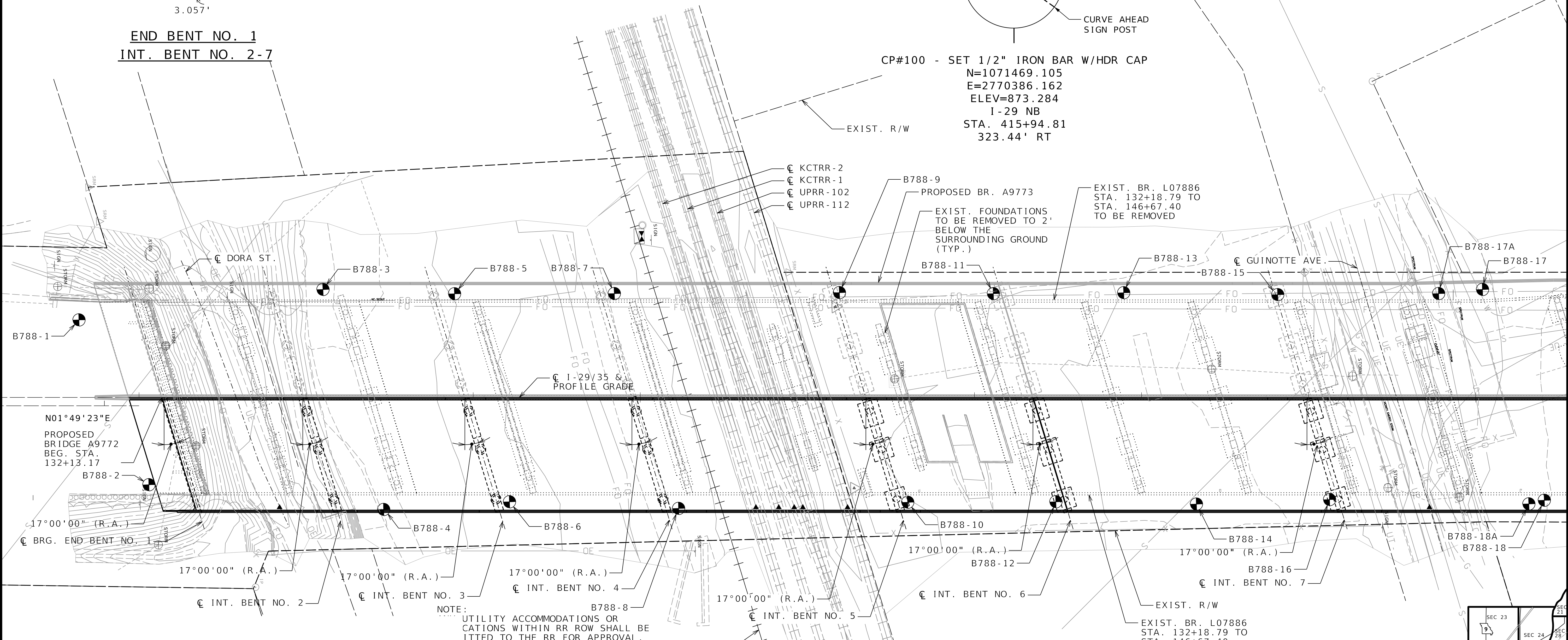


END BENT NO. 1
INT. BENT NO. 2-7

CP#100 - SET 1/2" IRON BAR W/HDR CAP
N=1071469.105
E=2770386.162
ELEV=873.284
I-29 NB
STA. 415+94.81
323.44' RT

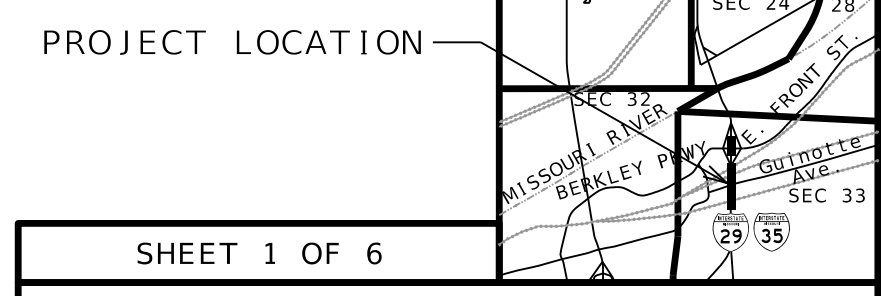


NOTE:
UTILITY ACCOMMODATIONS OR
CATIONS WITHIN RR ROW SHALL BE
ITTED TO THE RR FOR APPROVAL.

