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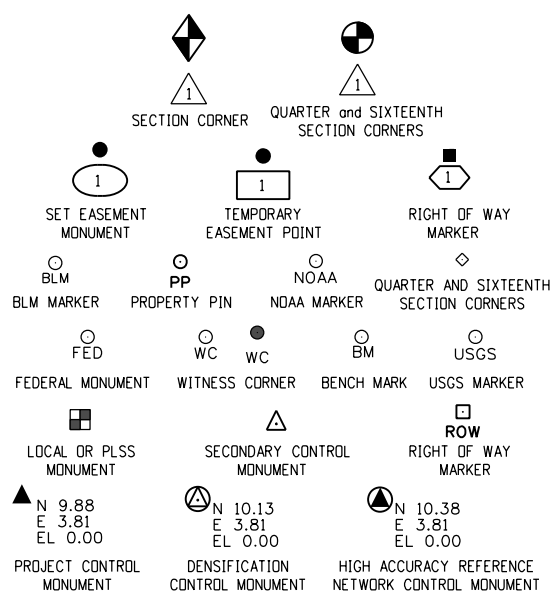
Land Survey Control Diagram			
Title Sheet			
Project Number: FBR 0063-046			
Project Location: SH-6, Road Improvements at Garrison St.			
Sec. 2, 3, 10 & 11, T4S, R69W/6th PM, Jefferson County			
Project Code:	Last Mod. Date:	Subset:	Sheet No.:
19478	11-18-13	1 of 4	4.01

DEPARTMENT OF TRANSPORTATION STATE OF COLORADO

PRELIMINARY LAND SURVEY CONTROL DIAGRAM

State Highway 6 MP 279.37 to 281.34
Township 4 South, Range 69 West
of the 6th Principle Meridian
County of Jefferson

SHEET NO.	INDEX OF SHEETS
4.01	(1) Title Sheet
4.02	(1) Plan Sheet
4.03-4.04	(2) Monument Coordinate Tables
	(4) Total Sheets



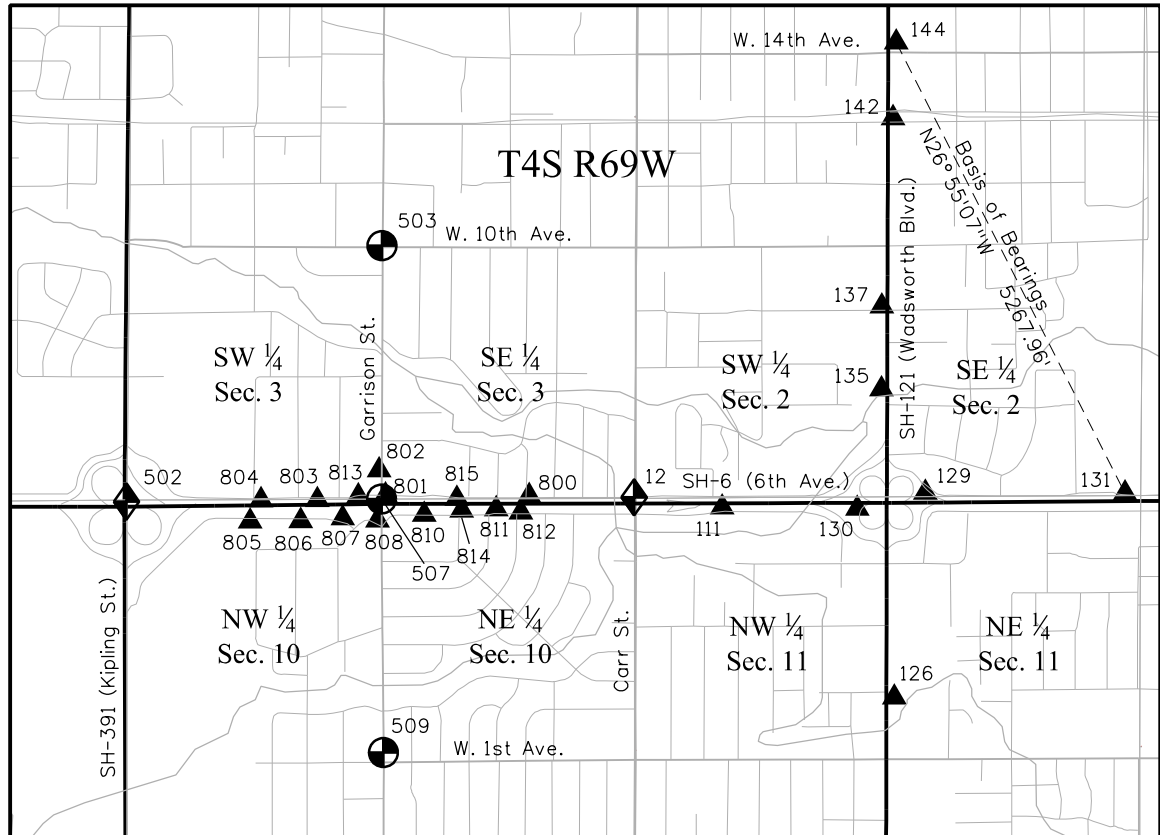
Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2012 found in The Colorado Department of Transportation, M & S Standards for survey monument descriptions.

