

Related Projects:
CONSTRUCTION PROJECT:
NH 1602-074
PROJECT CODE: 12713

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO

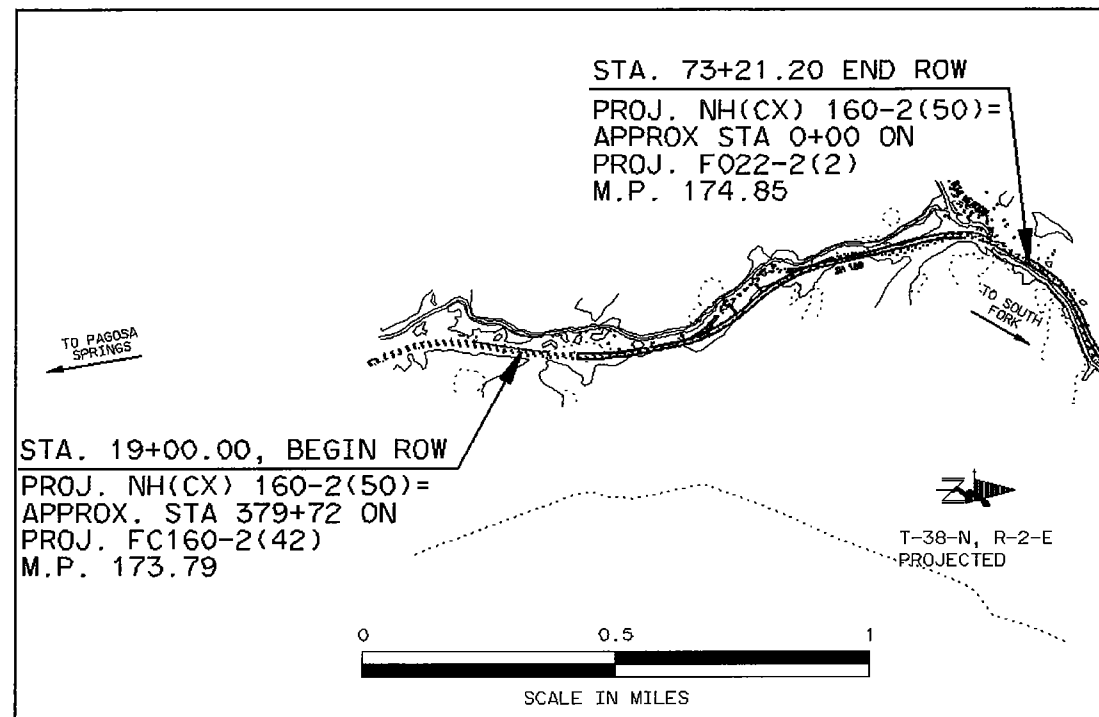
RIGHT OF WAY PLAN OF PROPOSED
FEDERAL AID PROJECT NO. NH(CX) 160-2(50) UNIT 1

U.S. HIGHWAY NO. 160

MINERAL COUNTY

WOLF CREEK UPPER NARROWS

PROJECT CODE NO. 92977
LENGTH OF PROJECT 1.027 MILES



INDEX OF SHEETS

- 1. TITLE & INDEX OF SHEETS
- 2. PROPERTY OWNERSHIP TABULATION
- 3-3C. CONTROL AND DIAGRAM SHEET MP.173.8 TO M.P. 181.2
- 4. CONTROL AND MONUMENTATION SHEET MP.173.79 TO M.P. 174.85
- 5-8. PLAN SHEETS
- 9. UNIT 1 OWNERSHIP MAP

BASIS OF BEARINGS (CONVERTED TO IMPERIAL UNITS)

ALL OF THE PROJECT CONTROL IS BASED ON A COMMON BASIS OF BEARING ORIGINATING AT TWO FHWA CONTROL POINTS NEAR MP 183 AND CARRIED BY CONVENTIONAL TOTAL-STATION ANGLE & DISTANCE TRAVERSE. THE ORIGINAL BEARING IS A LINE BETWEEN FHWA T-70 (OBLITERATED) AND FHWA T-69 (OBLITERATED). REFERENCE BEARING: S. 35°54'55" W.

GROUP 3 (MP 174.9 TO 176.7): A LINE BETWEEN PROJECT CONTROL POINT NO. 8027 (A CDOT 3.25" AL. CAP) AND PROJECT CONTROL POINT NO. 8028 (A CDOT 3.25" AL. CAP). REFERENCE BEARING N. 34°48'58" E., 334.801 METERS. (1098.43')

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AUTHORIZED

DATE _____

DIVISION ADMINISTRATOR

Carter :: Burgess

COUNTY LINE

TOWNSHIP OR RANGE LINE

LAND LINES SECTION LINE $\frac{1}{4}$ SECTION LINE $\frac{1}{16}$ SECTION LINE

PROPERTY OR TRACT LINE

EXISTING ROAD

NEW ROAD

CONTROL OF ACCESS

ACCESS DENIED BY DEED

RIGHT OF WAY LINE

TOP OF CUTS

TOE OF FILLS

BARBED WIRE FENCE

CHAIN LINK FENCE

BARRIER FENCE

WOVEN WIRE-COMBINATION FENCE

SNOW FENCE

WOOD FENCE

DEER FENCE

TEL. & CABLE TV LINES EXIST. NEW RELOCATED TO BE REMOVED

ELECTRIC LINES EXIST. NEW RELOCATED TO BE REMOVED

DEADMAN OR ANCHOR ON POLE

ELEC. TRANS. TOWER EXIST. NEW RELOCATED TO BE REMOVED

BURIED TEL. CABLE EXIST. NEW

BURIED ELECTRIC CABLE EXIST. NEW

FIBER OPTICS CABLE EXIST. NEW

BRIDGE LUMINAIRE WALL CEILING

MAIL BOX M.B.

SIGNS (SINGLE POST) (DOUBLE POST)

BENCH MARK B.M. TRIANGULATION POINT TRI.PT.

SECTION CORNER CENTER OF SECTION

TIES TO SECTION CORNER STA. DISTANCE ANGLE

ROAD APPROACHES NEW EXISTING

CULVERTS & DRAINS

PROPOSED

EXISTING NO HDWL. 1 HDWL. 2 HDWLS. END SECTIONS

PROPOSED

EXISTING SIPHON CBC

BRIDGES

PROPOSED

EXISTING

WATER RIVER LAKE CREEK

DITCH PROPOSED DITCH

Computer File Information				Index of Revisions			Colorado Department of Transportation			As Constructed		WOLF CREEK PASS EAST			Project No./Code	
Creation Date: 10-1-99		Initials: DMW		DOT ALAMOSA, CO 81101 PHONE: 719-589-4251 FAX: 719-589-3149 DEPARTMENT OF TRANSPORTATION				No Revisions:		TITLE SHEET			NH(CX)160-2(50)UNIT 1			
Last Modification Date: 4/25/2006		Initials: DMW						Revised:					92977			
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Units: English						Region Number V			JJS							

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Carter :: Burgess

Computer File Information		Index of Revisions		Colorado Department of Transportation		As Constructed		WOLF CREEK PASS EAST		Project No./Code	
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Units: English					Region Number V	JJS					

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TOTAL SURVEY CONTROL
U.S. HWY. 160 MP 173.8 to MP 181.2

TABULATION OF PROJECT CONTROL MONUMENTS

RIO GRANDE COUNTY
SECTIONS 17, 19, AND 20, T. 39 N., R. 3 E., N.M.P.M.

MINERAL COUNTY
R. 2 E., N.M.P.M.

