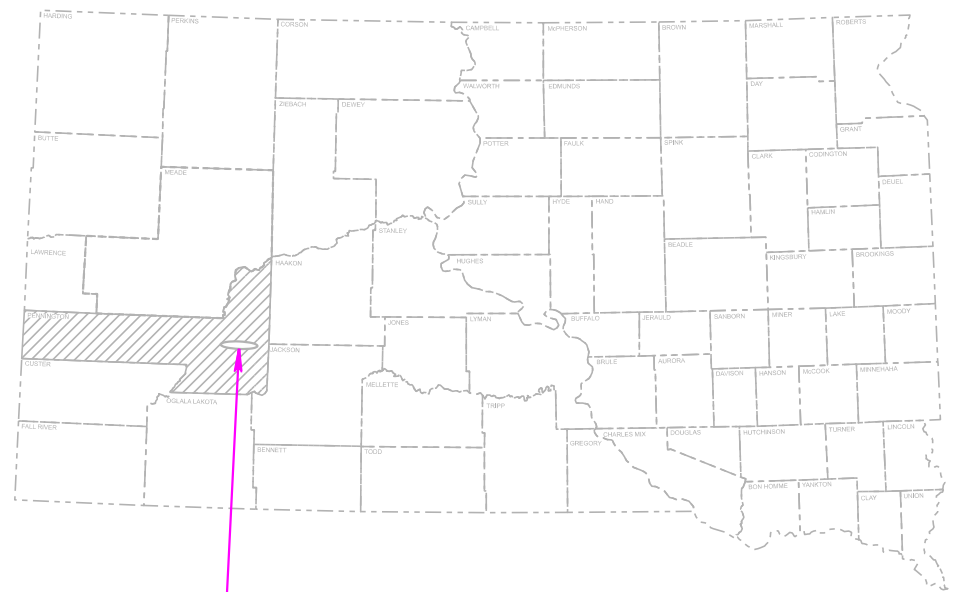


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT 000I-452
I-90 EXIT 109
PENNINGTON COUNTY
LIGHTING REPAIR
PCN I7CY

INDEX OF SHEETS

| | |
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| L1 | General Layout with Index |
| L2-L4 | Estimate with General Notes & Environmental Commitments |
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| L15-L21 | Standard Plates |



PROJECT

BEGIN 000I-452
MRM 109.48

END 000I-452
MRM 110.10

CITY LIMITS

WALL

DESIGN DESIGNATION

| | |
|-------------|--------|
| AADT (2024) | 4033 |
| AADT (2054) | 6473 |
| DHV | 1196 |
| D | 50% |
| DHV T% | 11.3% |
| AADT T% | 24.3% |
| V | 65 mph |

STORM WATER PERMIT
None Required

ESTIMATE OF QUANTITIES

| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
|-----------------|-------------------------------------|----------|------|
| 009E0010 | Mobilization | Lump Sum | LS |
| 230E0100 | Remove and Replace Topsoil | Lump Sum | LS |
| 634E0010 | Flagging | 40.0 | Hour |
| 634E0110 | Traffic Control Signs | 311.0 | SqFt |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 634E0275 | Type 3 Barricade | 1 | Each |
| 634E0420 | Type C Advance Warning Arrow Board | 1 | Each |
| 635E5301 | Type 1 Electrical Junction Box | 5 | Each |
| 635E8120 | 2" Rigid Conduit, Schedule 40 | 4,130 | Ft |
| 635E8220 | 2" Rigid Conduit, Schedule 80 | 645 | Ft |
| 635E9016 | 1/C #6 AWG Copper Wire | 18,520 | Ft |
| 730E0210 | Type F Permanent Seed Mixture | 11 | Lb |
| 731E0100 | Fertilizing | 630 | Lb |
| 732E0250 | Fiber Mulching | 828 | Lb |
| 734E0154 | 12" Diameter Erosion Control Wattle | 840 | Ft |

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf> >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥ 140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at: <https://sdeastwanted.sd.gov/maps/default.aspx>

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04): <https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04> >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:


The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

| | | | |
|--|----------|---------|---------|
|  Plotting Date: 3/27/2025 | PROJECT | SECTION | SHEET |
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COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06. Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

REMOVE AND REPLACE TOPSOIL

Prior to beginning grading operations topsoil will be removed and placed in a windrow alongside the grading limits. Following completion of construction, topsoil will be spread evenly over the disturbed areas.

All costs associated with removing and replacing the topsoil along areas to be resurfaced will be incidental to the contract lump sum price for "Remove and Replace Topsoil".

REMOVE AND REPLACE TOPSOIL

Prior to beginning grading operations topsoil will be removed and placed in a windrow alongside the grading limits. Following completion of construction, topsoil will be spread evenly over the disturbed areas.

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PERMANENT SEEDING

The areas to be seeded consist of all areas disturbed during construction.

Type F Permanent Seed Mixture will consist of the following:

| Grass Species | Variety | Pure Live Seed (PLS) (Pounds/Acre) |
|---|---|------------------------------------|
| Western Wheatgrass | Arriba, Flintlock, Rodan, Rosana, Walsh | 7 |
| Green Needlegrass | Lodorm, AC Mallard Ecovar | 4 |
| Sideoats Grama | Butte, Pierre | 3 |
| Blue Grama | Bad River | 2 |
| Oats or Spring Wheat: April through May; Winter Wheat: August through November | | 10 |
| Total: | | 26 |

FERTILIZING

The Contractor will apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,500 pounds per acre in accordance with the manufacturer's recommended method of application.

The all-natural slow release fertilizer will be as shown below or an approved equal:

| <u>Product</u> | <u>Manufacturer</u> |
|----------------|--|
| Sustane | Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 www.sustane.com |
| Perfect Blend | Perfect Blend, LLC Bellevue, WA Phone: 1-866-456-8890 www.perfect-blend.com |
| Nature Safe | Nature Safe Fertilizers Irving, TX Phone: 1-605-759-5622 www.naturesafe.com |

FIBER MULCHING

Fiber mulch will be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier will be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier will be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier will be synthetic.

Fiber mulch will be applied at the rate of 2,000 pounds per acre.

The Contractor will allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials will be incidental to the contract unit price per ton for "Fiber Mulching".

The fiber mulch provided will be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

TABLE OF EROSION CONTROL

| Location to | Location | Type F Permanent Seed Mixture Lb | Fertilizing Lb | Fiber Mulching Lb | 12" Diameter Erosion Control Wattle Ft |
|---------------|----------|----------------------------------|----------------|-------------------|--|
| ESC1 | EJL1 | 0.1 | 7 | 9 | 60 |
| EJL1 | JL4 | 1.2 | 69 | 91 | 60 |
| JL4 | EJL2 | 0.9 | 50 | 66 | 60 |
| EJL2 | B1 | 0.5 | 31 | 40 | 60 |
| B1 | B5 | 0.5 | 31 | 40 | 60 |
| EJL1 | B3 | 0.8 | 49 | 64 | 60 |
| B4 | EJL3 | 0.4 | 23 | 29 | 60 |
| EJL3 | JL3 | 2.0 | 114 | 152 | 60 |
| JL3 | JL2 | 0.1 | 9 | 11 | 60 |
| JL2 | A5 | 0.7 | 41 | 54 | 60 |
| A1 | JL1 | 1.3 | 75 | 99 | 60 |
| JL1 | EJL4 | 1.2 | 69 | 92 | 60 |
| EJL4 | A3 | 0.5 | 31 | 41 | 60 |
| A3 | A4 | 0.5 | 31 | 40 | 60 |
| Total: | | 10.8 | 630 | 828 | 840 |

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

Lane closures will be removed prior to nightfall.

TRAFFIC CONTROL SIGNS

Traffic control signs have been included in a table for each site. Payment will only be for those signs used for each site.

INVENTORY OF TRAFFIC CONTROL DEVICES

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

| SIGN CODE | SIGN DESCRIPTION | EXPRESSWAY / INTERSTATE | | | |
|-----------|----------------------------------|---|-----------|---------------|--------------|
| | | NUMBER | SIGN SIZE | SQFT PER SIGN | SQFT |
| R2-1 | SPEED LIMIT 45 | 2 | 36" x 48" | 12.0 | 24.0 |
| R2-1 | SPEED LIMIT 65 | 3 | 36" x 48" | 12.0 | 36.0 |
| R2-1 | SPEED LIMIT 80 | 1 | 36" x 48" | 12.0 | 12.0 |
| R2-6aP | FINES DOUBLE (plaque) | 1 | 36" x 24" | 6.0 | 6.0 |
| W3-5 | SPEED REDUCTION AHEAD (MPH) | 3 | 48" x 48" | 16.0 | 48.0 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 2 | 48" x 48" | 16.0 | 32.0 |
| W5-4 | RAMP NARROWS | 1 | 48" x 48" | 16.0 | 16.0 |
| W13-4P | ON RAMP (plaque) | 1 | 36" x 36" | 9.0 | 9.0 |
| W20-1 | ROAD WORK AHEAD | 2 | 48" x 48" | 16.0 | 32.0 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 2 | 48" x 48" | 16.0 | 32.0 |
| W20-7 | FLAGGER (symbol) | 1 | 48" x 48" | 16.0 | 16.0 |
| W21-5 | SHOULDER WORK | 2 | 48" x 48" | 16.0 | 32.0 |
| G20-2 | END ROAD WORK | 2 | 48" x 24" | 8.0 | 16.0 |
| | | EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS | | | 311.0 |
| | | SQFT | | | |

SUPPLYING AS BUILT PLANS

If the roadway lighting system is constructed differently than what is stated in the plans, the Contractor will supply as built plans to the Engineer and a copy will be sent to the Traffic Design Engineer. The as built plans may include conduit layouts, wiring diagrams, or other drawings depicting the changes from the original plans.

SHOP DRAWING AND CATALOG CUTS SUBMITTALS

The Contractor will submit shop drawings and catalog cuts in accordance with Section 985 of the Specifications.

PDF submittals will be sent to the following email addresses:

Stacy.Bartlett@state.sd.us
Evelyn.Dalldorf@state.sd.us

INCIDENTAL WORK

Incidental work includes, but is not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer, and work to dig down, expose, cut, and splice existing conduit on to new conduit at the existing footings.

WIRE SPLICING FOR LIGHTING

All wire splices for lighting will be made using TE Connectivity GTAP connectors, NSI Industries Polaris Blue connectors, or an approved equal.

