

CITY OF LOVELAND
1995 LEVEL NET SURVEY –
NGS CONTROL BENCHMARKS

Revised: January 10, 2008

BM NUMBER	STREET LOCATION	DESCRIPTION	ELEVATION
G 409 1984	3.3 miles N. of Hwy 34 - Hwy 287 intersection	Stainless steel rod encased in pipe with 5" logo cap, 3.3 miles Northerly along US Hwy 287 from its junction with US Hwy 34, 102.7' E. of SE corner of Brook residence, 47.6' S. of center of private drive, 40' W. of centerline of S. bound lanes and 3.6' N. of utility pole with two guy wires.	5078.113
H 409 1984	50th St - Hwy 287	Stainless steel rod encased in pipe with 5" logo cap, 76.8' W. of centerline of S. bound lanes of Hwy 287, 50.9' NW of utility pole, 32.8' S. of the centerline of W. 50th St. and 3.9' W. of utility pole marked "B 354-9494".	5055.692
F 409 1984	45th St - Hwy 287	Stainless steel rod encased in pipe with 5" logo cap, 74.8' E. of center of private drive, 32.8' W. of centerline of S. bound lanes of Hwy 287, 29.9' N. of center of 45th St. and 2.6' W. of utility pole marked "B 354-9528".	5039.055
X 401 1984 DESTROYED	37th St - Hwy 287	Stainless steel rod encased in pipe with 5" logo cap, 270' W. of S. bound lanes of Hwy 287, 37.1' N. of center of 37th St., 6.9' E. of utility pole and 4.6' S. of fence.	5013.038
K 105 RESET 1965	29th St - Garfield Ave	Disk set into the top of a concrete post flush with the ground, 39.4' W. of the centerline of Garfield Ave., 21.0' N. of the centerline of W. bound lanes of 29th St. and 1.0' N. of the S. edge of curb.	5025.328
W 401 1984	29th St - R.R. Tracks	Metal rod encased in pipe with 5" logo cap, 168' N. of centerline of W. bound lanes of 29th St., 36.7' E. of the near rail and 4.9' S. of utility pole.	5020.344

H 401 1984	22nd St - Taft Ave	Stainless steel rod encased in pipe with 5" logo cap, 37.1' N. of centerline of 22nd St., 25.6' W. of the center of S. bound lanes of Taft Ave and 7.5' W. of utility pole.	5014.071
G 322 RESET 1994	Taft Ave - Hwy 34	Disk in 2x2.5' concrete sign block at the SE corner of gas station, 95.1' E. of N. bound centerline of Taft Ave., 55.8' N. of centerline of W. Eisenhower Blvd, 2.6' NW of fence corner, 7.5' N. of edge of curb and 23.6' S. of SW corner of building (1327 W. Eisenhower Blvd).	5022.43
E 37 RESET 1970	Inlet to Lake Loveland - Hwy 34	Disk set in E. end of S. headwall of Big Barnes Ditch inlet to Lake Loveland, 1.0 miles W. along Hwy 34 from its junction with Hwy 287, 25.3' S. of centerline of E. bound lanes of Hwy 34 and 21.3' N. of N. edge of sidewalk.	5014.357
J 401 1984	15th St - Jackson	Stainless steel rod encased in pipe with 5" pipe with logo cap, 98.1' NW of NW corner of Skate Castle Building, 43.6' W. of the center of the intersection and 3.6' SE of utility pole.	5024.429
LOVELAND 1935 1982	Cleveland - S. Entrance to Cemetery	Triangulation Station disk in concrete post in NE end of planter, 53.1' E of the center of the entrance to Lakeside Cemetery, 33.5' S. of the center of 17th St. and 23.3' NW of centerline of Cleveland Ave.	5032.900
K 401 1984	7th St - R.R. Tracks	Stainless steel rod encased in pipe with 5" logo cap, 106' N. of centerline of 7th St., 18.0' W. of near rail, 16.7' E. of the center of private driveway and 2.3' N. of utility pole.	4987.388
G 402 1984	1st St - Railroad Ave	Stainless steel rod encased in pipe with 5" logo cap, 66.3' N. of centerline of 1st St., 39.0' E. of the near rail of the Colorado and Southern Railroad, 37.1' W. of centerline of Railroad Ave and 3.6' S. of utility pole marked "33-25-45".	4969.111

