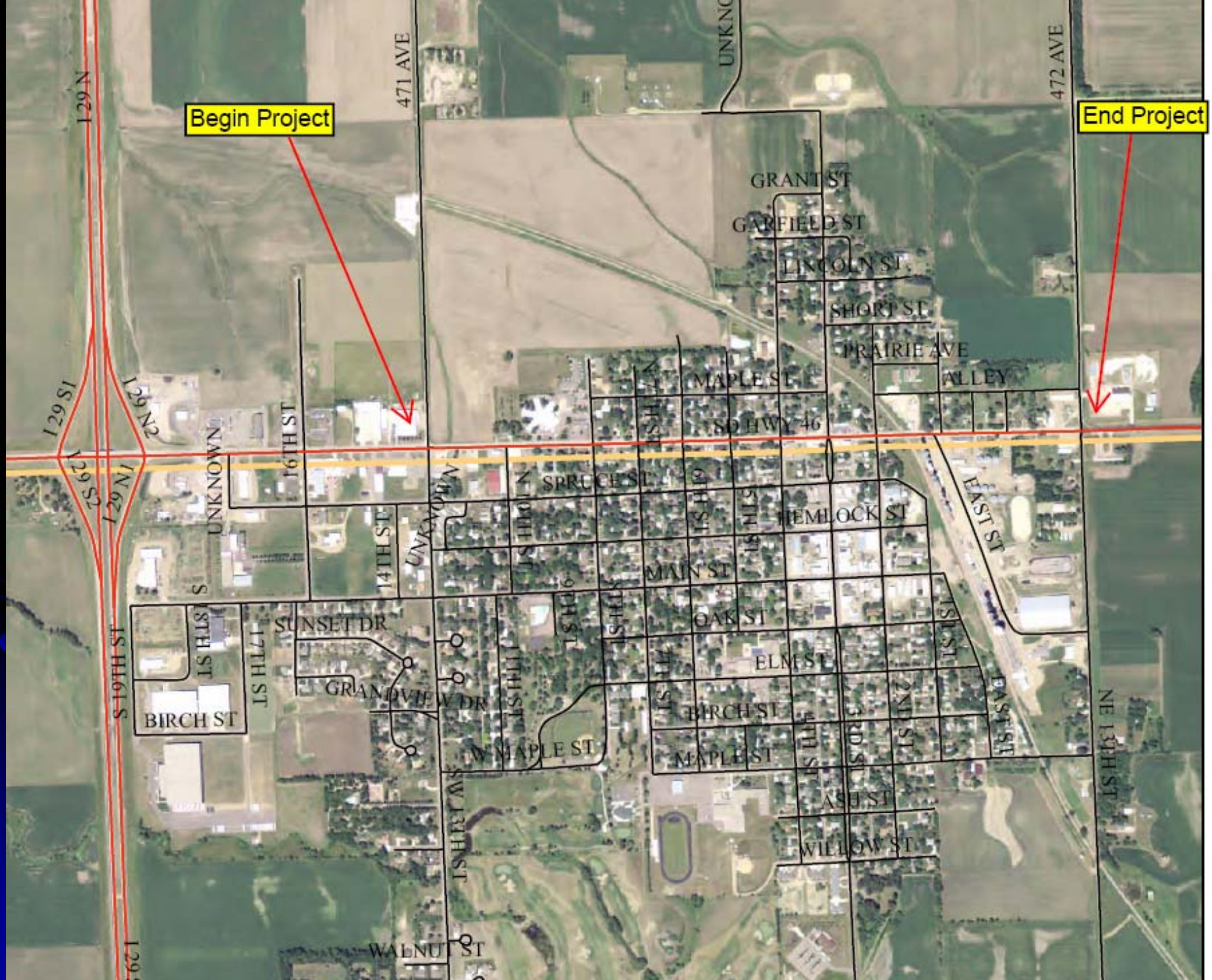
Beresford Public Meeting

SD46 Reconstruction

Mark Malone
SD DOT

SD46 Grading & Surfacing

- From SW 13th St to SE 13th St
  - 1 mile
- Complete Urban Reconstruction
  - Remove and Replace Concrete, C&G, Storm Sewer, Sidewalk
  - Railroad Crossing Upgrade
  - Lighting