GENERAL NOTES:

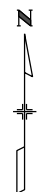
- This **Land Survey Control Diagram** is to document the recovery and/or establishment of survey points that will be the basis of future surveys for design purposes, right-of-way acquisitions, monumentation, and/or roadway construction. This Land Survey Control Diagram is not a Monumented Land Survey or a Boundary Survey and does not address matters of title.
- Coordinates established by Harris Kocher Smith for this Land Survey Control Diagram were based on a previously existing control network established by the Colorado Department of Transportation during a survey for Project No. STU 0062-019, Project Code 15215 and shown on diagrams deposited under Reception Nos. 2007087074 and 2011026028 in Jefferson County.
- BASIS OF BEARINGS:** Bearings are grid bearings of the Colorado state plane coordinate system of 1983, Central Zone (502). The line between Control Point 131 and Control Point 144, described herein, bears N26°55'07"W, a distance of 5267.96 feet.
- Project specific** (Ground) coordinates were obtained by multiplying the project's state plane coordinates by 1.0002596397 and then truncating the northing by 1,000,000 and the easting by 3,000,000. Published units are in US survey feet: 1 survey foot = (1200/3937) meters
- Horizontal Control Tolerances meet the precision requirements of CDOT type A control (+/- 0.07' with 95% certainty).
- Vertical Datum: Elevations are NAVD '88 Datum established by digital differential levels run from Point 111 (elevation = 5450.43) from CDOT Project No. STU 0062-019 having elevation established by digital differential levels run from NGS benchmark "E406" (PID KK11391), elevation = 5421.41'.
- Elevations on control points were established by digital differential levels with an accuracy meeting or exceeding 0.035' times the square root of the distance leveled in miles.

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.

NOTE: This Land Survey Control Diagram should be considered **PRELIMINARY AND SUBJECT TO CHANGE**, unless it bears the signature and seal of the Professional Land Surveyor in responsible charge.



PROJECT LOCATION MAP



Jefferson County Depositing Certificate:

Deposited this _____ day of _____, 201__ at _____ o'clock __.M. under
Reception No. _____
By: _____
Title: _____

Surveyor's Statement (Land Survey Control Diagram):

I, **George G. Smith Jr.**, a Professional Land Surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation that this **Land Survey Control Diagram** was prepared and the research, calculations and evaluation of the survey evidence were performed under my responsible charge and, based upon my knowledge, information and belief, in accordance with applicable standards of practice defined by Colorado Department of Transportation documents. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 19003 Date _____



