CONTRACT PLANS BUREAU
MONTANA DEPARTMENT OF TRANSPORTATION

As-Built Drawings

The following are as-built drawings for the structures. MDT provides them for informational purposes only. They do not include drawings for modifications to the structures, such as joint replacements and guardrail revisions and may not completely represent current conditions. Thus, some of the information contained in these documents may be out of date or not applicable with regard to the advertised project. The contractor should not rely solely on the as-built drawings provided for bidding purposes nor does any data in these files supersede the data in the contract documents.

FED. ROAD DIV. NO.	STATE	STATE PROJ. NO.	SHEET NO.
8	MONT.	RS-BRS 231-1(3)0	B1

STATE OF MONTANA

DEPARTMENT OF HIGHWAYS

BRIDGE PLANS & QUANTITIES

FEDERAL AID PROJECT NO. RS 231-1(1)0 P.E. RS-BRS 231-1(3)0 CONST.

HELENA - GREEN MEADOW DRIVE

LEWIS & CLARK COUNTY

LIST OF DRAWINGS

SHEET NO.	DWG. NO.	TITLE
B 2	14861	GENERAL LAYOUT AT STA. 61+20.00
B 3	14862	FOOTING PLAN
B 4	14863	BENT NO. 1
B 5	14864	BENTS NO. 2 AND NO. 3
B 6	14865	BENT NO. 4
B 7	14866	SLAB DETAILS
B 8	14867	WINGWALL DETAILS
B 9	14868	GENERAL LAYOUT AT STA. 121+73.50
B 10	14869	FOOTING PLAN
B 11	14870	BENTS NO. 1 AND NO. 4
B 12	14871	BENTS NO. 2 AND NO. 3
B 13	14872	SLAB DETAILS
B 14	SBR-T101 (REV. 2-6-90)	STANDARD BRIDGE RAIL - TYPE T101

* See Special Provisions.

