

CONTRACT R-24327	PROJECT IM-65-3(281)118	DESIGNATION 9981111	BRIDGE FILE MARION B-17-08FB
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**INDIANA
DEPARTMENT OF
TRANSPORTATION**

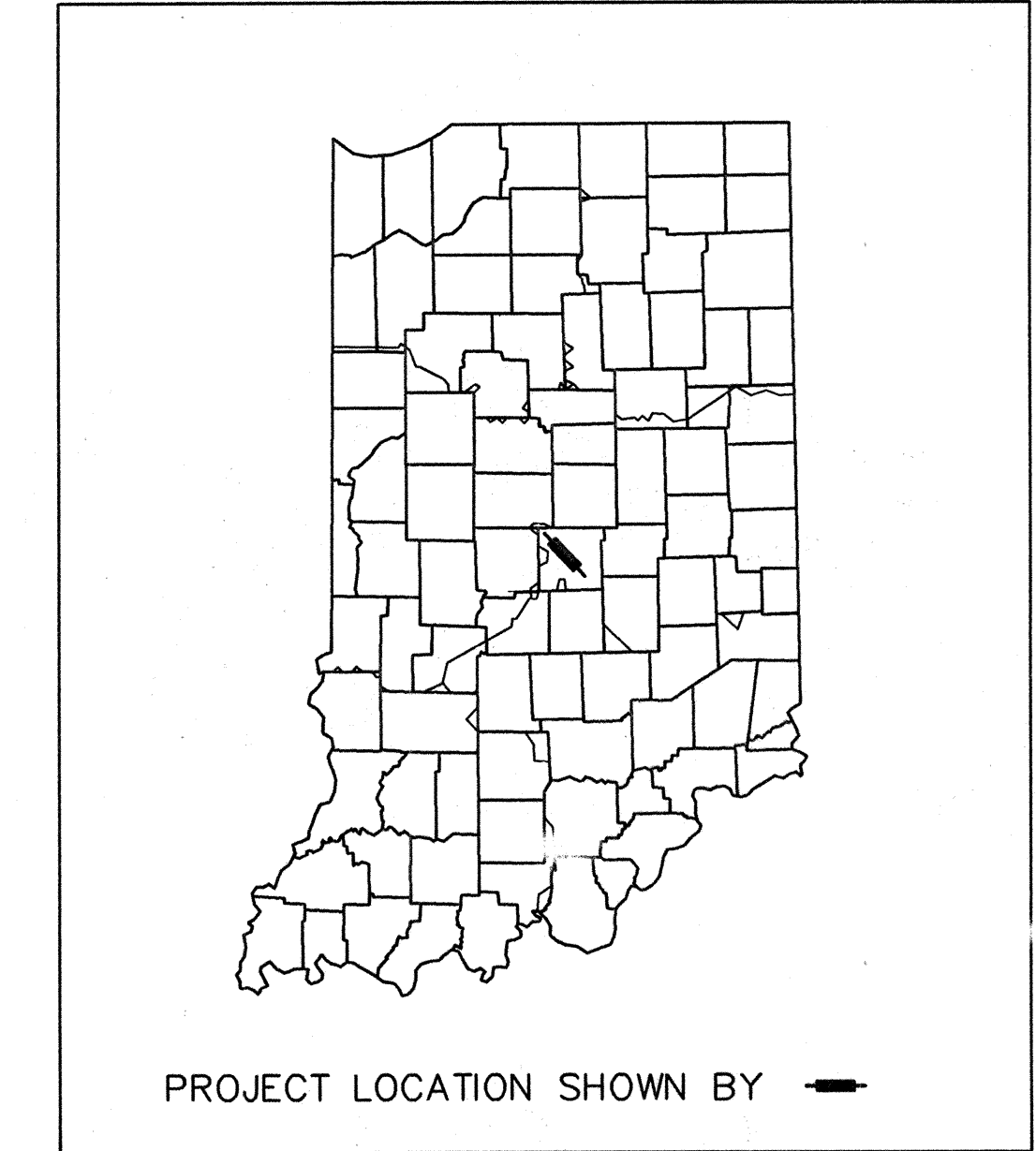
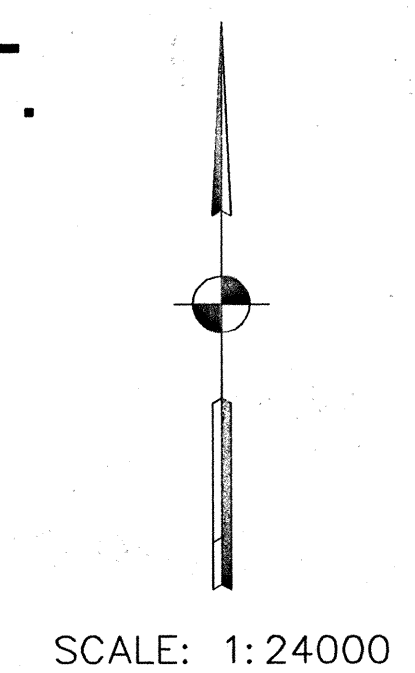
TRAFFIC DATA	EB 38th STREET	
A.A.D.T. (1997)	60963	V.P.D.
A.A.D.T. (2020)	82108	V.P.D.
D.H.V. (2020)		V.P.H.
DIRECTIONAL DISTRIBUTION	52 WB, 48 EB	%
TRUCKS		% D.H.V.
		% A.A.D.T.
DESIGN DATA		
ESAL'S	36200280	
DESIGN SPEED	90 KPH	
PROJECT DESIGN CRITERIA	PARTIAL RECONSTRUCTION (4R) (FREEWAY)	
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL	
RURAL / URBAN	URBAN (INTERMEDIATE)	
TERRAIN	LEVEL	
ACCESS CONTROL	PARTIAL	

INDEX				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
MARION B-17-08FB	CONTINUOUS COMPOSITE STEEL BEAM BRIDGE	3 SPANS: 19050, 22860, 19050 SKEW: VARIES	CROOKED CREEK	7+711.438 "EBL38TH"
SHEET NUMBER	SUBJECT			
1	TITLE AND INDEX			
2	SOIL BORINGS			
3, 4	GENERAL PLAN			
5	BENTS NO.1 AND NO.4 REMOVAL DETAILS			
6	BENT NO.1 DETAILS			
7	BENT NO.4 DETAILS			
8	BENTS NO.1 AND NO.4 DETAILS			
9	PIER NO.2 DETAILS			
10	PIER NO.3 DETAILS			
11	FRAMING PLAN			
12-15	STRUCTURAL STEEL DETAILS			
16-18	SUPERSTRUCTURE DETAILS			
19	R.C. BRIDGE APPROACH DETAILS			
20	BRIDGE SUMMARY			

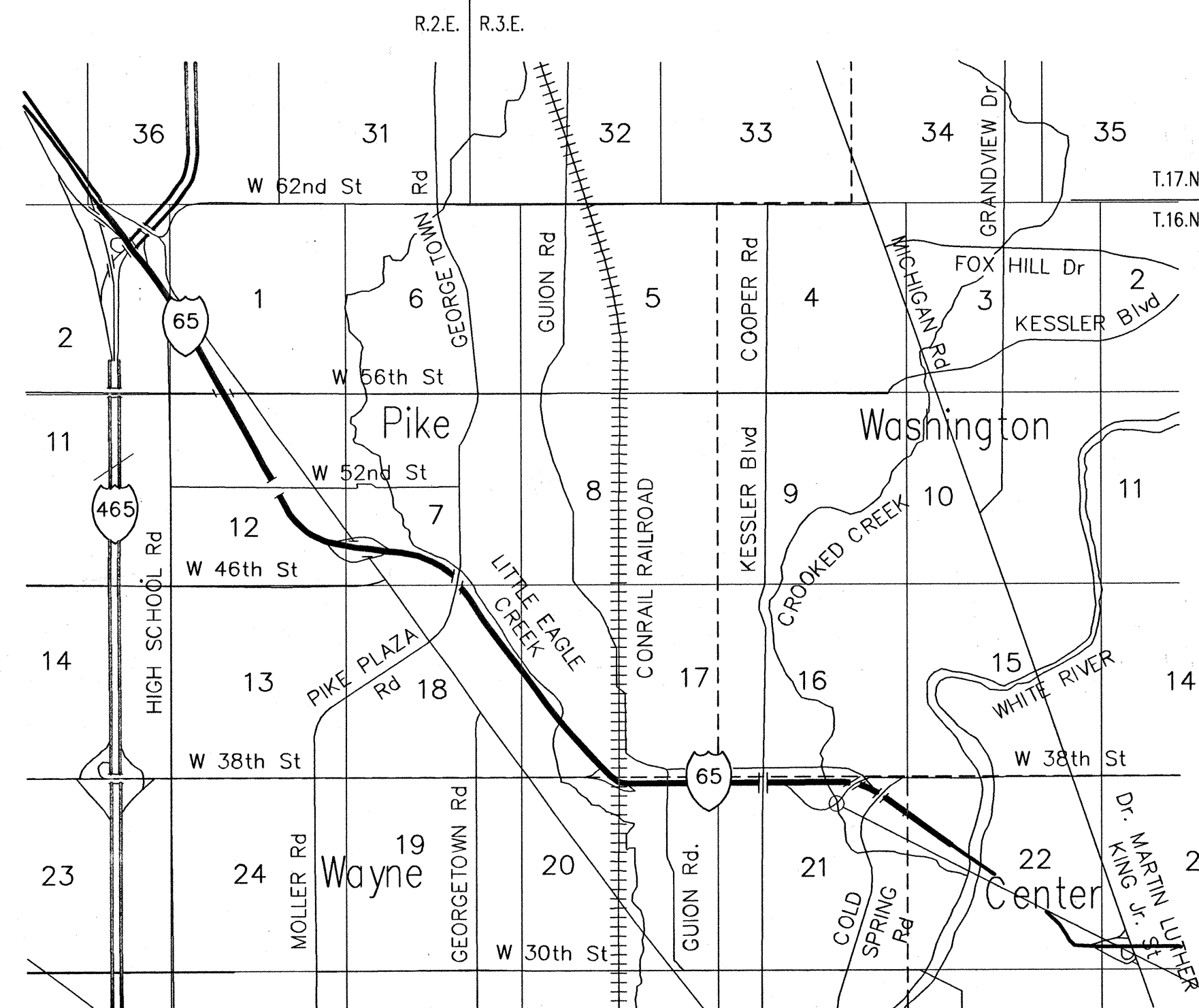
BRIDGE PLANS
FOR SPANS OVER 6.1 METERS
ROUTE: I-65 RP: 117+072

PROJECT NO. **IM-65-3(281)118** P.E. **CONST.**
IM-65-3(281)118

DECK RECONSTRUCTION AND WIDENING FOR BRIDGE ON EB 38TH STREET
OVER CROOKED CREEK IN WAYNE TOWNSHIP, MARION COUNTY



R-24327



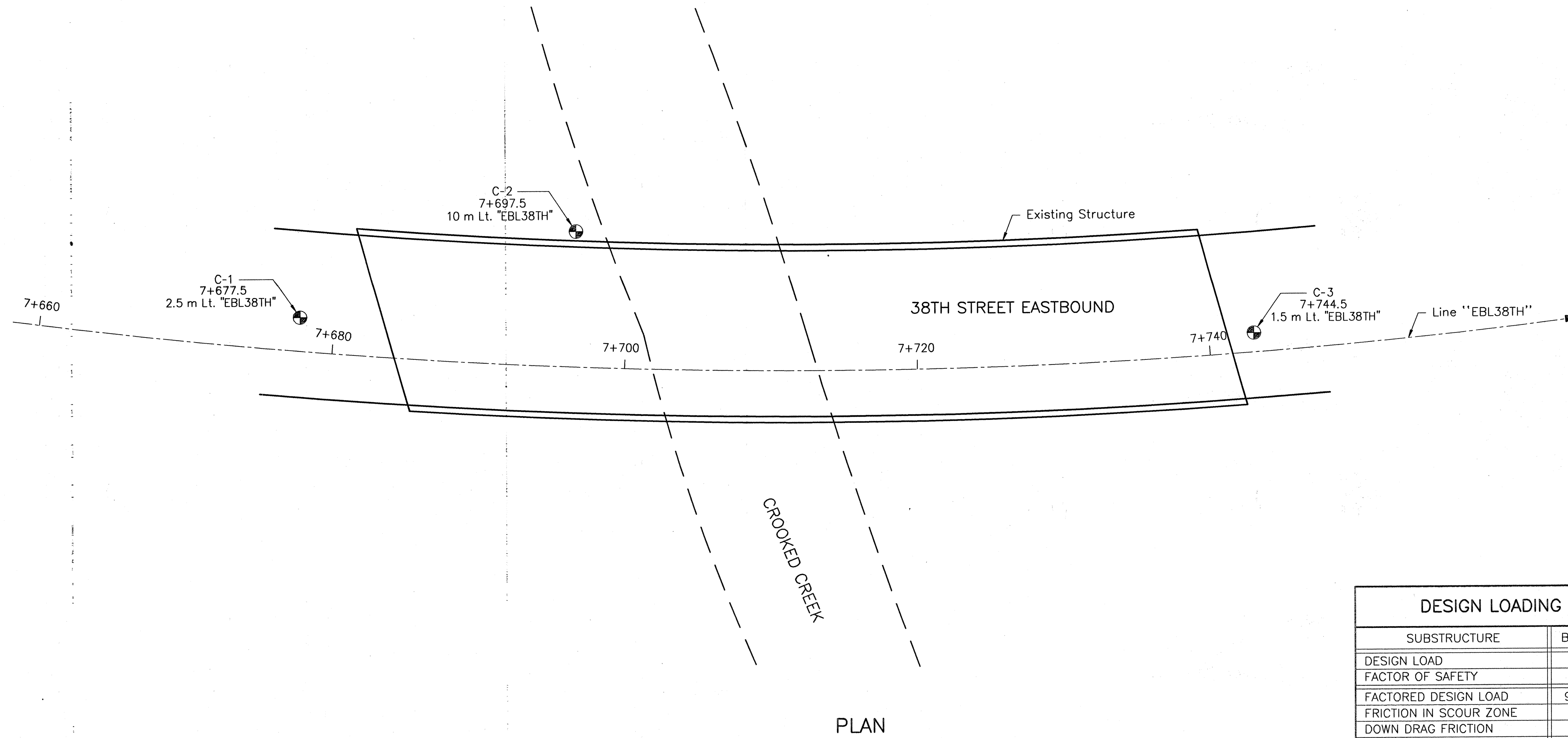
Str. No. MARION B-17-08FB
Deck Reconstruction and
Widening for Present
Str. No. MARION B-17-08FA
EB 38th Street Over Crooked
Creek

VICINITY MAP
INDIANAPOLIS, INDIANA
WAYNE & PIKE TOWNSHIPS
MARION COUNTY

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 1999
TO BE USED WITH THESE PLANS

Time: 11:46:41
Date: 4/11/2000
Scale: 1:25
Drawing File: I65_MarionCo\MB1708FB\Blt.dwg (32)

 JANSEN & SPAANS ENGINEERING CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	 Butler Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4815 FAX 317 713-4616	FEDERAL HIGHWAY ADMINISTRATION U.S. DEPT. OF TRANSPORTATION APPROVED: _____ DATE _____ DIVISION ADMINISTRATOR	PLANS PREPARED BY: JANSEN & SPAANS ENGINEERING (317)254-9686 PHONE NUMBER CERTIFIED BY: <i>Michael J. Halterman</i> 9/28/01 DATE APPROVED FOR LETTING: _____ DATE CHIEF, DIVISION OF DESIGN		BRIDGE FILE
					MARION B-17-08 FB
DESIGNATION					
9981111					
SHEETS					
1 of 20					
CONTRACT		PROJECT			
R-24327		IM-65-3(281)118			



DESIGN LOADING FOR GEOTECHNICAL TESTING				
SUBSTRUCTURE	BENT NO.1	PIER NO.2	PIER NO.3	BENT NO.4
DESIGN LOAD	360 kN	490 kN	490 kN	360 kN
FACTOR OF SAFETY	2.5	2.5	2.5	2.5
FACTORED DESIGN LOAD	900 kN	1225 kN	1225 kN	900 kN
FRICTION IN SCOUR ZONE	- kN	- kN	- kN	- kN
DOWN DRAG FRICTION	- kN	- kN	- kN	- kN
ULTIMATE LOAD	900 kN	1225 kN	1225 kN	900 kN
TESTING METHOD	by Formula Std. Spec. 701			

LOG OF TEST BORING				LOG OF TEST BORING				LOG OF TEST BORING				LOG OF TEST BORING				LOG OF TEST BORING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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moist, gray (glacial till), A-4, Lab No. 32115L	200	SS-11	7.0	SAND AND GRAVEL, dense to medium dense, wet, gray, A-1-a, Lab No. 32105L		<table border="1"> <thead> <tr> <th>SAMPLE</th> <th>DEPTH (m)</th> <th>DESCRIPTION/CLASSIFICATION and REMARKS</th> <th>SOIL PROPERTIES</th> </tr> </thead> <tbody> <tr> <td>SS-10</td> <td>10.1</td> <td>SAND AND GRAVEL, continued</td> <td>12.8</td> </tr> <tr> <td>SS-11</td> <td>10.5</td> <td>LOAM, very stiff to hard, moist, gray (glacial till), A-4, Lab No. 32115L</td> <td>310</td> </tr> <tr> <td>SS-12</td> <td>11.0</td> <td>LOAM, very stiff, moist, gray (glacial till), A-4, Lab No. 32115L</td> <td>>430</td> </tr> <tr> <td>SS-13</td> <td>11.5</td> <td>SAND AND GRAVEL, very dense, wet, gray, A-1-a, Lab No. 32105L</td> <td></td> </tr> <tr> <td>SS-14</td> <td>12.0</td> <td>LOAM, hard, moist, gray (glacial till), A-4, Lab No. 32115L</td> <td>>430</td> </tr> <tr> <td>SS-15</td> <td>12.5</td> <td>End of Boring at 21.3 m</td> <td></td> </tr> </tbody> 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<td>240</td> </tr> <tr> <td>SS-47</td> <td>22.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-48</td> <td>23.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-49</td> <td>23.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-50</td> <td>24.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-51</td> <td>24.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-52</td> <td>25.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-53</td> <td>25.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-54</td> <td>26.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-55</td> <td>26.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-56</td> <td>27.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-57</td> <td>27.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-58</td> <td>28.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-59</td> <td>28.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-60</td> <td>29.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-61</td> <td>29.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-62</td> <td>30.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-63</td> <td>30.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-64</td> <td>31.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-65</td> <td>31.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-66</td> <td>32.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-67</td> <td>32.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-68</td> <td>33.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-69</td> <td>33.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-70</td> <td>34.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-71</td> <td>34.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-72</td> <td>35.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-73</td> <td>35.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-74</td> <td>36.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-75</td> <td>36.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-76</td> <td>37.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-77</td> <td>37.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-78</td> <td>38.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-79</td> <td>38.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-80</td> <td>39.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-81</td> <td>39.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-82</td> <td>40.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-83</td> <td>40.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-84</td> <td>41.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-85</td> <td>41.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-86</td> <td>42.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-87</td> <td>42.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-88</td> <td>43.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-89</td> <td>43.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-90</td> <td>44.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-91</td> <td>44.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-92</td> <td>45.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-93</td> <td>45.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-94</td> <td>46.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-95</td> <td>46.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-96</td> <td>47.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-97</td> <td>47.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-98</td> <td>48.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-99</td> <td>48.5</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> <tr> <td>SS-100</td> <td>49.0</td> <td>LOAM, medium stiff to stiff, moist, brown (fill) (visual)</td> <td>240</td> </tr> </tbody> </table>				SAMPLE	DEPTH (m)	DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES	SS-1	0.3	ASPHALTIC CONCRETE		SS-2	0.5	PORTLAND CEMENT CONCRETE		SS-3	0.8	CRUSHED AGGREGATE (subbase)		SS-4	1.0	SAND, loose, moist, brown (fill) (visual)	240	SS-5	1.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-6	2.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-7	2.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-8	3.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-9	3.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-10	4.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-11	4.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-12	5.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-13	5.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-14	6.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-15	6.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-16	7.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-17	7.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-18	8.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-19	8.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-20	9.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-21	9.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-22	10.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-23	10.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-24	11.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-25	11.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-26	12.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-27	12.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-28	13.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-29	13.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-30	14.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-31	14.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-32	15.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-33	15.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-34	16.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-35	16.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-36	17.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-37	17.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-38	18.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-39	18.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-40	19.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-41	19.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-42	20.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-43	20.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-44	21.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-45	21.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-46	22.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-47	22.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-48	23.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-49	23.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-50	24.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-51	24.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-52	25.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-53	25.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-54	26.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-55	26.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-56	27.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-57	27.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-58	28.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-59	28.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-60	29.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-61	29.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-62	30.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-63	30.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-64	31.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-65	31.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-66	32.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-67	32.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-68	33.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-69	33.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-70	34.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-71	34.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-72	35.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-73	35.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-74	36.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-75	36.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-76	37.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-77	37.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-78	38.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-79	38.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-80	39.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-81	39.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-82	40.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-83	40.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-84	41.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-85	41.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-86	42.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-87	42.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-88	43.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-89	43.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-90	44.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-91	44.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-92	45.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-93	45.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-94	46.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-95	46.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-96	47.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-97	47.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-98	48.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-99	48.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240	SS-100	49.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240
SAMPLE	DEPTH (m)	DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-1	0.3	ASPHALTIC CONCRETE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SS-2	0.5	PORTLAND CEMENT CONCRETE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SS-3	0.8	CRUSHED AGGREGATE (subbase)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SS-4	1.0	SAND, loose, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-5	1.5	LOAM, medium stiff, moist, brown and gray (fill) (visual)	280																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-6	2.0	LOAM, very stiff, moist, brown and gray (fill) (visual)	280																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-7	3.0	SANDY LOAM, medium dense, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-8	4.0	LOAM, very stiff, moist, gray (fill) (visual)	410																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-9	5.0	SILTY LOAM, loose, moist, gray, trace organics and wood fragments (visual)	16.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-10	6.0	LOAM, very stiff, moist, gray (glacial till), A-4, Lab No. 32115L	200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-11	7.0	SAND AND GRAVEL, dense to medium dense, wet, gray, A-1-a, Lab No. 32105L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SAMPLE	DEPTH (m)	DESCRIPTION/CLASSIFICATION and REMARKS	SOIL PROPERTIES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-10	10.1	SAND AND GRAVEL, continued	12.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-11	10.5	LOAM, very stiff to hard, moist, gray (glacial till), A-4, Lab No. 32115L	310																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-12	11.0	LOAM, very stiff, moist, gray (glacial till), A-4, Lab No. 32115L	>430																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-13	11.5	SAND AND GRAVEL, very dense, wet, gray, A-1-a, Lab No. 32105L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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SS-2	0.5	SANDY LOAM, very loose, moist, brown, A-2-4, Lab No. 32155L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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SS-71	34.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-72	35.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-73	35.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-74	36.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-75	36.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-76	37.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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SS-85	41.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
SS-86	42.0	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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SS-89	43.5	LOAM, medium stiff to stiff, moist, brown (fill) (visual)	240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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317 713-4615
FAX 317 713-4616

RECOMMENDED FOR APPROVAL: *Michael J. Hallman* 9/28/01
DESIGNED: _____ DRAWN: TAL
CHECKED: _____ CHECKED: JWR

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE FILE MARION B-17-08-FB
DESIGNATION 9981111

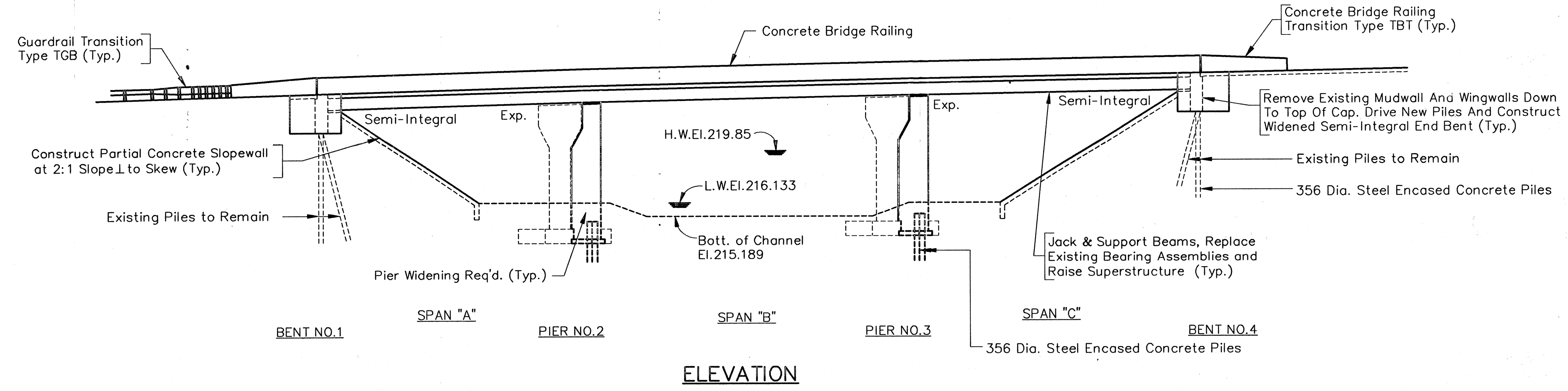
SURVEY BOOK SHEETS
2 of 20

CONTRACT PROJECT
R-24327 IM-65-3 (281) 118

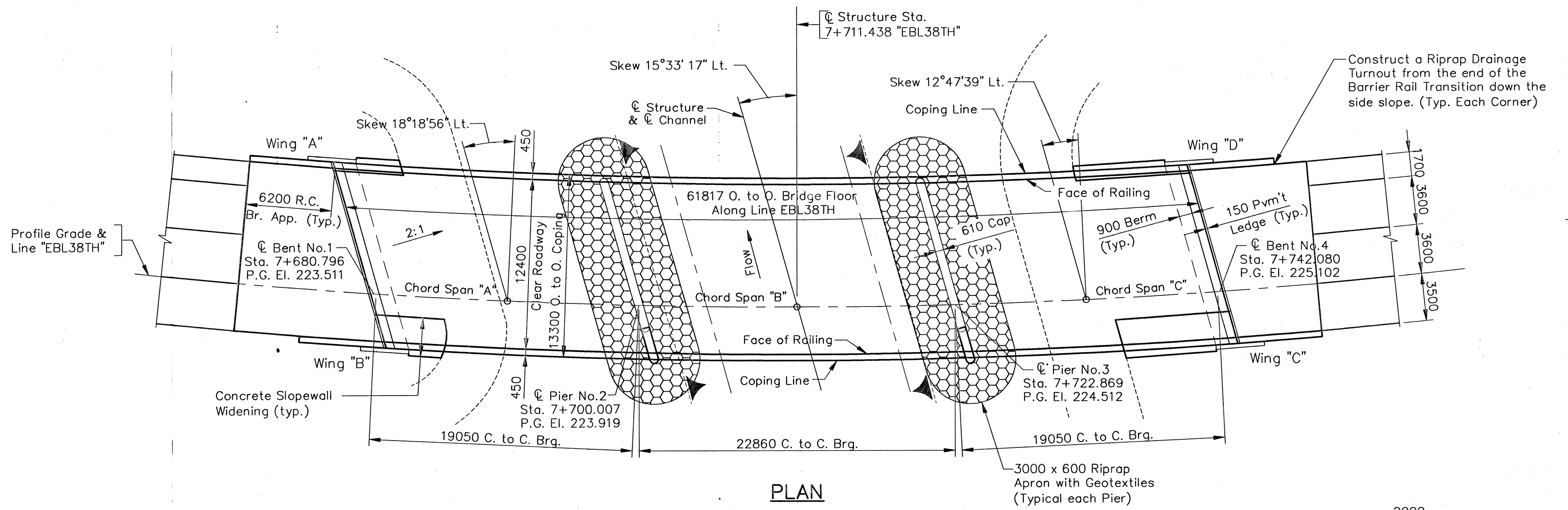
PLOT SCALE: 1:200,000 EDT DATE: 10/17/01 15:46:27 EDTED BY: D:\N\NABP-17-08-FB\30081111.D3D

"ORIGINAL" PROFILE GRADE (1963)		"NEW" PROFILE GRADE (2000)	
P.V.I.	7+665.72 "EBL"	P.V.I.	7+660 "EBL38TH"
P.V.I. ELEV.	221.785	P.V.I. ELEV.	222.148
V.C. =	243.84 m	V.C. =	190.0 m
G1 =	-0.88%	G1 =	-0.70 %
G2 =	+3.448%	G2 =	+3.576%

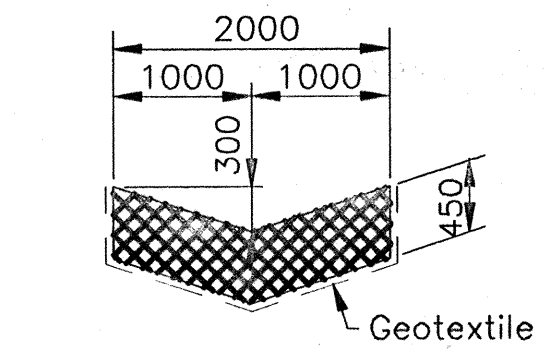
STRUCTURE BUILT TO A 190.0 m VERTICAL CURVE



ELEVATION



PLAN



RIPRAP DRAINAGE TURNOUT DETAIL
Not to Scale

GENERAL NOTES

Plans for the existing structures are on file in the Central Office and are available upon request.

Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new part to the old.

Masonry coat railing as shown in the details and all exposed substructure faces. Masonry coating shall conform to Federal Color Standard 595a, Color No. 27778 (Antique Ivory). See the Special Provisions.

Reinforcing steel covering shall be 65 mm in the top and 25 mm minimum in the bottom of the floor slabs, 75 mm in the footings except the bottom steel which shall be 100 mm, and 50 mm in all other parts, unless noted.

DESIGN DATA

UNIT STRESSES :

Class "C" Concrete $F'_c = 27 \text{ MPa}$

Class "A" Concrete $F'_c = 24 \text{ MPa}$

Class "B" Concrete $F'_c = 21 \text{ MPa}$

Reinforcing Steel $F_y = 420 \text{ MPa}$

LIVE LOAD :

HS20-44 loading with impact and distribution in accordance with 1996 A.A.S.H.T.O. Specifications and subsequent Interim Specifications.

Checked for special loading of 10885 kg. axles spaced at 1220 mm centers.

DEAD LOAD :

Actual plus 1.7 kN per square meter (composite) for future wearing surface and 0.7 kN per square meter (non composite) for permanent metal deck forms.

FLOOR SLAB :

Designed for a 7257 kg. wheel load plus impact with a structural depth of 160.

ALLOWABLE STRESSES :

In accordance with 1996 A.A.S.H.T.O. Specifications and Interim Specifications using Load Factor Design Method.

