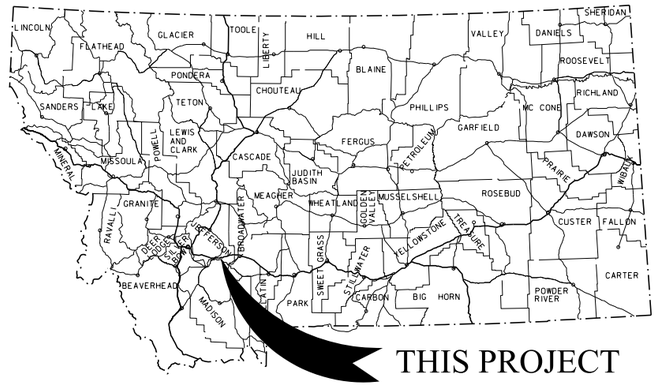
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MONTANA DEPARTMENT OF TRANSPORTATION

PRESENT	A.D.T. =
LETTING	A.D.T. =
DESIGN	A.D.T. =
	D.H.V. =
	TRUCKS =
	V. =
	18 KIP ESAL'S =
	GROWTH RATE =

N/A

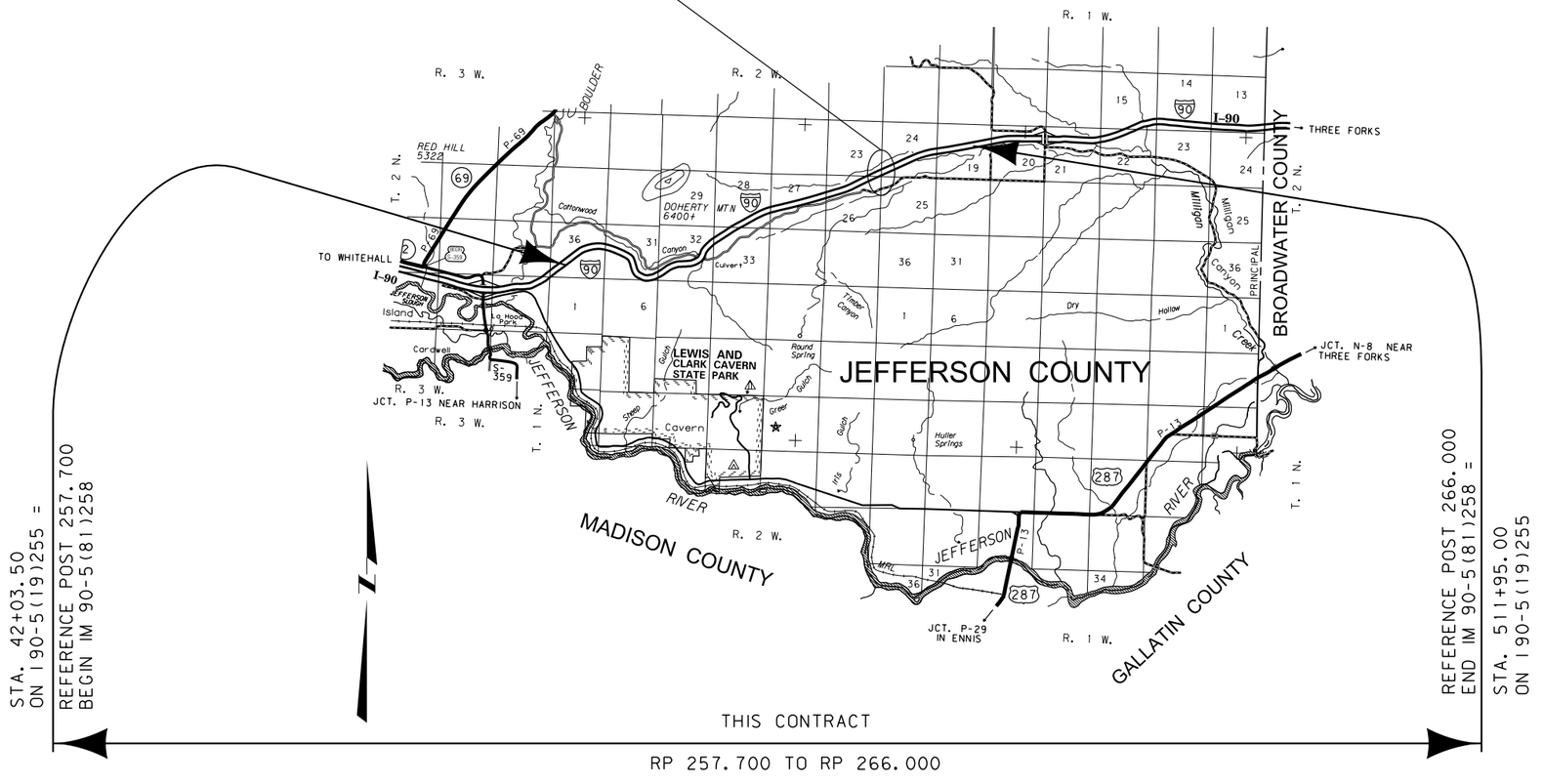
FEDERAL AID PROJECT IM 90-5(81)258
GUARDRAIL
COTTONWOOD HILL - GUARDRAIL
JEFFERSON COUNTY

LETTING DATE - _____

LENGTH 8.300 MILES

RP 264.06
I00090264+00611
BRIDGE ID 01549
44.2' X 79' CONCRETE BRIDGE
SEP COUNTY ROAD
THIS CONTRACT

RP 264.06
I00090264+00612
BRIDGE ID 01550
44.2' X 79' CONCRETE BRIDGE
SEP COUNTY ROAD
THIS CONTRACT



3	MDT MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\9248000rdtl001.dgn	DESIGNED BY	Kevin Mueller	7/20/2020	ROAD PLANS
2		12/15/2020	REVIEWED BY			UPN 9248000
		2:02:07 PM CPS - U5187	CHECKED BY			

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TABLE OF CONTENTS

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TEMPORARY BARRIER RAIL FOR BRIDGE BARRIER REPAIR	5

BRIDGE PLANS	
BRIDGE PLANS	B1-B6

NOTES

UTILITIES

CALL THE UTILITIES UNDERGROUND LOCATION CENTER (811) OR OTHER NOTIFICATION SYSTEM FOR THE MARKING AND LOCATION OF ALL LINES AND SERVICE BEFORE EXCAVATING. ALL CLEARANCES OR DEPTHS PROVIDED FOR UTILITIES ARE FROM EXISTING GROUND LINE.

