

# Section C: Traffic Control

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0292(96)073 IM 2292(90)0	C1	C40
Plotting Date: 8/31/2015			

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BEGIN IM 0293(96)73  
Station 8+74.08

Str. No. 42-065-030  
MRM 73.38+0.00

Str. No. 42-064-030  
MRM 73.38+0.00

Str. No. 42-066-006  
MRM 75.50

Str. No. 42-067-006  
MRM 75.50

Str. No. 42-070-006

Str. No. 50-172-240  
MRM 76.19

END IM 0293(96)073  
Interstate 29 Station 172+90.28

BEGIN IM 2292(90)0  
Station 4+53.85 - Begin Grading

END IM 2292(90)0  
Station 36+61.20

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

Plotted From - geoff\_babovec

Plot Name -

File - ...\\ppl\LINCO103\titleC.dgn

**SECTION C ESTIMATE OF QUANTITIES**

**01QS**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E4600	Salvage Traffic Control Barrier End Protection	4	Each
250E0010	Incidental Work	Lump Sum	LS
320E1200	Asphalt Concrete Composite	200.0	Ton
628E1200	Haul Movable Concrete Barrier	284	Each
634E0010	Flagging	400	Hour
634E0110	Traffic Control Signs	1,178	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0280	Type 3 Barricade, 8' Single Sided	19	Each
634E0340	Temporary Raised Pavement Markers	5.680	Mile
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	2,217	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	55,672	Feet
634E0640	Temporary Pavement Marking	99,634	Feet
634E0750	Temporary Concrete Barrier End Protection	6	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	2	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	3	Each
634E3000	Traffic Control Barrier	3000	Ft
634E3010	Traffic Control Barrier - State Furnished	3200	Ft
634E3020	Traffic Control Barrier - Rental	5650	Ft
634E3030	Reset Traffic Control Barrier	13175	Ft
634E3040	Haul Traffic Control Barrier	2000	Ft
634E3100	Reset Traffic Control Barrier End Protection	4	Each

**020Q**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
250E0010	Incidental Work	Lump Sum	LS
634E0010	Flagging	200	Hour
634E0110	Traffic Control Signs	415	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0280	Type 3 Barricade, 8' Single Sided	10	Each
634E0340	Raised Pavement Markers	1.520	Mile
634E0420	Type C Advance Warning Arrow Panel	1	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	32,789	Feet
634E0640	Temporary Pavement Marking	8,976	Feet
634E1215	Contractor Furnished Portable Changeable Message Sign	4	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 (4) phases according to the following Notes, Phasing Details, and Special Provisions.

**PHASE I**

**I29 SB Shoulder Widening station 24+94 to station 43+50**  
**I29 SB Mainline station 43+50 to 78+00, station 80+80 to 100+00, station 103+00 to 172+50.**

1. Remove tubular markers and Install barrier on I29 NB for mainline head-to-head traffic control per the Traffic Control Layouts and Standard Plates. Removal of markers shall be incidental work.

2. The Contractor shall maintain (2) lanes of traffic in both directions (head-to-head) on I29 NB pavement during both the am peak hour (from 6:00 AM to 9:00 AM) and the pm peak hour (from 4:00 PM to 7:00 PM).
3. Entrance and Exit Ramps are to remain open utilizing the in-place temporary pavement constructed under Project No. IM 0292(78)073 PCN 0511 and per the Traffic Control Layouts and Standard Plates.
4. Ramp closures on Ramp C and Ramp G for I29 SB bridge construction shall be in accordance with the special provision for contract time and the Traffic Control Layout.
5. Complete removals, grading, pipe culvert installation, surfacing, overhead signing, I29 SB bridge construction, and lighting.

**PHASE Ia**

**Ramp C station 8+75 to 42+00**

1. Maintain (1) lane of traffic per the Traffic Control Layouts and Standard Plates.
2. Complete removals, grading, surfacing, signing, and pavement markings.

**PHASE Ib**

**Ramp G station 10+00 to 38+00, station 39+60 to 49+00**

1. Maintain traffic on existing Ramp G and Ramp C per the Traffic Control Layouts and Standard Plates.
2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.
3. Construct temporary crossover between Ramp G and Ramp C.

**PHASE Ic**

**I229 NB station 149+00 to 152+80, station 155+80 to 181+00**

1. Maintain (2) lanes of traffic per the Traffic Control Layouts and Standard Plates.
2. Complete removals, temporary pavement, grading, surfacing, pipe culvert installation, signing and pavement markings.

**PHASE Id**

**I229 SB from Ramp A gore to station 101+30**

1. Maintain (2) lanes of traffic per the Traffic Control Layouts and Standard Plates. Ramp A to remain open to traffic at all times.
2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.

**PHASE II**

**I29 SB Mainline station 78+00 to 80+80, station 100+00 to 103+00**

**I29 NB Mainline station 107+00 to 109+80, station 134+65 to 137+60**

1. Shift I29 SB traffic to I29 SB lanes and shift I29 NB traffic off of diversion/temporary bridge per the Traffic Control Layouts and Standard Plates.
2. The Contractor shall maintain (2) lanes of traffic in both directions on I29 SB & NB pavement during both the am peak hour (from 6:00 AM to 9:00 AM) and the pm peak hour (from 4:00 PM to 7:00 PM).
3. Complete removals, grading, surfacing.
4. Complete temporary median crossovers station 98+96 to 108+17 and station 136+24 to 145+73.

**FOR BIDDING PURPOSES ONLY**

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	IM 0292(96)073/IM 2292(90)0	C2	C40
Revised: 10/22/2015 (MRK)			

**PHASE IIa**

**Ramp C station 38+50 to 42+00**

1. Maintain (1) lane of traffic per the Traffic Control Layouts and Standard Plates.
2. Complete removals, grading, surfacing, and pavement markings.

**PHASE IIb**

**Ramp G station 38+00 to 39+60**

1. Remove temporary bridge and embankment material. Ramp closures on Ramp C and Ramp G for temporary bridge removal shall be in accordance with the special provision for contract time and the Traffic Control Layout.
2. Complete removals, grading, surfacing, and pavement markings.

**PHASE IIc**

**I229 NB station 152+80 to 157+20**

1. Maintain traffic per the Traffic Control Layouts and Standard Plates.
2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.

**PHASE IId**

**I229 SB station 65+00 to Ramp A gore**

1. Maintain (1) lane of traffic per the Traffic Control Layouts and Standard Plates.
2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.

**PHASE III**

**I29 NB Mainline station 43+50 to 107+00, station 109+80 to 134+65, station 137+60 to 172+50**

1. Install barrier on I29 SB for mainline head-to-head traffic control per the Traffic Control Layouts and Standard Plates.
2. The Contractor shall maintain (2) lanes of traffic in both directions (head-to-head) on I29 SB pavement during both the am peak hour (from 6:00 AM to 9:00 AM) and the pm peak hour (from 4:00 PM to 7:00 PM).
3. Entrance and Exit Ramps are to remain open per the Traffic Control Layouts and Standard Plates.
4. Ramp closures on Ramp C and Ramp G for I29 NB bridge construction shall be in accordance with the special provision for contract time and the Traffic Control Layout.
5. Complete removals, grading, pipe culvert installation, surfacing, overhead signing, I29 NB bridge construction, and lighting.



**PHASE III (continued)**

- **PHASE IIIa**  
**Ramp A Complete Full Width**
  1. Maintain traffic on existing Ramp A alignment per the Traffic Control Layouts and Standard Plates.
  2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.
  3. SDN Communications has existing buried fiber optic cable to relocate along new Control of Access fence for Ramp A realignment. Contractor to coordinate with SDN concerning SDN planned relocation and timing of existing Control of Access fence removal.
- **PHASE IIIb**  
**I 229 NB & SB Inside Lanes**
  1. Maintain traffic per the Traffic Control Layouts and Standard Plates.
  2. Complete removals, grading, surfacing, pipe culvert installation, signing and pavement markings.

**PHASE IV**  
**Approach Slab Repairs at Tea Interchange**

1. Install traffic control on I29 NB and SB per the Standard Plates.
2. Complete the repairs for the approach slabs as per the plan requirements.
3. The Contractor shall maintain (2) lanes of traffic in both directions during both the am peak hour (from 6:00 AM to 9:00 AM) and the pm peak hour (from 4:00 PM to 7:00 PM). Lane closure signing already on the project shall be used. No extra payment for traffic control will be made for this work.

**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.

**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.

**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 4.5 of the 2015 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.

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 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 3 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 and I229 / Ramp C.

**MAINTENANCE OF OF NB LANES, SHOULDERS AND I-29 DIVERSION**

It is anticipated that patching will be required on the existing NB lanes, shoulders and I29 diversion. The contractor shall be responsible for maintaining the surface throughout the length and duration of the project.

Included in the Estimate of Quantities is 200 tons of Asphalt Concrete Composite for this work.

Cost for maintaining the mainline surface, shoulders and I29 diversion for the length and duration of the project shall be incidental to the contract unit price per ton for "Asphalt Concrete Composite".

**FOR BIDDING PURPOSES ONLY**

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Revised: 9/25/2015 (MRK)

**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/I229 ROAD WORK  
STARTS (Date)

Prior to the setting of new girders over traffic lanes, and removal 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 Project 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 an 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 square foot for "Traffic Control Signs".



**TRAFFIC CONTROL BARRIER**

The contractor shall supply additional traffic control barrier needed for this project. All traffic control barriers, and temporary concrete barrier end protections, must meet Test Level 3 crash requirements for NCHRP 350 or MASH. The estimate includes quantities for the rental of the traffic control barrier, supplying traffic control barrier to be retained by the Department, as well as barrier supplied by the Department for use on the project, to be retained by the Department. The bid items to be utilized for this project include the following:

**Traffic Control Barrier – State Furnished:** Barriers supplied by the Department, for use on this project. The Department maintains ownership of the barriers. Cost includes pick-up, setting, hauling and stockpiling the concrete barriers in the Department maintenance yard. These barriers are 12.5' temporary concrete barriers, as per standard plate 628.01, however payment will be at the contact unit price per foot.

**Traffic Control Barrier:** Barriers supplied by the Contractor, not previously used, with the Department maintaining ownership at the conclusion of the project. Cost includes supplying, and setting the barriers, as well as hauling to the Department maintenance yard, when no longer needed on the project.

**Traffic Control Barrier – Rental:** Barriers supplied by the Contractor, with the Contractor maintaining ownership at the conclusion of the project. Cost includes supplying, and setting the barriers, as well as hauling the barriers from the project at the conclusion of the project.

**Reset Traffic Control Barrier:** Barriers that have been previously set on the project, and must be reset to a new location. Costs for removal, storage (as necessary), and resetting the barriers on the project shall be paid for at the contract unit price per foot.

Please note that not all barriers will be reset. Barriers no longer needed shall be removed from the project, as required. There are currently 284 (3,550') barriers currently in place on the project. The cost to reset the existing barrier between Phase 2 and Phase 3 will be paid for at the contract unit price per foot for Reset Traffic Control Barrier. The cost to return these barriers to the south maintenance yard will be paid for at the contract unit price per each for "Haul Movable Concrete Barrier."

In addition, there are also 4 barrier end protections (crash cushions) currently in place on the project. These end protections are Department owned, and may be reset on the project, as needed. Payment to reset end protections, as required, will be paid for at the contract unit price per each for Reset Traffic Control Barrier End Protection. Once the end protection is no longer needed on the project, they shall be removed and delivered to the Sioux Falls Area office adjacent to the I90/Marion Road interchange. Cost to salvage and deliver the end barrier protections shall be paid for at the contract unit price per each for "Salvage Traffic Control Barrier End Protection."

The following table shows the barrier required for each phase of construction. There are 540 temporary concrete barriers (6,750') being supplied by the Department for traffic control purposes. 284 (3,550') barriers are currently installed on as shown in the plans, and will not need to be reset for Phase 1. The contractor will supply 3,000' of new Traffic Control Barriers, to be retained by the Department, and 5,650' of Traffic Control Barrier - Rental to be supplied and retained by the Contractor for traffic control purposes.

**FOR BIDDING PURPOSES ONLY**

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	IM 0292(96)073/IM 2292(90)0	C4	C40

Revised: 9/25/2015 (MRK)

**TABLE OF TRAFFIC CONTROL BARRIER**

Phase	Barrier in Place* (Ft)	Traffic Control Barrier–State Furnished (Ft)	Traffic Control Barrier (Ft)	Traffic Control Barrier – Rental (Ft)	Reset Traffic Control Barrier (Ft)	Temporary Concrete Barrier End Protection (Each)	Reset Traffic Control Barrier End Protection (Each)	Haul Moveable Concrete Barrier (Each)	Haul Traffic Control Barrier (Ft)
1	3,550	3,200	3,000	5,650		6			
2					200		1		
3					12,975		3		
End								284	2,000

\* Not a pay item

Upon completion of the project, a total of 2,000 of the 3,000 feet of Traffic Control Barrier will be hauled to other locations. 1,000 feet will be hauled to the Yankton Area office, and 1,000 feet will be hauled to the Mitchell Area office. The remaining 1000' will be returned to the Sioux Falls south yard. Cost for Haul Traffic Control Barrier, per foot, will include all costs to load, haul, unload, and stockpile the 2,000' of Traffic Control Barrier, as directed by the Area office.

Traffic Control Barrier that is to be retained by the Department shall be one of the two following products:

- Traffic Control Movable Concrete Barrier (F Shape Interior Section) built in accordance with Standard Plate 628.01
- ZoneGuard produced by Hill & Smith  
987 Buckeye Park Road  
Columbus, OH 43207  
Steve Draginis 612.437.3040 (ph)  
<http://www.hillandsmith.com/zoneguard/>

ZoneGuard, if selected, shall be installed as per the manufacturer's recommendations. The Contractor will be required to have a company representative on site when installing ZoneGuard barrier.

If ZoneGuard is supplied for barrier, to be retained by the Department (Traffic Control Barrier bid item), the length supplied must include 5 – 30' sections and 5 – 16' sections, as part of the 3000' specified in the plans.

Any transitional section that may be required, due to multiple types of barrier being supplied on the project, is incidental to the contract unit price per foot for the barrier, and no additional payment will be made.

Traffic control barriers will be needed for the following locations during construction:

**Phase I**

Roadway	Station	to Station	Length (Ft)	Comments
I-29	44+75	113+00	6,825	
I-29	118+25	120+25	200	At temporary structure
I-29	118+25	120+25	200	At temporary structure
I-29	125+25	171+50	4,625	
RampC	38+25	62+25	2,612.5	CL under I29, placed on previous project
RampC	60+50	62+25	312.5	EB outside shoulder, placed on previous project
RampC	58+25	60+25	262.5	WB outside shoulder, placed on previous project
I-29			362.5	Under 57 <sup>th</sup> St structure
			<b>Total</b>	<b>15,400</b>

**Phase II**

Roadway	Station	to Station	Length (Ft)	Comments
RampC	56+00	64+25	825	CL under I29
			<b>Total</b>	<b>825</b>

**Phase III**

Roadway	Station	to Station	Length (Ft)	Comments
I-29	44+75	171+75	12,700	
I-29	115+50	118+25	275	NB outside shoulder
			<b>Total</b>	<b>12,975</b>



**BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS**

A yellow linear delineation system panel shall be attached to each side of the barrier sections used on the left side of traffic lanes. A yellow or white linear delineation system panel shall be attached to the side of the barrier section exposed to traffic on the right side of the traffic lanes.. 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/Very High Intensity sheeting per ASTM D4956 Type XI. The Contractor shall furnish, install and maintain panels as follows:

- One panel along each concrete barrier section installed at the center of the barriers when measured along the length
- Four panels along each 50' ZoneGuard barrier section spaced at 12.5' center to center.

The panels shall be installed 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 replacement with an alternate color. 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.

**CONCRETE BARRIER END PROTECTION**

Documentation on the crash cushion, which includes the drawing details of the crash cushion, details for the transition to the traffic control 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 traffic control barrier with a transition that meets test level 3 requirements of NCHRP 350 or MASH at locations shown below in the Table of 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 "Temporary Concrete Barrier End Protection".

One barrier end protection, removed after Phase 1, may be reinstalled for Phase 3. The cost for removal and reset of the barrier protection for Phase 3 shall be paid for at the contract unit price per each for "Reset Traffic Control Barrier End Protection".

**TABLE OF BARRIER END PROTECTION**

Location	Station	Location	Unidirectional / Bidirectional	Quantity (Reset)	Quantity (New)
I-29	44+50	RT- Phase1	Bidirectional		1
I-29	113+00	RT- Phase1	Bidirectional		1
I-29	118+00	RT- Phase1	Bidirectional		2
I-29	125+50	RT- Phase1	Bidirectional		1
I-29	171+50	RT- Phase1	Bidirectional		1
RampC	56+00	LT- Phase2	Bidirectional	1	
I-29	44+50	LT- Phase3	Bidirectional	1	
I-29	115+50	LT- Phase3	Bidirectional	1	
I-29	171+50	LT- Phase3	Bidirectional	1	
Total				4	6

**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.

Temporary 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.

Temporary 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 Temporary 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 Raised Pavement Markers 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.

**FOR BIDDING PURPOSES ONLY**

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Revised: 9/25/2015 (MRK)

**CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN**

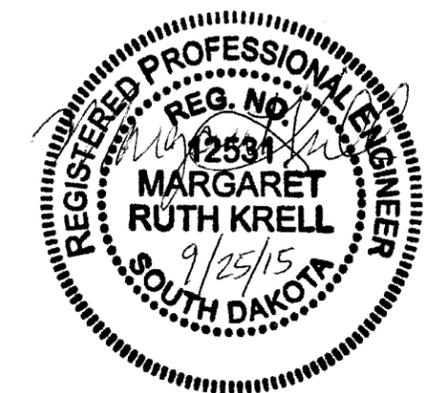
Contractor Furnished Portable Changeable Message Signs shall be utilized on this project to advise the traveling public of project conditions and as stated under the notes for ADVANCE CLOSURE NOTICE. The Contractor shall furnish, position and maintain the message signs at locations as directed by the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

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 Changeable Message Sign".



# Itemized List of Traffic Control

FOR BIDDING PURPOSES ONLY

STATE OF  
SOUTH  
DAKOTA

PROJECT  
IM 0292(96)073  
IM 2292(90)0

SHEET  
C5

SHEETS  
C40

Sign Code	Sign Size	Description	01QS		020Q	
			Number Required	Square Feet	Number Required	Square Feet
E5-2a	48" X 36"	Exit Closed	1	12	0	0
G20-1	48" X 24"	Road Work Next 3 Miles	5	40	3	24
G20-2	48" X 24"	End Road Work	4	32	3	24
R1-2	48" X 48" X 48"	Yield	2	14	0	0
R2-1	36" X 48"	Speed Limit 55	8	96	2	24
R2-1	36" X 48"	Speed Limit 45	2	24	0	0
R2-6ap	36" X 24"	Fines Double	5	30	2	12
R4-7	36" X 48"	Keep Right Symbol	1	12	0	0
R11-2	48" X 30"	Road Closed	4	40	4	40
SW12-1B	60" X 30"	Highway Workers Give 'Em A Brake	4	50	2	25
W1-4r	48" X 48"	Reverse Curve Symbol (Right)	1	16	1	16
W1-4br	48" X 48"	Double Right Reverse Curve	4	64	0	0
W1-4l	48" X 48"	Reverse Curve Sybmol (Left)	0	0	1	16
W1-4bl	48" X 48"	Double Left Reverse Curve	4	64	0	0
W1-6	60" X 30"	One-Direction Large Arrow	5	62.5	4	50
W3-2	48" X 48"	Yield Ahead	2	32	0	0
W3-5	48" X 48"	Speed Limit XX Ahead	5	80	2	32
W4-1	48" X 48"	Merge Symbol	4	64	0	0
W4-2	48" X 48"	Lt or Rt Lane Ends Symbol	2	32	2	32
W4-3	48" X 48"	Added Lane Symbol	1	16	1	16
W6-1	48" X 48"	Divided Highway	1	16	0	0
W6-3	48" X 48"	Two Way Traffic Symbol	4	64	0	0
W13-1P	30" X 30"	Advisory Speed (plaque)	4	25	0	0
W13-2	36" X 48"	Exit 45 MPH	2	24	0	0
W13-3	36" X 48"	Ramp 45 MPH	2	24	0	0
W20-1	48" X 48"	Road Work Ahead	2	32	2	32
W20-5	48" X 48"	Lt or Rt Lane Closed Ahead	2	32	2	32
W20-7	48" X 48"	Flagger Symbol	2	32	0	0
Special	60" X 48"	Exit 75 Interstate 229 1000 Ft	2	40	0	0
Special	60" X 48"	Exit 75 Interstate 229 Arrow Right	2	40	0	0
Special	60" X 48"	Exit 75 Arrow Right	2	40	0	0
Special	60" X 48"	Exit 1B Interstate 29 Arrow Right	1	20	1	20
Special	60" X 48"	Exit 1B Arrow Right	1	20	1	20
*****	*****	Type III Barricade 8'	19	N/A	10	N/A
<b>TOTAL SQ. FT. (01QS):</b>				1177.5	<b>TOTAL SQ. FT.(020Q):</b>	
					415	



FOR BIDDING PURPOSES ONLY

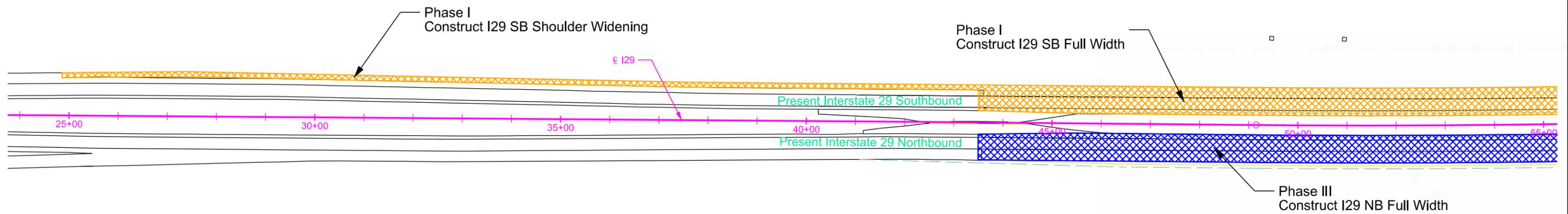
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C6	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS



