

#### Presents

#### **RAILROAD SURVEYING 101** FUNDAMENTALS FROM THE RAILROAD PROFESSIONAL'S PERSPECTIVE

FOR

THE SOCIETY OF LAND SURVEYORS OF IOWA



SLSI ANNUAL Workshop SCHEMAN CENTER – IOWA STATE UNIVERSITY (AMES, IA) JANUARY 18, 2008



# Safety (AREMA C-24)

#### **MODULE 1**

- Surveyor's Right of Entry vs. 49CFR214
- Why "On Track Safety"

• IOWA SURVEYOR RIGHT OF ENTRY NOT CLEAR WITH EXCEPTION FOR FEDERAL LEVEL AND RIGHT OF WAY SURVEYS (Iowa CH 542B, 354 & 355)



### **Response to Iowa Statute Code**

- IF the surveyor is there without the knowledge and permission of the railroad, he/she is a <u>trespasser</u> at the federal level under 49 CFR 214....You can only be a roadway worker, an operating employee or a trespasser under the federal regulations (no exceptions shown in the rule)
- What qualifies him as a "roadway worker" under 49CFR214? (NOT Railroad Rules qualified, no evidence of annual training by a railroad common carrier)
- Homeland Security issue / you became a threat to Interstate Transportation? (like RailFans?)
- OSHA has limited jurisdiction on RR R/W, FRA assumes lead role (If no OSHA rule, FRA rule then holds where appropriate.) Injury on RR R/W becomes a railroad statistic.)



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62.8	R		HARVARD X (5)	Sec. 23.77		Diverging	normal position is for Christian Industrial Lead Equations: MP 91 to MP 92 – 1.6 millio, MP 106.7 – MP 115.9.			
51.3.	-		WOODSTOCK K	C HVD52		Straidet St 10	FRA excepted track MP 176.2 to MP 191.3.			
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31.5	11	7031	BARRINGTON DO	1000		2.9 and 2.7 Straight				
26.5			PALATINE			8.7 and 0.3	Madisim: CP and WSOR operate over UP Setworen MP 137.9 and MP 140.3 and must permission from the UP train dispatcher before entering UP track and www.patify.th dispatcher when clear.			
24.2			ARLINGTON PARE X 0			Around Station platforms on Track 1 between MayDar of Between 100 10	Rule 6.32.2: Applies an all grade crossings between MP 186.0 and MP 192.0.			
22.4			ARESINGTON HEIGHTS	1			liem 2-C: Exception 1 applies (Harvard to Janesvilla) Exception 2 applies (Janesvilla)			
19.6			MT. PROSPECT	88621			Cheming Industrial Leud: Extends from Harvard MP 62.8-1.2 miles to MP 64.0, C and Chemiong RR Coen, FRA excepted track			
18.5	H1	NÜLA	SEEGER	111020		rington permanent speed re- striction signs (Rule 5.5) will not be displayed — Refer to Max, Speed column.	Janeroille Industrial Lead: Extends from MP 91.6 20 junction with WSOR at MP 94, of track MP 94.9. Maximum Speed 20 MPH except MP 94.3 to MP 94.9 10 MPH.			
18.7			CUMBERLAND	HV0:9		Additional Speed				
173	1	N012	DEVAL OWCUP @	EC012		Between CV and Mayfair while handling loaded	251,000 Eo, FRA ascepted inck. Cottage Grave Industrial Lead: Extends from Madison MP 11.0, [5:0 miles to C			
16.2			DES PLAINES	and the second second		Max, Speed column. Additional Speed Restrictions: MPH Betroest, CY and Mayline white humiling isolated can 39 lice as docter10 Do not exceed 30 MPH if fought time seeringso were 80 loom per operation banke. 45 More: If the bank of the banke Mark for humine per operation bank for humine per operation bank for humine per operation.	Cotting: Grove Initiatrial Lead: Extends from Maditton MP 81.6, 100 miles to C Grove, MP 71.5, Sta. No. HCOID. CP and WSOR trains operate over UP scovers MP 81 MP 957 and neuro brains protosised from UP train dopatcher before externing UP trade and notify train dopatcher when item: PRA suscepted track.			
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20	BUC 37.8	7.2		4,100 FT			
	BUC 38.1	UPSHUR					
20	BUC 38.6				ABS-261		