WETLANDS

WETLANDS MAY EXIST ADJACENT TO THE ROADWAY AND BEYOND THE PROJECT LIMITS. A WETLAND DELINEATION HAS NOT BEEN COMPLETED FOR THIS PROJECT. IMPACTS TO WETLAND AREAS ARE NOT ANTICIPATED IN ASSOCIATION WITH THE PROPOSED WORK. NO PERMITS HAVE BEEN OBTAINED. ANY ACTION IMPACTING WETLAND AREAS WITHOUT THE APPROPRIATE PERMITTING IS THE RESPONSIBILITY OF THE CONTRACTOR.

AS-BUILTS

I-IG 90-5(23)255
I90-5(19)255

SUMMARY

GUARDRAIL

REFERENCE POST		linear feet								each						REMARKS
		REMOVE GUARDRAIL		MGS GUARDRAIL		REMOVE CABLE RAIL		HIGH-TENSION CABLE RAIL		MASH W-BEAM TERMINAL SECTION		MGS ONE-WAY DEPARTURE TERMINAL SECTION		MASH THRIE BEAM BRIDGE APPROACH SECTION		
FROM	TO	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
WESTBOUND																
257.821	258.279	2,412.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
257.821	258.279			2,350.0						1		1				
258.608	258.691	437.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
258.608	258.691			375.0						1		1				
258.955	259.268	1,650.0														REMOVAL INCLUDES OTS, ONE-WAY DTS
258.955	259.268			1,587.5						1		1				
259.359	259.432	387.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
259.359	259.432			325.0						1		1				
259.499	259.601	537.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
259.499	259.601			475.0						1		1				
259.719	260.651	4,925.0														REMOVAL INCLUDES OTS, ONE-WAY DTS
259.719	260.651			4,862.5						1		1				
260.867	261.148	1,487.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
260.867	261.148			1,425.0						1		1				
262.035	262.472	2,312.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
262.035	262.472			2,250.0						1		1				
262.737	263.142	2,137.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
262.737	263.142			2,075.0						1		1				
263.263	263.734	2,487.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
263.263	263.734			2,425.0						1		1				
264.022	264.055 B.E.	175.0														REMOVAL INCLUDES ONE-WAY DTS
264.022	264.055 B.E.			162.5								1				
264.049	264.055 B.E.		37.5													REMOVAL INCLUDES ONE-WAY DTS
264.049	264.055 B.E.				25.0								1			
264.073 B.E.	264.147		387.5													REMOVAL INCLUDES OTS, BAS
264.073 B.E.	264.147				300.0						1				1	
264.073 B.E.	264.283	1,112.5														REMOVAL INCLUDES OTS, BAS
264.073 B.E.	264.283			1,025.0						1				1		
264.329	264.587	1,362.5														REMOVAL INCLUDES OTS, ONE-WAY DTS
264.329	264.587			1,300.0						1		1				
264.908	265.116	1,100.0														REMOVAL INCLUDES OTS, ONE-WAY DTS
264.908	265.116			1,037.5						1		1				
EASTBOUND																
259.231	259.321		475.0													REMOVAL INCLUDES OTS, ONE-WAY DTS
259.231	259.321				412.5						1		1			
259.405	259.521		612.5													REMOVAL INCLUDES OTS, ONE-WAY DTS
259.405	259.521				550.0						1		1			
259.618	259.748		687.5													REMOVAL INCLUDES OTS, ONE-WAY DTS
259.618	259.748				625.0						1		1			
259.792	259.894		537.5													REMOVAL INCLUDES OTS, ONE-WAY DTS
259.792	259.894				475.0						1		1			
260.847	260.962		612.5													REMOVAL INCLUDES OTS, ONE-WAY DTS
260.847	260.962				550.0						1		1			
261.972	262.661					3,638.0										
261.972	262.661							3,638.0								
262.725	262.808		437.5													REMOVAL INCLUDES OTS, ONE-WAY DTS
262.725	262.808				375.0						1		1			
263.505	263.623		625.0													REMOVAL INCLUDES OTS, ONE-WAY DTS
263.505	263.623				562.5						1		1			
263.968	264.026 B.E.	300.0														REMOVAL INCLUDES OTS, BAS
263.968	264.026 B.E.			212.5						1				1		
263.981	264.026 B.E.		237.5													REMOVAL INCLUDES OTS, BAS
263.981	264.026 B.E.				150						1				1	
264.044 B.E.	264.049	25.0														REMOVAL INCLUDES ONE-WAY DTS
264.044 B.E.	264.049			12.5								1				
264.044 B.E.	264.049		25.0													REMOVAL INCLUDES ONE-WAY DTS
264.044 B.E.	264.049				12.5								1			
264.983	265.210		1,200.0													REMOVAL INCLUDES OTS, ONE-WAY DTS
264.983	265.210				1,137.5						1		1			
265.409	265.906		2,625.0													REMOVAL INCLUDES OTS, ONE-WAY DTS
265.409	265.906				2,562.5						1		1			
SUBTOTAL		**22,850.0**	**8,500.0**	**21,900.0**	**7,737.5**	**3,638.0**	**~**	**3,638.0**	**~**	**14**	**11**	**14**	**11**	**2**	**2**	
TOTAL		**31,350.0**		**29,637.5**		**3,638.0**		**3,638.0**		**25**		**25**		**4**		

SUMMARY

TEMPORARY BARRIER RAIL *

REFERENCE POST	STRUCTURE	linear foot	each	linear foot	each	REMARKS
		TEMPORARY BARRIER RAIL	TEMPORARY IMPACT ATTENUATOR	RESET TEMPORARY BARRIER RAIL	RESET TEMPORARY IMPACT ATTENUATOR	
264.061	I00090264+00611 (01549) SEP COUNTY ROAD	500	1			BRIDGE PHASE 1
264.061	I00090264+00611 (01549) SEP COUNTY ROAD			500	1	BRIDGE PHASE 2
264.061	I00090264+00612 (01550) SEP COUNTY ROAD	500	1			BRIDGE PHASE 1
264.061	I00090264+00612 (01550) SEP COUNTY ROAD			500	1	BRIDGE PHASE 2
TOTAL		**1,000**	**2**	**1,000**	**2**	

