length	50.0000
	Elev	971.5803	969.8263	None	Type	Tangent
	Grade	-0.0351	-0.0351			
7	Sta	199+98.8753	200+48.8753	None	Length	50.0000
	Elev	969.8263	968.2757	None	Type	Tangent
	Grade	-0.0310	-0.0310			
9	Sta	200+48.8753	200+98.8753	None	Length	50.0000
	Elev	968.2757	966.8495	None	Type	Tangent
	Grade	-0.0285	-0.0285			

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: BarrettRTvert

VPI	Station	Elevation	Trans	Parabola-1	Parabola-2
1	198+48.8753	975.2966	None		
2	198+98.8753	973.3517	None		
3	199+48.8753	971.4710	None		
4	199+98.8753	969.6780	None		
5	200+48.8753	968.1475	None		
6	200+98.8753	966.6189	None		

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

Profile ID: BarrettRTvert

Elem		Start	End	Apex		Transition
1	Sta	198+48.8753	198+98.8753	None	Length	50.0000
	Elev	975.2966	973.3517	None	Type	Tangent
	Grade	-0.0389	-0.0389			
3	Sta	198+98.8753	199+48.8753	None	Length	50.0000
	Elev	973.3517	971.4710	None	Type	Tangent
	Grade	-0.0376	-0.0376			
5	Sta	199+48.8753	199+98.8753	None	Length	50.0000
	Elev	971.4710	969.6780	None	Type	Tangent
	Grade	-0.0359	-0.0359			
7	Sta	199+98.8753	200+48.8753	None	Length	50.0000
	Elev	969.6780	968.1475	None	Type	Tangent
	Grade	-0.0306	-0.0306			
9	Sta	200+48.8753	200+98.8753	None	Length	50.0000
	Elev	968.1475	966.6189	None	Type	Tangent
	Grade	-0.0306	-0.0306			

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

COORDINATE REPORT

Station Ref: 575

ID	STATION	OFFSET (ft)	NORTH (ft)	EAST (ft)	575 ELEV (ft)
B1&PGL	1084+63.5000	0.0000	1,460,309.4947	2,177,790.6862	996.4935
B2&PGL	1085+07.2083	0.0000	1,460,353.0599	2,177,794.2196	995.4562
B3&PGL	1085+72.2083	0.0000	1,460,417.8710	2,177,799.1706	993.9433
B4&PGL	1086+37.2083	0.0000	1,460,482.7088	2,177,803.7584	992.4660
B5&PGL	1086+72.5000	0.0000	1,460,517.9229	2,177,806.0971	991.6788

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

COORDINATE REPORT

Station Ref: 575

ID	STATION	OFFSET (ft)	NORTH (ft)	EAST (ft)	575 ELEV (ft)
BarrettCL&575CL	1085+72.3105	0.0000	1,460,417.9729	2,177,799.1781	993.9410

Intersection: 0.0000ft LT 575align 1085+72.3105 = 0.0000ft RT Barrettalign 200+00.0001

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

SPAN AND GIRDER REPORT

SPAN ID: B1-B2 ROADWAY: 575 ALIGNMENT: 575align NUMBER OF GIRDERS: 9
STARTING PIER: B1 STATION: 1084+63.5000 AZM: N 92.494842 SKEW: -2.250000
ENDING PIER: B2 STATION: 1085+07.2083 AZM: N 92.494842 SKEW: -2.034112

GIRDER	END POINT DISTANCES ALONG PIER CL			LENGTH		
	START	END	AZIMUTH	CL - CL	SEAT-SEAT	RADIUS
S1-G1	1.8041	1.8257	N 4.228428	43.6978	42.3221	INFINITY
S1-G2	5.3057	5.3273	N 4.228428	43.6978	42.3221	INFINITY
S1-G3	8.8073	8.8289	N 4.228428	43.6978	42.3221	INFINITY
S1-G4	12.3089	12.3305	N 4.228428	43.6978	42.3221	INFINITY
S1-G5	15.8105	15.8321	N 4.228428	43.6978	42.3221	INFINITY
S1-G6	19.3121	19.3337	N 4.228428	43.6978	42.3221	INFINITY
S1-G7	22.8137	22.8353	N 4.228428	43.6978	42.3221	INFINITY
S1-G8	26.3153	26.3369	N 4.228428	43.6978	42.3221	INFINITY
S1-G9	29.8169	29.8385	N 4.228428	43.6978	42.3221	INFINITY

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

SPAN AND GIRDER REPORT

SPAN ID: B2-B3 ROADWAY: 575 ALIGNMENT: 575align NUMBER OF GIRDERS: 9
STARTING PIER: B2 STATION: 1085+07.2083 AZM: N 92.494842 SKEW: -2.034112
ENDING PIER: B3 STATION: 1085+72.2083 AZM: N 92.494842 SKEW: -1.713058

GIRDER	END POINT DISTANCES ALONG PIER CL			LENGTH		
	START	END	AZIMUTH	CL - CL	SEAT-SEAT	RADIUS
S2-G1	1.8253	1.7364	N 4.250207	64.9957	63.4950	INFINITY
S2-G2	5.3270	5.2380	N 4.250207	64.9957	63.4950	INFINITY
S2-G3	8.8286	8.7397	N 4.250207	64.9957	63.4950	INFINITY
S2-G4	12.3302	12.2413	N 4.250207	64.9957	63.4950	INFINITY
S2-G5	15.8319	15.7429	N 4.250207	64.9957	63.4950	INFINITY
S2-G6	19.3335	19.2446	N 4.250207	64.9957	63.4950	INFINITY
S2-G7	22.8352	22.7462	N 4.250207	64.9957	63.4950	INFINITY
S2-G8	26.3368	26.2479	N 4.250207	64.9957	63.4950	INFINITY
S2-G9	29.8385	29.7495	N 4.250207	64.9957	63.4950	INFINITY

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

SPAN AND GIRDER REPORT

SPAN ID: B3-B4 ROADWAY: 575 ALIGNMENT: 575align NUMBER OF GIRDERS: 9
STARTING PIER: B3 STATION: 1085+72.2083 AZM: N 92.494842 SKEW: -1.713058
ENDING PIER: B4 STATION: 1086+37.2083 AZM: N 92.494842 SKEW: -1.392004

GIRDER	END POINT DISTANCES ALONG PIER CL			LENGTH		
	START	END	AZIMUTH	CL - CL	SEAT-SEAT	RADIUS
S3-G1	1.7370	1.7919	N 4.209000	65.0051	63.5045	INFINITY
S3-G2	5.2386	5.2935	N 4.209000	65.0051	63.5045	INFINITY
S3-G3	8.7402	8.7950	N 4.209000	65.0051	63.5045	INFINITY
S3-G4	12.2417	12.2966	N 4.209000	65.0051	63.5045	INFINITY
S3-G5	15.7433	15.7982	N 4.209000	65.0051	63.5045	INFINITY
S3-G6	19.2449	19.2997	N 4.209000	65.0051	63.5045	INFINITY
S3-G7	22.7464	22.8013	N 4.209000	65.0051	63.5045	INFINITY
S3-G8	26.2480	26.3029	N 4.209000	65.0051	63.5045	INFINITY
S3-G9	29.7496	29.8044	N 4.209000	65.0051	63.5045	INFINITY

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

SPAN AND GIRDER REPORT

SPAN ID: B4-B5 ROADWAY: 575 ALIGNMENT: 575align NUMBER OF GIRDERS: 9
STARTING PIER: B4 STATION: 1086+37.2083 AZM: N 92.494842 SKEW: -1.392004
ENDING PIER: B5 STATION: 1086+72.5000 AZM: N 92.494842 SKEW: -1.217688

GIRDER	END POINT DISTANCES ALONG PIER CL			LENGTH		
	START	END	AZIMUTH	CL - CL	SEAT-SEAT	RADIUS
S4-G1	1.7915	1.8077	N 4.231623	35.2987	33.9231	INFINITY
S4-G2	5.2932	5.3093	N 4.231623	35.2987	33.9231	INFINITY
S4-G3	8.7948	8.8109	N 4.231623	35.2987	33.9231	INFINITY
S4-G4	12.2964	12.3125	N 4.231623	35.2987	33.9231	INFINITY
S4-G5	15.7980	15.8142	N 4.231623	35.2987	33.9231	INFINITY
S4-G6	19.2996	19.3158	N 4.231623	35.2987	33.9231	INFINITY
S4-G7	22.8012	22.8174	N 4.231623	35.2987	33.9231	INFINITY
S4-G8	26.3028	26.3190	N 4.231623	35.2987	33.9231	INFINITY
S4-G9	29.8044	29.8206	N 4.231623	35.2987	33.9231	INFINITY

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

CLEARANCE REPORT

SPAN : B2-B3 SPAN ROADWAY: 575

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
B2	19.64	19.58
B3	1.67	1.61

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
S2-G1	19.72	199+61.0443	8.00	4
S2-G2	19.91	199+64.5458	8.00	4
S2-G3	20.10	199+68.0473	8.00	4
S2-G4	20.29	199+71.5487	8.00	4
S2-G5	20.49	199+75.0502	8.00	4
S2-G6	20.68	199+78.5517	8.00	4
S2-G7	20.87	199+82.0531	8.00	4
S2-G8	21.06	199+85.5546	8.00	4
S2-G9	21.26	199+89.0561	8.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
S2-G1	21.45	199+63.5021	44.00	5
S2-G2	21.65	199+67.0036	44.00	5
S2-G3	21.84	199+70.5050	44.00	5
S2-G4	22.03	199+74.0065	44.00	5
S2-G5	22.22	199+77.5080	44.00	5
S2-G6	22.41	199+81.0094	44.00	5
S2-G7	22.61	199+84.5109	44.00	5
S2-G8	22.80	199+88.0124	44.00	5
S2-G9	22.99	199+91.5139	44.00	5

LEFT EXTERIOR GIRDER ID: S2-G1
RIGHT EXTERIOR GIRDER ID: S2-G9

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+05.9436	-35.50	-0.71	1.32	1085+07.2083	0.00	-0.48	8.82
1085+38.5435	-35.50	31.79	1.43	1085+39.7083	0.00	32.02	8.94

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

CLEARANCE REPORT

SPAN : B3-B4 SPAN ROADWAY: 575

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
B3	-1.33	-1.39
B4	-107.31	-107.37

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
S3-G1	19.41	199+61.2767	0.00	4
S3-G2	19.60	199+64.7781	0.00	4
S3-G3	19.80	199+68.2795	0.00	4
S3-G4	19.99	199+71.7808	0.00	4
S3-G5	20.18	199+75.2822	0.00	4
S3-G6	20.37	199+78.7836	0.00	4
S3-G7	20.57	199+82.2850	0.00	4
S3-G8	20.76	199+85.7864	0.00	4
S3-G9	20.95	199+89.2878	0.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
S3-G1	19.60	199+64.7774	0.00	5
S3-G2	19.80	199+68.2787	0.00	5
S3-G3	19.99	199+71.7801	0.00	5
S3-G4	20.18	199+75.2815	0.00	5
S3-G5	20.37	199+78.7829	0.00	5
S3-G6	20.57	199+82.2843	0.00	5
S3-G7	20.76	199+85.7857	0.00	5
S3-G8	20.95	199+89.2871	0.00	5
S3-G9	21.14	199+92.7885	0.00	5

LEFT EXTERIOR GIRDER ID: S3-G1
RIGHT EXTERIOR GIRDER ID: S3-G9

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+71.1434	-35.50	-0.71	1.46	1085+72.2083	0.00	-0.48	8.96
1086+03.7432	-35.50	31.79	1.41	1086+04.7083	0.00	32.02	8.91

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CLEARANCE REPORT

SPAN : E-B2L-E-B3L SPAN ROADWAY: E-575SB

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
E-B2L	19.74	19.67
E-B3L	1.77	1.70

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S2-G01L	17.03	198+98.4895	8.00	4
E-S2-G11L	19.30	199+38.5061	8.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S2-G01L	18.80	199+01.4538	44.00	5
E-S2-G11L	21.07	199+41.4704	44.00	5

LEFT EXTERIOR GIRDER ID: E-S2-G01L
RIGHT EXTERIOR GIRDER ID: E-S2-G11L

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+03.5986	-100.75	-0.80	-1.67	1085+05.1649	-57.25	-0.69	1.83
1085+36.3837	-100.75	31.70	-1.55	1085+37.8263	-57.25	31.81	1.96
1085+69.1687	-100.75	64.20	-1.51	1085+70.4876	-57.25	64.31	1.99

MINIMUM CLEARANCE: LT -1.51 RT 1.83
MAXIMUM CLEARANCE: LT -1.67 RT 1.99

***** End of Report *****

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CLEARANCE REPORT

SPAN : E-B3L-E-B4L SPAN ROADWAY: E-575SB

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
E-B3L	-1.23	-1.30
E-B4L	-107.21	-107.28

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S3-G01L	16.72	198+98.7197	0.00	4
E-S3-G11L	18.99	199+38.7364	0.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S3-G01L	16.95	199+02.7206	0.00	5
E-S3-G11L	19.22	199+42.7373	0.00	5

LEFT EXTERIOR GIRDER ID: E-S3-G01L
RIGHT EXTERIOR GIRDER ID: E-S3-G11L

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+69.1687	-100.75	-0.80	-1.51	1085+70.4876	-57.25	-0.69	1.99
1086+01.9537	-100.75	31.70	-1.57	1086+03.1490	-57.25	31.81	1.93
1086+34.7387	-100.75	64.20	-1.72	1086+35.8103	-57.25	64.31	1.77

MINIMUM CLEARANCE: LT -1.51 RT 1.77
MAXIMUM CLEARANCE: LT -1.72 RT 1.99

***** End of Report *****

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CLEARANCE REPORT

SPAN : E-B2R-E-B3R SPAN ROADWAY: E-575NB

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
E-B2R	19.58	19.51
E-B3R	1.61	1.54

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S2-G01R	21.03	199+92.5576	8.00	4
E-S2-G11R	23.06	200+32.5744	8.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S2-G01R	22.79	199+95.5155	44.00	5
E-S2-G11R	24.79	200+35.5323	44.00	5

LEFT EXTERIOR GIRDER ID: E-S2-G01R
RIGHT EXTERIOR GIRDER ID: E-S2-G11R

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+06.9685	-6.75	-0.80	-1.68	1085+08.5095	36.75	-0.69	1.83
1085+39.4874	-6.75	31.70	-1.56	1085+40.9067	36.75	31.81	1.94
1085+72.0063	-6.75	64.20	-1.54	1085+73.3040	36.75	64.31	1.96

MINIMUM CLEARANCE: LT -1.54 RT 1.83
MAXIMUM CLEARANCE: LT -1.68 RT 1.96

***** End of Report *****

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CLEARANCE REPORT

SPAN : E-B3R-E-B4R SPAN ROADWAY: E-575NB

CLEAR ROADWAY: BarrettRT

PIER ID	HORIZONTAL LT CLR	HORIZONTAL RT CLR
E-B3R	-1.39	-1.46
E-B4R	-107.37	-107.44

ID	MIN VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S3-G01R	20.73	199+92.7893	0.00	4
E-S3-G11R	22.75	200+32.8052	0.00	4

ID	MAX VERTICAL CLR	STATION	OFFSET	REF NODE NUMBER
E-S3-G01R	20.95	199+96.7901	0.00	5
E-S3-G11R	22.95	200+36.8060	0.00	5

LEFT EXTERIOR GIRDER ID: E-S3-G01R
RIGHT EXTERIOR GIRDER ID: E-S3-G11R

LEFT EDGE OF DECK STATION	OFFSET	ALONG	CLR	RIGHT EDGE OF DECK STATION	OFFSET	ALONG	CLR
1085+72.0063	-6.75	-0.80	-1.54	1085+73.3040	36.75	-0.69	1.96
1086+04.5253	-6.75	31.70	-1.59	1086+05.7012	36.75	31.81	1.91
1086+37.0442	-6.75	64.20	-1.72	1086+38.0985	36.75	64.31	1.77

MINIMUM CLEARANCE: LT -1.54 RT 1.77
MAXIMUM CLEARANCE: LT -1.72 RT 1.96

***** End of Report *****

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DECK ELEVATIONS ALONG OFFSETS (EQUAL SPACINGS)

SPAN ID: B1-B2 ROADWAY: 575 BETWEEN PIERS : B1 - B2 SPACES = 2

OFFSET	DISTANCE	STATION	OFFSET	ELEVATION
1	43.7085			
		1084+62.1009	-35.5000	995.8170
		1084+84.0223	-35.5000	995.2945
		1085+05.9436	-35.5000	994.7760
2	43.7085			
		1084+62.1602	-34.0000	995.8456
		1084+84.0787	-34.0000	995.3231
		1085+05.9972	-34.0000	994.8047
3	43.7084			
		1084+63.1855	-8.0000	996.3411
		1084+85.0547	-8.0000	995.8200
		1085+06.9240	-8.0000	995.3029
4	43.7084			
		1084+63.2641	-6.0000	996.3792
		1084+85.1296	-6.0000	995.8582
		1085+06.9951	-6.0000	995.3412
5	43.7083			
		1084+63.5000	0.0000	996.4935
		1084+85.3542	0.0000	995.9729
		1085+07.2083	0.0000	995.4562

***** End of Report *****

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DECK ELEVATIONS ALONG OFFSETS (EQUAL SPACINGS)

SPAN ID: B2-B3 ROADWAY: 575 BETWEEN PIERS : B2 - B3 SPACES = 2

OFFSET	DISTANCE	STATION	OFFSET	ELEVATION
1	65.0002			
		1085+05.9436	-35.5000	994.7760
		1085+38.5435	-35.5000	994.0124
		1085+71.1434	-35.5000	993.2578
2	65.0002			
		1085+05.9972	-34.0000	994.8047
		1085+38.5928	-34.0000	994.0413
		1085+71.1885	-34.0000	993.2868
3	65.0000			
		1085+06.9240	-8.0000	995.3029
		1085+39.4465	-8.0000	994.5414
		1085+71.9689	-8.0000	993.7888
4	65.0000			
		1085+06.9951	-6.0000	995.3412
		1085+39.5120	-6.0000	994.5799
		1085+72.0288	-6.0000	993.8274
5	65.0000			
		1085+07.2083	0.0000	995.4562
		1085+39.7083	0.0000	994.6953
		1085+72.2083	0.0000	993.9433

***** End of Report *****

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DECK ELEVATIONS ALONG OFFSETS (EQUAL SPACINGS)

SPAN ID: B3-B4 ROADWAY: 575 BETWEEN PIERS : B3 - B4 SPACES = 2

OFFSET	DISTANCE	STATION	OFFSET	ELEVATION
1	65.0001			
		1085+71.1434	-35.5000	993.2578
		1086+03.7432	-35.5000	992.5121
		1086+36.3430	-35.5000	991.7754
2	65.0001			
		1085+71.1885	-34.0000	993.2868
		1086+03.7841	-34.0000	992.5412
		1086+36.3797	-34.0000	991.8046
3	65.0000			
		1085+71.9689	-8.0000	993.7888
		1086+04.4914	-8.0000	993.0451
		1086+37.0138	-8.0000	992.3104
4	65.0000			
		1085+72.0288	-6.0000	993.8274
		1086+04.5456	-6.0000	993.0839
		1086+37.0625	-6.0000	992.3493
5	65.0000			
		1085+72.2083	0.0000	993.9433
		1086+04.7083	0.0000	993.2002
		1086+37.2083	0.0000	992.4660

***** End of Report *****

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DECK ELEVATIONS ALONG OFFSETS (EQUAL SPACINGS)

SPAN ID: B4-B5 ROADWAY: 575 BETWEEN PIERS : B4 - B5 SPACES = 2

OFFSET	DISTANCE	STATION	OFFSET	ELEVATION
1	35.2917			
		1086+36.3430	-35.5000	991.7754
		1086+54.0431	-35.5000	991.3792
		1086+71.7431	-35.5000	990.9856
2	35.2917			
		1086+36.3797	-34.0000	991.8046
		1086+54.0774	-34.0000	991.4084
		1086+71.7752	-34.0000	991.0148
3	35.2917			
		1086+37.0138	-8.0000	992.3104
		1086+54.6718	-8.0000	991.9151
		1086+72.3298	-8.0000	991.5226
4	35.2917			
		1086+37.0625	-6.0000	992.3493
		1086+54.7174	-6.0000	991.9541
		1086+72.3724	-6.0000	991.5616
5	35.2917			
		1086+37.2083	0.0000	992.4660
		1086+54.8542	0.0000	992.0711
		1086+72.5000	0.0000	991.6788

***** End of Report *****

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GIRDER VERTICAL PLACEMENT

SPAN : B1-B2 ROADWAY: 575 GIRDERS COMPLETED: 9
MIN BUILD UP, in : 0.0000
DECK THICKNESS, in : 0.0000
NUMBER OF CHECK PTS: 3

GIRDER DATA

GIRDER	LENGTH (ft)	GIRDER TYPE	CAMBER (in)	TOTAL DEFL (in)	DAP START (in)	DAP END (in)
S1-G1	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G2	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G3	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G4	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G5	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G6	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G7	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G8	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S1-G9	42.3221	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000

GIRDER	BRG TOP ELEVATION START (ft)	END (ft)	BUILD-UP THICKNESS MIN (in)	LOCATION (ft)	MAX (in)	LOCATION (ft)
S1-G1	993.9780	992.9665	4.6049	25.6455 R	4.6613	-0.6791 L
S1-G2	994.0442	993.0325	4.6147	25.6455 R	4.6669	-0.6791 L
S1-G3	994.1104	993.0986	4.6237	25.6455 R	4.6725	0.0000 M
S1-G4	994.1766	993.1647	4.6329	25.6455 R	4.6783	0.0000 M
S1-G5	994.2427	993.2307	4.6428	21.2757 R	4.6852	0.0000 M
S1-G6	994.3089	993.2968	4.6514	21.2757 R	4.6910	0.0000 M
S1-G7	994.3751	993.3629	4.6600	21.2757 R	4.6983	42.3221 M
S1-G8	994.4413	993.4290	4.6686	21.2757 R	4.7096	42.3221 M
S1-G9	994.5075	993.4950	4.6774	16.9059 R	4.7222	42.3221 M

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

GIRDER VERTICAL PLACEMENT

SPAN : B2-B3 ROADWAY: 575 GIRDERS COMPLETED: 9
MIN BUILD UP, in : 0.0000
DECK THICKNESS, in : 0.0000
NUMBER OF CHECK PTS: 3

GIRDER DATA

GIRDER	LENGTH (ft)	GIRDER TYPE	CAMBER (in)	TOTAL DEFL (in)	DAP START (in)	DAP END (in)
S2-G1	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G2	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G3	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G4	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G5	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G6	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G7	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G8	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S2-G9	63.4950	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000

GIRDER	BRG TOP ELEVATION START (ft)	END (ft)	BUILD-UP THICKNESS MIN (in)	LOCATION (ft)	MAX (in)	LOCATION (ft)
S2-G1	992.1331	990.6165	4.1889	-0.6981 R	4.5708	63.4950 M
S2-G2	992.1992	990.6834	4.2003	-0.6981 R	4.5789	63.4950 M
S2-G3	992.2653	990.7502	4.2118	-0.6981 R	4.5882	63.4950 M
S2-G4	992.3313	990.8171	4.2244	-0.6981 R	4.5963	63.4950 M
S2-G5	992.3974	990.8839	4.2359	-0.6981 R	4.6056	63.4950 M
S2-G6	992.4635	990.9508	4.2475	-0.6981 R	4.6137	63.4950 M
S2-G7	992.5296	991.0176	4.2590	-0.6981 R	4.6231	63.4950 M
S2-G8	992.5956	991.0845	4.2718	-0.6981 R	4.6313	63.4950 M
S2-G9	992.6617	991.1513	4.2833	-0.6981 R	4.6407	63.4950 M

***** End of Report *****

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GIRDER VERTICAL PLACEMENT

SPAN : B3-B4 ROADWAY: 575 GIRDERS COMPLETED: 9
MIN BUILD UP, in : 0.0000
DECK THICKNESS, in : 0.0000
NUMBER OF CHECK PTS: 3

GIRDER DATA

GIRDER	LENGTH (ft)	GIRDER TYPE	CAMBER (in)	TOTAL DEFL (in)	DAP START (in)	DAP END (in)
S3-G1	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G2	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G3	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G4	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G5	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G6	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G7	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G8	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000
S3-G9	63.5045	AB_B-I 42-27IN	0.0000	0.0000	0.0000	0.0000

GIRDER	BRG TOP ELEVATION START (ft)	END (ft)	BUILD-UP THICKNESS MIN (in)	LOCATION (ft)	MAX (in)	LOCATION (ft)
S3-G1	990.6165	989.1299	4.1414	-0.8040 L	4.6559	64.3058 R
S3-G2	990.6834	989.1975	4.1497	-0.8040 L	4.6616	64.3058 R
S3-G3	990.7502	989.2652	4.1591	-0.8040 L	4.6662	64.3058 R
S3-G4	990.8171	989.3328	4.1674	-0.8040 L	4.6720	64.3058 R
S3-G5	990.8839	989.4004	4.1769	-0.8040 L	4.6778	64.3058 R
S3-G6	990.9508	989.4681	4.1852	-0.8040 L	4.6824	64.3058 R
S3-G7	991.0176	989.5357	4.1947	-0.8040 L	4.6882	64.3058 R
S3-G8	991.0845	989.6034	4.2030	-0.8040 L	4.6928	64.3058 R
S3-G9	991.1513	989.6710	4.2126	-0.8040 L	4.6987	64.3058 R

***** End of Report *****

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GIRDER VERTICAL PLACEMENT

SPAN : B4-B5 ROADWAY: 575 GIRDERS COMPLETED: 9
MIN BUILD UP, in : 0.0000
DECK THICKNESS, in : 0.0000
NUMBER OF CHECK PTS: 3

GIRDER DATA

GIRDER	LENGTH (ft)	GIRDER TYPE	CAMBER (in)	TOTAL DEFL (in)	DAP START (in)	DAP END (in)
S4-G1	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G2	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G3	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G4	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G5	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G6	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G7	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G8	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000
S4-G9	33.9231	AB_B-I 42 17IN	0.0000	0.0000	0.0000	0.0000

GIRDER	BRG TOP ELEVATION START (ft)	END (ft)	BUILD-UP THICKNESS MIN (in)	LOCATION (ft)	MAX (in)	LOCATION (ft)
S4-G1	989.9632	989.2013	4.2392	-0.8043 L	4.3422	34.6006 R
S4-G2	990.0309	989.2691	4.2438	-0.8043 L	4.3488	34.6006 R
S4-G3	990.0985	989.3369	4.2498	-0.8043 L	4.3555	34.6006 R
S4-G4	990.1661	989.4046	4.2557	-0.8043 L	4.3634	34.6006 R
S4-G5	990.2338	989.4724	4.2604	-0.8043 L	4.3701	34.6006 R
S4-G6	990.3014	989.5402	4.2664	-0.8043 L	4.3768	34.6006 R
S4-G7	990.3691	989.6079	4.2711	-0.8043 L	4.3847	34.6006 R
S4-G8	990.4367	989.6757	4.2772	-0.8043 L	4.3915	34.6006 R
S4-G9	990.5043	989.7435	4.2832	-0.8043 L	4.3982	34.6006 R

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G1

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,311.7083	2,177,754.2376	993.9780	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.9153	2,177,757.3582	992.9665	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019781 End: 0.019871 Avg: 0.019826
GIRDER PITCH,ft/ft: -0.023900 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.7828	995.7828	995.3947	0.3881
2	21.1611	995.2734	995.2734	994.8889	0.3845
3	42.3221	994.7686	994.7686	994.3832	0.3854

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.605	25.6455	R
MAXIMUM:	4.661	-0.6791	L

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6613	4.6565	4.6517
2	21.8489	4.6142	4.6105	4.6068
3	43.6978	4.6254	4.6228	4.6202

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G2

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,311.5559	2,177,757.7359	994.0442	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.7629	2,177,760.8565	993.0325	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019782 End: 0.019872 Avg: 0.019827
GIRDER PITCH,ft/ft: -0.023905 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.8495	995.8495	995.4609	0.3886
2	21.1611	995.3403	995.3403	994.9550	0.3852
3	42.3221	994.8356	994.8356	994.4492	0.3864

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.615	25.6455	R
MAXIMUM:	4.667	-0.6791	L

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6669	4.6621	4.6573
2	21.8489	4.6233	4.6196	4.6159
3	43.6978	4.6379	4.6353	4.6328

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G3

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,311.4035	2,177,761.2342	994.1104	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.6104	2,177,764.3547	993.0986	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019782 End: 0.019872 Avg: 0.019827
GIRDER PITCH,ft/ft: -0.023907 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.9162	995.9162	995.5271	0.3891
2	21.1611	995.4071	995.4071	995.0212	0.3860
3	42.3221	994.9026	994.9026	994.5153	0.3874

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.624	25.6455	R
MAXIMUM:	4.673	0.0000	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6725	4.6677	4.6630
2	21.8489	4.6318	4.6281	4.6245
3	43.6978	4.6492	4.6467	4.6442

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G4

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,311.2511	2,177,764.7325	994.1766	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.4580	2,177,767.8530	993.1647	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019782 End: 0.019872 Avg: 0.019827
GIRDER PITCH,ft/ft: -0.023909 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.9828	995.9828	995.5933	0.3896
2	21.1611	995.4740	995.4740	995.0873	0.3867
3	42.3221	994.9697	994.9697	994.5814	0.3883

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.633	25.6455	R
MAXIMUM:	4.678	0.0000	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6782	4.6734	4.6686
2	21.8489	4.6403	4.6366	4.6330
3	43.6978	4.6606	4.6581	4.6555

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G5

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,311.0987	2,177,768.2308	994.2427	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.3056	2,177,771.3513	993.2307	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019783 End: 0.019873 Avg: 0.019828
GIRDER PITCH,ft/ft: -0.023912 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	996.0495	996.0495	995.6594	0.3902
2	21.1611	995.5408	995.5408	995.1534	0.3875
3	42.3221	995.0367	995.0367	994.6474	0.3894

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.643	21.2757	R
MAXIMUM:	4.685	0.0000	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6850	4.6803	4.6755
2	21.8489	4.6500	4.6464	4.6428
3	43.6978	4.6732	4.6706	4.6681

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G6

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,310.9462	2,177,771.7291	994.3089	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.1532	2,177,774.8496	993.2968	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019783 End: 0.019873 Avg: 0.019828
GIRDER PITCH,ft/ft: -0.023914 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	996.1162	996.1162	995.7256	0.3906
2	21.1611	995.6077	995.6077	995.2195	0.3882
3	42.3221	995.1038	995.1038	994.7135	0.3903

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.651	21.2757	R
MAXIMUM:	4.691	0.0000	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6907	4.6860	4.6813
2	21.8489	4.6586	4.6550	4.6514
3	43.6978	4.6846	4.6821	4.6796

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G7

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,310.7938	2,177,775.2273	994.3751	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,353.0007	2,177,778.3479	993.3629	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019783 End: 0.019873 Avg: 0.019828
GIRDER PITCH,ft/ft: -0.023917 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	996.1829	996.1829	995.7918	0.3911
2	21.1611	995.6746	995.6746	995.2857	0.3889
3	42.3221	995.1708	995.1708	994.7796	0.3912

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.660	21.2757	R
MAXIMUM:	4.698	42.3221	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.6964	4.6917	4.6870
2	21.8489	4.6672	4.6636	4.6600
3	43.6978	4.6960	4.6935	4.6910

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G8

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,310.6414	2,177,778.7256	994.4413	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,352.8483	2,177,781.8462	993.4290	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019784 End: 0.019874 Avg: 0.019829
GIRDER PITCH,ft/ft: -0.023919 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	996.2496	996.2496	995.8580	0.3916
2	21.1611	995.7414	995.7414	995.3518	0.3896
3	42.3221	995.2379	995.2379	994.8457	0.3922

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.669	21.2757	R
MAXIMUM:	4.710	42.3221	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.7022	4.6975	4.6928
2	21.8489	4.6758	4.6722	4.6686
3	43.6978	4.7074	4.7050	4.7025

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GIRDER VERTICAL GEOMETRY

SPAN ID: B1-B2 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S1-G9

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.228428					
WPT-WPT LEN,ft: 42.3221	Start:	1,460,310.4890	2,177,782.2239	994.5075	0.0000
PR-PR LEN,ft: 43.6978	End:	1,460,352.6959	2,177,785.3444	993.4950	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.019784 End: 0.019874 Avg: 0.019829
GIRDER PITCH,ft/ft: -0.023924 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	996.3163	996.3163	995.9242	0.3921
2	21.1611	995.8083	995.8083	995.4179	0.3904
3	42.3221	995.3049	995.3049	994.9117	0.3932

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.677	16.9059	R
MAXIMUM:	4.722	42.3221	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.7079	4.7032	4.6986
2	21.8489	4.6850	4.6814	4.6779
3	43.6978	4.7201	4.7177	4.7152

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G1

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,355.4119	2,177,757.4688	992.1331	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,418.7322	2,177,762.1745	990.6165	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019884 End: 0.020013 Avg: 0.019949
GIRDER PITCH,ft/ft: -0.023885 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	994.7329	994.7329	994.3831	0.3498
2	31.7475	993.9848	993.9848	993.6248	0.3600
3	63.4950	993.2470	993.2470	992.8665	0.3805

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.189	-0.6981	R
MAXIMUM:	4.571	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.1937	4.1913	4.1889
2	32.4978	4.3154	4.3147	4.3139
3	64.9957	4.5665	4.5673	4.5681

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G2

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,355.2595	2,177,760.9671	992.1992	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,418.5798	2,177,765.6728	990.6834	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019884 End: 0.020014 Avg: 0.019949
GIRDER PITCH,ft/ft: -0.023873 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	994.8000	994.8000	994.4492	0.3508
2	31.7475	994.0521	994.0521	993.6913	0.3608
3	63.4950	993.3145	993.3145	992.9334	0.3811

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.200	-0.6981	R
MAXIMUM:	4.579	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2051	4.2027	4.2003
2	32.4978	4.3252	4.3244	4.3237
3	64.9957	4.5745	4.5753	4.5762

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G3 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.250207 North East (ft) (ft)
WPT-WPT LEN,ft: 63.4950 Start: 1,460,355.1070 2,177,764.4654 992.2653 0.0000
PR-PR LEN,ft: 64.9957 End: 1,460,418.4274 2,177,769.1712 990.7502 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019884 End: 0.020014 Avg: 0.019949
GIRDER PITCH,ft/ft: -0.023862 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	994.8670	994.8670	994.5153	0.3517
2	31.7475	994.1194	994.1194	993.7577	0.3617
3	63.4950	993.3821	993.3821	993.0002	0.3819

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.212	-0.6981	R
MAXIMUM:	4.588	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.2165	4.2141	4.2118
2	32.4978	4.3356	4.3348	4.3341
3	64.9957	4.5837	4.5846	4.5854

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G4

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,354.9546	2,177,767.9637	992.3313	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,418.2750	2,177,772.6695	990.8171	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019885 End: 0.020014 Avg: 0.019949
GIRDER PITCH,ft/ft: -0.023848 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	994.9341	994.9341	994.5813	0.3528
2	31.7475	994.1867	994.1867	993.8242	0.3625
3	63.4950	993.4497	993.4497	993.0671	0.3826

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.224	-0.6981	R
MAXIMUM:	4.596	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2292	4.2268	4.2244
2	32.4978	4.3460	4.3452	4.3445
3	64.9957	4.5918	4.5926	4.5935

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G5

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,354.8022	2,177,771.4621	992.3974	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,418.1225	2,177,776.1678	990.8839	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019885 End: 0.020014 Avg: 0.019950
GIRDER PITCH,ft/ft: -0.023837 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.0011	995.0011	994.6474	0.3537
2	31.7475	994.2541	994.2541	993.8906	0.3634
3	63.4950	993.5172	993.5172	993.1339	0.3833

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.236	-0.6981	R
MAXIMUM:	4.606	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2407	4.2383	4.2359
2	32.4978	4.3564	4.3556	4.3549
3	64.9957	4.6011	4.6019	4.6028

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G6 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.250207 North East (ft) (ft)
WPT-WPT LEN,ft: 63.4950 Start: 1,460,354.6498 2,177,774.9604 992.4635 0.0000
PR-PR LEN,ft: 64.9957 End: 1,460,417.9701 2,177,779.6661 990.9508 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019885 End: 0.020014 Avg: 0.019950
GIRDER PITCH,ft/ft: -0.023824 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.0682	995.0682	994.7135	0.3547
2	31.7475	994.3214	994.3214	993.9571	0.3642
3	63.4950	993.5848	993.5848	993.2008	0.3840

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.247	-0.6981	R
MAXIMUM:	4.614	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.2522	4.2498	4.2475
2	32.4978	4.3662	4.3655	4.3647
3	64.9957	4.6092	4.6100	4.6109

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G7

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,354.4973	2,177,778.4587	992.5296	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,417.8177	2,177,783.1645	991.0176	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019885 End: 0.020015 Avg: 0.019950
GIRDER PITCH,ft/ft: -0.023813 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.1353	995.1353	994.7796	0.3557
2	31.7475	994.3887	994.3887	994.0236	0.3651
3	63.4950	993.6524	993.6524	993.2676	0.3848

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.259	-0.6981	R
MAXIMUM:	4.623	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2637	4.2613	4.2590
2	32.4978	4.3767	4.3759	4.3752
3	64.9957	4.6185	4.6193	4.6202

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G8

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.250207					
WPT-WPT LEN,ft: 63.4950	Start:	1,460,354.3449	2,177,781.9570	992.5956	0.0000
PR-PR LEN,ft: 64.9957	End:	1,460,417.6653	2,177,786.6628	991.0845	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019886 End: 0.020015 Avg: 0.019950
GIRDER PITCH,ft/ft: -0.023799 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.2023	995.2023	994.8456	0.3567
2	31.7475	994.4560	994.4560	994.0901	0.3660
3	63.4950	993.7200	993.7200	993.3345	0.3855

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.272	-0.6981	R
MAXIMUM:	4.631	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2765	4.2741	4.2718
2	32.4978	4.3872	4.3864	4.3857
3	64.9957	4.6266	4.6275	4.6283

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B2-B3 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S2-G9 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.250207 North East (ft) (ft)
WPT-WPT LEN,ft: 63.4950 Start: 1,460,354.1925 2,177,785.4554 992.6617 0.0000
PR-PR LEN,ft: 64.9957 End: 1,460,417.5128 2,177,790.1611 991.1513 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.019886 End: 0.020015 Avg: 0.019950
GIRDER PITCH,ft/ft: -0.023788 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	995.2694	995.2694	994.9117	0.3577
2	31.7475	994.5234	994.5234	994.1565	0.3669
3	63.4950	993.7876	993.7876	993.4013	0.3863

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.283	-0.6981	R
MAXIMUM:	4.641	63.4950	M

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.2880	4.2857	4.2833
2	32.4978	4.3977	4.3969	4.3962
3	64.9957	4.6360	4.6368	4.6377

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G1

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,420.2288	2,177,762.2858	990.6165	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,483.5620	2,177,766.9467	989.1299	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020000 End: 0.020123 Avg: 0.020061
GIRDER PITCH,ft/ft: -0.023409 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.2123	993.2123	992.8665	0.3458
2	31.7522	992.4847	992.4847	992.1232	0.3615
3	63.5045	991.7673	991.7673	991.3799	0.3874

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.141	-0.8040	L
MAXIMUM:	4.656	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.1414	4.1416	4.1418
2	32.5026	4.3307	4.3324	4.3341
3	65.0051	4.6494	4.6526	4.6559

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G2

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,420.0764	2,177,765.7841	990.6834	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,483.4096	2,177,770.4450	989.1975	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020000 End: 0.020123 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023398 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.2799	993.2799	992.9334	0.3465
2	31.7522	992.5525	992.5525	992.1904	0.3621
3	63.5045	991.8354	991.8354	991.4475	0.3879

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.150	-0.8040	L
MAXIMUM:	4.662	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.1497	4.1498	4.1500
2	32.5026	4.3377	4.3394	4.3411
3	65.0051	4.6552	4.6584	4.6616

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G3 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.209000 North East (ft) (ft)
WPT-WPT LEN,ft: 63.5045 Start: 1,460,419.9240 2,177,769.2823 990.7502 0.0000
PR-PR LEN,ft: 65.0051 End: 1,460,483.2572 2,177,773.9432 989.2652 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020000 End: 0.020123 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023384 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.3475	993.3475	993.0002	0.3473
2	31.7522	992.6204	992.6204	992.2577	0.3627
3	63.5045	991.9035	991.9035	991.5152	0.3883

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.159	-0.8040	L
MAXIMUM:	4.666	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.1591	4.1593	4.1595
2	32.5026	4.3447	4.3464	4.3482
3	65.0051	4.6597	4.6629	4.6662

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G4

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,419.7715	2,177,772.7806	990.8171	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,483.1047	2,177,777.4415	989.3328	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020000 End: 0.020124 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023373 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.4151	993.4151	993.0671	0.3480
2	31.7522	992.6882	992.6882	992.3250	0.3632
3	63.5045	991.9716	991.9716	991.5828	0.3888

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.167	-0.8040	L
MAXIMUM:	4.672	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.1674	4.1675	4.1677
2	32.5026	4.3518	4.3535	4.3552
3	65.0051	4.6655	4.6687	4.6720

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G5

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,419.6191	2,177,776.2788	990.8839	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,482.9523	2,177,780.9397	989.4004	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020001 End: 0.020124 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023361 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.4827	993.4827	993.1339	0.3488
2	31.7522	992.7560	992.7560	992.3922	0.3639
3	63.5045	992.0397	992.0397	991.6504	0.3893

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.177	-0.8040	L
MAXIMUM:	4.678	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.1769	4.1770	4.1772
2	32.5026	4.3595	4.3612	4.3629
3	65.0051	4.6713	4.6745	4.6778

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G6 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.209000 North East (ft) (ft)
WPT-WPT LEN,ft: 63.5045 Start: 1,460,419.4667 2,177,779.7771 990.9508 0.0000
PR-PR LEN,ft: 65.0051 End: 1,460,482.7999 2,177,784.4380 989.4681 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020001 End: 0.020124 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023348 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.5503	993.5503	993.2008	0.3495
2	31.7522	992.8239	992.8239	992.4594	0.3644
3	63.5045	992.1078	992.1078	991.7181	0.3897

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.185	-0.8040	L
MAXIMUM:	4.682	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.1852	4.1853	4.1855
2	32.5026	4.3659	4.3677	4.3694
3	65.0051	4.6759	4.6791	4.6824

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G7 BRG CO-ORDS ELEVATION DAP HEIGHT
AZIMUTH, deg: N 4.209000 North East (ft) (ft)
WPT-WPT LEN,ft: 63.5045 Start: 1,460,419.3143 2,177,783.2753 991.0176 0.0000
PR-PR LEN,ft: 65.0051 End: 1,460,482.6475 2,177,787.9362 989.5357 0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020001 End: 0.020124 Avg: 0.020062
GIRDER PITCH,ft/ft: -0.023335 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.6178	993.6178	993.2676	0.3502
2	31.7522	992.8917	992.8917	992.5266	0.3651
3	63.5045	992.1759	992.1759	991.7857	0.3902

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.195	-0.8040	L
MAXIMUM:	4.688	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	CL (in)	RIGHT (in)
1	0.0000	4.1947	4.1949	4.1950
2	32.5026	4.3737	4.3754	4.3771
3	65.0051	4.6817	4.6850	4.6882

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G8

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,419.1619	2,177,786.7736	991.0845	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,482.4951	2,177,791.4345	989.6034	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020001 End: 0.020124 Avg: 0.020063
GIRDER PITCH,ft/ft: -0.023323 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.6854	993.6854	993.3345	0.3509
2	31.7522	992.9596	992.9596	992.5939	0.3656
3	63.5045	992.2439	992.2439	991.8534	0.3905

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.203	-0.8040	L
MAXIMUM:	4.693	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2030	4.2032	4.2034
2	32.5026	4.3802	4.3819	4.3836
3	65.0051	4.6864	4.6896	4.6928

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B3-B4 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S3-G9

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.209000					
WPT-WPT LEN,ft: 63.5045	Start:	1,460,419.0094	2,177,790.2718	991.1513	0.0000
PR-PR LEN,ft: 65.0051	End:	1,460,482.3426	2,177,794.9327	989.6710	0.0000

