FEATURE 251
INTERSECTIONS

Roadway Side	Allows Tie	LRS Package	Feature Type	Interlocking	Secured
C	No	No	Point	Yes	Yes
Responsible Party for Data Collection	District Planning				

BEGSECNM | BEGIN ROADWAY SECTION MILEPOINT DESCRIPTION

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
	10	Planning, Maintenance Offices, Work Program, Traffic Operations, HPMS, Safety Offices	All roadways.	N/A	N/A
Potential Anchor	Yes				

Definition/Background: Identifies the geographical location of the roadway whether it begins at an intersection or does not begin at an intersection. If the roadway does not begin at an intersection, then record the description of the physical location of the beginning milepoint so that it can be located. If possible, place a permanent physical marker in the field identifying the BMP, such as 1) permanent paint 2) survey nail marker or 3) thermoplastic

Value for BMP Description: 20 Bytes:
XXXXXXXXXXXXXXXXXXX

How to Gather this Data: Record the name of the intersecting roadway or boundary at the beginning milepoint of the roadway being inventoried/coded. Refer to Feature 114 for standard naming convention guidelines.

If the street sign is missing, if the street name is unknown or if the street is determined to be unnamed, code as "unsigned."

Special Situations: If the beginning roadway section milepoint name occurs at an intersection, then INTSDIRx Intersection Direction also must be coded.

ENDSECNM | END ROADWAY SECTION MILEPOINT DESCRIPTION

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
	11	Planning, Maintenance Offices, Work Program, Traffic Operations, HPMS	All roadways.	N/A	N/A
Potential Anchor	Yes				

Definition/Background: Identifies the geographical location of the roadway whether it ends at an intersection or does not end at an intersection. If the roadway does not end at an intersection, then record the description of the physical location of the ending milepoint so that it can be located. If possible, place a permanent physical marker in the field identifying the EMP, such as 1) permanent paint 2) survey nail marker or 3) thermoplastic.

How to Gather this Data: Record the name of the intersecting roadway or boundary at the end of the section. Refer to Feature 114 for standard naming convention guidelines.

If the street sign is missing, if the street name is unknown, or if the street is determined to be unnamed, code as "unsigned."

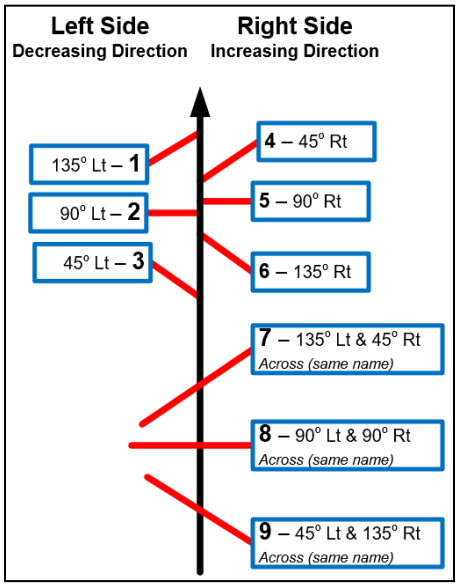
Value for EMP Description: 20 Bytes: XXXXXXXXXXXXXXXXXXXX

Special Situations: If the ending roadway section milepoint name occurs at an intersection, then INTSDIRx Intersection Direction must also be coded.

INTSDIRX | INTERSECTION DIRECTION (X=1-9)

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
		Planning, Maintenance Offices, Work Program, Traffic Operations, HPMS	All roadways.	N/A	N/A
Potential Anchor	Yes				

Definition/Background: Denotes the name of the intersecting roadway or cross streets.



How to Gather this Data: First, determine the angle of intersection, choose the appropriate characteristic name INTSDIR1 through INTSDIR9, then code the intersecting roadway name. The intersection directions are based on the degrees of angle to the roadway being inventoried/coded. Code 1 through code 6 are for roadways that terminate at the intersection. Code 7 through code 9 are for roadways that cross and continue through the intersection.

Minimum Coding Requirements for Urbanized Areas:

- It has controls, i.e., stop sign, stop bar, traffic signal, or yield sign.

