

USER: TThompson
PLOTTED: 08-MAR-2010 15:26
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08-MAR-2010 15:26

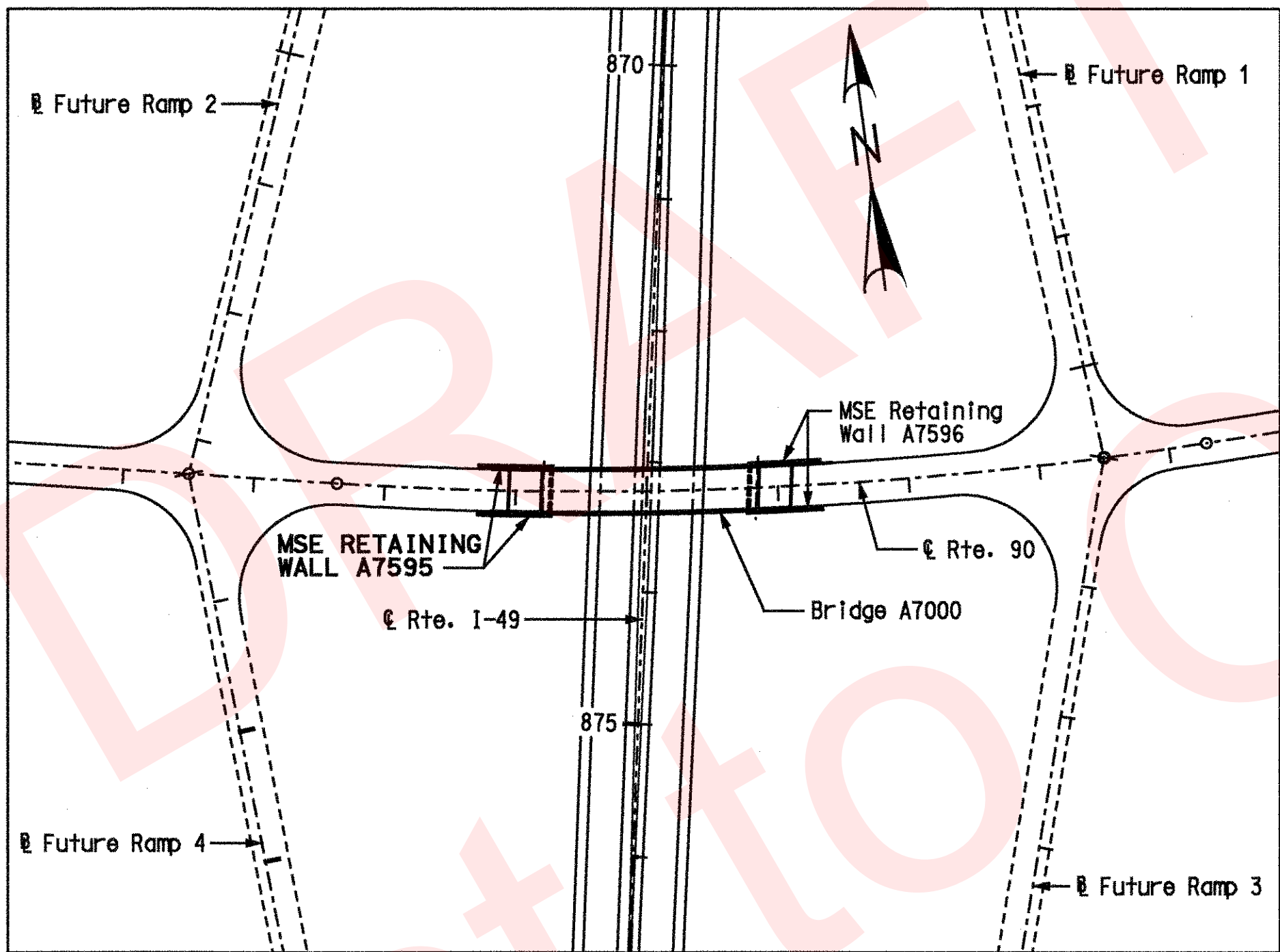
Designed JUL 2009
Detailed JUL 2009
Checked AUG 2009

Note: This drawing is not to scale. Follow Dimensions.