CONDUIT AND CABLE QUANTITIES



PROJECT
000I-452

SECTION SHEET
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Plotting Date: 3/27/2025

| Location to Location | | Rigid Conduit | | Copper Wire | | | | | | | | | | | | | | | | | | | |
|----------------------|------|---------------|-------------|------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | Schedule 40 | Schedule 80 | 1/C #6 AWG Ft | | | | | | | | | | | | | | | | | | | |
| | | 2" Ft | 2" Ft | | | | | | | | | | | | | | | | | | | | |
| Lighting | | | | | | | | | | | | | | | | | | | | | | | |
| ESC1 | EJL1 | 50 | | 185 | | | | | | | | | | | | | | | | | | | |
| EJL1 | JL4 | 125 | | 500 | | | | | | | | | | | | | | | | | | | |
| JL4 | JL5 | 420 | | 1,680 | | | | | | | | | | | | | | | | | | | |
| JL5 | EJL2 | 360 | | 1,440 | | | | | | | | | | | | | | | | | | | |
| EJL2 | B2 | | 65 | 195 | | | | | | | | | | | | | | | | | | | |
| EJL2 | B1 | 220 | | 880 | | | | | | | | | | | | | | | | | | | |
| B1 | B5 | 220 | | 660 | | | | | | | | | | | | | | | | | | | |
| JL4 | B3 | 270 | | 1,080 | | | | | | | | | | | | | | | | | | | |
| B3 | B4 | | 125 | 500 | | | | | | | | | | | | | | | | | | | |
| B4 | EJL3 | | 130 | 520 | | | | | | | | | | | | | | | | | | | |
| EJL3 | JL3 | 625 | | 2,500 | | | | | | | | | | | | | | | | | | | |
| JL3 | JL2 | 60 | 150 | 840 | | | | | | | | | | | | | | | | | | | |
| JL2 | A5 | 295 | | 1,180 | | | | | | | | | | | | | | | | | | | |
| A5 | A1 | | 115 | 460 | | | | | | | | | | | | | | | | | | | |
| A1 | JL1 | 540 | | 2,160 | | | | | | | | | | | | | | | | | | | |
| JL1 | EJL4 | 500 | | 2,000 | | | | | | | | | | | | | | | | | | | |
| EJL4 | A2 | | 60 | 180 | | | | | | | | | | | | | | | | | | | |
| EJL4 | A3 | 225 | | 900 | | | | | | | | | | | | | | | | | | | |
| A3 | A4 | 220 | | 660 | | | | | | | | | | | | | | | | | | | |
| Total: | | 4,130 | 645 | 18,520 | | | | | | | | | | | | | | | | | | | |

OVERVIEW

I-90 EXIT 109



PROJECT

000I-452

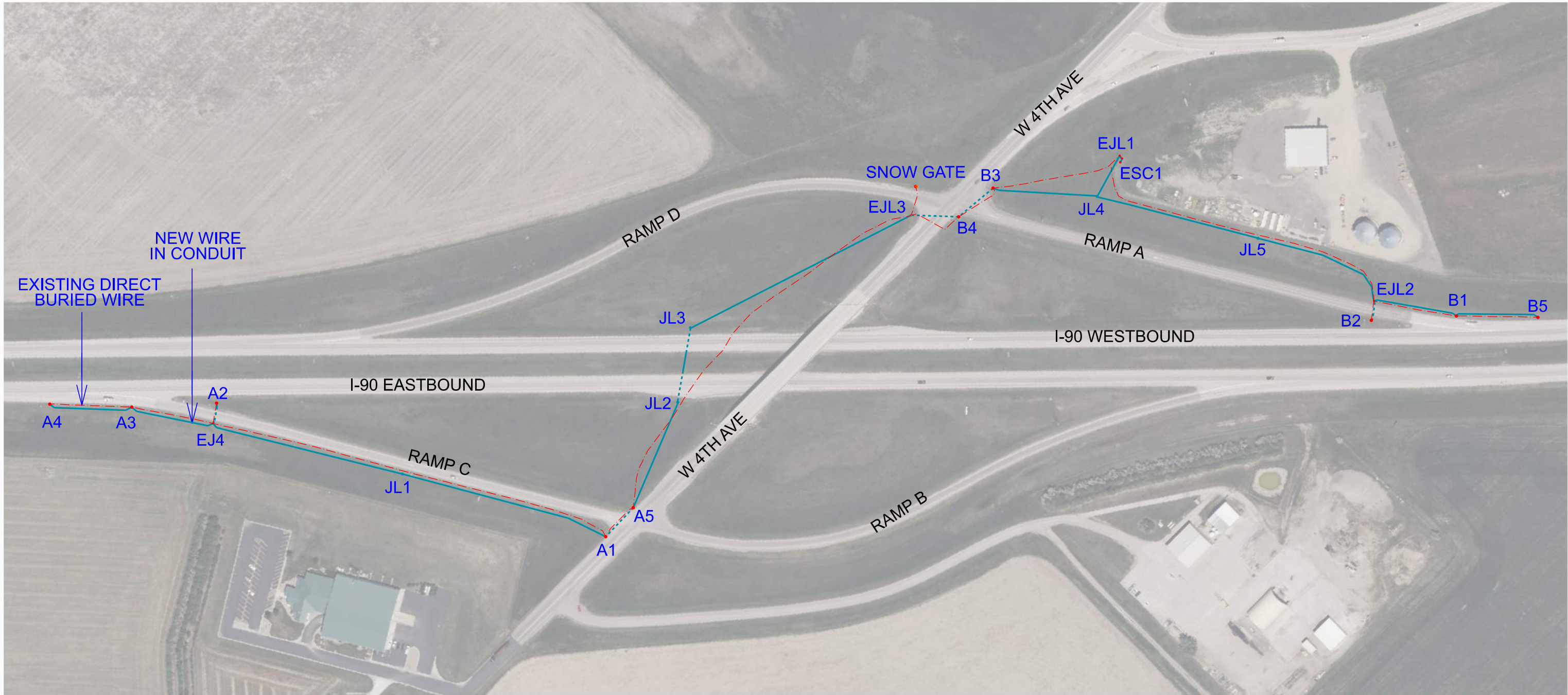
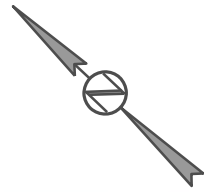
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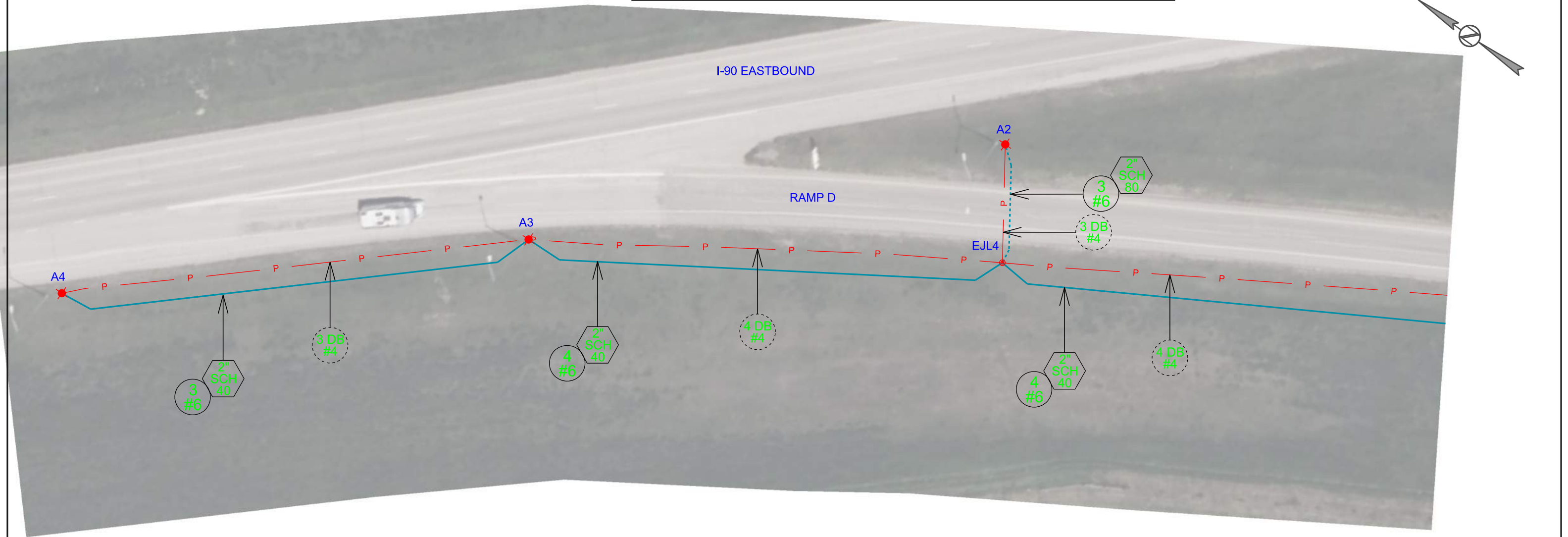
Plotting Date: 3/27/2025



CONDUIT LAYOUT EXIT 109

| ESTIMATE OF QUANTITIES | | | |
|------------------------|--|-----------|------|
| KEY | ITEM | EST QUANT | UNIT |
| | 2" Rigid Conduit, Schedule 40 | 4,130 | FT |
| | 2" Rigid Conduit, Schedule 80 | 645 | FT |
| | 1/C #6 AWG Copper Wire | 18,520 | FT |
| | Type 1 Electrical Junction Box (JL1-JL5) | 5 | EACH |

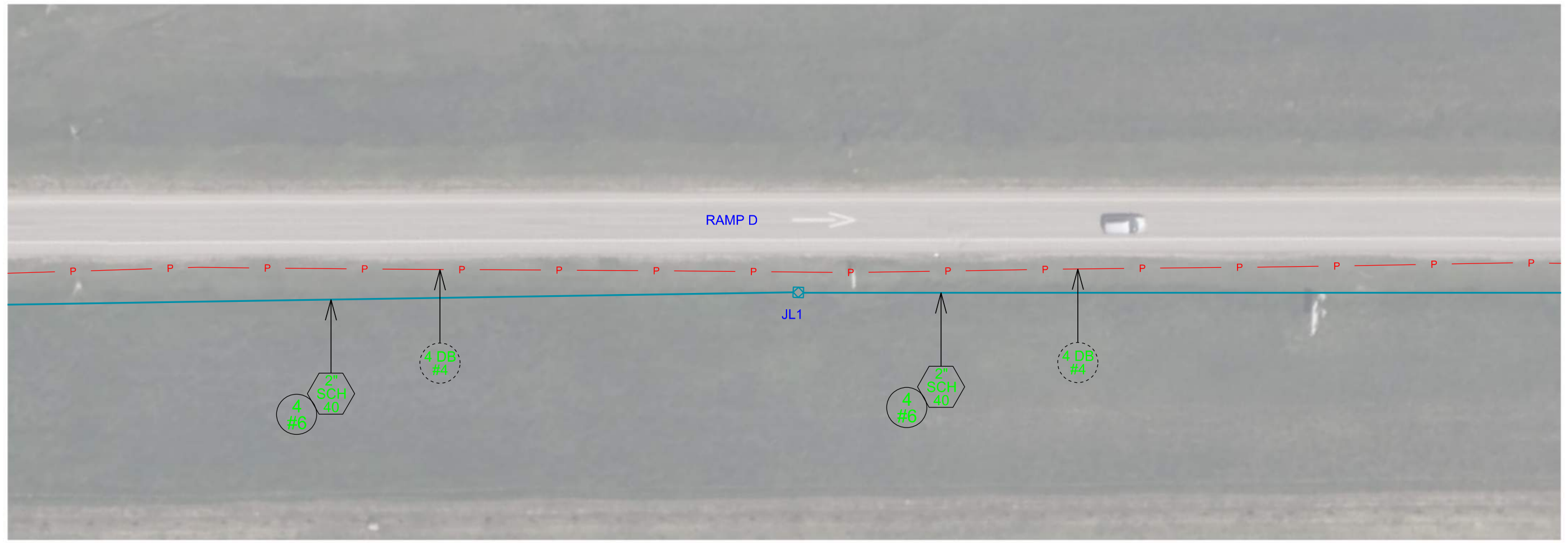
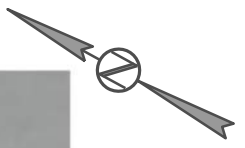
| EXISTING ITEMS | |
|----------------|---|
| KEY | ITEM |
| | Roadway Luminaire (A1-A5, B1-B5, SNOW GATE) |
| | Type 1 Electrical Junction Box (EJL1-EJL4) |
| | Meter Socket |
| | Electrical Service Cabinet (ESC1) |
| | 2" Rigid Conduit, Schedule 80 |
| | 1/C #4 AWG Direct Burial Copper Wire |
| | 1/C #6 AWG Copper Wire |



