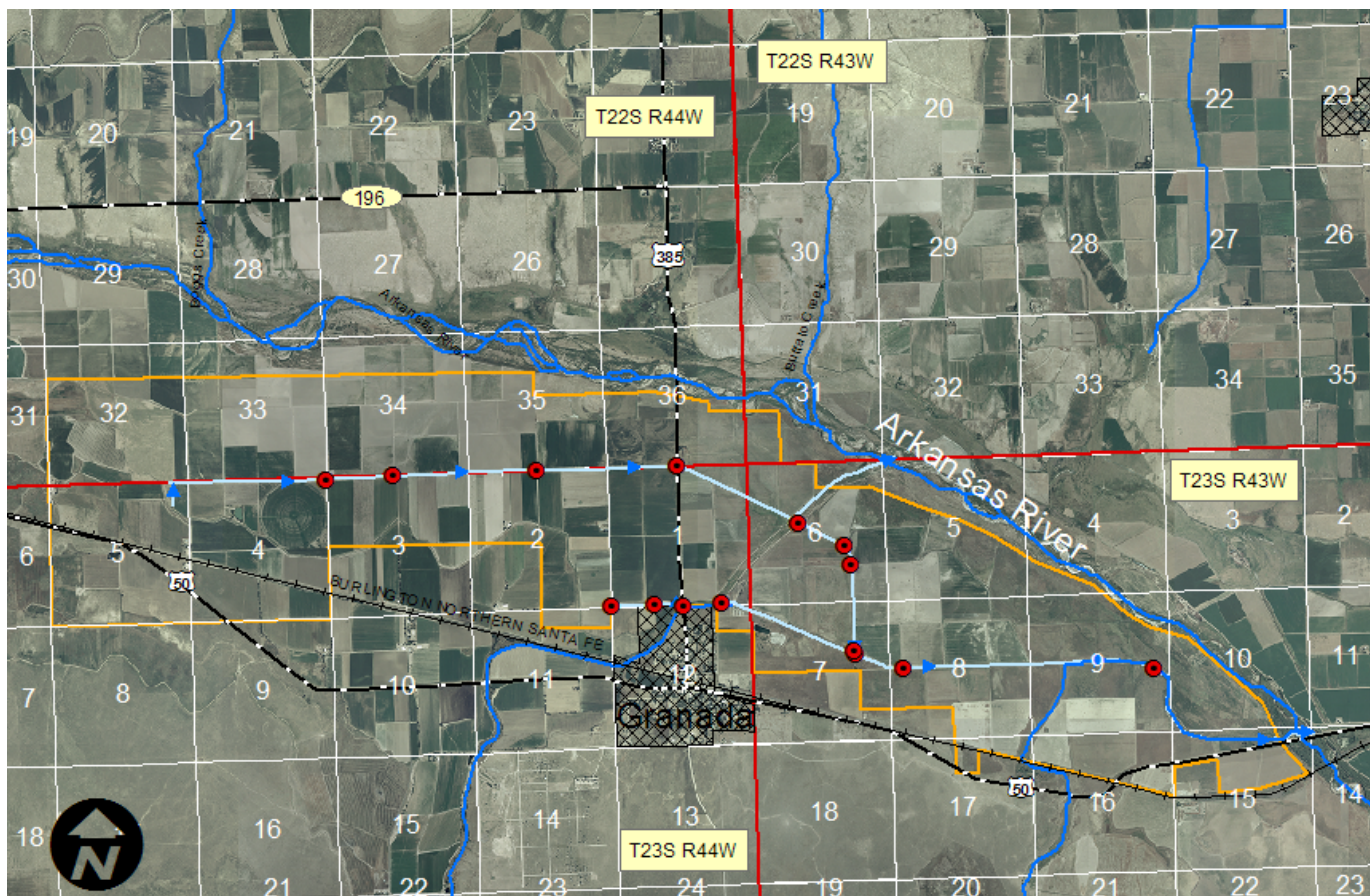


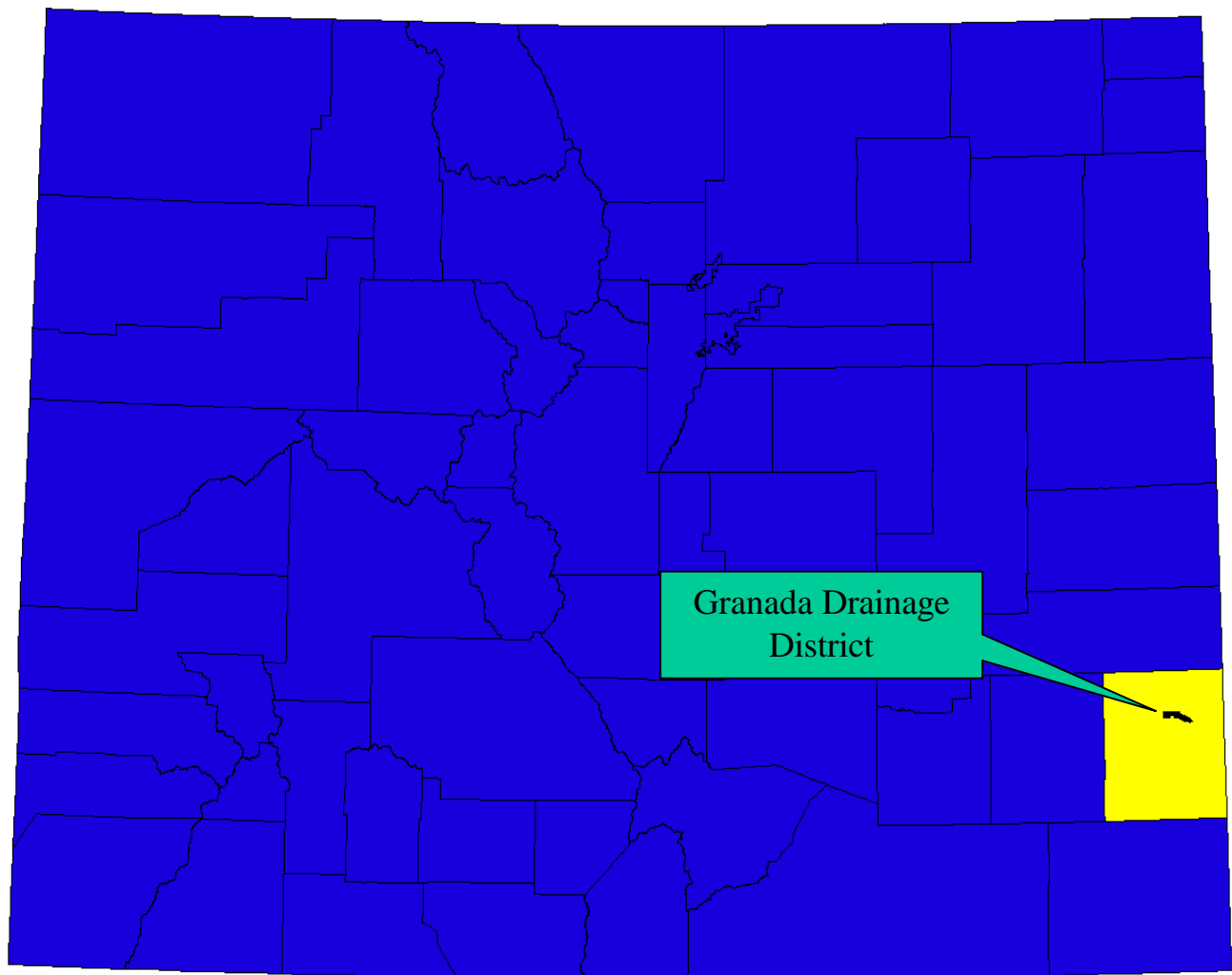
Granada Drainage District System Inventory



