

Appendix A

Atlas of Natural
and Cultural Features

ST.VRAIN GREENWAY











ATLAS/

INVENTORY OF NATURAL
and CULTURAL FEATURES

3/1/01

ST.VRAIN GREENWAY / LONGMONT, COLORADO / PREPARED BY DESIGN WORKSHOP, INC.

LEGEND OF COMMON FEATURES WITHIN ATLAS

- | | |
|---|--|
|  County Line |  Streets |
|  Existing Highways |  Ownership Boundaries |
|  Proposed Road (Ken Pratt) |  Railroads |
|  Existing Buildings |  Lakes |
|  St.Vrain / Creeks |  Drainages |



Solar Exposure

Elevation

Floodways

Habitat Types

Slope

Soils

Wetlands

Ownership

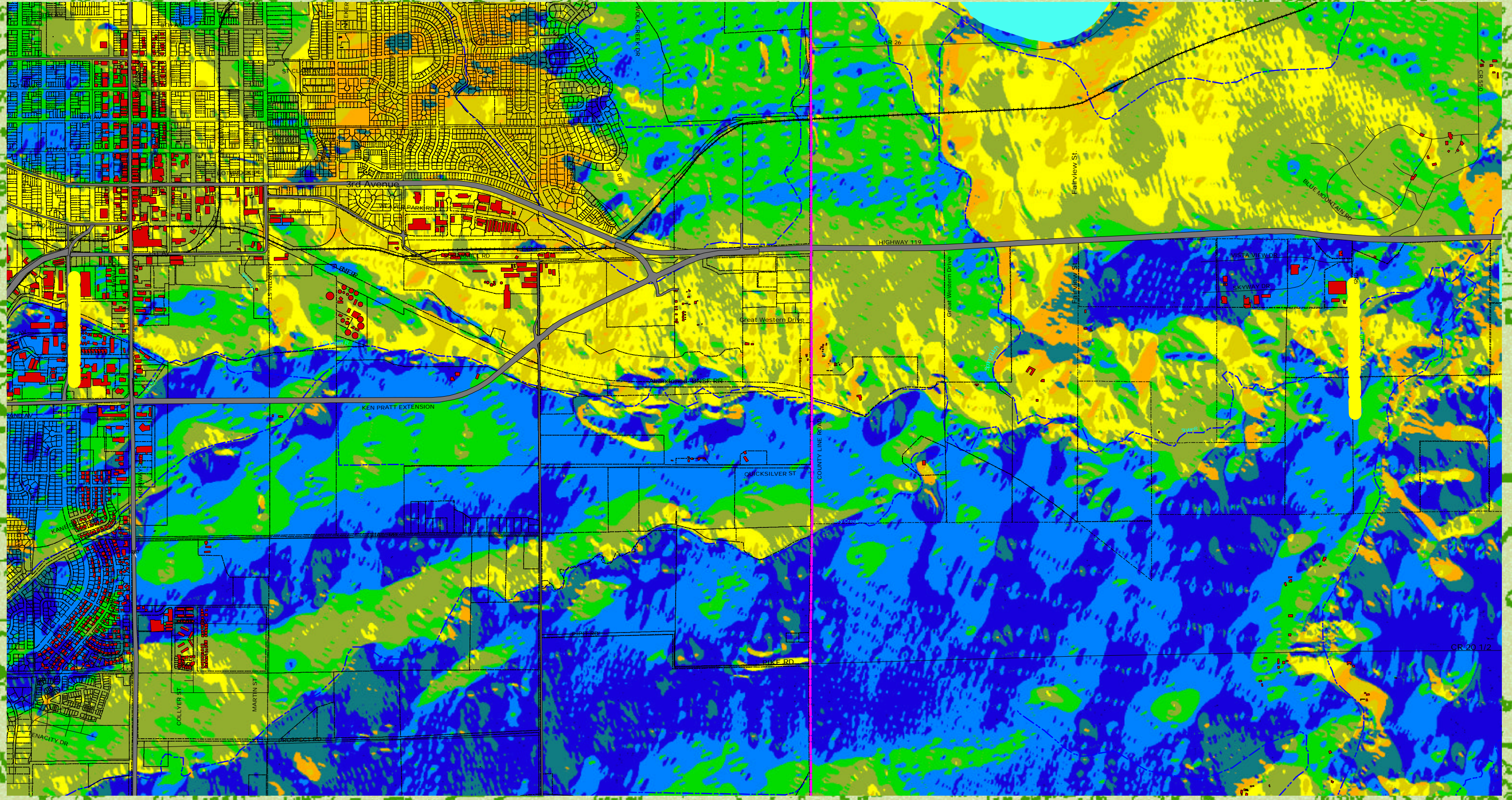
Historic

Aerial



St. Vrain Greenway

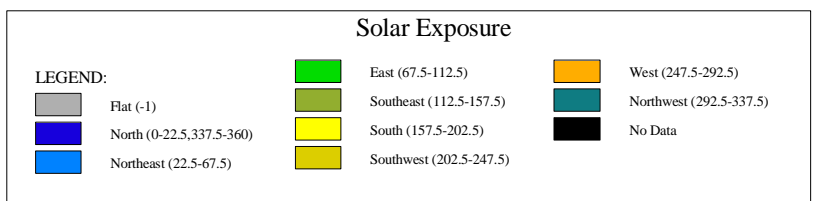
SOLAR EXPOSURE



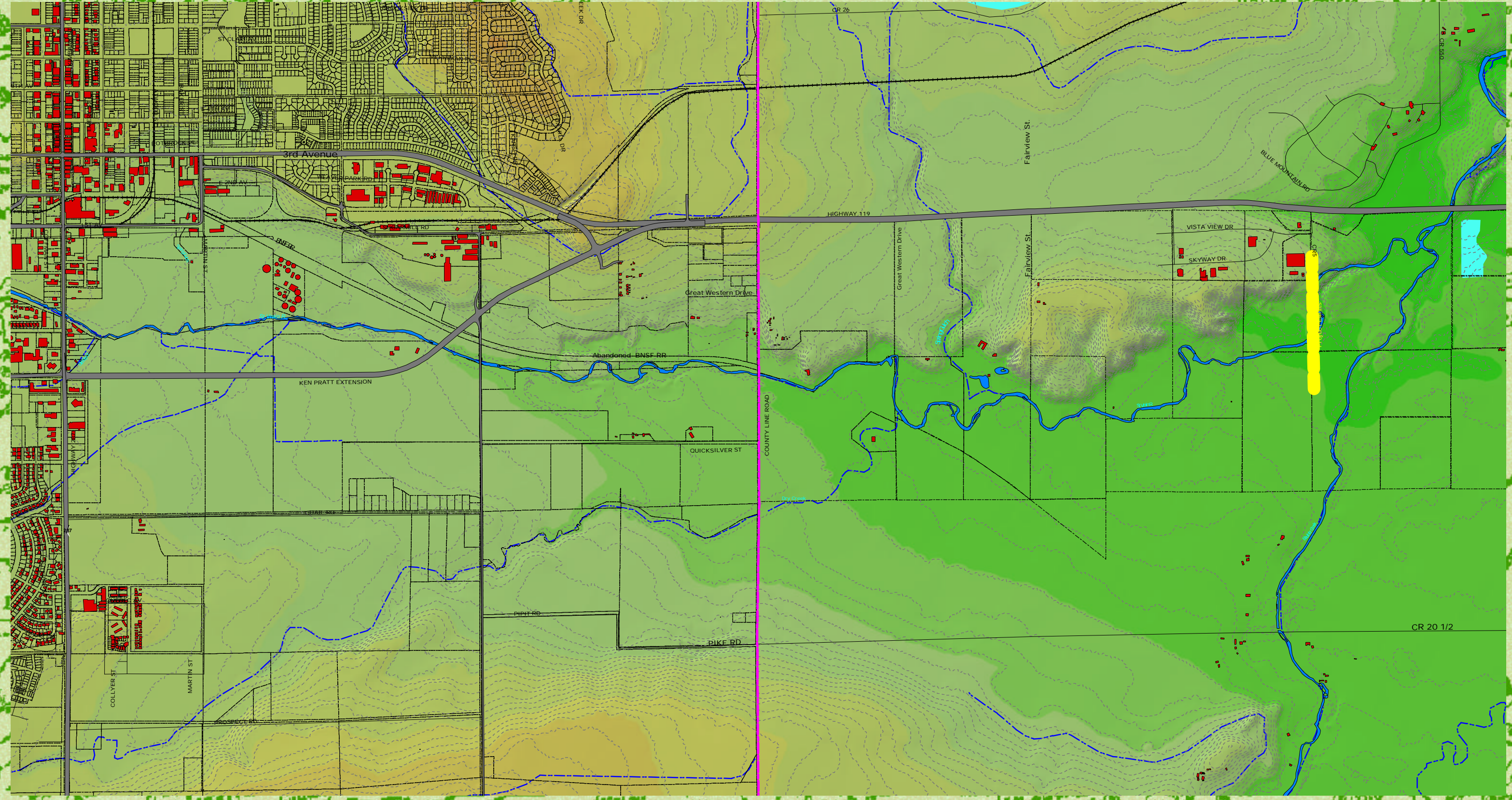
Source: Derived from USGS 10 Meter Elevation DEM



SOLAR EXPOSURE



St. Vrain Greenway



Source: Derived from USGS 10 Meter Elevation DEM



ELEVATION

Elevation Legend		
4811 - 4828	4910 - 4927	5010 - 5026
4828 - 4844	4927 - 4943	5026 - 5043
4844 - 4861	4943 - 4960	5043 - 5059
4861 - 4877	4960 - 4976	5059 - 5076
4877 - 4894	4976 - 4993	5076 - 5092
4894 - 4910	4993 - 5010	5092 - 5109
		5109 - 5125

