

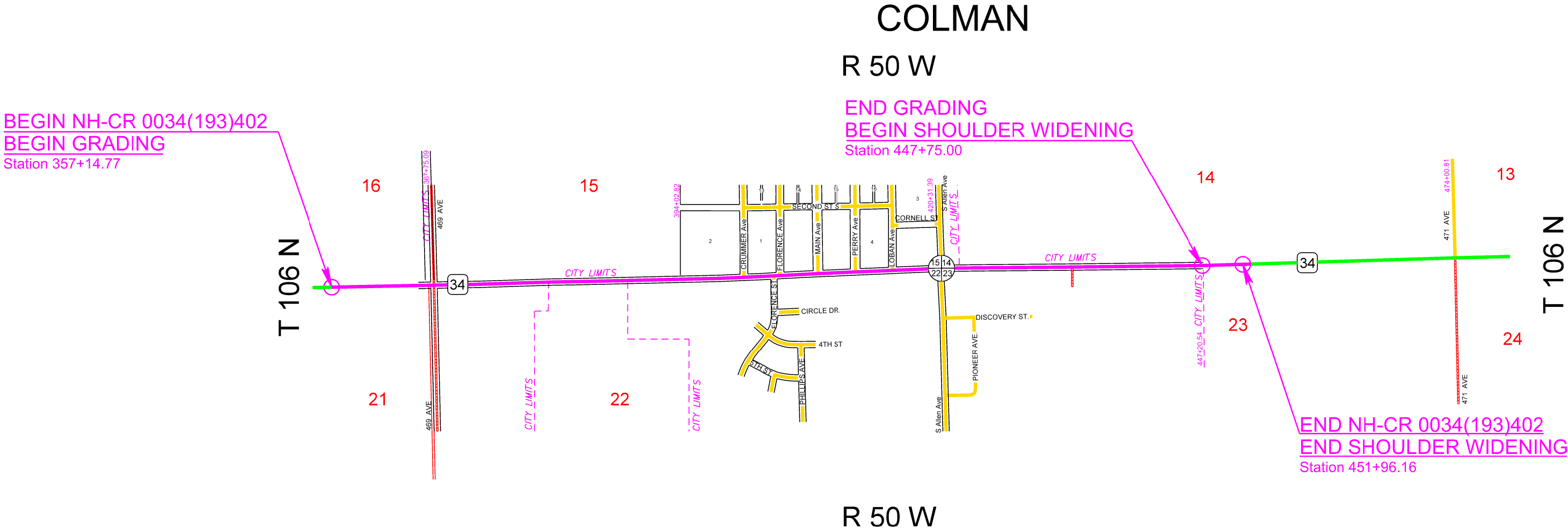
SECTION C: TRAFFIC CONTROL PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C1	C27

Plotting Date: 07/26/2024

INDEX OF SHEETS

C1	General Layout with Index
C2-C5	Estimate of Quantities & Notes
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C20	Signing Layout
C21	Overwidth Signing
C22	Special Signing Details
C23	Sign Tables
C24-C27	Standard Plates



Plot Scale - 1:200

Plotted From - TRSF12103

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	500.0	Hour
634E0020	Pilot Car	2,500.0	Hour
634E0110	Traffic Control Signs	1,244.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	60	Each
634E0380	Tubular Marker	210	Each
634E0390	Replace Tubular Marker	50	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	3,500	Ft
634E0600	4" Temporary Pavement Marking Tape Type I	432	Ft
634E0640	Temporary Pavement Marking	22,364	Ft
634E0900	Portable Temporary Traffic Control Signal	2	Unit
634E0919	Driveway Assistance Device	10.0	Mth
634E1002	Detour and Restriction Signing	563.0	SqFt
634E1020	Temporary Business Signing	50.0	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

SEQUENCE OF OPERATIONS

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

Notes:

- Contractor is advised August 9th and 10th, 2025 are Looney Days in the City of Colman. Contractor is advised there will be increased traffic and pedestrians during this period and Contractor will limit traffic disruptions due to the project as much as possible during this period.

Phase 1

General Work Description:

Widening, Temporary Surfacing

Construction:

- Install necessary traffic control and signing
- Widening existing roadway for temporary surfacing
- Install temporary surfacing as per phasing details (quantities included in section F)

Notes:

- Widening and temporary surfacing will be accomplished with use of flaggers and pilot car
- Temporary widening from 354+14 to 357+14 may be installed with phase 2 construction

Phase 2

General Work Description

Construction of south portion of SD Hwy 34 from station 357+14 to 382+00

Construction

- Install necessary traffic control, signing, and remove conflicting pavement markings.
- Remove existing pavement necessary for construction of phase 2
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 357+14 to 382+00

Notes:

- Traffic will be maintained single lane from station 357+14 to 382+00 with use of temporary traffic signals and 24 hour pilot car
- Access to Cemetery will be maintained at all times

Phase 3

General Work Description

Construction of north portion of SD Hwy 34 from station 357+14 to 380+50 and south portion from station 382+00 to 410+30.

Construction

- Install necessary traffic control, signing, and remove conflicting pavement markings.
- Remove existing pavement necessary for construction of phase 3
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 382+00 to 410+30.
- Install storm sewer, construct necessary grading, and westbound lane from station 357+14 to 380+50

Notes:

- Traffic will be maintained single lane from station 382+00 to 410+30 with use of temporary traffic signals and 24 hour pilot car
- Once the center turnlane, eastbound lane, and eastbound shoulder from station 382+00 to 410+30 are constructed and can carry 2 lanes of traffic, the contractor will be allowed to proceed to phase 4
- Access to either Crummer Ave or Main St will be maintained at all times
- Access to the City of Colman RV Park will be required at all times
- Access to either Allen St or 470th Ave will be required at all times to allow access to the City Park and Golf Course
- Access to either Summit Ave or Enterprise Ave will be required at all times to maintain access to businesses
- Phase construction of Florence St will be required as it is the only access for residents. Contractor will phase construction to maintain a 20' wide gravel surfacing

Phase 4

General Work Description

Construction of north portion of SD Hwy 34 from station 380+50 to 408+75 and south portion from station 410+30 to 447+75.

Construction

- Install necessary traffic control, signing, and remove conflicting pavement markings
- Remove existing pavement necessary for construction of phase 4
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 410+30 to 447+75
- Install storm sewer, construct necessary grading, and westbound lane from station 380+50 to 408+75

Notes:

- Traffic will be maintained single lane from station 410+30 to 447+75 with use of temporary traffic signals and 24 hour pilot car
- Once the center turnlane, eastbound lane, and eastbound shoulder from station 410+30 to 447+75 are constructed and can carry 2 lanes of traffic, the contractor will be allowed to proceed to phase 5
- Access to either Crummer Ave or Main St will be maintained at all times

Phase 5

General Work Description

Construction of north portion of SD Hwy 34 from station 408+75 to 447+75, sidewalk, approach pavements, permanent signing, permanent pavement marking, and lighting.

Construction

- Install necessary traffic control & signing
- Remove existing pavement necessary for construction of phase 5
- Install storm sewer, construct necessary grading, and westbound lane from station 408+75 to 447+75
- Install Sidewalk, approach pavements, permanent signing, permanent pavement marking, final erosion control, and lighting
- Miscellaneous cleanup

Notes:

- Sidewalk or approach pavements may be installed in prior phases.

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	500.0	Hour
634E0020	Pilot Car	2,500.0	Hour
634E0110	Traffic Control Signs	1,244.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
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634E0390	Replace Tubular Marker	50	Each
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634E0600	4" Temporary Pavement Marking Tape Type I	432	Ft
634E0640	Temporary Pavement Marking	22,364	Ft
634E0900	Portable Temporary Traffic Control Signal	2	Unit
634E0919	Driveway Assistance Device	10.0	Mth
634E1002	Detour and Restriction Signing	563.0	SqFt
634E1020	Temporary Business Signing	50.0	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

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Construction:

- Install necessary traffic control and signing
- Widening existing roadway for temporary surfacing
- Install temporary surfacing as per phasing details (quantities included in section F)

Notes:

- Widening and temporary surfacing will be accomplished with use of flaggers and pilot car
- Temporary widening from 354+14 to 357+14 may be installed with phase 2 construction

Phase 2

General Work Description

Construction of south portion of SD Hwy 34 from station 357+14 to 382+00

Construction

- Install necessary traffic control, signage, and remove conflicting pavement markings.
- Remove existing pavement necessary for construction of phase 2
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 357+14 to 382+00

Notes:

- Traffic will be maintained single lane from station 357+14 to 382+00 with use of temporary traffic signals and 24 hour pilot car
- Access to Cemetery will be maintained at all times

Phase 3

General Work Description

Construction of north portion of SD Hwy 34 from station 357+14 to 380+50 and south portion from station 382+00 to 410+30.

Construction

- Install necessary traffic control, signing, and remove conflicting pavement markings.
- Remove existing pavement necessary for construction of phase 3
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 382+00 to 410+30.
- Install storm sewer, construct necessary grading, and westbound lane from station 357+14 to 380+50

Notes:

- Traffic will be maintained single lane from station 382+00 to 410+30 with use of temporary traffic signals and 24 hour pilot car
- Once the center turnlane, eastbound lane, and eastbound shoulder from station 382+00 to 410+30 are constructed and can carry 2 lanes of traffic, the contractor will be allowed to proceed to phase 4
- Access to either Crummer Ave or Main St will be maintained at all times
- Access to the City of Colman RV Park will be required at all times
- Access to either Allen St or 470th Ave will be required at all times to allow access to the City Park and Golf Course
- Access to either Summit Ave or Enterprise Ave will be required at all times to maintain access to businesses
- Phase construction of Florence St will be required as it is the only access for residents. Contractor will phase construction to maintain a 20' wide gravel surfacing

Phase 4

General Work Description

Construction of north portion of SD Hwy 34 from station 380+50 to 408+75 and south portion from station 410+30 to 447+75.

Construction

- Install necessary traffic control, signing, and remove conflicting pavement markings
- Remove existing pavement necessary for construction of phase 4
- Install storm sewer, construct necessary grading, and construct center turnlane, eastbound lane, and eastbound shoulder from station 410+30 to 447+75
- Install storm sewer, construct necessary grading, and westbound lane from station 380+50 to 408+75

Notes:

- Traffic will be maintained single lane from station 410+30 to 447+75 with use of temporary traffic signals and 24 hour pilot car
- Once the center turnlane, eastbound lane, and eastbound shoulder from station 410+30 to 447+75 are constructed and can carry 2 lanes of traffic, the contractor will be allowed to proceed to phase 5
- Access to either Crummer Ave or Main St will be maintained at all times

Phase 5

General Work Description

Construction of north portion of SD Hwy 34 from station 408+75 to 447+75, sidewalk, approach pavements, permanent signing, permanent pavement marking, and lighting.

Construction

- Install necessary traffic control & signing
- Remove existing pavement necessary for construction of phase 5
- Install storm sewer, construct necessary grading, and westbound lane from station 408+75 to 447+75
- Install Sidewalk, approach pavements, permanent signing, permanent pavement marking, final erosion control, and lighting
- Miscellaneous cleanup

Notes:

- Sidewalk or approach pavements may be installed in prior phases.

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 temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

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.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

If inappropriate or conflicting pavement markings exist, the markings will be removed and replaced with applicable temporary pavement markings when the work duration is more than 3 days. When the work duration is less than 3 days, the channelizing devices in the area where the pavement markings conflict will be placed at one-half of the normal channelizing device spacing. Pavement marking removals will be incidental to the contract unit price per foot for "Remove Pavement Marking, 4" or equivalent". Temporary pavement marking will be paid for at the contract unit price per mile/foot for "Temporary Pavement Marking". The additional channelizing devices will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

Road closure signs and barricades as shown on the phasing detail sheets will be positioned to face traffic approaching the project.