May 13, 2009










Prepared with the assistance of Bill Grasmick and Walter Epley
The Lower Arkansas Valley Drainage System Rehabilitation Study
Colorado State Univ., Dr. John Wilkins-Wells, Sociology Water Lab
Clark Building B258, Fort Collins, CO 80523 Ph: 970-491-5635

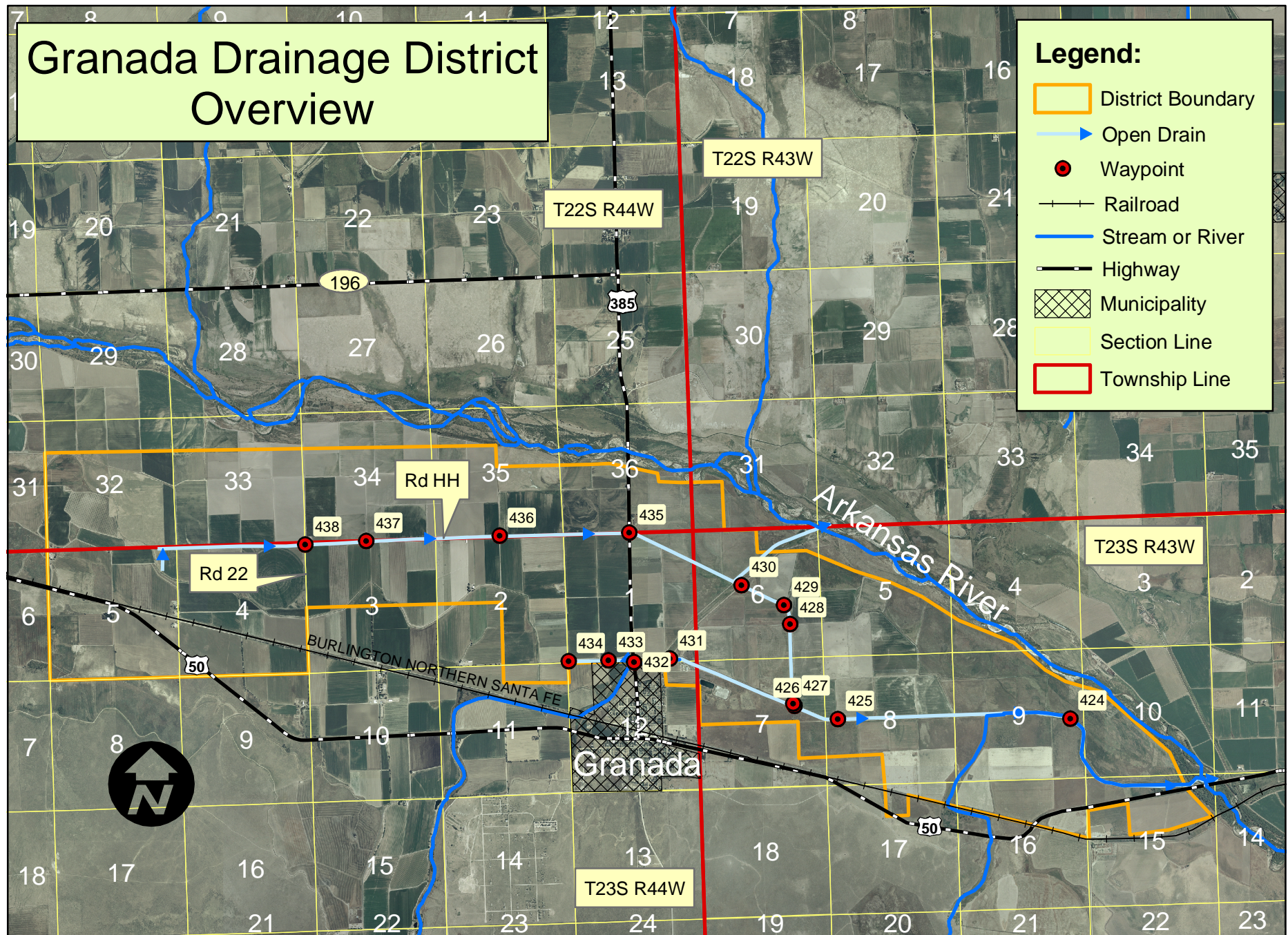
Location of Granada Drainage District in Colorado and Prowers County