ESTIMATED BRIDGE PLAN QUANTITIES

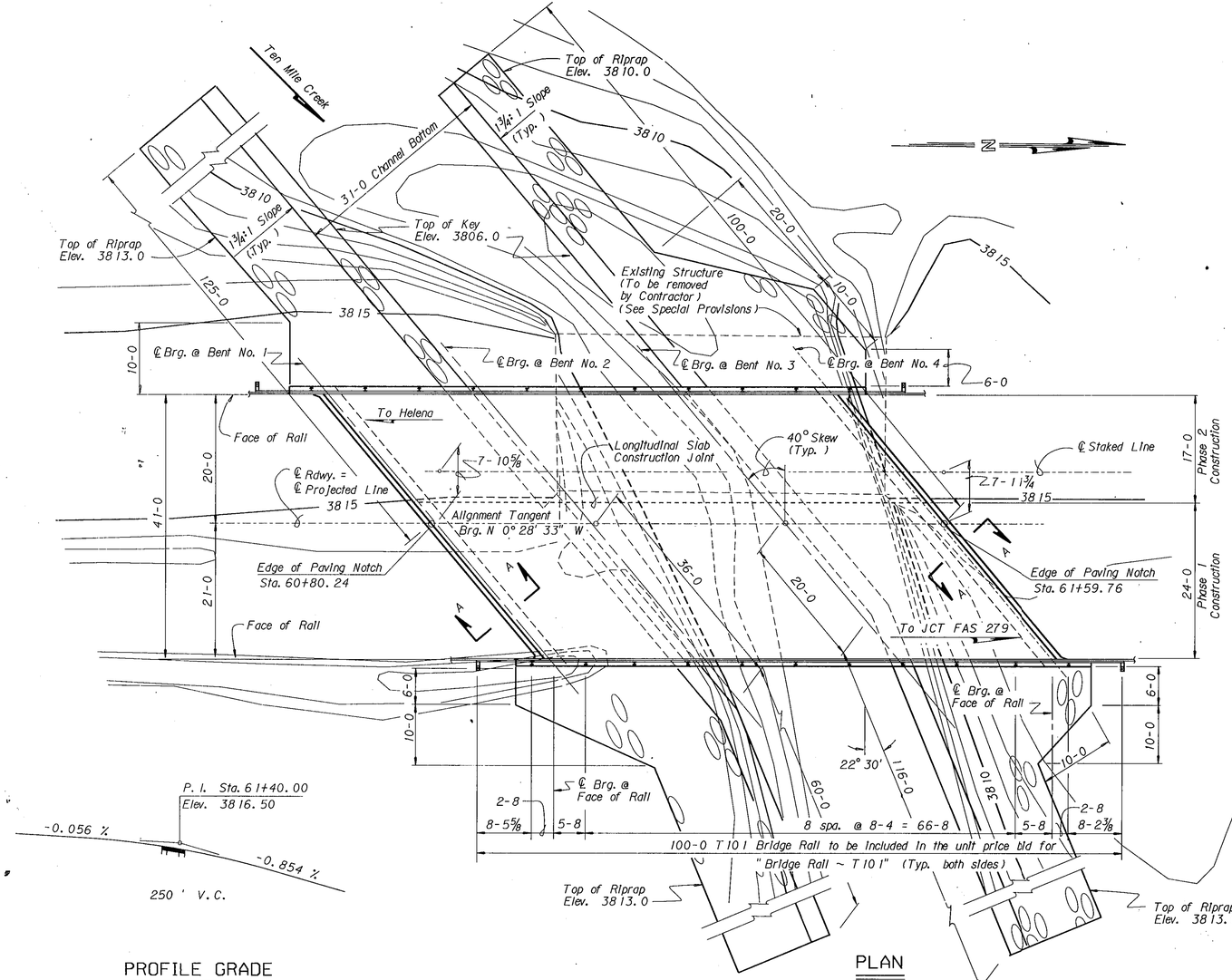
		LOCATION	LENGTH IN FEET	REINFORCING STEEL REGULAR (LBS.)	REINFORCING STEEL EPOXY CTD. (LBS.)	CLASS "AD" CONCRETE (CU. YDS.)	CLASS "BD MOD." CONC. (CU. YDS.)	STRUCTURAL STEEL (LUMP SUM)	STRUCT. EXC. TYPE I (CU. YDS.)	BRIDGE RAIL T101 (LIN. FT.)	HP 10 x 42 STEEL PILES (LIN. FT.) FURNISH	HP 10 x 42 STEEL PILES (LIN. FT.) DRIVE	12" Ø X ½" WALL THICKNESS STEEL PIPE PILE (LIN. FT.) FURNISH	12" Ø X ½" WALL THICKNESS STEEL PIPE PILE (LIN. FT.) DRIVE	16" O.D. X ½" WALL THICKNESS STEEL PIPE PILE (LIN. FT.) * FURNISH	16" O.D. X ½" WALL THICKNESS STEEL PIPE PILE (LIN. FT.) DRIVE	HP 10 x 42 STEEL TEST PILES (LUMP SUM)	16" O.D. STEEL PIPE TEST PILES (LUMP SUM)
STRUCTURE AT STA. 61+20.00	PHASE I	BENT NO. 1		1439	45	15.3					~~36~~ **48**	~~34~~ **39.6**						
		BENT NO. 2			1652	6.5									~~75~~ **78**	~~51~~ **45.82**		
		BENT NO. 3			1652	6.5		.30							~~50~~ **52**	~~35~~ **32.07**	1.0	1.0
		BENT NO. 4		1444	45	15.6					~~54~~ **72**	~~51~~ **64.51**						
		SUPERSTRUCTURE	78.0		16452		95.5			100.0								
		SUBTOTAL (PH. I)	78.0	2883	19846	43.9	95.5	.30		100.0	~~90~~ **120**	~~85~~ **104.11**			~~125~~ **130**	~~86~~ **77.89**	1.0	1.0
	PHASE II	BENT NO. 1		1046	29	10.3					~~36~~ **48**	~~34~~ **44.30**						
		BENT NO. 2			1121	4.2									~~50~~ **52**	~~34~~ **33.54**		
		BENT NO. 3			1121	4.2		.19							~~50~~ **52**	~~35~~ **31.12**		
		BENT NO. 4		1044	29	10.1					~~36~~ **51**	~~34~~ **49.66**						
		SUPERSTRUCTURE	78.0		11595		69.0			100.0								
		SUBTOTAL (PH. II)	78.0	2090	13895	28.8	69.0	.19		100.0	~~72~~ **99**	~~68~~ **93.96**			~~100~~ **104**	~~69~~ **64.66**		
STRUCTURE AT STA. 121+73.50		BENT NO. 1		2689	77	32.2			~~30~~ **29.515**		~~104~~ **96**	~~100~~ **54.91**						
		BENT NO. 2			2227	9.6							~~90~~ **130**	~~70~~ **63.02**				
		BENT NO. 3			2227	9.6		.51					~~110~~ **130**	~~90~~ **69.74**				
		BENT NO. 4		2689	77	32.2			~~30~~ **29.515**		~~104~~ **96**	~~100~~ **59.76**						
		SUPERSTRUCTURE	60.0		16686		116.6			150.0								
		SUBTOTAL	60.0	5378	21294	83.6	116.6	.51	~~60~~ **59.03**	150.0	~~208~~ **192**	~~200~~ **114.67**	~~200~~ **260**	~~160~~ **132.76**				
		TOTAL	138.0	10351	55035	156.3	281.1	1.0	~~60~~ **59.03**	350.0	~~370~~ **411**	~~353~~ **312.74**	~~200~~ **260**	~~160~~ **132.76**	~~225~~ **234**	~~155~~ **142.55**	1.0	1.0
		Final Pay Totals	***138.0***	***10351***	***55035***	***156.3***	***281.1***	***$1,650.00***	***59.0***	***350.0***	***411***	***312.7***	***260***	***132.8***	***234***	***142.6***	***$5,500.00***	***$5,500.00***