OVERWIDTH RESTRICTION AND DETOUR SIGNING

The Contractor will furnish and install the overwidth restriction signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Overwidth restriction signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the overwidth restriction signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the overwidth restriction signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours.

Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads, driveways, or as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs as shown in the plans. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

TEMPORARY PAVEMENT MARKING

Temporary pavement markings will be temporary paint, temporary raised pavement markers, or temporary marking tape.

- The Contractor will determine the best temporary pavement marking type to use on the project.
- Temporary paint will not be allowed on new PCCP surfaces.

Table of Temporary Pavement Markings

Use	Location	Length (Ft)
White Edge Line x 2 – Single Lane	Sta 355+14 to 451+96	9682
Double Yellow x 2 – Two Lanes	Sta 355+14 to 451+96	9682
Temporary Signals – SP 634.26	Varies	3000
		22,364

TEMPORARY PAVEMENT MARKING TAPE, TYPE I

Temporary pavement marking for stop lines for standard plate 634.26 will consist of 4" Temporary Pavement Marking Tape Type I. Placement of each 24" white stop line will be accomplished by placing six pieces of 4" x 12' tape adjacent to one another. Each workspace requires two stop lines which is an equivalent of approximately 144' of 4" tape (3 workspaces at 144' = 432').

PORTABLE TEMPORARY TRAFFIC CONTROL SIGNAL

In order to reduce the number of phases on the project, portable temporary traffic control signals have been spaced at greater distances than typically acceptable through timing alone. In lieu of timing, the portable temporary traffic control signals will be remotely controlled by a pilot car driver. The pilot car will run 24 hours, 7 days a week while the portable temporary traffic control signals are required on the project.

The Contractor will furnish, install, operate, and maintain a portable temporary traffic control signal during construction phases as determined by the Engineer. There will be one controller and one slave unit per location.

All vehicle signal heads will have backplates with retroreflective border. The vehicle signal head backplates will have a factory applied 3-inch wide yellow retroreflective border. Sheeting for the border will be Type IX or Type XI in conformance with ASTM D4956.

Signal backplates will be polycarbonate, aluminum, or aluminum-composite.
Minimum material thicknesses are:

- Polycarbonate, 0.10-inch
Aluminum, 0.06-inch
Aluminum-Composite, 0.08-inch

Signal backplates will extend not less than 5 inches from the edge of the signal head at the top, bottom, and sides.

All traffic signal equipment and materials will meet the requirements of Sections 635 and 985 of the Specifications except the controller requirements.

All costs involved with constructing and maintaining the portable temporary traffic control signal as specified above, will be included in the contract unit price per unit for "Portable Temporary Traffic Control Signal".

PORTABLE DRIVEWAY ASSISTANCE DEVICE SPECIFICATION

General

The Driveway Assistance Device (DAD) is a portable device designed to be used for residential driveways or entrances that fall within a one lane, bi-directional work zone. It may be either trailer or cart mounted, with one signal head positioned horizontally having three LED indications as follows; one 8” or 12” red flashing arrow, one 12” red ball indication centered between the arrows and one 8” or 12” red right flashing arrow mounted in a polycarbonate signal head with visors.

All costs for furnishing, installing, operating, maintaining, and relocating the Driveway Assistance Devices throughout the project will be included in the contract monthly unit price for “Driveway Assistance Device”.

Platform

The cart or trailer platform will have ample batteries and solar charging capabilities to ensure extended run times without external charging. The platforms will be equipped with 110v charger to facilitate external charging. The platform will be equipped with a digital LED readout displaying the current battery voltage at all times. The platform will be painted highway safety orange and be clearly marked with the manufacturer, serial number and emergency phone number.

Operational Requirements

The Driveway Assistance Device will only be used in conjunction with a portable traffic system conforming to the requirements of the NEMA TS 5 Standard.

DAD units will be programmable as part of the portable traffic signal system in one second increments from 3 to 999 seconds. In the event multiple DAD units are required, all units will be capable of being programmed with individual timing programs, allowing for sequential activation based on their placement within the work zone.

Each DAD will be equipped with a malfunction management unit having the following minimum capabilities:

Malfunction Management System – Every DAD and portable traffic signal within the signal system will be equipped with malfunction management unit with the ability to communicate with all signals within the signal system. In the event of a fault at any signal or DAD within the signal system, that fault will be communicated to every portable traffic signal and DAD within signal system, at which time every portable traffic signal and DAD will enter into the fault mode.

Fault Mode Capabilities- The DAD will have the ability to be programmed in a fault mode of solid red or flash red upon a system fault.

Conflict Monitoring – when any conflicting channels are detected as concurrently active, the malfunction management system will transfer all portable traffic signals and DADs within the signal system to fault mode.

Multiple Indications – The malfunction management system will monitor active signal and DAD indications and verify safe and proper operation. If a conflict or potentially unsafe scenario occurs, the malfunction management system will transfer all signals and DADs within the system to the fault mode.

Communication Monitoring – When communication between the signal and/or DAD units is lost, the system will enter into the fault mode.

Lack of Indication Monitoring – The signals and DADs within the signal system will enter into the fault mode when all instances of a signal lamp are lost for more than 1,000 milliseconds, unless one instance of signal indication, (at the signal loss location) is active and functioning properly.

Battery Monitoring – The DAD will have a mechanism for monitoring battery voltage and will be equipped with an LED readout displaying the current battery voltage at all times. In the event of a low battery condition, the DAD will be equipped with ability to contact up to three individuals via SMS text message or email, with a description of the low battery condition.

Remote Monitoring System

All portable traffic signals and DADs within the signal system will be equipped to interface with a Remote Monitoring System (RMS) capable of reporting signal location, battery voltage, and system faults. The RMS will include a password-protected web site, viewable via an internet-connected web browser. In the event of a system fault, the RMS will provide specific information concerning the cause of the system fault (example: “red lamp on signal number 1 out”). The RMS will immediately contact a minimum of three previously designated individuals via SMS text messaging or email, upon a fault event.

The active timing program operating the PTS system will be available and viewable through the RMS website at all times. The RMS will maintain a history of the operating system in each signal and DAD to include; total operating hours, alerts, and the location of the PTS trailer.

Communication Requirements

All signals and DADs within the signal system will have the ability to communicate via 900 MHz wireless radio as a primary data communication method between units. If wireless connectivity is not feasible, hardwired connectivity will be an acceptable alternative.

When wireless radio communication is utilized, the radio units will maintain the communication link at a minimum distance of one (1) mile under normal operating conditions. Normal operating conditions will be defined as a clear line of sight between PTS units. The radio system will conform to the applicable Federal Communication Commission requirements and all applicable state and local requirements.

If hardwired communication is utilized, the communication cable will be deployed in a manner that will not intrude in the direct work area of the project or obstruct vehicular and pedestrian traffic.

Signing

Each Driveway Assist Device will be furnished with two regulatory signs placed on or near the DAD in an area conspicuous to the motorist. The signs should read:

Sign 1: Proceed On Flashing Red Arrow After Stop

Sign 2: No Turn On Red

Table of Estimated DAD Months by Phase

Phase	Number of DAD’s	Months	Total (Months)
3	2	2	4
4	3	2	6
			10

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at locations detailed in the plans to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK
STARTS (Date)

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages as directed by the Engineer.

PCMS will also be place adjacent to any temporary signals and will display an estimated wait time.

INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Moody County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for “Flagging”.

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

TUBULAR MARKERS

The color of the tubular markers on centerline will be predominately orange.

All tubular markers will be a minimum of 28 inches in height. The base of the tubular marker should be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface after use. The pin used to connect the marker to the base will be of a type that will not puncture a vehicle tire if it should become dislodged from the base.

When used for tapers, spacing will be 25 feet. When used on centerline spacing will be 50 feet.

All costs for furnishing, installing, maintaining, and removing the tubular markers will be incidental to the contract unit price per each for “Tubular Marker”.

LIGHTING FOR NIGHTTIME WORK

If nighttime work is allowed by the Engineer, flagger stations, working construction equipment and active workspaces will be lighted between sunset and sunrise. Non-glare light sources will be provided.

Light levels are as defined in Section 2.9.2 of NCHRP 476.

Light in conformance with Level I will be provided at the active workspaces.

Light in conformance with Level II will be provided at the locations of working construction equipment.

Light in conformance with Level III is to be provided where labor intensive work is being completed such as during hand work, pavement sawing, project inspection, materials testing, and flagging.

Acceptable light sources will be Contractor furnished stand-alone lights or vehicle/equipment mounted lights. Stand-alone units will be marked with a minimum of two reflectorized drums on an approaching traffic side.

Cost for this lighting will be included in the contract lump sum price for “Traffic Control, Miscellaneous”.

TEMPORARY BUSINESS SIGNING

The Contractor will install temporary business signing as directed by the Engineer.



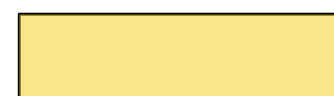
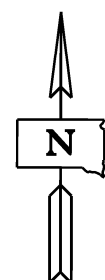
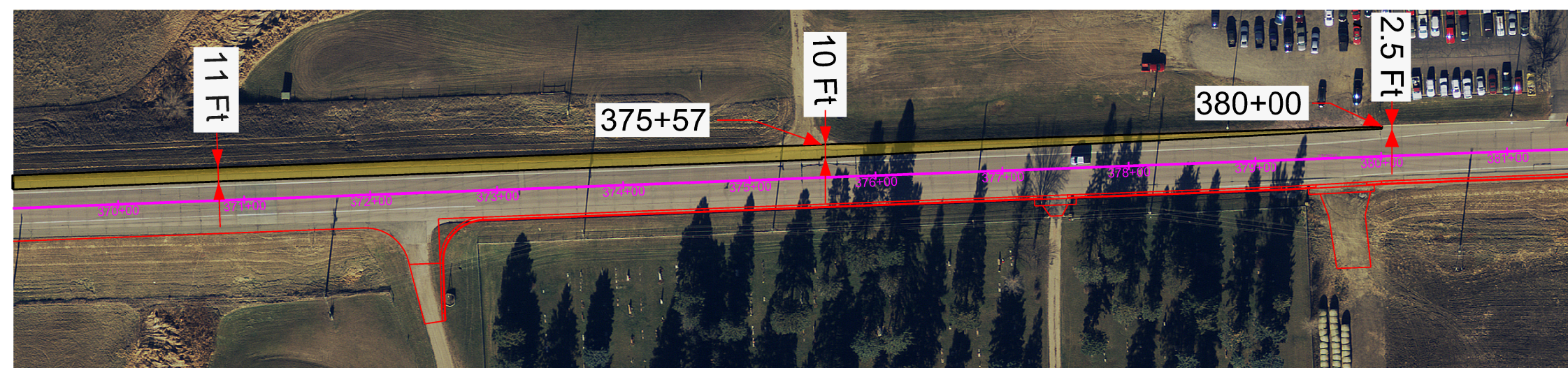
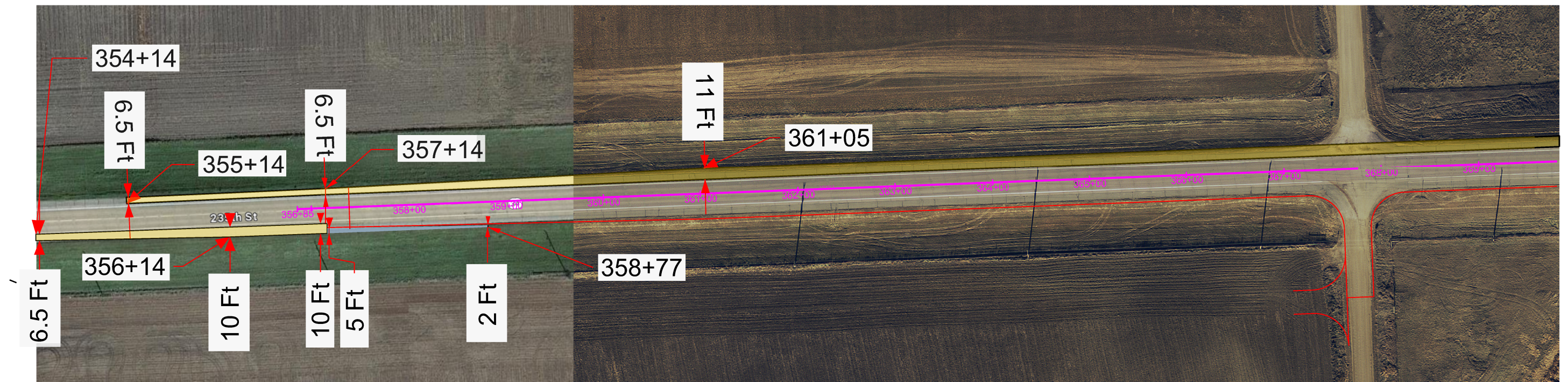
Business names shown on the temporary business signing may be requested to be changed or removed after the sign has been erected in the field. The business name lettering on the signs will be of material that easily allows for these changes.