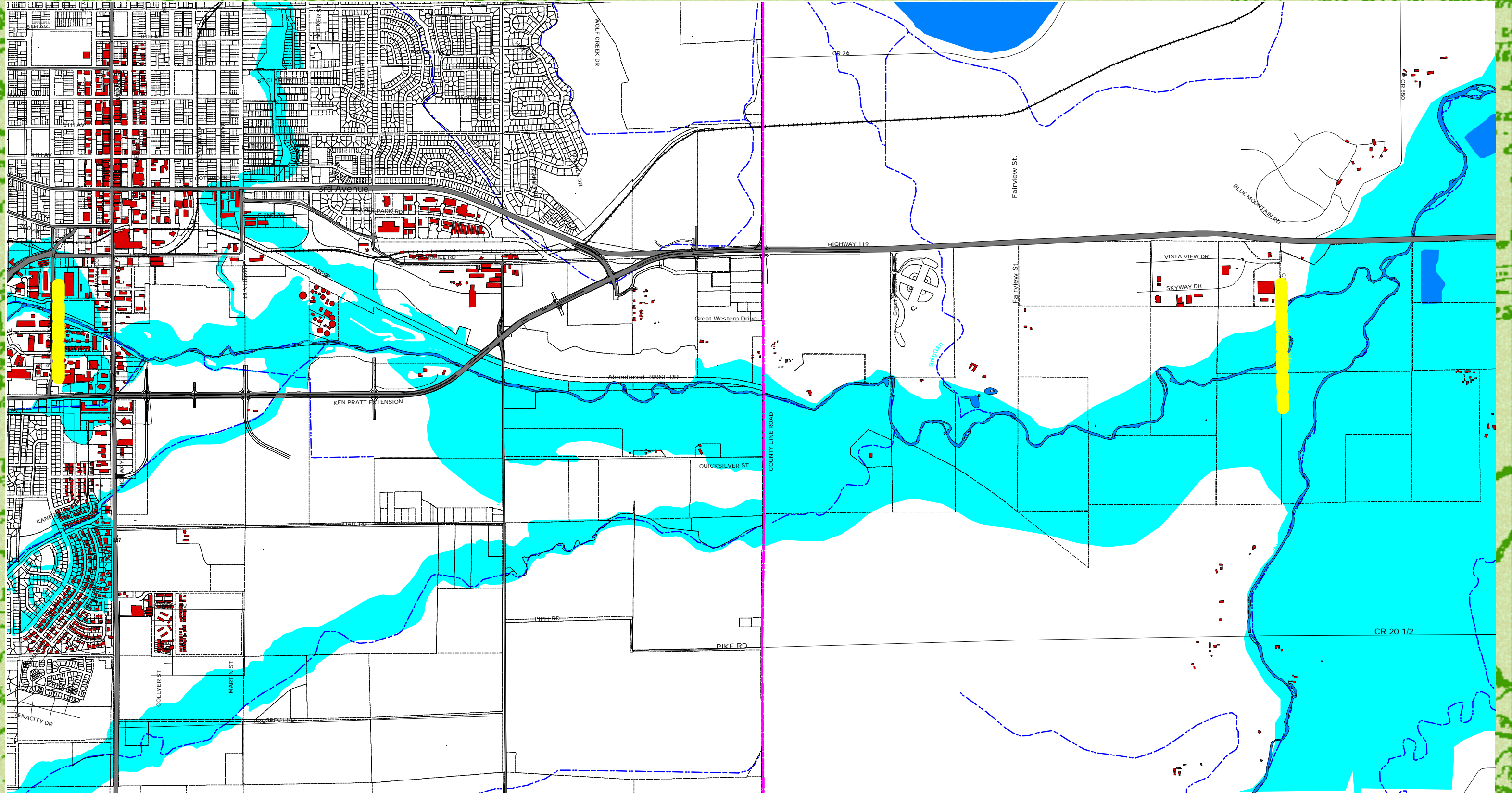
North

500 0 500 1000 Feet

DESIGN WORKSHOP, Inc.
March 2001

St. Vrain Greenway


consta vel Diario
 11 de Junio de 1820
 FLOODWAY



Source: FEMA (Federal Emergency Management Authority) Floodway Mapping Series. Updated to reflect Carter/Burgess Lefthand Cr. Channelization



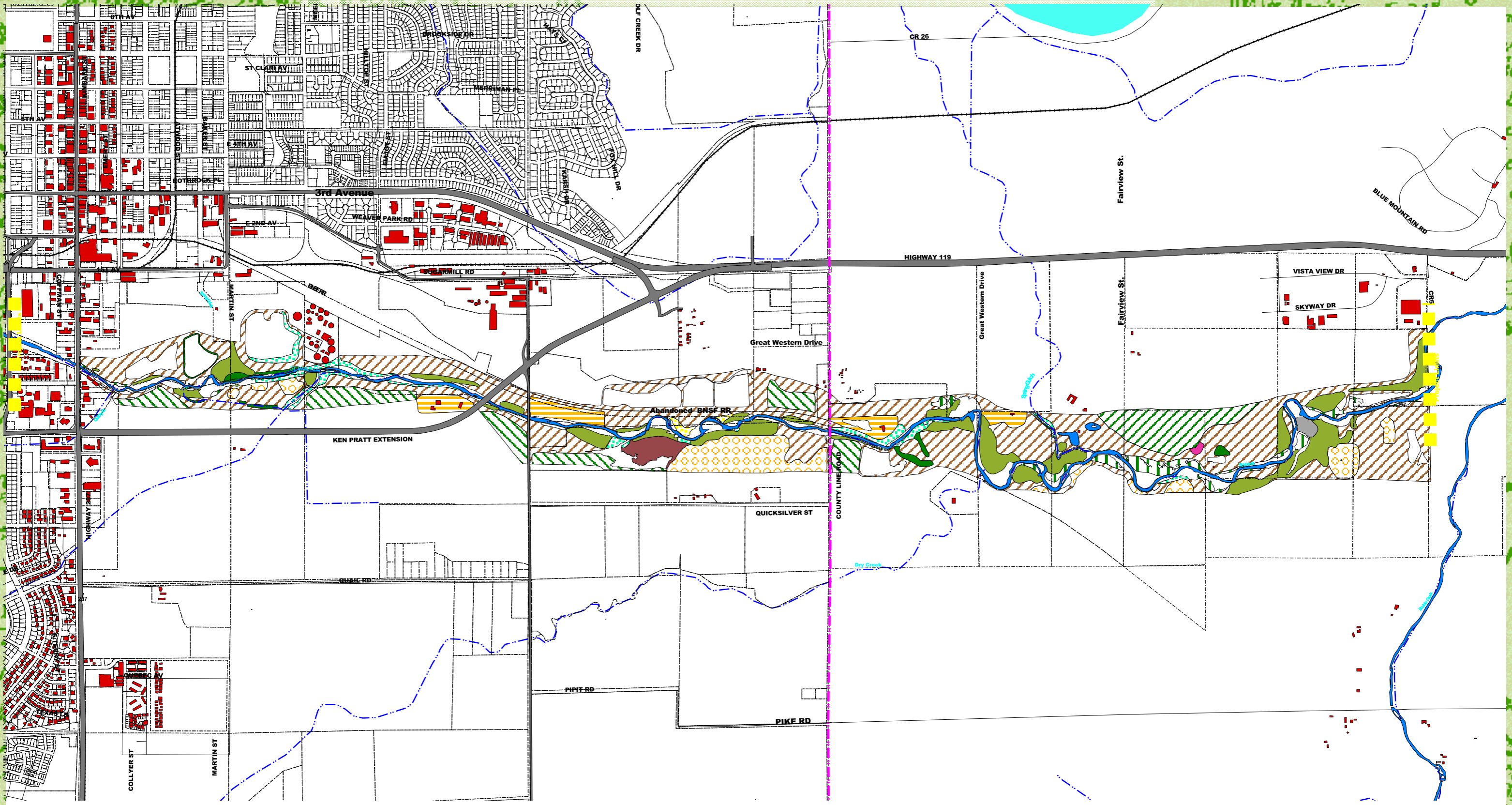
FLOODWAYS

Floodway Legend
 100 Yr. Floodway
 (assumes Left Hand Cr. channelization work completed)


 North
 500 0 500 1000 Feet
 DESIGN WORKSHOP, Inc.
 March 2001

St. Vrain Greenway

HABITAT TYPES



Source: ERO Resources Inc. Study dated Nov. 16th and submitted to City of Longmont



HABITAT TYPES

- | | | |
|------------------------|----------------------------------|-------------------|
| Cottonwood Gallery | Pine Plantation | Upland Grasslands |
| Cultivated | Prairie Dog, Abandoned | |
| Dry Grasslands | Prairie Dog Town | |
| Landscaped/Unvegetated | Riparian Shrub | |
| Mesic Grassland | Russian Olive Dominated Riparian | |
| Mixed Riparian | Siberian Elm Dominated Riparian | |

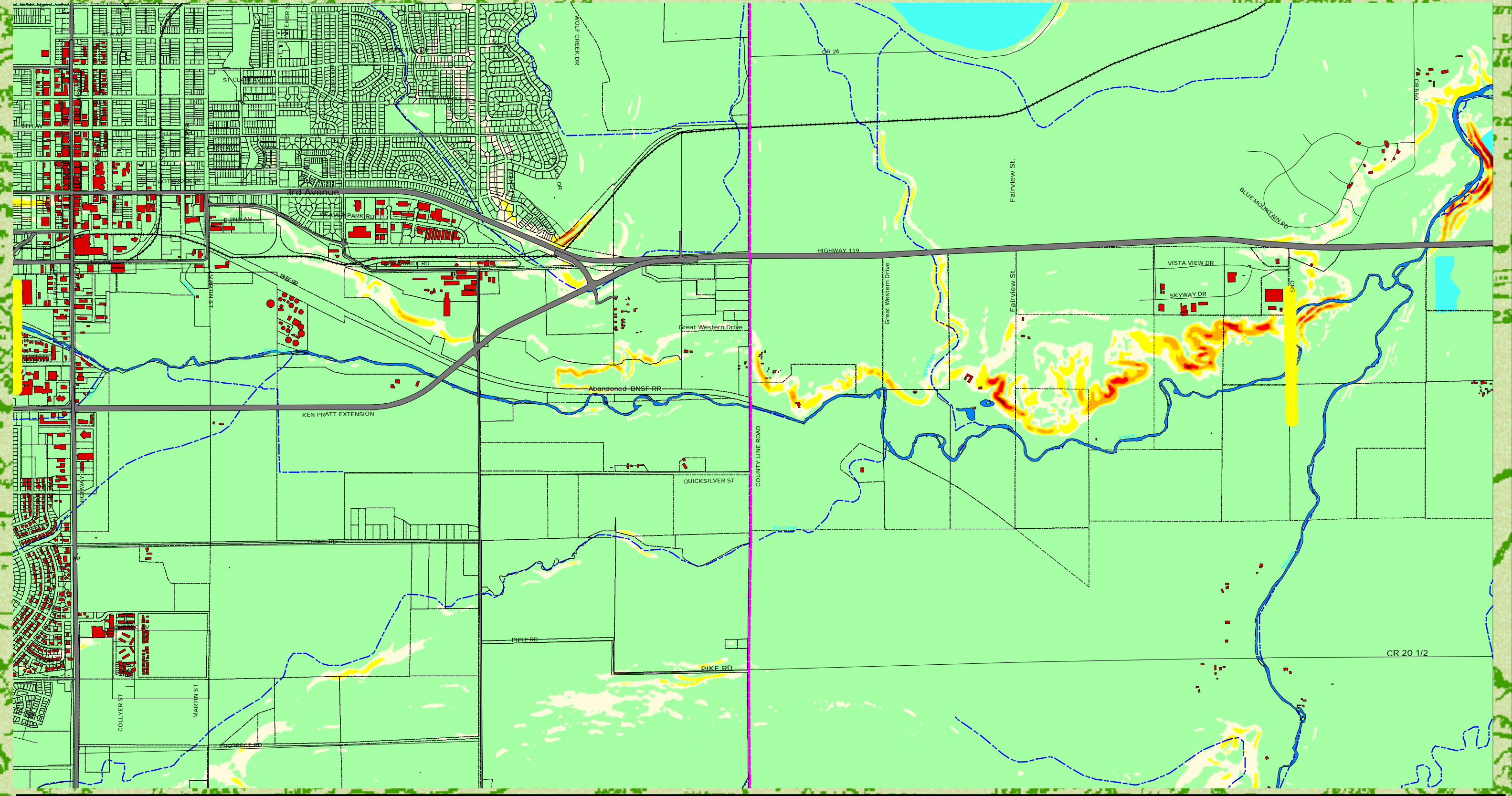


500 0 500 1000 Feet

DESIGN WORKSHOP, Inc. December 2000

St. Vrain Greenway

SLOPES



Source: Derived from USGS 10 Meter Elevation DEM



SLOPE

Slope Legend	
Green	0 - 6 Percent
Light Green	6 - 12
Yellow	12 - 20
Orange	20 - 30
Red	30 - 40
Dark Red	>40