GIRDER TYPE:AB_B-I 42-27IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 27.0000

DECK SLOPE ,ft/ft Start: 0.020001 End: 0.020124 Avg: 0.020063
GIRDER PITCH,ft/ft: -0.023310 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	993.7530	993.7530	993.4013	0.3517
2	31.7522	993.0274	993.0274	992.6611	0.3663
3	63.5045	992.3120	992.3120	991.9210	0.3910

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.213	-0.8040	L
MAXIMUM:	4.699	64.3058	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2126	4.2128	4.2130
2	32.5026	4.3879	4.3896	4.3914
3	65.0051	4.6922	4.6954	4.6987

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G1

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,485.0586	2,177,767.0568	989.9632	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,518.8892	2,177,769.5600	989.2013	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020135 End: 0.020198 Avg: 0.020166
GIRDER PITCH,ft/ft: -0.022460 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	991.7337	991.7337	991.3799	0.3538
2	16.9615	991.3551	991.3551	990.9989	0.3562
3	33.9231	990.9795	990.9795	990.6180	0.3615

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.239	-0.8043	L
MAXIMUM:	4.342	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2392	4.2420	4.2448
2	17.6494	4.2671	4.2707	4.2744
3	35.2987	4.3333	4.3377	4.3422

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G2

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,484.9062	2,177,770.5551	990.0309	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,518.7368	2,177,773.0582	989.2691	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020135 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022457 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	991.8018	991.8018	991.4476	0.3542
2	16.9615	991.4233	991.4233	991.0667	0.3567
3	33.9231	991.0478	991.0478	990.6858	0.3621

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.244	-0.8043	L
MAXIMUM:	4.349	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2438	4.2467	4.2495
2	17.6494	4.2728	4.2764	4.2801
3	35.2987	4.3400	4.3444	4.3488

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G3

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,484.7538	2,177,774.0534	990.0985	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,518.5844	2,177,776.5565	989.3369	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020135 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022451 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	991.8699	991.8699	991.5152	0.3547
2	16.9615	991.4916	991.4916	991.1344	0.3572
3	33.9231	991.1162	991.1162	990.7536	0.3626

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.250	-0.8043	L
MAXIMUM:	4.355	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2498	4.2526	4.2555
2	17.6494	4.2791	4.2827	4.2864
3	35.2987	4.3466	4.3511	4.3555

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G4

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,484.6014	2,177,777.5517	990.1661	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,518.4320	2,177,780.0548	989.4046	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020135 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022448 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	991.9380	991.9380	991.5828	0.3552
2	16.9615	991.5598	991.5598	991.2020	0.3578
3	33.9231	991.1845	991.1845	990.8213	0.3633

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.256	-0.8043	L
MAXIMUM:	4.363	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2557	4.2585	4.2614
2	17.6494	4.2860	4.2896	4.2933
3	35.2987	4.3545	4.3589	4.3634

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G5

	BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623				
WPT-WPT LEN,ft: 33.9231 Start:	1,460,484.4489	2,177,781.0500	990.2338	0.0000
PR-PR LEN,ft: 35.2987 End:	1,460,518.2795	2,177,783.5531	989.4724	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020135 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022445 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	992.0061	992.0061	991.6505	0.3556
2	16.9615	991.6280	991.6280	991.2698	0.3583
3	33.9231	991.2529	991.2529	990.8891	0.3638

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.260	-0.8043	L
MAXIMUM:	4.370	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2604	4.2633	4.2661
2	17.6494	4.2917	4.2954	4.2990
3	35.2987	4.3612	4.3656	4.3701

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G6

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,484.2965	2,177,784.5483	990.3014	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,518.1271	2,177,787.0514	989.5402	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020136 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022439 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	992.0742	992.0742	991.7181	0.3561
2	16.9615	991.6962	991.6962	991.3375	0.3588
3	33.9231	991.3213	991.3213	990.9569	0.3644

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.266	-0.8043	L
MAXIMUM:	4.377	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2664	4.2693	4.2721
2	17.6494	4.2981	4.3017	4.3054
3	35.2987	4.3679	4.3723	4.3768

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G7

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,484.1441	2,177,788.0466	990.3691	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,517.9747	2,177,790.5497	989.6079	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020136 End: 0.020198 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022439 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	992.1423	992.1423	991.7858	0.3565
2	16.9615	991.7645	991.7645	991.4052	0.3593
3	33.9231	991.3896	991.3896	991.0246	0.3650

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.271	-0.8043	L
MAXIMUM:	4.385	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2711	4.2740	4.2769
2	17.6494	4.3044	4.3081	4.3118
3	35.2987	4.3758	4.3803	4.3847

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G8

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,483.9917	2,177,791.5448	990.4367	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,517.8223	2,177,794.0480	989.6757	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020136 End: 0.020199 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022433 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	992.2104	992.2104	991.8534	0.3570
2	16.9615	991.8327	991.8327	991.4729	0.3598
3	33.9231	991.4580	991.4580	991.0924	0.3656

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.277	-0.8043	L
MAXIMUM:	4.391	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2772	4.2800	4.2829
2	17.6494	4.3108	4.3145	4.3181
3	35.2987	4.3825	4.3870	4.3915

***** End of Report *****

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GIRDER VERTICAL GEOMETRY

SPAN ID: B4-B5 ROADWAY: 575
MIN BUILD-UP,in: 0.0000 DECK THICK,in: 0.0000

GIRDER ID: S4-G9

		BRG CO-ORDS North	BRG CO-ORDS East	ELEVATION (ft)	DAP HEIGHT (ft)
AZIMUTH, deg: N 4.231623					
WPT-WPT LEN,ft: 33.9231	Start:	1,460,483.8392	2,177,795.0431	990.5043	0.0000
PR-PR LEN,ft: 35.2987	End:	1,460,517.6699	2,177,797.5463	989.7435	0.0000

GIRDER TYPE:AB_B-I 42 17IN CAMBER,in : 0.0000 TOTAL DEFL,in: 0.0000
TOP WIDTH,in: 42.0000 BOT WIDTH,in: 42.0000 HEIGHT,in: 17.0000

DECK SLOPE ,ft/ft Start: 0.020136 End: 0.020199 Avg: 0.020167
GIRDER PITCH,ft/ft: -0.022427 ROLL,deg: 0.019997

CHECK POINT	DIST ALONG CENTERLINE WPT-WPT (ft)	FINAL DECK ELEVATION (ft)	SCREED ELEVATION (ft)	GIRDER TOP ELEVATION (ERECTED) (ft)	SCREED HT. ABOVE GIRDER (ft)
1	0.0000	992.2785	992.2785	991.9210	0.3575
2	16.9615	991.9009	991.9009	991.5406	0.3604
3	33.9231	991.5263	991.5263	991.1602	0.3662

BUILD-UP	THICKNESS,in	LOCATION,ft	SIDE
MINIMUM:	4.283	-0.8043	L
MAXIMUM:	4.398	34.6006	R

CHECK POINT	DIST ALONG CENTERLINE END-END (ft)	BUILD-UP LEFT (in)	BUILD-UP CL (in)	BUILD-UP RIGHT (in)
1	0.0000	4.2832	4.2860	4.2889
2	17.6494	4.3172	4.3208	4.3245
3	35.2987	4.3893	4.3937	4.3982

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER CAP BEAM SEAT REPORT

PIER: B1 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S1-G1	1.8041	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	993.8657
				b	-1.7227	-0.9278	993.8537
				c	1.7757	-0.8219	993.9237
				d	1.7606	-0.3222	993.9356
				BrgCtr	0.0189	-0.6250	993.8947
S1-G2	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	993.9319
				b	-1.7227	-0.9278	993.9199
				c	1.7757	-0.8219	993.9899
				d	1.7606	-0.3222	994.0018
				BrgCtr	0.0189	-0.6250	993.9609
S1-G3	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	993.9981
				b	-1.7227	-0.9278	993.9861
				c	1.7757	-0.8219	994.0561
				d	1.7606	-0.3222	994.0680
				BrgCtr	0.0189	-0.6250	994.0271
S1-G4	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.0643
				b	-1.7227	-0.9278	994.0523
				c	1.7757	-0.8219	994.1223
				d	1.7606	-0.3222	994.1342
				BrgCtr	0.0189	-0.6250	994.0933
S1-G5	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.1304
				b	-1.7227	-0.9278	994.1184
				c	1.7757	-0.8219	994.1884
				d	1.7606	-0.3222	994.2003
				BrgCtr	0.0189	-0.6250	994.1594
S1-G6	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.1966
				b	-1.7227	-0.9278	994.1846
				c	1.7757	-0.8219	994.2546
				d	1.7606	-0.3222	994.2665
				BrgCtr	0.0189	-0.6250	994.2256
S1-G7	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.2628
				b	-1.7227	-0.9278	994.2508
				c	1.7757	-0.8219	994.3208
				d	1.7606	-0.3222	994.3327
				BrgCtr	0.0189	-0.6250	994.2918

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER: B1 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S1-G8	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.3290
				b	-1.7227	-0.9278	994.3170
				c	1.7757	-0.8219	994.3870
				d	1.7606	-0.3222	994.3989
				BrgCtr	0.0189	-0.6250	994.3580
S1-G9	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7378	-0.4281	994.3952
				b	-1.7227	-0.9278	994.3832
				c	1.7757	-0.8219	994.4532
				d	1.7606	-0.3222	994.4651
				BrgCtr	0.0189	-0.6250	994.4242
RIGHT	1.5164						

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER CAP BEAM SEAT REPORT

PIER: B2 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S1-G1	1.8257	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	992.9122
				b	1.7189	1.0528	992.9241
				c	-1.7795	0.9469	992.8542
				d	-1.7643	0.4472	992.8422
				BrgCtr	-0.0227	0.7500	992.8832
S1-G2	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	992.9782
				b	1.7189	1.0528	992.9901
				c	-1.7795	0.9469	992.9202
				d	-1.7643	0.4472	992.9082
				BrgCtr	-0.0227	0.7500	992.9492
S1-G3	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.0443
				b	1.7189	1.0528	993.0562
				c	-1.7795	0.9469	992.9863
				d	-1.7643	0.4472	992.9743
				BrgCtr	-0.0227	0.7500	993.0153
S1-G4	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.1104
				b	1.7189	1.0528	993.1223
				c	-1.7795	0.9469	993.0524
				d	-1.7643	0.4472	993.0404
				BrgCtr	-0.0227	0.7500	993.0814
S1-G5	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.1764
				b	1.7189	1.0528	993.1883
				c	-1.7795	0.9469	993.1184
				d	-1.7643	0.4472	993.1064
				BrgCtr	-0.0227	0.7500	993.1474
S1-G6	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.2425
				b	1.7189	1.0528	993.2544
				c	-1.7795	0.9469	993.1845
				d	-1.7643	0.4472	993.1725
				BrgCtr	-0.0227	0.7500	993.2135
S1-G7	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.3086
				b	1.7189	1.0528	993.3205
				c	-1.7795	0.9469	993.2506
				d	-1.7643	0.4472	993.2386
				BrgCtr	-0.0227	0.7500	993.2796

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER: B2 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S1-G8	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.3747
				b	1.7189	1.0528	993.3866
				c	-1.7795	0.9469	993.3167
				d	-1.7643	0.4472	993.3047
				BrgCtr	-0.0227	0.7500	993.3457
S1-G9	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7341	0.5531	993.4407
				b	1.7189	1.0528	993.4526
				c	-1.7795	0.9469	993.3827
				d	-1.7643	0.4472	993.3707
				BrgCtr	-0.0227	0.7500	993.4117
RIGHT	1.8282						

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER CAP BEAM SEAT REPORT

PIER: B2 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S2-G1	1.8253	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.0207
				b	-1.7185	-1.0535	992.0088
				c	1.7798	-0.9463	992.0788
				d	1.7645	-0.4465	992.0907
				BrgCtr	0.0230	-0.7500	992.0498
S2-G2	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.0868
				b	-1.7185	-1.0535	992.0749
				c	1.7798	-0.9463	992.1449
				d	1.7645	-0.4465	992.1568
				BrgCtr	0.0230	-0.7500	992.1159
S2-G3	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.1529
				b	-1.7185	-1.0535	992.1410
				c	1.7798	-0.9463	992.2110
				d	1.7645	-0.4465	992.2229
				BrgCtr	0.0230	-0.7500	992.1820
S2-G4	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.2189
				b	-1.7185	-1.0535	992.2070
				c	1.7798	-0.9463	992.2770
				d	1.7645	-0.4465	992.2889
				BrgCtr	0.0230	-0.7500	992.2480
S2-G5	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.2850
				b	-1.7185	-1.0535	992.2731
				c	1.7798	-0.9463	992.3431
				d	1.7645	-0.4465	992.3550
				BrgCtr	0.0230	-0.7500	992.3141
S2-G6	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.3511
				b	-1.7185	-1.0535	992.3392
				c	1.7798	-0.9463	992.4092
				d	1.7645	-0.4465	992.4211
				BrgCtr	0.0230	-0.7500	992.3802
S2-G7	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.4172
				b	-1.7185	-1.0535	992.4053
				c	1.7798	-0.9463	992.4753
				d	1.7645	-0.4465	992.4872
				BrgCtr	0.0230	-0.7500	992.4463

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PIER: B2 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S2-G8	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.4832
				b	-1.7185	-1.0535	992.4713
				c	1.7798	-0.9463	992.5413
				d	1.7645	-0.4465	992.5532
				BrgCtr	0.0230	-0.7500	992.5123
S2-G9	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7339	-0.5537	992.5493
				b	-1.7185	-1.0535	992.5374
				c	1.7798	-0.9463	992.6074
				d	1.7645	-0.4465	992.6193
				BrgCtr	0.0230	-0.7500	992.5784
RIGHT	1.8282						

***** End of Report *****

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PIER CAP BEAM SEAT REPORT

PIER: B3 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S2-G1	1.7364	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.5622
				b	1.7185	1.0535	990.5741
				c	-1.7798	0.9463	990.5041
				d	-1.7645	0.4465	990.4922
				BrgCtr	-0.0230	0.7500	990.5332
S2-G2	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.6291
				b	1.7185	1.0535	990.6410
				c	-1.7798	0.9463	990.5710
				d	-1.7645	0.4465	990.5591
				BrgCtr	-0.0230	0.7500	990.6001
S2-G3	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.6959
				b	1.7185	1.0535	990.7078
				c	-1.7798	0.9463	990.6378
				d	-1.7645	0.4465	990.6259
				BrgCtr	-0.0230	0.7500	990.6669
S2-G4	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.7628
				b	1.7185	1.0535	990.7747
				c	-1.7798	0.9463	990.7047
				d	-1.7645	0.4465	990.6928
				BrgCtr	-0.0230	0.7500	990.7338
S2-G5	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.8296
				b	1.7185	1.0535	990.8415
				c	-1.7798	0.9463	990.7715
				d	-1.7645	0.4465	990.7596
				BrgCtr	-0.0230	0.7500	990.8006
S2-G6	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.8965
				b	1.7185	1.0535	990.9084
				c	-1.7798	0.9463	990.8384
				d	-1.7645	0.4465	990.8265
				BrgCtr	-0.0230	0.7500	990.8675
S2-G7	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	990.9633
				b	1.7185	1.0535	990.9752
				c	-1.7798	0.9463	990.9052
				d	-1.7645	0.4465	990.8933
				BrgCtr	-0.0230	0.7500	990.9343

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PIER: B3 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S2-G8	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	991.0302
				b	1.7185	1.0535	991.0421
				c	-1.7798	0.9463	990.9721
				d	-1.7645	0.4465	990.9602
				BrgCtr	-0.0230	0.7500	991.0012
S2-G9	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7339	0.5537	991.0970
				b	1.7185	1.0535	991.1089
				c	-1.7798	0.9463	991.0389
				d	-1.7645	0.4465	991.0270
				BrgCtr	-0.0230	0.7500	991.0680
RIGHT	1.7505						

***** End of Report *****

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PIER CAP BEAM SEAT REPORT

PIER: B3 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S3-G1	1.7370	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.5040
				b	-1.7193	-1.0522	990.4923
				c	1.7791	-0.9475	990.5623
				d	1.7642	-0.4478	990.5740
				BrgCtr	0.0224	-0.7500	990.5332
S3-G2	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.5709
				b	-1.7193	-1.0522	990.5592
				c	1.7791	-0.9475	990.6292
				d	1.7642	-0.4478	990.6409
				BrgCtr	0.0224	-0.7500	990.6001
S3-G3	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.6377
				b	-1.7193	-1.0522	990.6260
				c	1.7791	-0.9475	990.6960
				d	1.7642	-0.4478	990.7077
				BrgCtr	0.0224	-0.7500	990.6669
S3-G4	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.7046
				b	-1.7193	-1.0522	990.6929
				c	1.7791	-0.9475	990.7629
				d	1.7642	-0.4478	990.7746
				BrgCtr	0.0224	-0.7500	990.7338
S3-G5	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.7714
				b	-1.7193	-1.0522	990.7597
				c	1.7791	-0.9475	990.8297
				d	1.7642	-0.4478	990.8414
				BrgCtr	0.0224	-0.7500	990.8006
S3-G6	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.8383
				b	-1.7193	-1.0522	990.8266
				c	1.7791	-0.9475	990.8966
				d	1.7642	-0.4478	990.9083
				BrgCtr	0.0224	-0.7500	990.8675
S3-G7	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.9051
				b	-1.7193	-1.0522	990.8934
				c	1.7791	-0.9475	990.9634
				d	1.7642	-0.4478	990.9751
				BrgCtr	0.0224	-0.7500	990.9343

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PIER: B3 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S3-G8	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	990.9720
				b	-1.7193	-1.0522	990.9603
				c	1.7791	-0.9475	991.0303
				d	1.7642	-0.4478	991.0420
				BrgCtr	0.0224	-0.7500	991.0012
S3-G9	3.5016	AB_B-I 42-27IN	1.0000				
				a	-1.7343	-0.5525	991.0388
				b	-1.7193	-1.0522	991.0271
				c	1.7791	-0.9475	991.0971
				d	1.7642	-0.4478	991.1088
				BrgCtr	0.0224	-0.7500	991.0680
RIGHT	1.7504						

***** End of Report *****

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PIER CAP BEAM SEAT REPORT

PIER: B4 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S3-G1	1.7919	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.0757
				b	1.7193	1.0522	989.0874
				c	-1.7791	0.9475	989.0174
				d	-1.7642	0.4478	989.0057
				BrgCtr	-0.0224	0.7500	989.0466
S3-G2	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.1433
				b	1.7193	1.0522	989.1550
				c	-1.7791	0.9475	989.0850
				d	-1.7642	0.4478	989.0733
				BrgCtr	-0.0224	0.7500	989.1142
S3-G3	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.2110
				b	1.7193	1.0522	989.2227
				c	-1.7791	0.9475	989.1527
				d	-1.7642	0.4478	989.1410
				BrgCtr	-0.0224	0.7500	989.1819
S3-G4	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.2786
				b	1.7193	1.0522	989.2903
				c	-1.7791	0.9475	989.2203
				d	-1.7642	0.4478	989.2086
				BrgCtr	-0.0224	0.7500	989.2495
S3-G5	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.3462
				b	1.7193	1.0522	989.3579
				c	-1.7791	0.9475	989.2879
				d	-1.7642	0.4478	989.2762
				BrgCtr	-0.0224	0.7500	989.3171
S3-G6	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.4139
				b	1.7193	1.0522	989.4256
				c	-1.7791	0.9475	989.3556
				d	-1.7642	0.4478	989.3439
				BrgCtr	-0.0224	0.7500	989.3848
S3-G7	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.4815
				b	1.7193	1.0522	989.4932
				c	-1.7791	0.9475	989.4232
				d	-1.7642	0.4478	989.4115
				BrgCtr	-0.0224	0.7500	989.4524

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PIER: B4 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S3-G8	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.5492
				b	1.7193	1.0522	989.5609
				c	-1.7791	0.9475	989.4909
				d	-1.7642	0.4478	989.4792
				BrgCtr	-0.0224	0.7500	989.5201
S3-G9	3.5016	AB_B-I 42-27IN	1.0000				
				a	1.7343	0.5525	989.6168
				b	1.7193	1.0522	989.6285
				c	-1.7791	0.9475	989.5585
				d	-1.7642	0.4478	989.5468
				BrgCtr	-0.0224	0.7500	989.5877
RIGHT	1.7789						

***** End of Report *****

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PIER CAP BEAM SEAT REPORT

PIER: B4 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S4-G1	1.7915	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	989.8505
				b	-1.7189	-1.0529	989.8393
				c	1.7795	-0.9468	989.9092
				d	1.7644	-0.4471	989.9205
				BrgCtr	0.0227	-0.7500	989.8799
S4-G2	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	989.9182
				b	-1.7189	-1.0529	989.9070
				c	1.7795	-0.9468	989.9769
				d	1.7644	-0.4471	989.9882
				BrgCtr	0.0227	-0.7500	989.9476
S4-G3	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	989.9858
				b	-1.7189	-1.0529	989.9746
				c	1.7795	-0.9468	990.0445
				d	1.7644	-0.4471	990.0558
				BrgCtr	0.0227	-0.7500	990.0152
S4-G4	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.0534
				b	-1.7189	-1.0529	990.0422
				c	1.7795	-0.9468	990.1121
				d	1.7644	-0.4471	990.1234
				BrgCtr	0.0227	-0.7500	990.0828
S4-G5	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.1211
				b	-1.7189	-1.0529	990.1099
				c	1.7795	-0.9468	990.1798
				d	1.7644	-0.4471	990.1911
				BrgCtr	0.0227	-0.7500	990.1505
S4-G6	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.1887
				b	-1.7189	-1.0529	990.1775
				c	1.7795	-0.9468	990.2474
				d	1.7644	-0.4471	990.2587
				BrgCtr	0.0227	-0.7500	990.2181
S4-G7	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.2564
				b	-1.7189	-1.0529	990.2452
				c	1.7795	-0.9468	990.3151
				d	1.7644	-0.4471	990.3264
				BrgCtr	0.0227	-0.7500	990.2858

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER: B4 LEFT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S4-G8	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.3240
				b	-1.7189	-1.0529	990.3128
				c	1.7795	-0.9468	990.3827
				d	1.7644	-0.4471	990.3940
				BrgCtr	0.0227	-0.7500	990.3534
S4-G9	3.5016	AB_B-I 42 17IN	1.0000				
				a	-1.7340	-0.5532	990.3916
				b	-1.7189	-1.0529	990.3804
				c	1.7795	-0.9468	990.4504
				d	1.7644	-0.4471	990.4616
				BrgCtr	0.0227	-0.7500	990.4210
RIGHT	1.7789						

***** End of Report *****

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER CAP BEAM SEAT REPORT

PIER: B5 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S4-G1	1.8077	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.1473
				b	1.7227	0.9279	989.1586
				c	-1.7757	0.8218	989.0886
				d	-1.7606	0.3221	989.0774
				BrgCtr	-0.0190	0.6250	989.1180
S4-G2	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.2151
				b	1.7227	0.9279	989.2264
				c	-1.7757	0.8218	989.1564
				d	-1.7606	0.3221	989.1452
				BrgCtr	-0.0190	0.6250	989.1858
S4-G3	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.2829
				b	1.7227	0.9279	989.2942
				c	-1.7757	0.8218	989.2242
				d	-1.7606	0.3221	989.2130
				BrgCtr	-0.0190	0.6250	989.2536
S4-G4	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.3506
				b	1.7227	0.9279	989.3619
				c	-1.7757	0.8218	989.2919
				d	-1.7606	0.3221	989.2807
				BrgCtr	-0.0190	0.6250	989.3213
S4-G5	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.4184
				b	1.7227	0.9279	989.4297
				c	-1.7757	0.8218	989.3597
				d	-1.7606	0.3221	989.3485
				BrgCtr	-0.0190	0.6250	989.3891
S4-G6	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.4862
				b	1.7227	0.9279	989.4975
				c	-1.7757	0.8218	989.4275
				d	-1.7606	0.3221	989.4163
				BrgCtr	-0.0190	0.6250	989.4569
S4-G7	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.5539
				b	1.7227	0.9279	989.5652
				c	-1.7757	0.8218	989.4952
				d	-1.7606	0.3221	989.4840
				BrgCtr	-0.0190	0.6250	989.5246

Filename: N:\TRA\255717\Eng\BR35\Geomath\I-575 BR35.gmd

PIER: B5 RIGHT OF PIER CL

GIRDER	WORK PT DISTANCE (ft)	GIRDER TYPE	PAD THICK (in)		DISTANCE FROM WORK PT ALONG CL (ft)	PERP TO CL (ft)	ELEVATION (ft)
S4-G8	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.6217
				b	1.7227	0.9279	989.6330
				c	-1.7757	0.8218	989.5630
				d	-1.7606	0.3221	989.5518
				BrgCtr	-0.0190	0.6250	989.5924
S4-G9	3.5016	AB_B-I 42 17IN	1.0000				
				a	1.7378	0.4282	989.6896
				b	1.7227	0.9279	989.7008
				c	-1.7757	0.8218	989.6308
				d	-1.7606	0.3221	989.6196
				BrgCtr	-0.0190	0.6250	989.6602
RIGHT	1.5127						

***** End of Report *****

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Beam Design Input	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	Excel	2003

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience prior the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not complete and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work activity, a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Beam Design Input calculations are included for span 1, spans 2&3, and span 4.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	16	16	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Input - Span 1
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

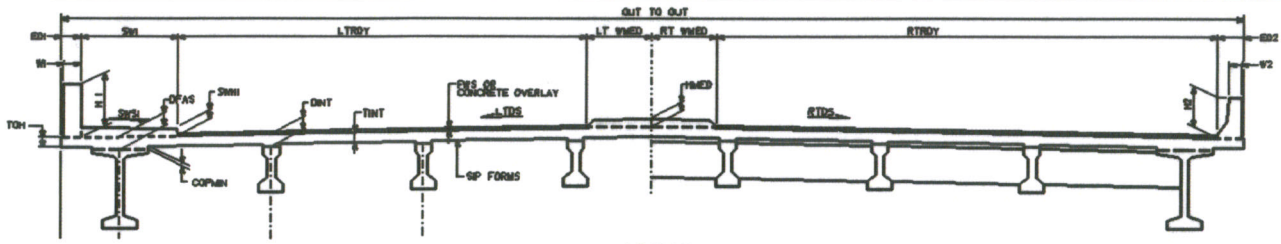
BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

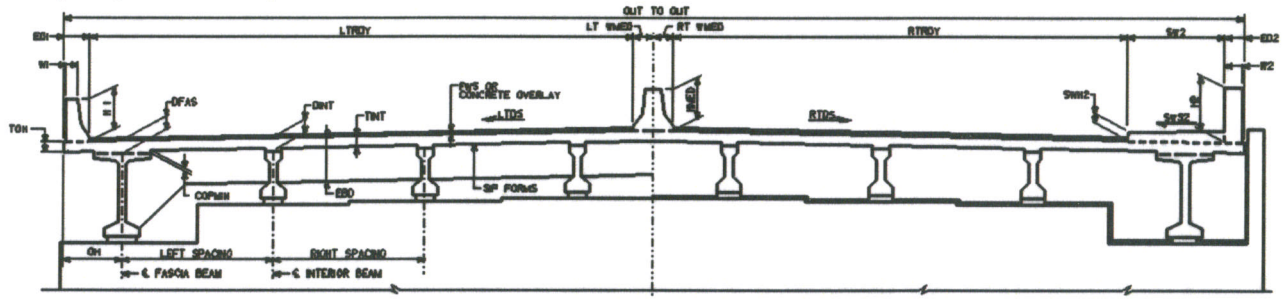
J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

TYPICAL DECK SECTIONS:





SECTION THRU EDGE BEAM **SECTION THRU ENDWALL**

Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

NON-COMPOSITE DEAD LOADS PER BEAM:

SLAB:

D_{INT} =	0.001 in.		
T_{INT} =	0.001 in.		
INTEGRAL WEARING SURFACE THICKNESS =	0 in.	INT. $SLAB_{WEIGHT}$ =	0.000 klf
DESIGN T_{INT} =	0.001 in.	INTEGRAL WEARING $SURFACE_{WEIGHT}$ =	0.000 klf
INT. COP_{MIN} =	0 in.		
INT. COP_{MAX} =	0 in.		
INT. COP. DEPTH DESIGN METHOD:	Average Coping		
INT. COP_{WIDTH} =	41.25 in.	INT. COP_{WEIGHT} =	0.000 klf
AVG. INT. COP DEPTH =	0 in.	INT. SIP_{WEIGHT} =	0.000 klf
SIP FORMS:	No	INT. $BEAM_{WEIGHT}$ =	0.516 klf
SLAB $CONC._{WEIGHT}$ =	0.150 k/ft^3	NON-COMPOSITE DEAD LOAD PER BEAM =	0.516 klf
BEAM $CONC._{WEIGHT}$ =	0.150 k/ft^3		

INTERIOR BEAM PROPERTIES:

INT. BEAM TYPE: 17" BOX

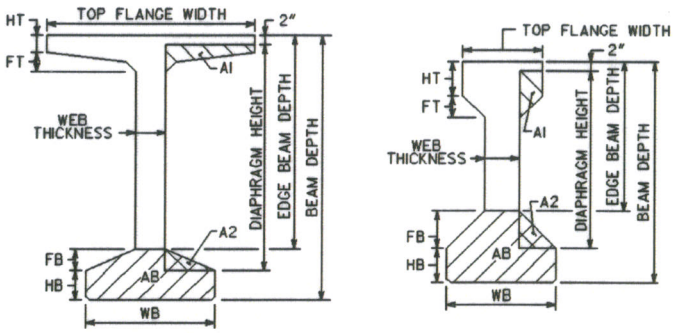
Top Flange Width =	41.25 in.
Beam Depth =	17 in.
Web Thickness =	11.5 in.
H_T =	5 in.
F_T =	0.3 in.
H_B =	4.5 in.
W_B =	42 in.
F_B =	0.3 in.
E.B. Depth (no coping) =	6.945 in.
Diaphragm Height =	6.945 in.
Cross Sectional Area =	495.75 in^2
A1 =	0 in^2
A2 =	0 in^2
AB =	0 in^2
INT. $BEAM_{WEIGHT}$ =	0.516 klf

CONCRETE STRENGTHS:

$f'_{C\ BEAM}$ =	6500 psi
$f'_{Ci\ BEAM}$ =	4500 psi
$f'_{C\ SLAB}$ =	3500 psi
SIT =	0.201 k / in^2
SFB =	0.484 k / in^2

TYPE OF STRANDS = 0.5 in. dia. low-relax
DRAPED STRANDS ? No

STRAND AREA = 0.167 sq. in.
RB_{FPU} = 0.75
RT_{FPU} = 0.75



DEFINITION OF BEAM AREAS FOR EB. & DIAPH. CALCS

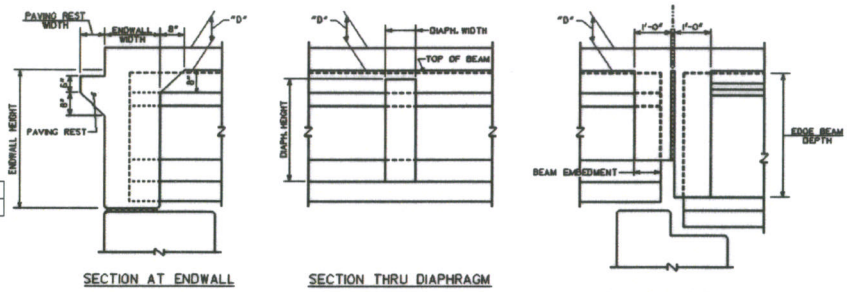
BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**
Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

EW., DIAPH., EDGE BEAM DIMENSIONS & CALCS:

SPAN TYPE: Intermediate Span



SECTION AT ENDWALL — SECTION THRU DIAPHRAGM — SECTION THRU EDGE BEAM

		# DIAPHRAGMS
DIAPH. WIDTH =	12 in.	1
DIAPH. HEIGHT =	6.945 in.	
INT. DIAPH. WEIGHT =	0.221 kips	
INT. EB. HEIGHT =	6.945 in.	
INT. EB. WIDTH =	18 in.	
BM. EMBED. FOR EB. =	0 in.	
INT. EB. WEIGHT =	0.331 kips	

INT. P-LOADS:	LOAD	POSITION	REACTION	MOMENT
EB. =	0.331 kips	0.00 ft.	0.331 kips	0.000 k-ft.
DIAPH. =	0.221 kips	21.16 ft.	0.110 kips	2.335 k-ft.
DIAPH. =	N/A	N/A	N/A	N/A
DIAPH. =	N/A	N/A	N/A	N/A
EB. =	0.331 kips	42.32 ft.	0.000 kips	0.000 k-ft.
TOTAL POINT DEAD LOAD PER BEAM =			0.441 kips	2.335 k-ft.

DECK SECTION DIMENSIONS & CALCS:

LEFT BARRIER
BARRIER TYPE: Jersey Barrier
FENCING OPTION: None
ED_1 = 1.750 ft.
W_1 = 0.75 ft.
H_1 = 2.667 ft.
LTDS = 2.0000 %

MEDIAN
MEDIAN TYPE: HOV Barrier

RIGHT BARRIER
BARRIER TYPE: None
FENCING OPTION: None
ED_2 = 0.000 ft.
W_2 = 0 ft.
H_2 = 0 ft.
RTDS = 2.0000 %

IS MEDIAN BARRIER CENTERED? No
OFFSET TO LEFT OR RIGHT? Left
OFFSET DISTANCE = 6.25 ft.

BRIDGE TYPE = Bridge Widening
SPAN LENGTH = 42.323 ft.
SKEW ANGLE = 88.2858 degrees

LEFT SPACING = 3.5 ft.
RIGHT SPACING = 3.5 ft.
LEFT OVERHANG = 1.75 ft.
RIGHT OVERHANG = 1.75 ft.
LEFT OFFSET TO BARRIER = 3 in.
RIGHT OFFSET TO BARRIER = 3 in.
SPACING TO SET BEAM = 1.75 ft.
NO. OF NEW BEAMS = 9 beams
NO. OF BEAMS IN EXISTING BRIDGE = 11 beams
NO. OF SET BEAMS W/ COMP. LOADS = 0 beams
TOTAL NO. OF BEAMS SUPPORTING WIDENING = 9 beams
NO. OF NEW BAYS = 9 bays

WIDENED BRIDGE OUT TO OUT = 31.500 ft.
EXISTING BRIDGE OUT TO OUT = 44.000 ft.
FINISHED BRIDGE OUT TO OUT = 75.500 ft.

NOTE: BRIDGE WIDENING IS TO ONE SIDE ONLY !

Ignore Median only for RDWY Width Calculations = Yes
Width of Median = 2 ft.

LT RDWY = 28.750 ft.
RT RDWY = 43.000 ft.
TOTAL WIDENED RDWY WIDTH = 73.750 ft. Including median width

Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

SUPERIMPOSED DEAD LOADS:

LEFT BARRIER
BARRIER WEIGHT = 0.405 klf
FENCING WEIGHT = 0.000 klf

MEDIAN
MEDIAN WEIGHT = 0.472 klf

RIGHT BARRIER
BARRIER WEIGHT = 0.000 klf
FENCING WEIGHT = 0.000 klf

NOTE: BARRIER WEIGHT INCLUDES SIDEWALK WEIGHT, IF PRESENT

FWS DESIGN METHOD: Avg. Beam Sp.
WEIGHT OF FWS = 30 lb/sf
DECK OVERLAY: Yes
AVG. THICKNESS = 5 in.

OUT TO OUT DIST. GREATER THAN 66'-5, DISTRIBUTE BARRIER DL et. al. ONTO OUTER BEAMS!

BEAM ON CENTERLINE ? Yes
DIST. MEDIAN AND/OR BARR. TO ALL BEAMS ? No
OVERRIDE NO. OF BM. TO DIST. LT BARRIER ? No
NO. OF BEAMS DIST. TO LT BARRIER = 4 beams

BEAMS SUPPORTING LT BARRIER
BM 1 - BM 4

OVERRIDE NO. OF BM. TO DIST. MED. BARRIER ? Yes
NO. OF BEAMS DIST. TO MED. BARRIER = 4 beams

BEAMS SUPPORTING MED BARRIER
BM 8 - BM 11

OVERRIDE NO. OF BM. TO DIST. RT BARRIER ? No
NO. OF BEAMS DIST. TO RT BARRIER = 0 beams

BEAMS SUPPORTING RT BARRIER

SUPERIMPOSED LOADS PER BRIDGE:
FWS WEIGHT = 2.213 klf per bridge
DECK OVERLAY WT. = 4.609 klf per bridge
UTILITY WEIGHT TO SUPERSTRUCTURE = 0.000 klf per bridge
TOTAL SUPERIMPOSED DEAD LOAD = 7.699 klf per bridge

SUPERIMPOSED LOADS PER BEAM:
FWS WEIGHT = 0.105 klf per beam
DECK OVERLAY WT. = 0.219 klf per beam
UTILITY WEIGHT TO SUPERSTRUCTURE = 0.000 klf per beam

LT BARRIER DEAD LOAD = 0.101 klf per beam
MED. BARRIER DEAD LOAD = 0.118 klf per beam
RT BARRIER DEAD LOAD = 0.000 klf per beam

MEDIAN BARRIER LOADING GOVERNS DESIGN

CONTROLLING SUPERIMPOSED DEAD LOAD = 0.442 klf per beam

DOUBLED LOADING CASES

	BARRIER ONLY	RAISED MEDIAN	MED. BAR.
WITHOUT OVERRIDE	0.101 klf per beam	0.195 klf per beam	0.219 klf per beam

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

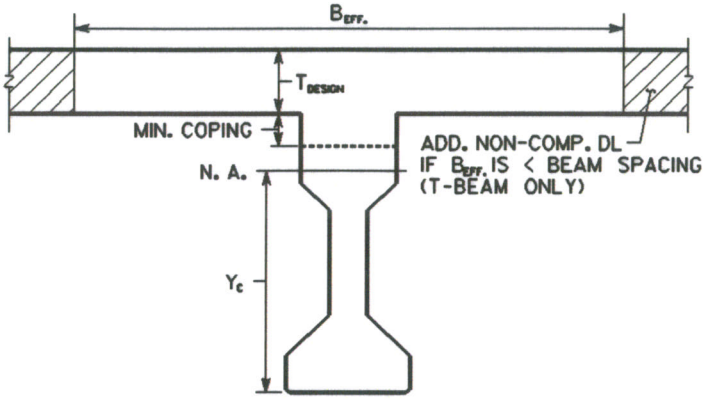
JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

COMPOSITE SECTION MODULUS CALC:

SPAN LENGTH = **42.323 ft.**

Section Properties from Geomath file: I-575 BR35 Beam ID: 42" x 17" update Adjacent Box Beam Section Drawing

BEAM MOMENT OF INERTIA =	16,046 in^4
BEAM Y_{BN} =	8.57116 in.
INT. COP_{MIN} =	0 in.
DESIGN T_{INT} =	0.001 in.
E_{BM} =	4.89 x 10^6 psi
E_{SLAB} =	3.59 x 10^6 psi
modular ratio =	1.36



AASHTO 8.10.1.1 - Compression Flange Width

wBM FLANGE =	41.25	in.
B_{eff} = Bm Spacing =	**42.00**	in.
B_{eff} = ¼ Span Length =	**126.97**	in.
B_{eff} = WBM FLANGE + 2[6 tSLAB] =	**41.26**	**in. CONTROLS**
Add. Non-Comp. DL (WDLNC) =	0.000 klf	(T-Beam Only)
Y_C =	8.57 in.	
COMPOSITE MOM. OF INERTIA =	16,048 in^4	

COMPOSITE SECTION MODULI:

SECTION MOD. AT TOP OF SLAB =	1,904 in^3
SECTION MOD. AT TOP OF BEAM =	1,904 in^3
SECTION MOD. AT BOT. OF BEAM =	1,872 in^3

Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

DISTRIBUTION & DEFLECTION FACTOR CALCS:

DISTRIBUTION FACTOR CALCS:

SHEAR	1.000	WHEEL
	0.500	AXLE

BOX BEAM DESIGN METHOD: Adjacent Box Beam

DEFLECTION FACTOR CALCS:

ALLOW USER TO DEFINE NO. OF LANES ?	No
CALCULATED NO. OF LANES =	5
ALLOW USER TO DEFINE NO. OF BEAMS ?	No
CALCULATED NO. OF BEAMS =	9
REDUCTION FACTOR =	0.75
DFD =	0.833

MAX SPACING = 3.5 ft.
MIN SPACING = 3.5 ft.

-> 9 beams will be used for DFD calcs.

Load Fraction in Adjacent Box Girders (AASHTO 3.23.4):

S =	3.50 ft.	I =	16,046 in^4	
NL =	2 lanes			
L =	42.32 ft.	b =	42 in.	
Poisson's Ratio (ASHTO 8.7.3) =	0.2	d =	17 in.	
D =	5.877	t =	5.75 in.	
C =	0.513	tf =	5 in.	
K =	0.689	J =	40,532 in^4	
W =	31.500 ft.	**Load Fraction =**	**0.595**	WHEEL
			0.298	AXLE

Moment Distribution in Spread Box Girders (AASHTO 3.28):

NL =	3 lanes		
NB =	9 beams		
S =	3.5 ft. bm. spaces		
L =	42.323 ft. span length		DFM:
W =	28.75 ft. rdwy width	WHEEL	0.664
k =	-0.028	AXLE	0.332

LIVE LOAD CALCS:

LEFT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_1 =	0 ft.	0.00 kips	0.000 k-ft.
LEFT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

RIGHT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_2 =	0 ft.	0.00 kips	0.000 k-ft.
RIGHT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

IMPACT FACTOR: 1.30

HS 20 LOADING:

			REACTION	R x DF x I
MIDSPAN:	480.500 k-ft.	TRUCK:	56.095 kips	30.110 kips
MAX:	489.778 k-ft.	LANE:	39.520 kips	22.122 kips

	REACTION	MOMENT
TOTAL LL+I =	30.110 kips	185.820 k-ft.
	MAX TOTAL LL+I =	**189.408 k-ft.**

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

SUMMARY OF DEAD & LIVE LOADINGS:

NON-COMPOSITE DEAD LOADS PER BEAM:

INT. SLAB $_{WEIGHT}$ =	0.000 klf
INT. COP$_{WEIGHT}$ =	0.000 klf
INT. SIP$_{WEIGHT}$ =	0.000 klf
INT. BEAM$_{WEIGHT}$ =	0.516 klf
TOTAL N-COMP. DL =	**0.516 klf**

SUPERIMPOSED DEAD LOADS PER BEAM:

LEFT BARRIER WEIGHT =	0.101 klf
LEFT FENCING WEIGHT =	0.000 klf
MEDIAN WEIGHT =	0.118 klf
RIGHT BARRIER WEIGHT =	#DIV/0!
RIGHT FENCING WEIGHT =	#DIV/0!
FWS WEIGHT =	0.105 klf
DECK OVERLAY WT. =	0.219 klf
UTILITY WEIGHT =	0.000 klf
TOTAL SUPERIMPOSED DL =	**0.442 klf**

LOADING RESULTS

	LOADING	REACTION	MOMENT
TOTAL N-COMP. DL =	0.516 klf	10.929 kips	115.635 k-ft
TOTAL SUPERIMPOSED DL =	0.442 klf	9.348 kips	98.909 k-ft
TOTAL POINT DL =		0.441 kips	2.335 k-ft
TOTAL DL =	**0.958 klf**	**20.718 kips**	**216.879 k-ft**
LEFT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
RIGHT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
TOTAL SW LL =	**0.000 klf**	**0.000 kips**	**0.000 k-ft**
MAX OF TRUCK OR LANE LL+I =		**30.110 kips**	**185.820 k-ft**
TOTAL DL + SW LL + (LL + I) =		**50.828 kips**	**402.699 k-ft.**

Description: 17" BOX at 3.5ft
Design Span Length: 42.323 ft.
Span No.: 1

SUMMARY OF PROGRAM INPUT:

SIMPLE SPAN PROGRAM INPUT:

	INTERIOR BEAM		
LENGTH =	42.323 ft.	**f '$_{C\ BEAM}$ =**	6500 psi
Moment Dist. Factor (DFM) =	0.595	**f '$_{Ci\ BEAM}$ =**	4500 psi
End Shear Dist. Factor (DFV) =	1.000	**SIT =**	0.201 k / in^2
LL Deflection Dist. Factor (DFD) =	0.833	**SFB =**	0.484 k / in^2
Non- Composite DL (W_{DLNC}) =	0.000 klf	**E_{BM} =**	4.89 x 10^6 psi
Composite DL (W_{DLC}) =	0.442 klf	**E_{SLAB} =**	3.59 x 10^6 psi
Sidewalk LL (W_{swK}) =	0.000 klf		
Effective Concrete Width (W_f) =	41.26 in.		
Concrete Slab Thickness (T_f) =	0.001 in.		
Minimum Coping (Df) =	0.000 in.		