Farnsworth www.f-w.com



# **Right of Entry vs. Safety**

- 49 CFR 214 "ON TRACK SAFETY"
- Railroad Property is <u>PRIVATE</u> Property
- Railroad Police (Special Agents) are licensed federal marshals (complete w/ guns and badges!)...can arrest YOU!
- You can be arrested for criminal trespass!
- You most likely are not insured to work on railroad rights-of-way... (special risk area)
- OSHA/FRA can fine you \$10,000+









#### The "Dirty Dozen"

# The TOP 12 STUMBLING BLOCKS, BLUNDERS, ASSUMPTIONS (BAD OR MISINFORMED) RAILROAD TECHNICAL PROFESSIONALS SEE ON AN ALMOST EVERYDAY BASIS



#### "The "Dirty Dozen"

- #1 Railroad curves
- #2 If in doubt, the Assessor's Map is WRONG!
- #3 Slope Chaining!
- #4 Center of Track in mainline curve is NOT center of right-of-way, there is no such thing as parallel spirals and 3-point on curve solution is VERBOTEN!!!
- #5 All railroad R/W's are strip conveyances, right?
- #6 Pulling of a milepost (It's got legs!!)



#### The "Dirty Dozen" continued

- #7 Misinterpreting Control Point
- #8 Equations and scaled items ("sc." and "pro")
- #9 Misinterpreting chaining and map calls

#10 T-Rails (Why was it set and where's the actual point?)

**Potentially deadly blunders**..." *I'm a surveyor and I don't need any permission to send my crews out on the tracks and besides: (1) the trains go slow here and I can always get a schedule*"

- or -

"My insurance will cover me while working on the railroad"



#### The "Dirty Dozen" continued

- #11 Fenceline = Right-of-Way Line?
- #12 The only public record is found in the county courthouse?





## **ICC Uniform Series of Accounts**

#### **Mapping Instructions**

- ICC General Order #1 (1914) mapping instructions
- ICC General Order #4 (1915) field survey parties
- ICC General Order #7 (1916) land schedules
- Please download David Pfieffer's excellent research text at: http://www.rrhistorical-2.com/rlhs/research.htm (ALIAS RIP-91) Excellent description of what can be found at archives-2 (Rockville, MD).....
- Write this down! (CD file corrupt)







# PLEASE AVOID THE "STUPID ZONES"!

# "Stupid Zones"

- New Roads and Highways Crossing Railroad Curves at Grade...
- Vertical Curves within 30 Ft. Of the Nearest Rail at an At-Grade Crossing (AASHTO/AREMA JOINT STANDARD)
- "FOULING" the std. clearance envelope
- Utilities too shallow or too close to railroad switches, bridges and structures
- Creating sight distance problems



# "Stupid Zones"



- New Roads and highways crossing railroad curves at grade...
- Vertical curves within 30 Ft. of the nearest rail at an at-grade crossing (AASHTO/AREMA JOINT STANDARD)



## "Stupid Zones"

- "FOULING" the standard clearance envelope
- Utilities too shallow or too close to railroad switches, bridges and structures
- Creating sight distance problems





## **OK**, where am I on the **RR**?

• Learn to communicate with the railroad in terms that they more readily understand



I'm interested in finding map data at:

State:	WYOMING	
Region:	Northern	
Division:	Powder River	
Subdivision:	CASPER LS-5	
Between: STATIC	ON and STATION	: Casper (202.2) &
Bishop (213.0)		
Between: Milepo	st and Milepost	MP 202 and MP
(213)		
Near Crossing: (D	OT Number)	064 978M
(1st Street in Casp	er)	



# **US-DOT/ AAR Crossing Numbering System**

- Typical DOT number tag found attached to poles, cross-bucks, mast-mounted flashing lights/gate/bells, bridges and also stenciled on signal department instrument cases
- UP & BNSF Now include those numbers on the "Panic" signs found at all crossings (UP is 4" x 8" Blue & White, BNSF's are 14" x 18" Black and White steel signs...







