

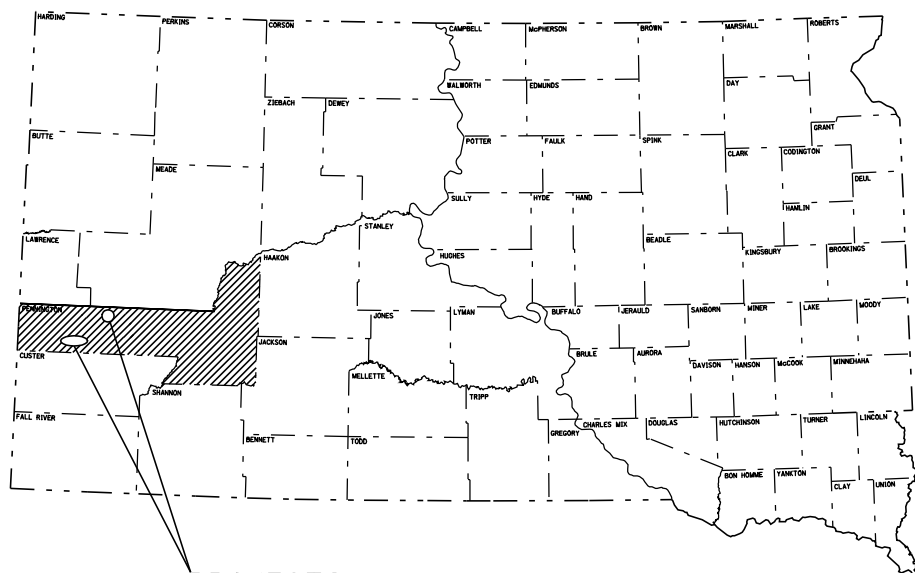
PLOT SCALE - 7666.560000:1.000000

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000P-452 000P-491	1	4

Plotting Date: 04-MAR-2010

### INDEX OF SHEETS

Sheets 1-2	Title Sheets
Sheet 3	Estimate of Qtys. and General Notes
Sheet 4	Details