Plot Scale - 1:200

Plot Name -



**LEGEND:**

- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III
- TEMPORARY PAVEMENT

**NOTES:**

Phase I

- Install Median Delineator/Barrier
- Shift I29NB Traffic to I29NB onto the Temporary Bridge
- Shift I29 SB Traffic to I29 NB Lanes
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

Phase II

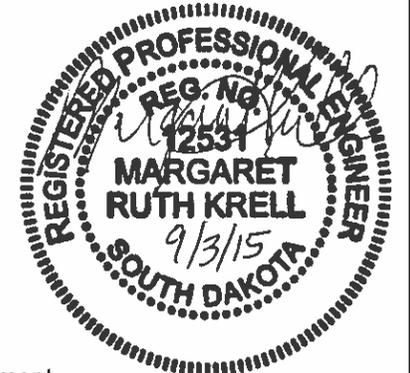
- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

Phase III

- Shift I29 NB Traffic to I29 SB Lanes
- Construct:
  - I29 NB: Complete Full Width
  - Ramp A: Complete Full Width
  - Ramp B: Complete Portion on Existing Alignment
  - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic

Phase IV

- Complete Approach Slab Repairs at TEA Interchange



Plotted From - geoff\_babovrec

File - ...Plans\025sec.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C7	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS

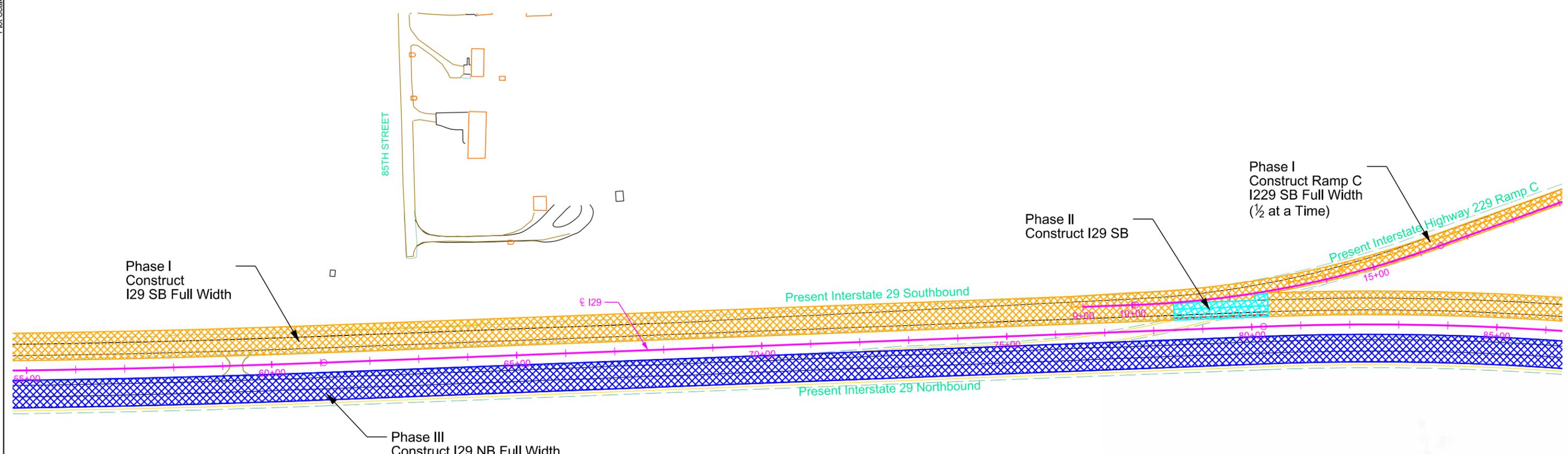


Plot Scale - 1:200

Plotted From - geoff\_babovrec

Plot Name -

File - ...Plans\055sec.dgn



**LEGEND:**

- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III
- TEMPORARY PAVEMENT

**NOTES:**

Phase I

- Install Median Delineator/Barrier
- Shift I29NB Traffic onto the Temporary Bridge
- Shift I29 SB Traffic to I29 NB Lanes
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

Phase II

- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

Phase III

- Shift I29 NB Traffic to I29 SB Lanes
- Construct:
  - I29 NB: Complete Full Width
  - Ramp A: Complete Full Width
  - Ramp B: Complete Portion on Existing Alignment
  - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic

Phase IV

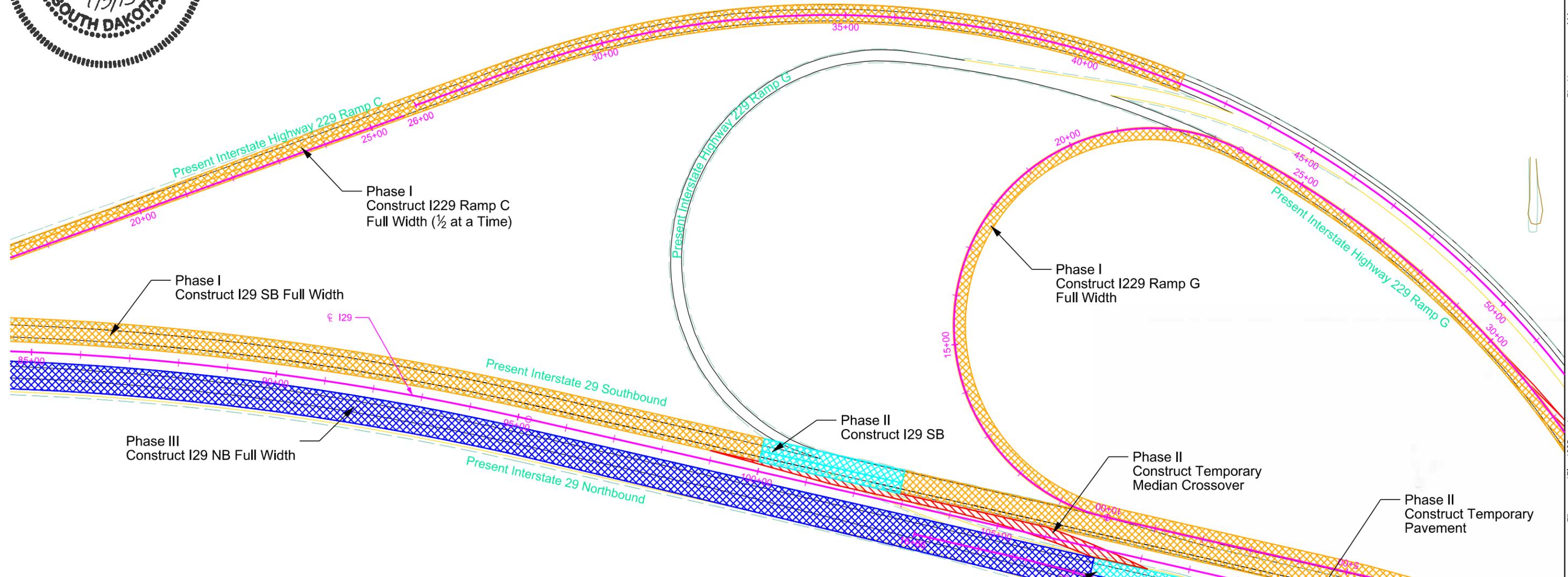
- Complete Approach Slab Repairs at TEA Interchange



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0		
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS



### NOTES:

#### Phase I

- Install Median Delineator/Barrier
- Shift I29 NB Traffic onto the Temporary Bridge
- Shift I29 SB Traffic to I29 NB Lanes
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - SB Bridge Replacement
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment (23+25 to 44+46)
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - Ramp G to Ramp C Crossover (Temporary Pavement)
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

#### Phase II

- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

#### Phase III

- Shift I29 NB Traffic to I29 SB Lanes
- Construct:
  - I29 NB: Complete Full Width
  - NB Bridge Replacement
  - Ramp A: Complete Full Width
  - Ramp B: Complete Portion on Existing Alignment
  - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic

#### Phase IV

- Complete Approach Slab Repairs at TEA Interchange

### LEGEND:

- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III
- TEMPORARY PAVEMENT

Plot Scale - 1:200

Plotted From - geoff\_babovrec

Plot Name -

...Plans\085sec.dgn

File -

114

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C9	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS



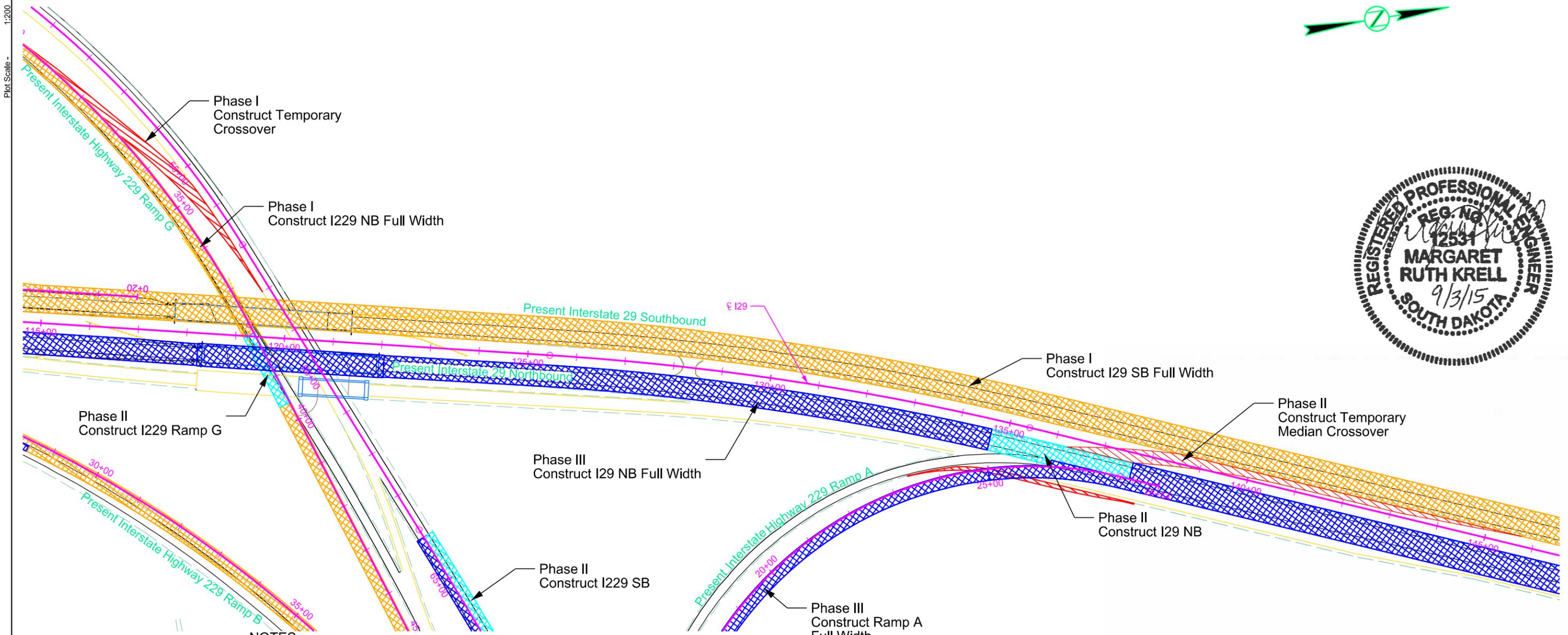
Plot Scale - 1:200

Plotted From - geoff\_babovrec

Plot Name -

...Plans\115socc.dgn

File -



**NOTES:**

**Phase I**

- Install Median Delineator/Barrier
- Shift I29 NB Traffic onto the Temporary Bridge
- Shift I29 SB Traffic to I29 NB Lanes
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - SB Bridge Replacement
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment (23+25 to 44+46)
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - Ramp G to Ramp C Crossover (Temporary Pavement)
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

**Phase II**

- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

**Phase III**

- Shift I29 NB Traffic to I29 SB Lanes
  - Construct:
    - I29 NB: Complete Full Width
    - NB Bridge Replacement
    - Ramp A: Complete Full Width
    - Ramp B: Complete Portion on Existing Alignment
    - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
    - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
- Phase IV**
- Complete Approach Slab Repairs at TEA Interchange

**LEGEND:**

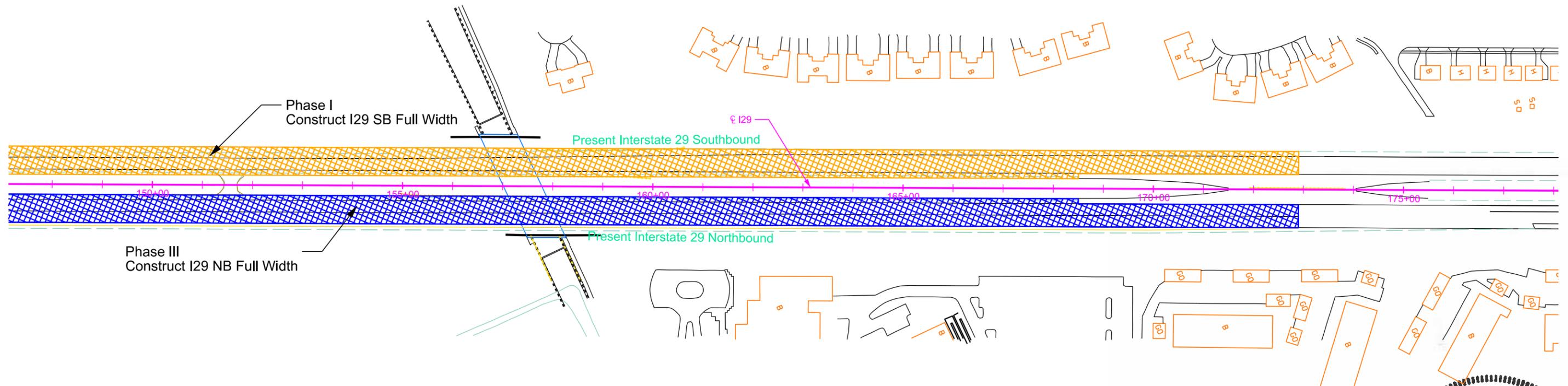
- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III
- TEMPORARY PAVEMENT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C10	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS

Plot Scale - 1:200



Phase I  
Construct I29 SB Full Width

Phase III  
Construct I29 NB Full Width

Present Interstate 29 Southbound

Present Interstate 29 Northbound

**LEGEND:**

- WORK AREA PHASE I
- WORK AREA PHASE II
- WORK AREA PHASE III
- TEMPORARY PAVEMENT

**NOTES:**

Phase I

- Install Median Delineator/Barrier
- Shift I29 NB Traffic onto the Temporary Bridge
- Shift I29 SB Traffic to I29 NB Lanes
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

Phase II

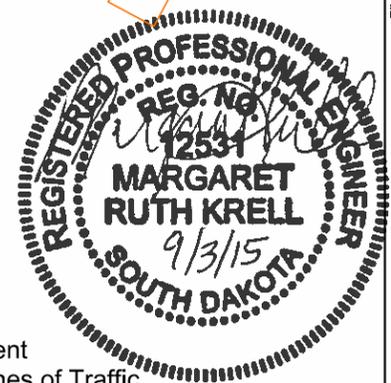
- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

Phase III

- Shift I29 NB Traffic to I29 SB Lanes
- Construct:
  - I29 NB: Complete Full Width
  - Ramp A: Complete Full Width
  - Ramp B: Complete Portion on Existing Alignment
  - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic

Phase IV

- Complete Approach Slab Repairs at TEA Interchange



Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\145socc.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C11	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS

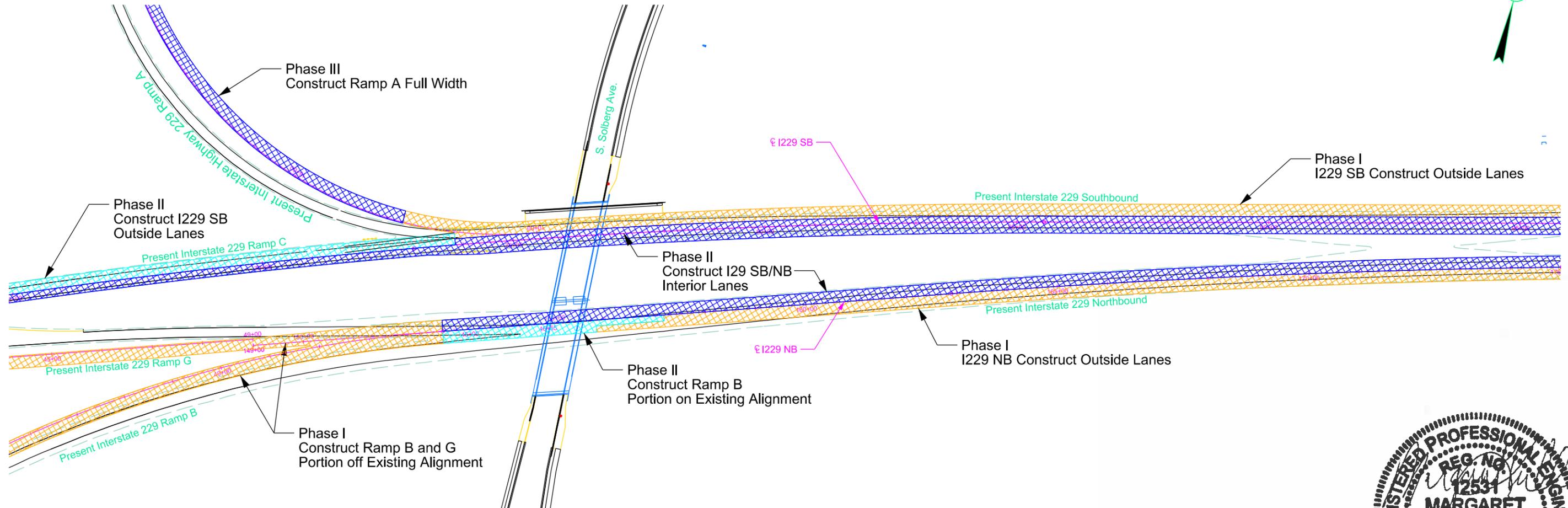
## I229

Plot Scale - 1:200

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\I229\045soc.dgn



### LEGEND:

-  WORK AREA PHASE I
-  WORK AREA PHASE II
-  WORK AREA PHASE III
-  TEMPORARY PAVEMENT

### NOTES:

#### Phase I

- Install Median Delineator/Barrier
- Shift I29 SB Traffic to I29 NB Lanes (Head to Head)
- Construct:
  - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
  - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
  - Ramp B: Complete Portion of Ramp Off Existing Alignment
  - Ramp C: (8+75 to 38+50) One Lane at a Time
  - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
  - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

#### Phase II

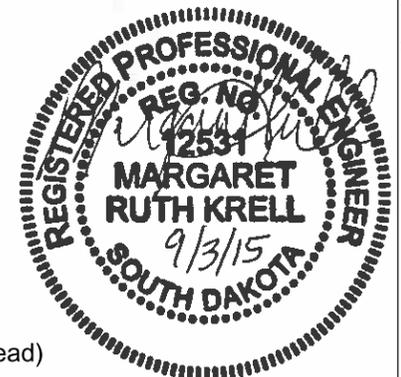
- Shift I29 SB Traffic to I29 SB Lanes
- Shift I29 NB Traffic off Diversion/Temporary Bridge
- Remove Temporary Bridge and Grading
- Construct:
  - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
  - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
  - Median Crossover (98+96 to 108+17) (Temporary Pavement)
  - Median Crossover (136+24 to 145+73) (Temporary Pavement)
  - Ramp C: (38+50 to 42+00) Complete Full Width
  - Ramp G: (38+00 to 39+60)
  - I229 NB: (152+80 to 157+20)
  - I229 SB: (65+00 to Ramp A Gore)

#### Phase III

- Shift I29 NB Traffic to I29 SB Lanes (Head to Head)
- Construct:
  - I29 NB: Complete Full Width
  - Ramp A: Complete Full Width
  - Ramp B: Complete Portion on Existing Alignment
  - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
  - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic

#### Phase IV

- Complete Approach Slab Repairs at TEA Interchange



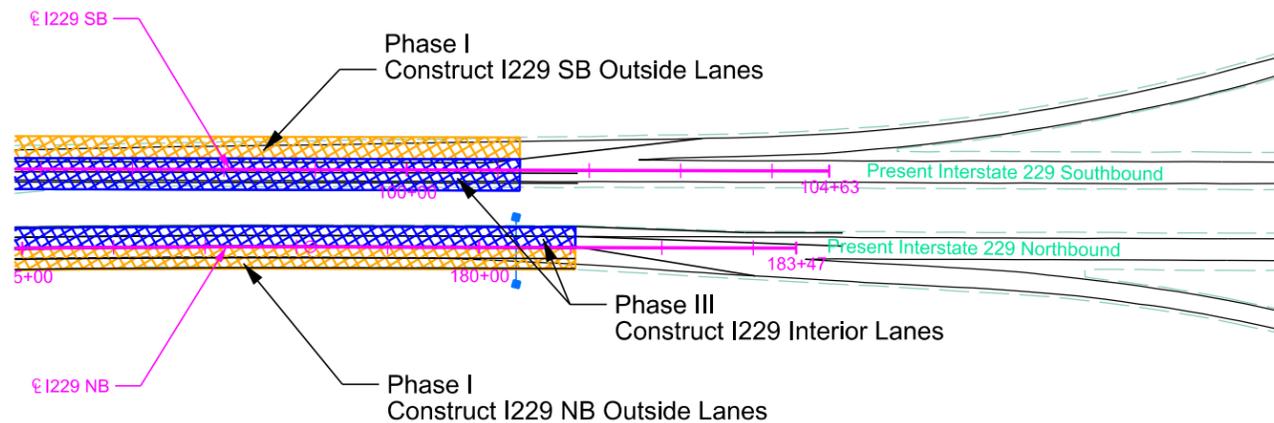
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C12	C40
Plotting Date: 8/31/2015			