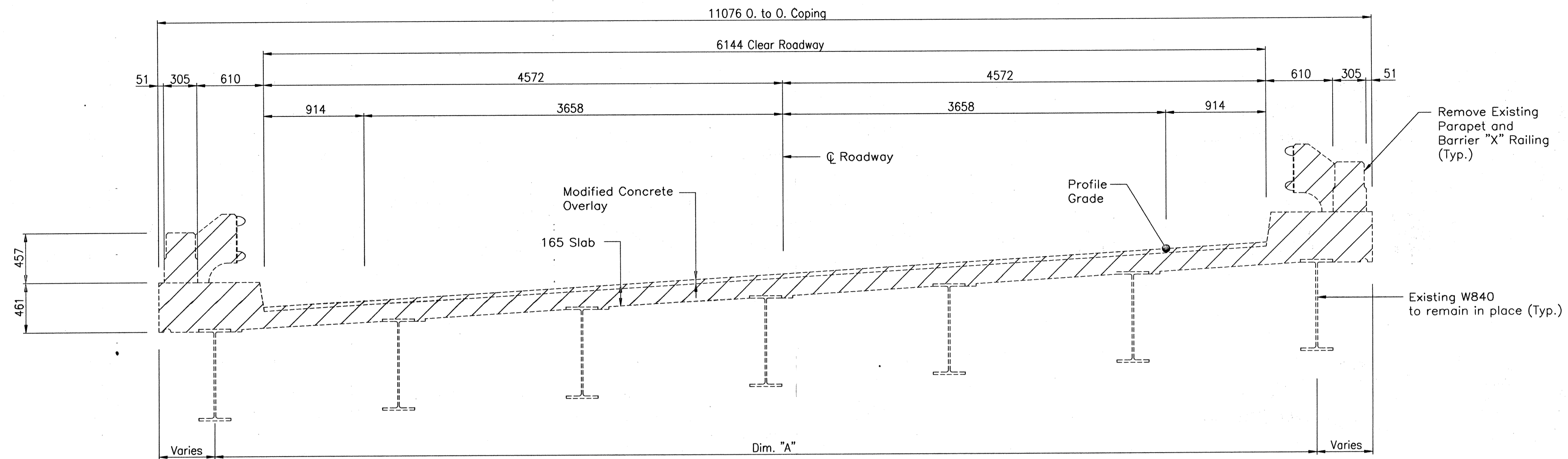
CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
3 SPANS: 19050, 22860, 19050
SKEW: VARIES, 12800 CLEAR RDWY.
OVER CROOKED CREEK ON EASTBOUND LANE W. 38TH ST.
IN MARION COUNTY

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

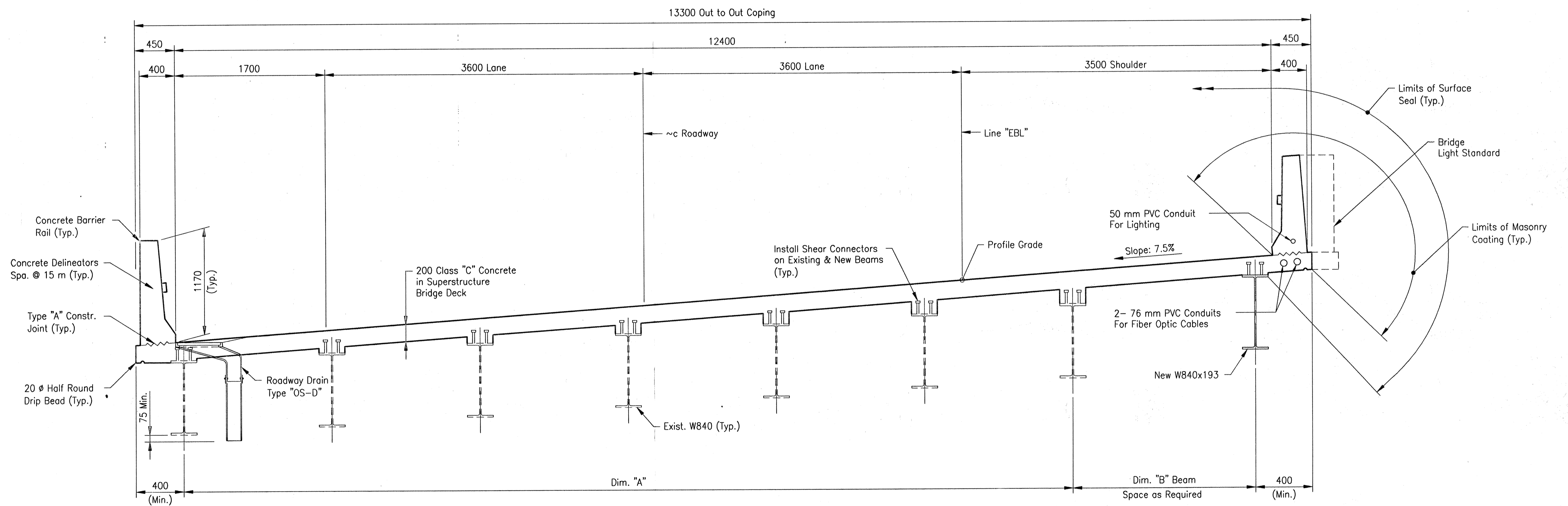
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Time: 14:55:20
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Drawing File: 65_MarionCo\MB1708\FB\3817-08-FB.dwg (S22)

 JANSEN & SPAANS ENGINEERING CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	 Butler Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN 46240 317 713-4615 FAX 317 713-4616		RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE 9/28/01	INDIANA DEPARTMENT OF TRANSPORTATION GENERAL PLAN	HORIZONTAL SCALE 1 : 200 BRIDGE FILE MARION B-17-08-FB
			DESIGNED: CBS CHECKED: LS		DRAWN: TAL CHECKED: JWR
CONTRACT R-24327				PROJECT IM-65-3 (281) 118	



TYPICAL EXISTING SECTION



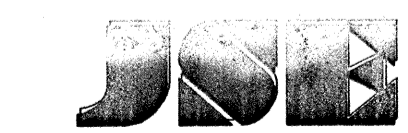
TYPICAL RECONSTRUCTION SECTION

BEAM SPACING TABLE

	DIM. "A"	DIM. "B"
SPAN "A"	6 Spaces @ 1653 = 9918	1963
SPAN "B"	6 Spaces @ 1676 = 10056	1992
SPAN "C"	6 Spaces @ 1697 = 10182	2016

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:54:48
 Date: 4/17/2000
 Drawing File: I65 MarionCo\MB1708\REV\SB-RECK.dwg (322)



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 INDIANAPOLIS, IN. 46240
 317 713-4615
 FAX 317 713-4616



RECOMMENDED FOR APPROVAL
Michael J. Halterman 9/28/01
 DESIGN ENGINEER DATE

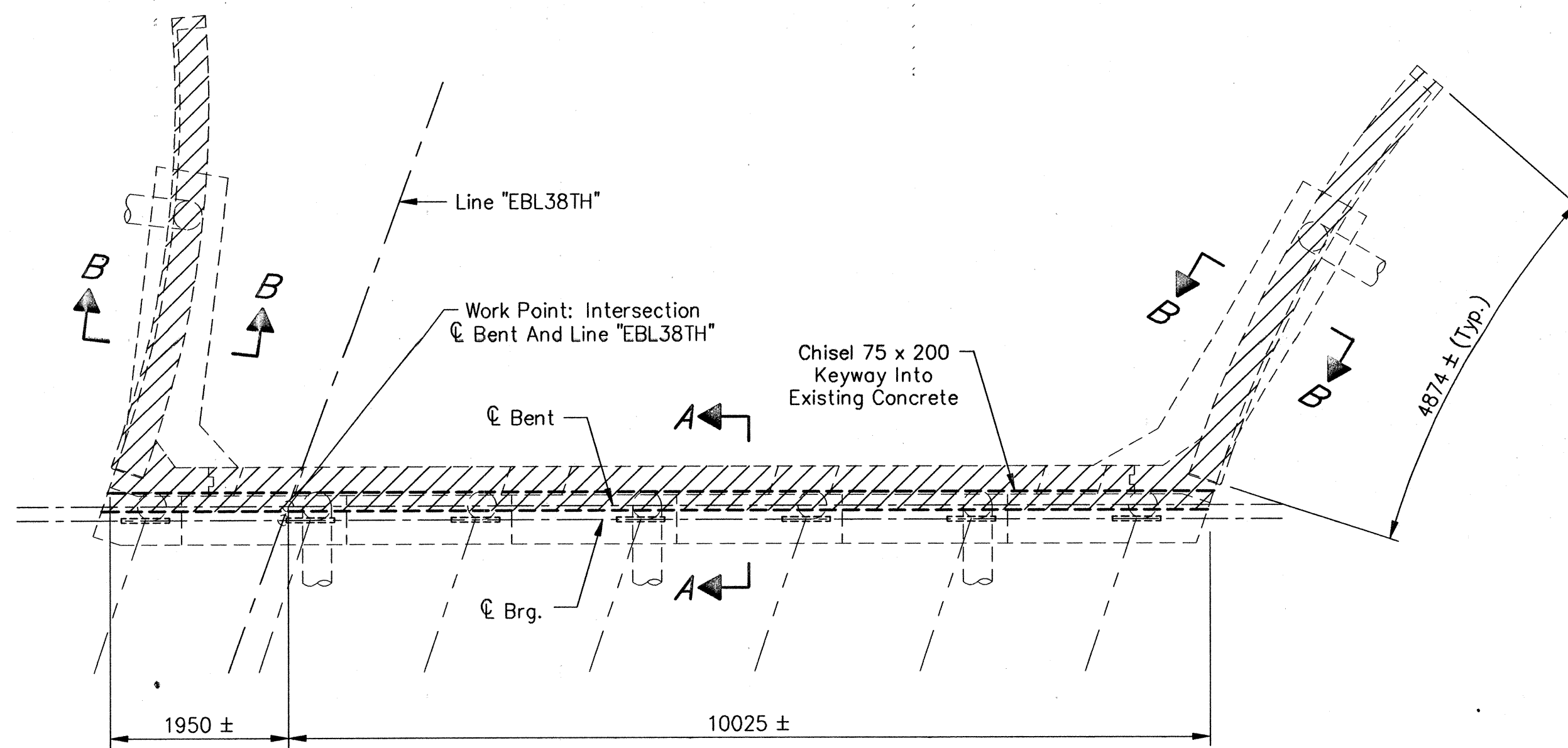
DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JWR

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

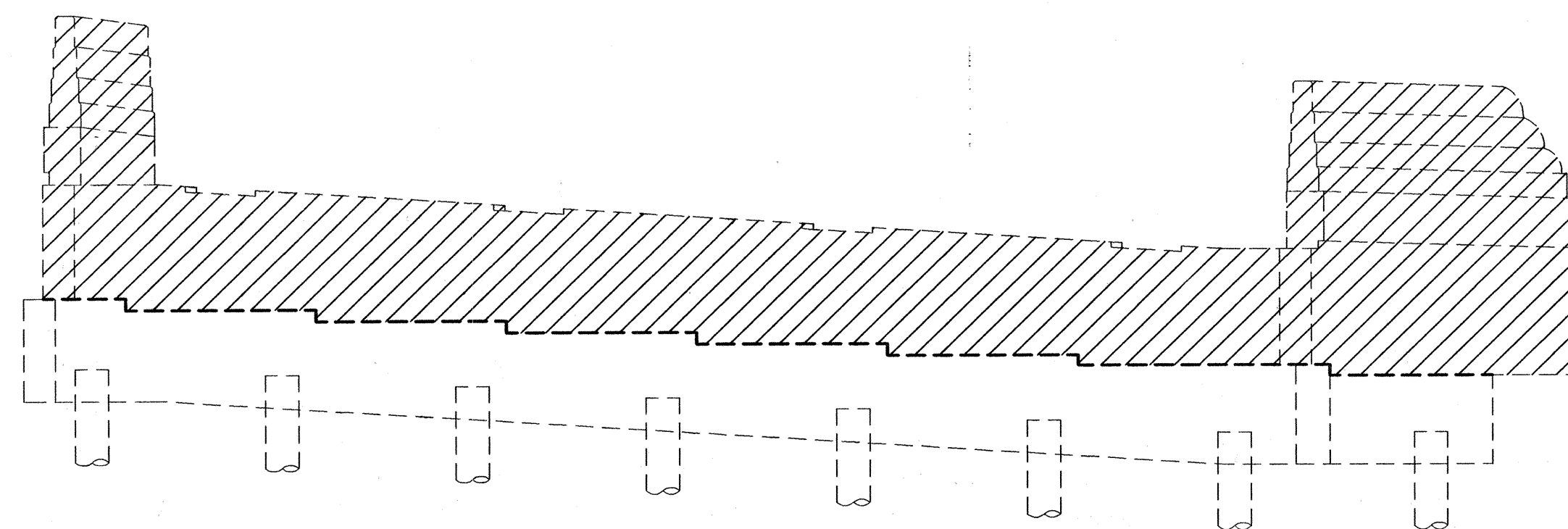
HORIZONTAL SCALE 1 : 25
 VERTICAL SCALE BRIDGE FILE
 MARION B-17-08-FB

DESIGNATION 9981111
 SURVEY BOOK SHEETS
 4 of 20
 CONTRACT PROJECT
 R-24327 IM-65-3 (281) 118

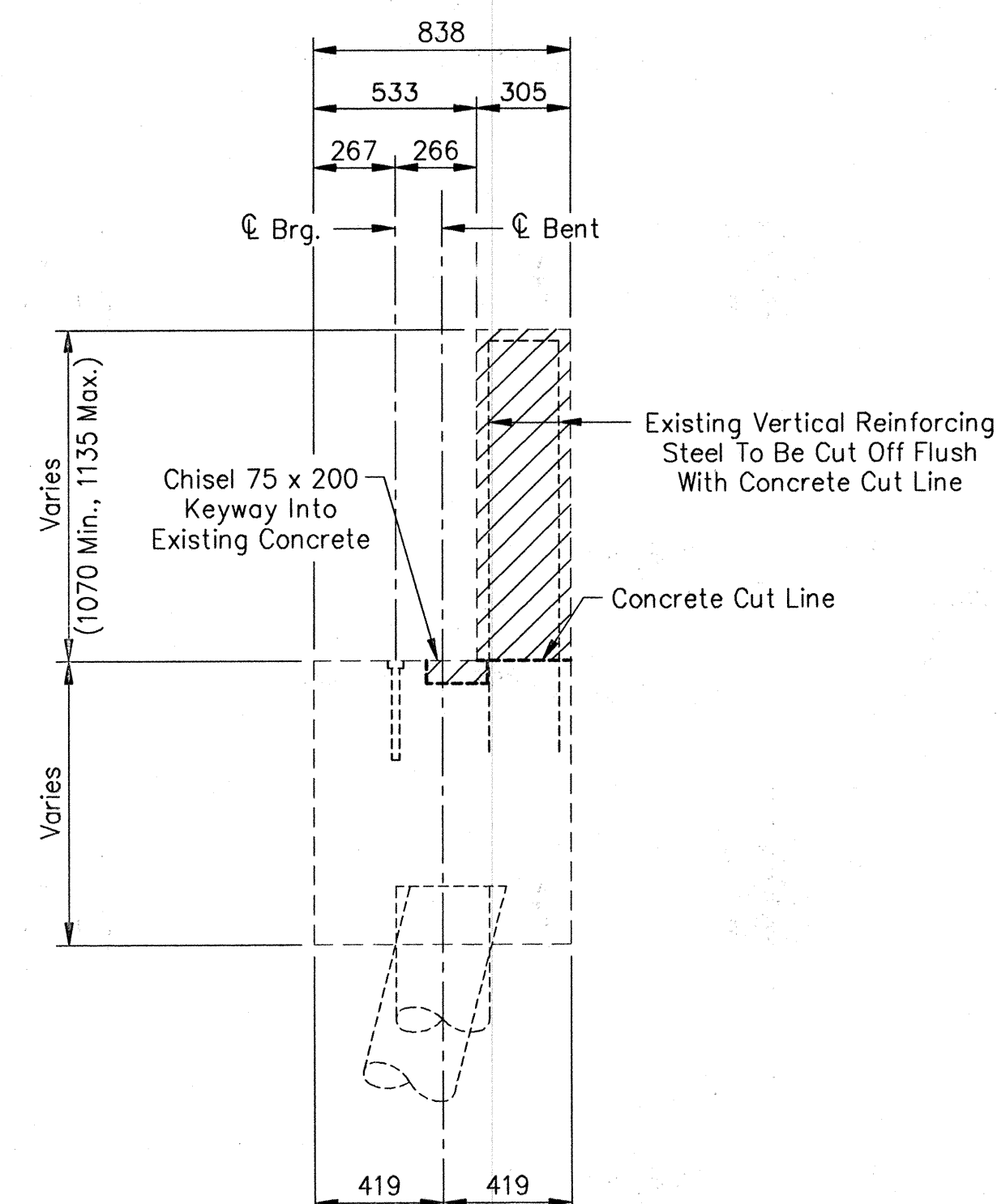


EXISTING PLAN BENTS NO. 1 & 4

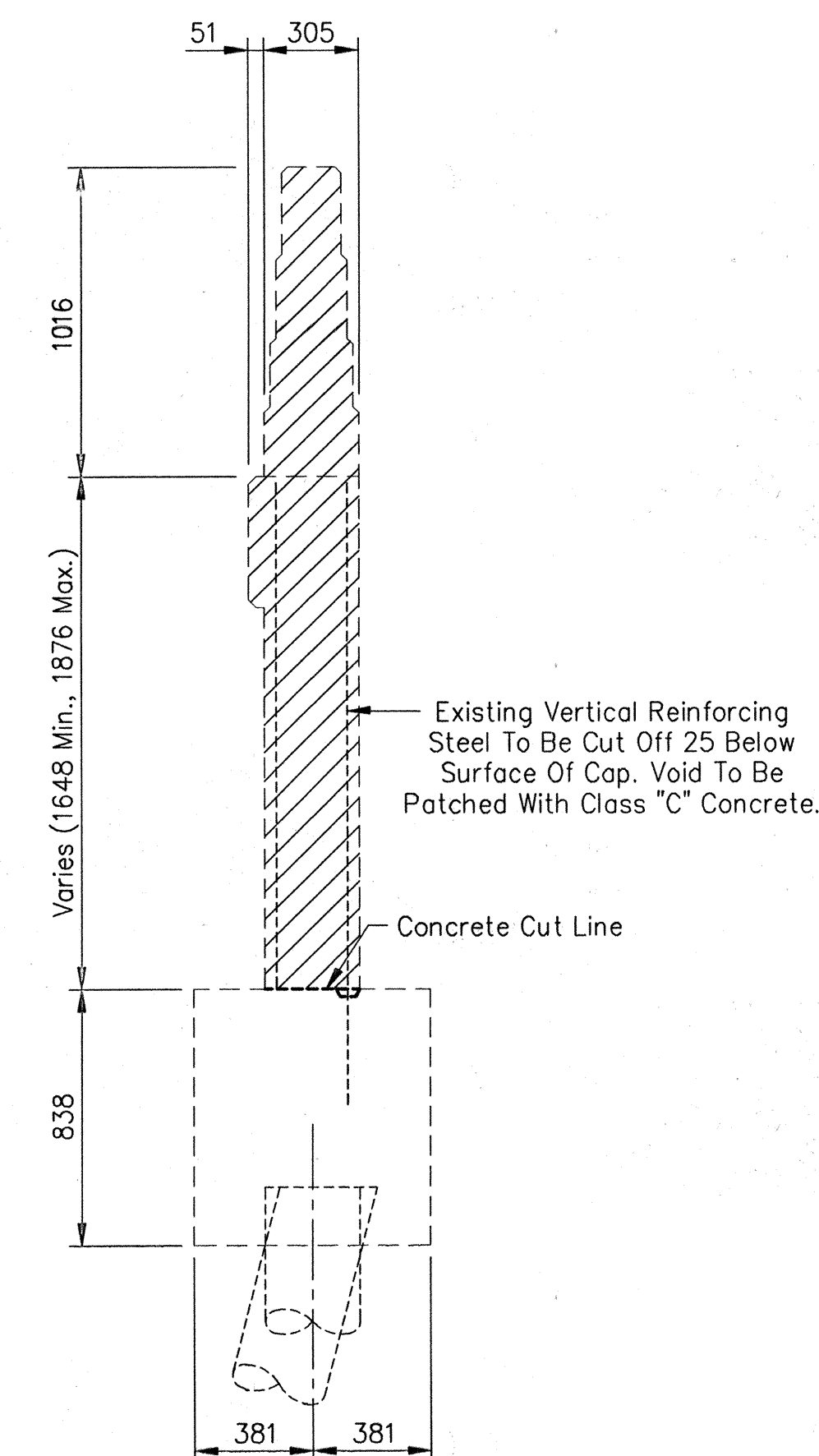
Note:
Bent No.1 Shown.
Bent No.4 Similar.



EXISTING ELEVATION



SECTION A-A
Scale: 1:20



SECTION B-B
Scale: 1:20

Cross Hatched Areas Indicate Removal

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
Date: 4/17/2000
Drawing File: I:\Marion\MB1708FB\SB-REMA.dwg (S22)

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INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616
509 WEST 84TH DRIVE, SUITE C
MERRILLVILLE, IN. 46410
219 769-2333
FAX 219 769-2377

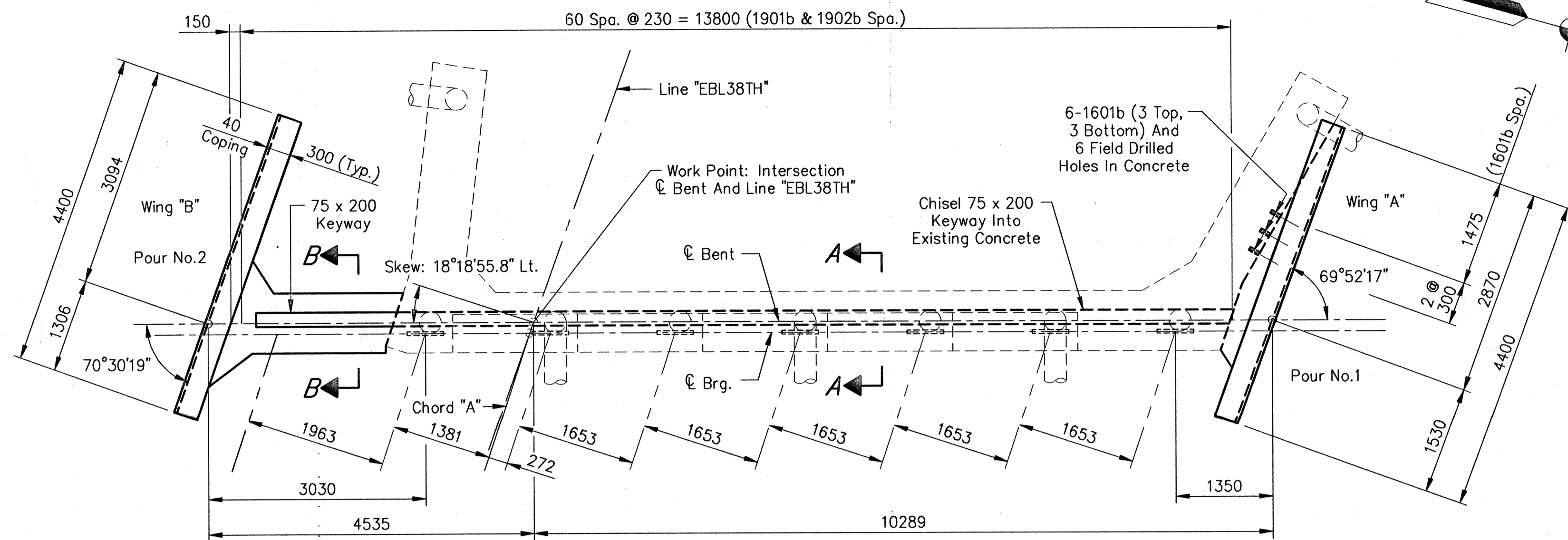


RECOMMENDED FOR APPROVAL *Michael J. Halperin* 9/28/01
DESIGN ENGINEER DATE
DESIGNED: CBS DRAWN: TAL
CHECKED: LS CHECKED: JW

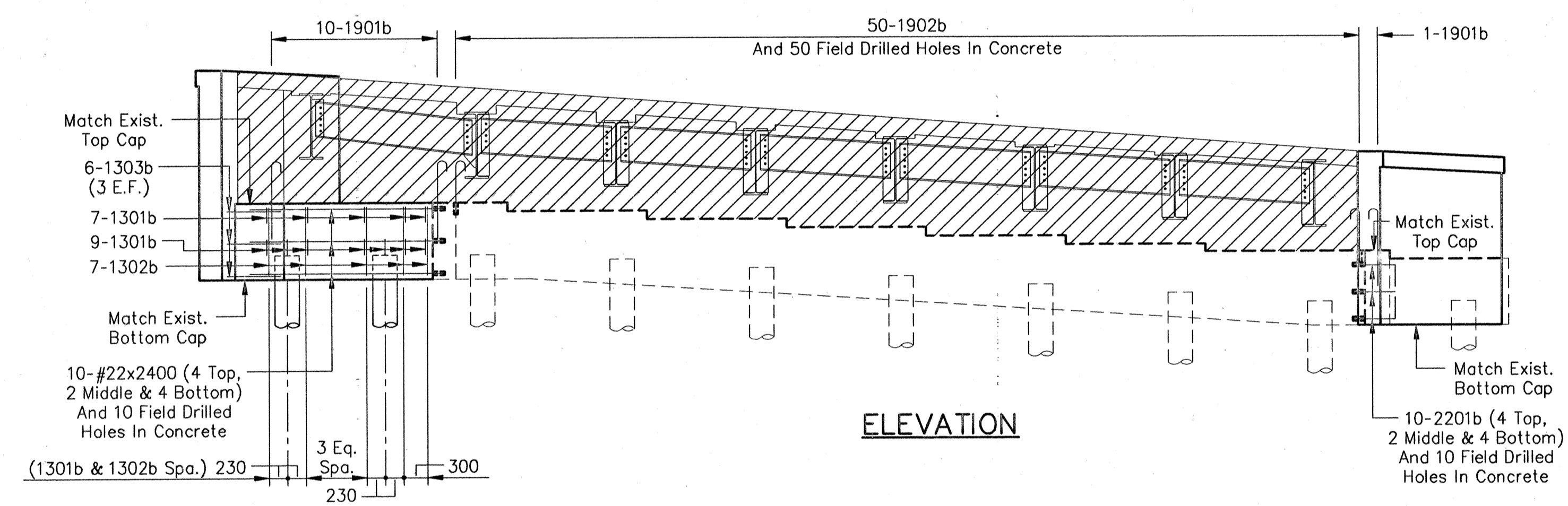
INDIANA
DEPARTMENT OF TRANSPORTATION

BENTS NO.1 AND NO.4
REMOVAL DETAILS

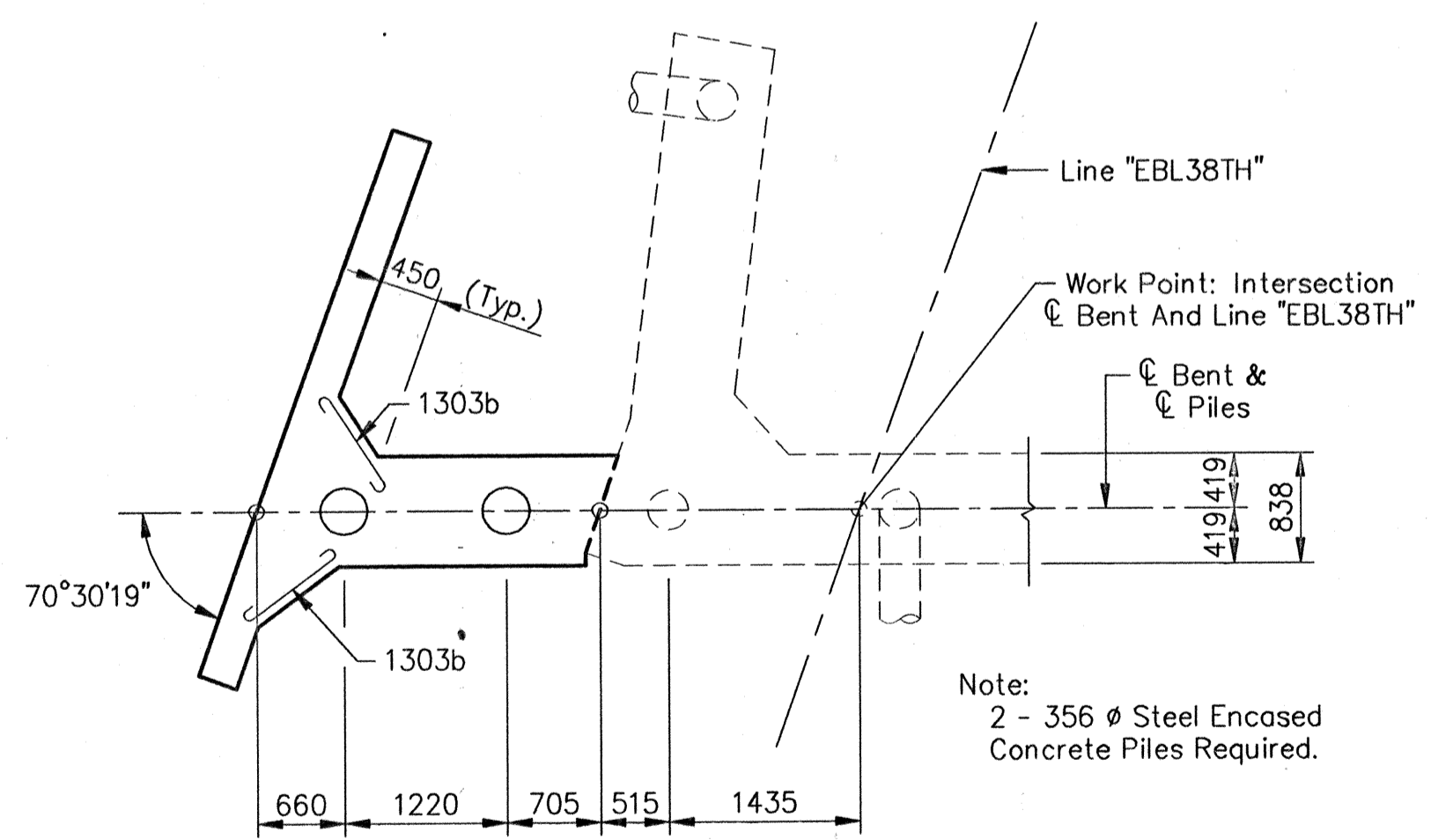
HORIZONTAL SCALE 1 : 50	BRIDGE FILE MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION 9981111
SURVEY BOOK	SHEETS 5 of 20
CONTRACT R-24327	PROJECT IM-65-3 (281) 118



