

**DESIGN**

DESIGN SPECIFICATIONS

"AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" XX EDITION AND (MONTH)(YEAR) ITD BRIDGE DESIGN LRFD MANUAL.

DESIGN PROCEDURES

RAILING IN ACCORDANCE WITH MASH TL - x. DESIGN SPEED IS \_\_\_ mph.  
 PROPRIETARY COMPUTER SOFTWARE PROGRAMS USED TO FACILITATE THE DESIGN:

NAME	VERSION	RELEASE DATE	NAME	VERSION	RELEASE DATE

DESIGN LOADS

PERMANENT LOADS

DC	UNIT WEIGHT OF REINFORCED CONCRETE .....	0.150	kcf
DW	FUTURE WEARING SURFACE .....	x.xx	ksf
EV	UNIT WEIGHT OF SOIL .....	xxx	ksf
	FILL DEPTH - MAX. ....	x.xx	ft
	FILL DEPTH - MIN. ....	x.xx	ft
EH	ACTIVE PRESSURE .....	xxx	kcf
	AT REST PRESSURE .....	xxx	kcf
	SOIL-STRUCTURE INTERACTION FACTOR ( $F_e$ OR $F_t$ ) .....	x.xx	
ES	EARTH LOAD SURCHARGE .....	x.xx	ft

TRANSIENT LOADS

LL	HL-93		
IM	DYNAMIC ALLOWANCE APPLIED TO TRUCK & TANDEM		
LS	LIVE LOAD SURCHARGE AT BARREL .....	x.xx	ft
	LIVE LOAD SURCHARGE AT WINGWALL .....	x.xx	ft

FOOTING DESIGN LOADS

STRENGTH LIMIT STATE - BEARING

NOMINAL BEARING RESISTANCE  $q_n = X$  ksf  
 EFFECTIVE FOOTING WIDTH  $B' = xx$  ft  
 EFFECTIVE FOOTING LENGTH  $L' = xx$  ft  
 RESISTANCE FACTOR  $\phi_b = X$   
 FACTORED BEARING RESISTANCE  $q_R = q_n \phi_b = xx$  ksf  
 FACTORED APPLIED LOAD  $YQ/(B'L') = xx$  ksf

SERVICE LIMIT STATE

PRESUMPTIVE BEARING CAPACITY  $q_p = x$  ksf  
 BASED UPON FOOTING SETTLEMENT = X inches OR LESS  
 EFFECTIVE FOOTING WIDTH  $B' = xx$  ft  
 EFFECTIVE FOOTING LENGTH  $L' = xx$  ft  
 RESISTANCE FACTOR  $\phi = 1.0$   
 FACTORED PRESUMPTIVE BEARING RESISTANCE  $\phi q_p = xx$  ksf  
 FACTORED APPLIED LOAD  $YQ/(B'L') = xx$  ksf

GENERAL NOTES

MATERIALS, CONSTRUCTION AND WORKMANSHIP IN ACCORDANCE WITH THE STATE OF IDAHO TRANSPORTATION DEPARTMENT: (YEAR) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION,(YEAR) SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS, AND THE PROJECT PLANS.

MATERIAL

CONCRETE:	DECK SLAB AND EDGE BEAM - CLASS 40A .....	$f'_c = 4.0$	ksi
	BARREL WALLS, FOOTINGS AND WINGWALLS - CLASS 40A .....	$f'_c = 4.0$	ksi
METAL REINFORCEMENT:	AASHTO M31, GRADE 60 .....	$f_y = 60$	ksi

PLAN DIMENSIONS AND ELEVATIONS


BEVEL EXPOSED EDGES OF CONCRETE  $\frac{3}{4}$ " UNLESS NOTED OTHERWISE.  
 DIMENSIONS TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE.  
 PROVIDE 2" CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BAR, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.  
 PROVIDE REINFORCING STEEL SPLICE LENGTHS IN ACCORDANCE WITH AASHTO SPECIFICATIONS.

CONSTRUCTION

PROVIDE CONSTRUCTION JOINTS AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED.  
 APPLY CONCRETE WATERPROOF SYSTEM TYPE D TO THE TOP SLAB.  
 DO NOT EXCEED A DIFFERENCE OF 2 FEET IN ELEVATION OF THE BACKFILL MATERIAL ON BOTH SIDES OF THE STRUCTURE DURING BACKFILL OPERATIONS.  
 SET THE ROLLER IN THE STATIC MODE FOR COMPACTING THE ASPHALT WEARING SURFACE OVER THE CULVERT WHEN THE DEPTH OF FILL IS LESS THAN 3'.  
 ELEVATIONS BASED ON NAVD 88 DATUM.

INCIDENTAL ITEMS

WORK NECESSARY TO FULFILL THE CONTRACT THAT IS NOT MEASURED OR PAID FOR SEPARATELY.

REVISIONS NO. DATE BY DESCRIPTION			DESIGNED DESIGN CHECKED DETAILED DWG. CHECKED CORRECTIONS	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY CADD FILE NAME Standards/Bridge Standard Drawings B17_2A.DGN DRAWING DATE: DEC 2024	 IDAHO TRANSPORTATION DEPARTMENT YOUR Safety→YOUR Mobility→YOUR Economic Opportunity APPROVED BY: BRIDGE ENGINEER MICHAEL T. JOHNSON DATE:	ENGLISH PROJECT NO.	DESIGN AND GENERAL NOTES BOX CULVERT/STIFFLEG BRIDGE (CAST-IN-PLACE) BRIDGE LRFD DESIGN MANUAL, B17.2A	BRIDGE PLANS BRIDGE KEY NO. COUNTY KEY NO. BRIDGE DWG. NO. SHEET OF
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