* SEE DETAIL

CURB

REFERENCE POST		linear feet				REMARKS
		REMOVE CURB		CONCRETE CURB 4 in		
FROM	TO	LEFT	RIGHT	LEFT	RIGHT	
EASTBOUND						
259.288	259.310		115.0		115.0	
265.495	265.955		2,429.0		2,429.0	
~	~			20.0	20.0	10' OF CURB PER BRIDGE CORNER BR ID# 01549
WESTBOUND						
259.488	259.500	275.0		275.0		
259.764	259.929	871.0		871.0		
~	~			20.0	20.0	10' OF CURB PER BRIDGE CORNER BR ID# 01550
SUBTOTAL		**1,146.0**	**2,544.0**	**1,186.0**	**2,584.0**	
TOTAL		**3,690.0**		**3,770.0**		

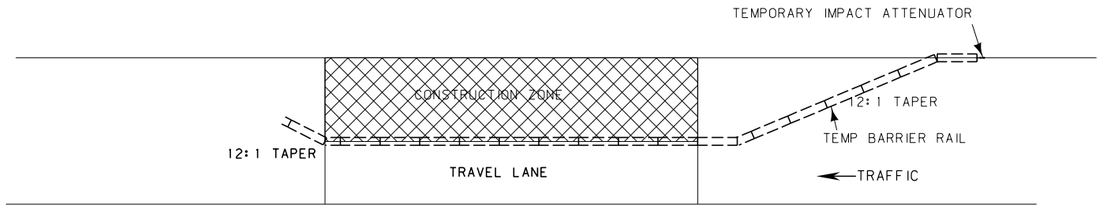
PAVEMENT MARKINGS

ITEM	UNIT	INTERIM APPLICATION #	FINAL APPLICATION	TOTAL
FOR STRUCTURES 01549 & 01550				
STRIPING - WHITE EPOXY	gallon		2	2
STRIPING - YELLOW EPOXY	gallon		1	1

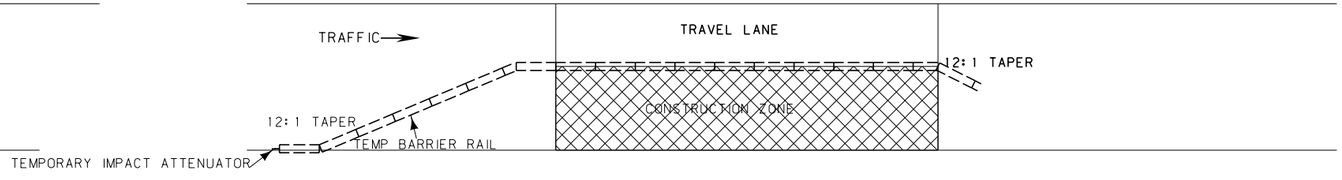
REVEGETATION

STATION		lump sum	cu. yards	acres			REMARKS
		REVEGETATION	TOPSOIL SALVAGING & PLACING	SEED	FERTILIZER	CONDITION SEEDBED	
FROM	TO						
~	~	1	775	1.4	1.4	1.4	GUARDRAIL REPLACEMENT
TOTAL		**1**	**# 775**	**# 1.4**	**# 1.4**	**# 1.4**	

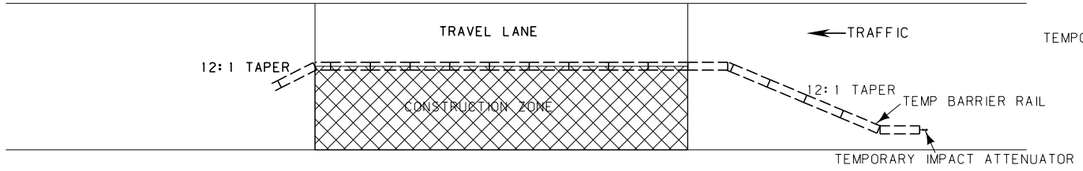
FOR INFORMATION ONLY



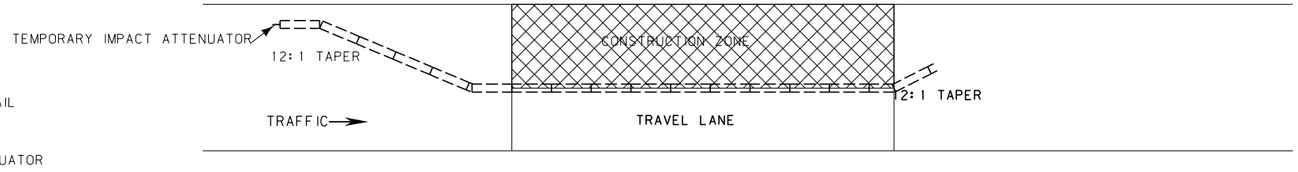
BRIDGE PHASE I CONSTRUCTION DIAGRAM
WESTBOUND
I00090264+00612 (01550)



BRIDGE PHASE I CONSTRUCTION DIAGRAM
EASTBOUND
I00090264+00611 (01549)



BRIDGE PHASE II CONSTRUCTION DIAGRAM
WESTBOUND
I00090264+00612 (01550)



BRIDGE PHASE II CONSTRUCTION DIAGRAM
EASTBOUND
I00090264+00611 (01549)

* SEE SPECIAL PROVISIONS
** SEE SUMMARY FRAME FOR BARRIER LENGTHS
*** SEE BRIDGE PLANS FOR LAYOUT

DETAIL

TEMPORARY BARRIER RAIL
FOR BRIDGE BARRIER REPAIR
FOR I00090264+00611 (01549)
AND I00090264+00612 (01550)