SURVEY CONTROL GROUP 1 (ORIG CDOT 1992 -RESET 1998 BY CONSULTANT)

POINT	NORTHING(m)	EASTING(m)	ELEV.(m)	DESCRIPTION
091	105960.970	504382.704	2591.915	83mm CDOT AL. CAP (Type 1)
090	105955.422	504170.383	2580.487	83mm CDOT AL. CAP (Type 1)
089	105775.730	503889.946	2572.003	83mm CDOT AL. CAP (Type 1)
088	105663.283	503667.987	2567.822	83mm CDOT AL. CAP (Type 1)
087	105530.098	503473.322	2567.365	83mm CDOT AL. CAP (Type 1)
086	105442.335	503150.278	2565.844	83mm CDOT AL. CAP (Type 1)
085	105417.069	502899.607	2567.733	83mm CDOT AL. CAP (Type 1)
084	105429.349	502627.839	2569.312	83mm CDOT AL. CAP (Type 1)
083	105252.261	502130.642	2575.068	83mm CDOT AL. CAP (Type 1)
983	105372.047	502305.460	2572.838	83mm CDOT AL. CAP (Type 1)
082	105020.528	501910.838	2578.026	83mm CDOT AL. CAP (Type 1)
081	104890.921	501773.289	2582.920	83mm CDOT AL. CAP (Type 1)

SURVEY CONTROL GROUP 2 (SET IN 1995 BY CDOT FORCES)

POINT	NORTHING(m)	EASTING(m)	ELEV.(m)	DESCRIPTION
755	101563.321	499161.099	2624.376	83mm CDOT AL. CAP (Type 1)
246	101848.469	499482.755	2619.621	83mm CDOT AL. CAP (Type 1)
247	101934.161	499674.701	2615.427	83mm CDOT AL. CAP (Type 1)
248	102223.897	500002.972	2609.629	83mm CDOT AL. CAP (Type 1)
249	102413.050	500203.623	2606.572	83mm CDOT AL. CAP (Type 1)
005	102620.768	500473.248	2603.084	83mm CDOT AL. CAP (Type 1)
771	102867.057	500794.687	2605.099	83mm CDOT AL. CAP (Type 1)
772	103001.921	500909.038	2604.706	83mm CDOT AL. CAP (Type 1)
754	103103.779	501076.438	2601.722	83mm CDOT AL. CAP (Type 1)
753	103220.620	501189.629	2604.806	83mm CDOT AL. CAP (Type 1)
752	103399.502	501265.422	2597.741	83mm CDOT AL. CAP (Type 1)
751	103566.163	501241.437	2596.049	83mm CDOT AL. CAP (Type 1)
750	103650.977	501287.153	2594.382	83mm CDOT AL. CAP (Type 1)
760	103944.663	501471.032	2588.059	83mm CDOT AL. CAP (Type 1)
770	104157.650	501485.251	2586.685	83mm CDOT AL. CAP (Type 1)
780	104283.403	501538.023	2584.113	83mm CDOT AL. CAP (Type 1)
790	104579.644	501589.258	2582.737	83mm CDOT AL. CAP (Type 1)
800	104760.072	501622.704	2601.274	83mm CDOT AL. CAP (Type 1)

SURVEY CONTROL GROUP 3 (SET IN 1997 BY CONSULTANT)

POINT	NORTHING(m)	EASTING(m)	ELEV.(m)	DESCRIPTION
8009	97396.017	497459.573	2794.771	83mm CDOT AL. CAP (Type 1)
8010	97682.824	497419.044	2796.484	83mm CDOT AL. CAP (Type 1)
8011	98038.352	497485.523	2797.455	83mm CDOT AL. CAP (Type 1)
8012	98349.840	497414.686	2771.569	83mm CDOT AL. CAP (Type 1)
8013	98587.576	497210.673	2755.423	83mm CDOT AL. CAP (Type 1)
8014	98833.614	497141.904	2740.209	83mm CDOT AL. CAP (Type 1)
8015	98977.810	497148.595	2731.045	83mm CDOT AL. CAP (Type 1)
8016	99226.341	497075.832	2719.046	83mm CDOT AL. CAP (Type 1)
8017	99507.655	497206.530	2707.463	83mm CDOT AL. CAP (Type 1)
8018	99640.917	497470.306	2701.890	83mm CDOT AL. CAP (Type 1)
8019	99770.876	497578.159	2695.487	83mm CDOT AL. CAP (Type 1)
8020	99951.815	497629.494	2690.955	83mm CDOT AL. CAP (Type 1)
8021	100090.224	497712.769	2686.622	83mm CDOT AL. CAP (Type 1)
8022	100261.391	497794.722	2684.163	83mm CDOT AL. CAP (Type 1)
8023	100509.726	497962.795	2674.301	83mm CDOT AL. CAP (Type 1)
8024	100570.630	498132.132	2671.134	83mm CDOT AL. CAP (Type 1)
8040	100684.734	498301.857	2664.208	83mm CDOT AL. CAP (Type 1)
8025	100837.159	498439.683	2658.443	83mm CDOT AL. CAP (Type 1)
8026	100951.050	498560.490	2657.810	83mm CDOT AL. CAP (Type 1)
8027	101082.621	498726.080	2646.866	83mm CDOT AL. CAP (Type 1)
8028	101357.489	498917.232	2629.794	83mm CDOT AL. CAP (Type 1)

GENERAL NOTES

- NOTE: This Control Survey is not a boundary survey or right-of-way survey and is prepared for the use of the Colorado Department of Transportation and their designated Consultants.
- 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: No warranty is implied or expressed unless this sheet bears the original signature(s) and seal(s) of all of the Professional Land Surveyor's in responsible charge for their part of the survey work as indicated by the signature blocks.
- NOTE: Field survey was established by conventional total-station angle and distance measurements. Raw data precision is computed to exceed 1:20000 or meet the minimum horizontal control tolerances of a Type B Survey and the vertical control accuracy as listed in the Colorado Department of Transportation Survey Manual Chapter 3 (Rev. 4/29/82).
- NOTE: It is possible that some of the survey control monuments listed are subject to movement, have been disturbed, or have been obliterated. It is the user's responsibility to verify the existence and stability of the control monuments.
- NOTE: All coordinates listed are PROJECT COORDINATES ONLY. Coordinates are determined from traverse calculations and are NOT derived from GPS observations.

BASIS OF BEARINGS

Note: All of the Project Control is based on a common basis of bearing originating at two FHWA control points near MP 183 and carried by conventional total-station angle & distance traverse. The original bearing is a line between FHWA T-70 (obliterated) and FHWA T-69 (obliterated). Reference bearing: S. 35°54'55" W.

GROUP 1 (MP 179.4 to 181.3) : A line between Project Control Point No. 91 (a CDOT 3.25" Al. Cap) and Project Control Point No. 88 (a CDOT 3.25" Al. Cap). Reference bearing: S. 67°23'16" W., 774.233 METERS.

GROUP 2 (MP 176.7 to 179.4) : A line between Project Control Point No. 780 (a CDOT 3.25" Al. Cap) and Project Control Point No. 800 (a CDOT 3.25" Al. Cap). Reference bearing: N. 10°04'25" E., 484.133 METERS.

GROUP 3 (MP 174.9 to 176.7) : A line between Project Control Point No. 8027 (a CDOT 3.25" Al. Cap) and Project Control Point No. 8028 (a CDOT 3.25" Al. Cap). Reference bearing: N. 34°48'58" E., 334.801 METERS.

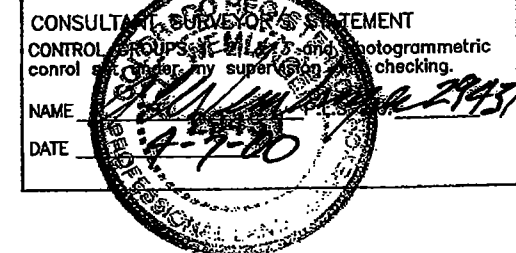
BASIS OF ELEVATIONS

NOTE: All elevations are based on ties to USC&GS BM U-161 found in the project corridor. The datum used was NGVD 29 elevations in feet as listed on the NGS datum sheets prior to current NAVD 88 datum sheets. The units were converted to metric using the U.S. Survey feet to metric factor.

GROUP 1 (MP 179.4 to 181.3): Based on Group 2 Control Point No. 790 (CDOT Type 1). Reference elevation: 2582.737m. Bench Levels run 1998 by consultant.

GROUP 2 (MP 176.7 to 179.4): Based on a tie to USC&GS BM U-161 (Brass disk in concrete). Reference elevation: 2596.895m (8519.98'). Bench Levels run 1995 by CDOT forces.

