

Sheet Revisions			Sheet Revisions		
Date	Description	Initials	Date	Description	Initials

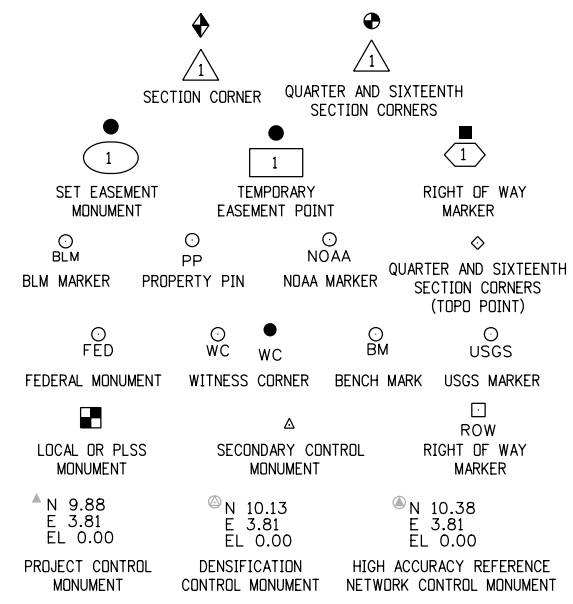
Project/Land Survey Control			
Title Sheet			
Project Number: FBR R200-266			
Project Location: BRIDGE REPLACEMENT			
G-12-C - ST HIGHWAY 9			
Project Code:	Last Mod. Date	Subset	Sheet No.
23558	11-19-2020	3.01 of 3.04	3.01

# DEPARTMENT OF TRANSPORTATION STATE OF COLORADO

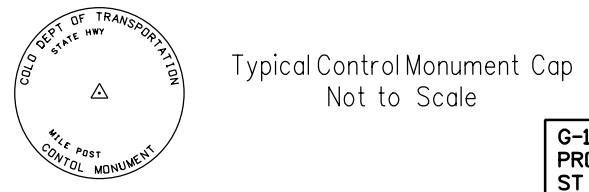
## PROJECT/LAND SURVEY CONTROL DIAGRAM

State Highway 9  
 Sections 1 & 12, Township 9 South, Range 78 West  
 of the 6th Principal Meridian  
 County of Park

SHEET NO.	INDEX OF SHEETS
3.01	(1) Title Sheet
3.02	(1) Coordinate Tables
3.04	(2) Plan Sheets
(4) Total Sheets	



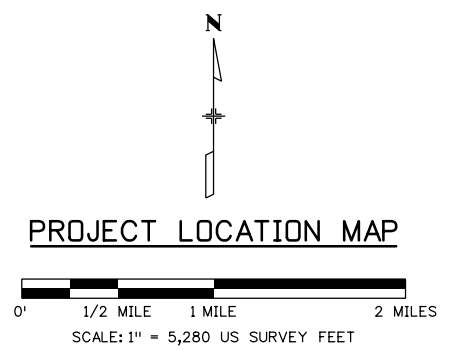
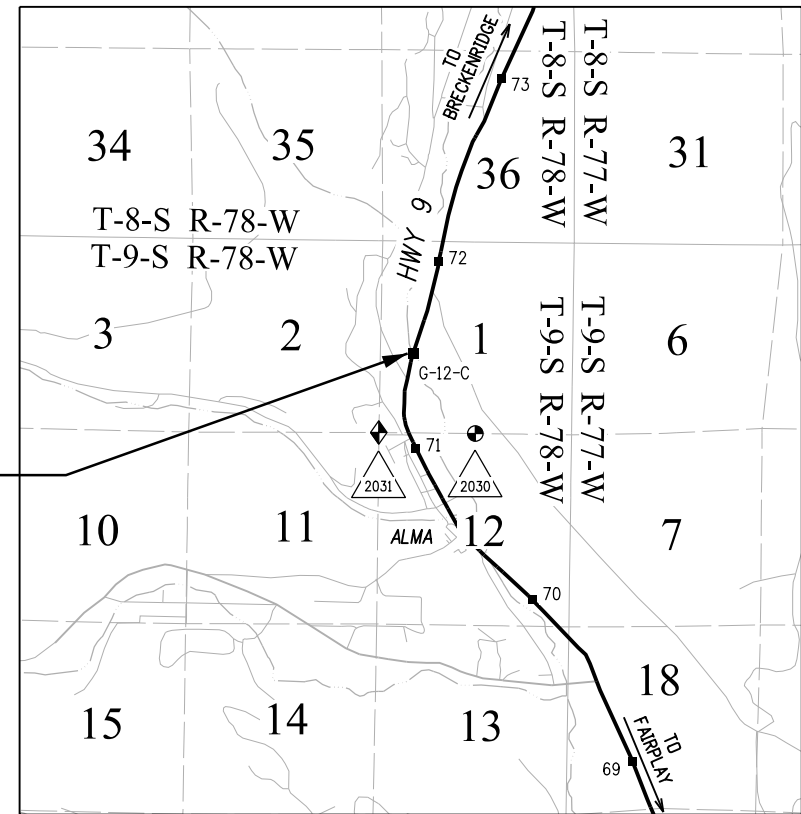
Note: For a complete listing of symbolology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication. Existing features are shown as screened weight (gray scale). Proposed or new features are shown as full weight without screening.



