DESIGN

DESIGN SPECIFICATIONS

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

LIVE LOAD DESIGNED FOR STRENGTH II.

DESIGN LOADS

PERMANENT LOADS

DC	UNIT WEIGHT OF REINFORCED CONCRETE	0.150 kcf
DW	FUTURE WEARING SURFACE	0.028ksf
EV	UNIT WEIGHT OF SOIL	xxx kcf
	FILL DEPTH	x.xx ft
EH	ACTIVE PRESSURE	xxx kcf
	AT REST PRESSURE	xxx kcf
ES	EARTH LOAD SURCHARGE AT HEADWALL	x.xx ft

TRANSIENT LOADS

LL	HL-93 AND STANDARD GAGE TRIDEM AXLE LOAD OF 120 k (40 k PER AXLE) WITH 4.5' AXLE SPACING
IM	DYNAMIC ALLOWANCE APPLIED TO TRUCK & TANDEM

FOOTING DESIGN LOADS FOR HEADWALLS

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 Φ_b = X

FACTORED BEARING RESISTANCE $q_R = q_n \Phi_b$ = xx ksf

FACTORED APPLIED LOAD $\Upsilon Q/(B'L')$ = 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 Φ = 1.0

FACTORED PRESUMPTIVE BEARING RESISTANCE Φq_p = xx ksf

FACTORED APPLIED LOAD $\Upsilon Q/B'L')$ = xx ksf

GENERAL NOTES

MATERIALS, CONSTRUCTION AND WORKMANSHIP IN ACCORDANCE WITH THE STATE OF IDAHO TRANSPORTATION DEPARTMENT, "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", 2023 EDITION, THE PROJECT PLANS, AND SPECIAL PROVISIONS.

MATERIAL

CONCRETE: HEADWALLS - CLASS 40A ..... f'c = 4 ksi

METAL REINFORCEMENT: AASHTO M31, GRADE 60 TYPE S ..... fy = 60 ksi

PLAN DIMENSIONS AND ELEVATIONS

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

DIMENSIONS TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE.

PROVIDE 2" CONCRETE COVER MEASURING 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 ONLY AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED.

DO NOT EXCEED A DIFFERENCE OF 2 FEET IN ELEVATION OF THE BACKFILL MATERIAL ON BOTH SIDES OF THE STRUCTURE DURING BACKFILL OPERATIONS.

SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 105.02.

FABRICATE AND INSTALL IN ACCORDANCE WITH SECTION 26 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.

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.

LOAD RATING

SUBMIT THE INITIAL LOAD RATING WITH THE SHOP DRAWINGS. PROVIDE THE LOAD RATING IN ACCORDANCE WITH THE ITD MANUAL FOR BRIDGE EVALUATION AND LOAD RATING SUMMARY FORM.

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	IDAHO TRANSPORTATION DEPARTMENT	ENGLISH	DESIGN AND GENERAL NOTES	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED	CADD FILE NAME	YOUR Safety→YOUR Mobility→YOUR Economic Opportunity	PROJECT NO.		BRIDGE KEY NO.	
1				DETAILED	Standards/Bridge Standard Drawings/B17_3.DGN	APPROVED BY: BRIDGE ENGINEER MICHAEL T. JOHNSON DATE:		METAL PIPE BRIDGE LRFD DESIGN MANUAL, B17.3	COUNTY / KEY NO.	
2				DWG. CHECKED					BRIDGE DWG. NO. / SHEET OF	
3				CORRECTIONS	DRAWING DATE: OCT 2023					
4										
5										