# SEQUENCE OF OPERATIONS

I229

Plot Scale - 1:200



**LEGEND:**

	WORK AREA PHASE I
	WORK AREA PHASE II
	WORK AREA PHASE III
	TEMPORARY PAVEMENT

**NOTES:**

- Phase I
- Install Median Delineator/Barrier
  - Shift I29 SB Traffic to I29 NB Lanes (Head to Head)
  - Construct:
    - I29 SB: Complete Full Width (43+50 to 78+00) (80+80 to 100+00) (103+00 to 172+50)
    - I29 SB: Complete Shoulder Widening (24+94 to 43+50)
    - Ramp B: Complete Portion of Ramp Off Existing Alignment
    - Ramp C: (8+75 to 38+50) One Lane at a Time
    - Ramp G: (10+00 to 38+00)(39+60 to 49+00) Complete Full Width
    - I229 NB: Construct Outside Lanes/Maintain 2 Lanes of Traffic
    - I229 SB: Construct Outside Lanes/Maintain 2 Lanes of Traffic

- Phase II
- Shift I29 SB Traffic to I29 SB Lanes
  - Shift I29 NB Traffic off Diversion/Temporary Bridge
  - Remove Temporary Bridge and Grading
  - Construct:
    - I29 SB: (78+00 to 80+80) (100+00 to 103+00)
    - I29 NB: (107+00 to 109+80) (134+65 to 137+60)
    - Median Crossover (98+96 to 108+17) (Temporary Pavement)
    - Median Crossover (136+24 to 145+73) (Temporary Pavement)
    - Ramp C: (38+50 to 42+00) Complete Full Width
    - Ramp G: (38+00 to 39+60)
    - I229 NB: (152+80 to 157+20)
    - I229 SB: (65+00 to Ramp A Gore)

- Phase III
- Shift I29 NB Traffic to I29 SB Lanes (Head to Head)
  - Construct:
    - I29 NB: Complete Full Width
    - Ramp A: Complete Full Width
    - Ramp B: Complete Portion on Existing Alignment
    - I229 NB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
    - I229 SB: Construct Inside Lanes/Maintain 2 Lanes of Traffic
- Phase IV
- Complete Approach Slab Repairs at TEA Interchange



Plotted From - geoff\_babovrec

Plot Name -

File - ...Plans\1229\175soc.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C13	C40

Plotting Date: 8/31/2015

# TRAFFIC CONTROL

FIXED LOCATION SIGNS  
(GROUND MOUNTED SUPPORTS)

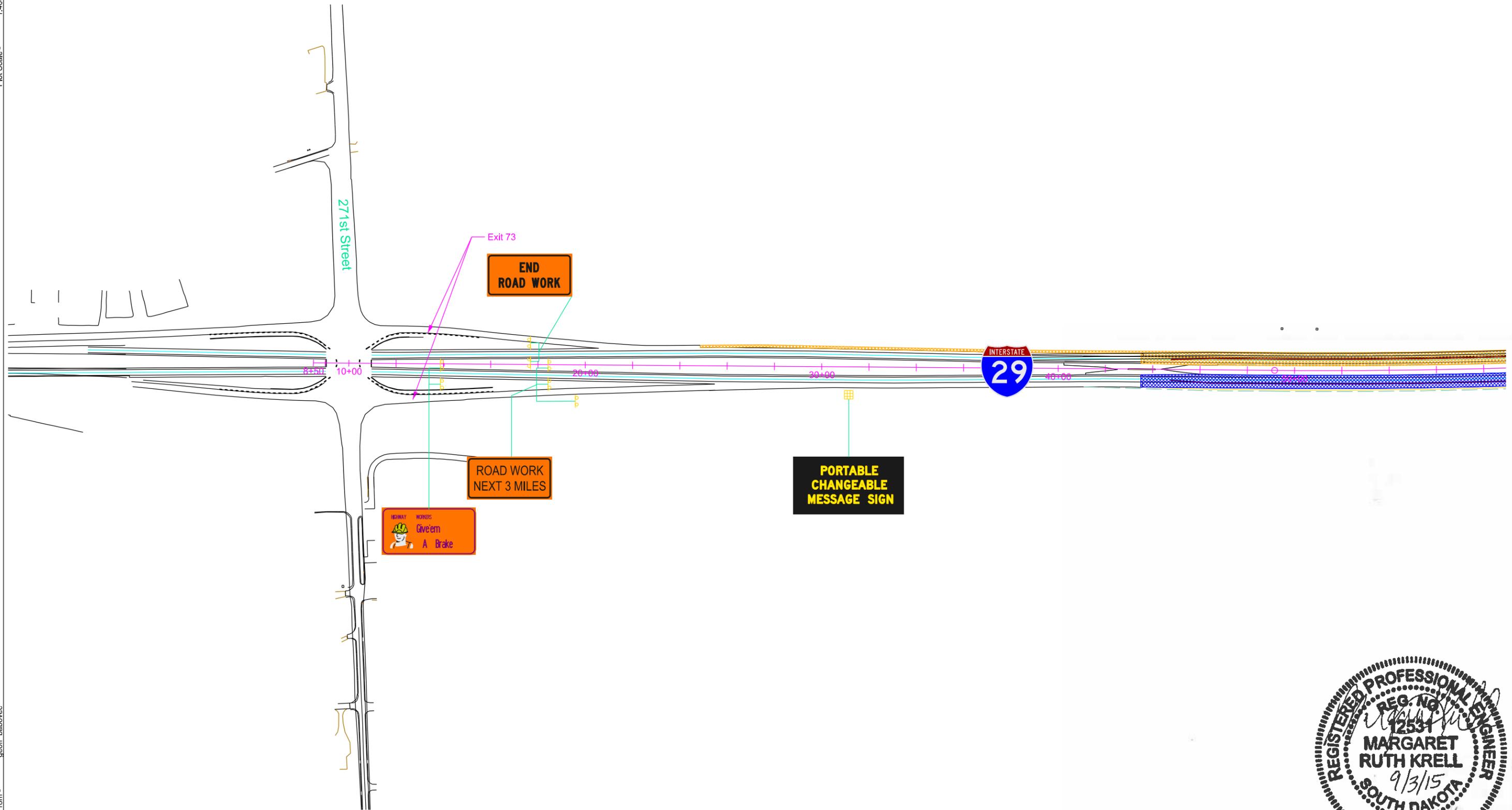


Plot Scale - 1:400

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\Fix Signage) c01.dgn



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C14	C40
Plotting Date: 8/31/2015			

# TRAFFIC CONTROL

## FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

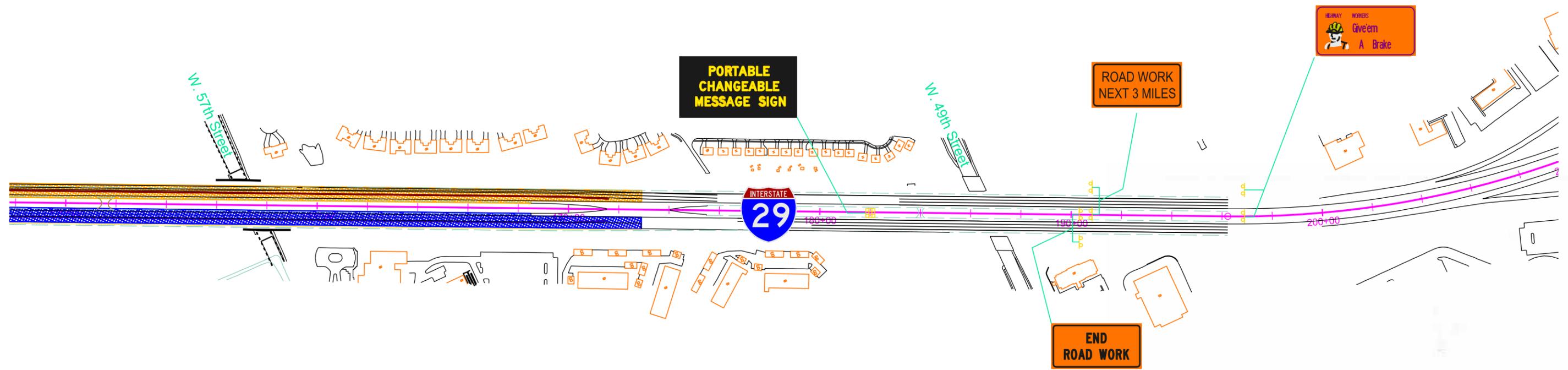


Plot Scale - 1:400

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\Fix Signage\c02.dgn



# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

FIXED LOCATION SIGNS  
(GROUND MOUNTED SUPPORTS)

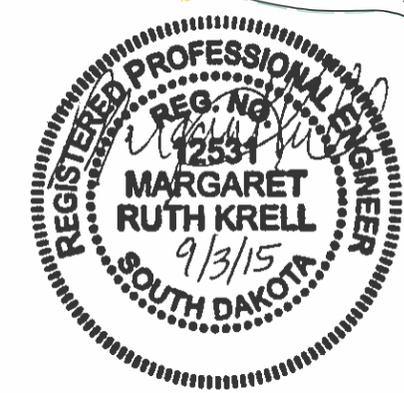
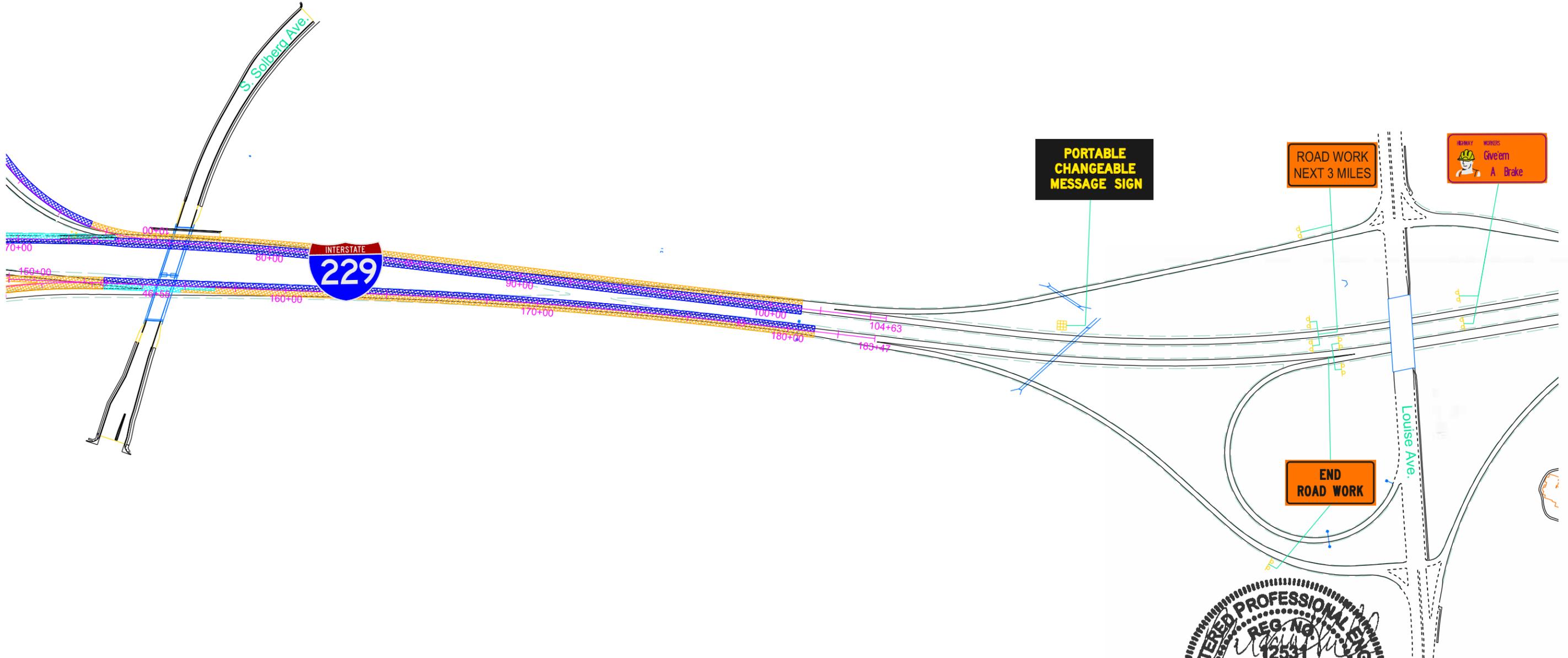
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C15	C40
Plotting Date: 8/31/2015			

Plot Scale - 1:400

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\Fix Signage) c03.dgn



# TRAFFIC CONTROL

## RAMP C & G CLOSURE

### ADVANCE WARNING

#### (TYPICAL)

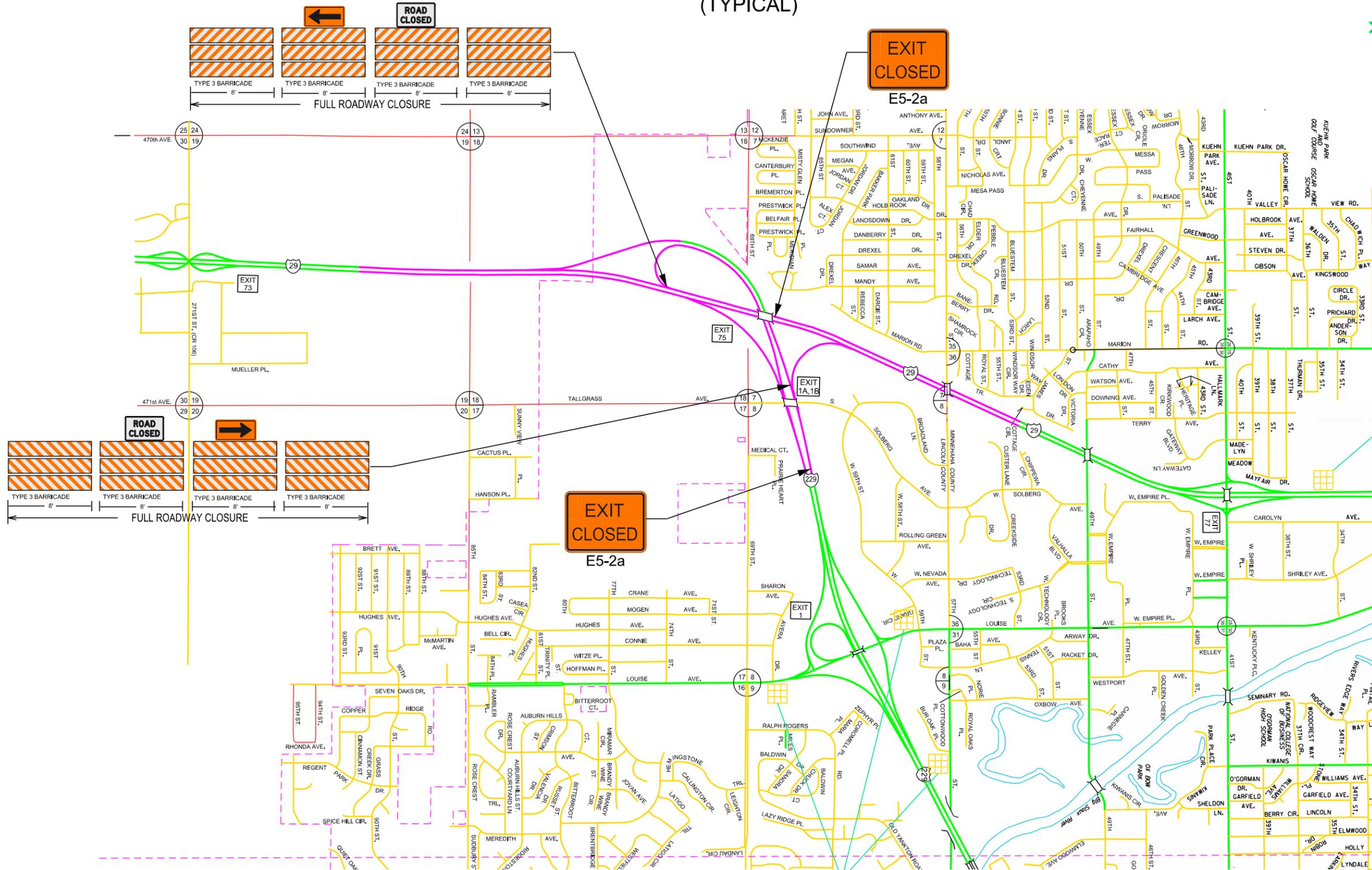
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 0293(96)73 IM 2292(90)0	SHEET C16	TOTAL SHEETS C40
Plotting Date: 8/31/2015			



Plot Scale - 1:2000

Plotted From - geoff\_babovec

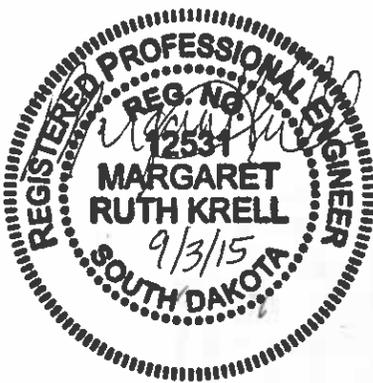


**PORTABLE CHANGEABLE MESSAGE SIGN**

Message:  
I29 to I229 Ramp 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 Name -

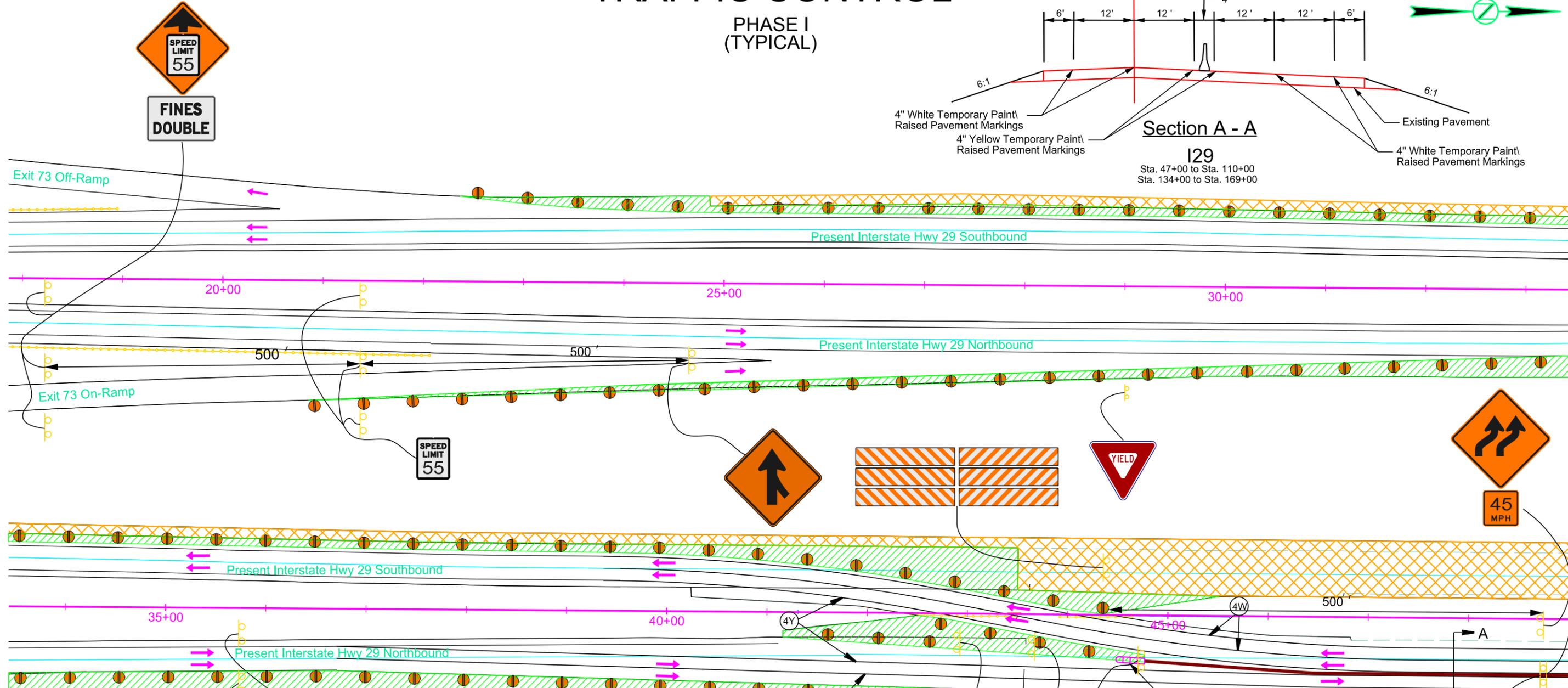
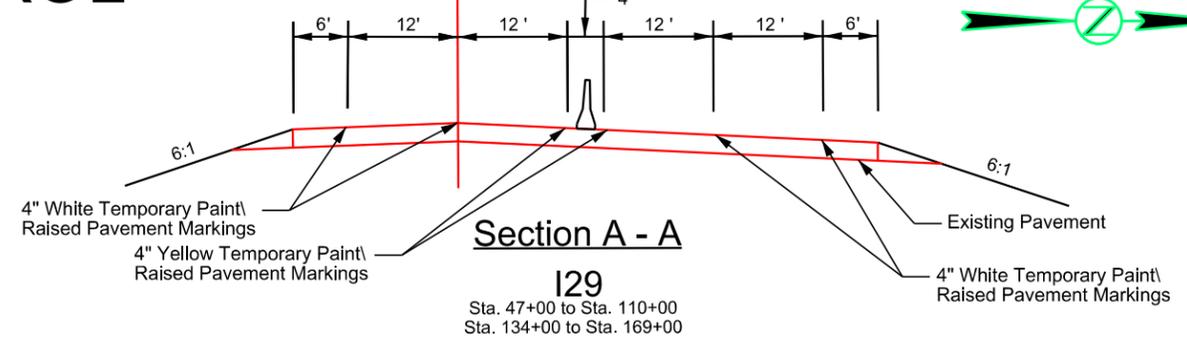
File - ...Plans\Ramp Closure T.C.dgn