▲ CM-MP - ControlPoint Monuments set by CDOT. They are CDOT Type II monuments, a 3/4" dia. aluminum control monument cap (as shown) on a 3' x 3/4" dia. aluminum security rod on a 3' x 3/4" dia. smooth aluminum rod.

**General Notes:**

1. This Project/Land Survey Control Diagram is not a boundary survey of the adjoining property and is prepared for the Colorado Department of Transportation purposes only.
2. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with CDOT that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
3. Refer to the M-629-1 Survey Monuments of the Standard Plans found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.



This control is part of a larger control network created for CDOT Project STA 0091-026. The control points were verified for accuracy.

**Basis of Bearings:** Bearings used in the calculation of coordinates are based on a grid bearing of N17°15'03"E from Control Point 7130 (a CDOT Type II Control Monument - MP 71.30) to Control Point 7140 (a CDOT Type II Control Monument - MP 71.40). Both monuments are marked appropriately for their milepost location. Coordinates are based on existing control established by Colorado Department of Transportation Project No. STA 0091-026 and were verified for this project.

**Basis of Elevations:** Project elevations are based on NAVD vertical datum. A bench loop was run starting at NSRS benchmark F 302 (3166.066 m). All control monuments on this project were tied through a bench loop. NSRS F 302 is a first order, class 2 benchmark. Elevations are based on existing vertical control established by the Colorado Department of Transportation Project No. STA 0091-026 and were verified for this project.

**COORDINATE DATUM:** Project coordinates are ground modified Colorado State Plane Central Zone (0502) NAD '83/(1992) coordinates. The combined elevation/scale factor used to modify coordinates from state plane to project coordinates is 1.000555028. The resulting project coordinates are truncated by 100,000 meters in the Northing and 200,000 meters in the Easting after converting from state plane coordinates to project coordinates. The NSRS is based on the NAD '83 (1992) datum.

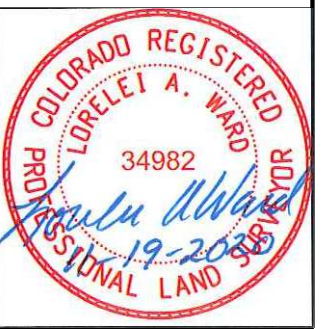
Project Coordinates Northing US Survey Feet =  
 (State Plane Coordinate Northing(m) \* 1.000555028 - 100,000m) \* (3937ft/1200m).  
 Project Coordinates Easting US Survey Feet =  
 (State Plane Coordinate Easting(m) \* 1.000555028 - 200,000m) \* (3937ft/1200m).