Minimum Coding Requirements for Rural Areas:

- It is paved or has any type of posted signage.

If the Safety Office requests a roadway be added to RCI, then code the name they provide, but field verify the milepoint. This will assist law enforcement when describing crash locations.

Characteristics	Intersecting Roadway Directions	Tolerance Ranges (Between)
INTSDIR1	135º Left	113º–157º Left
INTSDIR2	90º Left	68º–112º Left
INTSDIR3	45º Left	23º–67º Left
INTSDIR4	45º Right	23º–67º Right
INTSDIR5	90º Right	68º–112º Right
INTSDIR6	135º Right	113º–157º Right
INTSDIR7	135º Left and 45º Right Across (same name)	113º–157º Left and 23º–67º Right
INTSDIR8	90º Left and 90º Right Across (same name)	78º–112º Left and 78º–112º Right
INTSDIR9	45º Left and 135º Right Across (same name)	23º–67º Left and 113º–157º Right

Business entrances may be collected as prescribed under HPMS Feature 118 ATGOTHR.

Refer to Feature 114 for standard naming convention guidelines.

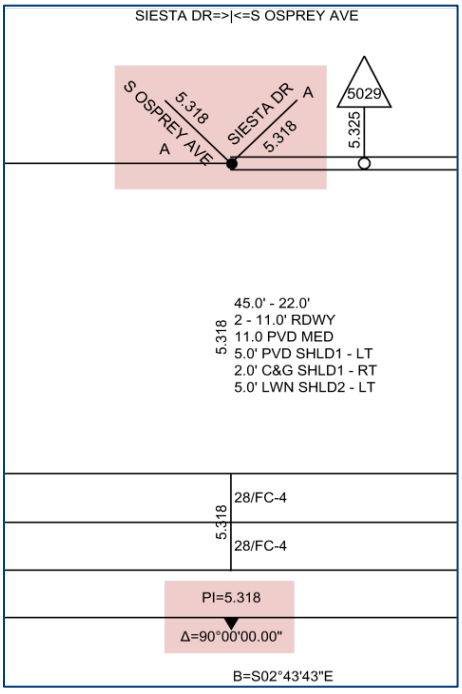
If the street sign is missing, if the street name is unknown, or if the street is determined to be unnamed, code it as "unsigned."

Special Situations: If two side roads on opposite sides are separated by 50 feet or less along the roadway, consider it one intersection with the milepoint between the two opposing side roads. Use engineering judgment to determine "midpoint." Consolidating these very close roadways helps to eliminate over coding. Use the USPS standard street suffixes.

For ramps, code the ramp's 8-digit roadway ID, the direction of travel, whether it is an on ramp or an off ramp, then a short descriptor. Full descriptions of the ramps will be stored in Feature 114 on the Ramp Roadway ID.