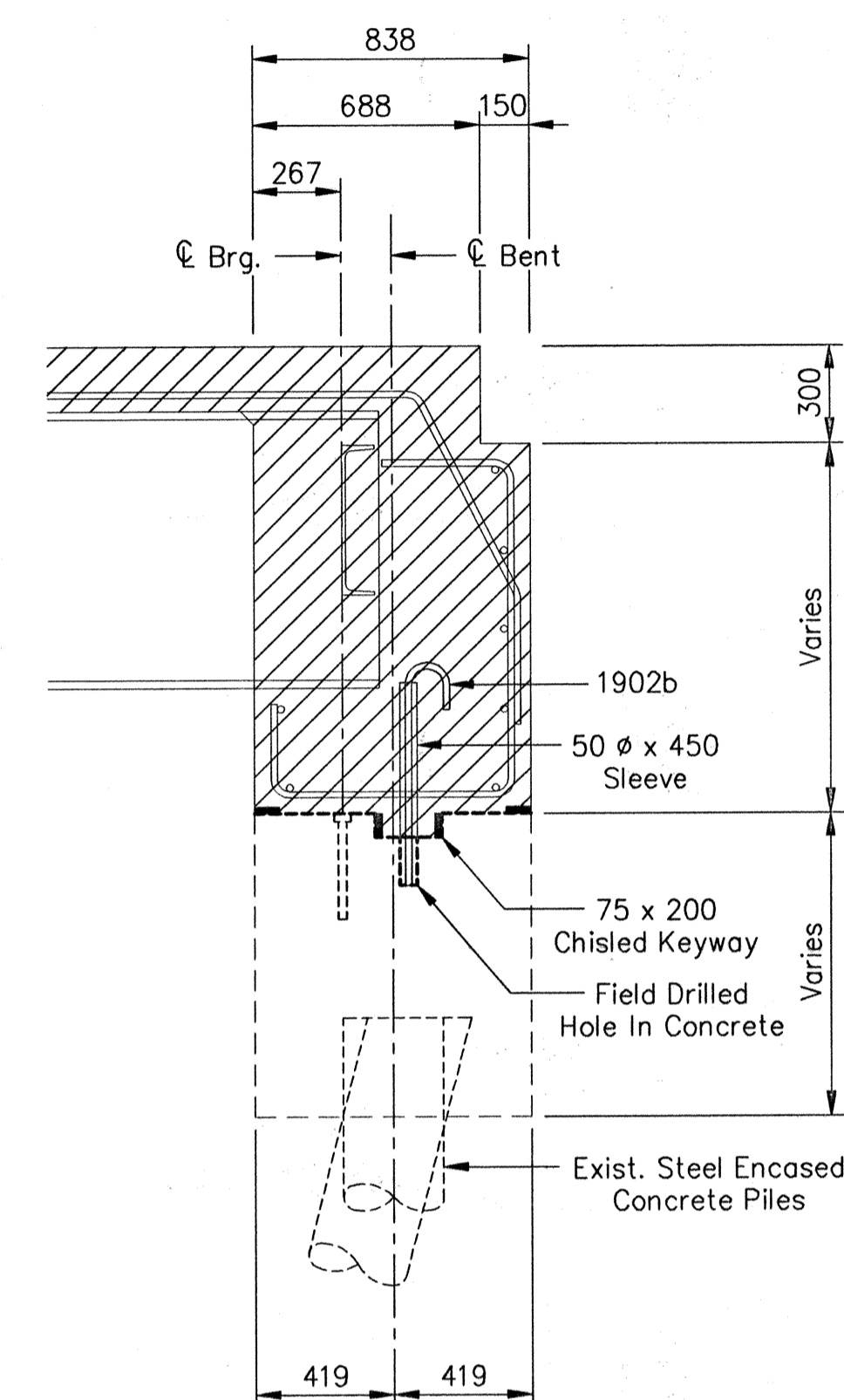
PLAN



ELEVATION

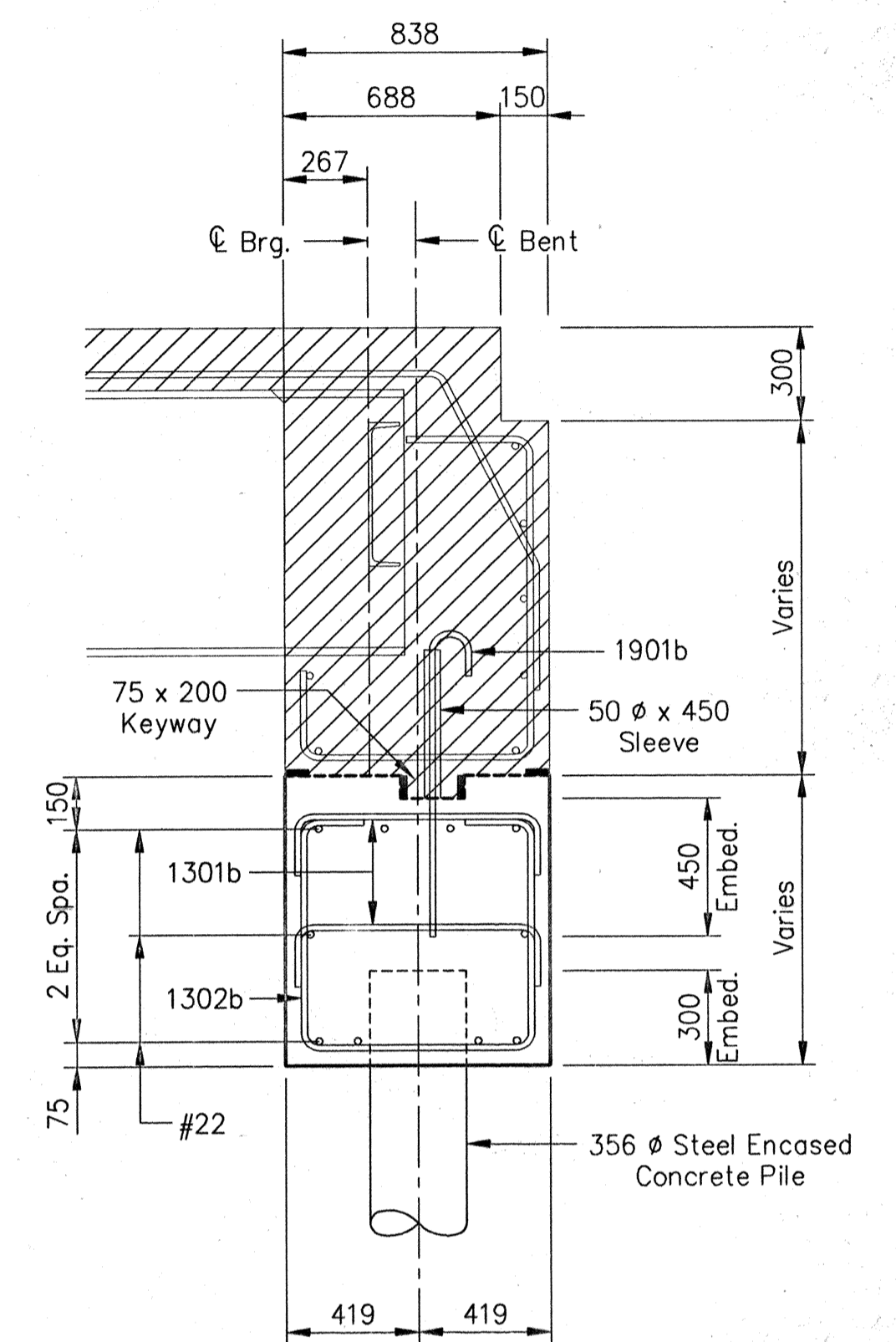


PILING PLAN



SECTION A-A

Scale: 1:20






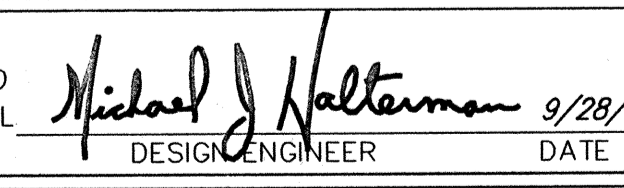
SECTION B-B

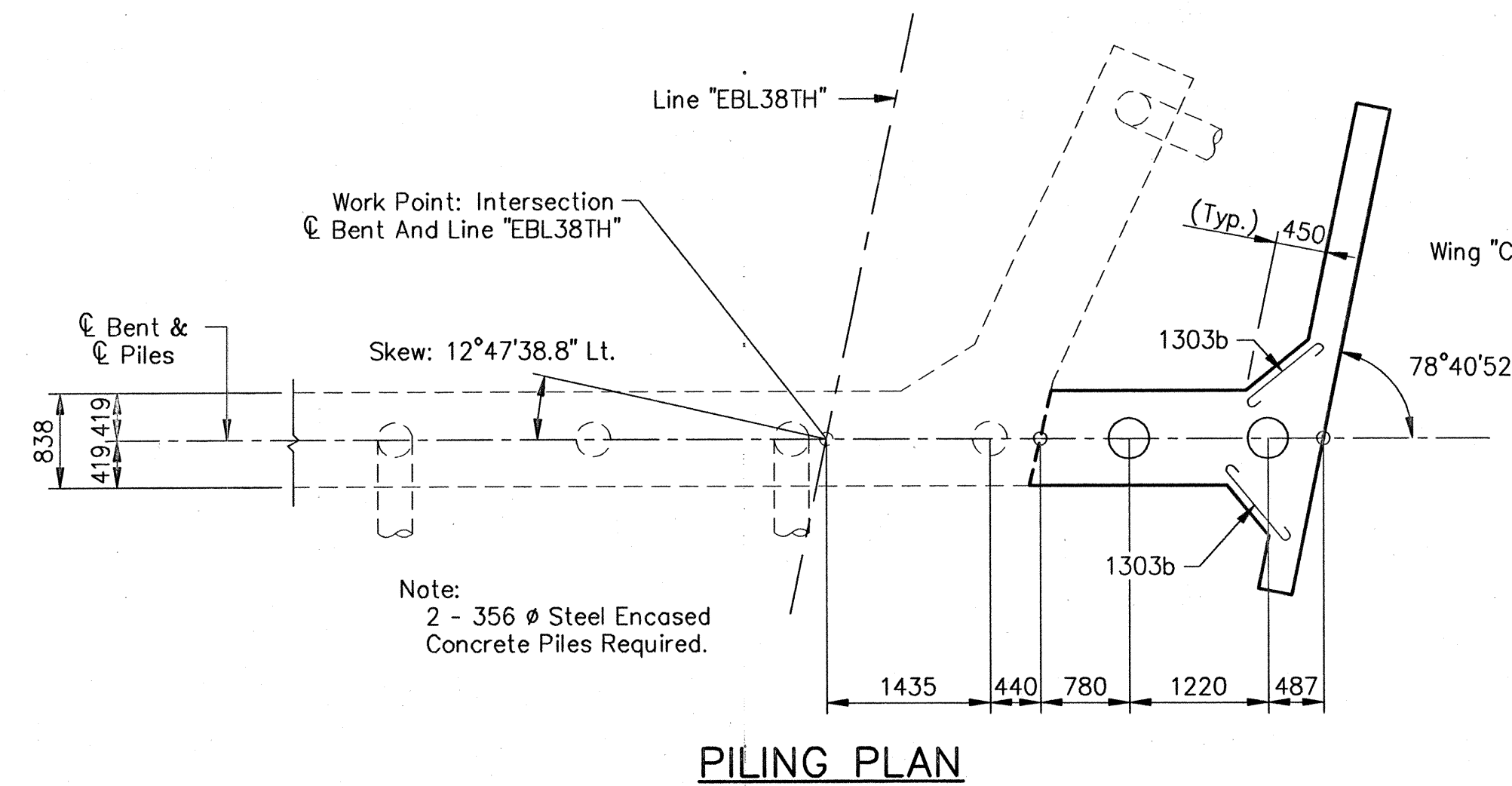
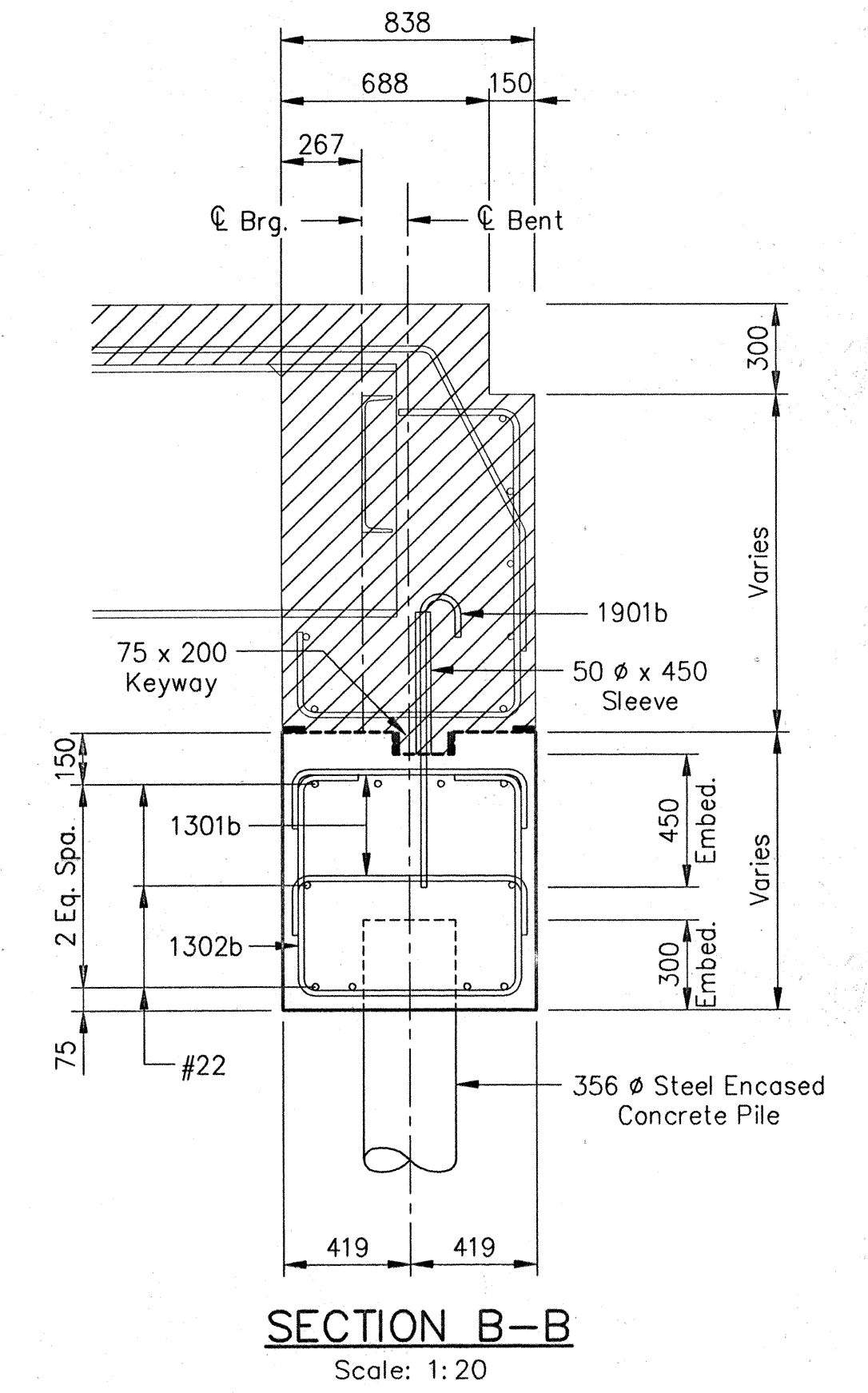
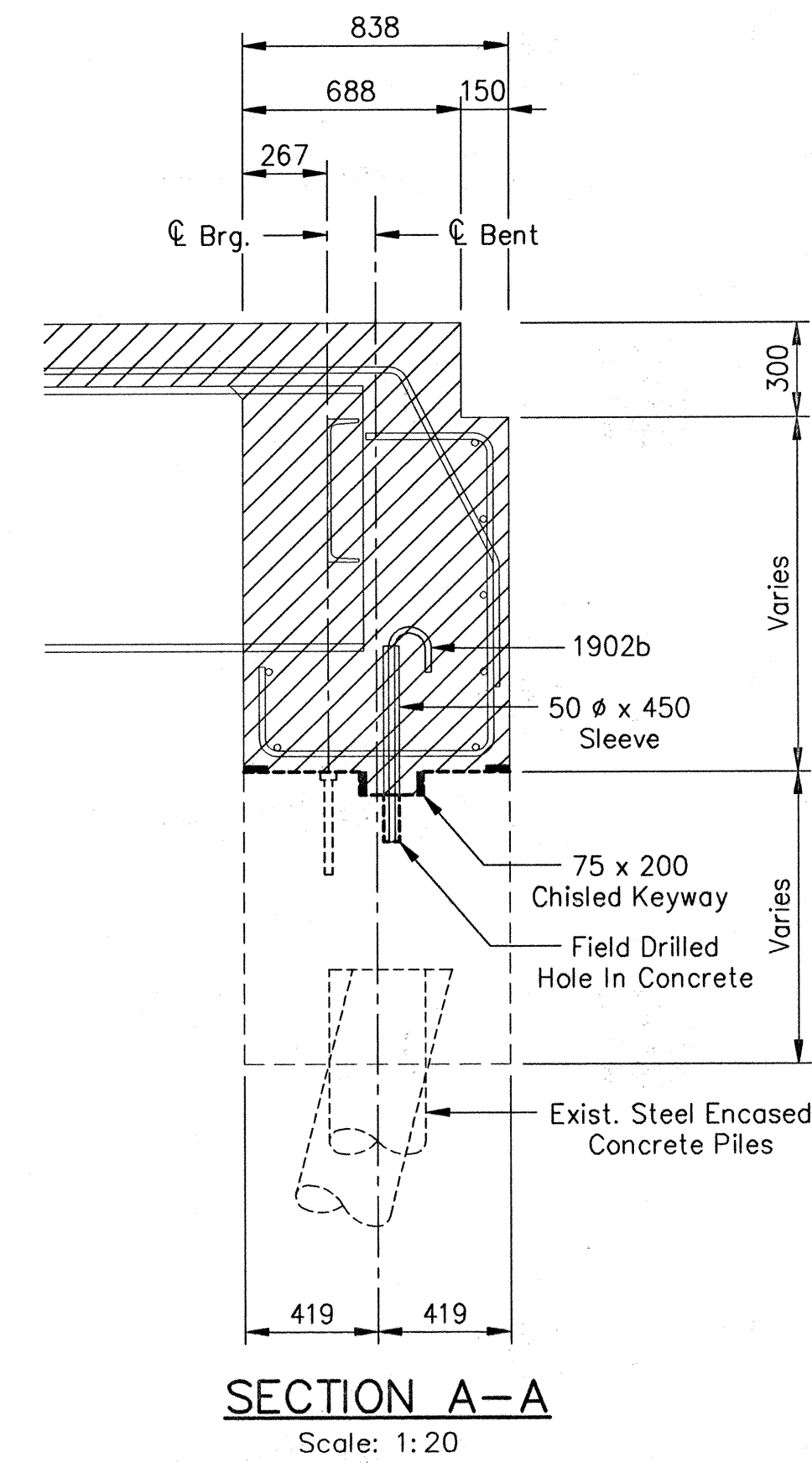
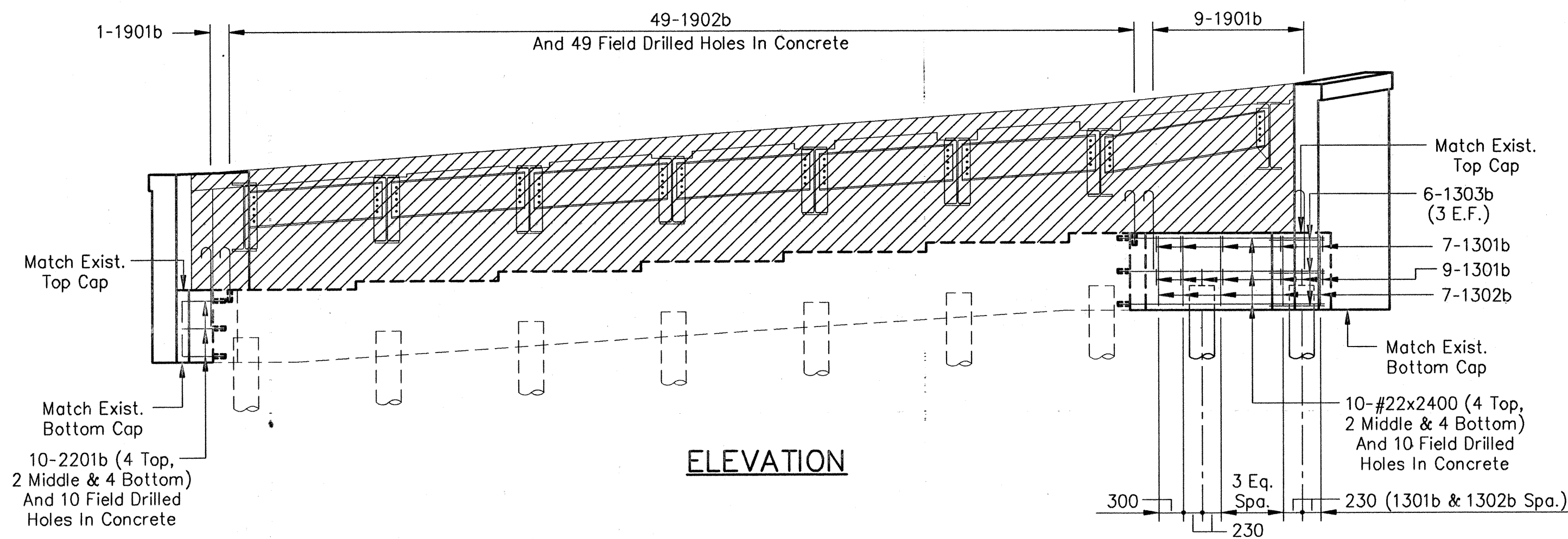
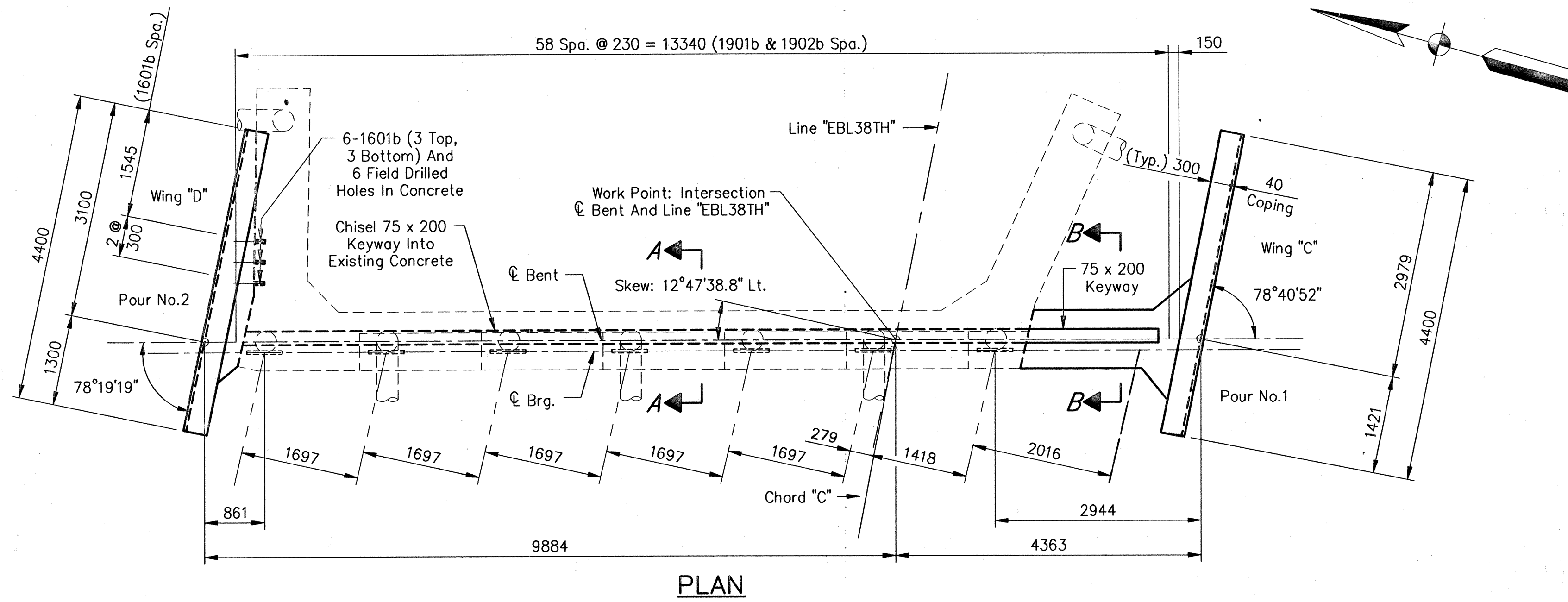
Scale: 1:20

- NOTES:
- All reinforcing steel to be epoxy coated.
 - For reinforcing bar notes, see Standard 703-BRST-01.
 - Surface Seal and Masonry Coat exposed surfaces of wingwall.
 - Field drilled holes in concrete shall extend to a depth sufficient to embed a bar 150 with an approved anchor system having a minimum pullout equal to 118 kN for #19 bars and 160 kN for #22 Bars.
 - For Wing "A" and Wing "B" details, see Sheet No.8.
 - For Backfill details, see Standard 211-BFIL-04.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
 Date: 4/11/2000
 Drawing File: 65 Marion\CB\MB1708REV\SB-REMA.dwg (322)

 JANSEN & SPAANS ENGINEERING CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS: (317) 254-9588 FAX (317) 259-8262	 Buder Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4615 FAX 317 713-4616	 MICHAEL J. HALTERMAN REGISTERED No. 20931 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL  DESIGN ENGINEER DATE 9/28/01	INDIANA DEPARTMENT OF TRANSPORTATION BENT NO.1 DETAILS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>1 : 50</td> <td>MARION B-17-08-FB</td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td></td> <td>9981111</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEETS</td> </tr> <tr> <td></td> <td>6 of 20</td> </tr> <tr> <td>CONTRACT</td> <td>PROJECT</td> </tr> <tr> <td>R-24327</td> <td>IM-65-3 (281) 118</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	1 : 50	MARION B-17-08-FB	VERTICAL SCALE	DESIGNATION		9981111	SURVEY BOOK	SHEETS		6 of 20	CONTRACT	PROJECT	R-24327	IM-65-3 (281) 118
HORIZONTAL SCALE	BRIDGE FILE																				
1 : 50	MARION B-17-08-FB																				
VERTICAL SCALE	DESIGNATION																				
	9981111																				
SURVEY BOOK	SHEETS																				
	6 of 20																				
CONTRACT	PROJECT																				
R-24327	IM-65-3 (281) 118																				



- NOTES:
- All reinforcing steel to be epoxy coated.
 - For reinforcing bar notes, see Standard 703-BRST-01.
 - Surface Seal and Masonry Coat exposed surfaces of wingwall.
 - Field drilled holes in concrete shall extend to a depth sufficient to embed a bar 150 mm with an approved anchor system having a minimum pullout equal to 118 kN for #19 bars and 160 kN for #22 Bars.
 - For Wing "A" and Wing "B" details, see Sheet No.8.
 - For Backfill details, see standard 211-BFIL-04.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
Date: 4/11/2000
User: jms
Drawing File: I65_MarionCA\MB1708FB\SB-REDA.dwg (S22)

JSE
JANSSEN & SPAANS ENGINEERING
CONSULTING ENGINEERS
2825 EAST 56TH STREET
INDIANAPOLIS, INDIANA 46220
BUS. (317) 254-9686
FAX (317) 259-8262

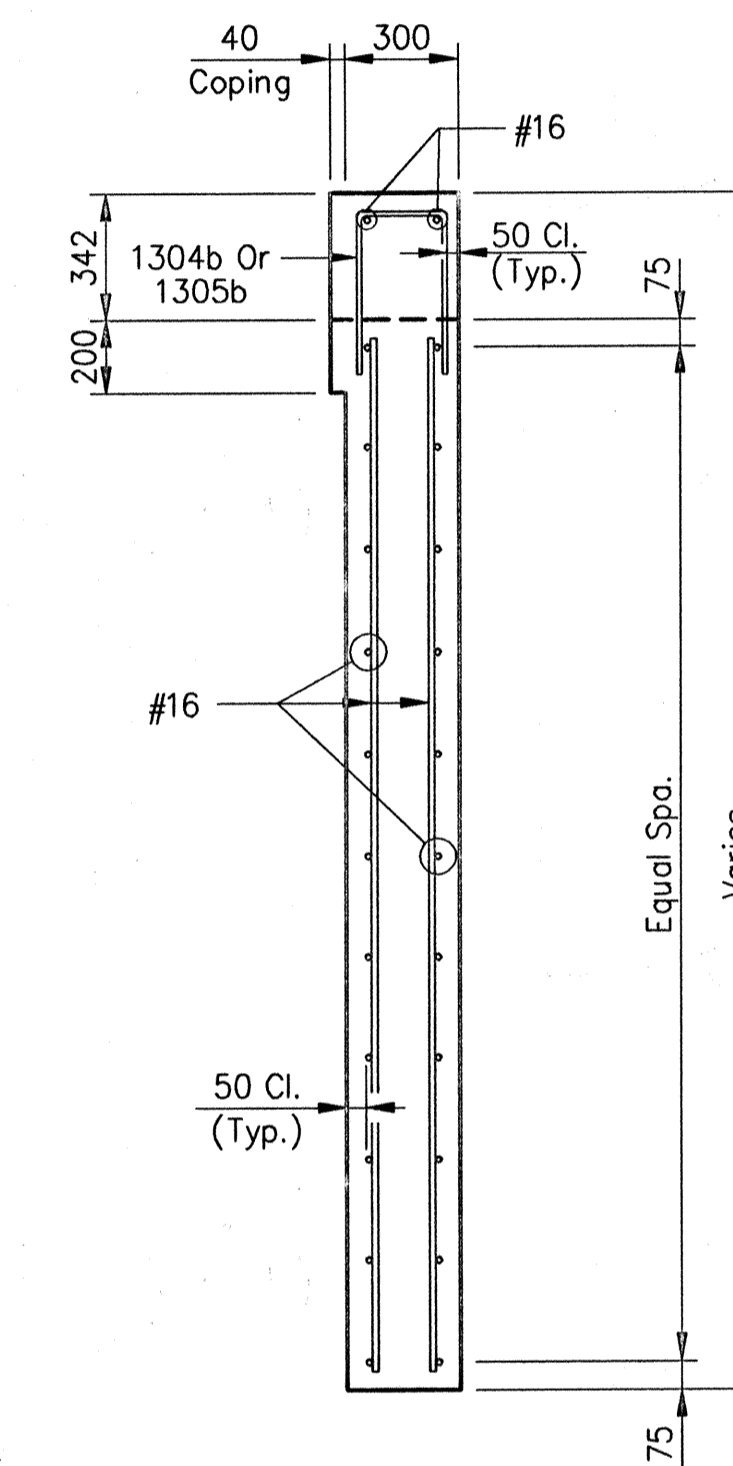
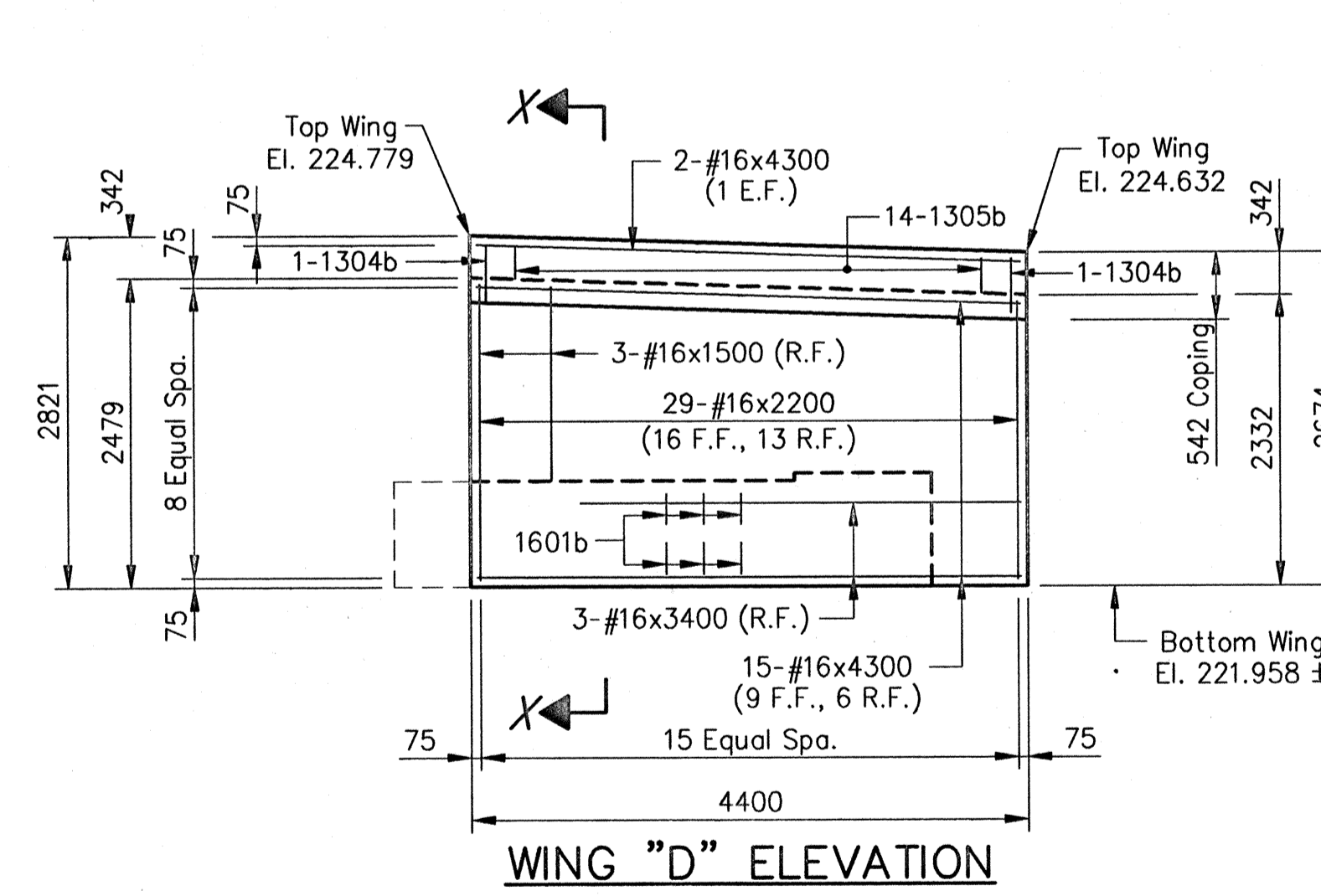
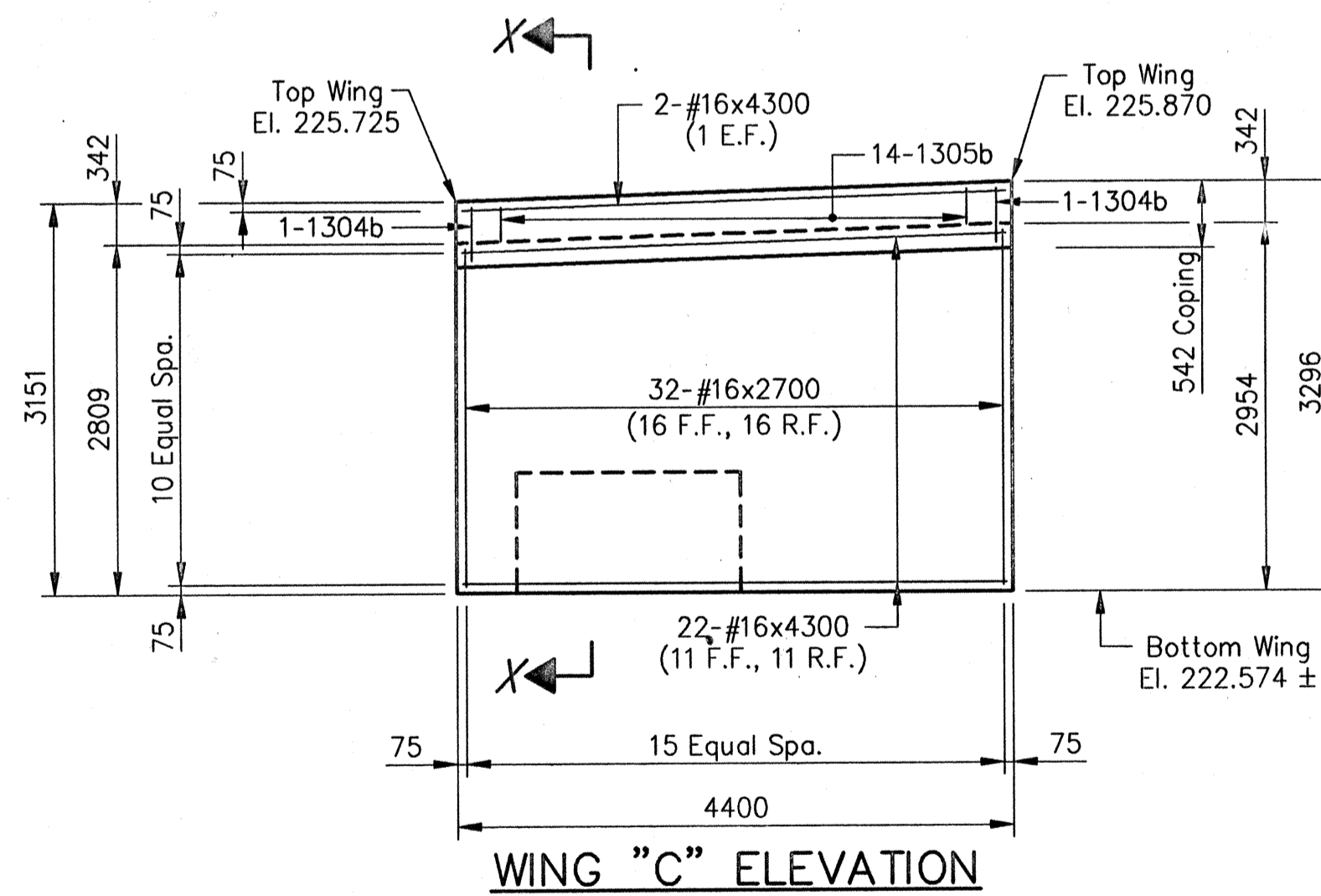
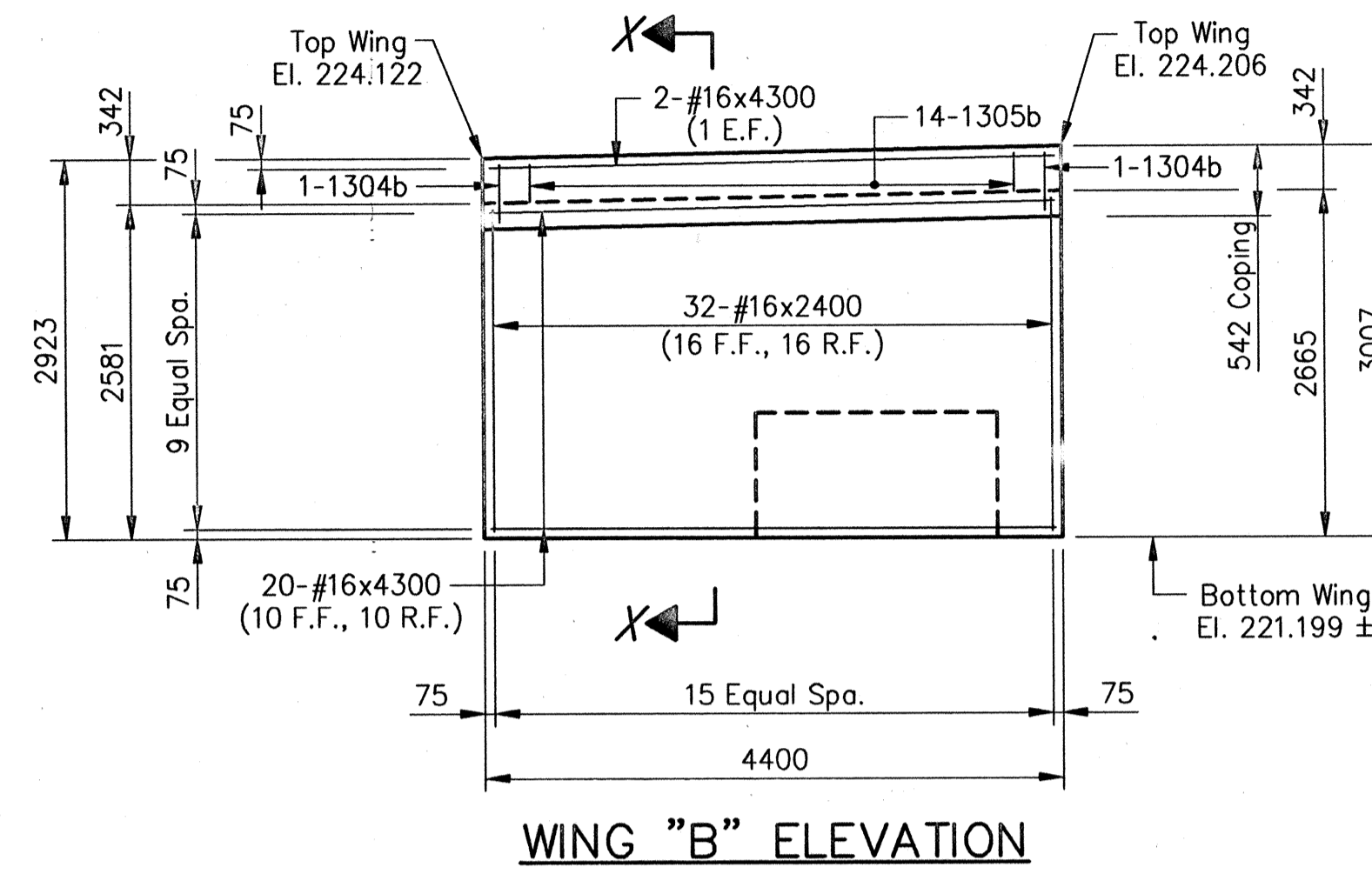
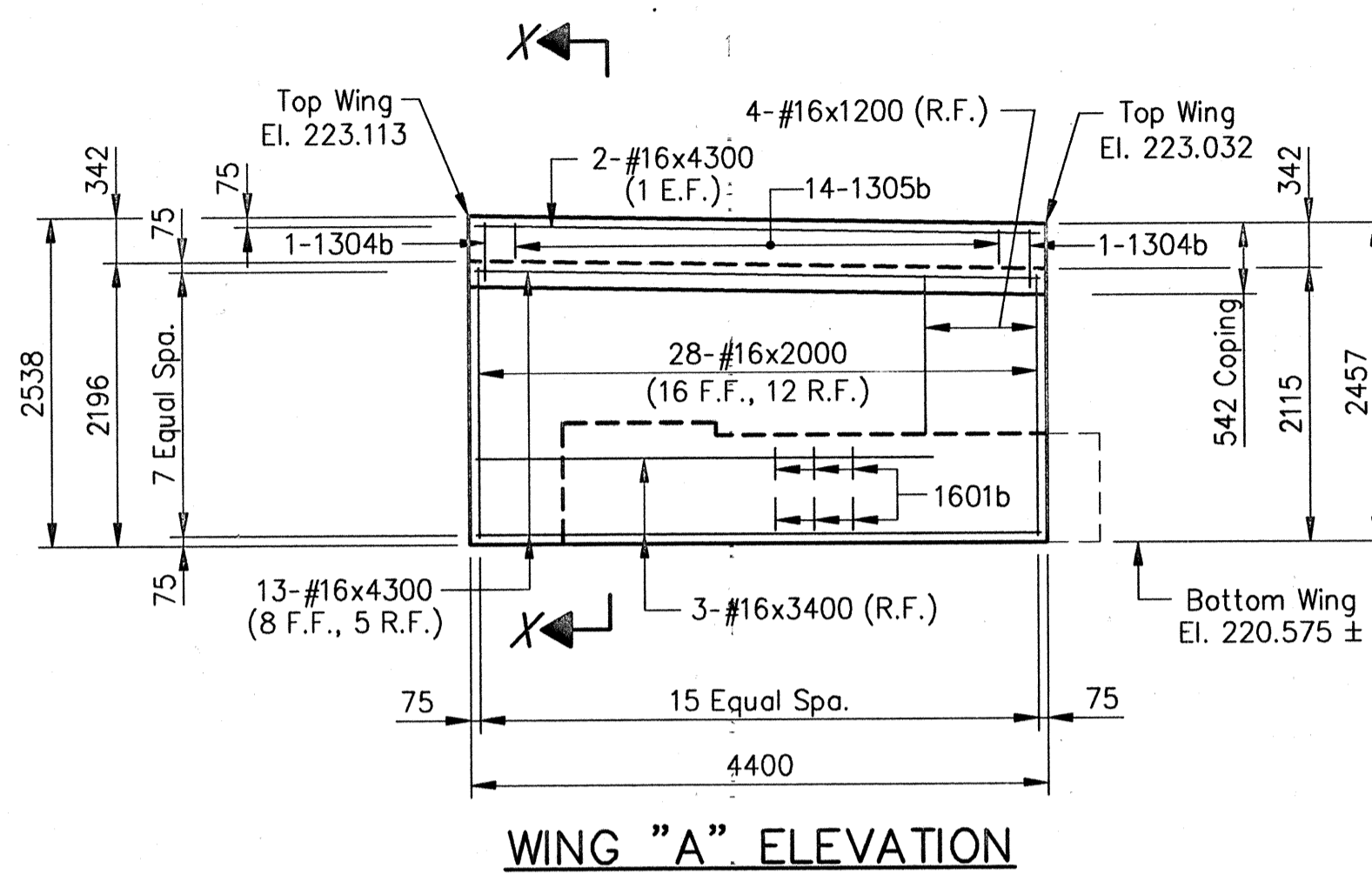
BFS
Butler Fairman Seufert
CONSULTING ENGINEERS
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