DRAWING NO. *14861O*

PREPARED BY: L.R.T. 1-31-91 CHECKED BY: W.S.F. 8-15-90

MONTANA CADD ###DATE### ###FILE### ###USER### ###DESIGN###FILE&SPECIFICATION###

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
8	MONT.	RS-BRS 231-1(3)0	B2



STREAM DATA

ICE : Light
DRIFT : None
SCOUR : Medium
DRAINAGE AREA : 167 sq. mi.
BASE FLOOD FLOW: 3430 c.f.s.
BASE FLOOD STAGE: 3815.5
BASE FLOOD VELOCITY: 5.8 f.p.s.

Also see Hydraulic Data Summary Sheet.

NOTES

SPECIFICATIONS: Montana Department of Highways and the Montana Highway Commission Specifications for Road and Bridge Construction, 1987 Edition and any amendments thereto, and Special Provisions shall govern unless otherwise noted. Design prepared in accordance with A.A.S.H.T.O. Specifications, 1989 Edition and any amendments thereto.

LIVE LOAD: Standard HS20-44 loading.

STRUCTURAL STEEL: All Structural steel shall be measured and paid for on the lump sum basis as set forth in the Standard Specifications. Estimated Weight = 491 lbs. - Phase I
317 lbs. - Phase II

REINFORCING STEEL: All reinforcing steel shall be of the deformed type and shall meet the requirements of A.S.T.M. Specifications A615, Grade 60 (A.A.S.H.T.O. M-31).

CAST-IN-PLACE CONCRETE: Unless otherwise approved, all concrete in the slab shall be Class "BD Modified" and all other concrete shall be Class "AD".

TRAFFIC CONTROL PLAN AND SEQUENCE OF OPERATIONS: See "Special Provisions."

STRUCTURE EXCAVATION: Structure Excavation at Bent No. 1 and Bent No. 2 shall not be measured for payment. All costs to be included in the cost of the Riprap and Unclassified Excavation. See "Special Provisions" and Road Plans.

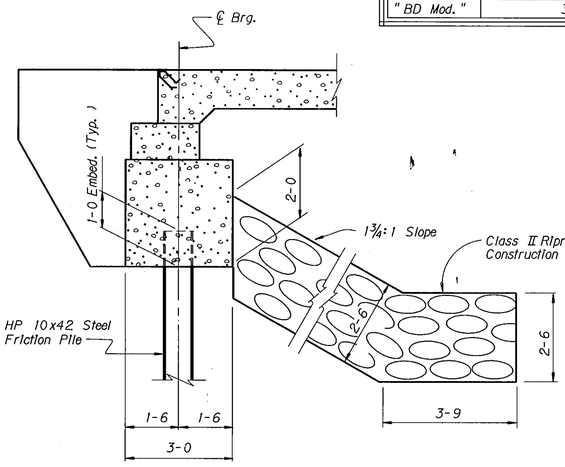
FINISHED GRADE: Finished Grade of Bridge at ℄ Rdwy. is the same as Profile Grade shown on Road Plans.