NO SCALE

AWARD COPY

ASSOCIATED PROJECT AGREEMENT NUMBERS	
P. E.	IM-G 90-5(80)258

MONTANA
DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS AND QUANTITIES

FEDERAL AID PROJECT NO. IM 90-5(81)258

COTTONWOOD HILL - GUARDRAIL

JEFFERSON COUNTY

LIST OF DRAWINGS

SHEET NO.	DWG. NO.	TITLE
BRIDGE DRAWINGS		
B1	24230	LIST OF DRAWINGS & ESTIMATED BRIDGE PLAN QUANTITIES
B2	24231	REVISE CONCRETE BARRIER RAIL - BR
B3	24232	CONCRETE BARRIER DETAILS
B4	24233	BARRIER REINFORCING STEEL PLACEMENT DIAGRAM & BILL OF REINFORCING STEEL
B5	24234	SHALLOW CONCRETE REPAIR
B6	23235	PHASE CONSTRUCTION DIAGRAMS

ESTIMATED BRIDGE PLAN QUANTITIES

STRUCTURE IDENTIFICATION NO.	ROUTE & R.P.	FEATURE CROSSED	GENERAL LAYOUT DRAWING NO.	Phase	SHALLOW CONCRETE REPAIR (SQ YD)	BRIDGE DECK CRACK SEAL (SQ YD)	JOINT SEALS - SILCONE (LN. FT.)	REVISE CONCRETE BARRIER RAIL - BR (LN. FT.)
01549	I-90, 246.06 N.B.	GRADE SEPARATION	7940	Phase I	0.3	238	15.0	103.0
				Phase II	0.3	238	15.0	103.0
				Structure Total	0.6	476.0	30.0	206.0
01550	I-90, 246.06 S.B.	GRADE SEPARATION	7940	Phase I	0.3	238	15.0	103.0
				Phase II	0.3	238	15.0	103.0
				Structure Total	0.6	476.0	30.0	206.0
				PROJECT TOTAL	1.2	952.0	60.0	412.0

BRIDGE WORK SUMMARY

MDT STRUCTURE NUMBER	STRUCTURE NAME	GENERAL LAYOUT DWG. NO.	BRIDGE DECK CRACK SEAL	REVISE CONCRETE BARRIER RAIL - BR	SHALLOW CONCRETE REPAIR	JOINT SEALS - SILICONE
01549	GRADE SEPARATION	7940	X	X	X	X
01550	GRADE SEPARATION	7940	X	X	X	X

SHEET NO. B1

LIST OF DRAWINGS & ESTIMATED BRIDGE PLAN QUANTITIES

SCALE: AS Shown

SEPARATION AT STA. 409+60.00

REFERENCE POINT 246.06

ROUTE 00090

FEDERAL AID PROJECT NO. IM 90-5(81)258

JEFFERSON COUNTY

MDT MONTANA DEPARTMENT OF TRANSPORTATION — BRIDGE BUREAU

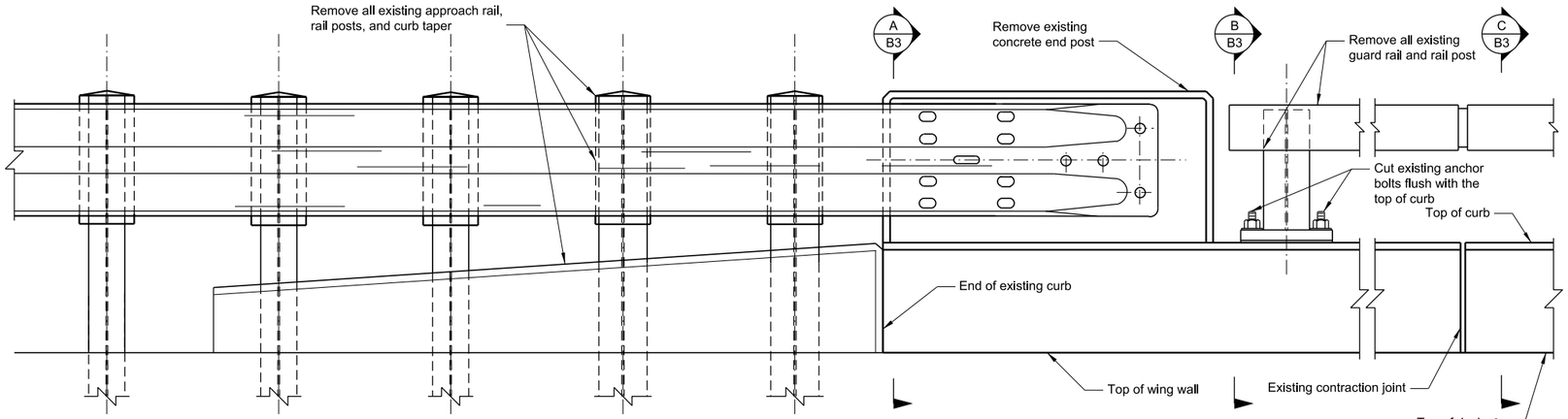
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DESIGNED	2-23-17	D.G.G.	C:\DGN\9248000brgsh001.dgn
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UPN NUMBER 9248000