# **US-DOT/ AAR Crossing Numbering System**

#### UP **188 759T** US-DOT/AAR



- Tags can be gray-metal license plates (4"x 9") and/or 5"x9" laminated cardboard tag
- DOT Numbers are unique to a particular crossing in the USA, Number is a 6-digit number and a check code letter....Tag also shows track owner !



### If All Else Fails, Before You Panic:

#### **EMERGENCY NUMBERS**

- UNION PACIFIC
- BNSF
- CN-IC
- CPR-Soo
- CSX
- NS
- IAIS
- ICE /DM&E

1-800-848-8715 Dispatcher 1-800-877-7267 UP Police 1-800-832-5452 Emergency 1-800-465-9239 Emergency 1-800-551-2553 Emergency 1-800-232-0144 1-800-453-2530 1-800-321-3891 1-800-339-1080

#### ALL LISTED ON THE IOWA CONTACT SHEETS... INCLUDE IN JOB BRIEFING



### Panic Signs Look Like...

#### Norfolk Southern











# Panic Signs Look Like...

#### **UNION PACIFIC**











# **DOT # Information from Panic Signs**



http://cabernet.caliper.com http://safetydata.fra.dot.gov/officeofsafety/NewCrossing/Default.asp http://safetydata.fra.dot.gov/OfficeofSafety/Default.asp



#### Example of web page



# **DOT # Information from Panic Signs**

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#### Example of web page



## New Signs to Look for...







www.f-w.com

• • • • •

#### **Information on New or Modified Crossings**

•The <u>ONLY</u> arbiter of what crossing is public or private in Indiana is the **IOWA DOT** under its application/ decision process. (Ia CH. 327G.15)

# (You cannot turn a private crossing into a public crossing w/o IaDOT's OVERVIEW!!!)

•The <u>ONLY</u> agency that can permit placement of, change width of or dictate change type of crossing protection of a public crossing is the **IOWA DOT Railroad Section**. (Local entities can, w/ IDOT inclusion, run "town hall meeting" style agreements with ALL parties in agreement (Ia CH 327G.16 & 327G.17)

 Iowa DOT Railroad Section now administers the DOT Crossing Number database for Iowa (Issues new numbers and does record corrections)







# **IOWA STATUTE**

- 327G.15 Railway and highway crossing at grade.
- Wherever a railway track crosses or shall hereafter cross a highway, street or alley, the railway corporation owning such track and the department, in the case of primary highways, the board of supervisors of the county in which such **crossing** is located, in the case of secondary roads, or the council of the city, in the case of streets and alleys located within a city, may agree upon the location, manner, vacation, physical structure, characteristics and maintenance of the **crossing** and flasher lights or gate arm signals at the **crossing** and allocation of costs thereof. The department shall become a party to the agreement if grade **crossing** safety funds are to be used. Up to seventy-five percent of the maintenance cost of flasher lights or gate arm signals at the **crossing** may be paid from the grade **crossing** safety fund.
- Notwithstanding other provisions of this section, maintenance of flasher lights or gate signals installed or ordered to be in stalled before July 1, 1973, shall be assumed wholly by the **railroad** corporation.
- Payments from the grade **crossing** safety fund shall be made by the treasurer of state upon certification by the department that the terms of the agreement have been followed.
- The department shall promulgate rules according to chapter <u>17A</u> for processing claims to the grade **crossing** safety funds.
- The provisions of this section shall not apply to the repair of the grade **crossing** surface.
- [R60, §1321, 1322; C73, §1262, 1263; C97, §2017, 2018; §SS15, §2017; C24, 27, 31, 35, 39, § **8020**, **8024**, **8025**; C46, §478.21, 478.25, 478.26; C50, 54, 58, 62, 66, 71, 73, 75, §478.21; C77, 79, 81, §327G.15]
- 327G.16 Disagreement application notice.
- If the persons specified in section <u>327G.15</u> cannot reach an agreement, either party may make written application to the department requesting resolution of the disagreement. The department shall request the department of inspections and appeals to set a date for hearing. The department of inspections and appeals shall give ten days' written notice of the hearing date.
- [SS15, §2017; C24, 27, 31, 35, 39, § 8021; C46, 50, 54, 58, 62, 66, 71, 73, 75, §478.22; C77, 79, 81, §327G.16; 81 Acts, ch 22, §19]
- 89 Acts, ch 273, §35
- 327G.17 Hearing order.
- The department of inspections and appeals shall hear the evidence of each party to the controversy and shall make an order, which may include, pursuant to chapters <u>6A</u> and <u>6B</u>, authority to condemn, resolving the controversy. The order shall include the portion of the expense to be paid by each part y to the controversy. In determining what portion of the expense shall be paid by each party the department of inspections and appeals may consider the ratio of the benefits accruing to the **railroad** or the governmental unit or both, to the general public use and benefit.
- The order of the department of inspections and appeals is subject to review by the state department of transportation. The decision of the state department of transportation is the final agency action.