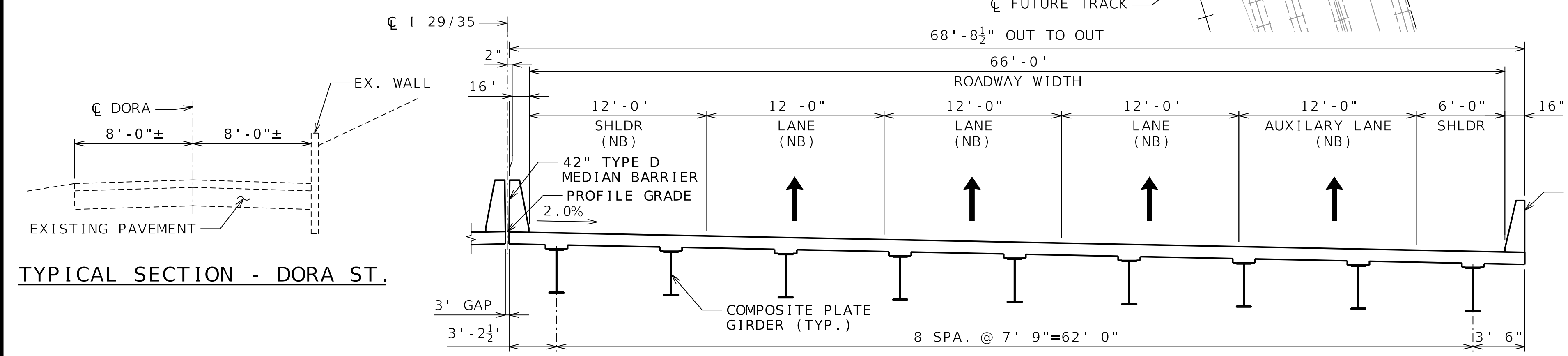
LEGEND
▲ POINT OF MINIMUM VERTICAL CLEARANCE
● INDICATES LOCATION OF BORINGS

I-29/35 NB DESIGN TRAFFIC
AADT - 2024 - 57,327
AADT - 2050 - 82,457
% TRUCKS = 7.0%
DESIGN SPEED = 55 MPH

PROPOSED BRIDGE A9772
STA. 132+13.17
(83'-97'-100'-140'-100')(164'-246')
(113'-92')(142'-185')
VARIABLE SKEW
CONT. COMPOSITE PLATE GIRDER SPANS
REMOVE EXIST. BRIDGE L07886
STA. 132+21.40
(51.7'-65.7'-10')(70'-93.5'-79.3'-63.7'-51.7')
(12'-63.7'-63.7'-63.7'-63.7'-12')(80'-90.7'-74')
(12'-87.5'-87.5'-12')(46'-58.2'-76.2'-54')
VARIABLE SKEW
CONT. COMPOSITE PLATE GIRDER SPANS

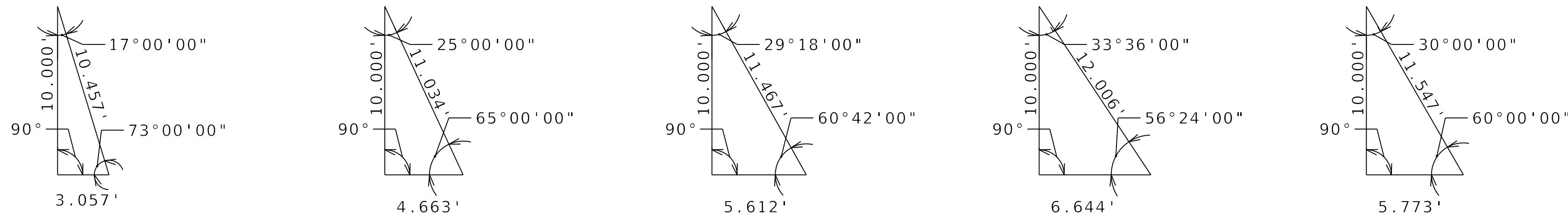


SHEET 1 OF 6	
Name of Crossing I-29/35 NB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9772	