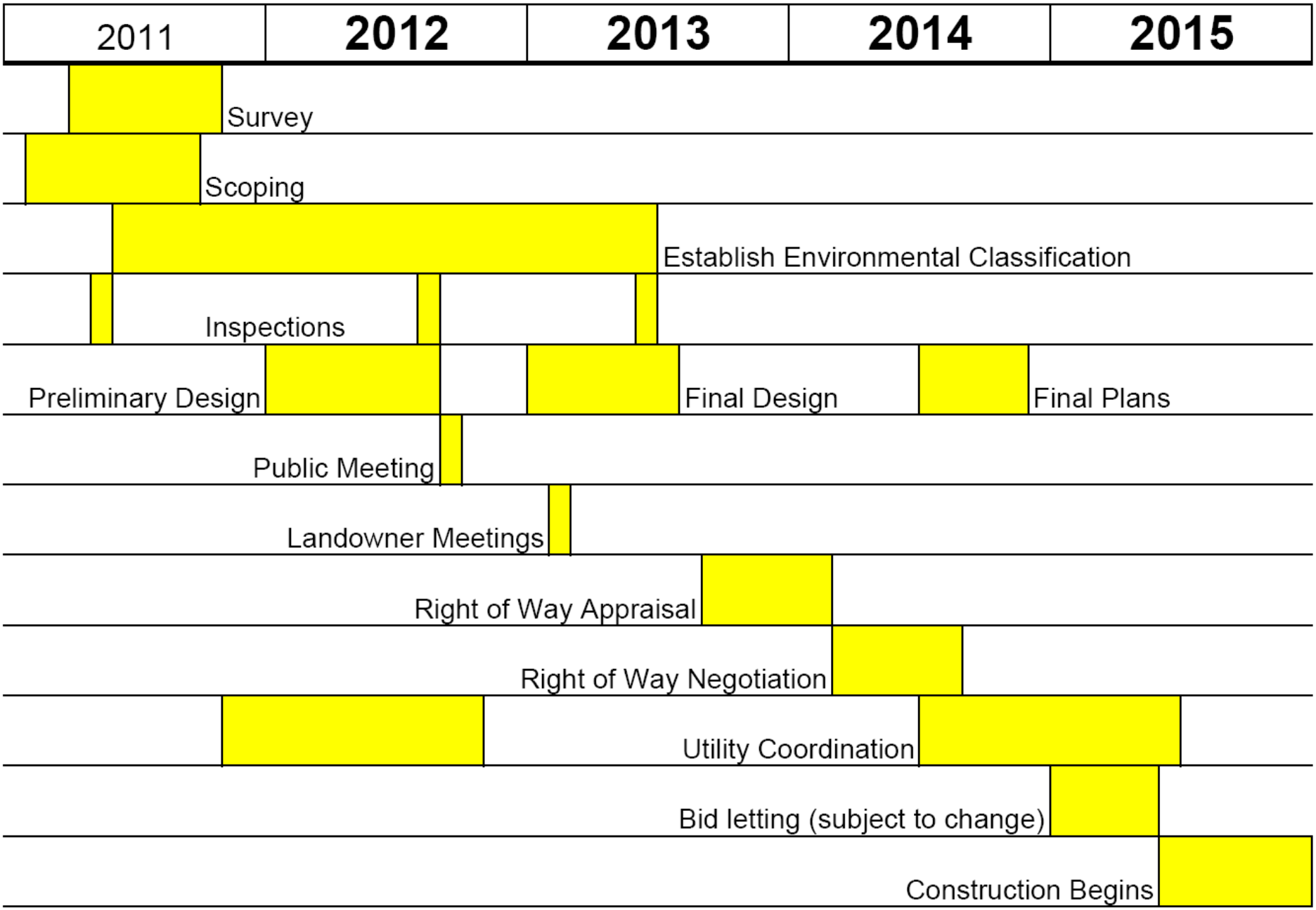
Begin Project
End Project
I 29 N
I 29 S1
I 29 N2
I 29 S2
I 29 N1
I 29
471 AVE
472 AVE
UNKNOWN
GRANT ST
GARFIELD ST
LINCOLN ST
SHORT ST
PRAIRIE AVE
ALLEY
MAPLE ST
SD HWY 46
SPRUCE ST
HEMLOCK ST
EAST ST
MAIN ST
OAK ST
ELM ST
BIRCH ST
MAPLE ST
ASH ST
WILLOW ST
SUNSET DR
GRANDVIEW DR
W MAPLE ST
WALNUT ST
16TH ST
14TH ST
18TH ST
17TH ST
19TH ST
11TH ST
9TH ST
8TH ST
7TH ST
6TH ST
5TH ST
4TH ST
3RD ST
2ND ST
1ST ST
NE 13TH ST

Purpose of Project

- Surface Condition
  - Pavement is in poor condition
- Pavement (Concrete) has a 40 year design life
  - Ancillary items
    - Sidewalk
    - ADA
    - Lighting
    - Safety
    - Capacity

Why are we here?

