

FHWA REGION NO.	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER	TOTAL SHEETS
7	KANSAS	87 N-0189-01	2001	73	105

SUPPLEMENTAL SPECIFICATIONS FOR PRE-ENGINEERED PEDESTRIAN BRIDGE

These specifications are for a fully engineered clear span bridge of welded steel construction and shall be regarded as minimum standards for design and construction as manufactured by Big R, Greeley, Colorado, 1-800-234-0734, or Continental Bridge, Alexandria, Minnesota, 1-800-328-2047, or Steadfast Bridges, Fort Payne, Alabama, 1-800-749-7515. A minimum of five years experience in design and fabrication of pedestrian bridges is required.

1.0 DIMENSIONS

- 1.1 **Width:** Inside clear width of bridge shall be 3.046 meters (10 feet 0 inches).
- 1.2 **Span:** Overall bearing of bridge shall be 8.230 meters (27 feet 0 inches) as shown on plans. Bridges having a difference in bearing elevations shall have the truss verticals perpendicular to the ground, (horizon).
- 1.3 **Camber:** Bridge shall be cambered 2% of the total span length.

2.0 DESIGN LOADS

- In addition to the normal dead loads, the bridge shall be designed for the following:
- 2.1 **Uniform Live Load:** Pedestrian bridges shall be designed for an evenly distributed live load of 2900 Pa (60 psf) as required by (AASHTO).
  - 2.2 **Wind Load:** All bridges shall be designed for a minimum wind load of 1450 Pa (30 psf) (approximately 193 Kph (120 mph)). The wind is calculated on the entire vertical surface of the bridge as if fully enclosed.
  - 2.3 **Design Criteria:** The design of the bridge shall be in accordance with the "American Institute of Steel Construction"; "Allowable Stress Design", June 1, 1989 or latest edition.
  - 2.4 **Design:** The bridge shall be designed & stamped by a Licensed Engineer in the State of Manufacture.
  - 2.5 **Temperature:** Bridge shall be designed to accommodate a temperature differential of 48.9 degree Celsius (120 degree Fahrenheit). Slip pads of UHMW polyethylene shall be placed between the smooth surface of this setting plate and the smooth bearing plate of the bridge. At least 25 mm (1") clearance shall be provided between the bridge and concrete abutments.

3.0 MATERIALS

- 3.1 All Structural members shall have a minimum thickness of material of at least 5 mm (3/16").
- 3.2 **Unpainted Weathering Steel** bridges shall be fabricated from ASTM A242 or ASTM A588 steel for plates and structural shapes and ASTM A606 or ASTM A8947 for tubular sections. Minimum yield (Fy) shall be greater than 345 MPa (50,000 psi).
- 3.3 **Wood Decking** shall be Timber Holdings LTD "Iron Woods™" Decking. The wood deck shall be designed for a 4800 Pa (100 psf) local loading condition. Floor planks shall be attached with at least two plated fasteners where planks cross-supporting member. Planks shall be nominal 50 mm x 200 mm (2"x 8") for bridges larger than 2.400 meters (8') wide. (Check with manufactures and use their specifications.)
- 3.4 Field splices shall be bolted with High Strength ASTM A325 or ASTM A490 bolts; type 3 bolts are required for weathering steel bridges.
- 3.5 Welding materials shall be in strict accordance with the American Welding Society (AWS). Structural welding code, D1.1. Filler metal as specified in 4.1 shall be used for the particular welding process required. Welders will be certified in accordance with AWS D1.1. at level 60.

4.0 FABRICATION

- 4.1 Workmanship, fabrications, and shop connections shall be in accordance with American Association of State Highway and Transportation Officials Specifications (AASHTO).
- 4.2 Welding operators shall be properly accredited experienced operators, each of whom shall submit satisfactory evidence of experience and skill in welding structural steel with the kind of welding to be used in the work, and who have demonstrated the ability to make uniform good welds meeting the size and type of weld required.

