Canyon County Commission Transportation Workshop

HIGHWAY DISTRICT No.4
15435 HIGHWAY 44
CALDWELL, IDAHO 83607

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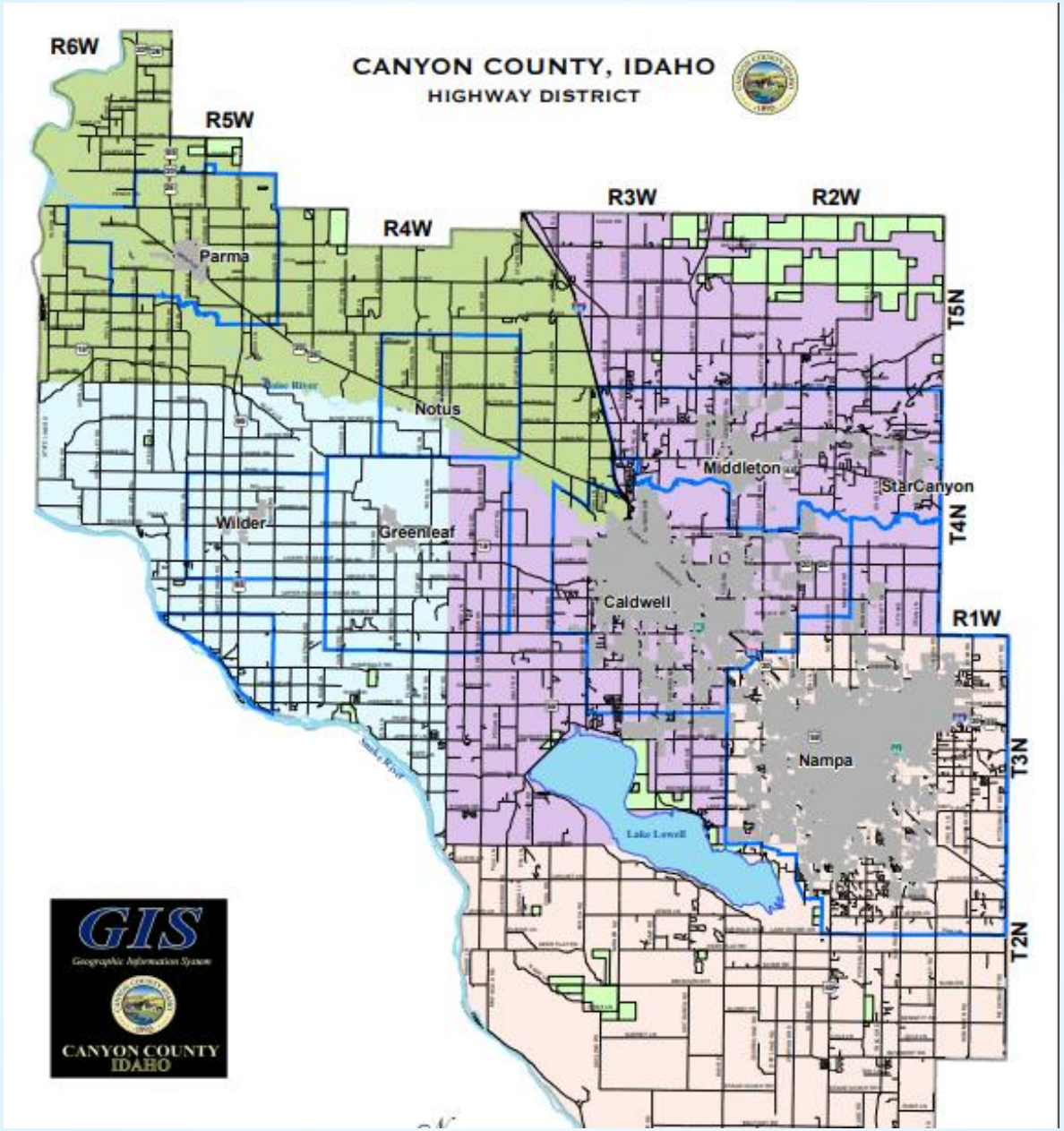
Formerly known as "Canyon Highway District No. 4


CANYON COUNTY, IDAHO
HIGHWAY DISTRICT
R6W
R5W
R4W
R3W
R2W
R1W
T5N
T4N
T3N
T2N
Parma
Notus
Middleton
StarCanyon
Wilder
Greenleaf
Caldwell
Nampa
Lake Lowell
GIS
Geographic Information System
CANYON COUNTY
IDAHO

Highway District No. 4

- Formed in 1981 from remaining Canyon Co road & bridge responsibilities
- Approximately 320 miles of public roadway
  - 318 paved miles
  - 2 gravel miles
  - Adding about 5 miles per year with new development
- 40 employees
- 3 elected commissioners
- Canyon Co has 4 highway districts, 8 cities with street departments, and one state highway agency (13 separate transportation jurisdictions).

