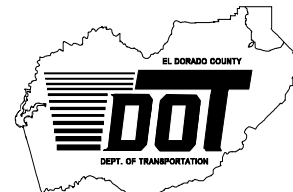
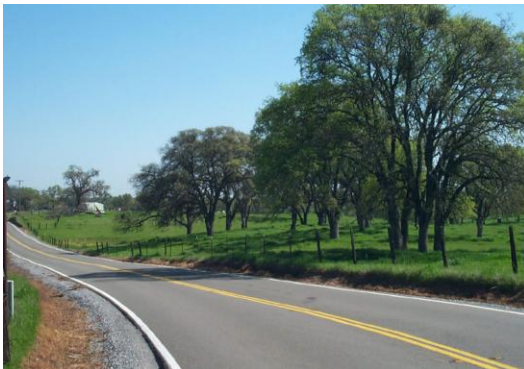


***“RED ROADS”***  
***- A discussion of***  
***development-related road***  
***requirements and their***  
***implications***



February 11, 2008



***“RED ROADS” – A DISCUSSION OF DEVELOPMENT-RELATED ROAD REQUIREMENTS AND THEIR IMPLICATIONS***

**PREPARED FOR:**

JOINT MEETING OF THE BOARD OF SUPERVISORS AND  
PLANNING COMMISSIONERS

FEBRUARY 11, 2008

BOARD OF SUPERVISORS CHAMBERS

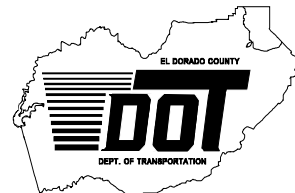
**PREPARED BY:**

**WORKING TEAM:**

LINDA WRIGHT, SURVEYOR'S OFFICE  
JON VEGNA, DOT  
CRAIG MCKIBBIN, DOT  
VAL AKANA, DOT

**ADVISORY TEAM:**

SUPERVISOR SWEENEY  
JOSE CRUMMETT, SURVEYOR'S OFFICE  
RICHARD SHEPARD, DOT  
JIM WARE, DOT  
TOM CELIO, DOT



# *Agenda:*

- Welcome, Introductions (Supervisor Sweeney)
- What is Driving the Need for this Discussion (Supervisor Sweeney)
- Objectives for this Workshop (Supervisor Sweeney)
- Background – The Approach (Jim Ware)
- Summary of Development-related Road Requirements (Jim)
- Translation of Requirements into Maps for Two “Pilot” Areas (Jim)
- Implications of the Requirements (Richard Shepard)
- Questions/Discussion (Richard)
- Next Steps (Richard)

# *What is Driving the Need for this Discussion?*

- As we will see later in this presentation, there is a lack of consistency (and in some cases a lack of clarity) between the road requirements related to new development:
  - General Plan
  - Subdivision Ordinance
  - Design and Improvement Standards Manual (DISM)
  - 2007 California Fire Code (and proposed amendments)
  - California Fire Protection Regulations
- In turn, it is no surprise that it is difficult for staff, the public, and decision makers to interpret and apply the requirements to new development in a consistent way.