MICHAEL J. HALPERIN
REGISTERED
No. 20931
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: *Michael J. Halperin* 9/28/01
DESIGN ENGINEER DATE
DESIGNED: CBS DRAWN: TAL
CHECKED: LS CHECKED: JWR

INDIANA DEPARTMENT OF TRANSPORTATION
BENT NO.4 DETAILS

HORIZONTAL SCALE 1 : 50	BRIDGE FILE MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION 9981111
SURVEY BOOK	SHEETS 7 of 20
CONTRACT R-24327	PROJECT IM-65-3 (281) 118



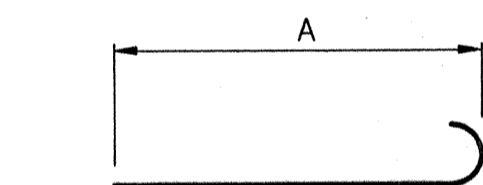
SECTION X-X
Scale- 1:20

**BENT NO.1
BILL OF MATERIALS**

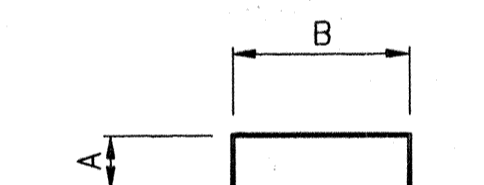
Epoxy Coated Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
2201b	10	900	
#22	10	2400	
Total No.22			100
1901b	11	1180	
1902b	50	880	
Total No.19			127
1601b	6	700	
#16	37	4300	
#16	3	3400	
#16	32	2400	
#16	28	2000	
#16	4	1200	
Total No.16			483
1301b	16	1120	
1302b	7	2720	
1303b	6	1200	
1304b	4	1040	
1305b	28	720	
Total No.13			68
Total Epoxy Coated Reinforcing Steel			778
Concrete			
Class "A" In Substructure			
Pour No.1		3.8	m ³
Pour No.2		5.9	m ³
Total Class "A" In Substructure			9.7 m ³
Miscellaneous			
Surface Seal		17	m ²
Masonry Coating		15	m ²
Field Drilled Holes In Concrete		76	Each
2-Piles, Conc., Steel Shell Encased			
5.1 mm, 356 mm x 15 m Approx.		30	m

**BENT NO.4
BILL OF MATERIALS**

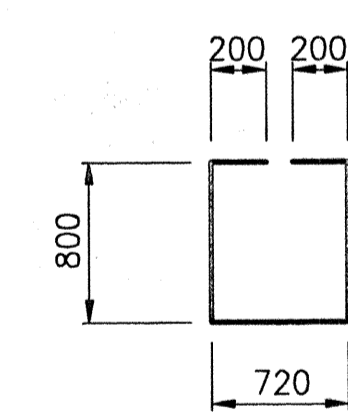
Epoxy Coated Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
2201b	10	900	
#22	10	2400	
Total No.22			100
1901b	10	1180	
1902b	49	880	
Total No.19			123
1601b	6	700	
#16	41	4300	
#16	3	3400	
#16	32	2700	
#16	29	2200	
#16	3	1500	
Total No.16			536
1301b	16	1120	
1302b	7	2720	
1303b	6	1200	
1304b	4	1040	
1305b	28	720	
Total No.13			68
Total Epoxy Coated Reinforcing Steel			827
Concrete			
Class "A" In Substructure			
Pour No.1		6.2	m ³
Pour No.2		4.1	m ³
Total Class "A" In Substructure			10.3 m ³
Miscellaneous			
Surface Seal		19	m ²
Masonry Coating		17	m ²
Field Drilled Holes In Concrete		75	Each
2-Piles, Conc., Steel Shell Encased			
5.1 mm, 356 mm x 9 m Approx.		18	m



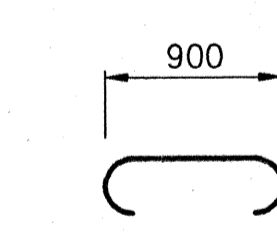
Mark	A	Length
1901b	980	1180
1902b	680	880



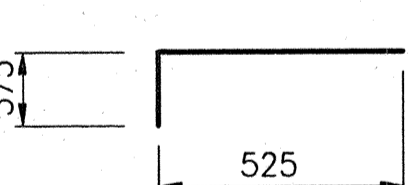
Mark	A	B	Length
1301b	200	720	1120
1304b	430	180	1040
1305b	270	180	720



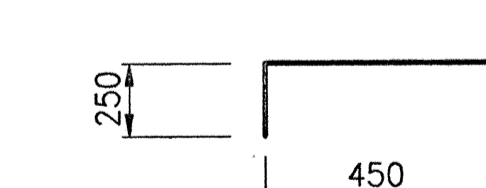
1302b x 2720



1303b x 1200



2201b x 900



1601b x 700

NOTES:
All reinforcing steel to be epoxy coated.
For reinforcing bar notes, see Standard 703-BRST-01.
Surface Seal and Masonry Coat exposed surfaces of wingwall.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
Date: 4/11/2000
Drawing File: B5 Marion\MB1708\B5-SB-RDMA.dwg (S22)

JSE
JANSSEN & SPAANS ENGINEERING
CONSULTING ENGINEERS
2825 EAST 56TH STREET
INDIANAPOLIS, INDIANA 46220
BUS: (317) 254-8986
FAX: (317) 259-8262

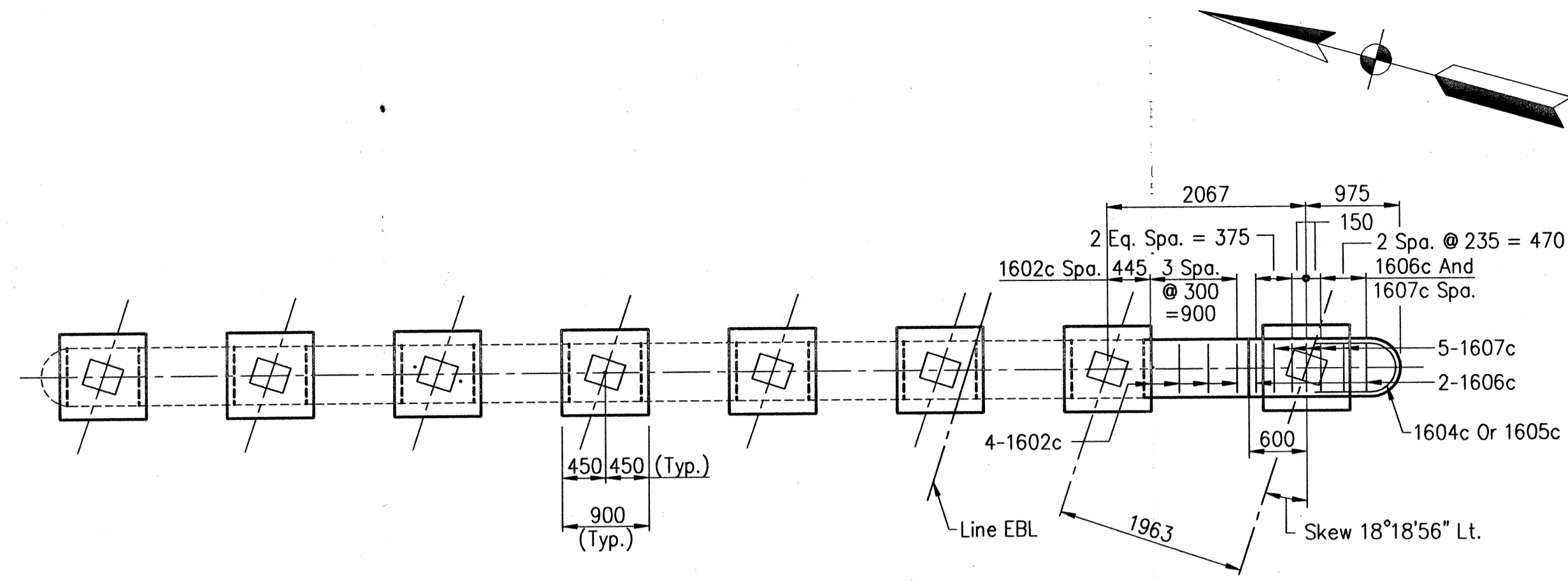
BFS
Butler Fairman Seufert
CONSULTING ENGINEERS
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

REGISTERED PROFESSIONAL ENGINEER
No. 20931
STATE OF INDIANA

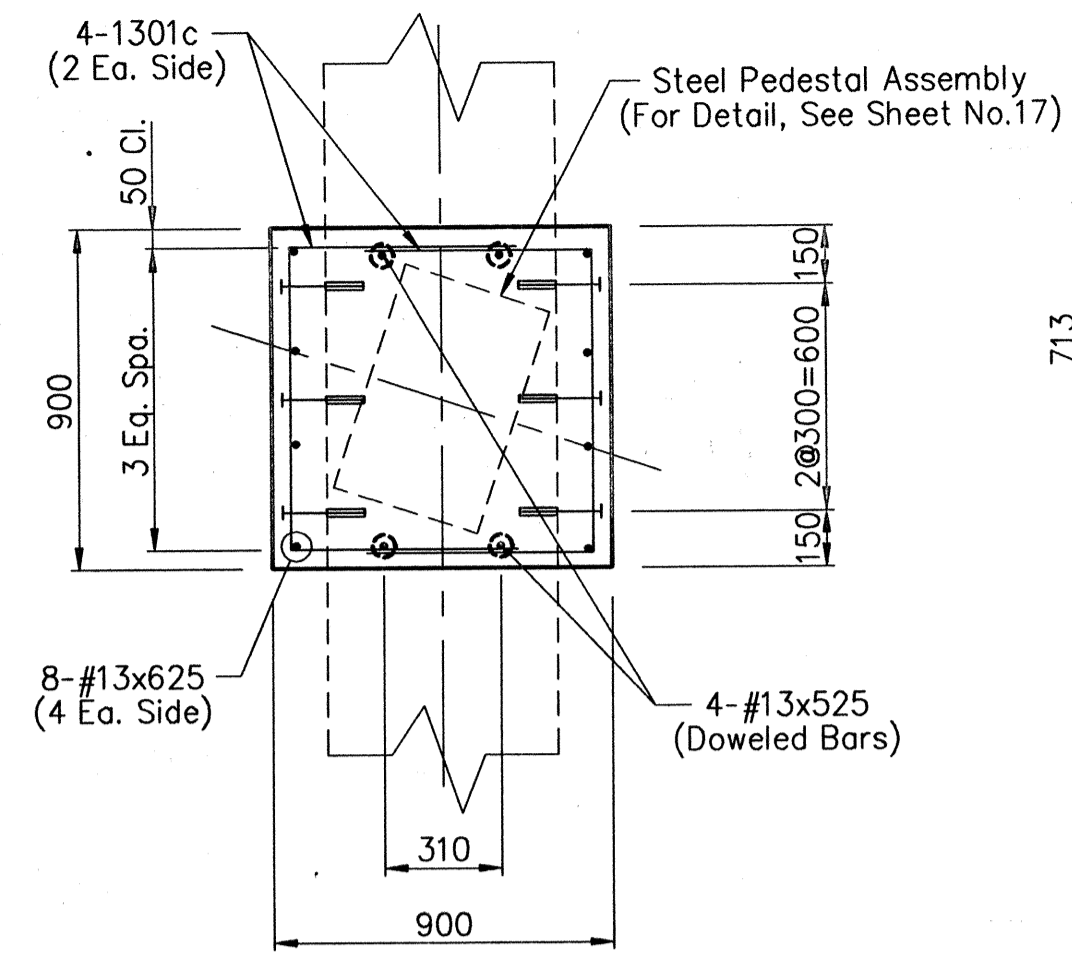
RECOMMENDED FOR APPROVAL
Michael J. Halterman 9/28/01
DESIGN ENGINEER DATE
DESIGNED: CBS DRAWN: TAL
CHECKED: LS CHECKED: JWR

INDIANA DEPARTMENT OF TRANSPORTATION
BENTS NO.1 AND NO.4 DETAILS

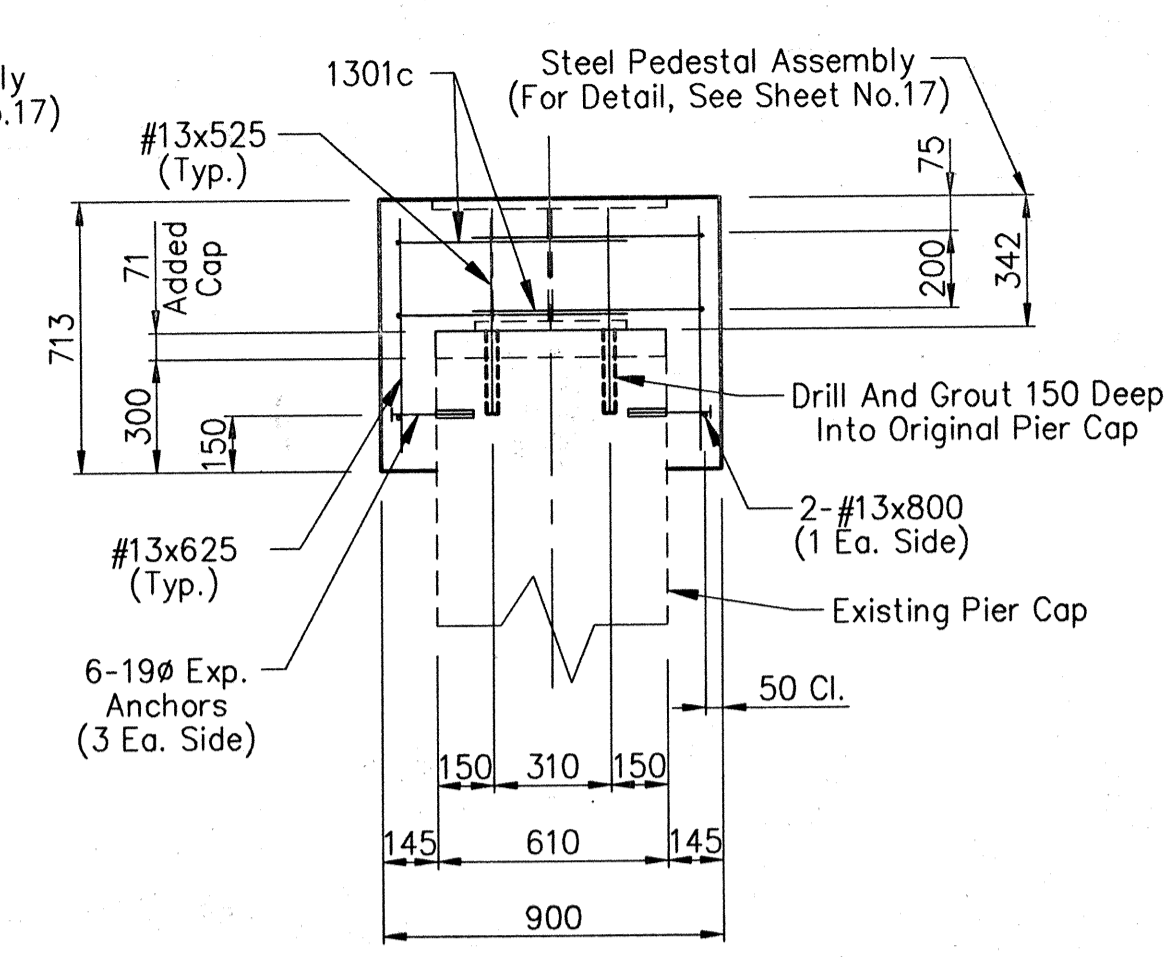
HORIZONTAL SCALE 1 : 50; Unless Noted	BRIDGE FILE MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION 9981111
SURVEY BOOK	SHEETS 8 of 20
CONTRACT R-24327	PROJECT IM-65-3 (281) 118



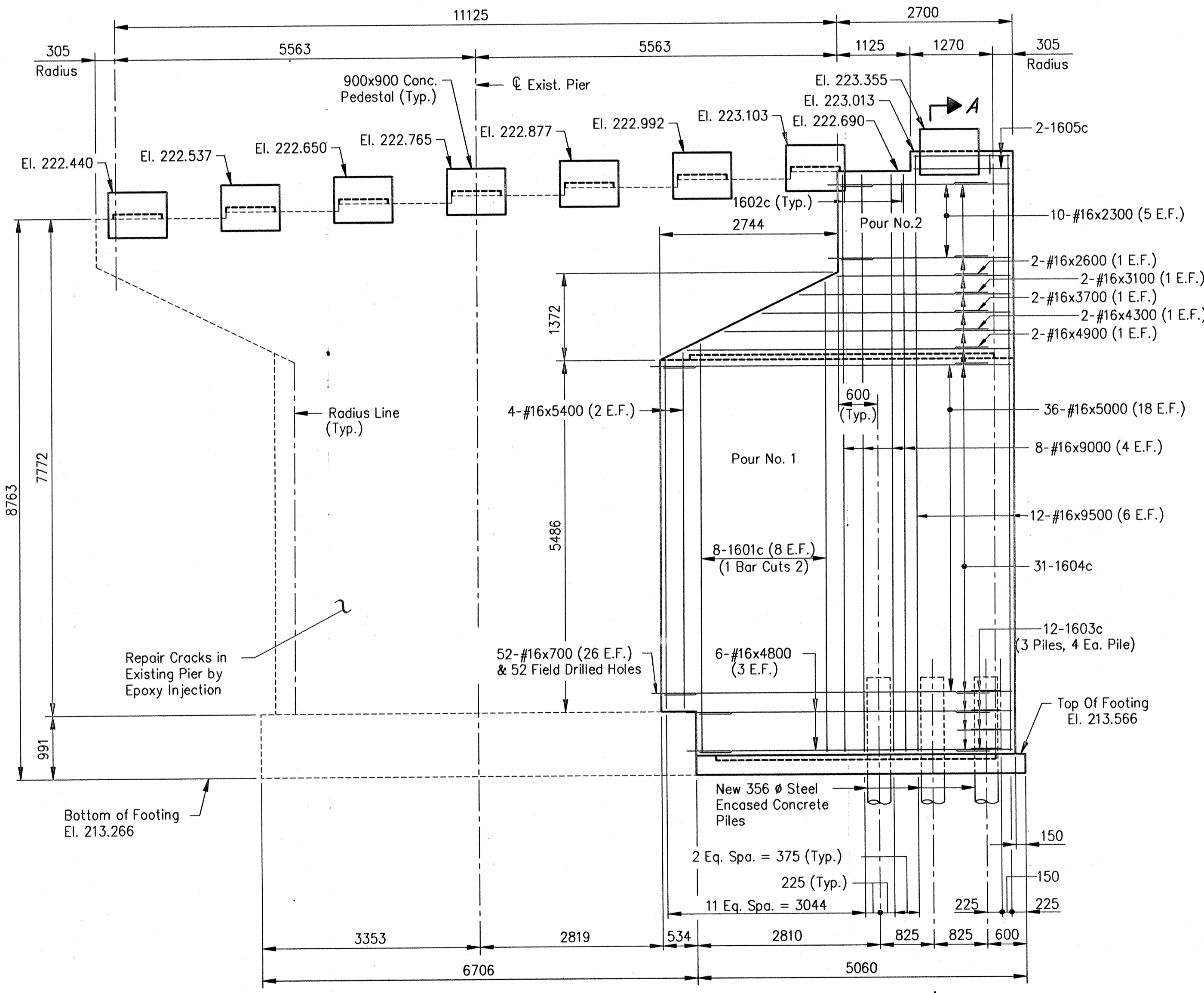
PIER NO. 2 PLAN



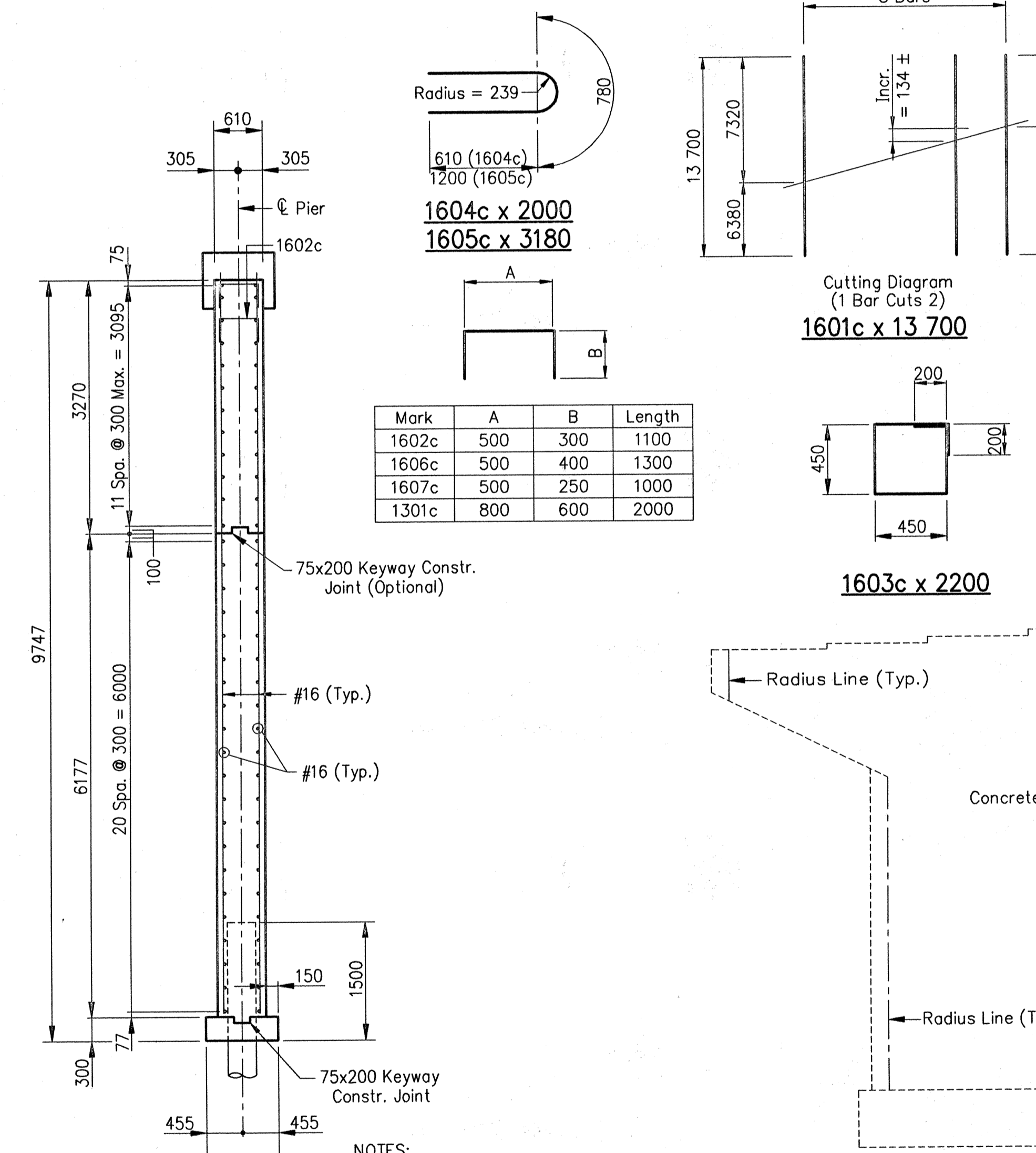
TYP. PEDESTAL PLAN
Scale - 1:20



TYP. PEDESTAL SECTION
Scale - 1:20

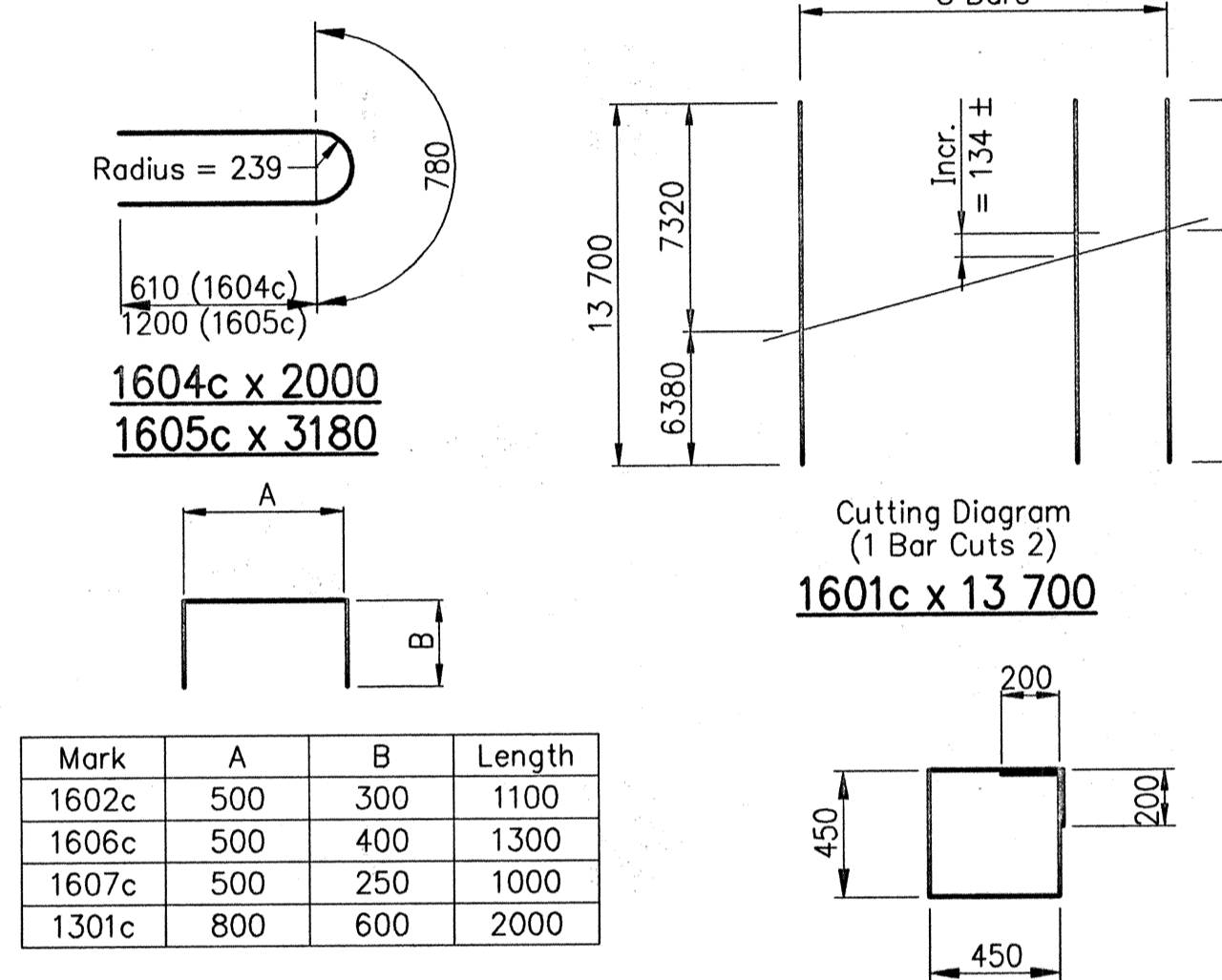


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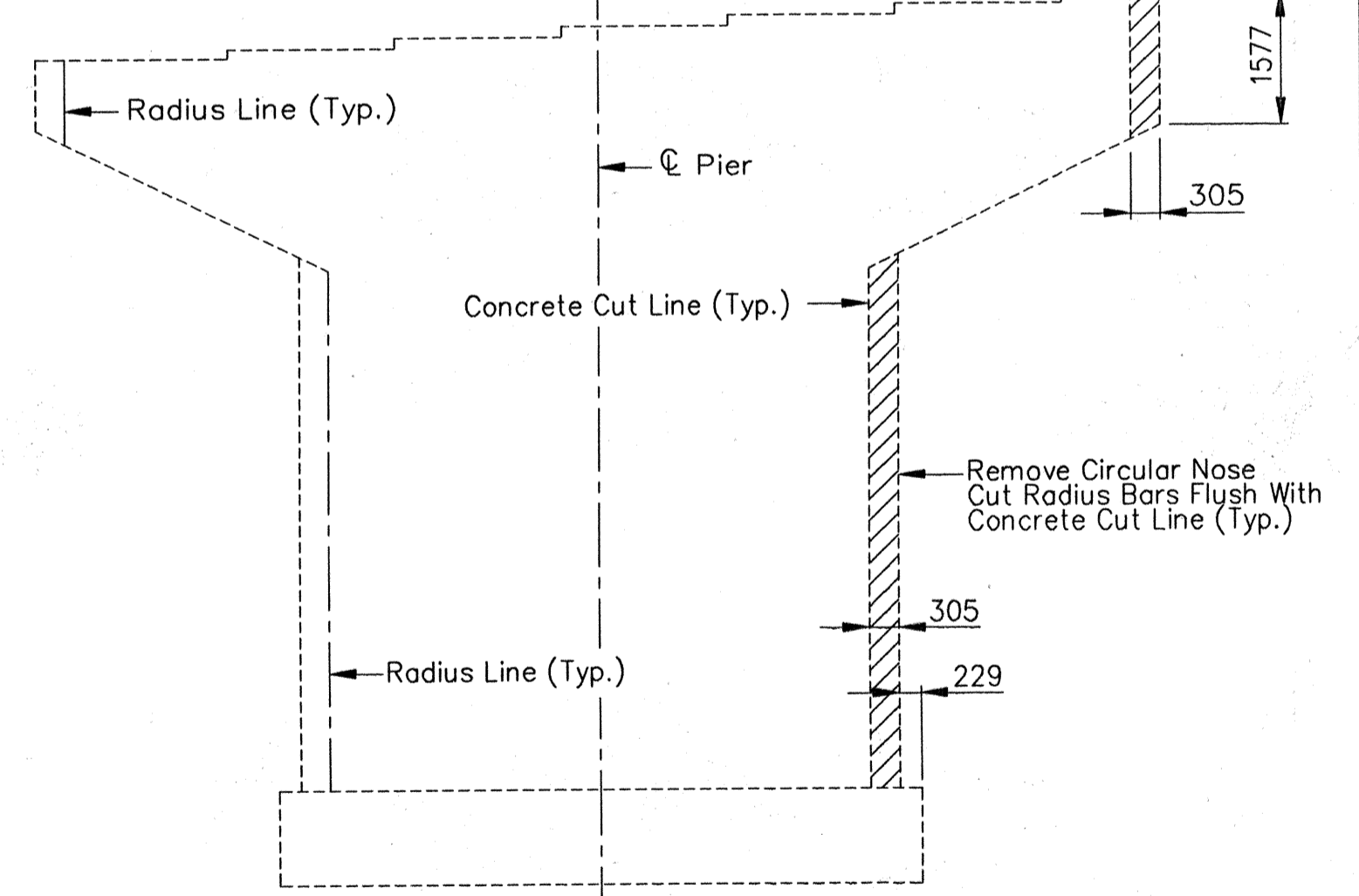


SECTION A-A

NOTES:
All dimensions are in millimeters (mm) and all elevations are in meters (m), except as noted.
For Reinforcing Bar Notes, see Bridge Standard 703-BRST-01.
Field drilled holes in concrete shall extend to a depth required to embed a bar 150 with an approved anchor system having a minimum pullout equal to 82kN for #16 bars.
For material in high strength grout, see Special Provisions.