GROUP 3 (MP 174.9 to 176.7): Based on Group 2 Control Point No. 755 (CDOT Type 1). Reference elevation: 2624.376m. Bench Levels run 1997 by consultant.



Computer File Information				Sheet Revisions				As Constructed		TOTAL SURVEY CONTROL		Project No./Code	
Creation Date:	12/10/97	Initials:	ACW	☒ mm/dd/yy	XXXXX		XXX	No Revisions:	mm/dd/yy			NH(CX) 160-2(50) Unit:	
Last Modification Date:	1/11/00	Initials:	ACW	☒ mm/dd/yy	XXXXX		XXX	Revised:	mm/dd/yy			92977	
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Drawing File Name:	92977_3.DWG			☒ mm/dd/yy	XXXXX		XXX	Sheet Subset: T.S.C. Subset Sheets: 1 of 4				Sheet Number	
Acad Ver. R13C4	Scale: NTS	Units: METRIC										3	

Colorado Department of Transportation
3803 N. Main Street, Suite 300
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Phone: (970) 385-1400
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Region 5

TOTAL SURVEY CONTROL
U.S. HWY. 160 MP 173.8 to MP 181.2

RIO GRANDE COUNTY
SECTIONS 17, 19, AND 20, T. 39 N., R. 3 E., N.M.P.M.

MINERAL COUNTY
R. 2 E., N.M.P.M.

TABULATION OF COLORADO H.A.R.N. GPS POINTS NEAR THE PROJECT

GEODETIC POSITIONS ARE BASED ON PRELIMINARY DATA OBTAINED FROM CDOT. THIS DATA HAS NOT BEEN APPROVED OR ACCEPTED BY THE NATIONAL GEODETIC SURVEY FOR INCLUSION IN THE COLORADO H.A.R.N. AT THIS TIME (FEB. 4, 1998).

STATION	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT	STATE PLANE COORDINATES:			
				NORTH	EAST	MAPPING ANGLE	SCALE FACTOR
LENICH	37°38'06.17450"	106°40'24.73443"		412925.700	810826.204	-0°43'11.36"	0.99995141
MC GEE	37°34'35.42497"	106°45'01.25732"		406517.075	803960.263	-0°46'00.97"	0.99995545
MARTINEZ	37°31'38.67148"	106°46'12.51642"		401092.088	802137.885	-0°46'44.68"	0.99995965

GENERAL NOTES

1. NOTE: This Control Survey is not a boundary survey or right-of-way survey and is prepared for the use of the Colorado Department of Transportation and their designated Consultants.
2. NOTE: It is possible that some of the survey control monuments listed are subject to movement, have been disturbed, or have been obliterated. It is the user's responsibility to verify the existence and stability of the control monuments.
3. NOTE: All coordinates listed are PROJECT COORDINATES ONLY. Coordinates are determined from traverse calculations and are NOT derived from GPS observations. GPS observations were carried out to establish a relationship between the PROJECT CONTROL and NAD83 Colorado South Zone State Plane Coordinates for the purpose of positioning some aerial panel points. The transformation parameters used for that purpose are:
- | | |
|--|-------------|
| COMBINED SCALE FACTOR APPLIED TO ALL STATE PLANE COORDS: | 1.000453898 |
| REDUCTION APPLIED TO NORTHING AFTER SCALING: | 304,943.132 |
| REDUCTION APPLIED TO EASTING AFTER SCALING: | 304,881.188 |
| ROTATION: | NONE |
4. NOTE: Aerial Panel Point Coordinates are carried to 3 decimal places for calculation purposes only. Actual field precision is in the order of a CDOT Type B Survey (+/- 8cm).

AERIAL PANEL POINTS (SET IN 1997 BY CONSULTANT)

POINT	NORTHING(m)	EASTING(m)	ELEV.(m)	DESCRIPTION
0010	106629.223	505042.668	2574.968	2" Al. Cap CAJE LS 29431 PP10
0011	106411.503	504816.251	2590.746	2" Al. Cap CAJE LS 29431 PP11
0012	105976.846	505087.023	2557.085	12" Spike
0013	106029.231	504555.509	2593.214	CDOT 3.25" Al. Cap "53"
0014	106058.150	503930.829	2656.561	12" Spike
0015	105740.251	504113.954	2558.555	12" Spike
0016	105576.194	503532.079	2567.147	2" Al. Cap CAJE LS 29431 PP16
0017	105624.548	502870.193	2603.841	PK Nail
0018	105428.845	502956.581	2567.356	2" Al. Cap CAJE LS 29431 PP18
0019	105255.077	503040.994	2575.377	12" Spike
0020	105197.806	501771.036	2662.948	GPS
0021	105022.882	501914.439	2577.879	12" Spike
0022	104873.311	502084.426	2608.733	PK Nail
0023	104255.754	501298.754	2705.669	PK Nail w/ 1.5" brass washer
0024	104108.396	501477.817	2587.302	
0025	104063.132	501783.519	2676.489	PK Nail
0026	103566.163	501241.437	2596.049	
0027	103317.122	501400.302	2592.472	12" Spike
0028	103067.677	501617.916	2606.071	12" Spike
0029	102795.201	500544.442	2673.342	PK Nail w/ 1.5" brass washer
0030	102564.641	500762.942	2657.913	PK Nail w/ 1.5" brass washer
0031	102264.118	499881.166	2678.606	PK Nail w/ 1.5" brass washer
0032	102080.837	500199.199	2642.930	12" Spike
0033	101719.330	499327.968	2621.635	
0034	101391.288	498759.348	2732.612	PK Nail w/ 1.5" brass washer
0035	101075.990	499071.009	2691.111	12" Spike
0036	100394.294	497692.063	2768.648	PK Nail w/ 1.5" brass washer
0037	100056.641	498077.735	2856.086	PK Nail w/ 1.5" brass washer
0038	99599.609	497370.366	2704.379	2" Al. Cap CAJE LS 29431
0039	99382.069	496883.910	2808.716	PK Nail w/ 1.5" brass washer
0040	99188.126	496800.617	2720.424	2" Al. Cap CAJE LS 29431
0041	99146.725	497089.193	2721.857	1.5" Al. Cap CAJE
0042	98395.041	497267.449	2806.138	PK Nail w/ 1.5" brass washer
0043	98466.590	497319.759	2764.628	2" Al. Cap CAJE LS 29431
0044	98525.963	497542.103	2877.472	12" Spike
0045	97618.928	497228.483	2833.733	12" Spike
0046	97722.537	497649.513	2859.878	12" Spike
0047	97510.062	497652.602	2870.084	12" Spike
0100	107587.622	504399.470	2798.815	12" Spike
0101	106191.286	505341.797	2563.693	2" Al. Cap CAJE LS 29431 PP101
0102	105406.763	502342.564	2572.294	2" Al. Cap CAJE LS 29431
0103	103220.620	501189.629	2604.806	CDOT 3.25" Al. Cap "753"
0104	102110.585	501335.054	2635.051	12" Spike
0105	100832.836	498436.181	2658.686	12" Spike
0106	98531.806	496113.449	2751.949	2" Al. Cap CAJE LS 29431
0107	97387.361	497354.918	2804.564	12" Spike