At locations on the signs where a square on the sign has been left blank, it is intended that a business name can be added to this square after the sign has been erected in the field. The business name lettering on the signs will be of material that easily allows for these additions.

The current business names for the temporary business signing are as follows:

- Colman Building Center
- Dollar General

Phase 1 - Widening / Temp Surfacing



Phase 1 - Temporary Pavement



To be Installed in Phase 2 for Phase 3

Widths Shown Represent Top of Pavement
(Not including 1.5' Sluff)

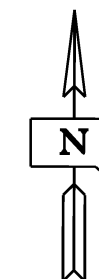
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PLOTTED FROM - TRSF12103

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C8	C27

Plotting Date: 05/24/2024

Phase 1 - Widening / Temp Surfacing



Phase 1 - Temporary Pavement



Phase 1 - Transition Pavement per Section F

Widths Shown Represent Top of Pavement
(Not including 1.5' Sluff)

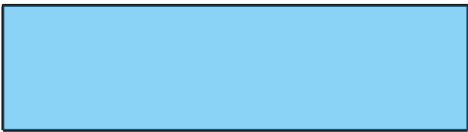
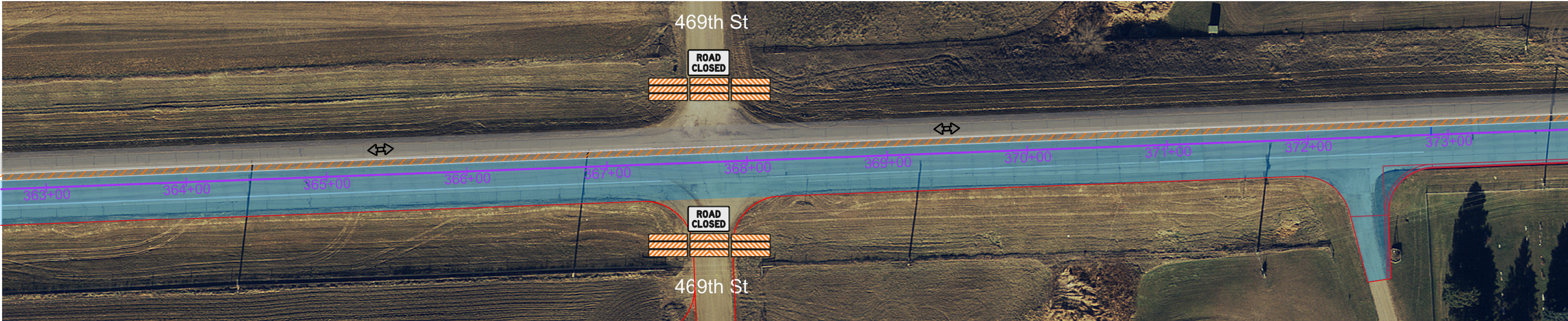
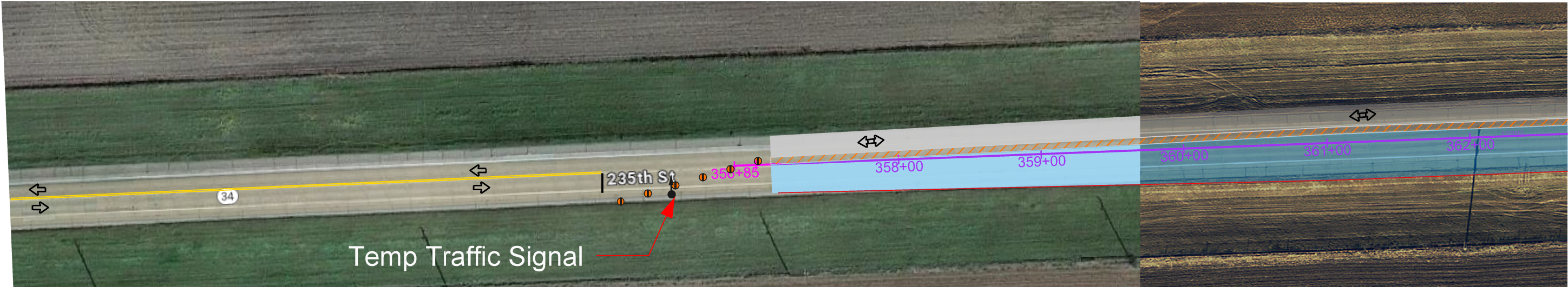
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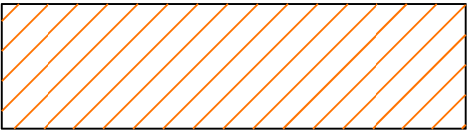
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	NH-CR 0034(193)402	C9	C27

Plotting Date: 05/24/2024

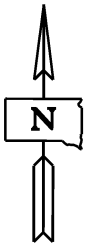
Phase 2



Phase 2



5 Ft Buffer



PLOT NAME - 6

FILE - ... \DGN\TEMP\WIDEN-PHASE2.DGN

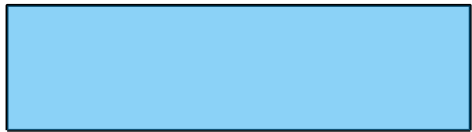
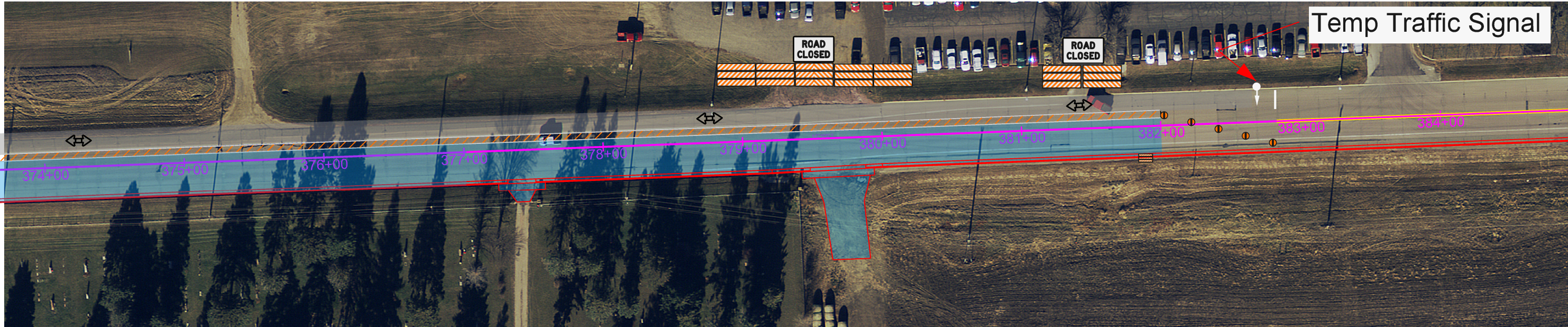
PLOT SCALE - 1:72.6987

PLOTTED FROM - TRSF12103

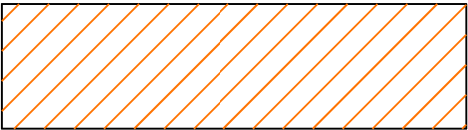
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C10	C27

Plotting Date: 05/24/2024

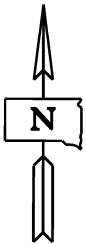
Phase 2



Phase 2



5 Ft Buffer



FILE - ... \DGN\TEMP\IDEN-PHASE2.DGN PLOT NAME - 7

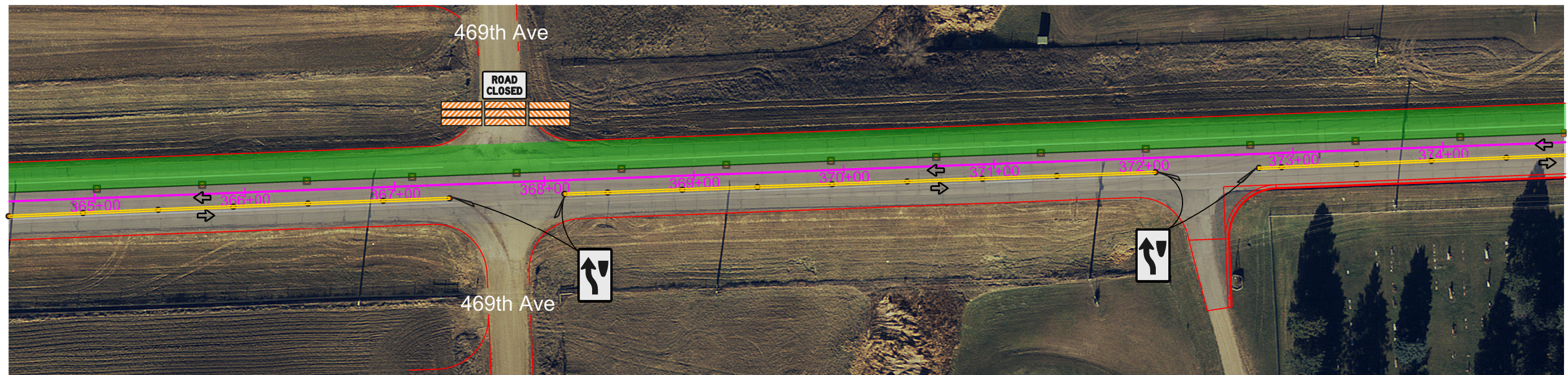
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

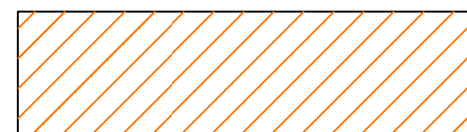
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C11	TOTAL SHEETS C27
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Plotting Date: 07/26/2024