# *Our objectives with this workshop are two-fold:*

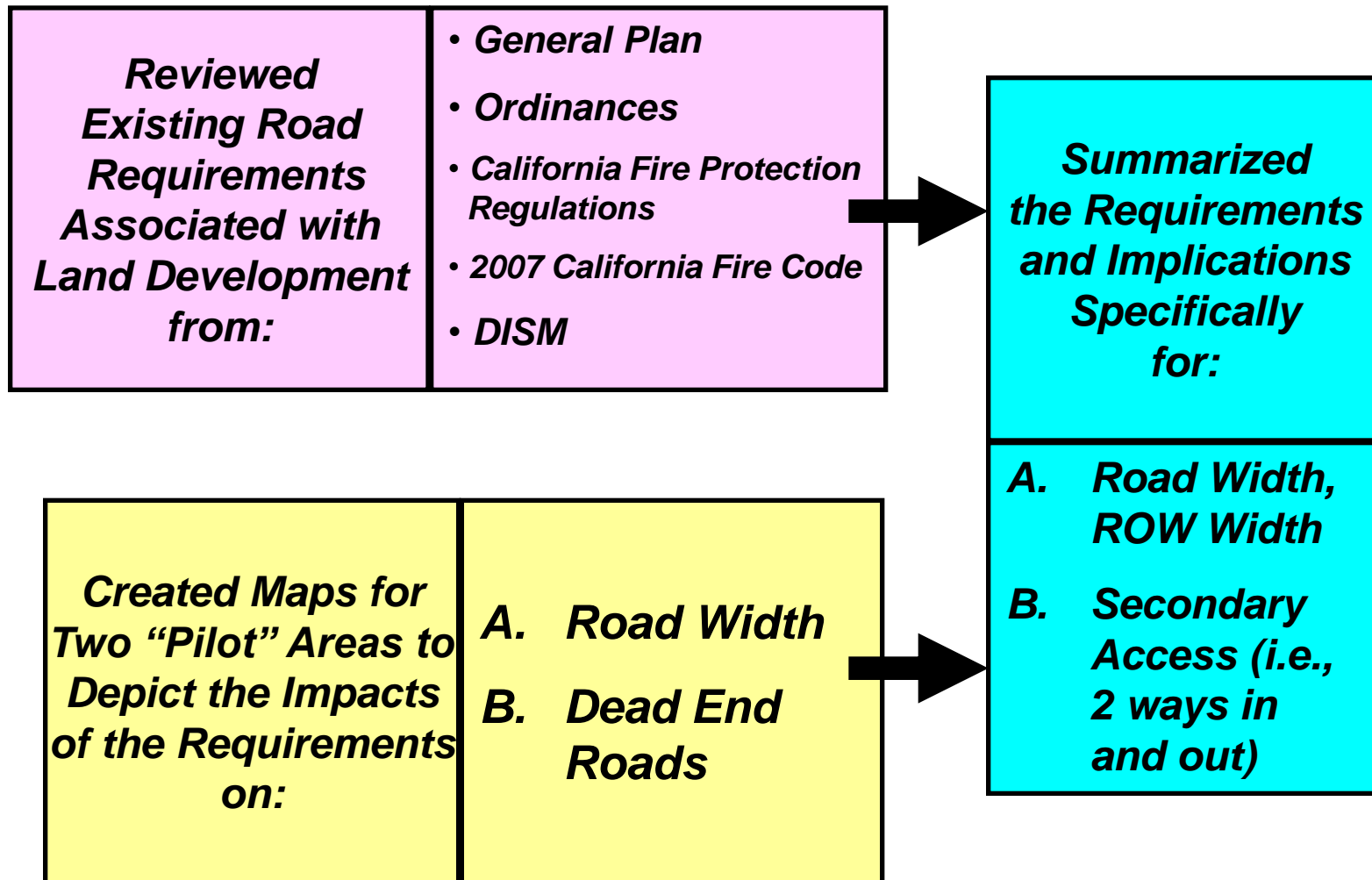
## 1. Attain consistent requirements:



- Part of the solution is the update to the Design and Improvement Standards Manual (DISM),
- However, inconsistent requirements need input from you as decision makers to help guide staff;
- This may require changes not only to the DISM, but also to ordinances, General Plan policies, etc.

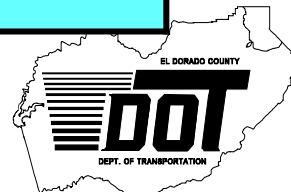
## 2. Discuss the possibility of creating a simple and clear method (e.g., maps) for the public, county staff, and decision makers to more easily understand the requirements.

# *Background – The Approach*



***Summarized Requirements for ROAD WIDTH***  
*(see supporting tables for detailed citations):*

	<b>Source</b>	<b>Requirement</b>
<b>Applies to Building Permits And Discretionary Development</b>	<b>California Fire Protection Regulations (Title 14. Natural Resources)</b>	<b>Minimum 18 feet road width ("two, nine-foot traffic lanes")</b>
	<b>2007 California Fire Code (Title 24. Building Standards)</b>	<b>"Unobstructed width of not less than 20 feet"</b>
	<b>2007 California Fire Code (<i>PROPOSED</i> Amendment by local Fire Districts)</b>	<b>20 feet, no parking on either side 30 feet, no parking on 1 side 40 feet, parking on both sides</b>
<b>Applies to Discretionary Development</b>	<b>General Plan</b>	<b>Minimum 24 feet; 60 feet ROW ("Travel ways for all highways should be 12 feet wide")</b>
	<b>DISM and Standard Plan 101-C</b>	<b>Minimum 18 feet road width, 50 feet ROW</b>
	<b>Subdivision Ordinance</b>	<b>Minimum 50 feet ROW (No road width specified)</b>