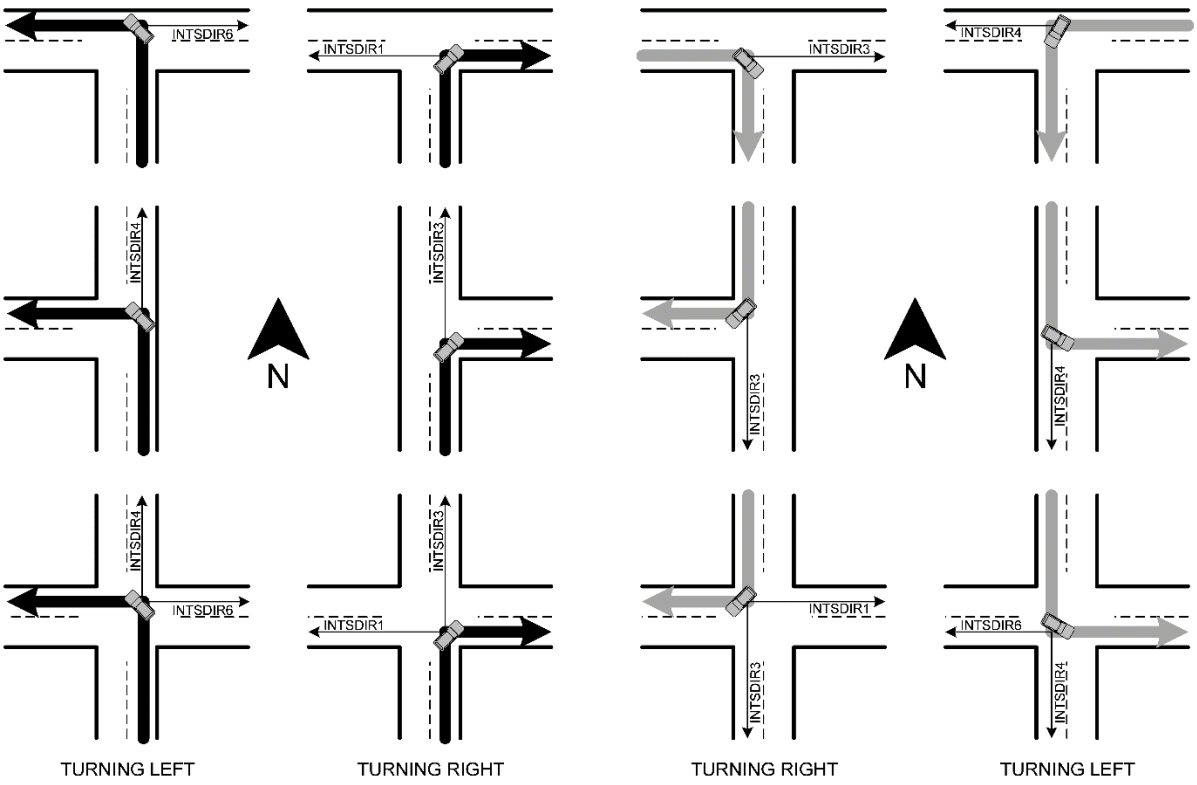
Descriptions	Abbreviations	Examples for coding Intersecting Ramps at
Agricultural Station	AG	99009113 SB ON AG
Rest Area	REST	99009116 NB OFF REST
Service Plaza	SERV	99009119 SB OFF SERV
Toll Plaza	TOLL	99009123 EB ON TOLL
Weigh Station	WEIGH	99009128 NB ON WEIGH
Interchange		99009111 WB ON
Interchange		99009112 EB OFF