Sheet No. 1 of 3

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

SEC/SUR 22 TWP 21N RGE 32W



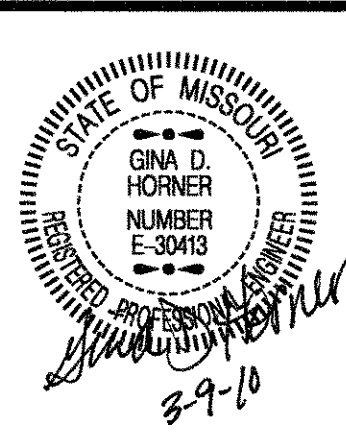
INDEX OF DRAWINGS

- 1 Title Sheet
- 2 General Plan and Elevation
- 3 Typical Sections

RETAINING WALL AT END BENT 1
OF BRIDGE A7000

STATE ROAD FROM RTE. H TO STATE LINE
ABOUT 8.0 MILES EAST OF RTE. 59
STA. 48+71.50 (RTE. 90)

STD. 611.60



DATE PREPARED
07/28/09

ROUTE
I-49

DISTRICT
BR

COUNTY
McDONALD

JOB NO.
J7P0601

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A7595

DESCRIPTION

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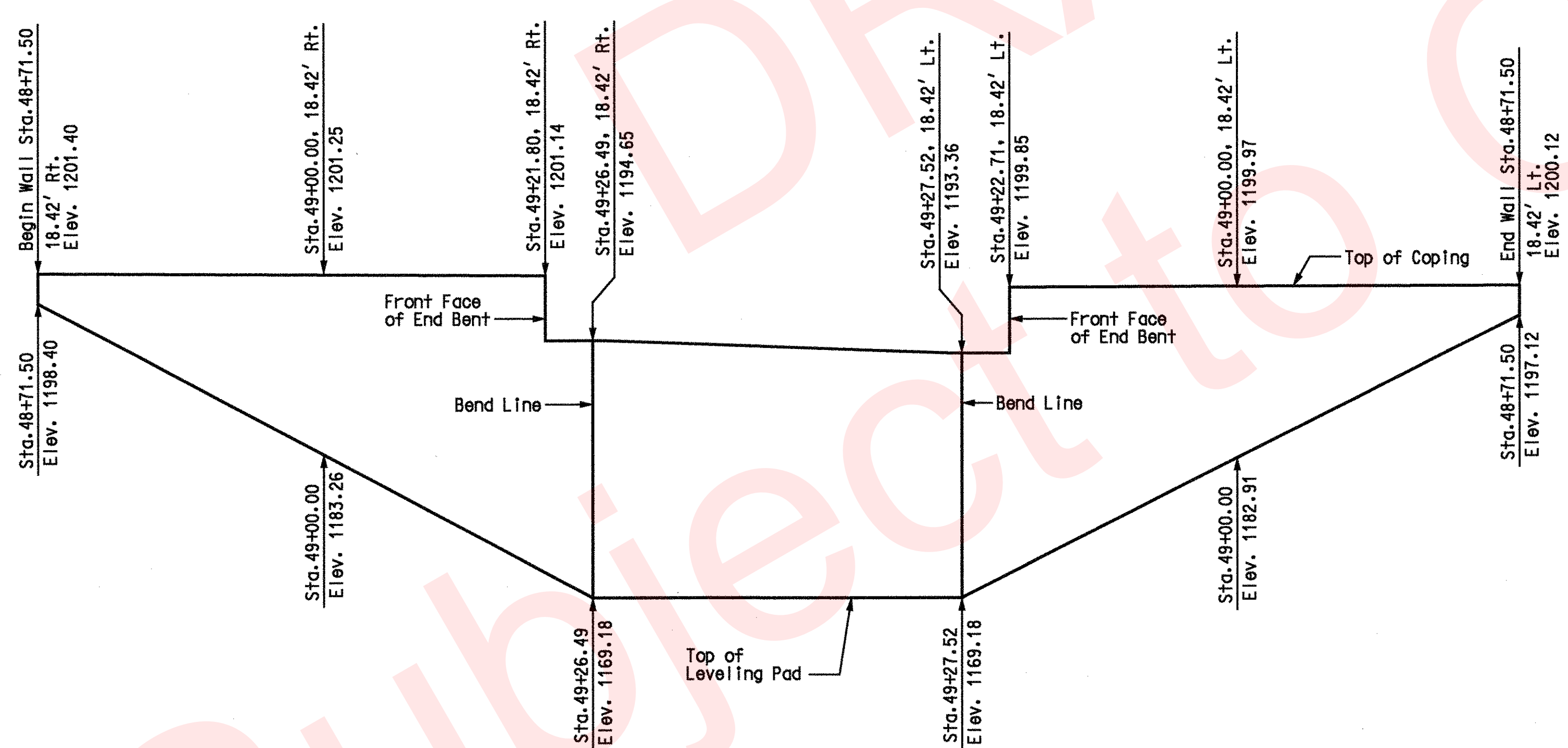
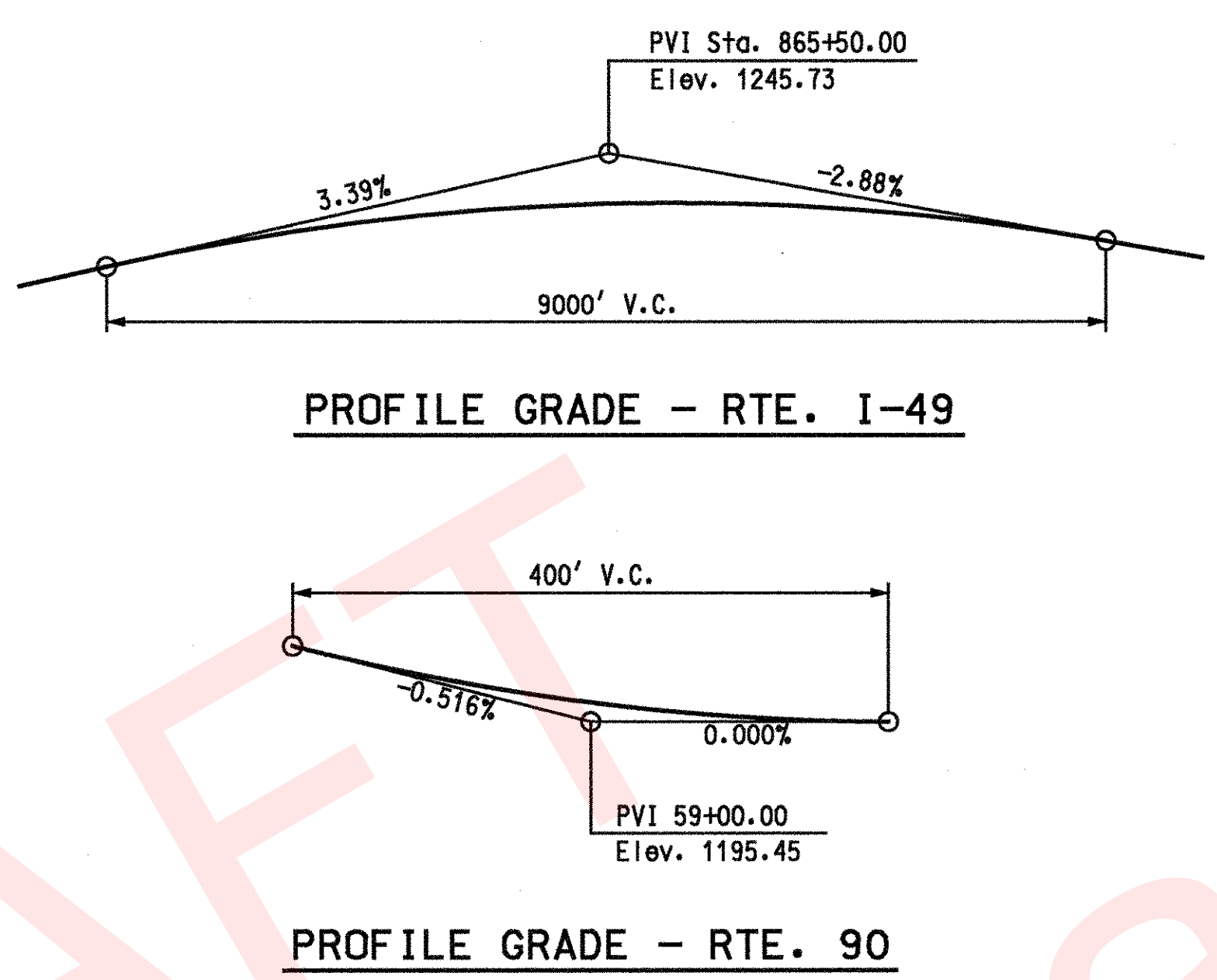
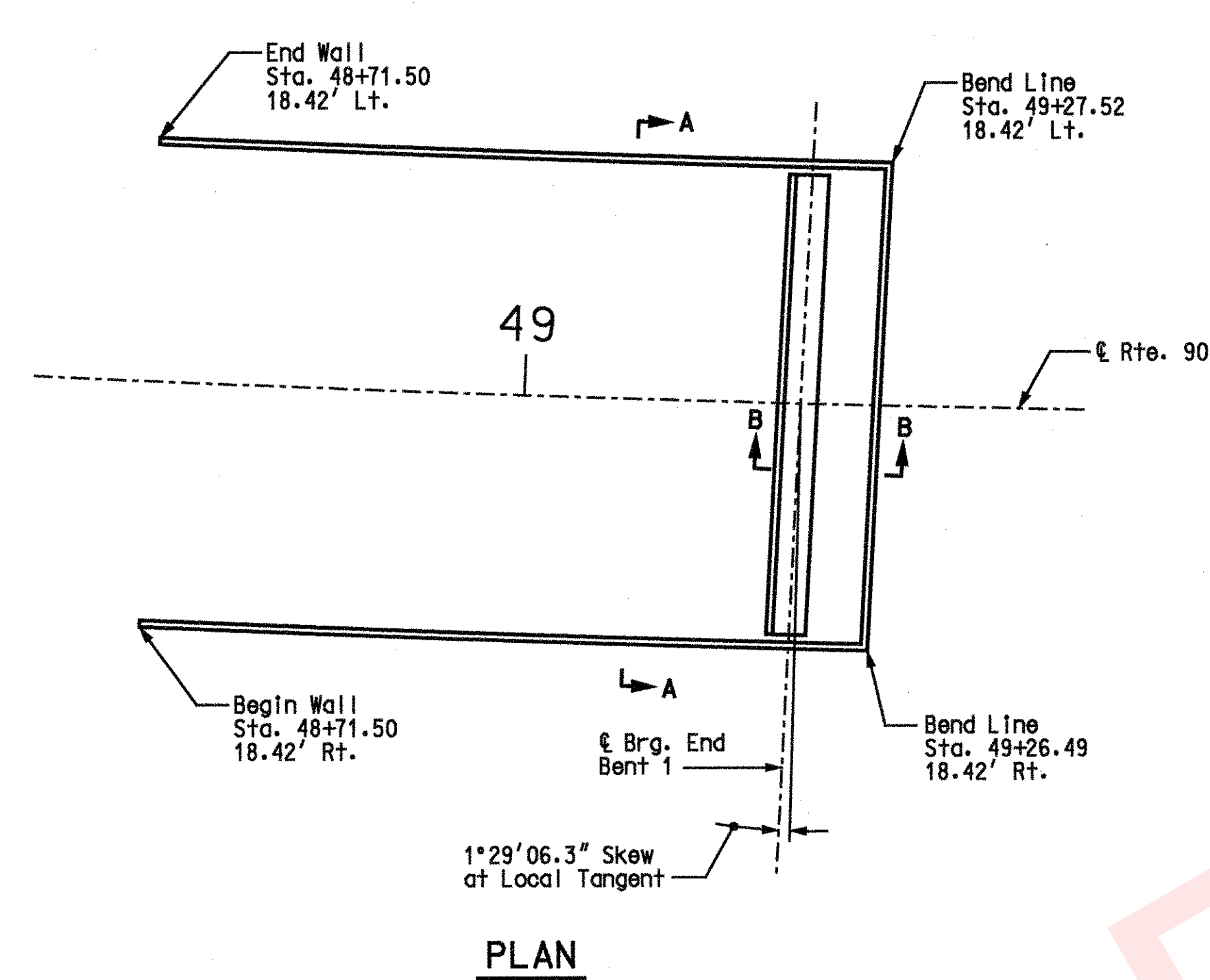
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

