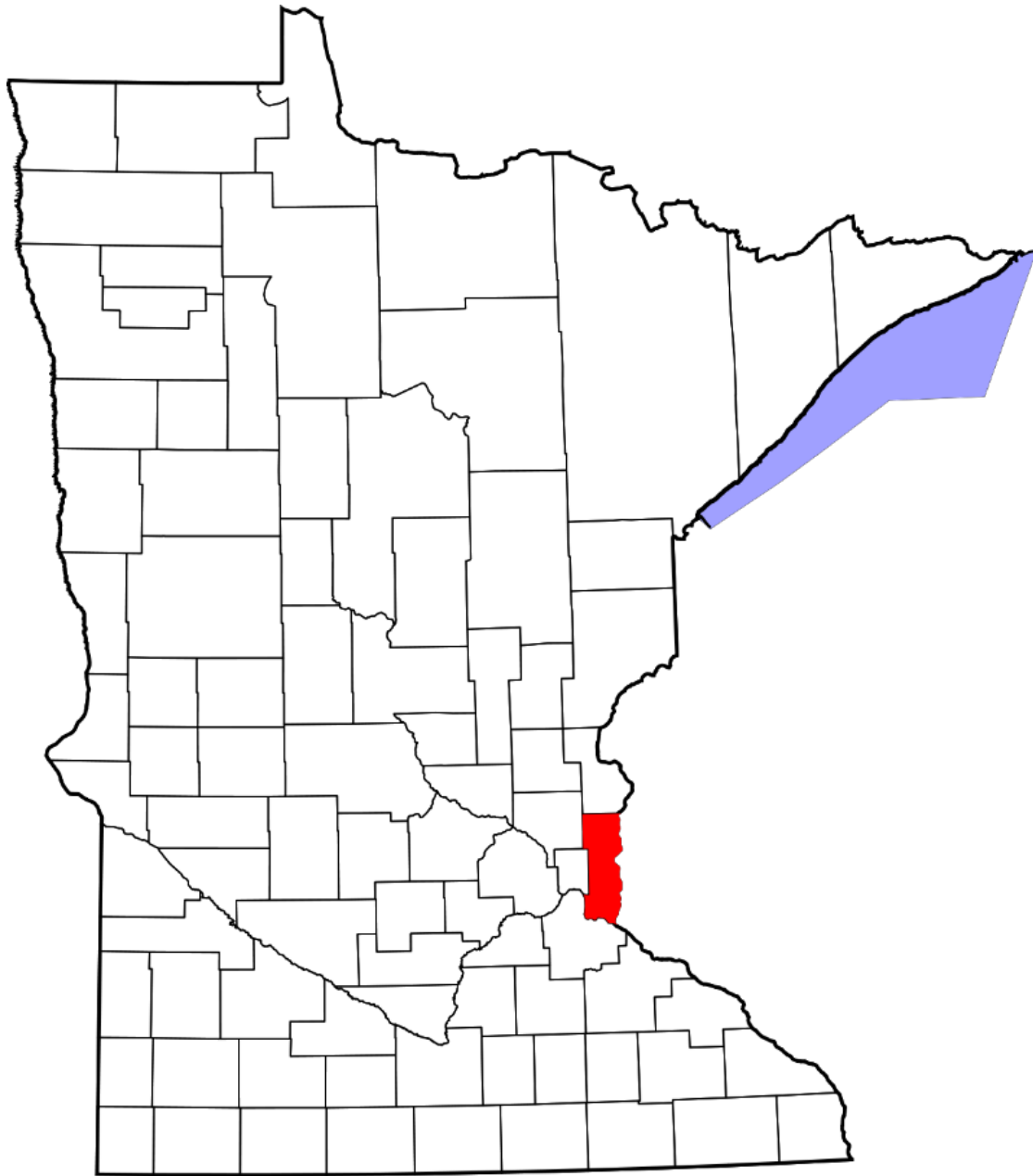


Pavement Markings – Washington County Perspective

Northland ATSSA Virtual How To
March 18, 2021

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Washington County

- Fifth most populous county in MN
- County seat is Stillwater
- Varied topography, land use, population, etc throughout county
 - Urban, suburban, rural locations
 - Commercial, residential, farming and tourist areas
- A fast-growing county



Striping is important!