# TRAFFIC CONTROL

PHASE I  
(TYPICAL)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C17	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	



- LEGEND:**
- TRAFFIC
  - WORK AREA (PHASE I)
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION

\* Raised Pavement Markers Are Used In Transition Areas



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

Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\014tc.dgn

# TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

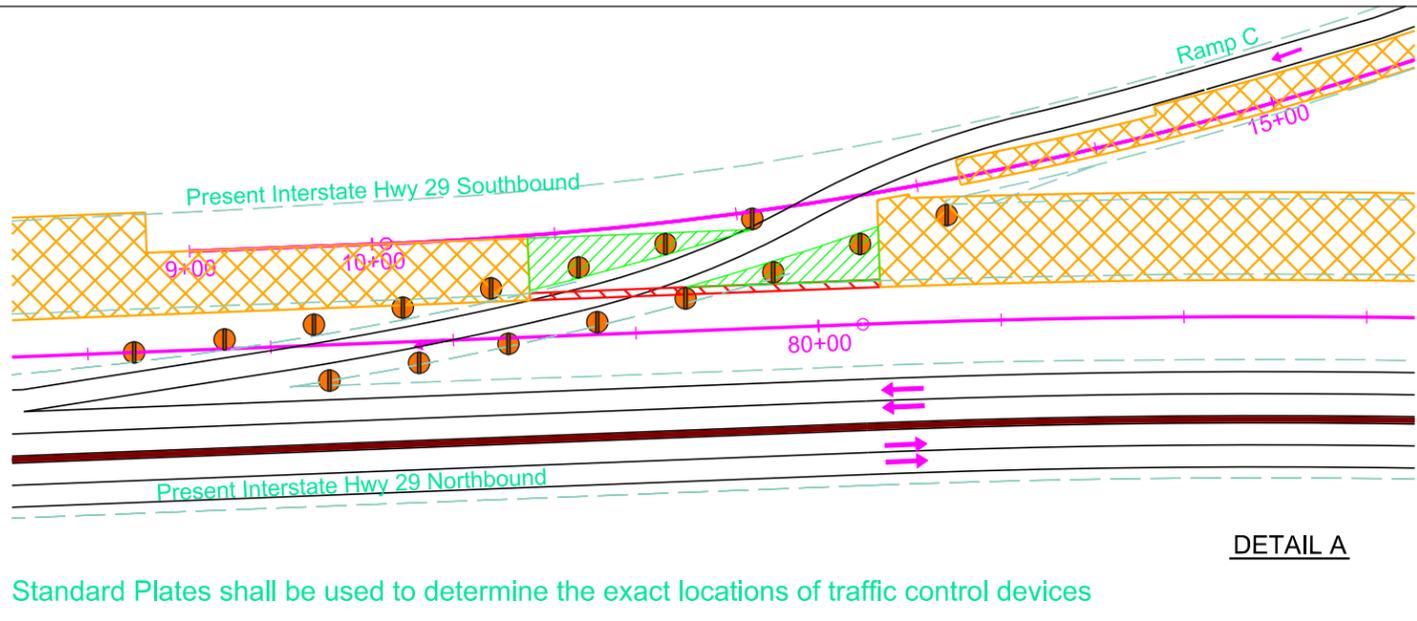
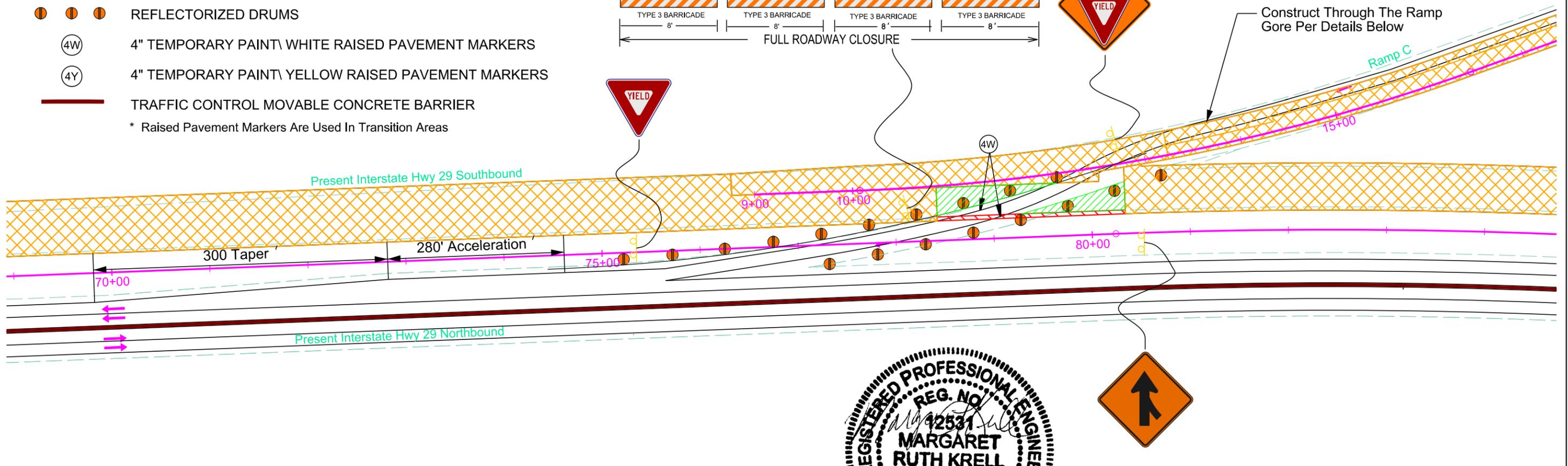
STATE OF SOUTH DAKOTA	PROJECT IM 0293(96)73 IM 2292(90)0	SHEET C18	TOTAL SHEETS C40
Plotting Date:	9/17/2015	Revised: 9/16/2015 (GASB)	



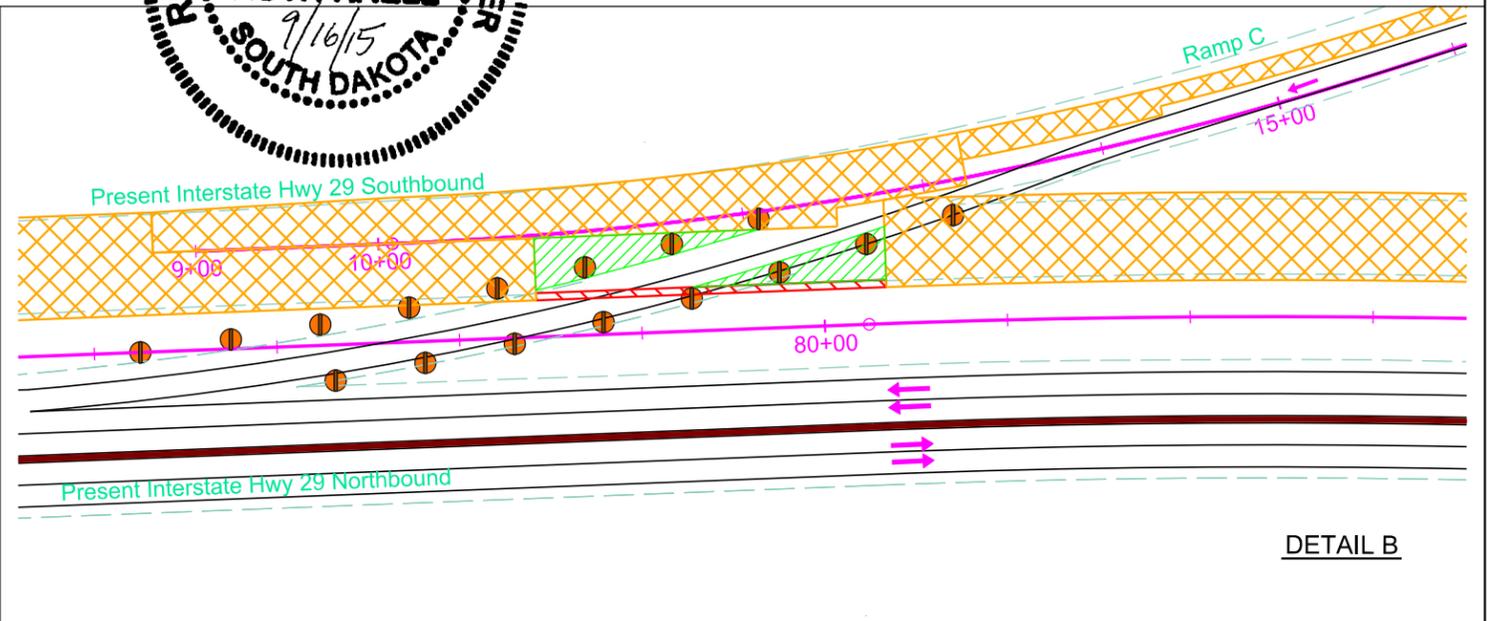
**LEGEND:**

- TRAFFIC
  - WORK AREA (PHASE I)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
- \* Raised Pavement Markers Are Used In Transition Areas

**PHASE I  
(RAMP C DETAIL)**



DETAIL A



DETAIL B

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

Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\055tc.dgn



# TRAFFIC CONTROL

## PHASE I (TYPICAL)

FOR BIDDING PURPOSES ONLY

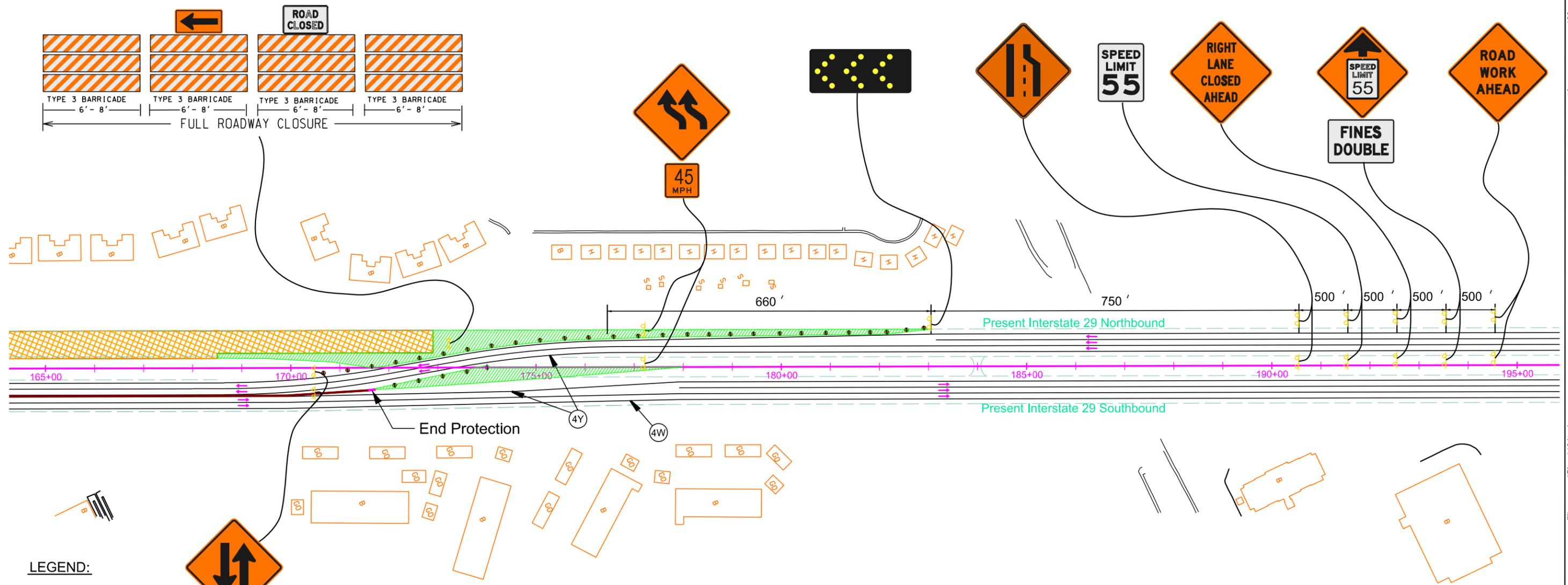
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C20	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

Plot Scale - 1:200

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\124tc.dgn



**LEGEND:**

-  TRAFFIC
  -  WORK AREA PHASE I
  -  CLOSED FOR TRAFFIC CONTROL
  -  REFLECTORIZED DRUMS
  -  4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  -  4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  -  TRAFFIC CONTROL MOVEABLE CONCRETE BARRIER
  -  CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

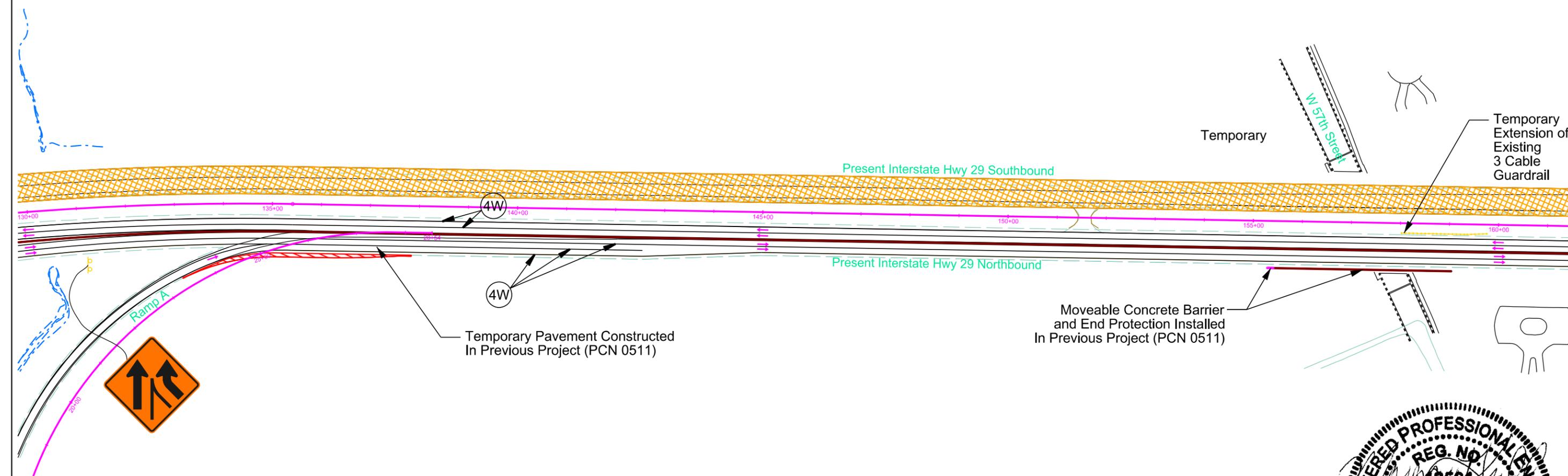
PHASE I  
RAMP A DETAIL  
57th ST DETAIL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C21	C40
Plotting Date: 9/29/2015		Revised: 9/25/2015 (GASB)	



Plot Scale - 1:200

Plot Name -



Moveable Concrete Barrier and End Protection Installed In Previous Project (PCN 0511)

Temporary Pavement Constructed In Previous Project (PCN 0511)

**LEGEND:**

- TRAFFIC
- WORK AREA PHASE I
- TEMPORARY PAVEMENT
- CLOSED FOR TRAFFIC CONTROL
- REFLECTORIZED DRUMS
- 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
- 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS

\* Raised Pavement Markers Are Used In Transition Areas



Plotted From - Margie Krell

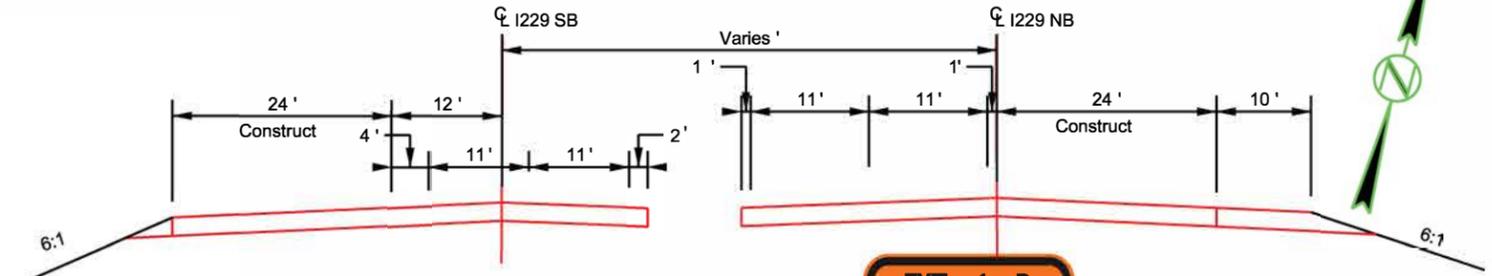
File - ...Plans\ (Ramp A)\ 124tc.dgn

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

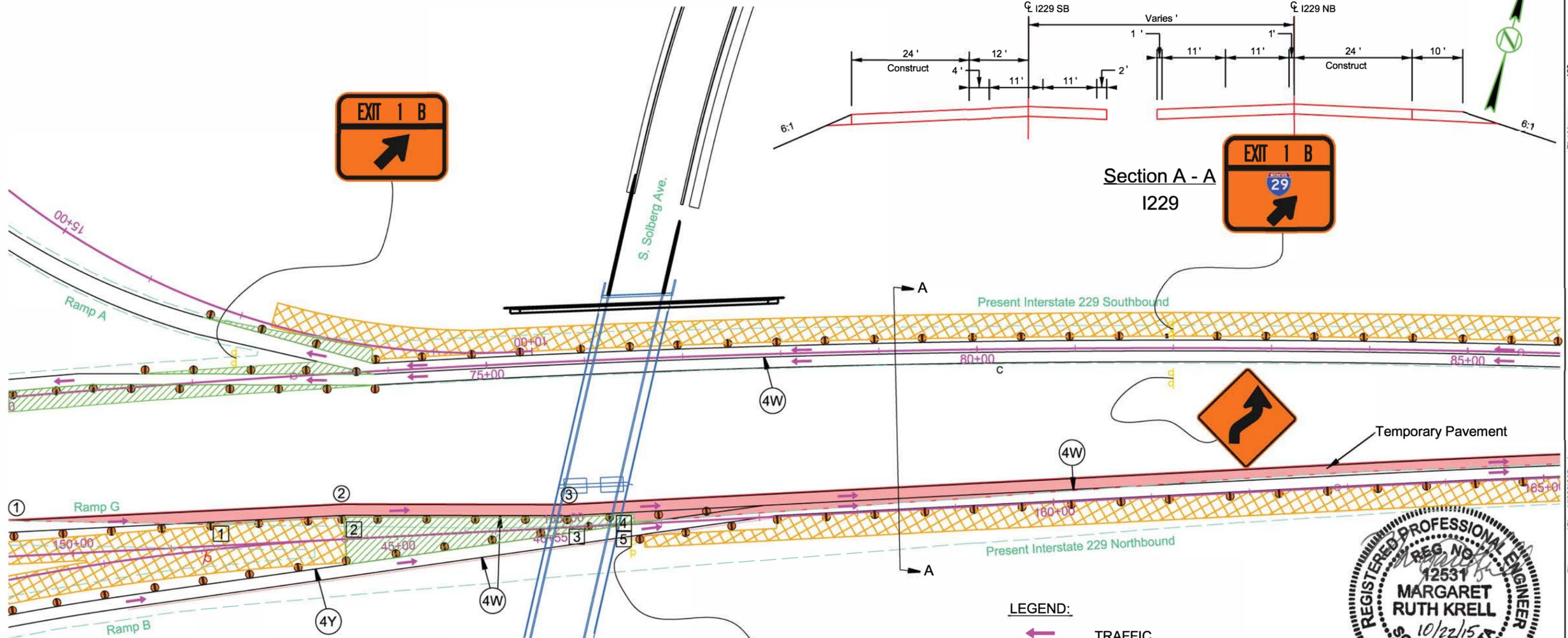
# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 0293(96)73 IM 2292(90)0	SHEET C22	TOTAL SHEETS C40
Plotting Date: 10/22/2015		Revised: 10/22/2015 (GASB)	

## PHASE I (TYPICAL)

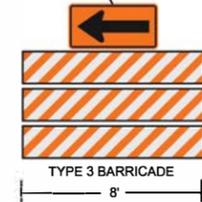


Section A - A  
I229



Temporary Pavement Boundary

Station (I229 SB alignment in 01QS)	Offset	Station (I229 SB alignment in 01QS)	Offset
① 149+20.17	37.24' L	① 151+35.75	22.15' L
② 152+77.28	36.04' L	② 152+77.23	22.05' L
③ 155+02.93	24.00' L	③ 155+02.95	10.00' L
		④ 155+72.11	10.00' L
		⑤ 155+72.11	2.19' L



LEGEND:

- TRAFFIC
  - WORK AREA (PHASE I)
  - TEMPORARY PAVEMENT (CONSTRUCT PRIOR TO PHASE 1 TRAFFIC CONFIGURATION)
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\I229\005tc.dgn

# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

PHASE I  
(TYPICAL)