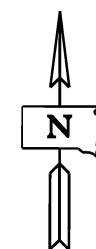
Phase 3



Phase 3



5 Ft Buffer



FILE - ... \DGN\TEMP\WIDEN-PHASE3.DGN PLOT NAME - 8

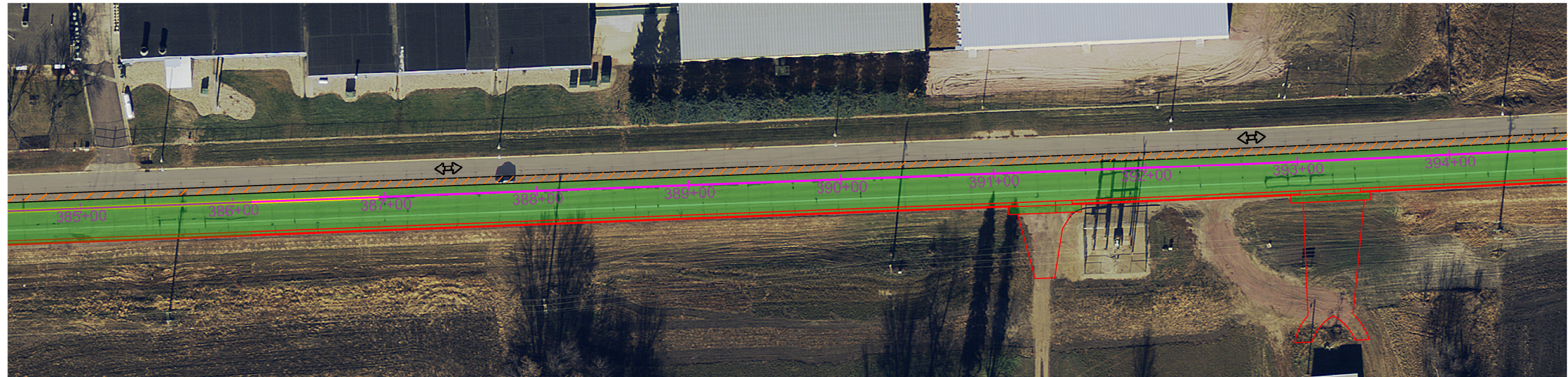
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

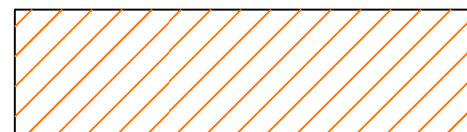
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C12	TOTAL SHEETS C27
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Plotting Date: 07/26/2024

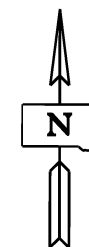
Phase 3



Phase 3



5 Ft Buffer



FILE - ... \DGN\TEMP\IDEN-PHASE3.DGN PLOT NAME - 9

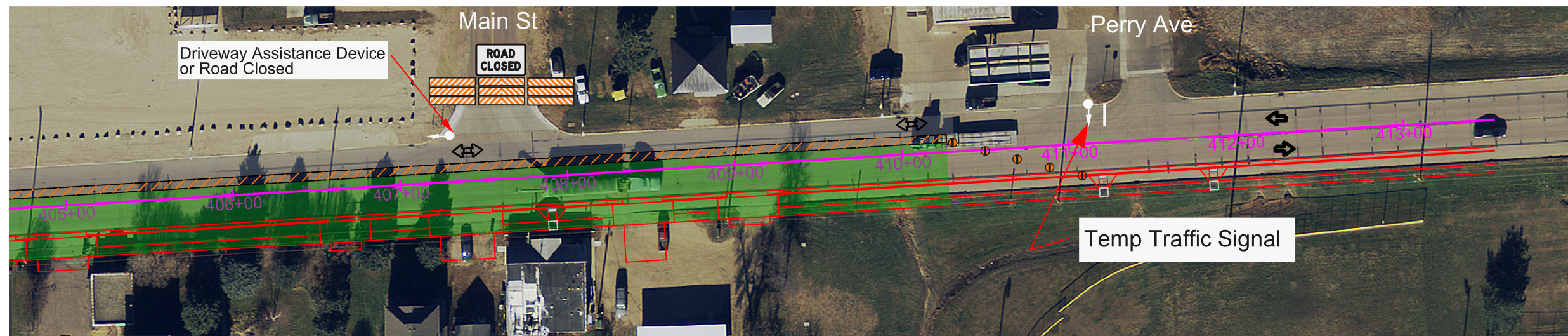
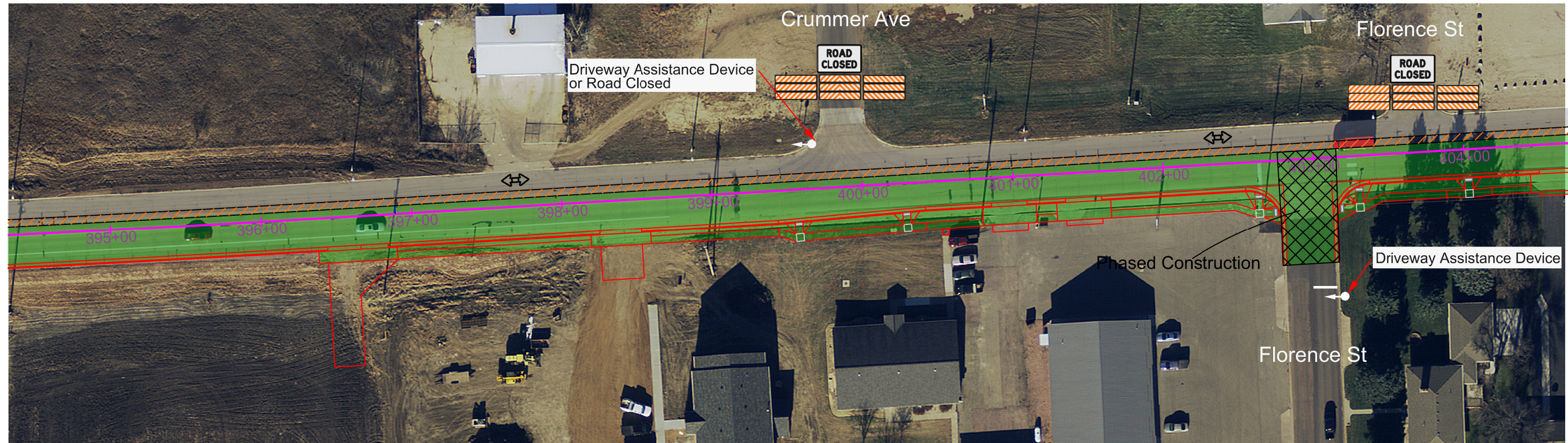
PLOT SCALE - 1:72.6987

PLOTTED FROM - TRSF12103

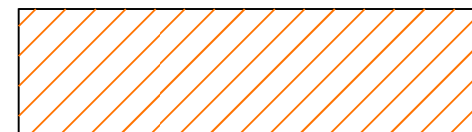
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C13	TOTAL SHEETS C27
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Plotting Date: 05/24/2024

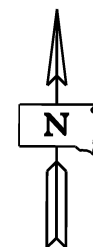
Phase 3



Phase 3



5 Ft Buffer



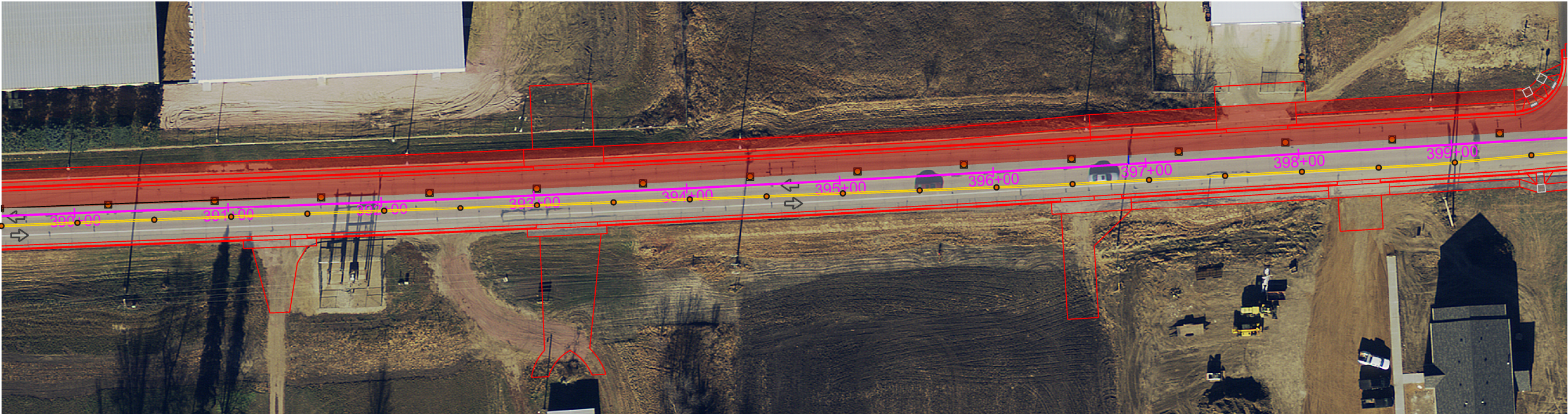
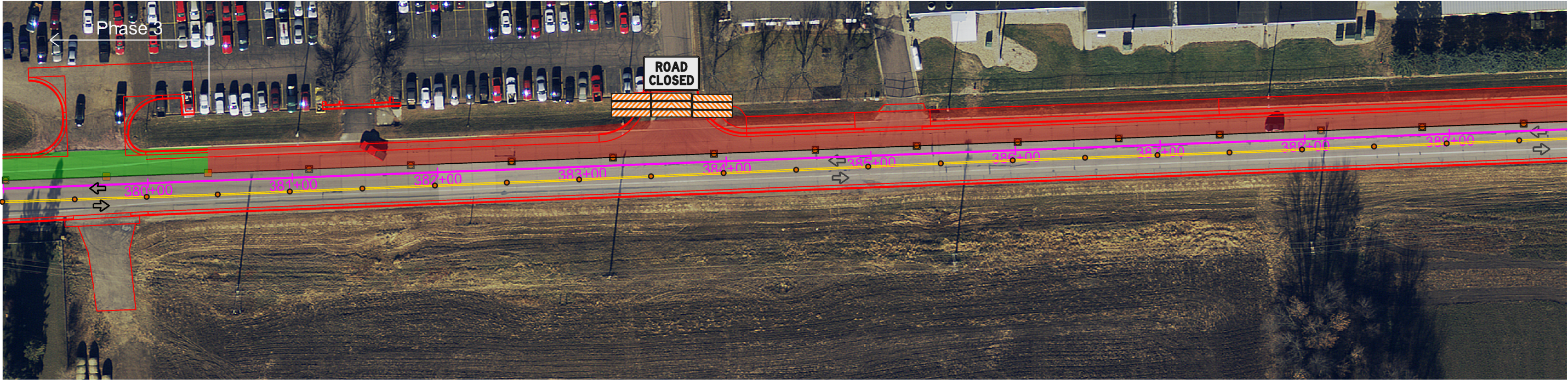
Note: See phasing notes for restrictions on closing intersecting roads/streets

FILE - ... \DGN\TEMP\IDEN-PHASING.DGN PLOT NAME - 10

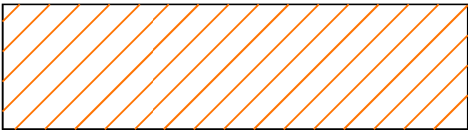
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C14	C27