HD4 Responsibilities

- Public Roadways
  - Traffic operations & safety
  - Pavement maintenance & replacement
  - Bridge & culvert maintenance & replacement
  - Capacity Improvements
  - Access control
  - Winter maintenance
- Public Rights-of-Way
  - Management
  - Clearing obstructions and encroachments
  - Acquisition
- Near- and Long-Term Transportation Planning
- Development Access and Oversight

HD4 Assets

- 320 miles of public roadway (Average PCI 77/100)
- 41 NBIS Bridges (> 20’ span)
  Average Sufficiency Rating 84/100
- 73 non-NBIS Bridges (< 20’ span)
  Average Sufficiency Rating 73/100
- 4,190 Pipe Culverts (251 30” Diameter or Larger)
- 5,960 Traffic Signs
- 4 Gravel Pits (2 owned, 1 owned jointly, 1 leased)
- 1 Office & Maintenance Yard, 2 satellite storage areas
- $5.1M in Equipment

2023 Projects

- 12 Large Culvert Replacements or Sliplines
- Northside Blvd Pavement Rehab- 1.0 miles
- Chicken Dinner Pavement Rehab- 2.0 miles
- Linden Rd Pavement Rehab- 0.5 miles
- Purple Sage Rd Pavement Rehab- 1.0 miles
- Pride Rd Overlay- 1.0 miles
- Foothill Rd Overlay- 1.0 miles
- New salt/sand storage shed

2024 Projects

- 11 Large Culvert Replacements or Sliplines
- Riverside Rd at Mora Canal Bridge Replacement
- Middleton Rd at Willow Creek Bridge Replacement
- Middleton/Linden Roundabout (2024-2025)
- 5.9 Miles Pavement Rehab (Riverside, Bear, Midway, El Paso
- 2.0 Miles Mill/Overlay Farmway Rd
- Old Hwy 30 Pavement Rehab- 4.5 miles (Federal Aid)
- Indiana/Orchard Shared Use Shoulder (Federal Aid)
- HD4 Office Expansion

2025-2030 Projects

- Roundabouts: Farmway/Ustick, Northside/Ustick, Midland/Linden
- Corridor Improvements: Old Hwy 30- SH 44 to Purple Sage
- Bridges: Mason Creek at Midland, Linden, Ward, Lincoln; Fifteen Mile Creek at Madison; Willow Creek at Purple Sage; Phyllis Canal at Wagner; DF Caldwell Canal at Roosevelt; Middleton Mill Slough at Duff Lane

Planning Efforts

- Old Hwy 30 Corridor Plan- US 20/26 to Galloway
- Caldwell Area Transportation System Plan (CATS)
- CATS Impact Fees
- Mid-Star Impact Fee Update
- SH 44- I84 to SH 16 Planning & Environmental Linkage
- I-84 Interchange: Exit 25 to Exit 17
- I-84 Interchange: Middleton/Ustick
- Recently Completed: Farmway Rd Corridor Plan; Ustick Rd Corridor Plan; Homedale Rd Intersection Evaluation

New Development

- 88 Plan or Plat Reviews YTD in 2023
- 104 Reviews in 2022; 120 in 2021
  - Does not include comments to agencies for rezones, lot splits, annexations, city preliminary plats, agency plans
- Access Permits: 131 YTD in 2023; 224 in 2022; 320 in 2021
- Utility Permits: 125 YTD in 2023; 209 in 2022; 159 in 2021

- New Development concentrated in Mid-Star area north of Boise River, and within city limits

Impact Fees

- HD4 formed partnership with Middleton & Star to develop a single service area and impact fee for the Mid-Star Service Area in 2020.
- Adopted by Middleton & Star in 2021; adopted by Canyon Co in 2022.
- CATS Plan will develop service area and impact fee schedule for Caldwell/North Nampa area (includes remainder of HD4 jurisdiction). Anticipated to be ready for consideration by County in early 2024.