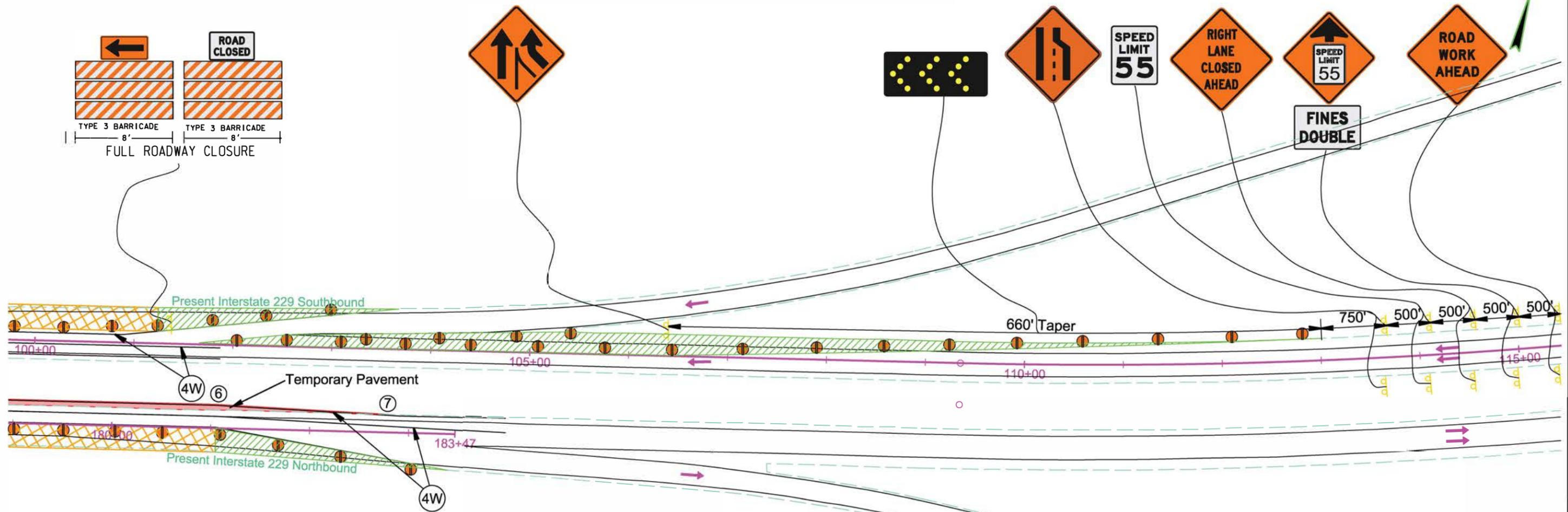
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C23	C40
Plotting Date: 10/22/2015		Revised: 10/22/2015 (GASB)	

Plot Scale - 1:100

Plotted From - geoff\_babovrec

Plot Name - 129

File - ...Plans\1229\100tc.dgn



**LEGEND:**

- TRAFFIC
  - WORK AREA (PHASE I)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas

**Temporary Pavement Boundary**

	Station (I229 SB alignment in 01QS)	Offset
(4)	169+07.26	24.00' L
(5)	174+79.00	24.00' L
(6)	181+05.17	24.00' L
(7)	182+79.55	18.19' L



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	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C24	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

## PHASE II (RAMP C DETAIL)



### LEGEND:

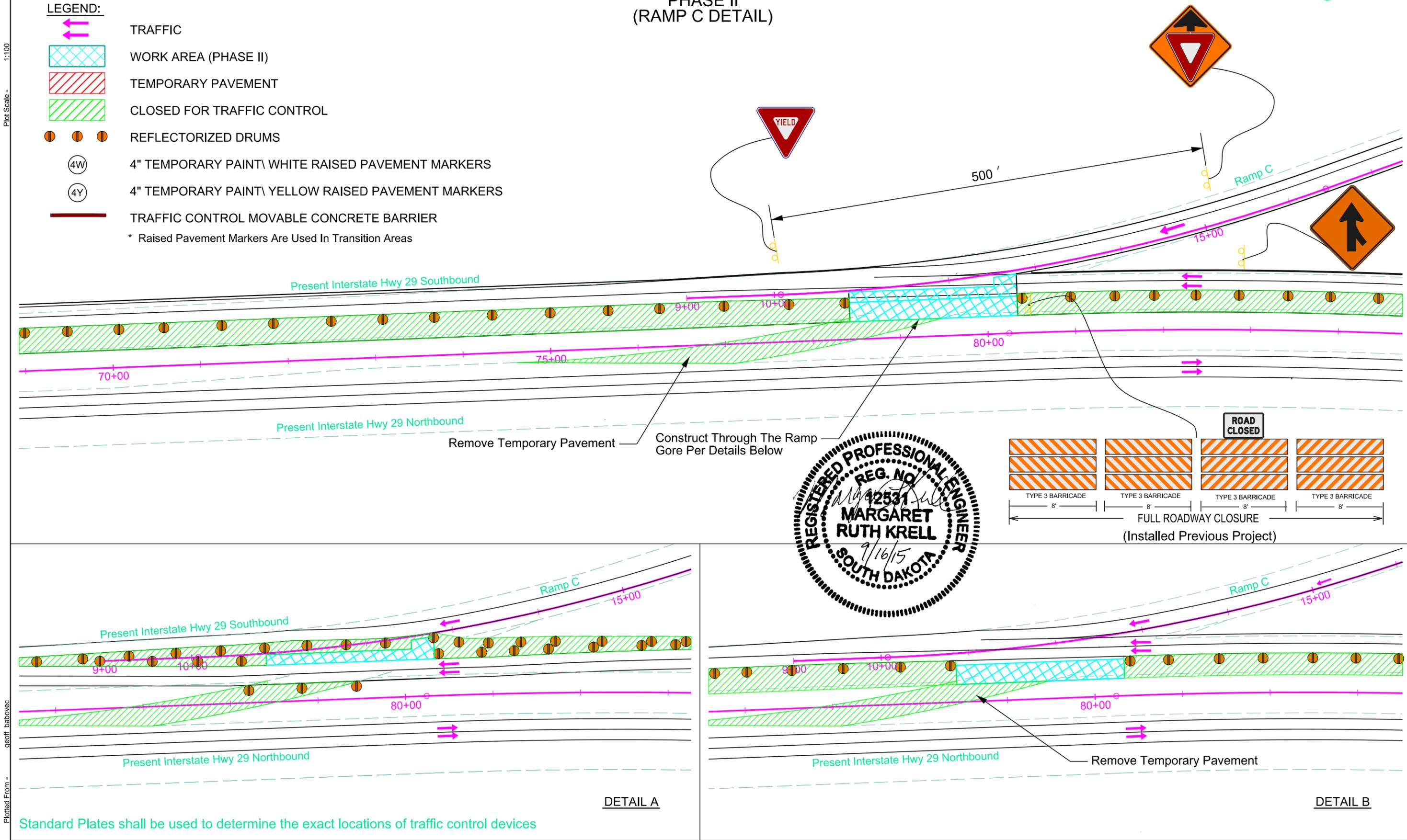
-  TRAFFIC
  -  WORK AREA (PHASE II)
  -  TEMPORARY PAVEMENT
  -  CLOSED FOR TRAFFIC CONTROL
  -  REFLECTORIZED DRUMS
  -  4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  -  4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  -  TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
- \* Raised Pavement Markers Are Used In Transition Areas

Plot Scale - 1:100

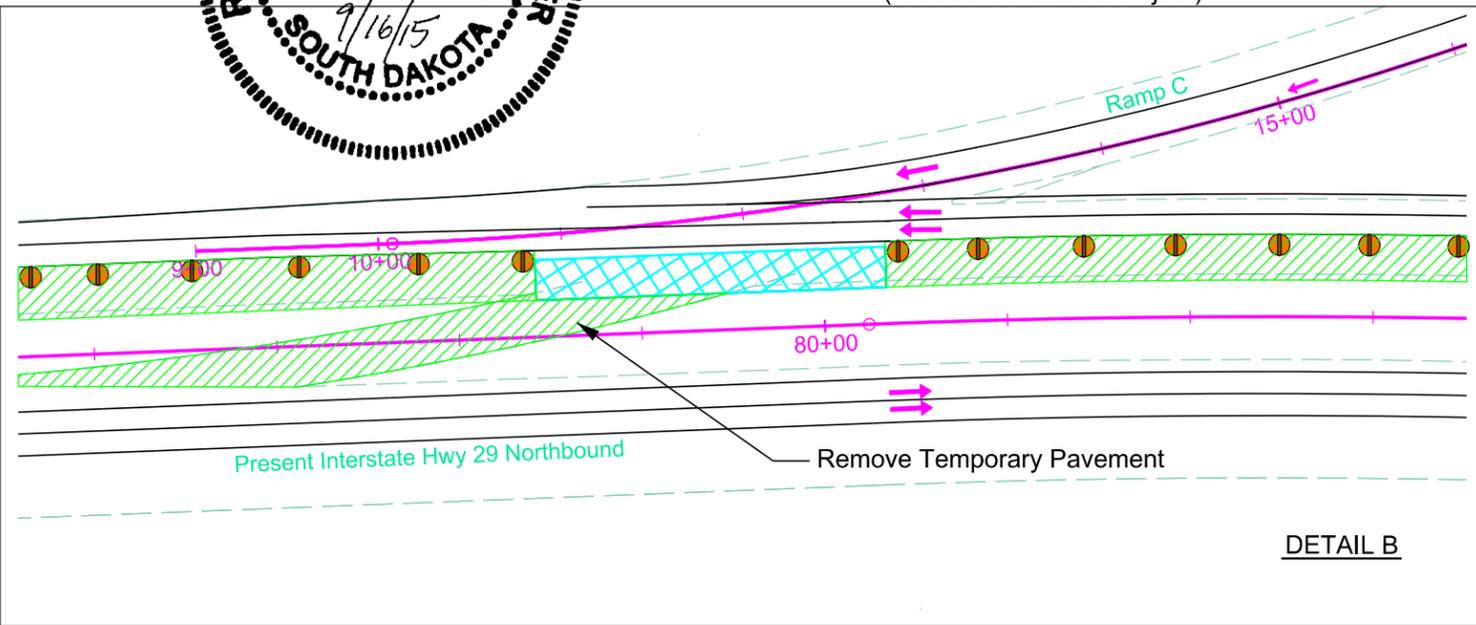
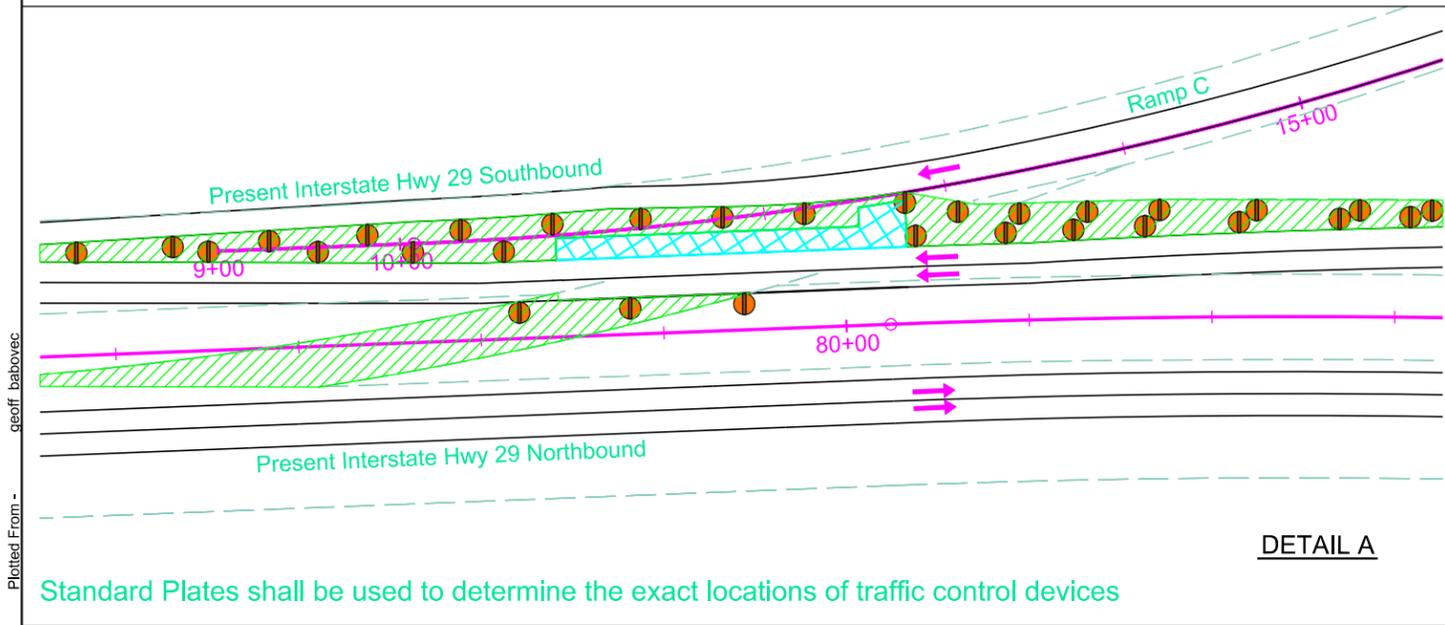
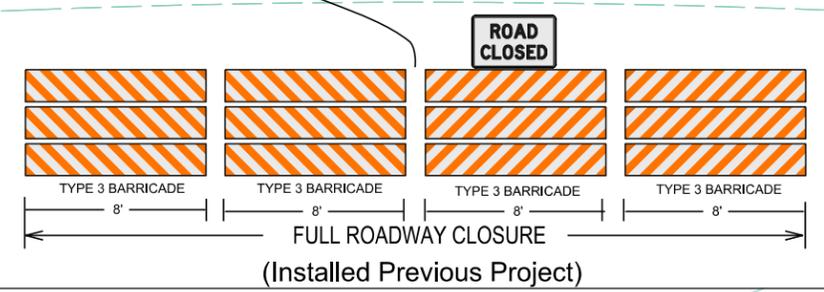
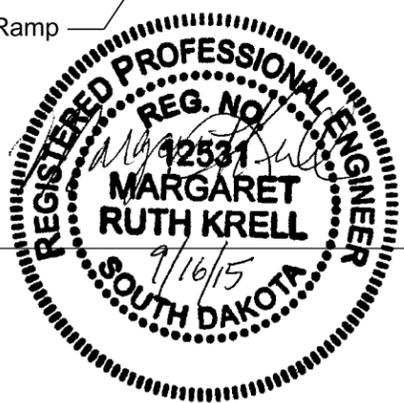
Plot Name - 130

Plotted From - geoff\_babovec

File - ...Plans\051c2.dgn



Remove Temporary Pavement  
Construct Through The Ramp Gore Per Details Below



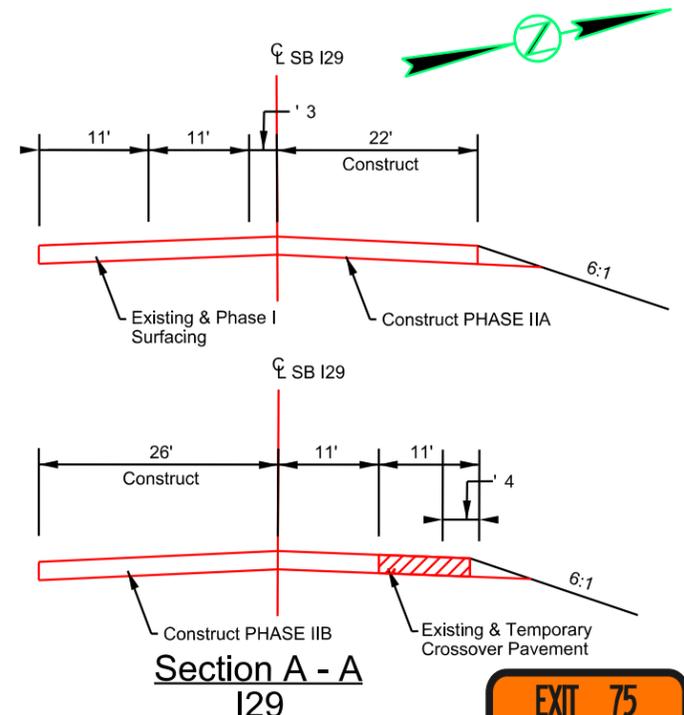
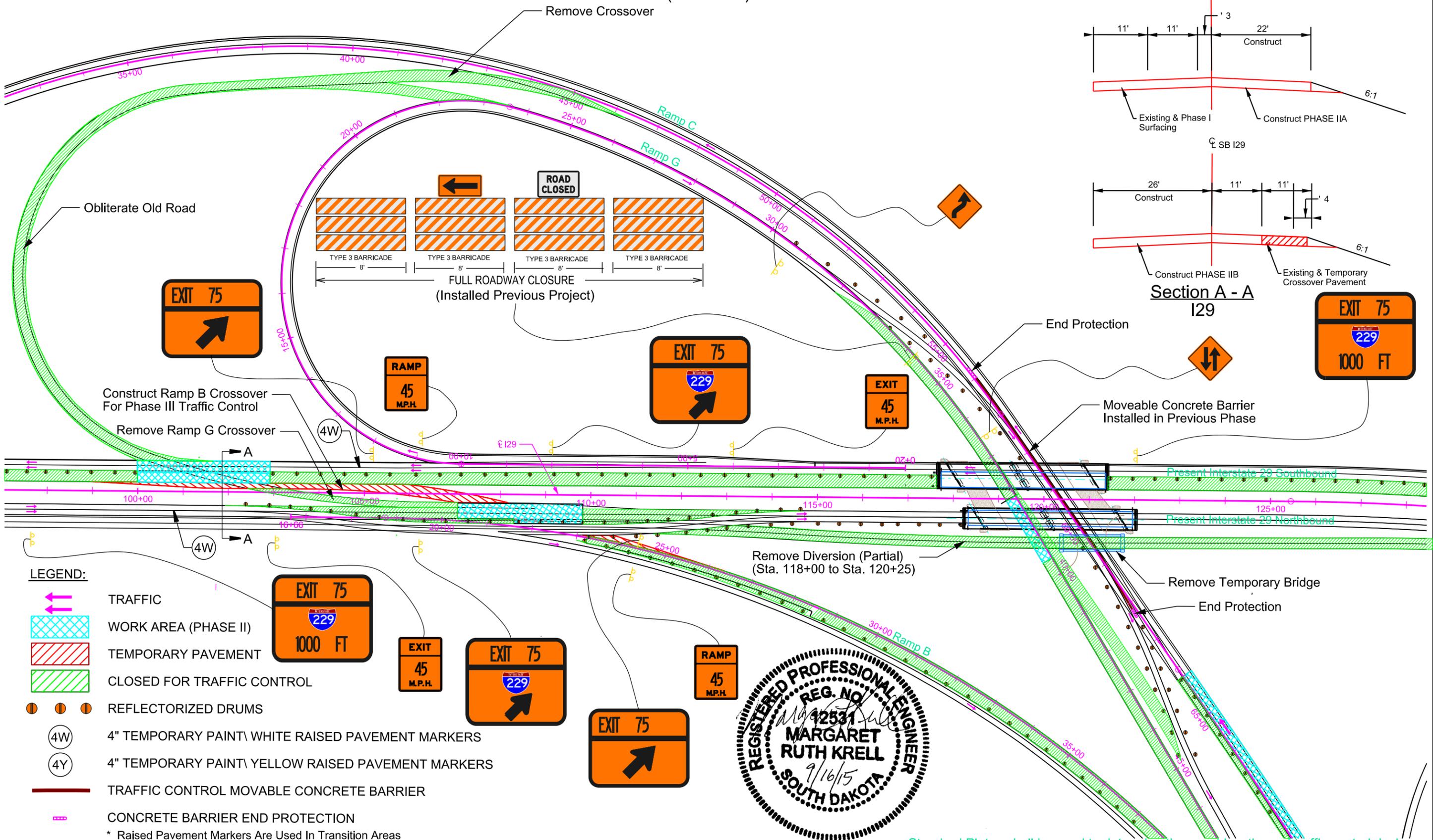
Standard Plates shall be used to determine the exact locations of traffic control devices

# TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 0293(96)73 IM 2292(90)0	SHEET C25	TOTAL SHEETS C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

## PHASE II (TYPICAL)



### LEGEND:

- TRAFFIC
  - WORK AREA (PHASE II)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plot Scale - 1:200

Plotted From - geoff\_babovrec

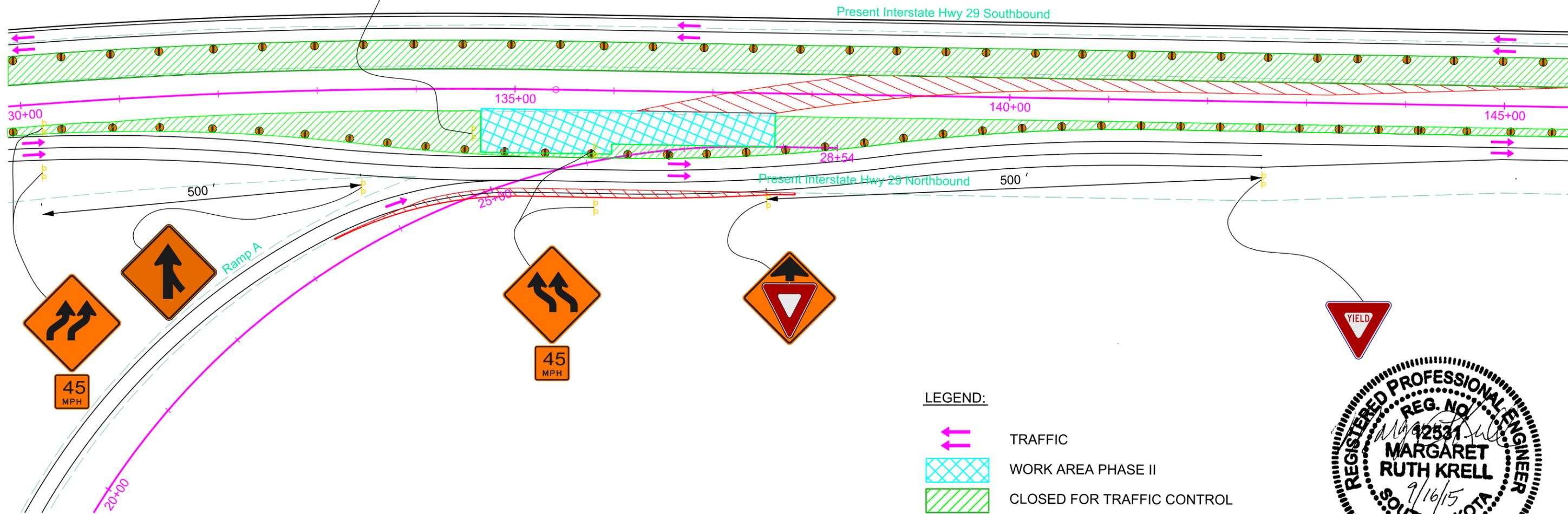
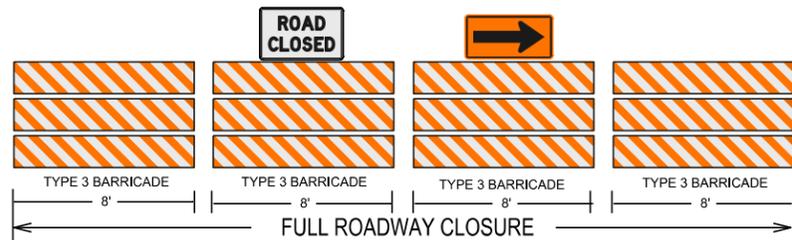
Plot Name -