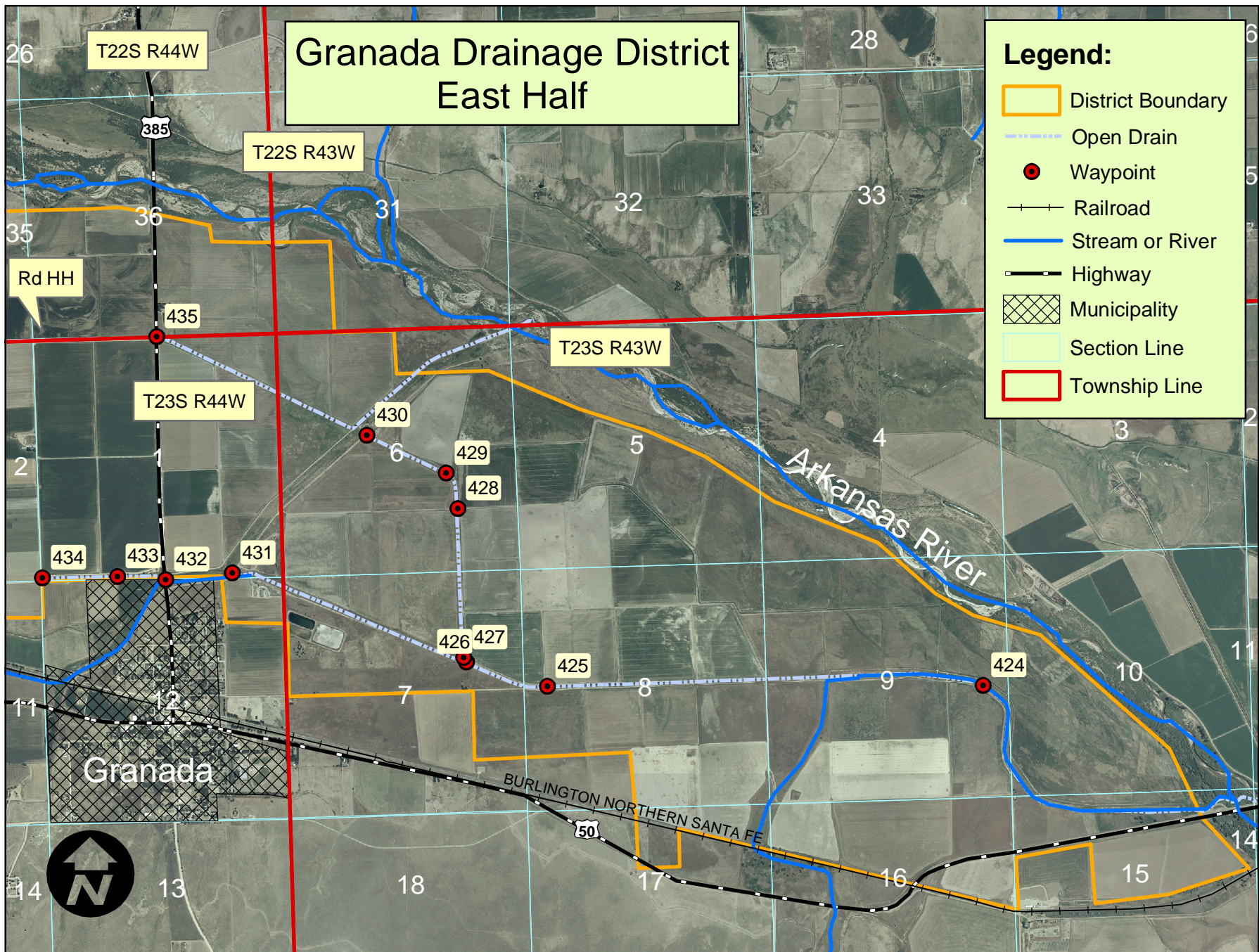


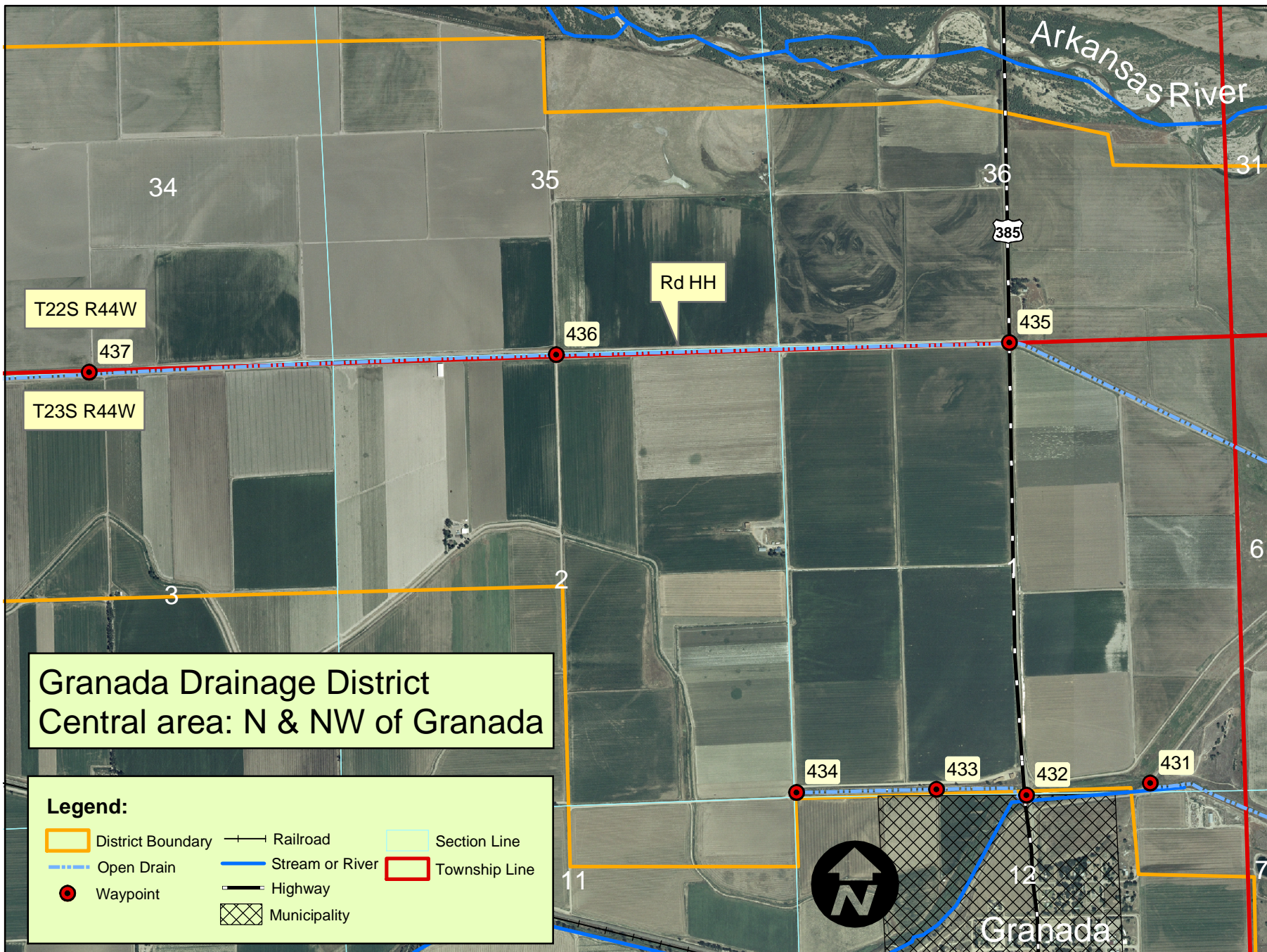
Granada Drainage District Overview

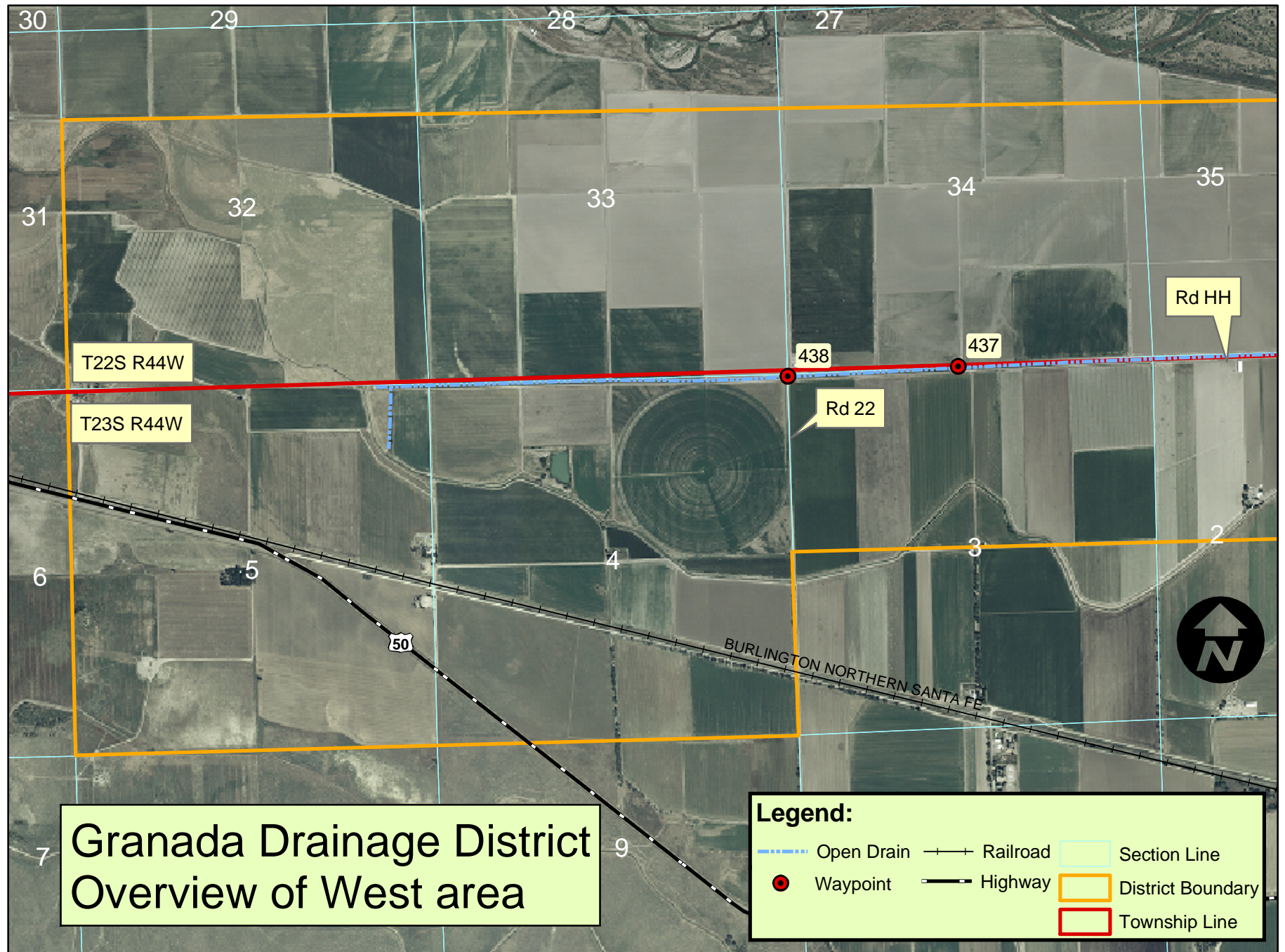
Legend:

-  District Boundary
-  Open Drain
-  Waypoint
-  Railroad
-  Stream or River