• [SS15, §2017; C24, 27, 31, 35, 39, § 8022; C46, 50, 54, 58, 62, 66, 71, 73, 75, §478.23; C77, 79, 81, §327G.17; 81 Acts, ch 22, §22]





## **Basics of Railroad Survey Control**

#### HIERARCHY (best to least)

- (1) T-Rails (called out in mapping)
- (2) Crossing frogs
- (3) Bridges & Tunnel Portals (including stone arches)
- (4) Pipes, Culverts & Treated Timber Boxes
- (5) Headblock / Point of Switch (Turnouts)
- (6) Centerline of road crossings
- (7) Signage
- (8) Map Calls to land lines (PRO & SC Standard Warning)





# **Understanding What Railroads Are**

#### (Crash course condensed version)

- Charters
  - (A) Initial Regulation
- Regulation (pre & post Staggers Act, 1983)
- Common Carriers Defined (Class 1's, Regionals, Shortlines, Industrials)
  - (A) ICC vs. AAR Classification
- Interurban & Transit
- Logging & Mining Railroads
- Funiculars / Inclined Railways
- Mileage of all gauges in the US "tops out" between 1915-1923 (254,000 miles in 1916)
  - Current mileage is just short of 183,000 miles (check figure, Standard & Poors')
- Railroad genealogy / Chain of Title (Understanding History & Finance)



# **Railroad Operating Structure**

#### **Typical, Military Origins to Today**

- Operating
  - Trainmaster, Yardmaster, Superintendent, Train Crews,
     Dispatcher, Management Asset Management, LAW, Lease & Contract, Accounting, Billing
- Maintenance / Engineering (M/W)
  - Division Engineer, Roadmaster, Chief Engineer, Trackman, Field Engineer, Signal and Communication Functions
- Equipment / Mechanical
  - Mechanical Foremen, Carmen, Shops



### **Railroad Orientation**

#### **MODULE 5**

- Timetable vs. Geographic / Compass Direction
- District / Division / Subdivision / Line Segment
- Railroad Slang (Skip)
- Safety Rules / Testing / Requirements



## **Evidence and Official Record**

- Looking Beyond the Courthouse
- Surveyors collect, examine & evaluate "EVIDENCE", they are not "Judge and Jury" (Even though at times we ought to be)
- The assessors map is "a best guess estimate" It should not be gospel !
- Official record does not automatically imply that it will be found in the local courthouse!



#### **Federal Laws and Regulations**



- Acts of 1862,1866,1872,1875
- Interstate Commerce Act of 1913
- Staggers Act of 1983
- ICCTEA and TEA-21
- Titles 16, 43 and 49 of the Federal Revised codes (CFR's)



### **State Laws**



- Fence & Livestock (Discussed Earlier, IA CH 327G.3-327G.10)
- Statute Side Clearance (Iowa oddly has no state law, railroad determines)
- AREMA Chapter 28 (Clearance Tables by state)
- The Ag Industry Issue (Ethanol Plants, etc.)