- Striping is a relatively inexpensive portion of a construction project, but bad striping will ruin public perception of how well it was constructed, even if the rest of it was done at a really high quality.
- In low light and poor weather conditions, it provides crucial guidance to the driver.
- Striping is a common topic of complaint from citizens, though not as common as signal timing/operations.

MnDOT provides the template

- Using MnDOT specifications creates consistency and contractors know what to expect.
- Many Washington County roadways have as high of traffic volumes as nearby trunk highways; some have more.
 - Residents' expectations are not any lower for County roadways.
- We do pick and choose when to deviate, however.
- The County commonly uses a limited variety of materials on the MnDOT QPL for pavement markings.
- Washington County location is advantageous.

Material Selection

- Life cycle cost is a consideration in construction.
- It's often easier to spend construction money than maintenance.
- It's been a good practice to put a long lasting marking in construction and not have to go restripe for as long as possible.



The County vs. MnDOT differences

- The County doesn't have as many instances of preventive pavement maintenance.
 - The County doesn't do many seal coats, so we don't have to worry as much about a newly-installed marking getting covered with a preventive maintenance treatment after 2 years.
 - It's also a smaller agency, so communication is easier.
- The County rarely installs rumble strips.
- The County is not governed by the MnDOT Pavement Markings Technical Memorandum or Traffic Engineering Manual.
 - The Minnesota Manual on Uniform Traffic Control Devices applies.

Most Common Material Choices

For new construction:

- Ground-In Wet-Reflective Epoxy for longitudinal markings for most new construction
 - Even on low AADT roadways
- Contrast tape on concrete for skips
- Contrast markings at concrete roundabouts
- Preformed Thermoplastic for pavement messages in construction

For restriping:

- Latex or preformed thermoplastic for pavement message restriping

Restriping (1/2)

- County personnel perform a night survey every spring to determine pavement marking restriping needs for longitudinal markings.
- County has ability to restripe pavement messages in latex or preformed thermoplastic with its own personnel
- County administers latex contract each year for long-line restriping

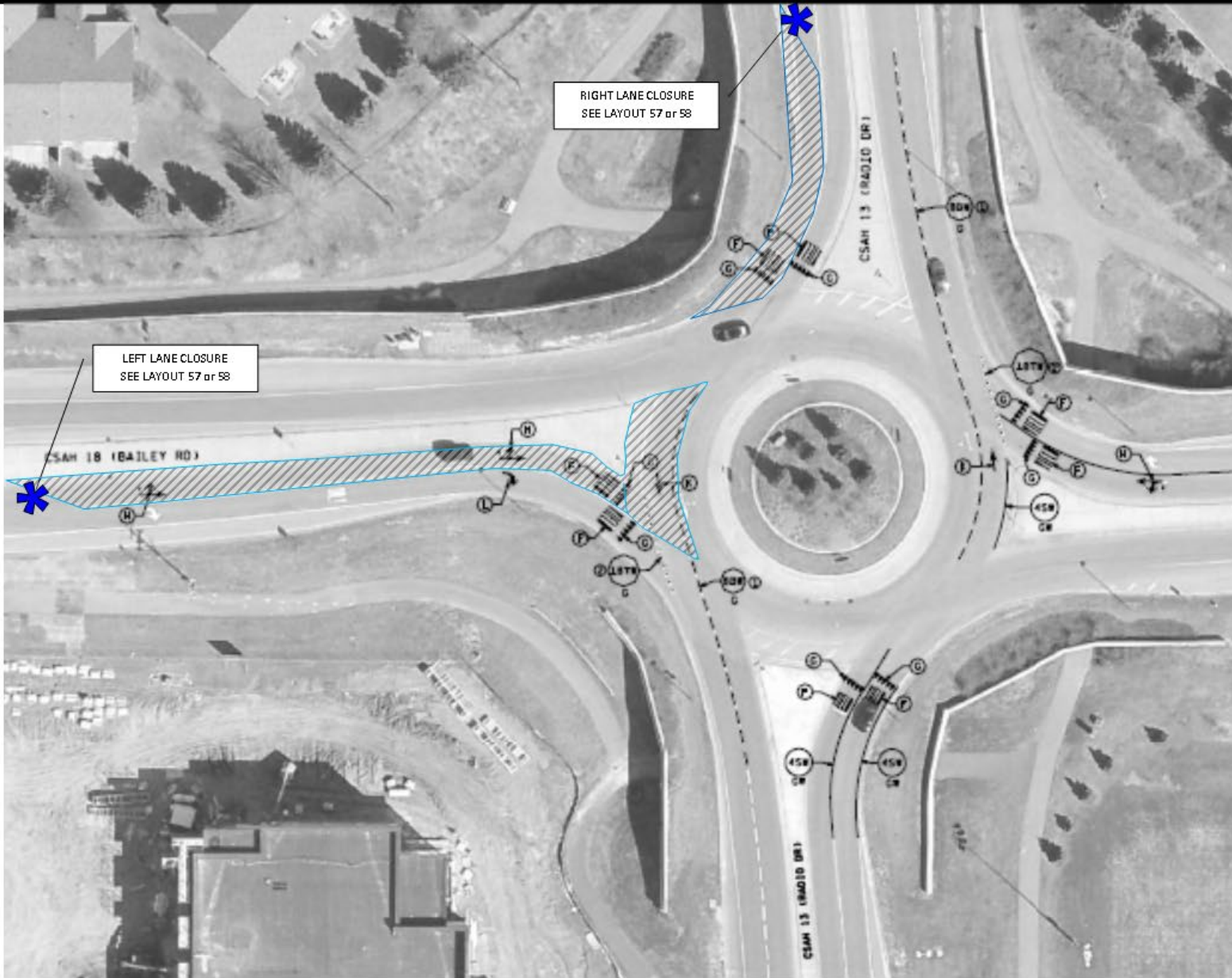
Restriping (2/2)