CONDUIT LAYOUT EXIT 109

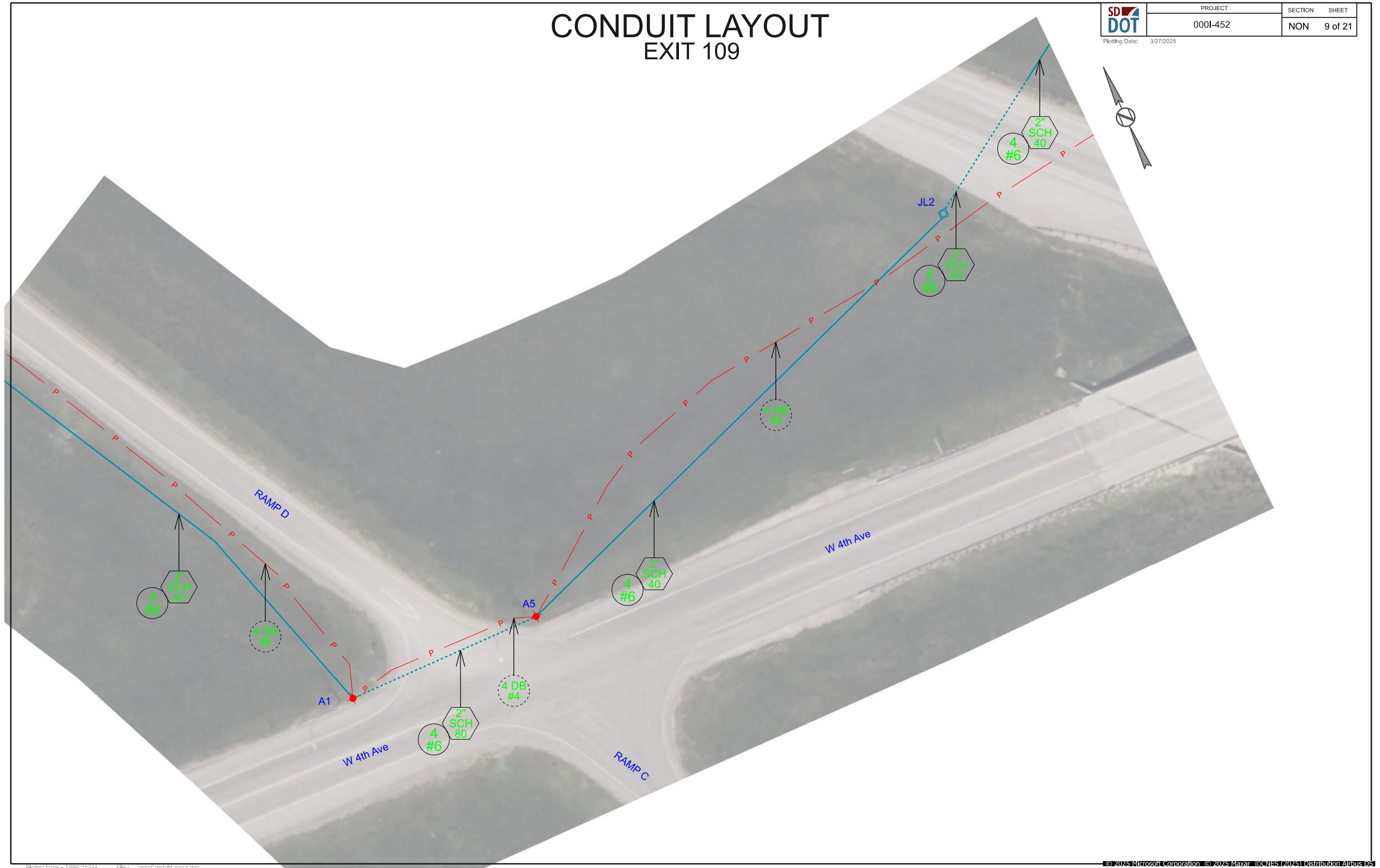
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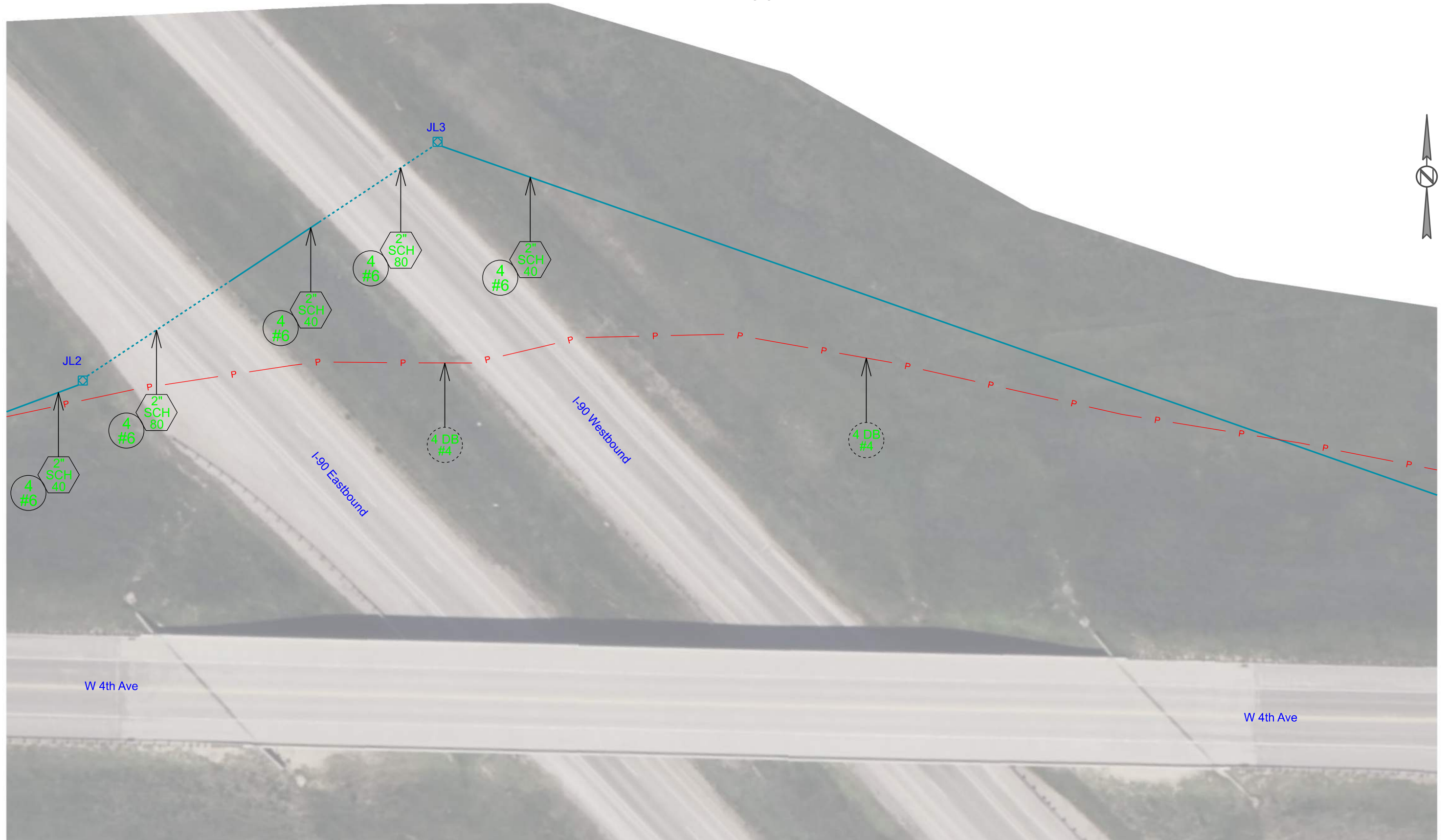


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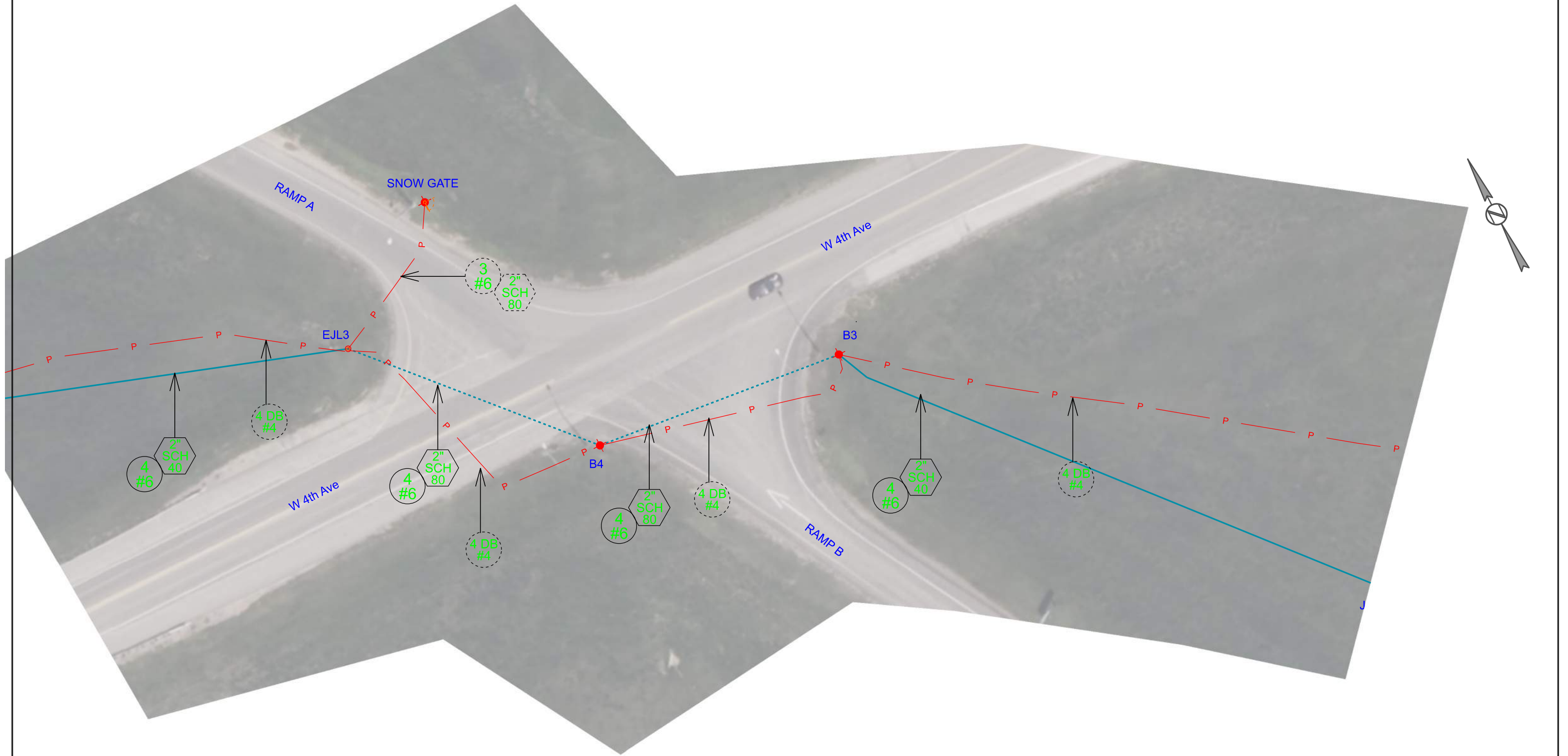
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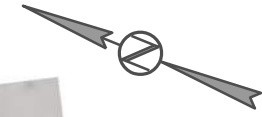
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CONDUIT LAYOUT EXIT 109