1601c x 13700



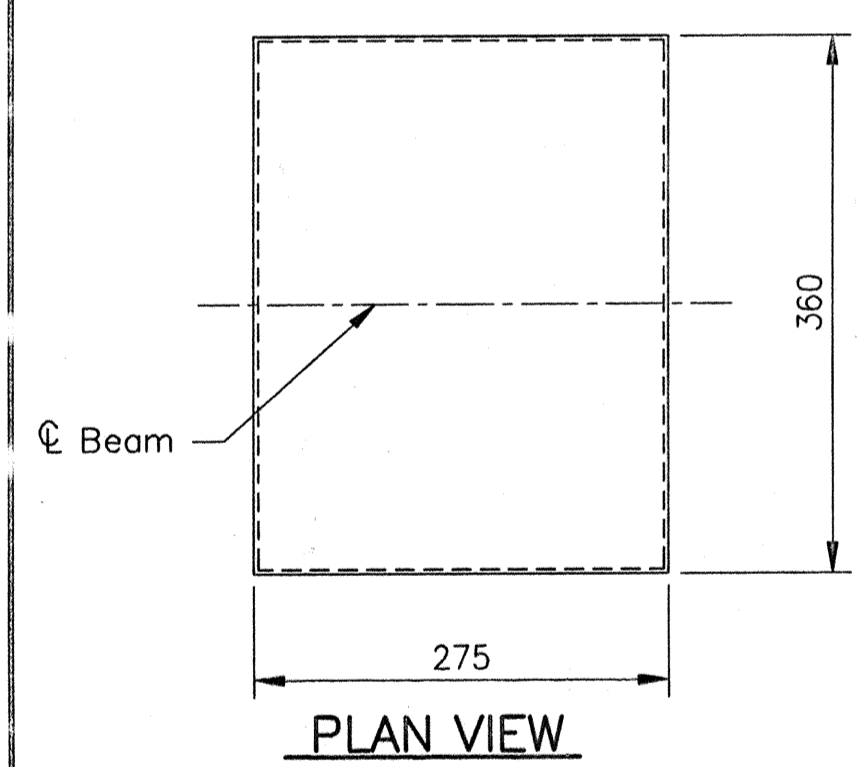
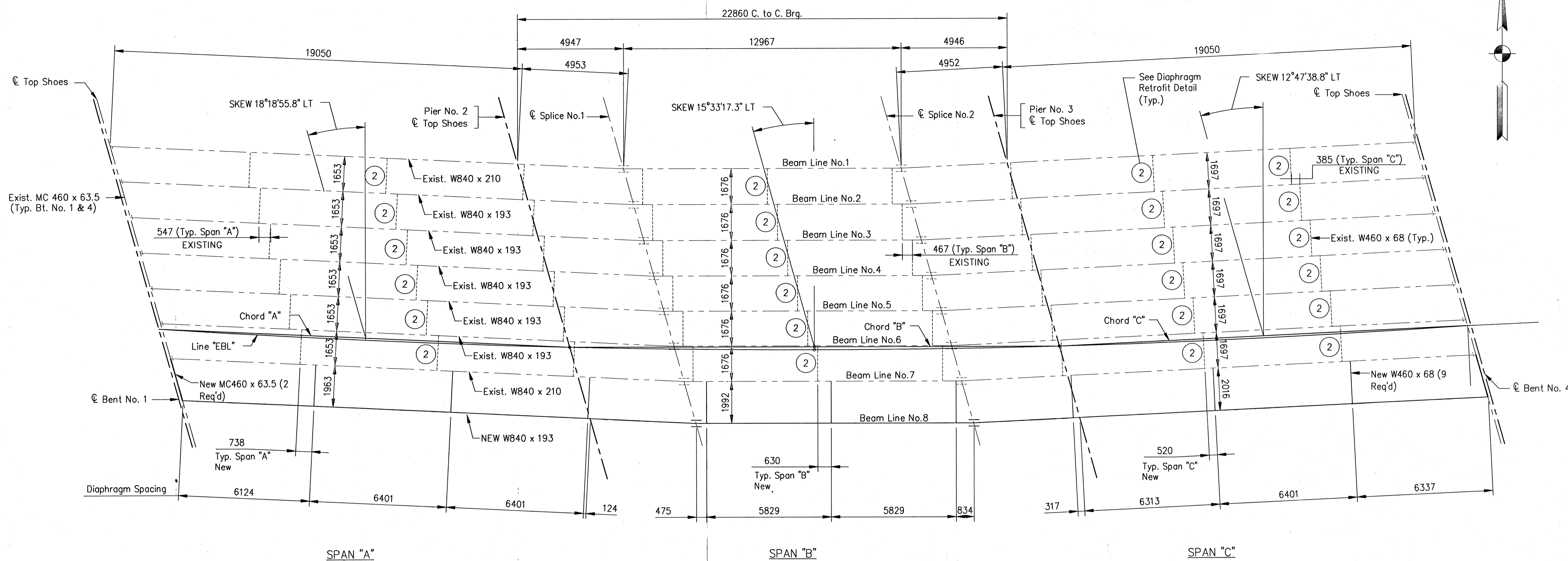
PIER NO. 2 REMOVAL DETAILS

PIER NO. 2 BILL OF MATERIALS

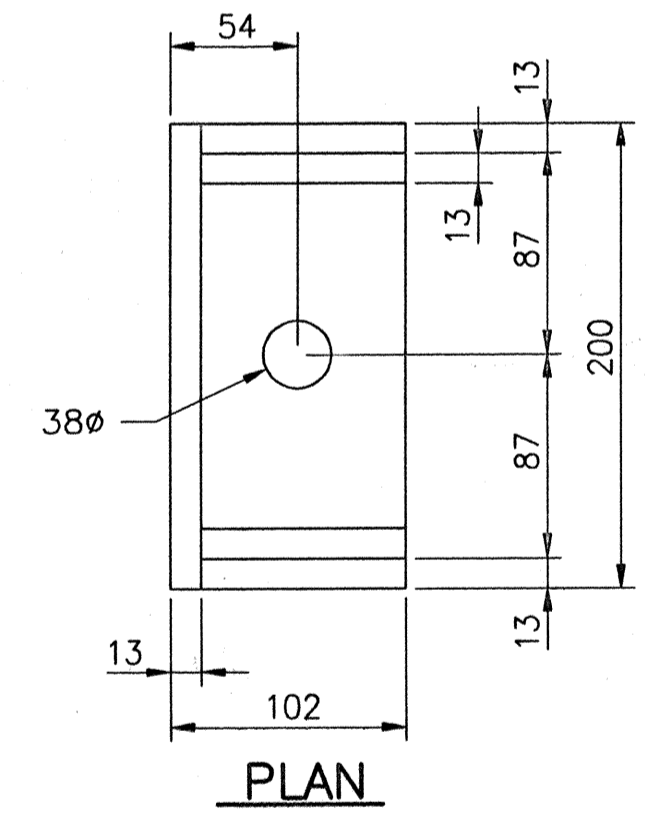
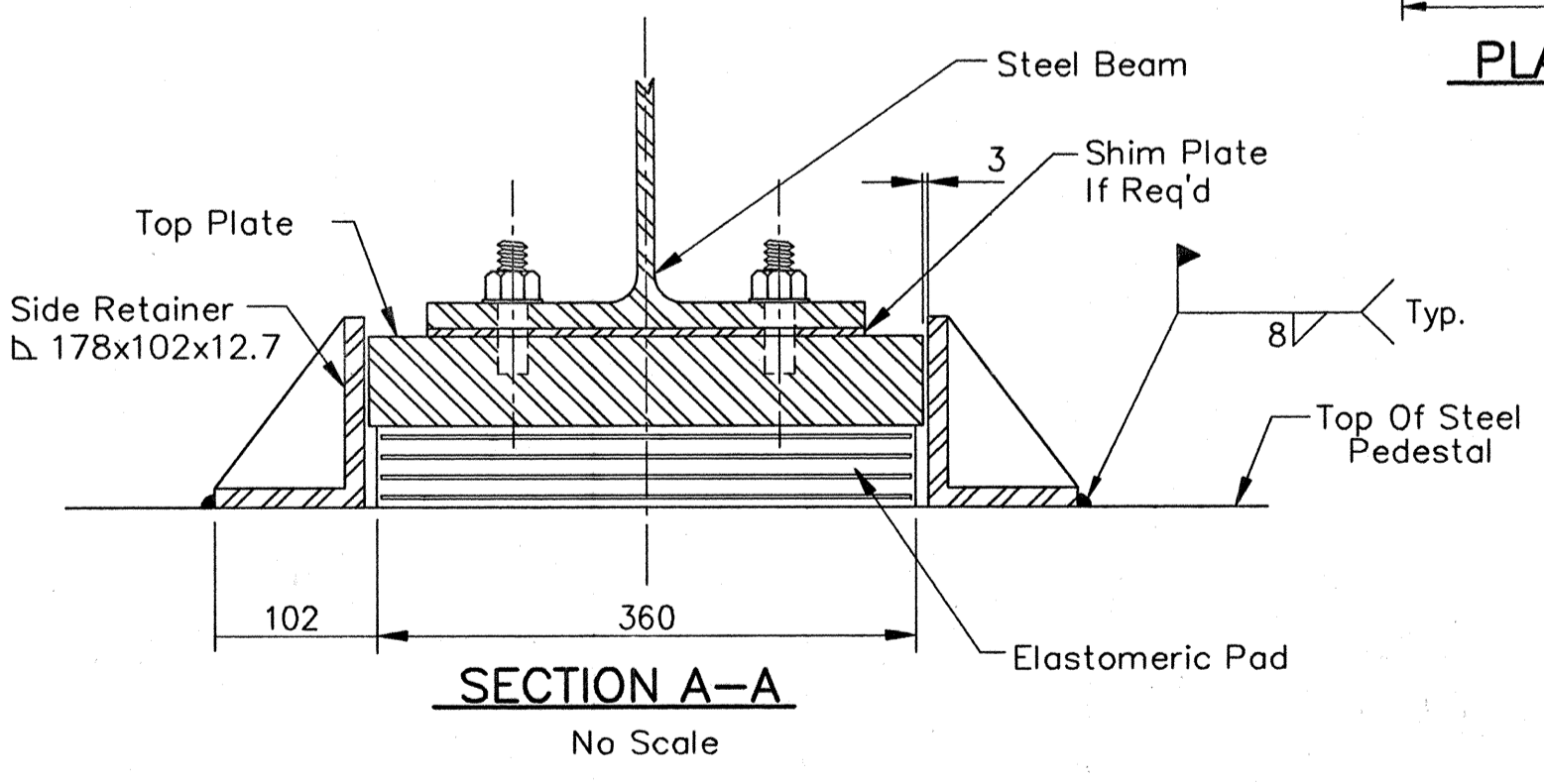
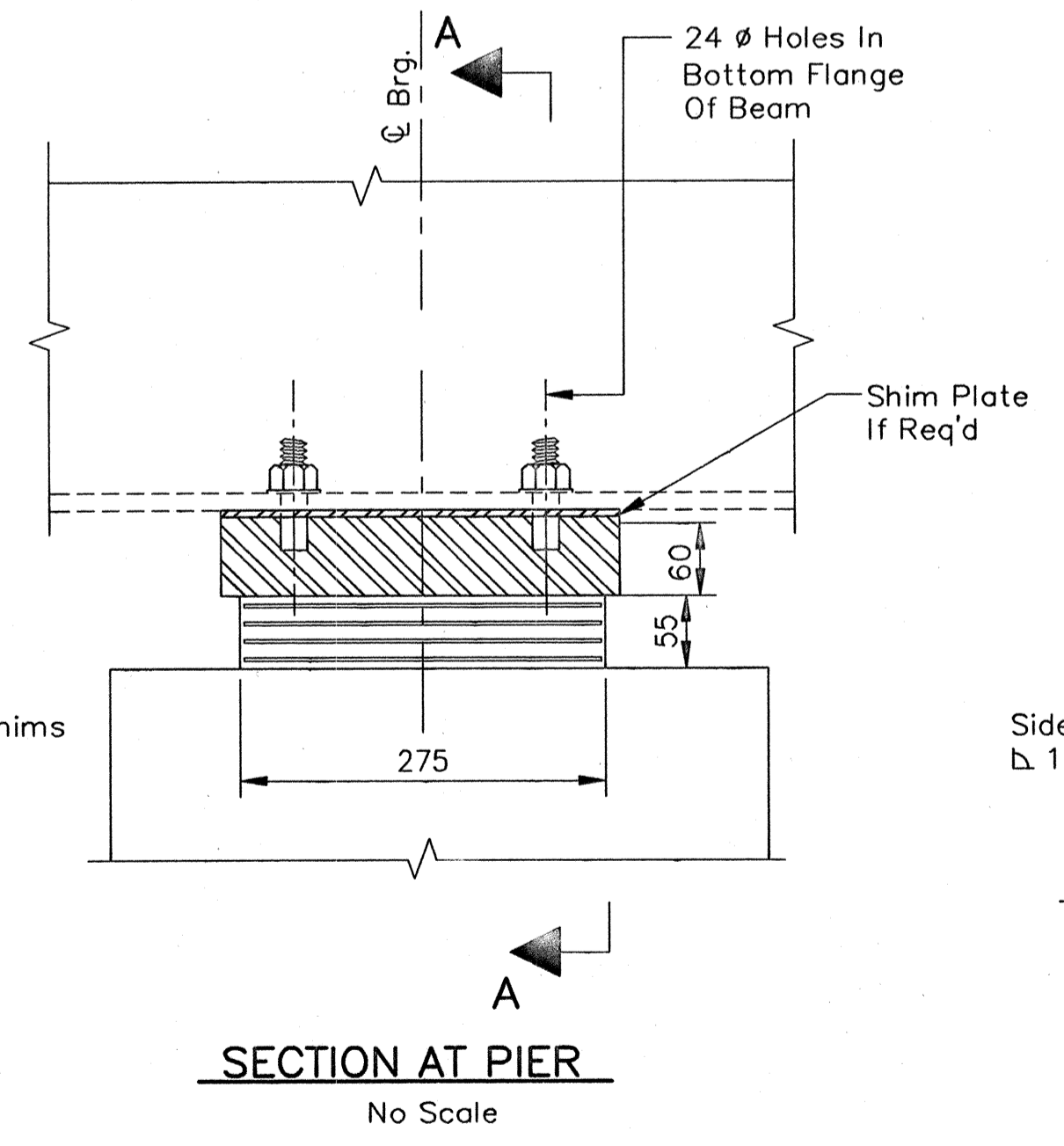
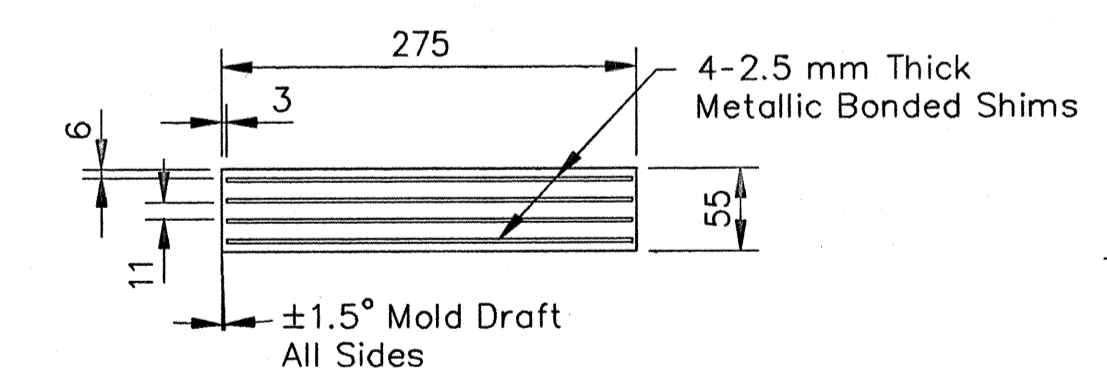
Plain Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
1601c	8	13700	
1602c	4	1100	
1603c	12	2200	
1604c	31	2000	
1605c	2	3180	
1606c	2	1300	
1607c	5	1000	
#16	12	9500	
#16	8	9000	
#16	4	5400	
#16	36	5000	
#16	2	4900	
#16	6	4800	
#16	2	4300	
#16	2	3700	
#16	2	3100	
#16	2	2600	
#16	10	2300	
#16	52	700	
Total No.16			1132
1301c	32	2000	
#13	16	800	
#13	64	625	
#13	32	525	
Total No.13			133
Total Plain Reinforcing Steel			1265
Concrete			
Class "A" In Substructure			
Pour No. 1			20.0 m ³
Pour No. 2			6.3 m ³
Pedestals			3.0 m ³
Total Class "A" In Substructure			29.3 m ³
Class "B" In Footing			
			1.4 m ³
Miscellaneous			
Field Drilled Holes In Concrete			84 Each
3-Piles, Conc., Steel, Shell Enc. 6.3mm			
Min. Thick 356mm@11m Approx.			33 m
19# Expansion Anchor			48 Each

Time: 14:32:26
Date: 4/11/2000
Scale: 1:50
Drawing Title: IES MarionCA\MBT708\FB\SB-P2A.dwg (S17)

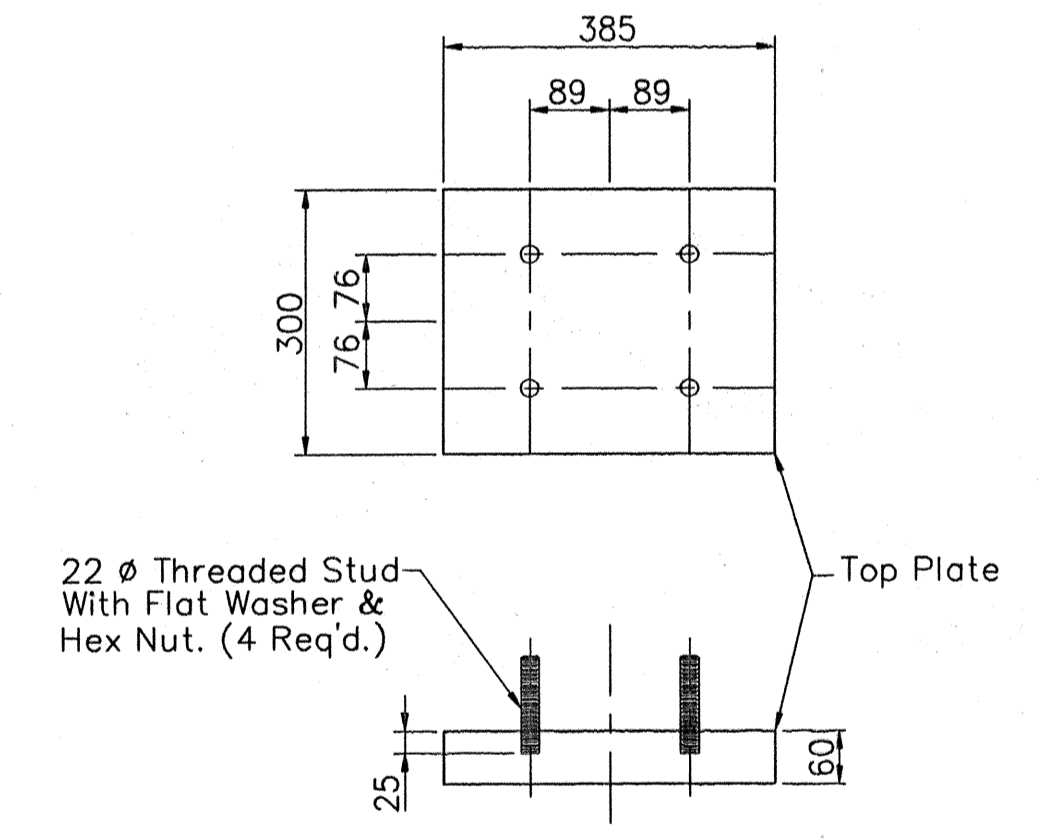
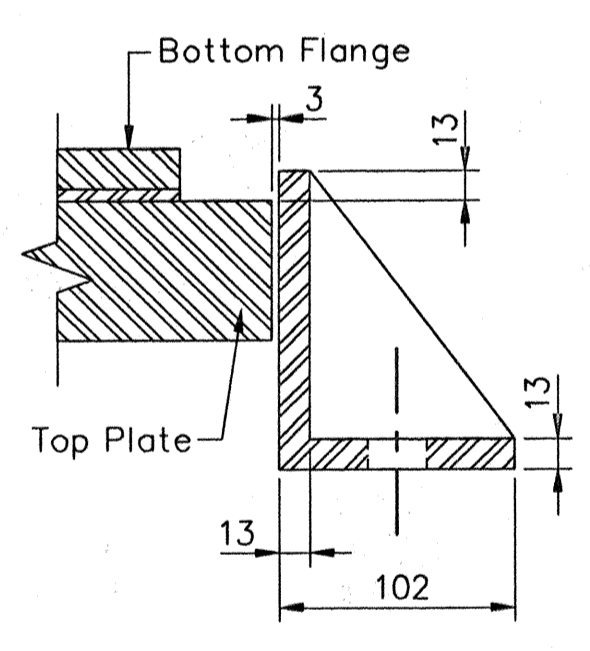
 JANSEN & SPAANS ENGINEERS CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	 Buder Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4615 FAX 317 713-4616	 Michael J. Halterman REGISTERED PROFESSIONAL ENGINEER No. 20931 STATE OF INDIANA	RECOMMENDED FOR APPROVAL <i>Michael J. Halterman</i> 9/28/01 DESIGNING ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION PIER NO.2 DETAILS	HORIZONTAL SCALE 1:50 BRIDGE FILE MARION B-17-08-FB
			DESIGNED: CBS DRAWN: TAL CHECKED: LS CHECKED: JWR		VERTICAL SCALE DESIGNATION 9981111 SURVEY BOOK SHEETS 9 of 20 CONTRACT R-24327 PROJECT IM-65-3 (281) 118



**ELASTOMERIC BEARING PAD
DETAIL AT PIERS**
No Scale



SIDE RETAINER
No Scale



TOP PLATE ASSEMBLY

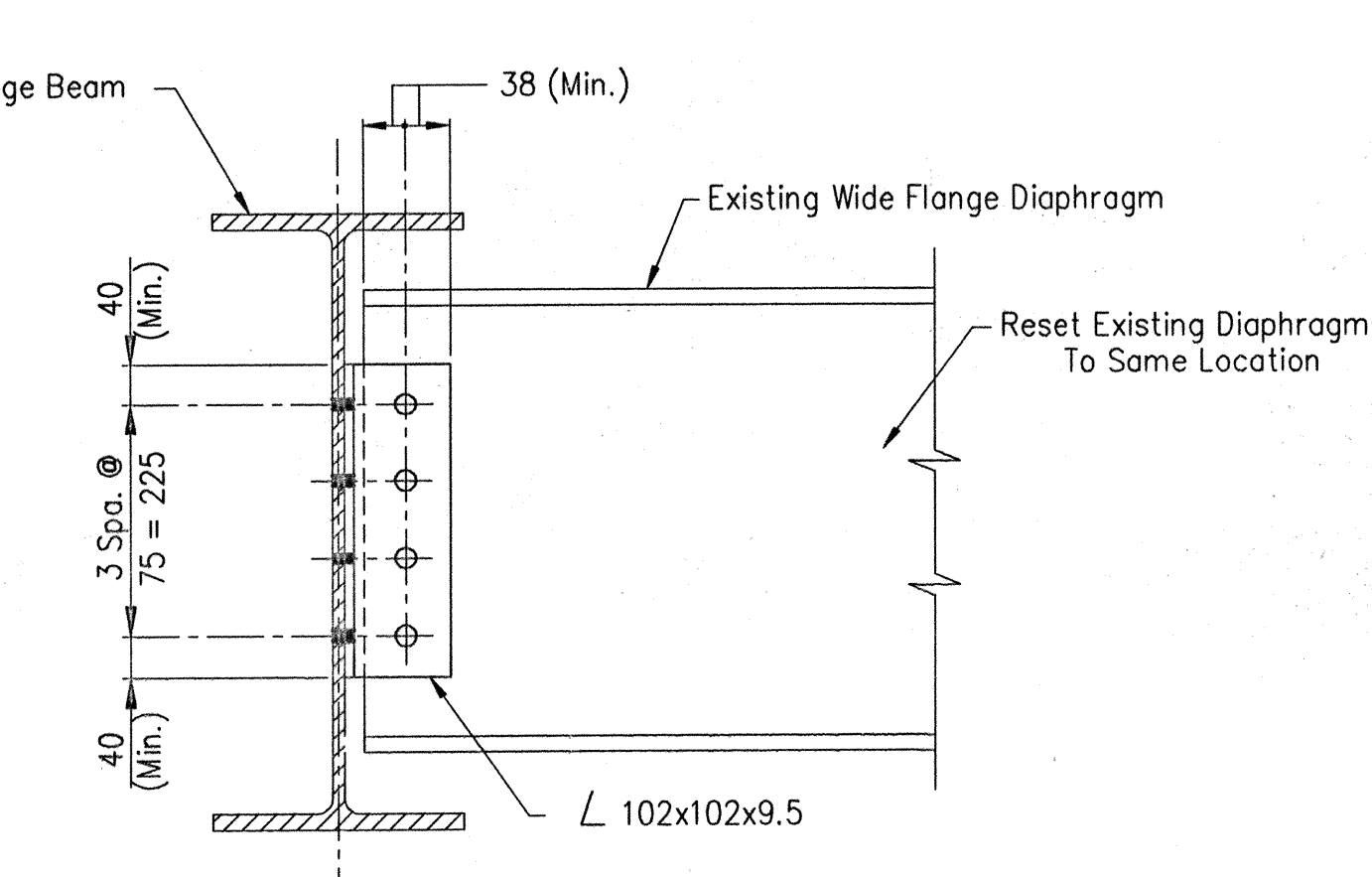
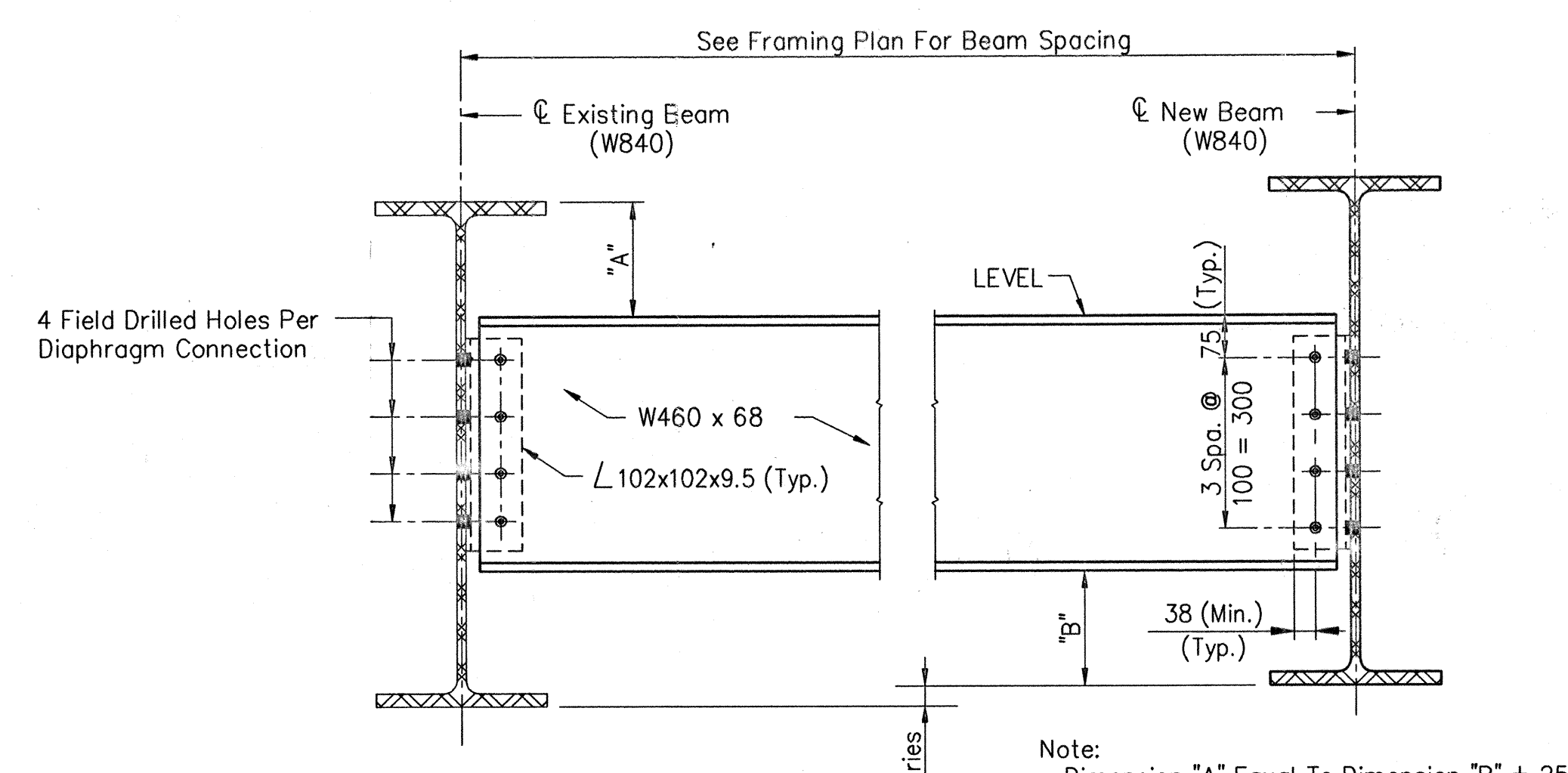
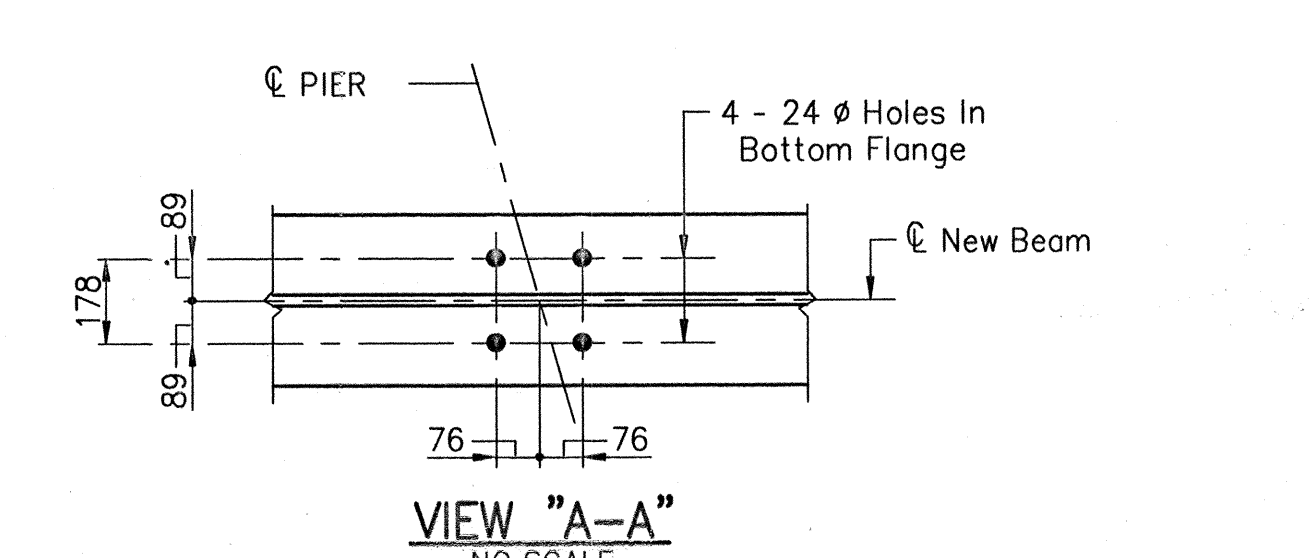
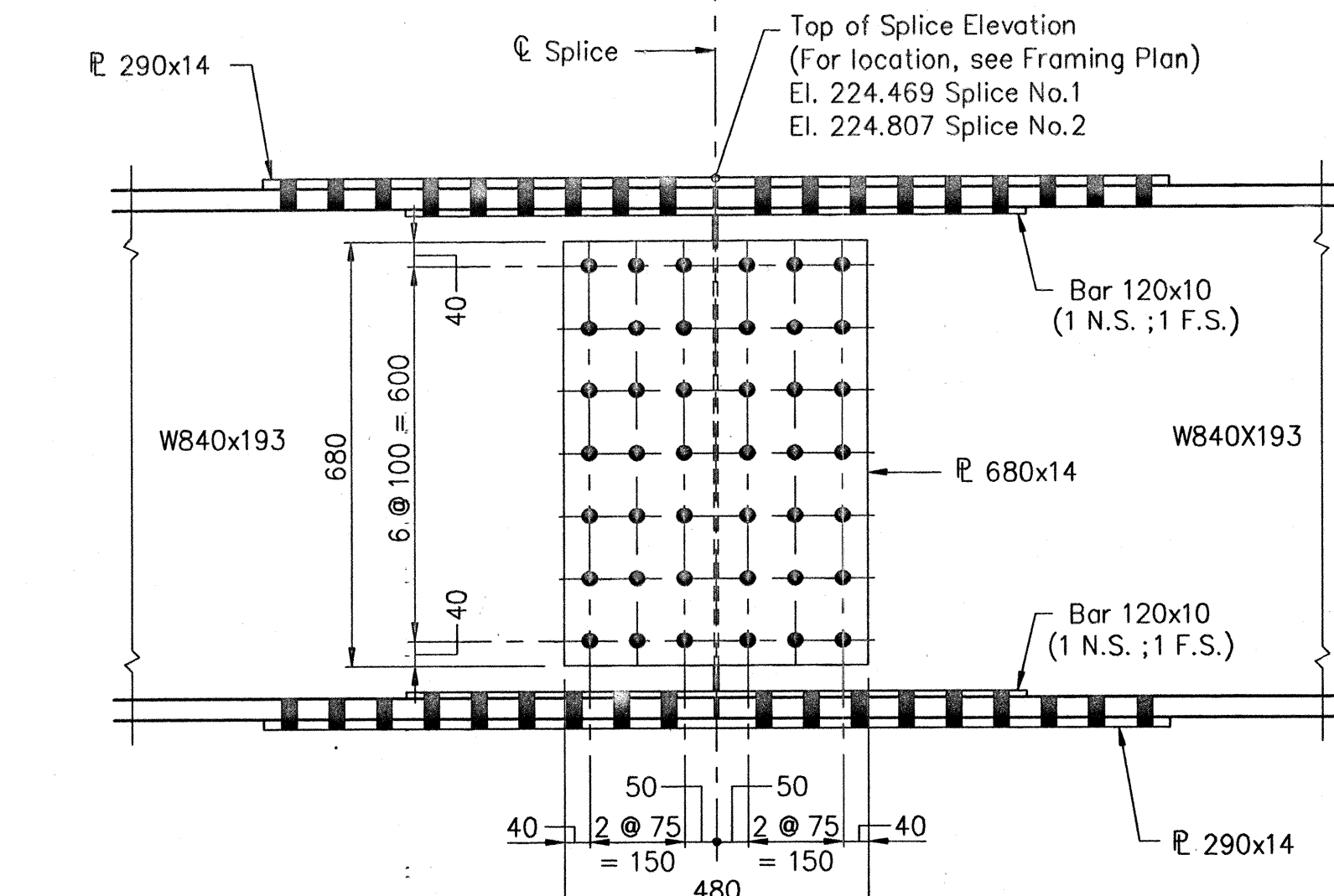
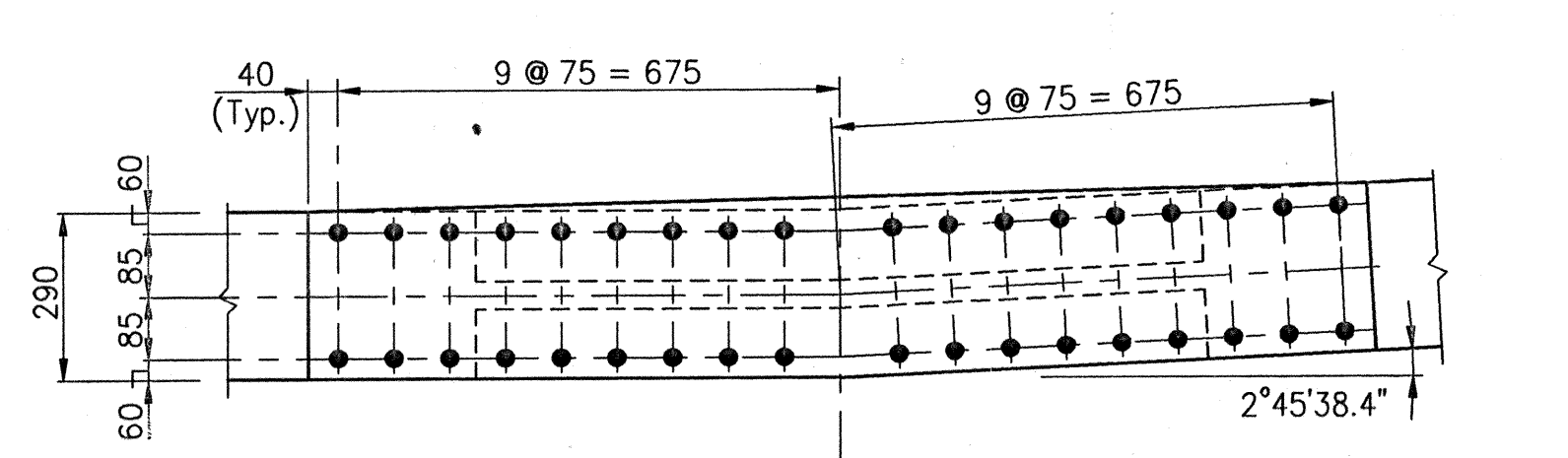
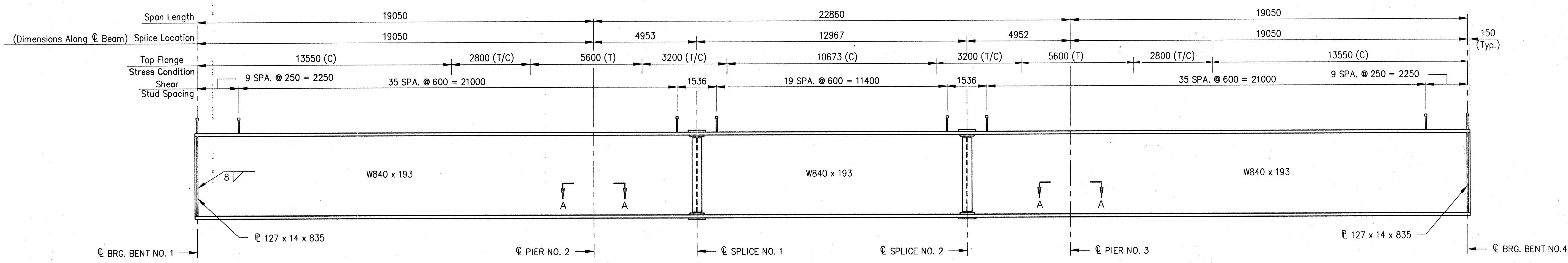
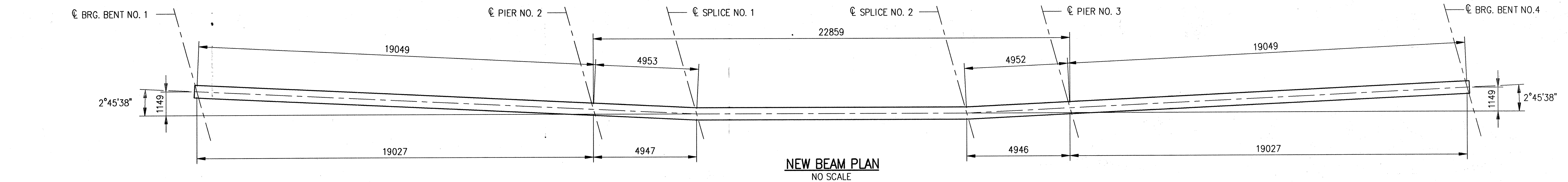
ESTIMATED QUANTITIES
WEIGHT OF STRUCTURAL STEEL = 18300 kg
(Includes 220 Shear Stud Connectors Installed On New Beams
And 2472 Shear Stud Connectors Installed On Existing Beams.)
FIELD DRILLED HOLES = 990 EACH