**NOTICE:** According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

SURVEYOR STATEMENT (PROJECT/LAND SURVEY CONTROL DIAGRAM)

*I, Lorelei A. Ward, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation that based upon my knowledge, information and belief, research, calculations and evaluation of the survey evidence were performed and this Project/Land Survey Control Diagram prepared under my responsible charge in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.*

PLS No. 34982



11/30/2020 10:11:59 AM J:\2020\0200567.00 - CDOT Bridge Bundles\23558 ROW\_Survey\G12C - Hwy 9 mp 71.445\Drawings\23558SURV\_G-12-C\_PLSheet.dgn



Sheet Revisions

Date	Description	Initials

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Project/Land Survey Control Diagram

Coordinate Tables			
Project Number: FBR R200-266			
Project Location: BRIDGE REPLACEMENT			
G-12-C - ST HIGHWAY 9			
Project Code:	Last Mod. Date	Subset	Sheet No.
23558	11-19-2020	3.02 of 3.04	3.02

GEODETIC COORDINATE TABLE



Point No	Geodetic Coordinates NAD-83(2011)		Elip Height (NAVD88)	Ortho Height (NAVD88)	Mapping Angle	Grid Scale Factor	NAD 83(2011) Zone 0502		Description
	Latitude(N)	Longitude(W)					SP Northing(m)	SP Easting(m)	
7030	N39°16'44.83183"	W106°03'27.81544"	10,274.662	10,317.19	-0°21'06.3"	1.000004380	465,441.945	866,281.538	CDOT TYPE II MON - "CM - MP 70.30"
7040	N39°16'49.34864"	W106°03'32.81186"	10,283.431	10,325.95	-0°21'09.5"	1.000004029	465,581.965	866,162.650	CDOT TYPE II MON - "CM - MP 70.40"
7055	N39°16'53.85919"	W106°03'39.75644"	10,309.899	10,352.41	-0°21'13.8"	1.000002832	465,722.081	865,997.077	CDOT TYPE II MON - "CM - MP 70.50"
7060	N39°16'57.82306"	W106°03'43.03965"	10,311.134	10,353.64	-0°21'15.9"	1.000002834	465,844.800	865,919.150	CDOT TYPE II MON - "CM - MP 70.60"
7075	N39°17'04.40049"	W106°03'47.33166"	10,314.740	10,357.24	-0°21'18.6"	1.000002763	466,048.264	865,817.549	CDOT TYPE II MON - "CM - MP 70.75"
7090	N39°17'10.54265"	W106°03'52.43111"	10,334.988	10,377.48	-0°21'21.8"	1.000001891	466,238.426	865,696.521	CDOT TYPE II MON - "CM - MP 70.90"
7100	N39°17'15.61908"	W106°03'54.95020"	10,357.553	10,400.04	-0°21'23.4"	1.000000892	466,395.342	865,637.128	CDOT TYPE II MON - "CM - MP 71.00"
7110	N39°17'19.22382"	W106°03'58.20182"	10,372.968	10,415.45	-0°21'25.5"	1.000000212	466,506.986	865,559.902	CDOT TYPE II MON - "CM - MP 71.10"
7130	N39°17'28.84237"	W106°03'59.93864"	10,364.705	10,407.18	-0°21'26.6"	1.000000761	466,803.850	865,520.133	CDOT TYPE II MON - "CM - MP 71.30"
7140	N39°17'34.27082"	W106°03'57.81695"	10,351.770	10,394.24	-0°21'25.2"	1.000001466	466,970.929	865,572.015	CDOT TYPE II MON - "CM - MP 71.40"

PROJECT COORDINATE TABLE



Point No	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
2007	1,205,536.32	2,185,364.38	10,387.19	3.5" BRASS CAP IN CONC HEADWALL "USC&GS BENCH MARK - F50"
7030	1,199,801.66	2,187,536.14	10,317.19	CDOT TYPE II MON - "CM - MP 70.30"
7040	1,200,261.30	2,187,145.87	10,325.95	CDOT TYPE II MON - "CM - MP 70.40"
7055	1,200,721.25	2,186,602.35	10,352.41	CDOT TYPE II MON - "CM - MP 70.50"
7060	1,201,124.10	2,186,346.54	10,353.64	CDOT TYPE II MON - "CM - MP 70.60"
7075	1,201,792.00	2,186,013.02	10,357.24	CDOT TYPE II MON - "CM - MP 70.75"
7090	1,202,416.24	2,185,615.73	10,377.48	CDOT TYPE II MON - "CM - MP 70.90"
7100	1,202,931.34	2,185,420.76	10,400.04	CDOT TYPE II MON - "CM - MP 71.00"
7110	1,203,297.83	2,185,167.26	10,415.45	CDOT TYPE II MON - "CM - MP 71.10"
7130	1,204,272.33	2,185,036.71	10,407.18	CDOT TYPE II MON - "CM - MP 71.30"
7140	1,204,820.79	2,185,207.02	10,394.24	CDOT TYPE II MON - "CM - MP 71.40"
7180	1,206,860.25	2,185,694.44	10,416.02	CDOT TYPE II MON - "CM - MP 71.80"
7205	1,208,659.74	2,186,054.02	10,458.28	CDOT TYPE II MON - "CM - MP 72.05"