- County administers contract for durable markings during most years
 - This often covers roundabout re-striping, or restriping on particularly busy roadways.
 - Durables contract includes markings where restriping activities has involved/difficult traffic control needs
- Some contractors and cities have embraced night work



Roundabout restriping

- Most challenging to restripe
- Highest wear with twisting movements
- Requires extensive traffic control
- County is prescriptive with traffic control setups
 - Safer
 - Ensures MUTCD compliance
 - Level playing field for bidding contractors
- Often lighted – presence is more important than retroreflectivity




RIGHT LANE CLOSURE
SEE LAYOUT 57 or 58

LEFT LANE CLOSURE
SEE LAYOUT 57 or 58

LEGEND

 Available work area

 Road closure, lane closure, or lane shift.
See Field Manual.

Notes

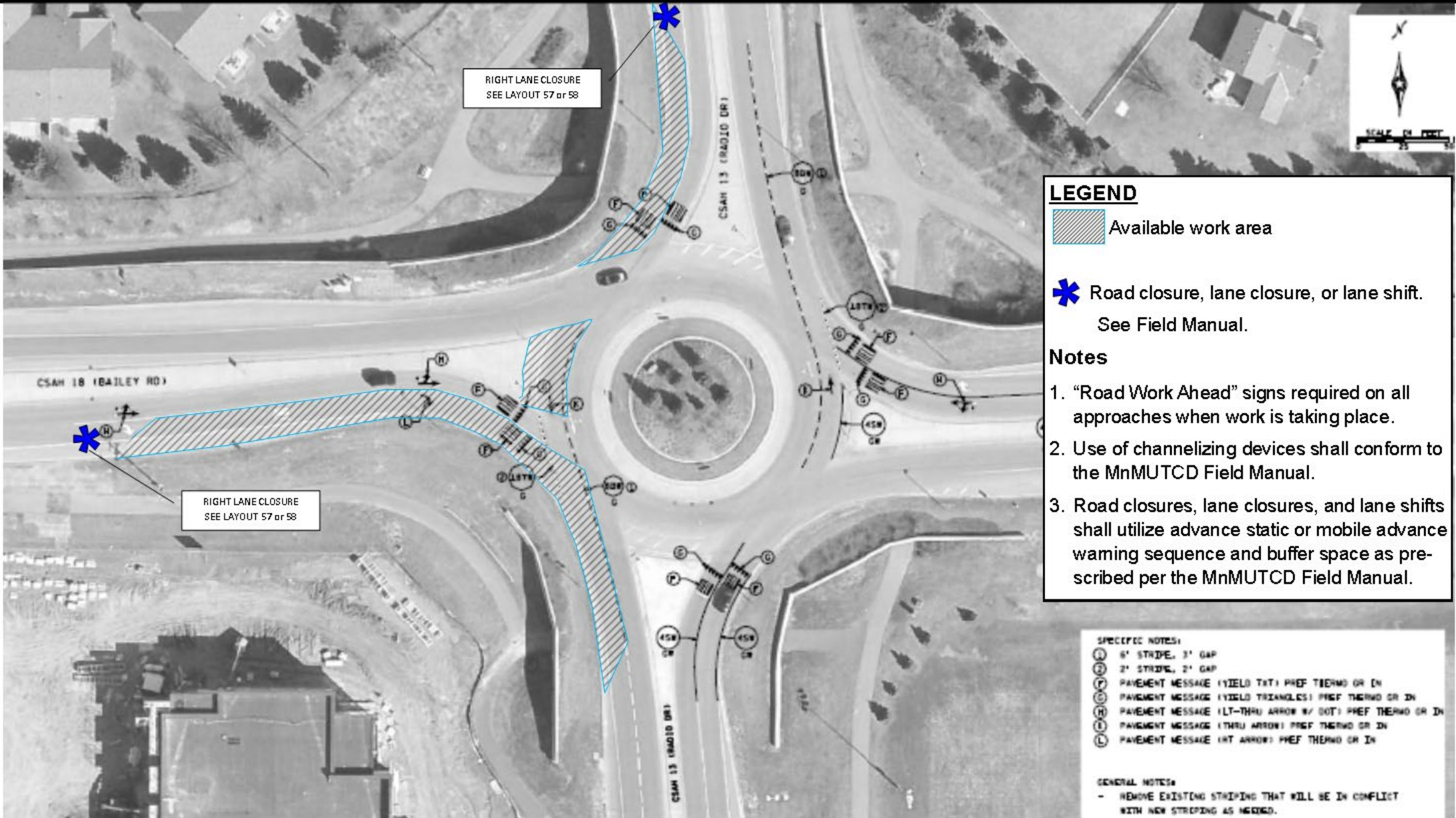
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2. Use of channelizing devices shall conform to the MnMUTCD Field Manual.
3. Road closures, lane closures, and lane shifts shall utilize advance static or mobile advance warning sequence and buffer space as prescribed per the MnMUTCD Field Manual.

SPECIFIC NOTES:

- (A) 6" STRIPE, 3' GAP
- (B) 2" STRIPE, 2" GAP
- (F) PAVEMENT MESSAGE (YIELD TXT) PREF THRWG OR IN
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GENERAL NOTES:

- REMOVE EXISTING STRIPING THAT WILL BE IN CONFLICT WITH NEW STRIPING AS NEEDED.