PROJECTS

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION

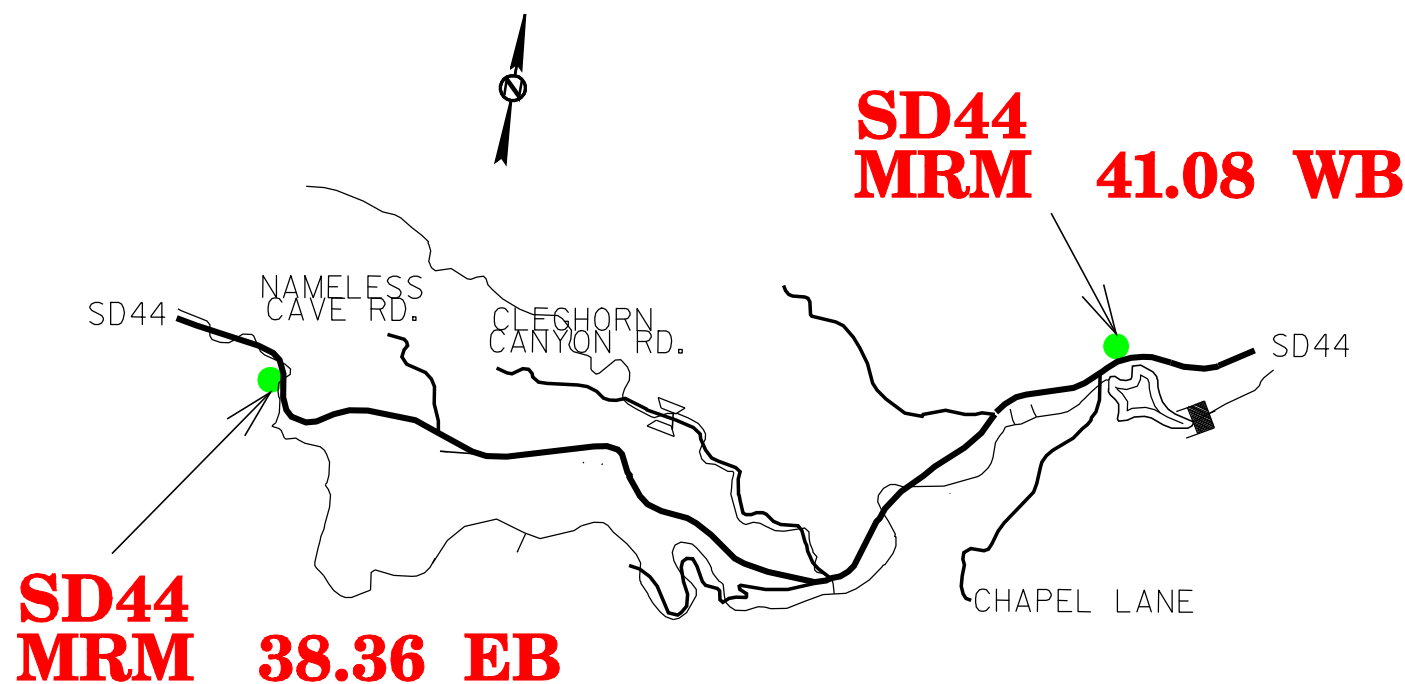
### PLANS FOR PROPOSED

**000P-452**  
**000P-491**

**US16, US385 & SD44**  
**PENNINGTON COUNTY**

SOLAR POWERED FLASHING LIGHT INSTALLATION  
ON DOT INSTALLED BIG HORN SHEEP SIGNS

PCN IIQA - IIQB



#### DESIGN DESIGNATION SD44

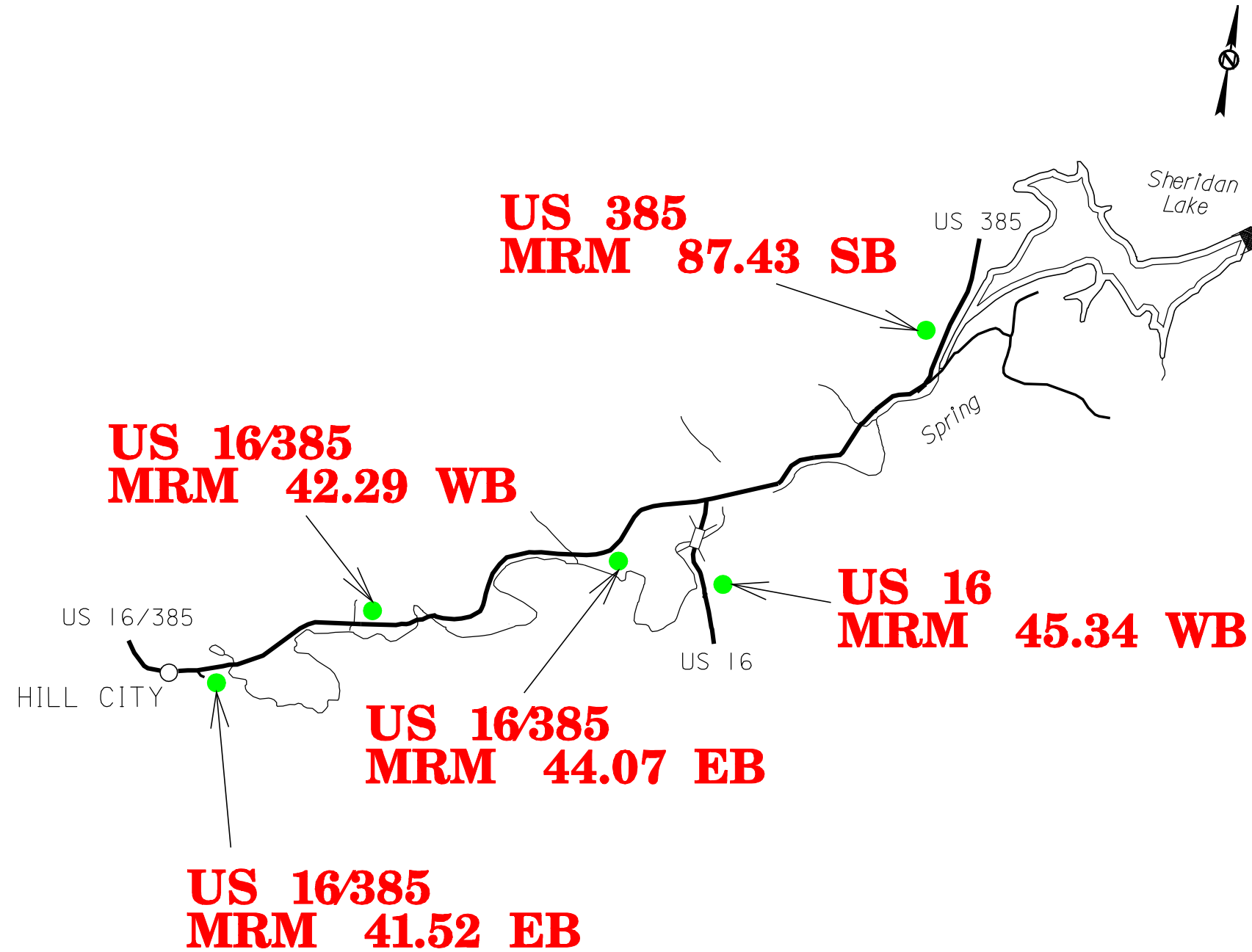
ADT (2008)	4300
ADT (2028)	5515
DHV	830
d	50%
T DHV	2.0%
T ADT	4.5%