FOUND BOUNDARY MONUMENT COORDINATE TABLE



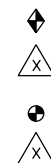
Point No.	Northing(ft)	Easting(ft)	Description
2001	1,208,684.52	2,186,044.93	#4 REBAR YPC - FREESE LS 4392
2002	1,208,682.76	2,186,147.27	#4 REBAR YPC - FREESE LS 4392
2004	1,205,892.14	2,185,365.54	1" IRON PIPE
2006	1,206,692.52	2,185,686.83	1" IRON PIPE
2008	1,203,930.13	2,184,988.20	1.5" ALUM CAP ON #5 REBAR - LS 11944
2009	1,203,535.32	2,185,050.53	1.5" ALUM CAP - ILLEGIBLE
2010	1,203,209.12	2,185,093.80	1.5" ALUM CAP - PLS 15296
2011	1,203,254.18	2,185,183.26	YPC - BURNETT 11944
2013	1,203,074.85	2,185,286.08	1.5" ALUM CAP - BURNETT LS 11944
2014	1,202,886.84	2,185,379.74	#5 REBAR YPC - ROY GEORGE LS 33192
2015	1,202,940.57	2,185,352.94	1.5" ALUM CAP - BURNETT LS 11944
2016	1,202,490.81	2,185,571.72	YPC - ROY GEORGE LC 33192
2018	1,203,383.14	2,185,245.22	2" ALUM CAP ON #5 REBAR - CROW HILL PLS 86960
2021	1,203,667.96	2,185,154.10	1" IRON PIPE
2022	1,205,313.93	2,185,358.41	1.5" ALUM CAP - BURNETT 11944
2032	1,203,391.12	2,184,464.35	1.5" ALUM CAP - ILLEGIBLE
2033	1,203,543.80	2,185,051.89	#5 REBAR BROKEN - BENT

FOUND ROW MONUMENT COORDINATE TABLE



Point No.	Northing(ft)	Easting(ft)	Description
2000	1,208,681.40	2,186,044.28	3" BRASS CAP - ST HWY DEPT STA 230+25
2003	1,208,679.98	2,186,146.73	3" BRASS CAP IN 6" DIAM CONCRETE COLLAR
2017	1,203,392.64	2,185,241.83	3.25" BRASS CAP - ST HWY DEPT STA 284+59
2019	1,203,247.07	2,185,306.51	3.25" ALUM CAP - CDOT PT 845 ROW PLS 17488
2020	1,204,497.87	2,185,163.64	3.25" ALUM CAP - CDOT PT 853 PLS 17488

FOUND ALIQUOT MONUMENT COORDINATE TABLE



Point No.	Northing(ft)	Easting(ft)	Description
2031	1,203,392.73	2,184,323.44	BLM BRASS CAP - SEC COR - S2-S1 / S 11-S12 - 1960
2030	1,203,365.93	2,186,985.76	BLM BRASS CAP - 1/4 COR - S1-S12 - 1960



5615 Wills Boulevard  
 Pueblo, CO 81008  
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Region 2

DRP

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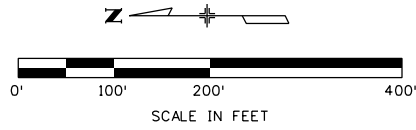
Project/Land Survey Control Diagram