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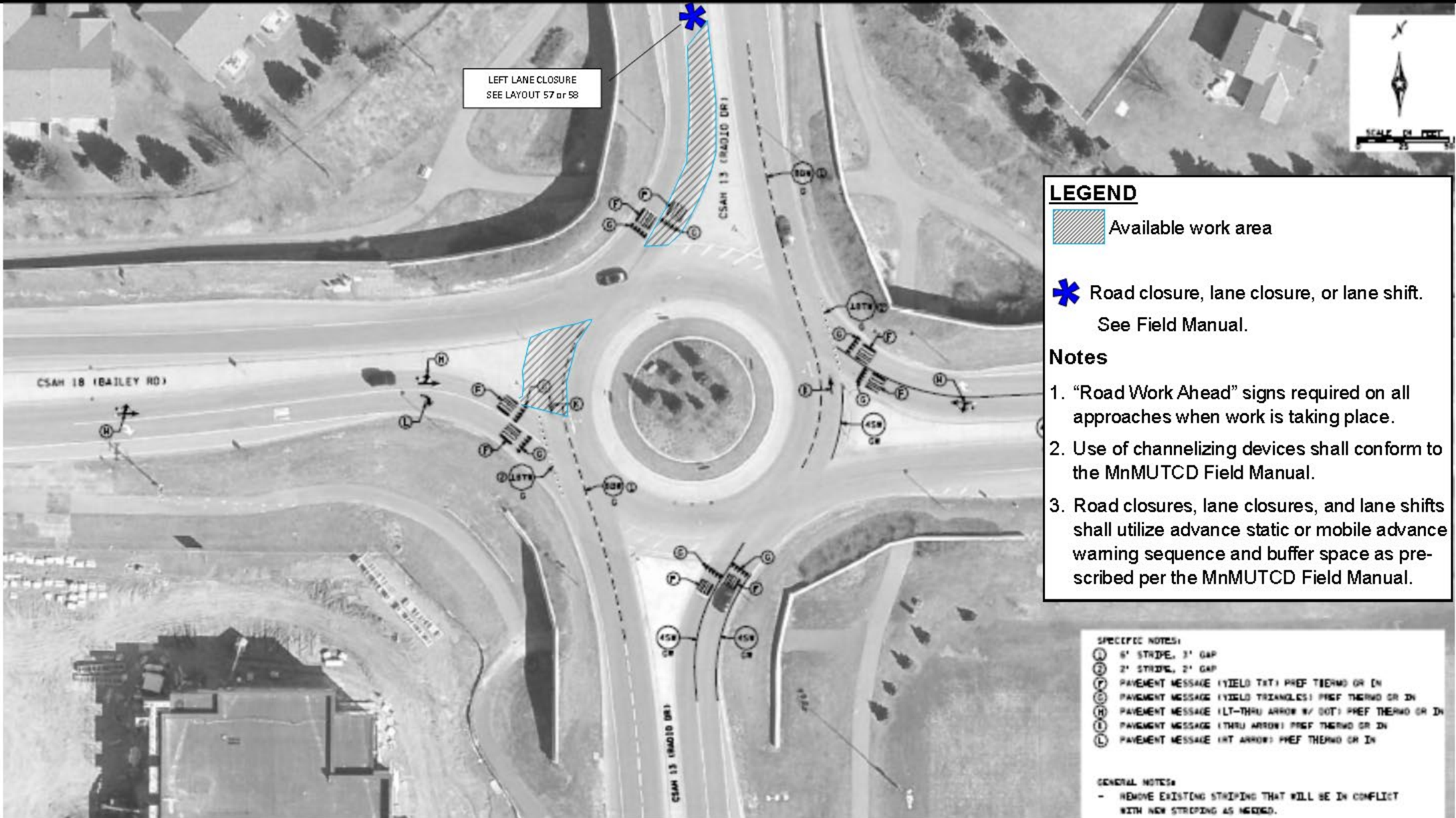