-  Highway
-  Municipality
-  Section Line
-  Township Line









Granada Drainage District
Close-up of Waypt. 430

Legend:

Open Drain

Waypoint

T23S R43W





430

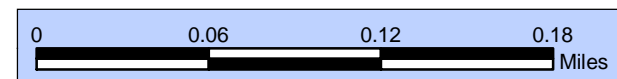
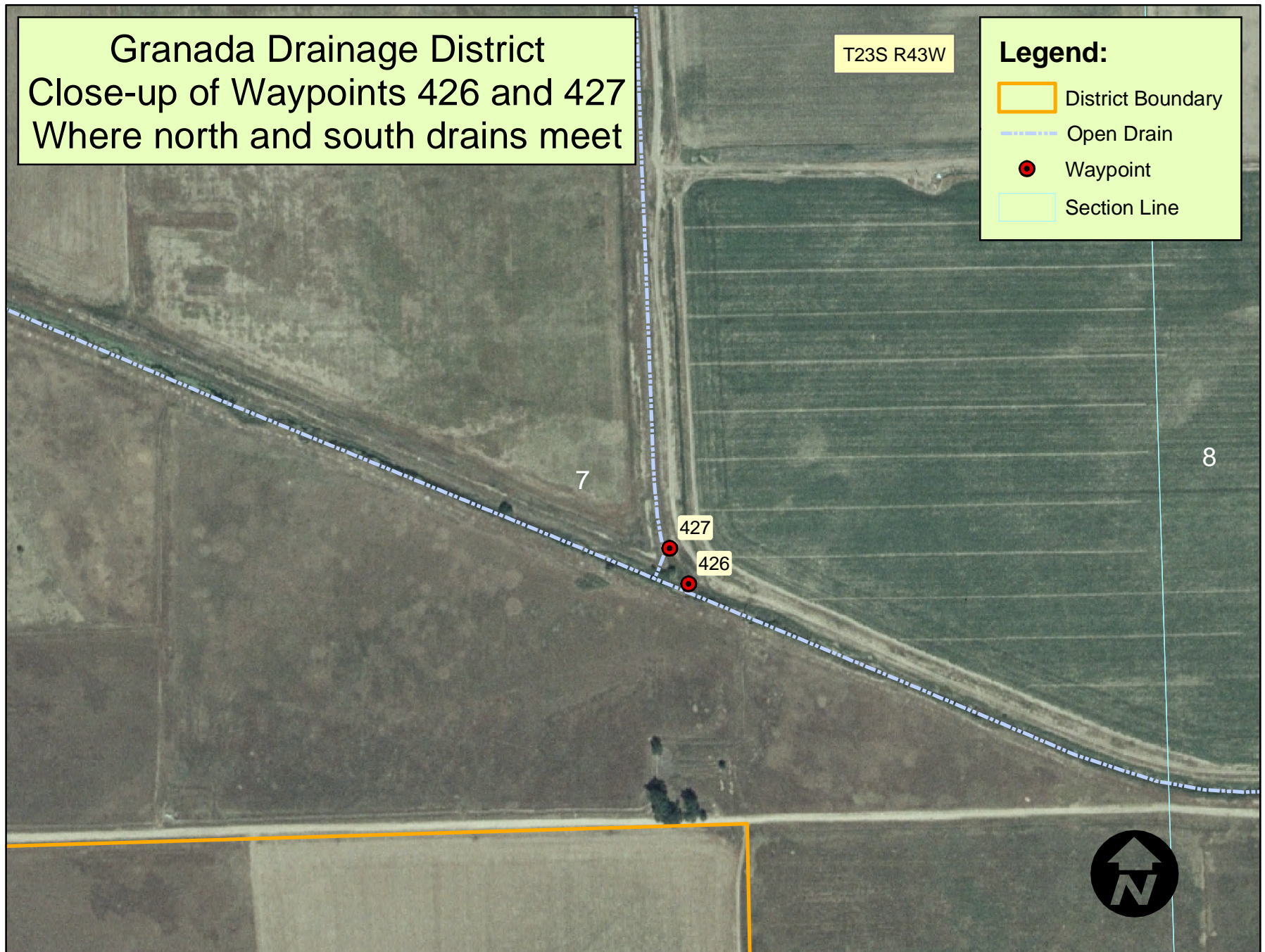