- NOTES:**
- Existing Structural Steel is ASTM A36.
 - Existing Diaphragm Connections to Beams Shall be Retrofitted.
 - Existing Cover Plate Ends Shall be Retrofitted as Shown. See Structural Steel Details.
 - All Structural Steel to be A709M, Grade 345.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 12:39:59
 Date: 7/13/2000
 Scale: 1/8" = 1'-0"
 Drawing File: I65_MarionCo\MB1708\FB\SB-FRP\JMA.dwg (622)

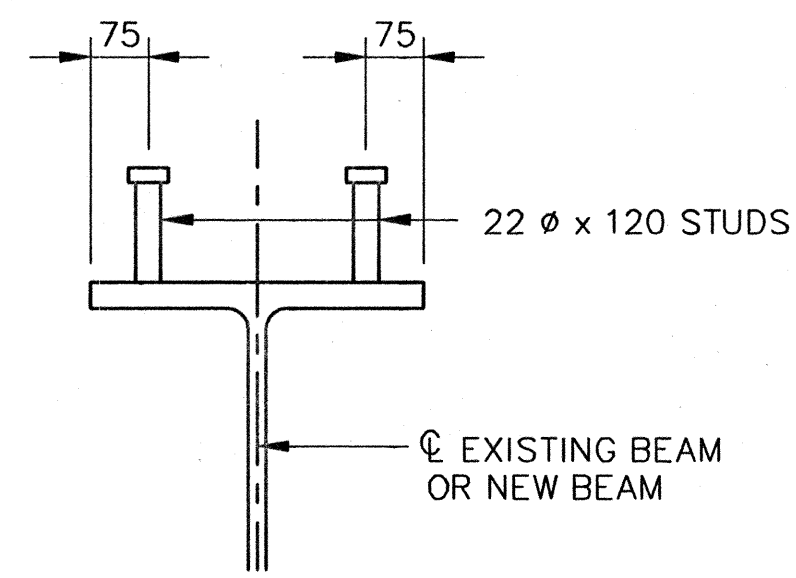
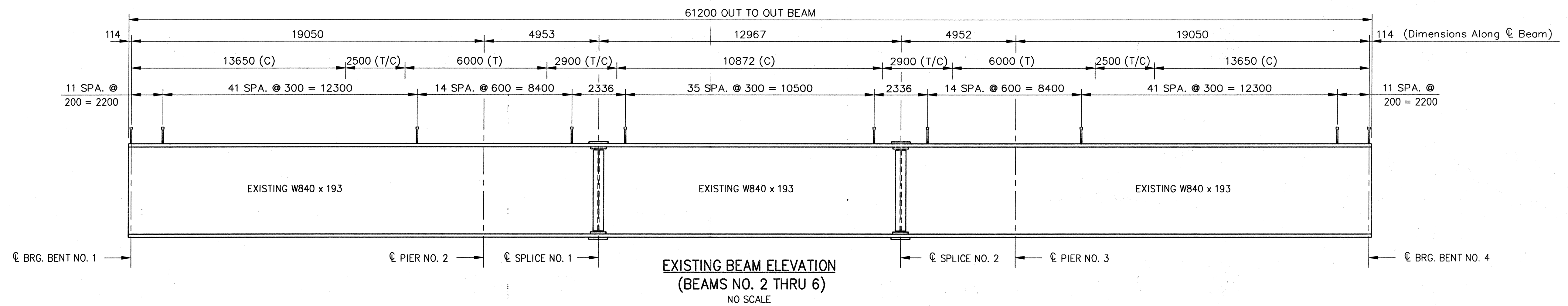
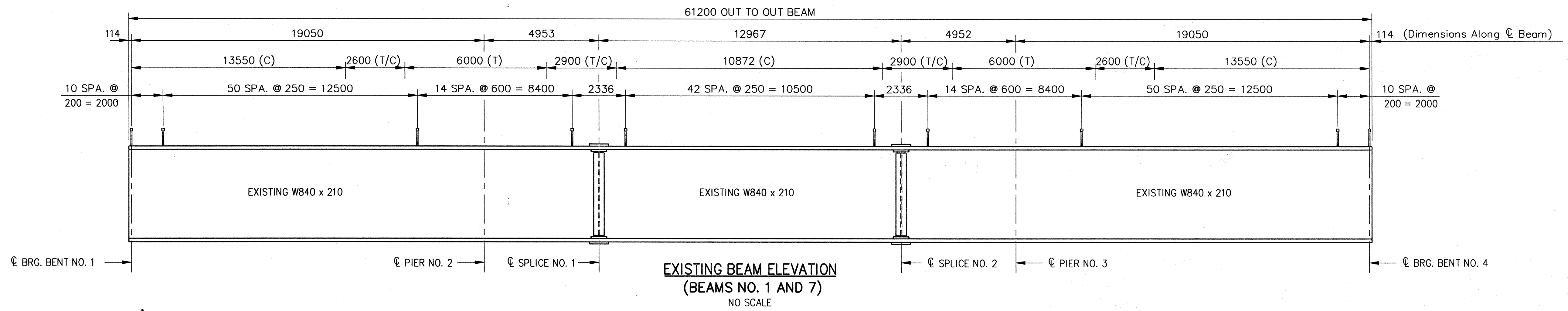
 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4615 FAX 317 713-4616	 RECOMMENDED FOR APPROVAL <i>Michael J. Halterman</i> 9/28/01 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION FRAMING PLAN
DESIGNED: CBS CHECKED: LS		DRAWN: TAL CHECKED: JWR	
HORIZONTAL SCALE As Noted VERTICAL SCALE As Noted		BRIDGE FILE MARION B-17-08-FB DESIGNATION 9981111	
SURVEY BOOK CONTRACT R-24327		SHEETS 11 of 20 PROJECT IM-65-3 (281) 118	



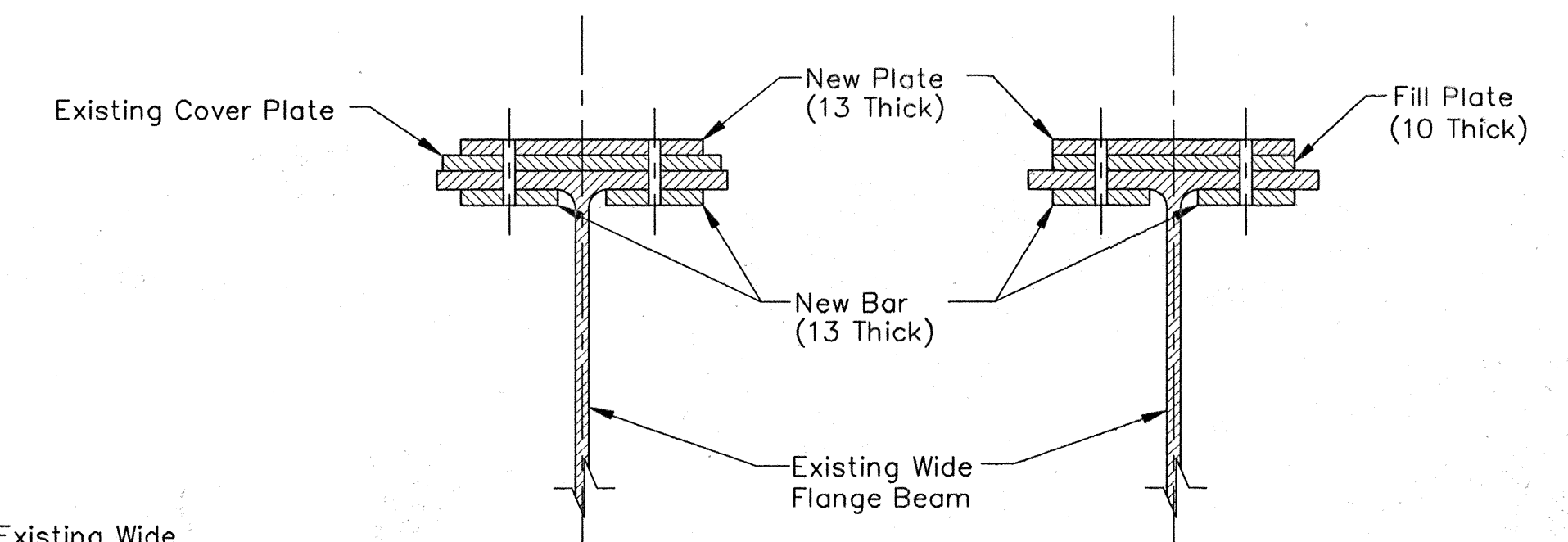
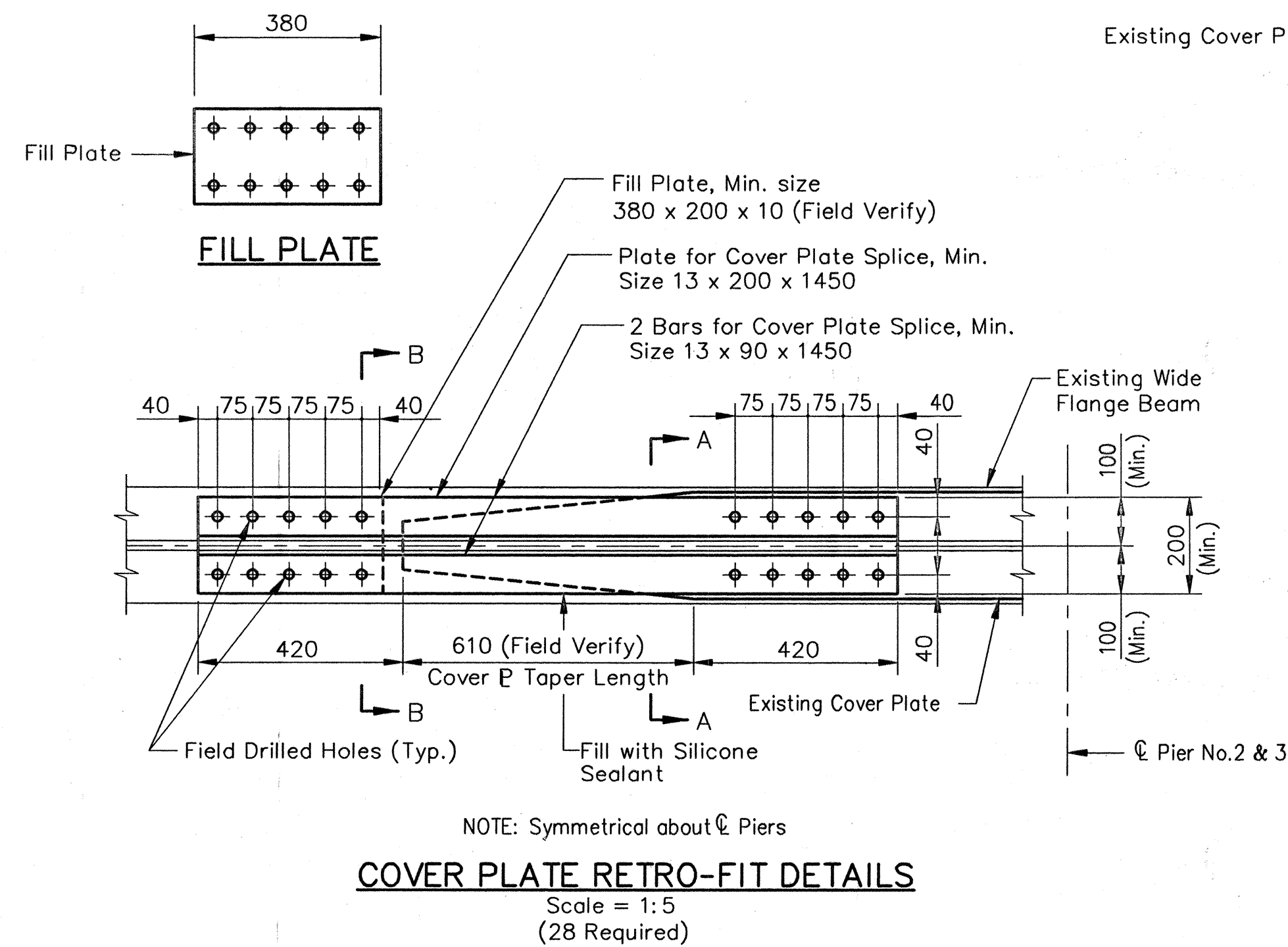
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.
 2. ALL STRUCTURAL STEEL TO BE A-709M GRADE 345, UNLESS NOTED.
 3. ALL BOLTS SHALL BE 22 ϕ A325M, TYPE 3 HIGH STRENGTH WITH OPEN HOLES OF 24 ϕ , UNLESS NOTED.
 4. FOR DIAPHRAGM LOCATIONS AND SPLICE LOCATIONS, SEE FRAMING PLAN SHEET NO.11.

Date: 12-29-07
 Scale: 1/100
 Drawing File: I65_MarionCo\MB17088B\GROBETA.dwg (S22)

JSE JANSSEN & SPAANS ENGINEERING CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	BFS Butler Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4615 FAX 317 713-4616	REGISTERED PROFESSIONAL ENGINEER No. 20931 STATE OF INDIANA MICHAEL J. HALPERN	RECOMMENDED FOR APPROVAL DESIGN ENGINEER DATE: 9/28/07
DESIGNED: CBS CHECKED: LS		DRAWN: TAL CHECKED: JWR	
INDIANA DEPARTMENT OF TRANSPORTATION STRUCTURAL STEEL DETAILS			
HORIZONTAL SCALE AS NOTED VERTICAL SCALE AS NOTED		BRIDGE FILE MARION B-17-08-FB DESIGNATION 9981111 SHEETS 12 of 20 PROJECT IM-65-3 (281) 118	



NOTES:
 STUDS SHALL BE AUTOMATICALLY WELDED TO THE BEAM BY THE USE OF A STUD WELDING GUN. THE WELDS SHALL BE OF SUFFICIENT STRENGTH TO PERMIT THE STUDS TO BE BENT 30°. THE CONTRACTOR MAY USE WELDED CHANNELS OR 19 Ø WELDED STUDS AS ALTERNATE SHEAR CONNECTORS. IF USED, THE ALTERNATE CONNECTORS SHALL HAVE EQUIVALENT SHEAR VALUE AND THE PROPOSED SIZE AND SPACING SHALL BE SUBMITTED FOR APPROVAL.

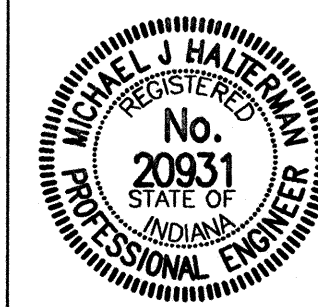


- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.
 2. ALL STRUCTURAL STEEL TO BE A709M GRADE 345, UNLESS NOTED.
 3. ALL BOLTS SHALL BE 22 Ø A325M, TYPE 3 HIGH STRENGTH WITH OPEN HOLES OF 24 Ø, UNLESS NOTED.
 4. FOR DIAPHRAGM LOCATIONS AND SPLICE LOCATIONS, SEE FRAMING PLAN, SHEET NO.11.

Date: 14-03-08
 Scale: 1:100
 Drawing File: 05_MarionCo\MB1708FB\steel-std.dwg (S17)

JSE
 JANSSEN & SPAANS ENGINEERING
 CONSULTING ENGINEERS
 2825 EAST 56TH STREET
 INDIANAPOLIS, INDIANA 46220
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 FAX: (317) 259-8262

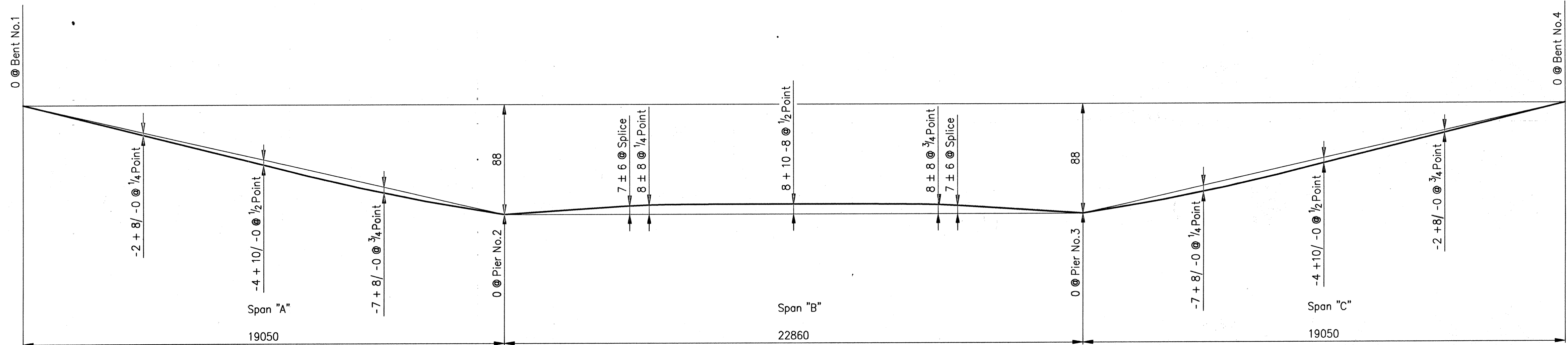
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 Butler Fairman Seufert
 CONSULTING ENGINEERS
 8450 WESTFIELD BLVD., SUITE 300
 INDIANAPOLIS, IN. 46240
 317 713-4616
 509 WEST 84TH DRIVE, SUITE G
 MERRILLVILLE, IN. 46410
 219 769-2333
 FAX 219 769-2377



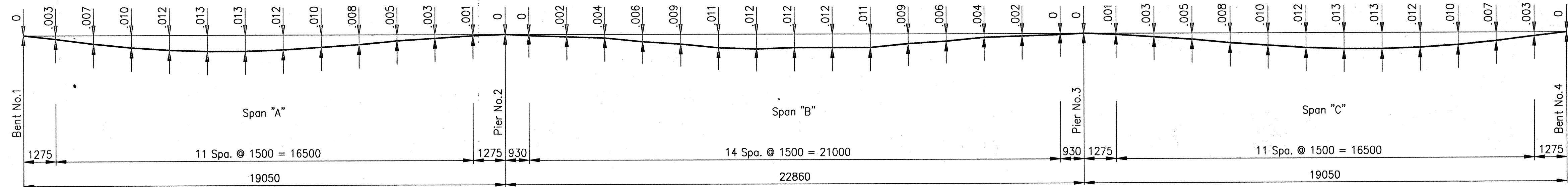
RECOMMENDED FOR APPROVAL: *Michael J. Halterman* 9/28/01
 DESIGN ENGINEER DATE
 DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JWR

INDIANA
 DEPARTMENT OF TRANSPORTATION
 STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION
AS NOTED	9981111
SURVEY BOOK	SHEETS
	13 of 20
CONTRACT	PROJECT
R-24327	IM-65-3 (281) 118



NO LOAD CAMBER AND BLOCKING DIAGRAM
NO SCALE



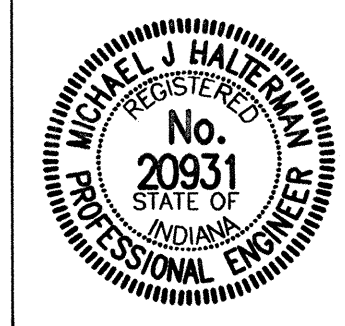
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(DEFLECTIONS IN METERS)
NO SCALE

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.

Time: 12:49:57
Date: 4/17/2000
Drawing File: I65_MarionCA\MB1708FB\GRODIERA.dwg (S22)
PLOT SCALE: 1:1000000

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2825 EAST 56TH STREET
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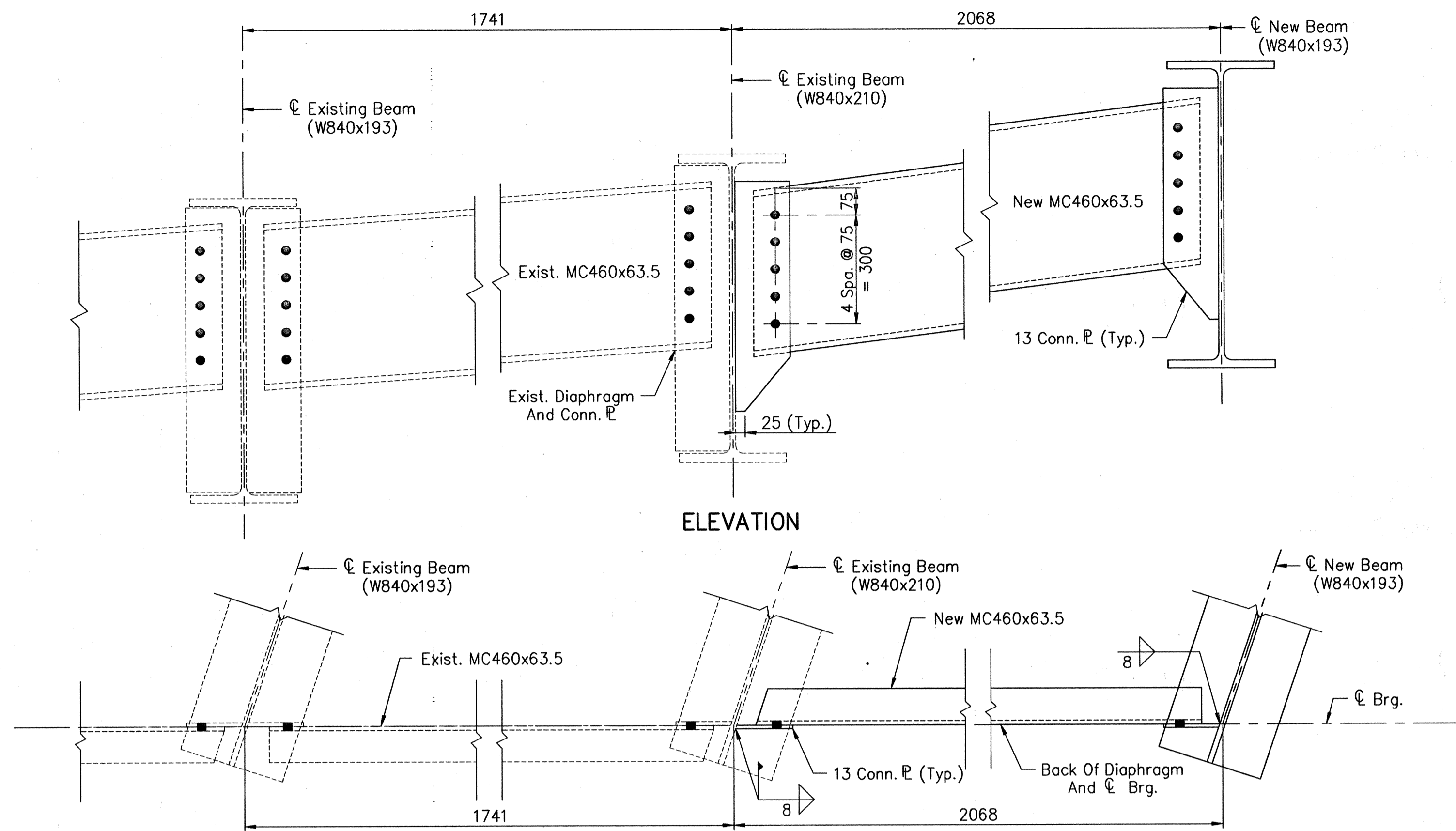
BFS
Butler Fairman Seufert
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8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616
509 WEST 84TH DRIVE, SUITE G
MERRILLVILLE, IN. 46410
219 769-2333
FAX 219 769-2377



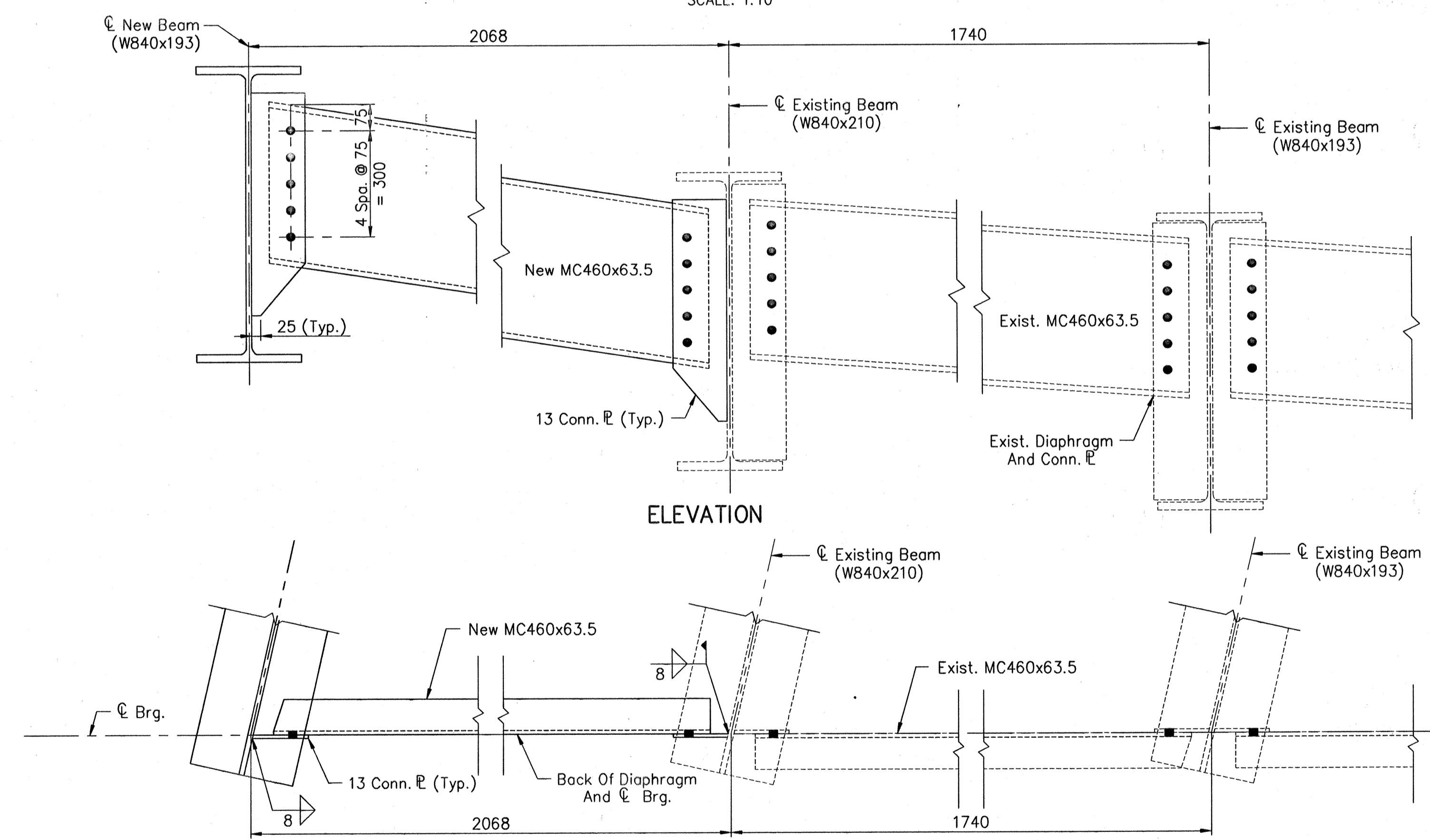
RECOMMENDED FOR APPROVAL: *Michael J. Halterman* 9/28/01
DESIGN ENGINEER DATE
DESIGNED: CBS DRAWN: TAL
CHECKED: LS CHECKED: JW

INDIANA DEPARTMENT OF TRANSPORTATION
STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION
AS NOTED	9981111
SURVEY BOOK	SHEETS
	14 of 20
CONTRACT	PROJECT
R-24327	IM-65-3 (281) 118



END DIAPHRAGM CONNECTION AT BENT NO.1
SCALE: 1:10



END DIAPHRAGM CONNECTION AT BENT NO.4
SCALE: 1:10

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.
 2. ALL STRUCTURAL STEEL TO BE A-709M GRADE 345, UNLESS NOTED.
 3. ALL BOLTS SHALL BE 22 ? A325M, TYPE 3 HIGH STRENGTH WITH OPEN HOLES OF 24 ?, UNLESS NOTED.
 4. FOR DIAPHRAGM LOCATIONS AND SPLICE LOCATIONS, SEE FRAMING PLAN SHEET NO.11.