P-LOADS:	**P1**	**P2**	**P3**	**P4**	**P5**
X	0.000 ft.	21.161 ft.	42.323 ft.	N/A	N/A
LOAD	0.331 kips	0.221 kips	0.331 kips	N/A	N/A

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Input - Spans 2&3
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

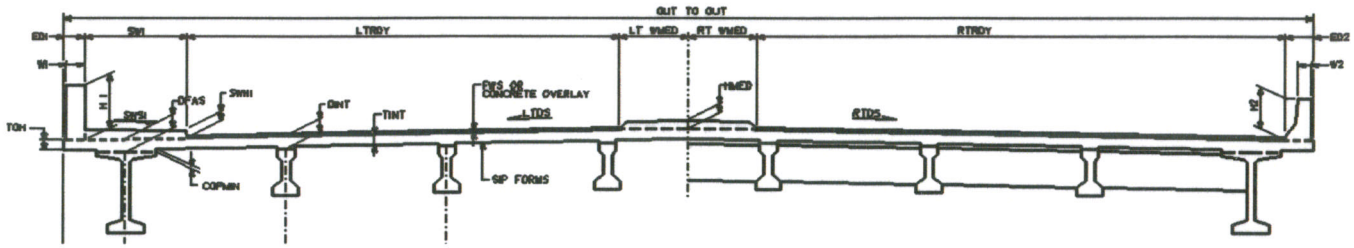
BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

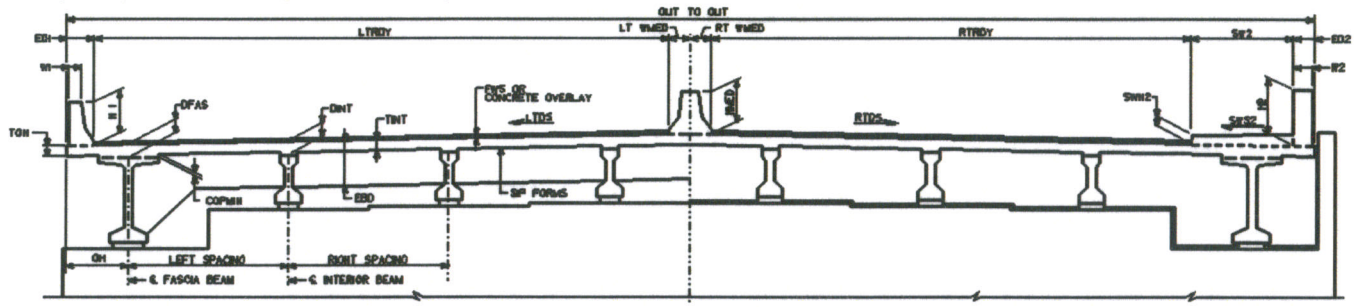
J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

TYPICAL DECK SECTIONS:





SECTION THRU EDGE BEAM **SECTION THRU ENDWALL**

Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

NON-COMPOSITE DEAD LOADS PER BEAM:

SLAB:

D_{INT} =	0.001 in.
T_{INT} =	0.001 in.
INTEGRAL WEARING SURFACE THICKNESS =	0 in.
DESIGN T_{INT} =	0.001 in.
INT. COP_{MIN} =	0 in.
INT. COP_{MAX} =	0 in.
INT. COP. DEPTH DESIGN METHOD:	Average Coping
INT. COP_{WIDTH} =	41.25 in.
AVG. INT. COP DEPTH =	0 in.
SIP FORMS:	No
SLAB $CONC._{WEIGHT}$ =	0.150 k/ft^3
BEAM $CONC._{WEIGHT}$ =	0.150 k/ft^3

INT. $SLAB_{WEIGHT}$ =	0.000 klf
INTEGRAL WEARING $SURFACE_{WEIGHT}$ =	0.000 klf
INT. COP_{WEIGHT} =	0.000 klf
INT. SIP_{WEIGHT} =	0.000 klf
INT. $BEAM_{WEIGHT}$ =	0.653 klf
NON-COMPOSITE DEAD LOAD PER BEAM =	0.653 klf

INTERIOR BEAM PROPERTIES:

INT. BEAM TYPE: 27" BOX

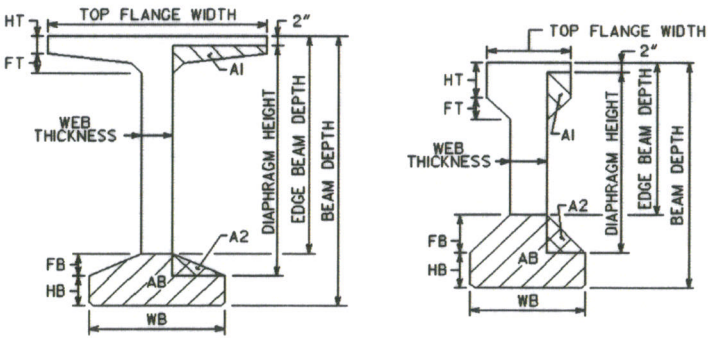
Top Flange Width =	41.25 in.
Beam Depth =	27 in.
Web Thickness =	10 in.
H_T =	5.5 in.
F_T =	0.58 in.
H_B =	5.5 in.
W_B =	42 in.
F_B =	0.56 in.
E.B. Depth (no coping) =	15.526 in.
Diaphragm Height =	15.526 in.
Cross Sectional Area =	627 in^2
A1 =	0 in^2
A2 =	0 in^2
AB =	0 in^2
INT. $BEAM_{WEIGHT}$ =	0.653 klf

CONCRETE STRENGTHS:

$f'_{C\ BEAM}$ =	6500 psi
$f'_{CI\ BEAM}$ =	4500 psi
$f'_{C\ SLAB}$ =	3500 psi
SIT =	0.201 k / in^2
SFB =	0.484 k / in^2

TYPE OF STRANDS = 0.5 in. dia. low-relax
DRAPED STRANDS ? No

STRAND AREA =	0.167 sq. in.
RB_{FPU} =	0.75
RT_{FPU} =	0.75



DEFINITION OF BEAM AREAS FOR EB. & DIAPH. CALCS

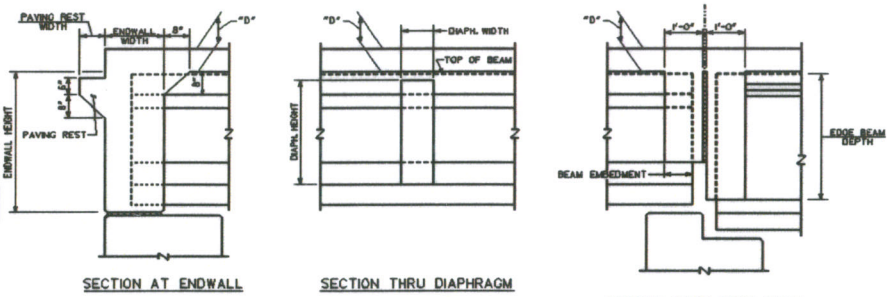
BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**
Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

EW., DIAPH., EDGE BEAM DIMENSIONS & CALCS:

SPAN TYPE: Intermediate Span



SECTION AT ENDWALL

SECTION THRU DIAPHRAGM

SECTION THRU EDGE BEAM

DIAPHRAGMS
3

DIAPH. WIDTH =	12 in.
DIAPH. HEIGHT =	15.526 in.
INT. DIAPH. WEIGHT =	0.518 kips
INT. EB. HEIGHT =	15.526 in.
INT. EB. WIDTH =	18 in.
BM. EMBED. FOR EB. =	0 in.
INT. EB. WEIGHT =	0.776 kips

INT. P-LOADS:	LOAD	POSITION	REACTION	MOMENT
EB. =	0.776 kips	0.00 ft.	0.776 kips	0.000 k-ft.
DIAPH. =	0.518 kips	15.88 ft.	0.388 kips	6.162 k-ft.
DIAPH. =	0.518 kips	31.75 ft.	0.259 kips	8.216 k-ft.
DIAPH. =	0.518 kips	47.63 ft.	0.129 kips	6.162 k-ft.
EB. =	0.776 kips	63.51 ft.	0.000 kips	0.000 k-ft.
	TOTAL POINT DEAD LOAD PER BEAM =		1.553 kips	20.541 k-ft.

DECK SECTION DIMENSIONS & CALCS:

LEFT BARRIER

BARRIER TYPE:	Jersey Barrier
FENCING OPTION:	None
ED_1 =	1.750 ft.
W_1 =	0.75 ft.
H_1 =	2.667 ft.
LTDS =	2.0000 %

MEDIAN

MEDIAN TYPE: HOV Barrier

RIGHT BARRIER

BARRIER TYPE:	None
FENCING OPTION:	None
ED_2 =	0.000 ft.
W_2 =	0 ft.
H_2 =	0 ft.
RTDS =	2.0000 %

IS MEDIAN BARRIER CENTERED?	No
OFFSET TO LEFT OR RIGHT?	Left
OFFSET DISTANCE FROM CL =	6.25 ft.

BRIDGE TYPE =	Bridge Widening
SPAN LENGTH =	63.505 ft.
SKEW ANGLE =	88.2858 degrees
LEFT SPACING =	3.5 ft.
RIGHT SPACING =	3.5 ft.
LEFT OVERHANG =	1.75 ft.
RIGHT OVERHANG =	1.75 ft.
LEFT OFFSET TO BARRIER =	3 in.
RIGHT OFFSET TO BARRIER =	3 in.
SPACING TO SET BEAM =	1.75 ft.
NO. OF NEW BEAMS =	9 beams
NO. OF BEAMS IN EXISTING BRIDGE =	11 beams
NO. OF SET BEAMS W/ COMP. LOADS =	0 beams
TOTAL NO. OF BEAMS SUPPORTING WIDENING =	9 beams
NO. OF NEW BAYS =	9 bays

WIDENED BRIDGE OUT TO OUT =	31.500 ft.
EXISTING BRIDGE OUT TO OUT =	44.000 ft.
FINISHED BRIDGE OUT TO OUT =	75.500 ft.

NOTE: BRIDGE WIDENING IS TO ONE SIDE ONLY !

Ignore Median only for RDWY Width Calculations = Yes

Width of Median = 2 ft.

LT RDWY =	28.750 ft.
RT RDWY =	43.000 ft.
TOTAL WIDENED RDWY =	73.750 ft.

Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

SUPERIMPOSED DEAD LOADS:

LEFT BARRIER

BARRIER WEIGHT =	0.405 klf
FENCING WEIGHT =	0.000 klf

MEDIAN

MEDIAN WEIGHT = 0.472 klf

RIGHT BARRIER

BARRIER WEIGHT =	0.000 klf
FENCING WEIGHT =	0.000 klf

NOTE: BARRIER WEIGHT INCLUDES SIDEWALK WEIGHT, IF PRESENT

FWS DESIGN METHOD: Avg. Beam Sp.

WEIGHT OF FWS = 30 lb/sf

DECK OVERLAY: Yes
AVG. THICKNESS = 5 in.

OUT TO OUT DIST. GREATER THAN 66'-5, DISTRIBUTE BARRIER DL et. al. ONTO OUTER BEAMS!

BEAM ON CENTERLINE ? Yes

DIST. MEDIAN AND/OR BARR. TO ALL BEAMS ? No

OVERRIDE NO. OF BM. TO DIST. LT BARRIER ? No
NO. OF BEAMS DIST. TO LT BARRIER = 4 beams

BEAMS SUPPORTING LT BARRIER
BM 1 - BM 4

OVERRIDE NO. OF BM. TO DIST. MED. BARRIER ? Yes

NO. OF BEAMS DIST. TO MED. BARRIER = 4 beams

BEAMS SUPPORTING MED BARRIER
BM 8 - BM 11

OVERRIDE NO. OF BM. TO DIST. RT BARRIER ? No
NO. OF BEAMS DIST. TO RT BARRIER = 0 beams

BEAMS SUPPORTING RT BARRIER

SUPERIMPOSED LOADS PER BRIDGE:

FWS WEIGHT =	2.213 klf per bridge
DECK OVERLAY WT. =	4.609 klf per bridge
UTILITY WEIGHT TO SUPERSTRUCTURE =	0.000 klf per bridge
TOTAL SUPERIMPOSED DEAD LOAD =	**7.699 klf per bridge**

SUPERIMPOSED LOADS PER BEAM:

FWS WEIGHT =	0.105 klf per beam
DECK OVERLAY WT. =	0.219 klf per beam
UTILITY WEIGHT TO SUPERSTRUCTURE =	0.000 klf per beam
LT BARRIER DEAD LOAD =	0.101 klf per beam
MED. BARRIER DEAD LOAD =	0.118 klf per beam
RT BARRIER DEAD LOAD =	0.000 klf per beam

MEDIAN BARRIER LOADING GOVERNS DESIGN

CONTROLLING SUPERIMPOSED DEAD LOAD = 0.442 klf per beam

WITHOUT OVERRIDE	0.101 klf per beam	0.195 klf per beam	0.219 klf per beam
WITH OVERRIDE	0.101 klf per beam	0.195 klf per beam	0.118 klf per beam

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

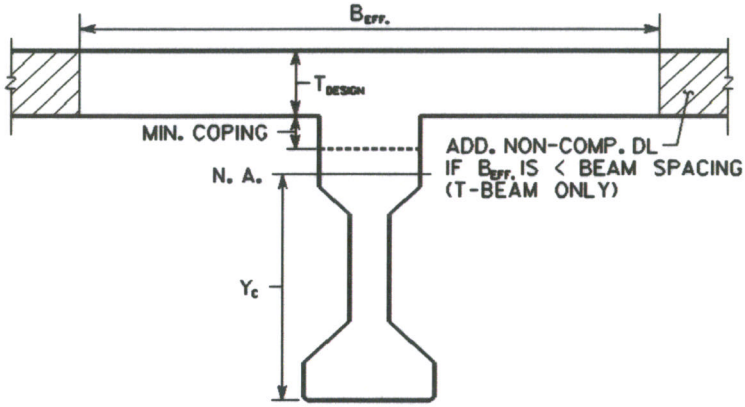
JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

COMPOSITE SECTION MODULUS CALC:

SPAN LENGTH = **63.505 ft.**

Section Properties from Geomath file: I-575 BR35 Beam ID: 42" x 27" update Adjacent Box Beam Section Drawing

BEAM MOMENT OF INERTIA =	58,041 in^4
BEAM Y_{BN} =	13.3751 in.
INT. COP_{MIN} =	0 in.
DESIGN T_{INT} =	0.001 in.
E_{BM} =	4.89 x 10^6 psi
E_{SLAB} =	3.59 x 10^6 psi
modular ratio =	1.36



AASHTO 8.10.1.1 - Compression Flange Width

wBM FLANGE =	41.25	in.
B_{eff} = Bm Spacing =	**42.00**	in.
B_{eff} = ¼ Span Length =	**190.52**	in.
B_{eff} = WBM FLANGE + 2[6 tSLAB] =	**41.26**	**in. CONTROLS**
Add. Non-Comp. DL (WDLNC) =	0.000 klf	(T-Beam Only)
Y_C =	13.38 in.	
COMPOSITE MOM. OF INERTIA =	58,046 in^4	

COMPOSITE SECTION MODULI:

SECTION MOD. AT TOP OF SLAB =	4,260 in^3
SECTION MOD. AT TOP OF BEAM =	4,261 in^3
SECTION MOD. AT BOT. OF BEAM =	4,340 in^3

Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

DISTRIBUTION & DEFLECTION FACTOR CALCS:

DISTRIBUTION FACTOR CALCS:

SHEAR	1.000	WHEEL
	0.500	AXLE

BOX BEAM DESIGN METHOD: Adjacent Box Beam

DEFLECTION FACTOR CALCS:

ALLOW USER TO DEFINE NO. OF LANES ?	No
CALCULATED NO. OF LANES =	5
ALLOW USER TO DEFINE NO. OF BEAMS ?	No
CALCULATED NO. OF BEAMS =	9
REDUCTION FACTOR =	0.75
DFD =	0.833

MAX SPACING = 3.5 ft.
MIN SPACING = 3.5 ft.

-> 9 beams will be used for DFD calcs.

Load Fraction in Adjacent Box Girders (AASHTO 3.23.4):

S =	3.50 ft.	I =	58,041 in^4	
NL =	2 lanes			
L =	63.51 ft.	b =	42 in.	
Poisson's Ratio (ASHTO 8.7.3) =	0.2	d =	27 in.	
D =	5.942	t =	5 in.	
C =	0.386	tf =	5.5 in.	
K =	0.779	J =	114,774 in^4	
W =	31.500 ft.	**Load Fraction =**	**0.589**	WHEEL
			0.295	AXLE

Moment Distribution in Spread Box Girders (AASHTO 3.28):

NL =	3 lanes		
NB =	10 beams		
S =	4 ft. bm. spaces		
L =	63.505 ft. span length		DFM:
W =	34 ft. rdwy width	WHEEL	0.609
k =	0.140	AXLE	0.304

LIVE LOAD CALCS:

LEFT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_1 =	0 ft.	0.00 kips	0.000 k-ft.
LEFT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

RIGHT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_2 =	0 ft.	0.00 kips	0.000 k-ft.
RIGHT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

IMPACT FACTOR: 1.27

HS 20 LOADING:

			REACTION	R x DF x I
MIDSPAN:	863.000 k-ft.	TRUCK:	61.417 kips	31.206 kips
MAX:	869.173 k-ft.	LANE:	46.320 kips	24.021 kips

	REACTION	MOMENT
TOTAL LL+I =	31.206 kips	321.583 k-ft.
	MAX TOTAL LL+I =	**323.883 k-ft.**

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

SUMMARY OF DEAD & LIVE LOADINGS:

NON-COMPOSITE DEAD LOADS PER BEAM:

INT. SLAB $_{WEIGHT}$ =	0.000 klf
INT. COP$_{WEIGHT}$ =	0.000 klf
INT. SIP$_{WEIGHT}$ =	0.000 klf
INT. BEAM$_{WEIGHT}$ =	0.653 klf
TOTAL N-COMP. DL =	**0.653 klf**

SUPERIMPOSED DEAD LOADS PER BEAM:

LEFT BARRIER WEIGHT =	0.101 klf
LEFT FENCING WEIGHT =	0.000 klf
MEDIAN WEIGHT =	0.118 klf
RIGHT BARRIER WEIGHT =	#DIV/0!
RIGHT FENCING WEIGHT =	#DIV/0!
FWS WEIGHT =	0.105 klf
DECK OVERLAY WT. =	0.219 klf
UTILITY WEIGHT =	0.000 klf
TOTAL SUPERIMPOSED DL =	**0.442 klf**

LOADING RESULTS

	LOADING	REACTION	MOMENT
TOTAL N-COMP. DL =	0.653 klf	20.740 kips	329.269 k-ft
TOTAL SUPERIMPOSED DL =	0.442 klf	14.027 kips	222.691 k-ft
TOTAL POINT DL =		1.553 kips	20.541 k-ft
TOTAL DL =	**1.095 klf**	**36.319 kips**	**572.501 k-ft**
LEFT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
RIGHT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
TOTAL SW LL =	**0.000 klf**	**0.000 kips**	**0.000 k-ft**
MAX OF TRUCK OR LANE LL+I =		**31.206 kips**	**321.583 k-ft**
TOTAL DL + SW LL + (LL + I) =		**67.525 kips**	**894.084 k-ft.**

Description: 27" BOX at 3.5ft
Design Span Length: 63.505 ft.
Span No.: 2 OR 3

SUMMARY OF PROGRAM INPUT:

SIMPLE SPAN PROGRAM INPUT:

INTERIOR BEAM

LENGTH =	63.505 ft.	**f '$_{c\ BEAM}$ =**	6500 psi
Moment Dist. Factor (DFM) =	0.589	**f '$_{ci\ BEAM}$ =**	4500 psi
End Shear Dist. Factor (DFV) =	1.000	**SIT =**	0.201 k / in^2
LL Deflection Dist. Factor (DFD) =	0.833	**SFB =**	0.484 k / in^2
Non- Composite DL (W_{DLNC}) =	0.000 klf	**E_{BM} =**	4.89 x 10^6 psi
Composite DL (W_{DLC}) =	0.442 klf	**E_{SLAB} =**	3.59 x 10^6 psi
Sidewalk LL (W_{swK}) =	0.000 klf		
Effective Concrete Width (W_f) =	41.26 in.		
Concrete Slab Thickness (T_f) =	0.001 in.		
Minimum Coping (Df) =	0.000 in.		

P-LOADS:	**P1**	**P2**	**P3**	**P4**	**P5**
X	0.000 ft.	15.876 ft.	31.753 ft.	47.629 ft.	63.505 ft.
LOAD	0.776 kips	0.518 kips	0.518 kips	0.518 kips	0.776 kips

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Input - Span 4
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

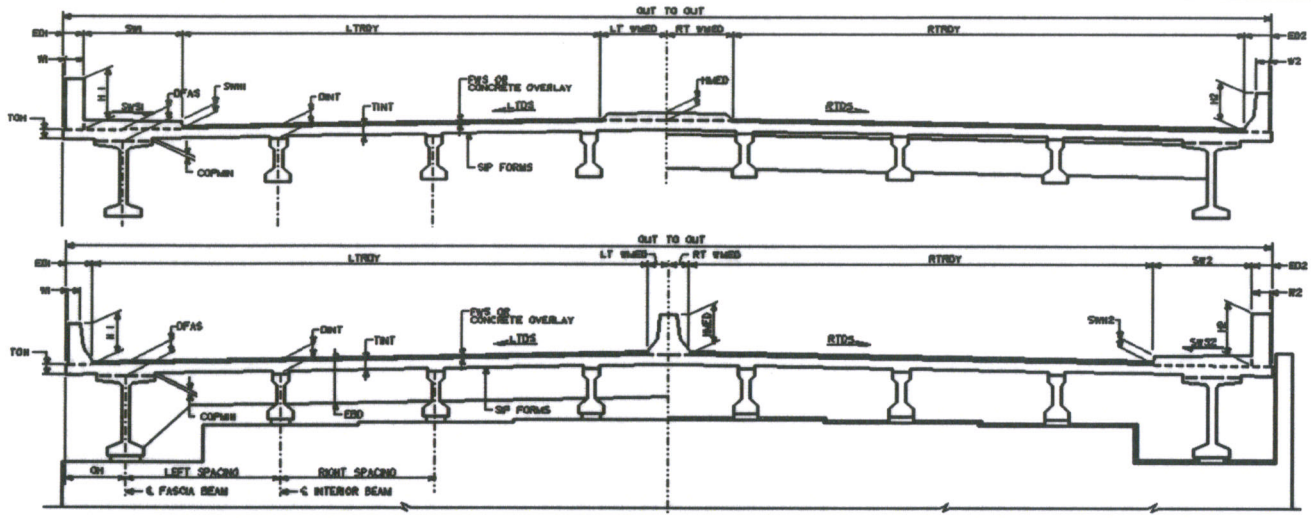
BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

TYPICAL DECK SECTIONS:



SECTION THRU EDGE BEAM **SECTION THRU ENDWALL**

Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

NON-COMPOSITE DEAD LOADS PER BEAM:

SLAB:

D_{INT} =	0.001 in.		
T_{INT} =	0.001 in.		
INTEGRAL WEARING SURFACE THICKNESS =	0 in.	INT. $SLAB_{WEIGHT}$ =	0.000 klf
DESIGN T_{INT} =	0.001 in.	INTEGRAL WEARING $SURFACE_{WEIGHT}$ =	0.000 klf
INT. COP_{MIN} =	0 in.		
INT. COP_{MAX} =	0 in.		
INT. COP. DEPTH DESIGN METHOD:	Average Coping		
INT. COP_{WIDTH} =	41.25 in.	INT. COP_{WEIGHT} =	0.000 klf
AVG. INT. COP DEPTH =	0 in.	INT. SIP_{WEIGHT} =	0.000 klf
SIP FORMS:	No	INT. $BEAM_{WEIGHT}$ =	0.516 klf
SLAB $CONC._{WEIGHT}$ =	0.150 k/ft^3	NON-COMPOSITE DEAD LOAD PER BEAM =	0.516 klf
BEAM $CONC._{WEIGHT}$ =	0.150 k/ft^3		

INTERIOR BEAM PROPERTIES:

INT. BEAM TYPE: 17" BOX

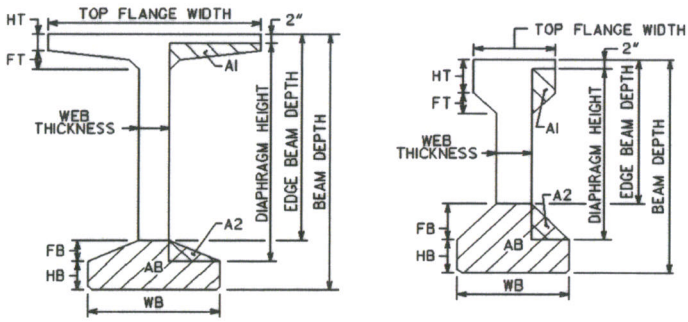
Top Flange Width =	41.25 in.
Beam Depth =	17 in.
Web Thickness =	11.5 in.
H_T =	5 in.
F_T =	0.3 in.
H_B =	4.5 in.
W_B =	42 in.
F_B =	0.3 in.
E.B. Depth (no coping) =	6.945 in.
Diaphragm Height =	6.945 in.
Cross Sectional Area =	495.75 in^2
A1 =	0 in^2
A2 =	0 in^2
AB =	0 in^2
INT. $BEAM_{WEIGHT}$ =	0.516 klf

CONCRETE STRENGTHS:

$f'_{C\ BEAM}$ =	5000 psi
$f'_{CI\ BEAM}$ =	4500 psi
$f'_{C\ SLAB}$ =	3500 psi
SIT =	0.201 k / in^2
SFB =	0.424 k / in^2

TYPE OF STRANDS = 0.5 in. dia. low-relax
DRAPED STRANDS ? No

STRAND AREA = 0.167 sq. in.
RB_{FPU} = 0.75
RT_{FPU} = 0.75



DEFINITION OF BEAM AREAS FOR EB. & DIAPH. CALCS

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**
Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

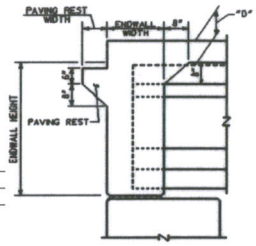
J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

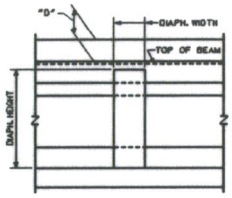
EW., DIAPH., EDGE BEAM DIMENSIONS & CALCS:

SPAN TYPE: Intermediate Span

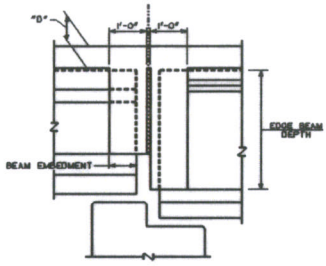
		# DIAPHRAGMS
DIAPH. WIDTH =	12 in.	
DIAPH. HEIGHT =	6.945 in.	1
INT. DIAPH. WEIGHT =	0.221 kips	
INT. EB. HEIGHT =	6.945 in.	
INT. EB. WIDTH =	18 in.	
BM. EMBED. FOR EB. =	0 in.	
INT. EB. WEIGHT =	0.331 kips	



SECTION AT ENDWALL



SECTION THRU DIAPHRAGM



SECTION THRU EDGE BEAM

INT. P-LOADS:	LOAD	POSITION	REACTION	MOMENT
EB. =	0.331 kips	0.00 ft.	0.331 kips	0.000 k-ft.
DIAPH. =	0.221 kips	16.96 ft.	0.110 kips	1.871 k-ft.
DIAPH. =	N/A	N/A	N/A	N/A
DIAPH. =	N/A	N/A	N/A	N/A
EB. =	0.331 kips	33.92 ft.	0.000 kips	0.000 k-ft.
	TOTAL POINT DEAD LOAD PER BEAM =		0.441 kips	1.871 k-ft.

DECK SECTION DIMENSIONS & CALCS:

LEFT BARRIER
BARRIER TYPE: Jersey Barrier
FENCING OPTION: None
ED_1 = 1.750 ft.
W_1 = 0.75 ft.
H_1 = 2.667 ft.
LTDS = 2.0000 %

MEDIAN
MEDIAN TYPE: HOV Barrier

RIGHT BARRIER
BARRIER TYPE: None
FENCING OPTION: None
ED_2 = 0.000 ft.
W_2 = 0 ft.
H_2 = 0 ft.
RTDS = 2.0000 %

IS MEDIAN BARRIER CENTERED? No
OFFSET TO LEFT OR RIGHT? Left
OFFSET DISTANCE = 6.25 ft.

BRIDGE TYPE = Bridge Widening
SPAN LENGTH = 33.922 ft.
SKEW ANGLE = 88.2858 degrees

LEFT SPACING = 3.5 ft.
RIGHT SPACING = 3.5 ft.
LEFT OVERHANG = 1.75 ft.
RIGHT OVERHANG = 1.75 ft.
LEFT OFFSET TO BARRIER = 3 in.
RIGHT OFFSET TO BARRIER = 3 in.
SPACING TO SET BEAM = 1.75 ft.
NO. OF NEW BEAMS = 9 beams
NO. OF BEAMS IN EXISTING BRIDGE = 11 beams
NO. OF SET BEAMS W/ COMP. LOADS = 0 beams
TOTAL NO. OF BEAMS SUPPORTING WIDENING = 9 beams
NO. OF NEW BAYS = 9 bays

WIDENED BRIDGE OUT TO OUT = 31.500 ft.
EXISTING BRIDGE OUT TO OUT = 44.000 ft.
FINISHED BRIDGE OUT TO OUT = 75.500 ft.

NOTE: BRIDGE WIDENING IS TO ONE SIDE ONLY !

Ignore Median only for RDWY Width Calculations = Yes
Width of Median = 2 ft.

LT RDWY = 28.750 ft.
RT RDWY = 43.000 ft.

TOTAL WIDENED RDWY WIDTH = 73.750 ft. Including median width

Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

SUPERIMPOSED DEAD LOADS:

LEFT BARRIER
BARRIER WEIGHT = 0.405 klf
FENCING WEIGHT = 0.000 klf

MEDIAN
MEDIAN WEIGHT = 0.472 klf

RIGHT BARRIER
BARRIER WEIGHT = 0.000 klf
FENCING WEIGHT = 0.000 klf

NOTE: BARRIER WEIGHT INCLUDES SIDEWALK WEIGHT, IF PRESENT

FWS DESIGN METHOD: Avg. Beam Sp.

WEIGHT OF FWS = 30 lb/sf

DECK OVERLAY: Yes
AVG. THICKNESS = 5 in.

OUT TO OUT DIST. GREATER THAN 66'-5. DISTRIBUTE BARRIER DL et. al. ONTO OUTER BEAMS!

BEAM ON CENTERLINE ? Yes

DIST. MEDIAN AND/OR BARR. TO ALL BEAMS ? No

OVERRIDE NO. OF BM. TO DIST. LT BARRIER ? No
NO. OF BEAMS DIST. TO LT BARRIER = 4 beams

BEAMS SUPPORTING LT BARRIER
BM 1 - BM 4

OVERRIDE NO. OF BM. TO DIST. MED. BARRIER ? Yes

BEAMS SUPPORTING MED BARRIER

NO. OF BEAMS DIST. TO MED. BARRIER = 4 beams

BM 8 - BM 11

OVERRIDE NO. OF BM. TO DIST. RT BARRIER ? No
NO. OF BEAMS DIST. TO RT BARRIER = 0 beams

BEAMS SUPPORTING RT BARRIER

SUPERIMPOSED LOADS PER BRIDGE:

FWS WEIGHT = 2.213 klf per bridge

DECK OVERLAY WT. = 4.609 klf per bridge

UTILITY WEIGHT TO SUPERSTRUCTURE = 0.000 klf per bridge

TOTAL SUPERIMPOSED DEAD LOAD = 7.699 klf per bridge

SUPERIMPOSED LOADS PER BEAM:

FWS WEIGHT = 0.105 klf per beam

DECK OVERLAY WT. = 0.219 klf per beam

UTILITY WEIGHT TO SUPERSTRUCTURE = 0.000 klf per beam

LT BARRIER DEAD LOAD = 0.101 klf per beam
MED. BARRIER DEAD LOAD = 0.118 klf per beam
RT BARRIER DEAD LOAD = 0.000 klf per beam

MEDIAN BARRIER LOADING GOVERNS DESIGN

CONTROLLING SUPERIMPOSED DEAD LOAD = 0.442 klf per beam

DOUBLED LOADING CASES

	BARRIER ONLY	RAISED MEDIAN	MED. BAR.
WITHOUT OVERRIDE	0.101 klf per beam	0.195 klf per beam	0.219 klf per beam
WITH OVERRIDE	0.101 klf per beam	0.195 klf per beam	0.118 klf per beam

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

COMPOSITE SECTION MODULUS CALC:

SPAN LENGTH = **33.922 ft.**

Section Properties from Geomath file: I-575 BR35 Beam ID: 42" x 17" update Adjacent Box Beam Section Drawing

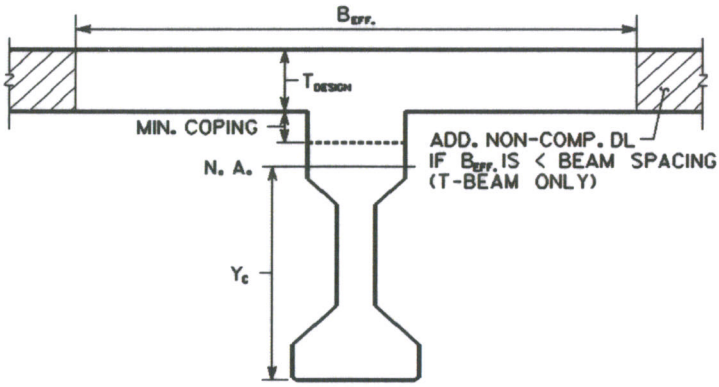
BEAM MOMENT OF INERTIA =	16,046 in^4	
BEAM Y_{BN} =	8.57116 in.	
INT. COP_{MIN} =	0 in.	
DESIGN T_{INT} =	0.001 in.	
E_{BM} =	4.29 x 10^6 psi	
E_{SLAB} =	3.59 x 10^6 psi	
modular ratio =	1.19	

AASHTO 8.10.1.1 - Compression Flange Width

wBM FLANGE =	41.25	in.
B_{eff} = Bm Spacing =	**42.00**	in.
B_{eff} = ¼ Span Length =	**101.77**	in.
B_{eff} = WBM FLANGE + 2[6 tSLAB] =	**41.26**	**in. CONTROLS**
Add. Non-Comp. DL (WDLNC) =	0.000 klf	(T-Beam Only)
Y_C =	8.57 in.	
COMPOSITE MOM. OF INERTIA =	16,049 in^4	

COMPOSITE SECTION MODULI:

SECTION MOD. AT TOP OF SLAB =	1,904 in^3
SECTION MOD. AT TOP OF BEAM =	1,904 in^3
SECTION MOD. AT BOT. OF BEAM =	1,872 in^3



Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

DISTRIBUTION & DEFLECTION FACTOR CALCS:

DISTRIBUTION FACTOR CALCS:

SHEAR	1.000	WHEEL
	0.500	AXLE

BOX BEAM DESIGN METHOD: Adjacent Box Beam

DEFLECTION FACTOR CALCS:

ALLOW USER TO DEFINE NO. OF LANES ?	No
CALCULATED NO. OF LANES =	5
ALLOW USER TO DEFINE NO. OF BEAMS ?	No
CALCULATED NO. OF BEAMS =	9
REDUCTION FACTOR =	0.75
DFD =	0.833

MAX SPACING =	3.5 ft.
MIN SPACING =	3.5 ft.

-> 9 beams will be used for DFD calcs.

Load Fraction in Adjacent Box Girders (AASHTO 3.23.4):

S =	3.50 ft.	I =	16,046 in^4	
NL =	2 lanes			
L =	33.92 ft.	b =	42 in.	
Poisson's Ratio (ASHTO 8.7.3) =	0.2	d =	17 in.	
D =	5.815	t =	5.75 in.	
C =	0.640	tf =	5 in.	
K =	0.689	J =	40,532 in^4	
W =	31.500 ft.	**Load Fraction =**	**0.602**	WHEEL
			0.301	AXLE

Moment Distribution in Spread Box Girders (AASHTO 3.28):

NL =	3 lanes		
NB =	9 beams		
S =	3.5 ft. bm. spaces		
L =	33.922 ft. span length		DFM:
W =	28.75 ft. rdwy width	WHEEL	0.664
k =	-0.028	AXLE	0.332

LIVE LOAD CALCS:

LEFT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_1 =	0 ft.	0.00 kips	0.000 k-ft.
LEFT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

RIGHT SIDEWALK LIVE LOAD:

		REACTION	MOMENT
SW_2 =	0 ft.	0.00 kips	0.000 k-ft.
RIGHT SW. LL. =	0.060 kips / ft^2		
SW LL PER BEAM =	0.000 klf		

IMPACT FACTOR: 1.30

MILITARY LOADING:

MIDSPAN: 348.000 k-ft.

	REACTION	R x DF x I
TRUCK:	51.636 kips	28.699 kips
LANE:	36.560 kips	21.147 kips

	REACTION	MOMENT
TOTAL LL+I =	28.699 kips	136.159 k-ft.
	MAX TOTAL LL+I =	

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

SUMMARY OF DEAD & LIVE LOADINGS:

NON-COMPOSITE DEAD LOADS PER BEAM:

INT. SLAB $_{WEIGHT}$ =	0.000 klf
INT. COP$_{WEIGHT}$ =	0.000 klf
INT. SIP$_{WEIGHT}$ =	0.000 klf
INT. BEAM$_{WEIGHT}$ =	0.516 klf
TOTAL N-COMP. DL =	**0.516 klf**

SUPERIMPOSED DEAD LOADS PER BEAM:

LEFT BARRIER WEIGHT =	0.101 klf
LEFT FENCING WEIGHT =	0.000 klf
MEDIAN WEIGHT =	0.118 klf
RIGHT BARRIER WEIGHT =	#DIV/0!
RIGHT FENCING WEIGHT =	#DIV/0!
FWS WEIGHT =	0.105 klf
DECK OVERLAY WT. =	0.219 klf
UTILITY WEIGHT =	0.000 klf
TOTAL SUPERIMPOSED DL =	**0.442 klf**

LOADING RESULTS

	LOADING	REACTION	MOMENT
TOTAL N-COMP. DL =	0.516 klf	8.759 kips	74.284 k-ft
TOTAL SUPERIMPOSED DL =	0.442 klf	7.492 kips	63.540 k-ft
TOTAL POINT DL =		0.441 kips	1.871 k-ft
TOTAL DL =	**0.958 klf**	**16.693 kips**	**139.696 k-ft**
LEFT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
RIGHT SW LL =	0.000 klf	0.000 kips	0.000 k-ft
TOTAL SW LL =	**0.000 klf**	**0.000 kips**	**0.000 k-ft**
MAX OF TRUCK OR LANE LL+I =		**28.699 kips**	**136.159 k-ft**
TOTAL DL + SW LL + (LL + I) =		**45.393 kips**	**275.855 k-ft.**

Description: 17" BOX at 3.5ft
Design Span Length: 33.922 ft.
Span No.: 4

SUMMARY OF PROGRAM INPUT:

SIMPLE SPAN PROGRAM INPUT:

INTERIOR BEAM

LENGTH =	33.922 ft.	**f '$_{C\ BEAM}$ =**	5000 psi
Moment Dist. Factor (DFM) =	0.602	**f '$_{CI\ BEAM}$ =**	4500 psi
End Shear Dist. Factor (DFV) =	1.000	**SIT =**	0.201 k / in^2
LL Deflection Dist. Factor (DFD) =	0.833	**SFB =**	0.424 k / in^2
Non- Composite DL (W_{DLNC}) =	0.000 klf	**E_{BM} =**	4.29 x 10^6 psi
Composite DL (W_{DLC}) =	0.442 klf	**E_{SLAB} =**	3.59 x 10^6 psi
Sidewalk LL (W_{swk}) =	0.000 klf		
Effective Concrete Width (W_f) =	41.26 in.		
Concrete Slab Thickness (T_f) =	0.001 in.		
Minimum Coping (Df) =	0.000 in.		

P-LOADS:	**P1**	**P2**	**P3**	**P4**	**P5**
X	0.000 ft.	16.961 ft.	33.922 ft.	N/A	N/A
LOAD	0.331 kips	0.221 kips	0.331 kips	N/A	N/A

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Beam Design Output	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	GDOT BRPSBM1	06/26/2008

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Beam design ouptput is included for span 1, spans 2&3, and span 4.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	28	28	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Output - Span 1
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

30-OCT-09
15:00:27

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS OR DESIGN OF SIMPLE SPAN PRESTRESSED BEAMS
REVISED: JUNE 26, 2008

PROB. NO. INT.

255717 I-575 over Barrett Parkway Span 1

SPAN DATA

D/A	LL CLASS	LL SK.	LENGTH	DFM	DFV	DFD	WDLNC	WDLC	WSWK	F'C	F'CI	NPL	SIT	SFB	SFTE
D	HS20	0 0 0	42.323	0.595	1.000	0.833	0.000	0.442	0.000	6.500	4.500	3	-0.201	-0.484	-0.001

BEAM DATA

BEAM DIMENSIONS								*	COMPOSITE SLAB			*	(E X 1,000,000)		*	STIRRUP	DECK	
WT	HT	FT	WS	HB	WB	FB	DB	*	WF	TF	DF	*	E BEAM	E SLAB	*	SIZE	PANEL	FSY
41.25	5.00	0.30	11.50	4.50	42.00	0.30	17.00		41.26	0.001	0.000		4.89	3.59		5	0	60.

STRAND DATA

TYPE	NST	XDIST	ACTUAL NO. OR MAX. NO. OF STRANDS PER ROW																			ASB	AST	DIAM	TCL	BCL	SPAC.
0	2	0.5830	13	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1670	0.1670	0.500	2.50	2.00	2.00

RBFPU	BFPU	IBLOSS	FBLOSS	RTFPU	TFPU	ITLOSS	FTLOSS	WTC	LOW LAX	ITLENGTH	FTLENGTH	DLENGTH
.75	270.00	0.00	0.00	.75	270.00	0.00	0.00	.150	1	0.00	0.00	0.00

DEBONDING DATA

DEBOND ACT. # AND LENGTH OR MAX. # AND LENGTH OF STRANDS DEBONDED PER ROW

0 0 .00

0 .00 0 .00

DRAPE DATA

DRAPED	MAX RAISE	HOLD DOWN PT.	ACT. # OR MAX. # OF STRANDS DRAPED PER ROW																		
0	0.00	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

P-LOADS

XP1	P1	XP2	P2	XP3	P3	XP4	P4	XP5	P5
0.000	0.331	21.161	0.221	42.323	0.331				

PRESTRESSED BEAM DESIGN - OUTPUT DATA FOR PROBLEM NO. INT. 255717 I-575 over Barrett Parkway Span 1

MOMENTS AT SPAN TWENTIETH POINTS - KIP-FEET

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	0.000	21.738	41.188	58.349	73.222	85.807	96.104	104.113	109.834	113.266	114.410
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.000	0.234	0.468	0.702	0.935	1.169	1.403	1.637	1.871	2.105	2.338
UNIFORM D.L. COMP.	0.000	18.804	35.628	50.473	63.338	74.224	83.131	90.059	95.007	97.976	98.966
LIVE LOAD + IMPACT	0.000	42.946	80.005	111.177	136.461	155.858	169.368	179.155	187.381	189.721	186.173
TOTAL D.L. + L.L.	0.000	83.722	157.288	220.700	273.957	317.060	350.007	374.964	394.093	403.067	401.887

STRESSES AT SPAN TWENTIETH POINTS - KIPS PER SQ.IN.