Granada Drainage District
Close-up of Waypoints 426 and 427
Where north and south drains meet

T23S R43W

Legend:

-  District Boundary
-  Open Drain
-  Waypoint
-  Section Line



Drainage District Infrastructure notes on the Granada Drainage District located in Prowers County, Colorado. This district includes all or parts of Sections 31 of T22S, R43W, Sections 4-10, and 15 - 17 of T23S, R43W, and Sections 32 – 36 of T22S, R44W and all or parts of Sections 1-5, 11, and 12 of T23S, R44W.

Key waypoints and notes were taken on August 11, 2007, and August 13, 2007. We used the Garmin GPSmap76 handheld unit with a backpack differential correction unit for the waypoints. Waypoints and notes were done with the help of Bill Grasmick and Walter Epley.

General Notes:

1. Granada Drainage District, situated around the community of Granada, Colorado on the flat river bottom south of the Arkansas River in southeastern Colorado, maintains open drains on lands irrigated with water from the Lamar Canal, the Manvel Canal, and the X-Y Canal lying on the south edge of the district. They were originally constructed beginning in 1922.
2. For this report, we have located and identified the open drains that are functioning as district drains based on visual inspection with the assistance of Bill Grasmick. In addition, we have used information from several sources including aerial photo interpretation. Black and white aerial photos from the NRCS, and color photos for the year 2005 were used to assist in the location of the drain lines.
3. Maintenance on the open drains is conducted regularly by the district utilizing fees collected by the county assessor. Mr Grasmick indicates that the ongoing maintenance program is sufficient to meet the needs of the district. He indicated that the district is adequately drained by the open drain system.
4. The spreadsheet included at the end of these notes shows the recorded waypoint number (ident), latitude, longitude, and date and time of reading.

Waypoint Log:

Waypoint 424:

Standing on the south bank (on top of the bank) of the Granada Ditchⁱ. In cross-section, the ditch is estimated to be 10 to 15 feet deep, and 20 to 40 feet wide at the bottom. The outflow of water at the bottom of the ditch is approximately 12 feet wide flowing eastward and is estimated to be approximately 1 to 3 feet deep.

Waypoint 425:

Standing on the centerline of a bridge over the Granada Ditch, and the centerline of the Granada Ditch, where the outflow is moving eastward. The open ditch is approximately 70 feet wide at the top of the berms, and 12 feet wide at the bottom of the ditch. The water appears to be approximately 1 to 2 feet deep at the bottom of the open ditch.

Waypoint 426:

Taken at the intersection of Road FF.7 and Road 26, on the middle of the north bank of the open ditch running east-southeast-ward, called the South Granada Ditch. This point is 6 feet above the water level, and 10 feet from the north edge of the water in the ditch. The outflow is approximately 6 to 10 feet wide and 1 to 3 feet deep at this point. An open

ditch called the North Granada Ditch joins this ditch coming from straight north just west of this point. The open ditch from this waypoint southeastward is called the Granada Ditch.

Waypoint 427:

Standing on the centerline of an open ditch coming from the north, the North Granada Ditch, flowing southward into the main South Granada Ditch. The ditch is dry at this point at this time. There is a slight bend here, from a just-west-of-north orientation south of this waypoint to a straight north-south orientation north of this waypoint. The open ditch is 6 feet wide at the bottom of the ditch at this location, and approximately 25 wide at the top of the berm. Overall, the ditch is 6 to 12 feet deep below the surrounding groundlevel.

Waypoint 428:

Taken on the centerline of the North Granada Ditch, an open north-south oriented ditch and the centerline of a field road with a culvert. The open ditch here is approximately 30 feet wide at the top of the berm, and the bottom of the ditch is approximately 6 feet below the level of the surrounding ground. The bottom is 8 to 10 feet below the top of the berm. There is no water in the ditch at this time, and the flow direction here is southward.

Waypoint 429:

Taken on top of the north bank of the open North Granada Ditch coming from the northwest. This point is taken at the beginning of a curve from a northwest-southeasterly orientation to a north-south orientation. This waypoint is "in-line" with the centerline of the portion above it to the northwest of here. The open ditch is 20 to 25 feet wide at the top, 6 feet wide at the bottom, which is approximately 4 – 6 feet below the surrounding ground level. The bottom of the ditch is approximately 12 feet below the top of the berm.

Waypoint 430:

Taken over the centerline of the open northwest-southeast oriented North Granada Ditch at the head or beginning of the ditch. It had previously been a continuous ditch, extending several miles to the north and west of here, but was cut off by the construction of the Wolf Creek drain. Water is standing in the open North Granada Ditch to the northwest of the Wolf Creek drain. The open ditch at this waypoint is approximately 10 to 20 feet below the surrounding ground level on the north side, and 6 to 12 feet below ground level on the opposite – or south side. From this waypoint, it begins again draining groundwater toward the southeast.

Waypoint 431:

Taken on the centerline of a field road running parallel to and along the southeast side of the northeast-southwest oriented Wolf Creek drain, and the northwest-southeasterly oriented centerline of the open South Granada Ditch which begins again after having merged with the Wolf Creek Drain about 1/4 mile to the west of this waypoint. The ditch, thusly oriented for approximately 100 feet, then runs due eastward. The flow direction at this waypoint of the South Granada Ditch is to the east.

Waypoint 432:

Taken on a bridge directly over the centerline of the South Granada Ditch at an approximate point where it merges with the Wolf Creek drain (toward the north edge of it). The Wolf Creek drain comes to this point from the southwest.

Waypoint 433:

Taken on the centerline of a north-south field road directly over the centerline of the east-west oriented South Granada Ditch. The bottom of the open ditch at this location is approximately 12 to 20 feet below the surrounding ground level. It is approximately 30 feet wide at the top. Water is flowing eastward at this point at the bottom of the ditch, and is approximately 1 – 2 feet deep and 4 feet wide.

Waypoint 434:

This waypoint, standing on the top of the end of the open South Granada Ditch, marks the beginning of the ditch which continues to the east from this point. Field runoff from irrigation is entering the open ditch at this time at this location.

