

**OREGON
DEPARTMENT
OF
TRANSPORTATION**

Highway Division

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Reviewed and Approved by
The Survey Leadership Team

Survey Filing Map Standards

**CONTROL, RECOVERY AND
RETRACEMENT SURVEYS**

August 1, 2018



Revision History

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Scott Morrison	Geometronics	Corrected optional paragraph numbers on page 10
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Paul Morin	Geometronics	Added language in Note 29
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Survey Filing Map Drafting Standards

[Control, Recovery and Retracement Survey Examples](#)

This Document is a guide to aid the Surveyor with filing map standards for ODOT Control, Recovery and Retracement Surveys.

1. Surveys filed will meet the requirement of this document in addition to the ORS (Oregon Revised Statutes) requirements for filing surveys. This document lists the minimum requirement for filing Control, Recovery & Retracement surveys for ODOT. If this document is silent on any item it is presumed to be optional and may be added if desired. Refer to the ODOT Survey Policy and Procedure Manual for additional requirements.
2. All ODOT surveys will be filed in English Units. In addition, see other items related to record data information.

Note: There may be some situations in which you may file a map in the metric units of the previously filed map. For example: if filing a Retracement only on a previously filed Control and Recovery map you may use the units of the previous filed map.

 - A) Show all linear values for retraced or measured dimensions in feet.
3. Definition of Survey Filing Maps: Refer to the ODOT Survey Policy and Procedure Manual for additional information.
 - A) CONTROL: A Control Survey will show a diagram of the network and the information relating to the network.
 - B) RECOVERY: A Recovery Survey will show the location of the found monuments and the information relating to the monuments.
 - C) RETRACEMENT: A Retracement Survey will establish and resolve the location of the right-of-way centerline & boundaries for Road, Hwy. or Fwy.
 - D) If a survey contains all three of these elements, then all three of these names will be listed.
4. ODOT will use 18" x 24" sheet size for survey filing maps.
5. Township, Range and 1/4 Section will be listed at the top center of each sheet for a heading. The first sheet should have all of the sections that the survey pertains to. All others sheets of the survey should have at least the 1/4 Sections with Township and Range that are represented on that sheet. DLC (Donation Land Claims) names and numbers will be listed on the sheets as applicable. See the "DRAFTING STANDARD EXAMPLES" (Sheet 1) for details.
6. The minimum text height on survey filing maps will be 0.10 inch.
7. All text will be upper case except for record units that require lower case as standard designation. Narrative text may be sentence case (upper and lower case) as long as the lower case text meets the minimum height of 0.10 inches.

8. The general breakdown of text fonts that may be used for the survey filing maps is as follows:

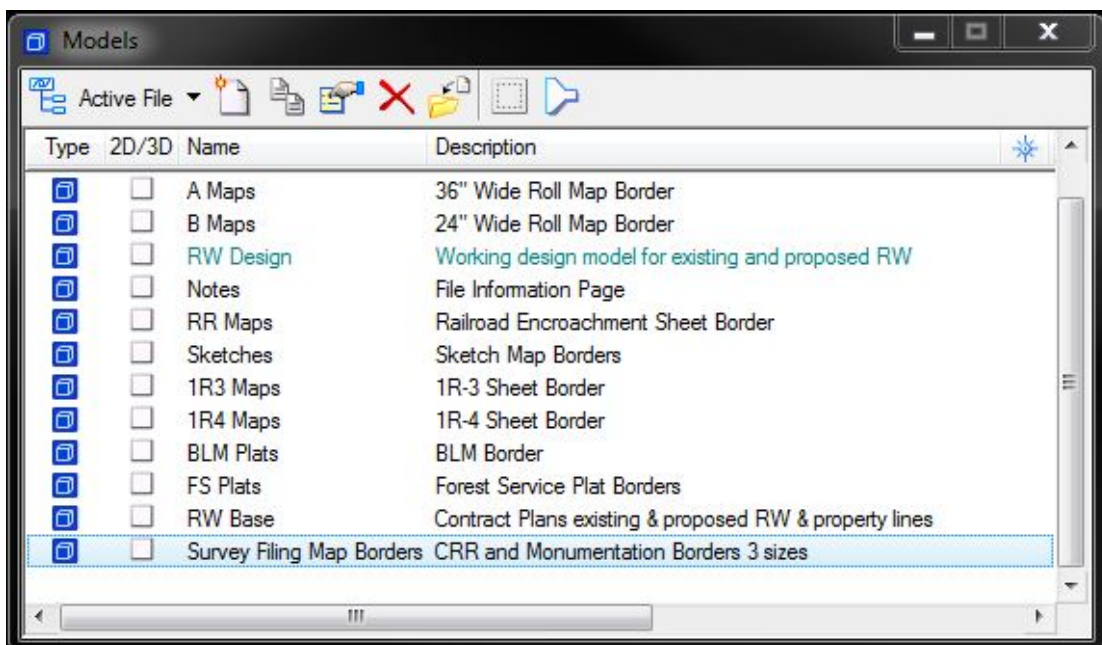
NOTE: USE THE ODOT SURVEY TASK MENU FOR CURRENT DRAFTING TASKS

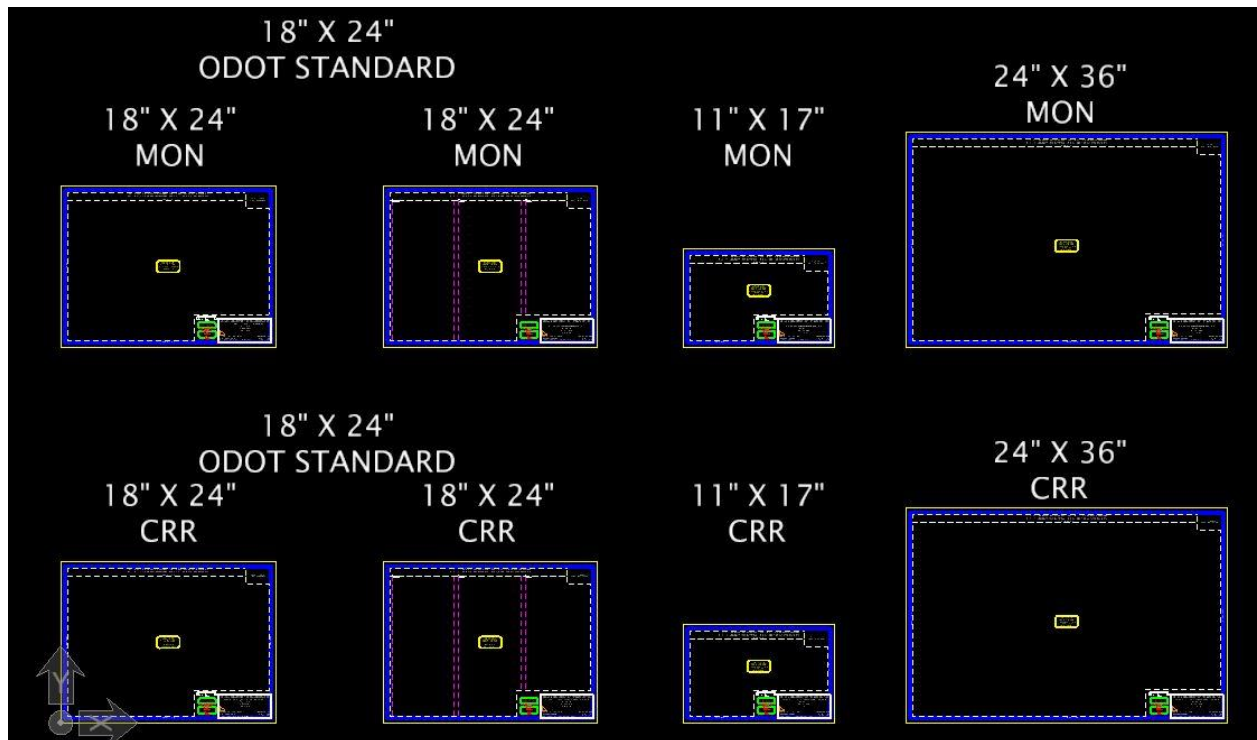
Center line alignment text - ODOT Slant font 24 (different fonts may be used if showing more than one alignment)
 Bearing and distance ties - ODOT Slant font 24
 Property ownership names - ODOT Slant font 24
 Topographical annotation - ODOT Slant font 24
 Narrative text - ODOT Slant font 24
 Subdivision lot and block numbers - ODOT Slant font 24
 Subdivision names - ODOT Block font 42
 Existing right of way - ODOT Vertical font 2
 Government boundary text - ODOT Vertical font 2
 Tables and columnar text - ODOT Vertical Mono font 4
 All other text - ODOT Vertical font 2