File - ...Plans\100rc2.dgn

# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

## PHASE II RAMP A DETAIL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C26	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	



**LEGEND:**

- TRAFFIC
  - WORK AREA PHASE II
  - CLOSED FOR TRAFFIC CONTROL
  - TEMPORARY PAVEMENT
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
- \* Raised Pavement Markers Are Used In Transition Areas



Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\Ramp A\124tc2.dgn

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	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C27	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

## PHASE II (TYPICAL)

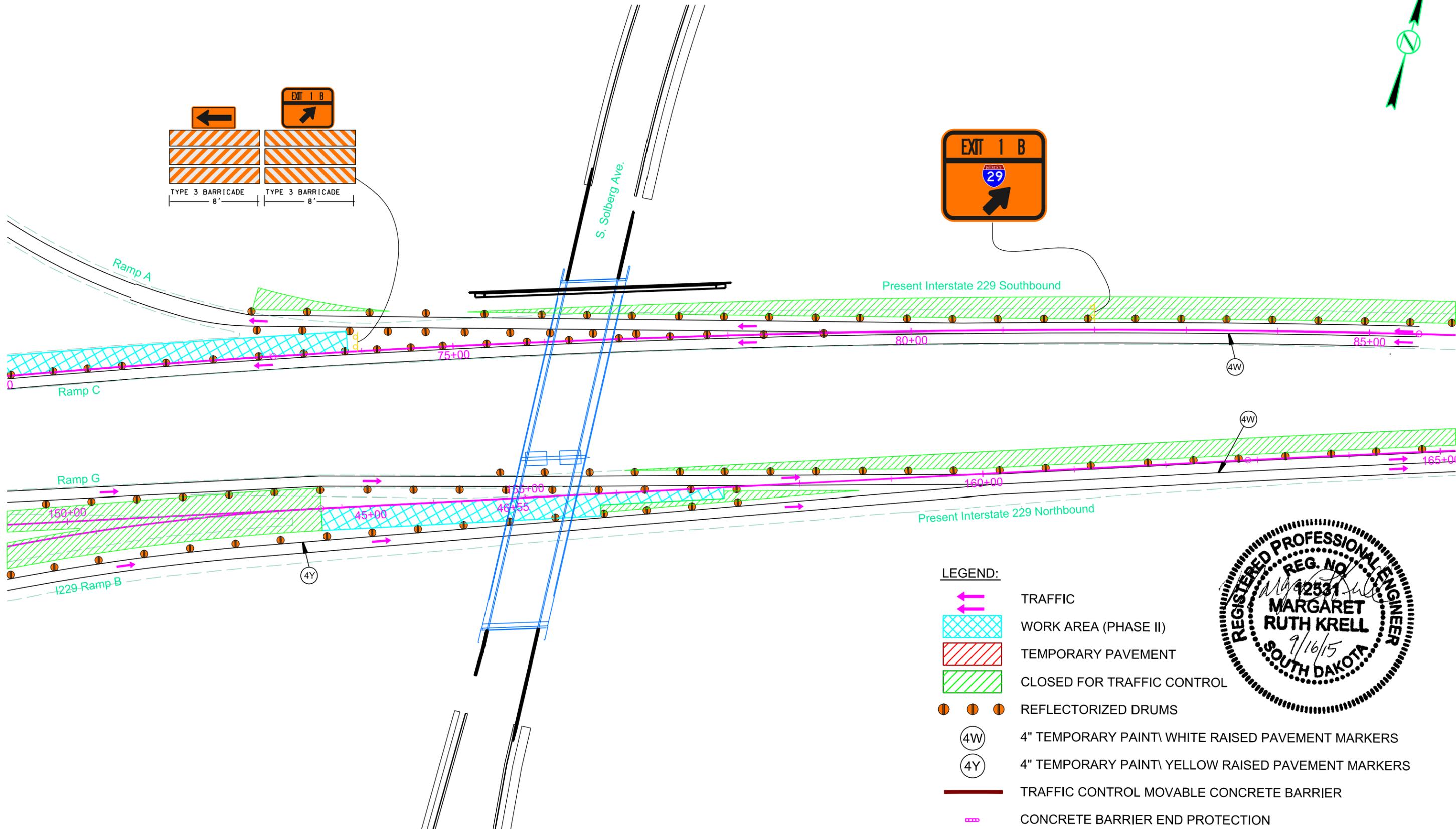
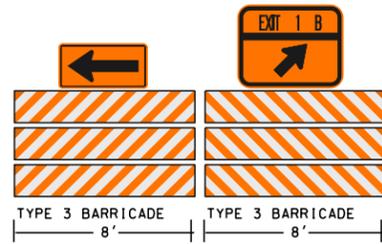
Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name -

File - ...Plans\1229\005tc2.dgn

133



**LEGEND:**

- TRAFFIC
- WORK AREA (PHASE II)
- TEMPORARY PAVEMENT
- CLOSED FOR TRAFFIC CONTROL
- REFLECTORIZED DRUMS
- 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
- 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
- TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
- CONCRETE BARRIER END PROTECTION

\* Raised Pavement Markers Are Used In Transition Areas



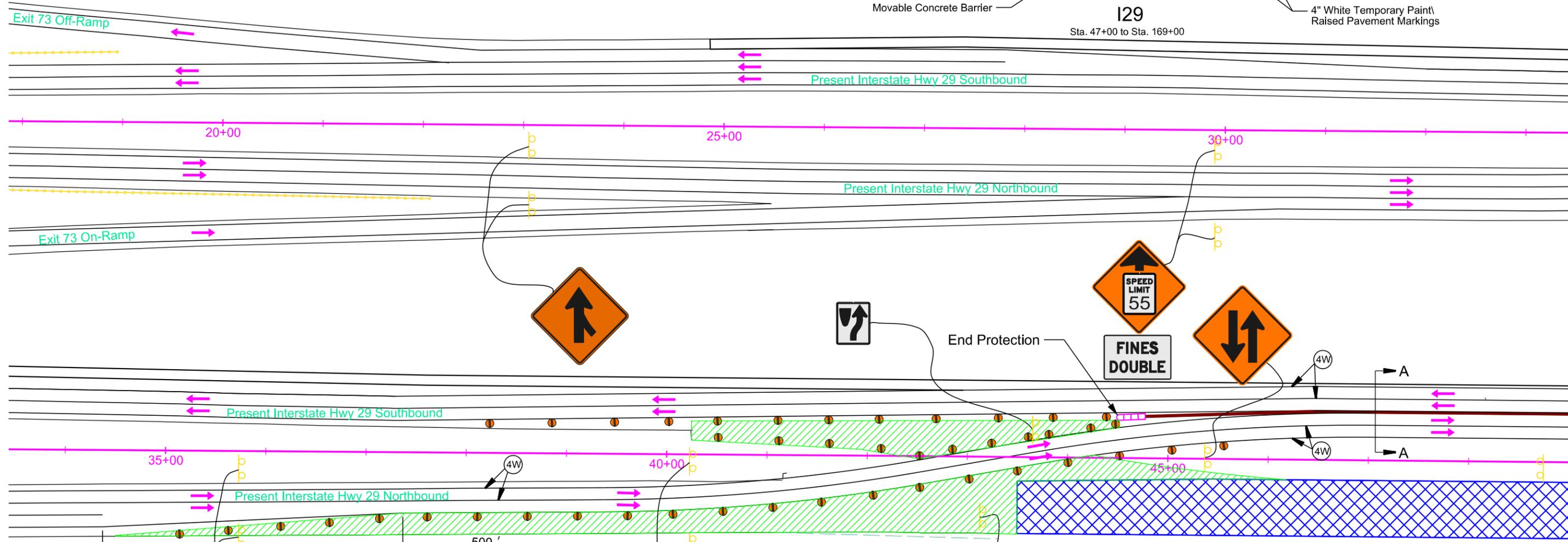
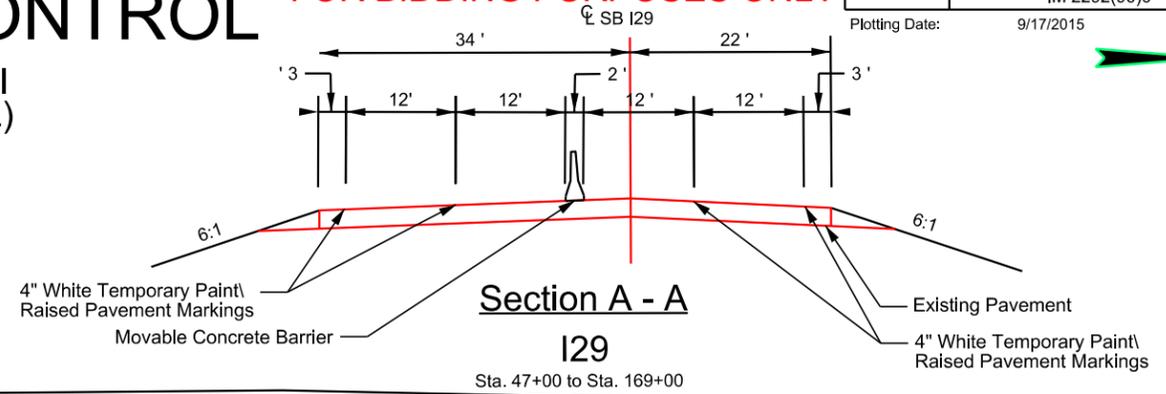
Standard Plates shall be used to determine the exact locations of traffic control devices

# TRAFFIC CONTROL

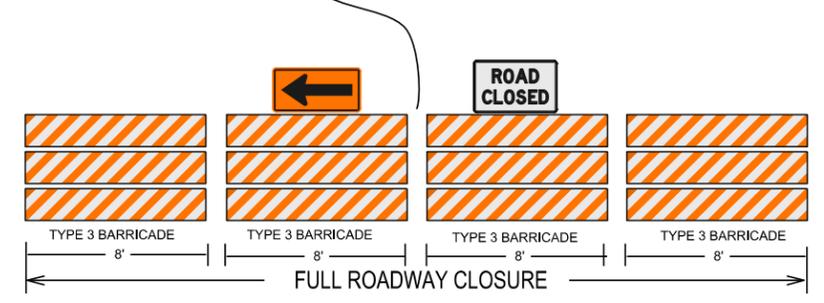
PHASE III  
(TYPICAL)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C28	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	



- LEGEND:**
- TRAFFIC
  - WORK AREA (PHASE III)
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plot Scale - 1:100  
Plotted From - geoff\_babovec

Plot Name - ...Plans\014tc3.dgn

# TRAFFIC CONTROL

FOR BIDDING PURPOSES ONLY

PHASE III  
(TYPICAL)

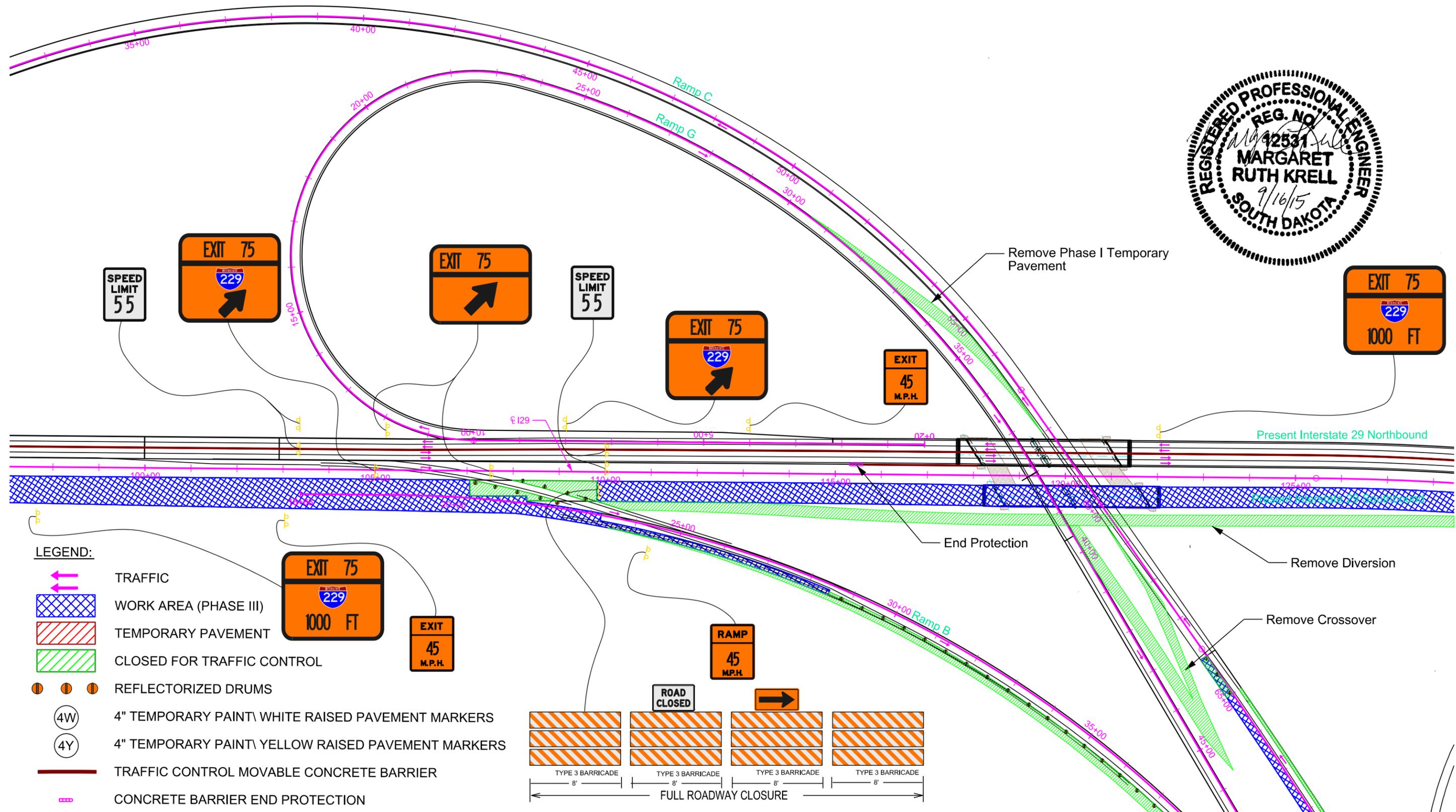
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C29	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	



Plot Scale - 1:200

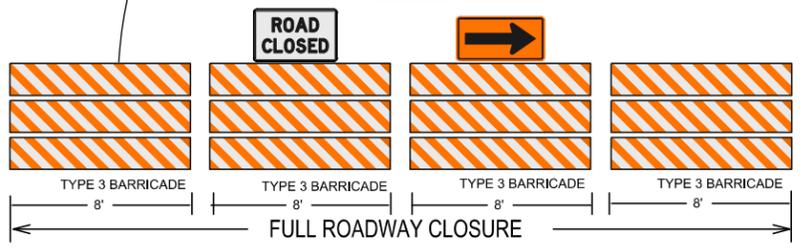
Plot Name -

File - ...Plans\100rc3.dgn



**LEGEND:**

- TRAFFIC
  - WORK AREA (PHASE III)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plotted From - geoff\_babovrec

# TRAFFIC CONTROL

## PHASE III (TYPICAL)

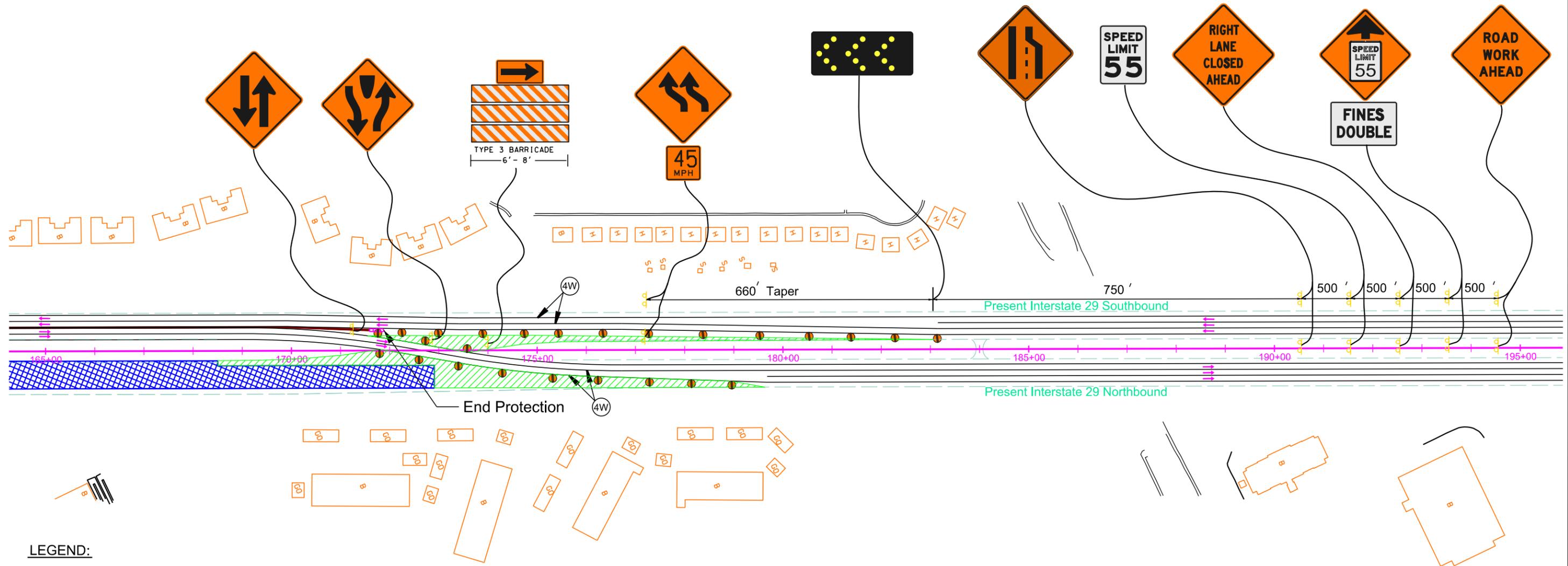
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C30	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

Plot Scale - 1:200

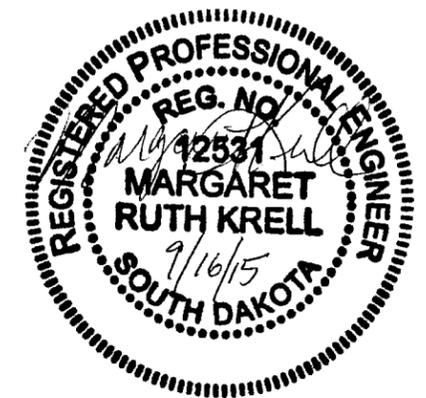
Plot Name -

File - ...Plans\124tc3.dgn



**LEGEND:**

- TRAFFIC
  - WORK AREA PHASE III
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVEABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas

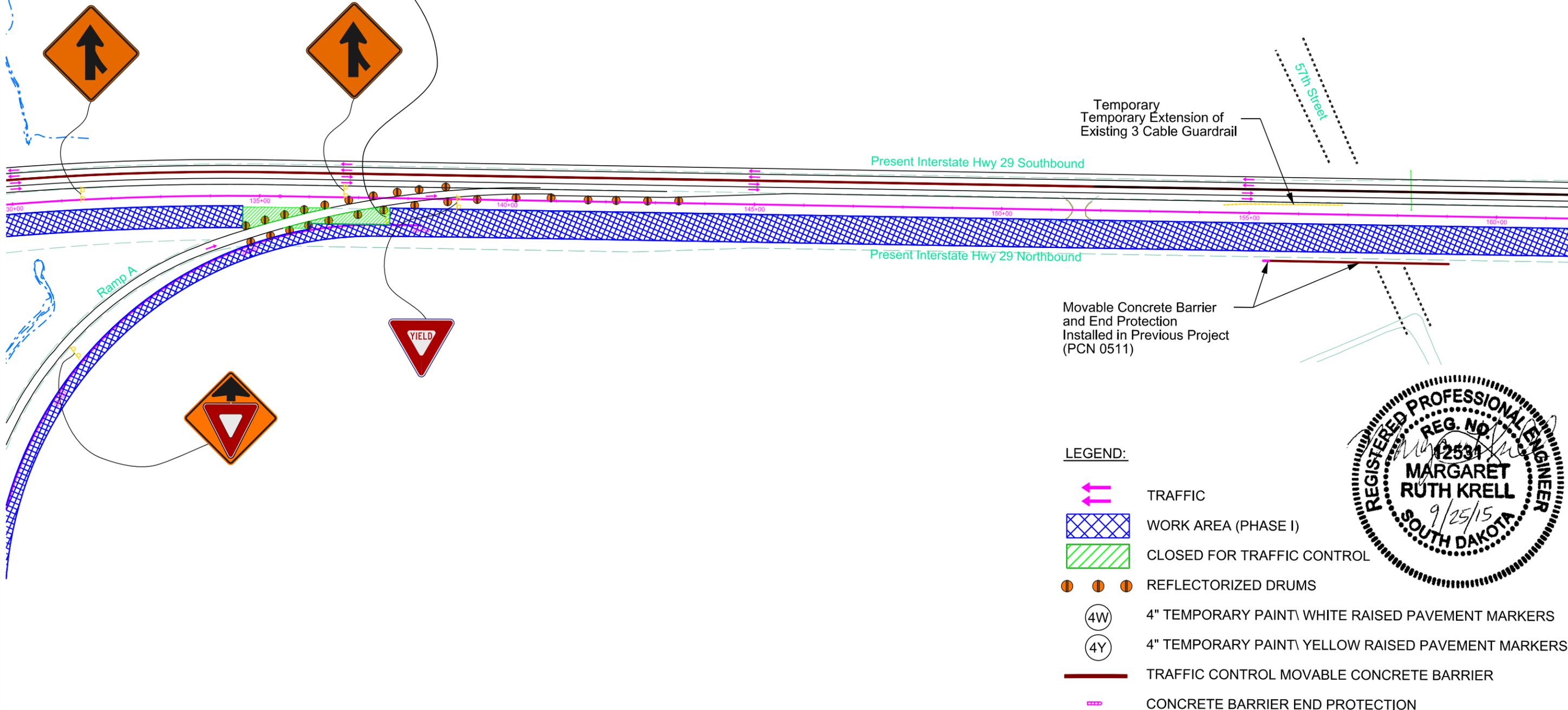


Standard Plates shall be used to determine the exact locations of traffic control devices

# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

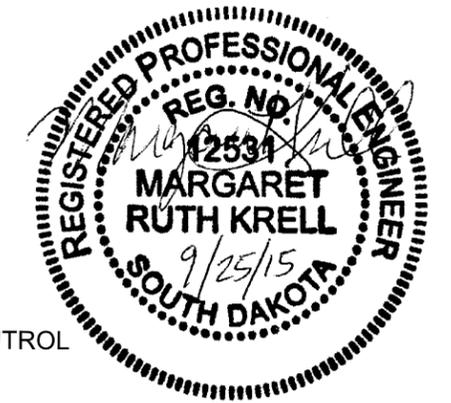
## PHASE III RAMP A DETAIL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C31	C40
Plotting Date: 9/29/2015		Revised: 9/25/2015 (GASB)	



**LEGEND:**

- TRAFFIC
  - WORK AREA (PHASE I)
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



Plot Scale - 1:200  
Margie Krell  
Plotted From -

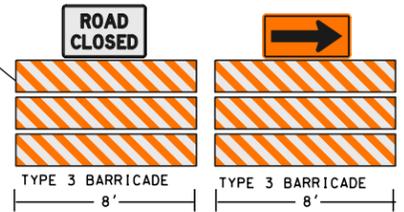
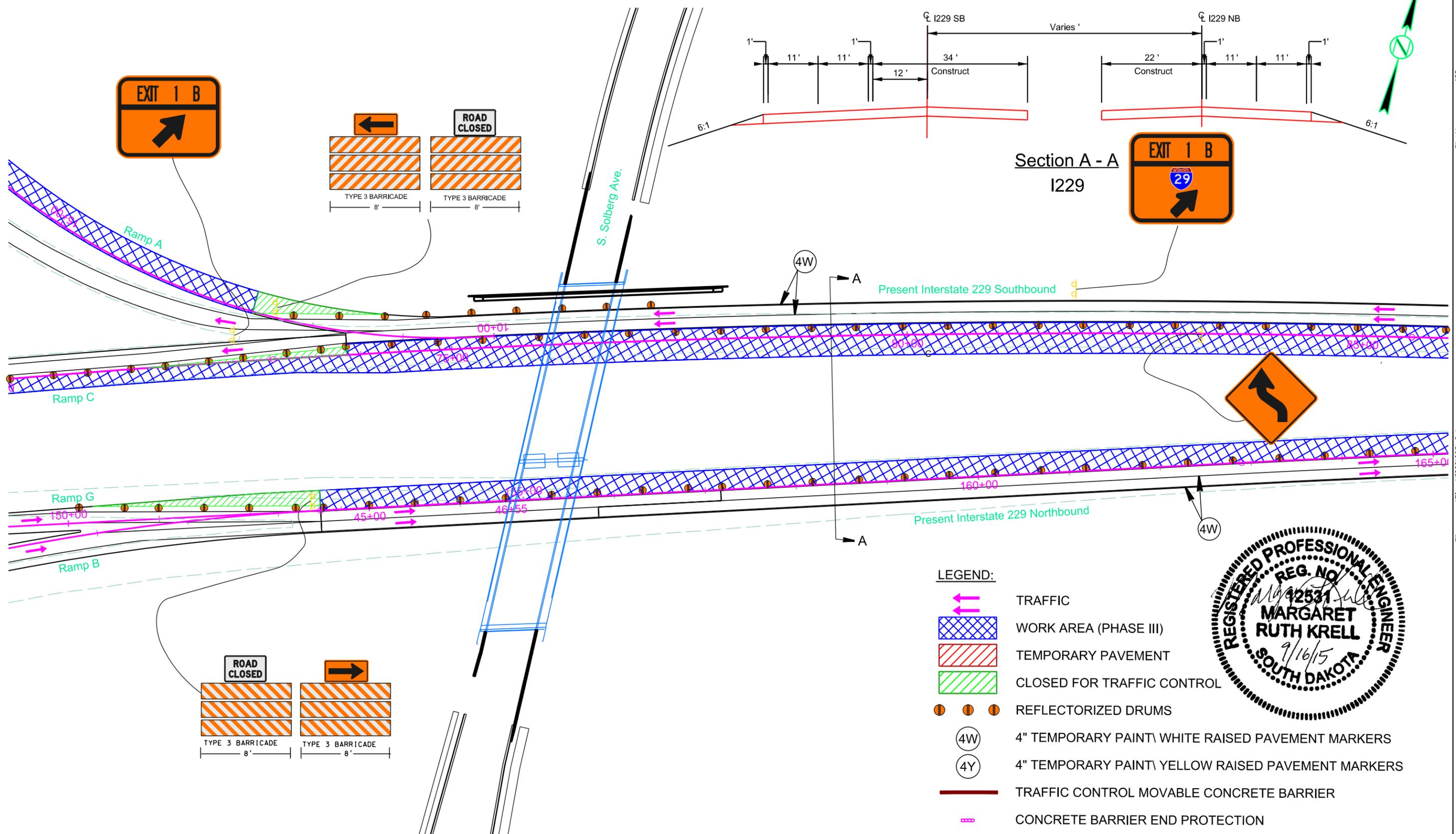
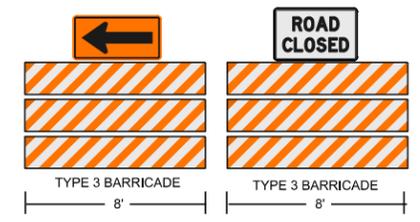
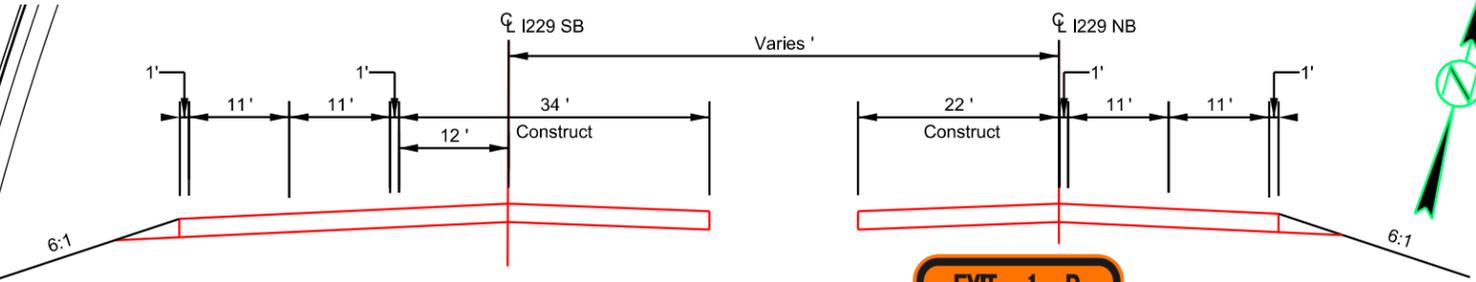
Plot Name - ...Plans\Ramp A\124tc3.dgn  
137

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

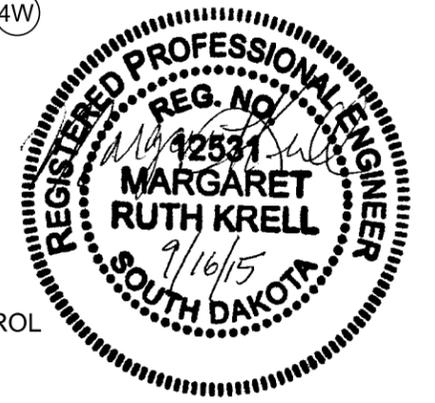
# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C32	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

## PHASE III (TYPICAL)



- LEGEND:**
- TRAFFIC
  - WORK AREA (PHASE III)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plot Scale - 1:100

Plotted From - geoff\_babovec

Plot Name - 138

File - ...Plans\I229\05tc3.dgn

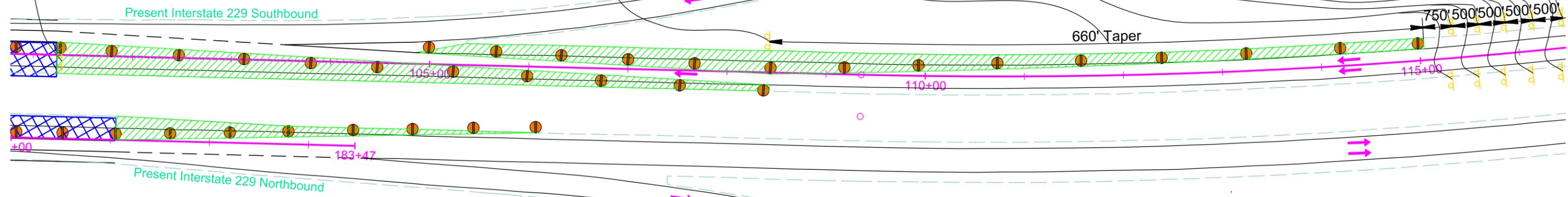
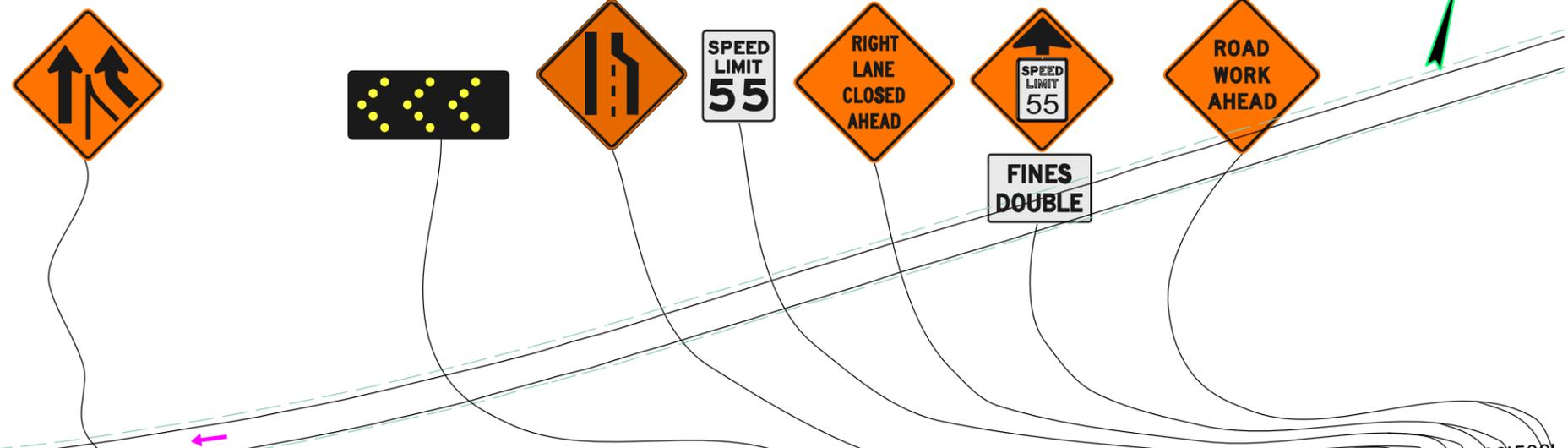
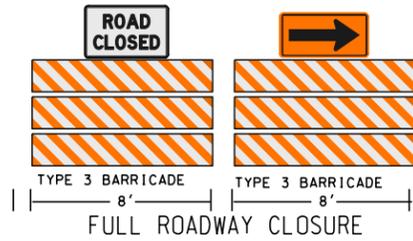
# TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

PHASE III  
(TYPICAL)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C33	C40
Plotting Date: 9/17/2015		Revised: 9/16/2015 (GASB)	

Plot Scale - 1:100

Plot Name - 139



- LEGEND:**
- TRAFFIC
  - WORK AREA (PHASE III)
  - TEMPORARY PAVEMENT
  - CLOSED FOR TRAFFIC CONTROL
  - REFLECTORIZED DRUMS
  - 4" TEMPORARY PAINT\ WHITE RAISED PAVEMENT MARKERS
  - 4" TEMPORARY PAINT\ YELLOW RAISED PAVEMENT MARKERS
  - TRAFFIC CONTROL MOVABLE CONCRETE BARRIER
  - CONCRETE BARRIER END PROTECTION
- \* Raised Pavement Markers Are Used In Transition Areas



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

Plotted From - geoff\_babovec

File - ...Plans\1229\100tc3.dgn

# Sign Details

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0293(96)73 IM 2292(90)0	C34	C40
Plotting Date: 8/31/2015			

Plot Scale - 1:200

Plotted From - geoff\_babovec

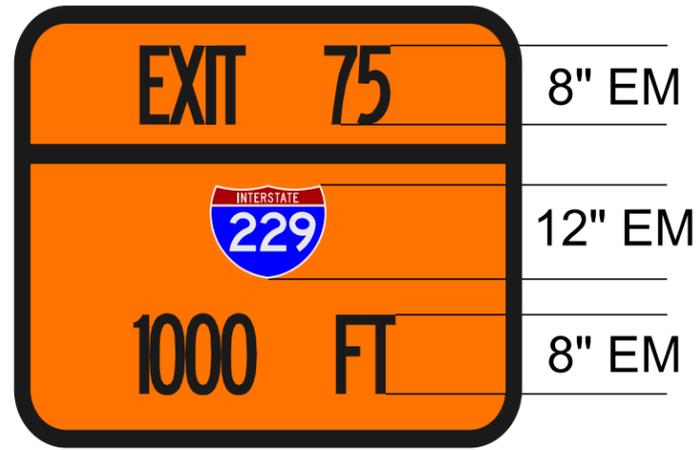
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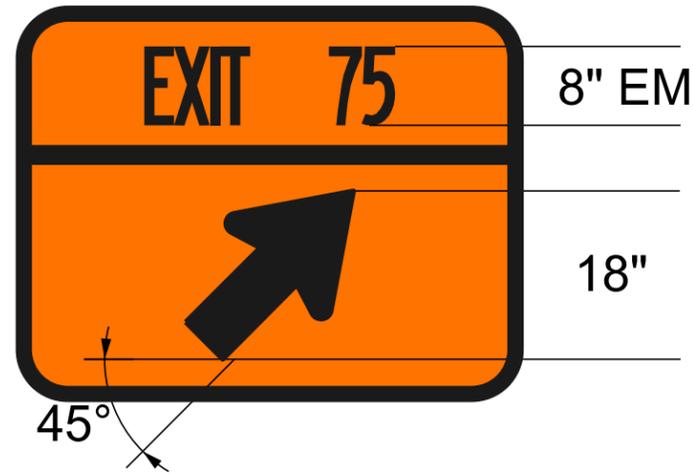
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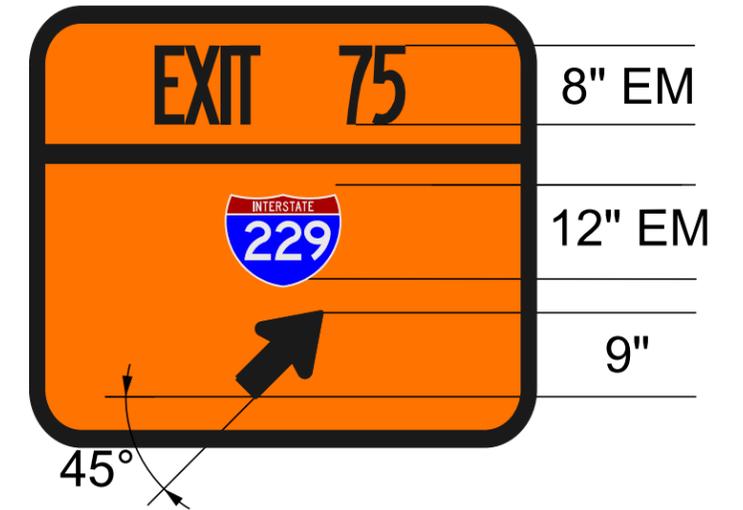
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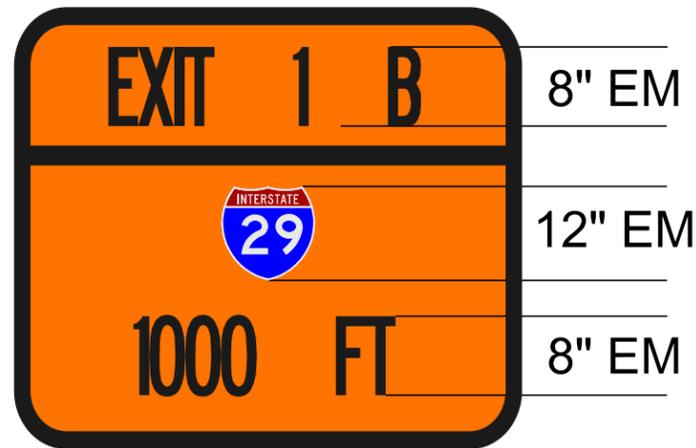
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BORDER WIDTH	1.25"
CORNER RADIUS	5.0"
LEGEND	6"/8" E. MODIFIED
BACKGROUND	TYPE: HIGH INTENSITY COLOR: ORANGE
LEGEND/BORDER	TYPE: HIGH INTENSITY COLOR: WHITE



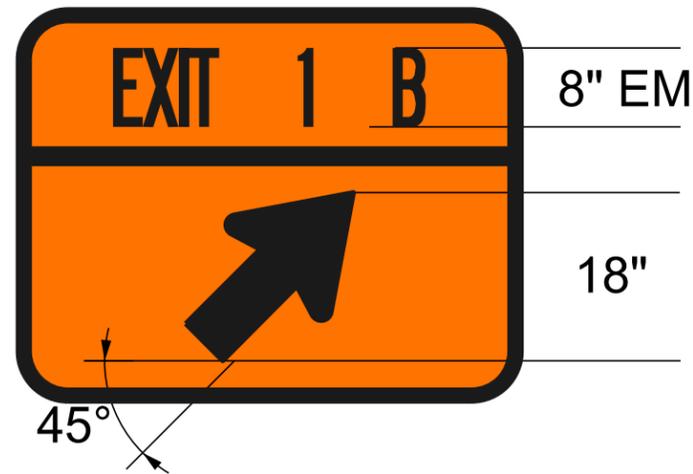
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LEGEND/BORDER	TYPE: HIGH INTENSITY COLOR: WHITE



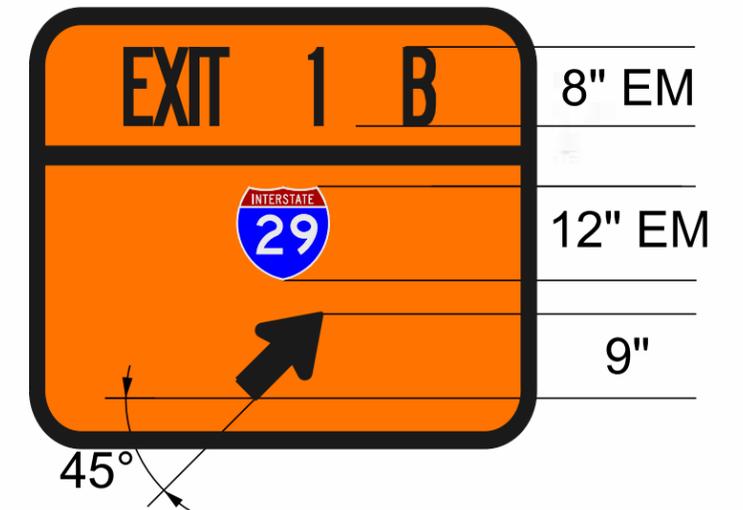
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CORNER RADIUS	5.0"
LEGEND	6"/8" E. MODIFIED
BACKGROUND	TYPE: HIGH INTENSITY COLOR: ORANGE
LEGEND/BORDER	TYPE: HIGH INTENSITY COLOR: WHITE



