

Section C: Traffic Control

FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|----------------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0292(78)073 | C1 | C32 |
| Plotting Date: 1/22/2015 | | | |

INDEX OF SHEETS

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BEGIN IM 0292(78)073
Interstate 29 Station 41+08.59

BEGIN IM 0292(78)073
Ramp C Station 33+00.62

END IM 0292(78)073
Interstate 29 Station 172+90.28

END IM 0292(78)073
Ramp C Station 66+64.94

Str. No. 42-066-006
MRM 75.50

Str. No. 42-067-006
MRM 75.50

SIoux FALLS

LEGEND

| | |
|---------------------------|--|
| CONSTRUCTION LINE PHASE 1 | |
| CONSTRUCTION LINE PHASE 2 | |
| CONSTRUCTION LINE PHASE 2 | |



8181 East Tufts Ave. 303-694-2770 (Phone)
Denver, CO 80237 303-694-3946 (Fax)

Plot Scale - 1:200

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Plot Name -

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SECTION C ESTIMATE OF QUANTITIES

| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
|-----------------|---|----------|------|
| 110E1400 | Remove Pavement Marking, 4" or Equivalent | 16,200 | Ft |
| 250E0010 | Incidental Work | Lump Sum | LS |
| 628E1500 | Concrete Barrier End Protection | 4 | Each |
| 634E0010 | Flagging | 300 | Hour |
| 634E0100 | Traffic Control | 3,106 | Unit |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 634E0340 | Raised Pavement Markers | 2.03 | Mile |
| 634E0380 | Tubular Marker | 73 | Each |
| 634E0420 | Type C Advance Warning Arrow Panel | 2 | Each |
| 634E0525 | Linear Delineation System Panel, Barrier Mounted | 412 | Each |
| 634E0640 | Temporary Pavement Marking | 13,925 | Ft |
| 634E0700 | Traffic Control Movable Concrete Barrier | 206 | Each |
| 634E1215 | Contractor Furnished Portable Changeable Message Sign | 7 | Each |

SEQUENCE OF OPERATIONS

The following Sequence of Operations shall be followed by the Contractor unless an alternate Sequence of Operations is submitted in writing two weeks prior to the preconstruction meeting and approved by the Engineer. The project shall be constructed in (3) phases according to the following Notes, Phasing Details, and Special Provisions. The Contractor will be allowed to work on phases I and II concurrently.

PHASE I**I29 NB temporary pavement widening and diversion station ±40+50 to station ±179+00 (for NB I29 traffic shift under PCN O1QS project)**

Install lane closures and/or shoulder closures on I29 NB as per the Traffic Control Layouts and Standard Plates. The Contractor shall maintain (2) lanes of traffic on I29 NB during the am peak hour from 6:00 AM to 9:00 AM and (2) lanes of traffic on I29 SB during the pm peak hour from 4:00 PM to 7:00 PM. Contractor to complete phase 1a prior to phase 1b construction.

- PHASE Ia**

I29 NB Temporary Pavement Widening

Complete removals, grading, surfacing, signing, delineation, pipe culvert installation and erosion control.

Ramps B and A must remain open to traffic at all times. See Traffic Control Layout details provided for temporary pavement widening to accommodate ramp operations during construction.

- PHASE Ib**

I29 Median crossovers

1. Install lane closures and/or shoulder closures on I29 NB & SB per the Standard Plates.
2. Complete removals, grading, surfacing, pipe culvert installation/extension and erosion control.

PHASE II**Ramp C station ±42+00 to station ±65+00**

Install lane closures on Ramp C per the Traffic Control Layouts and Standard Plates.

- PHASE IIa**

Ramp C outside lane construction

Complete removals, grading, surfacing, delineation, and erosion control while maintaining traffic on the inside lane of Ramp C.

- PHASE IIb**

Ramp C inside lane construction & median crossovers

1. Complete removals, grading, surfacing, delineation, and erosion control while maintaining traffic on the outside lane of Ramp C.
2. Complete temporary median crossovers from Ramp G to Ramp C and from Ramp C to I229 NB.

PHASE III**Temporary Bridge Construction (for NB I29 traffic shift under PCN O1QS project)**

Install traffic control as per the Traffic Control Layouts and Standard Plates. Maintain head to head traffic, one lane in each direction, on Ramp C using median crossovers from Ramp G to Ramp C and from Ramp C to I229 NB.

- PHASE IIIa**

Roadway approach embankment construction

Complete removals, grading, pipe culvert extension, surfacing, delineation, guardrail, pavement markings and erosion control for temporary bridge construction.

- PHASE IIIb**

Temporary Bridge installation

1. Coordinate with SDDOT, Travis Dressen, for obtaining, transporting and placement of temporary bridge.
2. Ramp closures will be install on Ramp C and Ramp G prior to the installation of the temporary bridge in accordance with the special provision for contract time.
3. Close off diversion with Type III Barricade. I29 NB traffic is to remain on existing NB travel lanes and existing NB bridge during winter shut down period. Tubular Marker delineators are to be installed per the detail in Section C to delineate the traveled way after the concrete widening is completed. They are spaced at 100' increments and are placed 10' from the edge of the traveled way.

SPECIAL CONDITIONS

1. During non-work hours a maximum 4" drop off and 4:1 slope must be maintained adjacent to the traveled roadway. No extra payment will be made for this work.
2. Damage to the shoulder surfacing, slopes or ditches due to the Contractor's operations shall be repaired by the Contractor, to the satisfaction of the Engineer, at no expense to the State. This includes routing of traffic onto the shoulders around the work zones.
3. During all phases of construction, a minimum of 11.0' lanes shall be maintained.

FOR BIDDING PURPOSES ONLY

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NIGHTTIME WORK REQUIREMENTS

During all Phases of construction, work spaces shall be lighted in accordance with NCHRP 476, Level II. Cost to meet these requirements shall be included in the contract lump sum price for incidental work.

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_476.pdf

TRAFFIC CONTROL PLAN SHEET LAYOUTS

The plan sheets provided as part of Section C are intended to be used in conjunction with all applicable Standard Plates. Any details provided as sheets in this section (e.g. taper lengths, advance signing details, and centerline delineation details) are intended to replace the details shown in the corresponding Standard Plates. All other details in the Standard Plates which are not in conflict with the plan sheets provided shall be as detailed in the Standard Plates.

GENERAL MAINTENANCE OF TRAFFIC

Traffic shall be maintained in accordance with Section 4.4 of the Specifications. Traffic control shall be installed in accordance with the Federal Manual on Uniform Traffic Control Devices (MUTCD), Traffic Control Layouts and the Standard Plates located herein.

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.



MAINTENANCE OF TRAFFIC

A Type III Barricade shall be installed at the end of a lane closure taper as detailed in these plans during pavement widening work on the mainline. Additional Type III Barricades shall be installed facing traffic within the closed lane at a spacing of 1/4 mile.

Reduced speed limit signs for 55mph through the work zone shall be spaced at 1/4 mile intervals on I29 NB and I229 / Ramp C.

ADVANCE CLOSURE NOTICE

1 week prior to starting work, (3) portable changeable message signs shall be installed (1 NB on I29, 1 SB on I29 & 1 SB on I229) notifying drivers of the upcoming construction. The Contractor shall program the portable changeable message signs with the following message:

I29 ROAD WORK
STARTS (Date)

Prior to the installation of the temporary bridge, the contractor will install closures on Ramp C and Ramp G as well as (4) portable changeable message signs per the traffic control advance warning detail in section C. This closure is in accordance with the special provision for contract time.

INCIDENTS

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

The Contractor shall set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite Department of Transportation, the South Dakota Highway patrol, the City of Sioux Falls, Lincoln County, and Minnehaha County, and the local emergency response entities to the meeting. The Engineer will conduct the meeting.

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

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs. The Contractor may be asked 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 for more than two hours. Ground mounted advance warning signs may be covered and additional portable warning 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 flagging shall be paid at the contract unit price per Hour of Flagging. Cost for the relocation of and advanced warning sign due to an incident shall be 50% of the designated sign rate as per Section 634.5 Basis of Payment in the Specifications. Cost for additional signs shall be paid at the contract unit bid price per Unit for Traffic Control.

TEMPORARY PAVEMENT MARKING

The Contractor shall place and maintain temporary pavement marking in accordance with Section 634 of the Specifications and the details in these plans.

Raised pavement markers shall be used in lieu of Temporary Pavement Marking Paint in transition and mainline areas which will not be covered by pavement marking paint. Measurements will be made and quantities will be paid for the actual quantities used.

Raised pavement markers shall be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer. The cost for removal of raised pavement markers shall be included in the contract unit price per mile for Raised Pavement Markers.

The Contractor will be required to remove the remaining temporary pavement markings prior to the placement of the permanent pavement markings. The Contractor shall use equipment that is not detrimental to the new roadway surface for removing pavement markings, as approved by the Engineer. The amount bid for the temporary pavement marking shall include the cost of removing the temporary marking installed on the project by the Contractor.

TRAFFIC CONTROL MOVABLE CONCRETE BARRIER

The Contractor will be required to pick up and haul the barrier to the project site, install them, and perform lane closure changes. The Contractor shall Contact Greg Aallberg (605-367-4970 Ext. 2116) at the Sioux Falls Area Office to arrange for pickup of the barrier. All barriers are and shall remain the property of the Department of Transportation and will remain in place per the plans following completion of project. The Number of barrier used shall be approved by the Engineer. Payment will be based on the actual number of barrier used on construction.

BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS

A yellow linear delineation system panel shall be attached to each side of the barrier section. The linear delineation system shall be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It shall be sheeted with Super High or Very High Intensity sheeting. The Contractor shall furnish, install and maintain one panel along each side of the barrier. The panels shall be installed at the center of the barrier when measured along the length, with the top of the panel 4 inches below the top of the barrier. Installation shall be as per the manufacturer's recommendation using stainless steel inserts and bolts. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. Replacement of damaged linear delineation system panels shall be furnished and replaced by the Contractor. Cost for furnishing, installing and maintaining the linear delineation system panels shall be paid for at the contract unit price per each for Linear Delineation System Panel, Barrier Mounted. The system panels shall remain attached to the barrier sections and shall become the property of the State of South Dakota upon completion of the project.

FOR BIDDING PURPOSES ONLY

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CONCRETE BARRIER END PROTECTION

The crash cushions provided shall be as specified below.

| Product | Manufacturer |
|----------|---|
| SCI100GM | Work Area Protection Corp. a division of Stabler Companies Inc. St. Charles, IL Phone: 1-630-377-9100 www.workareaprotection.com |

The anchoring pad for the crash cushion shall be an 8 inch thick PCC pavement that meets the requirements of Class M6 concrete.

Documentation on the crash cushion, which includes the drawing details of the crash cushion, details for the transition to the concrete barrier, and details for the concrete anchoring pad, shall be provided to the Project Engineer at the pre-construction meeting.

The crash cushion shall be attached to the concrete barrier with a transition that meets test level 3 requirements of NCHRP 350 at locations shown below in the Table of Permanent Concrete Barrier End Protection.. For bidirectional traffic, the transition shall be placed on both sides of the crash cushion and barrier.

The Contractor shall certify that the crash cushion was installed according to the manufacturer's installation instructions.

All costs for furnishing and installing the crash cushion including the anchoring pad, anchors for connection to the pad, transitions to the concrete barrier(if required), materials, labor, equipment, and incidental items shall be paid for at the contract unit price per each for "Concrete Barrier End Protection".

TABLE OF CONCRETE BARRIER END PROTECTION

| Station (I229 Ramp C) | Location | Unidirectional/ Bidirectional | Quantity (Each) |
|-----------------------|----------|----------------------------------|-----------------|
| 38+35 | Center | Bidirectional | 1 |
| 58+44 | R | Bidirectional | 1 |
| 62+06 | L | Bidirectional | 1 |
| 62+15 | Center | Bidirectional | 1 |
| Total | | | 4 |



CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

Contractor Furnished Portable Changeable Message Signs shall be utilized on this project to advise the traveling public of project conditions and as stated under the notes for ADVANCE CLOSURE NOTICE. The Contractor shall furnish, position and maintain the message signs at locations as directed by the Engineer.

Each message sign shall be in a new or nearly new condition and consist of a message board, power supply and a message control system, all mounted on a heavy duty trailer. The message signs shall remain the property of the Contractor upon completion of the project.

Addco Manufacturing, Precision Solar Controls Inc., Winkomatic Signal Company and American Signal Company are manufacturers of acceptable Solar Powered Portable Changeable Message Signs.

The overall dimensions of the message board shall be a minimum of 108" wide x 72" high. The message board shall be enclosed in a rigidly framed, weather tight housing.

The message board shall contain a minimum of three message lines. Each message line shall be capable of displaying a minimum of 8 characters. Each character shall be approximately 18" high and shall be formed by 35 dots in a 5 x 7 matrix. The message boards shall be capable of changing the entire message content in not more than 100 milliseconds. No more than 2 displays shall be used within any message cycle.

All costs associated with obtaining, positioning, re-positioning, programming, re-programming, maintaining, and removing the message signs shall be incidental to the contract unit price per each for CONTRACTOR FURNISHED PORTABLE SHANGEABLE MESSAGE SIGN.

MAINTENANCE OF DRAINAGE

The Contractor will be required to maintain drainage on the project during the course of construction. This will include the installing of Contractor furnished pipe to temporarily connect drainage systems, performing the necessary shaping, and all needed miscellaneous work. No separate payment will be made for this work. All cost for maintaining the drainage shall be incidental to the cost of the various contract bid items.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project IM-P022(56) - PCN 052K will be let and awarded to another Contractor for joint and spall repair project on I229. The Contractor shall coordinate his work so as not to interfere with or hinder the progress of the joint and spall repair work.

FOR BIDDING PURPOSES ONLY

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| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C3a | TOTAL SHEETS C32 |
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Revised 04-02-2015 (MRK)



Itemized List of Traffic Control

FOR BIDDING PURPOSES ONLY

| | | |
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| PROJECT SOUTH DAKOTA | SHEET C4 | TOTAL SHEETS C32 |
| IM 0293(96)73 | | |

| Sign Code | Sign Size | Description | Number Required | Units Per Sign | Units |
|---------------------|-----------------|------------------------------------|-----------------|----------------|-------------|
| G20-1 | 48" X 24" | Road Work Next 3 Miles | 6 | 24 | 144 |
| G20-2 | 48" X 24" | End Road Work | 6 | 24 | 144 |
| R1-2 | 48" X 48" X 48" | Yield | 2 | 34 | 68 |
| R2-1 | 30" X 36" | Speed Limit 55 | 14 | 23 | 322 |
| R2-1 | 30" X 36" | Speed Limit 45 | 2 | 23 | 46 |
| R2-6ap | 36" X 24" | Fines Doubled | 4 | 20 | 80 |
| SW12-1B | 60" X 30" | Highway Workers Give 'Em A Brake | 4 | 40 | 160 |
| W1-4 | 48" X 48" | Reverse Curve Symbol (Right) | 1 | 34 | 34 |
| W3-2 | 48" X 48" | Yield Ahead | 2 | 34 | 68 |
| W3-5 | 48" X 48" | Speed Limit 55 Ahead | 4 | 34 | 136 |
| W4-1 | 48" X 48" | Merge Symbol | 4 | 34 | 136 |
| W4-2 | 48" X 48" | Lt or Rt Lane Ends Symbol | 5 | 34 | 170 |
| W13-2 | 30" X 36" | Exit 55 MPH | 1 | 23 | 23 |
| W13-3 | 30" X 36" | Ramp 55 MPH | 1 | 23 | 23 |
| W20-1 | 48" X 48" | Road Work Ahead | 5 | 34 | 170 |
| W20-5 | 48" X 48" | Lt or Rt Lane Closed Ahead | 4 | 34 | 136 |
| W20-7a | 48" X 48" | Flagger | 4 | 34 | 136 |
| W20-7b | 48" X 48" | Be Prepared to Stop | 4 | 34 | 136 |
| Special | 60" X 48" | Exit 75 Interstate 229 1000 Ft | 2 | 38 | 76 |
| Special | 60" X 48" | Exit 75 Interstate 229 Arrow Right | 2 | 38 | 76 |
| Special | 60" X 48" | Exit 75 Arrow Right | 1 | 38 | 38 |
| ***** | ***** | Type III Barricade 8' | 14 | 56 | 784 |
| TOTAL UNITS: | | | | | 3106 |