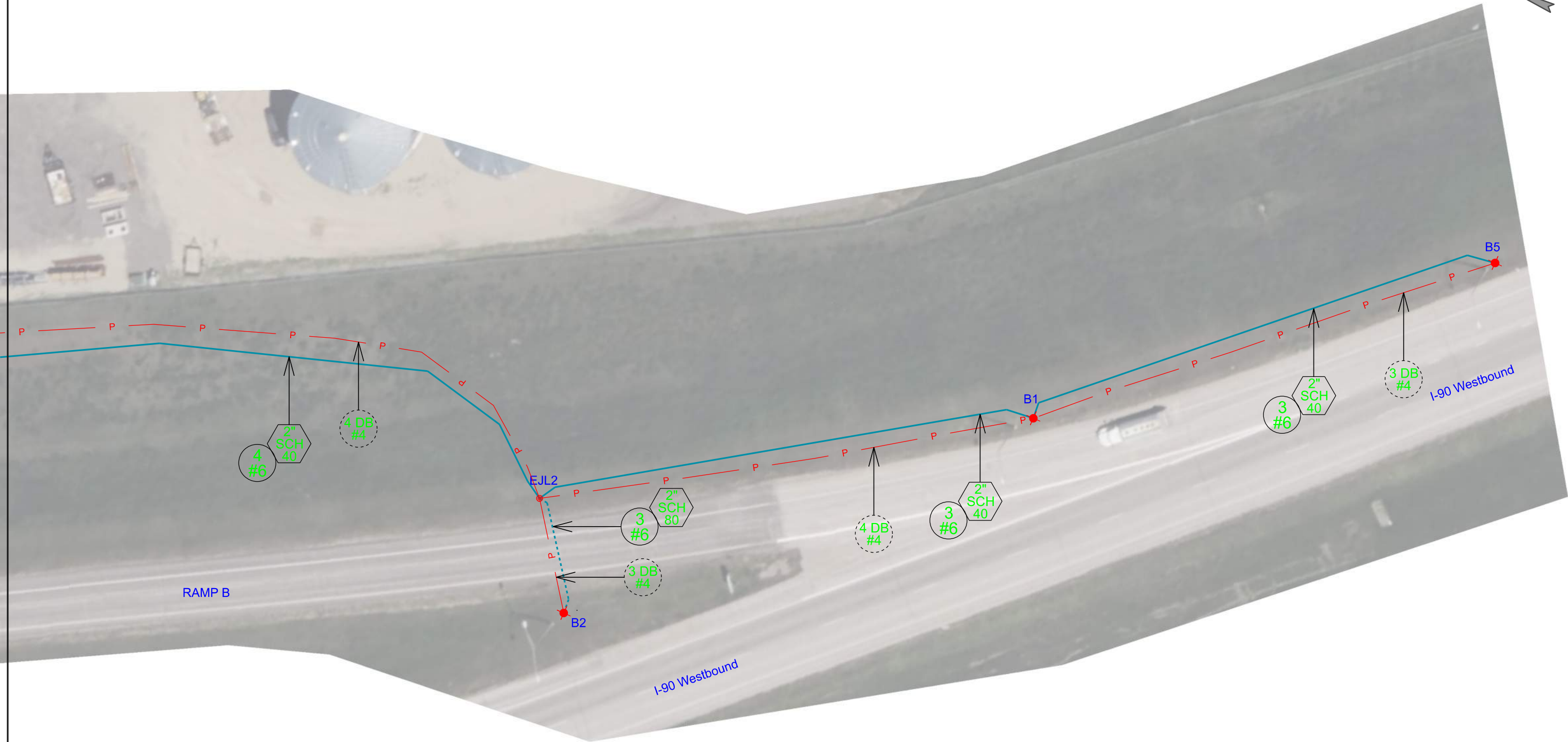
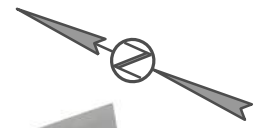
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|-----------|----------|---------|----------|
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| | 000I-452 | NON | 13 of 21 |
| Plotting Date: 3/27/2025 | | | |



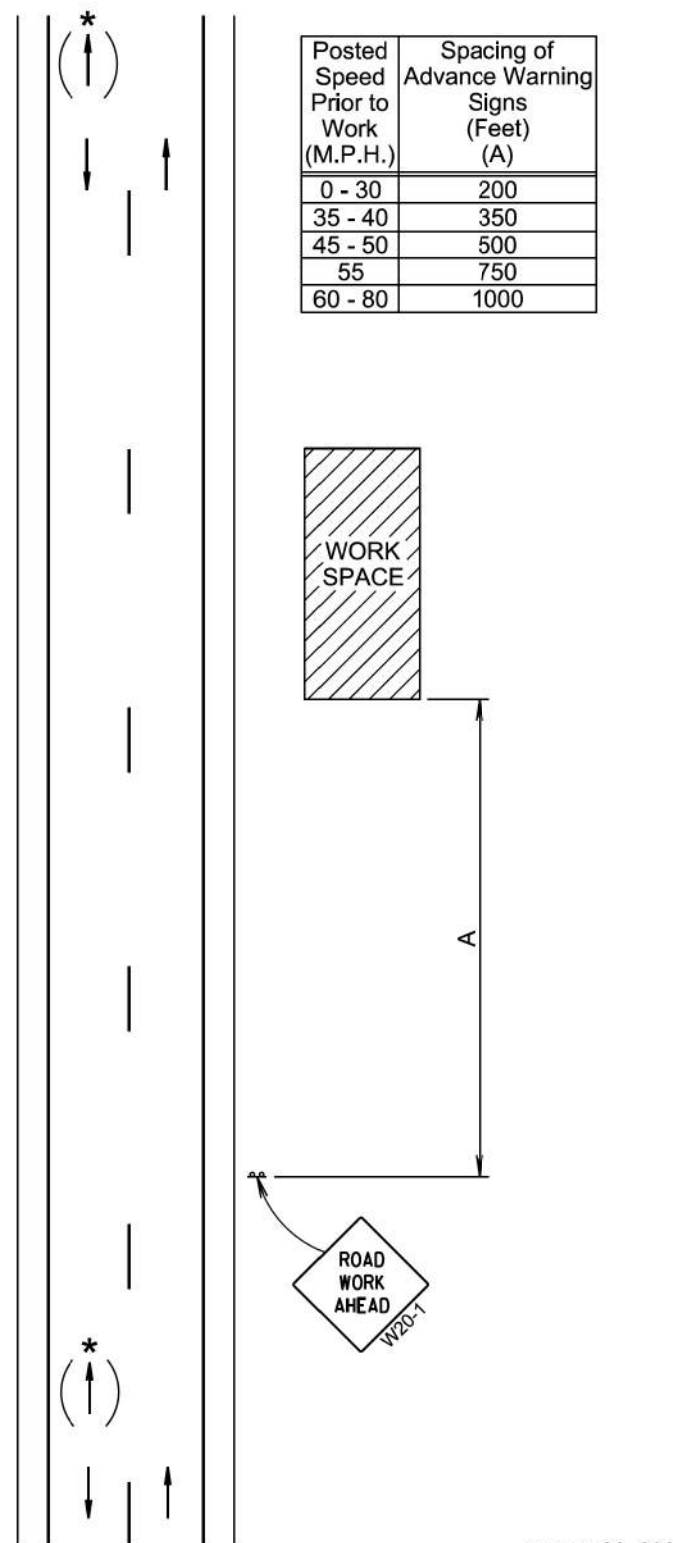
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