See the "DRAFTING STANDARD EXAMPLES" (Sheet 4) for details.

9. Space will be left to allow the counties to put their file numbers and other information on the survey. See the "DRAFTING STANDARD EXAMPLES" (Sheet 1) for details.
10. Each map sheet will contain a legend for the unlabeled lines, symbols and abbreviations. See the "DRAFTING STANDARD EXAMPLES" (Sheet 3, note 8.) for details.

NOTE: USE THE CURRENT BORDER CELLS LOCATED IN THE SeedRW2d.dgn FOUND IN THE ODOT WORKSPACE AND LOCATED IN THE SURVEY FILING MAP BORDERS MODEL.





11. Title Blocks will contain the following:

- A) "Oregon Department of Transportation"
- B) Type of survey: Control, Recovery, Retracement (or all of these)
- C) Project name (as listed in the project prospectus)
- D) State Highway name, State highway number, Oregon or US route number and milepoint limits of the map. Examples are: Cascade Highway South No. 160, OR213, M.P. 16.91 - 17.99; Sunset Highway No. 47, US26, M.P. 64.67 - 67.92.
- E) County
- F) Key Number and/or MicroStation file name
- G) Address of office filing the survey
- H) Date of survey filing
- I) Sheet number

See the "DRAFTING STANDARD EXAMPLES" (Sheet 3, note 9.) for details.

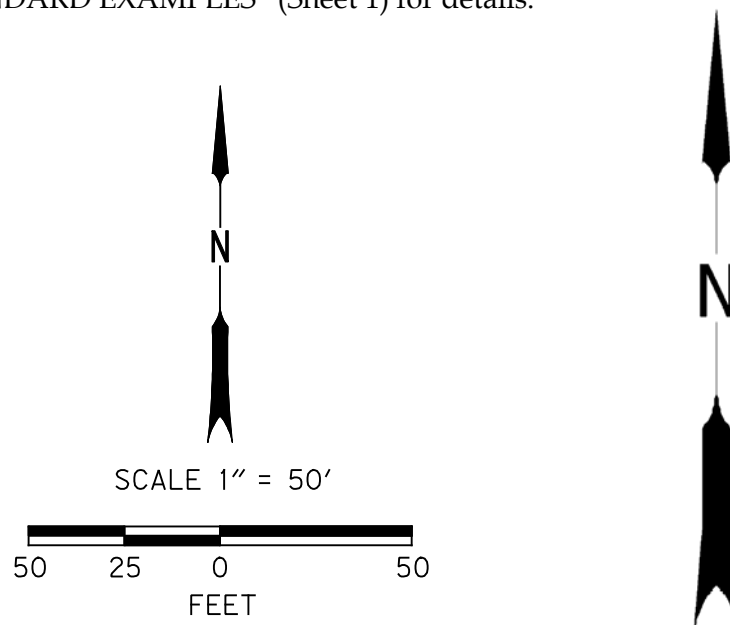
12. Each sheet will contain the ODOT logo located in the title block. For non-ODOT produced surveys, the contractor will place a company logo on each sheet.



13. Include a north arrow and a scale bar within each map sheet. Scales can be shown as 1" = 50'; 1" = 100'; etc. The scale will be shown with scale bar. See example below.

Note: For sheets that are not to scale, indicate this status on the sheet. A scale bar is not required on these sheets.

See "DRAFTING STANDARD EXAMPLES" (Sheet 1) for details.



14. Sheet Plan Layout: For large or complicated surveys include a sheet plan showing the organization or layout of each sheet along the survey. This is a quick reference showing where a sheet lies along the survey. On small surveys a simple index can be used, i.e.:

INDEX

SHEET 1 - NARRATIVE

SHEET 2 - PROJECT CONTROL SHEET

SHEET 3 - PROJECT RECOVERY

15. Narrative: Each narrative will be unique to the project and include the purpose, reference documents, alignment resolution, basis of stationing, basis of control, coordinates and network, survey work, dates and type equipment used. Information and examples follow:

A) PURPOSE: State the purpose of the survey; include what type of survey it is, where it is, and what project it is for.

Example (All Caps):

THE PURPOSE OF THIS SURVEY IS TO RESOLVE THE LOCATION OF THE EXISTING RIGHT-OF-WAY (R/W) FOR A PORTION OF PACIFIC HIGHWAY WEST (99 W) BEGINNING WESTERLY 2329 FT AND ENDING EASTERLY 846 FT OF HOOPER ROAD. THIS SURVEY IS TO ESTABLISH A CONTROL NETWORK AND RECOVER THE POSITION OF THE MONUMENTS (MONS). THIS SURVEY WAS DONE IN PREPARATION FOR THE PROPOSED PACIFIC HWY AT HOOPER ROAD OREGON DEPARTMENT OF TRANSPORTATION (ODOT) SAFETY CONSTRUCTION PROJECT.

Example (Sentence Case):

The purpose of this survey is to resolve the location of the existing right-of-way (R/W) for a portion of Pacific Highway West (99 W) beginning Westerly 2329 ft and ending Easterly 846 ft of Hooper Road. This survey is to establish a control network and recover the position of the monuments (mons). This survey was done in preparation for the proposed Pacific Hwy at Hooper Road Oregon Department of Transportation (ODOT) Safety Construction project.

Note: Abbreviate RIGHT-OF-WAY as "R/W".

- B) REFERENCE DOCUMENTS: List all of the reference documents that were used for this survey, such as ODOT Drawing Maps, Record of surveys, Subdivisions, and Deeds.

ODOT DRG 6B-8-5

(ODOT Right-of-Way, Located Line, and Constructed Line Maps are referred to as Drawing (DRG XX-XX-XX)).