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Region 1

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Sheet Revisions

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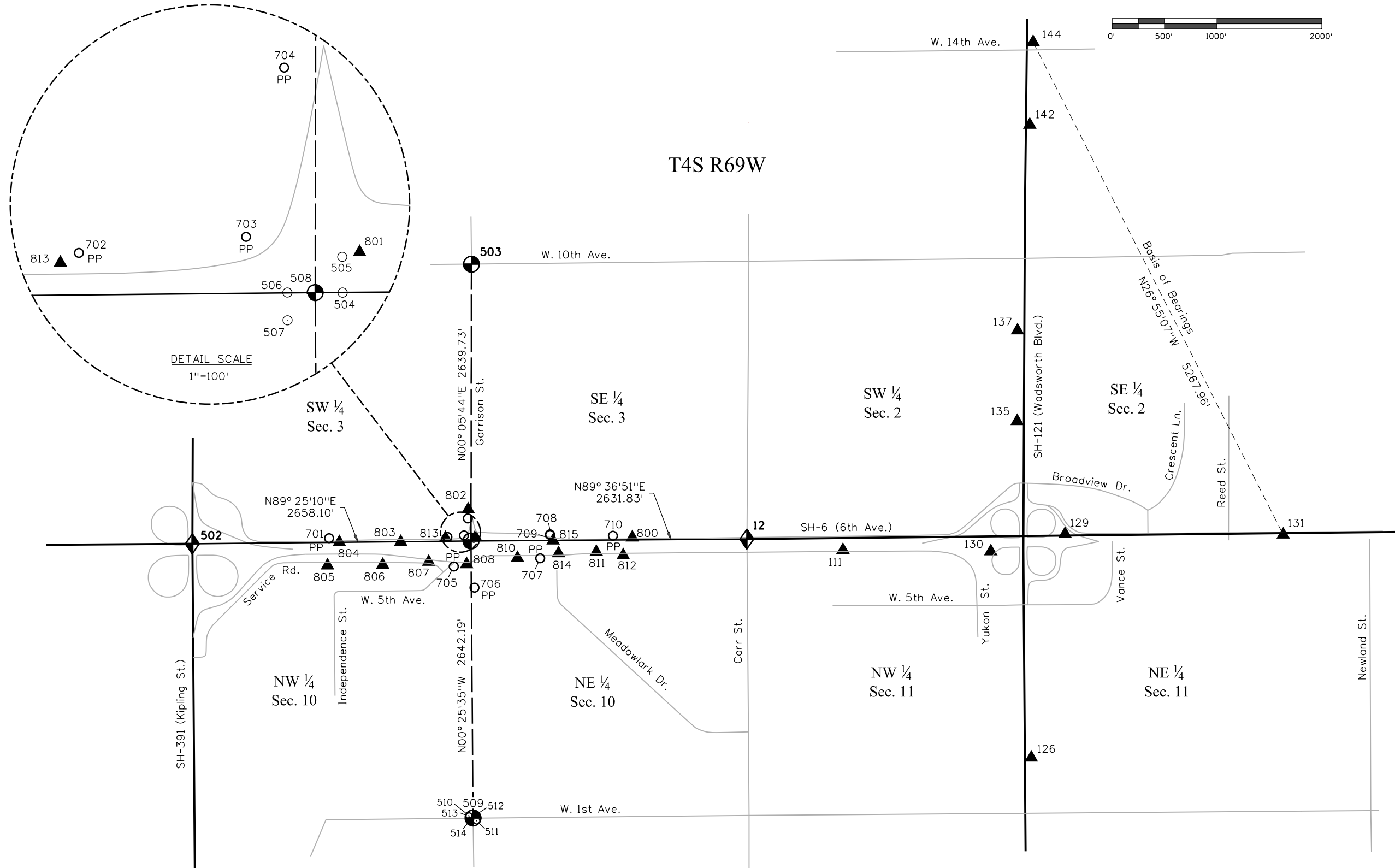


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Land Survey Control Diagram

Plan Sheet

Project Number: FBR 0063-046			
Project Location: SH-6, Road Improvements at Garrison St.			
Sec. 2, 3, 10 & 11, T4S, R69W/6th PM, Jefferson County			
Project Code:	Last Mod. Date:	Subset:	Sheet No.:
19478	11-18-13	2 of 4	4.02



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Existant Control from CDOT Project No. STU 0062-019 (15215)											
Geodetic and State Plane (NAD 1983-92 Zone 502) coordinates						Project Specific Coordinates				Description	
Point	Latitude	Longitude	Ellipsoid Height (sft)	Convergence Angle	Northing (sft)	Easting (sft)	Point	Northing (sft)	Easting (sft)	Elevation NAVD'88 (sft)	
111	39°43'31.35304"N	105°05'15.57105"W	5396.13	0°15'36.2"	1689360.871	3115983.304	111	689799.496	116792.337	5450.43	CDOT Type 6 Mon. w/ 2" Alum. Cap "CDOT CP 111"
126	39°43'11.70019"N	105°04'52.70821"W	5394.35	0°15'50.6"	1687380.484	3117778.805	126	687818.595	118588.304	5448.71	CDOT Type 5 Mon. "CP 126A 4.002076A"
129	39°43'32.76505"N	105°04'48.45127"W	5378.17	0°15'53.3"	1689513.449	3118101.586	129	689952.113	118911.169	5432.58	CDOT Type 2 Mon. "CP 129 4.006076"
130	39°43'31.15716"N	105°04'57.53696"W	5377.22	0°15'47.6"	1689347.485	3117392.448	130	689786.107	118201.847	5431.58	CDOT Type 2 Mon. "CP 130 4.006076C"
131	39°43'32.61005"N	105°04'21.83425"W	5362.17	0°16'10"	1689507.462	3120181.308	131	689946.125	120991.431	5416.74	CDOT Type 5 Mon. "CP 131 4.006074"
135	39°43'43.42515"N	105°04'54.24311"W	5353.85	0°15'49.7"	1690589.996	3117644.09	135	691028.939	118453.554	5408.25	CDOT Type 2 Mon. "CP 135 4.008076A"
137	39°43'51.96455"N	105°04'54.13929"W	5374.92	0°15'49.7"	1691454.088	3117648.223	137	691893.256	118457.688	5429.33	CDOT Type 5 Mon. "CP 137 4.009076A"
142	39°44'11.34064"N	105°04'52.52951"W	5383.70	0°15'50.7"	1693415.228	3117764.953	142	693854.906	118574.448	5438.15	CDOT Type 5 Mon. "CP 142 4.013076"
144	39°44'19.12834"N	105°04'52.07277"W	5381.84	0°15'51.0"	1694203.389	3117797	144	694643.271	118606.504	5436.34	CDOT Type 5 Mon. "CP 144 4.014076B"