January 22, 2021

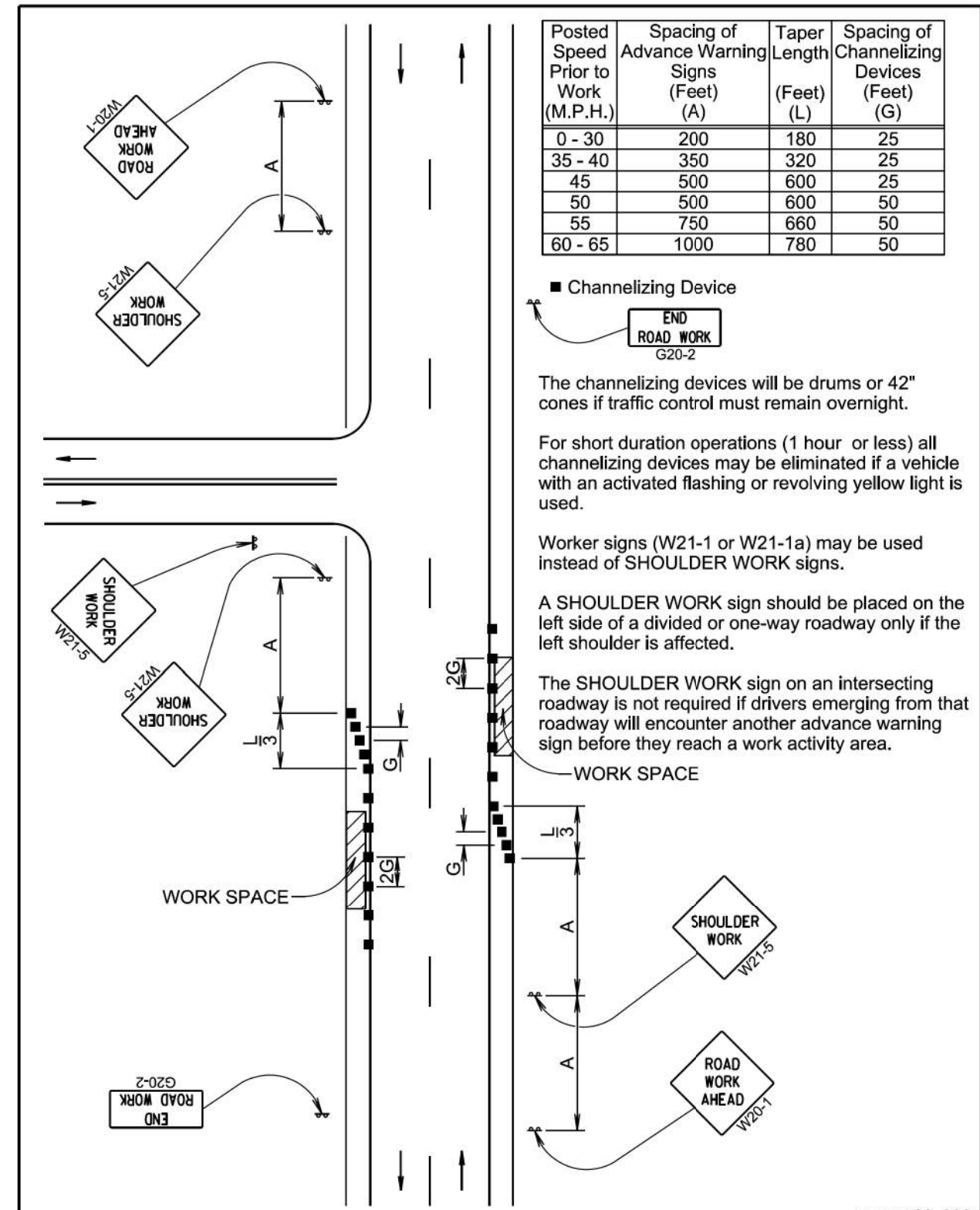
SD
DOT

WORK BEYOND THE SHOULDER

PLATE NUMBER
634.01

Sheet 1 of 1

Published Date: 2025



January 22, 2021

SD
DOT

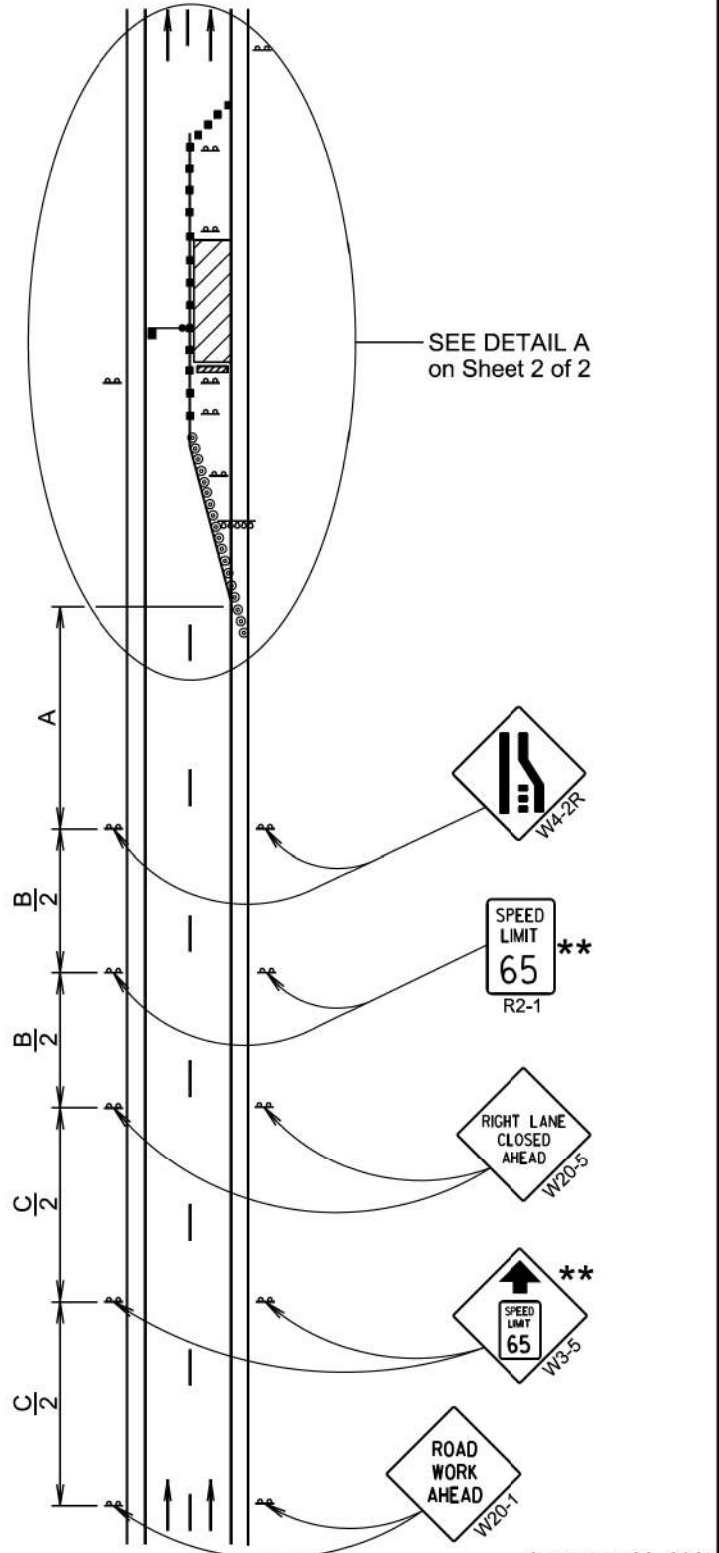
WORK ON SHOULDERS

PLATE NUMBER
634.03

Sheet 1 of 1

Published Date: 2025

| Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) | | |
|-------------------------------------|---|------|------|
| | (A) | (B) | (C) |
| 0 - 30 | 200 | | |
| 35 - 40 | 350 | | |
| 45 - 50 | 500 | | |
| 55 | 750 | | |
| 60 - 65 | 1000 | | |
| 70 - 80 | 1000 | 1500 | 2640 |



SEE DETAIL A on Sheet 2 of 2

** Speed appropriate for location.

- Reflectorized Drum
- Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.

September 22, 2021

| | | |
|---|---|------------------------|
| S D D O T Published Date: 2025 | WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS | PLATE NUMBER 634.63 |
| | | Sheet 1 of 2 |

| Posted Speed Prior to Work (M.P.H.) | Spacing of Channelizing Devices (Feet) (G) | Taper Length (Feet) (L) |
|-------------------------------------|--|-------------------------|
| 0 - 30 | 25 | 180 |
| 35 - 40 | 25 | 320 |
| 45 | 25 | 600 |
| 50 | 50 * | 600 |
| 55 | 50 * | 660 |
| 60 - 65 | 50 * | 780 |
| 70 - 80 | 50 * | 960 |

* Spacing is 40' for 42" cones.

** Speed appropriate for location.

*** Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.

■ Flagger (As Necessary)

● Reflectorized Drum

■ Channelizing Device

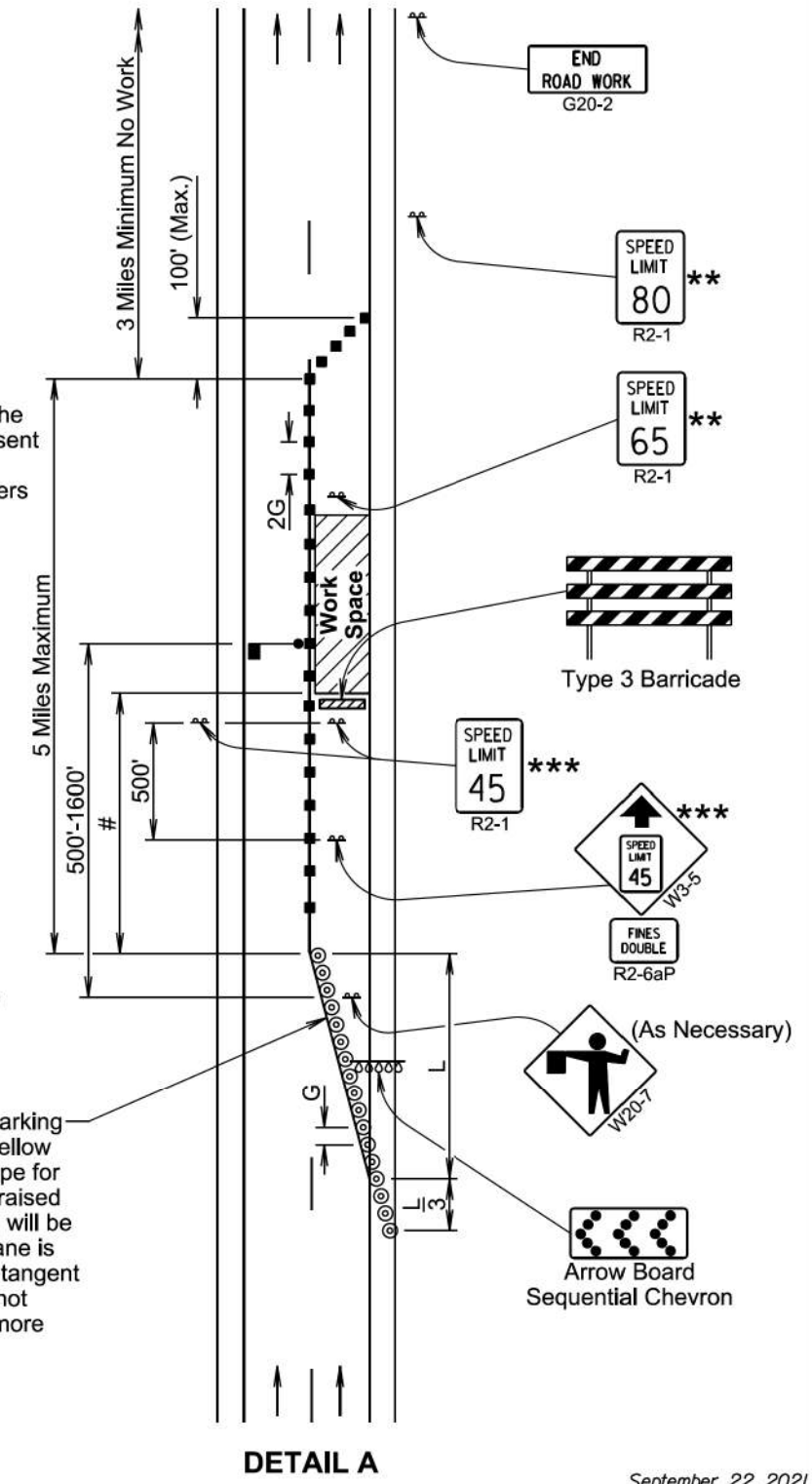
The Work Space will be a minimum of 500' from the end of the taper.

