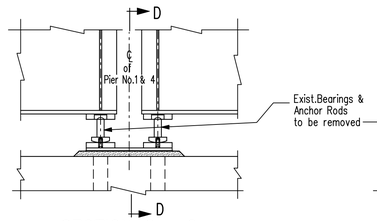
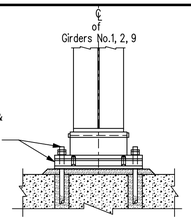


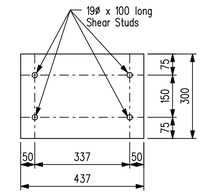
SECTION C - C

Scale 1 : 20
Showing Exist. Bearings on Piers 1 & 4



SECTION D - D

Scale 1 : 20



PLAN

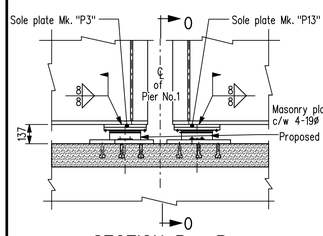
Showing masonry plate details for new Pot Bearings at Piers 1 & 4
Scale 1 : 10

POT BEARING DESIGN DATA

SITE No. 2924-00

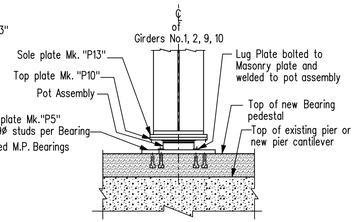
Substructure Unit	Girder Line	Service Limit State: Dead Load (kN)	Live Load (kN)	Total Vertical Load (kN)	Maximum Horizontal Load (kN): Longitudinal	Transverse	Strength Limit State: Maximum Vertical Load (kN)	Maximum Horizontal Load (kN): Longitudinal	Transverse	Service Limit State: Maximum Rotation (radians)	Maximum Movement (mm): Longitudinal	Transverse	Quantity	Bearing Type	Type	Total Bearing Height (mm)	Sole Plate (mm): Thickness	Width	Length	Masonry Plate (mm): Thickness	Width	Length
Pier 1 - South side	G1	166.2	328.1	494.3	—	—	781.9	—	—	0.020	± 32.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300
	G2 & G9	178.3	385.6	563.9	—	—	897.7	—	—	0.020	± 32.0	± 10.0	2	M.P.B.	PM 75	137	20	405	300	28	437	300
	G3 to G8	178.3	385.6	563.9	—	24.1	897.7	—	38.4	0.020	± 32.0	Restrained	6	U.P.B.	PMCG 75	156	20	405	300	28	437	300
	G10	276.0	231.8	507.8	—	—	750.7	—	—	0.020	± 32.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300
Pier 1 - North side	G1	144.5	332.4	476.9	—	—	762.3	—	—	0.020	± 57.0	± 10.0	1	M.P.B.	PM 75	137	20	405	325	28	437	300
	G2 & G9	155.2	390.7	545.9	—	—	877.7	—	—	0.020	± 57.0	± 10.0	2	M.P.B.	PM 75	137	20	405	325	28	437	300
	G3 to G8	155.2	390.7	545.9	—	23.7	877.7	—	42.9	0.020	± 57.0	Restrained	6	U.P.B.	PMCG 75	156	20	405	325	28	437	300
	G10	247.1	233.7	480.8	—	—	717.9	—	—	0.020	± 57.0	± 10.0	1	M.P.B.	PM 75	137	20	405	325	28	437	300
Pier 4 - South side	G1	144.5	332.4	476.9	—	—	762.3	—	—	0.020	± 36.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300
	G2 & G9	155.2	390.7	545.9	—	—	877.7	—	—	0.020	± 36.0	± 10.0	2	M.P.B.	PM 75	137	20	405	300	28	437	300
	G3 to G8	155.2	390.7	545.9	—	23.7	877.7	—	42.9	0.020	± 36.0	Restrained	6	U.P.B.	PMCG 75	156	20	405	300	28	437	300
	G10	247.1	233.7	480.8	—	—	717.9	—	—	0.020	± 36.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300
Pier 4 - North side	G1	205.7	348.3	554.0	—	—	866.7	—	—	0.020	± 35.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300
	G2 & G9	220.0	409.4	629.4	—	—	991.5	—	—	0.020	± 35.0	± 10.0	2	M.P.B.	PM 75	137	20	405	300	28	437	300
	G3 to G8	220.0	409.4	629.4	—	24.7	991.5	—	41.9	0.020	± 35.0	Restrained	6	U.P.B.	PMCG 75	156	20	405	300	28	437	300
	G10	334.2	247.0	581.2	—	—	850.0	—	—	0.020	± 35.0	± 10.0	1	M.P.B.	PM 75	137	20	405	300	28	437	300

MPB = Multi-directional Pot bearing.
UPB = Uni-directional Pot bearing.