C 410 1984	5th St SE - S. End of Island at Split in Hwy 287	Stainless steel rod encased in pipe with 5" logo cap, 284.1' S. of centerline of 5th St. SE, 79.4' NE of centerline of S. bound lanes of Hwy 287, 71.9' W. of centerline of N. bound lanes of Hwy 287, 65.6' N. of center of paved road and 35.1' NW of center of 2x4' storm drain cover.	4934.970
F 402 1984	Hwy 287 - Hwy 402	Stainless steel rod encased in pipe with 5" logo cap, 168' E. of centerline of N. bound lanes of Hwy 287, 115.8' W. of center of private drive, 50.2' N. of centerline of Hwy 402, and 7.9' W. of utility pole.	4928.730
H 402 1984	2.75 miles S. of Hwy 287 and Hwy 34 intersection	Stainless steel rod encased in pipe with 5" logo cap, 2.75 miles Southerly along Hwy 287 from its junction with Hwy 34, 52.8' E. of centerline of Hwy 287, 39.7' S. of center of private drive and 1' W. of fence.	5038.884

CITY OF LOVELAND

1995 VERTICAL DATUM - PRIMARY BENCHMARKS

Revised: January 10, 2008

BM NUMBER	STREET LOCATION	DESCRIPTION	ELEVATION
95 01	I-25 - Frontage	Alum. disk on S. end of W. headwall at canal on W. frontage road, 1200 N. of McWhinney Blvd intersection.	4957.02
95 02 DESTROYE D 1999	Rocky Mountain - Hwy 34	Alum. disk on S. wingwall, W. side of bridge on Rky. Mtn. Ave., 300' N. of Hwy 34 intersection.	4934.26
95 02 RESET 99	Rocky Mountain - Hwy 34	Alum. disk in concrete set 0.5' N. and 2.0' W. of the E end of the headwall of outlet structure for canal 240' N of Hwy 34 and 120' E of Rky. Mtn Ave. This disk was 3 rd order leveled by The Sear-Brown Group on May 28, 1999 using a level loop from and back to BM 95 03.	4936.52
95 03	Jelly Stone - Hwy 34	Alum. disk on headwall at canal, N. side of Hwy 34, 2450' W. of Rky. Mtn. Ave intersection.	4935.98
95 04	Co. Rd. #9 - Hwy 34	Rebar with alum. cap in valve box with lid marked "SURVEY", by NE guard pole at NE corner of intersection.	4945.60
95 05	3000' W. of Co. Rd. #9 - Hwy 34	Alum. disk on NE corner of median drain.	4947.44
95 06	Denver - Hwy 34	Disk on S. end of E. headwall, at bridge on Denver Ave, 500' N. of Hwy 34 intersection.	4967.15
95 07 (does not bear this number)	Boise - Hwy 34	Bolt on S. side of traffic control box, NW corner of intersection.	4978.81
95 08	Redwood - Hwy 34	Rebar with alum. cap, W. of signal pole, NW corner of intersection	4993.71