The FLAGGER sign will be used whenever there is a Flagger present.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

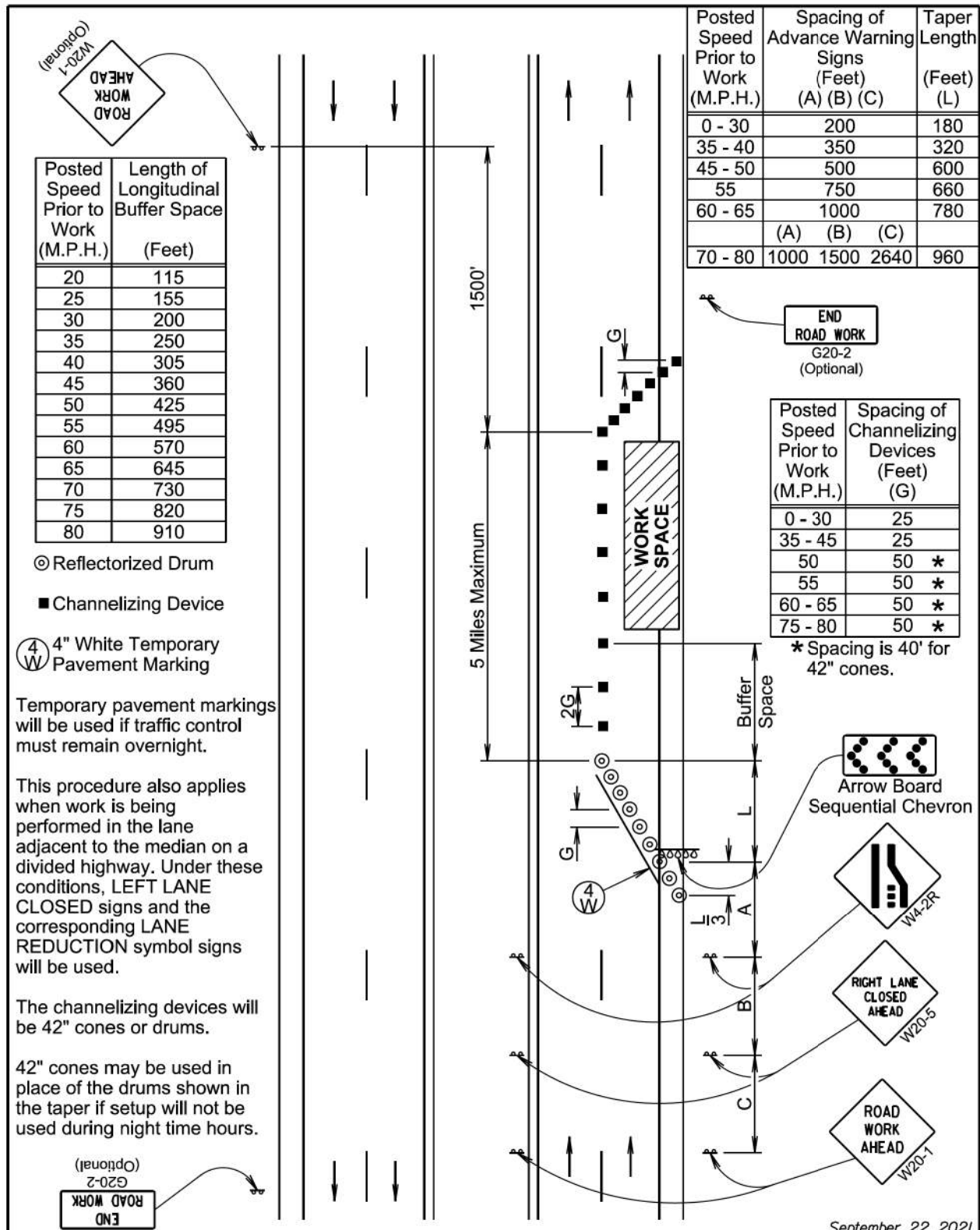
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

September 22, 2021

| | | |
|---|---|------------------------|
| S D D O T Published Date: 2025 | WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS | PLATE NUMBER 634.63 |
| | | Sheet 2 of 2 |



⊙ Reflectorized Drum
 ■ Channelizing Device
 (4 W) 4" White Temporary Pavement Marking

Temporary pavement markings will be used if traffic control must remain overnight.

This procedure also applies when work is being performed in the lane adjacent to the median on a divided highway. Under these conditions, LEFT LANE CLOSED signs and the corresponding LANE REDUCTION symbol signs will be used.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

September 22, 2021

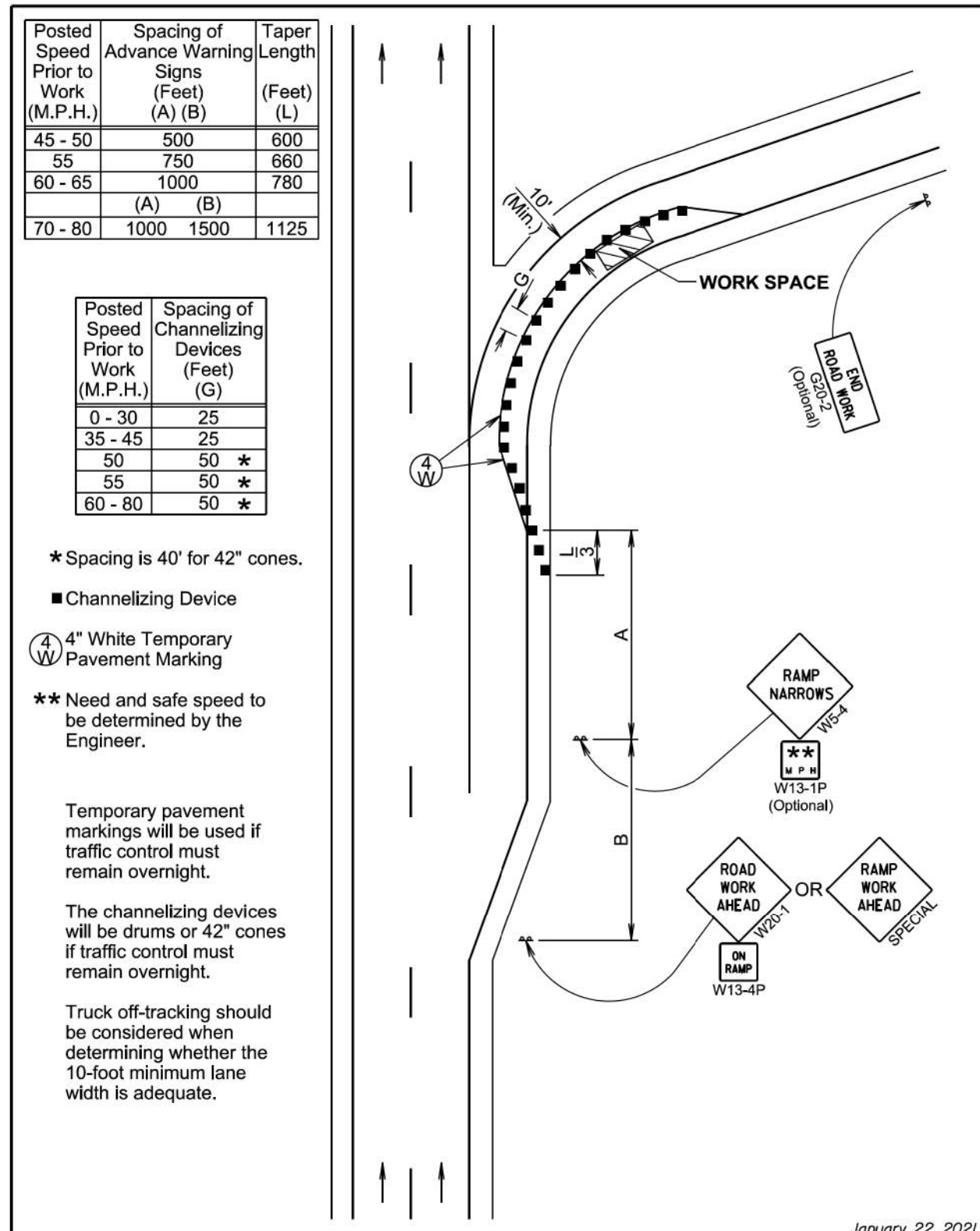
SD DOT

LANE CLOSURE WITHOUT BARRIER

PLATE NUMBER 634.64

Published Date: 2025

Sheet 1 of 1



* Spacing is 40' for 42" cones.
 ■ Channelizing Device
 (4 W) 4" White Temporary Pavement Marking

** Need and safe speed to be determined by the Engineer.

Temporary pavement markings will be used if traffic control must remain overnight.

The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

Truck off-tracking should be considered when determining whether the 10-foot minimum lane width is adequate.