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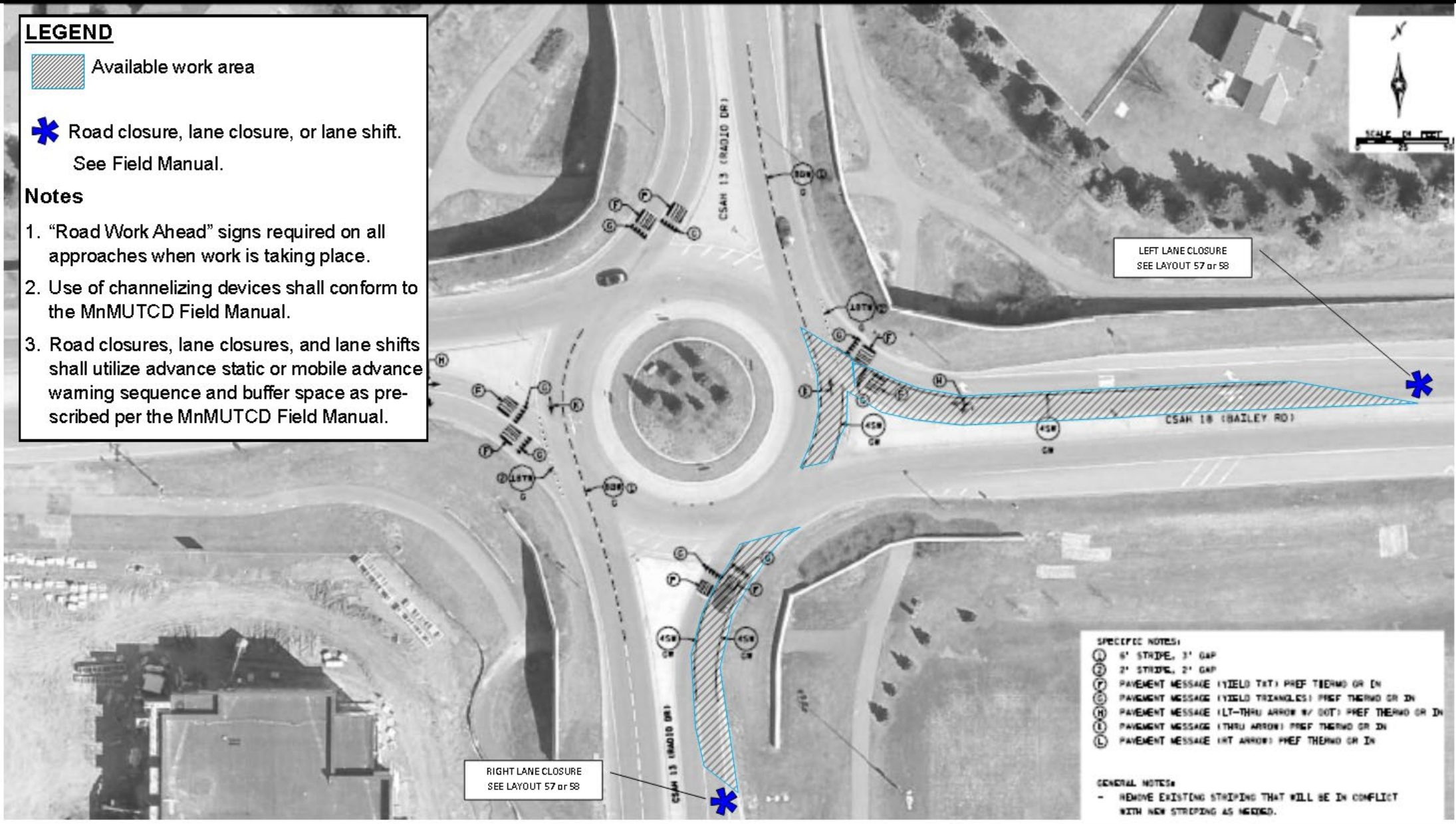
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