Mid-Star Service Area

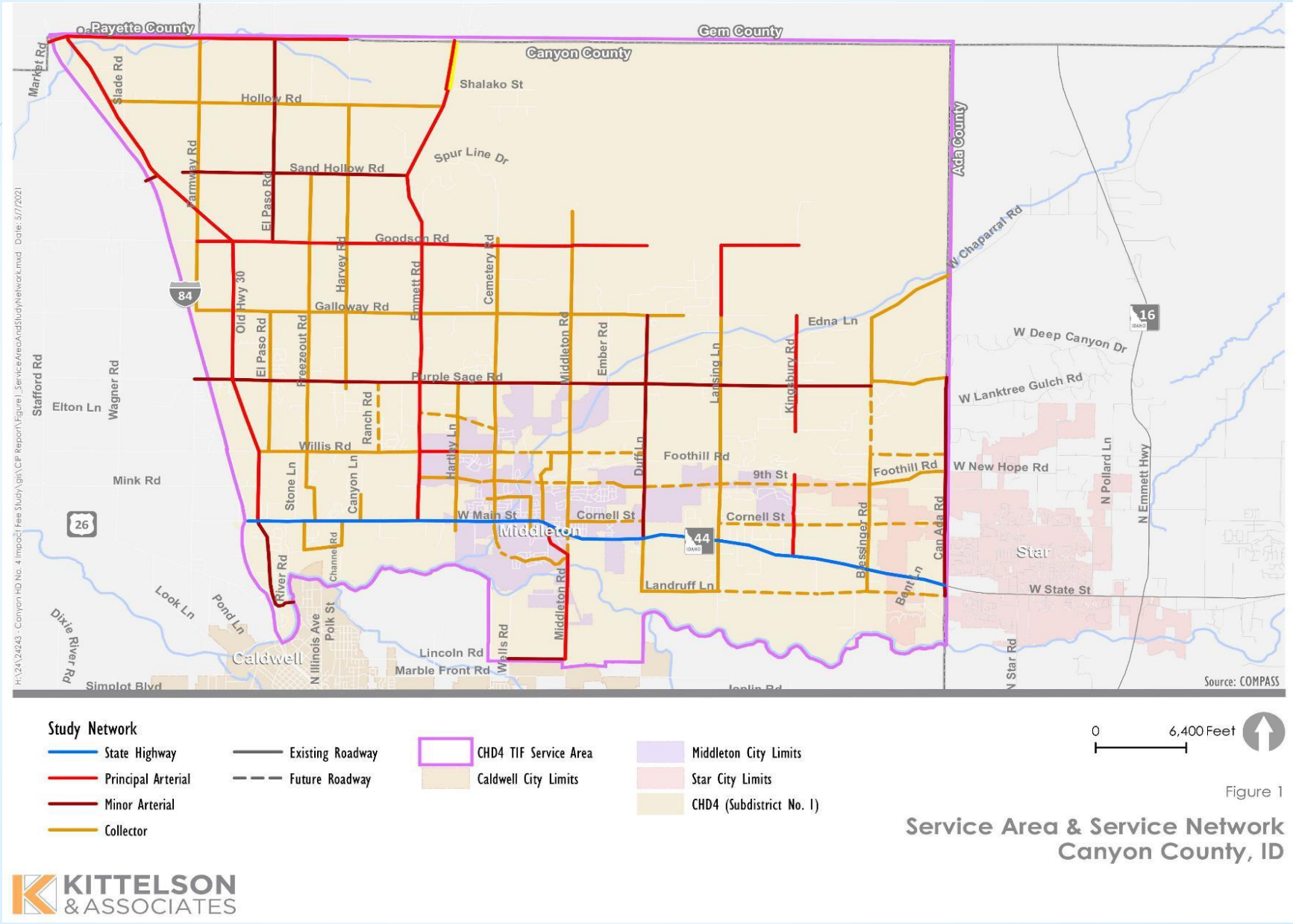


Figure 1

Service Area & Service Network
Canyon County, ID

KITTELSON & ASSOCIATES

Mid-Star Existing Deficiencies

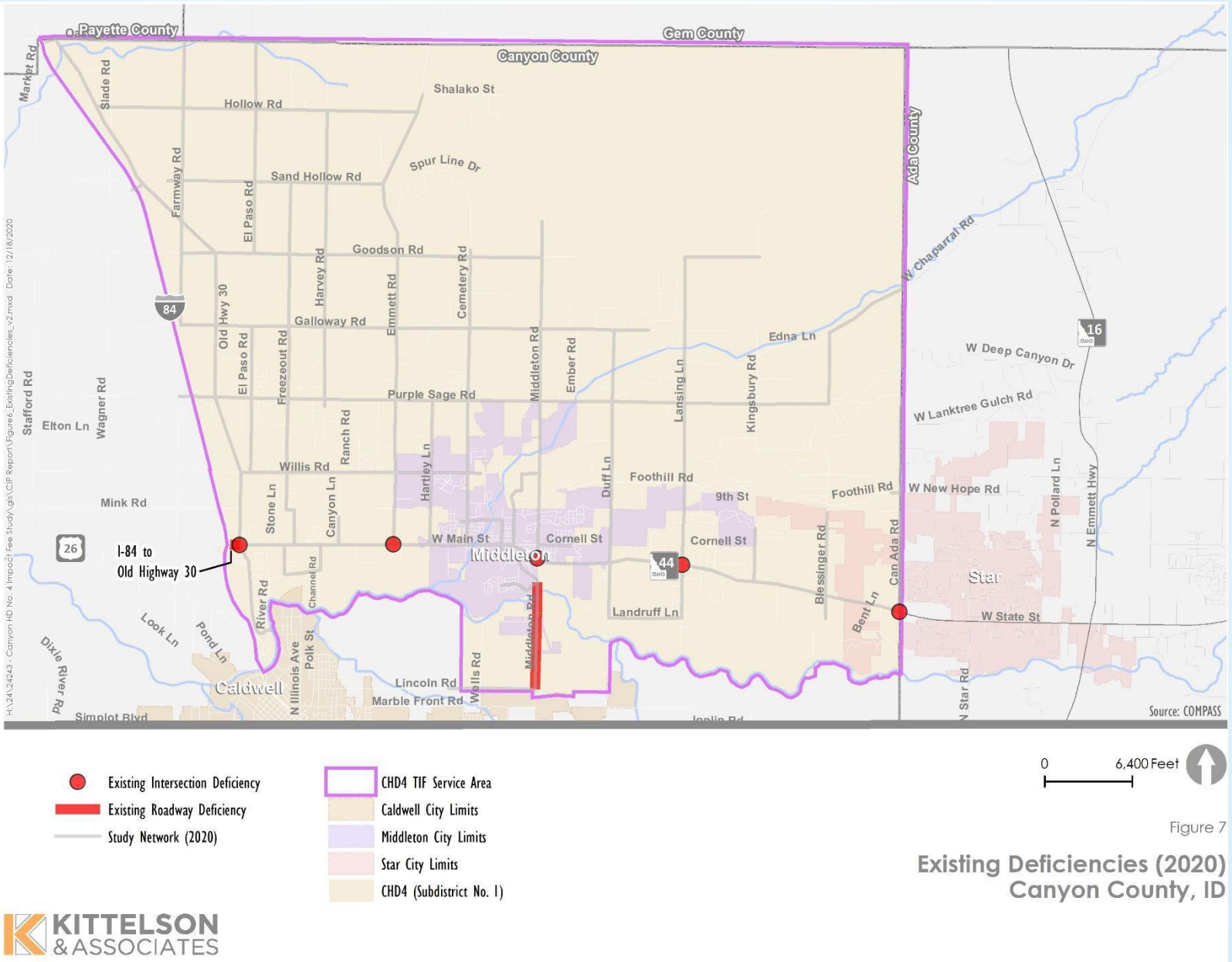


Figure 7

Existing Deficiencies (2020)
Canyon County, ID

KITTELSON & ASSOCIATES

Mid-Star CIP Projects

Figure 9. Mid-Star Service Area Capital Improvement Projects

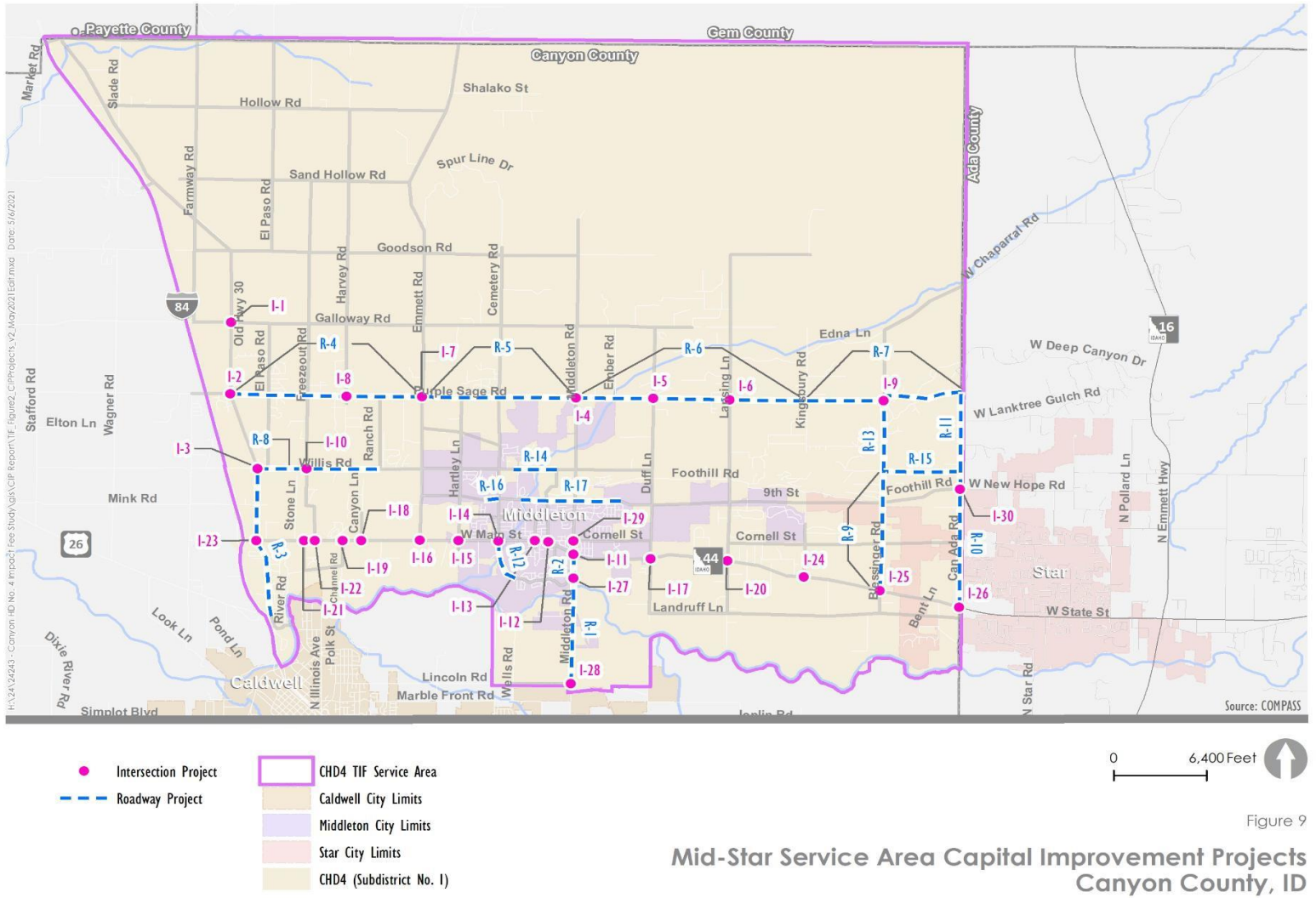


Figure 9

Mid-Star Service Area Capital Improvement Projects
Canyon County, ID

KITTELSON & ASSOCIATES

Mid-Star Impact Fee Revenues

- Rural Canyon County:
  - $327,934 since adoption
- City of Star within Canyon County:
  - $116,150 since adoption

Mid Star CIP Projects:

- Middleton Rd at Boise River Bridge- preliminary design study (2024)
- SH 44 Interim Study- I-84 to Can Ada Rd (underway)
- Duff Lane/SH 44 intersection (partnership with development)
- Blessinger Rd- Foothill to Sage Canyon Way (design 2024)
- Blessinger Rd/SH 44 intersection (design 2024)

Questions

? ? ? ?