5.0 RAILINGS & ACCESSORIES

- 5.1 All railings shall have a smooth inside surface with no protrusions or depressions. In accordance with AASHTO, railing for bicycle use is expected, a minimum height of 1350 mm (54") above the floor is required. All ends of angles and tubes shall be closed and ground smooth.
- 5.2 **Safety Rails:** Continuous rails shall be located on the inside of the tresses. The rails will be: Horizontal safety rails with a maximum opening of 150 mm (6 inches).
- 5.3 **Toe Plate:** 150 mm x 6 mm (6" x 1/4") continuous plate spaced 50 mm (2") above deck.

6.0 FINISHES

- 6.1 All boldly exposed surfaces of weathering steel bridges shall be sand blasted in accordance with the Steel Structures Painting Council (SSPC) Surface Preparation Specification No. 6 "Commercial Blast Cleaning".

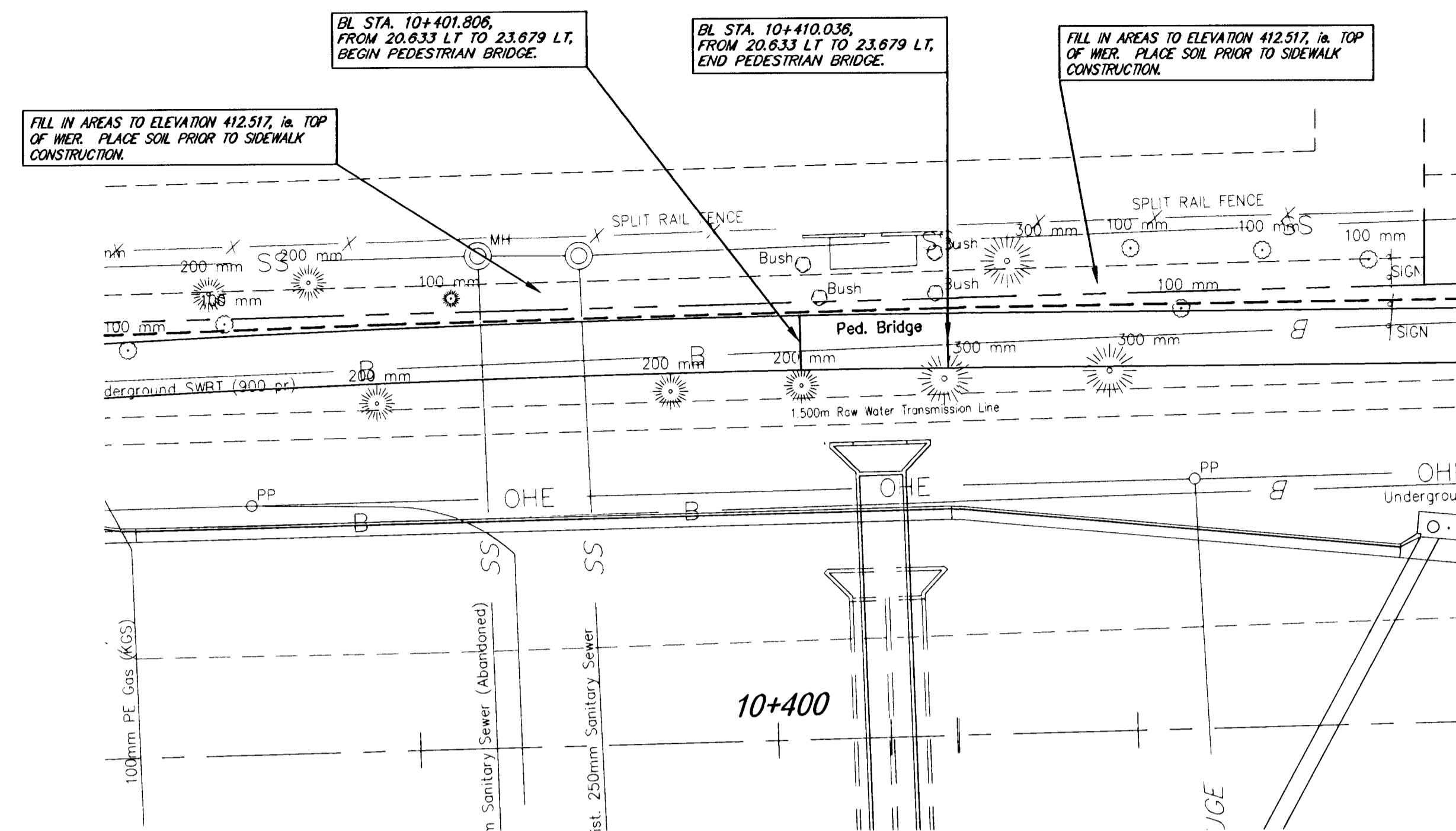
7.0 DELIVERY AND ERECTION