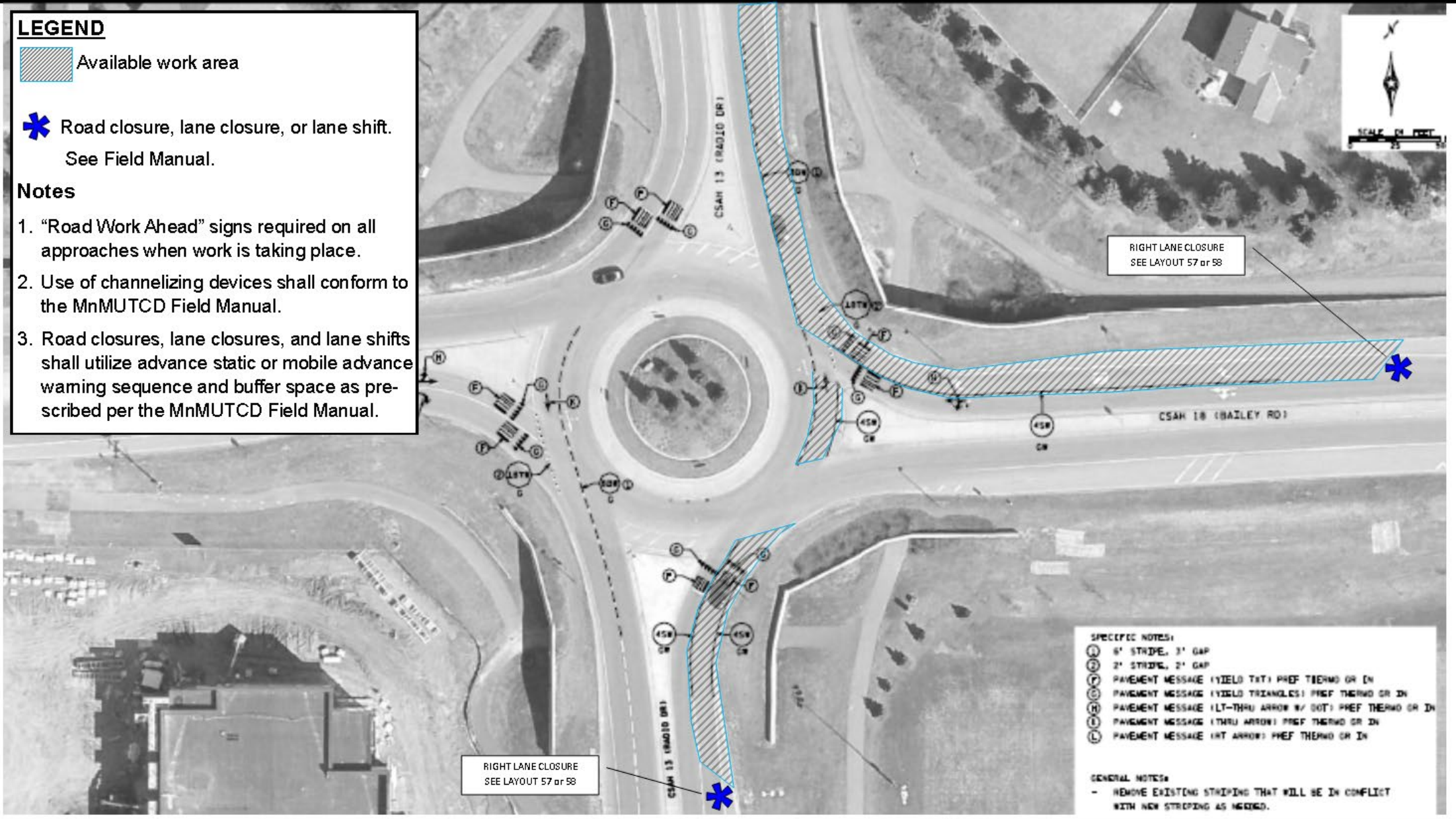
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