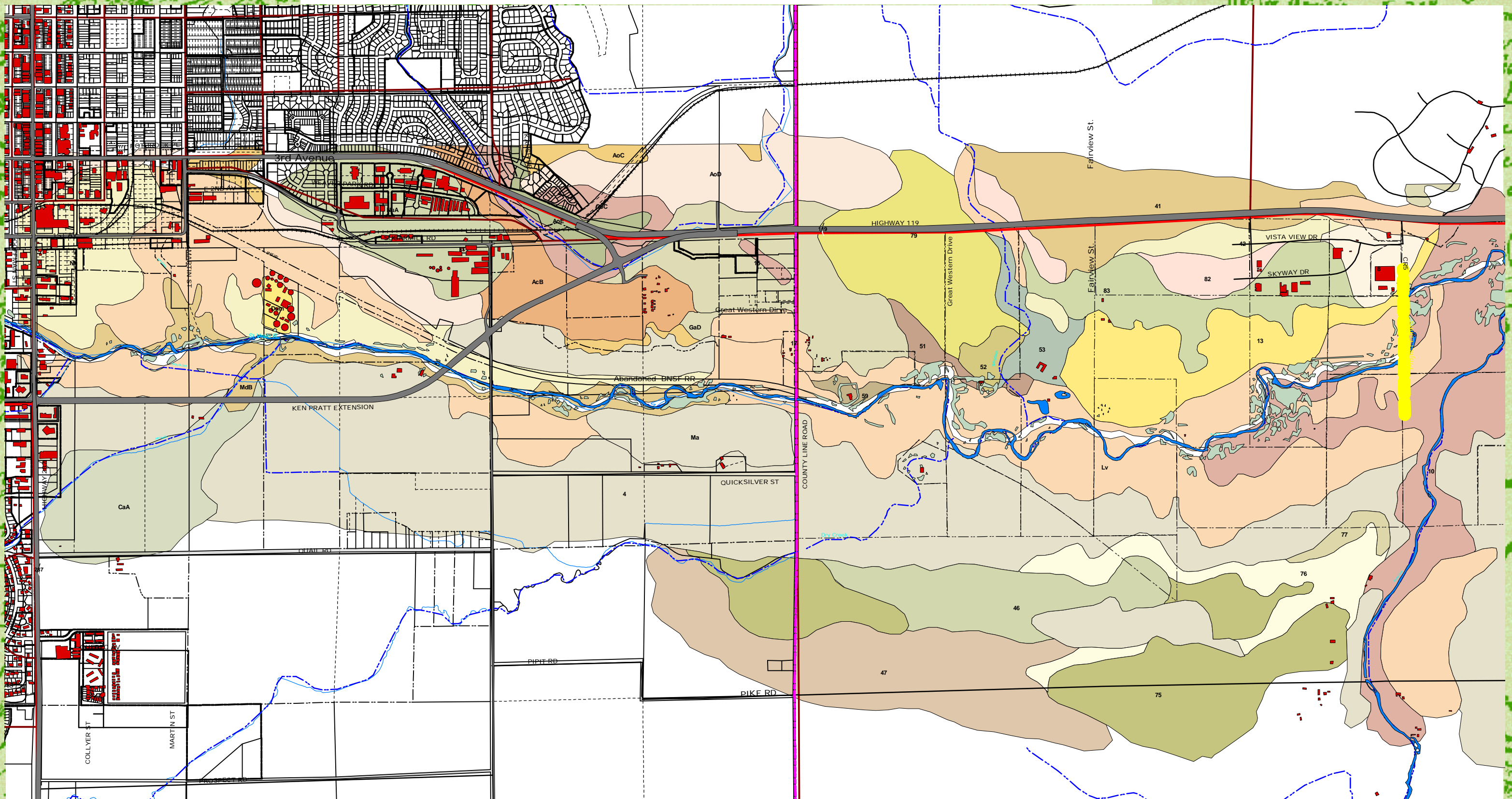
North

500 0 500 1000 Feet

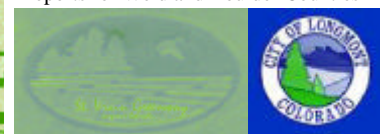
DESIGN WORKSHOP, Inc.
December 2000

St. Vrain Greenway

Soils



Source: Natural Resource Conservation Service Soil Reports for Weld and Boulder Counties



NRCS SOIL SERIES

Soil Series					
10	47	79	CaA	NuA	
13	51	8	CoC		
15	52	82	Dum		
17	53	83	GaD		
4	59	AcB	Lv		
41	75	AoC	Ma		
42	76	AoD	MdB		
46	77	AoE	Nh		



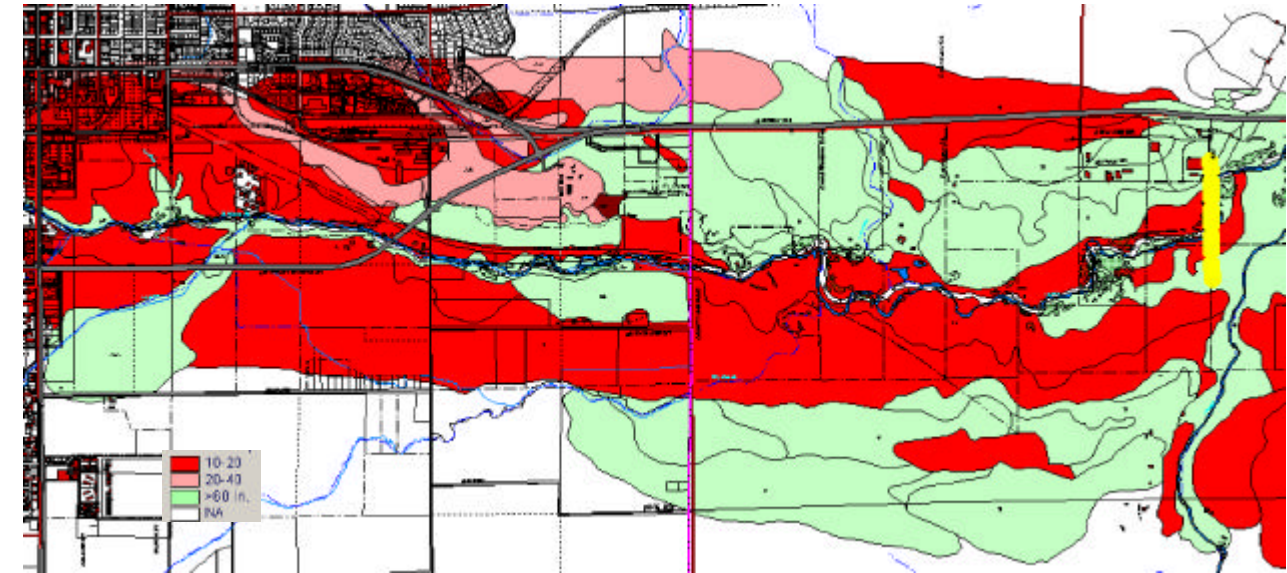
St. Vrain Greenway

Soil Series				
10	47	79	CaA	NuA
13	51	8	CoC	
15	52	82	Dum	
17	53	83	GaD	
4	59	AcB	Lv	
41	75	AoC	Ma	
42	76	AoD	MdB	
46	77	AoE	Nh	