SEQUENCE OF OPERATIONS

FOR BIDDING PURPOSES ONLY

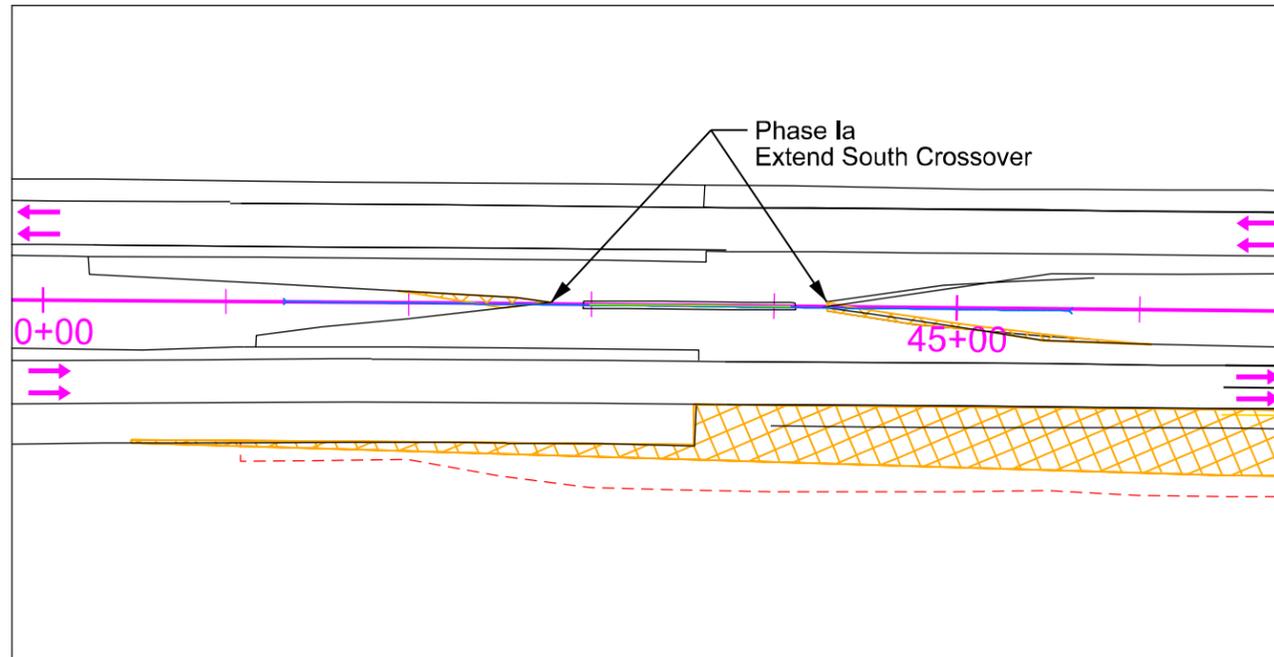
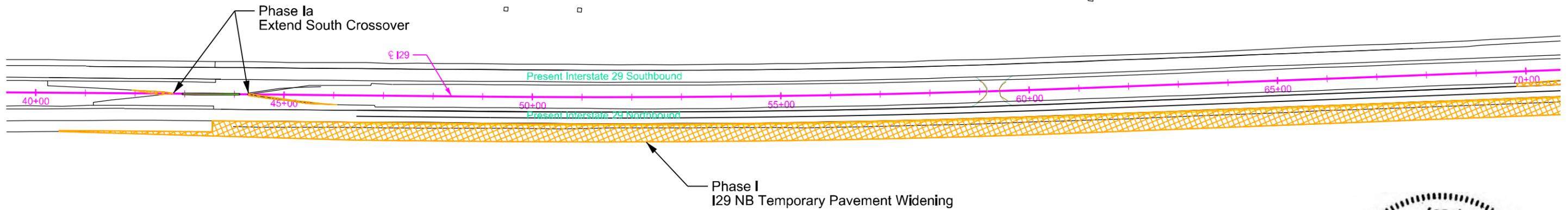
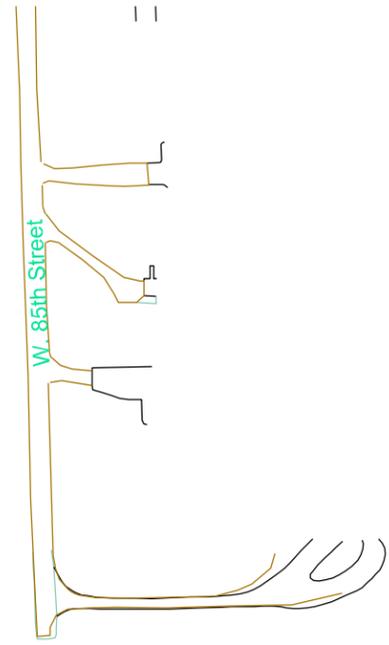
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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0292(78)073 | C5 | C32 |
| Plotting Date: 1/22/2015 | | | |

Plot Scale - 1:200

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LEGEND:



NOTES:

- Construction
- Phase I
- I29 NB: Complete Grading & Asphalt Concrete Surfacing (40+50 To 178+91)
 - Extend South Crossover
 - Median Crossover (69+81 to 79+87) (Temporary Pavement)
- Phase II
- Ramp C: Complete Full Width
 - Ramp C Crossover (Asphalt Concrete)
 - Ramp G Crossover (Asphalt Concrete)
- Phase III
- Temporary Bridge



SEQUENCE OF OPERATIONS

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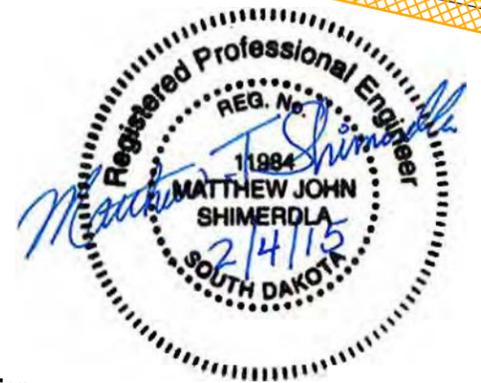
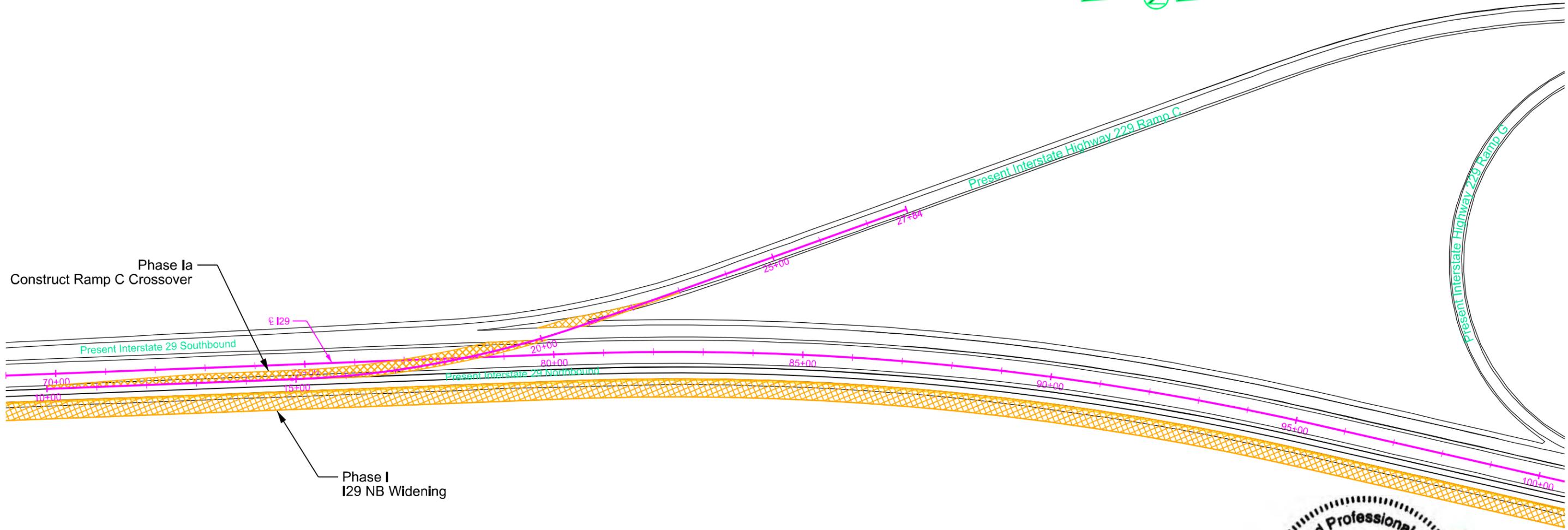
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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
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| Plotting Date: | | 1/22/2015 | |

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LEGEND:

 WORK AREA PHASE I

NOTES:

- Construction
- Phase I
- I29 NB: Complete Grading & Asphalt Concrete Surfacing (40+50 To 178+91)
 - Extend South Crossover
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SEQUENCE OF OPERATIONS

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| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C7 | TOTAL SHEETS C32 |
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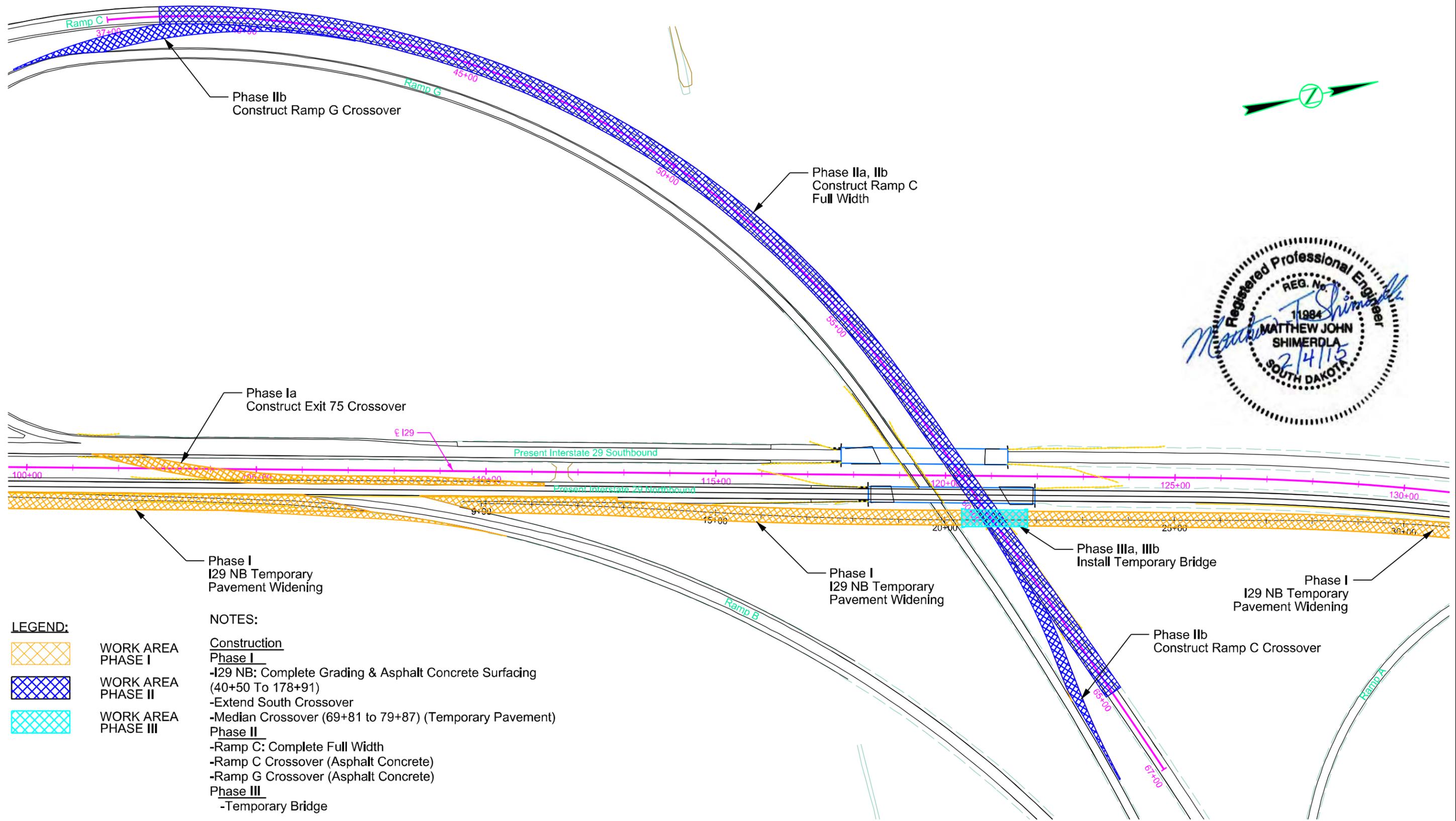
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LEGEND:

- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III

NOTES:

Construction

Phase I

- I29 NB: Complete Grading & Asphalt Concrete Surfacing (40+50 To 178+91)
- Extend South Crossover
- Median Crossover (69+81 to 79+87) (Temporary Pavement)

Phase II

- Ramp C: Complete Full Width
- Ramp C Crossover (Asphalt Concrete)
- Ramp G Crossover (Asphalt Concrete)

Phase III

- Temporary Bridge

SEQUENCE OF OPERATIONS

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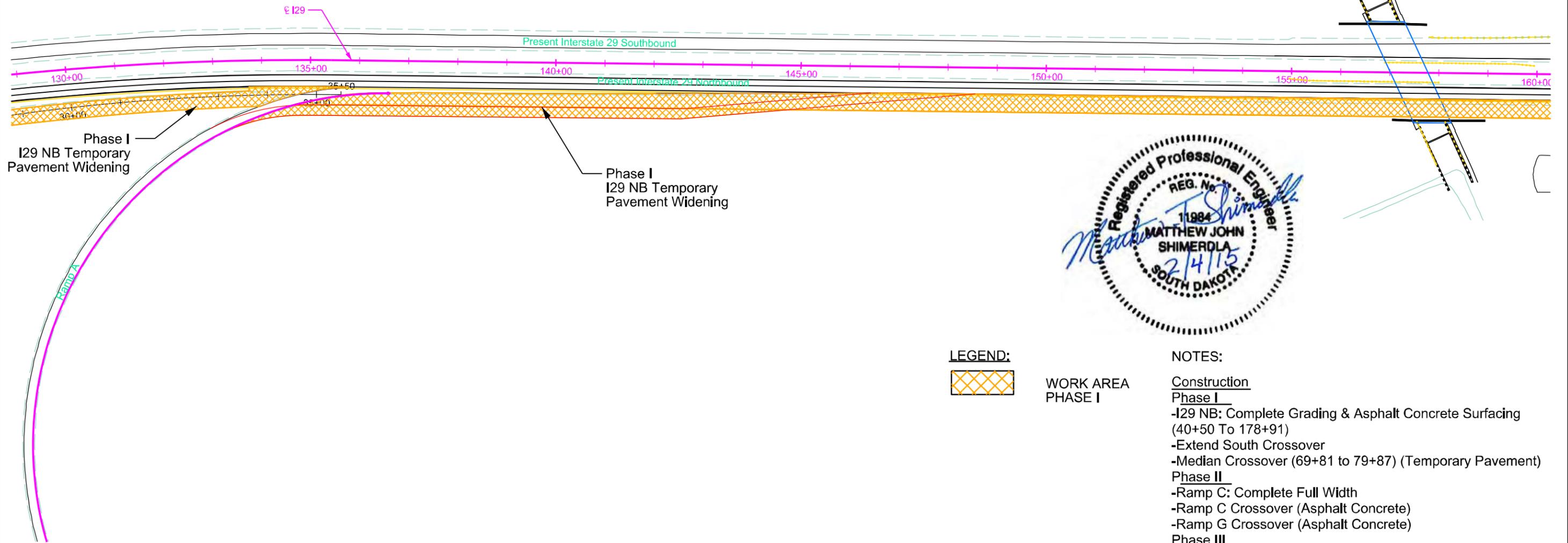
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| Plotting Date: 1/22/2015 | | | |

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LEGEND:



WORK AREA
PHASE I

NOTES:

- Construction
- Phase I
- I29 NB: Complete Grading & Asphalt Concrete Surfacing (40+50 To 178+91)
- Extend South Crossover
- Median Crossover (69+81 to 79+87) (Temporary Pavement)
- Phase II
- Ramp C: Complete Full Width
- Ramp C Crossover (Asphalt Concrete)
- Ramp G Crossover (Asphalt Concrete)
- Phase III
- Temporary Bridge

SEQUENCE OF OPERATIONS

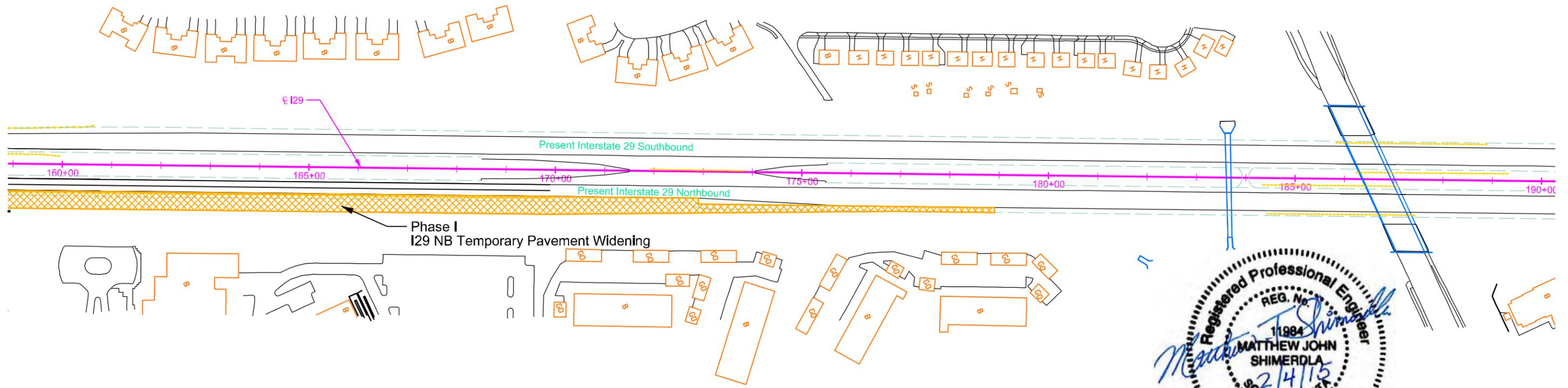
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LEGEND:



WORK AREA
PHASE I

NOTES:

Construction
Phase I

- I29 NB: Complete Grading & Asphalt Concrete Surfacing (40+50 To 178+91)
- Extend South Crossover
- Median Crossover (69+81 to 79+87) (Temporary Pavement)

Phase II

- Ramp C: Complete Full Width
- Ramp C Crossover (Asphalt Concrete)
- Ramp G Crossover (Asphalt Concrete)

Phase III

- Temporary Bridge



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| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C10 | TOTAL SHEETS C32 |
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Plotting Date: 1/22/2015