LOADS		BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	TOP	0.000	0.137	0.259	0.367	0.461	0.540	0.605	0.655	0.691	0.713	0.720
	BOT	0.000	-0.139	-0.263	-0.373	-0.468	-0.548	-0.614	-0.665	-0.702	-0.724	-0.731
TOTAL NONCOMP. D.L.	TOP	0.000	0.138	0.262	0.372	0.467	0.547	0.614	0.665	0.703	0.726	0.735
	BOT	0.000	-0.140	-0.266	-0.377	-0.474	-0.556	-0.623	-0.676	-0.714	-0.737	-0.746
TOTAL COMP.D.L.+L.L.	TOP	0.000	0.388	0.727	1.017	1.257	1.448	1.589	1.694	1.777	1.810	1.794
	BOT	0.000	-0.395	-0.739	-1.033	-1.277	-1.470	-1.613	-1.720	-1.804	-1.838	-1.822
TOTAL COMP.+NONCOMP.	TOP	0.000	0.527	0.990	1.389	1.724	1.995	2.202	2.359	2.479	2.536	2.529
	BOT	0.000	-0.535	-1.005	-1.410	-1.750	-2.026	-2.236	-2.396	-2.518	-2.575	-2.568

SHEARS AT SPAN TWENTIETH POINTS - KIPS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	10.813	9.732	8.650	7.569	6.488	5.407	4.325	3.244	2.163	1.081	0.000
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.442	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	-0.110
UNIFORM D.L. COMP.	9.353	8.418	7.483	6.547	5.612	4.677	3.741	2.806	1.871	0.935	0.000
LIVE LOAD + IMPACT	30.102	20.313	18.921	17.528	16.136	14.744	13.351	11.995	10.757	9.520	8.405
TOTAL D.L. + L.L.	50.710	38.573	35.164	31.755	28.346	24.937	21.528	18.155	14.901	11.647	8.294

BEAM PROPERTIES

* * * * * NON-COMPOSITE BEAM PROPERTIES * * * * * * * * * * * * *								COMPOSITE BEAM PROPERTIES * * * * * * *						
I	YT	YB	ST	SB	A	W	*	I	YT	YB	ST	SB	A	QS
16085.3	8.435	8.565	1907.0	1878.0	490.54	0.511	*	16087.4	8.434	8.566	1907.4	1878.1	490.57	
0.26														

STRAND AND MISC. DATA

MAX # STRDS *	ACT # STRDS *	MIN # STRDS *	E @ C.L. *	E @ END *	PS *	ASE *	NS(EACT-EEND) *	BPI *	BPF *	TPI *	TPF
26	18	12	4.843	4.843	0.61%	1.15	0.000	509.606	442.910	63.701	55.364

MOMENTS(K-FT.) AND SHEARS(KIPS), STIRRUP SPACING, STRESSES(KSI) AT SPAN TWENTIETH POINTS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
ULT. MOMENT REQD.	0.000	146.060	273.815	383.267	474.415	547.260	601.801	642.726	674.724	688.419	683.809
ULT. MOMENT FURN.	95.162	398.065	641.851	695.224	695.224	695.224	695.224	695.224	695.224	695.224	695.224
1.2*CRACKING MOMENT	222.987	545.667	545.665	545.663	545.662	545.661	545.660	545.659	545.659	545.658	545.658
DIST. TO N.A.(IN.)	0.522	2.299	3.894	4.268	4.268	4.268	4.268	4.268	4.268	4.268	4.268
MAX STEEL RATIO	0.025	0.108	0.183	0.201	0.201	0.201	0.201	0.201	0.201	0.201	0.201
ULT. COMP. SHEAR	77.381	54.955	50.723	46.490	42.258	38.025	33.792	29.637	25.740	21.842	18.211
ULT. TOTAL SHEAR	92.012	67.750	62.112	56.474	50.835	45.197	39.559	33.998	28.695	23.392	18.067
BEAM SHEAR CAPACITY	56.204	91.795	91.795	69.868	51.740	40.437	32.515	26.421	21.452	21.437	21.437
MIN. STIRRUP AREA	0.693	0.115	0.115	0.115	0.115	0.147	0.172	0.171	0.157	0.115	0.115
STRP.(#5) SPAC.(IN.)	10.731*	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750
PRESTRESS STRESS TOP	-0.063	-0.287	-0.287	-0.287	-0.287	-0.287	-0.287	-0.287	-0.287	-0.287	-0.287
BOT	0.583	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647
INITIAL STRESSES TOP	-0.063	-0.150	-0.028	0.080	0.174	0.253	0.318	0.368	0.404	0.426	0.433
BOT	0.583	2.508	2.384	2.274	2.179	2.099	2.033	1.982	1.945	1.923	1.916
FINAL STRESSES TOP	-0.063	0.277	0.740	1.139	1.474	1.745	1.952	2.109	2.230	2.286	2.279
BOT	0.583	1.766	1.296	0.891	0.550	0.275	0.064	-0.095	-0.217	-0.275	-0.267
FINAL # TOP STRANDS	0.506	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
FINAL # BOT STRANDS	4.052	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000
DEVELOP. # TOP STRDS	0.218	1.009	1.800	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
DEVELOP. # BOT STRDS	1.743	8.072	14.400	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000

* - FOR "ASE" REQUIREMENTS WITHIN A MAXIMUM DISTANCE OF 3.319" (D/4) FROM THE END OF BEAM USE EITHER
2 LOCATIONS OF 2-#5 STIRRUPS AT A MAXIMUM SPACING OF 1.319" OR
2 LOCATIONS OF 2-#6 STIRRUPS AT A MAXIMUM SPACING OF 1.319" USING 2" CL. FROM END OF BEAM

DEFLECTIONS(INCHES) AT CENTER LINE OF SPAN

BEAM	WDLNC	P-LOADS	WDLC	INITIAL	FINAL	SIDEWALK	TRUCK	LANE	MILITARY	RAILROAD	PRESTR.	CAMBER
0.469	0.000	0.008	0.406	-0.669	-0.107	0.000	1.038	0.656	0.889	0.000	-1.138	-1.189

MAXIMUM, ACTUAL AND MINIMUM ECCENTRICITIES(INCHES)AT SPAN TWENTIETH POINTS

ITEM	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
MAX ECC, SIT= -201	6.925	5.011	5.418	5.778	6.089	6.352	6.568	6.735	6.855	6.927	6.951
MAX ECC, SIB= 2700	36.356	5.471	5.878	6.237	6.549	6.812	7.028	7.195	7.315	7.387	7.411
INITIAL ECCENTRICITY	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843
FINAL ECCENTRICITY	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843	4.843
MIN ECC, SFT= 2600	-35.408	-4.047	-2.276	-0.749	0.534	1.571	2.365	2.966	3.426	3.643	3.614
MIN ECC, SFB= -484	-11.032	-3.636	-1.865	-0.338	0.945	1.983	2.776	3.377	3.838	4.054	4.026

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  * ECCENTRICITY PLOT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                                        1    1    1    1    1    1    1    1    1    1    2    2    2    2
2
* POINTS
*0....1....2....3....4....5....6....7....8....9....0....1....2....3....4....5....6....7....8....9....0....1....2....3....4

* 0.00 L *                        +          *

* 0.05 L *                        +*

* 0.10 L *                        +  *

* 0.15 L *                        +    *

* 0.20 L *     *                  +     *

* 0.25 L *          *             +       *

* 0.30 L *              *         +        *

* 0.35 L *                 *      +         *

* 0.40 L *                    *   +         *

* 0.45 L *                     *  +          *

* 0.50 L *                     *  +          *

*  *  *  *      * = MAX. AND MIN. ECCENTRICITY, + = ACTUAL ECCENTRICITY, HOLD-DOWN POINT IS  0.00 FEET FROM CENTER LINE OF SPAN

    STRAND ARRANGEMENT (TOP STRANDS NOT SHOWN)=  2

                      + +

            + + + + + + + + + + + +
```

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *STRAND ARRANGEMENT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5
6
* POINTS
*0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0

*  END   *    +   +

*  BRNG  *    +   +


* 0.05 L *    +   +


* 0.10 L *    +   +


* 0.15 L *    +   +


* 0.20 L *    +   +


* 0.25 L *    +   +


* 0.30 L *    +   +


* 0.35 L *    +   +


* 0.40 L *    +   +


* 0.45 L *    +   +


* 0.50 L *    +   +
```

FINAL STRAND ARRANGEMENT AT END

ROW	TOTAL #STRDS	VER DIST-STRAIGHT STRDS	#RAISED STRDS	VER DIST-RAISED STRDS	#DEB 1	DEB LENGTH 1	#DEB 2	DEB LENGTH 2
1	13	2.000	0	0.000	0	0.00L	0	0.00L
2	3	4.000	0	0.000	0	0.00L	0	0.00L
TOP	2	14.500						

INITIAL TRANSFER LENGTH = 2.649 FT

FINAL TRANSFER LENGTH = 2.302 FT

DEVELOPMENT LENGTH = 5.350 FT

LOSSES (KSI)

TOP STRANDS INITIAL LOSSES= 11.779 TOP STRANDS ADDITIONAL LOSSES= 24.961 TOP STRANDS FINAL LOSSES= 36.740

BOT STRANDS INITIAL LOSSES= 11.779 BOT STRANDS ADDITIONAL LOSSES= 24.961 BOT STRANDS FINAL LOSSES= 36.740

TOTAL LOSSES FOR ALL STRANDS= 36.740

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Output - Spans 2&3
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

30-OCT-09
15:27:32

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS OR DESIGN OF SIMPLE SPAN PRESTRESSED BEAMS
REVISED: JUNE 26, 2008

PROB. NO. INT.

255717 I-575 over Barrett Parkway Spans 2 or 3

SPAN DATA

D/A	LL CLASS	LL SK.	LENGTH	DFM	DFV	DFD	WDLNC	WDLC	WSWK	F'C	F'CI	NPL	SIT	SFB	SFTE
D	HS20	0 0 0	63.505	0.589	1.000	0.833	0.000	0.442	0.000	6.500	4.500	5	-0.201	-0.484	-0.001

BEAM DATA

BEAM DIMENSIONS								*	COMPOSITE SLAB			*	(E X 1,000,000)		*	STIRRUP	DECK	
WT	HT	FT	WS	HB	WB	FB	DB	*	WF	TF	DF	*	E BEAM	E SLAB	*	SIZE	PANEL	FSY
41.25	5.50	0.58	10.00	5.50	42.00	0.56	27.00		41.26	0.001	0.000		4.89	3.59		5	0	60.

STRAND DATA

TYPE	NST	XDIST	ACTUAL NO. OR MAX. NO. OF STRANDS PER ROW																			ASB	AST	DIAM	TCL	BCL	SPAC.
0	2	0.5830	16	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1670	0.1670	0.500	2.50	2.00	2.00

RBFPU	BFPU	IBLOSS	FBLOSS	RTFPU	TFPU	ITLOSS	FTLOSS	WTC	LOW LAX	ITLENGTH	FTLENGTH	DLENGTH
.75	270.00	0.00	0.00	.75	270.00	0.00	0.00	.150	1	0.00	0.00	0.00

DEBONDING DATA

DEBOND ACT. # AND LENGTH OR MAX. # AND LENGTH OF STRANDS DEBONDED PER ROW

0 0 .00

0 .00 0 .00

DRAPE DATA

DRAPED	MAX RAISE	HOLD DOWN PT.	ACT. # OR MAX. # OF STRANDS DRAPED PER ROW																		
0	0.00	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

P-LOADS

XP1	P1	XP2	P2	XP3	P3	XP4	P4	XP5	P5
0.000	0.776	15.876	0.518	31.753	0.518	47.629	0.518	63.505	0.776

PRESTRESSED BEAM DESIGN - OUTPUT DATA FOR PROBLEM NO. INT. 255717 I-575 over Barrett Parkway Spans 2 or 3

MOMENTS AT SPAN TWENTIETH POINTS - KIP-FEET

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	0.000	63.445	120.211	170.299	213.708	250.440	280.492	303.867	320.563	330.580	333.919
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.000	2.467	4.934	7.401	9.869	12.336	13.158	13.980	14.803	15.625	16.448
UNIFORM D.L. COMP.	0.000	42.335	80.214	113.637	142.603	167.113	187.166	202.763	213.904	220.589	222.817
LIVE LOAD + IMPACT	0.000	68.407	128.296	179.666	222.517	256.850	282.664	302.046	317.083	323.601	321.600
TOTAL D.L. + L.L.	0.000	176.654	333.655	471.003	588.697	686.738	763.480	822.656	866.352	890.395	894.784

STRESSES AT SPAN TWENTIETH POINTS - KIPS PER SQ.IN.

LOADS		BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	TOP	0.000	0.176	0.334	0.473	0.594	0.696	0.780	0.845	0.891	0.919	0.928
	BOT	0.000	-0.175	-0.331	-0.469	-0.588	-0.689	-0.772	-0.836	-0.882	-0.910	-0.919
TOTAL NONCOMP. D.L.	TOP	0.000	0.183	0.348	0.494	0.621	0.730	0.816	0.883	0.932	0.962	0.974
	BOT	0.000	-0.181	-0.344	-0.489	-0.615	-0.723	-0.808	-0.875	-0.923	-0.953	-0.964
TOTAL COMP.D.L.+L.L.	TOP	0.000	0.308	0.579	0.815	1.015	1.178	1.306	1.403	1.476	1.512	1.513
	BOT	0.000	-0.305	-0.574	-0.807	-1.005	-1.166	-1.293	-1.389	-1.461	-1.497	-1.498
TOTAL COMP.+NONCOMP.	TOP	0.000	0.491	0.927	1.309	1.636	1.909	2.122	2.286	2.408	2.475	2.487
	BOT	0.000	-0.486	-0.918	-1.296	-1.620	-1.890	-2.101	-2.263	-2.384	-2.450	-2.462

SHEARS AT SPAN TWENTIETH POINTS - KIPS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	21.033	18.929	16.826	14.723	12.620	10.516	8.413	6.310	4.207	2.103	0.000
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	1.553	0.777	0.777	0.777	0.777	0.259	0.259	0.259	0.259	0.259	0.259
UNIFORM D.L. COMP.	14.035	12.631	11.228	9.824	8.421	7.017	5.614	4.210	2.807	1.403	0.000
LIVE LOAD + IMPACT	31.206	21.621	20.350	19.072	17.785	16.490	15.187	13.866	12.488	11.110	9.731
TOTAL D.L. + L.L.	67.826	53.959	49.181	44.396	39.602	34.283	29.472	24.645	19.760	14.875	9.990

BEAM PROPERTIES

* * * * * NON-COMPOSITE BEAM PROPERTIES * * * * * * * * * * * * *							*	COMPOSITE BEAM PROPERTIES * * * * * * *						
I	YT	YB	ST	SB	A	W	*	I	YT	YB	ST	SB	A	QS
58577.4	13.569	13.431	4317.1	4361.2	635.90	0.662	*	58582.9	13.568	13.432	4317.8	4361.4	635.93	0.41

STRAND AND MISC. DATA

MAX # STRDS *	ACT # STRDS *	MIN # STRDS *	E @ C.L. *	E @ END *	PS *	ASE *	NS(EACT-EEND) *	BPI *	BPF *	TPI *	TPF
36	22	12	8.841	8.841	0.58%	1.41	0.000	640.219	563.891	64.022	56.389

MOMENTS(K-FT.) AND SHEARS(KIPS), STIRRUP SPACING, STRESSES(KSI) AT SPAN TWENTIETH POINTS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
ULT. MOMENT REQD.	0.000	288.939	544.946	768.020	958.162	1115.371	1237.509	1331.236	1401.073	1437.978	1441.950
ULT. MOMENT FURN.	189.186	1097.598	1538.571	1538.571	1538.571	1538.571	1538.571	1538.571	1538.571	1538.571	1538.571
1.2*CRACKING MOMENT	505.841	1237.534	1237.530	1237.527	1237.525	1237.523	1237.521	1237.520	1237.519	1237.518	1237.518
DIST. TO N.A.(IN.)	0.612	3.747	5.413	5.413	5.413	5.413	5.413	5.413	5.413	5.413	5.413
MAX STEEL RATIO	0.017	0.104	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151
ULT. COMP. SHEAR	85.858	63.267	58.689	54.094	49.482	44.852	40.203	35.517	30.706	25.896	21.085
ULT. TOTAL SHEAR	115.219	88.886	81.573	74.244	66.897	58.860	51.476	44.057	36.512	28.967	21.422
BEAM SHEAR CAPACITY	79.540	128.812	128.813	103.444	76.025	58.049	46.195	37.065	30.715	30.715	30.715
MIN. STIRRUP AREA	0.433	0.100	0.100	0.100	0.100	0.100	0.100	0.106	0.100	0.100	0.100
STRP.(#5) SPAC.(IN.)	17.196*	20.250	20.250	20.250	20.250	20.250	20.250	20.250	20.250	20.250	20.250
PRESTRESS STRESS TOP	-0.073	-0.335	-0.335	-0.335	-0.335	-0.335	-0.335	-0.335	-0.335	-0.335	-0.335
BOT	0.555	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535	2.535
INITIAL STRESSES TOP	-0.073	-0.158	-0.001	0.139	0.259	0.361	0.445	0.510	0.556	0.584	0.594
BOT	0.555	2.360	2.204	2.066	1.947	1.846	1.763	1.699	1.653	1.625	1.616
FINAL STRESSES TOP	-0.073	0.196	0.633	1.014	1.341	1.614	1.827	1.992	2.113	2.180	2.192
BOT	0.555	1.747	1.315	0.937	0.613	0.343	0.132	-0.031	-0.151	-0.217	-0.229
FINAL # TOP STRANDS	0.497	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
FINAL # BOT STRANDS	4.973	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000
DEVELOP. # TOP STRDS	0.208	1.342	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
DEVELOP. # BOT STRDS	2.082	13.424	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000

* - FOR "ASE" REQUIREMENTS WITHIN A MAXIMUM DISTANCE OF 5.602" (D/4) FROM THE END OF BEAM USE EITHER
3 LOCATIONS OF 2-#5 STIRRUPS AT A MAXIMUM SPACING OF 1.801" OR
2 LOCATIONS OF 2-#6 STIRRUPS AT A MAXIMUM SPACING OF 3.602" USING 2" CL. FROM END OF BEAM

DEFLECTIONS(INCHES) AT CENTER LINE OF SPAN

BEAM	WDLNC	P-LOADS	WDLC	INITIAL	FINAL	SIDEWALK	TRUCK	LANE	MILITARY	RAILROAD	PRESTR.	CAMBER
0.846	0.000	0.040	0.565	-0.732	0.061	0.000	1.084	0.736	0.809	0.000	-1.578	-1.275

MAXIMUM, ACTUAL AND MINIMUM ECCENTRICITIES(INCHES)AT SPAN TWENTIETH POINTS

ITEM	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
MAX ECC, SIT= -201	12.416	9.102	10.070	10.923	11.663	12.289	12.801	13.199	13.483	13.654	13.711
MAX ECC, SIB= 2700	69.496	10.943	11.911	12.764	13.504	14.130	14.642	15.040	15.324	15.495	15.552
INITIAL ECCENTRICITY	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841
FINAL ECCENTRICITY	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841	8.841
MIN ECC, SFT= 2600	-65.994	-7.890	-4.853	-2.196	0.081	1.978	3.462	4.607	5.452	5.917	6.002
MIN ECC, SFB= -484	-20.546	-6.844	-3.807	-1.150	1.127	3.024	4.509	5.653	6.499	6.964	7.049

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  * ECCENTRICITY PLOT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                                        1    1    1    1    1    1    1    1    1    1    2    2    2    2
2
* POINTS
*0....1....2....3....4....5....6....7....8....9....0....1....2....3....4....5....6....7....8....9....0....1....2....3....4

* 0.00 L *                                          +                 *

* 0.05 L *                                          + *

* 0.10 L *                                          +     *

* 0.15 L *                                          +          *

* 0.20 L *      *                                   +             *

* 0.25 L *              *                           +                *

* 0.30 L *                      *                   +                  *

* 0.35 L *                            *             +                    *

* 0.40 L *                                 *        +                     *

* 0.45 L *                                    *     +                      *

* 0.50 L *                                    *     +                       *

*  *  *  *      * = MAX. AND MIN. ECCENTRICITY, + = ACTUAL ECCENTRICITY, HOLD-DOWN POINT IS  0.00 FEET FROM CENTER LINE OF SPAN
```

STRAND ARRANGEMENT (TOP STRANDS NOT SHOWN)= 2

```
                    + +

                    + +

      + + + + + + + + + + + + + + + +
```

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *STRAND ARRANGEMENT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5
6
* POINTS
*0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0


*  END   *    +   +   +

*  BRNG  *    +   +   +


* 0.05 L *    +   +   +


* 0.10 L *    +   +   +


* 0.15 L *    +   +   +


* 0.20 L *    +   +   +


* 0.25 L *    +   +   +


* 0.30 L *    +   +   +


* 0.35 L *    +   +   +


* 0.40 L *    +   +   +


* 0.45 L *    +   +   +


* 0.50 L *    +   +   +
```

FINAL STRAND ARRANGEMENT AT END

ROW	TOTAL #STRDS	VER DIST-STRAIGHT STRDS	#RAISED STRDS	VER DIST-RAISED STRDS	#DEB 1	DEB LENGTH 1	#DEB 2	DEB LENGTH 2
1	16	2.000	0	0.000	0	0.00L	0	0.00L
2	2	4.000	0	0.000	0	0.00L	0	0.00L
3	2	6.000	0	0.000	0	0.00L	0	0.00L
TOP	2	24.500						

INITIAL TRANSFER LENGTH = 2.662 FT

FINAL TRANSFER LENGTH = 2.345 FT

DEVELOPMENT LENGTH = 5.599 FT

LOSSES (KSI)

TOP STRANDS INITIAL LOSSES= 10.818 TOP STRANDS ADDITIONAL LOSSES= 22.853 TOP STRANDS FINAL LOSSES= 33.670

BOT STRANDS INITIAL LOSSES= 10.818 BOT STRANDS ADDITIONAL LOSSES= 22.853 BOT STRANDS FINAL LOSSES= 33.670

TOTAL LOSSES FOR ALL STRANDS= 33.670

02-NOV-09
15:11:58

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS OR DESIGN OF SIMPLE SPAN PRESTRESSED BEAMS
REVISED: JUNE 26, 2008

PROB. NO. INT.

255717 I-575 over Barrett Parkway Span 4

SPAN DATA

D/A	LL CLASS	LL SK.	LENGTH	DFM	DFV	DFD	WDLNC	WDLC	WSWK	F'C	F'CI	NPL	SIT	SFB	SFTE
D	HS20	0 0 0	33.922	0.602	1.000	0.833	0.000	0.442	0.000	5.000	4.500	3	-0.201	-0.424	-0.001

BEAM DATA

BEAM DIMENSIONS								* COMPOSITE SLAB			* (E X 1,000,000)		* STIRRUP	DECK	
WT	HT	FT	WS	HB	WB	FB	DB	* WF	TF	DF	* E BEAM	E SLAB	* SIZE	PANEL	FSY
41.25	5.00	0.30	11.50	4.50	42.00	0.30	17.00	41.26	0.001	0.000	4.29	3.59	5	0	60.

STRAND DATA

TYPE	NST	XDIST	ACTUAL NO. OR MAX. NO. OF STRANDS PER ROW																			ASB	AST	DIAM	TCL	BCL	SPAC.
0	2	0.5830	9	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1670	0.1670	0.500	2.50	2.00	2.00

RBFPU	BFPU	IBLOSS	FBLOSS	RTFPU	TFPU	ITLOSS	FTLOSS	WTC	LOW LAX	ITLENGTH	FTLENGTH	DLENGTH
.75	270.00	0.00	0.00	.75	270.00	0.00	0.00	.150	1	0.00	0.00	0.00

DEBONDING DATA

DEBOND ACT. # AND LENGTH OR MAX. # AND LENGTH OF STRANDS DEBONDED PER ROW

0 0 .00

0 .00 0 .00

DRAPE DATA

DRAPED	MAX RAISE	HOLD DOWN PT.	ACT. # OR MAX. # OF STRANDS DRAPED PER ROW																		
0	0.00	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

P-LOADS

XP1	P1	XP2	P2	XP3	P3	XP4	P4	XP5	P5
0.000	0.331	16.961	0.221	33.922	0.331				

PRESTRESSED BEAM DESIGN - OUTPUT DATA FOR PROBLEM NO. INT. 255717 I-575 over Barrett Parkway Span 4

MOMENTS AT SPAN TWENTIETH POINTS - KIP-FEET

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	0.000	13.965	26.459	37.484	47.039	55.123	61.738	66.883	70.558	72.763	73.498
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.000	0.187	0.375	0.562	0.750	0.937	1.125	1.312	1.499	1.687	1.874
UNIFORM D.L. COMP.	0.000	12.079	22.887	32.424	40.689	47.682	53.404	57.854	61.033	62.941	63.576
LIVE LOAD + IMPACT	0.000	32.248	59.718	82.409	100.862	115.459	125.808	131.909	137.887	140.787	140.502
TOTAL D.L. + L.L.	0.000	58.480	109.440	152.879	189.339	219.201	242.074	257.958	270.977	278.177	279.450

STRESSES AT SPAN TWENTIETH POINTS - KIPS PER SQ.IN.

LOADS		BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	TOP	0.000	0.088	0.166	0.236	0.296	0.347	0.388	0.421	0.444	0.458	0.462
	BOT	0.000	-0.089	-0.169	-0.240	-0.301	-0.352	-0.395	-0.427	-0.451	-0.465	-0.470
TOTAL NONCOMP. D.L.	TOP	0.000	0.089	0.169	0.239	0.301	0.353	0.396	0.429	0.453	0.468	0.474
	BOT	0.000	-0.090	-0.171	-0.243	-0.305	-0.358	-0.402	-0.436	-0.460	-0.476	-0.482
TOTAL COMP.D.L.+L.L.	TOP	0.000	0.279	0.520	0.722	0.891	1.026	1.127	1.194	1.251	1.282	1.284
	BOT	0.000	-0.283	-0.528	-0.734	-0.904	-1.042	-1.145	-1.212	-1.271	-1.302	-1.304
TOTAL COMP.+NONCOMP.	TOP	0.000	0.368	0.689	0.962	1.191	1.379	1.523	1.623	1.705	1.750	1.758
	BOT	0.000	-0.374	-0.699	-0.977	-1.210	-1.401	-1.547	-1.648	-1.731	-1.777	-1.786

SHEARS AT SPAN TWENTIETH POINTS - KIPS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	8.667	7.800	6.933	6.067	5.200	4.333	3.467	2.600	1.733	0.867	0.000
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.442	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111
UNIFORM D.L. COMP.	7.497	6.747	5.997	5.248	4.498	3.748	2.999	2.249	1.499	0.750	0.000
LIVE LOAD + IMPACT	28.700	19.013	17.605	16.196	14.867	13.615	12.362	11.110	10.162	9.223	8.284
TOTAL D.L. + L.L.	45.305	33.671	30.646	27.621	24.675	21.807	18.938	16.070	13.505	10.950	8.394

BEAM PROPERTIES

* * * * * NON-COMPOSITE BEAM PROPERTIES * * * * * * * * * * * * *							*	COMPOSITE BEAM PROPERTIES * * * * * * *						
I	YT	YB	ST	SB	A	W	*	I	YT	YB	ST	SB	A	QS
16085.3	8.435	8.565	1907.0	1878.0	490.54	0.511	*	16087.7	8.434	8.566	1907.5	1878.1	490.57	0.29

STRAND AND MISC. DATA

MAX # STRDS *	ACT # STRDS *	MIN # STRDS *	E @ C.L. *	E @ END *	PS *	ASE *	NS(EACT-EEND) *	BPI *	BPF *	TPI *	TPF
24	14	8	4.351	4.351	0.48%	0.90	0.000	387.150	343.447	64.525	57.241

MOMENTS(K-FT.) AND SHEARS(KIPS), STIRRUP SPACING, STRESSES(KSI) AT SPAN TWENTIETH POINTS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
ULT. MOMENT REQD.	0.000	103.973	194.029	270.167	333.558	385.029	423.734	449.671	471.777	483.651	485.058
ULT. MOMENT FURN.	70.444	255.139	412.301	527.022	527.022	527.022	527.022	527.022	527.022	527.022	527.022
1.2*CRACKING MOMENT	179.881	413.432	427.364	427.363	427.362	427.361	427.360	427.360	427.359	427.359	427.359
DIST. TO N.A.(IN.)	0.457	1.731	2.920	3.869	3.869	3.869	3.869	3.869	3.869	3.869	3.869
MAX STEEL RATIO	0.025	0.097	0.163	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216
ULT. COMP. SHEAR	71.931	49.967	45.940	41.914	38.059	34.372	30.684	26.996	23.967	20.958	17.949
ULT. TOTAL SHEAR	83.771	60.251	55.097	49.944	44.963	40.149	35.334	30.520	26.364	22.228	18.092
BEAM SHEAR CAPACITY	48.096	75.405	77.035	67.801	50.286	39.415	31.829	26.085	21.516	18.802	18.802
MIN. STIRRUP AREA	0.704	0.115	0.115	0.115	0.115	0.115	0.116	0.122	0.122	0.115	0.115
STRP.(#5) SPAC.(IN.)	6.375*	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750
PRESTRESS STRESS TOP	-0.024	-0.093	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110
BOT	0.427	1.671	1.967	1.967	1.967	1.967	1.967	1.967	1.967	1.967	1.967
INITIAL STRESSES TOP	-0.024	-0.005	0.057	0.126	0.186	0.237	0.279	0.311	0.334	0.348	0.353
BOT	0.427	1.582	1.798	1.728	1.667	1.615	1.573	1.540	1.516	1.502	1.498
FINAL STRESSES TOP	-0.024	0.275	0.591	0.864	1.094	1.282	1.426	1.526	1.607	1.653	1.661
BOT	0.427	1.297	1.046	0.768	0.535	0.345	0.198	0.097	0.014	-0.032	-0.040
FINAL # TOP STRANDS	0.490	1.915	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
FINAL # BOT STRANDS	2.939	11.490	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000
DEVELOP. # TOP STRDS	0.215	0.841	1.466	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
DEVELOP. # BOT STRDS	1.290	5.043	8.797	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000

* - FOR "ASE" REQUIREMENTS WITHIN A MAXIMUM DISTANCE OF 3.196" (D/4) FROM THE END OF BEAM USE EITHER
2 LOCATIONS OF 2-#5 STIRRUPS AT A MAXIMUM SPACING OF 1.196" OR
2 LOCATIONS OF 2-#6 STIRRUPS AT A MAXIMUM SPACING OF 1.196" USING 2" CL. FROM END OF BEAM

DEFLECTIONS(INCHES) AT CENTER LINE OF SPAN

BEAM	WDLNC	P-LOADS	WDLC	INITIAL	FINAL	SIDEWALK	TRUCK	LANE	MILITARY	RAILROAD	PRESTR.	CAMBER
0.221	0.000	0.005	0.191	-0.370	-0.107	0.000	0.550	0.348	0.519	0.000	-0.590	-0.672

MAXIMUM, ACTUAL AND MINIMUM ECCENTRICITIES(INCHES)AT SPAN TWENTIETH POINTS

ITEM	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
MAX ECC, SIT= -201	7.793	5.324	5.439	5.732	5.986	6.201	6.377	6.513	6.611	6.669	6.689
MAX ECC, SIB= 2700	47.838	9.825	8.101	8.393	8.647	8.862	9.038	9.175	9.272	9.331	9.350
INITIAL ECCENTRICITY	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351
FINAL ECCENTRICITY	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351
MIN ECC, SFT= 2000	-34.976	-4.225	-2.354	-1.053	0.038	0.933	1.617	2.093	2.483	2.698	2.737
MIN ECC, SFB= -424	-11.942	-4.075	-2.538	-1.237	-0.146	0.749	1.434	1.909	2.299	2.515	2.553

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  * ECCENTRICITY PLOT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                                      1    1    1    1    1    1    1    1    1    1    2    2    2    2
2
* POINTS
*0....1....2....3....4....5....6....7....8....9....0....1....2....3....4....5....6....7....8....9....0....1....2....3....4

* 0.00 L *                      +                *

* 0.05 L *                      +    *

* 0.10 L *                      +    *

* 0.15 L *                      +      *

* 0.20 L **                     +       *

* 0.25 L *     *                +        *

* 0.30 L *        *             +         *

* 0.35 L *          *           +          *

* 0.40 L *            *         +          *

* 0.45 L *             *        +          *

* 0.50 L *              *       +          *

*  *  *  *      * = MAX. AND MIN. ECCENTRICITY, + = ACTUAL ECCENTRICITY, HOLD-DOWN POINT IS  0.00 FEET FROM CENTER LINE OF SPAN

    STRAND ARRANGEMENT (TOP STRANDS NOT SHOWN)=  2

                      + +

               + + + + + + + +
```

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *STRAND ARRANGEMENT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5
6
* POINTS
*0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0

*  END   *    +   +

*  BRNG  *    +   +


* 0.05 L *    +   +


* 0.10 L *    +   +


* 0.15 L *    +   +


* 0.20 L *    +   +


* 0.25 L *    +   +


* 0.30 L *    +   +


* 0.35 L *    +   +


* 0.40 L *    +   +


* 0.45 L *    +   +


* 0.50 L *    +   +
```

FINAL STRAND ARRANGEMENT AT END

ROW	TOTAL #STRDS	VER DIST-STRAIGHT STRDS	#RAISED STRDS	VER DIST-RAISED STRDS	#DEB 1	DEB LENGTH 1	#DEB 2	DEB LENGTH 2
1	9	2.000	0	0.000	0	0.00L	0	0.00L
2	3	4.000	0	0.000	0	0.00L	0	0.00L
TOP	2	14.500						

INITIAL TRANSFER LENGTH = 2.683 FT

FINAL TRANSFER LENGTH = 2.380 FT

DEVELOPMENT LENGTH = 5.423 FT

LOSSES (KSI)

TOP STRANDS INITIAL LOSSES= 9.311 TOP STRANDS ADDITIONAL LOSSES= 21.808 TOP STRANDS FINAL LOSSES= 31.119

BOT STRANDS INITIAL LOSSES= 9.311 BOT STRANDS ADDITIONAL LOSSES= 21.808 BOT STRANDS FINAL LOSSES= 31.119

TOTAL LOSSES FOR ALL STRANDS= 31.119

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Beam Design Output - Span 4
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

02-NOV-09
15:11:58

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS OR DESIGN OF SIMPLE SPAN PRESTRESSED BEAMS
REVISED: JUNE 26, 2008

PROB. NO. INT.

255717 I-575 over Barrett Parkway Span 4

SPAN DATA

D/A	LL CLASS	LL SK.	LENGTH	DFM	DFV	DFD	WDLNC	WDLC	WSWK	F'C	F'CI	NPL	SIT	SFB	SFTE
D	HS20	0 0 0	33.922	0.602	1.000	0.833	0.000	0.442	0.000	5.000	4.500	3	-0.201	-0.424	-0.001

BEAM DATA

BEAM DIMENSIONS								* COMPOSITE SLAB			* (E X 1,000,000)		* STIRRUP	DECK	
WT	HT	FT	WS	HB	WB	FB	DB	* WF	TF	DF	* E BEAM	E SLAB	* SIZE	PANEL	FSY
41.25	5.00	0.30	11.50	4.50	42.00	0.30	17.00	41.26	0.001	0.000	4.29	3.59	5	0	60.

STRAND DATA

TYPE	NST	XDIST	ACTUAL NO. OR MAX. NO. OF STRANDS PER ROW																			ASB	AST	DIAM	TCL	BCL	SPAC.
0	2	0.5830	9	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1670	0.1670	0.500	2.50	2.00	2.00

RBFPU	BFPU	IBLOSS	FBLOSS	RTFPU	TFPU	ITLOSS	FTLOSS	WTC	LOW LAX	ITLENGTH	FTLENGTH	DLENGTH
.75	270.00	0.00	0.00	.75	270.00	0.00	0.00	.150	1	0.00	0.00	0.00

DEBONDING DATA

DEBOND ACT. # AND LENGTH OR MAX. # AND LENGTH OF STRANDS DEBONDED PER ROW

0 0 .00

0 .00 0 .00

DRAPE DATA

DRAPED	MAX RAISE	HOLD DOWN PT.	ACT. # OR MAX. # OF STRANDS DRAPED PER ROW																		
0	0.00	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

P-LOADS

XP1	P1	XP2	P2	XP3	P3	XP4	P4	XP5	P5
0.000	0.331	16.961	0.221	33.922	0.331				

PRESTRESSED BEAM DESIGN - OUTPUT DATA FOR PROBLEM NO. INT. 255717 I-575 over Barrett Parkway Span 4

MOMENTS AT SPAN TWENTIETH POINTS - KIP-FEET

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	0.000	13.965	26.459	37.484	47.039	55.123	61.738	66.883	70.558	72.763	73.498
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.000	0.187	0.375	0.562	0.750	0.937	1.125	1.312	1.499	1.687	1.874
UNIFORM D.L. COMP.	0.000	12.079	22.887	32.424	40.689	47.682	53.404	57.854	61.033	62.941	63.576
LIVE LOAD + IMPACT	0.000	32.248	59.718	82.409	100.862	115.459	125.808	131.909	137.887	140.787	140.502
TOTAL D.L. + L.L.	0.000	58.480	109.440	152.879	189.339	219.201	242.074	257.958	270.977	278.177	279.450

STRESSES AT SPAN TWENTIETH POINTS - KIPS PER SQ.IN.