Computer File Information			Sheet Revisions			Colorado Department of Transportation			As Constructed		TOTAL SURVEY CONTROL		Project No./Code			
Creation Date:	12\10\97	Initials: ACW	(R-X)	mm/dd/yy	XXXXX	XXX	 3803 N. Main Street, Suite 300 Durango, CO 81301 Phone: (970) 385-1400 FAX: (970) 385-1410 Region 5	No Revisions:	mm/dd/yy	NH(CX) 160-2(50) Unit: 92977						
Last Modification Date:	1\11\00	Initials: ACW	(R-X)	mm/dd/yy	XXXXX	XXX		Revised:	mm/dd/yy							
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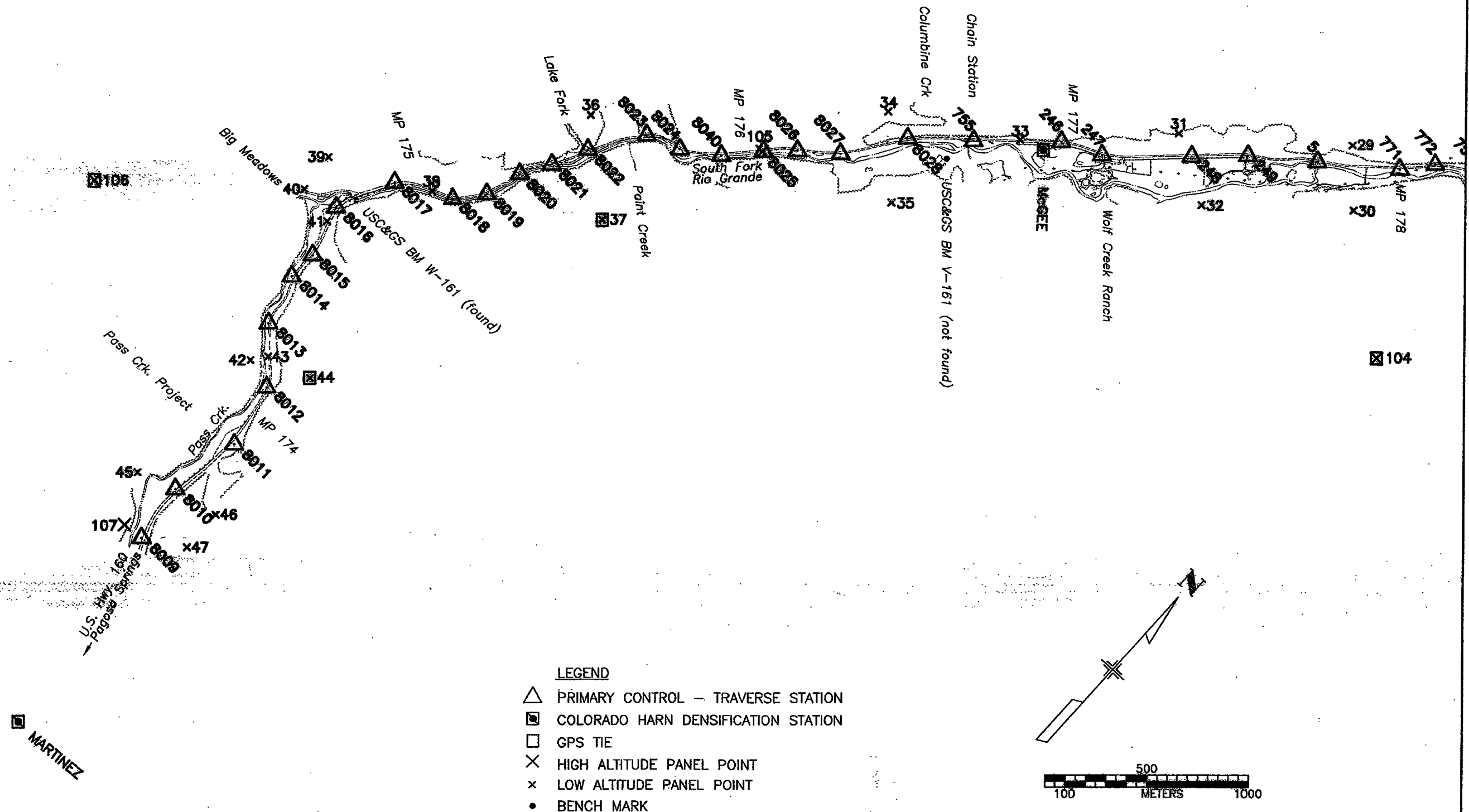
Colorado Department of Transportation

3803 N. Main Street, Suite 300
Durango, CO 81301
Phone: (970) 385-1400
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Region 5

TOTAL SURVEY CONTROL DIAGRAM

U.S. HWY. 160 MP 173.8 to MP 181.2

RIO GRANDE COUNTY
SECTIONS 17, 18, AND 20, T. 38 N., R. 3 E., N.M.P.M.
MINERAL COUNTY
R. 2 E., N.M.P.M.



LEGEND

- △ PRIMARY CONTROL — TRAVERSE STATION
- COLORADO HARN DENSIFICATION STATION
- GPS TIE
- × HIGH ALTITUDE PANEL POINT
- x LOW ALTITUDE PANEL POINT
- BENCH MARK

Computer File Information

Creation Date: 12/10/97 Initials: ACW
Last Modification Date: 1/11/00 Initials: ACW
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Sheet Revisions

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5	mm/dd/yy	XXXXX	XXX

Colorado Department of Transportation



Region 5

3803 N. Main Street, Suite 300
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As Constructed

No Revisions: mm/dd/yy
Revised: mm/dd/yy
Void: mm/dd/yy

TOTAL SURVEY CONTROL DIAGRAM

Project No./Code

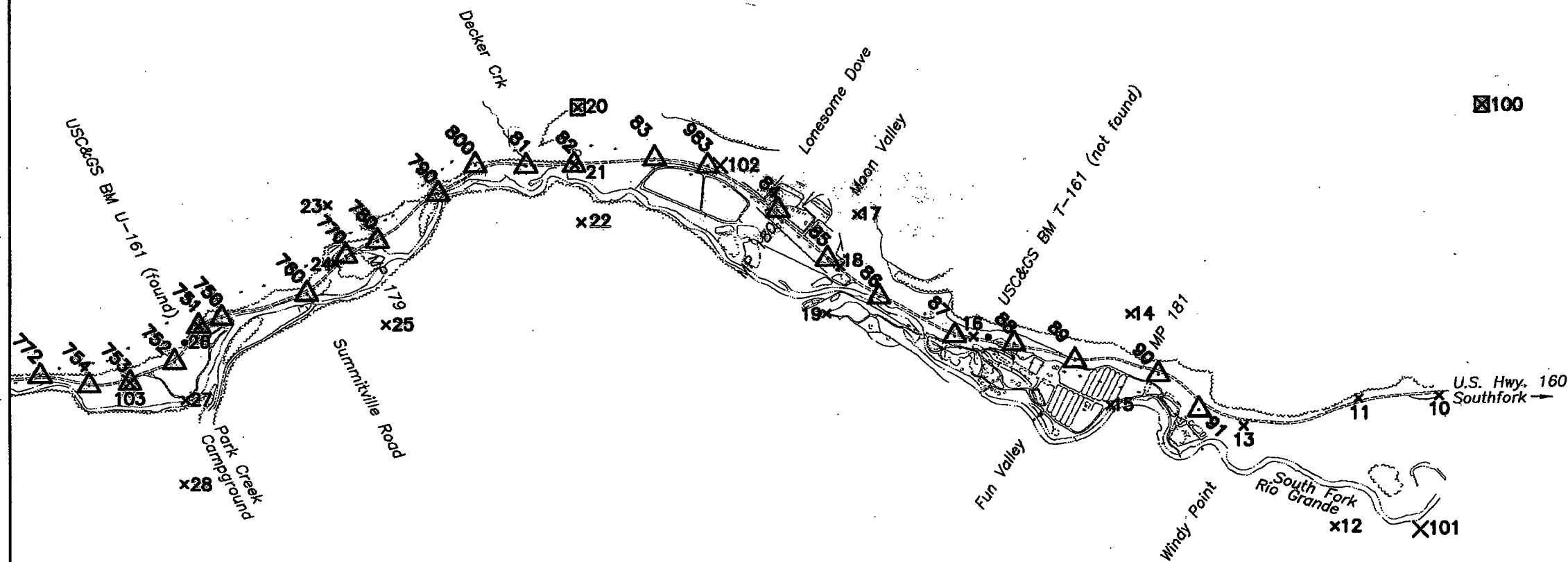
NH(CX) 160-2(50) Unit:

92977

Sheet Subset: T.S.C. Subset Sheets: 3 of 4

Sheet Number 3B

TOTAL SURVEY CONTROL DIAGRAM
 U.S. HWY. 160 MP 173.8 to MP 181.2
 RIO GRANDE COUNTY
 SECTIONS 17, 18, AND 20, T. 39 N., R. 3 E., N.M.P.M.
 MINERAL COUNTY
 R. 2 E., N.M.P.M.