95 09	Van Buren - Hwy 34	Alum. disk on signal pole base, south side of NE signal pole.	5041.56
95 10	Wilson - Hwy 34	Alum. disk in concrete base of signal pole, NE corner of intersection.	5060.56
95 11	Kennedy - Hwy 34	Alum. disk in concrete wall at N. of dam, on E. side of Kennedy, 880' N. of Hwy 34 intersection.	5064.50
95 12	2000' West of Kennedy - Hwy 34	Alum. disk on E. end of retaining wall, on N. side of Hwy. 34, 2000' W. of Kennedy intersection.	5070.90
95 13	Morning Drive - Hwy 34	Alum. disk on SW corner of sanitary sewer vault, NE corner of intersection.	5058.66
95 14	Morning Drive - 1300' N. of Hwy 34.	Alum. disk on E. end of N. headwall where Morning Dr. crosses canal, 1300' N. of Hwy. 34 intersection.	5100.76
95 14 1	Morning Drive - Juniper	Rebar with alum. cap on E. side of Morning Dr., at edge of asphalt, 100' N. of Juniper intersection.	5187.06
95 15	Co. Rd. #9 - Frank Rd.	Rebar with alum. cap in a valve box with lid marked "SURVEY", along fence on W. side of Boyd Lake Dr., 50' N. of Frank Rd intersection.	4979.76
95 16	Boyd Lake Lift Station	Rebar with alum. cap, NE corner of lift station fence.	4965.76
95 17	Boise - Silver Leaf	Rebar with alum. cap in valve box with lid marked "SURVEY", at NE corner of intersection.	4970.06
95 18 DESTROYED 9/98	Madison - 29th	Rebar with alum. cap in valve box with lid marked "SURVEY", 2' behind curb, 4' W. of catch basin, SW corner of intersection.	4980.72
95 19	Monroe - 29th	Alum. disk at N. side of traffic light base at SW corner of intersection.	5000.88
95 20	Custer - 29th	Alum. disk at base of signal pole, SE corner of intersection.	5028.33

95 21	Taft - 29th	Alum. disk, on concrete base of signal pole at SW corner of intersection.	5030.26
95 22	Loveland Municipal Golf - 29th	Alum. disk on corner of fence post conc. base, 50' E. of golf course.	5053.37
95 23	Greenland - 29th	Alum. disk on E. end of N. headwall of box culvert	5091.35
95 23 1	Wilson - 29th	Alum. disk on NE corner of electric vault lid, NE corner of intersection.	5119.11
95 24	Duffield - Dry Creek Bridge	Alum. disk on N. end of W. headwall on N. Duffield Ave.	5027.80
95 25	Taft - 37th	Alum. disk at base of signal pole, SW corner of intersection.	5056.89
95 25 1	Taft - 40th	Alum. disk on SW corner of inlet at NW corner of intersection.	5058.81
95 26	Glen Haven - 37th	Alum. disk at NW corner of headwall on irrigation structure between cul-de-sac at Glen Haven and 37th St.	5086.14
95 27 (does not bear this number)	N. Wilson @ Woodward facility	Found brass cap in valve box in median of Wilson Ave. at S. end of Woodward facility, marked "1/4 SECTION CORNER, 3 1/4, T5N, R69W".	5094.46 REVISED 5/6/97 5122.22
95 28 (does not bear this number) DESTROYED	N. Wilson — Appx. 43rd St.	Found rebar with 2" alum. cap in valve box with lid marked "Survey" at the centerline of Wilson Ave., bearing the following inscription: —— "T6N R69W" —— <u>33 34</u> —— <u>4 3</u> —— <u>LS 25372</u> —— 1994"	5126.72
95 29	Taft - 43rd	Alum. disk on SE corner of irrigation structure, on E. side of Taft Ave., 900' N. of 43rd intersection.	5059.62
95 30	Madison - GW Track	Alum. disk at base of W. signal pole, at Great Western railroad tracks on N Madison.	4970.44

95 31	Greeley Canal - 4th	Alum. disk at N. end of W. wing wall.	4969.23
95 32	Civic Center - 1st St. Parking Lot	Rebar with alum. cap, Civic Center S. parking lot, SE parking island, SE corner.	4971.40
95 33	G.L. Canal Franklin - 1st	Alum. disk on W. wingwall on N side of bridge crossing Greeley - Loveland Canal.	4973.31
95 34 DESTROYE D	Taft - 1st	Alum. disk at SE corner of outlet control structure on W. side of Taft, 50' S. of 1st St. intersection.	4964.44
95 35	Glenda Dr - 1st	Alum. disk on headwall of outlet structure of detention pond at SW corner of intersection.	4992.19
95 36	Wilson - Service Center Entrance	Alum. disk on NE corner of electric vault on W. side of road, across from the City of Loveland - Service Center entrance.	4992.40
95 37 DESTROYE D See 99 01	Wilson - Big T Bridge	Alum. disk on S. end of wingwall, W. side of Wilson.	4995.78
95 38	Wilson - Big Barnes	Alum. disk on N. end of wingwall, W. side of Wilson.	5019.91
95 39	Madison - SE 4th	Alum. disk on irrigation structure at NE corner of intersection.	4955.23
95 40	S. Boise - Treatment Plant	Alum disk on concrete headwall at canal crossing, 200' N. of City of Loveland treatment plant intersection.	4940.79
95 41	S. Boise - Southside Lift Station	Rebar with alum. cap, outside fence, 5' N. of Gate.	4907.65
95 42	Co. Rd. #13C (St. Louis) - Hwy 402	Alum. disk on conc. rail, S. end of W. rail.	4931.17
95 43	S. Roosevelt - 14th S.W.	Alum. disk on SE corner of inlet structure at NW corner of intersection.	4967.43
95 44	S. Roosevelt - RR Xing	Rebar with alum. cap in valve box with lid marked "SURVEY" near power pole	4939.64