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REV.

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CURVE DATA
RTE. 90

P.I. Sta. = 50+97.57
 $\Delta = 12^\circ 42' 24.7''$ (Lt.)
 $D = 1^\circ 54' 35.5''$
 $L = 665.33'$
 $T = 334.04'$
 $R = 3000.00'$
 $SE = 3.7\%$

MSE WALL SYSTEMS DATA TABLE				
Proprietary Wall Systems		Combination Wall Systems		
Manufacturer	System	Facing Unit Manufacturer	Facing Unit	Geogrid Manufacturer

ESTIMATED QUANTITIES		
ITEM		QUANTITY
Mechanically Stabilized Earth Wall Systems	Sq. Ft.	2,759

MSE Wall Systems Data Table is to be completed by MoDOT construction personnel to record the manufacturer of the proprietary wall system or the manufacturers of the combination wall system that was used for constructing the MSE wall.

Detailed JUL 2009
Checked AUG 2009

Note: This drawing is not to scale. Follow Dimensions.

Sheet No. 2 of 3

GENERAL NOTES:

Design Specifications:
2002 - AASHTO 17th Edition.
Seismic performance category A.
Acceleration coefficient = 0.05

Factor of safety shall be 2.0 for overturning, 1.5 for sliding and 2.0 for bearing.

For seismic design, the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

$\phi = 19^\circ$ for retained fill material to be retained by the mechanically stabilized earth wall.

$\phi = 25^\circ$ for foundation material the wall is to rest on.

$\phi = 34^\circ$ for selected granular backfill.

Maximum allowable bearing pressure is 4000 psf.

Minimum reinforcement length for MSE wall for global stability:
= $0.8 \times H$ for entire length of wall
(where H = Top of wall to bottom of wall)

All concrete for leveling pad and coping shall be Class B or B-1 with $f'c = 4,000$ psi.

Panel reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Front face of wall shall be vertical.

All stationing is along $\angle$ Rte. 90.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by pile driving, guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

Coping shall be required on this structure.

The MSE wall system shall be a large block wall system in accordance with Sec 720.

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

The cost of joint filler, complete-in-place, will be considered completely covered by the contract unit price for Concrete Traffic Barrier (Type B). See roadway plans.

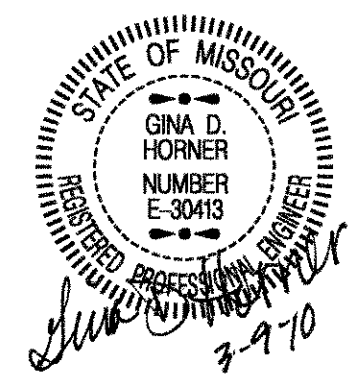
Total Length of wall = $147'-10\frac{3}{4}''$

Notes:
The boring logs or other factual records of subsurface data and investigations performed by the department for the design of this project are available from the Project Contact upon written request.

For Sections A-A and B-B, see Sheet No. 3.

- BENCHMARKS**
- BM-49-01-10 R.R. Spike 0.8' above ground, East side of a 14" red oak @ the NW quadrant of RTE 90 and SW 90-21 Elev. 1206.10
 - BM-49-01-11 1 1/2" Aluminum disk set in concrete, concrete flush with ground, 4.6' from edge of county road 9' (+/-) south of 16" black-jack oak, east side of county road SW 90-21, 60' (+/-) south of Don/Fern mail box #102, 0.3 miles (+/-) south of Rt. 90. Elev. 1123.70

GENERAL PLAN AND ELEVATION



DATE PREPARED
4/1/09

ROUTE
I-49

DISTRICT
BR

STATE
MO

SHEET NO.
2

COUNTY
MCDONALD

JOB NO.
J7P0601

CONTRACT ID.

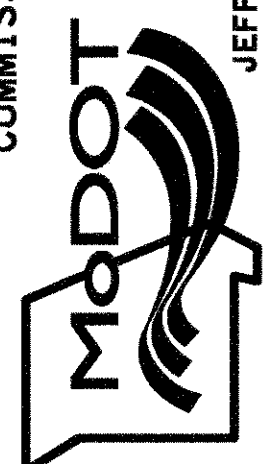
PROJECT NO.

BRIDGE NO.
A7595

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION


105 WEST CAPITAL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105-1310
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 007270

REV. IF A SFAI IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SFAI'D AND DATED.



≠ Bottom of wall shall be below roadway grade.

Note:
For location of Sections A-A and B-B, see Sheet No. 2.

Sheet No. 3 of 3

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DATE PREPARED

ROUTE I-49	STATE MO
DISTRICT BR	SHEET NO. 3

COUNTY	McDONALD
JOB NO.	J7P0601
CONTRACT ID.	

PROJECT NO.

BRIDGE NO.
A7595

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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

HNTB
7715 KIRK DRIVE
KANSAS CITY, MO 64105
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CERTIFICATE OF AUTHOR
NO. 001270

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