Plotting Date: 05/24/2024

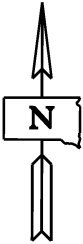
Phase 4



Phase 4



5 Ft Buffer



PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

PLOT NAME - 11

FILE - ... \DGN\TEMP\WIDEN-PHASING.DGN

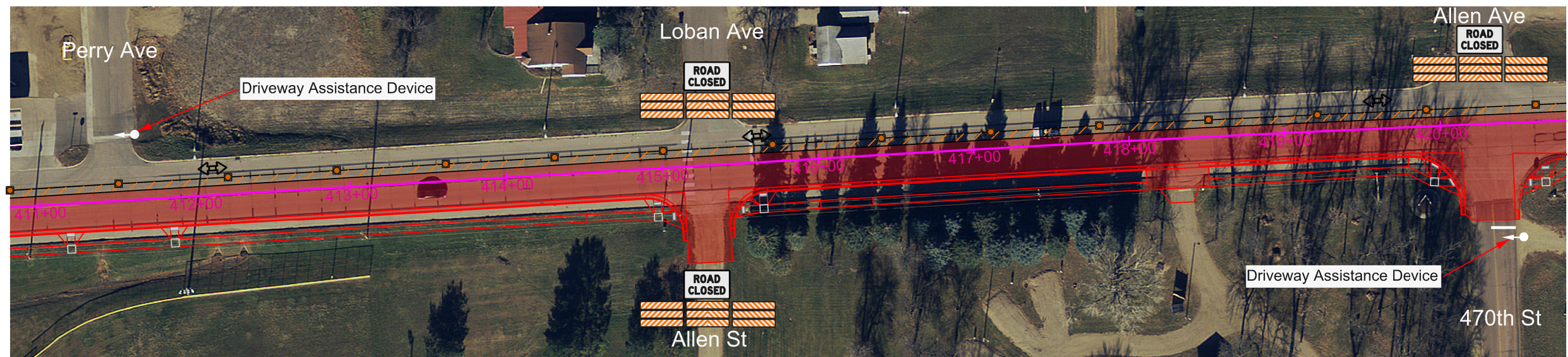
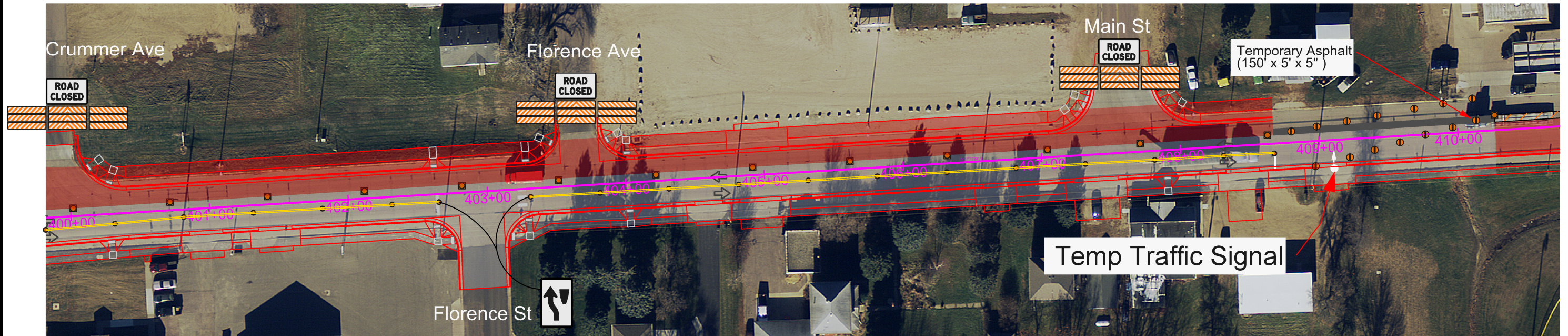
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

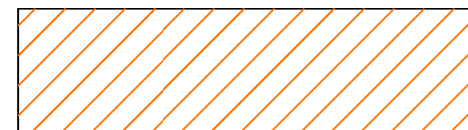
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C15	TOTAL SHEETS C27
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Plotting Date: 05/24/2024

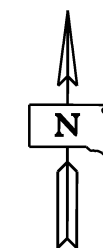
Phase 4



Phase 4



5 Ft Buffer



Note: See phasing notes for restrictions on closing intersecting roads/streets

PLOT NAME - 12

FILE - ... \DGN\TEMP\IDEN-PHASING.DGN

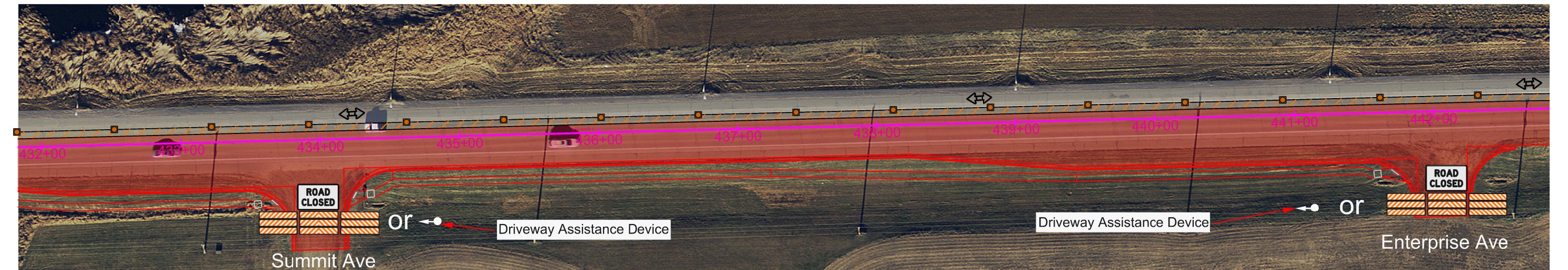
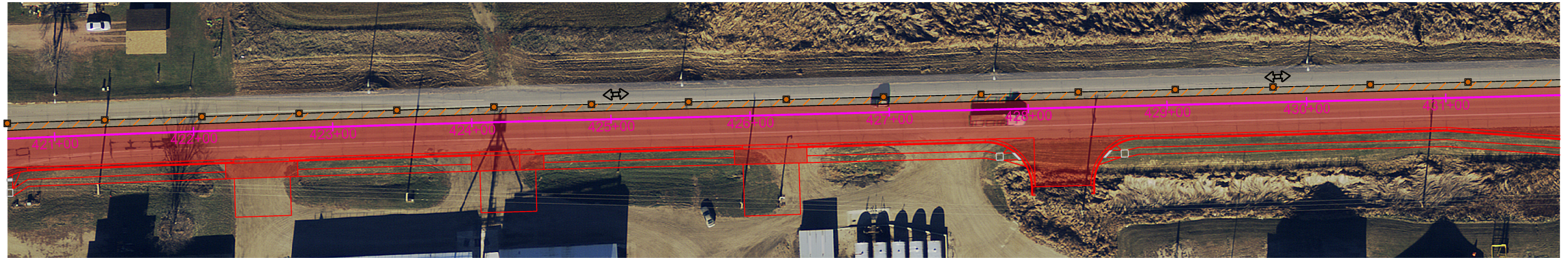
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

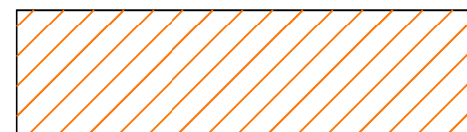
STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C16	TOTAL SHEETS C27
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Plotting Date: 05/24/2024

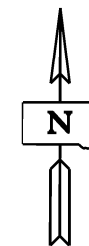
Phase 4



Phase 4



5 Ft Buffer



Note: See phasing notes for restrictions on closing intersecting roads/streets

FILE - ... \DGN\TEMP\WIDEN-PHASING.DGN PLOT NAME - 13

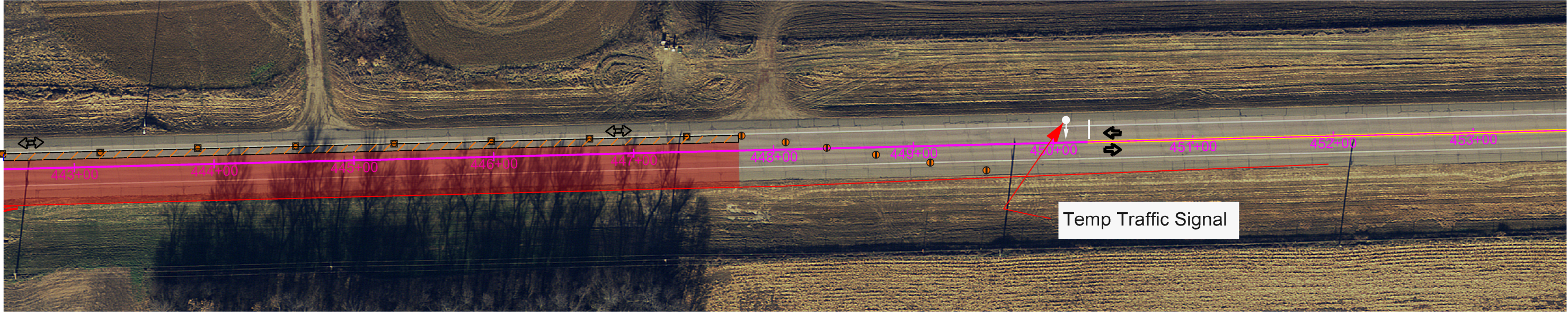
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

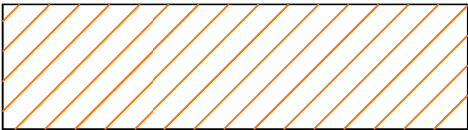
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C17	C27

Plotting Date: 05/24/2024

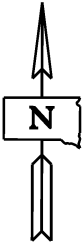
Phase 4



Phase 4



5 Ft Buffer



FILE - ... \DGN\TEMP\IDEN-PHASE4.DGN PLOT NAME - 14

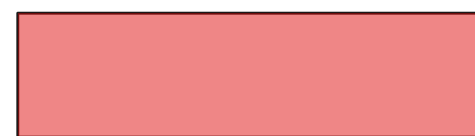
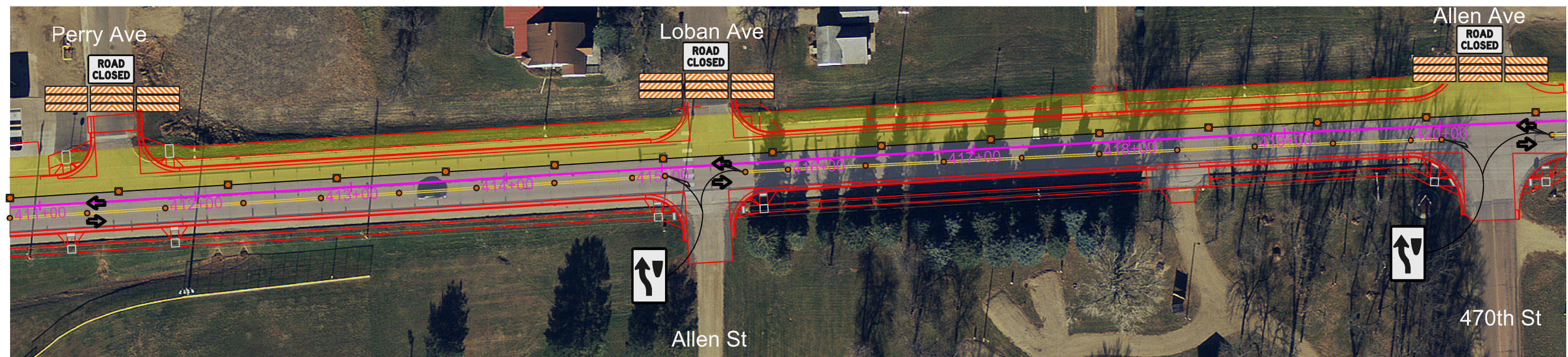
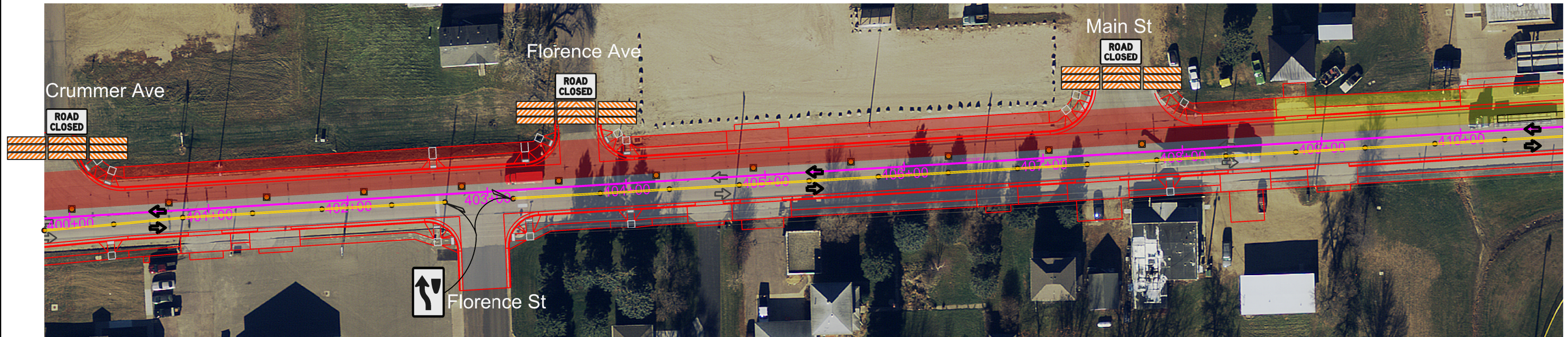
PLOT SCALE - 1:172.6987