- To involve public in the design process
- To discuss what options are available for improving SD Hwy 46
- Exchange ideas – listen and discuss concerns


2011
2012
2013
2014
2015
Survey
Scoping
Establish Environmental Classification
Inspections
Preliminary Design
Final Design
Final Plans
Public Meeting
Landowner Meetings
Right of Way Appraisal
Right of Way Negotiation
Utility Coordination
Bid letting (subject to change)
Construction Begins

Right of Way

- The project will utilize existing ROW to the maximum extent feasible
- Block-outs and small acquisitions may be necessary as well as easements
  - This will be discussed in more detail at individual Landowner Meetings

Encroachments

- Encroachments within the public Right of Way need to be addressed prior to Construction
  - Federal Highway Regulations
  - Safety
  - Consistency Statewide
- The City of Beresford is responsible for encroachment enforcement
  - Maintenance & Encroachment Agreement

Landowner Meetings

- Approximately 2 years from now
- Applicable to all affected Landowners
- You will be contacted by SDDOT
- Discuss your property in particular
  - Design details such as driveway location or width, fence, etc.

Right of Way Office

- Appraisals
  - Start in ~2.5 years
- Negotiations
  - Start in ~3 years

Construction

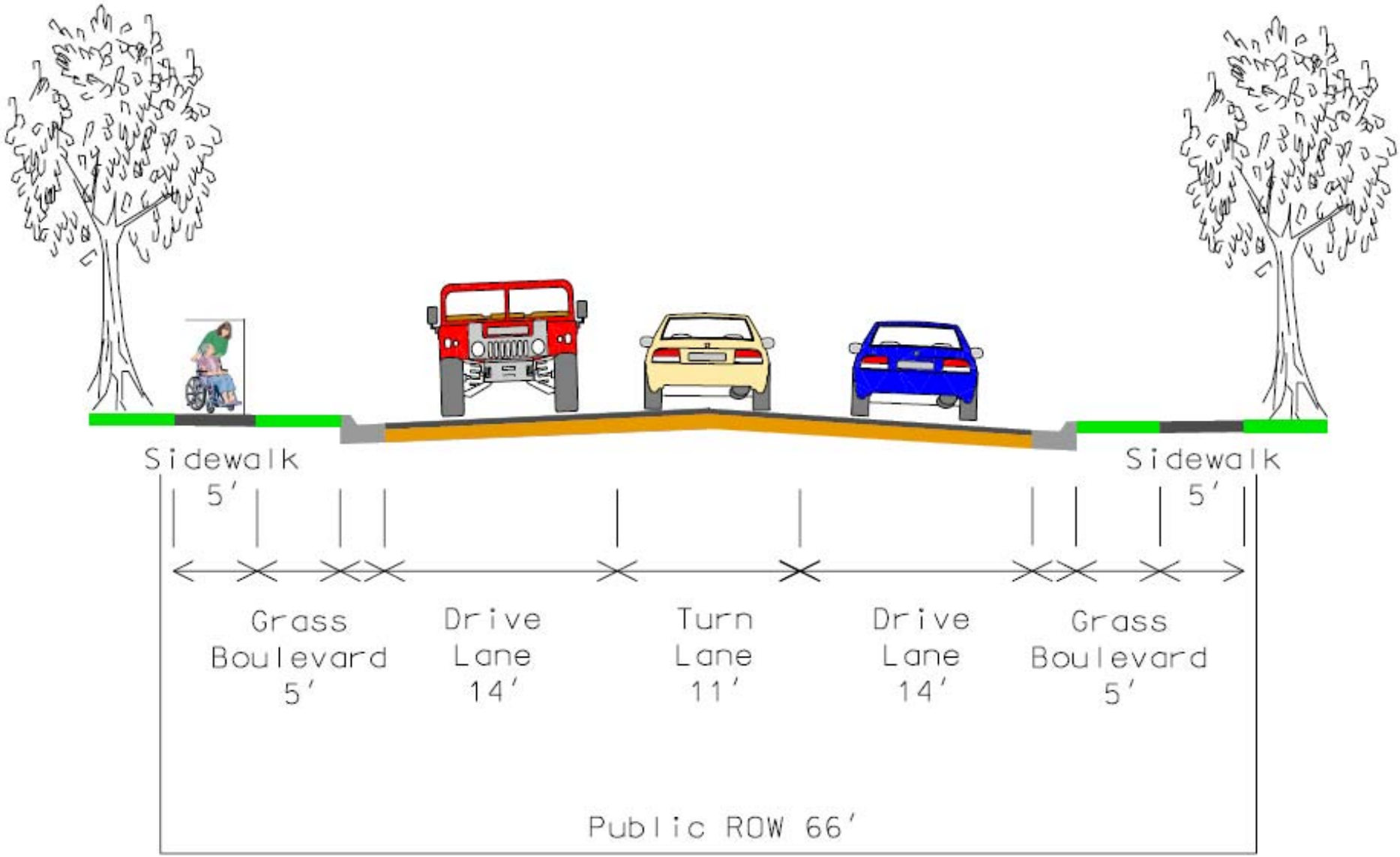
- Construction to begin in 2015
  - Pending Funding & Scheduling
  - 1 construction season
  - SDDOT will obtain additional public comment
- Mostly Two-Way Traffic