TRAFFIC CONTROL

FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

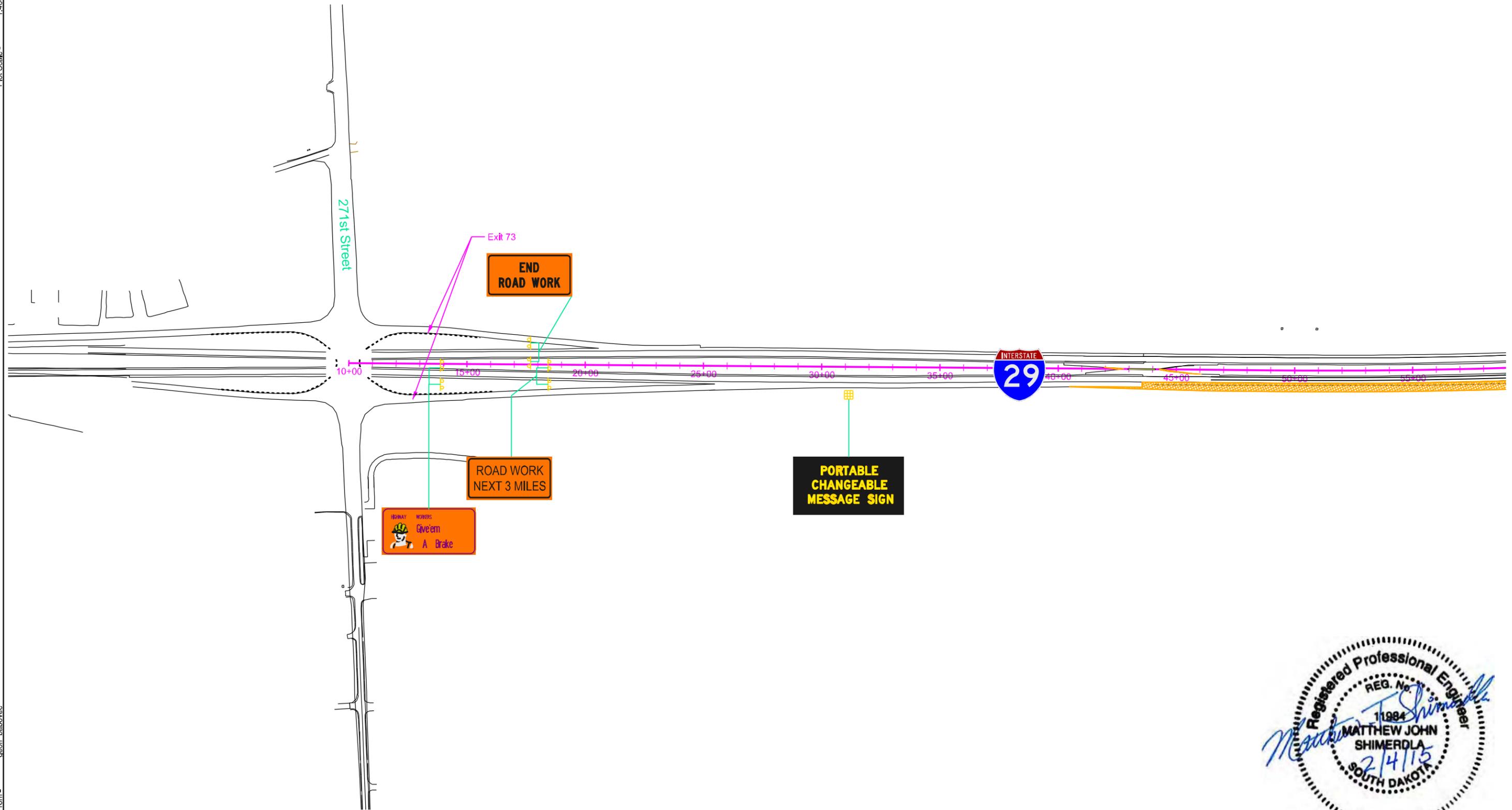


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Exact Locations of Signs Will Be Determined In the Field By the Engineer

FOR BIDDING PURPOSES ONLY

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| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C11 | TOTAL SHEETS C32 |
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Plotting Date: 1/22/2015

TRAFFIC CONTROL

FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

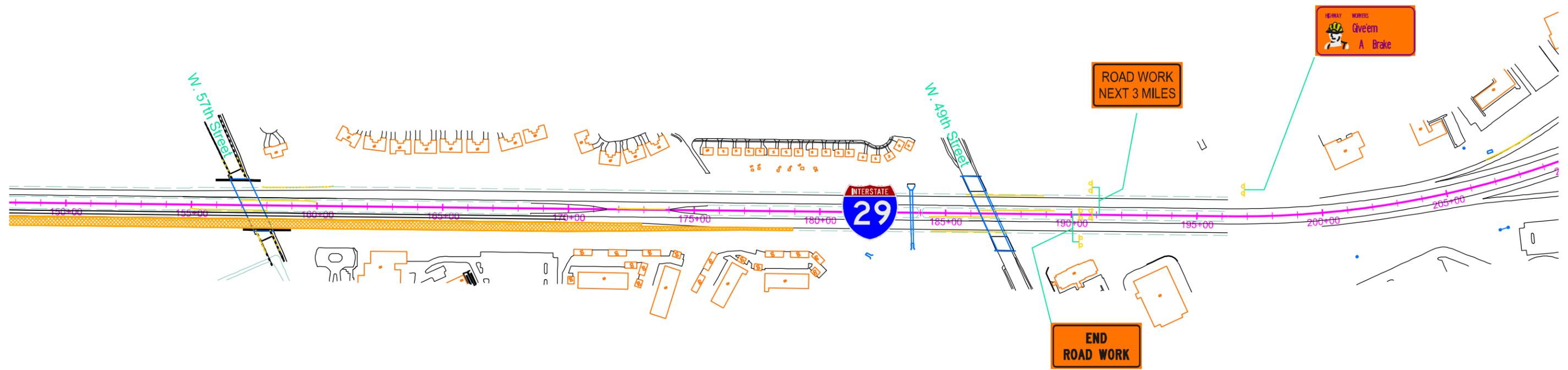


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Exact Locations of Signs Will Be Determined In the Field By the Engineer

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C12 | TOTAL SHEETS C32 |
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Plotting Date: 1/22/2015

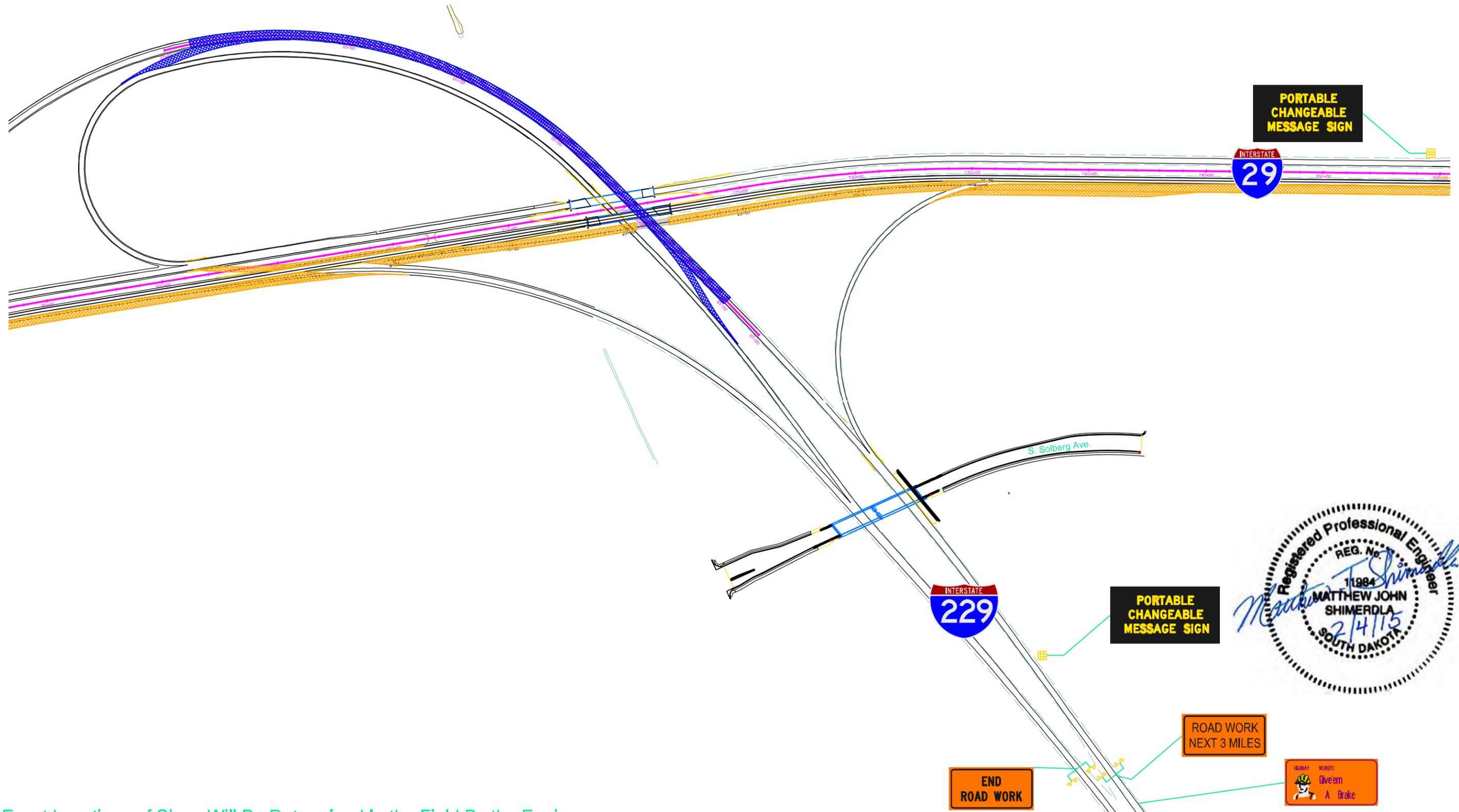


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File - ...Plans\Fix Signage) ic03.dgn



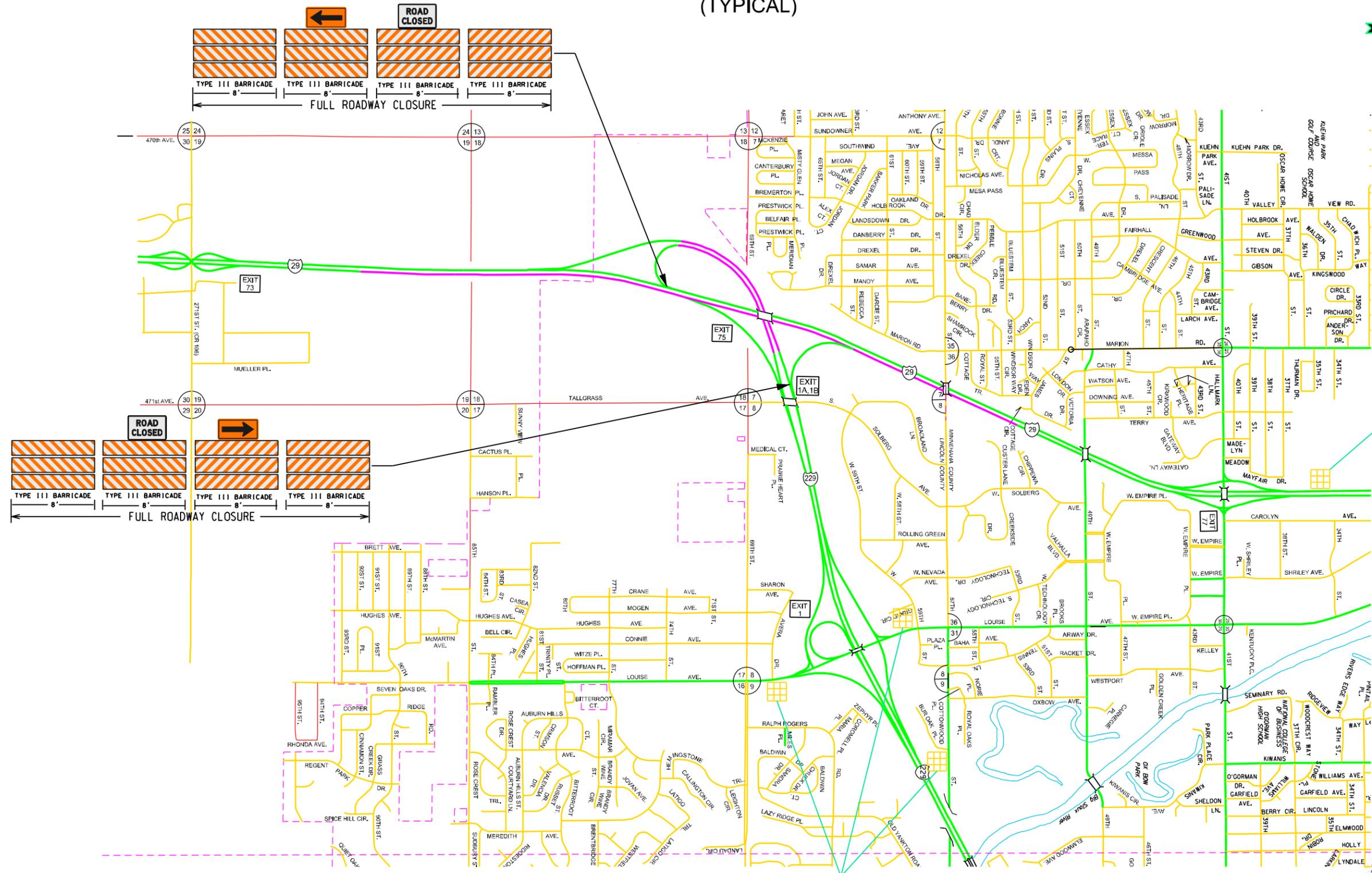
Exact Locations of Signs Will Be Determined In the Field By the Engineer

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

RAMP C & G CLOSURE ADVANCE WARNING (TYPICAL)

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C13 | TOTAL SHEETS C32 |
|-----------------------|---------------------------|--------------|---------------------|

Plotting Date: 2/4/2015
Revised: 2-4-2015

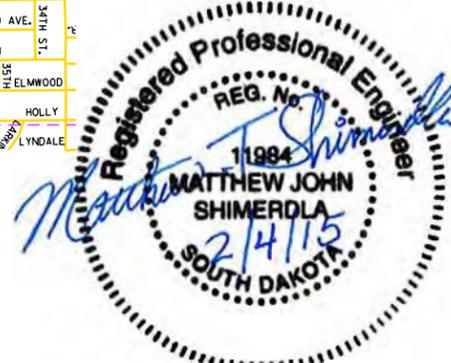


**PORTABLE
CHANGEABLE
MESSAGE SIGN**

Message:
NB On Ramp I 229 Closed
Alternate Route Advised

**PORTABLE
CHANGEABLE
MESSAGE SIGN**

Message:
SB On Ramp I 29 Closed
Alternate Route Advised



Exact Locations of Signs Will Be Determined In the Field By the Engineer

Plot Scale - 1:2000

Plotted From - geoff_babovec

Plot Name -

File - ...Plans\Ramp Closure T.C.dgn

TRAFFIC CONTROL

PHASE I (TYPICAL)

FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------------|----------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0292(78)073 | C14 | C32 |
| Plotting Date: 1/22/2015 | | | |

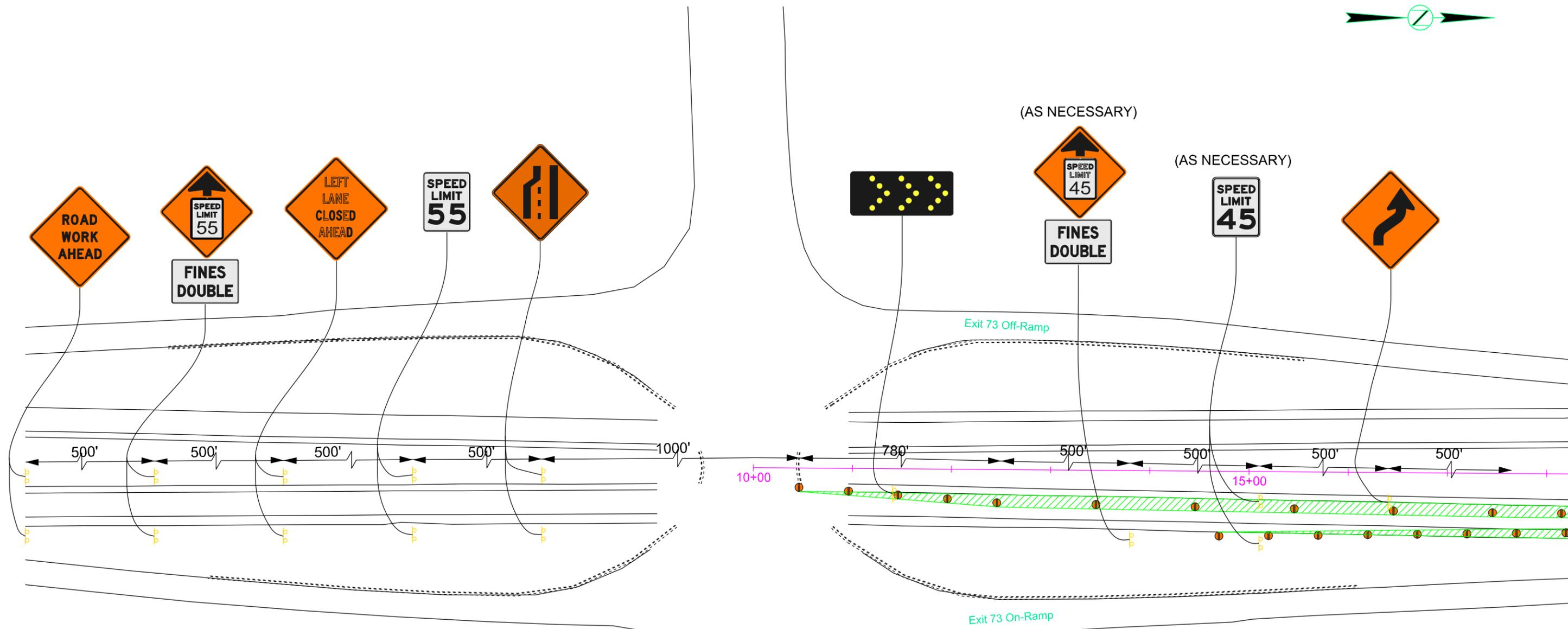


Plot Scale - 1:100

Plot Name -

...Plans000c.dgn

File -



Standard Plates shall be used to determine the exact locations of traffic control devices