RECORDED SURVEYS: CS 3573; PS 23094

(Each county has a different system for naming its surveys).

SUBDIVISIONS: Refer to any subdivisions or plats or partitions that were used to resolve the right-of-way. These should also be shown in the drafting.

DEEDS: List the deeds that were used to resolve the right-of-way centerline.

(Each county has a different system for naming its deeds).

Example:

REFERENCE DOCUMENTS USED: ODOT DRG 6B-8-5; COUNTY SURVEY (CS) 1631 CS 3860; CS 3904; CS 3298; CS 9364; CS 3573; CS 5688; CS 4097; CS 5361 AND CS 1955. SUBDIVISIONS USED: FRIZBIN ADDITION 35-1203

DEEDS USED: BK 19 PG 447, BK 17 PG 6667, BK 52 PG 6, BK 23 PG 3554, BK 23 PG 3556, BK 23 PG 3558, BK 13 PG 634, BK 91 PG 357, BK 97 PG 433, BK 37 PG 61.

- C) **ALIGNMENT RESOLVE:** Show how the right-of-way centerline alignment and right-of-way lines were resolved. The description should be a general “step by step” guide so that the next surveyor can follow in your footsteps. Listed below is an example.

Example:

THE STATIONING FOR THIS SURVEY WAS ESTABLISHED AT THE SPLIT OF FND MONS 1027 AND 1028 AT RECORD STATION 104+01.25 PT.

THE R/W CENTERLINE ALIGNMENT WAS RESOLVED BY A SPLIT OF MONUMENTS (MONS) 1027, 1028 AND A POINT PLACED AT RECORD DISTANCE FROM MON 1021 TO ESTABLISH THE WESTERLY TANGENT. THE EASTERLY TANGENT WAS ESTABLISHED BY CONNECTING THE SPLIT OF MONS 1016 AND 1015 AND THE PROPORTIONED SPLIT OF MONS 1012 AND 1014. THESE TWO TANGENTS WERE EXTENDED TO A POINT OF INTERSECT (PI). THE RADIUS AND SPIRAL LENGTHS WERE ADJUSTED TO PROVIDE THE BEST FIT TO THE CURVE CONTROL MONS FOUND.

- D) **BASIS OF BEARING:** The basis of bearing for the survey needs to be explained. Here are some examples of different types.

Examples:

THE BASIS OF BEARING WAS ESTABLISHED UTILIZING THE DATUM REALIZATION OF NAD 83(2011) EPOCH 2010.00.

COORDINATES ARE PROJECTED TO THE OREGON COORDINATE REFERENCE SYSTEM (OCRS) XXXXXXXXXXXX ZONE, INTERNATIONAL FEET.

PROJECTION DATA IS PROVIDED IN OAR 734-005-015.

GRID COORDINATE ZONE DISTANCES CLOSELY MATCH GROUND DISTANCES.

Or:

THE BASIS OF BEARING WAS ESTABLISHED BY HOLDING TWO GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) STATIONS, "AAA" AND "BBB", SET BY ODOT GEOMETRONICS. THE DOCUMENTATION OF THESE GNSS STATIONS IS FILED WITH THE POLK COUNTY SURVEYOR'S OFFICE AS CS 12506.

Or:

THE BASIS OF BEARING WAS ESTABLISHED BY HOLDING TWO GNSS STATIONS, "AAA" AND "BBB", FROM THE CITY OF XXX NETWORK.

Or:

THE BASIS OF BEARING IS BASED ON COUNTY SURVEY NO. XXXX FILED (survey date), in (County name) COUNTY, OREGON.

Or:

THE BASIS OF BEARING IS BASED ON ODOT DRG XX-XX-XX, DATED XX-XXX-XXXX.

Or:

THE BEARINGS ARE BASED ON NAD 83(2011), EPOCH 2010.00, OREGON COORDINATE REFERENCE SYSTEM (OCRS), XXXX ZONE, INTERNATIONAL FOOT.

Or:

THE BEARINGS ARE BASED ON THE OREGON COORDINATE SYSTEM (OCS) OF 1983 (1991 ADJUSTMENT), NORTH ZONE.

Or:

THE BASIS OF BEARING WAS ESTABLISHED BY HOLDING 2 GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) POINTS, 9283-1 AND 9283-2. W & H PACIFIC SET THESE ON SEPTEMBER 2, 1997 AT THE REQUEST OF ODOT. THE DOCUMENTATION OF THESE GNSS STATIONS IS FILED WITH THE POLK COUNTY SURVEYOR'S OFFICE AS CS 12506.

- E) BASIS OF COORDINATES: State the coordinate system the survey is based on. It is preferable to use coordinates that are projected to an Oregon Coordinate Reference System (OCRS) low distortion projection zone. If Elevations are shown state the vertical datum used and bench marks held. There should be a statement that the elevations were correct at the time of the survey and that they should be field verified before use.

COORDINATES ARE PROJECTED TO THE OREGON COORDINATE REFERENCE SYSTEM (OCRS) XXXXXXXXXXXX ZONE, INTERNATIONAL FEET.

PROJECTION DATA IS PROVIDED IN OAR 734-005-015.

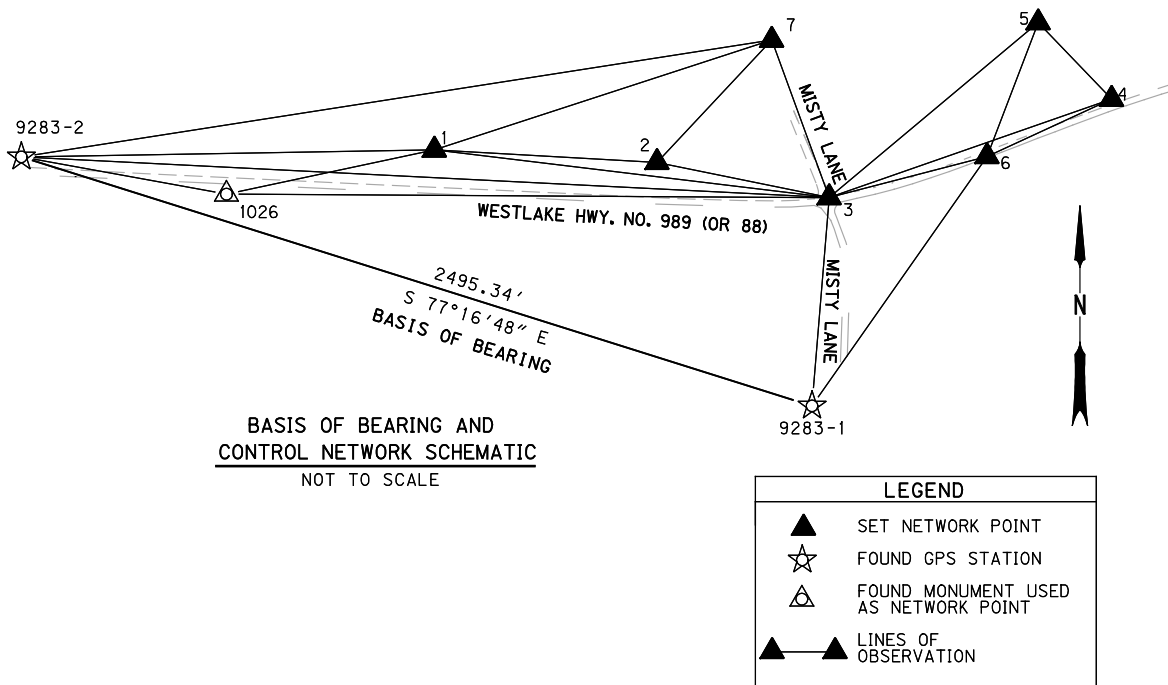
GRID COORDINATE ZONE DISTANCES CLOSELY MATCH GROUND DISTANCES.