PLOTTED FROM - ITRC1.1625

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000P-452 000P-491	2	4

Plotting Date: 04-MAR-2010



DESIGN	DESIGNATION	US16
ADT	(2008)	5160
ADT	(2028)	6195
DHV		930
d		50%
T DHV		3.9%
T ADT		8.5%

DESIGN	DESIGNATION	US385
ADT	(2008)	1505
ADT	(2028)	1790
DHV		270
d		50%
T DHV		3.4%
T ADT		7.4%

**ESTIMATE OF QUANTITIES**

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
632E3400	Solar Powered Flasher	7	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS

**WORK DESCRIPTION**

Work on this project consists of the Contractor furnishing and installing 7 Solar Powered Flashers on 7 DOT furnished and installed signs.

**SOLAR POWERED FLASHER**

The contractor shall provide all labor and equipment necessary to install the Solar Powered Flashers to existing signs. Payment for furnishing and installing the Solar Powered Flashers will be paid for at the contract unit price for each and all other costs shall be incidental.

The solar powered flasher shall be a JSF Technologies' Solar Powered 24-Hour Flashing Beacon or equivalent.

The system shall be self-contained with all components mounted within the signal head or solar panel housing. No additional cabinet is required. The flashing beacon shall be LED and 12" yellow with a tunnel visor and include mounting hardware to mount to a 2" or 2.5" square tubular post.

The Solar Powered Flasher shall be mounted to the top of each sign shown in the details in these plans. Two 3/8" diameter straight bolts (Grade 8) shall be used to attach each flasher to the existing sign post.

The single section shall be constructed of polycarbonate material and must be adjustable independently from the bracket for lens alignment.

The system shall include a Flash Pattern Selector with the ability to operate at least (2) flash patterns:

1. High Visibility Strobe – one second cycle of four 1/16<sup>th</sup> second flashes, followed by a 1/2 second pause.
2. MUTCD – a 1/2 second on, 1/2 second off cycle.

The solar panel housing section shall house Hawker 25 Ah, 2V, BC Cell, sealed lead acid or equivalent batteries. The batteries shall be field replaceable, and have a 3-5 year service life.

**MISCELLANEOUS ELECTRICAL**

The Contractor shall provide all labor and equipment necessary to install a single pole switch, wire, conduit, and weather proof switch box for each Solar Powered Flasher.

All costs for labor and material for furnishing and installing the switches, wire, conduit, and switch boxes will be paid for at the contract lump sum Miscellaneous Electrical.

The switch shall be mounted to the sign post at a height accessible from ground level and have the capability to be locked in the ON or OFF positions.

**MISCELLANEOUS ELECTRICAL (CONTINUED)**

The Contractor shall be responsible for the restoration of any disturbed areas to the satisfaction of the Engineer.