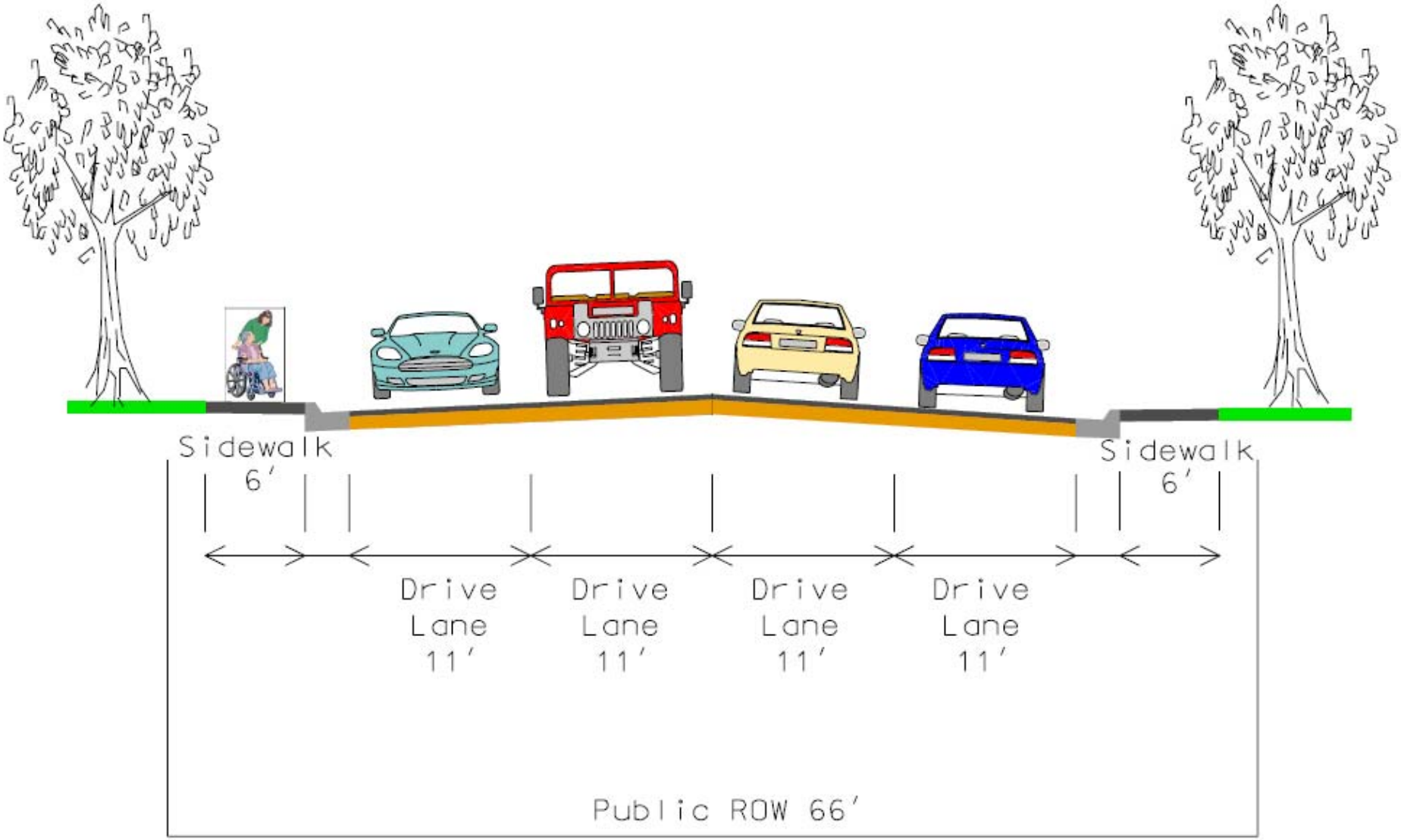
Existing Conditions (SD46)

- 4 – 12’ Concrete Lanes
- Some Curbside sidewalk
- ROW width = 66’(majority)
- Roadway Lighting (poor condition)
- ADT – 5,700