- F) SURVEY WORK: State the beginning and ending dates that the survey work was performed.

16. Network/Traverse: Show the network or traverse from which monuments were surveyed.

- A) Show a schematic diagram. This can be separate from the sheet orientation diagram or included with it.
- B) Include the Basis of Bearing, note heavier line weight on Basis of Bearing line.
- C) Show the lines of observation to each network point. (Or list them in a table if they are numerous.)

Note: The following sketch is an example of a network schematic diagram. Features such as edge of pavement or other orientation information is useful but not required. The schematic shows the entire network and the lines of observation.

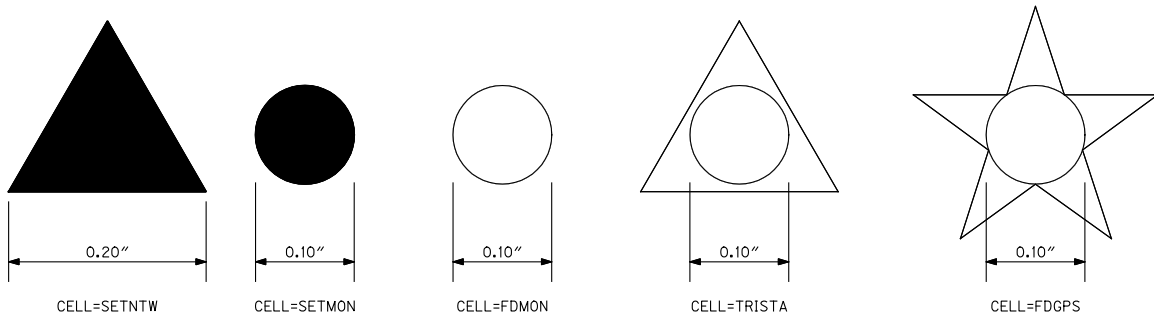


D) For a Control survey, a table is preferred when the points are numerous. If there are a few points, the data may be entered at the point. The Network/Traverse Table should show the following:

- (1) Point number
- (2) Coordinates (Level Circuit Elevations for control points may be shown).
- (3) Description of points set. (List ODOT or Consultant if they set the monument)
- (4) If a found monument is used, show the county survey number setting the found monument, or the oldest survey that references the position of the monument that a CS states was found, or state "origin unknown" or "UNK", or show any other reference to the monument found.
- (5) When using non industry standard abbreviations, a glossary should be provided, i.e. R.P.C. = Red Plastic Cap

17. The network/traverse points and point numbers should be shown on each individual sheet where they occur.

18. All found monument and network control point cells or symbols should be no smaller than the common county requirement of 0.1".



19. The found monument symbol or other symbols that are not filled shall be shown on the map unobscured. If other data makes it obscure, then show a detail.

20. Found Monument Table: A table is preferred unless there are only a few monuments. The text for tables will be a mono spaced font (ft=4). A table template cell and a report template have been created for this purpose. A Monument Table should show the following headings:

RECOVERED MONUMENT LIST

PT. NO.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DATE	DESCRIPTION & REFERENCE DOCUMENTS
1023	440109.74	7469673.71	115+00.07	40.08' LT	11-25-97	FND 3/4" IRON ROD, CS 1631, etc.

- A) Station:
List the computed station of monuments as they relate to the right-of-way recovery centerline.
- B) Offset:
List the offset distance and direction LT or RT of the right-of-way recovery centerline.
- C) Date:
List the date when the monument was tied.
- D) Descriptions:
Describe the size and type of monument in the original unit of measure. Include the condition of the monument; i.e. e., bent, leaning, etc.
- E) Reference Documents:
Show the county survey number setting the found monument, or the oldest survey that references the position of a monument that a CS states was found, or state "origin unknown", or "UNK", or show any other reference to monuments found or set.

21. Show all resolved measurements. Include the original unit of measurements and dimensions of record i.e., feet, chains, rods, perches, metric units, etc.

22. Bearing: The tangent bearing (PT to PC, or PT to PS) should show along the centerline. Show both record and resolved.

23. Curve Data: Show the following:

A) Resolved Data:

Degree of Curvature

Radius

 Δ (Delta Angle) for simple curves $T\Delta$ (Total Delta Angle) for curves with spirals

T (Total distance from PC to PI)

Ts (Total distance from PS to PI) (There could be a Ts1 ([in]) and a Ts2 ([out]) if there are different spiral lengths).

Spiral Lengths

S angle

a value

B) Record Data (a statement may be substituted in the narrative for commonly held curve data like degree of curvature and spiral length)

Duplicate all record data as noted on the record map such as:

Degree of Curvature

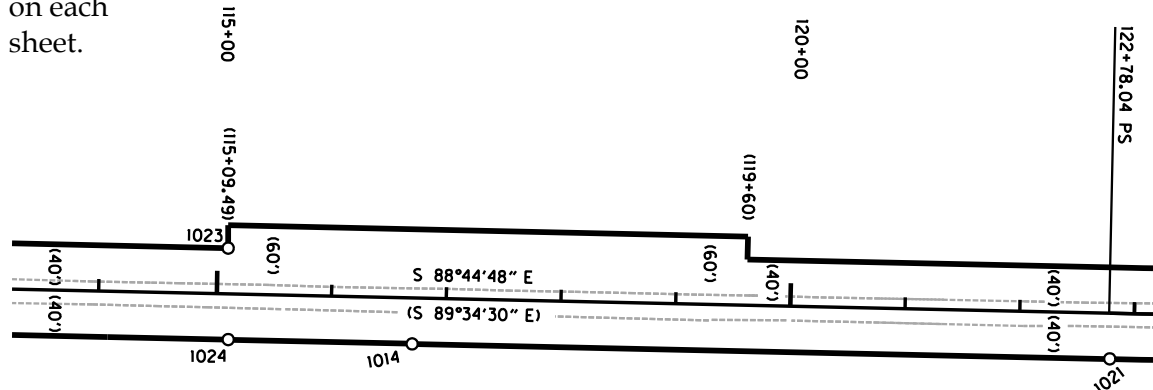
Radius (if present)

Ts (Total distance from PS to PI) (There could be a Ts1 (in) and a Ts2 (out) if there are different spiral lengths).

 Δ (Delta Angle) for simple curves $T\Delta$ (Total Delta Angle) for curves with spirals

Spiral Lengths

24. Right-of-Way Lines and Widths: Show the record widths in original units and the station at all changes in right-of-way. Show the record right-of-way widths at both ends of tangents on each sheet.