Waypoint 435:

This waypoint is taken on the centerline of Highway 385 and the centerline of the North Granada Ditch. The ditch is oriented straight east-west to the west of this point, and in a southeasterly-northwesterly orientation to the southeast of this waypoint. The open ditch is approximately 40 feet wide at the top of the berm. The bottom of the ditch is approximately 6 to 12 feet below the surrounding ground level. Water is running toward the southeast at this point, the flow being approximately 3 feet wide, and 1 to 2 feet deep. The ditch continues from this waypoint in a southeasterly direction approximately a mile, until it meets the Wolf Creek Drain where it turns to the northeast and parallels the Wolf Creek Drain until it dumps into the Arkansas River.

Waypoint 436:

Taken on the centerline of a field road running north-south, and crossing Road HH at a right angle, which parallels the North Granada Ditch just to the north side of it. This waypoint is taken directly over the centerline of the open ditch. Water is flowing eastward at the bottom of the open ditch which is approximately 10 to 16 feet below the surrounding ground level. The flow at the bottom of the open ditch at this time is 4 to 6 feet wide, and estimated to be 1 – 3 feet deep. The ditch is 50 feet wide at the top of the berms.

Waypoint 437:

Waypoint taken on top of the north bank of the North Granada Ditch, oriented east-west at this point. The bottom of the open ditch is approximately 6 to 10 feet below the level of the surrounding ground. The ditch is approximately 40 feet wide at the top and over 6 feet wide at the bottom. Water depth is estimated to be 1 to 3 feet at this point, and flowing eastward.

Waypoint 438:

Taken on the centerline of north-south Road 22 just over the centerline of the North Granada Ditch. Road HH lies parallel to the North Granada Ditch immediately on the north side of it. Road 22 makes a very short bend just immediately north of this waypoint, to lying on the east side of the section line. Water is running eastward at the bottom of the ditch, the flow being approximately 4 – 6 feet wide and estimated to be from 1 to 3 feet deep. The bottom of the open ditch is approximately 6 to 10 feet below the surrounding ground level. The ditch at this point has banks approximately 2 feet above the surrounding ground level.

District Statistics:

Length of open drain: 63,385 feet

= 12.00 miles

Area of district: 353,505,425 square feet

Area of district: 8,115.36 acres

Following is a spreadsheet of the waypoint logs showing the waypoint number (ident), the occasion of taking the waypoint, or what it was (Type), Latitude and Longitude readings, and the date and time (Comment) when the waypoint was taken. On the page following these logs is a key to the items under "Type".

Type	Ident	Lat	Long	Comment
OpenDitch	424	38.06348545	-102.2489381	11-AUG-07 13:13
DitchRdCro	425	38.06420261	-102.2819307	11-AUG-07 13:24
OpenDitch	426	38.06580196	-102.2880241	11-AUG-07 13:34
OpenDitch	427	38.06606214	-102.288186	11-AUG-07 13:39
OpenDitch	428	38.07501124	-102.2883246	11-AUG-07 13:46
OpenDitch	429	38.07713999	-102.2891155	11-AUG-07 13:51
OpenDitch	430	38.07954887	-102.2950473	11-AUG-07 14:01
OpenDitch	431	38.07153317	-102.3055479	11-AUG-07 14:11
DitchRdCro	432	38.07126688	-102.310588	11-AUG-07 14:16
DitchRdCro	433	38.07153745	-102.3142383	11-AUG-07 14:23
OpenDitch	434	38.07156653	-102.3199195	11-AUG-07 14:29
DitchRdCro	435	38.08581166	-102.310754	11-AUG-07 14:37
OpenDitch	436	38.08584737	-102.3291845	11-AUG-07 14:45
OpenDitch	437	38.08570873	-102.3481693	11-AUG-07 14:52
DitchRdCro	438	38.08549306	-102.3568392	11-AUG-07 14:59

ArcView Field Title	Possible Entry	Explanation Key
Ident		GPS Waypoint Identification Number
Lat		Latitude of reading
Lon		Longitude of reading
Comment		Date and time of reading
Type		
	Manhole	Manhole
	ManhBur	Buried Manhole
	ObsPoint	observation point - generally vert. Pipe extending to tile line from surface
	Inlet	Inlet, or beginning of line
	TileOutlet	End of tile line dumping into seep ditch, or open drain
	BurOutl	Outlet of a tile drain that is buried beneath the surface
	OpenDitch	Open drainage ditch. Seep Ditch
	TileLoc	Location of Tile Line
	TileJunc	Loc. of Tile Junction where more than two lines meet
	TileElbow	Loc. of Elbow in tile line where line bends
	TileRdCross	Crossing of Tile Line under Road
	DitchRdCro	Crossing of Open Ditch under Road/Railroad
	CanalTileCross	Crossing of Tile Line under Canal
	RepairsCar	Location of point where tile has been repaired: generally visible soil disturbance
	Sinkhole	Loc. of place where soil has washed down into tile line, leaving an open hole
	Openhole	Open hole in ground, varying depths and sizes. Relates to tile location.
	FieldObs	Location of relevant condition observed in the field relating to the possible location of tile lines or open ditch.
	SurfDrainStr	Structure for drainage of surface water. May be culvert, or similar structure.

Walter F. Epley
Research Assistant
Colorado State University
Sociology Water Lab
B258 Clark Building
Fort Collins, CO 80523
Phone Off: 970-491-5635
Cell: 303-842-0265

ⁱ Source for the location and name of ditches includes Google Maps (<http://maps.google.com>).

/ SUMMARY OF DRAINAGE DISTRICTS

STATE Colorado

WATER DISTRICT OR AREA No. 67

DATE September

1942

SUMMARY OF DATA ON GRANADA DRAINAGE DISTRICT

Under Lamar, Manvel, XY and Graham Ditches

GENERAL

LOCATION: STATE Colorado COUNTY Prowers NEAR Granada

ACRES: GROSS 7900 ASSESSED 7811.5 SUSTAINING 5700

UNIT OF ASSESSMENT (1) Dollar of assessed benefits

TOTAL UNITS: ORIGINAL \$523,572 SUSTAINING \$402,000

UNITS OF ASSESSMENT PER ACRE: AVERAGE \$67 MAXIMUM \$ 110 MINIMUM \$ 20

LIABILITY FOR DISTRICT OBLIGATIONS Each tract liable for 100% of assessments levied against

LOCATION OF ASSESSMENT RECORDS Wm. Hayden, Granada, Colo. & Co. Assessor, Lamar

LAND: BAD ALKALI 17 %; SLIGHT ALKALI 28 %; HIGH WATER TABLE 15 %; TREND stable

ELEVATION 3500 FT. AVERAGE GROWING SEASON 164 DAYS April 28 TO October 10

PRECIPITATION IN INCHES: ANNUAL AVERAGE 16.05 CHARACTERISTICS OF RAINFALL 76% from 4/1 to 10/1

Erratic - maximum 24.5 in.; minimum 7.4 in.; maximum daily 4.3 in. Intense storms in summer months.