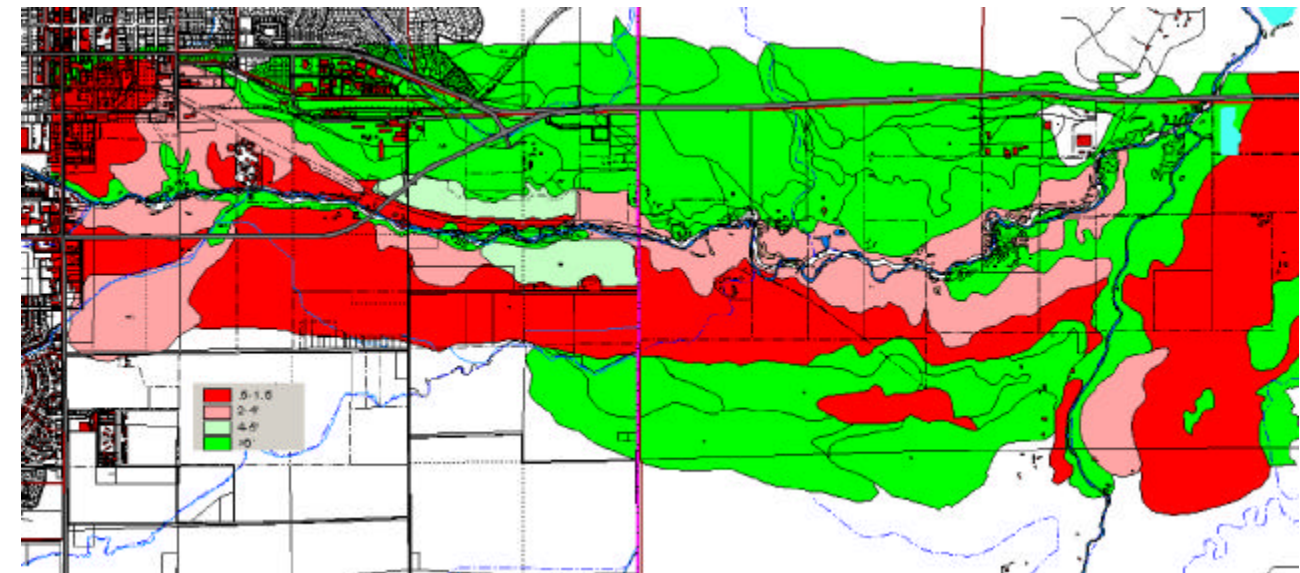
Soil Series Characteristics

Type	Name	SL%	DepthBR	DepthWaterTable	ShrinkSwell	HydroGroup
AoD	Ascalon Otero Complex, 5-9%	5	>60 in.	>6'	Low Medium	
Nh	Niwot Soils	2	>60 in.	.5-1.5	Medium	
Lv	Loveland Soils	3	>60 in.	2-4'	Medium	
CaA	Calkins Sandy Loam, 0-1%	4	>60 in.	2-4'	Low	
NuA	Nunn Clay Loam, 0-1%	5	>60 in.	>6'	Medium	
AoC	Ascalon Otero Complex, 3-5%	6	>60 in.	>6'	Low Medium	
AoC	Ascalon Otero Complex, 3-5%	7	>60 in.	>6'	Low Medium	
AoE	Ascalon Otero Complex, 9-20%	8	>60 in.	>6'	Low Medium	
Ma	Made Land	9	>60 in.	4-5'	Low	
AcB	Ascalon Sandy Loam	10	>60 in.	>6'	Low Medium	
10	Bankard Sandy Loam	15	>60 in.	>6'	Low	A
4	Aquolis and Aquents, Flooded	12	>60 in.	.5-1.5	Medium	D
CoC	Colby Silty Clay Loam, 3-5%	13	>60 in.	>6'	Medium	
15	Colby Loam, 1-3%	14	>60 in.	>6'	Low	B
MdB	Manter Sandy Loam, 1-3%	15	>60 in.	>6'	Low	
Dum	Not Soil	16	NA	NA		
GaD	Gaynor Silty Clay Loam, 3-9%	17	20-40	>6'	High	
17	Colby Loam, 5-9%	18	>60 in.	>6'	Low	B
79	Weld Loam	19	>60 in.	>6'	Low	C
59	Shingle Loam	20	10-20	>6'	Low	D
51	Otero Sandy Loam, 1-3%	21	>60 in.	>6'	Low	B
52	Otero Sandy Loam, 5-9%	22	>60 in.	>6'	Low	B
53	Otero Sandy Loam, 3-5%	23	>60 in.	>6'	Low	B
13	Cascajo Grav. Sandy Loam	24	>60 in.	>6'	Low	A
77	Vona Sandy Loam, 3-5%	25	>60 in.	>6'	Low	B
83	Wiley-Colby Complex, 3-5%	26	>60 in.	>6'	Low	B
82	Wiley-Colby Complex, 1-3%	27	>60 in.	>6'	Low	B
41	Nunn Clay Loam, 0-1%	28	>60 in.	>6'	Medium	C
42	Nunn Clay Loam, 1-3%	29	>60 in.	>6'	Medium	C
8	Ascalon Loam	30	>60 in.	NA	Low	B
76	Vona Sandy Loam, 1-3	31	>60 in.	>6'	Low	B
75	Vona Sandy Loam, 0-1%	32	>60 in.	>6'	Low	B
46	Olney Fine Sandy Loam, 0-1%	33	>60 in.	>6'	Low	B
47	Olney Fine Sandy Loam, 1-3%	34	>60 in.	>6'	Low	B

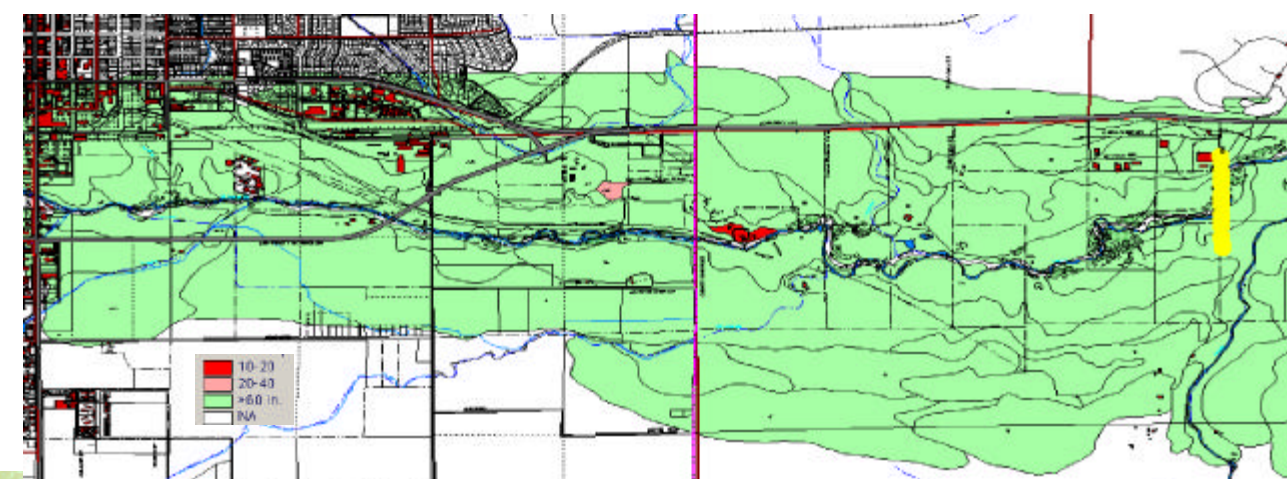
Shrink/Swell Classification



Depth to Water Table



Depth to Bedrock



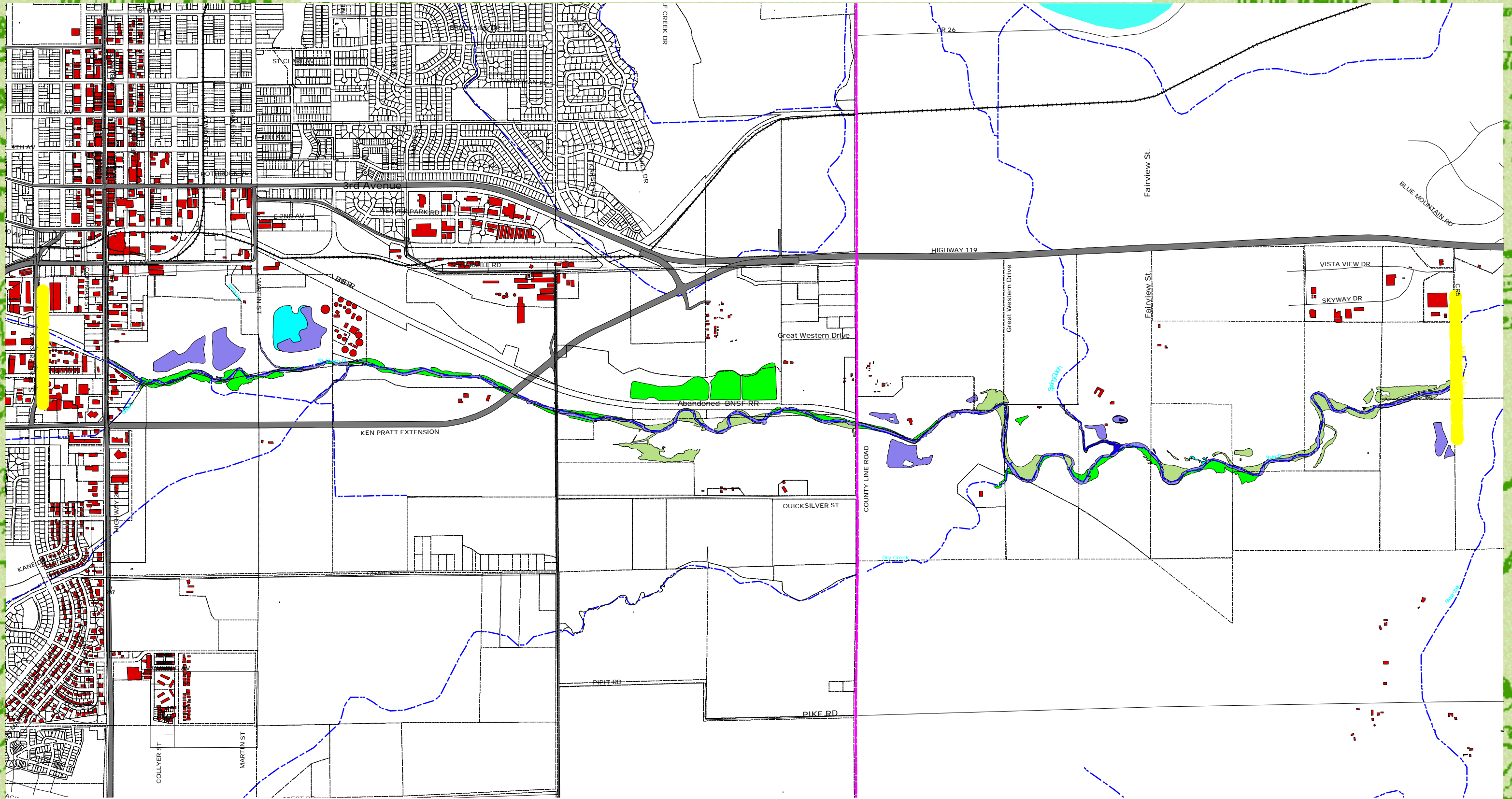
Source: Natural Resource Conservation Service Soil Reports for Weld and Boulder Counties



NRCS SOIL SERIES

St. Vrain Greenway

WETLANDS



Source: ERO Resources Inc. Study dated Nov. 16h and submitted to City of Longmont