25. Centerline: Show the Recovery alignments and right-of-way lines.

(Multiple alignments should be noted in different line styles and/or have unique labeling).

Show the alignments with stationing, all centerline control points and PIs. List the coordinates at PIs, POTs, angle points and the ends of the alignment only.

26. Alignment stationing & offset distances should be shown in the direction ahead on line. All other drafting should follow the bottom/right rule. That is it should be easily read from the bottom or the right side if placed at bottom. The layout sequence for sheeting out of the pages should follow the stationing ahead on line. Exception: Section labels should be north oriented.
27. At a minimum, show all section lines, 1/4 section lines and Donation Land Claim lines. These lines will be shown even when the monumented corners defining these lines were not tied. Use deeds and other surveys to locate these lines. 1/16 lines will be shown when they pertain to the survey.
28. Show a calculated bearing and distance from a tied monumented section corner, one-quarter corner, one-sixteenth corner or Donation Land Claim corner in Township and Range, or to a monumented lot or parcel corner or boundary corner of a recorded subdivision, partition or condominium, to a point on the recovered centerline. (A section corner, one-quarter corner, one-sixteenth corner or Donation Land Claim corner is preferred)

(Note: Numbers 29, 30, and 31 are optional)

29. Private Property Lines: Show all property lines abutting the Highway right-of-way in areas where right-of-way acquisitions may occur. These lines will be placed graphically for distance and bearing according to surveys, plats, deeds, etc. Place the lines relative to the current project's basis of bearing. Do not show deed lines within the right of way. All property lines will stop at the right of way boundary, even if the deed calls to the center line.
30. Back Property Lines: Show back property line monuments that were tied if they are necessary to resolve the highway right-of-way.
31. Deeds used: The deed recording information listed should be noted on the parcel that it is related to, not just listed in the narrative. They can be shown in a table when a symbol is noted in the parcel.

See the "DRAFTING STANDARD EXAMPLES" (Sheet 4 note 7.) for details.

32. List the State Highway name. Examples are: Cascade Highway South, Sunset Highway.
33. List the names of cross streets on the sheets where they occur.
34. If a railroad encroachment map is needed, resolve and display the railroad alignment and right-of-way lines.
35. Topo features: The following items should be displayed if they have been surveyed or tied in the normal course of building a digital terrain model or base map. Extra effort should NOT be made to include topographical features that are not essential for the project or retracement.

- A) Significant bodies of water such as rivers, creeks, ponds and lakes. Also include their names.
 - B) Existing edge of roadway. (Gutter or edge of pavement)
 - C) Railroad tracks: If you display railroad tracks when they cross or are adjacent to the highway right-of-way, indicate in the narrative how the positions of railroad tracks were determined.
 - D) Any other elements used to resolve the right-of-way shall be shown such as fences, ditches, power poles, buildings and bridges. (The bridge number shall be placed on or near the bridge).
36. Mandatory features, text and other elements of the map shall be displayed in black and white. Only a few counties allow optional features such as existing topography to be gray shaded. Check with the County Surveyor.

Survey Filing Map Standards

CONTROL, RECOVERY AND RETRACEMENT SURVEY EXAMPLE SHEETS

August 1, 2018

The survey filing map drafting standards documents provide examples of a typical survey, outlines the layout of each sheet, and the various standards required for ODOT surveys.

Control, Recovery and Retracement surveys satisfy ORS 209.155(1) by identifying existing recorded monuments, the existing right of way and controlling center line and survey control for the construction or reconstruction of a public road. The following examples show the general sheet layout for a Control, Recovery and Retracement survey. Each sheet example also focusses on a specific portion of the standards as listed below:

Sheet Subject

1. Narrative, Sheet Layout
2. Network Schematic
3. Cells and Symbol Standards
4. Text Standards
5. Common Line Standards

Revision History

Authored by

Survey Technical Advisory Committee

Ron Hamilton	Region 1
Roger Galles	Region 1
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Festus Obijiofor	Region 1
Evan Burroughs	Region 2
Marshall Wagstaff	Region 3
Robert Butler	Region 5

Revised November,
2008 Scott Morrison Geometronics – Corrected blunders in title block as shown on example sheets

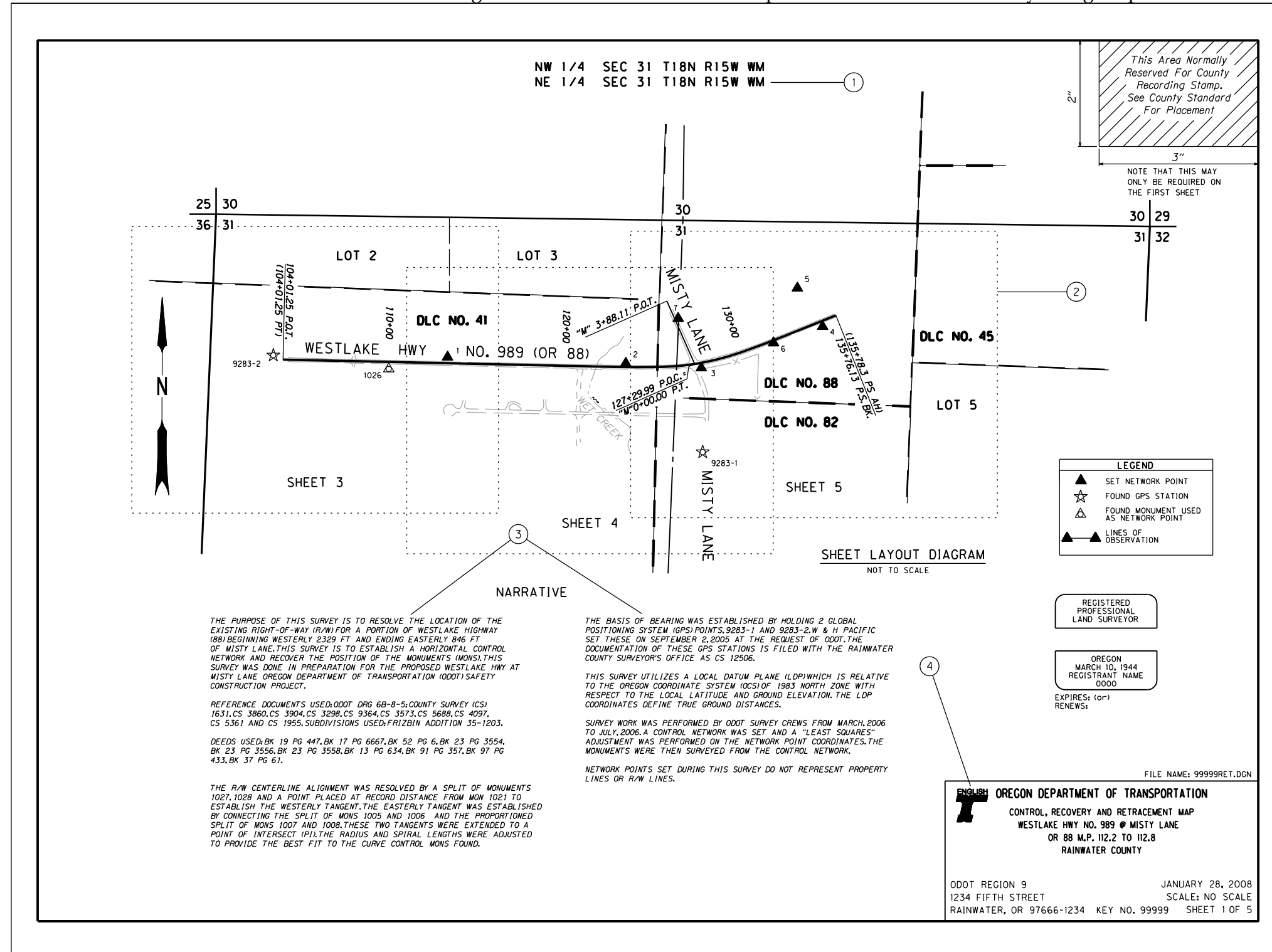
Revised August 1, 2018
Paul Morin Geometronics – Updated language throughout document per SLT review and recommendations