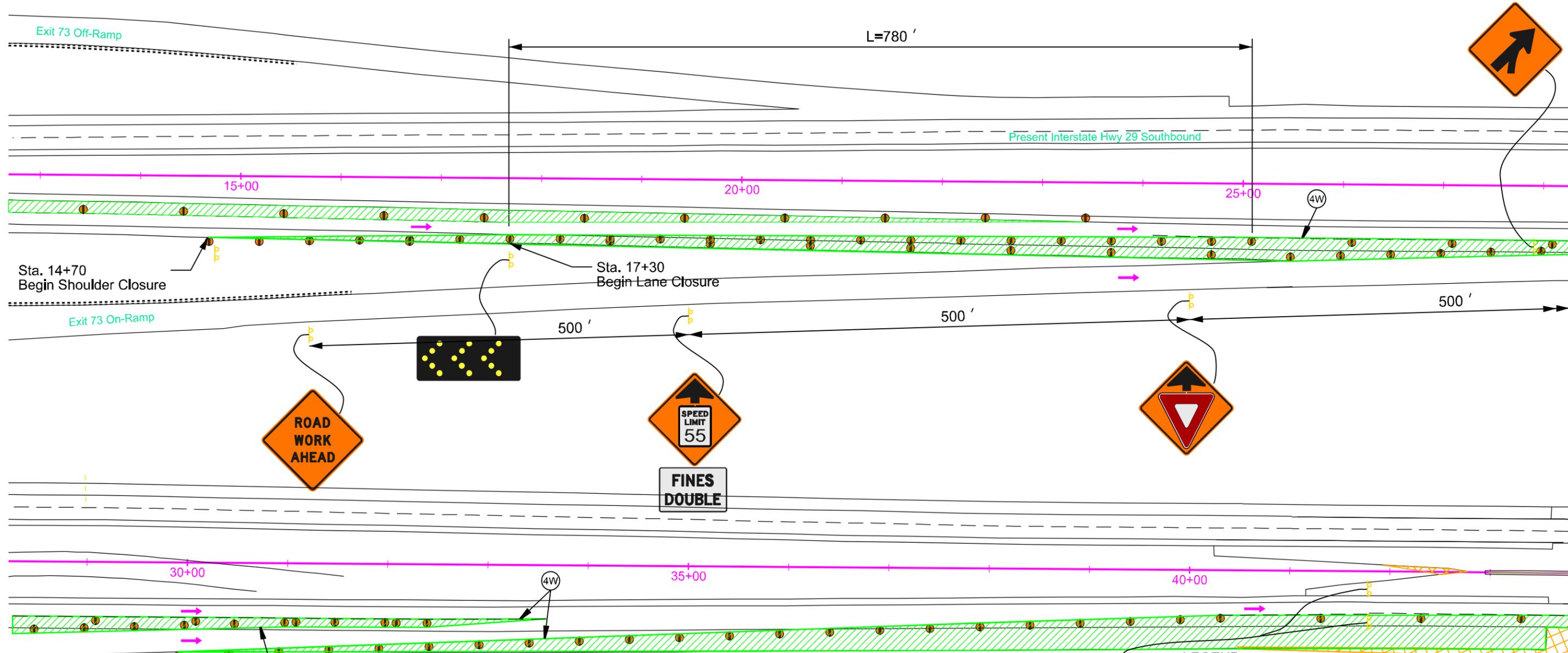
- LEGEND:**
- TRAFFIC
 - WORK AREA
 - CLOSED FOR TRAFFIC CONTROL
 - REFLECTORIZED DRUMS
 - 4" WHITE RAISED PAVEMENT MARKERS
 - 4" YELLOW RAISED PAVEMENT MARKERS
 - ADVANCE WARNING ARROW PANEL

TRAFFIC CONTROL

PHASE I (TYPICAL)

FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C15 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |



LEGEND:

| | |
|--|-----------------------------------|
| | TRAFFIC |
| | WORK AREA |
| | CLOSED FOR TRAFFIC CONTROL |
| | REFLECTORIZED DRUMS |
| | 4" WHITE RAISED PAVEMENT MARKERS |
| | 4" YELLOW RAISED PAVEMENT MARKERS |
| | ADVANCE WARNING ARROW PANEL |



Standard Plates shall be used to determine the exact locations of traffic control devices

Plot Scale - 1:100
geoff_babovrec
Plotted From -

Plot Name - 41
...Plans014tc.dgn
File -

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

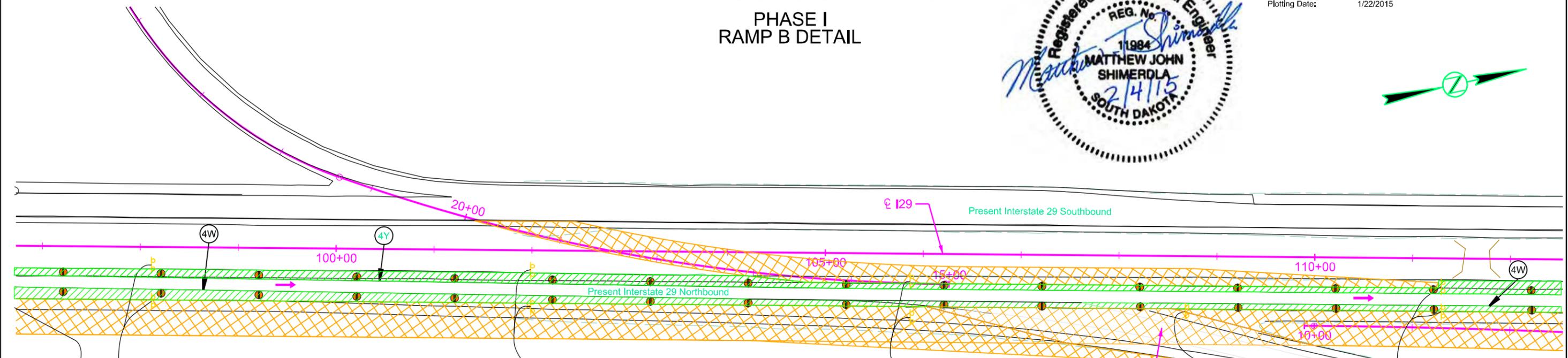
PHASE I RAMP B DETAIL

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C16 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |



Plot Scale - 1:100

Plot Name -



LEGEND:

TRAFFIC

WORK AREA

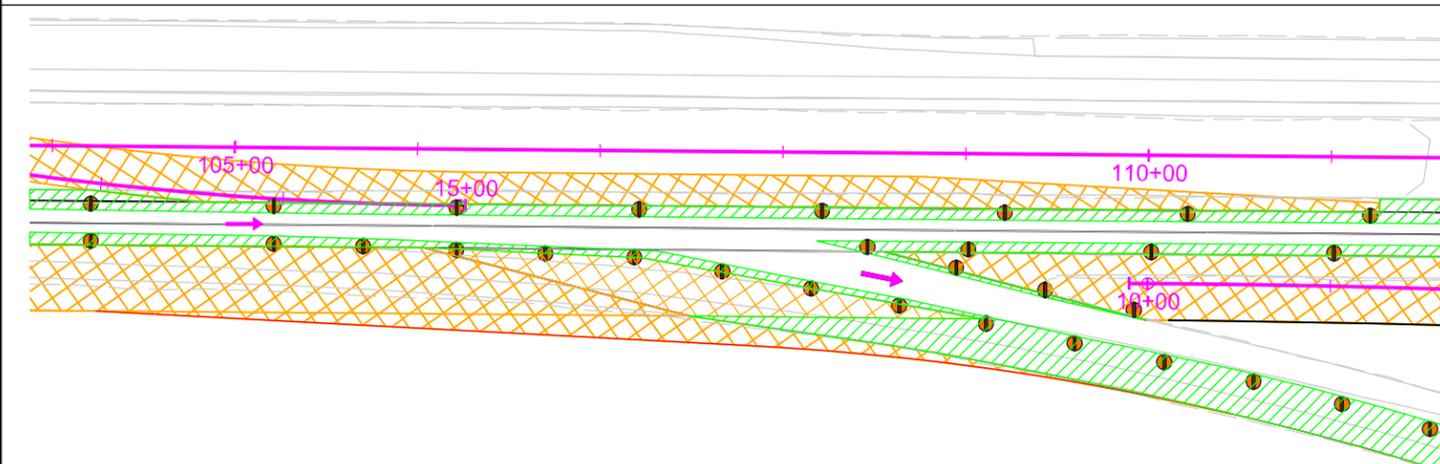
CLOSED FOR TRAFFIC CONTROL

REFLECTORIZED DRUMS

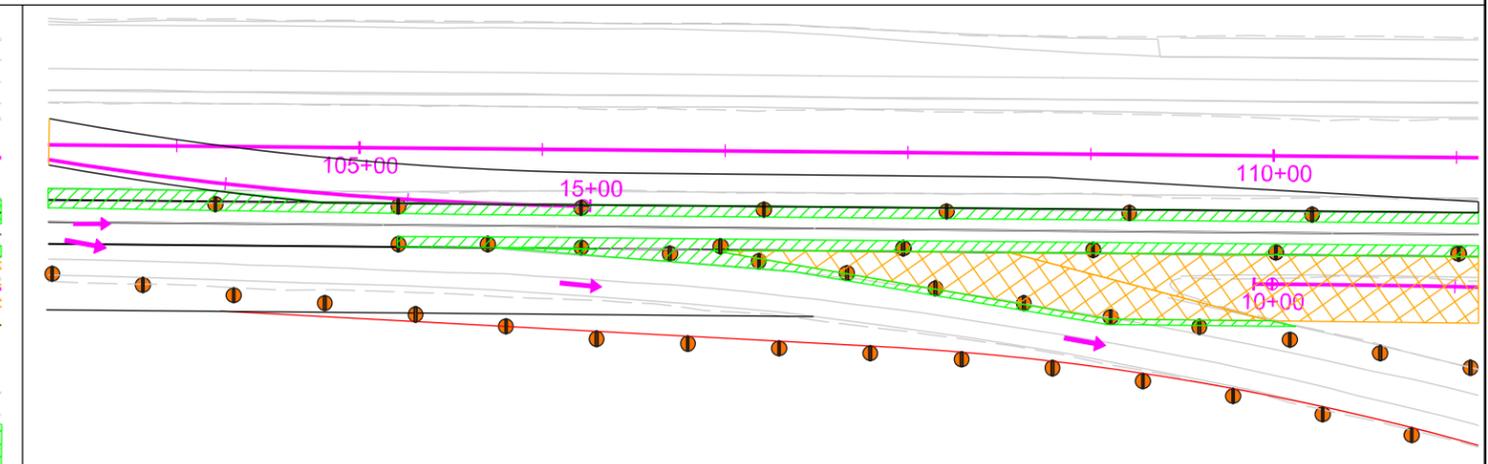
4" WHITE RAISED PAVEMENT MARKERS

4" YELLOW RAISED PAVEMENT MARKERS

Construct Thru the Ramp Gore per Details Below. Overbuild Existing Pavement (2.0% Cross Slope).



DETAIL A



DETAIL B

Standard Plates shall be used to determine the exact locations of traffic control devices

Plotted From - geoff_babovrec

File - ...Plans\0971c.dgn

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C17 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |

PHASE I RAMP A DETAIL



LEGEND:

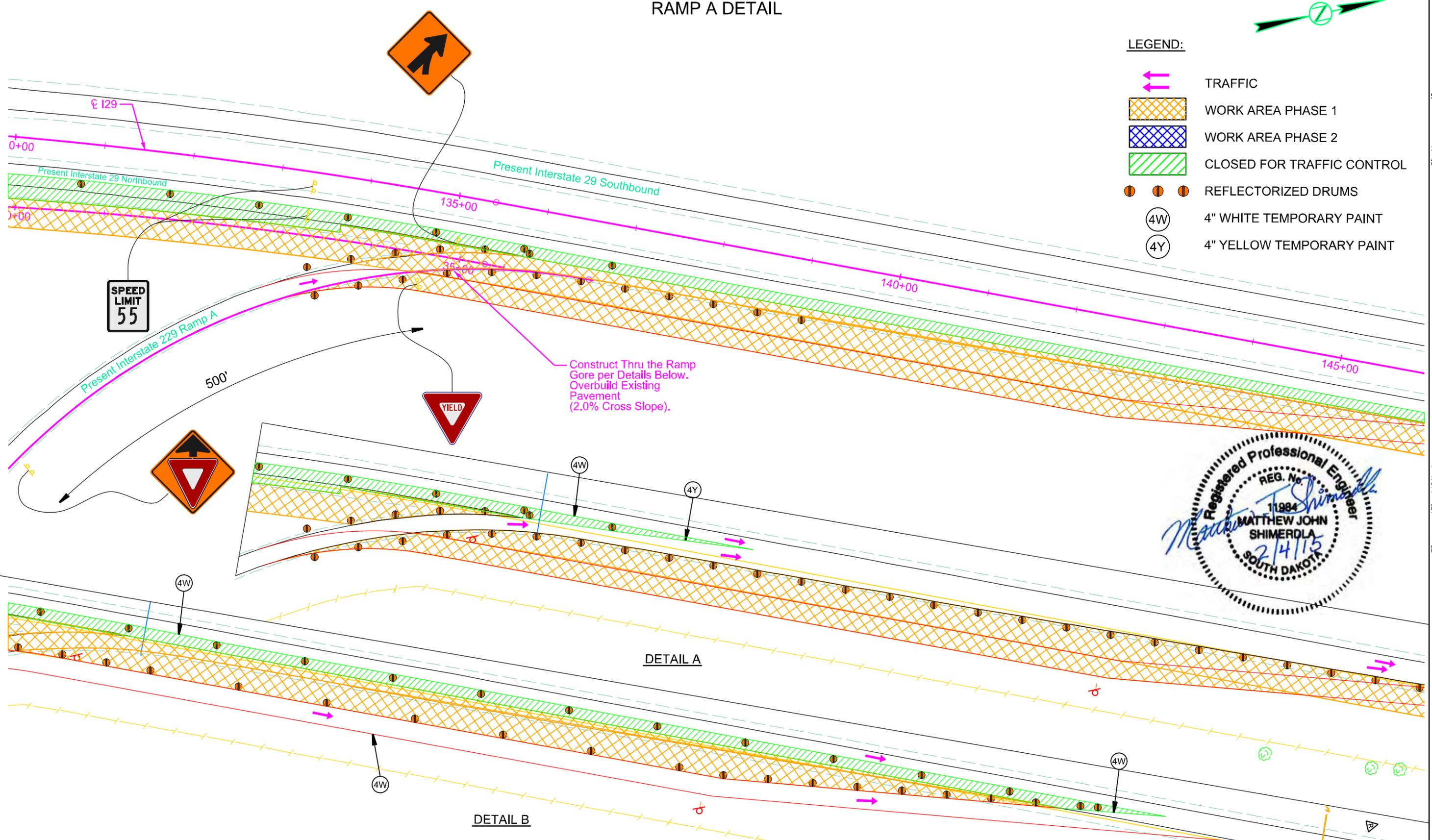
- TRAFFIC
- WORK AREA PHASE 1
- WORK AREA PHASE 2
- CLOSED FOR TRAFFIC CONTROL
- REFLECTORIZED DRUMS
- 4" WHITE TEMPORARY PAINT
- 4" YELLOW TEMPORARY PAINT

Plot Scale - 1:100

Plotted From - geoff_babovec

Plot Name -

File - ...Plans\124tc.dgn



Construct Thru the Ramp Gore per Details Below. Overbuild Existing Pavement (2.0% Cross Slope).



DETAIL A

DETAIL B

Standard Plates shall be used to determine the exact locations of traffic control devices

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C18 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |

PHASE IIa (TYPICAL)

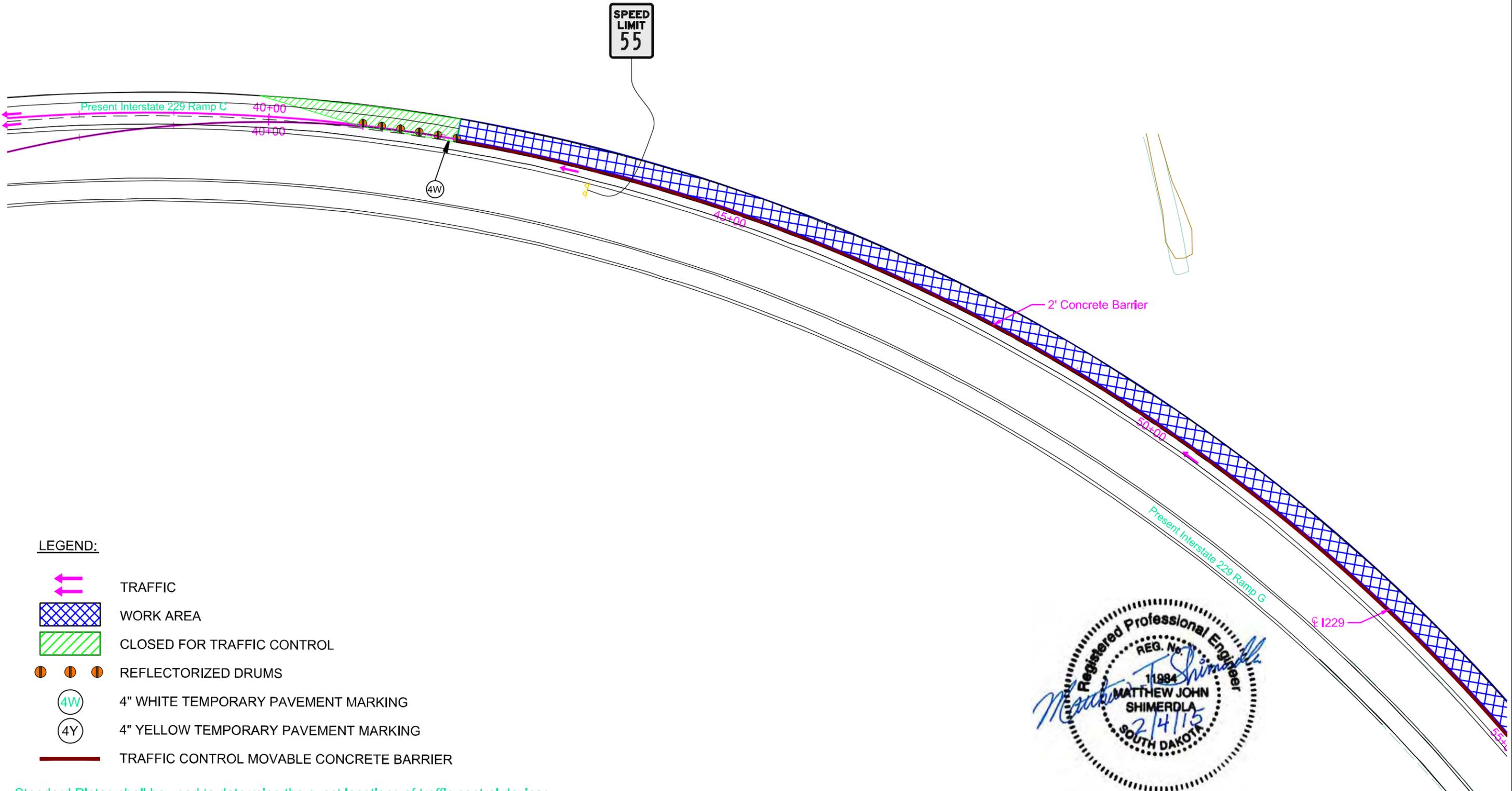


Plot Scale - 1:100

Plotted From - geoff_babovrec

Plot Name - 44

File - ...Plans\035\c2a.dgn



LEGEND:

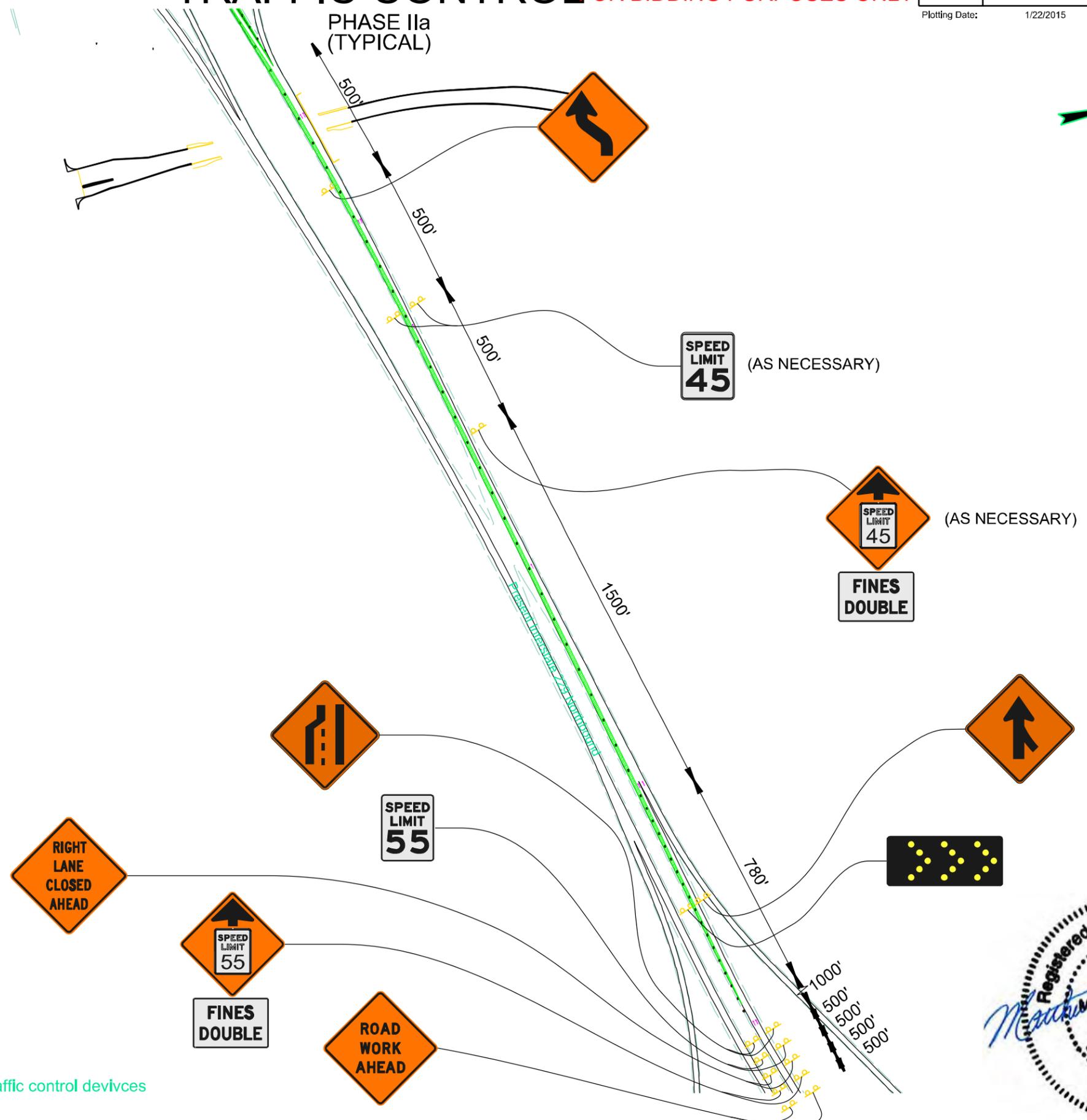
-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER



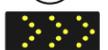
Standard Plates shall be used to determine the exact locations of traffic control devices

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C19 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |



LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  ARROW MESSAGE BOARD

Standard Plates shall be used to determine the exact locations of traffic control devices



Plot Scale - 1:400

Plotted From - geoff_babovrec

Plot Name -

File - ...Plans\0501c.dgn

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|----------------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0292(78)073 | C20 | C32 |

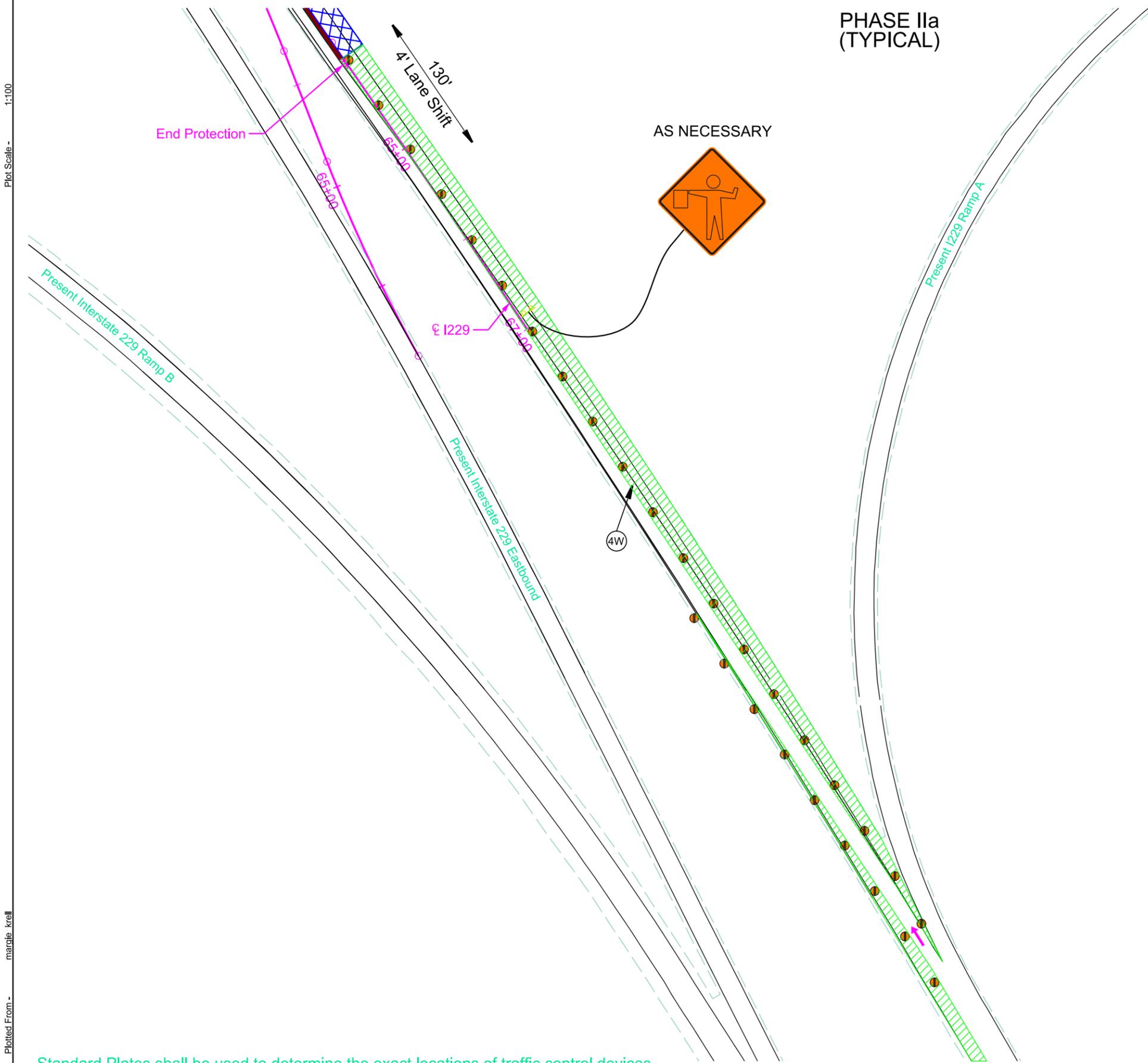
Plotting Date: 4/2/2015
 Revised: 04-02-2015 (MRK)

PHASE IIa (TYPICAL)

Plot Scale - 1:100

Plotted From - margie_krell

Plot Name - 50



(4W)

LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
-  CONCRETE BARRIER END PROTECTION



Standard Plates shall be used to determine the exact locations of traffic control devices

TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

PHASE IIb
(TYPICAL)

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C21 | TOTAL SHEETS C32 |
|-----------------------|---------------------------|--------------|---------------------|

Plotting Date: 4/2/2015
Revised: 04-02-2015 (MRK)

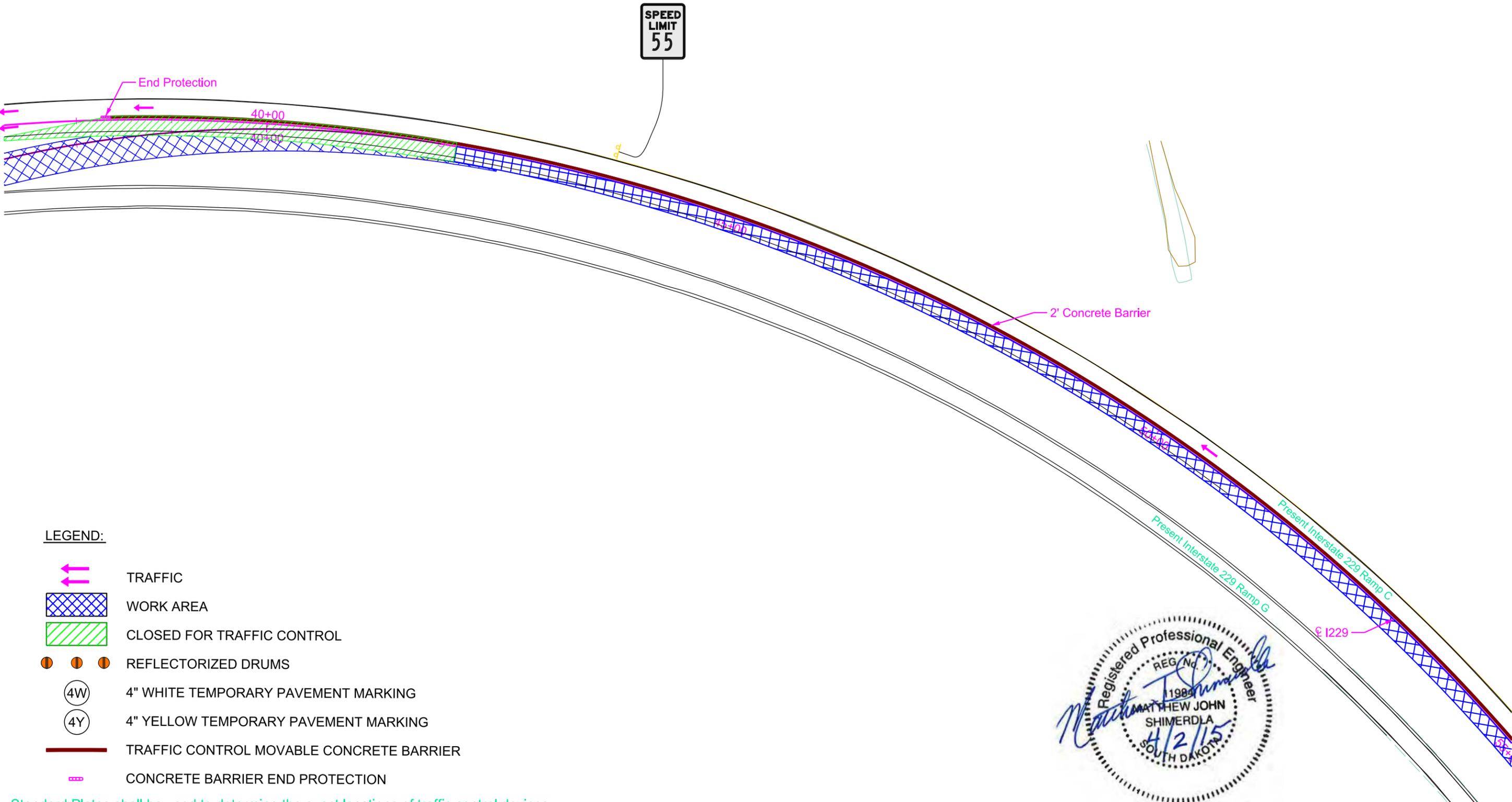


Plot Scale - 1:100

Plotted From - margie_krell

Plot Name -

File - ...Plans\035\c2b.dgn



LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
-  CONCRETE BARRIER END PROTECTION

Standard Plates shall be used to determine the exact locations of traffic control devices

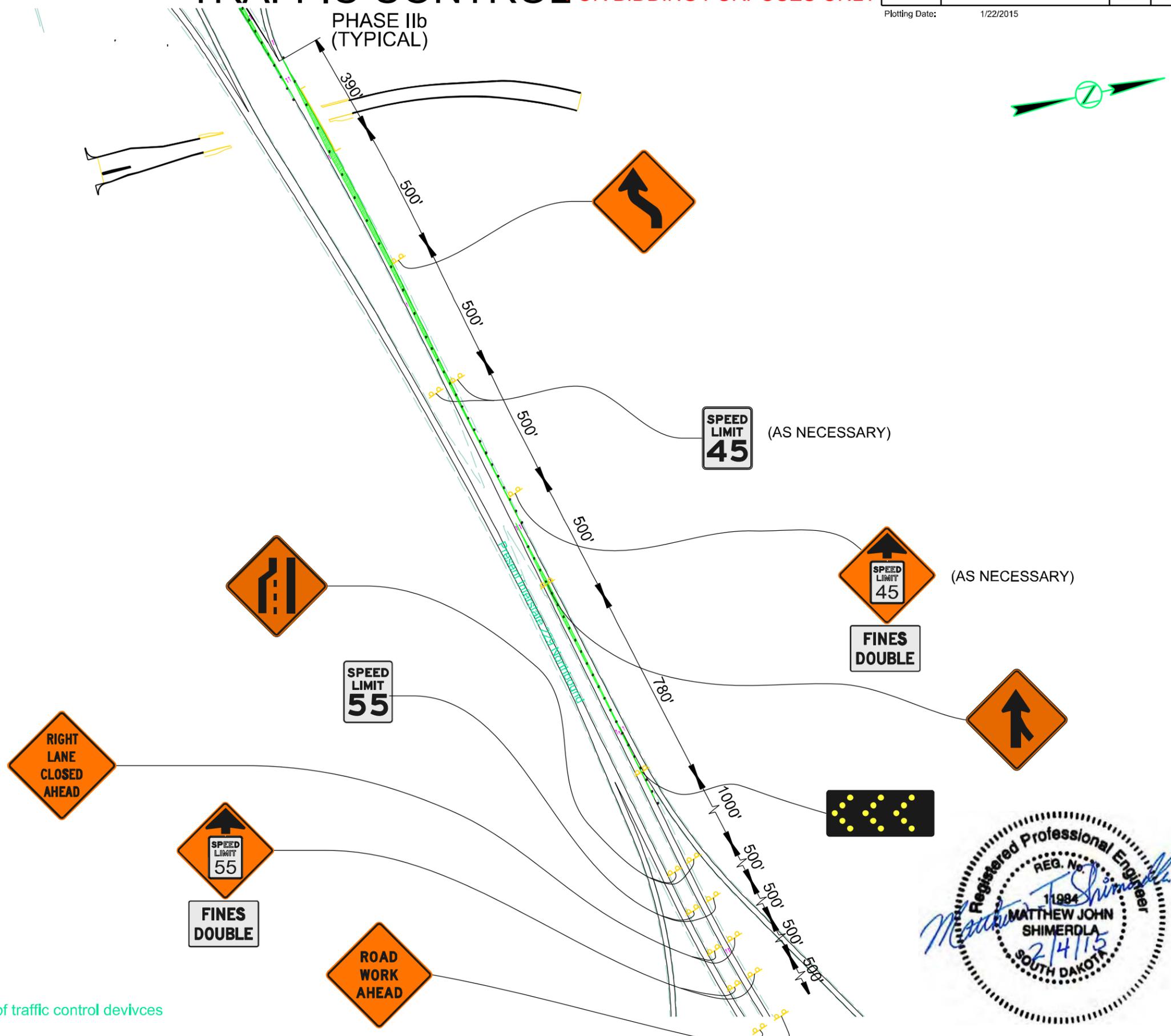


TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C22 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |

Plot Scale - 1:400
Plotted From - geoff_babovrec

Plot Name - ...Plans\0501c2.dgn
48



LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  ARROW MESSAGE BOARD

Standard Plates shall be used to determine the exact locations of traffic control devices



TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C23 | TOTAL SHEETS C32 |
|-----------------------|---------------------------|--------------|---------------------|

Plotting Date: 4/2/2015
Revised: 04-02-2015 (MRK)