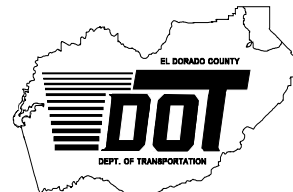
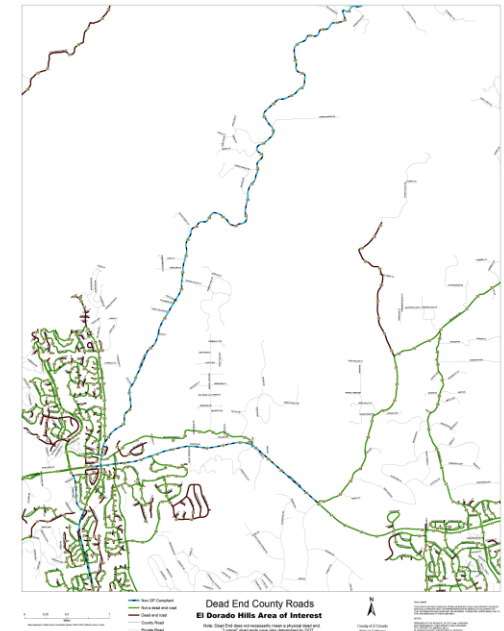
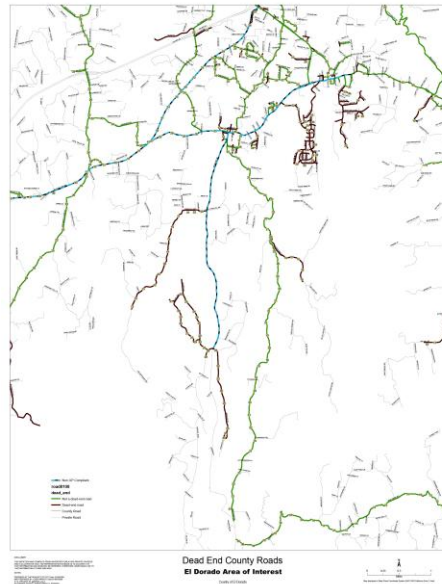
*Working with existing DOT road width data in the Surveyor's GIS System, we were able to create 2 maps for each of 2 "pilot" areas to display the requirements:*

- **2 GEOGRAPHIC AREAS:**

1. *In and around the town of El Dorado, south on Highway 49 to Sand Ridge*
2. *El Dorado Hills, northeast of Green Valley and Salmon Falls Roads*

- **2 MAPS per AREA:**





1. *Road Widths*
2. *Dead End Roads*





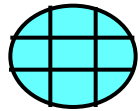
# *Explanation of the Maps (I):*

## **ROAD WIDTH MAPS:**

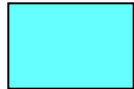
-  *“RED” roads are less than 18 feet wide and, in theory, no development (including building permits) should be allowed without road widening to the minimum 18 feet.*
-  *“GREEN” roads are at least 24 feet wide and, therefore, are likely to be acceptable for ministerial permits as well as discretionary development.*
-  *“YELLOW” roads are at least 18 feet but less than 24 feet wide and, therefore, are likely to be acceptable for ministerial permits but not discretionary development.*
-  *“BLUE” roads **DO NOT** meet the General Plan’s Circulation Requirement for 2025 and, in theory, should be upgraded before new development is allowed.*
  - *Additionally, once dead end roads turn a particular color, the remainder of the road stays that color all the way to the end, whether or not the road widens out after the “pinch” point (examples: China Hill and Church Mine Roads).*

# *Explanation of the Maps (II):*

## ROAD WIDTH MAPS:



**BRIDGES**



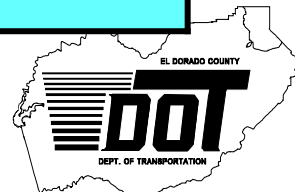
**BOX CULVERTS**

- Bridges and culverts can also be “constraints” and can turn a road yellow or red, even if the road would otherwise be green.
  - For example, on Greenstone Road, between Highway 50 and Mother Lode Drive, there is a 19 foot wide bridge which makes at least part of Greenstone Road yellow; otherwise it would be green.
  - Note: A “bridge” is defined as having at least a 20 foot long span; anything smaller is a “box culvert”.

