

**DESIGN DATA**

**LIVE LOAD:**

DESIGN LOADING : 90 PSF PEDESTRIAN OR 20,000 LB MAINTENANCE VEHICLE (H10)

**MATERIAL PROPERTIES:**

CONCRETE MASONRY  $f'c = 3,500$  P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60  $f_y = 60,000$  P.S.I.

**FOUNDATION DATA:**

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB WITH PILE POINTS. ABUTMENT PILING TO BE DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS \* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 35'-0" AT THE WEST ABUTMENT, AND 45'-0" AT THE EAST ABUTMENT.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

**HYDRAULIC DATA:**

100 YEAR FREQUENCY	
DRAINAGE AREA	397 SQ. MI.
Q100	8,600 C.F.S.
VELOCITY	5.90 FT./SEC.
WATERWAY AREA	1,459 SQ. FT.
SCOUR CRITICAL CODE	5
HIGH WATER 100 ELEVATION	681.46
O <sub>2</sub> ELEVATION (2,060 C.F.S.)	675.33
O <sub>2</sub> VELOCITY	2.51 FT./SEC.
PATH OVERFLOW DESIGN FREQUENCY	> 100 YEARS
VERTICALLY EXCEEDED FREQUENCY	> 100 YEARS

**LIST OF DRAWINGS**

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES & NOTES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. RAILING DETAILS

CONSULTANT DESIGN CONTACT: LEAH RHODES (608) 355-8945

BRIDGE OFFICE CONTACT: AARON BONK (608) 261-0261

NO.	DATE	REVISION	BY

ENGINEERING | ARCHITECTURE | SURVEYING  
 FUNDING | PLANNING | ENVIRONMENTAL  
**MSA**  
 1702 PANKRATZ STREET, MADISON WI 53704  
 (608) 242-7779 www.msaeng.com

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

ACCEPTED: CHIEF STRUCTURES DESIGN ENGINEER DATE

**STRUCTURE B-32-246**

STH 16 TRAIL BRIDGE OVER LA CROSSE RIVER

COUNTY: LA CROSSE TOWNSHIP: VILLAGE: WEST SALEM

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY: XXX	DESIGN CKD: XXX	DRAWN BY: RLR	PLANS CKD: JZ
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**GENERAL PLAN** SHEET 1 OF 8