		at SE corner of intersection.	
95 45 (does not bear this number)	Roosevelt - Bridge	Brass cap (painted over) 30' S. of N. end of W. wall.	4950.76
95 46	Trigon - 14th SW	Rebar with alum. cap, in brick-work E. of Trigon statue in median.	5044.52
95 47	Taft - 14th SW	NE bolt at base of NW signal pole.	5037.73
95 48 DESTROYE D	Tyler - 14th SW	Alum. disk on top of storm sewer inlet at NE corner of intersection.	5021.18
95 48 RESET	Tyler - 14 th SW	Alum. disk in concrete at back of walk at NE corner of Tyler and 14 th SW. Point set and leveled by The Sear- Brown Group on Dec. 16, 1999	5021.28
95 49	Dotsero - 14th SW	Alum. disk on traffic control box pad on S. side of SW 14th St.	5029.01
95 50	Wilson - 14th SW	Rebar with alum. cap in valve box with lid marked "SURVEY" at E. end of electric vault at NE corner of intersection.	5048.54
95 51 DESTROYE D See 05 01 below	Wilson - Carlisle	Alum. disk on W. headwall at culvert crossing, 50' N. of Carlisle intersection.	5033.07
95 52	14th SW - 1/2 Mile West of Wilson.	Rebar with alum. cap, 2700' W. of Wilson, S. side of 14th SW, 1' N. of power pole numbered "08".	5057.69
95 53	Co. Rd 21 - 14th SW	Alum. disk on N. end of E. wingwall where 14th SW crosses canal.	5077.57
95 54	Nadine Ct. - 14th SW	Rebar with alum. cap, E. of power pole on S. side of 14th SW.	5099.58
95 55	North End Nadine	Rebar with alum. cap, SE corner of Boedecker Lift Station	5066.59
95 56	S. Taft - 23rd SW	Rebar with alum. cap, NE corner of intersection near power pole.	5062.03

95 57	Monroe - 33rd	Alum. disk on SW corner of irrigation structure on E. side of Monroe, 500' N of 33rd intersection.	5007.37
95 58	Monroe - 41st	Alum. disk on S. end of concrete pad at South Horseshoe Lift Station.	4980.56
95 59	Monroe - 50th	Alum. disk on headwall of culvert at NW corner of intersection.	4983.62
95 60	Monroe - Ptarmigan Circle	Alum. disk at S. end of concrete pad at North Horseshoe Lift Station.	4982.84
95 61	Madison - County Rd. 24 E	Alum. disk on concrete irrigation structure, NE corner of intersection.	4999.62
95 62	1st St - Namaqua Rd.	Alum. disk on concrete irrigation headwall, SW corner of intersection.	5033.40
95 63	23rd SW - Frances Dr.	Alum. disk on headwall at W. end of cul-de-sac on 23rd St. SW, 300 W. of Frances Drive intersection.	5016.79
95 64	19th SW - S. Colorado	SE bolt on fire hydrant at SW corner of intersection.	5005.29
99 01	Wilson Ave - Big Thompson River	Alum. disk on top of parapet wall at SE Corner of bridge.	5003.47
05 01	Wilson – Carlisle	Alum. disk at N. end of W. headwall at culvert crossing, 50' N. of Carlisle intersection, bearing the following inscription: 05 01 5034.23 2005	5034.23
05-02	Walmart Distribution Center	Alum. disk at SE corner of concrete slab, 8' NE of chain link fence corner, 38' W of access road to Walmart Distribution Center, 55' S of centerline of Crossroads Blvd (LCR 26). Bears the following inscription: "BM 05-2 KSI"	5050.34