Set Project Control by GPS, unless noted otherwise - Based on CDOT Project No. STU 0062-019 (15215) - Benched Elevations											
Geodetic and State Plane (NAD 1983-92 Zone 502) coordinates						Project Specific Coordinates				Description	
Point	Latitude	Longitude	Ellipsoid Height (sft)	Convergence Angle	Northing (sft)	Easting (sft)	Point	Northing (sft)	Easting (sft)	Elevation NAVD'88 (sft)	
800	39°43'32.62911"N	105°05'41.27494"W	5429.80	0°15'20"	1689480.952	3113974.413	800	689919.608	114782.924	5483.91	#5 Rebar w/ GPC
801	39°43'32.75649"N	105°06'00.42442"W	5444.02	0°15'08"	1689487.211	3112478.161	801	689925.868	113286.284	5498.03	#5 Rebar w/ GPC
802	39°43'35.34783"N	105d06'01.29312"W	5439.43	0°15'07"	1689749.115	3112409.135	802	690187.841	113217.239	5493.45	#5 Rebar w/ GPC
803	39°43'32.31002"N	105°06'09.53847"W	5457.15	0°15'02"	1689438.910	3111766.256	803	689877.555	112574.194	5511.10	#5 Rebar w/ GPC
804	39°43'32.31015"N	105°06'17.02127"W	5472.75	0°14'57"	1689436.373	3111181.606	804	689875.017	111989.392	5526.58	PK Nail & Washer
805	39°43'30.12586"N	105°06'18.49911"W	5473.97	0°14'57"	1689214.854	3111067.100	805	689653.441	111874.857	5527.85	#5 Rebar w/ GPC
806	39°43'30.15550"N	105°06'11.74450"W	5460.37	0°15'01"	1689220.153	3111594.846	806	689658.741	112402.740	5514.38	#5 Rebar w/ GPC
* 807	39°43'30.41996"N	105°06'06.14530"W	5453.35	0°15'04"	1689248.827	3112032.212	807	689687.423	112840.218	5507.37	3.5" Alum. Cap "CDOT CONTROL MILE POST 4.005093"
808	39°43'30.18333"N	105°06'01.51875"W	5448.19	0°15'07"	1689226.471	3112393.804	808	689665.061	113201.905	5502.24	Chiseled "X"
810	39°43'30.74152"N	105d05'55.29983"W	5445.23	0°15'11"	1689285.093	3112879.458	810	689723.698	113687.685	5499.39	Chiseled "X"
811	39°43'31.29117"N	105°05'45.68571"W	5435.68	0°15'17"	1689344.039	3113630.391	811	689782.659	114438.812	5489.76	PK Nail & Washer
812	39°43'30.95381"N	105°05'42.39163"W	5430.71	0°15'19"	1689311.048	3113887.918	812	689749.660	114696.407	5484.89	#5 Rebar w/ GPC
814	39°43'31.17006"N	105°05'50.28652"W	5440.50	0°15'14"	1689330.188	3113270.971	814	689768.804	114079.299	5494.55	#5 Rebar w/ GPC
815	39°3'32.37925"N	105°05'50.93960"W	5442.09	0°15'14"	1689452.312	3113219.402	815	689890.961	114027.717	5496.14	#5 Rebar w/ GPC

* Recovered existing monument and established project coordinates Note: "GPC" indicates Green Plastic Cap

Project Control by Conventional Survey				
Project Specific Coordinates				Description
Point	Northing (sft)	Easting (sft)	Elevation NAVD'88 (sft)	
813	689915.669	113000.896	5502.67	PK Nail & Washer
816	689888.197	114442.482	5489.74	PK Nail in Asphalt
817	689663.375	112116.987	5521.88	PK Nail in Asphalt