Sheet 1 - Technical Information Sheet

This sheet contains the survey narrative along with a sheet layout diagram of the survey project. This option shows the narrative in all capitol letters. Minimum size of the narrative text is 0.10 inch upon plotting. The use of sentence case letters (upper and lower case) is allowed if the lower case letters meet the minimum text height. See the [Control, Recovery and Retracement Surveys](#) written standards for details. The examples below may not represent the latest borders and styles. Use the current Survey Task Menu from the ODOT workkspace for all drafting tasks and for current borders use the Seed file located in the SeedRW2d.dgn file found in the ODOT workspace and located in the Survey Filing Map Borders model.

Notes and Explanations

1. Exception to text size standard. This required information may be larger depending on aesthetics and available space. Include all 1/4 sections on this sheet. Other sheets may be limited to 1/4 section information for that sheet.
2. Sheet layout illustration. This can facilitate navigating between sheets in large surveys.
3. Survey narrative. Details regarding the content of the survey narrative can be found in the written portion of these standards.
4. ODOT Flying Tee logo to be used for ODOT produced drawings only. This logo is not to be used for consultant produced drawings.

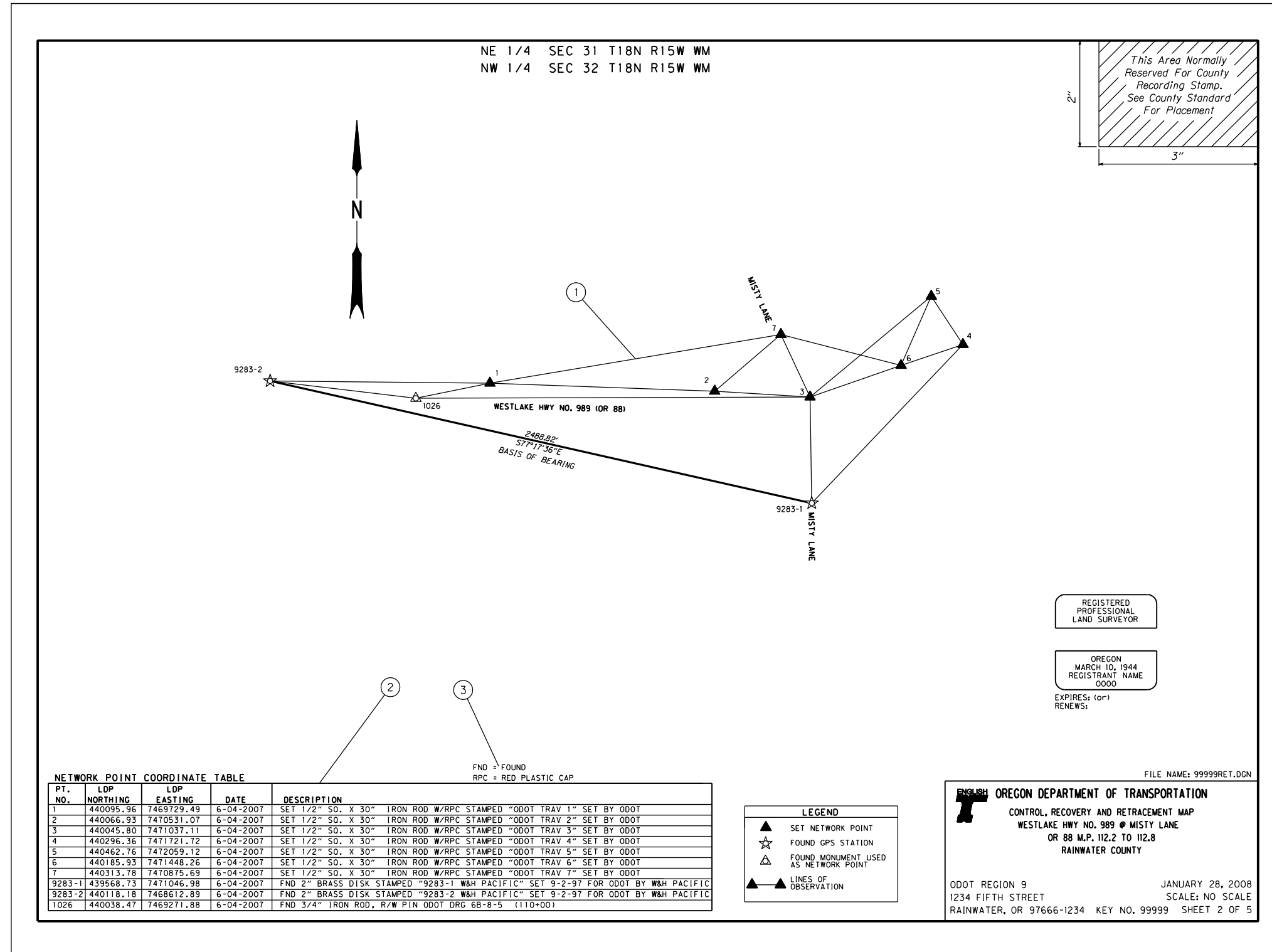


Sheet 2 - Network/Traverse Data

This sheet contains a simple schematic showing the network control points with their lines of observation. The basis of bearing shall be shown with a heavier weight line. The examples below may not represent the latest borders and styles. Use the current Survey Task Menu from the ODOT workspace for all drafting tasks and for current borders use the Seed file located in the SeedRW2d.dgn file found in the ODOT workspace and located in the Survey Filing Map Borders model.

Notes and Explanations

1. Network control schematic. Scale and modify shape to fit available space on the sheet. Include roadway names or alignment features to aid in orientation. Observation line for the basis of bearing shall be shown with a heavier weight line.
2. Control Point Description Table.
Cell Name: NETTBL
Level Name: E_SURV_MAPS_General
3. Abbreviation definition required only if abbreviation is not industry standard.