LOADS		BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	TOP	0.000	0.088	0.166	0.236	0.296	0.347	0.388	0.421	0.444	0.458	0.462
	BOT	0.000	-0.089	-0.169	-0.240	-0.301	-0.352	-0.395	-0.427	-0.451	-0.465	-0.470
TOTAL NONCOMP. D.L.	TOP	0.000	0.089	0.169	0.239	0.301	0.353	0.396	0.429	0.453	0.468	0.474
	BOT	0.000	-0.090	-0.171	-0.243	-0.305	-0.358	-0.402	-0.436	-0.460	-0.476	-0.482
TOTAL COMP.D.L.+L.L.	TOP	0.000	0.279	0.520	0.722	0.891	1.026	1.127	1.194	1.251	1.282	1.284
	BOT	0.000	-0.283	-0.528	-0.734	-0.904	-1.042	-1.145	-1.212	-1.271	-1.302	-1.304
TOTAL COMP.+NONCOMP.	TOP	0.000	0.368	0.689	0.962	1.191	1.379	1.523	1.623	1.705	1.750	1.758
	BOT	0.000	-0.374	-0.699	-0.977	-1.210	-1.401	-1.547	-1.648	-1.731	-1.777	-1.786

SHEARS AT SPAN TWENTIETH POINTS - KIPS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
UNIFORM D.L. BEAM	8.667	7.800	6.933	6.067	5.200	4.333	3.467	2.600	1.733	0.867	0.000
UNIFORM D.L. NON-C.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CONCENTRATED P-LOADS	0.442	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111	0.111
UNIFORM D.L. COMP.	7.497	6.747	5.997	5.248	4.498	3.748	2.999	2.249	1.499	0.750	0.000
LIVE LOAD + IMPACT	28.700	19.013	17.605	16.196	14.867	13.615	12.362	11.110	10.162	9.223	8.284
TOTAL D.L. + L.L.	45.305	33.671	30.646	27.621	24.675	21.807	18.938	16.070	13.505	10.950	8.394

BEAM PROPERTIES

* * * * * NON-COMPOSITE BEAM PROPERTIES * * * * * * * * * * * * *							*	COMPOSITE BEAM PROPERTIES * * * * * * *						
I	YT	YB	ST	SB	A	W	*	I	YT	YB	ST	SB	A	QS
16085.3	8.435	8.565	1907.0	1878.0	490.54	0.511	*	16087.7	8.434	8.566	1907.5	1878.1	490.57	0.29

STRAND AND MISC. DATA

MAX # STRDS *	ACT # STRDS *	MIN # STRDS *	E @ C.L. *	E @ END *	PS *	ASE *	NS(EACT-EEND) *	BPI *	BPF *	TPI *	TPF
24	14	8	4.351	4.351	0.48%	0.90	0.000	387.150	343.447	64.525	57.241

MOMENTS(K-FT.) AND SHEARS(KIPS), STIRRUP SPACING, STRESSES(KSI) AT SPAN TWENTIETH POINTS

LOADS	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
ULT. MOMENT REQD.	0.000	103.973	194.029	270.167	333.558	385.029	423.734	449.671	471.777	483.651	485.058
ULT. MOMENT FURN.	70.444	255.139	412.301	527.022	527.022	527.022	527.022	527.022	527.022	527.022	527.022
1.2*CRACKING MOMENT	179.881	413.432	427.364	427.363	427.362	427.361	427.360	427.360	427.359	427.359	427.359
DIST. TO N.A.(IN.)	0.457	1.731	2.920	3.869	3.869	3.869	3.869	3.869	3.869	3.869	3.869
MAX STEEL RATIO	0.025	0.097	0.163	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216
ULT. COMP. SHEAR	71.931	49.967	45.940	41.914	38.059	34.372	30.684	26.996	23.967	20.958	17.949
ULT. TOTAL SHEAR	83.771	60.251	55.097	49.944	44.963	40.149	35.334	30.520	26.364	22.228	18.092
BEAM SHEAR CAPACITY	48.096	75.405	77.035	67.801	50.286	39.415	31.829	26.085	21.516	18.802	18.802
MIN. STIRRUP AREA	0.704	0.115	0.115	0.115	0.115	0.115	0.116	0.122	0.122	0.115	0.115
STRP.(#5) SPAC.(IN.)	6.375*	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750	12.750
PRESTRESS STRESS TOP	-0.024	-0.093	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110
BOT	0.427	1.671	1.967	1.967	1.967	1.967	1.967	1.967	1.967	1.967	1.967
INITIAL STRESSES TOP	-0.024	-0.005	0.057	0.126	0.186	0.237	0.279	0.311	0.334	0.348	0.353
BOT	0.427	1.582	1.798	1.728	1.667	1.615	1.573	1.540	1.516	1.502	1.498
FINAL STRESSES TOP	-0.024	0.275	0.591	0.864	1.094	1.282	1.426	1.526	1.607	1.653	1.661
BOT	0.427	1.297	1.046	0.768	0.535	0.345	0.198	0.097	0.014	-0.032	-0.040
FINAL # TOP STRANDS	0.490	1.915	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
FINAL # BOT STRANDS	2.939	11.490	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000
DEVELOP. # TOP STRDS	0.215	0.841	1.466	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
DEVELOP. # BOT STRDS	1.290	5.043	8.797	12.000	12.000	12.000	12.000	12.000	12.000	12.000	12.000

* - FOR "ASE" REQUIREMENTS WITHIN A MAXIMUM DISTANCE OF 3.196" (D/4) FROM THE END OF BEAM USE EITHER
2 LOCATIONS OF 2-#5 STIRRUPS AT A MAXIMUM SPACING OF 1.196" OR
2 LOCATIONS OF 2-#6 STIRRUPS AT A MAXIMUM SPACING OF 1.196" USING 2" CL. FROM END OF BEAM

DEFLECTIONS(INCHES) AT CENTER LINE OF SPAN

BEAM	WDLNC	P-LOADS	WDLC	INITIAL	FINAL	SIDEWALK	TRUCK	LANE	MILITARY	RAILROAD	PRESTR.	CAMBER
0.221	0.000	0.005	0.191	-0.370	-0.107	0.000	0.550	0.348	0.519	0.000	-0.590	-0.672

MAXIMUM, ACTUAL AND MINIMUM ECCENTRICITIES(INCHES)AT SPAN TWENTIETH POINTS

ITEM	BRNG	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L
MAX ECC, SIT= -201	7.793	5.324	5.439	5.732	5.986	6.201	6.377	6.513	6.611	6.669	6.689
MAX ECC, SIB= 2700	47.838	9.825	8.101	8.393	8.647	8.862	9.038	9.175	9.272	9.331	9.350
INITIAL ECCENTRICITY	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351
FINAL ECCENTRICITY	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351	4.351
MIN ECC, SFT= 2000	-34.976	-4.225	-2.354	-1.053	0.038	0.933	1.617	2.093	2.483	2.698	2.737
MIN ECC, SFB= -424	-11.942	-4.075	-2.538	-1.237	-0.146	0.749	1.434	1.909	2.299	2.515	2.553

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  * ECCENTRICITY PLOT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                                      1    1    1    1    1    1    1    1    1    1    2    2    2    2
2
* POINTS
*0....1....2....3....4....5....6....7....8....9....0....1....2....3....4....5....6....7....8....9....0....1....2....3....4

* 0.00 L *                      +                *

* 0.05 L *                      +    *

* 0.10 L *                      +    *

* 0.15 L *                      +      *

* 0.20 L **                     +       *

* 0.25 L *     *                +        *

* 0.30 L *        *             +         *

* 0.35 L *          *           +          *

* 0.40 L *            *         +          *

* 0.45 L *             *        +          *

* 0.50 L *              *       +          *

*  *  *  *      * = MAX. AND MIN. ECCENTRICITY, + = ACTUAL ECCENTRICITY, HOLD-DOWN POINT IS  0.00 FEET FROM CENTER LINE OF SPAN

    STRAND ARRANGEMENT (TOP STRANDS NOT SHOWN)=  2

                      + +

               + + + + + + + +
```

```
*  SPAN  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *STRAND ARRANGEMENT (INCHES) *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
*
                                1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5
6
* POINTS
*0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0.1.2.3.4.5.6.7.8.9.0