PLOTTED FROM - TRSF12103

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C18	TOTAL SHEETS C27
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Plotting Date: 07/26/2024

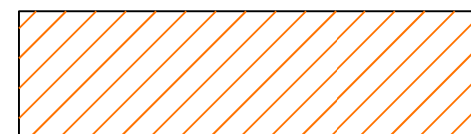
Phase 5



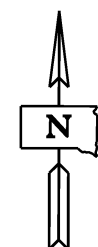
Phase 4



Phase 5



5 Ft Buffer



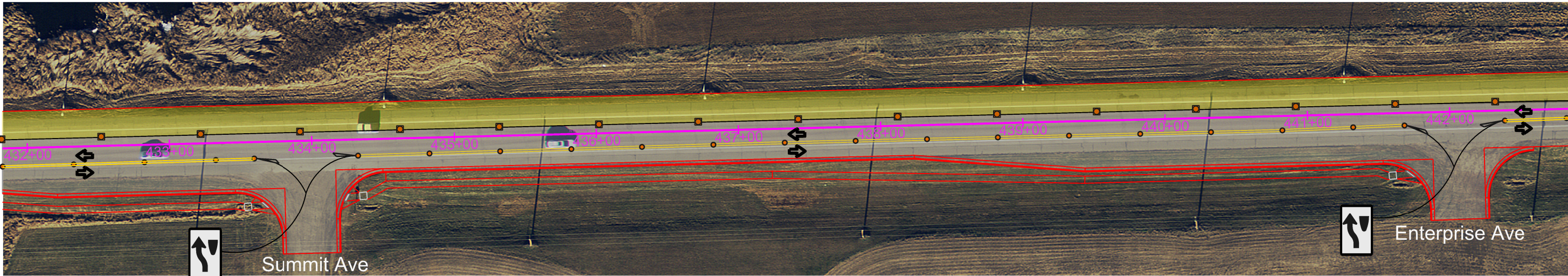
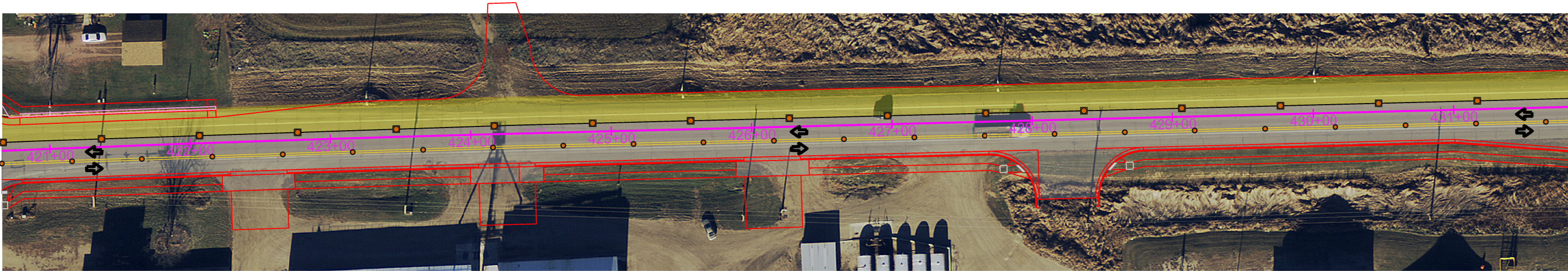
Note: See phasing notes for restrictions on closing intersecting roads/streets

FILE - ... \DGN\TEMP\IDEN-PHASING.DGN PLOT NAME - 15

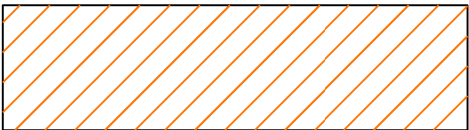
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C19	C27

Plotting Date: 05/24/2024

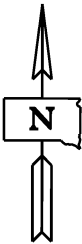
Phase 5



Phase 5



5 Ft Buffer



PLOT SCALE - 1:72.6987

PLOTTED FROM - TRSF12103

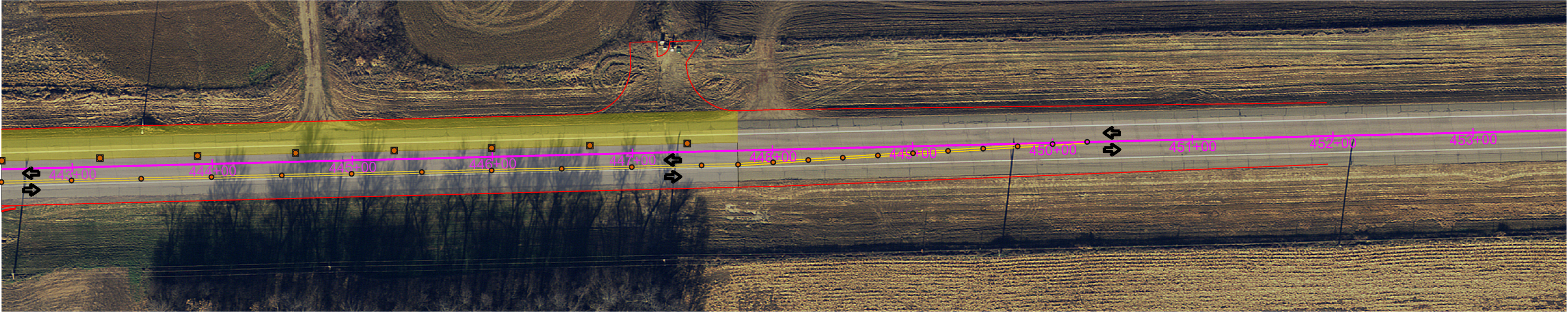
PLOT NAME - 16

FILE - ... \DGN\TEMP\WIDEN-PHASING.DGN

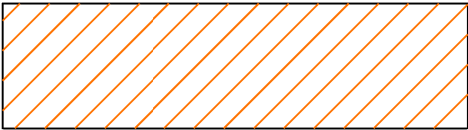
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C20	C27

Plotting Date: 05/24/2024

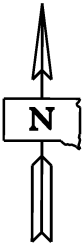
Phase 5



Phase 5



5 Ft Buffer



PLOT SCALE - 1:72,6987

PLOTTED FROM - TRSF12103

PLOT NAME - 17

FILE - ... \DGN\TEMP\IDEN-PHASE5.DGN

PLOTTED FROM - TRSF12103

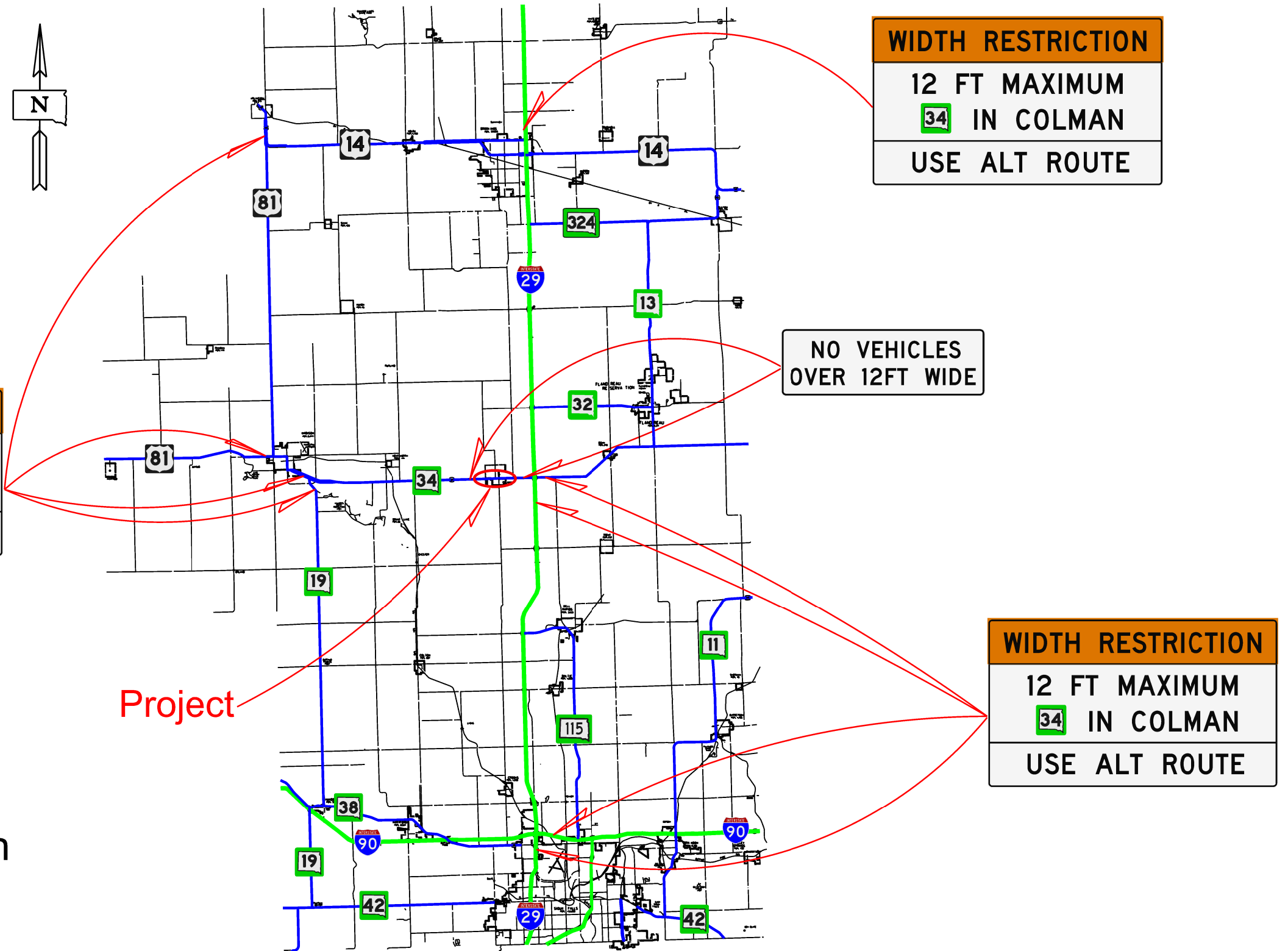
Plotting Date: 07/26/2024

- Road Closed Ahead or Road Work Ahead installed depending if Intersecting road is Open or Closed
- Speed Limit Reductions will be moved depending on current project limits
- Construction signs cannot obscure existing signs and must be installed a minimum of 200' from existing signs