Transportation Specifics for Development

Agency Development Review: Transportation Considerations

- Project Details, Location
- Public Road Frontage, Classification
- Access
- Right-of-Way, Frontage Improvements
- Traffic Impacts
- Safety

Project Specifics

- Project Type: Residential
  Commercial
  Industrial

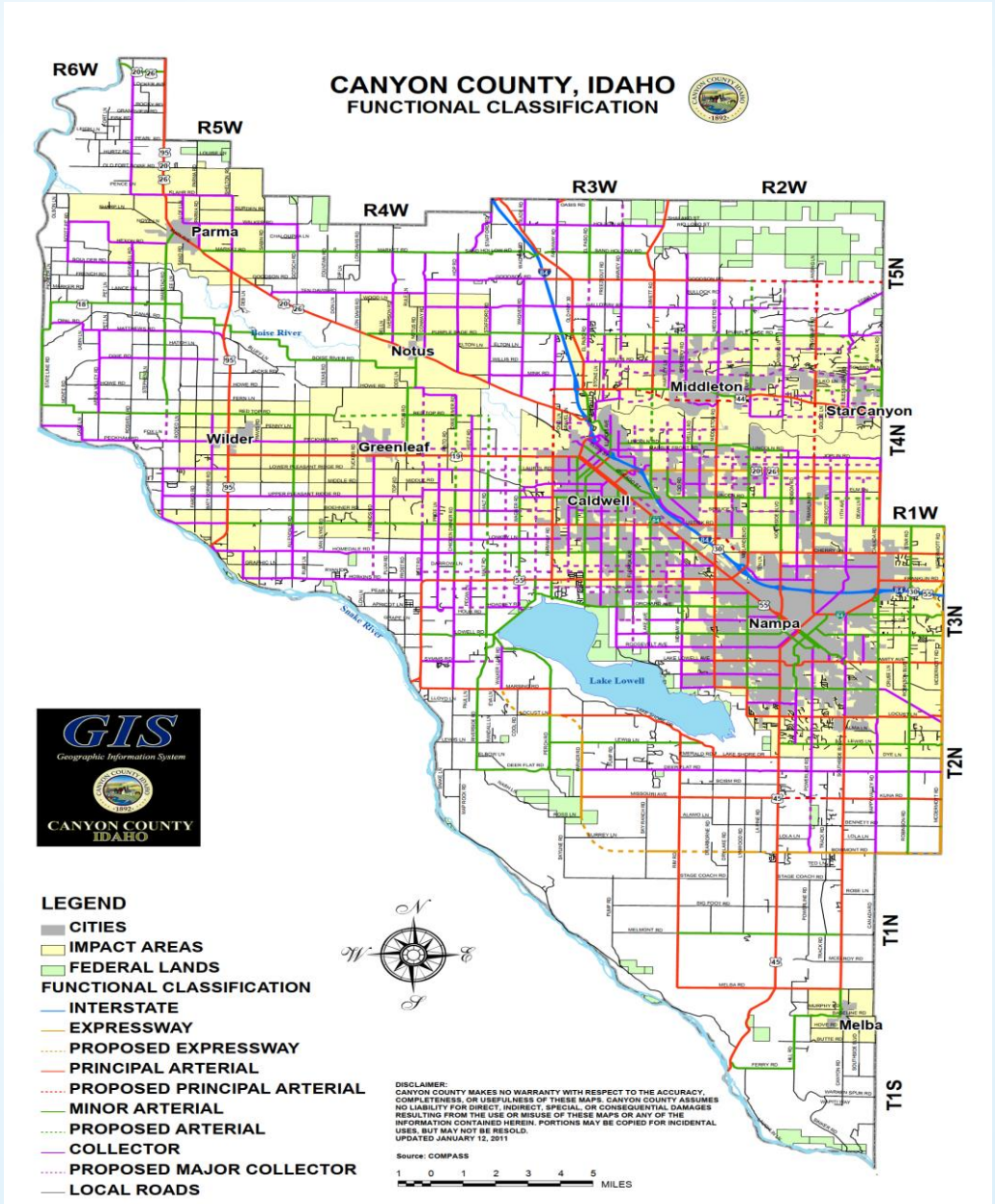
- Project Location
  - Rural vs. Urban (One mile from city limits)
  - City Area of Impact

- Details:
  - Hours of operations/impacts
  - Expected traffic generation

Existing Road Network

- Public Roadway Frontage for subject property (may be more than one)
- If no public frontage, what legal means of access exists?
- Status of public rights-of-way available to subject property
  - Public Highway
  - Open R/W privately maintained
  - Closed R/W