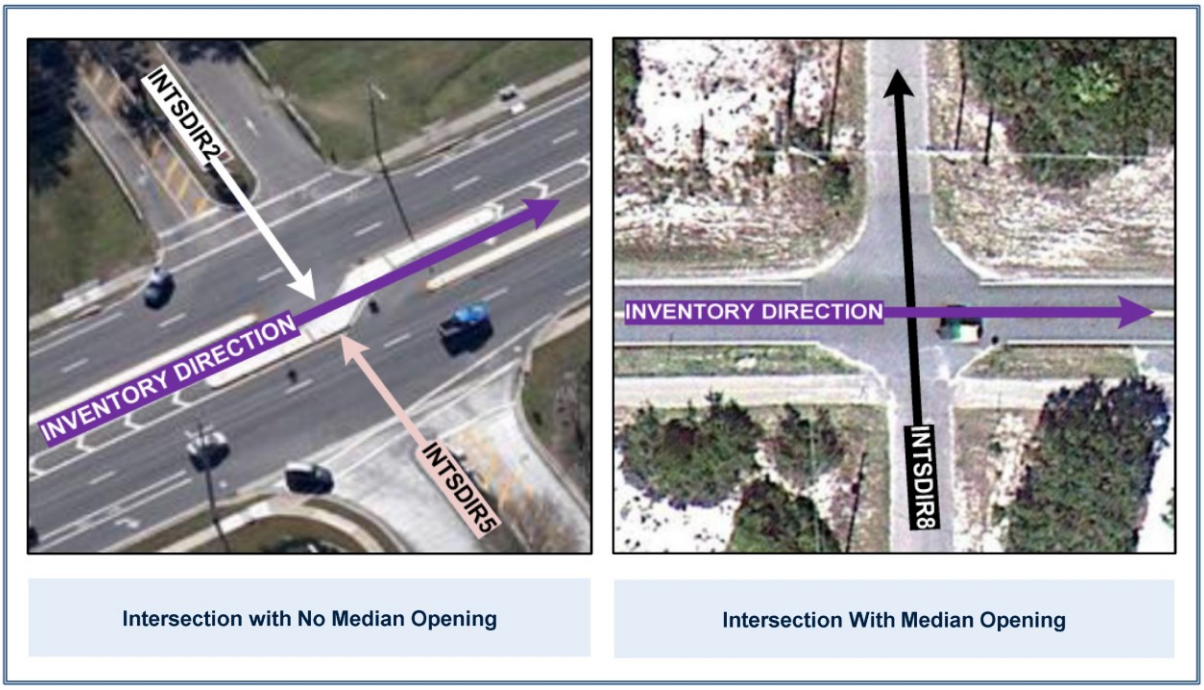
Special Cases: Coding intersecting roadways that occur at a 90 degree (90°) turn of the inventoried roadway: In these special situations, the available intersection codes for collecting intersecting roadways do not handle that leg of the intersection that continues straight ahead. The recommended method is to inventory all the legs of the intersection in such a manner so that the 90 degree (90°) turn intersections can be drawn and represented on the SLD by coding the intersecting legs at these points from a projected 45 degree (45°) diagonal, so that there are no zero degree (0°) codes used for any intersecting roadways. Using this method, the intersecting roadways are collected at either a 45 degree (45°) or a 135 degree (135°) direction from the projected diagonal as the inventoried roadway makes the 90 degree (90°) turn. If the inventoried roadway makes a turn at a "4-way" intersection, collect both intersecting roadways at the intersection. When plotted on the SLD, these legs will be represented at right angles to each other, and there will be sufficient space on the SLD so the intersections are not drawn on top of each other.



Also code Feature 220 NCPINT (Non-curve Point of Intersection) to denote the change in the direction of the inventory roadway, i.e., 90° turn.

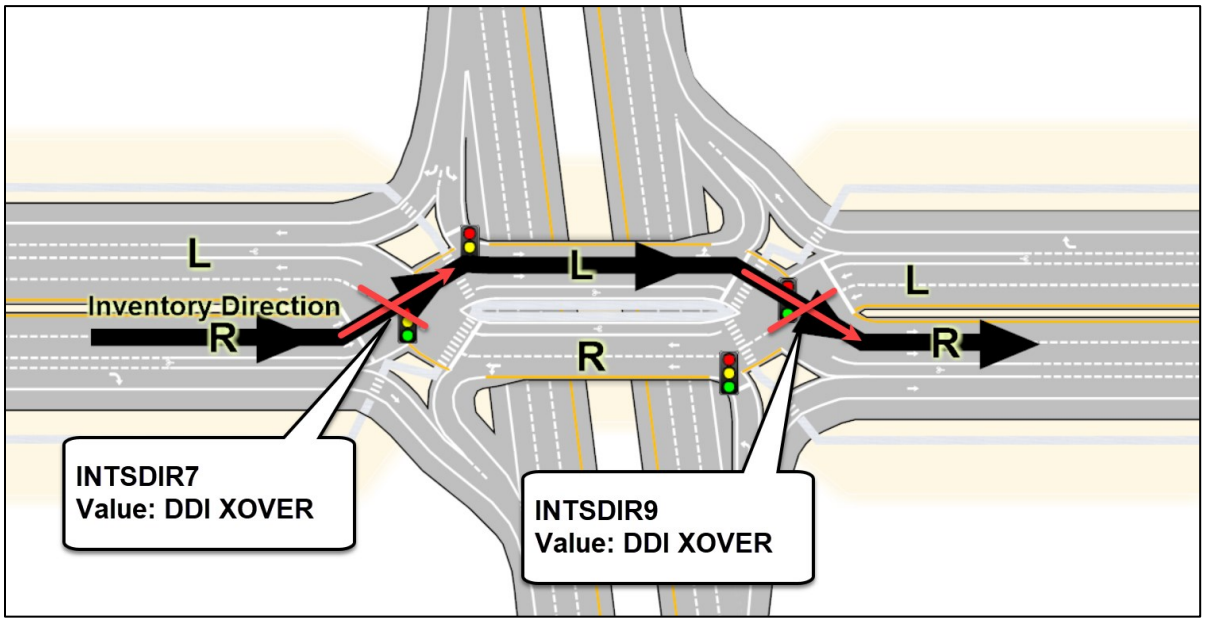
Value for Intersection Roadway Name: 20 Bytes: XXXXXXXXXXXXXXXXXXXX