# *Summarized Requirements for SECONDARY ACCESS*

*(see supporting tables for detailed citations):*

	<b>Source</b>	<b>Requirement</b>
<b>Applies to Building Permits And Discretionary Development</b>	<b>California Fire Protection Regulations (Title 14. Natural Resources)</b>	Maximum length of dead end road = 5,280 feet for parcels 20 acres or larger (lengths are shorter for parcels of smaller sizes)
	<b>2007 California Fire Code (Title 24. Building Standards)</b>	Sets maximum length of a dead end road at 150 feet unless special measures are taken e.g., automatic sprinkler systems
	<b>2007 California Fire Code (<u>PROPOSED</u> Amendment by local Fire Districts)</b>	Secondary access will be required when there are more than 24 parcels or the roadway exceeds the maximum length of the road dependent on parcel size (to be further defined)
<b>Applies to Discretionary Development</b>	<b>General Plan</b>	“An ultimate road circulation plan shall be included that accommodates the maximum density and provides secondary access.”
	<b>DISM</b>	“At least two connections with an existing, improved public street, or with a future street extension...shall be provided...”  Some exceptions apply based on length of road and # of parcels served



# *Explanation of the Maps (III):*

## DEAD END ROAD MAPS:



**“RED”** roads **DO NOT** connect to 2 County-maintained roads. In other words, a NON County-maintained road does not “count” as a connection.



**“GREEN”** roads **DO** connect to 2 County-maintained roads.



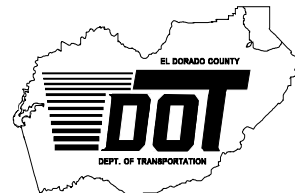
**“BLUE”** roads **DO NOT** meet the General Plan’s Circulation Requirement for 2025 and, in theory, should be upgraded before new development is allowed. This is the same definition as on the Road Width Maps.

– Additionally:

- If a road branches off a dead end road, it is also a dead end road (e.g., all roads off Fowler, after Toyon, are **RED**).
- Closed loop roads are automatically dead ends and therefore, are **RED**.

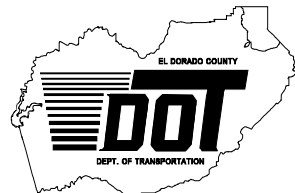
## *Assumptions/Limitations of Data:*

1. Road width data is only available for County-maintained roads. There is almost NO width data available for NON County-maintained roads.
2. All maps were created with existing DOT data; the road width data is updated periodically.
3. Road widths are measured from “edge of surface” (i.e., pavement or gravel) to “edge of surface”.
4. Road width data was not collected for these maps; it was collected solely for maintaining County roads. Therefore, the data does not necessarily include the narrowest point on any given road.
  - While the GIS system is set up to store data collected at every “mile post”, the data was not collected at every mile post. (A “mile post” exists at every 1/100 of a mile.)
5. The bridge road width data is reasonably accurate as it is maintained for reporting to the State and Federal governments. The box culvert data is several years old. (Cross culvert data is currently being collected.) Some work still needs to be done to reconcile DOT data to GIS data for bridge and culvert locations.



# *Implications and Questions*

2/22/2012



*If we strictly adhered to the standards, all building in some areas of the county would stop without significant road upgrades. (I)*

## **Road Width:**

1. Should we entertain the possibility of having different road standards for rural versus urban areas of the county?
  - Standard Plan 101-C incorporates this option to a certain degree because road width widens with increasing ADT.
  - We would need to amend the General Plan.
  
1. Should we allow ministerial (i.e., building) permits on roads less than 18 feet wide, without requiring road widening?
  
2. Should we allow discretionary development in areas where roads do not meet the General Plan 2025 circulation plan, without requiring road widening?
  
3. What do we do with the new Fire Code and amendments proposed by the Fire Districts? (They imply that the 18 foot minimum should be 20 feet.)
  