Roadway Functional Classification



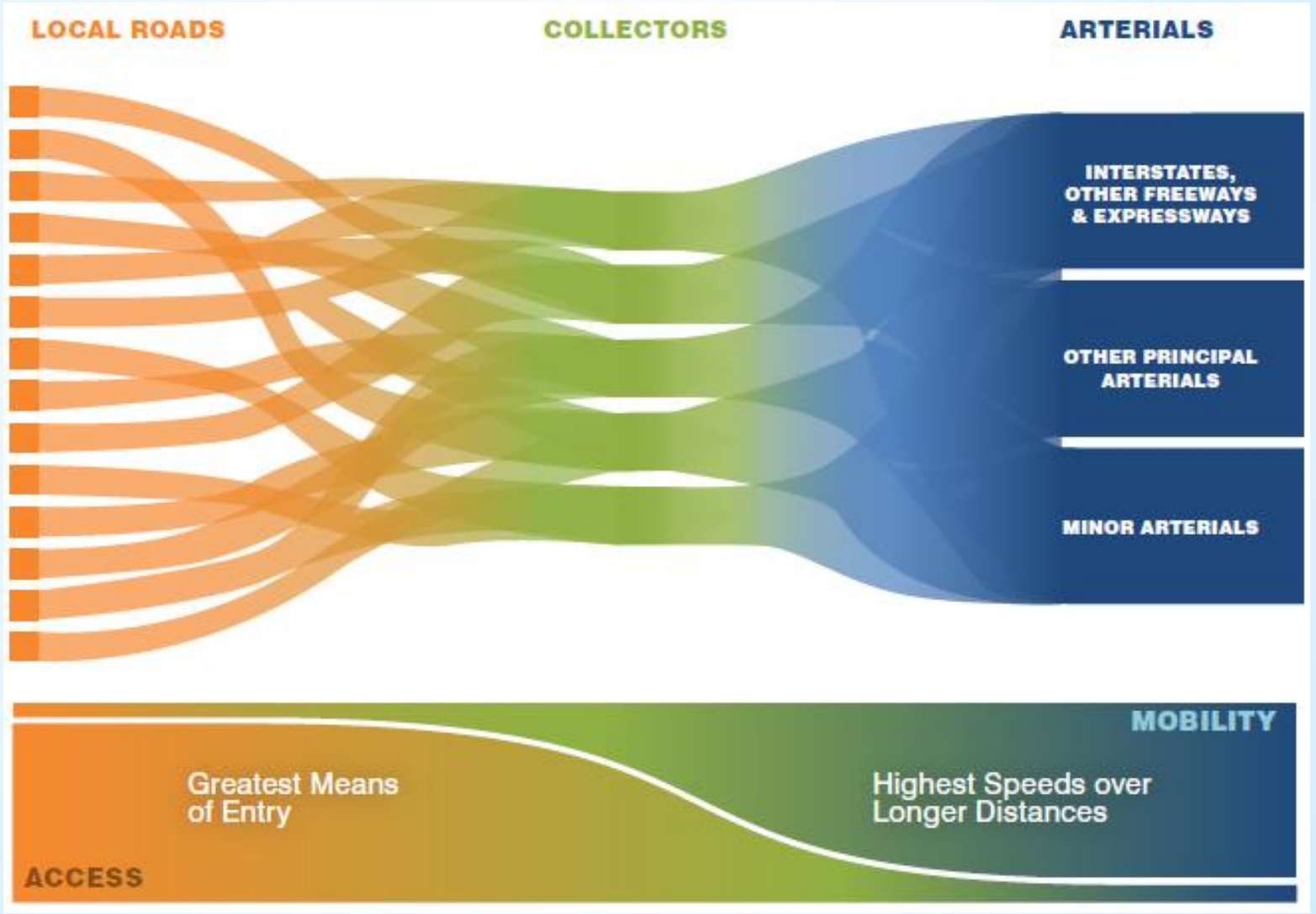
Functional Classification

- CHD4 has adopted Canyon Co FC Map
- Three main road classifications:
  - Arterial- Long trips/high speeds connecting cities
  - Collector- Med trips/speeds connecting neighborhoods to the arterial system and providing property access
  - Local- Short trips/low speed providing primarily property access

Rural Classification

- Principal Arterials (State System)
  typically at 5-6 mile intervals (I-84, State Street, Karcher Rd, etc…)
- Rural Arterials (Local System)
  typically at 2-3 mile intervals (Middleton, Farmway, Old Hwy 30, Emmett Rd)
- Collectors (major & minor)
  typically at ½ mile intervals across the valley
- Local Roads
  300 – 600 ft intervals as needed to serve property access

Mobility and Functional Classification



Right-of-Way

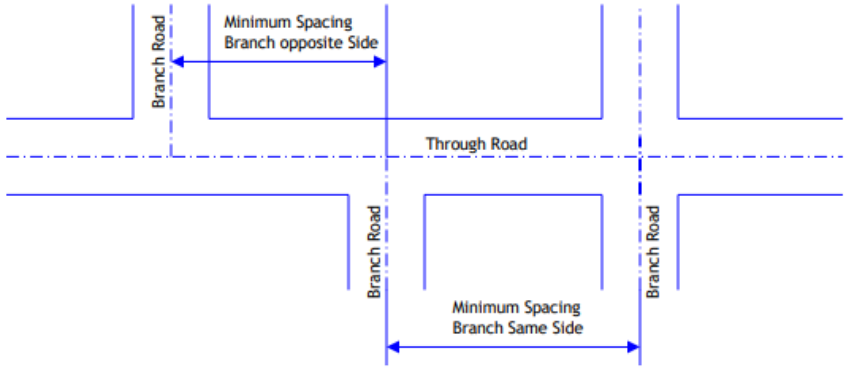
- What is existing r/w for adjacent public roads? Many are “prescriptive r/w”, 50-feet wide.
- What are future r/w needs?
  - Arterial 100-feet wide (5-7 lanes)
  - Collector 80-feet wide (3-5 lanes)
  - Local 50 to 60 feet wide (2 lanes)
- Additional r/w for intersections, slopes, turn lanes

Future Connectivity (New Roads)

- Future collector roadways (section & ¼ section lines, or half-mile intervals).
  - Locate on common property lines where practical to promote access and share development costs
  - Not required where terrain or previous development make extension of roadway impractical
- Neighborhood connectivity
  - Remove adjoining access to arterials
  - Provide access to landlocked or underserved parcels