UTILITIES: For location of utilities see appropriate Road Plans sheet.

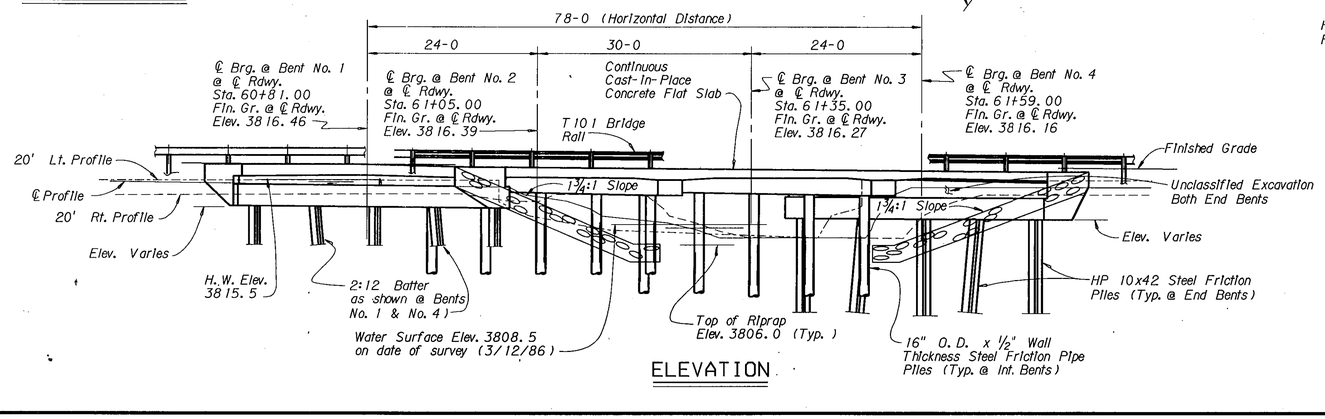
DRAINAGE DITCH: The existing drainage ditches on the South East and and South West Banks near the structure shall not be blocked by the placement of riprap.

HPS 10x42 STEEL PILES: HPS 10x42 Steel Piles may be substituted for HP 10x42 Steel Piles.

CLASS OF CONCRETE	MIN. REQ'D. CYLINDER STRENGTH TO ACHIEVE A 1.0 PAY FACTOR (p.s.i.)	STRENGTH FOR DESIGN PURPOSES (p.s.i.)
"AD"	3400	3000
"BD Mod."	3900	3500



SECTION A-A
Scale ~ ½" = 1-0



ELEVATION

STATE OF MONTANA
DEPARTMENT OF HIGHWAYS

BRIDGE OVER TEN MILE CREEK
AT STA. 61+20.00
FEDERAL AID PROJECT NO. RS-BRS 231-1(3)0
LEWIS AND CLARK COUNTY

GENERAL LAYOUT

Scale ~ 1" = 10-0 (except as noted)