4. What other issues are raised by the road width requirements that need to be addressed?

*If we strictly adhered to the standards, all building in some areas of the county would stop without significant road upgrades. (II)*

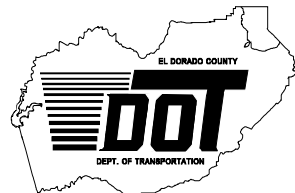
## **Secondary Access:**

1. The General Plan makes a blanket and general statement about the need for new developments to develop a circulation plan that includes secondary access. The DISM and Fire Regulations describe specific requirements related to secondary access and dead end roads.
  - Should secondary access be required for all discretionary development applications (including parcel maps, subdivisions, design reviews, etc.)?
2. Exceptions vary for length of dead end roads based on distance, number of parcels and/or size of parcels. How best to reconcile the various rules?
3. What other issues are raised by the requirements that need to be addressed?



# *Discussion*

2/22/2012



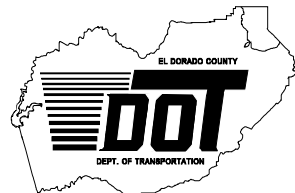
# *Next Steps (I)*

- Homework?
- Follow-on Discussion?
- More Mapping?
  - Funding required to do more of this is variable and depends on decisions related to:
    - Focus/Priorities,
    - Amount and Accuracy of Data, and
    - Timeframe.

# *Next Steps (II)*

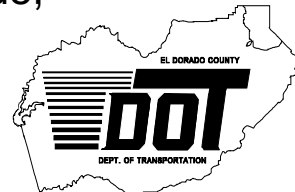
- DOT has at least some road width data for over 90% of all County maintained roads; this data is already available on a County-wide map but has not been distributed widely.
  - We could make this available now, without “coloring” the roads.
- The mapping effort for the 2 pilot areas has consumed about 250 hours of staff time since September. (Staff has worked on this project as they have found time.)
  - The pilot areas cover about 12% of the County-maintained road miles.
  - 250 hours divided by 12% = approximately 2100 hours (i.e., 260 work days) to do all County maintained roads with the same approach that we have taken with the pilot areas.

***BACK-UP***



*There are 3 sets of fire requirements that affect new development; 2 are driven by the State and 1 is driven by the local Fire Protection Districts (I):*

- California Law consists of 29 codes, covering various subject areas, the State Constitution and Statutes. Two of the 29 codes that create fire-related requirements are:
  1. The Public Resources Code authorizes the California Code of Regulation Title 14. Natural Resources:
    - Cal Fire (formerly CDF) publishes its “Fire Protection” regulations under Title 14.
    - The regulations specifically pertaining to roads were last updated in 1991.
  2. The Health and Safety Code authorizes the California Code of Regulation Title 24. Building Standards Code:
    - Title 24 is “owned” by the State’s Building Standards Commission.
    - Part 9 of Title 24 is the “California Fire Code” which contains fire-safety-related building standards referenced in other parts of Title 24.
    - The updated Fire Code was adopted by the state in 2007, along with the new Building Code, Electrical Code, Plumbing Code, Energy Code, Mechanical Code, etc.



*There are 3 sets of fire requirements that affect new development; 2 are driven by the State and 1 is driven by the local Fire Protection Districts (II):*

3. The Fire Prevention Officers (FPOs) Association, whose members are appointed by the Fire Chief in each Fire District, is recommending to their Chiefs, that they adopt Title 24, Part 9. California Fire Code with certain amendments.
  - County staff is working with the FPOs to better understand the proposed amendments and their implications on new development.
- The 3 sets of fire requirements cross over in certain areas, for example, road widths and secondary access.
  - Working with the FPOs, county staff will need to reconcile the requirements and make recommendations as to which to choose for incorporation into the DISM, for example.

# *Level of Service (Capacity)*

- *For smaller, local roads, Level of Service is not a limiting factor because the number of daily trips is low. Other requirements drive their widths (e.g., Fire Safe Regulations, Standard Plan 101-C, etc.).*
- *For larger roads, Level of Service (i.e., Capacity) is already encompassed in the **BLUE** General Plan Roads.*
  - *For example, the capacity model shows that Green Valley Road, between Salmon Falls Road and Deer Valley Road, should be an “undivided 4 lane arterial” which, according to the General Plan (Table TC-1, page 65) should be 64 feet wide with 80 feet of ROW.*
- *Therefore, Level of Service is not shown as a separate map.*