Proposed Typical Section

- 2 - 14’ Lanes & 1 – 11’ Center Turn Lane
- OR 4 – 11’ Lanes (PCCP)
- Curb & Gutter
- New Storm Sewer
- Boulevard Sidewalk (3 lanes)
- Curbside Sidewalk (4 lanes)
- Lighting
- No Parking
- Access Management


Sidewalk
5'
Sidewalk
5'
Grass
Boulevard
5'
Drive
Lane
14'
Turn
Lane
11'
Drive
Lane
14'
Grass
Boulevard
5'
Public ROW 66'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Drive
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11'
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Lane
11'
Drive
Lane
11'
Drive
Lane
11'
Public ROW 66'

5 Lane Section

- 2 Lane can handle up to 3,200 veh/hr (Highway Capacity Manual)
  - According to our design manual, our ADT design range for 5 lane is between 16,000 to 30,000 based on Level of Service
- Higher Cost
- More ROW Impacts
  - We would need to acquire at least 10-15’
    - That would mean curbside sidewalk as well
- We are not currently considering this option

Advantages of 3 vs 4 Lanes

- Vehicles
  - Provide safe storage for left turning vehicles
  - Reduce number of conflict points for left turn vehicles and vehicles entering the roadway
  - Reduces Speed Differential
  - Traffic Calming
  - Snow Storage in Boulevards
    - Possibility of change in snow removal process

Advantages of 3 vs 4 Lanes contd.

- Pedestrian
  - Reduce crossing distance
  - Reduce top end travel speed (traffic calming)
  - Buffer sidewalk from travel lanes
  - Reduce conflict points
- General
  - Improved Green Space
  - Improved Aesthetics

Disadvantages of 3 lane vs 4 lane

- Snow drifts in boulevard blocking sight distance
- Slow driver
  - The probability of someone being forced to travel below the posted speed limit due to following a slow driver is 6.2% on this roadway.
- Possible conflicts of vehicles in the two way left turn lane
- Roadway consistency

Examples of 3 lane Sections

- 3 Lane Section can be safe and efficient up to 20,000+ vehicles/day
- US12 in Milbank – 8000 ADT
- Melgaard Rd from 5th St to Dakota St in Aberdeen – 8000 ADT
- Roosevelt St from 6th Ave to 8th Ave in Aberdeen – 8200 ADT
- 18th St in Sioux Falls in front of Sanford – 18,000 ADT