DRAWING NO. 14861

DESIGNED	12-28-88	L.R.T.
DRAWN	12-28-88	L.R.T.
CHECKED	2-20-91	W.S.F.
APPROVED	4-5-91	J.C.H.
REVISED		
REVISED		

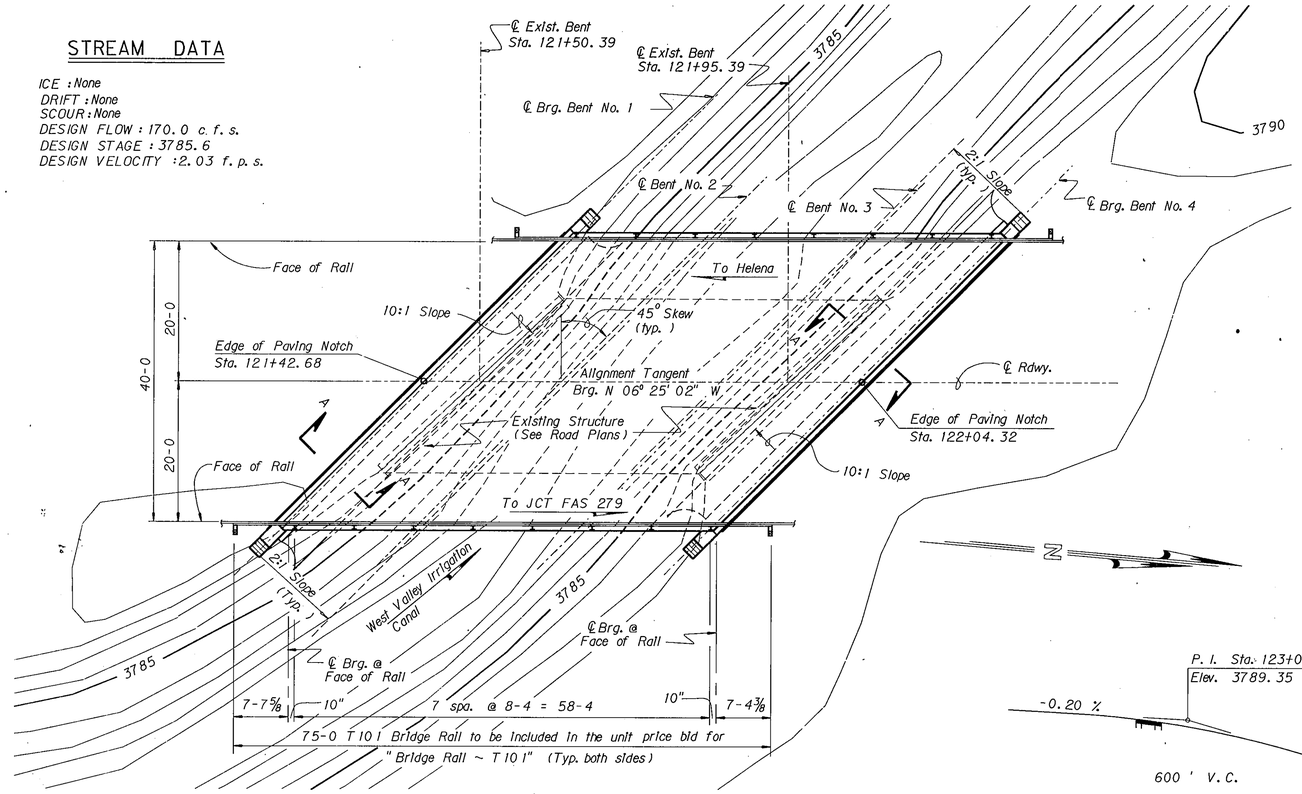
MONTANA \ CADD \ BRMM 04-APR-1991 13:14
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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
8	MONT.	RS-BRS 231-1(3)0	B9

STREAM DATA

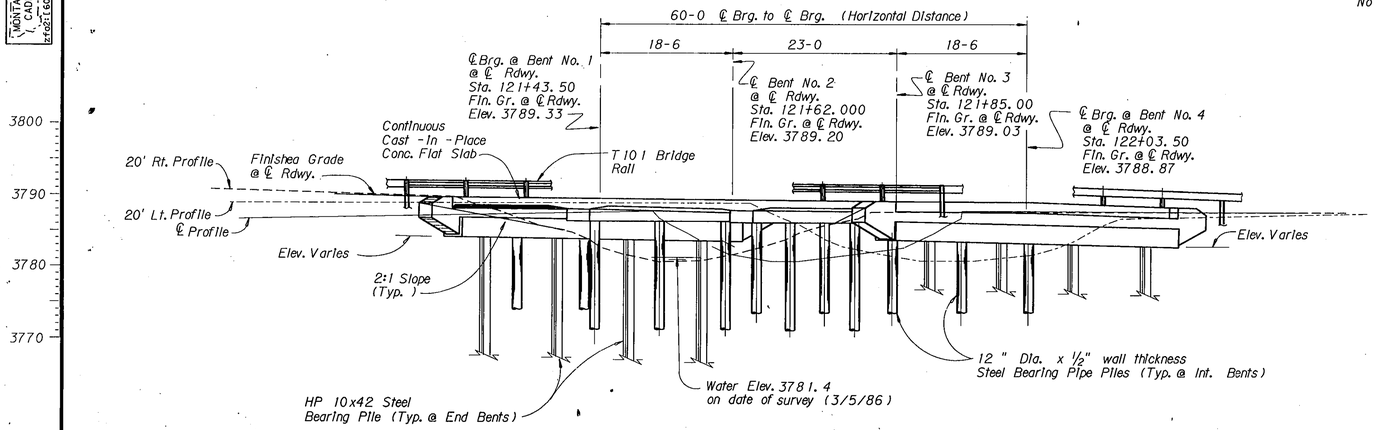
ICE : None
DRIFT : None
SCOUR : None
DESIGN FLOW : 170.0 c. f. s.
DESIGN STAGE : 3785.6
DESIGN VELOCITY : 2.03 f. p. s.