Time: 12:49:57
 Date: 4/11/2000
 Drawing File: IES_MarionCo\MB1708FB\GIBBERI.dwg (S22)

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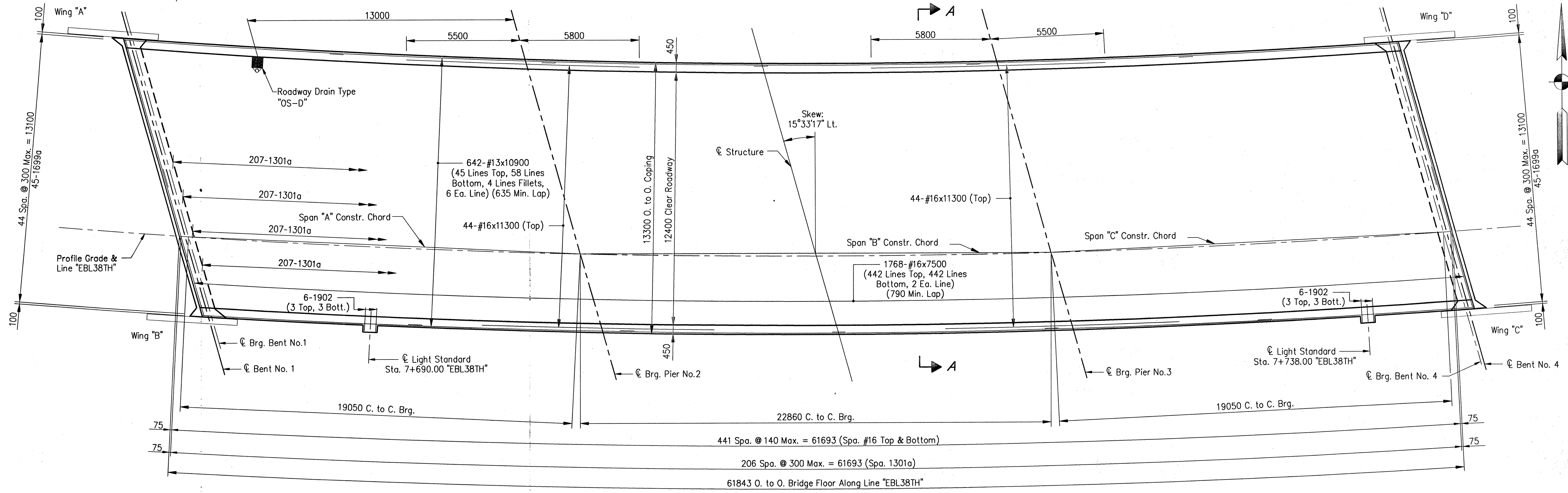
MICHAEL J. HALTERMAN
 REGISTERED PROFESSIONAL ENGINEER
 No. 20931
 STATE OF INDIANA

RECOMMENDED FOR APPROVAL
Michael J. Halterman 9/28/01
 DESIGN ENGINEER DATE

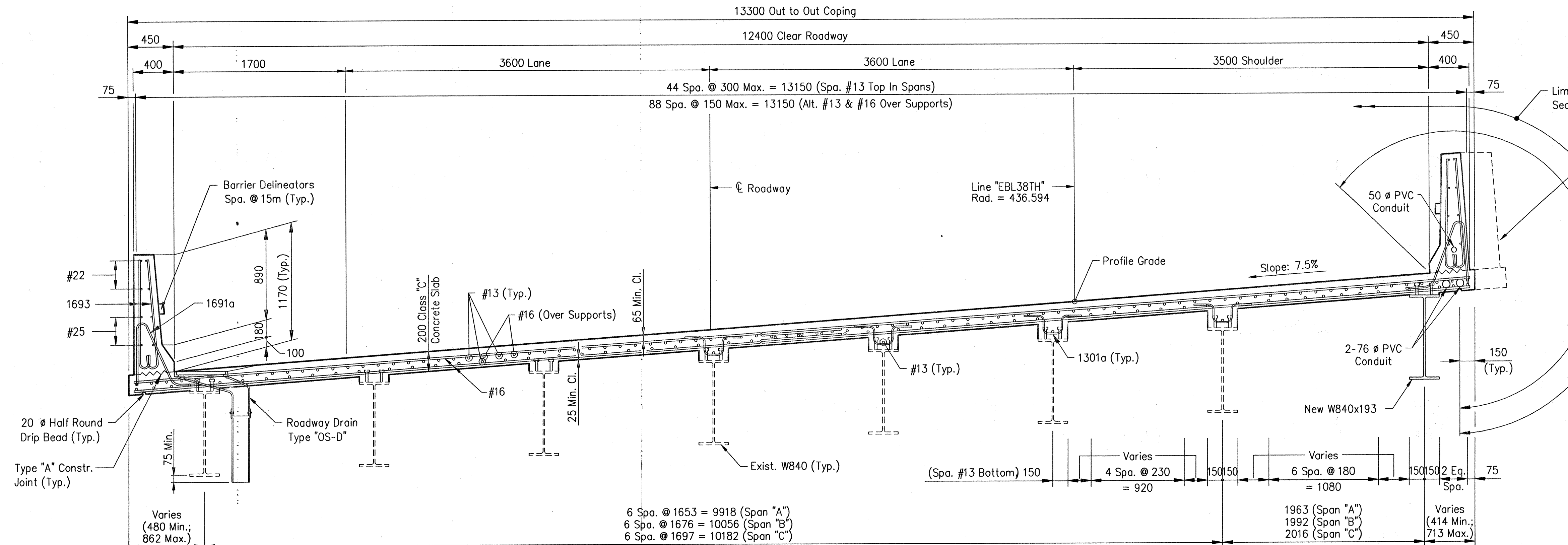
DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JWR

INDIANA DEPARTMENT OF TRANSPORTATION
 STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION
AS NOTED	9981111
SURVEY BOOK	SHEETS
	15 of 20
CONTRACT	PROJECT
R-24327	IM-65-3 (281) 118



PLAN
SCALE: 1:100



SECTION A-A
SCALE: 1:25

NOTES:
 All Reinforcing Steel Shall Be Epoxy Coated.
 All dimensions are in millimeters (mm), except as noted.
 For Roadway Drain Type OS-D details, see Standard 704-BDCG-02-03.
 For Bridge Light Standard details, see Standard 807-BLIT-01-04.
 For additional details, see Sheets No.17 and No.18.
 For reinforcing bar notes, see Standard 703-BRST-01.

Time: 13,327
 Date: 7/11/2020
 Drawing File: I65_MarionCA\MB1708FB\SLB-PLANK.dwg (92)

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 2825 EAST 56TH STREET
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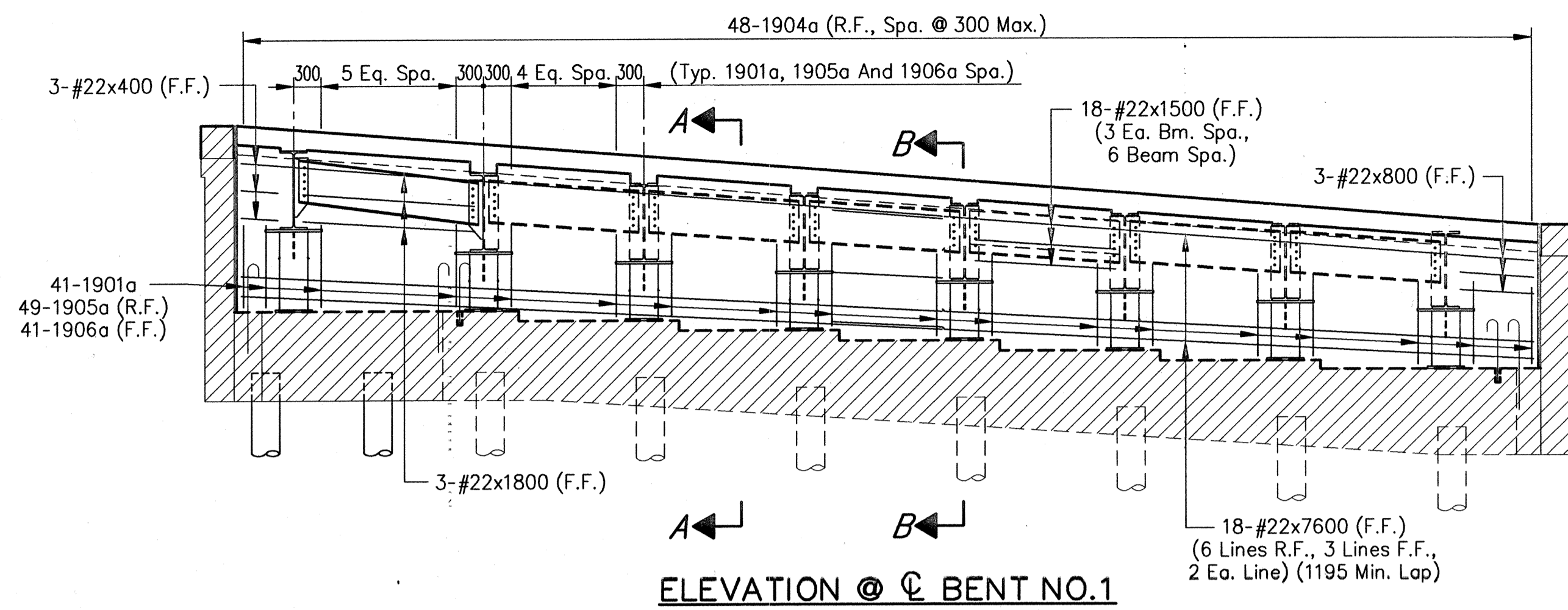
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 317 713-4615
 219 769-2333
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 FAX 219 769-2377



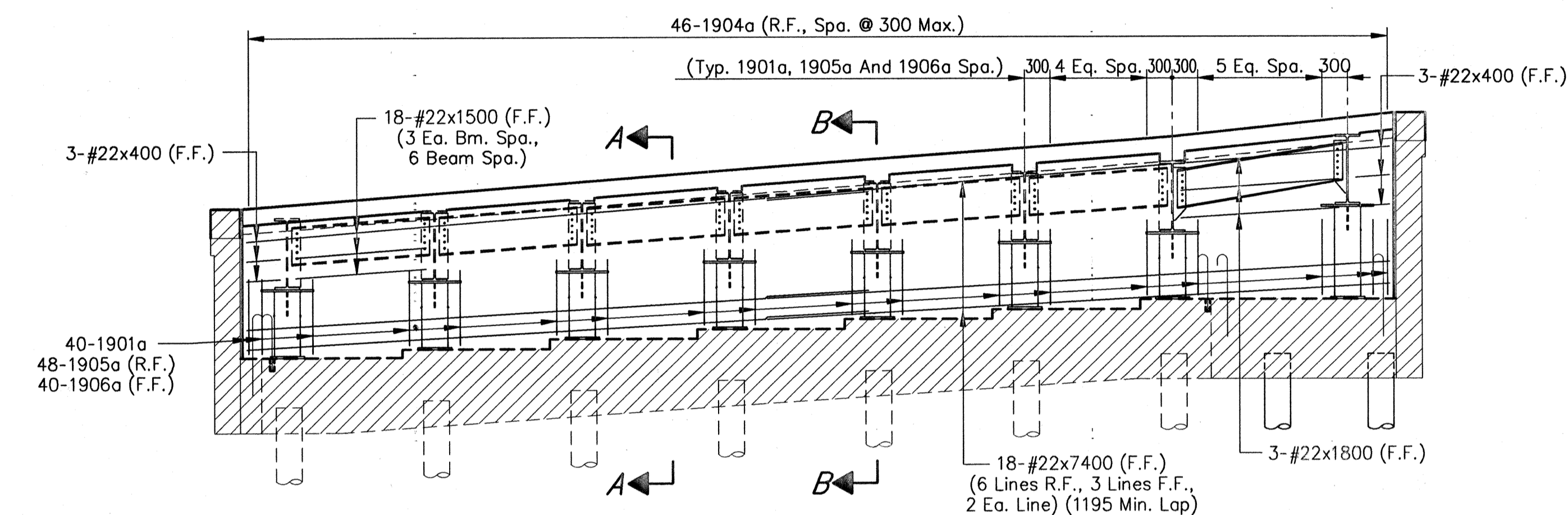
RECOMMENDED FOR APPROVAL
Michael J. Halterman 9/28/01
 DESIGN ENGINEER DATE
 DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JWJ

INDIANA
 DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE
 DETAILS

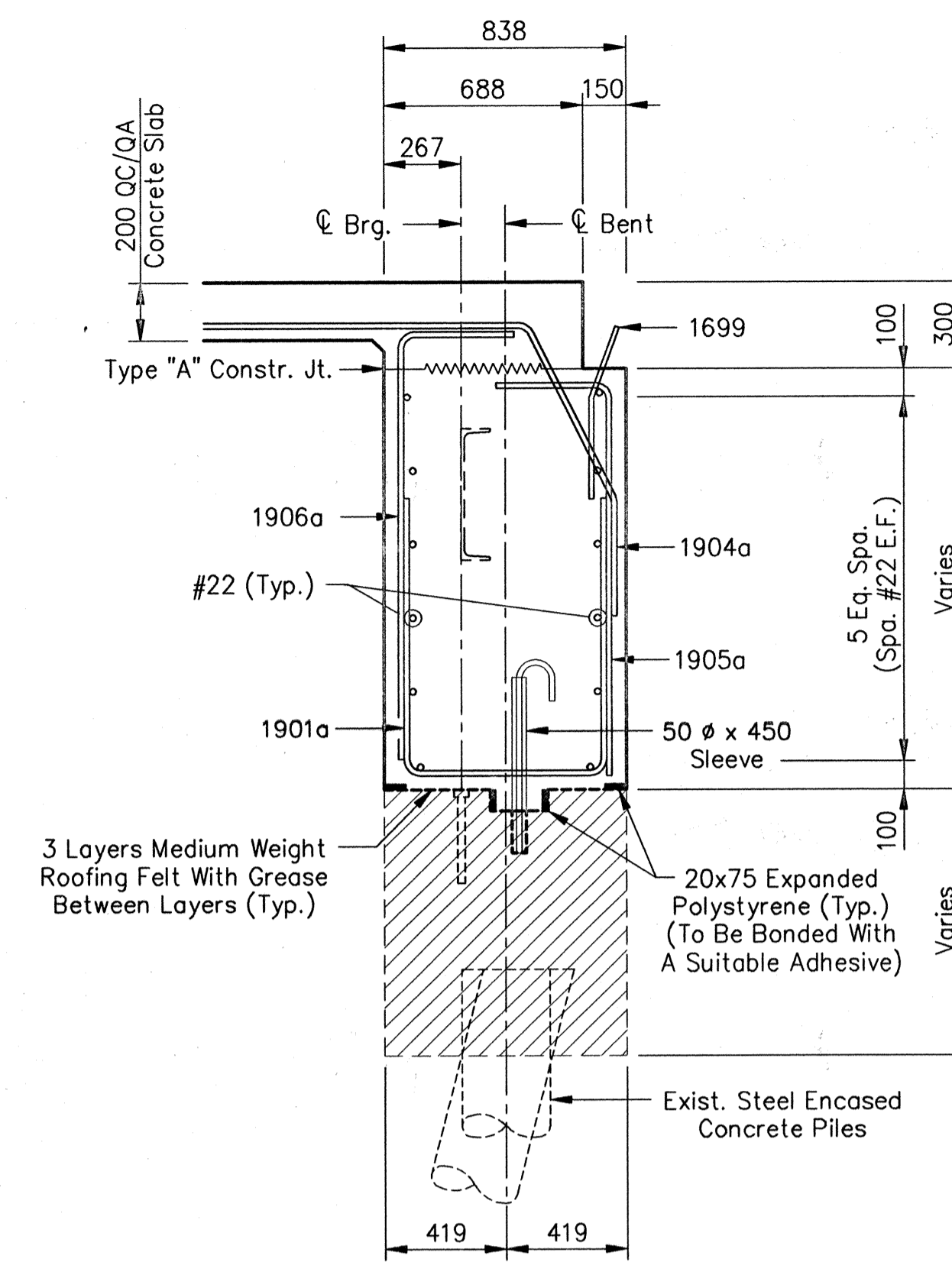
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AS NOTED	MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION
AS NOTED	9981111
SURVEY BOOK	SHEETS
	16 of 20
CONTRACT	PROJECT
R-24327	IM-65-3 (281) 118



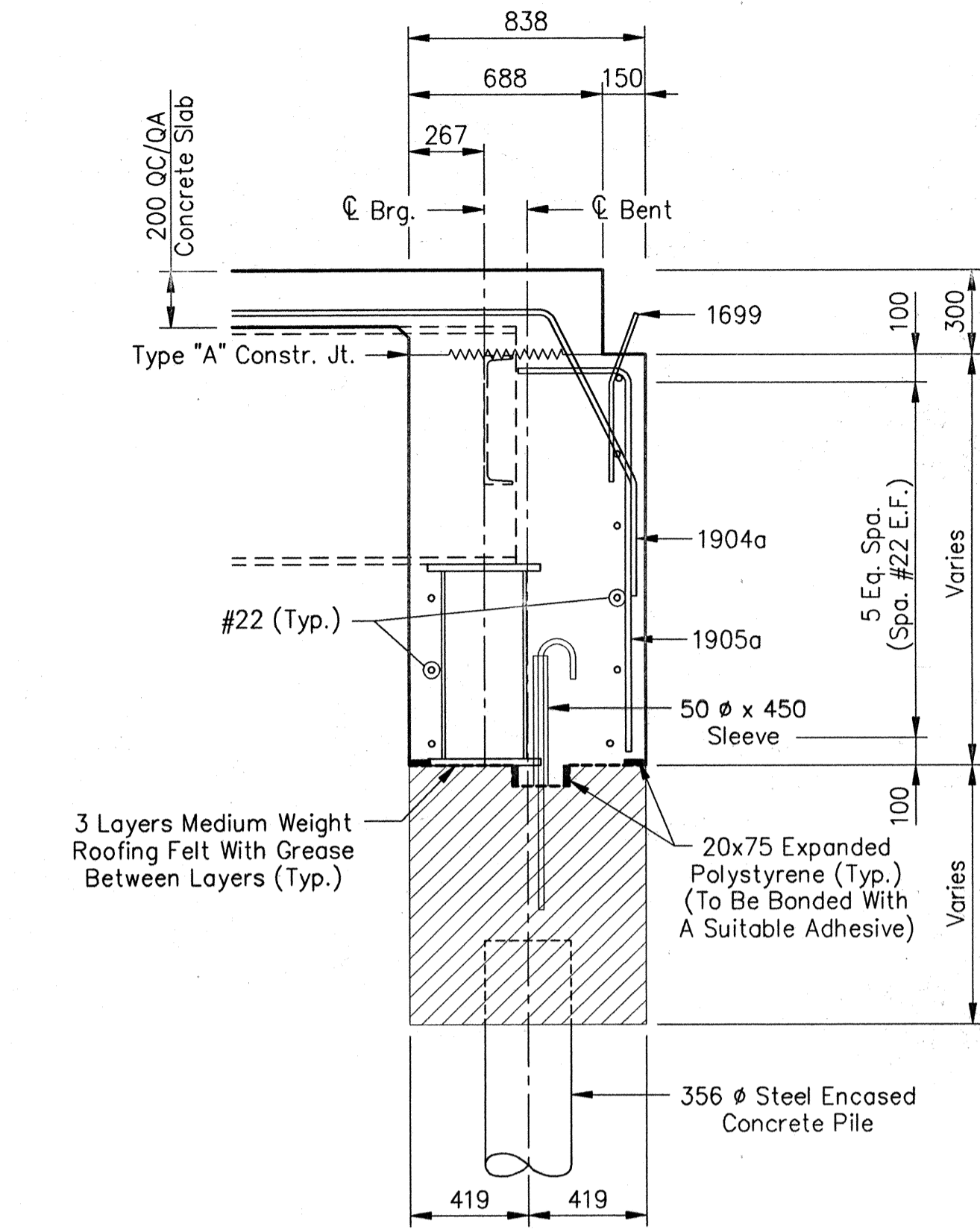
ELEVATION @ BENT NO.1



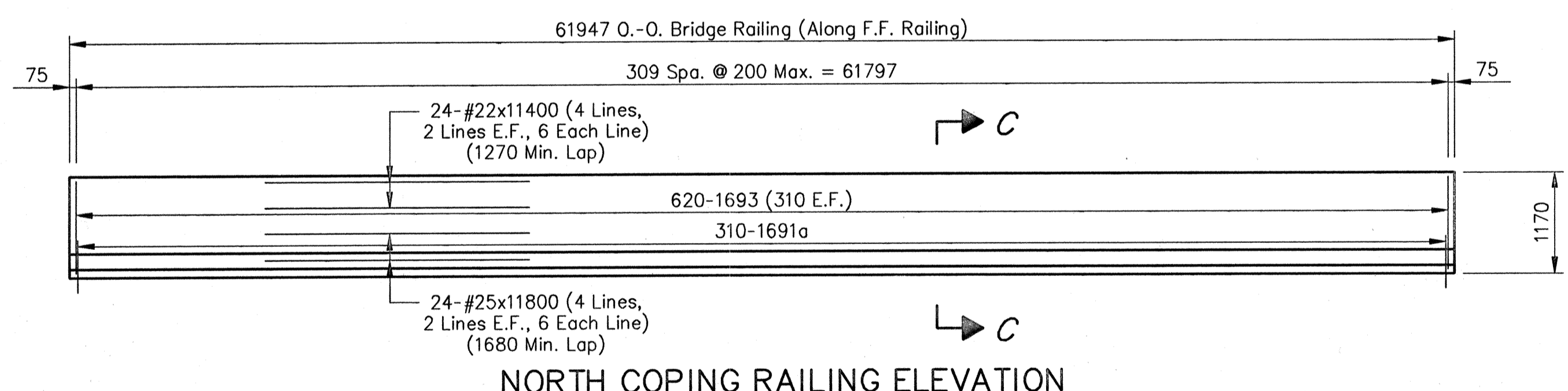
ELEVATION @ BENT NO.4



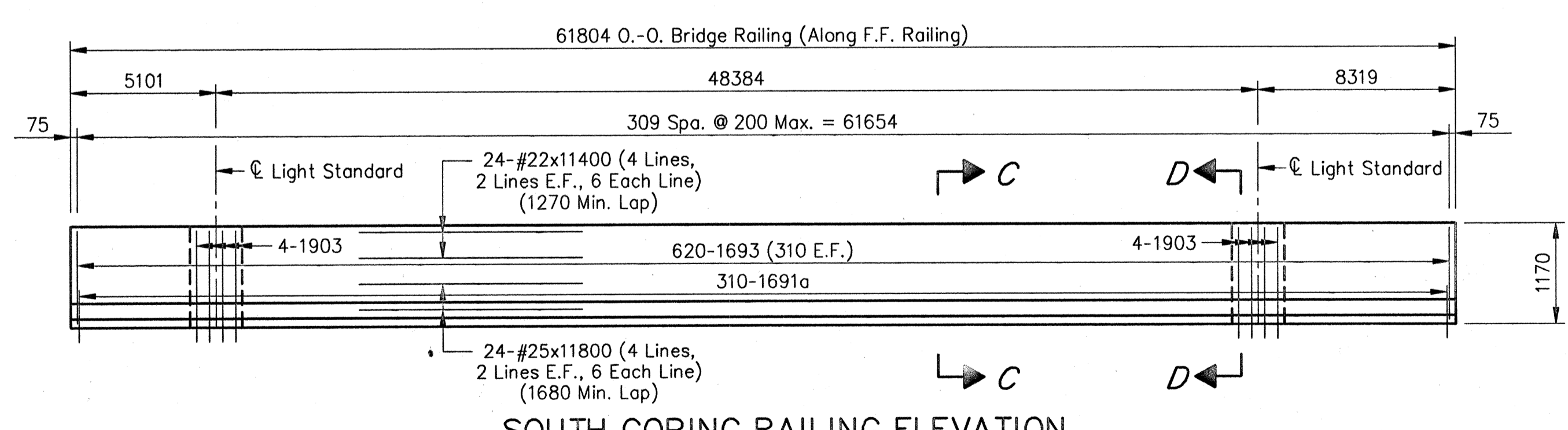
SECTION A-A
Scale: 1:20



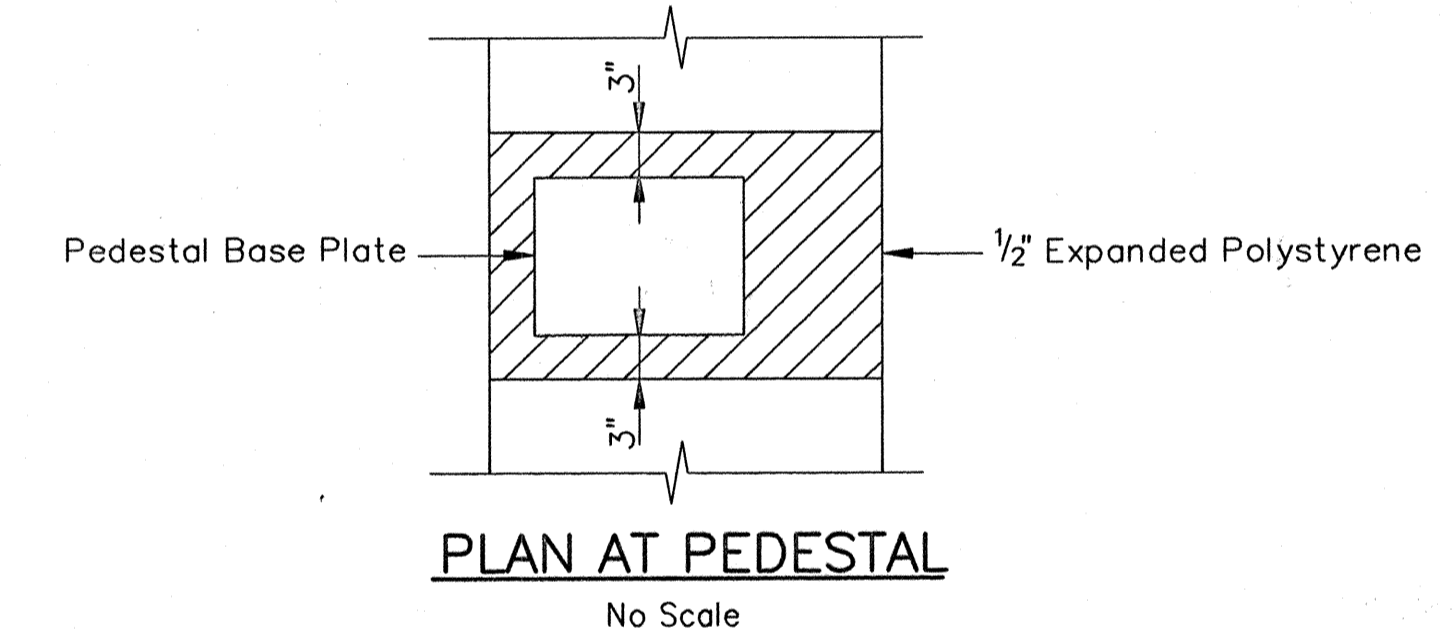
SECTION B-B
Scale: 1:20



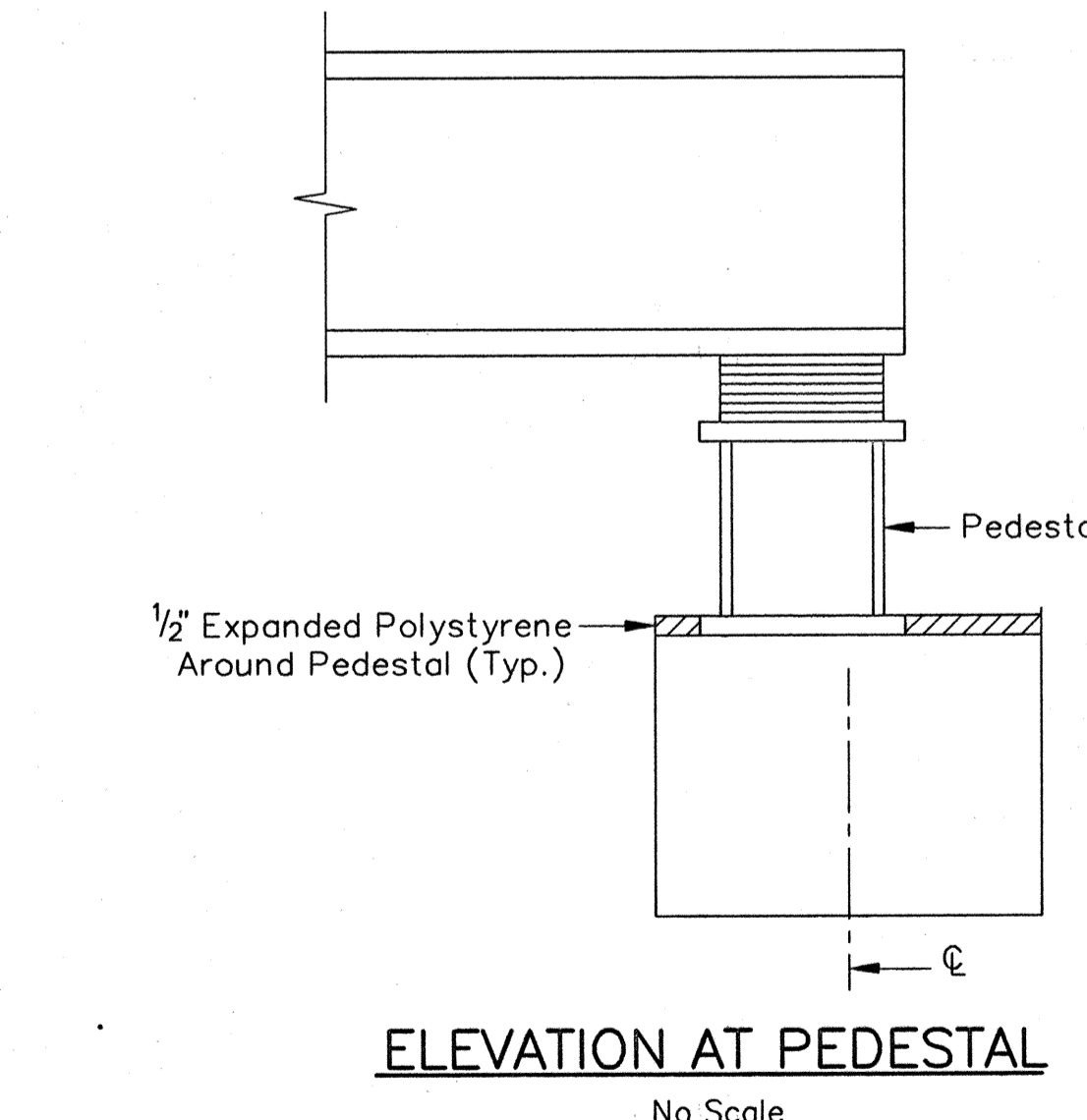
NORTH COPING RAILING ELEVATION



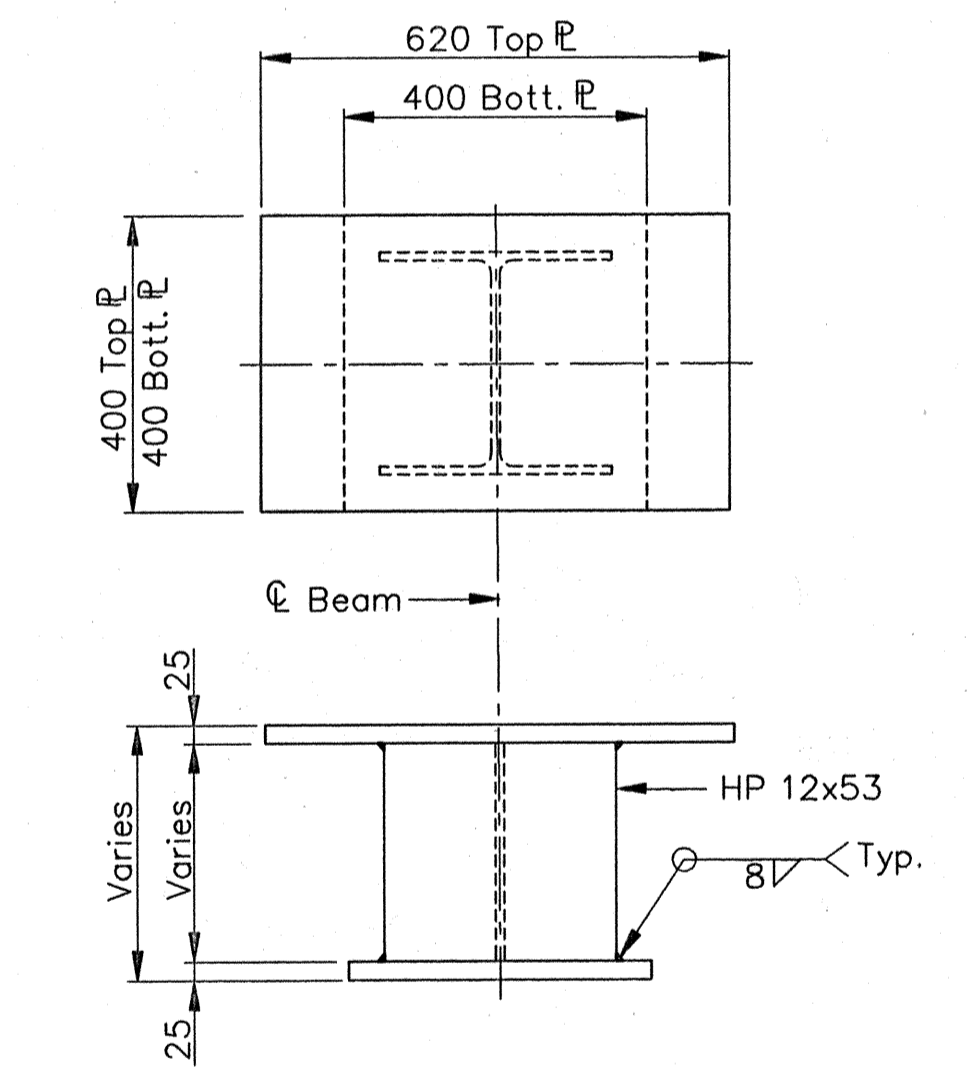
SOUTH COPING RAILING ELEVATION



PLAN AT PEDESTAL
No Scale



ELEVATION AT PEDESTAL
No Scale



H-PILE STEEL PEDESTAL DETAIL
(32 Req'd.)
Scale - 1:10

NOTES:
 For reinforcing bar notes, see Standard 703-BRST-01.
 All reinforcing steel to be epoxy coated.
 For Backfill details, see Standard 211-BFIL-04.
 For additional details and Bill Of Materials, see Sheet No.18.
 For Section "C-C", see Standard 706-BCBR-02.
 For Section "D-D", see Standard 807-BLIT-01.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
 Date: 4/11/2000
 Drawing File: I:\Marion\MB1708\REV\SR-REMA.dwg (SZ2)