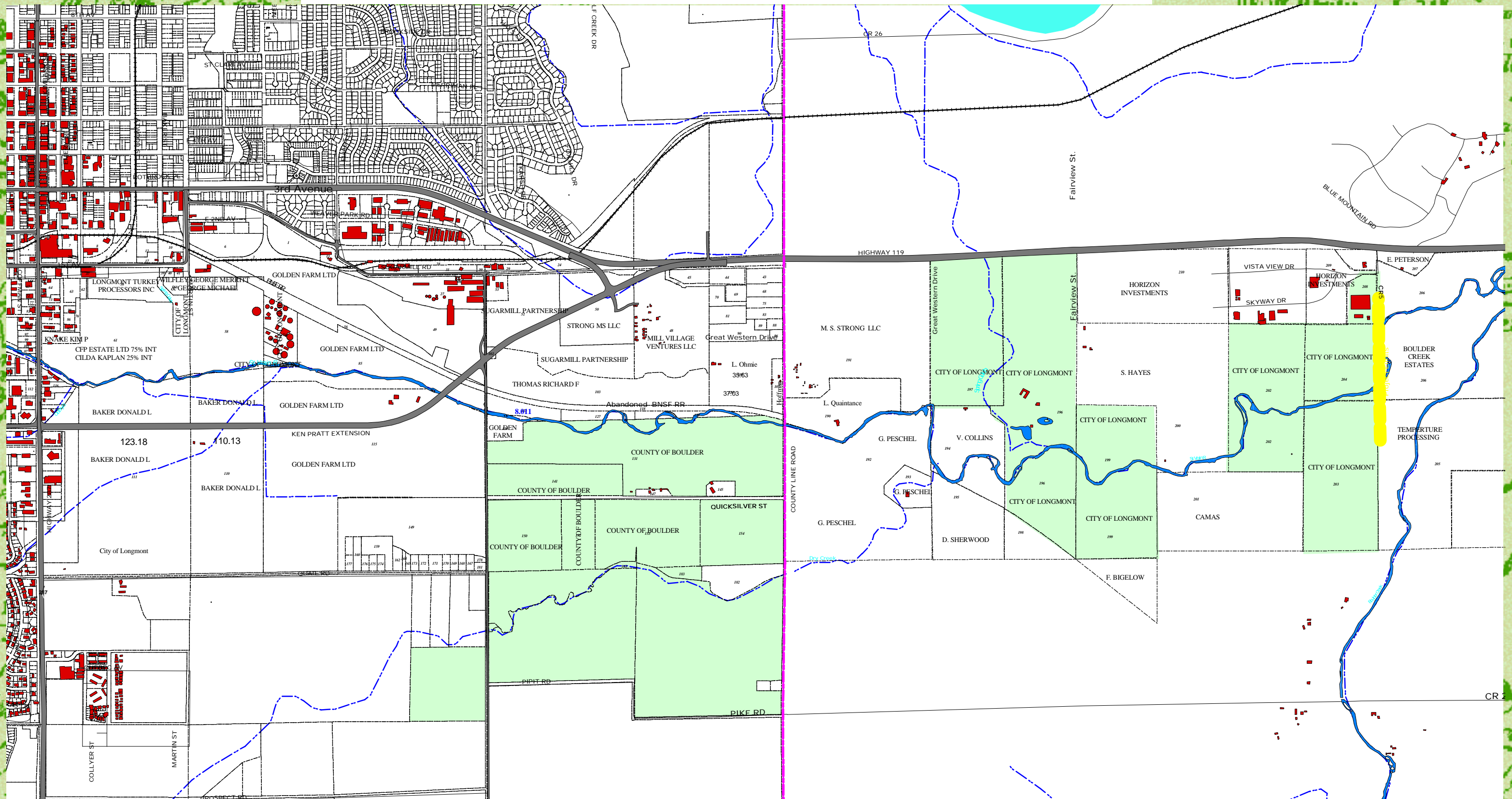
WETLANDS

- Emergent
- Saturated
- Willow shrub
- Willow shrub/Emergent
- Other Wetlands



500 0 500 1000 Feet
 DESIGN WORKSHOP, Inc.
 March 2001

St. Vrain Greenway



Source: County Assessor's Data from both Weld and Boulder County as of 7/2000.



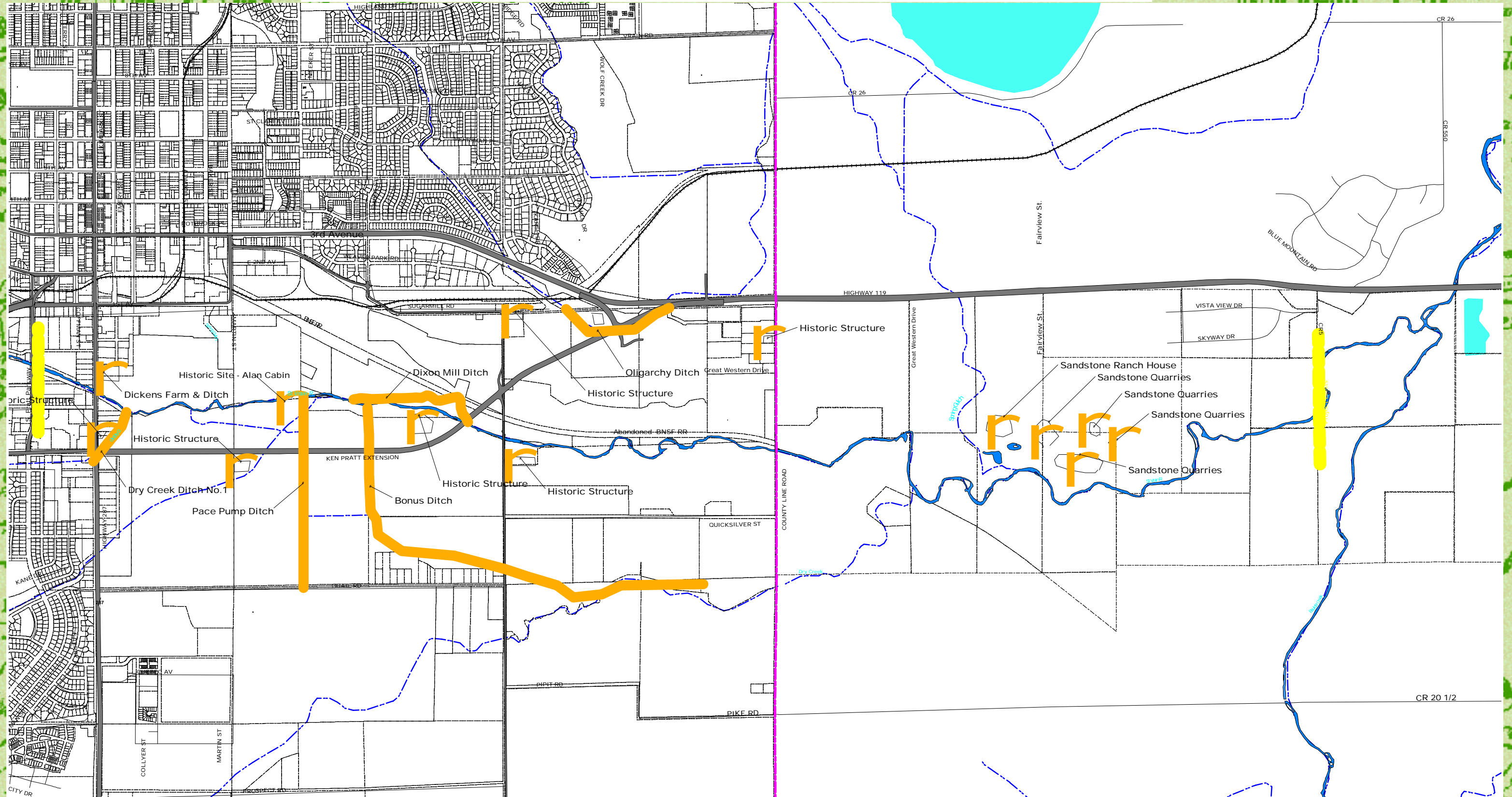
LAND OWNERSHIP

Land Owner Legend:
Public Ownership

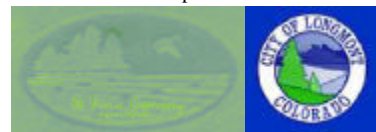


St. Vrain Greenway

HISTORIC



Source: Review of Records from State Archaeologic Office and Local experts



HISTORIC SITES

Historic Sites Legend

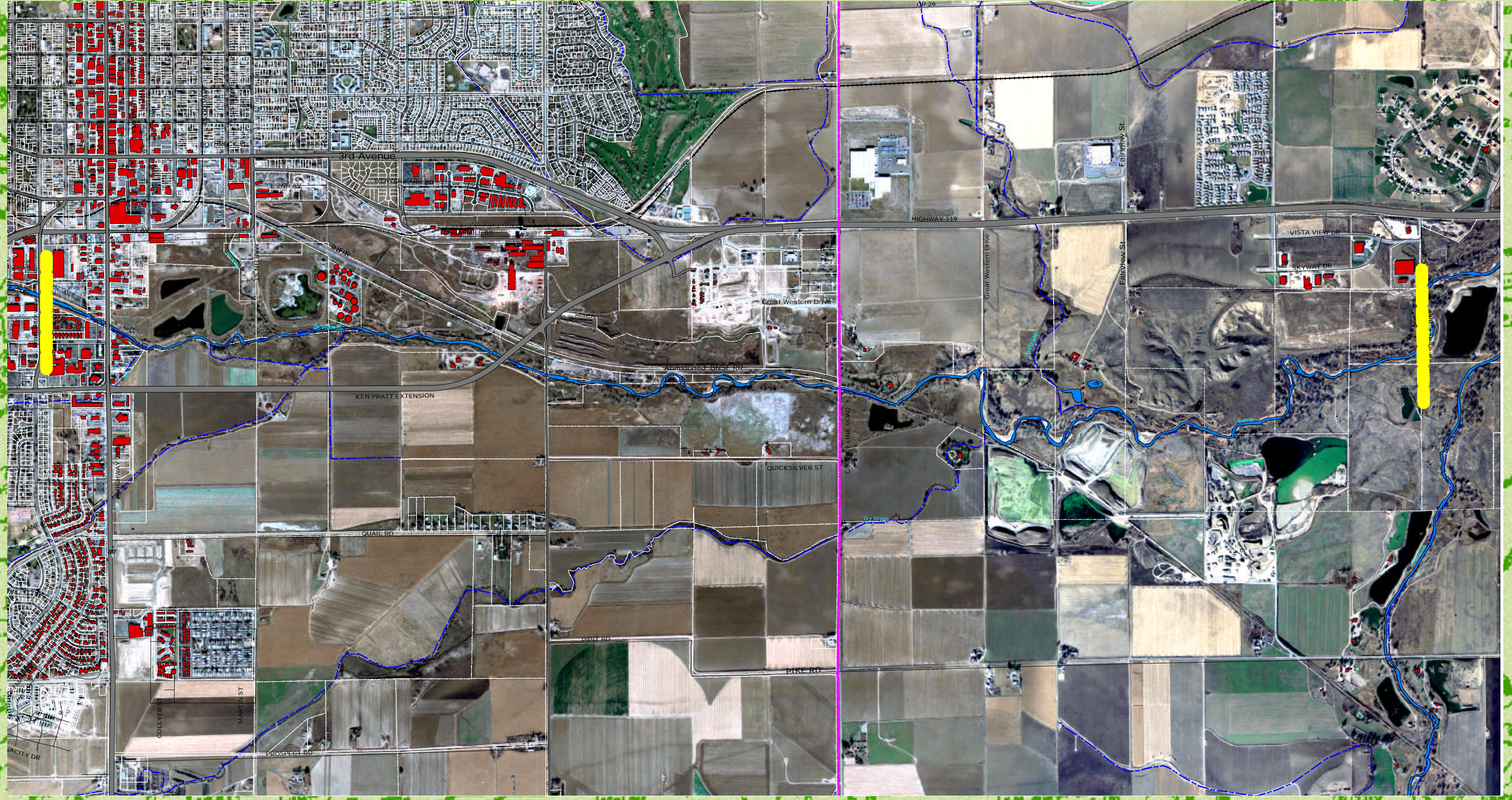
- Historic Elements
- Historic Sites & Structures



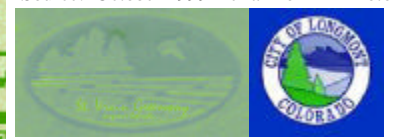
500 0 500 1000 Feet
DESIGN WORKSHOP, Inc.
March 2001

St. Vrain Greenway











AERIAL PHOTO



Source: October 1999 Aerial from AirPhoto USA



AERIAL

-  County Line
-  Existing Highways
-  Proposed Road (Ken Pratt)
-  Existing Buildings
-  St. Vrain / Creeks
-  Streets
-  Ownership Boundaries
-  Railroads
-  Lakes
-  Drainages

A north arrow pointing upwards and a scale bar showing 0, 500, and 1000 feet are located in the bottom right corner. Below the scale bar, the text reads 'DESIGN WORKSHOP, Inc. March 2001'.