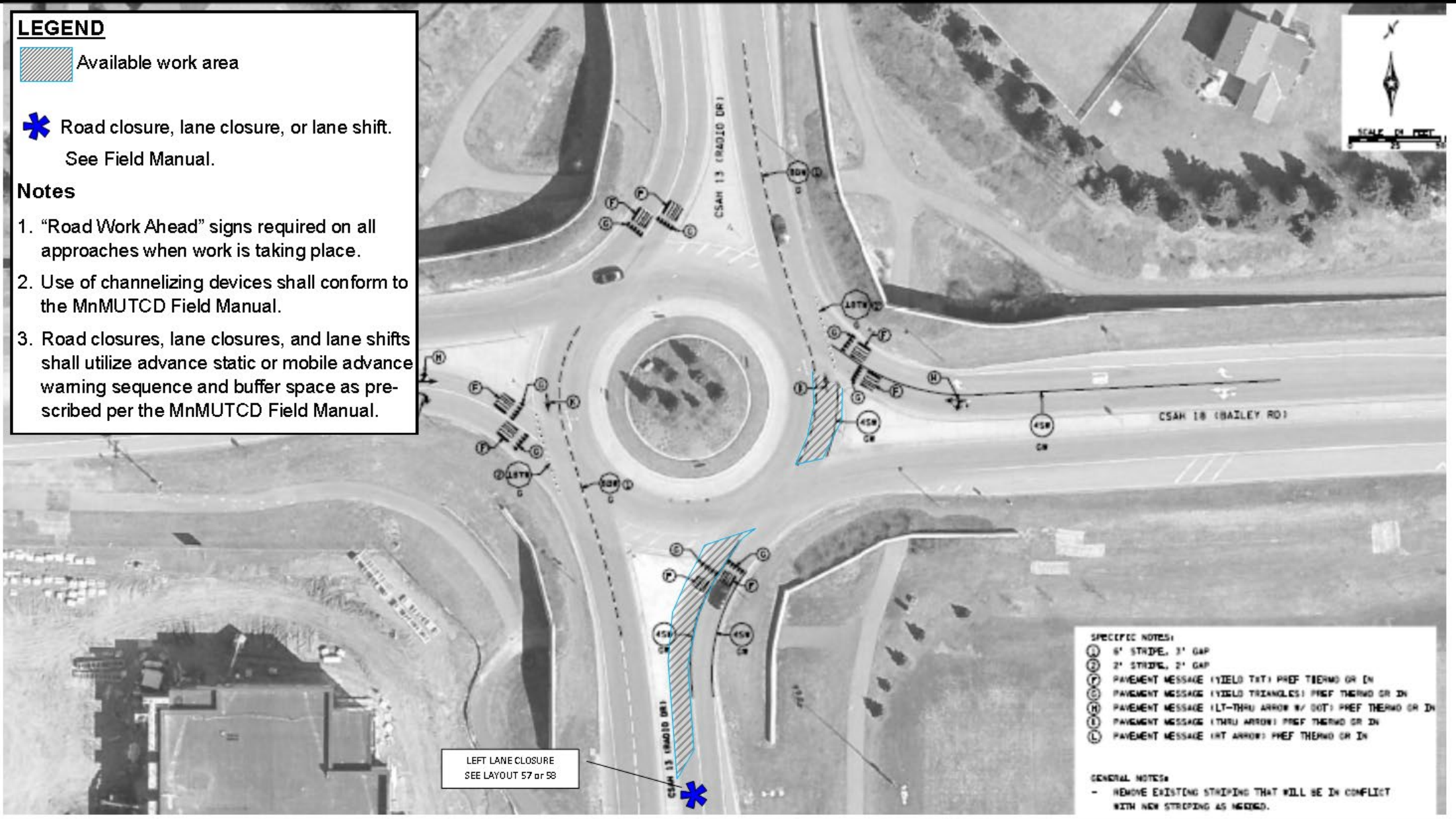
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When do we use surface epoxy?