Access

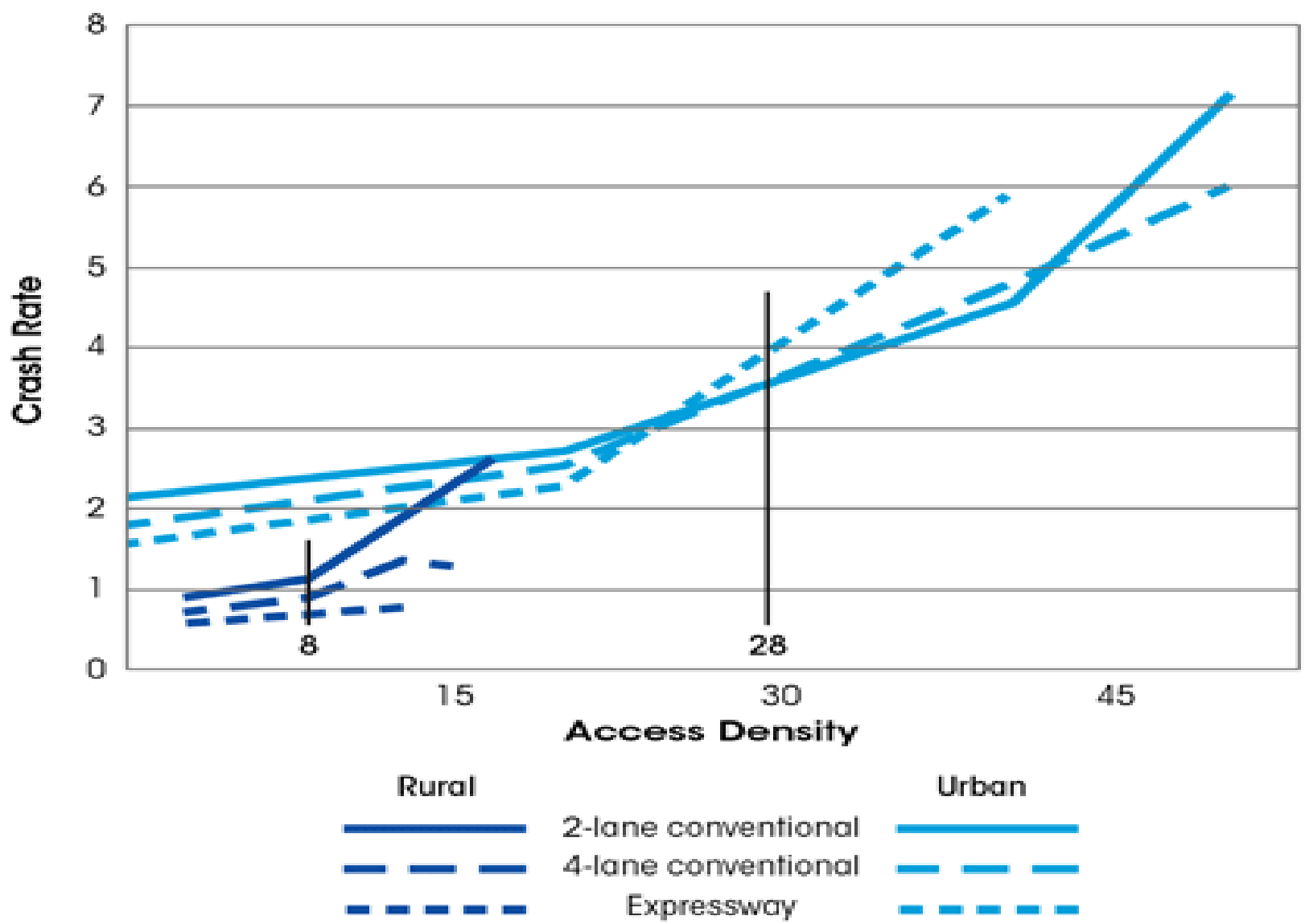
Access availability depends on functional classification and access type



A. Rural Roadway Spacing (see spacing diagram above):

Through Roadway (see diagram)	Branch Roadway (see diagram)	Minimum Spacing Branch on same side of Through Roadway	Minimum Spacing Branch on opposite side of Through Roadway
Principal Arterial	Arterial	1 mile	1 mile
	Collector	½ mile	½ mile
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Minor Arterial	Arterial	½ mile	½ mile
	Collector	¼ mile	¼ mile
	Local Road	No Direct Access	No Direct Access
	Private Road	No Direct Access	No Direct Access
Major Collector	Collector	1/4 mile	1/8 mile
	Local Road	1/8 mile	1/16 mile
	Private Road	No Direct Access	No Direct Access
Minor Collector	Collector	1/4 mile	1/8 mile
	Local Road	1/8 mile	1/16 mile
	Private Road	1/8 mile	1/16 mile
Local Roads	Local Road	1/8 mile	1/16 mile
	Private Road*	1/8 mile	1/16 mile

* Private roads shall not be constructed off or extended from Local Public Roads within platted subdivisions.



Notes:

- Rural refers to non-municipal areas and cities with a population fewer than 5,000.
- 8 is the average access density for rural highways.
- 28 is the average access density for urban highways.

Other Access Considerations

- Intersection sight distance (hills, curves)
- Existing access points
- Future planned roadways

Traffic Impact Studies (TIS)

- Purpose
  - Determine transportation system improvements to:
    - Maintain an acceptable Level of Service (LOS)
    - Provide acceptable level of safety
    - Provide appropriate site access provisions
    - Continue transportation network
- TIS thresholds
  - > 500 trips per day
  - > 50 trips in peak hour

Traffic Impact Studies (TIS)

- Components of TIS
  - Area of Influence / Study Area
    - Roads adjoining site
    - Arterials within ½ mile of site
    - Intersections with 5% or more of traffic from proposed development
    - Include future roads
      - Planning Functional Classification Map or Policy
      - Corridor Plan
      - Neighborhood Transportation Plan
  - Determine Horizon Year
  - Identify Planned Improvements

Traffic Impact Studies (TIS)