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Land Survey Control Diagram			
Tabulation Sheet			
Project Number:	FBR 0063-046		
Project Location:	SH-6 Road Improvements at Garrison St.		
	Sec. 2, 3, 10 & 11, T4S, R69W/6th PM, Jefferson County		
Project Code:	Last Mod. Date	Subset	Sheet No.
19478	02-07-14	4 of 4	4.04

Recovered Aliquot Points

Geodetic and State Plane (NAD 1983-92 Zone 502) coordinates						Project Specific Coordinates			Description
Point	Latitude	Longitude	Convergence Angle	Northing (sft)	Easting (sft)	Point	Northing (sft)	Easting (sft)	
502	39°43'32.20926"N	105°06'34.97860"W	0°14'46"	1689420.098	3109778.599	502	689858.738	110586.021	NE Cor. Sec. 9- 3.25" Alum. Cap in range box "L.P.I. 2003 LS 34986"
503	39°43'58.44198"N	105°06'00.76282"W	0°15'08"	1692086.067	3112440.284	503	692525.399	113248.397	C 1/4 Cor. Sec. 3- 3.25" Alum. Cap in range box "LAKEWOOD 1999 PLS 14112"
504	39°43'32.36014"N	105°06'00.63336"W	0°15'08"	1689447.035	3112462.012	504	689885.682	113270.131	Reference Point- Cut "X" in curb
505	39°43'32.69681"N	105°06'00.63602"W	0°15'08"	1689481.099	3112461.655	505	689919.755	113269.773	Reference Point- Cut "X" in curb
506	39°43'32.36312"N	105°06'01.30770"W	0°15'07"	1689447.104	3112409.323	506	689885.751	113217.428	Reference Point- Cut "X" in curb
507	39°43'32.10201"N	105°06'01.30685"W	0°15'07"	1689420.684	3112409.506	507	689859.324	113217.611	Reference Point- Cut "X" in curb
508	39°43'32.36119"N	105°06'00.96786"W	0°15'08"	1689447.026	3112435.877	508	689885.673	113243.989	N 1/4 Cor. Sec. 10 (cal'c from accessories)
509	39°43'06.25566"N	105°06'00.86495"W	0°15'08"	1686805.594	3112455.541	509	687243.555	113263.658	C 1/4 Cor. Sec. 10- 3.25" Alum. Cap in range box "LAKEWOOD 2000 LS 19591"
510	39°43'06.46835"N	105°06'01.41332"W	0°15'07"	1686826.926	3112412.596	510	687264.893	113220.702	Reference Point- Cut "X" in sidewalk
511	39°43'05.98681"N	105°06'00.43390"W	0°15'08"	1686778.539	3112489.343	511	687216.493	113297.469	Reference Point- Cut "X" in top of light pole base
512	39°43'06.51131"N	105°06'00.42848"W	0°15'08"	1686831.612	3112489.533	512	687269.580	113297.659	Reference Point- Nail & 1" brass washer
513	39°43'06.44460"N	105°06'01.33466"W	0°15'07"	1686824.550	3112418.754	513	687262.516	113226.861	Reference Point- Nail & 1" brass washer
514	39°43'05.99476"N	105°06'01.29483"W	0°15'07"	1686779.047	3112422.066	514	687217.002	113230.174	Reference Point- Nail & 1" brass washer
12	39°43'32.42048"N	105°05'27.29277"W	0°15'27"	1689464.738	3115066.968	12	689903.390	115875.763	NE Cor. Sec. 10- 3" Alum. Cap (from Proj. No. STU 0062-019)

Recovered Property Pins by Conventional Survey, unless noted otherwise

Project Specific Coordinates				Description
Point	Northing (sft)	Easting (sft)	Elevation NAVD'88 (sft)	
701	689911.979	111890.899	5527.04	1" Steel Pipe
702	689923.482	113018.676	5501.67	1.5" Alum. Cap "LANE ENG SRV INC 16837"
703	689938.930	113178.076	5499.14	1.5" Alum. Cap "LANE ENG SRV INC 16???"
704	690100.238	113214.450	5494.55	#5 Rebar
705	689641.875	113079.904	5502.98	#4 Rebar w/ broken Yellow Plastic Cap
* 706	689440.823	113277.305	5504.70	Nail & Brass Washer "37929"
* 707	689719.968	113904.846	5495.32	Yellow Plastic Cap "LS 2568"
708	689949.212	113998.094	5492.35	Yellow Plastic Cap (illegible)
709	689943.040	113998.020	5494.10	Orange Plastic Cap "DENVER ENG PLS 12083"
710	689934.881	114598.322	5486.50	0.5" Square Bar

* Measured by GPS only