Appendix B

Detailed Cost Estimate

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE ONE COST ESTIMATE (DRAFT)
 June 18, 2001

note: Phase One work includes Greenway Through Trail (10') from S. Pratt Parkway to Left Hand Creek, then south along L.H.C. to Recreation Center (8'). Includes a bridge and trail to RTD trailhead.
 Not all improvements for Dicken's Park - only a trailhead, Restrooms and Large Picnic shelter

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	NOTES
Pavement					
Urban and Suburban Through (A)	LF	6240	\$39.00	\$243,360.00	10' concrete & 3' jogging (assume earthwork/fine grading include in unit price)
Rural Through (B)	LF	0	\$27.00	\$0.00	5' concrete & 2 - 3' jogging & 4' Bridal (assume earthwork/fine grading include in unit price)
Preserve Through (C)	LF	0	\$15.00	\$0.00	8' Gravel & 3' Bridal jogging (assume earthwork/fine grading include in unit price)
Urban Secondary (1)	LF	0	\$15.00	\$0.00	8' gravel (assume earthwork/fine grading include in unit price)
Standard Greenway (2)	LF	6880	\$28.00	\$192,640.00	8' Concrete (assume earthwork/fine grading include in unit price)
Road Offset (bypass) (3)	LF	0	\$28.00	\$0.00	5' or 8' concrete (assume earthwork/fine grading include in unit price)
Street Bridge / Underpass					
					Street Bridge at Highway 287 and at S. Pratt Parkway (underpass @ S. Pratt done)
Bridge identification signs	Each	4	\$6,700.00	\$26,800.00	include fabrication and installation
Highway signs	Each	2	\$2,100.00	\$4,200.00	include fabrication and installation
Earthwork for concrete ramp (both sides)	CY	740	\$5.00	\$3,700.00	assume 10' grade different at 5% slope result 370 CY of earthwork at each side
Concrete Ramp (both sides)	SF	4000	\$6.00	\$24,000.00	assume \$5.5/sf of concrete (10' wide, 6" concrete) and \$0.5/sf of fine grade
High Water Gates	Each	2	\$2,000.00	\$4,000.00	Both sides of Underpass
warning strip + 30" thickened edge	LF	240	\$24.60	\$5,904.00	assume 120' underpass
rip rap facing	CY	120	\$39.00	\$4,680.00	assume 2' of trail require 1CY of rip rap/18"-30" boulders
Underpass lighting	Each	2	\$1,000.00	\$2,000.00	Include only lighting material/installation; does not include electrical system for lighting
Pedestrian Bridge					
					three bridges - at RTD, at St. Vrain Greenway W. of Water/Wastewater Plant, and at Left Hand Creek at Bonus ditch
Pedestrian Bridge	Each	3	\$90,000.00	\$270,000.00	price assumes bridge is about 140' long, include material and installation
Trail Head (ave. 20 car)					
					only one trailhead at Martin St.
6" full depth asphalt	SF	7100	\$1.68	\$11,928.00	
curb & gutter	LF	330	\$12.03	\$3,969.90	
striping (thermoplastic)	LF	360	\$4.92	\$1,771.20	

Furniture					
18' Shelter	Each	1	\$19,000.00	\$19,000.00	Big enough for 6 Picnic Tables
12' Shelter (picnic table/trail)	Each	0	\$16,000.00	\$0.00	enough for 4 Picnic Tables
Trail Shelter	Each	0	\$10,000.00	\$0.00	Shelter itself and no picnic tables; locate 1 per mile
6' Bench	Each	14	\$450.00	\$6,300.00	1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	29	\$400.00	\$11,600.00	At: Benches, Trail Heads, Shelters, bridge, picnic area, underpass
Rest Rooms	Each	1	\$55,000.00	\$55,000.00	At Dickens location; assume electrical/utility included
6' Picnic Tables	Each	10	\$575.00	\$5,750.00	include picnic area and picnic tables at shelter
Signage					
Rules & Regulations signs	Each	4	\$1,500.00	\$6,000.00	include fabrication and installation
Regulatory Sign	Each	3	\$920.00	\$2,760.00	include fabrication and installation
Trail Marker Sign	Each	4	\$2,750.00	\$11,000.00	include fabrication and installation
Freestanding Park Identity Sign	Each	3	\$3,000.00	\$9,000.00	include fabrication and installation
Interpretive Sign	Each	2	\$1,500.00	\$3,000.00	include fabrication and installation
Landscape					
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	393600	\$1.55	\$610,080.00	Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	260	\$400.00	\$104,000.00	Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	520	\$30.00	\$15,600.00	Size vary, assume 25' o.c. spacing along the trail

\$1,642,443.10

Estimated site construction cost, no utilities, no contingency	\$1,642,443.10
Estimated project contingency (7%)	\$114,971.02
Estimated project mobilization (5.6%)	\$91,976.81
Estimated project Demo (1.5%)	\$24,636.65
Estimated Storm Drainage (1.5%)	\$24,636.65
Estimated Water Control (2.2%)	\$36,133.75
Estimated Lighting and Electrical System (1.7%)	\$27,921.53
Estimated phase total, with contingency and mobilization	\$1,962,719.50

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE TWO COST ESTIMATE (DRAFT)
 June 18, 2001

note: Phase Two work includes Greenway Through Trail (10') from Left Hand Creek to County Line Road; also includes secondary trail on south side near RTD, also the White Water Park
 Includes the south side underpass at Main Street and trail connection between the end of built Greenway and RTD trailhead

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	NOTES
Pavement					
Urban and Suburban Through (A)	LF	10320	\$39.00	\$402,480.00	10' concrete & 3' jogging (assume earthwork/fine grading include in unit price)
Rural Through (B)	LF	0	\$27.00	\$0.00	5' concrete & 2 - 3' jogging & 4' Bridal (assume earthwork/fine grading include in unit price)
Preserve Through (C)	LF	0	\$15.00	\$0.00	8' Gravel & 3' Bridal jogging (assume earthwork/fine grading include in unit price)
Urban Secondary (1)	LF	3010	\$15.00	\$45,150.00	8' gravel (assume earthwork/fine grading include in unit price)
Standard Greenway (2)	LF	1200	\$28.00	\$33,600.00	8' Concrete (assume earthwork/fine grading include in unit price)
Road Offset (bypass) (3)	LF	0	\$28.00	\$0.00	5' or 8' concrete (assume earthwork/fine grading include in unit price)
Street Bridge / Underpass					
					Two street bridges at 119th street and County Line Road
Bridge identification signs	Each	4	\$6,700.00	\$26,800.00	include fabrication and installation
Highway signs	Each	4	\$2,100.00	\$8,400.00	include fabrication and installation
Earthwork for concrete ramp*	CY	1850	\$5.00	\$9,250.00	assume 10' grade different at 5% slope result 370 CY of earthwork at each side
Concrete Ramp*	SF	10000	\$6.00	\$60,000.00	assume \$5.5/sf of concrete (10' wide, 6" concrete) and \$0.5/sf of fine grade
warning strip + 30" thickened edge*	LF	480	\$24.60	\$11,808.00	assume 120' underpass
rip rap facing*	CY	240	\$39.00	\$9,360.00	assume 2' of trail require 1CY of rip rap/18"-30" boulders
Underpass lighting*	Each	4	\$1,000.00	\$4,000.00	Include only lighting material/installation; does not include electrical system for lighting
High Water Gates*	Each	8	\$2,000.00	\$16,000.00	Both sides of Underpass
* note: Ramps for Phase Two include 2 at secondary underpass on Main Street, 2 at 119th Street, and 2 at Ken Pratt extension. None at County Line Road.					
Pedestrian Bridge					
					two bridges
Pedestrian Bridge	Each	2	\$90,000.00	\$180,000.00	price assumes bridge is about 140' long, include material and installation

Trailhead (ave. 20 car)					only one trailhead at Martin St.
6" full depth asphalt	SF	14200	\$1.68	\$23,856.00	
curb & gutter	LF	660	\$12.03	\$7,939.80	
striping (thermoplastic)	LF	720	\$4.92	\$3,542.40	
Fence at county line road	LF	1750	\$11.00	\$19,250.00	
Furniture					
18' Shelter	Each	0	\$19,000.00	\$0.00	Big enough for 6 Picnic Tables
12' Shelter (picnic table/trail)	Each	2	\$16,000.00	\$32,000.00	enough for 4 Picnic Tables
Trail Shelter	Each	0	\$10,000.00	\$0.00	Shelter itself and no picnic tables; locate 1 per mile
6' Bench	Each	14	\$450.00	\$6,300.00	1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	45	\$400.00	\$18,000.00	At: Benches, Trail Heads, Shelters, bridge, picnic area, underpass
Rest Rooms	Each	2	\$55,000.00	\$110,000.00	At Willow Cove / Mill Meadow locations; assume electrical/utility included
6' Picnic Tables	Each	20	\$575.00	\$11,500.00	include picnic area and picnic tables at shelter
Signage					
Rules & Regulations signs	Each	1	\$1,500.00	\$1,500.00	include fabrication and installation
Regulatory Sign	Each	2	\$920.00	\$1,840.00	include fabrication and installation
Trail Marker Sign	Each	3	\$2,750.00	\$8,250.00	include fabrication and installation
Freestanding Park Identity Sign	Each	0	\$3,000.00	\$0.00	include fabrication and installation
Interpretive Sign	Each	4	\$1,500.00	\$6,000.00	include fabrication and installation
Landscape					
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	309600	\$1.55	\$479,880.00	Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	205	\$400.00	\$82,000.00	Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	410	\$30.00	\$12,300.00	Size vary, assume 25' o.c. spacing along the trail
White Water Park					
White Water Park	LS	1	\$213,000.00	\$213,000.00	

\$1,844,006.20

Estimated site construction cost, no utilities, no contingency	\$1,844,006.20
Estimated project contingency (7%)	\$129,080.43
Estimated project mobilization (5.6%)	\$103,264.35
Estimated project Demo (1.5%)	\$27,660.09
Estimated Storm Drainage (1.5%)	\$27,660.09
Estimated Water Control (2.2%)	\$40,568.14
Estimated Lighting and Electrical System (1.7%)	\$31,348.11
Estimated phase total, with contingency and mobilization	\$2,203,587.41

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE THREE COST ESTIMATE (DRAFT)

June 18, 2001

note: Phase Three work includes bypass commuter route from Mill Meadow to Sandstone Ranch and onto east project limit - excludes trail and facility within Sandstone Ranch.