January 22, 2021

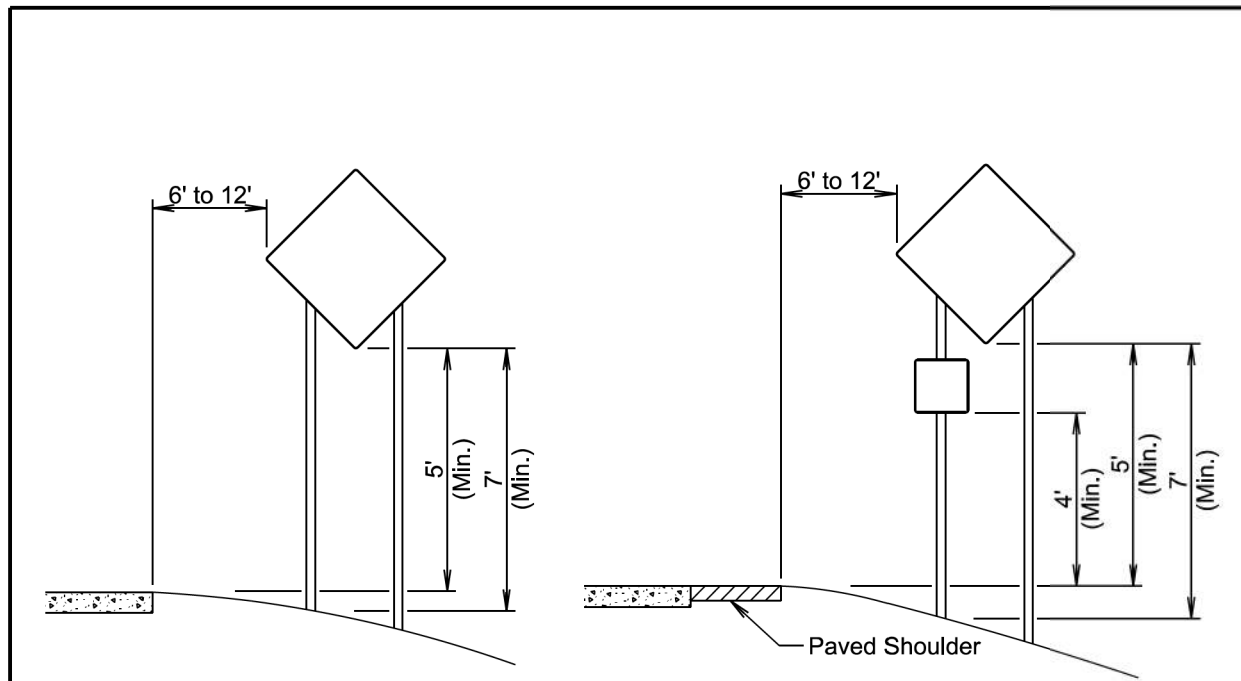
SD DOT

PARTIAL EXIT RAMP CLOSURE

PLATE NUMBER 634.69

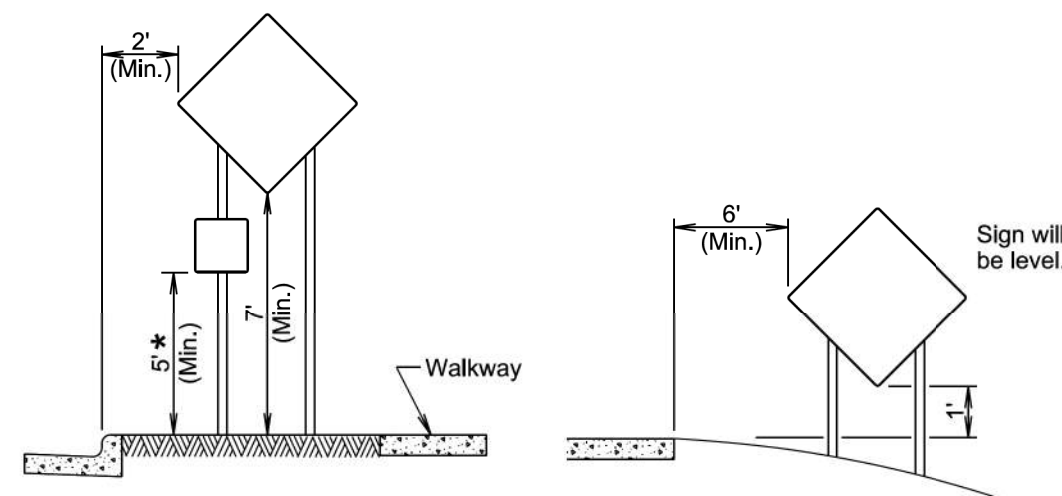
Published Date: 2025

Sheet 1 of 1



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE




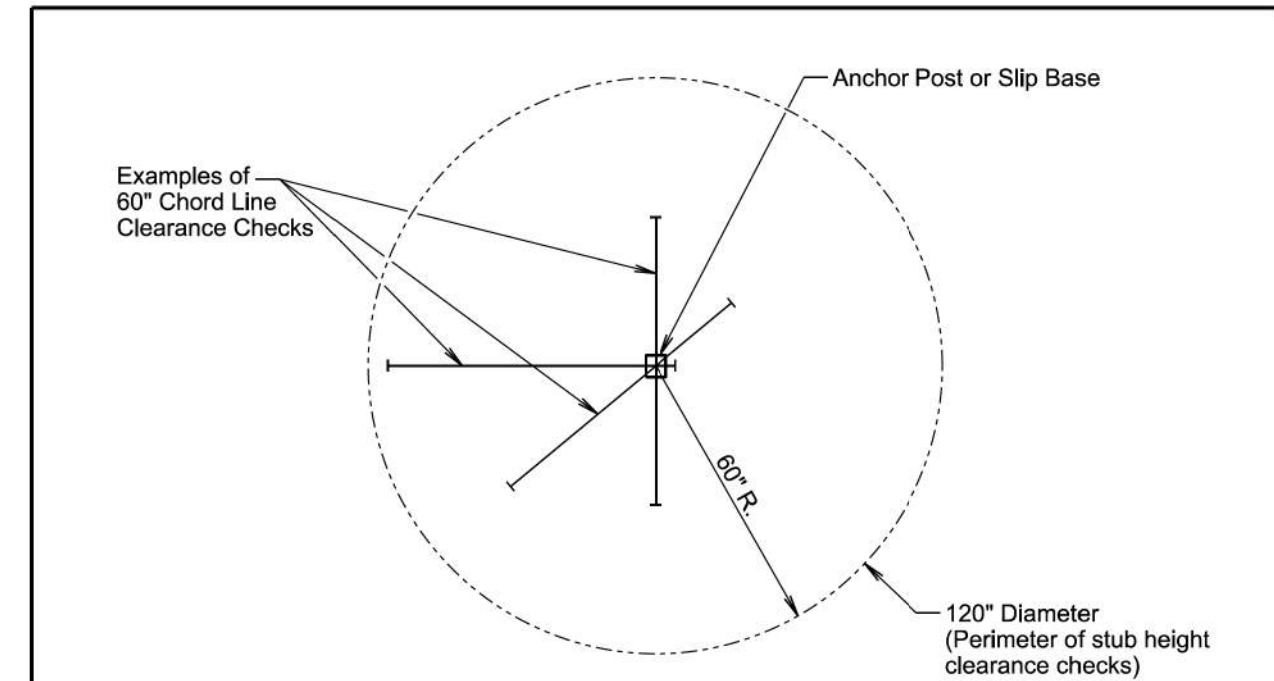
URBAN DISTRICT

RURAL DISTRICT 3 DAY MAXIMUM
(Not applicable to regulatory signs)

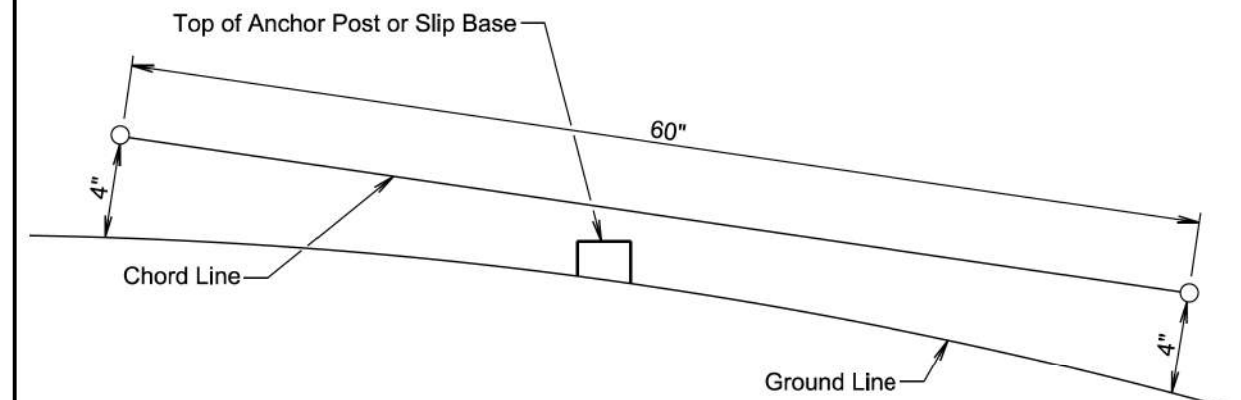
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

| | | |
|---|--|------------------------|
|  | CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing) | PLATE NUMBER 634.85 |
| | | Sheet 1 of 1 |
| Published Date: 2025 | | |



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

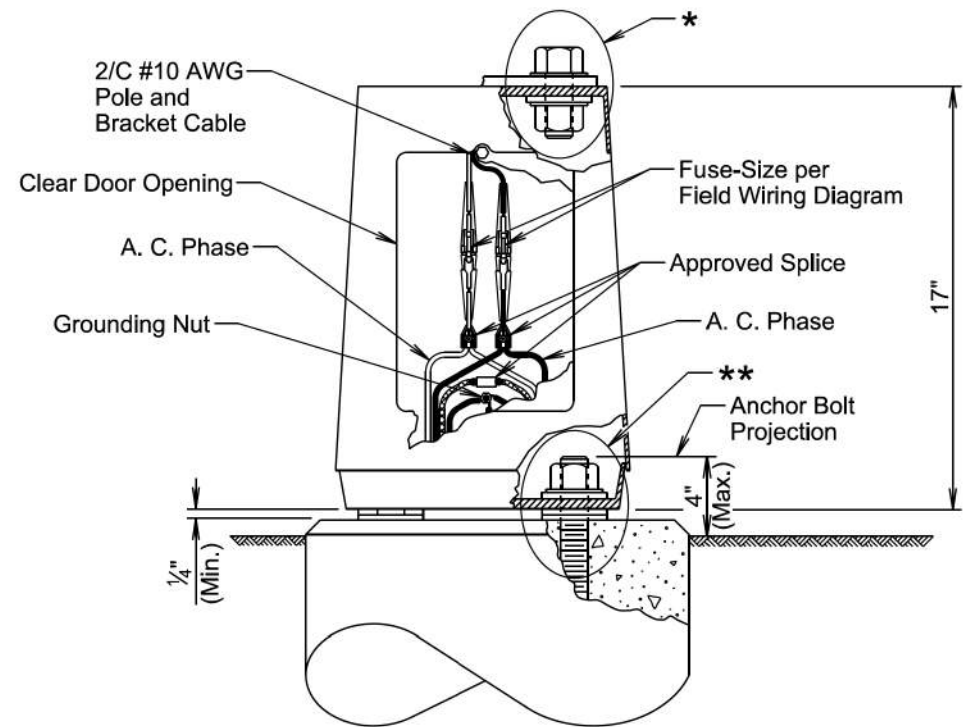
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

| | | |
|---|---|------------------------|
|  | BREAKAWAY SUPPORT STUB CLEARANCE | PLATE NUMBER 634.99 |
| | | Sheet 1 of 1 |
| Published Date: 2025 | | |



GENERAL NOTES:

Base details are provided for example only and are not intended to be a complete design.

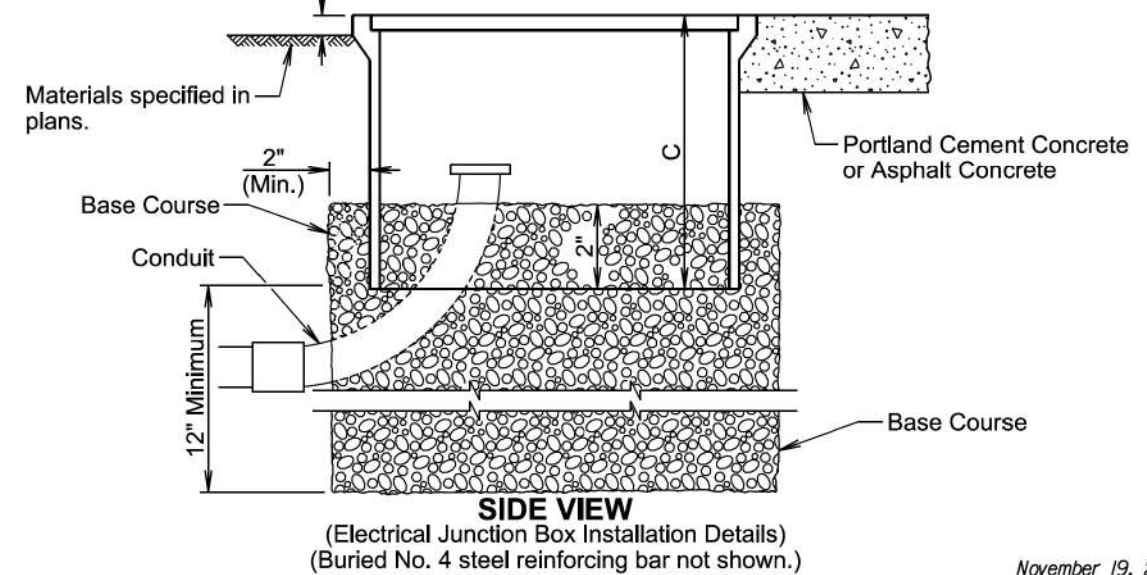
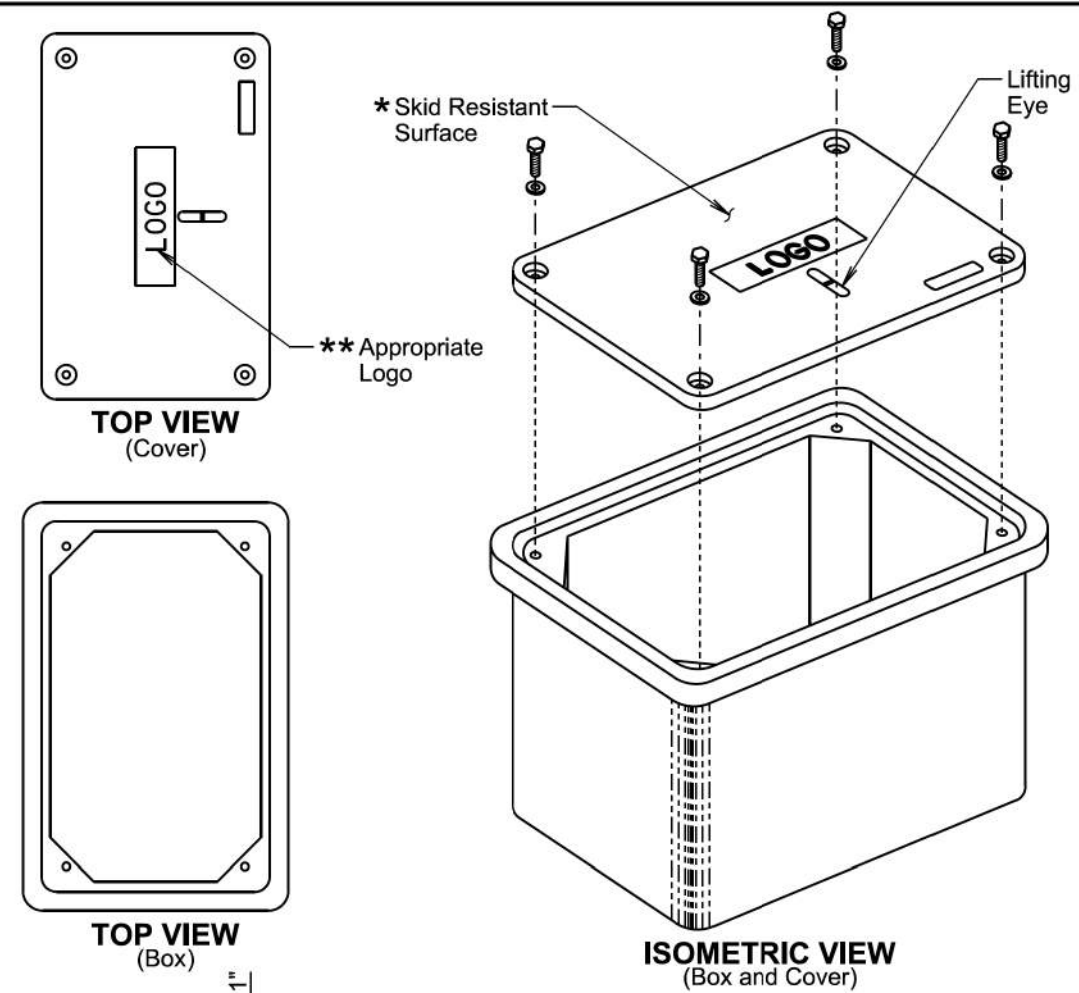
Fused connectors will be breakaway type.