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 317 713-4615
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MICHAEL J. HALPERN
 REGISTERED
 No. 20931
 STATE OF INDIANA
 PROFESSIONAL ENGINEER

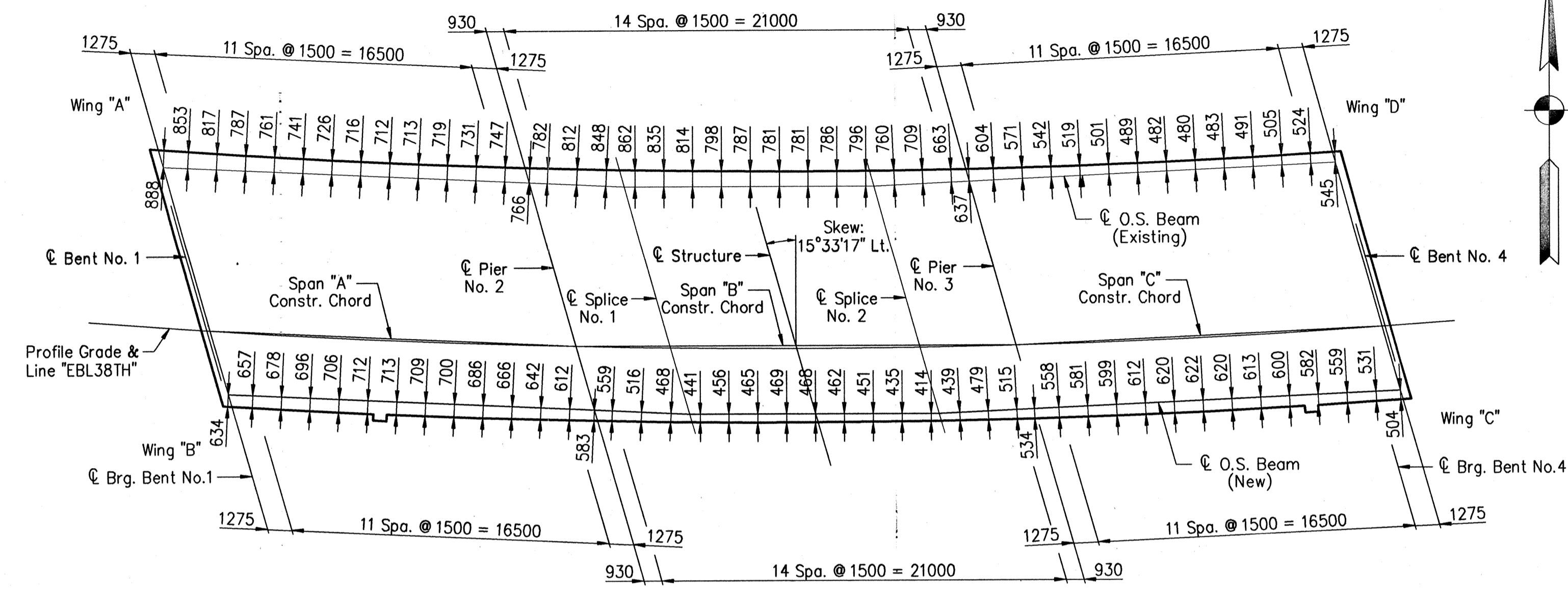
RECOMMENDED FOR APPROVAL
 Michael J. Halpern 9/28/01
 DESIGN ENGINEER DATE
 DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JWR

INDIANA
 DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE 1 : 50	BRIDGE FILE MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION 9981111
SURVEY BOOK	SHEETS 17 of 20
CONTRACT R-24327	PROJECT IM-65-3 (281) 118

**SUPERSTRUCTURE
BILL OF MATERIALS**

Epoxy Coated Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
#25	48	11800	
Total No.25			2250
#22	48	11400	
#22	18	7600	
#22	18	7400	
#22	6	1800	
#22	36	1500	
#22	3	800	
#22	9	400	
Total No.22			2701
1901a	81	2380	
1902	12	1375	
1903	8	3360	
1904a	94	2880	
1905a	97	1540	
1906a	81	1740	
Total No.19			1782
1691a	620	1680	
1693	1240	1260	
1699	90	620	
#16	88	11300	
#16	1768	7500	
Total No.16			26251
1301a	828	960	
#13	642	10900	
Total No.13			7746
Total Epoxy Coated Reinforcing Steel			40730
Concrete			
Class "C" in Superstructure			212.0 m ³
Class "C" Concrete Railing			38.4 m ³
Miscellaneous			
Surface Seal			1138 m ²
Masonry Coating			371 m ²
Barrier Delineators			10 Each
1- Standard Roadway Drain			
Type OS, Grate D			146 kg
50 Ø PVC Pipe Conduit			68 m
75 Ø PVC Pipe Conduit			136 m
Anchor Bolt AR-22			8 Each



COPING OFFSETS
SCALE: 1:200

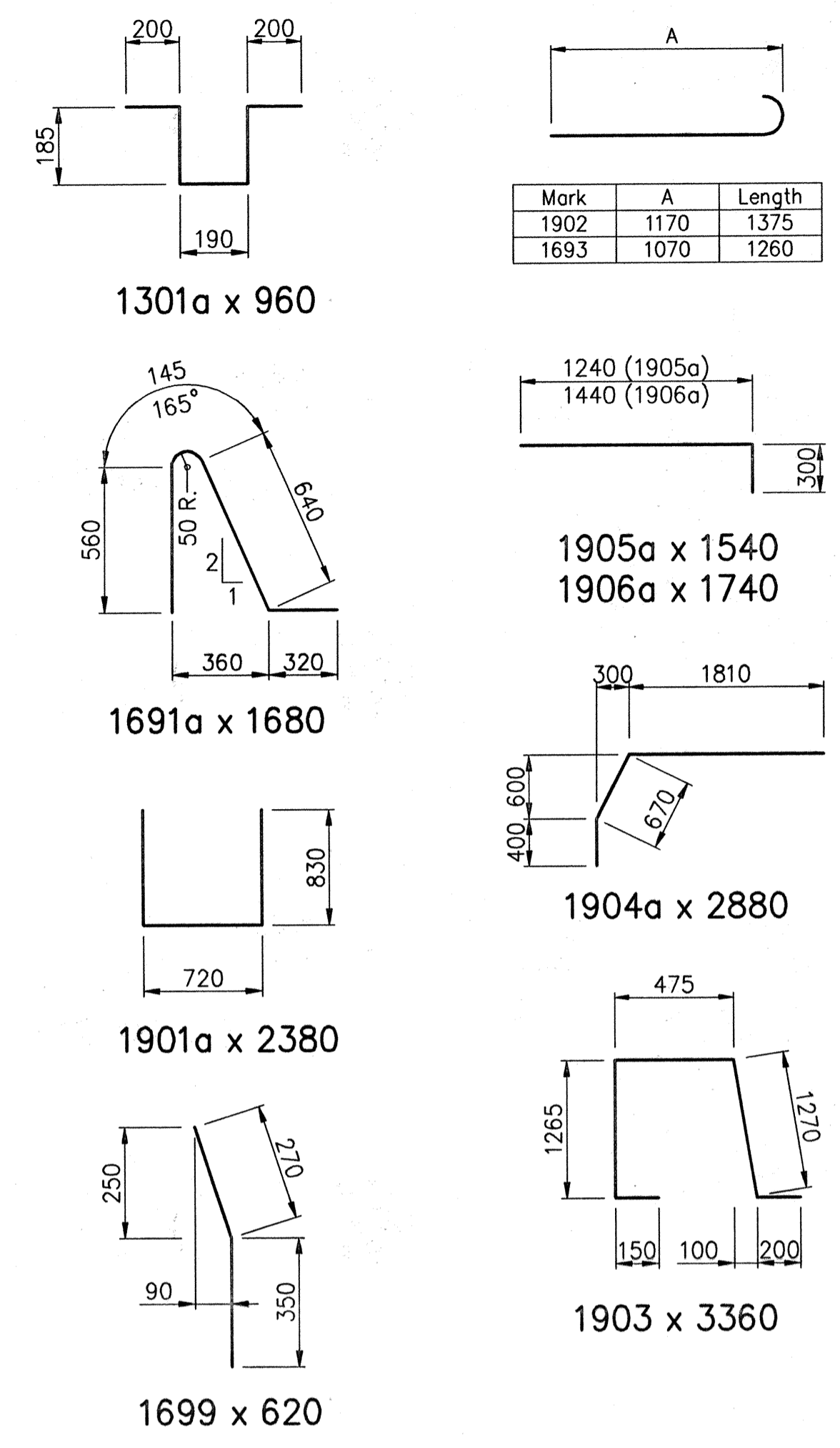
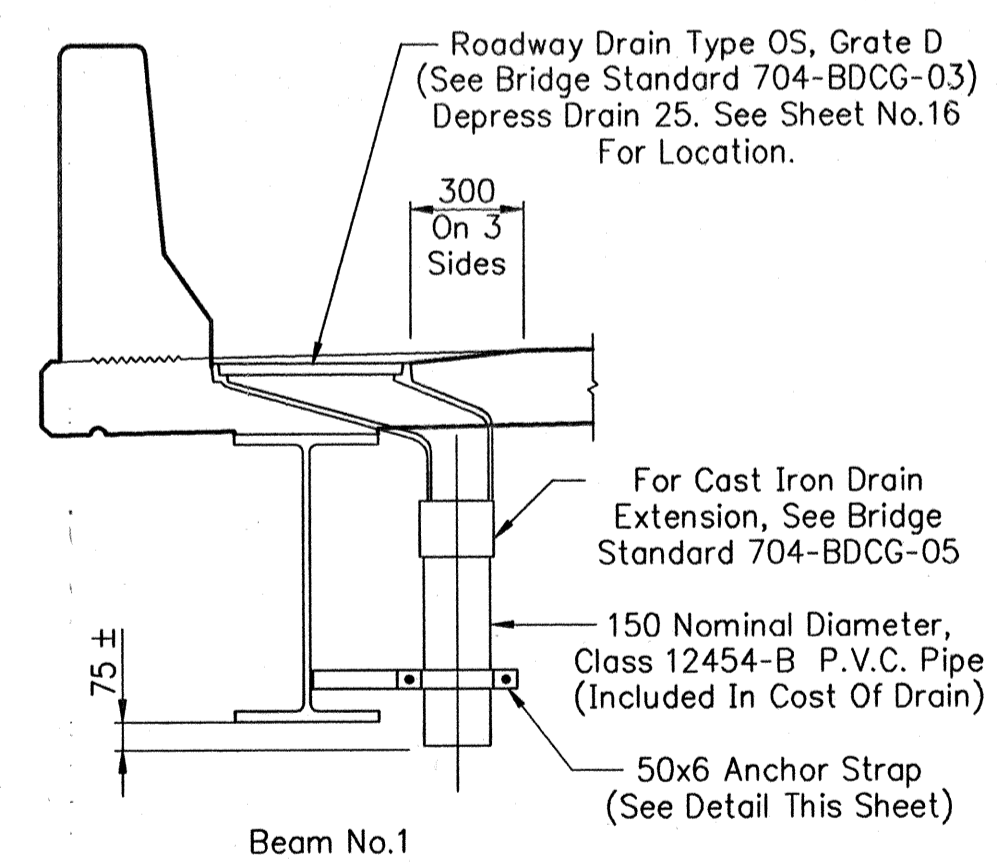
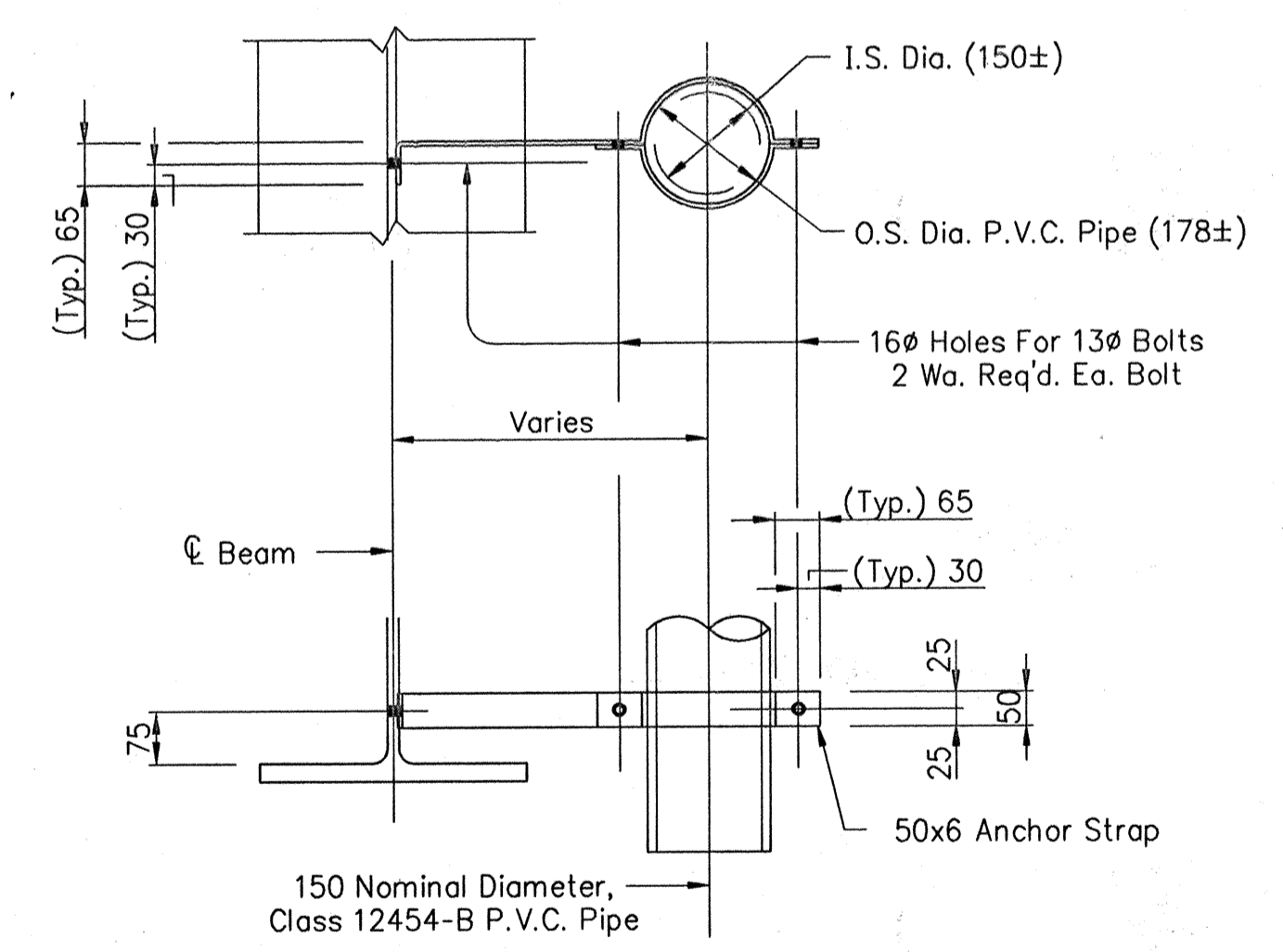


TABLE OF BOTTOM OF BEAM ELEVATIONS

Beam No.	@ Bent No.1	@ Bent No.5
No.1	221.163	223.679
No.2	222.257	223.778
No.3	222.369	223.894
No.4	222.480	224.010
No.5	222.591	224.126
No.6	222.702	224.240
No.7	222.814	224.354
No.8	223.069	224.662



SECTION AT ROADWAY DRAIN TYPE OS-D



DRAIN PIPE BRACKET DETAIL
Scale: 1:10

NOTES:

- All reinforcing steel to be epoxy coated.
- For reinforcing bar notes, see Standard 703-BRST-01.
- Surface Seal and Masonry Coat exposed surfaces of wingwall.
- Field drilled holes in concrete shall extend to a depth sufficient to embed a bar 150 with an approved anchor system having a minimum pullout equal to 118 kN for #19 bars and 160 kN for #22 Bars.
- For Wing "A" and Wing "B" details, see Sheet No.8.
- For Backfill details, see standard 211-BFIL-04.
- All dimensions for coping offsets and screed lines are taken along the construction chords.

All Dimensions Are In Millimeters (mm), And All Elevations Are In Meters (m), Except As Noted.

Time: 11:55:47
Date: 4/11/2000
Drawing File: I63_MarionCo\MB1708FB\SB-REMA.dwg (S22)

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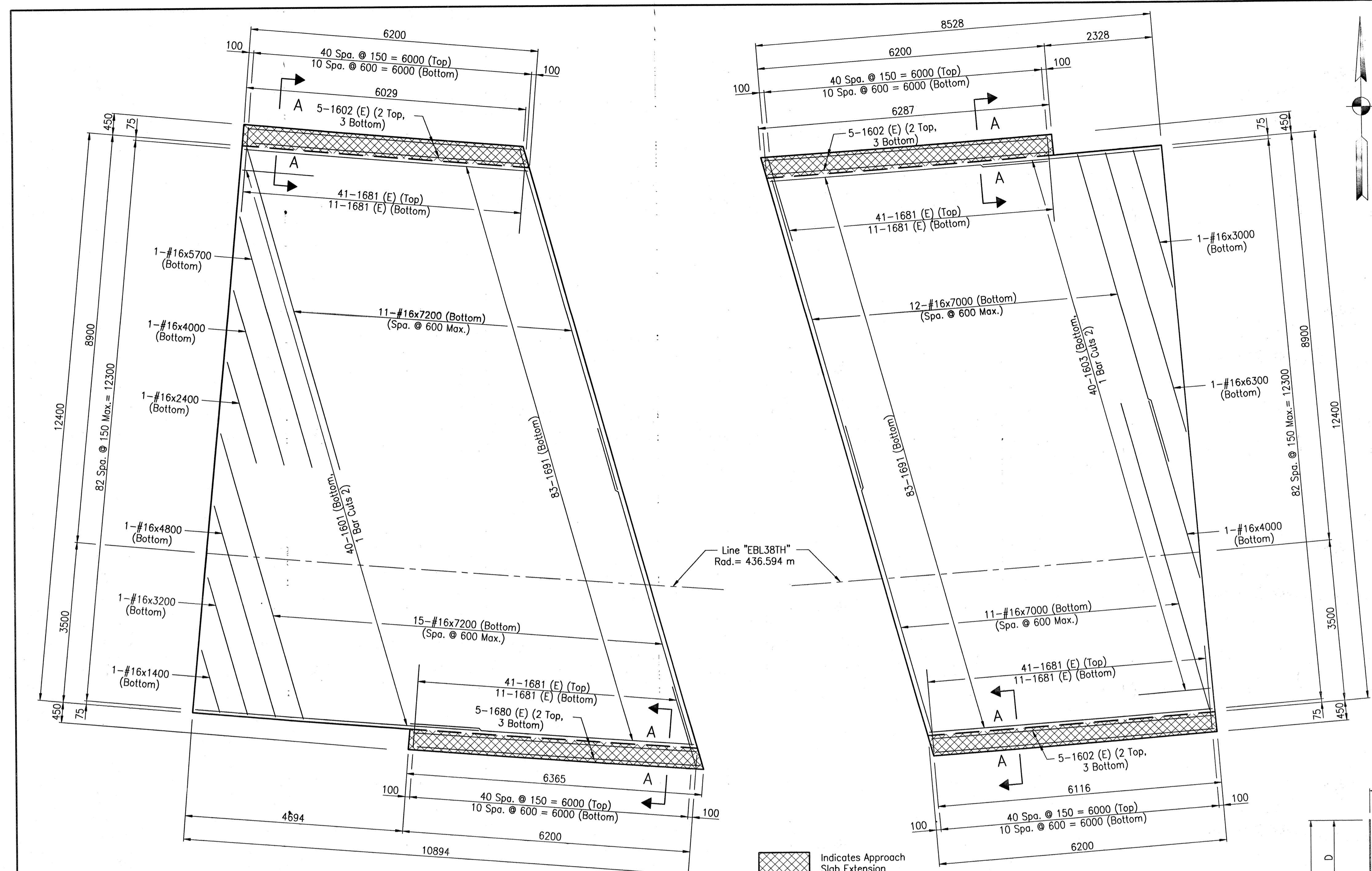
MICHAEL J. HALTERMAN
REGISTERED
No. 20931
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL
Michael J. Halterman 9/28/01
DESIGN ENGINEER DATE

DESIGNED: CBS DRAWN: TAL
CHECKED: LS CHECKED: JWR

INDIANA
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS

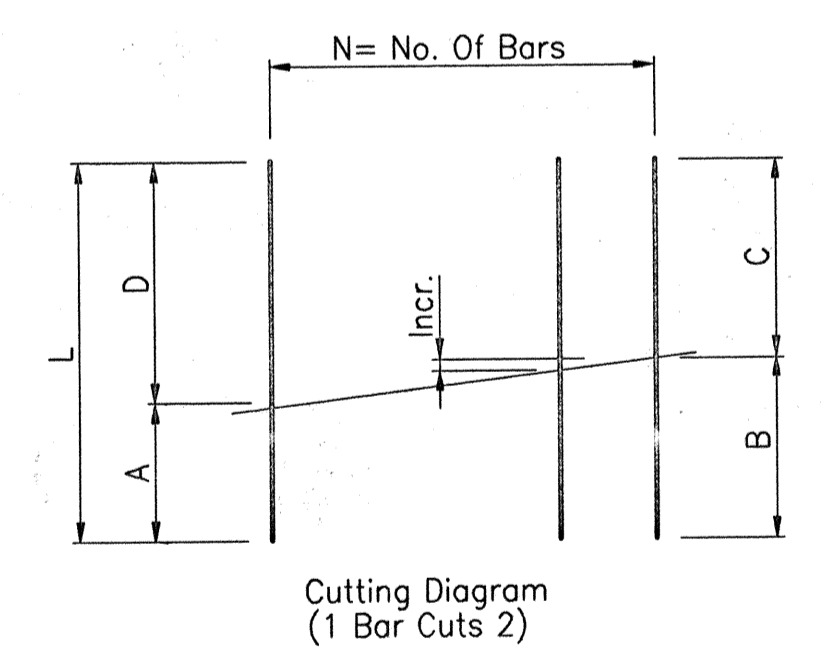
HORIZONTAL SCALE 1 : 50	BRIDGE FILE MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION 9981111
SURVEY BOOK	SHEETS 18 of 20
CONTRACT R-24327	PROJECT IM-65-3 (281) 118



BENT NO.1 APPROACH SLAB
SCALE: 1:50

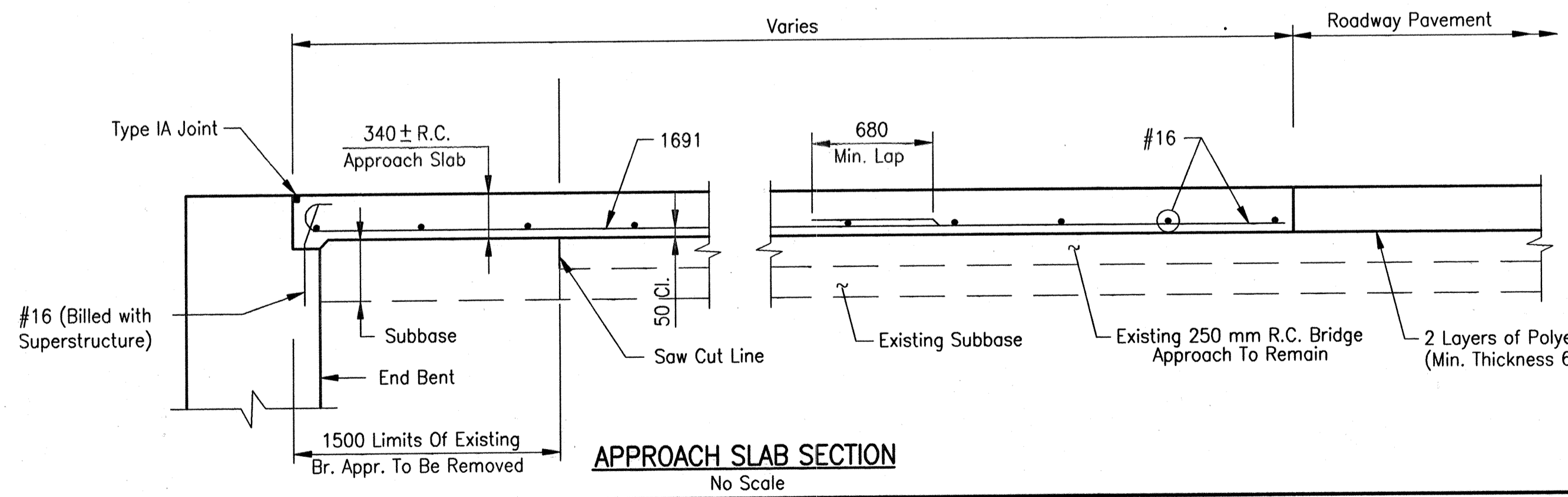
BENT NO.4 APPROACH SLAB
SCALE: 1:50

Indicates Approach Slab Extension

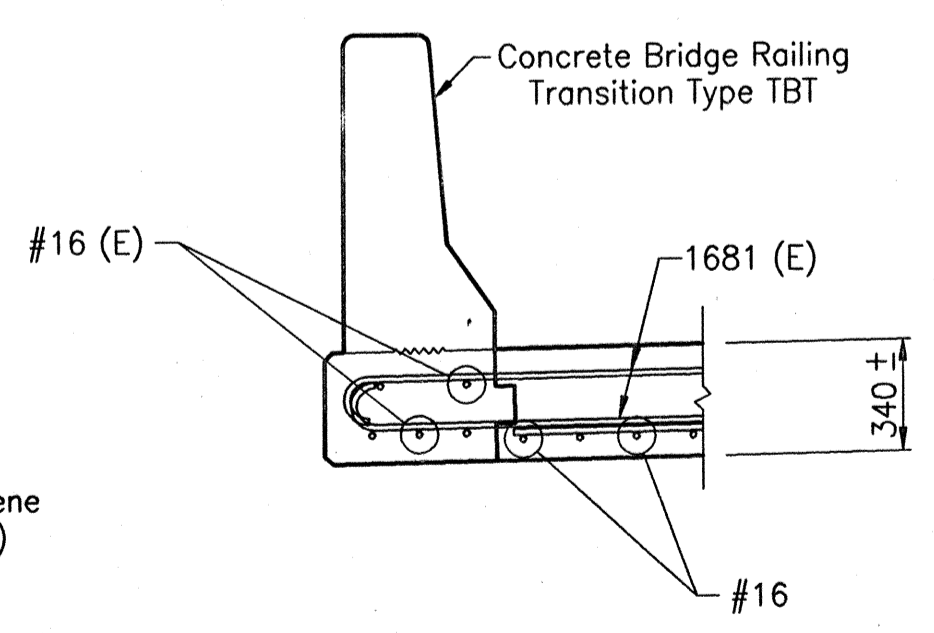


Mark	A	Length
1602	5900	6080
1680	6100	6280
1681	1830	2020
1691	6000	6180

Mark	L	A	B	C	D	Incr.	N
1601	6540	900	3240	3300	5640	60	40
1603	4180	900	2070	2110	3280	30	40



APPROACH SLAB SECTION
No Scale



SECTION A-A
No Scale

NOTES:
FOR REINFORCING BAR NOTES, SEE STANDARD DRAWING 703-BRST-01.
FOR CONCRETE BRIDGE RAILING TRANSITION TYPE TBT, SEE STANDARD DRAWING 706-TBT-01 Thru 03.
(E) INDICATES EPOXY COATED REINFORCING STEEL.

BENT NO.1 APPROACH SLAB
BILL OF MATERIALS

Epoxy Coated Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
1602	5	6080	
1680	5	6280	
1681	104	2020	
Total Epoxy Coated Reinforcing Steel			422
Plain Reinforcing Steel			
1601	40	6540	
1691	83	6180	
#16	26	7200	
#16	1	5700	
#16	1	4800	
#16	1	4000	
#16	1	3200	
#16	1	2400	
#16	1	1400	
Total Plain Reinforcing Steel			1526
Concrete			
Reinf. Conc. Bridge Appr., 340mm			112 m ³
Miscellaneous			
Subbase			19 m ³

BENT NO.4 APPROACH SLAB
BILL OF MATERIALS

Epoxy Coated Reinforcing Steel			
Size And Mark	No. Of Bars	Length (mm)	Weight (kg)
1602	5	6080	
1680	5	6280	
1681	104	2020	
Total Epoxy Coated Reinforcing Steel			422
Plain Reinforcing Steel			
1603	40	4180	
1691	83	6180	
#16	23	7000	
#16	1	6300	
#16	1	4000	
#16	1	3000	
Total Plain Reinforcing Steel			1326
Concrete			
Reinf. Conc. Bridge Appr., 340mm			97 m ³
Miscellaneous			
Subbase			17 m ³

Time: 13:22
 Date: 4/13/2000
 Drawing File: S22
 Maricopa MBI 708RB APPRSLAB.dwg (S22)

 JANSEN & SPAANS ENGINEERING CONSULTING ENGINEERS 2825 EAST 56TH STREET INDIANAPOLIS, INDIANA 46220 BUS. (317) 254-9686 FAX (317) 259-8262	 Buder Fairman Seufert CONSULTING ENGINEERS 8450 WESTFIELD BLVD., SUITE 300 INDIANAPOLIS, IN. 46240 317 713-4615 FAX 317 713-4616	 RECOMMENDED FOR APPROVAL <i>Michael J. Halterman</i> 9/28/01 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION R.C. BRIDGE APPROACH DETAILS
DESIGNED: CBS CHECKED: LS		DRAWN: TAL CHECKED: JWR	
HORIZONTAL SCALE AS NOTED VERTICAL SCALE AS NOTED		BRIDGE FILE MARION B-17-08-FB DESIGNATION 9981111	
SURVEY BOOK R-24327		SHEETS 19 of 20 PROJECT IM-65-3 (281) 118	

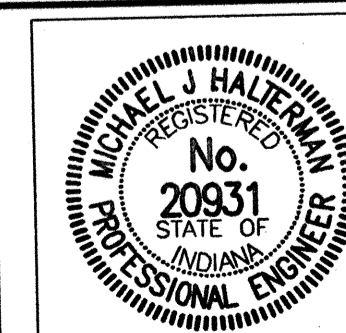
SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE			CONCRETE "C" IN RAILING		HIGH STRENGTH GROUT IN PEDESTALS	SUBBASE	REINF. STEEL	REINF. STEEL EPOXY COATED	STRUCT. STEEL ***	FIELD DRILLED HOLES	ANCHOR BOLTS AB1	ANCHOR BOLTS AR22	356mm STEEL ENCASED CONC. PILE, 5.1mm THK		356mm STEEL ENCASED CONC. PILE, 6.3mm THK		CAST IRON GRATES, BASINS & FITTINGS	EXPANSION JOINT SEALING SYSTEM	50 mm Ø PVC CONDUIT	75 mm Ø PVC CONDUIT	REINF. CONC BRIDGE APPROACH 340mm	150 mm Ø PVC DRAIN PIPE	FIELD DRILLED HOLES IN CONCRETE	BARRIER DELINEATORS	MASONRY COATING (ESTIMATED) **	SURFACE SEAL (ESTIMATED) **	AGGREGATE FOR END BENT BACKFILL	WET EXCAVATION	CONCRETE BULB TEE BEAM (1372mm)	19 # EXPANSION ANCHORS		
	"C" IN SUPERSTR.	"A" IN SUBSTR.	"B" IN FOOTING	m³	Meters									m³	m³	kg.	kg.															kg.	EACH
SUPERSTRUCTURE	212.0			38.4				40730		18300	990		8					146		68	136					10	371	1138					
SUBSTRUCTURE																																	
BENT NO. 1		9.7						778						2	30									10	76	15	17	11			29	48	
PIER NO. 2		29.3	1.4					1265																84						23		48	
PIER NO. 3		29.6	1.4					1286						2	18								10	86		17	19	13					
BENT NO. 4		10.3						827																									
APPROACH SLAB																																	
BENT NO.1 APPROACH SLAB							19	1526	422																								
BENT NO.4 APPROACH SLAB							17	1326	422																								
TOTALS	212.0	78.9	2.8	38.4			36	5403	43179	18300	990		8	4	48	6	66	146		68	136	209	20	321	10	403	1174	24	52			96	

REVISIONS	
DATE	ITEM

NOTE :
 ** Estimated Quantity, to be paid for as "LSUM".

Date: 4/17/2000
 Scale: 1"=1'
 Drawing File: 65 MarionCA\MB1708FB\SUM-SHT.dwg (522)



RECOMMENDED FOR APPROVAL: *Michael J. Halterman* 9/28/01
 DESIGN ENGINEER DATE

DESIGNED: CBS DRAWN: TAL
 CHECKED: LS CHECKED: JW

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE SUMMARY

HORIZONTAL SCALE	BRIDGE FILE
NONE	MARION B-17-08-FB
VERTICAL SCALE	DESIGNATION
NONE	9981111
SURVEY BOOK	SHEETS
	20 of 20
CONTRACT	PROJECT
R-24327	IM-65-3 (281) 118