Plan Sheet

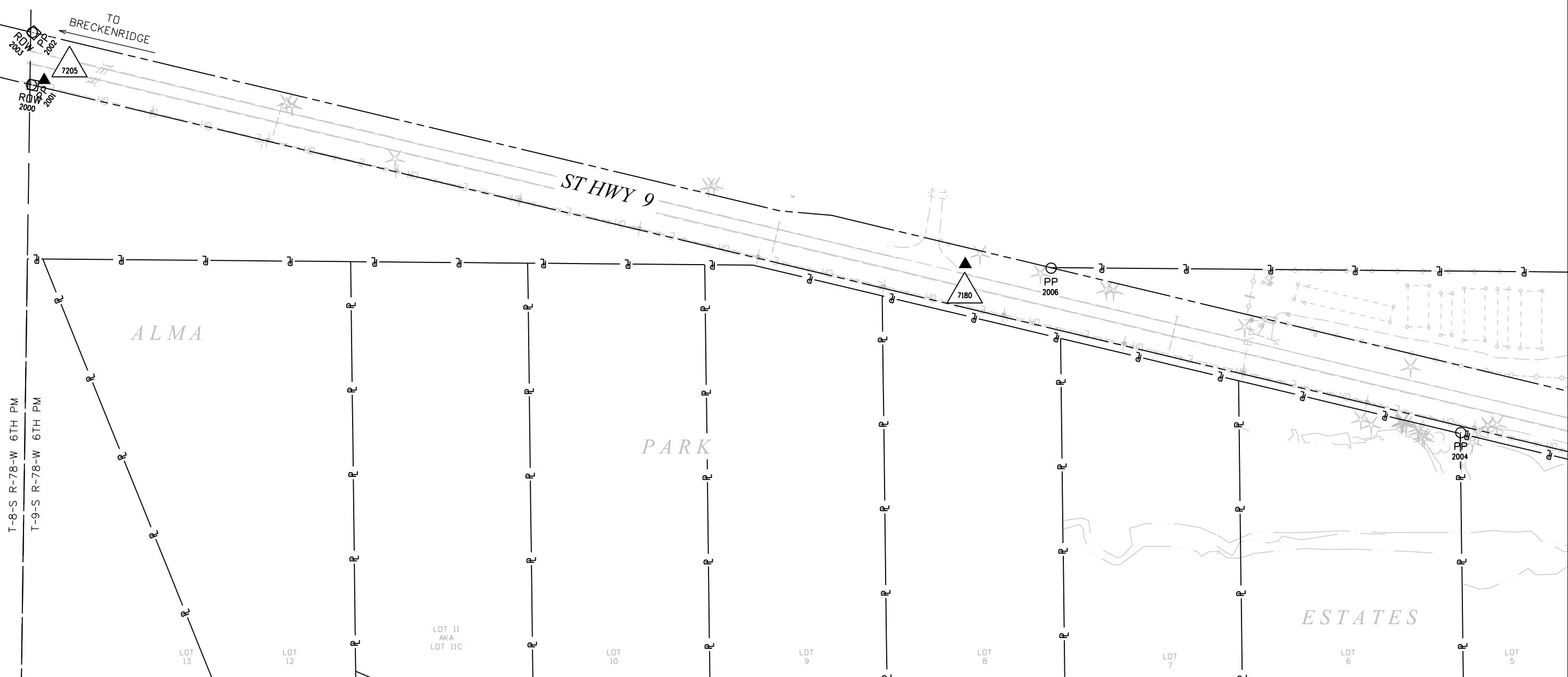
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Project Location: BRIDGE REPLACEMENT			
G-12-C - ST HIGHWAY 9			
Project Code:	Last Mod. Date	Subset	Sheet No.
23558	11-19-2020	3.03 of 3.04	3.03

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TOWNSHIP LINE PROTRACTED



SECTION 1  
 T-9-S R-78-W  
 6TH PM





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Region 2

DRP

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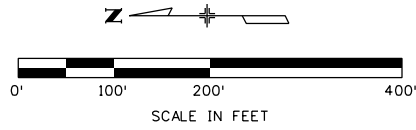


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Project/Land Survey Control Diagram

Plan Sheet

Project Number: FBR R200-266			
Project Location: BRIDGE REPLACEMENT			
G-12-C - ST HIGHWAY 9			
Project Code:	Last Mod. Date	Subset	Sheet No.
23558	11-19-2020	3,04 of 3,04	3,04



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