* Hardware connecting the pole to the base will be installed in accordance with the manufacturer's recommendation.

** Hardware connecting the base to the footing will be installed in accordance with the manufacturer's recommendation. The Contractor will install leveling devices in accordance with the manufacturer's recommendation if shimming is necessary to install the light poles plumb and level. The washers and shims will be installed around the anchor bolts.

November 19, 2022

| | | | |
|----------------------|-----------|--|------------------------|
| Published Date: 2025 | SD DOT | ROADWAY LUMINAIRE POLE BREAKAWAY TRANSFORMER BASE | PLATE NUMBER 635.21 |
| | | | Sheet 1 of 1 |



November 19, 2020

| | | | |
|----------------------|-----------|--|------------------------|
| Published Date: 2025 | SD DOT | ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4 | PLATE NUMBER 635.65 |
| | | | Sheet 1 of 2 |

| ELECTRICAL JUNCTION BOX | | | |
|-------------------------|-------------------------|------------------------|-------------------|
| TYPE | DESCRIPTION | APPROXIMATE COVER SIZE | MINIMUM DEPTH (C) |
| 1 | Open Bottom with Gasket | 11"x18" | 18" |
| 2 | Open Bottom with Gasket | 13"x24" | 18" |
| 3 | Open Bottom with Gasket | 17"x30" | 18" |
| 3A | Open Bottom with Gasket | 24"x36"*** | 24" |
| 4 | Open Bottom with Gasket | 30"x48"*** | 24" |

GENERAL NOTES:

The cover will be gasketed with a minimum of two stainless steel bolts and washers.

The cover will have a lifting eye.

* The surface of the cover will have a minimum wet and dry coefficient of friction value of 0.5 as determined by ASTM F609.

** The cover of the junction box will have the appropriate logo in one inch size letters and will be recessed. When the junction box contains cables or wires for a traffic signal then the logo will be "Signal". When the junction box contains lighting conductors then the logo will be "Lighting".

*** Two piece covers will be used for Type 3A and Type 4 junction boxes.

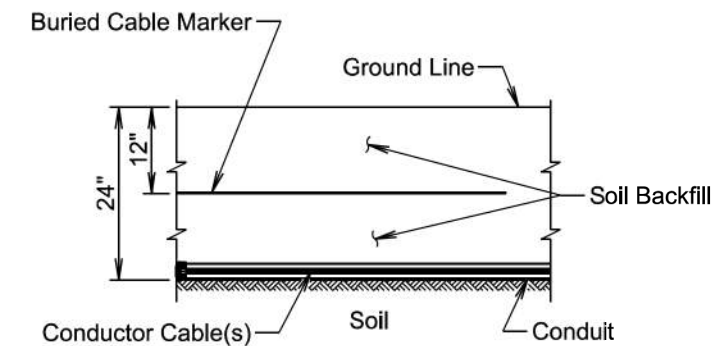
The electrical junction boxes will comply with the American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 2007 Specification for Underground Enclosure Integrity. The loading requirement for all electrical junction boxes and covers will be Tier 22 of ANSI/SCTE 77 2007.

The electrical junction boxes will be UL listed.

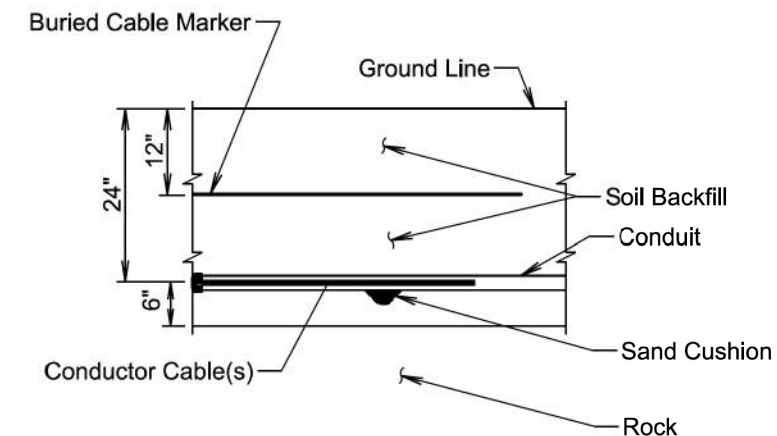
For junction boxes located outside of pavement, a No. 4 steel reinforcing bar with a minimum length of 18" will be buried adjacent to the long side of the junction box. All costs associated with furnishing and placing the steel reinforcing bar will be incidental to the contract unit price per each for "Type _ Electrical Junction Box".

November 19, 2020

| | | | |
|----------------------|-----------|--|------------------------|
| Published Date: 2025 | SD DOT | ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4 | PLATE NUMBER 635.65 |
| | | | Sheet 2 of 2 |



SECTION VIEW



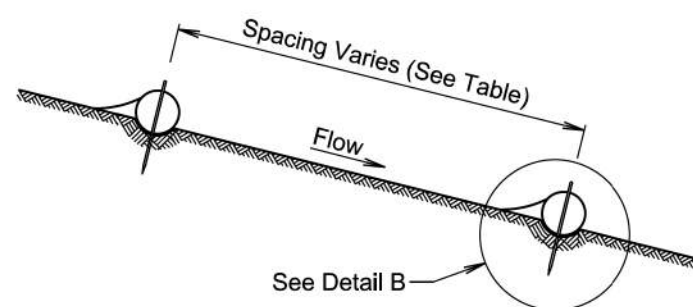
SECTION VIEW

GENERAL NOTE:

The Buried Cable Marker will be plastic, approximately 6" wide, and will be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker will have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence of a buried electric circuit below will be printed in a contrasting color on the cable marker. The Buried Cable Marker will be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker will be incidental to the contract unit price per foot for the bid item used for the electrical conductor.

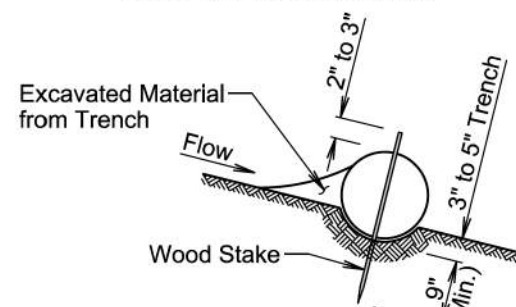
November 19, 2022

| | | | |
|----------------------|-----------|----------------------|------------------------|
| Published Date: 2025 | SD DOT | CONDUIT INSTALLATION | PLATE NUMBER 635.76 |
| | | | Sheet 1 of 1 |

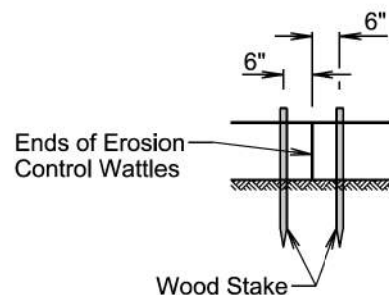


ELEVATION VIEW
(Cut or Fill Slope Installation)

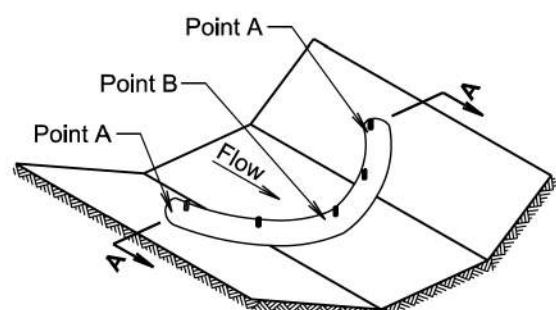
| CUT OR FILL SLOPE INSTALLATION | |
|--------------------------------|---------------|
| Slope | Spacing (Ft.) |
| 1:1 | 10 |
| 2:1 | 20 |
| 3:1 | 30 |
| 4:1 | 40 |



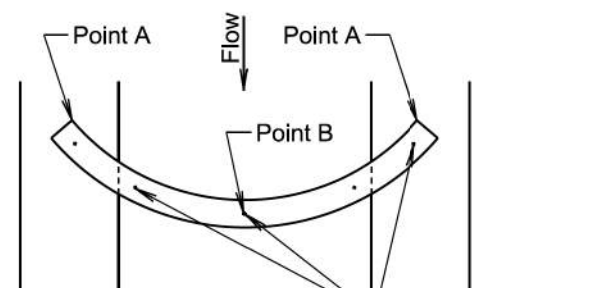
DETAIL B
(Typical of All Installations)



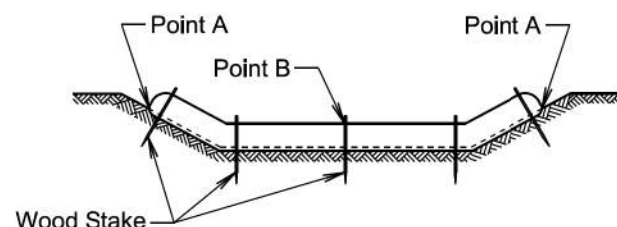
DETAIL C
(See General Notes)



ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)



SECTION A-A

| DITCH INSTALLATION | |
|--------------------|---------------|
| Grade | Spacing (Ft.) |
| 2% | 150 |
| 3% | 100 |
| 4% | 75 |
| 5% | 50 |

February 14, 2020

Published Date: 2025

SD DOT

EROSION CONTROL WATTLE

PLATE NUMBER
734.06

Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2025

SD DOT

EROSION CONTROL WATTLE

PLATE NUMBER
734.06

Sheet 2 of 2