MDT STRUCTURE 01549, 01550

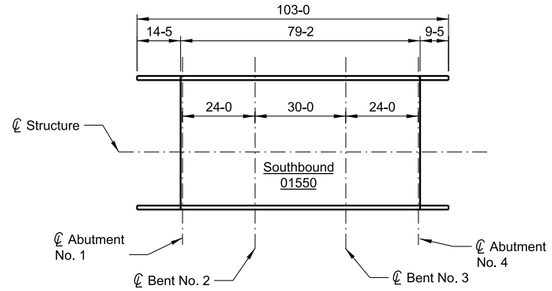
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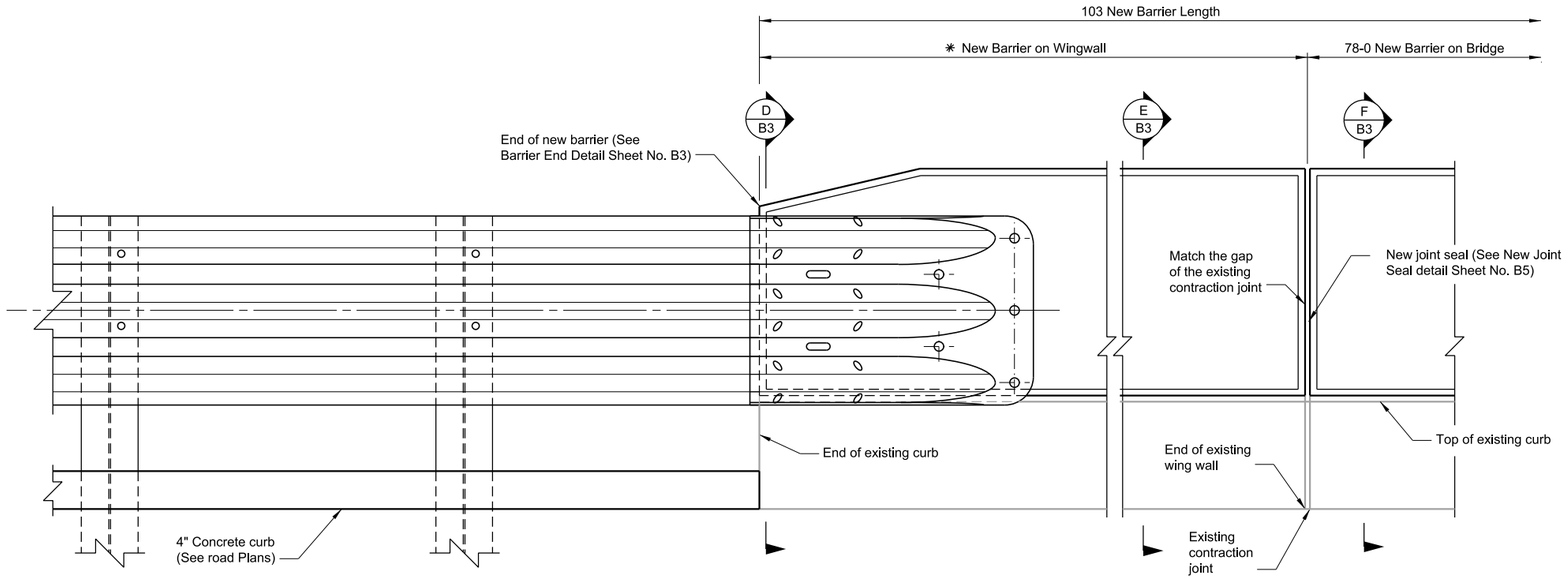
EXISTING PARTIAL ELEVATION

Scale ~ 1½" = 1-0



BARRIER LENGTH DIAGRAM

Scale ~ 1" = 1-25



* NOTE: See Barrier Length Diagram this sheet.

NOTE: Barrier ends typical both ends of structure.

NEW PARTIAL ELEVATION

Scale ~ 1½" = 1-0

SHEET NO. B2

REVISE CONCRETE BARRIER RAIL - BR

SCALE: AS Shown

SEPARATION

AT STA. 409+60.00

REFERENCE POINT 246.06

ROUTE 00090

FEDERAL AID PROJECT NO. IM 90-5(81)258

JEFFERSON COUNTY

MDT MONTANA DEPARTMENT OF TRANSPORTATION

BRIDGE BUREAU

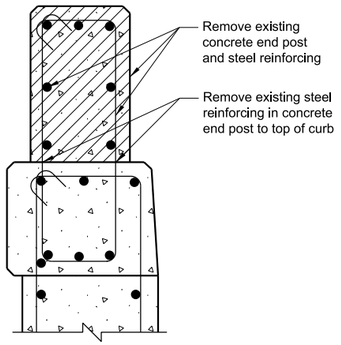
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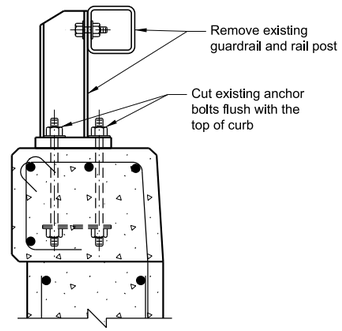
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MDT STRUCTURE 01549, 01550

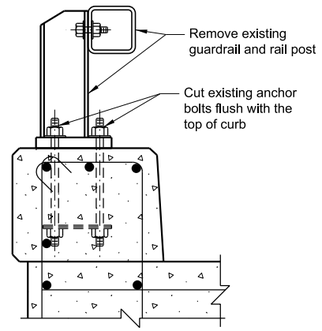
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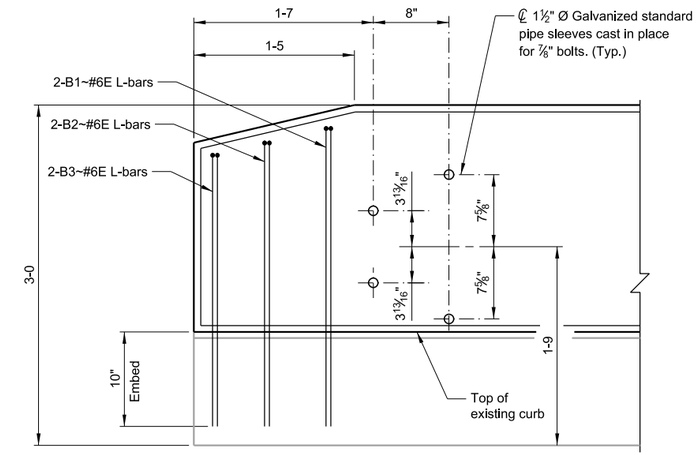
A / B2 EXISTING CONCRETE END POST
Scale ~ 1½" = 1-0



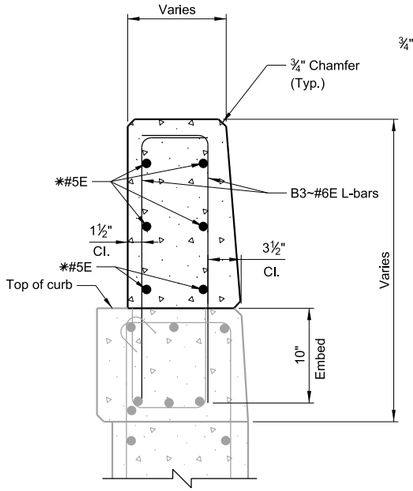
B / B2 EXISTING GUARDRAIL ON WING WALL
Scale ~ 1½" = 1-0