# **ICC Uniform System of Accounts**

#### 49CFR1201

- This single government regulation gave today's surveyor the following to use as evidence:
  - ICC CADASTRE (Valuation maps, station, R/W, Land & other maps)
- VAL map index maps and overview to railroad in 1918
- ICC Valuation Order #7 ...land schedules
- ICC Corporate structure valuation statements (family tree)
- ICC Field notes (title, improvements, audits, appraisal)
- Uniform standards between railroads
- Collection of applicable maps & records of the time



# **ICC Uniform System of Accounts**

#### 49CFR1201

- Impetus for railroads to catalog all improvements to verify
- Addition and betterments accounting system
- Depreciation was not allowed 1913 until 1983 & Staggers Act!!
- Those railroads so valuated
  - (Turned in a complete set of maps schedules & accounting)
    - http://rnetzlof.pennsyrr.com/Iccindex/icc\_1.html
    - http://www.nara.gov/publications/prologue/railrd1.html
    - HTTP://WWW.NHRS.ORG (pfieffer nara paper)



## **ICC Uniform System of Accounts**

- Direct outcome of ICC Act of 1913
- VAL Maps (under ICC General Order #1) were created as an "accounting tool"
- Accountants make lousy surveyors, the rules under ICC G.O. #1 have come to haunt surveyors relating to these maps ever since
- The Act (under 49-CFR-1201) is more to level the playing fields in a tax sense than for the benefit of surveyors and mappers... "VALUATION"!



## **ICC General Order #1**







IV. FORM OF MAPS AND PROFILES

6. SIZE OF SHEETS.

The Right-of-Way and Track Map shall be made in sheets 24 by 56 inches. A plain, single-line border shall be drawn on each sheet, dimensions inside of which shall be 23 by 55 inches.

The Station Maps shall be made in sheets 24 by 56 inches, with border line as above. When more than one sheet is required to show a station property, the plat shall be made upon "matched marked" sheets in such manner as to require a minimum number.

The profile shall be made in sheets 12 by 56 inches with border. The size inside of border lines shall be 10 by 55 inches. 7. SCALES.

The Right-of-Way and Track Map shall be made on a scale of 1 inch equals 400 feet, or 1 inch equals 200 feet.

The Station Maps shall be made on a scale of 1 inch equals 100 feet, or in complicated situations 1 inch equals 50 feet.

The Profile shall be made on standard plate  $\Delta_s$  and on scales of: Vertical, 1 inch equals 20 feet; horizontal, 1 inch equals 400 feet.

S. SYMBOLS.

The symbols used on all maps and profiles shall be the standards recommended by the American Railway Engineering Association, in so far as they may be applicable.

9. LETTERING.

All lettering on maps and profiles shall be in plain, simple style. 10. ARRANGEMENT OF DATA.

The Right-of-Way and Track Map sheets shall be made with the zero or



# Valuation Map Key Index (typical)





#### **ICC General Order No. 4**

#### **Instructions to Field Parties**

#### Ca. FIRST TENTATIVE DRAFT INSTRUCTIONS FOR: ROADWAY AND TRACK FIELD PARTIES OF THE INTERSTATE COMMERCE COMMISSION DIVISION OF VALUATION

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marshes, etc.; and obtain and note each other information and data with respect to construction of the military under survey as, together with the notes of the instrument man and escardar, will constitute a complete record of the physical property which it is his duty to investory.

The assistant faild engineer shall also in cases where a representative of the valuesy accompanies the field party exopenses with such representative to the extent of deciding, if possible, all questions, such as classification of grading in excreminen-pengliks of overland; classification of ressource; geologic classific real amount of program of community conservations of tension of prime transmission and the second sec matten relating to the construction of the relevant and the quantity and classification of the materials entering therein or about which there may be conneceery.

In cases of disagreement between the assistant fold engineer and the representative of the railway acto the figures or other matter in any particular care, a full statement of each case shall be ends to the field engineer, noting in detail the opinions and differencies of each pietr.

#### WORK OF PRILE PARTY.

The work and duties of the other members of the field party shall at all times be under the direction of the assistant field engineer and achieve to the approval of the member of the origineering beard in charge.

#### DOTTING OF THE RECORDER.

The seconder, values otherwise instructed by the assistant field expresse, shall conduct the work and keep the noise of the chaining group as benchdere outlined and in accordance with the detailed instructions hereinafter given.