PHASE IIb (TYPICAL)

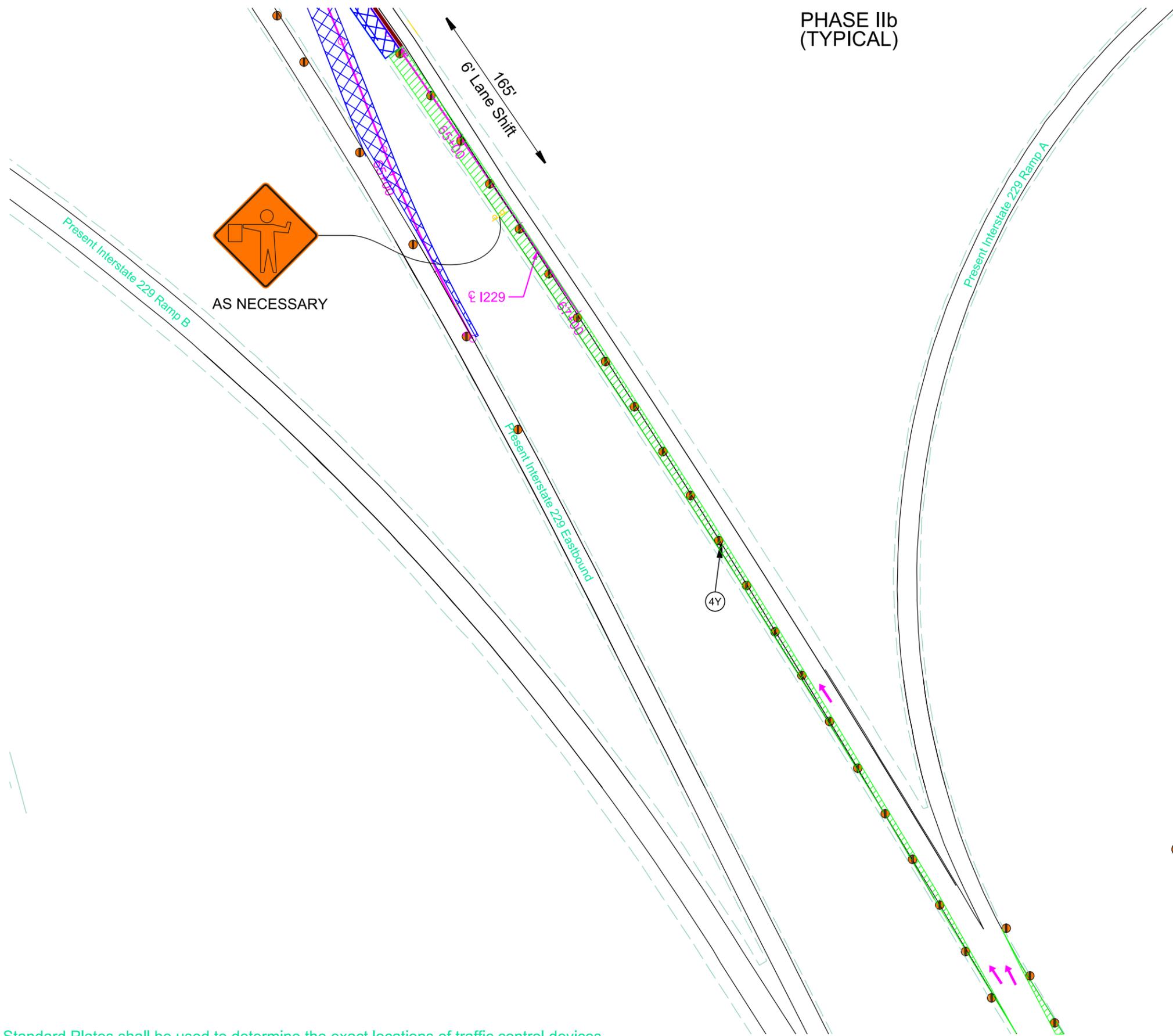


Plot Scale - 1:100

Plotted From - margie_krell

Plot Name -

File - ...Plans\061tc2b.dgn



AS NECESSARY

LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
-  CONCRETE BARRIER END PROTECTION



Standard Plates shall be used to determine the exact locations of traffic control devices

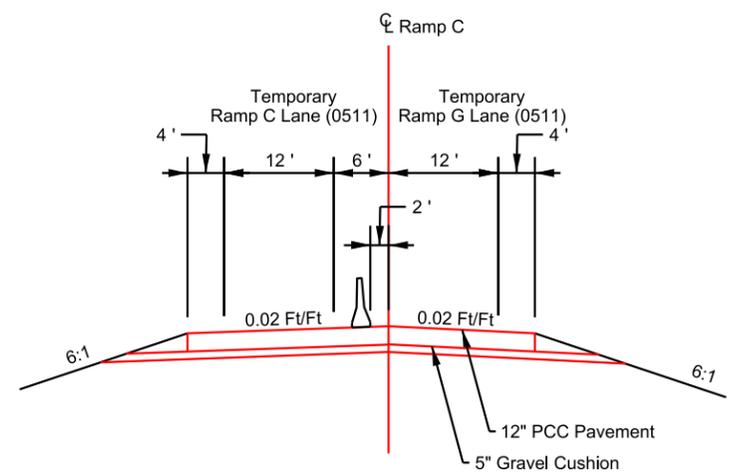
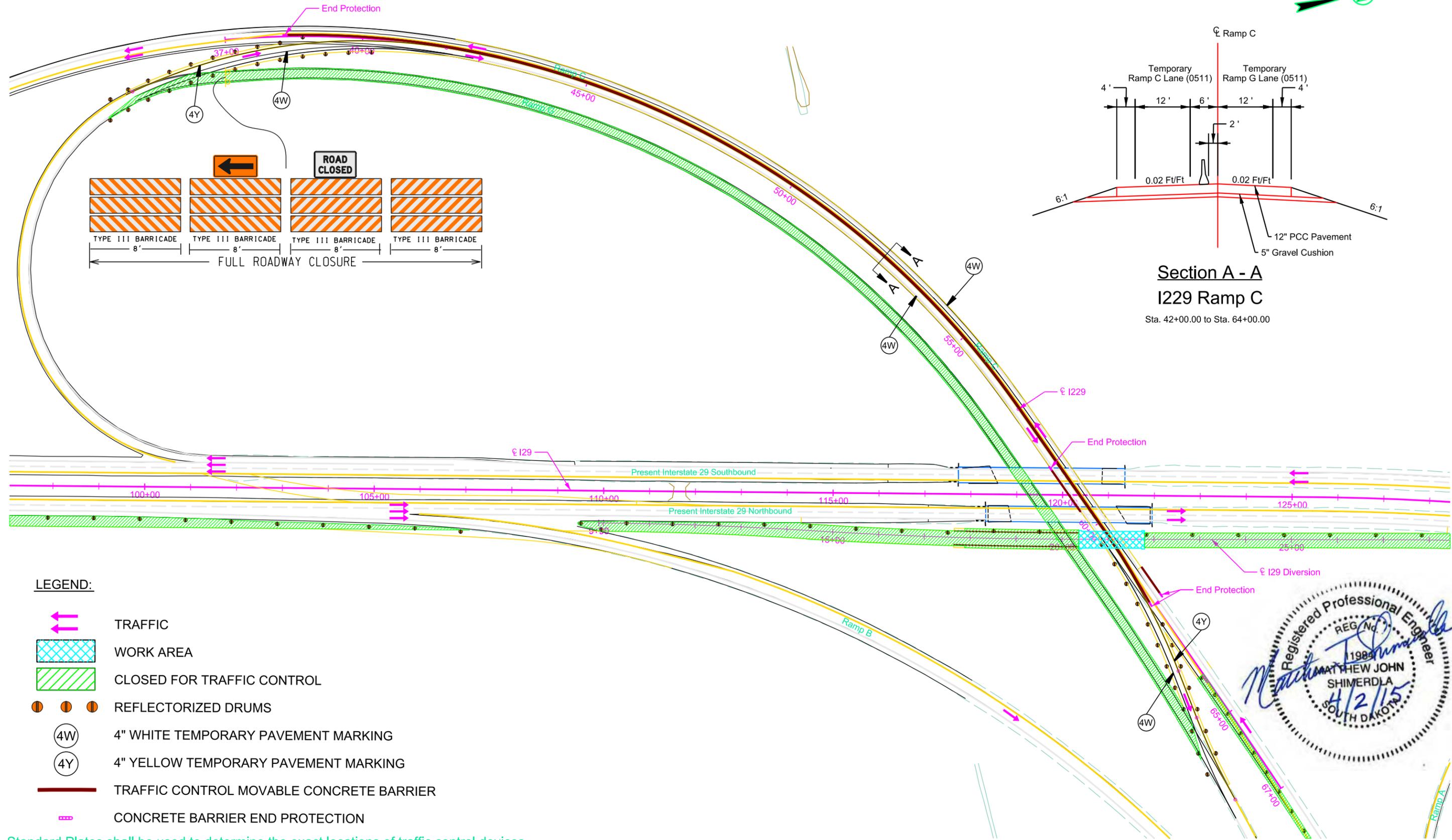
TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

PHASE IIIa (TYPICAL)

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C24 | TOTAL SHEETS C32 |
|-----------------------|---------------------------|--------------|---------------------|

Plotting Date: 4/2/2015
Revised: 04-02-2015 (MRK)



Section A - A
I229 Ramp C
Sta. 42+00.00 to Sta. 64+00.00

LEGEND:

-  TRAFFIC
-  WORK AREA
-  CLOSED FOR TRAFFIC CONTROL
-  REFLECTORIZED DRUMS
-  4" WHITE TEMPORARY PAVEMENT MARKING
-  4" YELLOW TEMPORARY PAVEMENT MARKING
-  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
-  CONCRETE BARRIER END PROTECTION



Standard Plates shall be used to determine the exact locations of traffic control devices

Plot Scale - 1:200

Plotted From - margie_krell

Plot Name - 54

File - ...Plans\100rc3.dgn

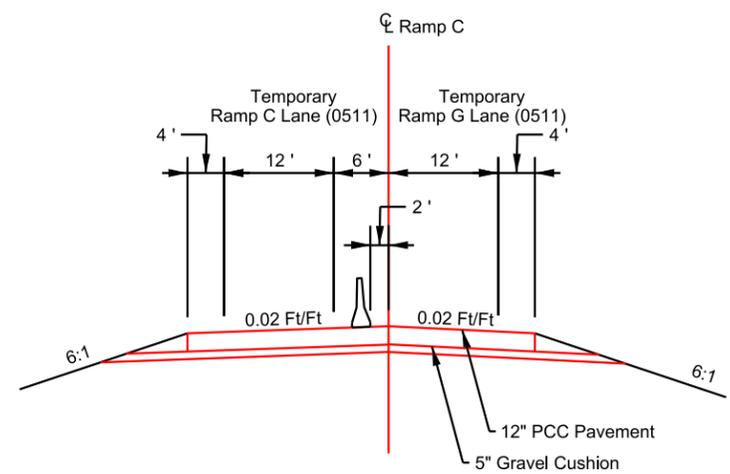
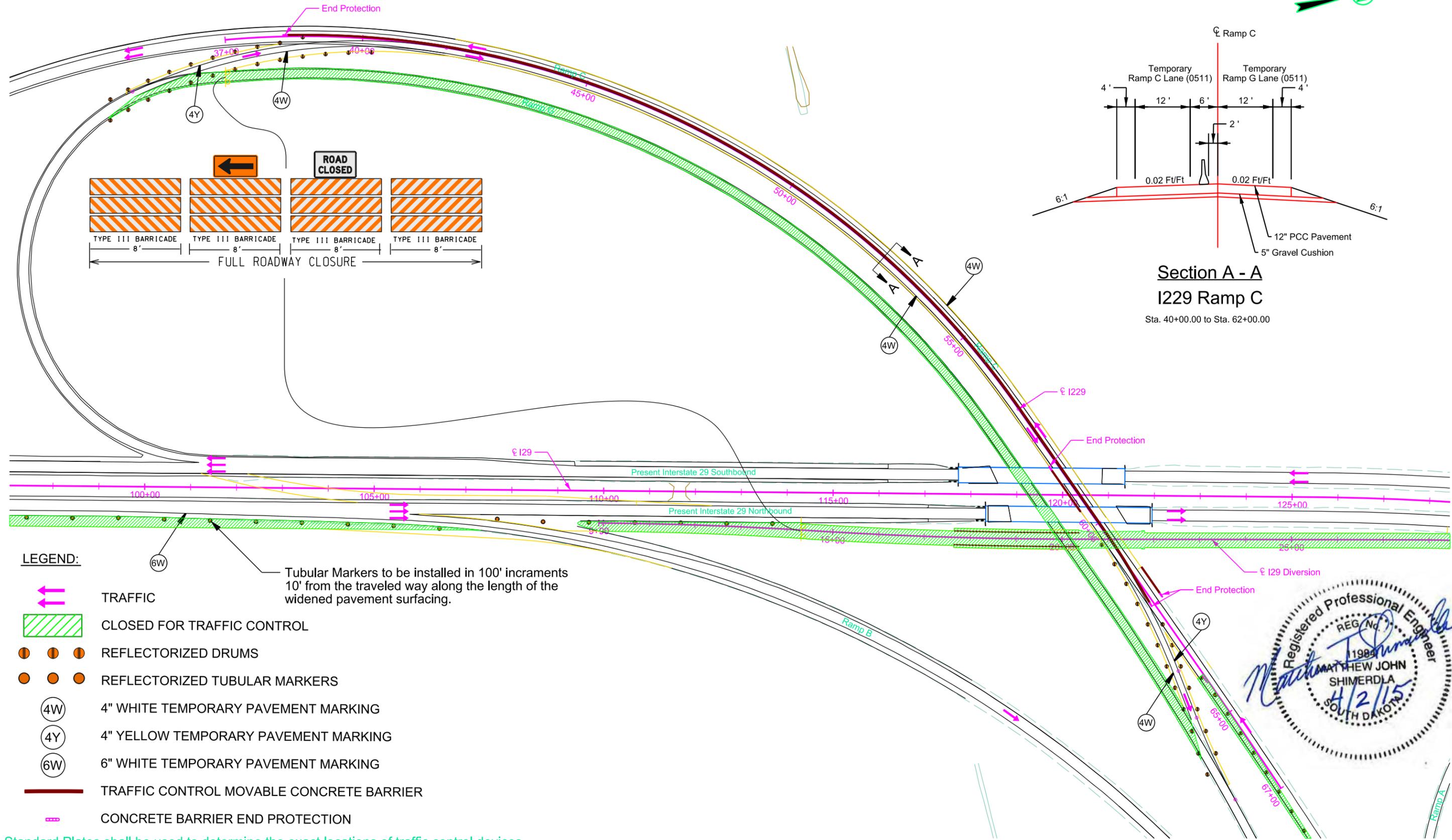
TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

PHASE IIIb (TYPICAL)

| | | | |
|-----------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C25 | TOTAL SHEETS C32 |
|-----------------------|---------------------------|--------------|---------------------|

Plotting Date: 4/2/2015
Revised: 04-02-2015 (MRK)



Section A - A
I229 Ramp C
Sta. 40+00.00 to Sta. 62+00.00

LEGEND:

- TRAFFIC
 - CLOSED FOR TRAFFIC CONTROL
 - REFLECTORIZED DRUMS
 - REFLECTORIZED TUBULAR MARKERS
 - 4" WHITE TEMPORARY PAVEMENT MARKING
 - 4" YELLOW TEMPORARY PAVEMENT MARKING
 - 6" WHITE TEMPORARY PAVEMENT MARKING
 - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
 - CONCRETE BARRIER END PROTECTION
- Tubular Markers to be installed in 100' increments 10' from the traveled way along the length of the widened pavement surfacing.