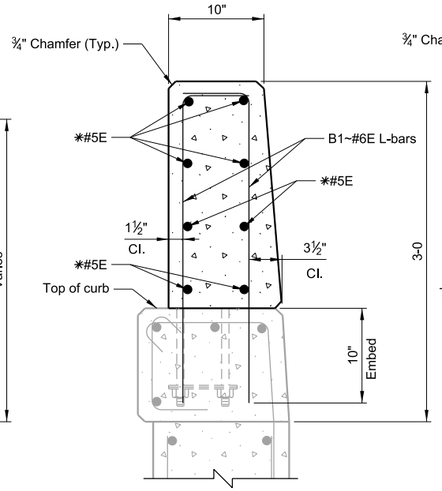
C / B2 EXISTING GUARDRAIL ON CURB
Scale ~ 1½" = 1-0



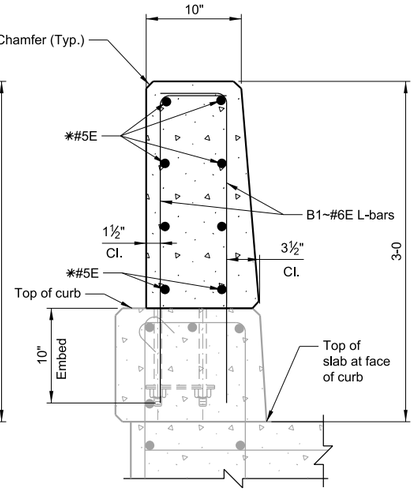
NEW BARRIER END DETAIL
Scale ~ 1½" = 1-0



D / B2 NEW BARRIER AT END OF WING WALL
Scale ~ 1½" = 1-0



E / B2 NEW BARRIER ON WING WALL
Scale ~ 1½" = 1-0



F / B2 NEW BARRIER ON CURB
Scale ~ 1½" = 1-0

* NOTE: See Barrier Reinforcing Steel Placement Diagram Sheet No. B4.
NOTE: See Sheet No. B4 for Bill of Reinforcing Steel.

SHEET NO. B3

CONCRETE BARRIER DETAILS

SCALE: AS Shown

SEPARATION

AT STA. 409+60.00

REFERENCE POINT 246.06

ROUTE 00090

FEDERAL AID PROJECT NO. IM 90-5(81)258

JEFFERSON COUNTY

MDT MONTANA DEPARTMENT OF TRANSPORTATION

BRIDGE BUREAU

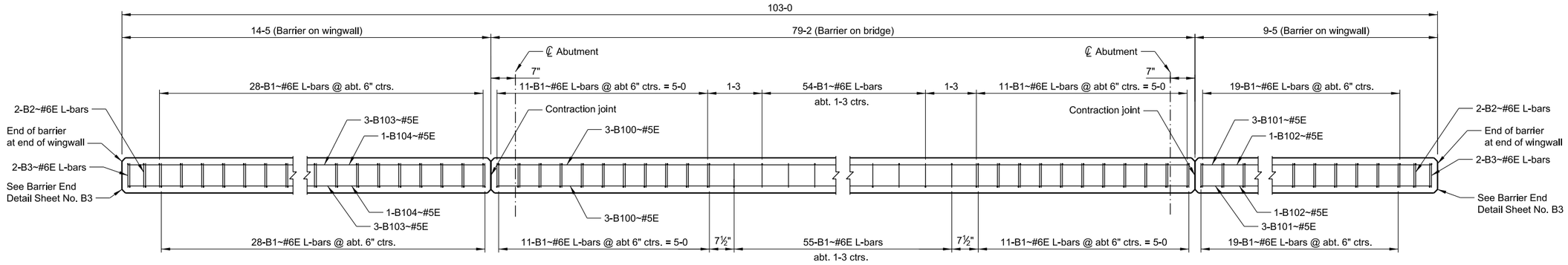
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UPN NUMBER 9248000

MDT STRUCTURE 01549, 01550

DRAWING NO. 24232

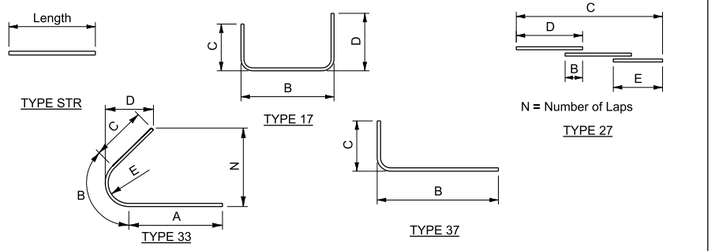
AWARD COPY



BARRIER REINFORCING STEEL PLACEMENT DIAGRAM (NORTHBOUND 01549, SOUTHBOUND 01550)

No Scale

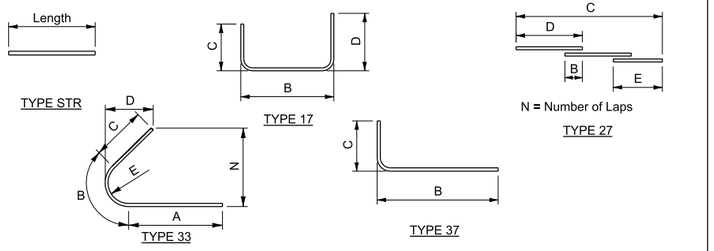
BILL OF REINFORCING STEEL (SOUTHBOUND 01550)



(ALL DIMENSIONS ARE OUT TO OUT)

Mark	Size	No.	Type	Length	A	B	C	D	E	G	N
B100	5E	12	27	81-10		3-0	78-10	60-0	21-10		1
B101	5E	12	STR	7-4							
B102	5E	4	STR	6-7							
B103	5E	12	STR	12-4							
B104	5E	4	STR	11-7							
B1	6E	494	37	3-3		2-8	0-7				
B2	6E	8	37	3-1		2-6	0-7				
B3	6E	8	37	3-0		2-5	0-7				

BILL OF REINFORCING STEEL (NORTHBOUND 01549)

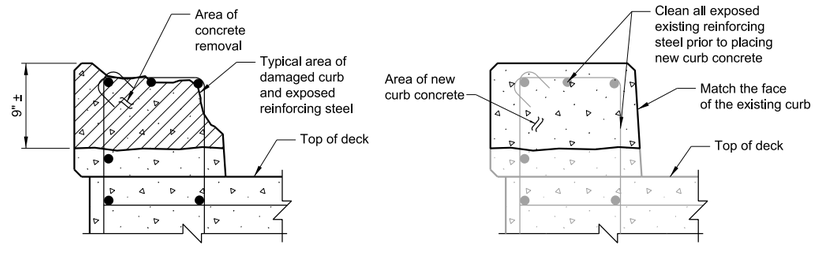


(ALL DIMENSIONS ARE OUT TO OUT)

Mark	Size	No.	Type	Length	A	B	C	D	E	G	N
B100	5E	12	27	81-10		3-0	78-10	60-0	21-10		1
B101	5E	12	STR	7-4							
B102	5E	4	STR	6-7							
B103	5E	12	STR	12-4							
B104	5E	4	STR	11-7							
B1	6E	494	37	3-3		2-8	0-7				
B2	6E	8	37	3-1		2-6	0-7				
B3	6E	8	37	3-0		2-5	0-7				

NOTE: The suffix E denotes epoxy coated reinforcing steel.