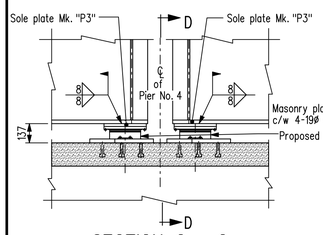
SECTION P - P

Showing Proposed Bearings on Pier 1 Girders 1, 2, 9, 10.
Scale 1 : 20



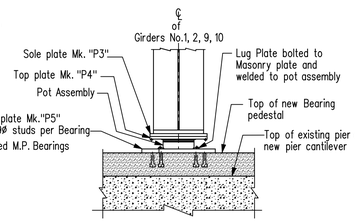
SECTION O - O

Scale 1 : 20



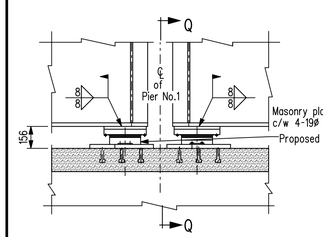
SECTION C - C

Showing Proposed Bearings on Piers 4 Girders 1, 2, 9, 10
Scale 1 : 20



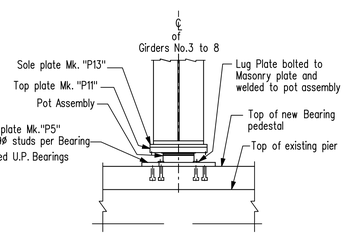
SECTION D - D

Scale 1 : 20



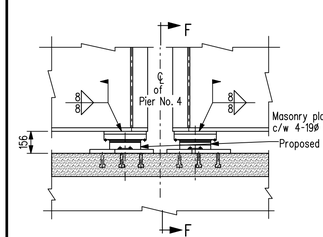
SECTION R - R

Showing Proposed Bearings on Pier 1 Girders 3 to 8
Scale 1 : 20



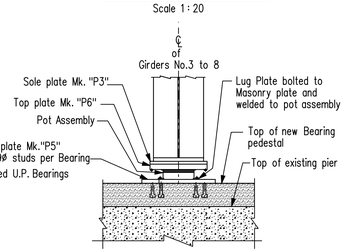
SECTION Q - Q

Scale 1 : 20



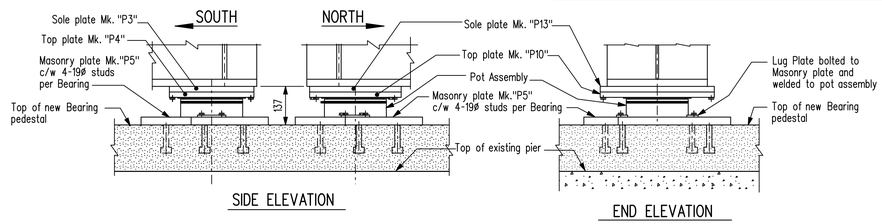
SECTION E - E

Showing Proposed Bearings on Piers 4
Scale 1 : 20



SECTION F - F

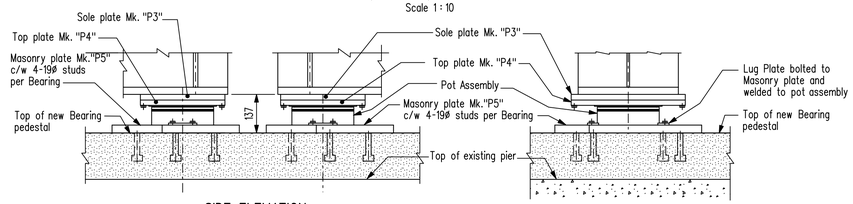
For Girders No. 3 to 8
Scale 1 : 20



SIDE ELEVATION — END ELEVATION

BEARING DETAILS PIER 1

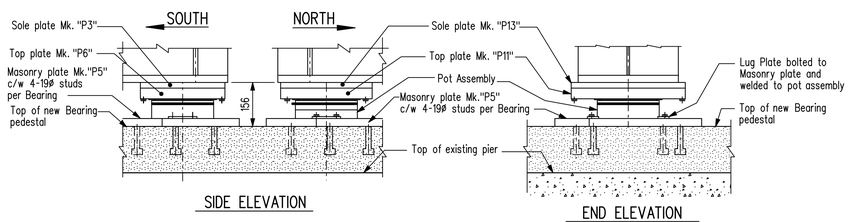
Showing M.P. Bearings for Girders 1, 2, 9 & 10
Scale 1 : 10