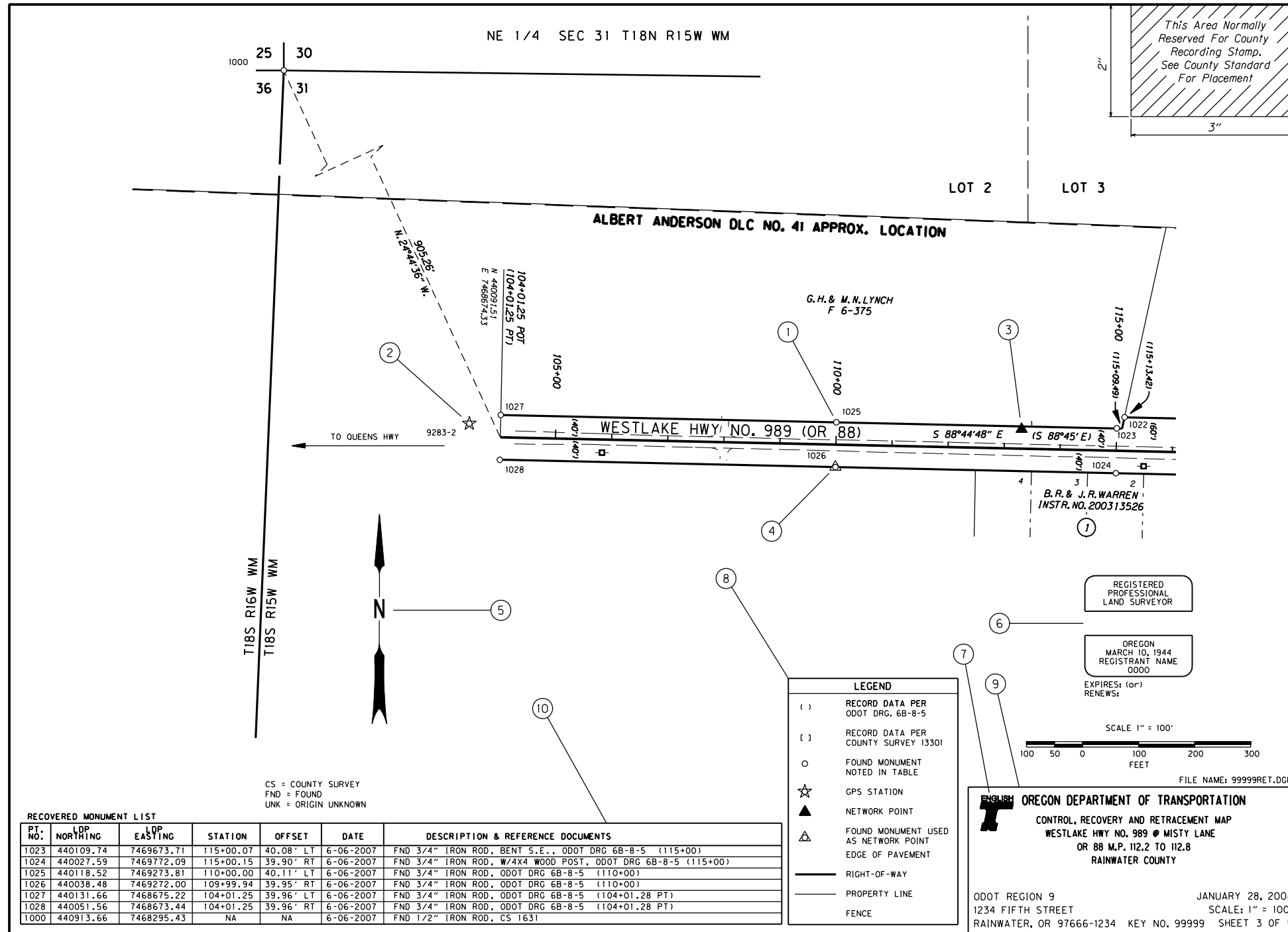


Sheet 3 - Common Cell Symbols Used

This sheet shows common cell symbols used in recovery surveys. Title block, Legends, tables, etc. are shown in approximate positions and may be adjusted according to the needs of the sheet. All cells shown on this page are found in the Cadastral cell library and can be accessed from the Cadastral drafting menu unless otherwise noted. The examples below may not represent the latest borders and styles. Use the current Survey Task Menu from the ODOT workspace for all drafting tasks and for current borders use the Seed file located in the SeedRW2d.dgn file found in the ODOT workspace and located in the Survey Filing Map Borders model.

Notes and Explanations

1. Found Monument Cell. For monuments recovered during this survey.
Cell Name: FDMON
Level Name: E_SURV_MON_FdMon
Color: 4
Weight: 1
2. Found GPS Station Cell.
Cell Name: FDGPS
Level Name: E_SURV_MON_FdGPS
Color: 0
Weight: 1
3. Set Traverse/Network Point Cell.
Cell Name: SETNTW
Level Name: E_SURV_NTW_SetNTWPt
Color: 3
Opaque Fill Color: 3
4. Found Monument Used As A Traverse/Network Point Cell.
Cell Name: TRISTA
Level Name: E_SURV_NTW_FdTriSta
Color: 0
Weight: 1
5. North Arrow Cell.
Cell Name: ARROW
Level Name: P_ODOT_PLAN_General
Color: 6
Opaque Fill Color: 6
6. Generic PLS Stamp Cell.
Cell Name: PLS
Level Name: P_ODOT_PLAN_ProfStamp
P_ODOT_PLAN_ProfStampTx
Color: 3
7. ODOT Flying Tee Logo For English Surveys.
Cell Name: ENGLISH TEE
Level Name: E_SURV_MAPS_General
Color: 4
Opaque Fill Color: 4
8. Symbol Legend Cell. Edit the cell to include only symbols appropriate for the particular sheet.
Cell Name: LEGEND_SFM
Level Name: E_SURV_MAPS_General
9. Generic Survey Filing Map Title Block Cell.
Cell Name: TBLOCK_SFM
Level Name: E_SURV_MAPS_General
10. Recovered Monument Table Cell.
Cell Name: MONTBL
Level Name: E_SURV_MAPS_General



Sheet 4 - Sheet Text Standards

All text when plotted at 1"=100' scale, shall have a minimum height and width of 0.10 inch (Tx=10). Text fonts used will be ODOT vertical font 2, ODOT vertical Mono font 4, ODOT slant font 24 and ODOT Block font 42. The ODOT drafting menus will automatically load the correct text symbology for any particular item. The examples below may not represent the latest borders and styles. Use the current Survey Task Menu from the ODOT workspace for all drafting tasks and for current borders use the Seed file located in the SeedRW2d.dgn file found in the ODOT workspace and located in the Survey Filing Map Borders model.