- Pavement is not in good enough shape to support grooving, or is not worth the cost of grooving
- Atop the rare preventive maintenance surface, or in tandem with crack sealing/mastic application
- If the project is likely/certain to run late in the season
 - This gives the option to change to a fast-dry or late season marking.

Late Season Striping

- Have a plan
- Who's causing the project to run late?
- Communicate with contractors
- Which tradeoffs are you willing to accept?
- Surface striping in fall and coming back the next year to groove in markings often works out well.



Pavement Marking Inspection

- Inspection is critical.
- So is spotting, particularly at roundabouts.
- Stripers want to do good work, and we've rarely had problems.
- Common times we have problems are at the end of the construction season
 - Pressure to finish multiple jobs
 - Weather is often an issue
 - Striper is usually a subcontractor and project schedule is not necessarily in their control.

Inspection considerations



- It's not just about retroreflectivity!
- Grooving and striping in accordance with product specifications
- Proper traffic control is imperative for safety, striping efficiency, and claim avoidance

Other striping notes (1/2)

- The County uses temporary tape and/or traffic control devices for temporary traffic control during switches to avoid scarring as much as possible. We don't like to have scarring on the top surface, as that can be misleading to drivers during rainy conditions.
 - Temporary striping often applied prior to bituminous wearing course paving
- The County stripes edgelines and centerlines on all rural roadways under its jurisdiction, regardless of whether they're required.

Other striping notes (2/2)

- County cities and townships are invited to buy into the annual County latex striping contract.
 - This serves our local agencies and helps them achieve economies of scale they wouldn't get on their own.
- The County uses prevailing wage for striping contracts as a general practice.

Questions?



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