RIGHT OF WAY AND MONUMENTATION SHEET

M.P. 173.79 TO M.P. 174.85

TABULATION OF PROPOSED R.O.W. MARKERS

Point	Northing	Easting	Station	Offset	Type/Description
101	320943.9683	1632166.2926	17+04.99	99.99	Right NOT SET
101W	320954.5700	1632097.1090	17+04.99	30.00	Right TYPE 1 RM 70FT 101
102	322201.9421	1632154.7931	29+36.24	99.99	Right NOT SET
102W	322189.2540	1632080.8730	29+36.27	24.99	Right TYPE 1 RM 75FT 102
103	322812.9044	1632049.7211	35+36.73	124.99	Right NOT SET
103W	322761.6890	1631903.4020	35+36.74	30.03	Left TYPE 1 RM 155FT 103
103W	322783.1910	1631964.7570	35+36.76	34.98	Right TYPE 1 RM 90FT 103
104	323358.7037	1631756.7178	40+98.71	125.00	Right NOT SET-Tunnel
105	323464.4078	1631648.1629	42+58.71	125.00	Right NOT SET-Tunnel
106	323580.5861	1631547.9339	44+18.71	125.00	Right NOT SET-Tunnel
107	324057.1882	1631297.6868	50+08.64	125.00	Right NOT SET
107W	324031.3950	1631211.4850	50+08.61	35.02	Right TYPE 1 RM 90FT 107
108	324205.6566	1631258.9586	51+68.64	125.00	Right NOT SET
108W	324183.3020	1631166.6830	51+68.68	30.05	Right TYPE 1 RM 95FT 108
109	324430.5010	1631204.3916	54+00.01	125.00	Right NOT SET
109W	324408.0940	1631112.0670	54+00.01	29.99	Right TYPE 1 RM 95FT 109
110	324618.9631	1631132.9284	56+00.01	100.00	Right NOT SET
110W	324602.4710	1631064.9120	56+00.02	30.01	Right TYPE 1 RM 70FT 110
110W	324589.7160	1631012.4020	56+00.01	24.03	Left TYPE 1 RM 124FT 110
111	325131.9917	1631008.4227	61+27.93	100.00	Right NOT SET
111W	325130.7750	1631003.5820	61+27.89	95.01	Right TYPE 1 RM 5FT 111
112	325346.8074	1630964.0253	63+57.93	100.00	Right NOT SET
113	325900.7047	1631049.9523	69+83.52	100.00	Right NOT SET-See Unit 2
114	326091.9728	1631157.3461	72+13.52	100.00	Right NOT SET-See Unit 2
115	326184.0079	1631213.2546	73+21.21	100.00	Right NOT SET-See Unit 2
120	320981.8296	1631919.1762	17+04.99	150.01	Left NOT SET
120W	320964.4280	1632032.8150	17+05.00	35.04	Left TYPE 1 RM 115FT 120
121	321874.2054	1631810.4391	26+50.01	285.01	Left NOT SET
121W	321903.7480	1632119.0160	26+50.03	24.98	Right TYPE 1 RM 310FT 121
121W	321895.5630	1632033.4160	26+50.03	61.01	Left TYPE 1 RM 224FT 121
122	322168.0441	1631957.6867	29+36.24	100.01	Left NOT SET
122W	322180.7560	1632031.6050	29+36.24	25.00	Left TYPE 1 RM 75FT 122
123	322412.4824	1631915.6488	31+84.27	100.01	Left NOT SET
123W	322434.5270	1632043.7400	31+84.29	29.97	Right TYPE 1 RM 130FT 123
123W	322425.7050	1631992.5080	31+84.27	22.02	Left TYPE 1 RM 78FT 123
124	322564.8941	1631886.9142	33+44.27	100.01	Left NOT SET
124W	322592.0950	1632008.9280	33+44.29	25.00	Right TYPE 1 RM 125FT 124
124W	322581.2130	1631960.0970	33+44.29	25.03	Left TYPE 1 RM 75FT 124
125	322789.8734	1631818.3626	35+95.01	100.01	Left NOT SET
125W	322806.2760	1631860.2480	35+95.05	55.02	Left TYPE 1 RM 45FT 125
125W	322836.4570	1631937.5640	35+95.04	27.97	Right TYPE 1 RM 128FT 125
126	323418.8126	1631224.6739	44+85.01	230.01	Left NOT SET
126W	323472.0450	1631297.2410	44+84.99	140.01	Left TYPE 1 RM 90FT 126
126W	323444.2400	1631259.3060	44+85.02	187.04	Left TYPE 1 RM 43FT 126
127	323597.5179	1631120.9437	46+65.01	220.00	Left NOT SET
127W	323660.5950	1631232.3100	46+65.01	92.02	Left TYPE 1 RM 128FT 127
127W	323624.6160	1631168.8340	46+64.99	164.98	Left TYPE 1 RM 55FT 127
128	323789.6325	1631157.8898	48+05.01	100.00	Left NOT SET
128W	323808.1510	1631198.9250	48+05.02	54.98	Left TYPE 1 RM 45FT 128
128W	323845.1230	1631280.9790	48+04.98	35.02	Right TYPE 1 RM 135FT 128
129	323992.7531	1631082.1106	50+08.64	100.00	Left NOT SET
129W	324014.2240	1631153.9670	50+08.63	25.01	Left TYPE 1 RM 75FT 129
130	324152.5922	1631040.3055	51+68.64	100.00	Left NOT SET
130W	324166.7070	1631098.6550	51+68.59	39.97	Left TYPE 1 RM 60FT 130
131	324377.4366	1630985.7384	54+00.01	100.00	Left NOT SET
131W	324391.6180	1631044.0340	54+00.04	40.01	Left TYPE 1 RM 60FT 131
132	324423.6677	1630964.2285	54+50.01	110.00	Left NOT SET
132W	324456.6810	1631100.2810	54+50.00	30.00	Right TYPE 1 RM 140FT 132
132W	324442.5310	1631041.9590	54+50.01	30.02	Left TYPE 1 RM 80FT 132
133	324474.6158	1630962.1543	55+00.01	100.00	Left NOT SET
133W	324492.3080	1631035.0740	55+00.01	24.97	Left TYPE 1 RM 75FT 133
133W	324505.2860	1631088.4840	55+00.02	30.00	Right TYPE 1 RM 130FT 133
134	325084.8233	1630814.0643	61+27.93	100.00	Left NOT SET
134W	325097.7720	1630867.5640	61+27.90	44.96	Left TYPE 1 RM 55FT 134
135	325320.3431	1630765.7840	63+57.93	100.00	Left NOT SET
136	325315.0503	1630726.1357	63+57.93	140.00	Left NOT SET
137	326003.0431	1630832.8651	69+83.52	140.00	Left NOT SET-See Unit 2
138	325985.9867	1630869.0463	69+83.52	100.00	Left NOT SET-See Unit 2
139	326195.8093	1630986.4133	72+13.52	100.00	Left NOT SET-See Unit 2
140	326287.8445	1631042.3219	73+21.21	100.00	Left NOT SET-See Unit 2

SURVEY CONTROL POINT TABULATION

POINT NUMBER	NORTH (M)	EAST (M)	ELEVATION (M)
PNT 8009	97396.017	497459.573	2794.771
PNT 8010	97682.824	497419.044	2976.484
PNT 8011	98038.352	497485.523	2797.455
PNT 8012	98349.840	497414.686	2771.569
PNT 8013	98587.576	497210.673	2755.423
PNT 8014	98833.614	497141.904	2740.209
PNT 8015	98977.810	497148.595	2731.045
PNT 8016	99226.341	497075.832	2719.046
PNT 8017	99507.655	497206.530	2707.463
PNT 8027	101082.621	498726.080	2646.866
PNT 8028	101357.489	498917.232	2629.794

SURVEY CONTROL POINT TABULATION (CONVERTED TO IMPERIAL UNITS)

POINT NUMBER	NORTH (FT)	EAST (FT)	ELEVATION (FT)
319540.0987	1632081.9469	9169.1778	
320481.0647	1631948.9781	9765.3479	
321647.4928	1632167.0846	9177.9836	
322669.4330	1631934.6802	9093.0559	
323449.4052	1631265.3475	9040.0836	
324256.6148	1631039.7279	8990.1630	
324729.6979	1631061.6800	8960.1035	
325545.0867	1630822.9567	8920.7367	
326468.0310	1631251.7550	8882.7348	
331635.2320	1636237.1453	8683.9262	
332537.0281	1636864.2832	8627.9158	

BASIS OF BEARINGS (CONVERTED TO IMPERIAL UNITS)

ALL OF THE PROJECT CONTROL IS BASED ON A COMMON BASIS OF BEARING ORIGINATING AT TWO FHWA CONTROL POINTS NEAR MP 183 AND CARRIED BY CONVENTIONAL TOTAL-STATION ANGLE & DISTANCE TRAVERSE. THE ORIGINAL BEARING IS A LINE BETWEEN FHWA T-70 (OBLITERATED) AND FHWA T-69 (OBLITERATED). REFERENCE BEARING: S. 35°54'55" W.