- 7.1 Bridges will be delivered by truck to a location nearest to the site accessible by roads. Hauling permits and freight charges are the responsibility of the manufacturer.
- 7.2 The manufacturer will notify the customer in advance of the expected arrival time. Information regarding delays after the trucks depart the plant such as inclement weather, delays in permits, re-routing by public agencies or other circumstances will be passed on to the customer as soon as possible but the expense of such unavoidable delays will not be accepted by the manufacturer.
- 7.3 The manufacturer will advise the customer of the actual lifting weights, attachment points and all necessary information to install the bridge. Unloading, splicing, bolting, and proper lifting equipment is the responsibility of others.

8.0 COMPLIANCE

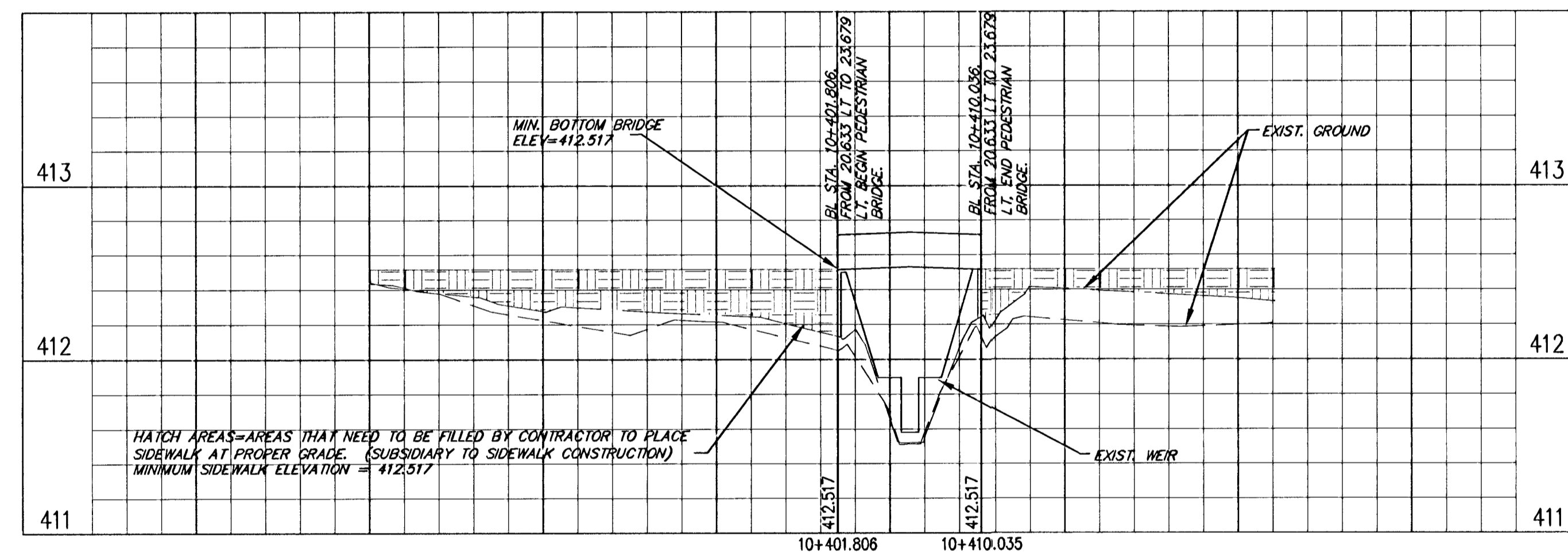
- 8.1 The manufacturer shall comply with attached requirements.