ECONOMIC & FINANCIAL CONDITIONS

GENERAL TAXES ON LAND AND IMPROVEMENTS: AVERAGE \$1 to 1.50 PER ACRE for irrig., cultivated land

CAPITAL DEBT AS OF September 1 19 42; BONDS \$ 14,000 @ 6½ % PAYABLE 19 29-38

WARRANTS \$ @ % PAYABLE 19 ; OTHER DEBTS \$ @ % PAYABLE 19

NET CAPITAL DEBT: \$, ADJUSTED TO AN EQUIVALENT 6% BASIS \$

OR \$ PER SUSTAINING (1)

B. & I. ASSESSMENTS FOR PERIOD 19 32-37 AVERAGED \$0.0263 PER (1) \$1 of ass'd benefits

O. & M. ASSESSMENTS FOR PERIOD 19 32-37 AVERAGED \$0.002 PER (1) \$1 of ass'd benefits

ESTIMATED FUTURE ANNUAL ASSESSMENTS PER SUSTAINING (1) Dollar of assessed benefits

B. & I. \$ none O. & M. \$ (1) \$0.002

HISTORY AND TREND OF DEBT AND ASSESSMENTS District issued \$90,000 of 6½% serial bonds in 19 payable 1929-1938. Assessments levied for B&I for period 1928-1937 as provided by law and no levies made since that time. Approximately \$14,000 of bonds plus accrued interest unpaid. Not a lien on district as a whole but only on those lands with unpaid assessments. O&M constant over last 10 years and approximately same levy may be anticipated in future.

THESE LANDS ARE part SUBJECT TO OTHER ASSESSMENTS BY Lamar Canal & Irrig. Co., Manvel Canal & Irrigation Co., X Y Ditch and Graham Ditch.

PHYSICAL CONDITIONSEFFECTIVENESS OF SYSTEM AND ADEQUACY OF PAST MAINTENANCE

Open drains only - 11 miles. System generally effective on lands lying south of or above the main outlet drain. Ineffective between this drain and river. Satisfactory maintenance in past.

AREA HAS not BEEN ZONED. (SEE ZONE DESCRIPTIONS IF IT HAS BEEN ZONED)

EXPECTED FUTURE ADEQUACY OF MAINTENANCE Future maintenance expected to compare favorably with that of the past and hold area in present condition. U. S. Gov't. now owns about 5200 acres in district, embracing about 90% of sustaining lands. These lands comprise part of the Granada Japanese Relocation Camp.

CHARACTER OF FLOODS (2) Flood hazard from Arkansas River very slight after completion of Caddoa Reservoir and confined only to pasture lands. Occasional flash overflow on small area along Wolf Creek.

RECOMMENDATIONS: APPRAISAL FACTORS IN (3) Percentage of assessed benefits

TOTAL DEDUCTION \$ none UNTIL 19 19

ANNUAL B. & I. \$ none ANNUAL O. & M. 0.2%

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre- district's method of assessment

(2) Supplement by attaching gage record tables where available

(3) % of assessed benefits, or % of assessed valuation, or dollars per acre

(SEE REVERSE SIDE FOR ADDITIONAL INFORMATION)
(over)

NAME OF DISTRICT **GRANADA DRAINAGE DISTRICT**

WATER DISTRICT OR AREA, No. 67

Under Lamar, Manvel, X Y and Graham Ditches

DATE OF INSPECTION September, 1942

LAND LOCATION **4½ MILES east ~~xx~~ and 5 mi. west of Granada**IN **Prowers**

COUNTY. TOWNSHIP 22,23S RANGE 43 & 44, West

ORGANIZATIONDATE OF ORGANIZATION **August 28, 1922**

UNDER LAW OF 1911 and 1919

AMENDMENTS TO ORIGINAL ORGANIZATION

ACRES: GROSS **7900**, ASSESSED **7811.5**, SUSTAINING **5700**UNIT OF ASSESSMENT (1) **Dollar of assessed benefits**TOTAL UNITS: ORIGINAL **\$523,572** SUSTAINING **\$402,000**UNITS OF ASSESSMENT PER ACRE: AVERAGE \$ **67**, MAXIMUM \$ **110**, MINIMUM \$ **20**LIABILITY FOR DISTRICT OBLIGATIONS **Each tract liable for 100% of assessments levied**NAME AND ADDRESS OF SECRETARY **Wm. Hayden, Granada, Colorado** against it

LOCATION OF ASSESSMENT RECORDS " " " " and Co. Assessor, Lamar

TYPE OF LANDGENERAL **First and second bottom land and part bordering Arkansas River.**

U.S.B.R. classification: Cl. 1- 20%; Cl. 2-63%; Cl. 5 & 6 - 17%.

TOPOGRAPHY**Gently sloping to relatively level.**SOILS: PREDOMINANT TYPES **Las Animas si.cl.l.-47%; Las A. cl.l.-15%; Manvel si.l.-25%; Prowers l.f.s. - 13%.**PER CENT OF AREA: BAD ALKALI **17%**, SLIGHT ALKALI **28%**, HIGH WATER TABLE **15 %**
TREND **stable**CLIMATEELEVATION **3500 FT.**, AVERAGE GROWING SEASON **164 DAYS April 28** TO **October 10**RAINFALL AT **Lamar** STATION **15** MILES FROM DISTRICT - **16.05 inches**LENGTH OF RECORD **53** YEARS **1889** TO **1941**, ACCURACY **good**CHARACTERISTICS OF RAINFALL **76% between 4/1 and 10/1. Erratic - maximum, 24.5"; minimum, 7.4"; maximum daily, 4.3". Intense storms in summer months.**CROPS

CROPS	% OF AREA:	CROPS	% OF AREA:	CROPS	% OF AREA:
ALFALFA	: 17	POTATOES	: :		: :
CLOVER	:	SUGAR BEETS	16 : 8		: :
OTHER HAY	:	beans	1 : 1		: :
PASTURE	: 46	truck & other	2 : 1		: :
CEREALS	: 14	roads, waste, etc.	5 :		: :
CORN	: 3		: :		: :
SORGHUMS	: 5		: :		: :