PLAN

PROFILE GRADE

No Scale



ELEVATION

NOTES

SPECIFICATIONS: Montana Department of Highways and the Montana Highway Commission Specifications for Road and Bridge Construction, 1987 Edition and any amendments thereto, and Special Provisions shall govern unless otherwise noted. Design prepared in accordance with A. A. S. H. T. O. Specifications, 1989 Edition and any amendments thereto.

LIVE LOAD: Standard HS20-44 loading.

STRUCTURAL STEEL: All Structural steel shall be measured and paid for on the lump sum basis as set forth in the Standard Specifications. Estimated Weight = 857 lbs.

REINFORCING STEEL: All reinforcing steel shall be of the deformed type and shall meet the requirements of A. S. T. M. Specifications A615, Grade 60 (A. A. S. H. T. O. M-31).

CAST-IN-PLACE CONCRETE: Unless otherwise approved, all concrete in the slab shall be Class "BD Modified" and all other concrete shall be Class "AD".

TRAFFIC CONTROL PLAN AND SEQUENCE OF OPERATIONS: See "Special Provisions."

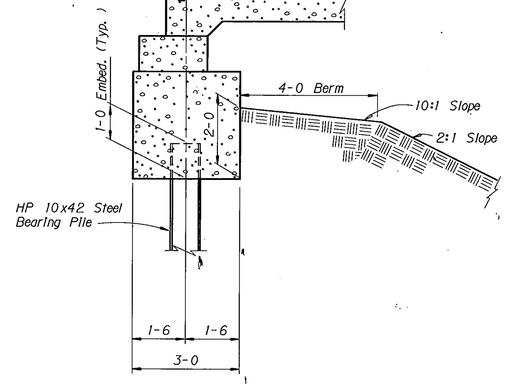
STRUCTURE EXCAVATION: Structure excavation shall be measured from Berm Elevation.

FINISHED GRADE: Finished Grade of Bridge @ ℄ Rdwy. Is the same as the Profile Grade shown on the Road Plans.

UTILITIES: For location of utilities see appropriate ℄ Road Plans sheet.

HPS 10x42 STEEL PILES: HPS 10x42 Steel Piles may be substituted for HP 10x42 Steel Piles.

CLASS OF CONCRETE	MIN. REQ'D. CYLINDER STRENGTH TO ACHIEVE A 1.0 PAY FACTOR (p. s. i.)	STRENGTH FOR DESIGN PURPOSES (p. s. i.)
"AD"	3400	3000
"BD Mod."	3900	3500



SECTION A-A

Scale ~ ½" = 1-0

STATE OF MONTANA
DEPARTMENT OF HIGHWAYS

BRIDGE OVER HELENA VALLEY CANAL

AT STA. 121+73.50

FEDERAL AID PROJECT NO. RS-BRS 231-1(3)0

LEWIS AND CLARK COUNTY

GENERAL LAYOUT

Scale ~ 1" = 10-0 (except as noted)

DESIGNED	12-28-88	L. R. T.
DRAWN	12-28-88	L. R. T.
CHECKED	2-27-91	W. S. F.
APPROVED	4-5-91	J. C. H.
REVISED		
REVISED		

DRAWING NO. 14868

MONTANA CADD 04-APR-1991 12:59 BRHAM
[60,5J0556HVCGL.BRG]

[60, 5J0556HVCGL. BRG