DATE	
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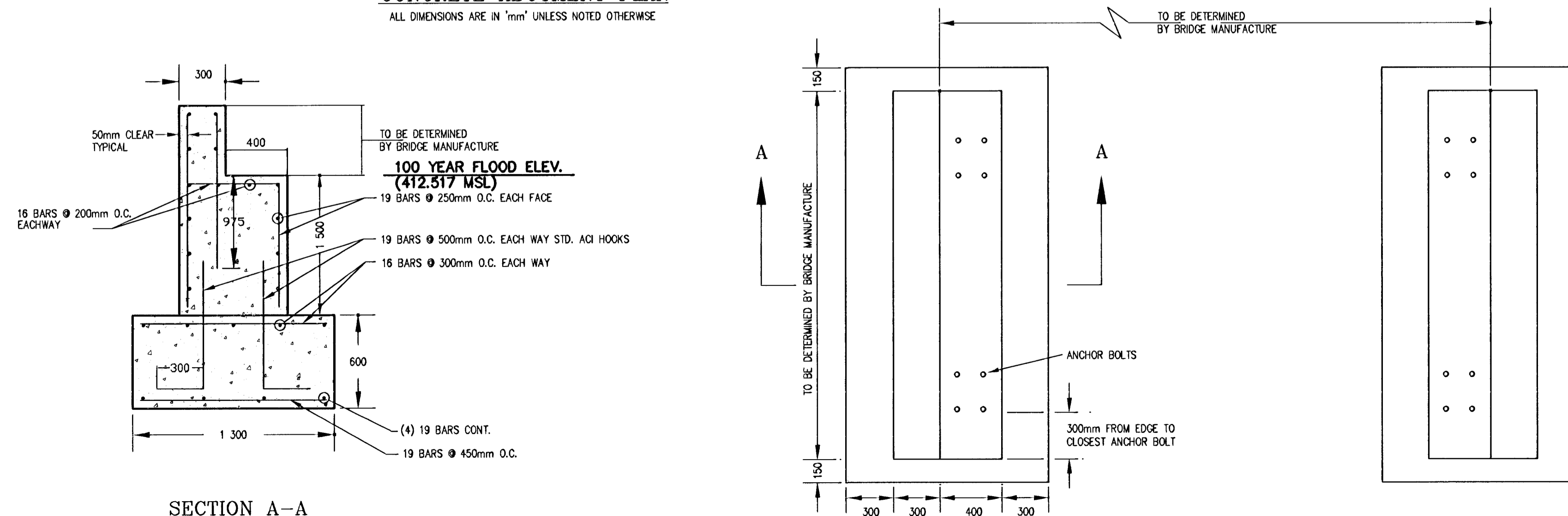
SEE ABUTMENT PLANS AND SUPPLEMENTAL SPECIFICATIONS, THIS SHEET



BRIDGE PLAN / PROFILE

CONCRETE ABUTMENT PLAN

ALL DIMENSIONS ARE IN "mm" UNLESS NOTED OTHERWISE



SECTION A-A

**Pedestrian Bridge Plan/Profile & Supplemental Specs.**  
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**SAVOY, RUGGLES & BOHM, P.A.**  
ENGINEERING & SURVEYING

PROJECT NUMBER  
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DESIGN	REVIEW	DATE	UTILITY	SRB JOB
MWS	CMB	May 23, 2001		1478T

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