#### Derrisse of this Instrument MAN.

The instrument man, unless otherwise instructed by the assistant field engineer, shall conduct the work and here the noise of the convention party as hereinhelers ortflored and in accordance with the detail instructions hereinafter gives.

#### MAPS AND PROPERTY.

The field party shall be provided with each right-el-way and track room, profiles, station plate, and statched plans as will be secured from the carrier BARS LINK.

Unless otherwise instructed, the base line will be as follows: 1. On single-track roads, including olds tracks, taktnay between the tails of the main truck

2. On double-track route midway howeven the two main tracks 5. Where the corrier has a base line already defined on the ground it may be used. Structures shall all be located with respect to the base line, taking rematurements at tight angles to the latter

#### CHARNESS YES HARD LINE.

The noise of the chaining group shall be kert in a separate notabook. Notes shall bagin at the bottors of page. Sintches and notes descriptive of the property shall. he made. The claining notes shall show recepters location, and descriptive information of all parts of the carrier's property hovershelves assigned to the classifing group for investo

The base line shull be chained carefully and alcumitely with a stud tape, rematring continuously allong one of the process rathe

7 Each 100-not station shall be marked by a line on web or base of rail. The station member in full shall be plainly marked an web of rail at each even borth shall and internations stations will be varied with a single number. At the end of the day's work the station near be referenced to preserve and identify it.....

The location and remotes of all railoposts shall be noted and the station and plus taken for intersections of state, county, covership, and other lines of political subdivistans where the same new indicated by sign part or otherwise on the right of way.

The differences, if any exist, between the chaining and the stationing of the carrier must not be accumulated. At points where the carrier's station location is defailedly established the differences shall be recorded and the varyior's station taken for continuing the chaining

The alignment as shown on right-al-way and track maps or problem shall be vertdod and the station and play of approximate ends of curves rerded in chaining notes. Curves shall not be sun or other assassments taken to check alignment.

2. LAND FOR TRANSPORTATION PURPAGES.

Each parent of right of way an invest on the right of way and track maps shall be verified on the ground by measurements to feases, measurants, or other evidences of rightof may limits, and if as such ovidences exist the fact shall be recorded in the notes. When the right of way is found to be of uniform width it will be sufficient to record the width at each senth station, with notes and stationing to show charge of width at other irregulatity. For irregular parcels make shutches where provide to show boundaries and dimensions measured. Lond adjoining the right of way shall be acted as to character, such as wooled,

examply, fortile, onlivered, etc., giving the limits of some to measure entries. Buch Information as it is possible to obtain in the field as to character of the right-of-way at time road was constructed, and if any buildings, highways, or structures were moved, shall be recurded.

#### 3. GRANNE

The goding investory shall include all work classified under bio network, and in addition therets, separately recorded, grading work done for buildings and anothers when in the judgment of the anistant field originear such work can been be measured by the case-section group. Chaining and cross-section noise will be recorded, beginning at the bottom of page

The consection group shall check the marking of stations done by the chaining group. Consecutions shall be ranks of the readiest at such distances apart as will give a pre-cision segued to common practice in values of construction. In general reverse distriwhen equals at each 100-best station and at such interposition points or the condi-tions document for entertheory dis grading quantities and their chastication. No discasses will be fixed as a maximum between sections, and when the readbest metion in level country is uniform the distance between successive cross-sections may be mare than 100 feet. When consistent with the standard of precision such intermadiate sections or are necessary thall be taken on even 10 lost plasme.

Herisontal measurements in cross-sections shall be measured from the base live and at right angles threes. Tortical measurements shall be made (you astignate or fails of rail. The use of slope of ballast, as point of incorrection with readbed subgrade shall be justed and rated. All filmbus constructed by the carrier for any purpose shall be tanagened at such intervals as are recommy to obtain information as to yardage. oto shall be needs of the reasons for construction of ditches where used for other than raiload permission

requests of the source, manifed mode: account offset flow door bench sported, duel to basis by the first party, but detect assumements its lavariatering and property shall on the taken by Horden periodic sourcessi.