*  END   *    +   +

*  BRNG  *    +   +


* 0.05 L *    +   +


* 0.10 L *    +   +


* 0.15 L *    +   +


* 0.20 L *    +   +


* 0.25 L *    +   +


* 0.30 L *    +   +


* 0.35 L *    +   +


* 0.40 L *    +   +


* 0.45 L *    +   +


* 0.50 L *    +   +
```

FINAL STRAND ARRANGEMENT AT END

ROW	TOTAL #STRDS	VER DIST-STRAIGHT STRDS	#RAISED STRDS	VER DIST-RAISED STRDS	#DEB 1	DEB LENGTH 1	#DEB 2	DEB LENGTH 2
1	9	2.000	0	0.000	0	0.00L	0	0.00L
2	3	4.000	0	0.000	0	0.00L	0	0.00L
TOP	2	14.500						

INITIAL TRANSFER LENGTH = 2.683 FT

FINAL TRANSFER LENGTH = 2.380 FT

DEVELOPMENT LENGTH = 5.423 FT

LOSSES (KSI)

TOP STRANDS INITIAL LOSSES= 9.311 TOP STRANDS ADDITIONAL LOSSES= 21.808 TOP STRANDS FINAL LOSSES= 31.119

BOT STRANDS INITIAL LOSSES= 9.311 BOT STRANDS ADDITIONAL LOSSES= 21.808 BOT STRANDS FINAL LOSSES= 31.119

TOTAL LOSSES FOR ALL STRANDS= 31.119

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Substructure Design Input	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	Excel	2003

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience prior the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not complete and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work activity, a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Substructure Design Input calculations are included for bents 1&3.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	7	7	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bent Design Input - Bent 1
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

END BENT REACTIONS: BENT 1

APPROACH SLAB LENGTH =	30.00	feet	CAP DEPTH =	2.00	ft
			CAP WIDTH =	3.00	ft
SKEW =	88.27	degrees			
BEAM SPACING =	8.000	feet			
SPACING ALONG SKEW =	8.004	feet			
DEAD LOAD REACTION =	20.718	kips			
DL OF APPROACH =	10.00	kips	Total Rxn on Bent =	612.24 kips	
WEIGHT OF CAP =	7.20	kips		6 HP 10 x 42	5 HP 12 x 53 4 HP 14 x 73
TOTAL DL =	37.92	kips			
LIVE LOAD =	30.11	kips	Pile Type:	**Steel HP**	
TOTAL PILE REACTION =	**68.03**	**kips =**	**34 tons**	**Use-->**	**HP10x42**

END BENT REACTIONS: BENT 5

APPROACH SLAB LENGTH =	30.00	feet	CAP DEPTH =	2.00	ft
			CAP WIDTH =	3.00	ft
SKEW =	88.27	degrees			
BEAM SPACING =	8.000	feet			
SPACING ALONG SKEW =	8.004	feet			
DEAD LOAD REACTION =	16.693	kips			
DL OF APPROACH =	10.00	kips	Total Rxn on Bent =	563.33 kips	
WEIGHT OF CAP =	7.20	kips		6 HP 10 x 42	5 HP 12 x 53 3 HP 14 x 73
TOTAL DL =	33.89	kips			
LIVE LOAD =	28.70	kips	Pile Type:	**Steel HP**	
TOTAL PILE REACTION =	**62.59**	**kips =**	**31 tons**	**Use-->**	**HP10x42**

WINGWALL LENGTH CALCULATIONS:

BENT	**1**		**5**	
SKEW =	88.27	degrees	88.27	degrees
"D" =	1	IN	1	IN
BEARING PAD THICKNESS =	2.500	IN	2.500	IN
CAP DEPTH =	2.00	FT	2.00	FT
BEAM DEPTH =	17	IN	17	IN
BERM =	2	FT	2	FT
CAP WIDTH =	3	FT	3	FT
H =	3.71	FT	3.71	FT
WINGWALL HEIGHT USED =	4.25	FT	4.25	FT
THEORETICAL WINGWALL LENGTH =	5.42	FT	5.42	FT
ACTUAL WING WALL LENGTH =	5.50	FT	5.50	FT
NUMBER OF PILES PER WINGWALL =	0		0	

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bent Design Input - Bent 3
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

PIER DESIGN CALCULATIONS

BENT 3

GENERAL REQUIREMENTS:

Live Load cases:	See GDOT Program BRLLCA		
Skew Angle:	88.29	° FROM CL BRIDGE	
	1.71306	° FROM CL BENT	
Concrete Strength:	3500	psi	
Rebar Strength:	60000	psi	
Ec =	3587	ksi	AASHTO 8.7.1
Es =	29000	ksi	AASHTO 8.7.2
Allowable Steel Stress:	24000	psi	AASHTO 8.15.2.2
n = Ec/Es =	8		AASHTO 8.15.3.4
Cap Bar size:	11	#	
Stirup Size:	5	#	
Max bars / row in top of cap:	6	bars	
Max bars / row in bot of cap:	9	bars	
Column Steel Ratios:	1	% min.	
	8	% max.	
Edge of Column to main rebar:	4.125	in.	

Impact Factor

	Length (ft)	Impact
LEFT SPAN	65.00	1.263
RIGHT SPAN	65.00	1.263
	Avg. Impact =	1.26

Soil Weight 0.120 kcf

Columns:
TYPE S (S-SQUARE or RECTANGULAR, C-CIRCULAR, P-PILES)

Pile Spacing: 3.00 ft. MIN 5 ft. MAX
1.00 ft. EMBED 1.5 ft. EDGE

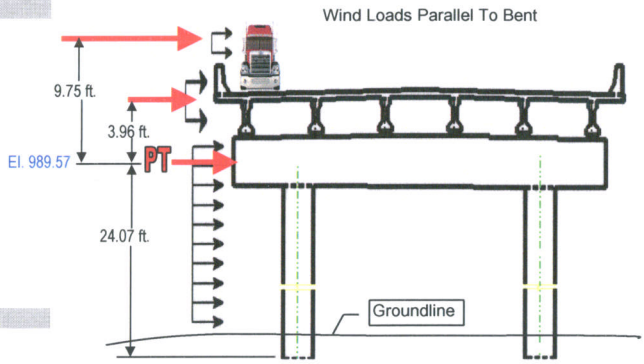
Pile Capacity:
Pile Type: **Steel HP**
Pile Size: **HP12x53** STEEL HP
ALLOWABLE LOAD 140 KIPS = 70 TONS
UPLIFT 0 KIPS =

WIND ON SUPERSTRUCTURE

AASHTO 3.15.2.1.1

	Left Span	Rigtht Span	
Parapet Height =	32 in.	32 in.	
Beam Height =	27 in.	27 in.	
'D' or 'H' Dimension =	0 in.	0 in.	
Beam + Coping + Slab =	2.25 ft.	2.25 ft.	
Total Height =	4.92 ft.	4.92 ft.	
Span Lengths =	65.00 ft.	65.00 ft.	TOTAL
Wind Force Area =	159.8 ft^2	159.8 ft^2	320 ft^2
Height of Cap =	3.00 ft.	3.00 ft.	
Wind Force Arm =	3.96 ft.		

Wind Loads Parallel To Bent



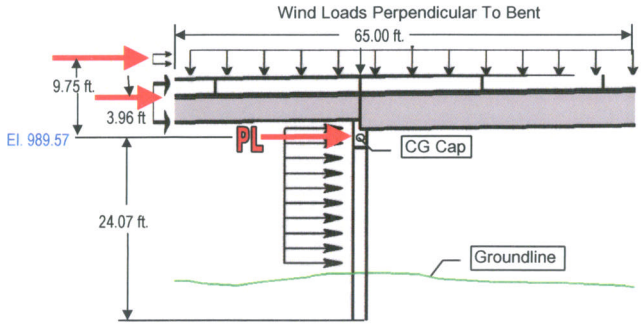
WIND ON SUBSTRUCTURE:

AASHTO 3.15.2.2

Wind Force =	0.040	ksf	PARA. & PERP.
Length of Cap =	31.50	ft.	
Width of Cap =	3.00	ft.	
CG of Cap ELEV =	989.57		
Ground Line ELEV=	967.50		
Depth to Point of Fixity =	2.00		
Pt. of Fixity ELEV =	965.50		
Bot. Cap to Pt. of Fixity =	22.57	ft.	
Design Height of Column =	24.07	ft.	
Exposed Height of Column =	20.57	ft.	CG Cap to Pt. of Fixity
Width of Column =	3.00	ft.	
Depth of Column =	3.00	ft.	
No. of Columns =	2	columns	

	PARA.	PERP.	
M_{CAP} =	8.67	90.98	k-ft.
M_{COL} =	30.32	60.65	k-ft.
M_{TOTAL} =	38.99	151.63	k-ft.
	PT = 1.62	**PL = 6.30**	**kips**

Wind Loads Perpendicular To Bent



BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

PIER DESIGN CALCULATIONS

BENT 3

WIND ON LIVE LOAD — AASHTO 3.15.2.1.2

Length =	65.00	ft.			
APT = APL =	9.750	ft.	Use-->	9.750	ft.

TRACTION FORCE: For One lane — AASHTO 3.9 & 3.10

			(SPEED)	70 mph	D	0.5 (degrees)
LF =	2.980	k	CF =	1.817 k		

TEMPERATURE FORCE: — AASHTO 3.16

Friction Force due to Temperature:

Δ = Temp. Deflection = ALPHA x Length x Change in Temp.

T_{RISE} =	30	° T_{FALL} =	40	° (Fahrenheit)
Material (C or S):	C	ALPHA =	0.000006	/ ° (Fahrenheit)

Force in Pad = Fs = [G x L x W x Deflection] / (Telas)

	LEFT	RIGHT	
Expansion Length =	65.00	0.00	ft
Δ =	0.187	0.000	in
G = Shear Modulus of Pad =	200	200	psi
L= Length of Pad =	6.00	6.00	in
W = Width of Pad =	42.00	42.00	in
Telas = Bearing Elastomer Depth =	1.000	1.000	in
Fs =	9.43	0.00	KIPS /pad
No. of Beams =	9	9	
Total Temperature Force =	84.91	0.00	kips @ top of seat
Elastic Modulus of Columns (E) =	1000	1000	ksi
Total Moment of Inertia of Columns (I) x (Columns)=	559872	559872	in^4
Lateral Force to Deflect Columns = Δ (3 E I) / L^3 =	15.83	0.00	kips
LATERAL FORCE TO DEFLECT COLUMN CONTROLS =	15.83	0.00	kips @ top of seat
	16.81	0.00	kips @ center of cap
P_L =	16.80	0.00	kips
P_T =	0.50	0.00	kips

Difference =	P_L =	16.80	kips	AT CL CAP	
	P_T =	0.50	kips	AT CL CAP	
	P_L =	17.85	kips	AT CL CAP ---->	Use Total Lateral Force
	P_T =	0.53	kips	AT CL CAP	= PL + Equiv. Lateral Force from MDL due to eccentricity

Expansion of Concrete Cap =	**0.00018**	in/in	
Contraction of Concrete Cap =	**0.00044**	in/in	which includes 0.0002 for creep

STREAM FORCE: — AASHTO 3.18.1

100 yr Flood ELEV. =	0	ft.	
Point of Fixity =	24.07	ft.	
Bottom of Stream ELEV =	967.50	ft.	
Pt. of Fixity ELEV =	965.50		
V_{AVG} =	0	FPS @ 100 yr. Flood	
K =	1.4	for square ended piers	
$P_{AVG} = K * (V_{AVG})^2$ =	0.00	psf	AASHTO Eq. (3-4)
$P_{MAX} = 2 * P_{AVG}$ =	0.00	psf	
Piers Aligned with streaam flow:			
P_S =	0.000	kips	
M =	0.00	k-ft.	
$P_{CL\ CAP}$ =	0.000	k	

BRIDGE: **I-575 over Barrett Parkway**
COUNTY: **COBB**
P.I. NO: **713640**
PROJECT: **NH000-0575-01(028)**

J.B. TRIMBLE, INC.

JOB NO: **255717**
DESIGNED BY: **WBN**
CHECKED BY: **JCR**

PIER DESIGN CALCULATIONS

BENT 3

DEAD LOAD: AASHTO 3.3

LENGTH = 31.50 feet

SKEW = 88.29 degrees

SPAN 2

BEAM	BEAM SPACING	DISTANCE BETWEEN	DISTANCE ALONG	R dl	Add'l DL	DL
1		1.750	1.750	36.319	0.000	36.319
2	3.500	3.500	5.250	36.319	0.000	36.319
3	3.500	3.500	8.750	36.319	0.000	36.319
4	3.500	3.500	12.250	36.319	0.000	36.319
5	3.500	3.500	15.750	36.319	0.000	36.319
6	3.500	3.500	19.250	36.319	0.000	36.319
7	3.500	3.500	22.750	36.319	0.000	36.319
8	3.500	3.500	26.250	36.319	0.000	36.319
9	3.500	3.500	29.750	36.319	0.000	36.319
		1.750	31.500			
		31.500				

TOTAL 326.871

CL Brg to CL Bent = 0.7500

SPAN 3

BEAM	BEAM SPACING	DISTANCE BETWEEN	DISTANCE ALONG	R dl	Add'l DL	DL
1		1.750	1.750	36.319	0.000	36.319
2	3.500	3.500	5.250	36.319	0.000	36.319
3	3.500	3.500	8.750	36.319	0.000	36.319
4	3.500	3.500	12.250	36.319	0.000	36.319
5	3.500	3.500	15.750	36.319	0.000	36.319
6	3.500	3.500	19.250	36.319	0.000	36.319
7	3.500	3.500	22.750	36.319	0.000	36.319
8	3.500	3.500	26.250	36.319	0.000	36.319
9	3.500	3.500	29.750	36.319	0.000	36.319
		1.750	31.500			
		31.500				

TOTAL 326.871

CL Brg to CL Bent = 0.7500

653.742

COMBINED LOADS

	POINT	MEMBER		DISTANCE ALONG	R dl	Add'l DL	DL	CHECK POINT
	G1	1	5.250	1.750	72.638	0.000	72.638	1
	G2	1	3.500	5.250	72.638	0.000	72.638	2
7.00	EC	1	1.000	6.250				3
	EC	2	0.750	7.750				4
	G3	2	1.000	8.750	72.638	0.000	72.638	5
	G4	2	3.500	12.250	72.638	0.000	72.638	6
17.50	G5	2	3.500	15.750	72.638	0.000	72.638	7
	G6	2	3.500	19.250	72.638	0.000	72.638	8
	G7	2	3.500	22.750	72.638	0.000	72.638	9
	EC	2	1.000	23.750				10
7.00	EC	2	0.750	25.250				11
	G8	3	1.000	26.250	72.638	0.000	72.638	12
	G9	3	3.500	29.750	72.638	0.000	72.638	13
				1.750				
			31.500					

ADDITIONAL DL MOMENT DUE TO ECCENTRICITY:

M_{DL} = 0.00 KIP-FT

(EQUIV. LONG FORCE) $F_{EL} = M_{DL} / H_{DESIGN\ OF\ COLUMN}$ = 0.00 KIP

(TOTAL LONG FORCE) $F_L = F_{EL} + P_{L\ TEMP}$ = 17.85 KIP

LIVE LOADS: AASHTO 3.4

	LEFT	RIGHT	
Span Lengths =	65.00	65.00	ft.

LIVE LOAD REACTION 63.38 KIPS AXLE LOAD NO IMPACT **VERIFY !!!!**
67.60 KIPS LANE LOAD NO IMPACT

AVERAGE IMPACT 1.2632

P-LOAD FOR BRLLCA INPUT 42.695 KIPS

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Live Load Case Output	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	GDOT BRLLCA	06/26/2008

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Live Load Case ouptput is included for bent 3.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	3	3	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Live Load Case Output - Bent 3
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
SUMMARY OF THE LIVE LOAD CASE PROGRAM
REVISED: JUNE 26, 2008

I-575 OVER BARRETT PWKY - BENT 3

BRIDGE WIDTH	X1	X2	CENTER LINE DISTANCE	# OF BEAMS	REACTION FORCE	MAXIMUM # OF TRUCKS	# OF COLUMNS	COLUMN WIDTH	SKEW ANGLE
31.500	1.750	1.750	15.750	9	42.695	3	0	0.000	0

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20
1.750	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500											

	NO. OF TRUCKS	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
LL CASE 1	1	42.695	12.199	30.496	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 2	2	42.695	12.199	36.596	36.596	18.298	24.397	0.000	0.000	0.000	0.000
LL CASE 3	3	42.695	12.199	36.596	36.596	18.298	36.596	30.496	24.397	18.298	0.000
LL CASE 4	1	0.000	0.000	0.000	0.000	0.000	0.000	30.496	12.199	42.695	0.000
LL CASE 5	2	0.000	0.000	0.000	24.397	18.298	36.596	36.596	12.199	42.695	0.000
LL CASE 6	3	18.298	24.397	30.496	36.596	18.298	36.596	36.596	12.199	42.695	0.000
LL CASE 7	1	0.000	0.000	0.000	36.596	12.199	36.596	0.000	0.000	0.000	0.000
LL CASE 8	2	30.496	12.199	42.695	36.596	12.199	36.596	0.000	0.000	0.000	0.000
LL CASE 9	3	30.496	12.199	42.695	36.596	12.199	36.596	42.695	12.199	30.496	0.000
LL CASE 10	2	0.000	12.199	30.496	24.397	36.596	24.397	30.496	12.199	0.000	0.000
LL CASE 11	2	42.695	12.199	30.496	0.000	0.000	0.000	30.496	12.199	42.695	0.000
LL CASE 12	3	42.695	12.199	36.596	36.596	18.298	24.397	30.496	12.199	42.695	0.000

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
Intermediate Bent Design Output	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
					X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	X YES ◯ NO	◯	X	GDOT BRPIER	06/26/2008

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Intermediate Bent Design ouptput is included for bent 3.

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	10	10	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bent Design Output - Bent 3
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Sufficient sample calculations representative of the scope and conditions in the design calculation were performed and the results compared to demonstrate the computer program adequacy.

PRECONSTUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS AND DESIGN OF PIERS FOR BRIDGES - V 4.2.07 - AASHTO SPECS 1984 INTERIM
REVISED: JUNE 30, 2008
I-575 OVER BARRETT PKWY - BENT 3

DESIGN DATA

DESIGN OPTIONS	NO. CAN	NO. COL	NO. LLC	SKEW D M S	ANG	F'C PSI	FC PSI	N	FY PSI	FS PSI	EC KSI	ES KSI	CONC. STRAIN	Z FACT	* * * CAP REINFORCING STEEL * * * MAIN SIZE	STR SIZ	MAX TOP	MAX BOT	MIN SIZE	MIN NO.	TOP CL.	MIN S.SP	CAP DEPTH INCR.	BOT CL.
D D D L	2	2	12	1-42-47		3500.	1400.	8.	60000.	24000.	3587.	29000.	0.0030	170.	11	5	6	9	6	4	2.00	4.00	3.00	2.00

COLUMN REINFORCING STEEL MIN.P	MAX.P	CL.SP.	CLEAR	R MODE	KL COEF	OC	OF	CM	BD1	BD2	IMPACT %	SOIL WT KCF	ALL.S.P. KSF	MIN PL SP	MAX PL SP	EDGE DIST	PILE DEPTH	REBAR CLEAR	ALL.PILE CAPACITY	ALL.PILE UPLIFT	I P
1.00	8.00	2.25	4.125	2	2.00	0.00	0.90	0.00	1.00	0.00	26.32	0.120	0.000	3.00	5.00	1.500	1.000	3.000	140.000	0.000	P

CAP DATA

CN	C	L	A	DE	BC	BE	DH	LH	XB1	XB2	XB3	XB4	XB5	XB6	XB7	XB8
11	C	7.000	0.000	3.000	3.000	3.000	0.000	0.000	5.250	3.500	1.000					
12	C	17.500	0.000	3.000	3.000		0.000	0.000	0.750	1.000	3.500	3.500	3.500	3.500	1.000	
13	C	7.000	0.000	3.000	3.000	3.000	0.000	0.000	0.750	1.000	3.500					

COLUMN DATA

CN	P	I	T	S	HT	A	DT	BT	DB	BB	DL	FLEX	ND	NB	SZ	ND	NB	SZ	ND	NB	SZ	ND	NB	SZ	SLOPE	EP	AP
21	0	C	T		24.070	0.000	3.000	3.000	0.000	0.000	1.500	0.000	2	4	11	0	0	0	4	6	11	0	0	0	0.000	0.000	0.000
22	0	C	T		24.070	0.000	3.000	3.000	0.000	0.000	1.500	0.000	2	4	11	0	0	0	4	6	11	0	0	0	0.000	0.000	0.000

FOOTING DATA

CN	S/P	B	D	T	DEL.B	DEL.D	DEL.T	R.B/D	R.D/B	S.HT.	NP	SYM.	BP	DP	SET.
31	P	6.000	6.000	3.500	0.500	0.500	0.250	1.000	1.000	0.000	4	1	0.000	0.000	0.000
32	P	6.000	6.000	3.500	0.500	0.500	0.250	1.000	1.000	0.000	4	1	0.000	0.000	0.000

GROUP II WIND

SUPERSTRUCTURE AREA*		STD.	WIND ON SUPERSTRUCTURE INTENSITIES								* WIND FORCE ARM		* WIND ON PIER	
TRANS.	LONG.	WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	APT	APL	PT	PL
320.	320.	1	50	0	44	6	41	12	33	16	17	19	3.958	3.958	1.620	6.300

GROUP III WIND

STD. *	WIND ON SUPERSTRUCTURE INTENSITIES									*	STD. *	WIND ON LIVE LOAD INTENSITIES									*	LENGTHS OF LL		* WIND ON LL ARMS	
WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	WIND	FT1	FL1	FT2	FL2	FT3	FL3	FT4	FL4	FT5	FL5	TRANS.	LONGI.	APT	APL
1	50	0	44	6	41	12	33	16	17	19	1	100	0	88	12	82	24	66	32	34	38	65.0	65.0	9.750	9.750

MISCELLANEOUS FORCES

CENTRI.	TRACTION FORCE AND ARMS			EXPANSION	SHRINKAGE	STREAM FLOW	
FT	FL	APT	APL	COEFFICIENT	COEFFICIENT	PT	PL
1.817	2.980	9.750	9.750	0.00018000	0.00044000	0.534	17.852

DEAD LOAD SUPERSTRUCTURE AND LIVE LOAD CASES

I.D.	NL	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
D L	0	72.638 72.638	72.638	0.000	0.000	72.638	72.638	72.638	72.638	72.638	0.000	0.000	72.638
LL 1	1	42.695 0.000	12.198	0.000	0.000	30.496	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL 2	2	42.695 0.000	12.198	0.000	0.000	36.595	36.595	18.297	24.397	0.000	0.000	0.000	0.000
LL 3	3	42.695 18.297	12.198	0.000	0.000	36.595	36.595	18.297	36.595	30.496	0.000	0.000	24.397
LL 4	1	0.000 42.695	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.496	0.000	0.000	12.198
LL 5	2	0.000 42.695	0.000	0.000	0.000	0.000	24.397	18.297	36.595	36.595	0.000	0.000	12.198
LL 6	3	18.297 42.695	24.397	0.000	0.000	30.496	36.595	18.297	36.595	36.595	0.000	0.000	12.198
LL 7	1	0.000 0.000	0.000	0.000	0.000	0.000	36.595	12.198	36.595	0.000	0.000	0.000	0.000
LL 8	2	30.496 0.000	12.198	0.000	0.000	42.695	36.595	12.198	36.595	0.000	0.000	0.000	0.000
LL 9	3	30.496 30.496	12.198	0.000	0.000	42.695	36.595	12.198	36.595	42.695	0.000	0.000	12.198
LL10	2	0.000 0.000	12.198	0.000	0.000	30.496	24.397	36.595	24.397	30.496	0.000	0.000	12.198
LL11	2	42.695 42.695	12.198	0.000	0.000	30.496	0.000	0.000	0.000	30.496	0.000	0.000	12.198
LL12	3	42.695 42.695	12.198	0.000	0.000	36.595	36.595	18.297	24.397	30.496	0.000	0.000	12.198

MEMBER PROPERTIES

COLUMN PROPERTIES

CN	KT KTM	COTB COBT	COTBM COBTM	TLR TRL	TRC TCR	TLC TCL	DFC DFL	KL PDF	FKBR FKUBR	PCBR PCUBR	PCL FLU	UFMT UFMB	EITTB EILTB	PSIT PSIB	RGTB RGL
1	579404.1	0.5000	0.5000	0.5405	1.0000	0.4595	0.4595	0.017425	15.1	67330.8	4538.7	36107.4	173188.2	0.5	10.5
	579404.1	0.5000	0.3053	0.0000	1.0000	0.0000	0.0000	0.5000	30.9	16181.9	22.6	36107.4	173188.2	0.0	10.5
2	579404.1	0.5000	0.5000	0.0000	0.4595	1.0000	0.4595	0.017425	15.1	67330.8	4538.7	36107.4	173188.2	0.5	10.5
	579404.1	0.5000	0.3053	0.5405	0.0000	1.0000	0.5405	0.5000	30.9	16181.9	22.6	36107.4	173188.2	0.0	10.5

CAP PROPERTIES

CN	CO K	KML KMR	COMLR COMRL	FMWT UFEM	FMLP1 FMRP1	FMLP2 FMRP2	FMLP3 FMRP3	FMLP4 FMRP4	FMLP5 FMRP5	FMLP6 FMRP6	FMLP7 FMRP7	FMLP8 FMRP8
2	0.5000	681568.8	0.2461	34.4531	0.6871	1.4175	2.5725	2.1875	1.1025	0.1575	0.0308	
	796928.9	681568.8	0.2461	68308.2	0.0308	0.1575	1.1025	2.1875	2.5725	1.4175	0.6871	

COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

		TRANSVERSE							*	LONGITUDINAL		
LOAD	COL	PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF
UNIT F.AT CL.CAP	1	0.613	5.367	0.500	6.668	0.613	0.000	-5.367	0.750	0.500	12.035	12.035
	2	-0.613	5.367	0.500	6.668	-0.613	-5.367	0.000	0.750	0.500	12.035	12.035
EXPANSION OF CAP	1	0.000	23.173	2.625	40.021	0.000	0.000	-23.173	0.000	0.000	0.000	0.000
	2	0.000	-23.173	-2.625	-40.021	0.000	23.173	0.000	0.000	0.000	0.000	0.000
SHRINKAGE OF CAP	1	0.000	-56.646	-6.418	-97.830	0.000	0.000	56.646	0.000	0.000	0.000	0.000
	2	0.000	56.646	6.418	97.830	0.000	-56.646	0.000	0.000	0.000	0.000	0.000
DEAD LOAD TOTAL	1	348.134 378.603	19.646	1.224	9.823	378.603	541.541	-561.187	0.000	0.000	0.000	0.000
	2	348.134 378.603	-19.646	-1.224	-9.823	378.603	561.187	-541.541	0.000	0.000	0.000	0.000
STREAM FLOW	1	0.328	2.866	0.267	3.561	0.328	0.000	-2.866	13.389	8.926	214.849	214.849
	2	-0.328	2.866	0.267	3.561	-0.328	-2.866	0.000	13.389	8.926	214.849	214.849
TRAC. FORCE 1 LN	1	0.104	0.478	0.045	0.594	0.104	0.000	-0.478	-16.755	-1.489	-50.369	-50.369
	2	-0.104	0.478	0.045	0.594	-0.104	-0.478	0.000	-16.755	-1.489	-50.369	-50.369
CENT. FORCE 1 LN	1	2.126	9.748	0.908	12.110	2.126	0.000	-9.748	0.306	0.027	0.919	0.919
	2	-2.126	9.748	0.908	12.110	-2.126	-9.748	0.000	0.306	0.027	0.919	0.919
WIND ON SUBSTR.	1	0.994	8.695	0.810	10.802	0.994	0.000	-8.695	-4.725	-3.150	-75.821	-75.821
	2	-0.994	8.695	0.810	10.802	-0.994	-8.695	0.000	-4.725	-3.150	-75.821	-75.821
GROUP 2 WIND 1 1	1	14.421	94.531	8.806	117.440	14.421	0.000	-94.531	-3.420	-2.911	-69.118	-69.118
	2	-14.421	94.531	8.806	117.440	-14.421	-94.531	0.000	-3.420	-2.911	-69.118	-69.118
GROUP 2 WIND 1 2	1	14.421	94.531	8.806	117.440	14.421	0.000	-94.531	6.030	3.389	82.523	82.523
	2	-14.421	94.531	8.806	117.440	-14.421	-94.531	0.000	6.030	3.389	82.523	82.523
GROUP 2 WIND 2 1	1	12.858	84.538	7.876	105.026	12.858	0.000	-84.538	-8.814	-3.899	-96.817	-96.817
	2	-12.858	84.538	7.876	105.026	-12.858	-84.538	0.000	-8.814	-3.899	-96.817	-96.817
GROUP 2 WIND 2 2	1	12.761	83.922	7.818	104.261	12.761	0.000	-83.922	11.111	4.320	108.614	108.614
	2	-12.761	83.922	7.818	104.261	-12.761	-83.922	0.000	11.111	4.320	108.614	108.614
GROUP 2 WIND 3 1	1	12.100	79.696	7.424	99.011	12.100	0.000	-79.696	-14.129	-4.873	-124.114	-124.114
	2	-12.100	79.696	7.424	99.011	-12.100	-79.696	0.000	-14.129	-4.873	-124.114	-124.114
GROUP 2 WIND 3 2	1	11.907	78.464	7.310	97.480	11.907	0.000	-78.464	16.270	5.265	135.107	135.107
	2	-11.907	78.464	7.310	97.480	-11.907	-78.464	0.000	16.270	5.265	135.107	135.107
GROUP 2 WIND 4 1	1	9.984	66.168	6.164	82.204	9.984	0.000	-66.168	-17.830	-5.551	-143.116	-143.116
	2	-9.984	66.168	6.164	82.204	-9.984	-66.168	0.000	-17.830	-5.551	-143.116	-143.116
GROUP 2 WIND 4 2	1	9.727	64.525	6.011	80.162	9.727	0.000	-64.525	19.553	5.867	151.964	151.964
	2	-9.727	64.525	6.011	80.162	-9.727	-64.525	0.000	19.553	5.867	151.964	151.964
GROUP 2 WIND 5 1	1	5.711	38.854	3.620	48.271	5.711	0.000	-38.854	-20.866	-6.107	-158.709	-158.709
	2	-5.711	38.854	3.620	48.271	-5.711	-38.854	0.000	-20.866	-6.107	-158.709	-158.709

COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

		TRANSVERSE						*	LONGITUDINAL			
LOAD	COL	PC	MT	V	MB	RF	ML	MR	MT	V	MB	MF
GROUP 2 WIND 5 2	1	5.406	36.903	3.438	45.847	5.406	0.000	-36.903	21.754	6.270	163.267	163.267
	2	-5.406	36.903	3.438	45.847	-5.406	-36.903	0.000	21.754	6.270	163.267	163.267
GROUP 3 WIND 1 1	1	11.931	63.230	5.890	78.554	11.931	0.000	-63.230	0.067	-0.776	-17.449	-17.449
	2	-11.931	63.230	5.890	78.554	-11.931	-63.230	0.000	0.067	-0.776	-17.449	-17.449
GROUP 3 WIND 1 2	1	11.931	63.230	5.890	78.554	11.931	0.000	-63.230	2.902	1.114	28.043	28.043
	2	-11.931	63.230	5.890	78.554	-11.931	-63.230	0.000	2.902	1.114	28.043	28.043
GROUP 3 WIND 2 1	1	10.577	56.173	5.233	69.786	10.577	0.000	-56.173	-6.068	-1.474	-39.337	-39.337
	2	-10.577	56.173	5.233	69.786	-10.577	-56.173	0.000	-6.068	-1.474	-39.337	-39.337
GROUP 3 WIND 2 2	1	10.494	55.738	5.193	69.246	10.494	0.000	-55.738	8.681	1.771	48.660	48.660
	2	-10.494	55.738	5.193	69.246	-10.494	-55.738	0.000	8.681	1.771	48.660	48.660
GROUP 3 WIND 3 1	1	9.921	52.753	4.914	65.538	9.921	0.000	-52.753	-12.114	-2.162	-60.908	-60.908
	2	-9.921	52.753	4.914	65.538	-9.921	-52.753	0.000	-12.114	-2.162	-60.908	-60.908
GROUP 3 WIND 3 2	1	9.754	51.883	4.833	64.457	9.754	0.000	-51.883	14.548	2.439	69.594	69.594
	2	-9.754	51.883	4.833	64.457	-9.754	-51.883	0.000	14.548	2.439	69.594	69.594
GROUP 3 WIND 4 1	1	8.087	43.199	4.024	53.668	8.087	0.000	-43.199	-16.322	-2.641	-75.923	-75.923
	2	-8.087	43.199	4.024	53.668	-8.087	-43.199	0.000	-16.322	-2.641	-75.923	-75.923
GROUP 3 WIND 4 2	1	7.865	42.039	3.916	52.226	7.865	0.000	-42.039	18.282	2.864	82.915	82.915
	2	-7.865	42.039	3.916	52.226	-7.865	-42.039	0.000	18.282	2.864	82.915	82.915
GROUP 3 WIND 5 1	1	4.386	23.909	2.227	29.703	4.386	0.000	-23.909	-19.776	-3.034	-88.244	-88.244
	2	-4.386	23.909	2.227	29.703	-4.386	-23.909	0.000	-19.776	-3.034	-88.244	-88.244
GROUP 3 WIND 5 2	1	4.121	22.531	2.099	27.991	4.121	0.000	-22.531	20.785	3.148	91.846	91.846
	2	-4.121	22.531	2.099	27.991	-4.121	-22.531	0.000	20.785	3.148	91.846	91.846
LIVE LOAD LL 1	1	95.089	-69.690	-3.646	-18.060	95.089	245.495	-175.805	0.000	0.000	0.000	0.000
	2	-9.700	47.311	3.646	40.440	-9.700	-47.311	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL 2	1	142.820	24.660	2.148	27.039	142.820	245.495	-270.155	0.000	0.000	0.000	0.000
	2	27.957	-44.271	-2.148	-7.427	27.957	44.271	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL 3	1	127.898	13.964	1.170	14.209	127.898	220.946	-234.910	0.000	0.000	0.000	0.000
	2	102.650	-23.600	-1.170	-4.573	102.650	148.478	-124.879	0.000	0.000	0.000	0.000
LIVE LOAD LL 4	1	-9.700	-47.311	-3.646	-40.440	-9.700	0.000	47.311	0.000	0.000	0.000	0.000
	2	95.089	69.690	3.646	18.060	95.089	175.805	-245.495	0.000	0.000	0.000	0.000
LIVE LOAD LL 5	1	27.957	44.271	2.148	7.427	27.957	0.000	-44.271	0.000	0.000	0.000	0.000
	2	142.820	-24.660	-2.148	-27.039	142.820	270.155	-245.495	0.000	0.000	0.000	0.000
LIVE LOAD LL 6	1	102.650	23.600	1.170	4.573	102.650	124.879	-148.478	0.000	0.000	0.000	0.000
	2	127.898	-13.964	-1.170	-14.209	127.898	234.910	-220.946	0.000	0.000	0.000	0.000
LIVE LOAD LL 7	1	42.694	95.496	5.951	47.748	42.694	0.000	-95.496	0.000	0.000	0.000	0.000
	2	42.694	-95.496	-5.951	-47.748	42.694	95.496	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL 8	1	133.394	54.763	3.843	37.729	133.394	181.451	-236.214	0.000	0.000	0.000	0.000
	2	37.383	-68.560	-3.843	-23.932	37.383	68.560	0.000	0.000	0.000	0.000	0.000
LIVE LOAD LL 9	1	115.275	25.044	1.561	12.522	115.275	163.305	-188.350	0.000	0.000	0.000	0.000
	2	115.275	-25.044	-1.561	-12.522	115.275	188.350	-163.305	0.000	0.000	0.000	0.000
LIVE LOAD LL10	1	85.388	116.368	7.252	58.184	85.388	21.347	-137.714	0.000	0.000	0.000	0.000
	2	85.388	-116.368	-7.252	-58.184	85.388	137.714	-21.347	0.000	0.000	0.000	0.000
LIVE LOAD LL11	1	85.389	-117.001	-7.291	-58.500	85.389	245.495	-128.494	0.000	0.000	0.000	0.000
	2	85.389	117.001	7.291	58.500	85.389	128.494	-245.495	0.000	0.000	0.000	0.000
LIVE LOAD LL12	1	119.808	-20.385	-1.348	-12.061	119.808	220.946	-200.560	0.000	0.000	0.000	0.000
	2	110.741	22.877	1.348	9.570	110.741	198.069	-220.946	0.000	0.000	0.000	0.000

CAP ANALYSIS AND DESIGN DATA

CAP MOMENTS AND SHEARS

	MOMENTS(KIP-FEET)							**	SHEARS(KIPS)				
POINT	D.L.TOT.	G1 MAX.+	G1 MAX.-	G2 MAX.+	G2 MAX.-	G3 MAX.+	G3 MAX.-	DL T.LT	DL T.RT	G1 + LT	G1 + RT	G1 - LT	G1 - RT
P 1	-2.687	-2.687	-2.687	-2.687	-2.687	-2.687	-2.687	-3.071	-97.501	-3.071	-97.501	-3.071	-190.191
P 2	-354.689	-354.689	-679.107	-354.689	-354.689	-354.689	-548.951	-103.643	-198.073	-103.643	-198.073	-196.334	-317.245
P 3	-553.639	-553.639	-997.230	-553.639	-553.639	-553.639	-819.262	-199.828	-199.828	-199.828	-199.828	-319.000	-319.000
C 1L	-704.003	-704.003	-1236.973	-704.003	-704.003	-704.003	-1023.147	-201.144		-201.144		-320.316	
C 1R	-729.543	-626.832	-1345.121	-606.654	-856.159	-585.219	-1193.258		251.430		451.661		230.371
P 4	-541.465	-454.547	-1011.383	-429.108	-657.228	-413.697	-909.806	250.113	250.113	450.345	450.345	229.055	229.055
P 5	-292.229	-226.370	-567.934	-193.917	-393.521	-186.536	-533.406	248.358	153.929	448.590	268.694	227.300	132.871
P 6	235.774	539.280	61.046	284.930	185.128	450.891	93.105	147.787	53.357	262.551	96.403	126.728	32.299
P 7	411.775	854.314	248.675	411.775	411.775	676.768	314.110	47.215	-47.215	90.261	-24.282	26.156	-86.939
P 8	235.774	550.908	72.674	286.420	186.618	462.519	104.733	-53.357	-147.787	-30.425	-124.854	-93.081	-259.229
P 9	-292.229	-213.251	-544.679	-190.936	-390.541	-173.417	-510.150	-153.929	-248.358	-130.997	-225.426	-265.371	-439.249
P10	-541.465	-439.555	-984.805	-425.702	-653.821	-398.704	-883.228	-250.113	-250.113	-227.181	-227.181	-441.004	-441.004
C 2L	-729.543	-610.434	-1316.051	-602.928	-852.433	-568.821	-1164.188	-251.430		-228.497		-442.320	
C 2R	-704.003	-704.003	-1236.973	-704.003	-704.003	-704.003	-1023.147		201.144		320.316		201.144
P11	-553.639	-553.639	-997.230	-553.639	-553.639	-553.639	-819.262	199.828	199.828	319.000	319.000	199.828	199.828
P12	-354.689	-354.689	-679.107	-354.689	-354.689	-354.689	-548.951	198.073	103.643	317.245	196.334	198.073	103.643
P13	-2.687	-2.687	-2.687	-2.687	-2.687	-2.687	-2.687	97.501	3.071	190.191	3.071	97.501	3.071

CAP DESIGN DATA

PT.	M+ UNF. K-FT.	M- UNF. K-FT.	TOP REINFORCE. AS	NO.SIZE	BOT.REINFORCE. AS	NO.SIZE	LEFT STIRRUPS M.SP.	AV/IN	BAR&SPAC	RIGHT STIRRUPS M.SP.	AV/IN	BAR&SPAC	D IN.	FC PSI	PS %	FS/FF RATIO	FS/FZ RATIO
P 1	-2.067	-2.067	1.76	4 # 11	1.76	4 # 11	0.00	0.000	#5@ 0.00	15.98	0.046	#5@13.57	36.00		0.15	0.000	0.005
P 2	-272.838	-422.270	4.77	4 # 11	1.76	4 # 11	16.50	0.046	#5@13.58	16.50	0.118	#5@ 5.28	36.00		0.41	0.538	0.860
P 3	-425.876	-630.202	7.13	5 # 11	1.76	4 # 11	16.50	0.119	#5@ 5.23	16.50	0.119	#5@ 5.23	36.00		0.66	0.649	0.961
C 1	-513.877	-853.704	10.07	7 # 11	1.76	4 # 11	16.12	0.124	#5@ 5.01	8.06	0.204	D#5@ 6.09	36.00		0.97	0.766	1.006
P 4	-376.476	-641.166	7.24	5 # 11	1.76	4 # 11	8.25	0.197	D#5@ 6.31	8.25	0.197	D#5@ 6.31	36.00		0.67	0.799	0.978
P 5	-194.456	-358.963	4.10	4 # 11	1.76	4 # 11	7.99	0.204	D#5@ 6.07	15.98	0.094	#5@ 6.61	36.00		0.36	0.564	0.921
P 6	321.164	97.293	1.76	4 # 11	3.88	4 # 11	15.98	0.090	#5@ 6.88	15.98	0.030	#5@15.98	36.00		0.34	0.691	0.824
P 7	520.591	241.623	1.76	4 # 11	6.07	4 # 11	16.50	0.030	#5@16.50	16.50	0.030	#5@16.50	36.00		0.56	0.969	1.060
P 8	330.109	106.238	1.76	4 # 11	3.97	4 # 11	15.98	0.030	#5@15.98	15.98	0.088	#5@ 7.04	36.00		0.34	0.697	0.847
P 9	-184.364	-341.074	3.92	4 # 11	1.76	4 # 11	15.98	0.092	#5@ 6.75	7.99	0.198	D#5@ 6.25	36.00		0.34	0.531	0.875
P10	-364.943	-620.721	7.04	5 # 11	1.76	4 # 11	8.25	0.191	D#5@ 6.49	8.25	0.191	D#5@ 6.49	36.00		0.65	0.763	0.947
C 2	-501.263	-831.343	9.84	7 # 11	1.76	4 # 11	8.06	0.198	D#5@ 6.26	16.12	0.124	#5@ 5.01	36.00		0.95	0.737	0.980
P11	-425.876	-630.202	7.13	5 # 11	1.76	4 # 11	16.50	0.119	#5@ 5.23	16.50	0.119	#5@ 5.23	36.00		0.66	0.649	0.961
P12	-272.838	-422.270	4.77	4 # 11	1.76	4 # 11	16.50	0.118	#5@ 5.28	16.50	0.046	#5@13.58	36.00		0.41	0.538	0.860
P13	-2.067	-2.067	1.76	4 # 11	1.76	4 # 11	15.98	0.046	#5@13.57	0.00	0.000	#5@ 0.00	36.00		0.15	0.000	0.005

NOTE: *** FS/FZ RATIO EXCEEDS 1.0! ***

COLUMN ANALYSIS AND DESIGN OUTPUT

CRITICAL COLUMN LOADS

CN	T B	GR	LLC	WC	R	E S	C F	S F	PF	MTF	MLF	PM	MTM	MLM	PU	MTU	MLU	PU/PM	B	D
1	T	1	LL 2	0.0			C	S	768.6	108.1	18.2	768.6	247.2	306.7	2099.7	676.1	838.9	2.733	36.00	36.00
1	B	3	LL 3	5.2			C	S	671.3	112.7	578.7	671.3	214.1	728.0	1226.6	390.7	1328.5	1.826	36.00	36.00
2	T	1	LL 5	0.0			C	S	756.7	-50.0	18.2	756.7	245.5	300.4	2098.8	681.8	834.3	2.774	36.00	36.00
2	B	3	LL 6	5.2			C	S	645.6	50.2	578.7	645.6	205.9	720.7	1201.1	382.2	1337.9	1.858	36.00	36.00

COLUMN DESIGN DATA

CN	T B	B FACE 1 NO.SIZE	B FACE 2 NO.SIZE	D FACE 3 NO.SIZE	D FACE 4 NO.SIZE	AS	PS	BD12	BD	SUMPU	SUMPC	DEL.T	DEL.L	CM	R	PHIC
1	T	4 # 11	4 # 11	2 # 11	2 # 11	18.72	1.444	1.00	0.177	1316.	19575.	1.072	1.330	1.000	2	0.70
1	B	4 # 11	4 # 11	2 # 11	2 # 11	18.72	1.444	1.00	0.174	1244.	20979.	1.063	1.258	1.000	2	0.70
2	T	4 # 11	4 # 11	2 # 11	2 # 11	18.72	1.444	1.00	0.436	1316.	17464.	1.081	1.323	1.000	2	0.70
2	B	4 # 11	4 # 11	2 # 11	2 # 11	18.72	1.444	1.00	0.000	1244.	21020.	1.063	1.245	1.000	2	0.70

FOOTING 1 DESIGN LOADS

F	G	LLID	WC	ES	C	S	P	MT	VT	ML	VL	P4	P3	P2	P1	MTF	VBF	VPF	LOAD
1	1	LL 2	0.0		C	S	496.245	59.009	5.008	216.686	8.980	123.216	73.092	88.554	138.678	26.260	-0.135	6.514	MAX.P1
1	1	LL 2	0.0		C	S	743.595	95.355	7.991	281.692	11.674	177.470	112.308	137.222	202.384	39.559	-0.175	9.848	MAX.MT
1	1	LL 2	0.0		C	S	743.595	95.355	7.991	281.692	11.674	177.470	112.308	137.222	202.384	39.559	-0.175	9.848	MAX.VT
1	1	LL 2	0.0		C	S	743.595	95.355	7.991	281.692	11.674	177.470	112.308	137.222	202.384	39.559	-0.175	9.848	MAX.VP
1	3	LL 3	5.2		C	S	636.688	108.831	8.903	578.724	21.020	187.712	55.936	84.217	215.994	47.421	-0.175	8.350	MAX.ML
1	1	LL 2	0.0		C	S	743.595	95.355	7.991	281.692	11.674	177.470	112.308	137.222	202.384	44.496	-0.175	9.848	MAX.VL
1	3	LL 6	4.2		C	S	473.516	100.324	8.666	436.241	15.884	137.822	38.462	64.857	164.217	26.486	-0.135	6.195	MAX.P3

FOOTING 1 ANALYSIS/DESIGN RESULTS

FOOTING SIZE			* BAR REINFORCEMENT STEEL					* SECTION CAPACITIES				
B	D	T	P1/PA	AS	NO.SIZE	SPAC.	PLACEMENT	MT.	VB	VP	DS	FC
7.950	7.950	3.500	0.991	0.45	18 # 4 @	5.250	TOP TRAN	52.715	31.681	63.361	26.250	0.000
				0.53	22 # 4 @	4.250	BOT.LONG	65.464	32.284	64.568	26.750	0.000

NUMBER OF PILES = 5 BP = 2.475 DP = 2.475

FOOTING 2 DESIGN LOADS

F	G	LLID	WC	ES	C	S	P	MT	VT	ML	VL	P4	P3	P2	P1	MTF	VBF	VPF	LOAD
2	3	LL12	4.2		C	S	452.620	84.633	6.358	436.241	15.884	141.794	24.691	50.140	167.244	16.958	0.000	-0.619	MAX.P1
2	1	LL 5	0.0		C	S	731.689	-23.125	-2.575	281.692	11.674	187.987	111.189	118.841	195.639	24.702	0.000	-0.804	MAX.MT
2	1	LL 5	0.0		C	S	731.689	-23.125	-2.575	281.692	11.674	187.987	111.189	118.841	195.639	24.702	0.000	-0.804	MAX.VT
2	1	LL 5	0.0		C	S	731.689	-23.125	-2.575	281.692	11.674	187.987	111.189	118.841	195.639	24.702	0.000	-0.804	MAX.VP
2	3	LL 6	5.2		C	S	610.929	54.046	3.311	578.724	21.020	199.102	43.794	59.422	214.730	32.981	0.000	-0.804	MAX.ML
2	1	LL 5	0.0		C	S	731.689	-23.125	-2.575	281.692	11.674	187.987	111.189	118.841	195.639	30.464	0.000	-0.804	MAX.VL
2	3	LL12	3.2		C	S	450.730	96.864	7.275	422.920	15.459	137.815	24.238	53.363	166.941	17.201	0.000	-0.619	MAX.P3

FOOTING 2 ANALYSIS/DESIGN RESULTS

FOOTING SIZE			* BAR REINFORCEMENT STEEL					* SECTION CAPACITIES				
B	D	T	P1/PA	AS	NO.SIZE	SPAC.	PLACEMENT	MT.	VB	VP	DS	FC
7.200	7.200	3.500	0.956	0.28	11 # 4 @	7.750	TOP TRAN	35.741	31.681	63.361	26.250	0.000
				0.37	14 # 4 @	6.125	BOT.LONG	46.241	32.284	64.568	26.750	0.000

NUMBER OF PILES = 5 BP = 2.100 DP = 2.100

CALCULATION COVER SHEET

PROJECT	JOB NO.	CALC NO.	SHEET
I-75 / I-575 NORTHWEST CORRIDOR	NH000-0575-01(028)	BR#35	1

SUBJECT	DISCIPLINE
References for Design	STRUCTURAL

CALCULATION STATUS DESIGNATION	PRELIMINARY	CONFIRMED	SUPSEDED	VOIDED	INCOMPLETE
	☐	☐	☐	☐	X

COMPUTER PROGRAM/TYPE	SCP	MAINFRAME	PC	PROGRAM	VERSION/RELEASE NO.
	◯ YES ◯ NO	◯	◯	NONE	

Note 1: Georgia Department of Transportation (GDOT) terminated Contract Number TOURDPPI60072 for its convenience the completion of all work under that contract and directed that the work with respect to these calculations be discontinued.
(a) These calculations were not completed at the time of GDOT's direction and the information contained herein is not and/or has not been fully verified or checked. These calculations are a work-in-progress and are presented only as such.
(b) Any user is cautioned that the use of these calculations and any related information or calculations, without access to factors and without proper regard for their purpose, could lead to erroneous conclusions.