The Road Offset Trail (Type 3) indicates 8' wide concrete, and the Developer is responsible for 5' of that width as part of their improvements, thus only 3 additional feet of concrete per linear foot has been calculated for Great Western Drive. This 3' would amount to \$18 for each linear foot of bypass.

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	NOTES
Pavement					
Urban and Suburban Through (A)	LF	0	\$39.00	\$0.00	10' concrete & 3' jogging (assume earthwork/fine grading include in unit price)
Rural Through (B)	LF	0	\$27.00	\$0.00	5' concrete & 2 - 3' jogging & 4' Bridal (assume earthwork/fine grading include in unit price)
Preserve Through (C)	LF	0	\$15.00	\$0.00	8' Gravel & 3' Bridal jogging (assume earthwork/fine grading include in unit price)
Urban Secondary (1)	LF	0	\$15.00	\$0.00	8' gravel (assume earthwork/fine grading include in unit price)
Standard Greenway (2)	LF	2920	\$28.00	\$81,760.00	8' Concrete (assume earthwork/fine grading include in unit price)
Road Offset (bypass) (3)	LF	9250	\$18.00	\$166,500.00	5' or 8' concrete (assume earthwork/fine grading include in unit price)
Street Bridge / Underpass					
Bridge identification signs	Each	0	\$6,700.00	\$0.00	include fabrication and installation
Highway signs	Each	0	\$2,100.00	\$0.00	include fabrication and installation
Earthwork for concrete ramp (both sides)	CY	0	\$5.00	\$0.00	assume 10' grade different at 5% slope result 370 CY of earthwork at each side
Concrete Ramp (both sides)	SF	0	\$6.00	\$0.00	assume \$5.5/sf of concrete (10' wide, 6" concrete) and \$0.5/sf of fine grade
High Water Gates	Each	0	\$2,000.00	\$0.00	Both sides of Underpass
warning strip + 30" thickened edge	LF	0	\$24.60	\$0.00	assume 120' underpass
rip rap facing	CY	0	\$39.00	\$0.00	assume 2' of trail require 1CY of rip rap/18"-30" boulders
Underpass lighting	Each	0	\$1,000.00	\$0.00	Include only lighting material/installation; does not include electrical system for lighting
Pedestrian Bridge					
Pedestrian Bridge	Each	0	\$90,000.00	\$0.00	price assumes bridge is about 140' long, include material and installation
Trailhead (ave. 20 car)					
6" full depth asphalt	SF	7100	\$1.68	\$11,928.00	only one trailhead
curb & gutter	LF	330	\$12.03	\$3,969.90	
striping (thermoplastic)	LF	360	\$4.92	\$1,771.20	

Furniture					
18' Shelter	Each	0	\$19,000.00	\$0.00	Big enough for 6 Picnic Tables
12' Shelter (picnic table/trail)	Each	1	\$16,000.00	\$16,000.00	enough for 4 Picnic Tables
Trail Shelter	Each	0	\$10,000.00	\$0.00	Shelter itself and no picnic tables; locate 1 per mile
6' Bench	Each	6	\$450.00	\$2,700.00	1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	17	\$400.00	\$6,800.00	At: Benches, Trail Heads, Shelters, bridge, picnic area, underpass
Rest Rooms	Each	0	\$55,000.00	\$0.00	
6' Picnic Tables	Each	10	\$575.00	\$5,750.00	include picnic area and picnic tables at shelter
Signage					
Rules & Regulations signs	Each	1	\$1,500.00	\$1,500.00	include fabrication and installation
Regulatory Sign	Each	1	\$920.00	\$920.00	include fabrication and installation
Trail Marker Sign	Each	1	\$2,750.00	\$2,750.00	include fabrication and installation
Freestanding Park Identity Sign	Each	2	\$3,000.00	\$6,000.00	include fabrication and installation
Interpretive Sign	Each	1	\$1,500.00	\$1,500.00	include fabrication and installation
Landscape					
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	365100	\$1.55	\$565,905.00	Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	240	\$400.00	\$96,000.00	Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	480	\$30.00	\$14,400.00	Size vary, assume 25' o.c. spacing along the trail

\$971,754.10

Estimated site construction cost, no utilities, no contingency	\$971,754.10
Estimated project contingency (7%)	\$68,022.79
Estimated project mobilization (5.6%)	\$54,418.23
Estimated project Demo (1.5%)	\$14,576.31
Estimated Storm Drainage (1.5%)	\$14,576.31
Estimated Water Control (2.2%)	\$21,378.59
Estimated Lighting and Electrical System (1.7%)	\$16,519.82
Estimated phase total, with contingency and mobilization	\$1,161,246.15

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE FOUR COST ESTIMATE (DRAFT)
 June 18, 2001

note: Phase Four work includes Greenway Through Trail from County Line Road to Sandstone Ranch south of River, ending at Bridge to Sandstone Ranch district park; includes bridge at Sandstone Ranch and both sides of underpasses at County Line Road.

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	NOTES
Pavement					
Urban and Suburban Through (A)	LF	0	\$39.00	\$0.00	10' concrete & 3' jogging (assume earthwork/fine grading include in unit price)
Rural Through (B)	LF	6020	\$27.00	\$162,540.00	5' concrete & 2 - 3' jogging & 4' Bridal (assume earthwork/fine grading include in unit price)
Preserve Through (C)	LF	0	\$15.00	\$0.00	8' Gravel & 3' Bridal jogging (assume earthwork/fine grading include in unit price)
Urban Secondary (1)	LF	0	\$15.00	\$0.00	8' gravel (assume earthwork/fine grading include in unit price)
Standard Greenway (2)	LF	1720	\$28.00	\$48,160.00	8' Concrete (assume earthwork/fine grading include in unit price)
Road Offset (bypass) (3)	LF	0	\$28.00	\$0.00	5' or 8' concrete (assume earthwork/fine grading include in unit price)
Street Bridge / Underpass					
Bridge identification signs	Each	0	\$6,700.00	\$0.00	include fabrication and installation
Highway signs	Each	0	\$2,100.00	\$0.00	include fabrication and installation
Earthwork for concrete ramp**	CY	740	\$5.00	\$3,700.00	assume 10' grade different at 5% slope result 370 CY of earthwork at each side
Concrete Ramp**	SF	4000	\$6.00	\$24,000.00	assume \$5.5/sf of concrete (10' wide, 6" concrete) and \$0.5/sf of fine grade
High Water Gates**	Each	2	\$2,000.00	\$4,000.00	Both sides of Underpass
warning strip + 30" thickened edge**	LF	280	\$24.60	\$6,888.00	assume 120' underpass
rip rap facing**	CY	120	\$39.00	\$4,680.00	assume 2' of trail require 1CY of rip rap/18"-30" boulders
Underpass lighting**	Each	1	\$1,000.00	\$1,000.00	Include only lighting material/installation; does not include electrical system for lighting
** note: phase four work only include underpass at both sides of county line road					
Pedestrian Bridge					
Pedestrian Bridge	Each	1	\$90,000.00	\$90,000.00	price assumes bridge is about 140' long, include material and installation
Trailhead (ave. 20 car)					
6" full depth asphalt	SF	0	\$1.68	\$0.00	
curb & gutter	LF	0	\$12.03	\$0.00	
striping (thermoplastic)	LF	0	\$4.92	\$0.00	

Furniture					
18' Shelter	Each	0	\$19,000.00	\$0.00	Big enough for 6 Picnic Tables
12' Shelter (picnic table/trail)	Each	0	\$16,000.00	\$0.00	enough for 4 Picnic Tables
Trail Shelter	Each	1	\$10,000.00	\$10,000.00	Shelter itself and no picnic tables; locate 1 per mile
6' Bench	Each	4	\$450.00	\$1,800.00	1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	5	\$400.00	\$2,000.00	At: Benches, Trail Heads, Shelters, bridge, picnic area, underpass
Rest Rooms	Each	0	\$55,000.00	\$0.00	
6' Picnic Tables	Each	0	\$575.00	\$0.00	include picnic area and picnic tables at shelter
Signage					
Rules & Regulations signs	Each	2	\$1,500.00	\$3,000.00	include fabrication and installation
Regulatory Sign	Each	2	\$920.00	\$1,840.00	include fabrication and installation
Trail Marker Sign	Each	2	\$2,750.00	\$5,500.00	include fabrication and installation
Freestanding Park Identity Sign	Each	0	\$3,000.00	\$0.00	include fabrication and installation
Interpretive Sign	Each	2	\$1,500.00	\$3,000.00	include fabrication and installation
Landscape					
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	232200	\$1.55	\$359,910.00	Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	150	\$400.00	\$60,000.00	Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	300	\$30.00	\$9,000.00	Size vary, assume 25' o.c. spacing along the trail

\$792,018.00

Estimated site construction cost, no utilities, no contingency	\$792,018.00
Estimated project contingency (7%)	\$55,441.26
Estimated project mobilization (5.6%)	\$44,353.01
Estimated project Demo (1.5%)	\$11,880.27
Estimated Storm Drainage (1.5%)	\$11,880.27
Estimated Water Control (2.2%)	\$17,424.40
Estimated Lighting and Electrical System (1.7%)	\$13,464.31
Estimated phase total, with contingency and mobilization	\$946,461.51

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE FIVE COST ESTIMATE (DRAFT)
 June 18, 2001

note: Phase Five work includes Greenway Through Trail from Sandstone Spur trail to east project limits; does not include bridge over Boulder Creek (since this is beyond limits).