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### **ICC General Order No. 7**

#### Land Schedules, Form DV-107



#### VALUATION ORDER NO. 7.

It is further ordered, That every common carrier owning or operating a steam railroad, and whose property is to be valued by the Commission under said valuation act of March 1, 1913, shall prepare and file in the office of the Commission at Washington, D. C., on or before the date fixed by the Commission as that as of which the carrier's property shall be valued, on forms each of which shall be like the form hereto attached, No. 108, another typewritten schedule, in duplicate, showing as to each instrument through which such carrier has derived title to or interest in any parcel of land held by it for purposes other than those of a common carrier, the same information and data required by the Commission in the next preceding paragraph of this order in connection with each instrument through which such carrier has derived title to or interest in any parcel of land owned or used by it for common-carrier purposes. Such schedule shall also show, as to each parcel of land held by the carrier for purposes other than those of a common carrier, the number assigned thereto on the right of way and station maps required by the Map Order, so called, made and entered by the Commission under date of January 12, 1914, the area of the parcel at the time it was originally acquired and at the present time, the cost of the parcel, including the improvements thereon, when originally acquired, together with a statement in detail of the amount and character of each expenditure which entered into such cost, the date and cost of any improvements placed by the carrier on the parcel subsequent to its acquisition, and the cost of the portion of each parcel and the improvements thereon which is now held by such carrier for purposes other than those of a common carrier. If a portion of a parcel or the improvements thereon has been sold since originally acquired, or if a portion of any improvements placed on a parcel subsequent to its acquisition has been sold, the carrier now holding the unsold portion of such parcel shall show in said schedule the date of such sale, and the amount of money or other consideration received for the portion so sold, by the carrier who made the sale.

Provided, however, That this order shall not be construed so as to include the land grants covered by the second provision of the paragraph marked "Fifth" of said valuation act of March 1, 1913, so far as such grants may have been made by the Government of the United States or by a State government. By the Commission.

> George B. McGinty, Secretary

INSTRUCTIONS FOR D. V. FORM NO. 107.

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The first column shall contain the number which has been assigned to each parcel of land on the right of way and station maps required under the Map Order, so called, promulgated by the Commission on January 12, 1914.

The second column shall contain the number of the file in which each instrument conveying title to or interest in each parcel of land is kept by the custodian of the railroad company.

The third column shall contain the legal character of the instrument through which tills to or interest in each parcel of land has been derived, such as deed, quitclaim deed, condemnation, ordinance, lease, agreement, grant, donation, etc.

The fourth column shall contain the date of the execution of the instrument.

The fifth column shall contain the name of the grantor in deeds, the defendant in condemnation suits, the name of the town, city, or village in ordinances, the first party in leases and agreements, and the donor in grants and donations.

The sixth column shall contain the name of the individual or corporation to whom the conveyance, lease, etc., was made.

The seventh column shall contain the book of the public record in which the instrument is recorded.

The eighth column shall contain the page of the book of the public record in which the instrument is recorded.

The ninth column shall contain the date of the recording of the instrument. Where the instrument is not recorded in the county records of the county designated on the upper left-hand corner of the form, the place of record shall be shown immediately below the entries in the seventh, eighth, and ninth columns.

The tenth column shall contain the area of each parcel of land as now owned or used for common-carrier purposes where said area is 1 acro or more. If part of a parcel has been sold before it dedication to public use, the area of the original parcel shall be shown in the nineteenth column; if such a sale has been made after the dedication of the parcel, the area of the parcel at the time of dedication shall also be shown in the nineteenth column.

The eleventh column shall contain the area of each parcel of land as now owned or used for common-carrier purposes where said area is less than 1 acre. If part of a parcel has been sold before its delication to public use, the area of the original parcel shall be shown in



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[SEAL.]

• • •

## The ICC Land Schedule / Cadastre

#### ICC Forms DV-1107 and DV-1108



Before GIS there was still cadastre. Form DV 107

COURTESY OF ICC GENERAL ORDER No. 7



#### ICC VALUATION ORG CHART (CH&D)/ B&O RR

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