(c) If any such calculations or any information contained herein is used in future work efforts or any follow on design work a complete confirmation of the information contained herein should be performed prior to any such use.
(d) GTP has no responsibility for the use of this information not under its direct control.

Included Reference Information:

- Roadway information
- Bridge Survey Shots
- Existing Bridge Plans
- Existing Bridge Maintenance Reports
- BFI

NO.	REASON FOR REVISION	TOTAL NO. OF SHEETS	LAST SHEET NO.	BY	CHECKED	APPROVED/ ACCEPTED	DATE
A	As per GDOT's termination for convenience direction	49	49	JCR			11/30/09

RECORD OF REVISIONS

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Roadway Information
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Horizontal Alignment Review Report

Report Created: 8/25/2009
Time: 2:44pm

Project: I-75/I-575
Description: I-75/I-575 PPI
File Name: N:\TRA\255717\Drawings\Civil\Rdy\InRoads\I-75 I-575.alg
Last Revised: san49773 8/25/2009 2:20:22 PM
Input Grid Factor: 1.00000000 **Note:** All units in this report are in feet unless specified otherwise.

Alignment Name: I-575 NB CL
Alignment Description: I-575 NB CL 0.87' Offset from PEM
Alignment Style: MAIN_P_CONSTCL

		Station	Northing	Easting
Element: Linear				
POB	( )	1050+00.0000	1456909.8518	2177145.4614
PI	( )	1060+22.8869	1457908.5098	2177366.7754
Tangential Direction:		N 12°29'43.6305" E		
Tangential Length:		1022.8869		
Element: Linear				
PI	( )	1060+22.8869	1457908.5097	2177366.7754
PI	( )	1064+31.6862	1458307.6208	2177455.2467
Tangential Direction:		N 12°29'55.3387" E		
Tangential Length:		408.7992		
Element: Linear				
PI	( )	1064+31.6862	1458307.6208	2177455.2467
PI	( )	1067+29.8700	1458598.6629	2177520.1167
Tangential Direction:		N 12°33'54.7092" E		
Tangential Length:		298.1839		
Element: Linear				
PI	( )	1067+29.8700	1458598.6629	2177520.1167
PC	( )	1068+96.1808	1458761.0400	2177556.0741
Tangential Direction:		N 12°29'10.6370" E		
Tangential Length:		166.3108		
Element: Circular				
PC	( )	1068+96.1808	1458761.0400	2177556.0741
PI	( )	1091+44.2606	1460955.9477	2178042.1224
CC	( )		1461269.0292	2166230.4399
PT	( )	1113+37.2862	1463173.5218	2177673.0317
Radius:		11600.0000		
Delta:		21°56'09.2878" Left		
Degree of Curvature (Arc):		0°29'38.1450"		
Length:		4441.1054		
Tangent:		2248.0798		

BR#35
575 o/
Barrett

PROJECT:	NW Corridor
COUNTY:	COBB
BRIDGE:	35
DESCRIPTION:	I-575 over Barrett Pkwy

VERTICAL GRADE DATA FOR NEW ALIGNMENT, ADJUSTED FOR SURVEY DIFF.:

PVC =	1080+85.53	PVI =	1090+35.53	PVT =	1099+85.53
PVI EL. =	1006.1350	PVI EL. =	980.39	PVI EL. =	969.8450
		VC Length (ft) =	1900		

ELEVATION COMPARISON, ADJUSTED FOR SURVEY DIFF.

BENT 1R LEFT SIDE		BENT 1R RIGHT SIDE	
Geomath Rdy EL. =	996.375	Geomath Rdy EL. =	997.179
Survey EL. =	996.174	Survey EL. =	996.961
DIFFERENCE =	0.201	DIFFERENCE =	0.218

BENT 2R LEFT SIDE		BENT 2R RIGHT SIDE	
Geomath Rdy EL. =	995.351	Geomath Rdy EL. =	996.130
Survey EL. =	995.350	Survey EL. =	996.194
DIFFERENCE =	0.001	DIFFERENCE =	-0.064

BENT 3R LEFT SIDE		BENT 3R RIGHT SIDE	
Geomath Rdy EL. =	993.841	Geomath Rdy EL. =	994.621
Survey EL. =	993.982	Survey EL. =	994.712
DIFFERENCE =	-0.141	DIFFERENCE =	-0.091

BENT 4R LEFT SIDE		BENT 4R RIGHT SIDE	
Geomath Rdy EL. =	992.364	Geomath Rdy EL. =	993.139
Survey EL. =	992.494	Survey EL. =	993.200
DIFFERENCE =	-0.130	DIFFERENCE =	-0.061

BENT 5R LEFT SIDE		BENT 5R RIGHT SIDE	
Geomath Rdy EL. =	991.560	Geomath Rdy EL. =	992.381
Survey EL. =	991.524	Survey EL. =	992.300
DIFFERENCE =	0.036	DIFFERENCE =	0.081

Mean EL. Difference =	0.005

Horizontal Alignment Review Report

Report Created: 9/8/2009
Time: 2:08pm

Project: I-75/I-575
Description: I-75/I-575 PPI
File Name: N:\TRA\255717\Drawings\Civil\Rdy\InRoads\I-75 I-575.alg
Last Revised: san49773 9/8/2009 2:04:03 PM
Input Grid Factor: 1.00000000 **Note:** All units in this report are in feet unless specified otherwise.

Alignment Name: XR 1086+00 I-575 Barrett Parkway
Alignment Description: I-575 Barret Parkway
Alignment Style: MAIN_P_SIDECL

		Station	Northing	Easting
Element: Linear				
POB	( )	190+98.8753	1460333.5107	2176911.0799
PC	( )	193+14.5739	1460394.3717	2177118.0142
Tangential Direction:		N 73°36'39.4815" E		
Tangential Length:		215.6986		
Element: Circular				
PC	( )	193+14.5739	1460394.3717	2177118.0142
PI	( )	194+81.7348	1460441.5375	2177278.3830
CC	( )		1459435.0037	2177400.1720
PT	( )	196+45.8330	1460433.9816	2177445.3730
Radius:		1000.0000		
Delta:		18°58'47.0834" Right		
Degree of Curvature (Arc):		5°43'46.4806"		
Length:		331.2590		
Tangent:		167.1609		
Chord:		329.7465		
Middle Ordinate:		13.6852		
External:		13.8751		
Tangent Direction:		N 73°36'39.4815" E		
Radial Direction:		S 16°23'20.5185" E		
Chord Direction:		N 83°06'03.0231" E		
Radial Direction:		S 2°35'26.5649" W		
Tangent Direction:		S 87°24'33.4350" E		
Element: Linear				
PT	( )	✓196+45.8330	✓1460433.9816	✓2177445.3730
POE	( )	203+20.6096	✓1460403.4810	✓2178119.4600
Tangential Direction:		✓S 87°24'33.4350" E		
Tangential Length:		674.7766		

Alignment Name: XR 1141+00 Big Shanty
Alignment Description: I-575 Big Shanty
Alignment Style: MAIN_P_SIDECL

J.B.T. J. B. Timble, Inc.

Vertical Alignment Review with XY Coordinates Report

Report Created: 10/20/2009
Time: 4:49pm

Project: I-75/I-575
Description: I-75/I-575 PPI
File Name: N:\TRA\255717\Drawings\Civil\Rdy\InRoads\I-75 I-575.alg
Last Revised: san49773 10/20/2009 4:45:55 PM
Input Grid Factor: 1.00000000 **Note:** All units in this report are in feet unless specified otherwise.

Horizontal Alignment: XR 1086+00 I-575 Barrett Parkway
Horizontal Description: I-575 Barret Parkway LT SIDE WEST BOUND
Horizontal Style: MAIN_P_CONSTCL

Vertical Alignment: 8' LEFT OFFSET
Vertical Description: 8' LEFT OFFSET
Vertical Style: MAIN_P_EOP

		Station	Elevation	Northing	Easting
Element: Linear					
	POB	191+48.8753	1005.2602	1460347.6186	2176959.0483
	PVI	191+98.8753	1002.9555	1460361.7265	2177007.0167
	Tangent Grade:	-4.61%			
	Tangent Length:	50.0000			
Element: Linear					
	PVI	191+98.8753	1002.9555	1460361.7265	2177007.0167
	PVI	192+48.8753	1000.7783	1460375.8343	2177054.9851
	Tangent Grade:	-4.35%			
	Tangent Length:	50.0000			
Element: Linear					
	PVI	192+48.8753	1000.7783	1460375.8343	2177054.9851
	PVI	192+98.8753	997.9550	1460389.9422	2177102.9535
	Tangent Grade:	-5.65%			
	Tangent Length:	50.0000			
Element: Linear					
	PVI	192+98.8753	997.9550	1460389.9422	2177102.9535
	PVI	193+48.8753	996.2049	1460403.4839	2177151.0814
	Tangent Grade:	-3.50%			
	Tangent Length:	50.0000			
Element: Linear					
	PVI	193+48.8753	996.2049	1460403.4839	2177151.0814
	PVI	193+98.8753	994.3828	1460414.7229	2177199.7965
	Tangent Grade:	-3.64%			
	Tangent Length:	50.0000			
Element: Linear					

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PVI	193+98.8753	994.3828	1460414.7229	2177199.7965
PVI	194+48.8753	992.3849	1460423.5131	2177249.0125
Tangent Grade:	-4.00%			
Tangent Length:	50.0000			

Element: Linear

PVI	194+48.8753	992.3849	1460423.5131	2177249.0125
PVI	194+98.8753	990.2693	1460429.8325	2177298.6063
Tangent Grade:	-4.23%			
Tangent Length:	50.0000			

Element: Linear

PVI	194+98.8753	990.2693	1460429.8325	2177298.6063
PVI	195+48.8753	988.2979	1460433.6654	2177348.4539
Tangent Grade:	-3.94%			
Tangent Length:	50.0000			

Element: Linear

PVI	195+48.8753	988.2979	1460433.6654	2177348.4539
PVI	195+98.8753	986.0362	1460435.0022	2177398.4308
Tangent Grade:	-4.52%			
Tangent Length:	50.0000			

Element: Linear

PVI	195+98.8753	986.0362	1460435.0022	2177398.4308
PVI	196+48.8753	983.8254	1460433.8441	2177448.4123
Tangent Grade:	-4.42%			
Tangent Length:	50.0000			

Element: Linear

PVI	196+48.8753	983.8254	1460433.8441	2177448.4123
PVI	196+98.8753	981.7630	1460431.5840	2177498.3612
Tangent Grade:	-4.12%			
Tangent Length:	50.0000			

Element: Linear

PVI	196+98.8753	981.7630	1460431.5840	2177498.3612
PVI	197+48.8753	979.5067	1460429.3240	2177548.3101
Tangent Grade:	-4.51%			
Tangent Length:	50.0000			

Element: Linear

PVI	197+48.8753	979.5067	1460429.3240	2177548.3101
PVI	197+98.8753	977.4108	1460427.0639	2177598.2590
Tangent Grade:	-4.19%			
Tangent Length:	50.0000			

Element: Linear

PVI	197+98.8753	977.4108	1460427.0639	2177598.2590
PVI	198+48.8753	975.3205	1460424.8039	2177648.2079
Tangent Grade:	-4.18%			
Tangent Length:	50.0000			

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Element: Linear

PVI	198+48.8753	975.3205	1460424.8039	2177648.2079
PVI	198+98.8753	973.5017	1460422.5438	2177698.1568
Tangent Grade:	-3.64%			
Tangent Length:	50.0000			

Element: Linear

PVI	198+98.8753	973.5017	1460422.5438	2177698.1568
PVI	199+48.8753	971.5803	1460420.2838	2177748.1057
Tangent Grade:	-3.84%			
Tangent Length:	50.0000			

Element: Linear

PVI	199+48.8753	971.5803	1460420.2838	2177748.1057
PVI	199+98.8753	969.8263	1460418.0237	2177798.0546
Tangent Grade:	-3.51%			
Tangent Length:	50.0000			

Element: Linear

PVI	199+98.8753	969.8263	1460418.0237	2177798.0546
PVI	200+48.8753	968.2757	1460415.7637	2177848.0035
Tangent Grade:	-3.10%			
Tangent Length:	50.0000			

Element: Linear

PVI	200+48.8753	968.2757	1460415.7637	2177848.0035
PVI	200+98.8753	966.8495	1460413.5036	2177897.9524
Tangent Grade:	-2.85%			
Tangent Length:	50.0000			

Element: Linear

PVI	200+98.8753	966.8495	1460413.5036	2177897.9524
PVI	201+48.8753	965.5086	1460411.2436	2177947.9013
Tangent Grade:	-2.68%			
Tangent Length:	50.0000			

Element: Linear

PVI	201+48.8753	965.5086	1460411.2436	2177947.9013
PVI	201+98.8753	964.2204	1460408.9835	2177997.8502
Tangent Grade:	-2.58%			
Tangent Length:	50.0000			

Element: Linear

PVI	201+98.8753	964.2204	1460408.9835	2177997.8502
PVI	202+48.8753	962.9437	1460406.7235	2178047.7991
Tangent Grade:	-2.55%			
Tangent Length:	50.0000			

Element: Linear

PVI	202+48.8753	962.9437	1460406.7235	2178047.7991
PVI	202+98.8753	961.6165	1460404.4634	2178097.7480

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Tangent Grade:	-2.65%			
Tangent Length:	50.0000			

Element: Linear

PVI	202+98.8753	961.6165	1460404.4634	2178097.7480
POE	203+20.6096	961.0361	1460403.4810	2178119.4600
Tangent Grade:	-2.67%			
Tangent Length:	21.7343			

Vertical Alignment: 8' RIGHT OFFSET
Vertical Description: 8' RIGHT OFFSET BARRETT RTSIDE EAST BOUND
Vertical Style: MAIN_P_EOP

	Station	Elevation	Northing	Easting

Element: Linear

POB	191+48.8753	1005.0612	1460347.6186	2176959.0483
PVI	191+98.8753	1002.7577	1460361.7265	2177007.0167
Tangent Grade:	-4.61%			
Tangent Length:	50.0000			

Element: Linear

PVI	191+98.8753	1002.7577	1460361.7265	2177007.0167
PVI	192+48.8753	1000.1115	1460375.8343	2177054.9851
Tangent Grade:	-5.29%			
Tangent Length:	50.0000			

Element: Linear

PVI	192+48.8753	1000.1115	1460375.8343	2177054.9851
PVI	192+98.8753	997.9814	1460389.9422	2177102.9535
Tangent Grade:	-4.26%			
Tangent Length:	50.0000			

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Element: Linear

PVI	192+98.8753	997.9814	1460389.9422	2177102.9535
PVI	193+48.8753	995.8527	1460403.4839	2177151.0814
Tangent Grade:	-4.26%			
Tangent Length:	50.0000			

Element: Linear

PVI	193+48.8753	995.8527	1460403.4839	2177151.0814
PVI	193+98.8753	993.8331	1460414.7229	2177199.7965
Tangent Grade:	-4.04%			
Tangent Length:	50.0000			

Element: Linear

PVI	193+98.8753	993.8331	1460414.7229	2177199.7965
PVI	194+48.8753	992.0488	1460423.5131	2177249.0125
Tangent Grade:	-3.57%			
Tangent Length:	50.0000			

Element: Linear

PVI	194+48.8753	992.0488	1460423.5131	2177249.0125

PVI	194+98.8753	990.4011	1460429.8325	2177298.6063
Tangent Grade:	-3.30%			
Tangent Length:	50.0000			

Element: Linear

PVI	194+98.8753	990.4011	1460429.8325	2177298.6063
PVI	195+48.8753	988.3477	1460433.6654	2177348.4539
Tangent Grade:	-4.11%			
Tangent Length:	50.0000			

Element: Linear

PVI	195+48.8753	988.3477	1460433.6654	2177348.4539
PVI	195+98.8753	985.7704	1460435.0022	2177398.4308
Tangent Grade:	-5.15%			
Tangent Length:	50.0000			

Element: Linear

PVI	195+98.8753	985.7704	1460435.0022	2177398.4308
PVI	196+48.8753	983.6277	1460433.8441	2177448.4123
Tangent Grade:	-4.29%			
Tangent Length:	50.0000			

Element: Linear

PVI	196+48.8753	983.6277	1460433.8441	2177448.4123
PVI	196+98.8753	981.6139	1460431.5840	2177498.3612
Tangent Grade:	-4.03%			
Tangent Length:	50.0000			

Element: Linear

PVI	196+98.8753	981.6139	1460431.5840	2177498.3612
PVI	197+48.8753	979.4305	1460429.3240	2177548.3101
Tangent Grade:	-4.37%			
Tangent Length:	50.0000			

Element: Linear

PVI	197+48.8753	979.4305	1460429.3240	2177548.3101
PVI	197+98.8753	977.3628	1460427.0639	2177598.2590
Tangent Grade:	-4.14%			
Tangent Length:	50.0000			

Element: Linear

PVI	197+98.8753	977.3628	1460427.0639	2177598.2590
PVI	198+48.8753	975.2966	1460424.8039	2177648.2079
Tangent Grade:	-4.13%			
Tangent Length:	50.0000			

Element: Linear

PVI	198+48.8753	975.2966	1460424.8039	2177648.2079
PVI	198+98.8753	973.3517	1460422.5438	2177698.1568
Tangent Grade:	-3.89%			
Tangent Length:	50.0000			

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Element: Linear

PVI	198+98.8753	973.3517	1460422.5438	2177698.1568
PVI	199+48.8753	971.4710	1460420.2838	2177748.1057
Tangent Grade:	-3.76%			
Tangent Length:	50.0000			

Element: Linear

PVI	199+48.8753	971.4710	1460420.2838	2177748.1057
PVI	199+98.8753	969.6780	1460418.0237	2177798.0546
Tangent Grade:	-3.59%			
Tangent Length:	50.0000			

Element: Linear

PVI	199+98.8753	969.6780	1460418.0237	2177798.0546
PVI	200+48.8753	968.1475	1460415.7637	2177848.0035
Tangent Grade:	-3.06%			
Tangent Length:	50.0000			

Element: Linear

PVI	200+48.8753	968.1475	1460415.7637	2177848.0035
PVI	200+98.8753	966.6189	1460413.5036	2177897.9524
Tangent Grade:	-3.06%			
Tangent Length:	50.0000			

Element: Linear

PVI	200+98.8753	966.6189	1460413.5036	2177897.9524
PVI	201+48.8753	965.2736	1460411.2436	2177947.9013
Tangent Grade:	-2.69%			
Tangent Length:	50.0000			

Element: Linear

PVI	201+48.8753	965.2736	1460411.2436	2177947.9013
PVI	201+98.8753	963.9241	1460408.9835	2177997.8502
Tangent Grade:	-2.70%			
Tangent Length:	50.0000			

Element: Linear

PVI	201+98.8753	963.9241	1460408.9835	2177997.8502
PVI	202+48.8753	962.6413	1460406.7235	2178047.7991
Tangent Grade:	-2.57%			
Tangent Length:	50.0000			

Element: Linear

PVI	202+48.8753	962.6413	1460406.7235	2178047.7991
PVI	202+98.8753	961.3573	1460404.4634	2178097.7480
Tangent Grade:	-2.57%			
Tangent Length:	50.0000			

Element: Linear

PVI	202+98.8753	961.3573	1460404.4634	2178097.7480
POE	203+20.6096	960.8004	1460403.4810	2178119.4600
Tangent Grade:	-2.56%			

J.B. Trimble, Inc.

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bridge Survey Shots
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Barrett Pkwy, Br. 3

SVXO10012,1460485.239,2177745.023,992.657 BT 4 LT, In
SVXO10017,1460487.192,2177704.564,991.821 BT 4 LT, Out
SVXO10013,1460311.939,2177732.474,996.534 BT 1 LT, Inside
SVXO10014,1460313.685,2177690.962,995.675 BT 1 LT, outside
SVXO10015,1460357.511,2177695.046,994.861 BT 2 LT, OUT
SVXO10087,1460355.492,2177735.417,995.660 BT 2LT, In
SVXO10016,1460422.489,2177699.886,993.320 BT 3LT, Out
SVXO10088,1460420.579,2177740.394,994.175 BT 3LT, In
SVXO10011,1460520.494,2177748.005,991.748 BT 5 LT, In
SVXO10018,1460522.322,2177706.371,991.106 BT 5 LT, Out
SVXO10001,1460518.336,2177800.192,991.524 BT 5 RT, In
SVXO10005,1460309.963,2177784.769,996.174 BT 1 RT, In
SVXO10002,1460482.930,2177798.488,992.494 BT 4 RT, In
SVXO10009,1460481.650,2177838.890,993.200 BT 4 RT, Out
SVXO10003,1460418.079,2177793.830,993.982 BT 3 RT, In
SVXO10008,1460416.304,2177834.185,994.712 BT 3 RT, Out
SVXO10004,1460353.438,2177788.947,995.350 BT 2 RT, In
SVXO10007,1460351.514,2177829.354,996.194 BT 2 RT, Out
SVXO10006,1460307.839,2177826.506,996.961 BT 1 RT, OUT
SVXO10010,1460516.361,2177842.034,992.300 BT 5 RT, OUT

CALCULATION SHEET

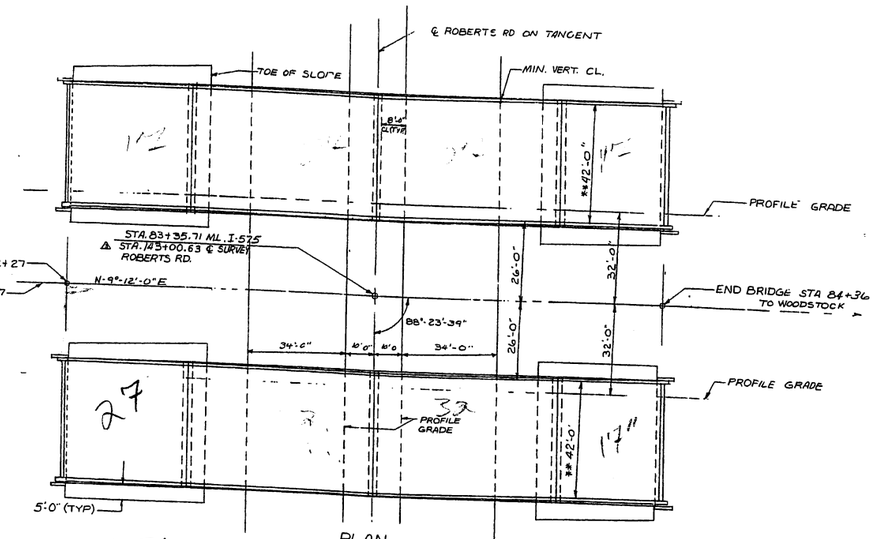
PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Existing Bridge Plans
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
GA.	I-575-1(2)00	33	88

CONTRACT 2
REV. 4-18-78
REV. 9-27-78
REV. 5-24-78



PLAN

P.I STA. 89+03.82 △
Δ = 21°-56'-35" LT. △
D = 0° 30'
T = 2,221.53 △
L = 4,388.61 △
S.E. = .002 FT./FT.
℄ = 200 FT.
SP = 70 MPH.

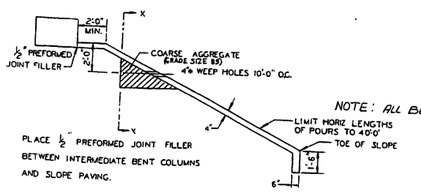
HORIZONTAL CURVE DATA ON M.L. I-575

400' V.C.
-4.27% -2.617%
PVI STA 143+00
ELEV 969.94

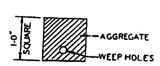
VERTICAL CURVE DATA ON ROBERTS ROAD

1900' V.C.
-2.71% -1.11%
PVI STA 88+00
ELEV 980.18

VERTICAL CURVE DATA ON M.L. I-575

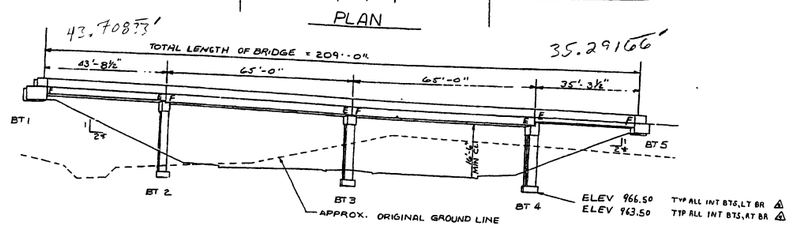


SLOPE PAVING DETAIL



SECTION X-X

* NORMAL TO ROBERTS ROAD
** INSIDE TOP OF BARRIER TO INSIDE TOP OF BARRIER



LONGITUDINAL SECTION

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD DATED 1977

WAITING PERIOD - NO WORK SHALL BE STARTED ON BENTS 1 AND 2 UNTIL THE COMPLETED END FILLS HAVE BEEN IN PLACE FOR AN ESTIMATED PERIOD OF 60 DAYS

CHAMFER - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4 INCH UNLESS OTHERWISE NOTED.

REINFORCEMENT - ALL REINFORCEMENT SHALL BE PLACED AND TIED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

DRIVING DATA PILES - ONE REQUIRED AT EACH BENT

PLAN DRIVING OBJECTIVE - SEE SUBSTRUCTURE DETAILS

UTILITIES

NONE

BRIDGE CONSISTS OF

11 - PSC DECK UNITS, 44 FT SPAN ---------- SPECIAL DESIGN
22 - PSC DECK UNITS, 65 FT SPAN ---------- SPECIAL DESIGN
11 - PSC DECK UNITS, 36 FT SPAN ---------- SPECIAL DESIGN
2 - PILE END BENTS ---------- SPECIAL DESIGN
3 - CONCRETE INTERMEDIATE BENTS ---------- SPECIAL DESIGN
CONCRETE BARRIER ---------- SPECIAL DESIGN
END POST AND END POST GUARDRAIL ATTACHMENT DETAIL --- GA. STD NO 3053 (2-1-75)
L = 4'0", W = 1'-1"; H = 2'-10"
BAR BENDING DETAILS ---------- GA. STD. NO. 3901
TYPICAL FILL DETAIL AT END OF BRIDGE - - - - - - GA. STD NO. 9037 (9-1-70)

SUMMARY OF QUANTITIES

LT BR	RT BR	
46	46	CU. YD. BR. BKFILL
167	234	CU YD BR EXCAV, GR SEP
LUMP		SUPERSTR. CONC. (CL AA) - BR NO 2 LT
	LUMP	SUPERSTR. CONC (CL AA) - BR NO 2 RT
145	155	CU YD CL A CONC
11	11	PSC DECK UNITS, 44 FT SPAN
22	22	PSC DECK UNITS, 65 FT SPAN
11	11	PSC DECK UNITS, 36 FT SPAN
29064	33063	LB BAR REINF STEEL
LUMP		SUPERSTR REINF STEEL - BR NO 2 LT
	LUMP	SUPERSTR REINF STEEL - BR NO 2 RT
2737	2755	LIN FT PILING IN PLACE, STEEL H, 12 BP 53
1	1	EACH LOAD TEST, STEEL H, 12 BP 53 (IF REQD)
610	610	SQ YD CONC SLOPE PAV, 4 IN.
△ 1,230 ~~941~~	1,230 ~~941~~	~~SQ YD BR DECK SEALANT (SYSTEM "B")~~ SQ YD BRIDGE DECK WATERPROOFING MEMBRANE (METHOD B)
104	104	TONS ASPH CONC # GP. 2 ONLY, INCL. BITUM. MAT'L. △
94	94	GAL BITUM. TACK COAT

DESIGN DATA

SPECIFICATIONS - A.A.S.H.T.O. 1973; INT. - 1974, 1975, 1976

TYPICAL HS20-44 AND/OR MILITARY LOADING - IMPACT ALLOWED

FUTURE PAVING ALLOWANCE = 30 LB PER SQ FT

CLASS AA CONCRETE - F'C = 3,000 PSI (ALLOWABLE FC = 1,200 PSI)

CLASS AAA CONCRETE - F'C = 5,000 PSI

REINFORCEMENT - A.S.T.M. A - 615, GRADE 40 (ALLOWABLE FS = 20,000 PSI)

BRIDGE NO 2LT & 2RT.

BY	REVISIONS	DATE
JFS	REV QTY & BRS	7-18-78
DFS	REV DWG CONC. TYPE	4-18-78
DFS	REV HORIZ. ALIGN	9-27-78
DFS	REV POST ELEV	5-24-78

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

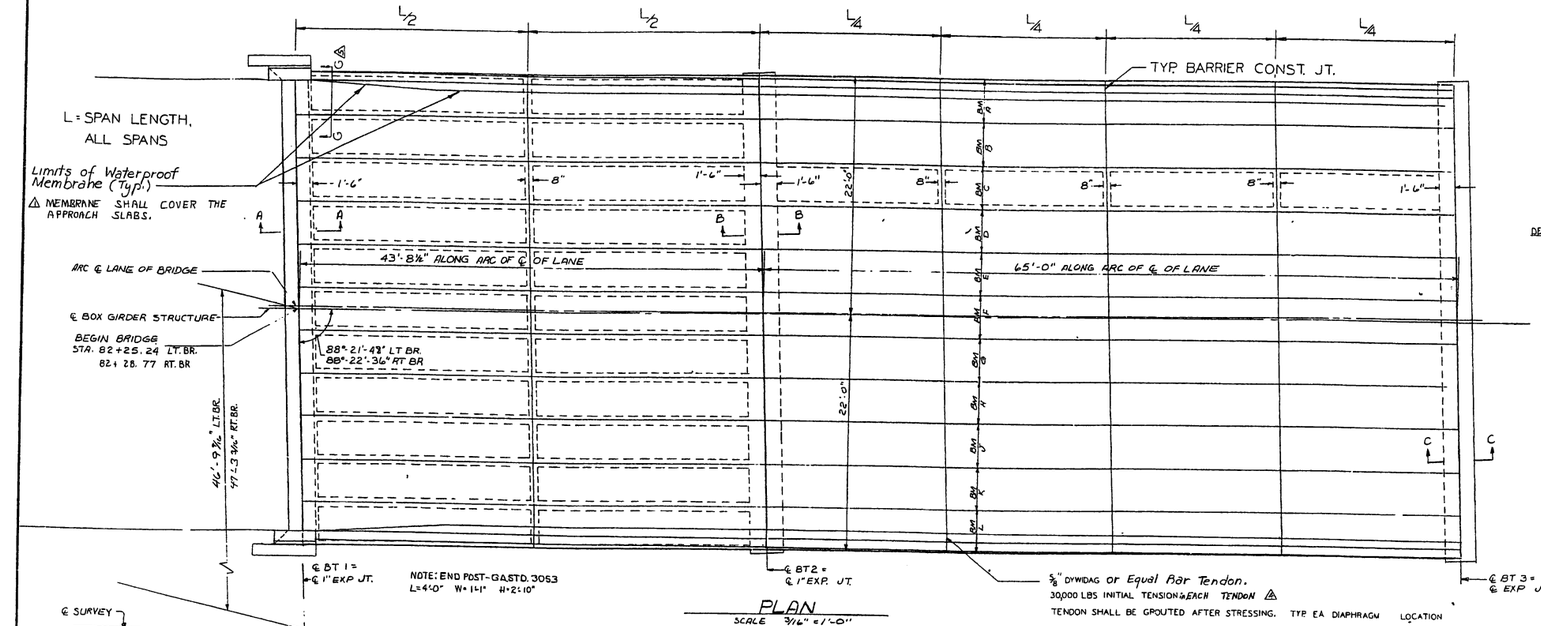
PLAN AND ELEVATION
M.L. I-575 OVER ROBERTS ROAD
COBB-CHEROKEE CO.; Barrett Pkwy I-575-1(2)00 C72
SCALE: 1/20" = 1'-0" JAN 1978

DESIGNED DES | TRACED | REVIEWED LRP
DRAWN RHS | CHECKED BDM | APPROVED

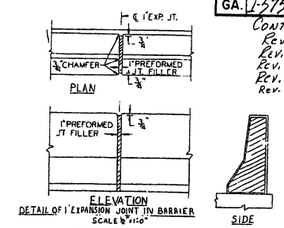
BRIDGE SHEET 1 OF 8

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	34	38

CONTRACT 2
Rev. 4-18-78
Rev. 4-27-78
Rev. 5-4-78
Rev. 6-27-78
Rev. 9-26-78



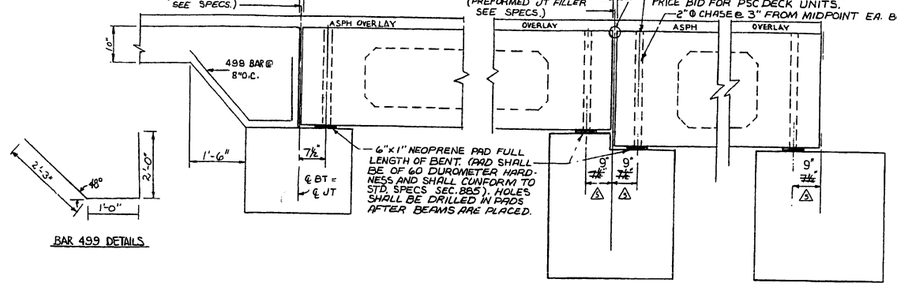
PLAN
SCALE 3/16" = 1'-0"



NOTE:

1. ALL CONCRETE FOR PRECAST BOX BMS SHALL BE CLASS AAA WITH A MINIMUM COMPRESSIVE STRENGTH AT THE AGE OF 28 DAYS OF 5000 PSI
2. PRESTRESSED STRANDS MAY BE RELEASED AFTER THE CONC. HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AND AN AGE OF 24 HRS.
3. BEAMS FOR THE 35'-3½" SPAN SHALL BE CAST ¼" LONGER THAN THE IN PLACE LENGTH AND BEAMS FOR THE 43'-8½" SPAN SHALL BE CAST ⅜" LONGER THAN THE IN-PLACE LENGTH, AND BEAMS FOR THE 65'-0" SPAN SHALL BE CAST 11/16" LONGER THAN THE IN-PLACE LENGTH TO ACCOUNT FOR ELASTIC SHORTENING - ROTATION AT ENDS AND SHRINKAGE.
4. TOPS OF BEAMS SHALL BE ROUGHENED BY TRANSVERSE RAKING

~~△ NOTE: TAPER ASPH. OVERLAY AT JTS. SO THAT THE MEMBRANE MAY BE IN CONTACT WITH THE CONC.~~

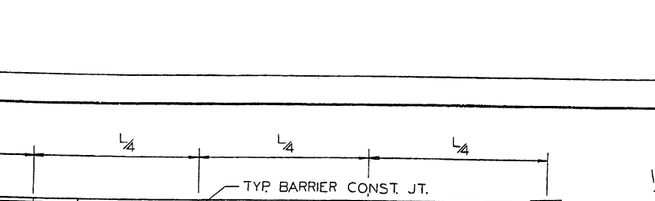


BAR 499 DETAILS

SECTION A-A
SCALE 3/16" = 1'-0"

SECTION B-B
SCALE 3/16" = 1'-0"

SECTION C-C
SCALE 3/16" = 1'-0"



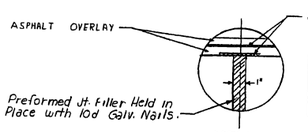
TYPICAL BEAM DETAIL SPANS 1, 2 & 3
NO SCALE

NOTES:

APPROACH SLAB SHALL BE A MODIFICATION OF GA. STD. 9017H. THE MODIFICATION IS INDICATED IN SECTION "A-A" THIS SHEET AND IN SECTION (F-F) SHEET 3 OF 8. QUANTITIES FOR APPROACH SLABS ARE NOT INCLUDED IN QUANTITIES SHOWN ON BRIDGE PLANS, AND Shall BE INCLUDED ON ROADWAY PLAN. ASPHALT ON APPROACH SLAB SHALL BE INCLUDED ON ROADWAY PLANS.
COST OF ⅝" DYWIDAG OF Equal Bar shall be Included IN PRICE BID FOR PSC DECK UNITS.
COST OF GROUT AND POLYMER TYPE JT. SEALER SHALL BE INCLUDED IN PRICE BID FOR PSC DECK UNITS.

COST OF NEOPRENE PADS SHALL BE INCLUDED IN PRICE BID FOR PSC DECK UNITS

* PLACE ½" I.D. GALV. STEEL PIPE AS SHOWN TO VENT VOIDS. PIPE SHALL CONFORM TO STD. SPECS. SECT. 847. COST SHALL BE INCLUDED IN PRICE BID FOR PSC DECK UNITS.



DETAIL "A"
NO SCALE

QUANTITIES

ITEM / SPAN	1 LT.	1 RT.	2 LT.	2 RT.	3 LT.	3 RT.	4 LT.	4 RT.	TOTAL LT.	TOTAL RT.
Lump Superstructure Conc., Cu. Yds.	9.82	9.82	14.21	14.21	14.21	14.21	7.98	7.98	46.22	46.22
Lump Superstructure Reinf. Steel, Lbs.	1240	1240	1446	1446	1446	1446	1050	1050	5182	5182

BRIDGE SHEET 2 OF 8

BY	REVISIONS	DATE
DFS	Rev. on 6-4-78 JCT. 6-6	1-22-78
DFS	REV. ABUTMENT WATERPROOF.	4-18-78
DFS	ADD'D NOTE	4-27-78
DFS	REV. MEMBRANE AT JTS	5-5-78
DFS	REV. FORCE IN DIAPH.	6-27-78

BRIDGE NO. 2 LT AND RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

SUPERSTRUCTURE DETAILS

I-575 OVER ROBERTS ROAD

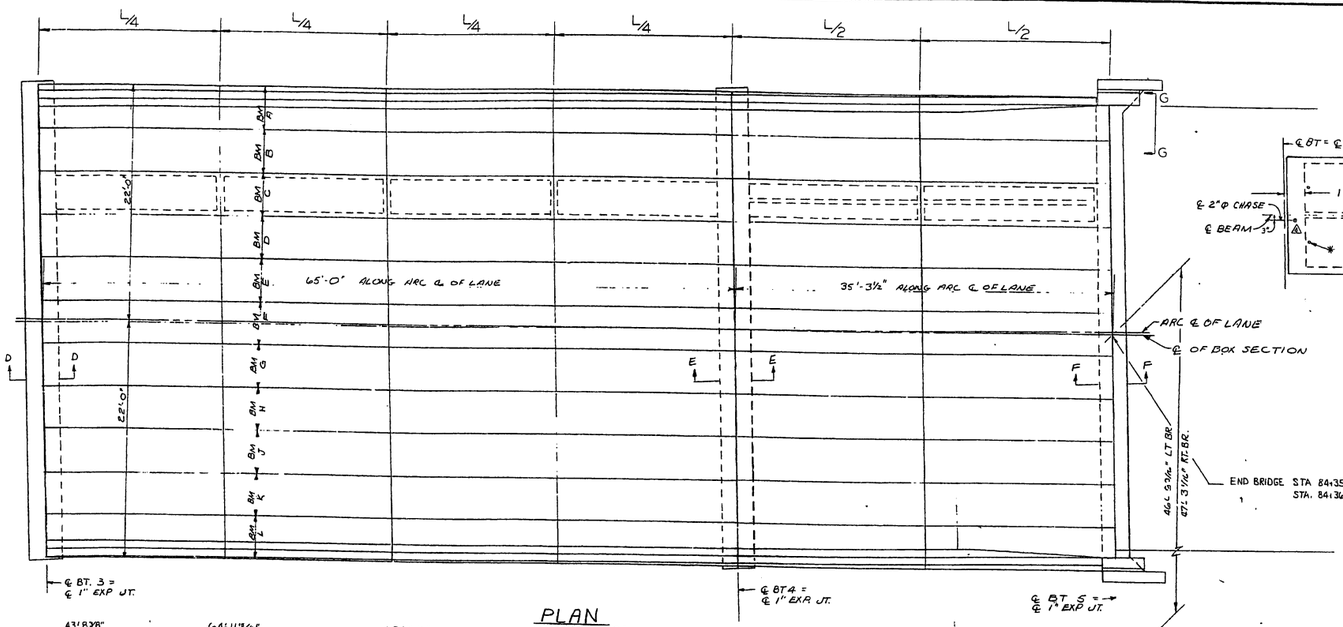
COBB-CHEROKEE CO'S. I-575-1(2)00 CT. 2

SCALE: AS SHOWN JAN 1978

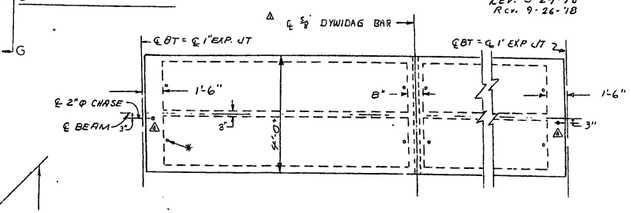
DESIGNED DFS TRACED DRAWN RHS CHECKED RDM REVIEWED LRP APPROVED

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	35	88

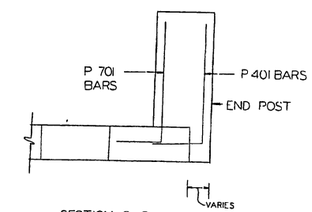
CONTRACT 2
REV. 4-18-78
REV. 5-4-78
REV. 5-24-78
REV. 9-26-78



PLAN
SCALE: 3/16" = 1'-0"

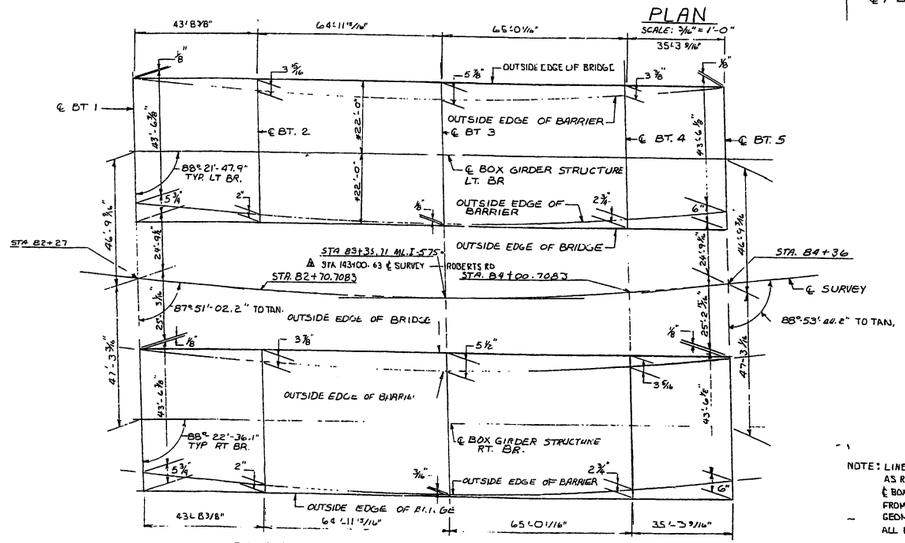


TYPICAL BEAM DETAIL SPAN 4
NO SCALE

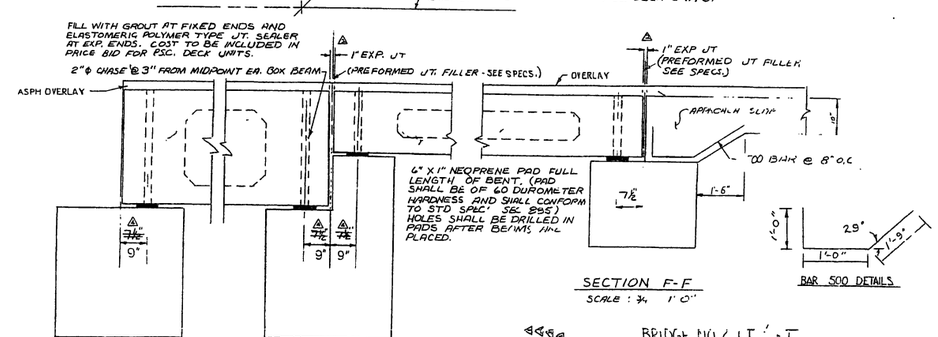


SECTION G-G

* PLACE ½" I.D GALV STEEL PIPE AS SHOWN TO VENT VOIDS. PIPE SHALL CONFORM TO STD. SPECS SECT. 847. COST SHALL BE INCLUDED IN PRICE BID FOR PSC DECK UNITS.



BRIDGE GEOMETRICAL LAYOUT
NO SCALE



SECTION D-D
SCALE: ¾" = 1'-0"

SECTION E-E
SCALE: ¾" = 1'-0"

SECTION F-F
SCALE: ¾" = 1'-0"

BAR 500 DETAILS

NOTE: LINES DESIGNATED OUTSIDE EDGE OF BARRIER ARE CONCENTRIC ARCS AS REFERENCED TO ℄ SURVEY AS NOTED ON SHT. 4 OF 8, CROSS SECTION VIEWS. ℄ BOX GIRDER STRUCTURE LT BR. AND RT. BR. ARE STRAIGHT LINES FROM BEGIN BRIDGE TO END BRIDGE AS REFERENCED ON BRIDGE GEOMETRICAL LAYOUT. THESE STRAIGHT LINES ARE NOT PARALLEL. ALL BENTS ARE PARALLEL TO ℄ SURVEY, ROBERTS RD.

BRIDGE NO 2 LT. & RT.

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

SUPERSTRUCTURE DETAIL
I-575 OVER ROBERTS ROAD

COBB-CHEROKEE CO.
I-575-1(2) 0 T 2
SCALE: AS SHOWN
JAN 197-

BY	REVISIONS	DATE
DFS	REV. CAR SIZE	6-19-78
DFS	REV. ELEV.	5-4-78
DFS	REV. ELEV.	5-24-78
DFS	REV. CHASE AND DETAIL	9-26-78

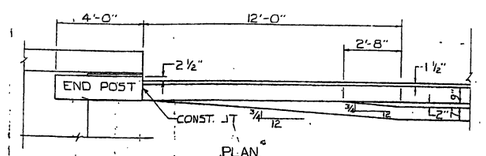
BRIDGE SHEET 3 OF 8

DESIGNED DFS | TRACED | REVIEWED LKP
DRAWN RHS | CHECKED BDM | APPROVED

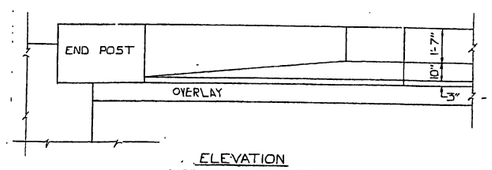
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	36	88

CONTRACT 2
REV. 4-18-78
REV. 9-27-78
REV. 10-5-79

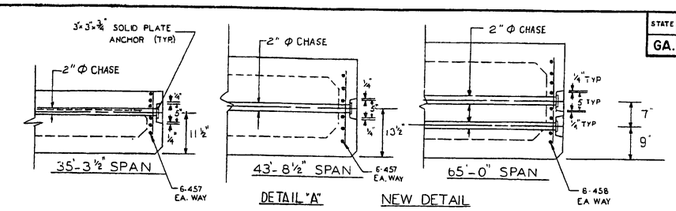
NOTE: BARS P401 AND P701 SHOWN ON GA STD 3063 FOR END POSTS AND BARS 563 SHALL BE CAST INTO THE EXTERIOR BEAMS



PLAN
BARRIER TAPER DETAIL



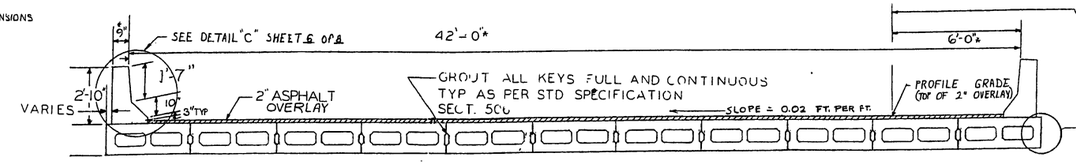
ELEVATION
BARRIER TAPER DETAIL



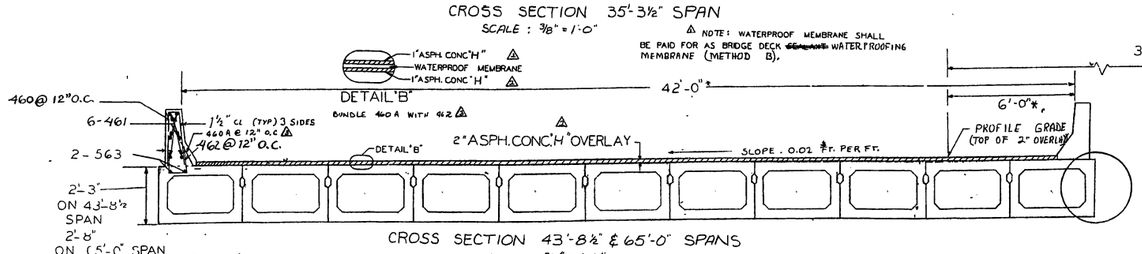
DETAIL "A"

NEW DETAIL

* RADIAL DIMENSIONS



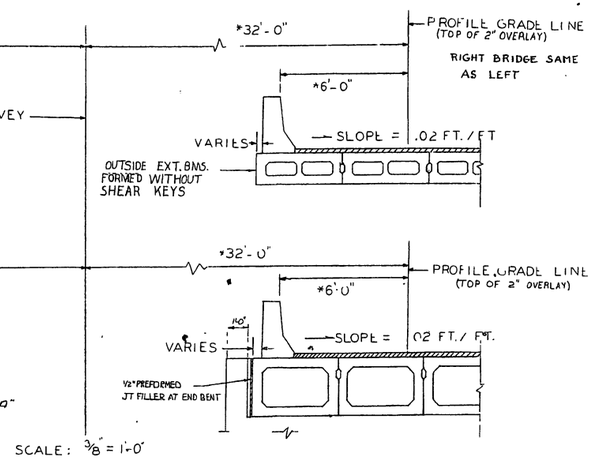
CROSS SECTION 35'-3½" SPAN
SCALE : 3/8" = 1'-0"



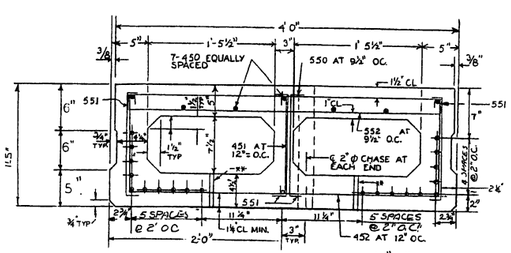
NOTE: WATERPROOF MEMBRANE SHALL BE PAID FOR AS BRIDGE DECK ~~SEALANT~~ WATERPROOFING MEMBRANE (METHOD B).

CROSS SECTION 43'-8½" & 65'-0" SPANS
SCALE : 3/8" = 1'-0"

Shear keys shall be omitted on outside vertical face of exterior beams.



SCALE : 3/8" = 1'-0"

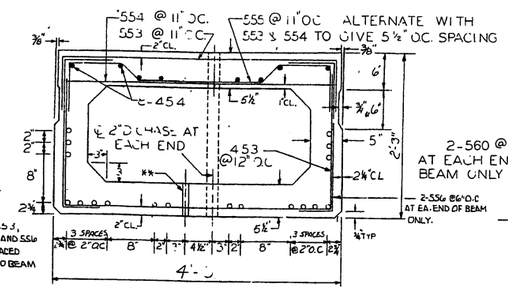


SCALE : 1/8" = 1"

36'-3½" SPAN PSC BOX SECTION -
SCALE: 1" = 8"

NOTE BARS 551 REQUIRED AT ENDS OF BEAMS ONLY. PLACE BARS 550, 551, 552 & 452 PARALLEL TO ENDS OF BEAM

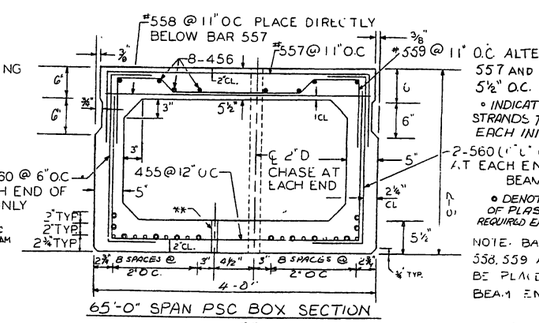
○ INDICATES 21-½" Φ 270K STRANDS TO 28,910#/EA INITIAL



NOTE: BARS 453, 553, 554, 555 AND 556 SHALL BE PLACED PARALLEL TO BEAM ENDS.

○ INDICATES 18-½" Φ 270K STRANDS TO 28,910 LB/EA. INITIAL.

4'-0" OF-N PSC BOX SECTION
SCALE NO SCALE



○ INDICATES 22-½" Φ 270K STRANDS TO 28,910 LBS EACH INITIAL

○ DENOTES 6'-6" LENGTH OF PLASTIC SHEATHING REQUIRED EACH END OF STRAND.

NOTE: BARS 455, 557, 558, 559 AND 560 SHALL BE PLACED PARALLEL TO BEAM ENDS.

65'-0" SPAN PSC BOX SECTION

BRIDGE NO 2 LT/RT.

** PLACE ½ I.D. GALV. STEEL PIPE AS SHOWN TO VENT VOIDS. PIPE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 847

EST. QUANTITIES PER BEAM			
ITEM	SPAN 1	SPAN 2 & 3	SPAN 4
CU YDS CLASS AAA CONC.	8.35	13.42	5.23
LBS BAR REINF STEEL	1146	1790	799
LIN FT W/ 270K PRETEN. STEEL	786	1430	740

● BAR REINF QUANTITIES ARE FOR THE INTERIOR BEAMS.

LBS. BAR REINF. STEEL FOR EACH EXTERIOR BEAM	SPAN 1	SPAN 2 & 3	SPAN 4
	~~1154~~ 1,213	~~1886~~ 1,897	~~1087~~ 854 △

BRIDGE SHEET 4 OF 8

REVISIONS	BY	DATE
DEV. PRI. TRA.	DFS	4-18-78
DEV. ABUT. CONC. TYPE	DFS	4-25-78
DEV. 403.1 PRE-CAST	DFS	10-5-79

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

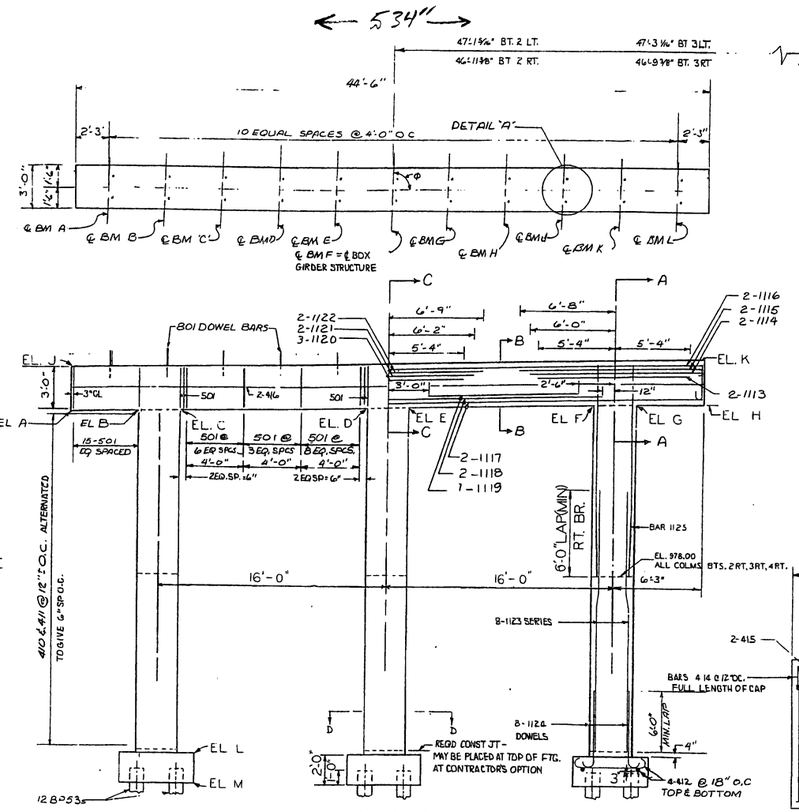
SUPERSTRUCTURE DETAIL
M.L. I-575 OVER ROBERTS ROAD
COBB-CHEROKEE I-575-1(2)00 CT 2

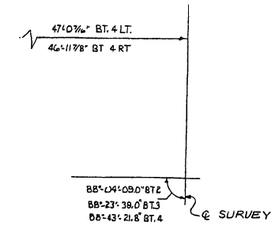
SCALE AS NOTED OCT 1977

DESIGNED DFS TRACED DFS-BDM REVIEWED LRP
DRAWN BLO CHECKED APPROVED

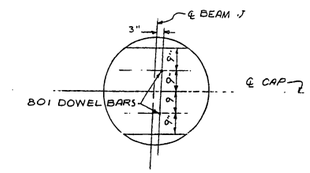
STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
GA.	I-575-1(2)00	37	88

CONTRACT 2
REV. 11-6-78





NOTE:
ϕ = BB° 21'-47.9" BT 2LT, BT 3LT, BT 4LT
BB° 22'-36.1" BT 2RT, BT 3RT, BT 4RT.

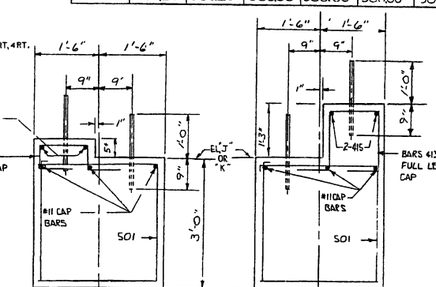


DETAIL "A"
SCALE: 1/2" = 1'-0"

ELEVATION BT 3 LT.

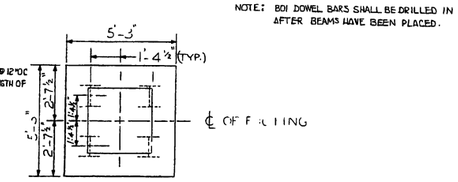
NOTE: IF METAL FORMS ARE USED, COLMS. MAY BE POURED IN ONE LIFT. IN THIS EVENT BARS 1123 MAY BE OMITTED AND BARS 1125 SHALL BE FABRICATED FULL LENGTH.

ELEVATIONS												
BENT	A	B	C	D	E	F	G	H	J	K	L	M
2 LT	988.66	988.75	988.81	989.06	989.11	989.36	989.42	989.51	991.66	992.51	968.50	966.50
△ 2 RT	989.19	989.28	989.34	989.58	989.64	989.88	989.94	990.03	992.19	993.03	965.50	963.50
3 LT	987.14	987.23	987.29	987.54	987.59	987.84	987.90	987.99	990.14	990.99	968.50	966.50
△ 3 RT	987.68	987.77	987.83	988.08	988.13	988.38	988.44	988.53	990.63	991.53	965.50	963.50
4 LT	985.65	985.74	985.80	986.05	986.11	986.36	986.42	986.51	988.65	989.51	968.50	966.50
△ 4 RT	986.20	986.29	986.35	986.60	986.66	986.91	986.97	987.06	989.20	990.06	965.50	963.50



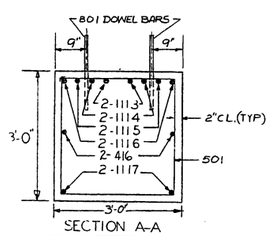
SECTION AT BENT 2 & 4 SHOWING PEDESTAL
SCALE: 3/4" = 1'-0"

NOTE: 801 DOWEL BARS SHALL BE DRILLED IN AFTER BEAMS HAVE BEEN PLACED.

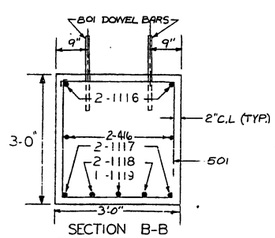


FOOTING PLAN BTS 2,3,4
SCALE 3/8" = 1'-0"

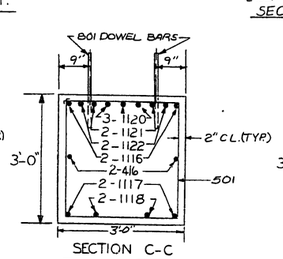
PLAN DRIVING OBJECTIVE: DRIVE PILES TO A DRIVING RESISTANCE OF 63 TONS AT BENTS 2, 3 & 4 AFTER MIN. TIP ELEVATIONS OF 940 AT BTS 2LT, 3LT & RT, 4LT & RT, AND 930 AT BT 2 RT HAVE BEEN ACHIEVED.



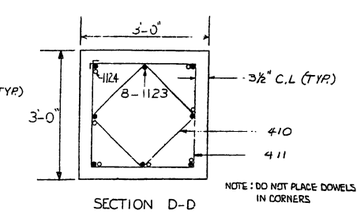
SECTION A-A
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION D-D
SCALE: 3/4" = 1'-0"

NOTE: DO NOT PLACE DOWELS IN CORNERS

QUANTITIES						
ITEM . BENT	2 LT	2 RT	3 LT	3 RT	4 LT	4 RT
CU. YDS CLASS. A CONCRETE	42.47	45.98	39.98	43.51	41.41	44.96
LBS BAR REINFORCING STEEL	8751	10071	8347	9682	8298	9642

BRIDGE NO 2 LT & RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

INTERMEDIATE BENTS
M.L. I-575 OVER ROBERTS ROAD
COBB-CHEROKEE I-575-1(2)00 CT 2

SCALE: AS NOTED DEC. 1977

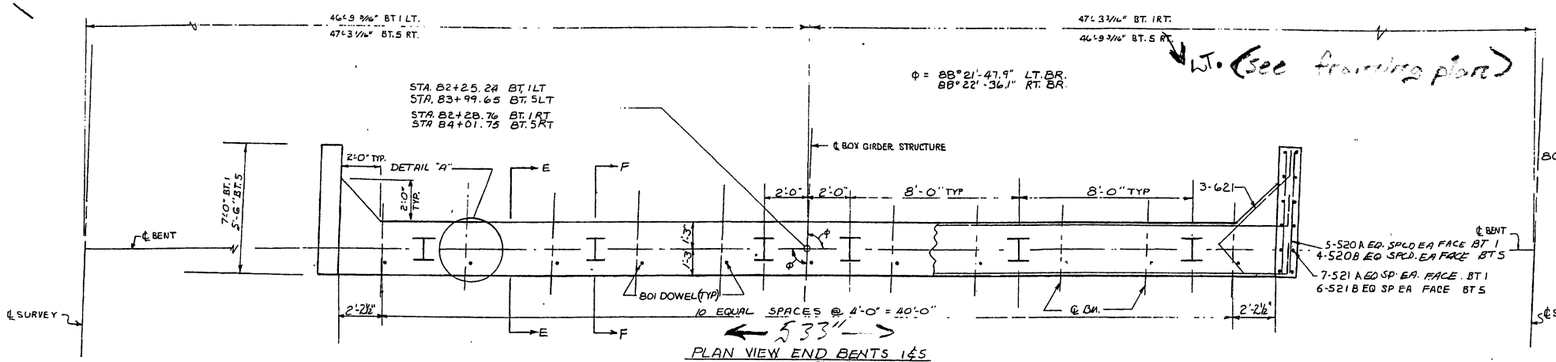
BY	REVISIONS	DATE
DFS	REVISED ELEVATIONS	12-2-78

BRIDGE SHEET 5 OF 8

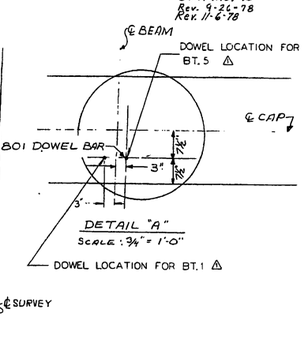
DESIGNED FFC
DRAWN BCO-RHS
TRACED
CHECKED BDM
REVIEWED LRP
APPROVED

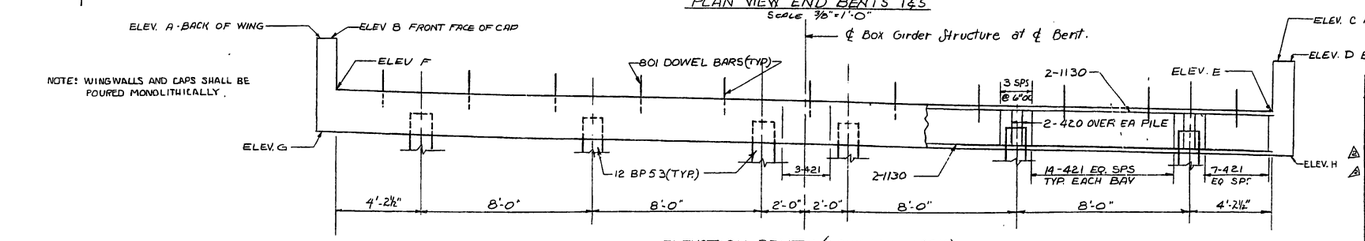
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	I-575-1(2)00	38	88

CONTRACT 2
Rev. 9-26-78
Rev. 11-6-78

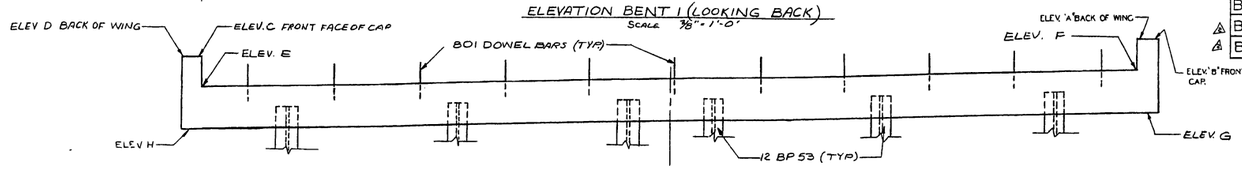


PLAN VIEW END BENTS 1 & 5
SCALE 3/8" = 1'-0"





ELEVATION BENT 1 (LOOKING BACK)
SCALE 3/8" = 1'-0"



ELEVATION BENT 5 (LOOKING AHEAD)
SCALE 3/8" = 1'-0"

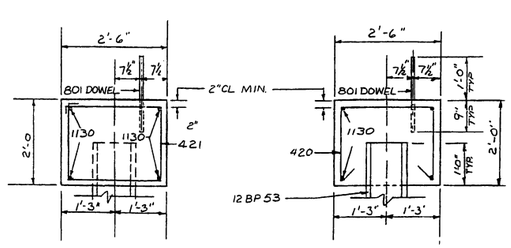
ELEVATIONS	A	B	C	D	E	F	G
BENT 1 LT	996.44	996.27	995.43	995.61	993.12	993.96	991.96
BENT 5 LT	991.39	991.50	990.64	990.53	989.13	989.99	987.99
△ BENT 1 RT	996.96	996.79	995.95	996.12	993.62	994.46	992.46
△ BENT 5 RT	991.95	992.06	991.20	991.09	989.69	990.55	988.55
	H						
BENT 1 LT	991.12						
BENT 5 LT	987.13						
△ BENT 1 RT	991.62						
△ BENT 5 RT.	987.69						

NOTE: 801 DOWEL BARS SHALL BE DRILLED IN AFTER BEAMS HAVE BEEN PLACED.

QUANTITIES				
ITEM \ BENT	1 LT	5 LT	1 RT	5 RT
CU. YARDS "A" CONC.	10.78	9.91	10.79	9.91
LBS. BAR REINF. STEEL	1880	1788	1880	1788

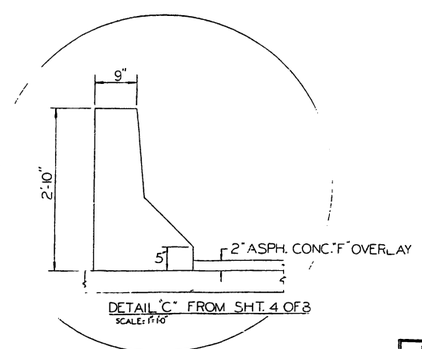
PLAN DRIVING OBJECTIVE

DRIVE ALL PILES TO A DRIVING RESISTANCE OF 61 TONS AFTER A MINIMUM TIP ELEVATION OF 940 IS REACHED AT BENTS 1 LEFT AND 5 LEFT. A MINIMUM TIP ELEVATION OF 930 IS REACHED AT BENT 1 RT. AND A MIN TIP ELEV OF 950 IS REACHED AT BENT 5 RT.



SECTION E-E BENTS 1 & 5
SCALE 3/4" = 1'-0"

SECTION F-F BENTS 1 & 5
SCALE: 3/4" = 1'-0"



DETAIL "C" FROM SHT. 4 OF 3
SCALE: 1"=10"

BRIDGE NO 2 LT & RT

GEORGIA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION-BRIDGE DESIGN

END BENTS
M.L. I-575 OVER ROBERTS ROAD
COBB-CHEROKEE I-575-1(2)00 CT 2

SCALE: AS NOTED DEC. 1977

REVISIONS	BY	DATE
△ REV. ELEVATIONS	GAS	7-28-78
△ REV. ELEVATIONS	GAS	10-5-78

BRIDGE SHEET 6 OF 8

DESIGNED EEC DRAWN RHS TRACED CHECKED BDM REVIEWED LRP APPROVED

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Existing Bridge Maintenance Reports
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0111-0 **Cobb** SUFF. RATING 89.36

Location & Geography

*		Structure I.D.No:	067-0111-0
	200	Bridge Information	06
*	6A	Feature Int:	SR 5C ERNEST BARRETT PKY
*	6B	Critical Bridge:	0
*	7A	Route Number Carried:	SR00417
*	7B	Facility Carried:	I-575 (NBL)
*	9	Location:	3 MI E OF KENNESAW
	2	DOT District:	7
	207	Year Photo:	2003
*	91	Inspection Frequency:	24 Date: 03/09/2005
	92A	Fract Crit Insp Freq:	00 Date: 02/01/1901
	92B	Underwater Insp Freq:	00 Date: 02/01/1901
	92C	Other Spc. Insp Freq:	00 Date: 02/01/1901
*	4	Place Code:	00000
*	5	Inventory Route (O/U):	1
		Type:	1
		Designation:	1
		Number:	00575
		Direction:	0
*	16	Latitude: 34-00.8	MMS Prefix: SR
*	17	Longitude: 084-33.6	MMS Suffix: 00 MP: 1.17
	98	Border Bridge: 000	%Shared: 00
	99	ID Number:	000000000000000
*	100	STRAHNET:	1
	12	Base Highway Network:	1
	13A	LRS Inventory Route:	671041700
	13B	Sub Inventory Route:	0
*	101	Parallel Structure:	R
*	102	Direction of Traffic:	1
*	264	Road Inventory Mile Post:	018.08
*	208	Inspection Area: 09	Initials: JMC
		Engineer's Initial:	jal

* Location I.D. No.: 067-00417D-001.22N

*	104	Highway System:	1
*	26	Functional Classification:	11
*	204	Federal Route Type:	I No.: 05751
	105	Federal Lands Highway:	0
*	110	Truck Route:	1
	206	School Bus Route:	0
	217	Benchmark Elevation:	0000.00
	218	Datum:	0
*	19	Bypass Length:	01
*	20	Toll:	3
*	21	Maintenance:	01
*	22	Owner:	01
*	31	Design Load:	6
	37	Historical Significance:	5
	205	Congressional District:	06
	27	Year Constructed:	1979
	106	Year Reconstructed:	0000
	33	Bridge Median:	1
	34	Skew:	02
	35	Structure Flared:	0
	38	Navigation Control:	N
	213	Special Steel Design:	0
	267	Type of Paint:	0
*	42	Type of Service on:	1
			1
	214	Movable Bridge:	0
	203	Type Bridge:	Z-O-O-O
	259	Pile Encasement:	3
*	43	Structure Type Main:	5 05
	45	No. Spans Main:	004
	44	Structure Type Appr:	0 00
	46	No. Spans Appr:	0000
	226	Bridge Curve Horz:	0 Vert: 0
	111	Pier Protection:	0
	107	Deck Structure Type:	2
	108	Wearing Surface Type:	6
		M	0
		F	0

Signs & Attachments

	225	Expansion Joint Type:	02
	242	Deck Drains:	0