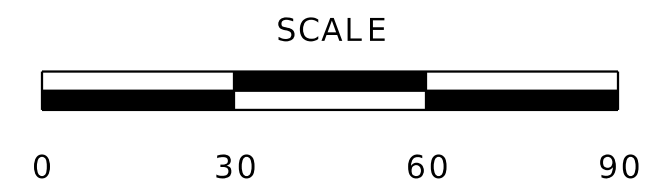
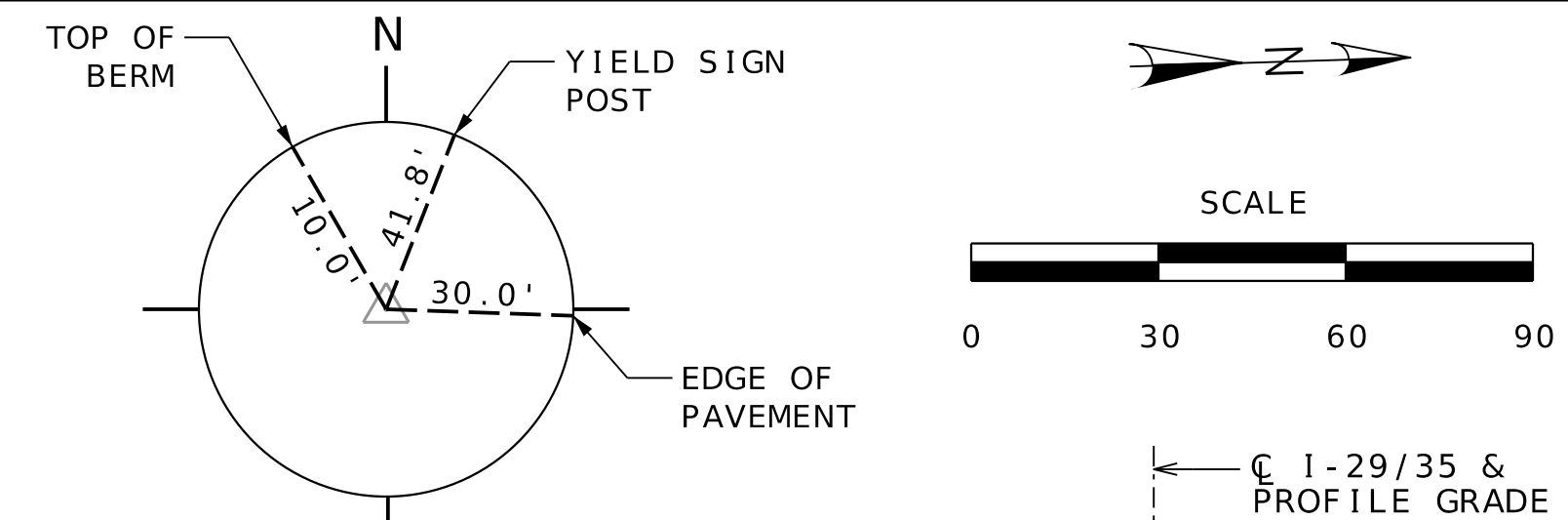


TYPICAL SECTION BRIDGE A9772
UNIT 1 & 2

BRIDGE A9772



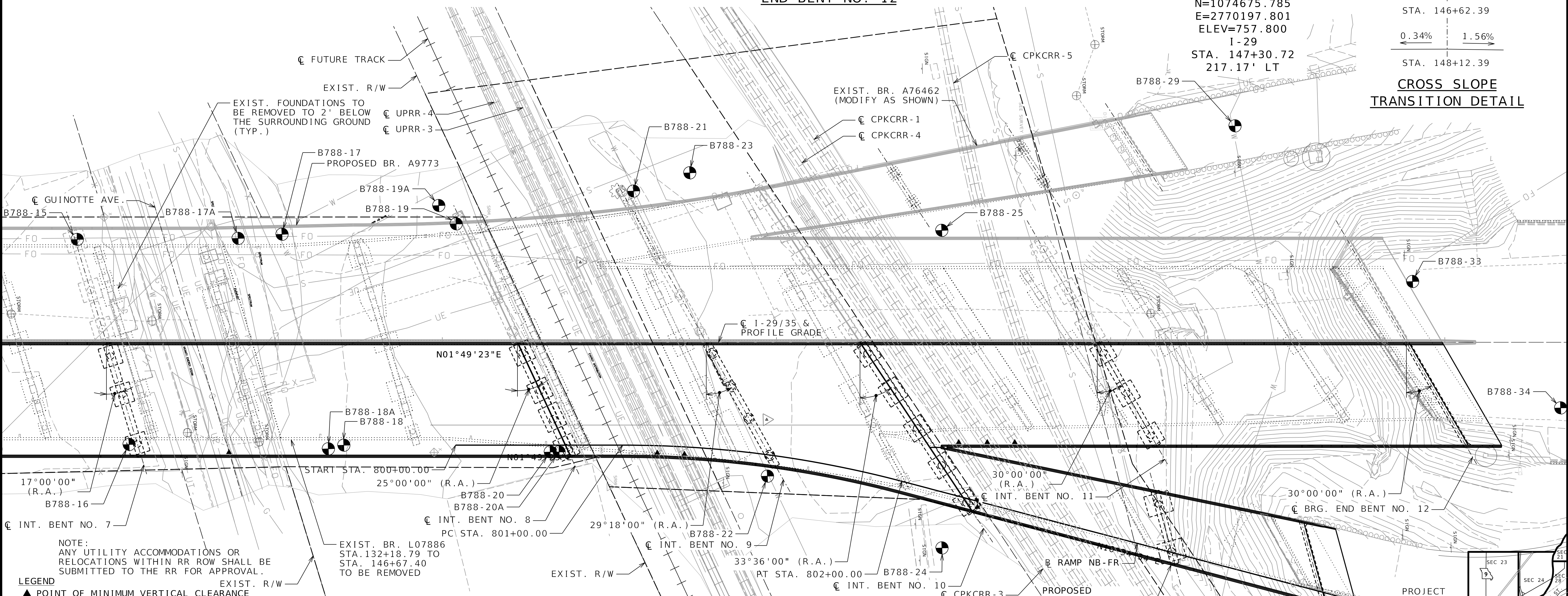
INT. BENT NO. 7 INT. BENT NO. 8 INT. BENT NO. 9 INT. BENT NO. 10 INT. BENT NO. 11
END BENT NO. 12