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C22	C27

Plotting Date: 07/30/2024

Overwidth Signing



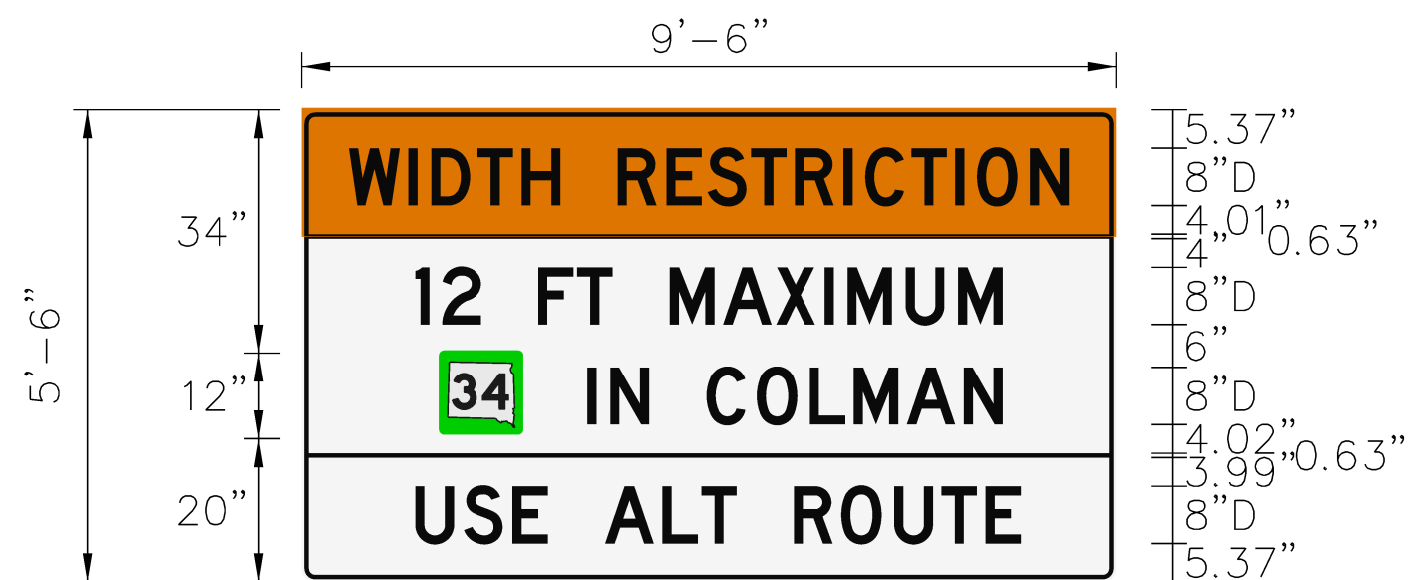
Use Alt Route List:

- I29 NB - Prior to Exit 83
- I29 NB - Prior to Exit 109
- I29 SB - Prior to Exit 133
- I90 WB - Prior to I29
- Hwy 14 EB - Prior to Hwy 81
- Hwy 81 EB - Prior to Madison
- Hwy 34 EB - Prior to Hwy 19
- Hwy 34 WB - Prior to I29
- Hwy 19 NB - Prior to Hwy 34

Special Sign Details

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0034(193)402	C23	C27

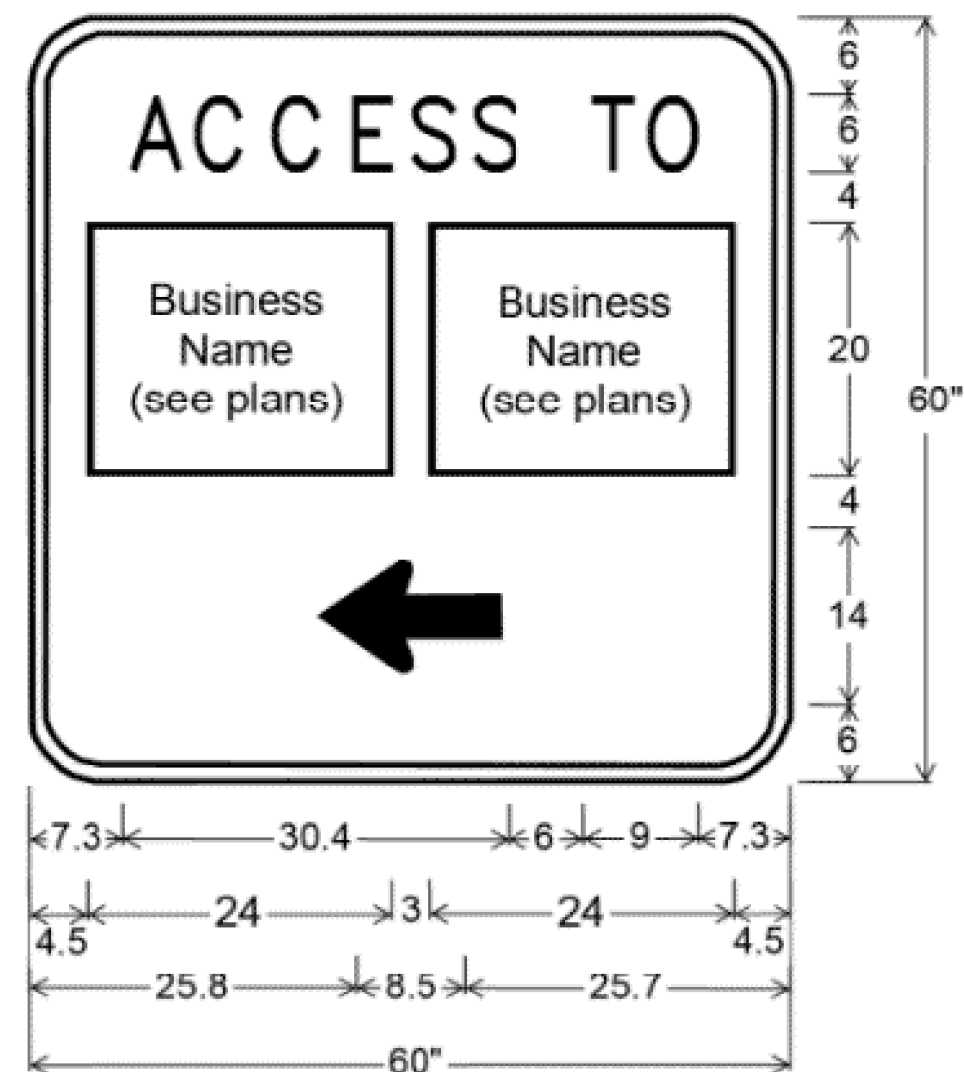
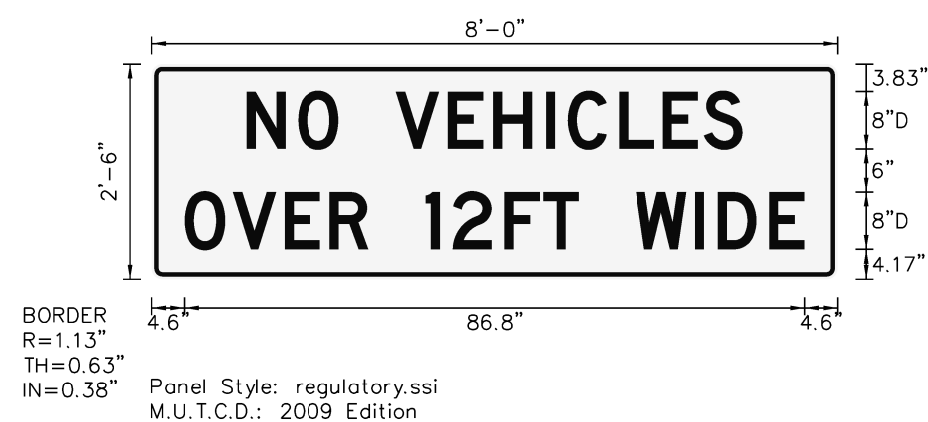
Plotting Date: 07/30/2024



BORDER
R=1.5"
TH=0.63"
IN=0.38"

6.6" 100.8" 6.6"

Panel Style: guide_fwy_auxiliary_wht_2012.ssi
M.U.T.C.D.: 2009 Edition



6.0" Radius, 1.3" Border, White on Blue;
"ACCESS TO" White Type D Font;
0.5" White Outline for Rectangles;
4" White Type C Font within Rectangles;
White Standard Arrow Custom 14.0" X 8.5";

STATE OF SOUTH DAKOTA	PROJECT NH-CR 0034(193)402	SHEET C24	TOTAL SHEETS C27
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Plotting Date: 05/24/2024

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	30"	5.2	10.4
R2-1	SPEED LIMIT 25	2	24" x 30"	5.0	10.0
R2-1	SPEED LIMIT 45	2	24" x 30"	5.0	10.0
R2-1	SPEED LIMIT 65	2	24" x 30"	5.0	10.0
R2-6aP	FINES DOUBLE (plaque)	2	24" x 18"	3.0	6.0
R3-2	LEFT TURN PROHIBITION (symbol)	4	24" x 24"	4.0	16.0
R4-7c	(Narrow) KEEP RIGHT (symbol)	10	18" x 30"	3.8	38.0
R10-6	STOP HERE ON RED	2	24" x 36"	6.0	12.0
R11-2	ROAD CLOSED	8	48" x 30"	10.0	80.0
R11-3a	ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY	2	60" x 30"	12.5	25.0
R11-3a	ROAD CLOSED 1 BLOCK AHEAD LOCAL TRAFFIC ONLY	10	60" x 30"	12.5	125.0
W1-4	REVERSE CURVE (L or R)	4	48" x 48"	16.0	64.0
W3-3	SIGNAL AHEAD (symbol)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W8-1	BUMP	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-17	SHOULDER DROP-OFF (symbol)	2	48" x 48"	16.0	32.0
W9-3	CENTER LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
W20-1	ROAD WORK AHEAD	21	48" x 48"	16.0	336.0
W20-4	ONE LANE ROAD AHEAD	6	48" x 48"	16.0	96.0
W20-7	FLAGGER (symbol)	6	48" x 48"	16.0	96.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	6	30" x 18"	3.8	22.8
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
G20-5aP	WORK ZONE (plaque)	2	24" x 18"	3.0	6.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 1244.2			

DETOUR AND RESTRICTION SIGNING

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
SPECIAL	WIDTH RESTRICTION USE ALT ROUTE	10	114" x 66"	52.3	523.0
SPECIAL	NO VEHICLES OVER 12 FT WIDE	2	96" x 30"	20.0	40.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 563.0			

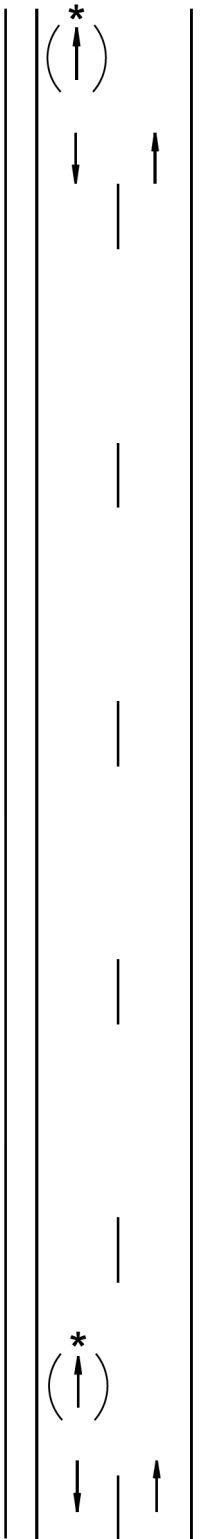
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

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.

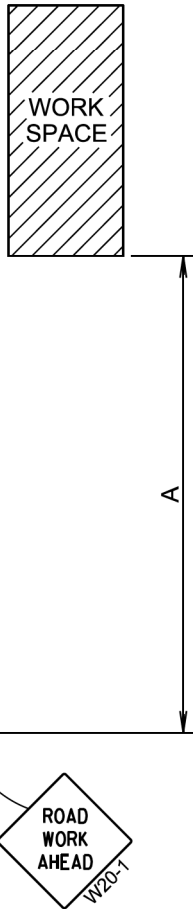
The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* 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.