	243	Parapet Location:	0
		Height:	0.00
		Width:	0.00
	238	Curb:	0.00 0
	239	Handrail:	9 9
*	240	Median Barrier Rail:	0
	241	Bridge Median Height:	0.00
		Width:	0.00
*	230	Guardrail Loc Dir Rear:	6
		Fwrd:	0
		Oppo Dir Rear:	0
		Fwrd:	0
	244	Approach Slab:	3
	224	Retaining Wall:	0
	233	Posted Speed Limit:	65
	236	Warning Sign:	0
	234	Delineator:	1
	235	Hazard Boards:	0
	237	Utilities Gas:	00
		W	00
		Ele	00
		Telephone:	00
		S	00
	247	Lighting Street:	0
		Naviagtion:	0
		Aerial:	0
*	248	County Continuity No.:	01

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0111-0 **Cobb** SUFF. RATING 89.36

Programming Data

201 Project No.: I-575-1 (2) 00 CT.2
202 Plans Available: 1
249 Prop. Proj. No. 0000000000000000
250 Approval Status: 0000
251 P.I. No.: 0000000
252 Contract Date: 02/01/1901
260 Seismic No.: 00000
75 Type Work: 00 0
94 Bridge Imp. Cost: $ 0
95 Roadway Imp. Cost: $ 0
96 Total Imp Cost: $ 0
76 Imp. Length: 000000
97 Imp. Year: 0000
114 Future ADT: 106560 Year: 2024

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: N
216 Water Depth: 00.0 Br. Height: 00.0
222 Slope Protection: 4
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 067-00417D-001.22N

Measurements

* 29 ADT: 071040 Year: 2004
109 % Trucks: 11
* 28 Lanes On: 02 Under: 06
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0065
* 49 Structure Length: 209
51 Br. Rwdy. Width: 40.50
52 Deck Width: 43.70
* 47 Tot. Horz. Cl: 40.50
50 Curb/Sdewlk Width: 0.00/0.00
32 Approach Rdwy Width: 038
* 229 Shoulder Width:
Rear Lt: 4.00 Type: 2 Rt: 10.00
Fwrd Lt: 4.00 Type: 2 Rt: 10.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 0 Fwrd: 0
36 Safety Features Br. Rail: 1
Transition: 1
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: H 20 ' 03 "
* 228 Min. Vertical Cl
Act. Odm Dir: 99 ' 99 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
55 Lateral Undercl. Rt: H 14.00
56 Lateral Undercl. Lt: 8.50
* 10 Max Min Vert Cl: 99 ' 99 " Dir: 0
39 Nav Vert Cl: 000 Horz: 0000
116 Nav Vert Cl Closed: 000
245 Deck Thickness Main: 5.00
Deck Thick Approach: 0.00
246 Overlay Thickness: 5.00
212 Year Last Painted: Sup: 0000 Sub: 0000

Ratings

65 Inventory Rating Method: 1
63 Inventory Rating Method: 1
66 Inventory Type: 2 Rating: 31
64 Operating Type: 2 Rating: 53
231 Calculated Loads
H-Modified: 21 0
HS-Modified: 30 0
Type 3: 26 0
Type 3s2: 40 0
Timber: 36 0
Piggyback: 40 0
261 H Inventory Rating: 21
262 H Operating Rating: 36
67 Structural Evaluation: 7
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 0
60A Substructure Condition: 7
60B Scour Condition: N
60C Underwater Condition: N
71 Waterway Adequacy: N
61 Channel Protection Cond: N
68 Deck Geometry: 7
69 UnderClr. Horz/Vert: 6
72 Appr. Alignment: 8
62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
41 Struct Open, Posted, Cl: A
* 103 Temporary Structure: 0
232 Posted Loads H-Modified: 00
HS-Modified: 00
Type 3: 00
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0111-0 **Cobb** SUFF. RATING 89.36

Location & Geography

* Structure I.D.No: 067-0111-0
* 6A Feature Int: SR 417 NBL (I-575)
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00005
* 7B Facility Carried: ERNEST BARRETT PY
* 9 Location: 3 MI E OF KENNESAW
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 3
Designation: 1
Number: 00005
Direction: 0
* 16 Latitude: 34-00.8 HMMS Prefix:
* 17 Longitud 084-33.6 HMMS Suffix: MP:
* 100 STRAHNET: 0
12 Base Highway Network: 1
13A LRS Inventory Route: 6710005
13B Sub Inventory Route: 0
* 101 Parallel Structure: R
* 102 Direction of Traffic: 2
* 104 Highway System: 0
* 26 Functional Classification: 14
* 204 Federal Route Type: F No.: 02221
105 Federal Lands Highway: 00
* 110 Truck Route: 0
* 19 Bypass Length: 01
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1979
* 42 Type of Service on: 1 Under: 1
* 43 Structure Type Main: 5 05
* 208 Inspection Area: 09 Initials: JMC
* Location I.D. No.: 067-00005C-001.97E
* XReference I.D. No 067-00417D-001.22N

Signs & Attachments

* 240 Median Barrier Rail: 0
* 230 Guardrail Loc Dir Rear: 0
Fwrd: 0
Oppo Dir Rear: 0
Fwrd: 0

Measurements

* 29 ADT: 034300 Year: 1998
* 28 Lanes On: 02 Under: 06
* 48 Max. Span Length: 0065
* 49 Structure Length: 209
* 47 Tot. Horz. Cl: 56.50
* 229 Shoulder Width:
Rear Lt: 2.00 Type: 3 Rt: 2.00
Fwrd Lt: 2.00 Type: 3 Rt: 2.00
Pavement Width:
Rear: 34.00 Type: 2
Fwrd: 34.00 Type: 2
Intersection Rear: 1 Fwrd: 1

* 228 Min. Vertical Cl
Act. Odm Dir: 21 ' 00 "
Oppo. Dir: 20 ' 03 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 22 ' 00 " Dir: 3

Ratings

* 227 Collision Damage: 0

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 01

Hydraulic Data

* 265 U/W Insp. Are 0 Diver: ZZZ

GEORGIA DEPARTMENT OF TRANSPORTATION

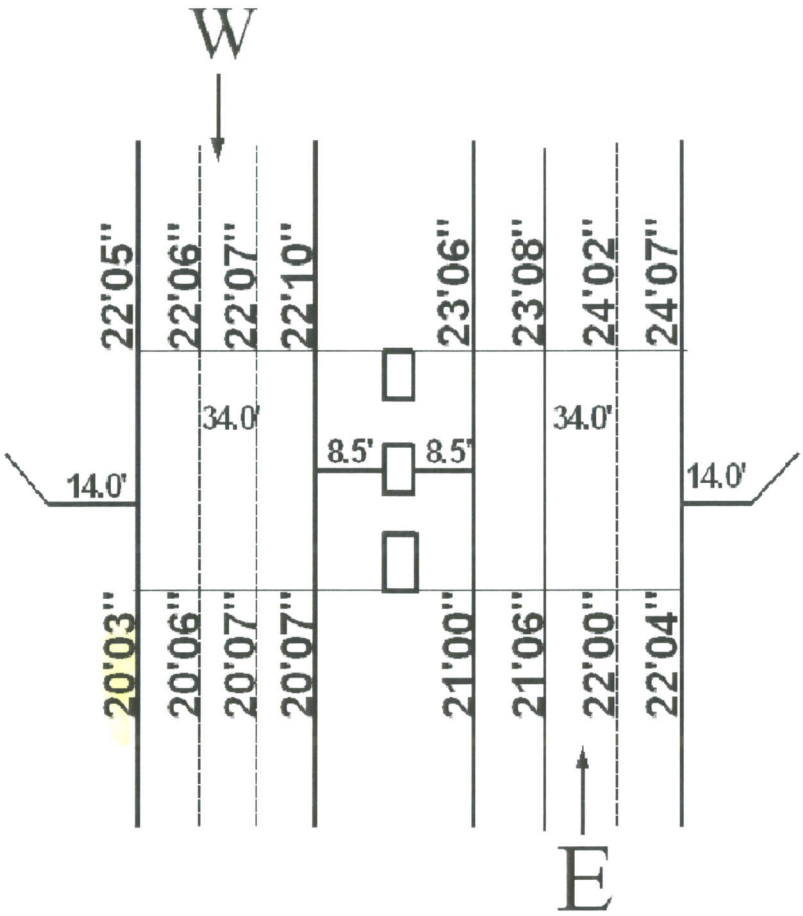
X-Vertical Clearance Report

District: 7 **Inspection Date:** 3/9/2005 **Inspection Area:** 09

Bridge Inspector: Jerry Cooper **Over:** SR 5C ERNEST BARRETT PKY

Location ID: 067-00417D-001.22N **County:** Cobb **Skew:** 02

Structure ID: 067-0111-0 **Road Name:** I-575 (NBL)



XLocationID **067-00005C-001.97E**

XRef ID: 067-0111-0-A

Min Clearance Over: 99-99 **Min Clearance Under:** 20-03 **Clearance Type:** H

Act Min Vert. Odom: 21-00 **Post Min Vert. Odom:** 00-00

Act Min Vert. Opp: 20-03 **Post Min Vert. Opp:** 00-00

Max Min Vert. Clear: 22-00 **Direction:** East

Lat Under Cl Right: 14.00 **Left:** 8.50 **Lateral Type:** 6

Rating-Under Cl Horz/Vert: 6 **Total Horizontal Clearance (ft):** 56.50

GEORGIA DEPARTMEN OF TRANSPORTATION

Bridge Component Report

District: 7
Bridge Inspector: Jerry Cooper
Location ID: 067-00417D-001.22N
Structure ID: 067-0111-0

Inspection Date: 3/9/2005
Over: SR 5C ERNEST BARRETT PKY
County: Cobb
Road Name: I-575 (NBL)

Inspection Area: 09

SubStructure Data

Bent#	Type	Foundation	Col	#Cols	Piling	#Piles	Sway	CAP	Remarks
1	A			0		0		C	ONLY CAP EXPOSED
2	B		C	3		0		C	
3	B		C	3		0		C	
4	B		C	3		0		C	
5	A			0		0		C	ONLY CAP EXPOSED

SuperStructure Data

Span#	Beam Type	Spacing	Length	#Beams	Remarks
1	PSC Box Beam	0.00	44.00	11	27" PSC Box Beam Panels
2	PSC Box Beam	0.00	65.00	11	32" PSC Box Beam Panels
3	PSC Box Beam	0.00	65.00	11	32" PSC Box Beam Panels
4	PSC Box Beam	0.00	35.00	11	17" PSC Box Beam Panels

Bearing Data

Span#	Rear Type Bearing	FWD Type Bearing	Remarks
1	03 - Elastomeric	03 - Elastomeric	
2	03 - Elastomeric	03 - Elastomeric	
3	03 - Elastomeric	03 - Elastomeric	
4	03 - Elastomeric	03 - Elastomeric	

GEORGIA DEPARTMENT OF TRANSPORTATION

Bridge Inspection Report

District: 7 **Inspection Date:** 3/9/2005 **Inspection Area:** 09
Bridge Inspector: Jerry Cooper **Over:** SR 5C ERNEST BARRETT PKY **Bridge Status:** 06
Location ID: 067-00417D-001.22N **County:** Cobb
Structure ID: 067-0111-0 **Road Name:** I-575 (NBL)

EVALUATION & DEFICIENCIES

SubStructure: **Year Painted:** 0000

Concrete caps at both abutments.
Minor cracking in both abutment caps.
Bents 2, 3, and 4 have concrete caps and 3 concrete columns.

Substructure = H-42 Calculated 2004 by Central Office (Load Factor)

Very minor cracking in all intermediate caps between columns.

SuperStructure: **Year Painted:** 0000

4 span p.s.c. box beam units (11 units per span) .
Span #1 has a 27" box beam.
Span #2 and #3 has a 32" box beam.
Span #4 has a 17" box beam.

Superstructure = H-21 Calculated 2004 by Central Office (Load Factor).

Very minor cracking in all spans (normal).

Deck:

5" concrete slab with 5" asphalt overlay (roof slab of a p.s.c. box beam).

Deck rating deemed adequate for Superstructure capacity - February, 2004.

Asphalt cracked and breaking up at joints. Minor
Debris and trash are in both deck gutters.

General:

BUILT IN 1979 PROJECT # I-575-1 (2) 00 CT.2

Calculations for this structure were determined by the Central Office. - February, 2004.

Ladder and hand tools used.

Condition Rating

Component	Material	Rating
Substructure	Concrete	7
Superstructure	Concrete	7
Deck	Concrete	7

Temp Shored: **No**

Truck Type	Gross/H-Mod	HSMod	Tand	3-S-2	Log	Piggy
Calculated Posting	21	30	26	40	36	40
Posting Required	No	No	No	No	No	No
Existing Posting	00	00	00	00	00	00

Not a School Bus Route.

Structure Does Not Require Posting

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0112-0 **Cobb** SUFF. RATING 89.09

Location & Geography

*		Structure I.D.No:	067-0112-0
	200	Bridge Information	06
*	6A	Feature Int:	SR 5C ERNEST BARRETT PKY
*	6B	Critical Bridge:	0
*	7A	Route Number Carried:	SR00417
*	7B	Facility Carried:	I-575 (SBL)
*	9	Location:	3 MI E OF KENNESAW
	2	DOT District:	7
	207	Year Photo:	2003
*	91	Inspection Frequency:	24 Date: 03/09/2005
	92A	Fract Crit Insp Freq:	00 Date: 02/01/1901
	92B	Underwater Insp Freq:	00 Date: 02/01/1901
	92C	Other Spc. Insp Freq:	00 Date: 02/01/1901
*	4	Place Code:	00000
*	5	Inventory Route (O/U):	1
		Type:	1
		Designation:	1
		Number:	00575
		Direction:	0
*	16	Latitude: 34-00.8	MMS Prefix: SR
*	17	Longitude: 084-33.6	MMS Suffix: 00 MP: 1.18
	98	Border Bridge: 000	%Shared: 00
	99	ID Number:	000000000000000
*	100	STRAHNET:	1
	12	Base Highway Network:	1
	13A	LRS Inventory Route:	671041700
	13B	Sub Inventory Route:	0
*	101	Parallel Structure:	L
*	102	Direction of Traffic:	1
*	264	Road Inventory Mile Post:	018.09
*	208	Inspection Area: 09	Initials: JMC
		Engineer's Initial:	jal

* Location I.D. No.: 067-00417D-001.23N

*	104	Highway System:	1
*	26	Functional Classification:	11
*	204	Federal Route Type:	I No.: 05751
	105	Federal Lands Highway:	0
*	110	Truck Route:	1
	206	School Bus Route:	0
	217	Benchmark Elevation:	0000.00
	218	Datum:	0
*	19	Bypass Length:	01
*	20	Toll:	3
*	21	Maintenance:	01
*	22	Owner:	01
*	31	Design Load:	6
	37	Historical Significance:	5
	205	Congressional District:	06
	27	Year Constructed:	1979
	106	Year Reconstructed:	0000
	33	Bridge Median:	1
	34	Skew:	02
	35	Structure Flared:	0
	38	Navigation Control:	N
	213	Special Steel Design:	0
	267	Type of Paint:	0
*	42	Type of Service on:	1
			1
	214	Movable Bridge:	0
	203	Type Bridge:	Z-O-O-O
	259	Pile Encasement:	3
*	43	Structure Type Main:	5 05
	45	No. Spans Main:	004
	44	Structure Type Appr:	0 00
	46	No. Spans Appr:	0000
	226	Bridge Curve Horz:	0 Vert: 0
	111	Pier Protection:	0
	107	Deck Structure Type:	2
	108	Wearing Surface Type:	6
		M	0
		F	0

Signs & Attachments

	225	Expansion Joint Type:	02
	242	Deck Drains:	0
	243	Parapet Location:	0
		Height:	0.00
		Width:	0.00
	238	Curb:	0.00 0
	239	Handrail:	9 9
*	240	Median Barrier Rail:	0
	241	Bridge Median Height:	0.00
		Width:	0.00
*	230	Guardrail Loc Dir Rear:	6
		Fwrd:	0
		Oppo Dir Rear:	0
		Fwrd:	0
	244	Approach Slab:	3
	224	Retaining Wall:	0
	233	Posted Speed Limit:	65
	236	Warning Sign:	0
	234	Delineator:	1
	235	Hazard Boards:	0
	237	Utilities Gas:	00
		W	00
		Ele	00
		Telephone:	00
		S	00
	247	Lighting Street:	0
		Naviagtion:	0
		Aerial:	0
*	248	County Continuity No.:	01

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0112-0 **Cobb** SUFF. RATING 89.09

Programming Data

201 Project No.: I-575-1 (2) 00 CT.2
202 Plans Available: 1
249 Prop. Proj. No. 0000000000000000
250 Approval Status: 0000
251 P.I. No.: 0000000
252 Contract Date: 02/01/1901
260 Seismic No.: 00000
75 Type Work: 00 0
94 Bridge Imp. Cost: $ 0
95 Roadway Imp. Cost: $ 0
96 Total Imp Cost: $ 0
76 Imp. Length: 000000
97 Imp. Year: 0000
114 Future ADT: 111855 Year: 2024

Hydraulic Data

215 Waterway Data
Highwater Elev.: 0000.0 Year: 1900
Avg. Streambed Elev.: 0000.0 Freq.: 00
Drainage Area: 00000
Area Of Opening: 000000
113 Scour Critical: N
216 Water Depth: 00.0 Br. Height: 00.0
222 Slope Protection: 4
221 Spur Dikes Rear: 0 Fwrd: 0
219 Fender System: 0
220 Dolphin: 0
223 Culvert Cover: 000
Type: 0
No. Barrels: 0
Width: 0.00 Height: 0.00
Length: 0 Apron: 0
* 265 U/W Insp. Area: 0 Diver: ZZZ

* Location I.D. No.: 067-00417D-001.23N

Measurements

* 29 ADT: 074570 Year: 2004
109 % Trucks: 11
* 28 Lanes On: 02 Under: 06
210 No. Tracks On: 00 Under: 00
* 48 Max. Span Length: 0065
* 49 Structure Length: 209
51 Br. Rwdy. Width: 40.50
52 Deck Width: 43.70
* 47 Tot. Horz. Cl: 40.50
50 Curb/Sdewlk Width: 0.00/0.00
32 Approach Rdwy Width: 038
* 229 Shoulder Width:
Rear Lt: 4.00 Type: 2 Rt: 10.00
Fwrd Lt: 4.00 Type: 2 Rt: 10.00
Pavement Width:
Rear: 24.00 Type: 2
Fwrd: 24.00 Type: 2
Intersection Rear: 0 Fwrd: 0
36 Safety Features Br. Rail: 1
Transition: 1
App. G. Rail: 1
App. Rail End: 1
53 Minimum Cl.Over: 99 ' 99 "
Under: H 16 ' 05 "
* 228 Min. Vertical Cl
Act. Odm Dir: 99 ' 99 "
Oppo. Dir: 99 ' 99 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
55 Lateral Undercl. Rt: H 14.00
56 Lateral Undercl. Lt: 8.50
* 10 Max Min Vert Cl: 99 ' 99 " Dir: 0
39 Nav Vert Cl: 000 Horz: 0000
116 Nav Vert Cl Closed: 000
245 Deck Thickness Main: 5.00
Deck Thick Approach: 0.00
246 Overlay Thickness: 5.00
212 Year Last Painted: Sup: 0000 Sub: 0000

Ratings

65 Inventory Rating Method: 1
63 Inventory Rating Method: 1
66 Inventory Type: 2 Rating: 31
64 Operating Type: 2 Rating: 53
231 Calculated Loads
H-Modified: 21 0
HS-Modified: 30 0
Type 3: 26 0
Type 3s2: 40 0
Timber: 36 0
Piggyback: 40 0
261 H Inventory Rating: 21
262 H Operating Rating: 36
67 Structural Evaluation: 7
58 Deck Condition: 7
59 Superstructure Condition: 7
* 227 Collision Damage: 0
60A Substructure Condition: 7
60B Scour Condition: N
60C Underwater Condition: N
71 Waterway Adequacy: N
61 Channel Protection Cond: N
68 Deck Geometry: 7
69 UnderClr. Horz/Vert: 6
72 Appr. Alignment: 8
62 Culvert: N

Posting Data

70 Bridge Posting Required: 5
41 Struct Open, Posted, Cl: A
* 103 Temporary Structure: 0
232 Posted Loads H-Modified: 00
HS-Modified: 00
Type 3: 00
Type3s2: 00
Timber: 00
Piggyback: 00
253 Notification Date 02/01/1901
253 Fed Notify Date: 02/01/1901 0

BRIDGE INVENTORY DATA LISTING GEOI A DEPARTMENT OF TRANSPORTATION

Structure ID: 067-0112-0 **Cobb** SUFF. RATING 89.09

Location & Geography

* Structure I.D.No: 067-0112-0
* 6A Feature Int: SR 417 SBL (I-575)
* 6B Critical Bridge: 0
* 7A Route Number Carried: SR00005
* 7B Facility Carried: ERNEST BARRETT PY
* 9 Location: 3 MI E OF KENNESAW
* 91 Inspection Frequency: 00 Date: 02/01/1901
* 4 Place Code: 00000
* 5 Inventory Route (O/U): 2
Type: 3
Designation: 1
Number: 00005
Direction: 0
* 16 Latitude: 34-00.8 HMMS Prefix:
* 17 Longitud 084-33.6 HMMS Suffix: MP:
* 100 STRAHNET: 0
12 Base Highway Network: 1
13A LRS Inventory Route: 6710005
13B Sub Inventory Route: 0
* 101 Parallel Structure: L
* 102 Direction of Traffic: 2
* 104 Highway System: 0
* 26 Functional Classification: 14
* 204 Federal Route Type: F No.: 02221
105 Federal Lands Highway: 00
* 110 Truck Route: 0
* 19 Bypass Length: 01
* 20 Toll: 3
* 21 Maintenance: 01
* 22 Owner: 01
27 Year Constructed: 1979
* 42 Type of Service on: 1 Under: 1
* 43 Structure Type Main: 5 05
* 208 Inspection Area: 09 Initials: JMC
* Location I.D. No.: 067-00005C-001.95E
* XReference I.D. No 067-00417D-001.23N

Signs & Attachments

* 240 Median Barrier Rail: 0
* 230 Guardrail Loc Dir Rear: 0
Fwrd: 0
Oppo Dir Rear: 0
Fwrd: 0

Measurements

* 29 ADT: 034300 Year: 1998
* 28 Lanes On: 02 Under: 06
* 48 Max. Span Length: 0065
* 49 Structure Length: 209
* 47 Tot. Horz. Cl: 56.50
* 229 Shoulder Width:
Rear Lt: 2.00 Type: 3 Rt: 2.00
Fwrd Lt: 2.00 Type: 3 Rt: 2.00
Pavement Width:
Rear: 34.00 Type: 2
Fwrd: 34.00 Type: 2
Intersection Rear: 1 Fwrd: 1

* 228 Min. Vertical Cl
Act. Odm Dir: 17 ' 02 "
Oppo. Dir: 16 ' 05 "
Posted Odm. Dir: 00 ' 00 "
Oppo. Dir: 00 ' 00 "
* 10 Max Min Vert Cl: 18 ' 01 " Dir: 3

Ratings

* 227 Collision Damage: 0

Posting Data

* 103 Temporary Structure: 0
* 248 County Continuity No.: 01

Hydraulic Data

* 265 U/W Insp. Are 0 Diver: ZZZ

GEORGIA DEPARTMENT OF TRANSPORTATION

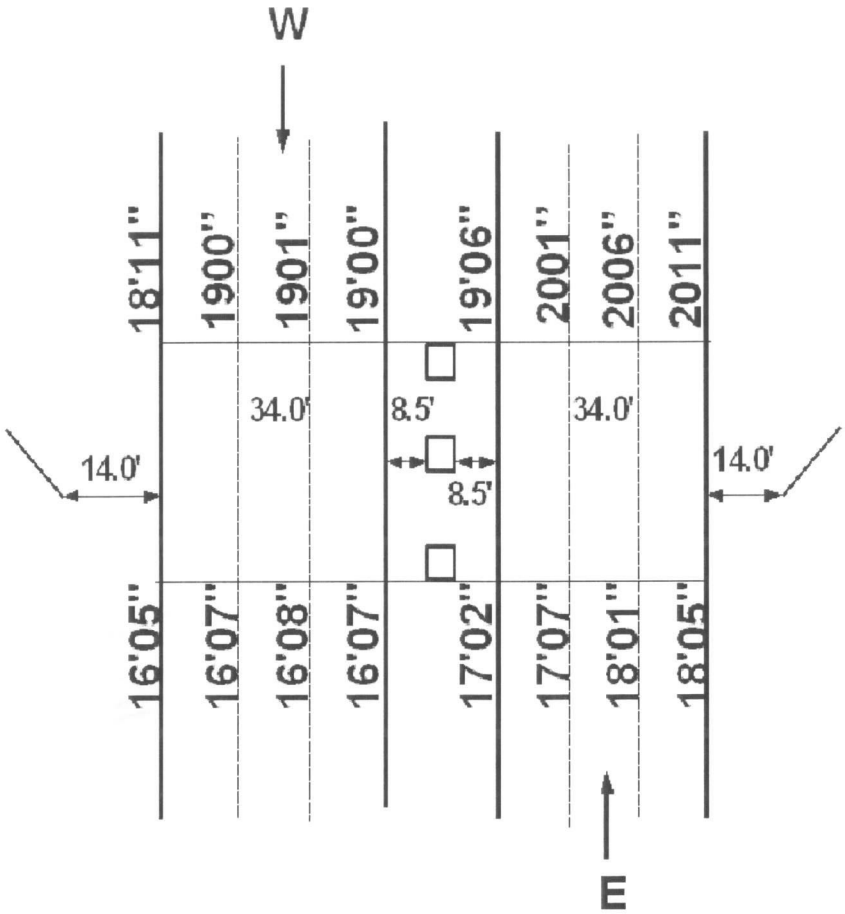
X-Vertical Clearance Report

District: 7 **Inspection Date:** 3/9/2005 **Inspection Area:** 09

Bridge Inspector: Jerry Cooper **Over:** SR 5C ERNEST BARRETT PKY

Location ID: 067-00417D-001.23N **County:** Cobb **Skew:** 02

Structure ID: 067-0112-0 **Road Name:** I-575 (SBL)



XLocationID **067-00005C-001.95E**

XRef ID: 067-0112-0-A

Min Clearance Over: 99-99 **Min Clearance Under:** 16-05 **Clearance Type:** H

Act Min Vert. Odom: 17-02 **Post Min Vert. Odom:** 00-00

Act Min Vert. Opp: 16-05 **Post Min Vert. Opp:** 00-00

Max Min Vert. Clear: 18-01 **Direction:** East

Lat Under Cl Right: 14.00 **Left:** 8.50 **Lateral Type:** 6

Rating-Under Cl Horz/Vert: 6 **Total Horizontal Clearance (ft):** 56.50

GEORGIA DEPARTMEN . JF TRANSPORTATION

Bridge Component Report

District: 7
Bridge Inspector: Jerry Cooper
Location ID: 067-00417D-001.23N
Structure ID: 067-0112-0

Inspection Date: 3/9/2005
Over: SR 5C ERNEST BARRETT PKY
County: Cobb
Road Name: I-575 (SBL)

Inspection Area: 09

SubStructure Data

Bent#	Type	Foundation	Col	#Cols	Piling	#Piles	Sway	CAP	Remarks
1	A			0		0		C	ONLY CAP EXPOSED
2	B		C	3		0		C	
3	B		C	3		0		C	
4	B		C	3		0		C	
5	A			0		0		C	ONLY CAP EXPOSED

SuperStructure Data

Span#	Beam Type	Spacing	Length	#Beams	Remarks
1	PSC Box Beam	4.00	44.00	11	27" PSC Box Beam Panels
2	PSC Box Beam	4.00	65.00	11	32" PSC Box Beam Panels
3	PSC Box Beam	4.00	65.00	11	32" PSC Box Beam Panels
4	PSC Box Beam	4.00	35.00	11	17" PSC Box Beam Panels

Bearing Data

Span#	Rear Type Bearing	FWD Type Bearing	Remarks
1	03 - Elastomeric	03 - Elastomeric	
2	03 - Elastomeric	03 - Elastomeric	
3	03 - Elastomeric	03 - Elastomeric	
4	03 - Elastomeric	03 - Elastomeric	

GEORGIA DEPARTMENT OF TRANSPORTATION

Bridge Inspection Report

District: 7 **Inspection Date:** 3/9/2005 **Inspection Area:** 09
Bridge Inspector: Jerry Cooper **Over:** SR 5C ERNEST BARRETT PKY **Bridge Status:** 06
Location ID: 067-00417D-001.23N **County:** Cobb
Structure ID: 067-0112-0 **Road Name:** I-575 (SBL)

EVALUATION & DEFICIENCIES

SubStructure: **Year Painted:** 0000

Concrete caps at both abutments.
Bents 2, 3, and 4 have Concrete caps and 3 concrete columns.

Substructure = H-42 Calculated 2004 by Central Office (Load Factor)

Minor cracking in all intermediate caps.

SuperStructure: **Year Painted:** 0000

4 span P.S.C. box beam units (11 box beams per span).
3 different size box beams .
Box beam size as follows: (span#1 = 27") (span #2 & #3 = 32") (span #4 = 17")

Superstructure = H-21 Calculated 2004 by Central Office (Load Factor).

Very minor cracking in box beams.

Deck:

5" concrete slab with 5" asphalt overlay. (Roof Slab of a p.s.c. Box Beam)

Deck rating deemed adequate for Superstructure capacity - February, 2004.

Asphalt breaking up at joints. Minor
Debris and trash are in both gutter lines.

General:

Built in 1979 project # I-575-1 (2) 00 ct.2.

Calculations for this structure were determined by the Central Office. - February, 2004.

Ladder and hand tools used.

Condition Rating

Component	Material	Rating
Substructure	Concrete	7
Superstructure	Concrete	7
Deck	Concrete	7

Temp Shored: **No**

Truck Type	Gross/H-Mod	HSMod	Tand	3-S-2	Log	Piggy
Calculated Posting	21	30	26	40	36	40
Posting Required	No	No	No	No	No	No
Existing Posting	00	00	00	00	00	00

Not a School Bus Route.

Structure Does Not Require Posting

CALCULATION SHEET

PROJECT: I-75 / I-575 NORTHWEST CORRIDOR
JOB NUMBER NH000-0575-01(028)
CALC NO. BR#35

SUBJECT: Bridge Foundation Investigation
BY: JCR DATE: 11/30/2009

SHEET NO.
SHEET REV.

Preliminary Foundation Recommendations
Bridge 35: I-575 over SR 5C (Ernest Barrett Parkway)
Northwest Corridor Project
GDOT Project No. NH000-0073-03(242), PI No. 714130
Cobb County, Georgia

WILLMER ENGINEERING INC.
Project No. ATL-171-3463BFI3

Document No.: ATL-171-3463BFI3-35
Revision: A
Issue Date: October 14, 2009
Document Status: Issued for Review

Prepared For

GEORGIA TRANSPORTATION PARTNERS
Atlanta, Georgia

Prepared By

WILLMER ENGINEERING INC.
3772 Pleasantdale Road
Suite 165
Atlanta, Georgia 30340-4270

770.939.0089

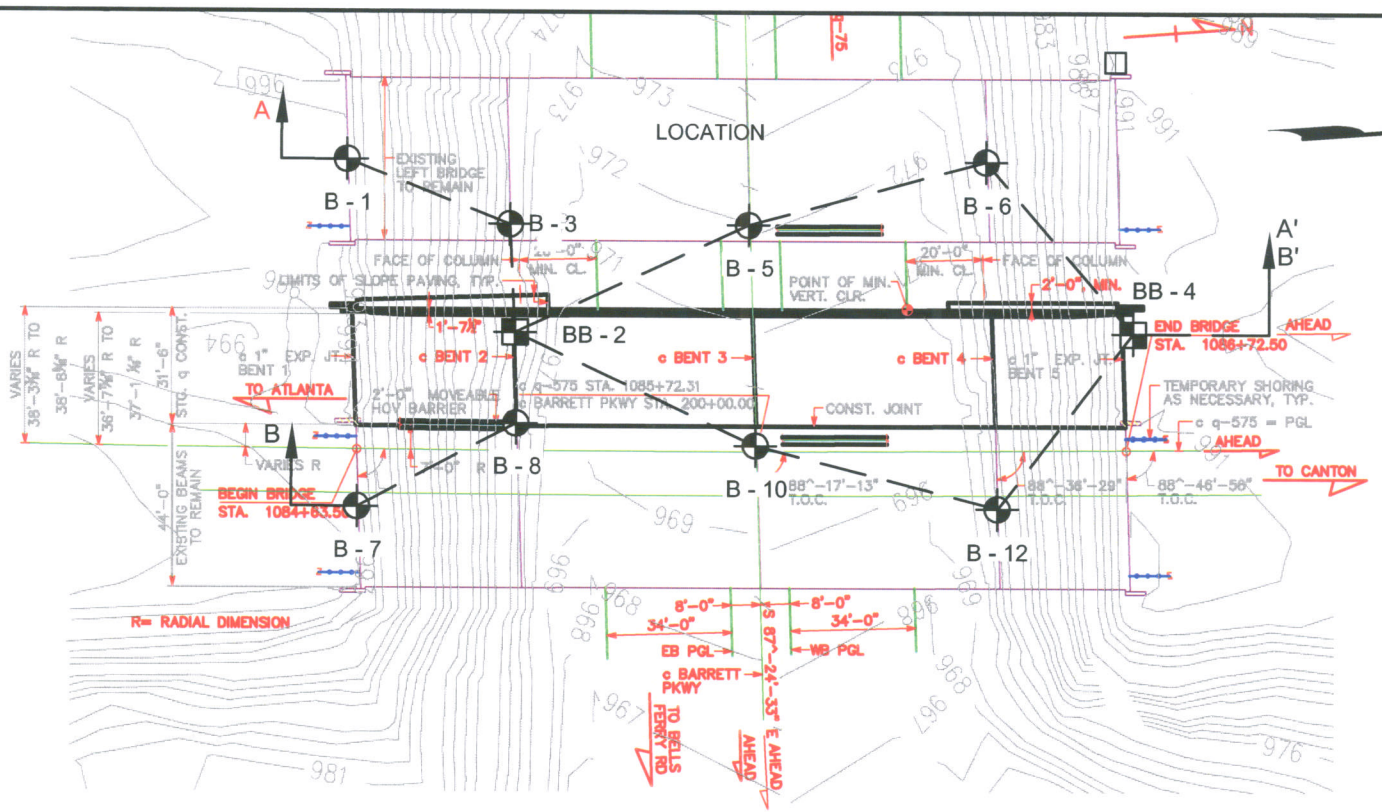
PWR AND AUGER REFUSAL ELEVATIONS (feet)			
Bent No.	**Reference Boring No.**	**Top of PWR**	**Auger Refusal**
1	B-1	920	**
	B-7	904	903
2	B-3	*	**
	BB-2	936	928
	B-8	*	**
3	B-5	*	**
	B-10	*	**
4	B-6	922	**
	B-12	928	**
5	BB-4	927	921

* PWR was not encountered in this boring.
** Boring was not extended to auger refusal.

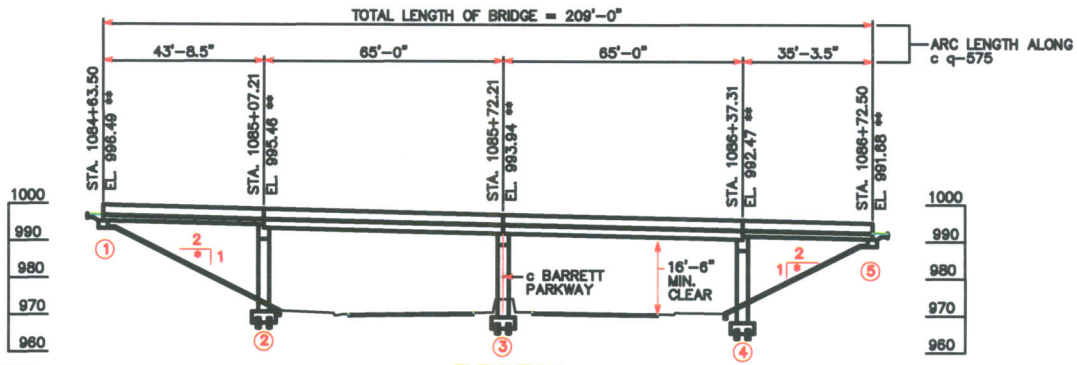
MAXIMUM PILE DESIGN LOADS			
Pile Type	**Load Transfer (%)**		**Design Load**
	Friction	**End Bearing**	
H-Piles	20	80	HP 10x42 = 55 Tons
			HP 12x53 = 70 Tons
			HP 14x73 = 96 Tons
			HP 14x89 = 117 Tons

FOUNDATION RECOMMENDATIONS						
Bent No.	**Drilled Shaft**			**Spread Footing Bearing (ksf)**	**Pile Footing (Type)**	**Pile Bent (Type)**
	Skin Friction (ksf)		**End Bearing (ksf)**			
	PWR	**Rock**				
1						H
2					H	
3					H	
4					H	
5						H

ELEVATIONS (feet)					
Bent No.	Reference Boring No.	Bottom of Drilled Shaft	Bottom of Spread Footing	H-Pile	
				Minimum Tip	Estimated Tip
1–Left	B-1			934±	932±
1–Right	B-7			914±	912±
2–Left	BB-2			935±	933±
2–Right	B-8			917±	915±
3–Left	B-5			925±	925±
3–Right	B-10			928±	926±
4–Left	B-6			926±	920±
4–Right	B-12			927±	920±
5	BB-4			926±	924±



PLAN



ELEVATION

LEGEND:

B - 1 BORING LOCATION (GDOT, 1976)

BB - 2 BORING LOCATION (WILLMER, 2007)

SCALE: 1" = 50'	
DATE: 10/14/2009	
DRAWN BY: JK	
REVIEWED BY: DK	

WILLMER ENGINEERING INC.

GEOTECHNICAL ENGINEERING ¤ CONSTRUCTION SERVICES
ENVIRONMENTAL SERVICES AND ENGINEERING
3772 PLEASANTDALE ROAD - SUITE 165
ATLANTA, GA 30340-4270

FIGURE 2 - BORING LOCATION PLAN
I -575 OVER S.R. 5C (ERNEST BARRETT PARKWAY)
NORTHWEST CORRIDOR PROJECT
COBB COUNTY, GEORGIA
WILLMER PROJECT No. ATL-171-3463BFI3

P:\3463-Northwest Corridor - PSP - Cobb County\CADD\B35_PE.dwg

WILLMER ENGINEERING INC. | WE

Project: **I-575 over SR 5C (Ernest Barrett Parkway)**	**HOLE No. BB-2**
Location: **Cobb County, Georgia**	Sheet 1 of 1
Project Number: **171-3463BFI3-35; GDOT Proj. # : NH000-0073-03(242); PI # : 714130**	Location: **Bent No. 2**

Azimuth: **--** Angle from Horizontal: **90** Surface Elevation (ft): **970.16** Station: **ST 1085+06, 32' LT. of CL**

Drilling Equipment: **CME 550** Drilling Method: **HSA Auto Hammer**

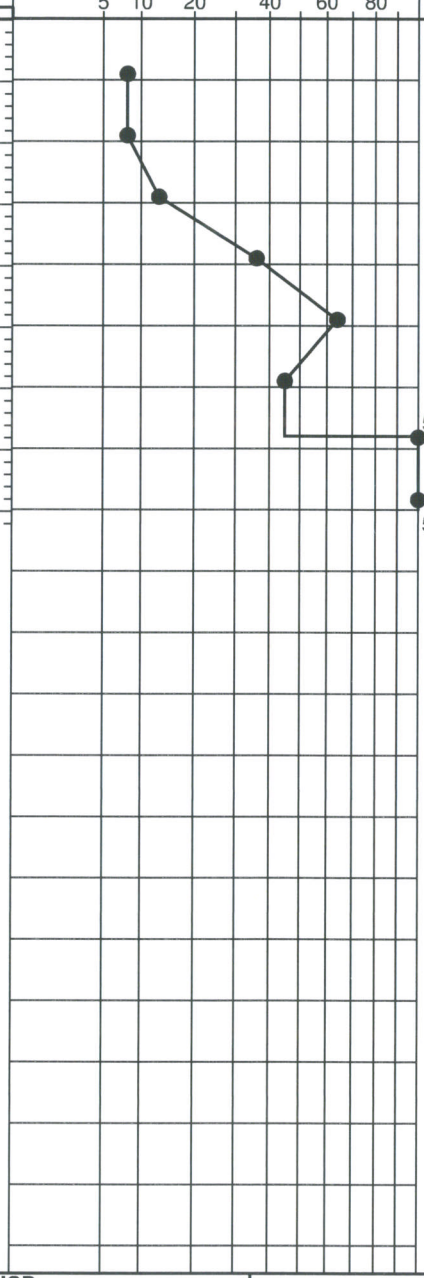
Core Boxes: **--** Samples: **8** Overburden (ft): **42** Rock (ft): **--** Total Depth (ft): **42.0**

Logged By: **MK** Date Drilled: **10/1/07**

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION		ELEVATION (feet)	STANDARD PENETRATION TEST DATA (blows/foot)	N-VALUE
					ASPHALT - 8 inches	GAB	970.2		
					GAB - 16 inches	SM			
5		SS			RESIDUUM : Loose and medium dense brown, white and tan silty medium to fine **SAND**		965		8
10		SS					960		8
15		SS					955		13
20		SS			Dense and very dense brown, white and tan silty medium to fine **SAND** (slightly micaceous)	SM	950		36
25		SS					945		64
30		SS					940		45
35		SS			PARTIALLY WEATHERED ROCK : Sampled as very dense brown, white and tan silty medium to fine **SAND** with rock fragments	PWR	935		50/2"
40		SS					930		50/4"

Auger refusal encountered @ 42 feet below existing ground surface.

Groundwater was encountered @ 18 feet below existing ground surface @ time of boring.



SAMPLER TYPE

SS - Split Spoon
ST - Shelby Tube
NQ - Rock Core, 1-7/8"
NX - Rock Core, 2-1/8"
CU - Cuttings
CT - Continuous Tube

DRILLING METHOD

HSA - Hollow Stem Auger
CFA - Continuous Flight Augers
DC - Driving Casing
RW - Rotary Wash
RC - Rock Core

Hole No. **BB-2**

SPTN 171-3099A.GPJ 11/20/07

WILLMER ENGINEERING INC. | WE

Project: **I-575 over SR 5C (Ernest Barrett Parkway)**	**HOLE No. BB-4**
Location: **Cobb County, Georgia**	Sheet 1 of 1
Project Number: **171-3463BFI3-35; GDOT Proj. # : NH000-0073-03(242); PI # : 714130**	Location: **Bent No. 5**

Azimuth: **--** Angle from Horizontal: **90** Surface Elevation (ft): **990.99** Station: **ST 1086+75, 32' LT. of CL**

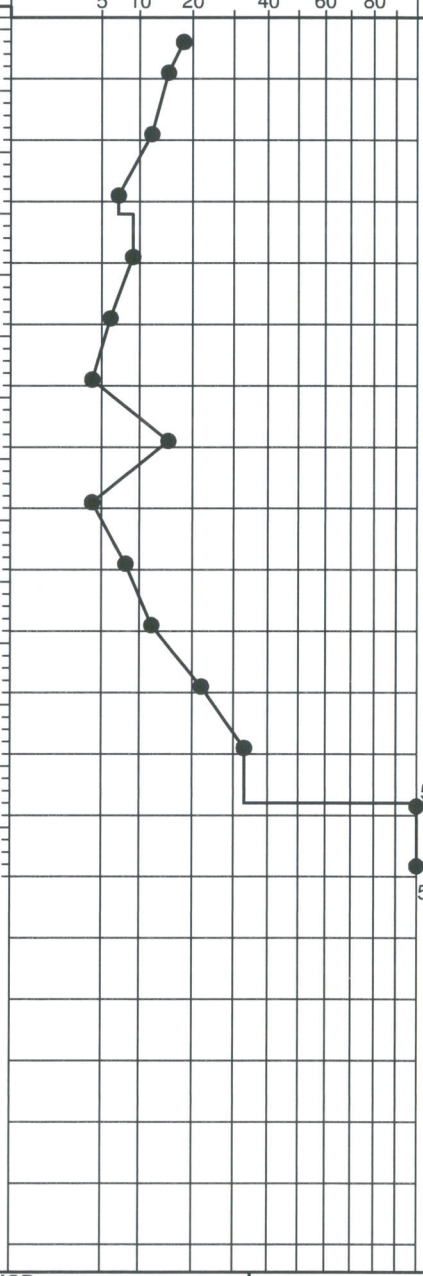
Drilling Equipment: **CME 550** Drilling Method: **HSA Auto Hammer**

Core Boxes: **--** Samples: **15** Overburden (ft): **70** Rock (ft): **--** Total Depth (ft): **70.0**

Logged By: **MK** Date Drilled: **9/25/07**

VERTICAL DEPTH (ft)	GRAPHIC LOG	SAMPLE TYPE	REC%	RQD %	MATERIAL DESCRIPTION		ELEVATION (feet)	N-VALUE
		SS			TOPSOIL - 1 inch	FILL	991.0	
		SS			FILL : Medium dense reddish brown and tan silty medium to fine **SAND**	FILL	990	18
5		SS					985	15
10		SS			Stiff to firm reddish brown medium to fine sandy **SILT** (micaceous)		980	12
15		SS					975	7
20		SS			RESIDUUM : Very loose, loose and medium dense brown and tan silty medium to fine **SAND** (micaceous)	SM	970	9
25		SS					965	6
30		SS					960	4
35		SS					955	15
40		SS					950	4
45		SS					945	8
50		SS					940	12
55		SS			Medium dense and dense brown, white and tan silty medium to fine **SAND** (slightly micaceous)	SM	935	22
60		SS					930	33
65		SS			PARTIALLY WEATHERED ROCK : Sampled as very dense brown, black and tan silty medium to fine **SAND** with rock fragments	PWR	925	50/6"
70		SS						50/3"

STANDARD PENETRATION TEST DATA (blows/foot)



Boring terminated @ 70 feet below existing ground surface.

Groundwater was encountered @ 42 feet below existing ground surface @ time of boring

Bore hole caved in to 32 feet below existing ground surface @ 24 hours after completion of boring.

SAMPLER TYPE

SS - Split Spoon
ST - Shelby Tube
NQ - Rock Core, 1-7/8"
NX - Rock Core, 2-1/8"
CU - Cuttings
CT - Continuous Tube

DRILLING METHOD

HSA - Hollow Stem Auger
CFA - Continuous Flight Augers
DC - Driving Casing
RW - Rotary Wash
RC - Rock Core

Hole No. **BB-4**

SPTN 171-3099A.GPJ 11/20/07

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/23/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-1

BENT NO. 1 FOOTING GROUND ELEV. 970.10

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	Ø
	Gr. El.												
970													
	Lse. Brn. Gray Micas. Clayey Sandy Silt	2s	7										
960	Loose Mltc. Micas. Sandy Silt	4s	6										
		5u											
		6s	12										
		7u											
950		8s	16										
	Medium Dense Same	9s	19										
940	Dense Mltc. Micas. Sandy Silt	10s	26										
		11s	60										
930	Very Dense Same	12s	60										
20		13s	60=.5'										
	End Drilling												

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications of Contract on the job.

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/19/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-3

BENT NO. 2 FOOTING GROUND ELEV. 971.47

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø
	Gr. El.												
970	Very Loose Mltc. Micas. Sandy Silt	1s	4										
960	Loose Same	2s	6										
		3s	10										
950	Medium Dense Mltc. Micas. Sandy Silt	4s	14										
	Dense Same	5s	27										
940		6s	60										
	Very Dense Mltc. Micas. Sandy Silt	7s	60=9'										
930		8s	60										
		9s	60=9'										
	End Drilling												

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OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

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BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 7/22/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-5

BENT NO. 3 FOOTING GROUND ELEV. 987.07

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø
	Gr. El.												
980	Lse. to Med. Dense Mltc. Micas. Sdy. Silt												
970		1s	6										
		2s	5										
960		3s	7										
	Loose Same	4s	7										
950		5s	9										
		6s	10										
940	Medium Dense Mltc. Micas. Sandy Silt	7s	12										
	Dense Same	8s	26										
930	Very Dense Mltc. Micas. Sandy Silt	9s	60										
		10s	60=9'										
	End Drilling												

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DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 7/22/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-6

BENT NO. 4 FOOTING GROUND ELEV. 986.47

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	Ø
	Gr. El.												
	Med. Dse. Red Yel. Micas. Clayey Sandy Silt	1s	15										
980	Medium Dense Mltc. Micas. Sandy Silt	2s	11										
	Loose Same	3s	9										
970		4s	10										
Swt	Medium Dense Mltc. Micas. Sandy Silt	5s	16										
960	Loose Same	6s	9										
	Medium Dense Mltc. Micas. Sandy Silt		11										
950	Loose Same	8s	9										
		9s	9										
940		10s	12										
	Medium Dense Mltc. Micas. Sandy Silt	11s	13										
930		12s	22										
		13s	60=.7'										
920	Very Dense Same	14s	60=5'										

The Department of Transportation in making this foundation [illegible] assumes no responsibility for its accuracy.

No claim will be considered [illegible] or relied on the [illegible] in his bidding or in his construction operations and [illegible] that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications or Contract on the Job.

DOT 490

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OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/18/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-7

BENT NO. 1 FOOTING GROUND ELEV. 971.07

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø
	Gr. El.												
970													
		1s	9										
Gwt. 960		2s	8										
	Loose Mltc. Micas. Sandy Silt	3s	7										
950		4s	9										
		5s	10										
940		6s	11										
		7s	11										
930	Medium Dense Same	8s	13										
		9s	15										
920		10s	23										
		11s	60=9"										
	Very Dense Mltc. Micas. Sandy Silt	12s	60=7"										
910													

Cont

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/18/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-7 Continued

BENT NO. 1 FOOTING GROUND ELEV. 971.07

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	Ø		
		-13s	60=.9'												
		V.Dse.Weathered Rock													
900	Practical Refusal														

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for the data shown. No claim will be allowed for any misunderstanding or misinterpretation of the data shown.

DOT 490

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SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/18/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-8

BENT NO. 2 FOOTING GROUND ELEV. 968.57

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø
970	Gr. El.												
	Loose Mltc. Micas. Clayey Sandy Silt	1s	8										
960	Very Loose Mltc. Micas. Sandy Silt	2s	3										
		3s	4										
950		4s	10										
	Loose Same	5s	9										
940		6s	9										
		7s	11										
930	Medium Dense Mltc. Micas. Sandy Silt	8s	18										
		9s	23										
920	Very Dense Same	10s	60=.9'										
	End Drilling												

The Department of Transportation in making this foundation report available to contractors assumes no responsibility for its accuracy.

No claim will be considered if the contractor relies on this information in his bidding or in his construction operations and finds that it is inaccurate.

This foundation investigation report is not considered as a part of the Plans and Specifications in contract on the job.

DOT 490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/24/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-10

BENT NO. 3 FOOTING GROUND ELEV. 974.87

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø
	Gr. El. ?												
Gwt. 970	Loose Mltc. Micas. Sandy Silt	1s	10										
	Very Loose Mltc. Micas. Sandy Silt	2s	4										
960		3s	4										
	Loose Same	4s	9										
950		5s	10										
		6s	12										
940	Medium Dense Mltc. Micas. Sandy Silt	7s	15										
		8s	34										
	Dense Same												
930		9s	60=.7'										
	Very Dense Mltc. Micas. Sandy Silt	10s	60=.7'										
	End Drilling												

The Department of Transportation in making [illegible] available to contractors [illegible] for its accuracy. [illegible] will be [illegible] if the contract- [illegible] in his bidding of [illegible] operations and finds that [illegible] satisfactory.

This foundation investigation report is not [illegible] as a part of the Plans and Specifications [illegible] Contract on the job.

DOT-490

DEPARTMENT OF TRANSPORTATION

OFFICE OF MATERIALS AND RESEARCH, FOREST PARK, GEORGIA

SOILS ENGINEERING AND GEOLOGY BRANCH

BRIDGE SUBSURFACE INVESTIGATION

Project No. NH000-0073-03(242)

PROJECT PI No. 714130 COUNTY Cobb DATE 8/24/76

LOCATION I-575 over SR 5C (Ernest Barrett Parkway) BORING NO. B-12

BENT NO. 4 FOOTING GROUND ELEV. 974.17

PROPOSED FOOTING ELEV. PARTY CHIEF Pulliam

ELEV.	BORING LOG		BLOW	UNIFIED	γ	W	Gs	% 200	% CLAY	LL	PI	C	ø		
	Gr. El. 1														
970	Medium Dense Mltc. Micas. Sandy Silt														
Swt.		1s	14												
		2s	5												
960		3s	7												
	Loose Same	4s	5												
950		5s	10												
		6s	10												
940		7s	60												
	Very Dense Mltc. Micas. Sandy Silt	8s	60												
930		9s	60-5'												
		10s	60												
920	End Drilling 5														