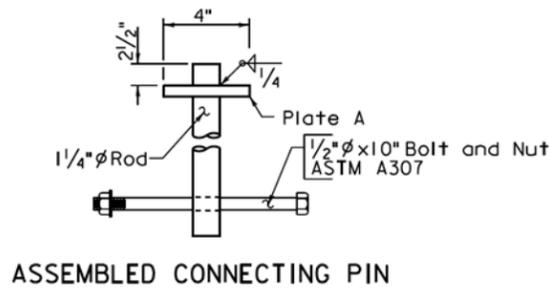
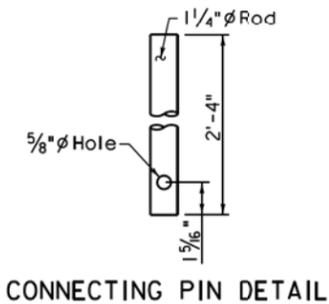
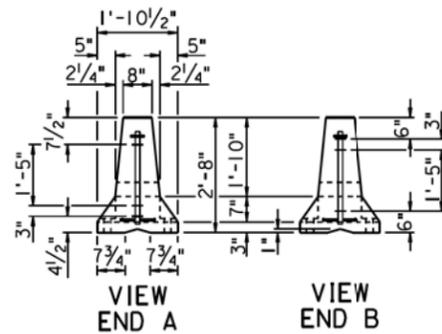
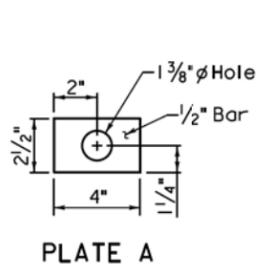
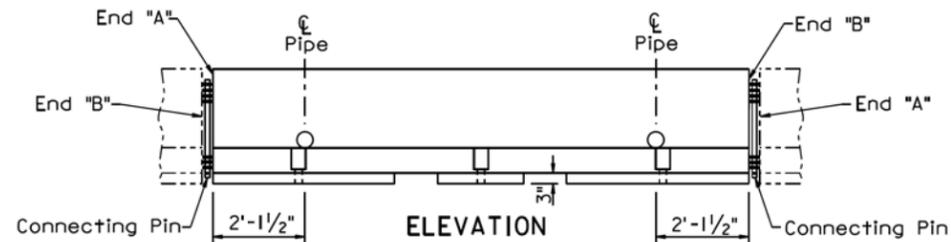
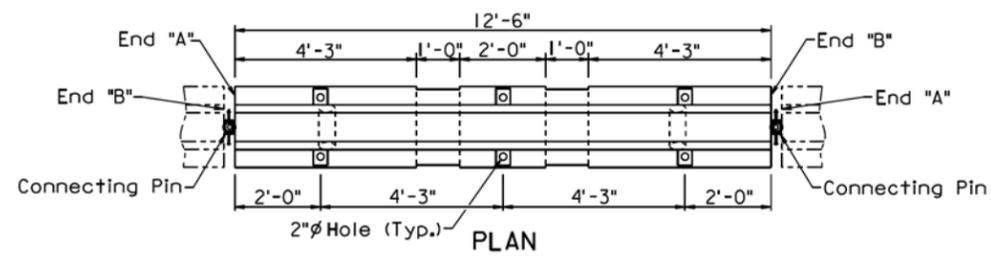
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BORDER WIDTH	1.25"
CORNER RADIUS	5.0"
LEGEND	6"/8" E. MODIFIED
BACKGROUND	TYPE: HIGH INTENSITY COLOR: ORANGE
LEGEND/BORDER	TYPE: HIGH INTENSITY COLOR: WHITE



SIGN NUMBER	SPECIAL
WIDTH X HEIGHT	5'-0" X 4'-0"
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



**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

June 26, 2009

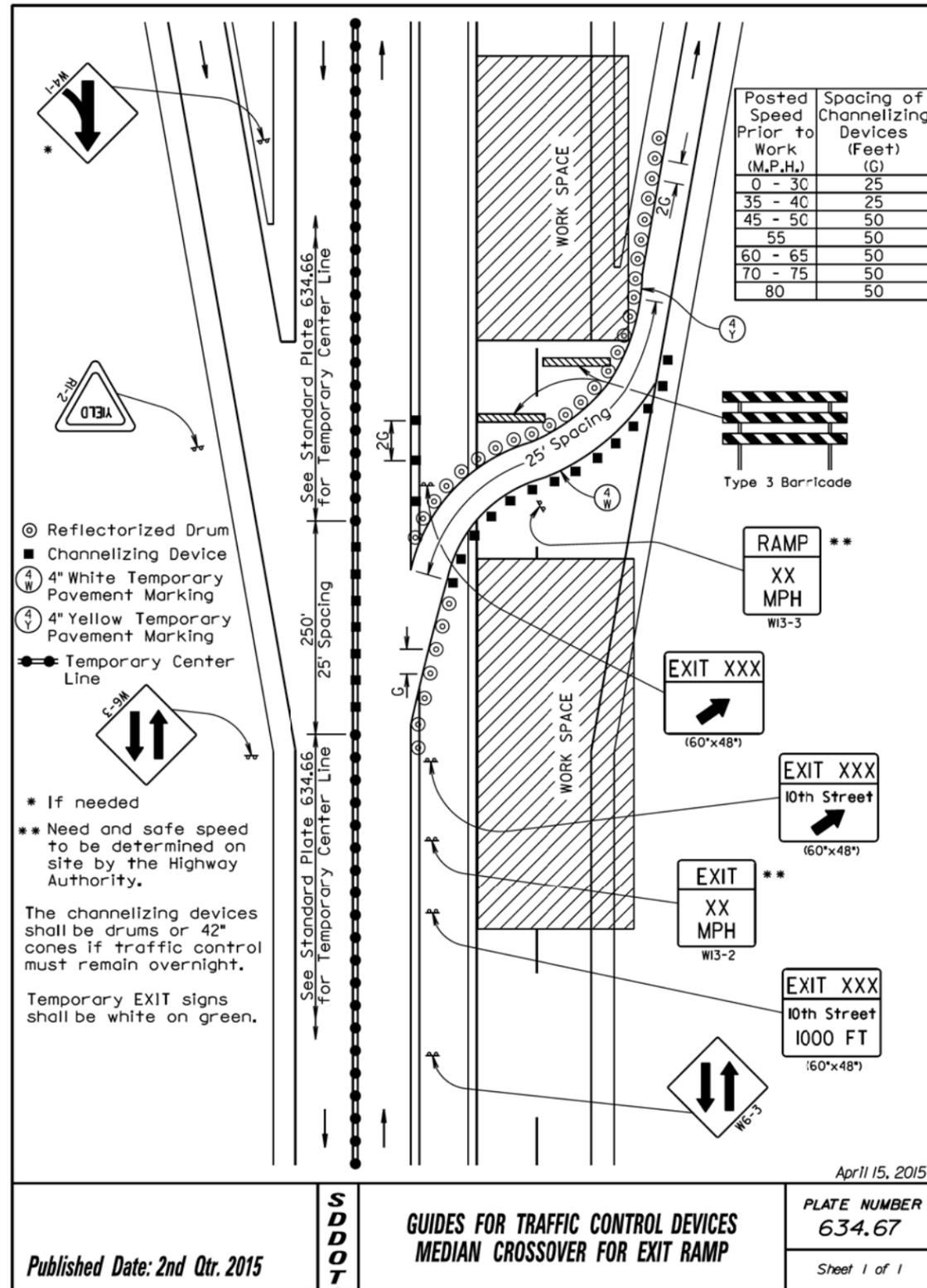
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			Sheet 1 of 2

Published Date: 2nd Qtr. 2015	S D D O T	TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (F SHAPE INTERIOR SECTION)	PLATE NUMBER 628.01
			Sheet 2 of 2



Plot Scale - 1:200

Plotted From - geoff\_babovec



Published Date: 2nd Qtr. 2015

SDOT

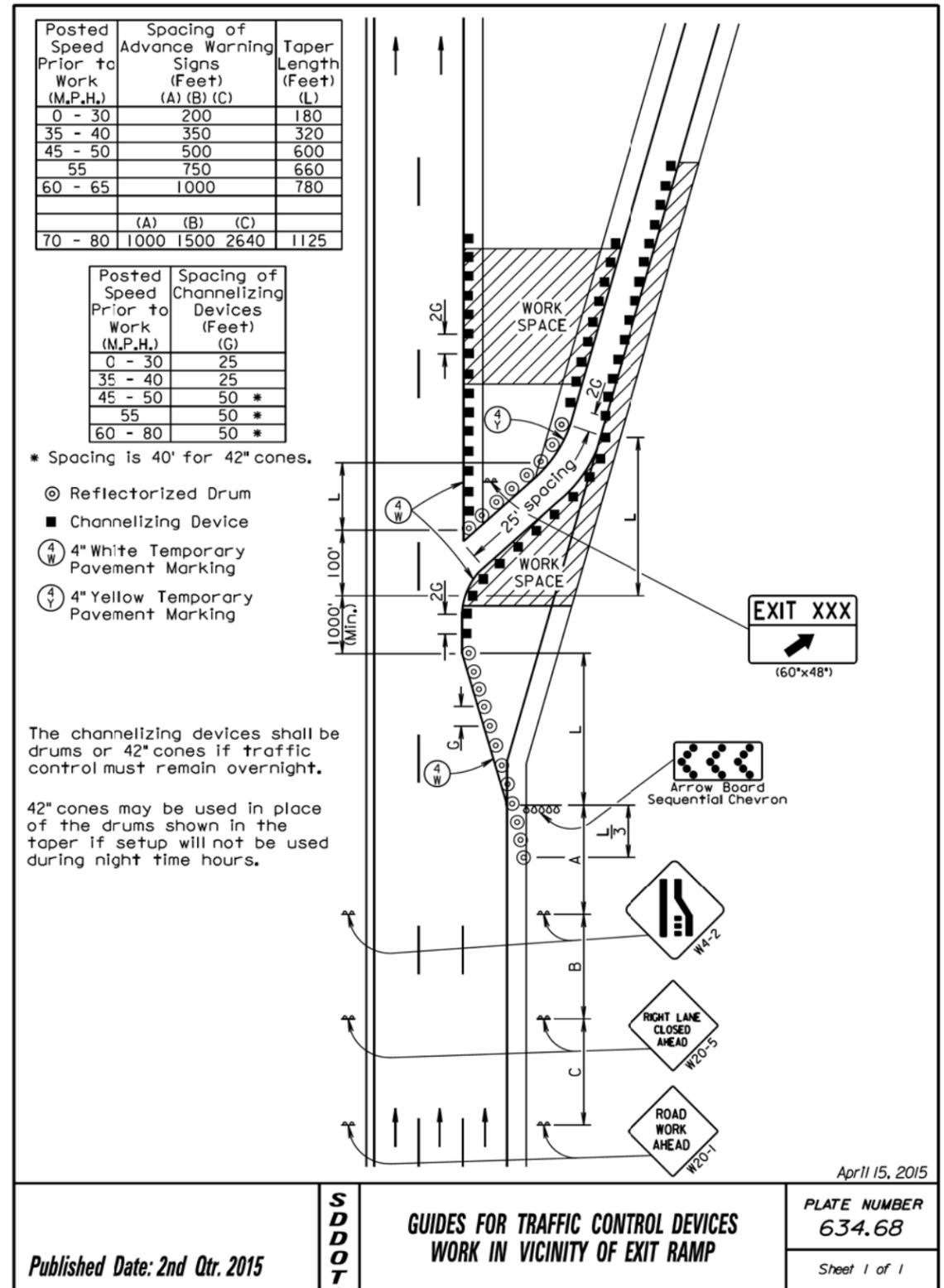
GUIDES FOR TRAFFIC CONTROL DEVICES  
MEDIAN CROSSOVER FOR EXIT RAMP

PLATE NUMBER 634.66

Sheet 1 of 1

Plot Name -

File - ...Plans\PlateC-3.dgn



Published Date: 2nd Qtr. 2015

SDOT

GUIDES FOR TRAFFIC CONTROL DEVICES  
WORK IN VICINITY OF EXIT RAMP

PLATE NUMBER 634.68

Sheet 1 of 1

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 - 80	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 - 80	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.

April 15, 2015

**SD DOT**

**GUIDES FOR TRAFFIC CONTROL DEVICES WORK IN VICINITY OF ENTRANCE RAMP**

PLATE NUMBER 634.70

Sheet 1 of 1

Published Date: 2nd Qtr. 2015

**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: 2nd Qtr. 2015

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 0292(78)073	SHEET C39	TOTAL SHEETS C40
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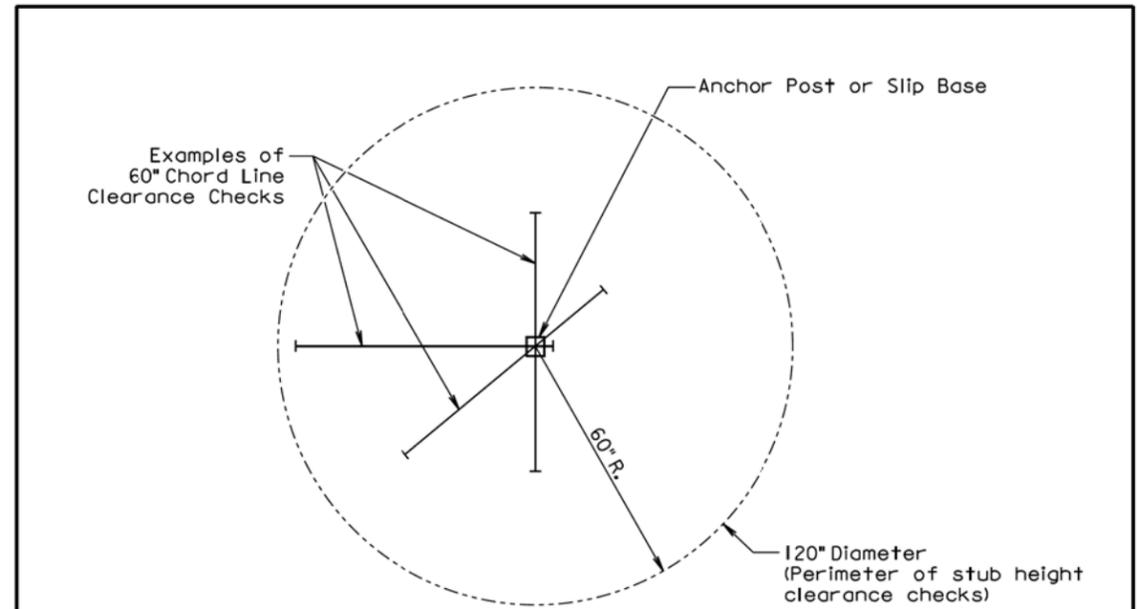
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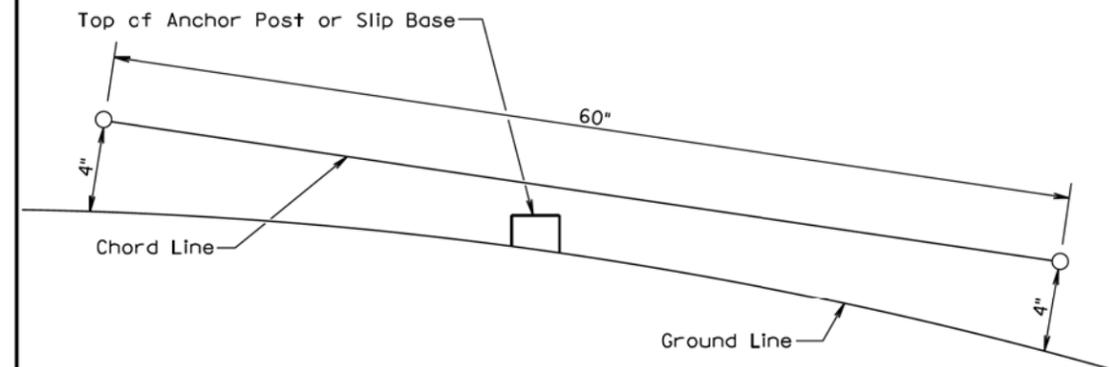
Plotted From - geoff\_babovec

Plot Name - 145

File - ...Plans\PlateC-5.dgn



**PLAN VIEW**  
(Examples of stub height clearance checks)



**ELEVATION VIEW**

**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: 2nd Qtr. 2015

**S  
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**BREAKAWAY SUPPORT STUB CLEARANCE**

PLATE NUMBER  
**634.99**

Sheet 1 of 1

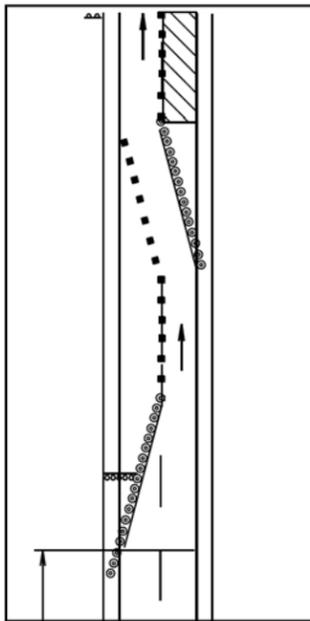
# SPECIAL DETAIL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 0292(78)073	SHEET C40	TOTAL SHEETS C40
Plotting Date:	9/16/2015	Revised: 9/16/2015 (GASB)	

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)	Spacing of Advanced Warning Signs (Feet)		
			(A)	(B)	(C)
0 - 30	25	180	200		
35 - 40	25	320	350		
45 - 50	50 *	600	500		
55	50 *	660	750		
60 - 65	50 *	780	1000		
70 - 75	50 *	900	1000	1500	2640

\* Spacing to be every 40' for 42" cones.



See Detail "A"

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

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

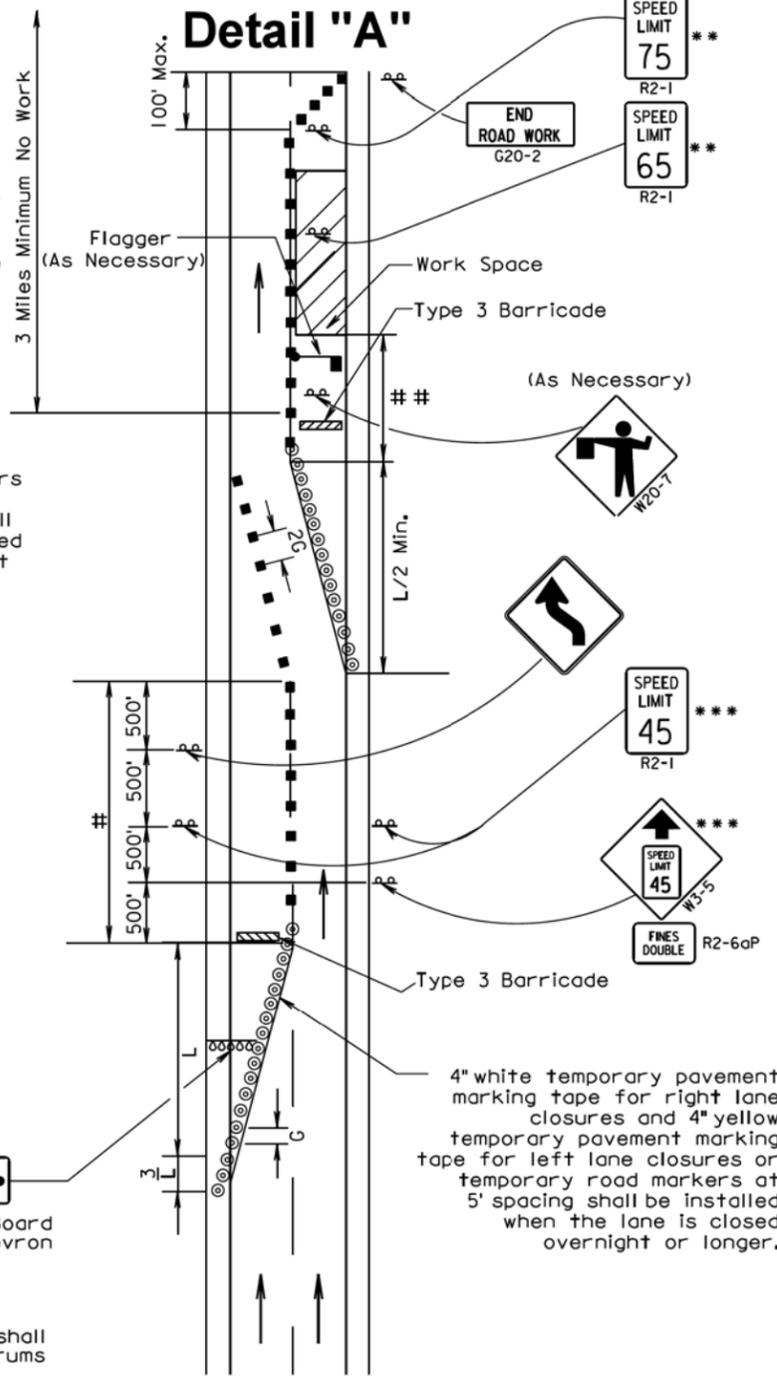
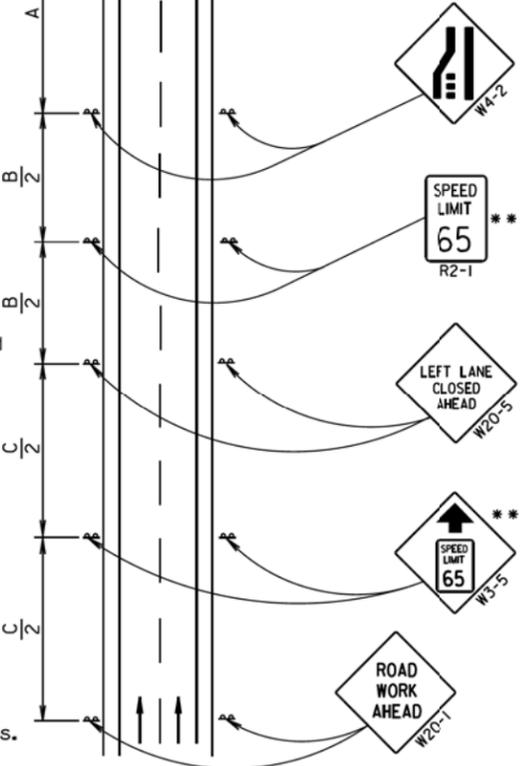
High speed is defined as having a posted speed limit greater than 45 mph.

\*\* Speed appropriate for location.

⊙ Reflectorized Drum

■ Channelizing Device 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 any night time hours.



# The Lane Shift shall be at least 2000' from the end of the taper.

## The Work Space shall be at least 500' from the end of the Lane Shift.

\*\*\* 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.

Arrow Board Sequential Chevron

⊙ Reflectorized Drum

■ Channelizing Device shall be 42" cones or drums

4" white temporary pavement marking tape for right lane closures and 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 or longer.

## WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS WITH LANE SHIFT