NOTE: Lap #5E bars 3-0 minimum .



REPAIR CURB

Scale ~ 1½" = 1-0

01549

SHEET NO. B4

BARRIER REINFORCING STEEL PLACEMENT DIAGRAM & BILL OF REINFORCING STEEL,

SCALE: AS Shown

SEPARATION

AT STA. 409+60.00

REFERENCE POINT 246.06

ROUTE 00090

FEDERAL AID PROJECT NO. IM 90-5(81)258

JEFFERSON COUNTY

MDT MONTANA DEPARTMENT OF TRANSPORTATION

BRIDGE BUREAU

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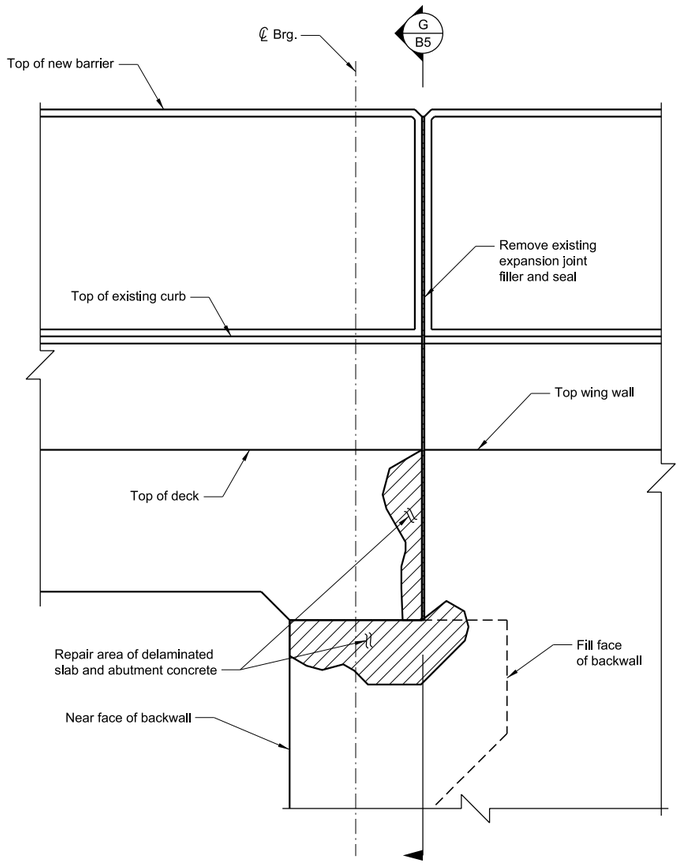
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REVISED								
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					DRAWN	2-23-17	D.G.G.	
					DESIGNED	2-23-17	D.G.G.	

UPN NUMBER 9248000

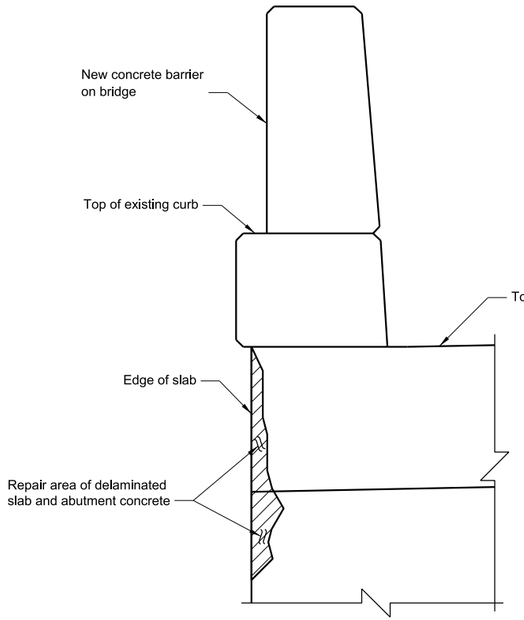
MDT STRUCTURE 01549, 01550

DRAWING NO. 24233

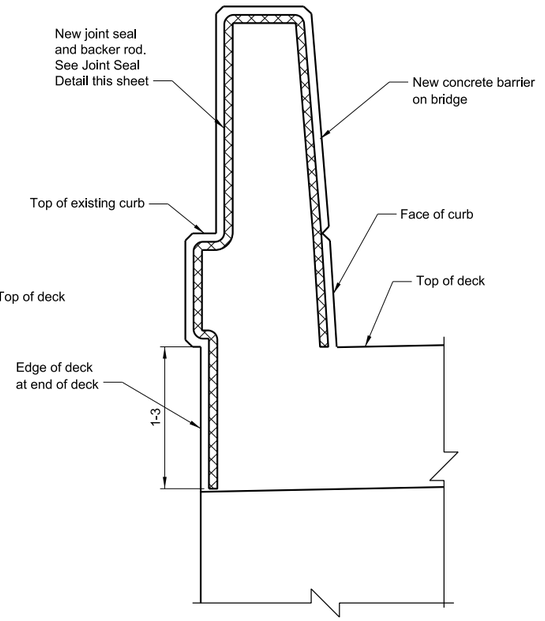
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REPAIR STRUCTURE DETAIL
Scale ~ 1½" = 1-0



REPAIR STRUCTURE



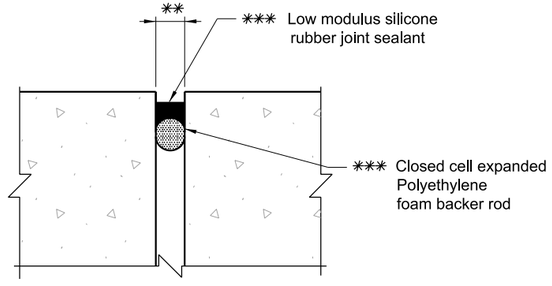
NEW JOINT SEAL

G
B5 SECTION
Scale ~ 1½" = 1-0

NOTE: Include all cost associated with furnishing and installing the backer rod and silicone sealant in the unit price bid for Joint Seals - Silicone.