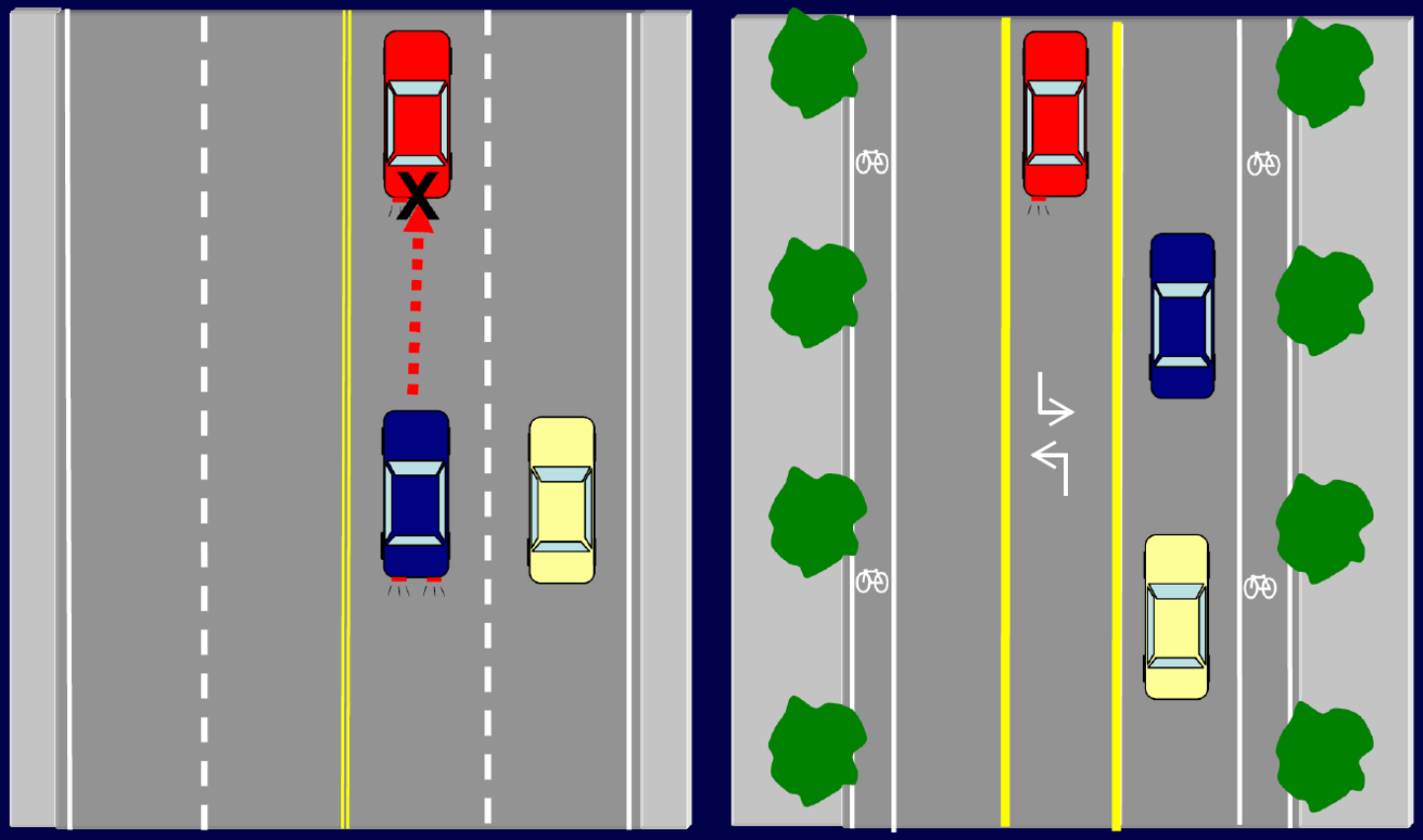
Accident Data in Beresford

- From 2007-2009

- 2 Intersection crashes due to snow in middle of road
- 3 of the intersection crashes were folks just pulling out not seeing the oncoming vehicle