05-03	Arena Circle – Fairgrounds Parkway	Alum. disk on SE corner of concrete electric vault lid, NW corner of intersection, 13' N. of N. curb of Arena Circle and 75' W of centerline of Fairgrounds Parkway. Bears the following inscriptions: “COL 05-03” and also “BM 05-1 KSI”	5034.90
24 E-9 (Warning: this monument has possibly been disturbed)	Boyd Lake – 37	(WARNING: Field observations of this benchmark on April 14, 2006 suggest that this benchmark has been disturbed. The top of the disk appears to have been damaged by grading activities.) Alum. disk at SE corner of concrete slab, 22' W of edge of asphalt on Boyd Lake Ave (LCR 9) at intersection with E 37 th St (LCR 24E). Bears the following inscription: “BM 24 E-9 KSI”	4983.51
26-7	Rocky Mtn – Crossroads	Alum. disk at NE corner of concrete slab, 6' NE of S. electric box, 65' west of chain link fence, 170' N of edge of asphalt on Crossroads Blvd at intersection with Rocky Mountain Ave. Bears the following inscription: “BM 26-7 KSI”	5015.56
06-01	Centerra – Kendall	Alum. disk in center of inlet box on NW side of Centerra Pkwy, 90' SW of W. corner at intersection of Centerra Pkwy and Kendall Pkwy. Bears the following inscription: “BM 06-01 KSI”	4954.12
06-02	Centerra – Sky Pond	Alum. disk in island, 1.5' N of traffic mast, at NW corner of intersection of Centerra Pkwy and Sky Pond Dr. Bears the following inscription: “BM 06-02 KSI”	4957.96

CITY OF LOVELAND
1995 LEVEL NET SURVEY -
SECONDARY BENCHMARKS
Revised: January 10, 2008

BM NUMBER	STREET LOCATION	DESCRIPTION	ELEVATION
17	11th St - Madison Ave	W. bolt on crown of fire hydrant at entry to Ward Industrial Park.	4975.08
18	Madison Ave - N. of 11th St	W. bolt on crown of fire hydrant near Brymar sign, E. side of Madison, N. of 11th St. intersection.	4983.26
23	Harlow Lane - Hwy 34	N. bolt on crown of fire hydrant at SE corner of intersection.	5018.06
29	29th St - Custer Ave	S. bolt on crown of fire hydrant at NW corner of intersection.	5030.91
30	29th St - Sheridan Ave	S. bolt on crown of fire hydrant at NW corner of intersection.	5017.04
35	15th St - Cleveland	SE bolt on crown of fire hydrant at SW corner of intersection.	5028.75
37	Monroe Ave - Hwy 34	N. bolt on crown of fire hydrant at SE corner of intersection.	5009.53
41	Prospect - Hwy 34	N. bolt on crown of fire hydrant at NW corner of intersection.	5029.16
43	Estrella - Hwy 34	S. bolt on crown of fire hydrant at NE corner of intersection.	5064.72
44	Walnut - Hwy 34	Nail in power pole, 50' SW of Sunset Antiques at NE corner of intersection.	5067.89
52	1st St - Namaqua Rd	Nail in base of power pole marked "TBM-03-8" at NE corner of intersection.	5033.95
55	14th St SE - Hwy 287	S. bolt on crown of fire hydrant at NW corner of intersection.	4934.19
56	14th ST SW - Valency Dr	N. bolt on crown of fire hydrant at SW corner of intersection.	4942.02
64	G.L. Ditch - Hwy 34	Chiseled square on SW wing-wall of bridge over Greeley-Loveland Canal on Hwy 34	4970.23