NOTE: Match existing grades and profiles for all concrete repair.

NOTE: See Special Provisions for additional information.



JOINT SEAL DETAIL
No Scale

** NOTE: Joint openings vary in width. Determine joint opening sizes before ordering materials. Provide a minimum ½" opening between adjacent barriers, slab and wingwalls.

NOTE: Clean existing opening throughly prior to placement of new backer rod and joint sealant.

*** NOTE: Use Dow Corning 888 Silicone joint sealant or approved equal. Install in accordance with the manufacturer's recommendations. Asphalt based sealant is not acceptable. Include all costs associated with furnshing and installing backer rod and silicone sealant in the unit price bid for Joint Seals - Silicone.

SHEET NO.
B5

SHALLOW CONCRETE
REPAIR

SCALE: AS Shown

SEPARATION
AT STA. 409+60.00

REFERENCE POINT
246.06

ROUTE
00090

FEDERAL AID PROJECT NO.
IM 90-5(81)258

JEFFERSON COUNTY

MDT
MONTANA DEPARTMENT
OF TRANSPORTATION
BRIDGE BUREAU

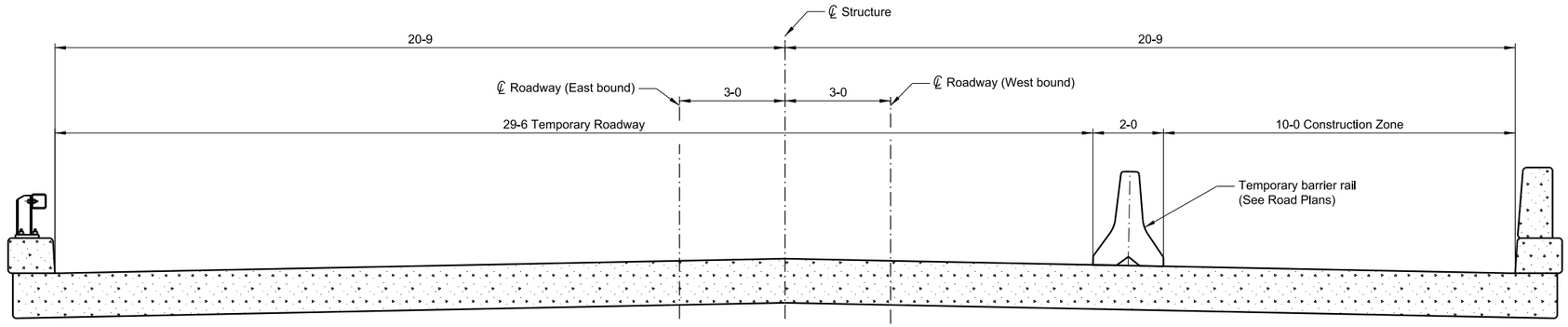
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CHECKED								D.M.P.	8-3-20
DRAWN								D.G.G.	2-23-17
DESIGNED								D.G.G.	2-23-17

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MDT STRUCTURE
01549, 01550

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24234

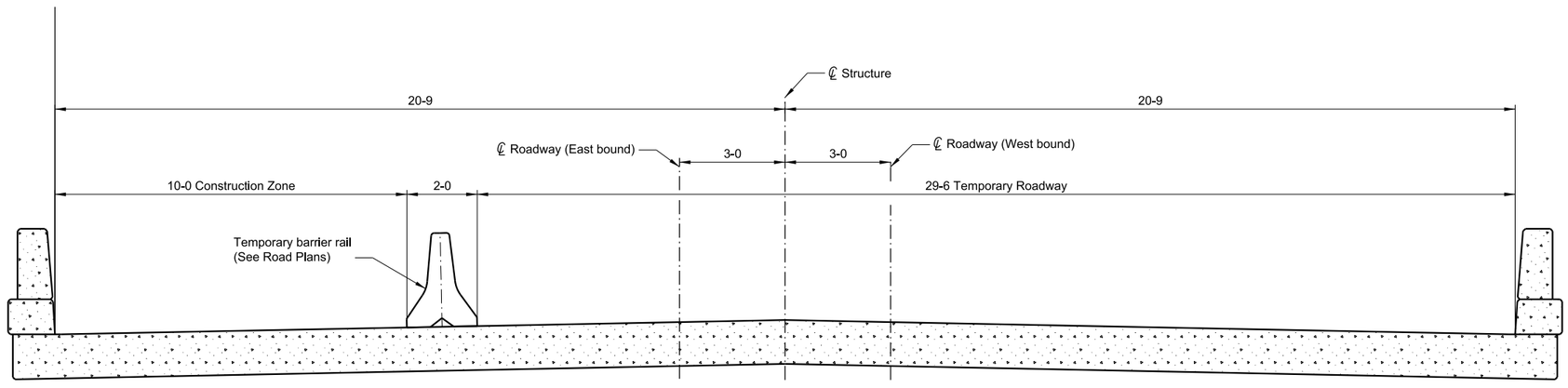


PHASE I

Scale ~ ½" = 1-0

(East bound ahead on line)

(West bount back on line)



PHASE II

Scale ~ ½" = 1-0

(East bound ahead on line)

(West bount back on line)

SHEET NO.
B6

PHASE CONSTRUCTION DIAGRAMS

SCALE: AS Shown

SEPARATION

AT STA. 409+60.00

REFERENCE POINT
246.06

ROUTE
00090

FEDERAL AID PROJECT NO.
IM 90-5(81)258

JEFFERSON COUNTY

MONTANA DEPARTMENT OF TRANSPORTATION

BRIDGE BUREAU

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CHECKED	8-3-20	D.M.P.	
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9248000

MDT STRUCTURE
01549, 01550

DRAWING NO.
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