Notes and Explanations

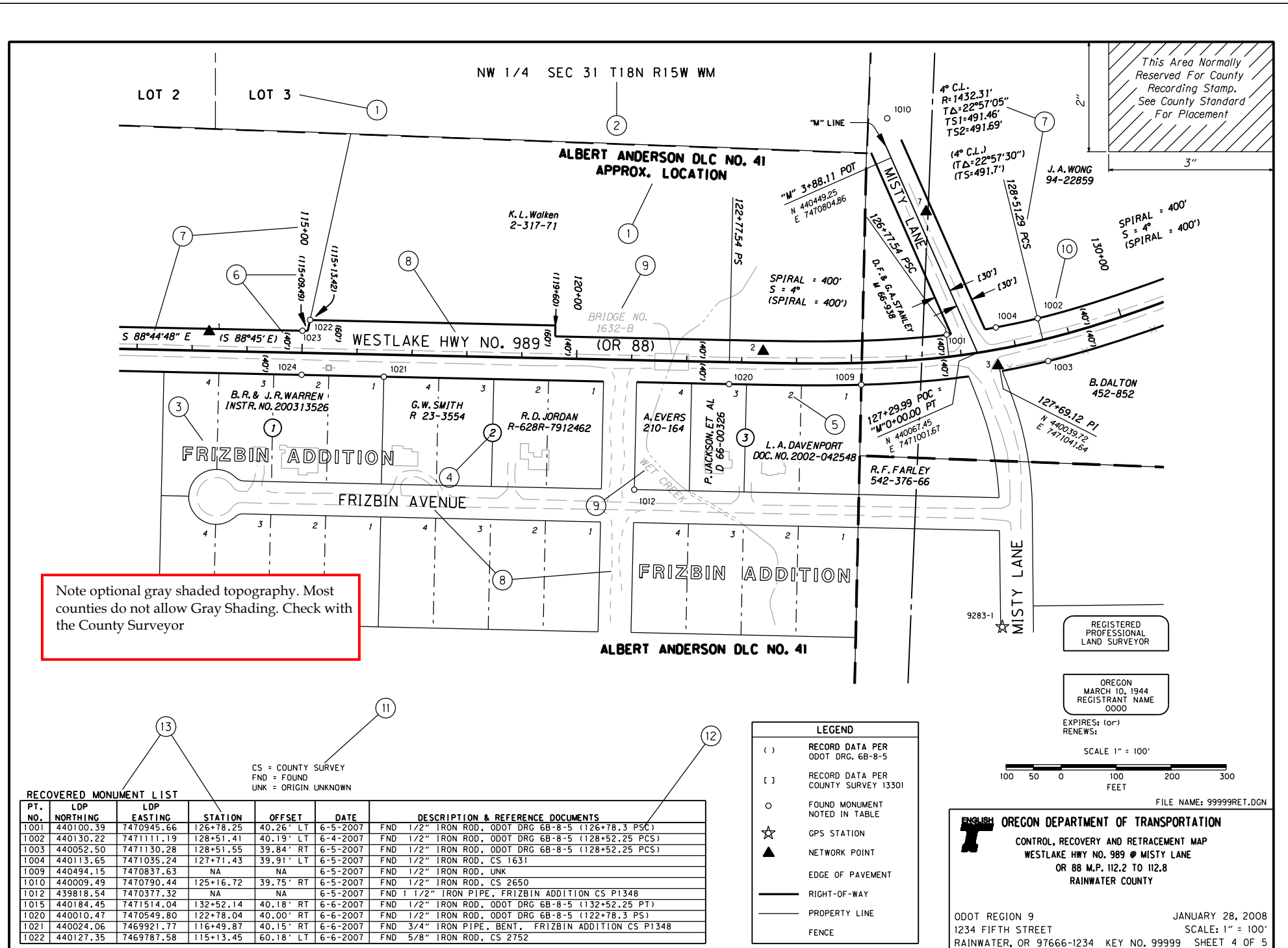
General breakdown of text fonts used:

- Center line alignment text - ODOT Slant font 24 (different fonts may be used if showing more than one alignment)
- Bearing and distance ties - ODOT Slant font 24
- Property ownership names - ODOT Slant font 24
- Topographical annotation - ODOT Slant font 24
- Narrative text - ODOT Slant font 24
- Subdivision lot and block numbers - ODOT Slant font 24
- Subdivision names - ODOT Block font 42
- Existing right of way - ODOT Vertical font 2
- Government boundary text - ODOT Vertical font 2
- Tables and columnar text - ODOT Vertical Mono font 4
- All other text - ODOT Vertical font 2

Some fonts found in cells such as the title block and PLS stamp do not totally conform to the above standards.

Text sizes shown below are based on a 1"=100' plot, CAD active scale AS=2

1. Government Line Labels (Township, Section, Quarter section, Government Lot, and DLC: Ft=2, Tx=16)
2. Township/Range/Section Sheet Header (same as Government line labels).
3. Subdivision Name: Ft=42, Tx=24 or 36 depending on appearance.
4. Subdivision Block Numbers: Ft=24, Tx=12
5. Subdivision Lot Numbers: Ft=24, Tx=10
6. Right Of Way Data: Ft=24, Tx=10
7. Center Line Alignment Data (stationing, tangent bearings, control points, curve data including spirals): Ft=24, Tx=12
8. Street And Road Names: Ft=2, Tx=18.8
*This text is found on the Existing drafting menu.
9. Topographical Feature Labels: Ft=24 (text size varies)
*Topographical features are found on the Existing drafting menu.
10. Point Numbers (Network points, R/W monuments, GPS stations, etc.): Ft=2, Tx=10
11. Notes: Ft=2
12. Text In Tables: Ft=4
13. Various Table And Column Headings: Ft=2 or 4



Sheet 5 - Common Line Standards

This sheet shows the various line styles used on ODOT drawings. The examples below may not represent the latest borders and styles. Use the current Survey Task Menu from the ODOT workspace for all drafting tasks and for current borders use the Seed file located in the SeedRW2d.dgn file found in the ODOT workspace and located in the Survey Filing Map Borders model.

Notes and Explanations

- Existing Street/Highway Right Of Way Line.
 Level Name: E_SURV_BNDRY_ROW*
 Color: 4
 Weight: 4
 Line Style: 0
 * Use this level for stand alone CAD files or when not using the survey pen tables to bump the weight upon plotting.
- Section Line.
 Level Name: E_SURV_BNDRY_GovSectionLine
 Color: 6
 Weight: 3
 Line Style: 0
- Quarter Section Line.
 Level Name: E_SURV_BNDRY_GovQuartSectLine
 Color: 6
 Weight: 2
 Line Style: quarter_V8
- DLC Line With Claim On Both Sides.
 Level Name: E_SURV_BNDRY_GovDLCLine
 Color: 6
 Weight: 1
 Line Style: dlc3_V8
- DLC Line With Claim On Right Side Only.
 Level Name: E_SURV_BNDRY_GovDLCLine
 Color: 6
 Weight: 1
 Line Style: dlc2_V8
- DLC Line With Claim On Left Side Only.
 Level Name: E_SURV_BNDRY_GovDLCLine
 Color: 6
 Weight: 1
 Line Style: dlc1_V8
- Edge Of Asphalt Pavement. *Found on Existing drafting menu
 Level Name: E_RDWY_ROAD_EdgeAsph
 Color: 2
 Weight: 1
 Line Style: 3
- Fence Line. *Found on Existing drafting menu
 Level Name: E_RDWY_ROAD_Fence
 Color: 2
 Weight: 1
- Property Line.
 Level Name: E_SURV_BNDRY_Property
 Color: 4
 Weight: 1
 Line Style: 0
- Resolved Center Line *Different line styles may be used for multiple alignments.
 Level Name: E_SURV_ALIGN_Main
 Color: 3
 Weight: 5
 Line Style: *
- Control Point Flag *Flag is preset in InRoads preferences
 Level Name: E_SURV_ALIGN_MainTx
 Color: 0
 Weight: 1
 Line Style: 0