SOURCE OF INFORMATION **U.S.B.R. survey and W.C. reports** ACCURACY **fair**YIELDS AND TRENDS **Yields are spotty and range from excellent to poor. Trend away from small grain and toward corn and sorghum in last 5 years.**DISPOSITION OF CROPS **With exception of sugar beets and truck crops, the greater part of the crops raised in this district have been used for stock feeding.**ECONOMIC CONDITIONSNO. OF FARMS **21** . TENANCY APPROX. **75 %**. CONDITION OF FARM IMPROVEMENTS **generally fair - some poor.**GENERAL CHARACTER OF FARMS AND FARMERS **part of area formerly owned by American Crystal Sugar Co. and recently sold to U.S. Gov't. Is very good farm land in good condition. Remainder generally fair to poor, with same type of farmers.**GENERAL TAXES ON LAND AND IMPROVEMENTS: AVERAGE \$ **1 to 1.50** PER ACRE - **irrigated, cultivated land**
TRANSPORTATION FACILITIES **A.T. & S.F. Ry. and U.S. Highway No. 50 run through district for almost its entire length.**MARKETING FACILITIES **Beet dumps, feed lots and packing sheds available with short haul. Good market for surplus feed crops.**

DRAINAGE DISTRICTS - FINANCIAL CONDITION
GRANADA DRAINAGE DISTRICT

198

OPERATION AND MAINTENANCE ACCOUNT AS OF September 1 19 42

ASSETS		:	LIABILITIES		:
CASH ON HAND	:\$ 1721.93	:	WARRANTS OUTSTANDING	:\$:
ASSESSMENTS RECEIVABLE	:	:	OTHER	:	:
MISCELLANEOUS RECEIVABLE	:	:		:	:
TOTAL	:\$ 1721.93	:	TOTAL	:\$ none	:

CAPITAL DEBT SCHEDULE

INDEBTEDNESS	:	AMOUNT	:	INT. RATE	:	AMOUNT PER UNIT	:	REPAYMENT PERIOD	:
*BONDS	:	\$ 14,000	:	6½ %	:	\$ 0.0267	:	PER \$1 of as-	:
BONDS	:	:	:	%	:		:	PER s'd bene.: 1929-38	:
BONDS -	:	:	:	%	:		:	PER	:
WARRANTS	:	:	:	%	:		:	PER	:
OTHER	:	:	:	%	:		:	PER	:
TOTAL	:	:\$:	%	:	PER	:		:

NOTE: IF ANNUAL PAYMENTS ARE VARIABLE ATTACH DETAILED REPAYMENT SCHEDULES

Original - \$90,000 - issued 1922

CAPITAL DEBT ACCOUNT AS OF September 1 19 42

ASSETS		:	LIABILITIES		:
CASH ON HAND	:\$ 226.98	:	WARRANTS OUTSTANDING	:\$:
CURRENT ASSESSMENTS RECEIVABLE	:	:	BOND PRINCIPAL UNMATURED	:	:
DELINQUENT ASSESSMENTS RECEIVABLE	:	:	BOND PRINCIPAL DELINQUENT	: 14,000	:
MISCELLANEOUS RECEIVABLE	:	:	INTEREST DELINQUENT	: ?	:
	:	:		:	:
TOTAL	:\$ 226.98	:	TOTAL	:\$14,000 & int.:	:

CAPITAL DEBT IF ALL ASSESSMENTS ARE COLLECTED..... \$
 ESTIMATED CURRENT AND DELINQUENT ASSESSMENTS COLLECTIBLE.....
 NET CAPITAL DEBT.....
 NET DEBT ADJUSTED TO AN EQUIVALENT 6% BASIS.....
 NET ADJUSTED DEBT PER SUSTAINING (1).....

PAST ANNUAL ASSESSMENTS IN DOLLARS PER dollar of assessed benefits

ITEM:	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	AVE.
A	:	:	:	:	:	:	:	:	:	:	:
B	\$.0231	.0240	.0246	.0276	.292	.0292	- not included in average				.0263
SUB	:	:	:	:	:	:	:	:	:	:	:
TO-	:	:	:	:	:	:	:	:	:	:	:
TAL	:	:	:	:	:	:	:	:	:	:	:
C	\$.002	.002	.002	.002	.002	.002	.002	.002	.002	.002	.002
	:	:	:	:	:	:	:	:	:	:	:
TOTAL	.0251	.0260	.0266	.0296	.0312	.0312	:	:	:	:	:

A - WARRANTS. B - BONDS & INTEREST. C - O. & M.

ESTIMATED FUTURE ANNUAL ASSESSMENTS PER SUSTAINING (1) Dollar of assessed benefits

ANNUAL B. & I. \$ none ANNUAL O. & M. \$.002

HISTORY AND TREND OF DEBT AND ASSESSMENTS District issued \$90,000 in bonds in 1922, payable serially 1929-1938 inclusive. Assessments levied for B&I for the years 1929-37 as prescribed by law and no levies made since that time. Approximately \$14,000 in bonds outstanding and unpaid, with accrued interest. Not a lien on the district as a whole but only on those lands with unpaid assessments. O&M constant over last 10 years and approximately same charge may be anticipated in future.

THESE LANDS ARE part SUBJECT TO OTHER ASSESSMENTS BY Lamar Canal & Irr. Co., Manvel Canal & Irri. Co., X Y Ditch, Graham Ditch.

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre - district's method of assessment

GRANADA DRAINAGE DISTRICTCONSTRUCTION

COST OF CONSTRUCTION: ORIGINAL \$ 90,000

PRESENT UNPAID \$ 14,000

OUTLET OF SYSTEM: STREAM Arkansas River

SEC. 15 TWP. 23S R. 43W

EFFECT OF BACKWATER Drain is deep, with good grade and velocity. No appreciable effect except on lower half mile of drain during high water. Cleans when water recedes.

LENGTH OF MAIN DRAIN 9 MILES; LATERALS 2 MILES. TOTAL LENGTH 11 MILES

ADEQUACY OF SYSTEM Open drains only. Drains run easterly in a line generally parallel with the river. System adequate for lands lying south of or above the main drain. Between main drain and river, the area is almost entirely pasture and is apparently unsuited to the raising of cultivated crops. Drains are very deep, of good velocity and staked along the bottom.

PROBABLE NEW CONSTRUCTION None anticipated.

GENERAL EFFECTIVENESS OF SYSTEM AND ADEQUACY OF PAST MAINTENANCE

System generally effective south of main drain and ineffective between main drain and the river. System has been adequately maintained and a good quality of maintenance can reasonably be expected in future. U.S. Government now owns approximately 5200 acres of the district area - the entire area east of Granada and the south central portion west of Granada. Also owns about 90% of sustaining lands. The Government-owned land comprises part of the Granada Japanese Relocation Camp.

FUTURE MAINTENANCE: ANNUAL COST (1) \$ 0.002 per dollar of assessed benefits.
EXPECTED FUTURE ADEQUACY

Future adequacy is expected to remain about as at present - adequate south of the main drain and inadequate between main drain and the river. Good maintenance may also be reasonably expected at annual cost of approximately \$800.

(1) Dollar of assessed benefits, or dollar of assessed valuation, or acre-district's method of assessment