← C 1-29/35 & PROFILE GRADE

2.00%	2.00%
STA. 146+62.39	
0.34%	1.56%
STA. 148+12.39	

CROSS SLOPE TRANSITION DETAIL

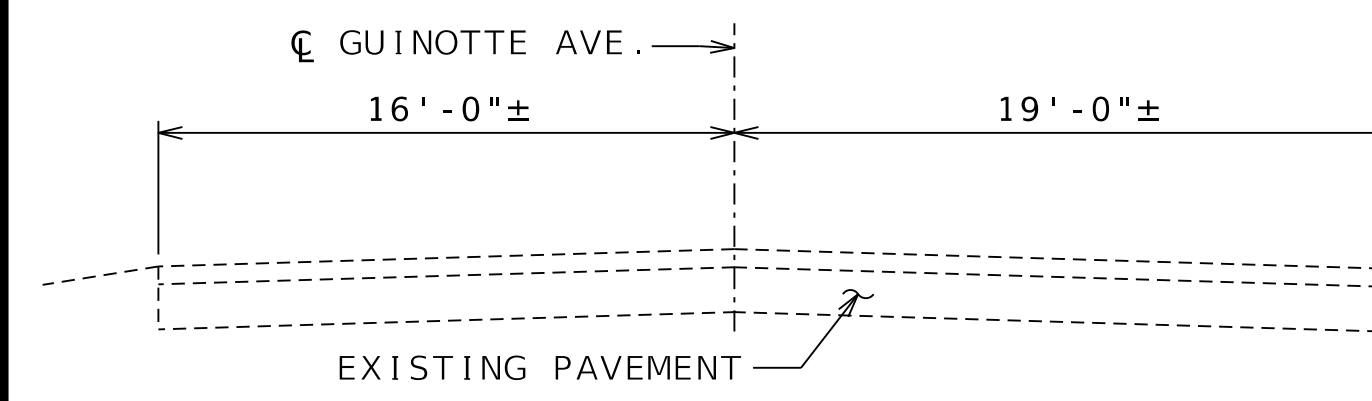


NOTE:
ANY UTILITY ACCOMMODATIONS OR RELOCATIONS WITHIN RR ROW SHALL BE SUBMITTED TO THE RR FOR APPROVAL.