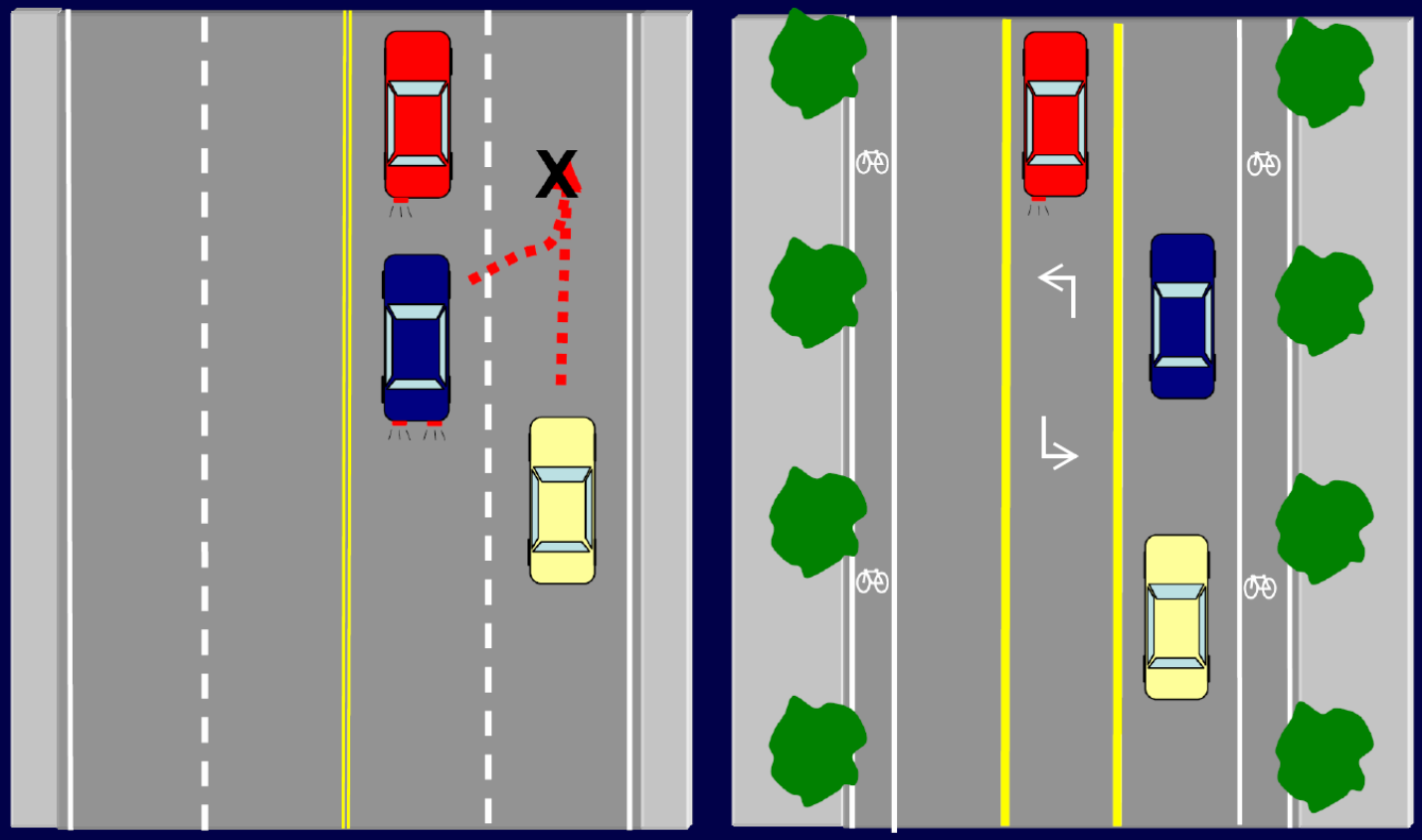
Accident Reduction Types

3 crash types can be reduced by going from 4 to 3 lanes: 1 – rear enders



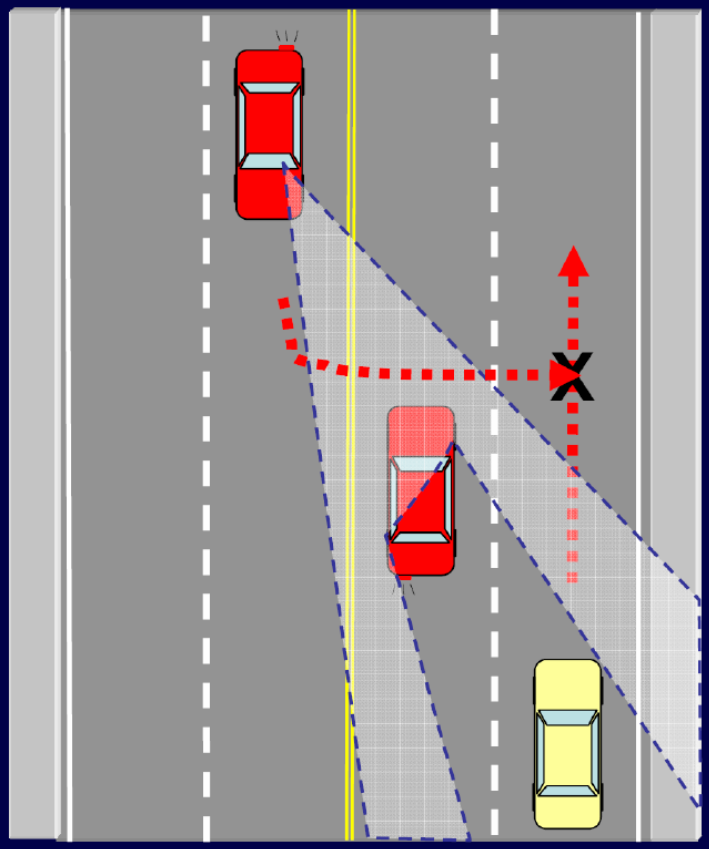
Accident Reduction Types

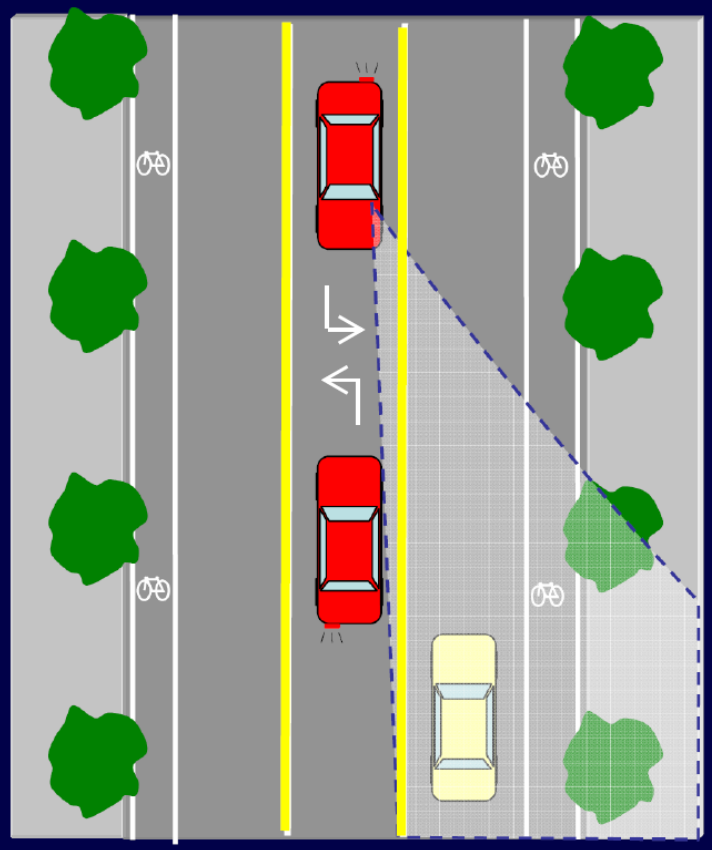
3 crash types can be reduced by going from 4 to 3 lanes: 2 – side swipes