SIDE ELEVATION — END ELEVATION

BEARING DETAILS ON PIER 4

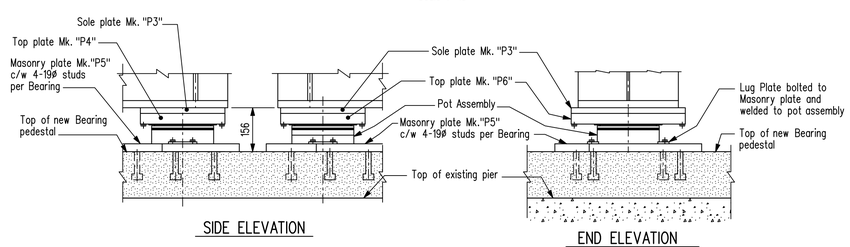
Showing M.P. Bearings for Girders 1, 2, 9 & 10
Scale 1 : 10



SIDE ELEVATION — END ELEVATION

BEARING DETAILS PIER 1

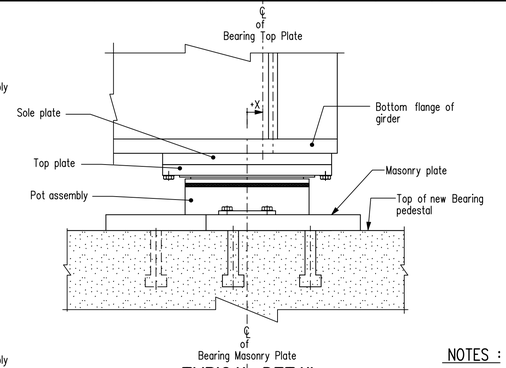
Showing U.P. Bearings for Girders 3 to 8
Scale 1 : 10



SIDE ELEVATION — END ELEVATION

BEARING DETAILS PIER 4

Showing U.P. Bearings for Girders 3 to 8
Scale 1 : 10



TYPICAL DETAIL

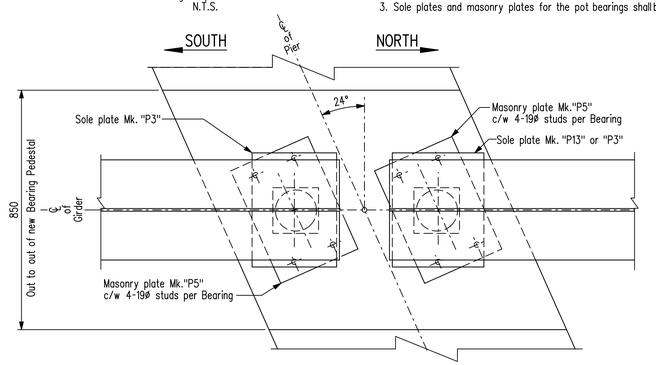
Showing Expansion bearing Temperature Offset on Piers 1 & 4
X = Bearing temperature offset
N.T.S.

EXPANSION BEARINGS TEMPERATURE OFFSET SETTING TABLE

PIER 1 South Side °C	X mm	PIER 1 North Side °C	X mm	PIER 4 South Side °C	X mm	PIER 4 North Side °C	X mm
-40	-11	-40	-34	-40	-15	-40	-13
-30	-8	-30	-26	-30	-11	-30	-10
-20	-6	-20	-19	-20	-8	-20	-7
-10	-4	-10	-11	-10	-5	-10	-4
0	-1	0	-4	0	-2	0	-1
5	0	5	0	5	0	5	0
10	1	10	4	10	2	10	1
20	4	20	11	20	5	20	4
30	6	30	19	30	8	30	7
40	8	40	26	40	11	40	10

NOTES :

1. Pot Bearings shall be Goodco PM 75 and PMCG 75 or equivalent as approved by the Engineer.
2. Design Code = AASHTO LRFD 2004 with 2005 interim revisions.
3. Sole plates and masonry plates for the pot bearings shall be CSA G40.21 Grade 350W.



TYPICAL PLAN

Showing bearings layout on Piers 1 & 4
Scale 1 : 10

REVISIONS		
10/03/04	J.J.	As built
DATE	BY	DESCRIPTION

PROVINCE OF MANITOBA — Original signed by M. B. CHISLETT 09/04/20 — REGISTERED PROFESSIONAL ENGINEER

BEARING DETAILS

RECONSTRUCTION AND STRENGTHENING OF EXISTING BRIDGE OVER ASSINIBOINE RIVER - CONTRACT ONE
ON P.T.H. No. 100 IN R.L.'S 72, 73 & 94
PARISH OF ST. CHARLES

CITY OF WINNIPEG

Manitoba Infrastructure and Transportation
Water Control & Structures

RELEASED FOR CONSTRUCTION BY: Original signed by Ruth J. Eden 09/05/01
DIRECTOR STRUCTURES, DESIGN AND CONSTRUCTION BRANCH — DATE

DESIGN	BY: M.B.C.	
	CHECKED: M.W.H.	
DETAILS	BY: G.S.	
	CHECKED: M.B.C.	

SCALE: As shown — SHEET No. 34 — SITE No. 2924-00

...\Contract_1\292400_Bearings.dgn 2010-03-04 3:43:29 PM