- Components of TIS
  - Determine/Estimate Traffic Volumes
    - Existing
    - Background
      - Traffic Volume Growth Rate
      - Background Development
    - Site Traffic
      - Trip Generation (at developments driveway
        - Trip Capture
      - Pass-by Trips
      - Trip Distribution & Assignment

Traffic Impact Studies (TIS)

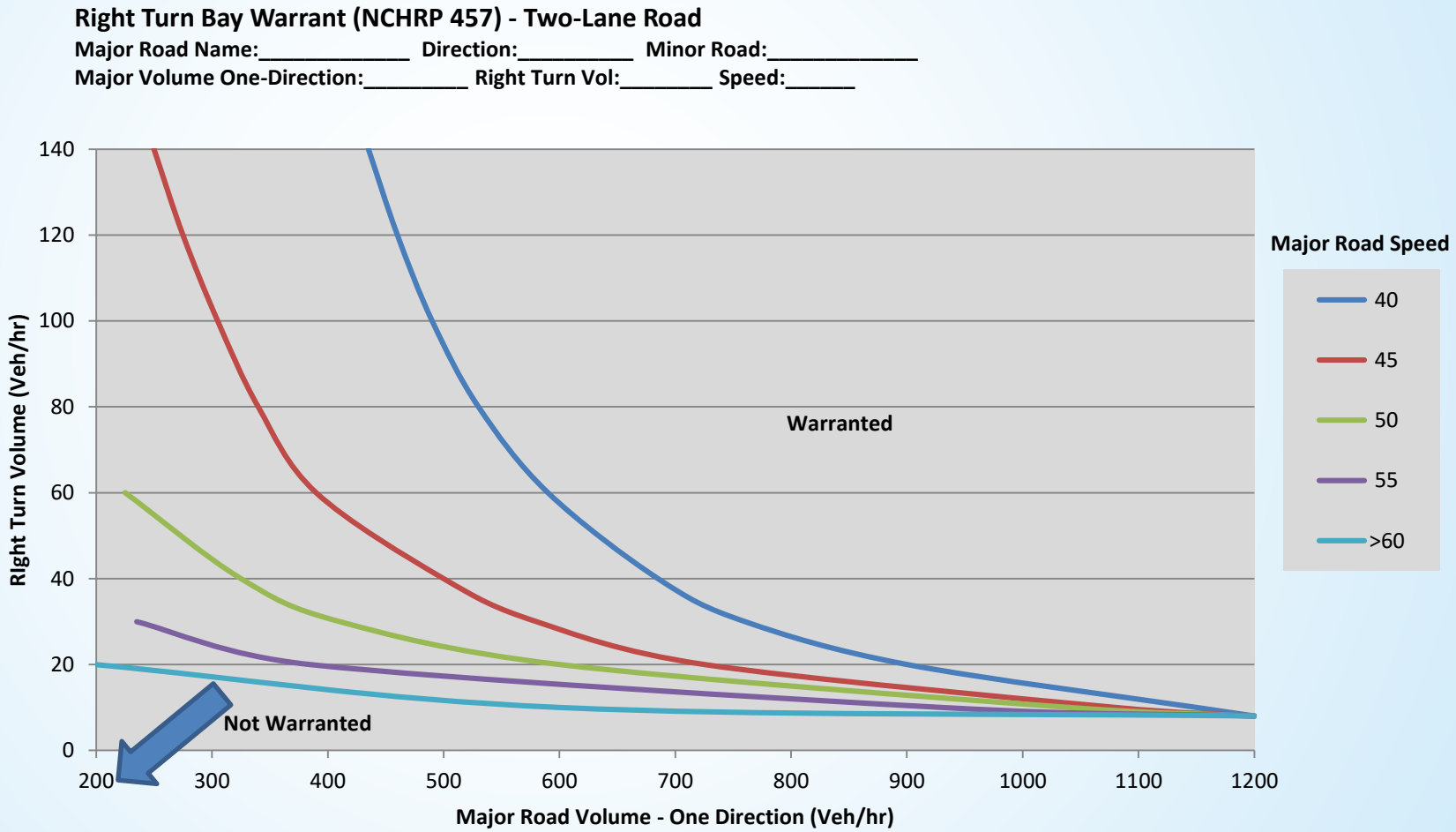
- Components of TIS (Continued)
  - Evaluation
    - Conditions
      - Existing
      - Future Background (Horizon Year)
      - Proposed Development + Future Background (Horizon Year)
    - Criteria
      - Level of Service
      - Warrants (i.e. Turn Lane, Signal)
    - Safety
    - Access Design Standards

Traffic Impact Studies (TIS)

Stop Controlled Intersection Levels of Service

LOS	Delay
A	Less than 10 seconds
B	10 to 15 seconds
C	15 to 25 seconds
D	25 to 35 seconds
E	35 to 50 seconds
F	More than 50 seconds

Traffic Impact Studies (TIS)



Traffic Impact Studies (TIS)

- Components of TIS (Continued)
  - Identify Improvements to accommodate
    - Existing
    - Future Background (Horizon Year)
    - Proposed Development + Future Background (Horizon Year)
  - Mitigation (Exactions)
    - Improvement Construction
    - Proportionate Share
    - Right-of-Way

Safety

- Safety Considerations for New Development
  - Crash-Analysis Approach
    - Evaluate 3-year (or more) crash history
    - Crash Rate
    - High Accident Locations
  - Preventative Approach
    - Engineering Standards or Guidelines
    - Regulatory Requirements
  - Crash Severity Reduction Approach
    - Predict Safety Improvement
    - Crash Modification Factors (CMF)