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	NOTES
Pavement					
Urban and Suburban Through (A)	LF	0	\$39.00	\$0.00	10' concrete & 3' jogging (assume earthwork/fine grading include in unit price)
Rural Through (B)	LF	0	\$27.00	\$0.00	5' concrete & 2 - 3' jogging & 4' Bridal (assume earthwork/fine grading include in unit price)
Preserve Through (C)	LF	6880	\$15.00	\$103,200.00	8' Gravel & 3' Bridal jogging (assume earthwork/fine grading include in unit price)
Urban Secondary (1)	LF	0	\$15.00	\$0.00	8' gravel (assume earthwork/fine grading include in unit price)
Standard Greenway (2)	LF	0	\$28.00	\$0.00	8' Concrete (assume earthwork/fine grading include in unit price)
Road Offset (bypass) (3)	LF	0	\$28.00	\$0.00	5' or 8' concrete (assume earthwork/fine grading include in unit price)
Street Bridge / Underpass					
Bridge identification signs	Each	0	\$6,700.00	\$0.00	include fabrication and installation
Highway signs	Each	0	\$2,100.00	\$0.00	include fabrication and installation
Earthwork for concrete ramp	CY	0	\$5.00	\$0.00	assume 10' grade different at 5% slope result 370 CY of earthwork at each side
Concrete Ramp	SF	0	\$6.00	\$0.00	assume \$5.5/sf of concrete (10' wide, 6" concrete) and \$0.5/sf of fine grade
High Water Gates	Each	0	\$2,000.00	\$0.00	Both sides of Underpass
warning strip + 30" thickened edge	LF	0	\$24.60	\$0.00	assume 120' underpass
rip rap facing	CY	0	\$39.00	\$0.00	assume 2' of trail require 1CY of rip rap/18"-30" boulders
Underpass lighting	Each	0	\$1,000.00	\$0.00	Include only lighting material/installation; does not include electrical system for lighting
Pedestrian Bridge					
Pedestrian Bridge	Each	0	\$90,000.00	\$0.00	price assumes bridge is about 140' long, include material and installation
Trailhead (ave. 20 car)					
6" full depth asphalt	SF	0	\$1.68	\$0.00	
curb & gutter	LF	0	\$12.03	\$0.00	
striping (thermoplastic)	LF	0	\$4.92	\$0.00	

Furniture					
18' Shelter	Each	0	\$19,000.00	\$0.00	Big enough for 6 Picnic Tables
12' Shelter (picnic table/trail)	Each	0	\$16,000.00	\$0.00	enough for 4 Picnic Tables
Trail Shelter	Each	1	\$10,000.00	\$10,000.00	Shelter itself and no picnic tables; locate 1 per mile
6' Bench	Each	3	\$450.00	\$1,350.00	1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	3	\$400.00	\$1,200.00	At: Benches, Trail Heads, Shelters, bridge, picnic area, underpass
Rest Rooms	Each	0	\$55,000.00	\$0.00	
6' Picnic Tables	Each	0	\$575.00	\$0.00	include picnic area and picnic tables at shelter
Signage					
Rules & Regulations signs	Each	1	\$1,500.00	\$1,500.00	include fabrication and installation
Regulatory Sign	Each	1	\$920.00	\$920.00	include fabrication and installation
Trail Marker Sign	Each	1	\$2,750.00	\$2,750.00	include fabrication and installation
Freestanding Park Identity Sign	Each	0	\$3,000.00	\$0.00	include fabrication and installation
Interpretive Sign	Each	2	\$1,500.00	\$3,000.00	include fabrication and installation
Landscape					
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	206400	\$1.55	\$319,920.00	Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	135	\$400.00	\$54,000.00	Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	270	\$30.00	\$8,100.00	Size vary, assume 25' o.c. spacing along the trail

\$497,840.00

Estimated site construction cost, no utilities, no contingency	\$497,840.00
Estimated project contingency (7%)	\$34,848.80
Estimated project mobilization (5.6%)	\$27,879.04
Estimated project Demo (1.5%)	\$7,467.60
Estimated Storm Drainage (1.5%)	\$7,467.60
Estimated Water Control (2.2%)	\$10,952.48
Estimated Lighting and Electrical System (1.7%)	\$8,463.28
Estimated phase total, with contingency and mobilization	\$594,918.80

Design Workshop, Inc.

ST. VRAIN EAST CORRIDOR
PHASE SIX COST ESTIMATE (DRAFT)
 June 18, 2001

note: Phase Six work includes elements not included in phase one to five, such as through trail and trail head at Sugar Mill trail, Park trails within Dickens Park, Willow Cove, Mill Meadow, and Confluence Overlook.

St. Vrain Greenway Master Plan Update

ITEMS:	Units	Quantities	Unit Price	Item Total	Subtotal	NOTES
Willow Cove						
8' wide Park Walkway (4" C.I.P conc.)	SF	10000	\$3.50	\$35,000.00		
12' Shelter	Each	15	\$16,000.00	\$240,000.00		enough for 4 Picnic Tables
6' Picnic Tables	Each	60	\$575.00	\$34,500.00		
Trash Receptacle	Each	60	\$400.00	\$24,000.00		At: Picnic Shelter
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	423800	\$1.55	\$656,890.00		for entire park
Trees (tree/install/drip irrig)	Each	170	\$400.00	\$68,000.00		Assume planting 4 trees / per 10,000 sf of landscape areas
Shrubs (shrub/install/drip irrig)	Each	255	\$30.00	\$7,650.00		Assume planting 6 shrubs / per 10,000 sf of landscape areas

\$1,066,040.00

Estimated site construction cost, no utilities, no contingency

\$1,066,040.00

Estimated project contingency (7%)

\$74,622.80

Estimated project mobilization (5.6%)

\$59,698.24

Estimated project Demo (1.5%)

\$15,990.60

Estimated Storm Drainage (1.5%)

\$15,990.60

Estimated project total, with contingency and mobilization

\$1,232,342.24

ITEMS:	Units	Quantities	Unit Price	Item Total	Subtotal	NOTES
Mill Meadow						
12' Shelter	Each	2	\$16,000.00	\$32,000.00		enough for 4 Picnic Tables
6' Picnic Tables	Each	8	\$575.00	\$4,600.00		
Trash Receptacle	Each	8	\$400.00	\$3,200.00		At: Picnic Shelter
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	544210	\$1.55	\$843,525.50		for entire park
Trees (tree/install/drip irrig)	Each	220	\$400.00	\$88,000.00		Assume planting 4 trees / per 10,000 sf of landscape areas
Shrubs (shrub/install/drip irrig)	Each	325	\$30.00	\$9,750.00		Assume planting 6 shrubs / per 10,000 sf of landscape areas

\$981,075.50

Estimated site construction cost, no utilities, no contingency

\$981,075.50

Estimated project contingency (7%)

\$68,675.29

Estimated project mobilization (5.6%)

\$54,940.23

Estimated project Demo (1.5%)

\$14,716.13

Estimated Storm Drainage (1.5%)

\$14,716.13

Estimated project total, with contingency and mobilization

\$1,134,123.28

ITEMS:	Units	Quantities	Unit Price	Item Total	Subtotal	NOTES
Confluence Overlook						
12' Shelter	Each	1	\$16,000.00	\$16,000.00		enough for 4 Picnic Tables
6' Picnic Tables	Each	4	\$575.00	\$2,300.00		
Trash Receptacle	Each	4	\$400.00	\$1,600.00		At: Picnic Shelter

\$19,900.00

Estimated site construction cost, no utilities, no contingency

\$19,900.00

Estimated project contingency (7%)

\$1,393.00

Estimated project mobilization (5.6%)

\$1,114.40

Estimated project Demo (1.5%)

\$298.50

Estimated Storm Drainage (1.5%)

\$298.50

Estimated project total, with contingency and mobilization

\$23,004.40

ITEMS:	Units	Quantities	Unit Price	Item Total	Subtotal	NOTES
Sugar Mill Trail						
Standard Greenway Trail (2)	LF	1720	\$28.00	\$48,160.00		8' Concrete (assume earthwork/fine grading include in unit price)
6' Bench	Each	1	\$450.00	\$450.00		1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	1	\$400.00	\$400.00		At: Benches, Trail Heads
Rules & Regulations signs	Each	1	\$1,500.00	\$1,500.00		include fabrication and installation
Interpretive Sign	Each	1	\$1,500.00	\$1,500.00		include fabrication and installation
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	51600	\$1.55	\$79,980.00		Assume 15' disturbing areas at both sides of trail
Trees (tree/install/drip irrig)	Each	34	\$400.00	\$13,600.00		Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	68	\$30.00	\$2,040.00		Size vary, assume 25' o.c. spacing along the trail

\$147,630.00

Estimated site construction cost, no utilities, no contingency

\$147,630.00

Estimated project contingency (7%)

\$10,334.10

Estimated project mobilization (5.6%)

\$8,267.28

Estimated project Demo (1.5%)

\$2,214.45

Estimated Storm Drainage (1.5%)

\$2,214.45

Estimated project total, with contingency and mobilization

\$170,660.28

ITEMS:	Units	Quantities	Unit Price	Item Total	Subtotal	NOTES
Dickens Park						
Standard Greenway Trail (2)	LF	9040	\$28.00	\$253,120.00		8' Concrete (assume earthwork/fine grading include in unit price)
6' Bench	Each	3	\$450.00	\$1,350.00		1/4 Urb&SubUrb/ every 3/8 Rural/ 1/2 Preserve / Maj Trail Intersections / Bridges / Ramps to Street
Trash Receptacle	Each	80	\$400.00	\$32,000.00		At: Benches, Trail Heads
12' Shelter	Each	20	\$16,000.00	\$320,000.00		enough for 4 Picnic Tables
6' Picnic Tables	Each	80	\$575.00	\$46,000.00		At: Benches, Trail Heads
Landscape Areas (soil prep/fine grading/irrig/native seed)	SF	2700720	\$1.55	\$4,186,116.00		for entire park
Trees (tree/install/drip irrig)	Each	1080	\$400.00	\$432,000.00		Size vary, assume 50' o.c. spacing along the trail
Shrubs (shrub/install/drip irrig)	Each	1620	\$30.00	\$48,600.00		Size vary, assume 25' o.c. spacing along the trail

\$5,319,186.00

Estimated site construction cost, no utilities, no contingency

\$5,319,186.00

Estimated project contingency (7%)

\$372,343.02

Estimated project mobilization (5.6%)

\$297,874.42

Estimated project Demo (1.5%)

\$79,787.79

Estimated Storm Drainage (1.5%)

\$79,787.79

Estimated project total, with contingency and mobilization

\$6,148,979.02

Estimated Phase Six project total, with contingency and mobilization

\$8,709,109.21

Phase One:	\$1,962,719.50
Phase Two	\$2,203,587.41
Phase Three	\$1,161,246.15
Phase Four	\$946,461.51
Phase Five	\$594,918.80
Phase Six	\$8,709,109.21
All Phases	\$15,578,042.59