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



January 22, 2021

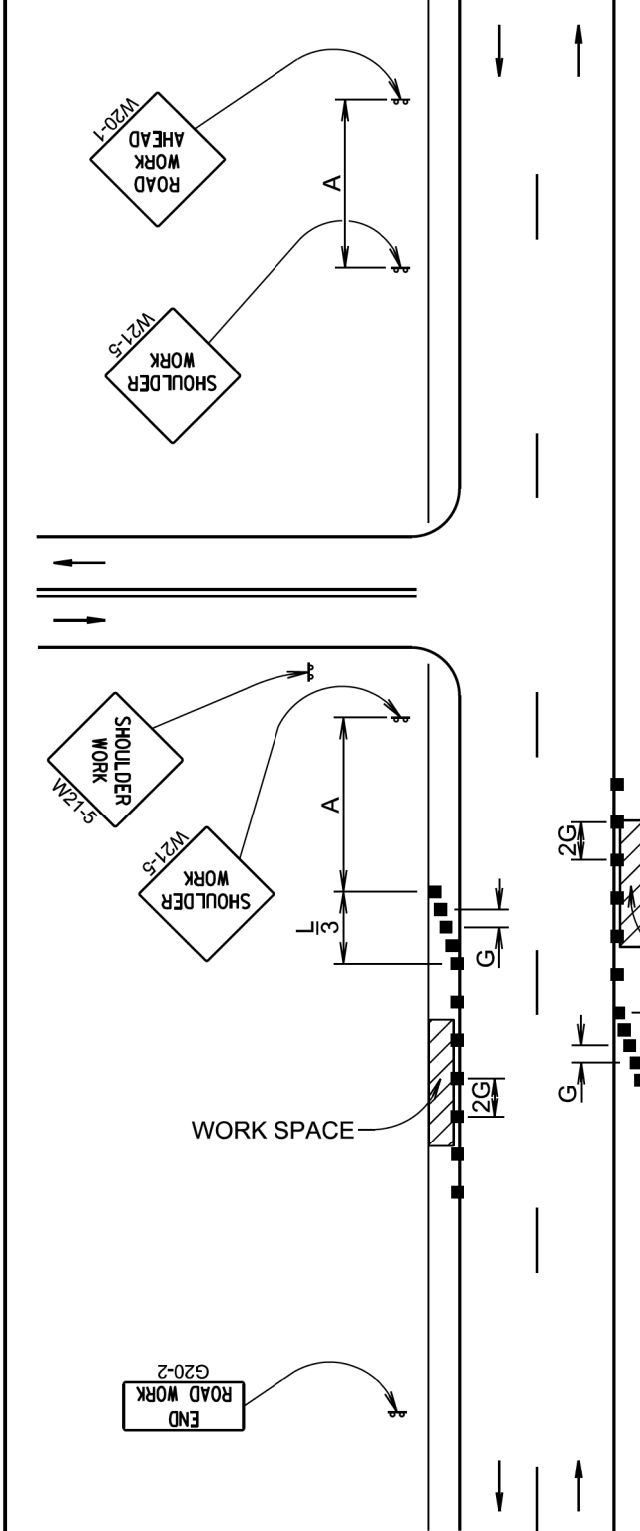
Published Date: 2025

S
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T

WORK BEYOND THE SHOULDER

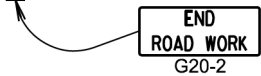
PLATE NUMBER
634.01

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

Channelizing Device



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

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

WORK SPACE

January 22, 2021

Published Date: 2025

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WORK ON SHOULDERS

PLATE NUMBER
634.03

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

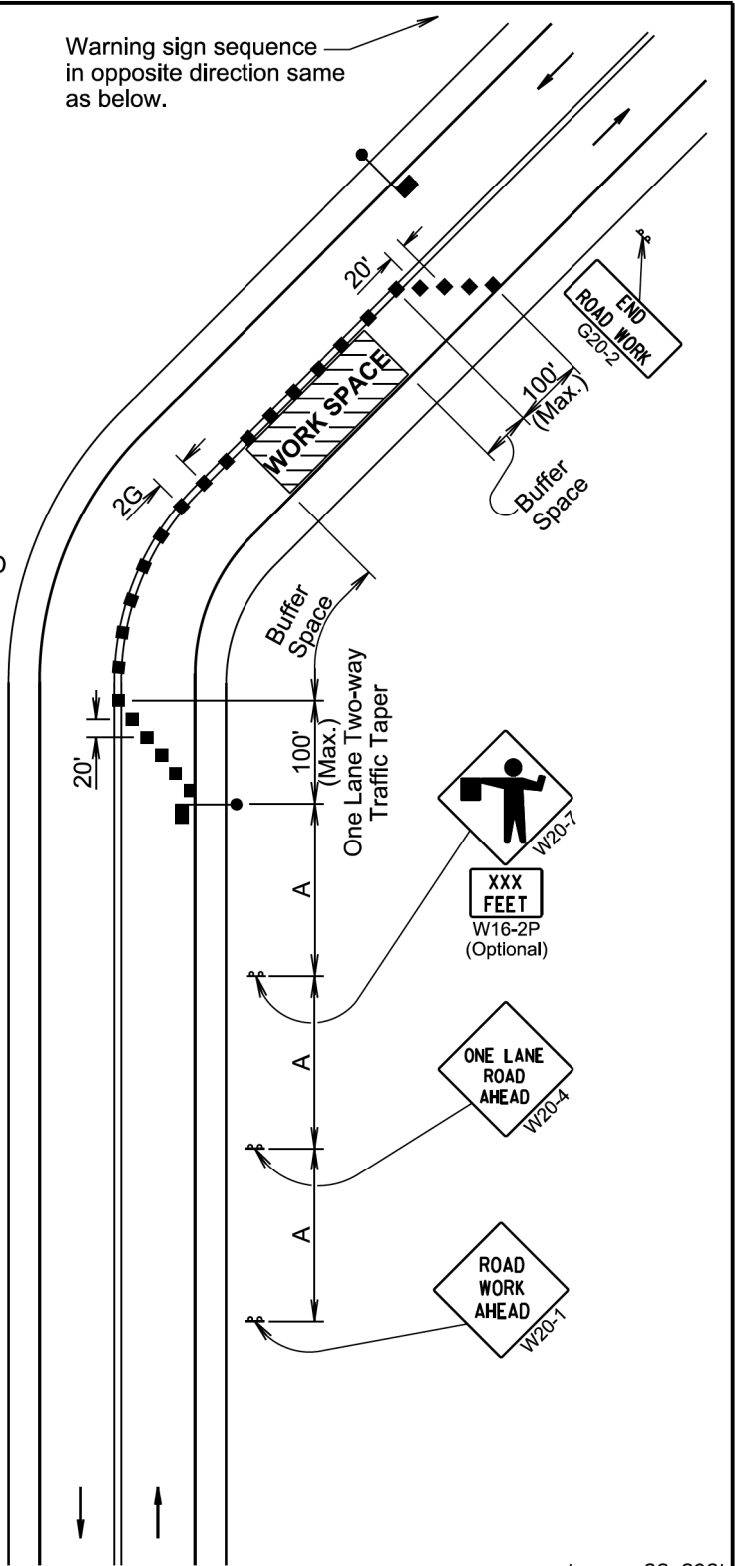
END ROAD WORK
G20-2

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.

Warning sign sequence in opposite direction same as below.

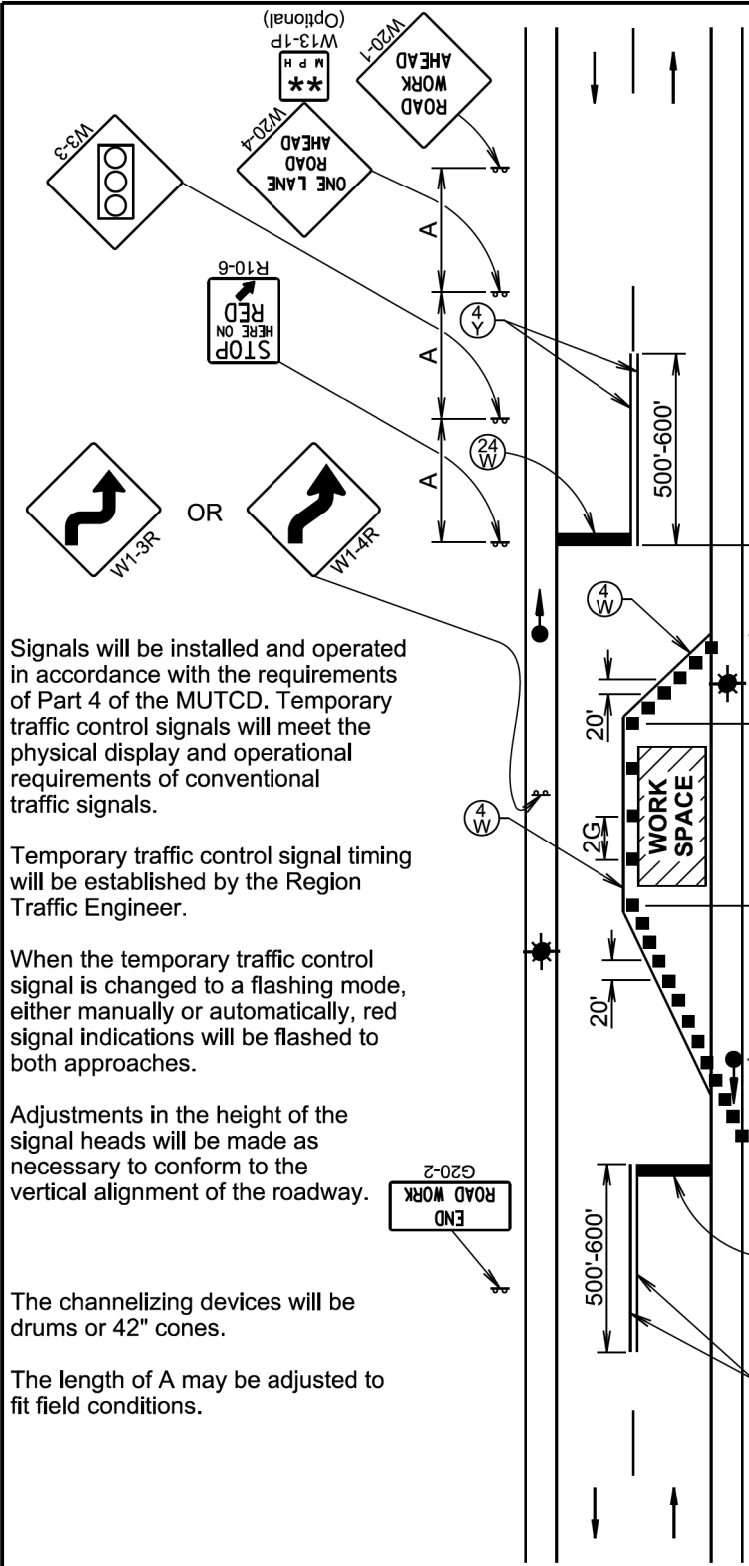


January 22, 2021

Published Date: 2025	S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

- END ROAD WORK G20-2
- 24" White Temporary Pavement Marking (24 W)
- 4" White Temporary Pavement Marking (4 W)
- 4" Yellow Temporary Pavement Marking (4 Y)
- Channelizing Device
- Traffic Signal
- Lighting (Optional)
- ** Need and safe speed to be determined at the site by the Engineer.



January 22, 2021

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