GROUP 3 (MP 174.9 TO 176.7): A LINE BETWEEN PROJECT CONTROL POINT NO. 8027 (A CDOT 3.25" AL. CAP) AND PROJECT CONTROL POINT NO. 8028 (A CDOT 3.25" AL. CAP). REFERENCE BEARING N. 34°48'58" E., 334.801 METERS. (1098.43')

BASIS OF ELEVATIONS (CONVERTED TO IMPERIAL UNITS)

ALL ELEVATIONS ARE BASED ON TIES TO USC&GS BM U-161 FOUND IN THE PROJECT CORRIDOR. THE DATUM USED WAS NGVD 29 ELEVATIONS IN FEET AS LISTED ON THE NGS DATUM SHEETS PRIOR TO CURRENT NAVD 88 DATUM SHEETS. THE UNITS WERE CONVERTED TO METRIC USING THE U.S. SURVEY FEET TO METRIC FACTOR.

GROUP 2 (MP 179.4): BASED ON TIE TO USC&GS BM U-161 (BRASS DISK IN CONCRETE). REFERENCE ELEVATION: 2596.895M (8519.98'). BENCH LEVELS RUN 1995 BY CDOT FORCES.

GROUP 3 (MP 174.9 TO 176.7): BASED ON GROUP 2 CONTROL POINT NO. 755 (CDOT TYPE 1). REFERENCE ELEVATION: 2624.376M (8610.14'). BENCH LEVELS RUN 1997 BY CONSULTANT.

GENERAL NOTES

- THIS CONTROL SURVEY IS NOT A BOUNDARY SURVEY OR RIGHT-OF-WAY SURVEY AND IS PREPARED FOR THE USE OF THE COLORADO DEPARTMENT OF TRANSPORTATION AND THEIR DESIGNATED CONSULTANTS.
- 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 ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
- NO WARRANTY IS IMPLIED OR EXPRESSED UNLESS THIS SHEET BEARS THE ORIGINAL SIGNATURE(S) AND SEAL(S) OF ALL OF THE PROFESSIONAL LAND SURVEYOR'S IN RESPONSIBLE CHARGE FOR THEIR PART OF THE SURVEY WORK AS INDICATED BY THE SIGNATURE BLOCKS.
- FIELD SURVEY WAS ESTABLISHED BY CONVENTIONAL TOTAL-STATION ANGLE AND DISTANCE MEASUREMENTS. RAW DATA PRECISION IS COMPUTED TO EXCEED 1:20000 OR MEET THE MINIMUM HORIZONTAL CONTROL TOLERANCES OF A TYPE B SURVEY AND THE VERTICAL CONTROL ACCURACY AS LISTED IN THE COLORADO DEPARTMENT OF TRANSPORTATION SURVEY MANUAL CHAPTER 3 (REV. 4/29/92).
- IT IS POSSIBLE THAT SOME OF THE SUVERY CONTROL MONUMENTS LISTED ARE SUBJECT TO MOVEMENT, HAVE BEEN DISTURBED, OR HAVE BEEN OBLITERATED. IT IS THE USER'S RESPONSIBILITY TO VERIFY THE EXISTENCE AND STABILITY OF THE CONTROL MONUMENTS.
- ALL COORDINATES LISTED ARE PROJECTED COORDINATES ONLY. COORDINATES ARE DETERMINED FROM TRAVERSE CALCULATIONS AND ARE NOT DERIVED FROM GPS OBSERVATIONS.
- THE CONVERSION FACTOR USED FOR ALL COORDINATES AND ELEVATIONS AND DISTANCES USED IS "ONE METER EQUALS 3937/1200 FEET". AS PER COLORADO REVISED STATUES 38-62-103(2).

QUANTITY OF MONUMENT TO BE SET

CAP TYPE	MONUMENT TYPE							
	1	1A	2	2A	3	3A	4	5
REFERENCE	34							
RIGHT OF WAY	3							
CONTROL								
ALIQUOT CORNER								
PER/EASEMENT								
Right of Way Monumentation under my control.								
NAME	Carter Burgess, P.L.S. 24942							
DATE	11/16/06							

Carter Burgess

Computer File Information

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Last Modification Date: 4/25/2006	Initials: DMW
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Drawing File Name: ...wce041.10c	
Units: English	

Index of Revisions

3/2006	Set ROW Monuments	C:B/jum

Colorado Department of Transportation

	1205 WEST AVE BOX "C" ALAMOSA, CO 81101 PHONE: 719-589-4251 FAX: 719-589-3149
Region Number V	

As Constructed

No Revisions:
Revised:
Void:

WOLF CREEK PASS EAST

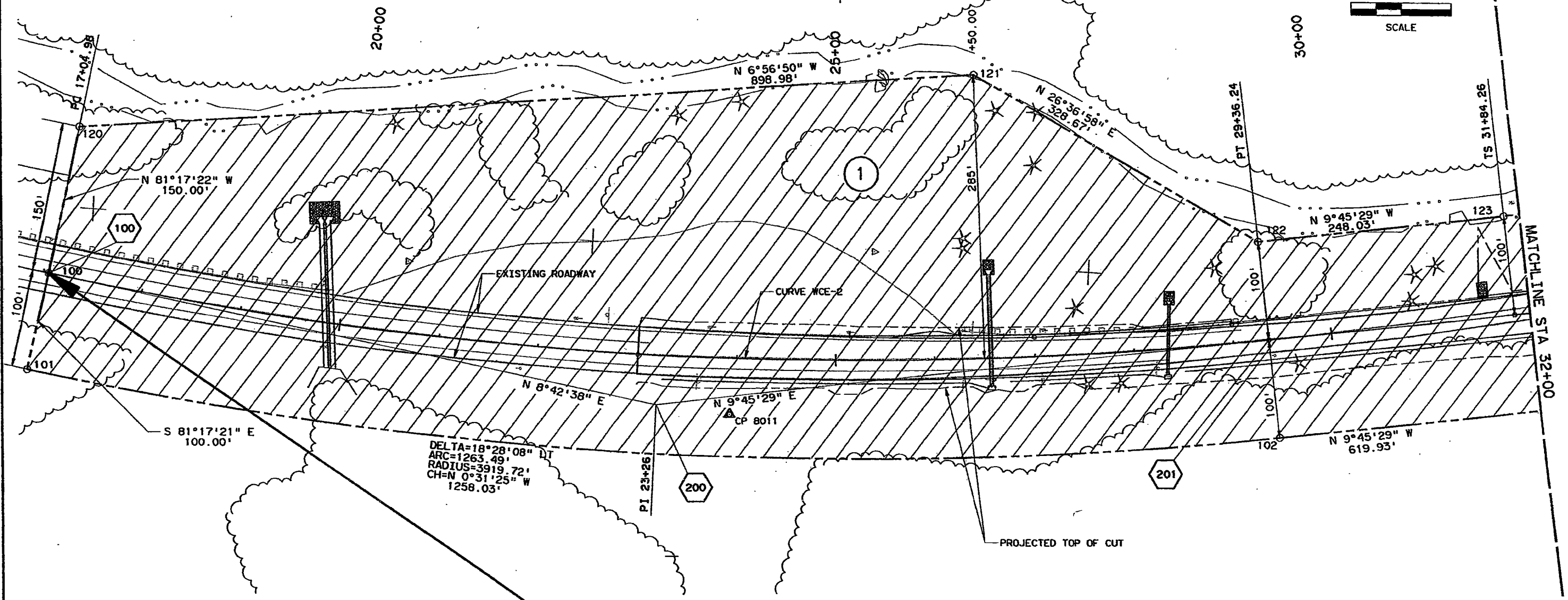
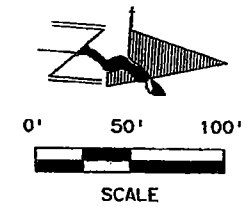
RIGHT OF WAY MONUMENTATION TABULATION
Designer: M. SCHNIEDER
Detailer: C. GILBERT
Drawing Number: 4 of 9