74	1st St - Franklin Ave	Spike in power pole at entrance to Flatiron Paving Co. on S. side of 1st St., W. of Franklin Ave.	4957.29
76	1st St - Harrison Ave	S. bolt on crown of fire hydrant at NE corner of intersection.	4978.97
77	1st St - Garfield Ave	S. bolt on crown of fire hydrant at NW corner of intersection.	4972.86
78	1st St - 1500' E. of Namaqua	Spike in base of power pole on N. side of 1st St. approximately 1500' E. of Namaqua.	5024.03
80	1st St - E. of Wilson	Chiseled square on W. end of N. headwall at Mariano Exchange Ditch on 1st St.	5004.86
81	1st St - Dotsero	N. bolt on crown of fire hydrant, 150' S. of intersection.	4998.10
93	14th St SW - Douglas Ave	N. bolt on crown of fire hydrant, at SW corner of intersection.	5045.53
95	29th St - Antero Dr	S. bolt on crown of fire hydrant at NE corner of intersection.	5044.83
97	29th St - Glendevey Dr	N. bolt on crown of fire hydrant at SW corner of intersection.	5110.67
103	Wilson Ave - Hwy 34	Larimer County Mapping brass cap stamped "39510" at SE corner of intersection.	5060.83
104	29th St - Lincoln	S. bolt on crown of fire hydrant at SE corner of intersection.	5022.11
105	29th St - Monroe Ave	E. bolt on crown of fire hydrant at SE corner of intersection.	5000.73
106	29th St - E. of Monroe	N. bolt on crown of fire hydrant in front of Mary Blair Elementary on E. 29th St., E. of Monroe.	4994.47
108	Madison - Silver Leaf	E. bolt on crown of fire hydrant at NW corner of intersection.	4987.08
110	18th St - Boise	N. bolt on crown of fire hydrant at NE corner of intersection.	4974.30
111	5th St SW - Wilson Ave	W. bolt on crown of fire hydrant at NE corner of intersection.	5022.80

112	Wilson Ave - Fire Station #3	W. bolt on crown of fire hydrant on Wilson, S. of driveway to Fire Station #3.	5033.50
113	14th St SW - Wilson Ave	Spike in base of power pole at NE corner of intersection.	5050.66
114	14th St SW - Zoe Ct	S. bolt on crown of fire hydrant between Zoe Ct. and Effie Ct. on N. side of 14th St. SW.	5034.05
115	14th St SW - Dotsero	N. bolt on crown of fire hydrant at SE corner of intersection.	5030.97
117	14th St SW - Tyler	Railroad spike in base of power pole at SE corner of intersection.	5021.14
118	Taft Ave - Ellen Pl	W. bolt on crown of fire hydrant at NE corner of intersection.	5058.46
119	Taft Ave - Edwina Pl	Spike in power pole marked "03-50", 200' S. of intersection.	5060.46
123 Destroyed 1/10/08	1st St - Madison	E. bolt on crown of fire hydrant at NW corner of intersection.	4960.64
124	1st St - St. Louis	S. bolt on crown of fire hydrant at NW corner of intersection.	4967.37
133	Glendevey Dr - Wilson Ave	W. bolt on crown of fire hydrant at SE corner of intersection.	5120.67
137	37th St - Caddoa Dr	E. bolt on crown of fire hydrant at SW corner of intersection.	5056.56
139	Taft Ave - Beech Dr.	60d nail in power pole at NE corner of intersection.	5042.68
142	37th St - Butternut Dr	N. bolt on crown of fire hydrant at SW corner of intersection.	5025.68
143	37th St - R.R. tracks	S. bolt on crown of fire hydrant, 500' E. of 37th St and railroad tracks intersection on N. side of 37th St.	5011.24
144	37th St - Hwy 287	S. bolt on crown of fire hydrant at NW corner of intersection.	5013.46
153	Taft Ave - 40th St	E. bolt on crown of fire hydrant at SW corner of intersection.	5062.16

154	Taft Ave - 41st St	S. bolt on crown of fire hydrant, 200' E. of NE corner of intersection.	5059.85
LCM 39516	1st St - Wilson Ave	Disk set in curb on E. side of Wilson Ave at SE corner of intersection.	5008.41
Jellystone	Jellystone Lift Station - Hwy 34	E. bolt on crown of fire hydrant on N. side of Hwy 34, near Jellystone Lift Station	4941.87