For crossover intersections at a diverging diamond interchange, the intersection direction will be coded with INTSDIR7, INTSDIR8, or INTSDIR9, according to the angle of the intersecting roadway as illustrated above. The value for the intersecting roadway name shall be "DDI XOVER."

EXAMPLE OF INTERSECTIONS AT A DDI CROSSOVER AREA

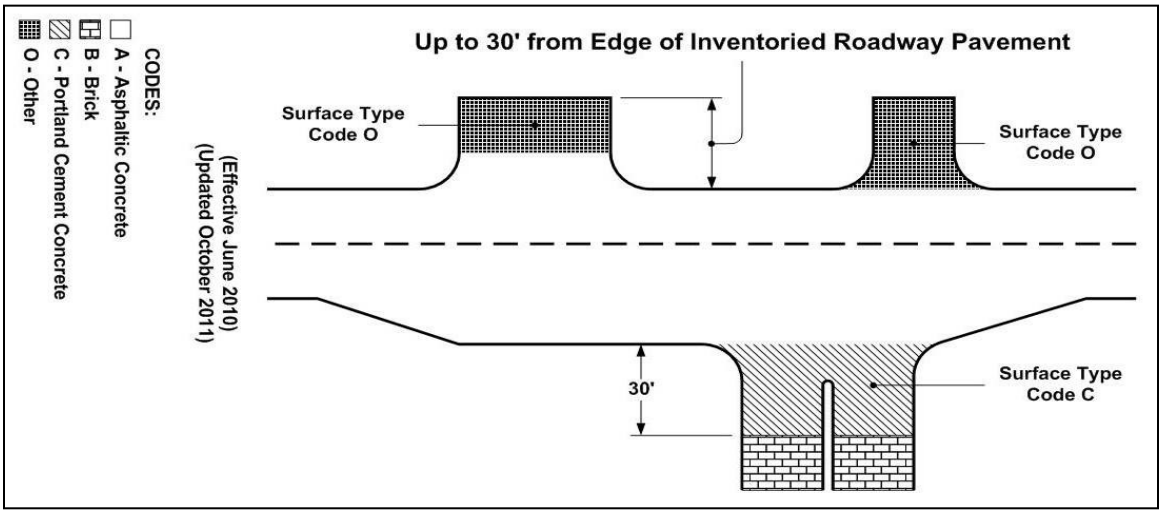


Note: INTSDIR8 would be coded if the intersecting lanes crossed at a 90 angle with respect to each other.

INTSRTPX | INTERSECTION SURFACE TYPE (X=1-9)

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
		Planning, Maintenance Offices, Work Program, Traffic Operations, HPMS	All roadways.[1]	N/A	N/A
Potential Anchor	No				

[1] *This characteristic is optional and collected at the District's discretion.*



Definition/Background: The intersection surface type determines how well merging maneuvers occur at the termination of lane drops; where the tangent section of the roadway and entrance acceleration allow for a smooth, safe transition. Intersections of grade or cross slope should be gently rounded to improve vehicle operation. Pavement generally should be sloped toward the intersection corners to provide super-elevation for turning maneuvers and to promote proper drainage.

How to Gather this Data: Record the surface type of the intersecting roadway up to 30 feet from the edge of the inventoried roadway or from the right-of-way line, whichever is less. The only concern is the point of connection of the intersecting roadway and how it interacts with the mainline, not the entire composition of the intersecting roadway itself.

Codes	Descriptions
A	Asphaltic Concrete
B	Brick
C	Portland Cement Concrete
O	Other