Project No./Code

NH(CX)160-2(50)UNIT1
92977
Sheet Number 4

4/25/2006 8:21:13 AM k:\072138 Wolf Creek Row\dgn\wce041.10c

T.38-N, R-2-E, NMPM PROJECTED



CURVE WCE-2
 PI STA = 23+25.99
 $\Delta = 18^\circ 28' 07.83''$ LT.
 $D = 1^\circ 30' 00.00''$
 $T = 621.01$
 $L = 1231.26$
 $R = 3819.72$

STA 17+04.98 BEGIN R.O.W. NH(CX) 160-2(50)
 APPROX. STA 379+72± ON PROJ. FC160-2(42)
 M.P. 173.79

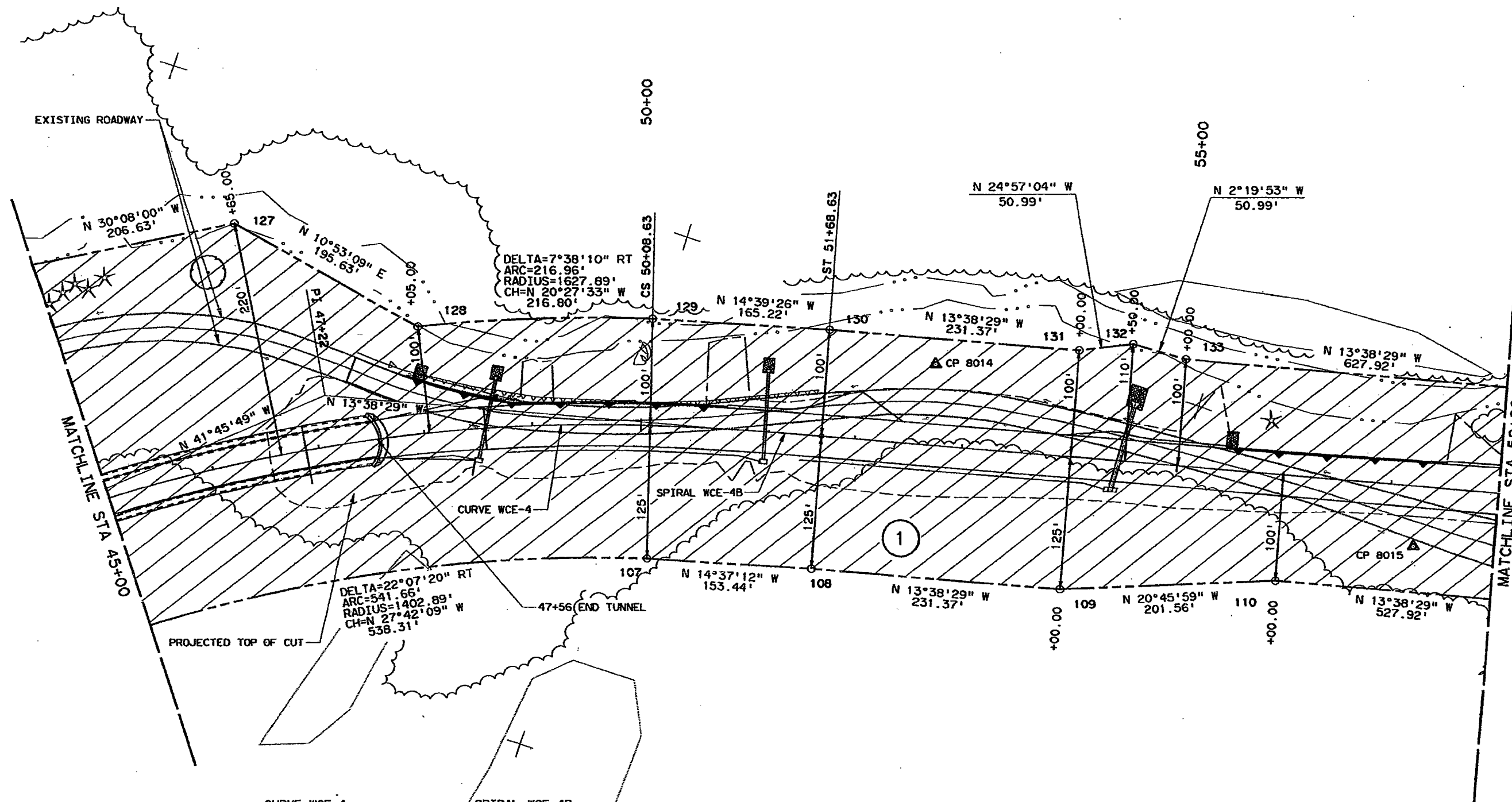
① UNITED STATES FOREST SERVICE

Carter Burgess

Computer File Information		Index of Revisions		Colorado Department of Transportation		As Constructed	WOLF CREEK PASS EAST		Project No./Code	
Creation Date:	9/21/99 Initials: CJG	☐			1205 WEST AVE BOX "C" ALAMOSA, CO 81101 PHONE: 719-589-4251 FAX: 719-589-3149	No Revisions:	RIGHT OF WAY BEGIN TO STA 32+00		NH(CX)160-2(50)UNIT1	
Last Modification Date:	19 JAN 2000 Initials: CJG	☐				Revised:			92977	
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	Units: English	☐			Region Number V	JJS			Sheet Number 5	

19 JAN 2000 15:11:45 u:\cad\civil\phase1\wce100.10t

T.38-N, R-2-E, NMPM PROJECTED



CURVE WCE-4
 PI STA = 47+21.55
 $\Delta = 22^{\circ}07'20.22''$ RT.
 $D = 3^{\circ}45'00.00''$
 $T = 298.68$
 $L = 589.93$
 $R = 1527.89$

SPIRAL WCE-4B
 $L = 160.00$
 $\Theta = 3^{\circ}00'00.00''$ RT.
 $LT = 106.68$
 $ST = 53.35$
 $X = 159.96$
 $Y = 2.79$