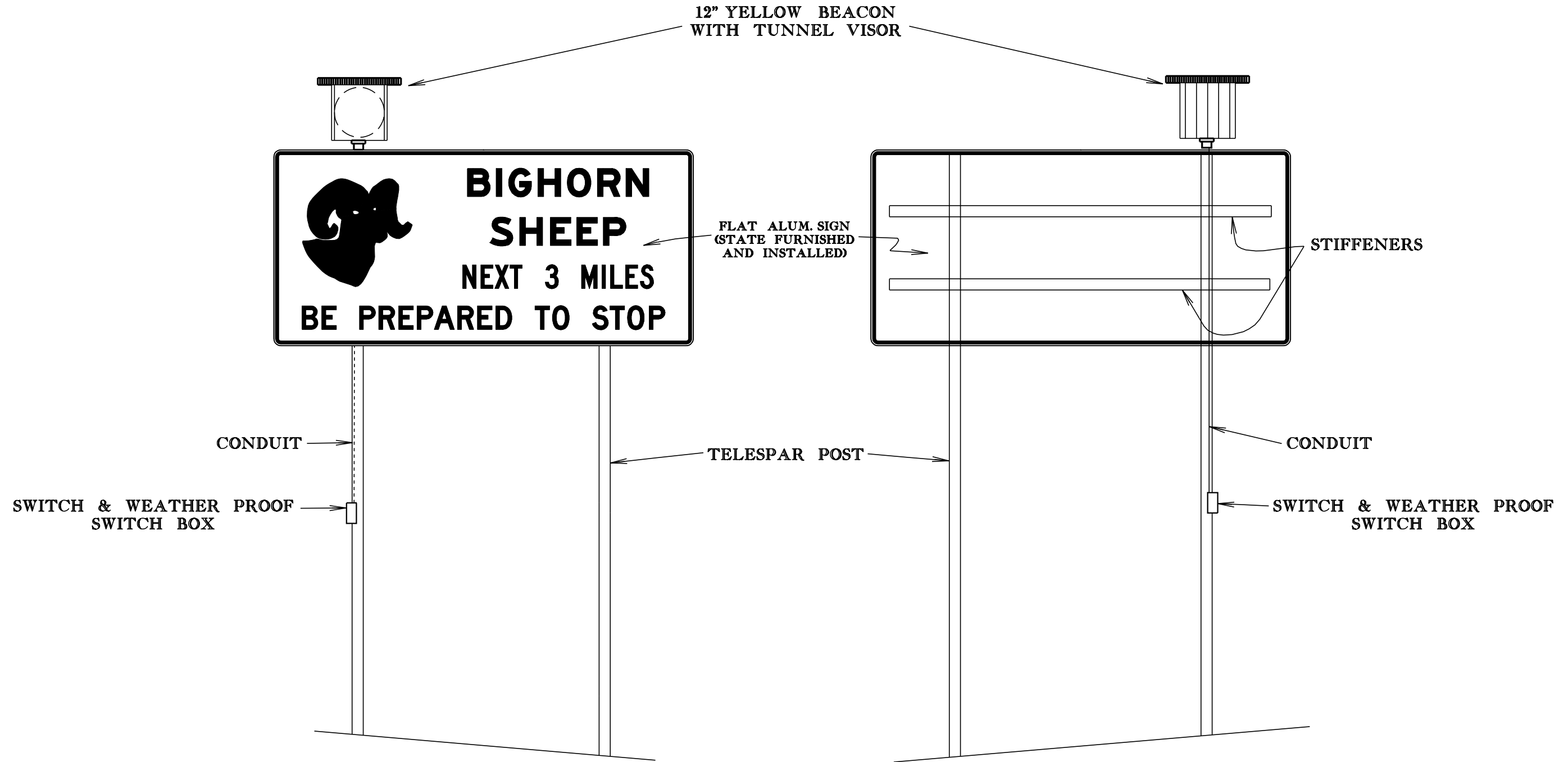
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-452 000P-491		
		3	4

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000P-452 000P-491	4	4

Plotting Date: 04-MAR-2010

# DETAILS FOR ATTACHING FLASHING BEACON



PLOTTED FROM - TRRC11625

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