Standard Plates shall be used to determine the exact locations of traffic control devices

Plot Scale - 1:200

Plotted From - margie_krell

Plot Name -

File - ...Plans\100rc3b.dgn

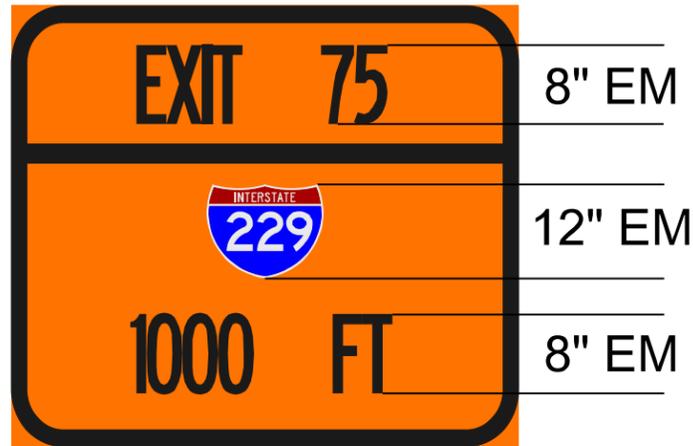
Sign Details

FOR BIDDING PURPOSES ONLY

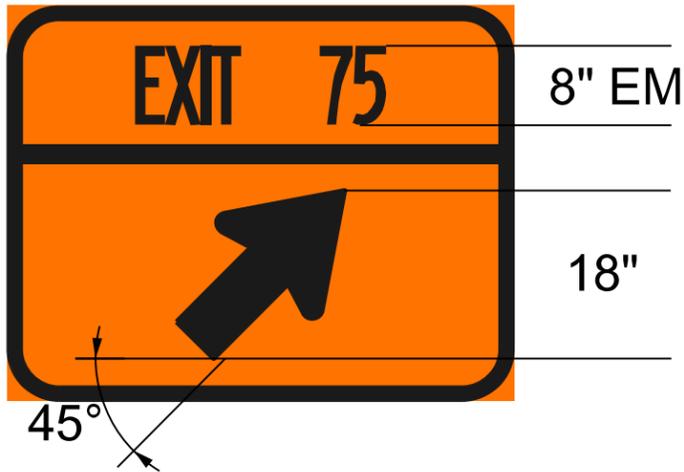
| | | | |
|--------------------------|---------------------------|--------------|---------------------|
| STATE OF SOUTH DAKOTA | PROJECT IM 0292(78)073 | SHEET C26 | TOTAL SHEETS C32 |
| Plotting Date: 1/22/2015 | | | |

Plot Scale - 1:200

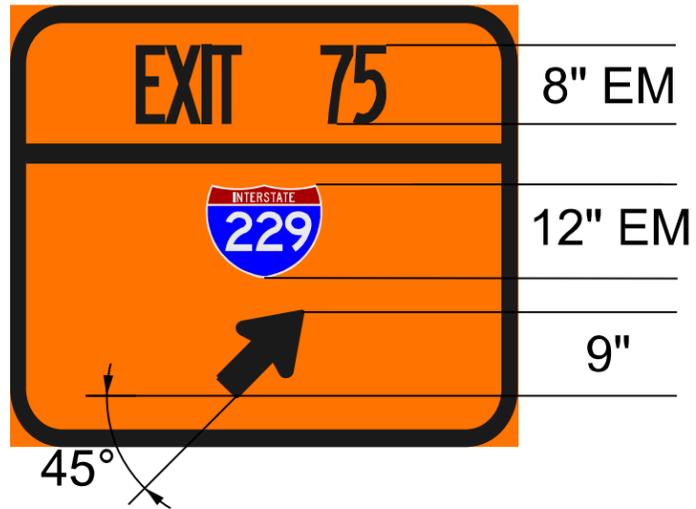
Plot Name -



| | |
|----------------|---------------------------------------|
| SIGN NUMBER | SPECIAL |
| WIDTH X HEIGHT | 5'-0" X 4'-0" |
| BORDER WIDTH | 1.25' |
| CORNER RADIUS | 5.0' |
| LEGEND | 6/8" E. MODIFIED |
| BACKGROUND | TYPE: HIGH INTENSITY COLOR: ORANGE |
| LEGEND/BORDER | TYPE: HIGH INTENSITY COLOR: WHITE |



| | |
|----------------|---------------------------------------|
| SIGN NUMBER | SPECIAL |
| WIDTH X HEIGHT | 5'-0" X 3'-6" |
| BORDER WIDTH | 1.5' |
| CORNER RADIUS | 5.0' |
| LEGEND | 6/8" E. MODIFIED |
| BACKGROUND | TYPE: HIGH INTENSITY COLOR: ORANGE |
| LEGEND/BORDER | TYPE: HIGH INTENSITY COLOR: WHITE |

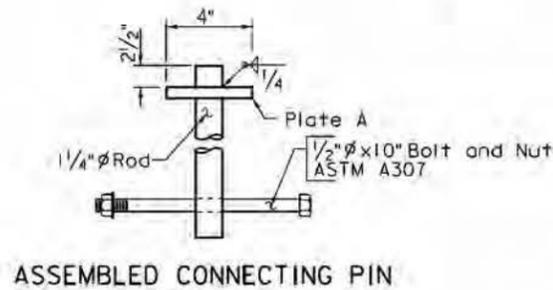
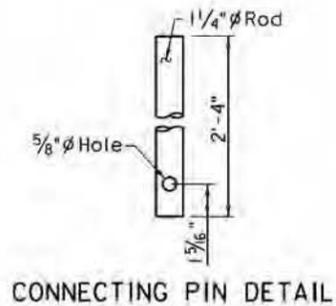
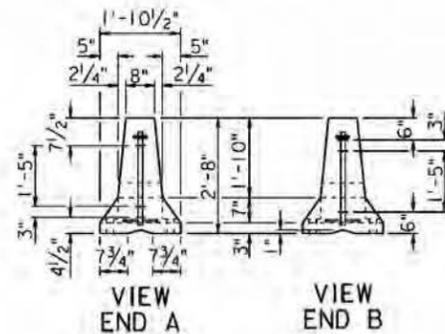
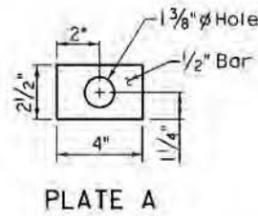
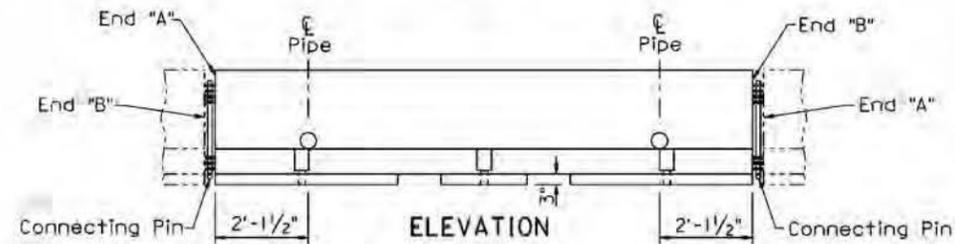
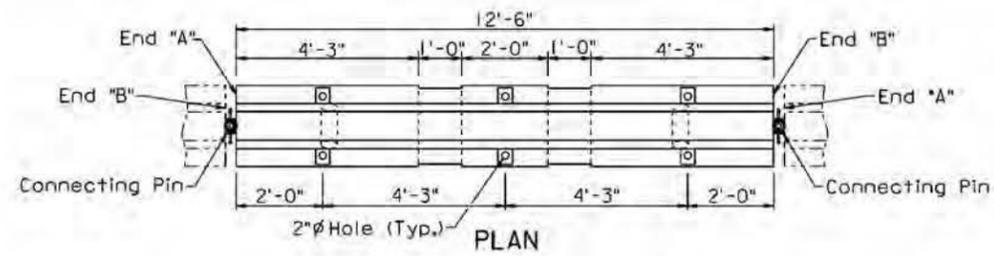


| | |
|----------------|---------------------------------------|
| SIGN NUMBER | SPECIAL |
| WIDTH X HEIGHT | 5'-0" X 4'-0" |
| BORDER WIDTH | 1.25' |
| CORNER RADIUS | 5.0' |
| LEGEND | 6/8" E. MODIFIED |
| BACKGROUND | TYPE: HIGH INTENSITY COLOR: ORANGE |
| LEGEND/BORDER | TYPE: HIGH INTENSITY COLOR: WHITE |

Plotted From - geoff_babovec

File - ...Plans\SignDetails.dgn





June 26, 2009

Published Date: 4th Qtr. 2014

S
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T

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS
(F SHAPE INTERIOR SECTION)

PLATE NUMBER
628.01

Sheet 1 of 2

GENERAL NOTES:

The detailed drawings are for illustrative purpose and depicts the current version of the F shape concrete barrier. If new movable concrete barriers are requested on a project, they shall be constructed according to the F shape movable concrete barrier details on standard plate 628.10.

Each movable concrete barrier section weighs 5030 ± pounds.

Each movable concrete barrier section is detailed to provide end "A" to end "B" connection by insertion of a pin through steel loops.

The Jersey shape or any version of the F shape traffic control movable concrete barriers may be used on a project, however, only the same type or version shall be used for each run of barriers.

Movable concrete barrier sections shall be placed to provide uniform bearing of the sections with the paved surface as approved by the Engineer.

Movable concrete barrier sections shall never be moved or lifted using the end loops.

Movable concrete barrier sections that have been damaged shall not be used. Barrier sections are considered damaged if the loops are end welded onto existing damaged loops, loops are fractured, or there is exposed rebar from fractured concrete.

All cost for transporting the barriers from the specified location to the project site, installing, and returning the barriers to the specified location shall be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

If the concrete barriers need to be moved and reset on the project, requiring the barriers to be transported by truck, all cost for removing, transporting, and resetting the barriers shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". All cost for small shifts in alignment of the barriers, not requiring the barriers to be transported by truck, shall be incidental to various contract items.

June 26, 2009

Published Date: 4th Qtr. 2014

S
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T

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS
(F SHAPE INTERIOR SECTION)

PLATE NUMBER
628.01

Sheet 2 of 2

Plot Scale - 1:200

Plot Name -

File - ...Plans\PlateC-2.dgn

Plotted From -

geoff_babovrec

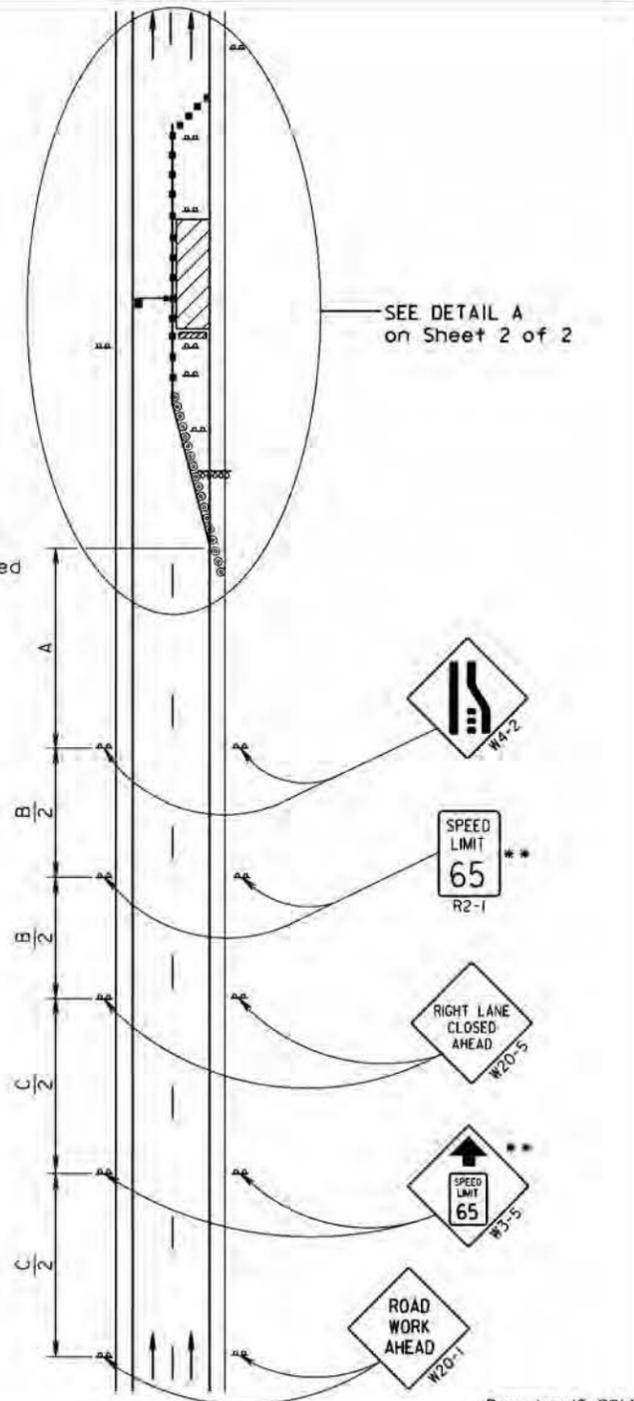
Plotted From -

| 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 | | |
| | (A) | (B) | (C) |
| 70 - 75 | 1000 | 1500 | 2640 |

- ** 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.



December 16, 2014

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 4th Qtr. 2014 | S D D O T | 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 - 50 | 50 * | 600 |
| 55 | 50 * | 660 |
| 60 - 65 | 50 * | 780 |
| 70 - 75 | 50 * | 900 |

- * 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 shall be covered or removed when workers are not present.

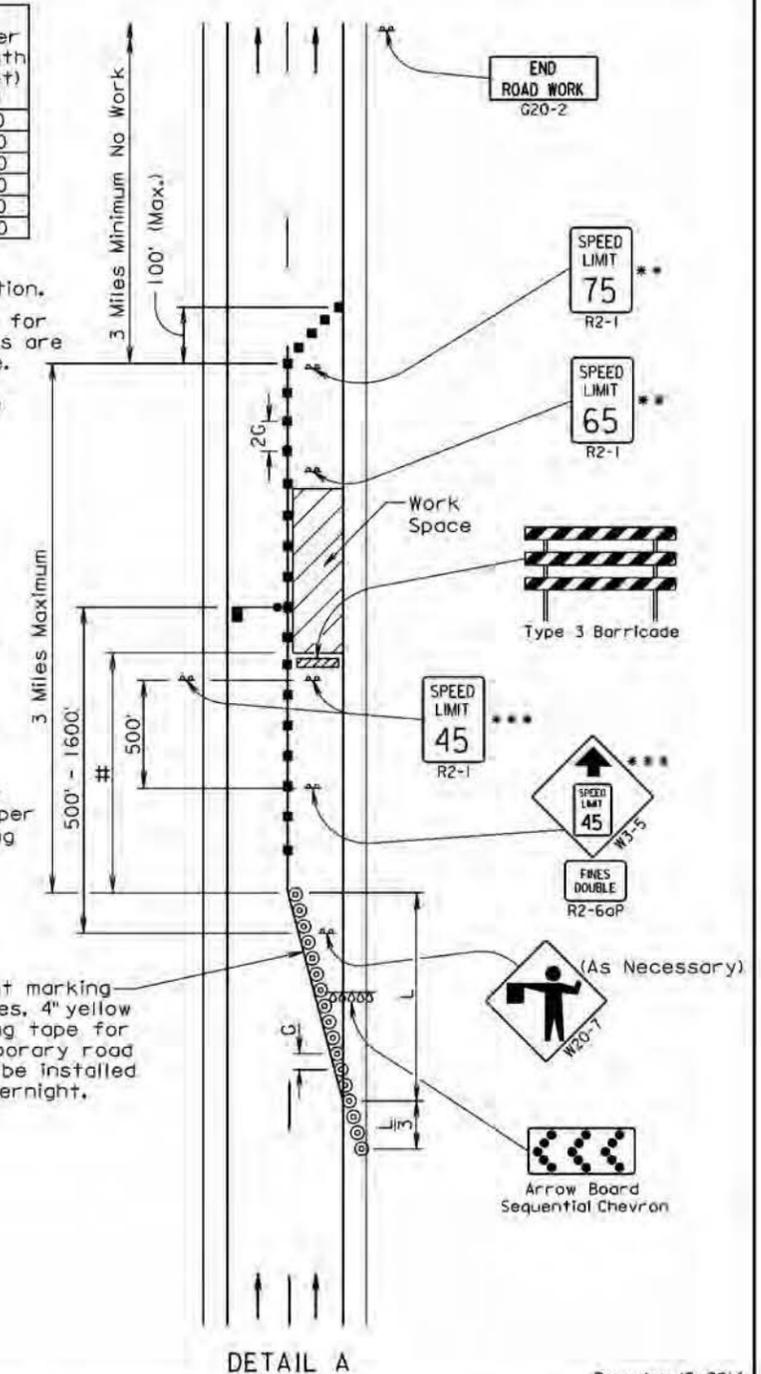
- Flagger (As Necessary)
- ⊙ Reflectorized Drum
- Channelizing Device
- # The Work Space shall be a minimum of 500' from the end of the taper.

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

The channelizing devices shall be 42" cones or drums.