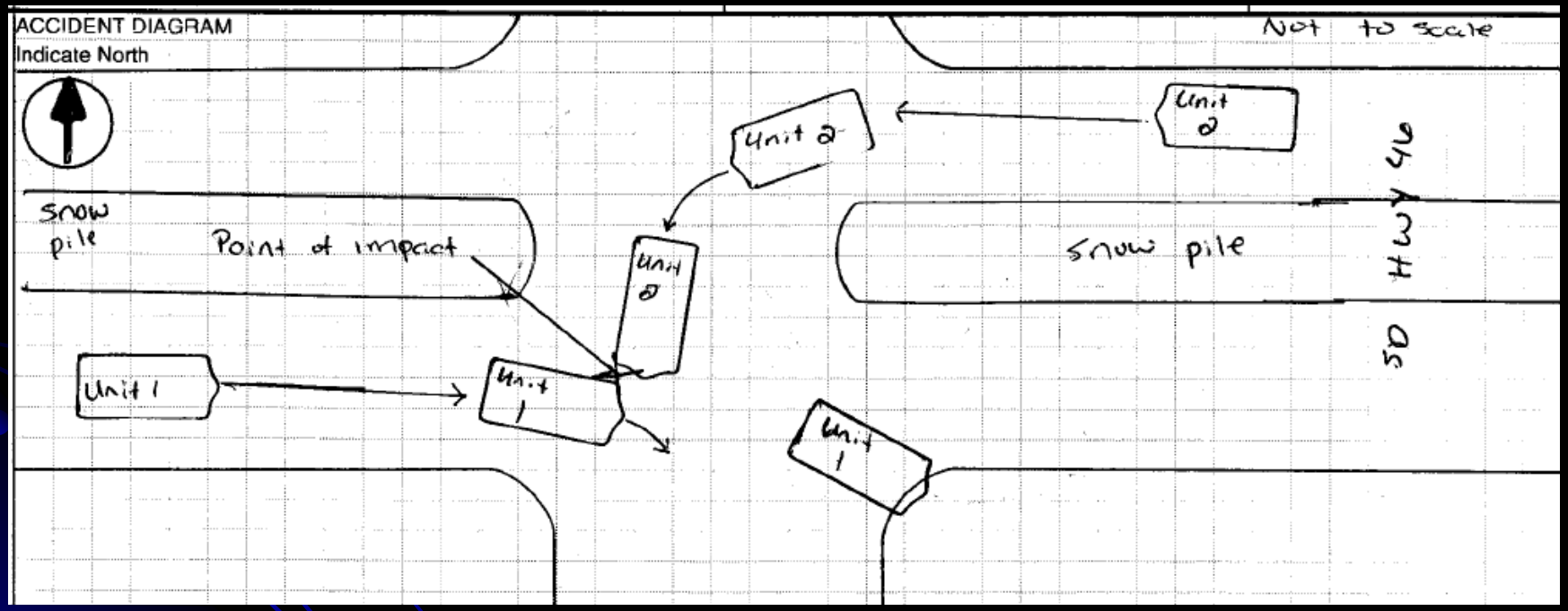
Accident Reduction Types

3 crash types can be reduced by going from 4 to 3 lanes: 3 – left turn/broadside





Accident Diagram of Snow Pile



Milbank

- Went from 4 to 3 lanes in 2005
- Currently has up to 8,000 veh./day
- Total accidents decreased from 99 to 37 (63% reduction)
  - 99 accidents from 2000-2002 and 37 from 2006-2008

Accident Rate in Beresford

- Accident Rate of 1.60
- Statewide average on this roadway classification is 1.88
- 8 accidents in 3 years (7 PDO, 1 injury)

Costs

- Estimated cost for SD46 having 3 lanes is $4.263 M
- Estimated cost for SD46 having 4 lanes is $4.542 M
- Estimated cost for SD46 having 5 lanes is $5.059 M (Plus ROW and Utility Costs)

- Website
  - http://www.sddot.com/pe/projdev/planning_pubmeet_sd46.asp
- Comments Due Fri. April 29, 2011
  - Mail - 700 E Broadway Ave Pierre, SD 57501
  - Email – mark.malone@state.sd.us

Questions?