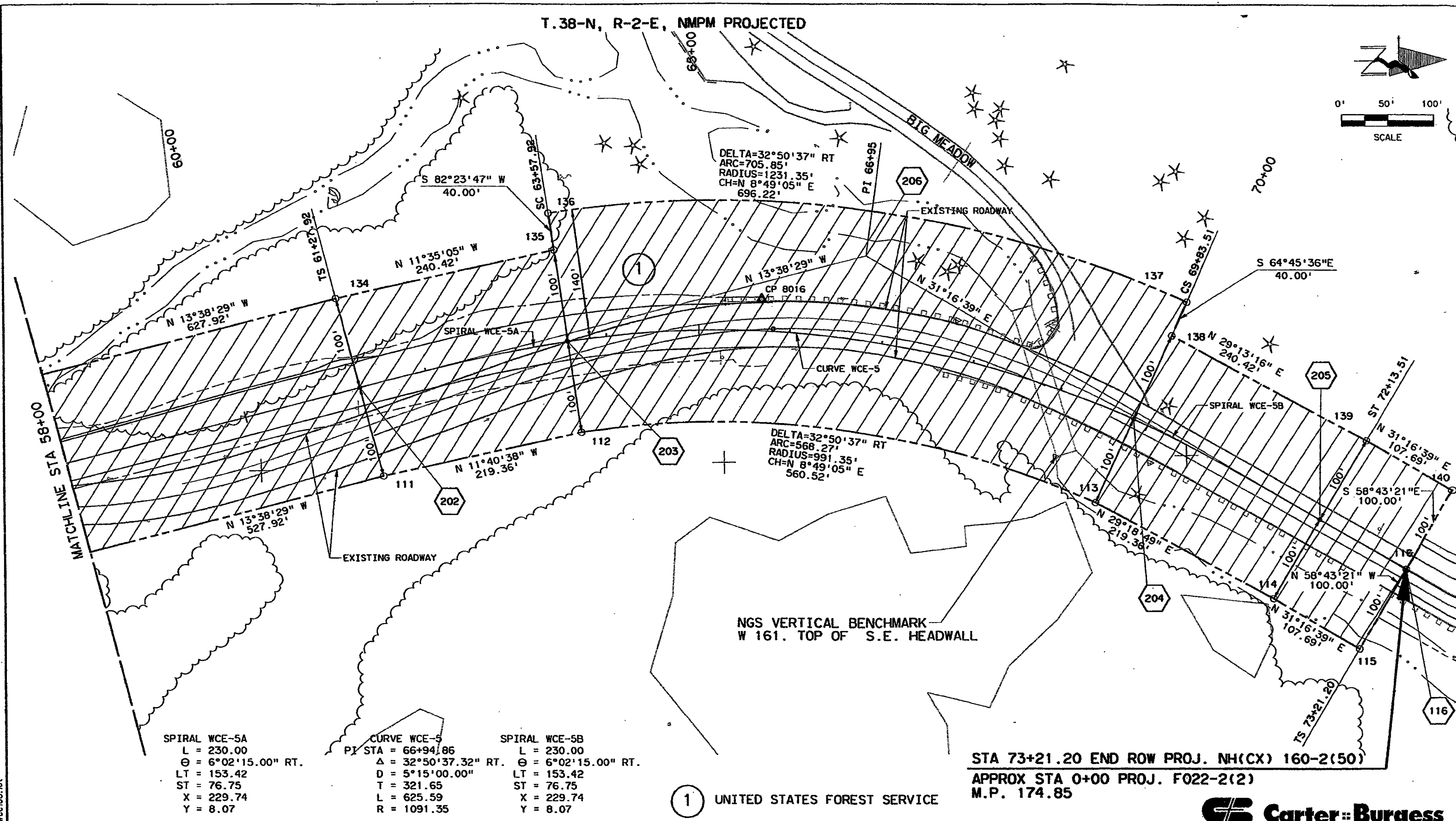
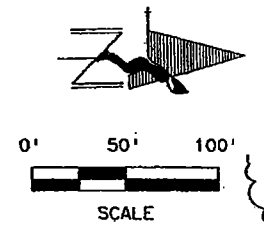
① UNITED STATES FOREST SERVICE

Carter-Burgess

Computer File Information		Index of Revisions		Colorado Department of Transportation		As Constructed	WOLF CREEK PASS EAST			Project No./Code
Creation Date: 9/21/99	Initials:	CJG		 1205 WEST AVE BOX "C" ALAMOSA, CO 81101 PHONE: 719-589-4251 FAX: 719-589-3149	Region Number V	No Revisions:	RIGHT OF WAY FROM STA 45+00 TO STA 58+00			NH(CX)160-2(50)UNIT
Last Modification Date: 19 JAN 2000	Initials:	CJG				Revised:				92977
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	Units: English				JJS					

19 JAN 2000
 15:12:00
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T.38-N, R-2-E, NMPM PROJECTED



SPIRAL WCE-5A
L = 230.00
θ = 6°02'15.00" RT.
LT = 153.42
ST = 76.75
X = 229.74
Y = 8.07

CURVE WCE-5
PI STA = 66+94.86
Δ = 32°50'37.32" RT.
D = 5°15'00.00"
T = 321.65
L = 625.59
R = 1091.35

SPIRAL WCE-5B
L = 230.00
θ = 6°02'15.00" RT.
LT = 153.42
ST = 76.75
X = 229.74
Y = 8.07

1 UNITED STATES FOREST SERVICE

STA 73+21.20 END ROW PROJ. NH(CX) 160-2(50)
APPROX STA 0+00 PROJ. F022-2(2)
M.P. 174.85

Carter-Burgess

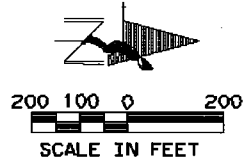
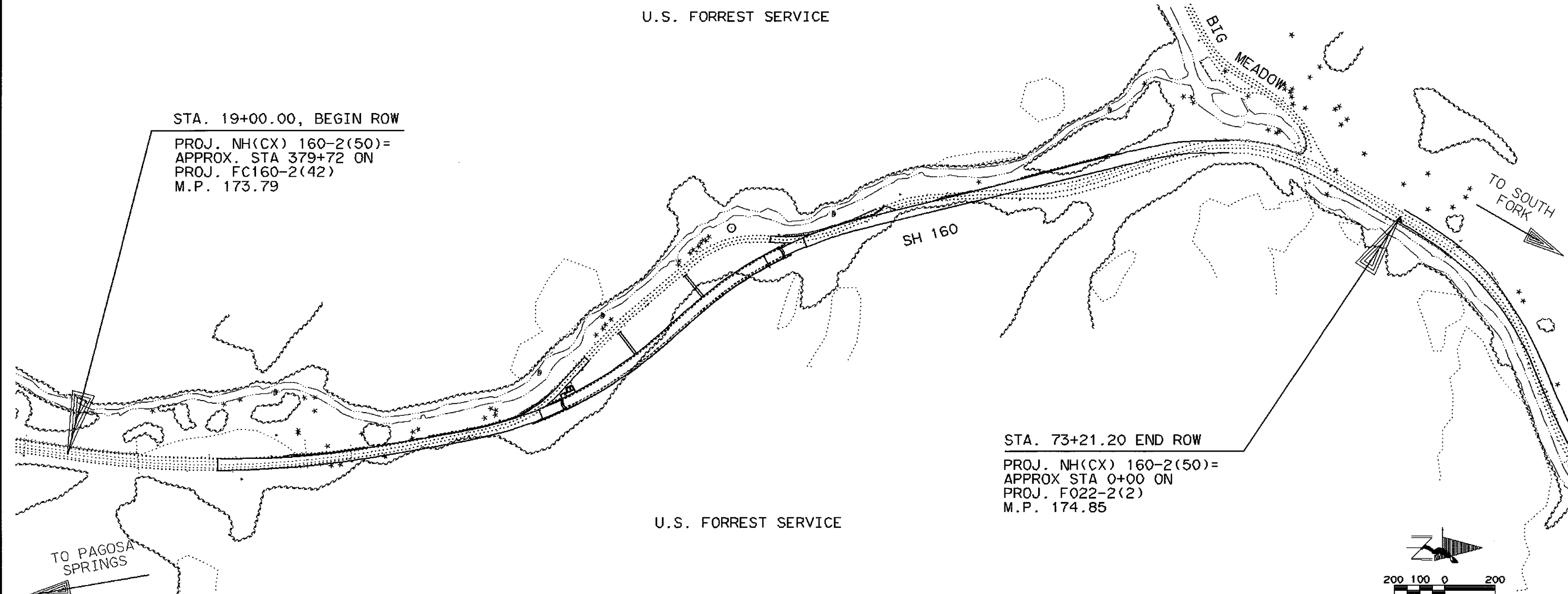
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AS CONSTRUCTED		GTS	FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.
NO REVISIONS	REVISED		VIII	COLO.		

RIGHT OF WAY
WOLF CREEK PASS EAST

REVISIONS	



T-38-N, R-2-E
PROJECTED
Carter-Burgess

Computer File Information			Index of Revisions			Colorado Department of Transportation  1205 WEST AVE BOX "C" ALAMOSA, CO 81101 PHONE: 719-589-4251 FAX: 719-589-3149 Region Number V JJS	As Constructed		WOLF CREEK PASS EAST		Project No./Code	
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Last Modification Date: 4/25/2006	Initials: DMM	☐					Revised:	Designer: M. SCHNIEDER		92977		
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