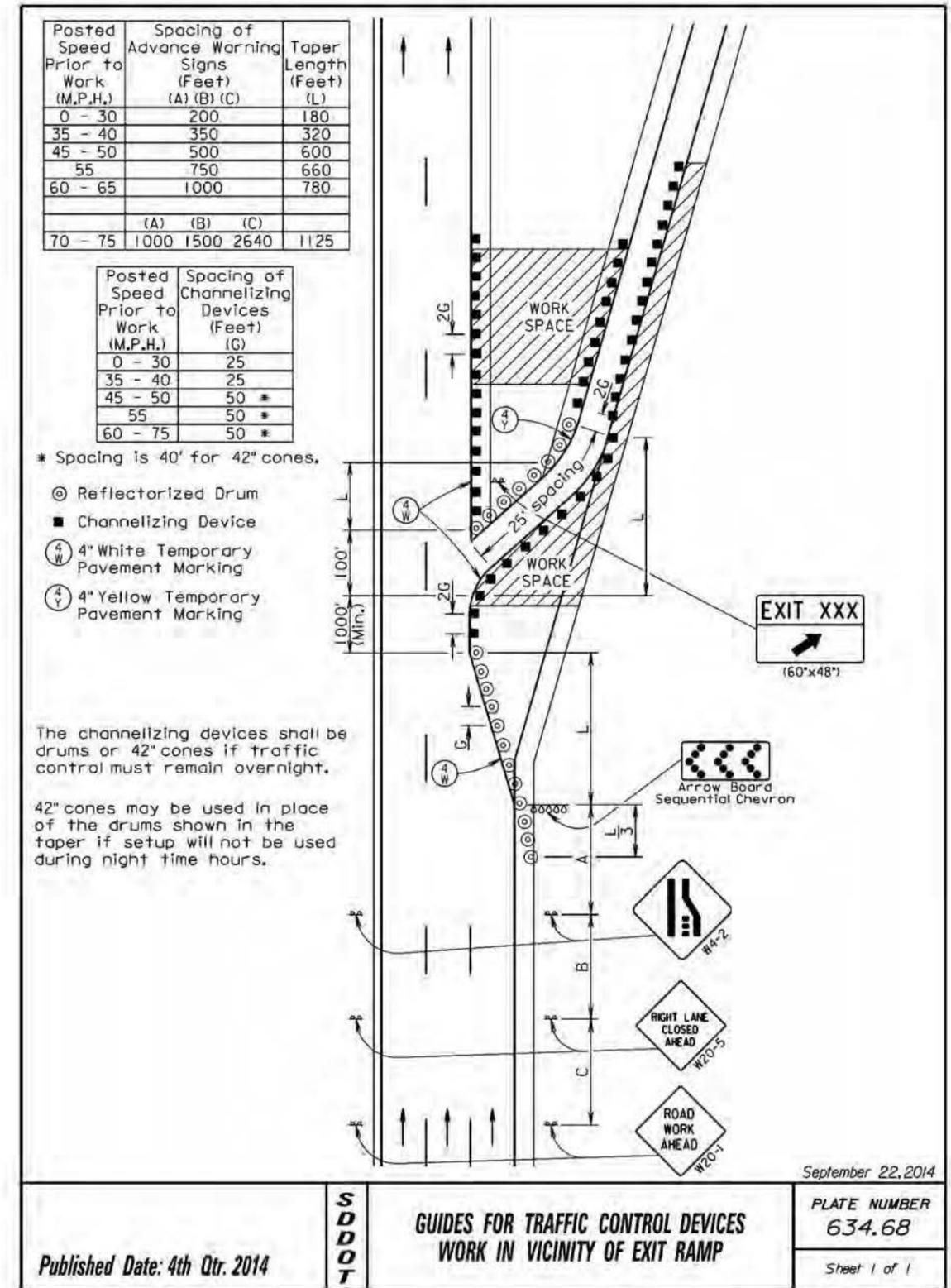
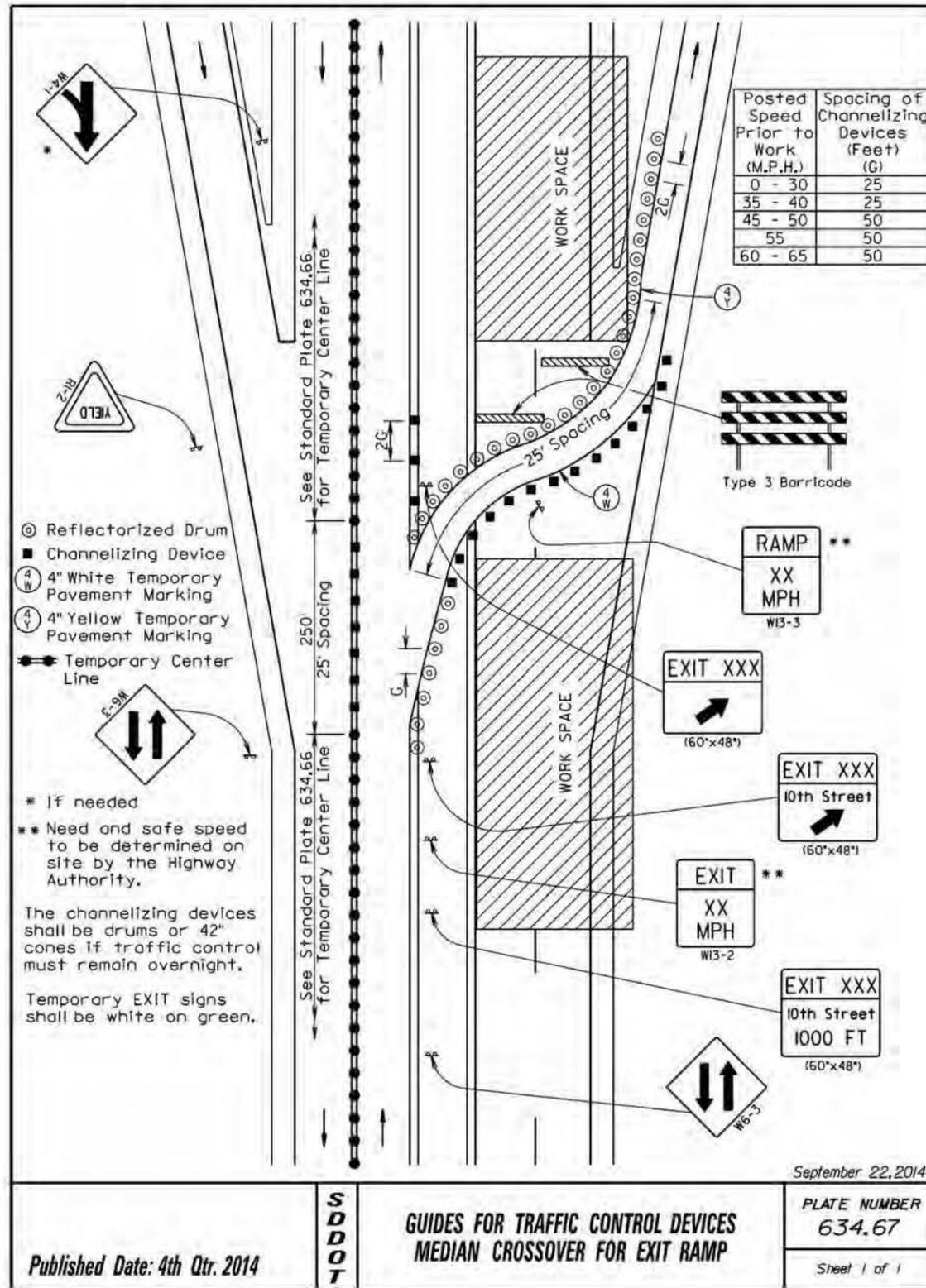
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary road markers at 5' spacing shall be installed when the lane is closed overnight.



December 16, 2014

| | | | |
|-------------------------------|-----------------------|---|------------------------|
| Published Date: 4th Qtr. 2014 | S D D O T | WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS | PLATE NUMBER 634.63 |
| | | | Sheet 2 of 2 |



| Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) | | | Taper Length (Feet) |
|-------------------------------------|---|------|------|---------------------|
| | (A) | (B) | (C) | (L) |
| 0 - 30 | 200 | | | 180 |
| 35 - 40 | 350 | | | 320 |
| 45 - 50 | 500 | | | 600 |
| 55 | 750 | | | 660 |
| 60 - 65 | 1000 | | | 780 |
| | (A) | (B) | (C) | |
| 70 - 75 | 1000 | 1500 | 2640 | 1125 |

| Posted Speed Prior to Work (M.P.H.) | Spacing of Channelizing Devices (Feet) |
|-------------------------------------|--|
| 0 - 30 | 25 |
| 35 - 40 | 25 |
| 45 - 50 | 50 * |
| 55 | 50 * |
| 60 - 65 | 50 * |

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

Temporary pavement markings shall be used if traffic control must remain overnight.
 The channelizing devices shall be drums or 42" cones if traffic control must remain overnight.
 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, 2014

SD DOT
**GUIDES FOR TRAFFIC CONTROL DEVICES
 WORK IN VICINITY OF ENTRANCE RAMP**
 PLATE NUMBER 634.70
 Sheet 1 of 1
 Published Date: 4th Qtr. 2014

RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE

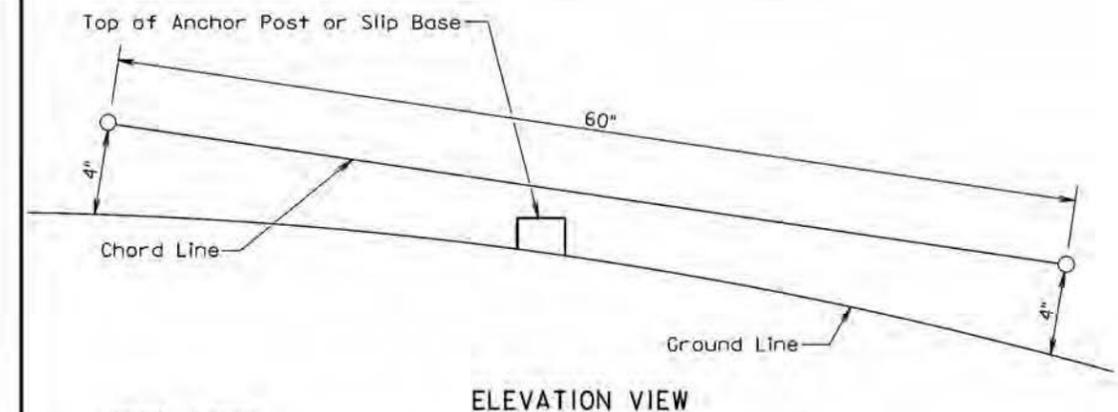
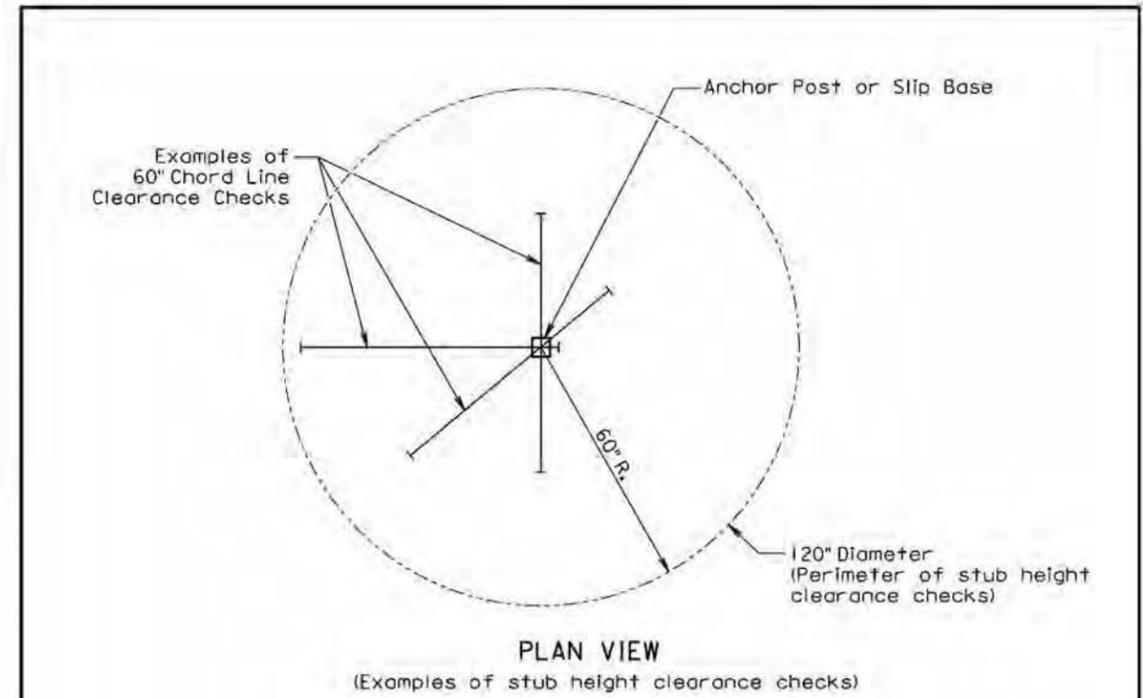
URBAN DISTRICT

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.

September 22, 2014

SD DOT
**CRASHWORTHY SIGN SUPPORTS
 (Typical Construction Signing)**
 PLATE NUMBER 634.85
 Sheet 1 of 1
 Published Date: 4th Qtr. 2014



GENERAL NOTES:

The top of anchor posts and slip bases SHALL 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 shall 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.

July 1, 2005

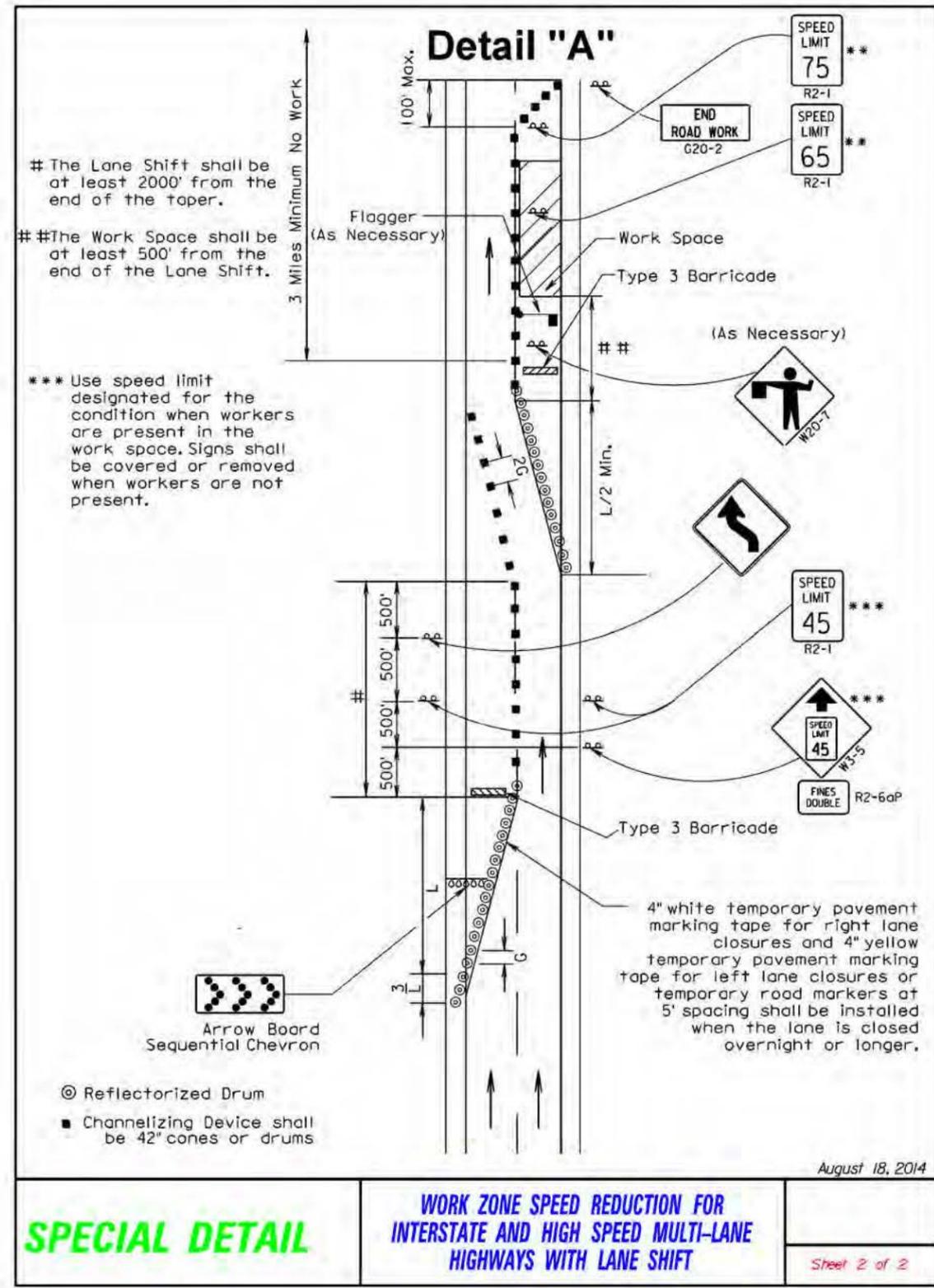
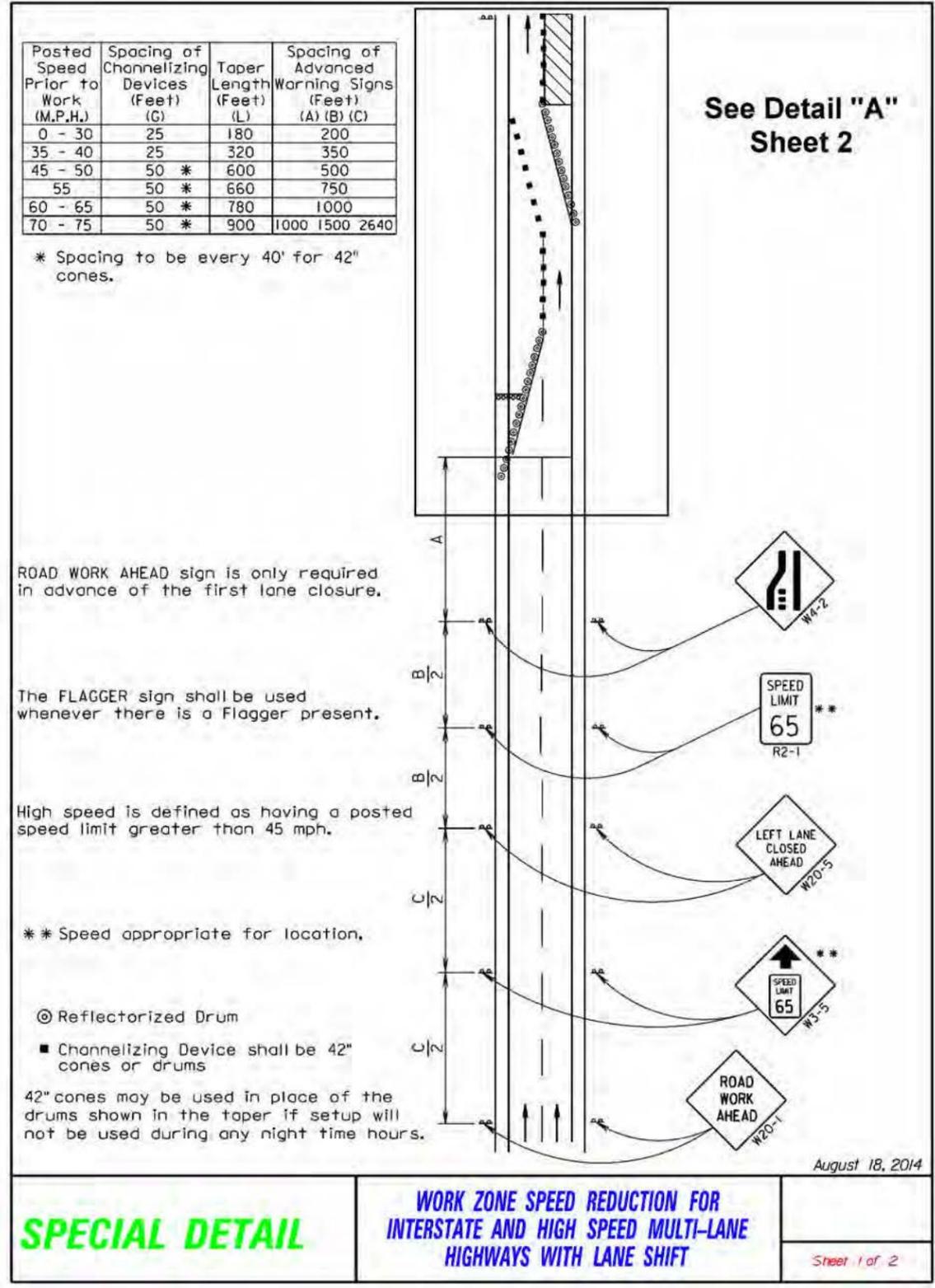
Published Date: 4th Qtr. 2014

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BREAKAWAY SUPPORT STUB CLEARANCE

PLATE NUMBER
634.99

Sheet 1 of 1



Plotted From - geoff_babovenc 1:200 Plot Scale -

Plot Name - ...Plans\PlateC-6.dgn File -