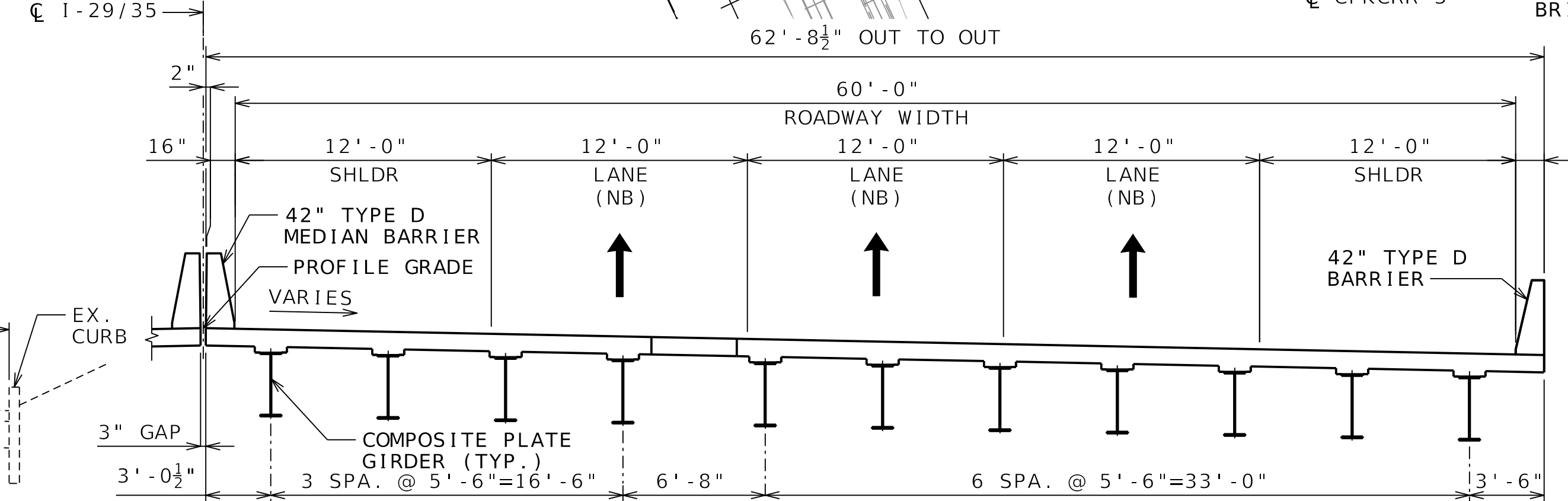
LEGEND
▲ POINT OF MINIMUM VERTICAL CLEARANCE
● INDICATES LOCATION OF BORINGS

CURVE DATA B RAMP NB-FR

PI STA.	801+84.93
PC STA.	801+00.00
PT STA.	802+68.91
Δ	14°45'11.4" RT.
D	8°44'2.8"
L	168.91' ARC
T	84.93'
R	656.00'

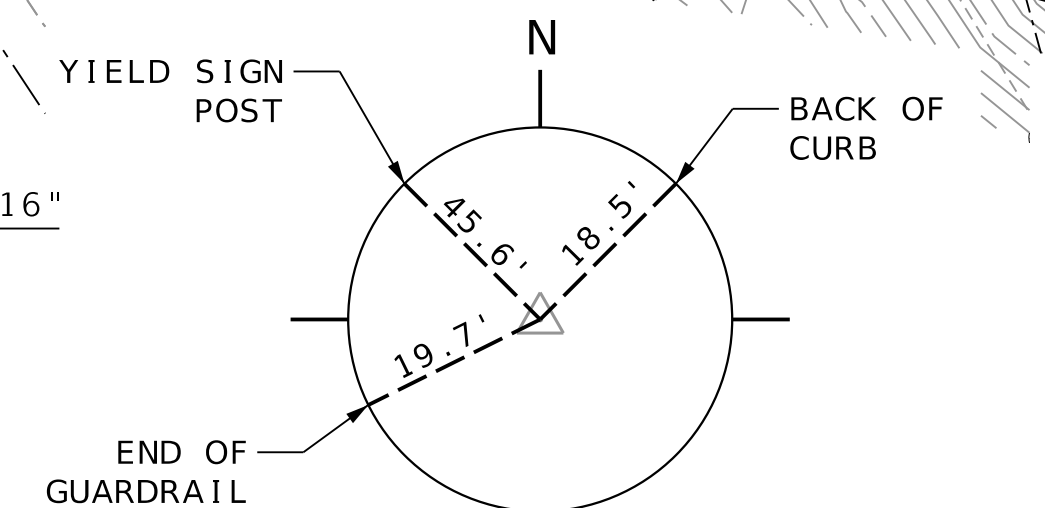


TYPICAL SECTION - GUINOTTE AVE.



TYPICAL SECTION BRIDGE A9772

NOTE: SEE BRIDGE MEMO FOR VARIABLE DECK WIDTHS IN UNIT 3.



CP#102 - SET 1/2" IRON BAR W/HDR CAP
N=1075094.646
E=2770651.477
ELEV=759.064
I-29
STA. 151+59.31
233.38' RT

SHEET 2 OF 6

Name of Crossing
I-29/35 NB OVER DORA ST., UPRR,
GUINOTTE AVE & CPKC

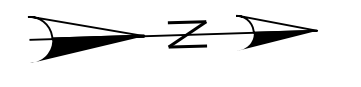
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W
ROUTE I-29; JACKSON COUNTY
SURVEY MADE BY HDR ENGINEERING INC.

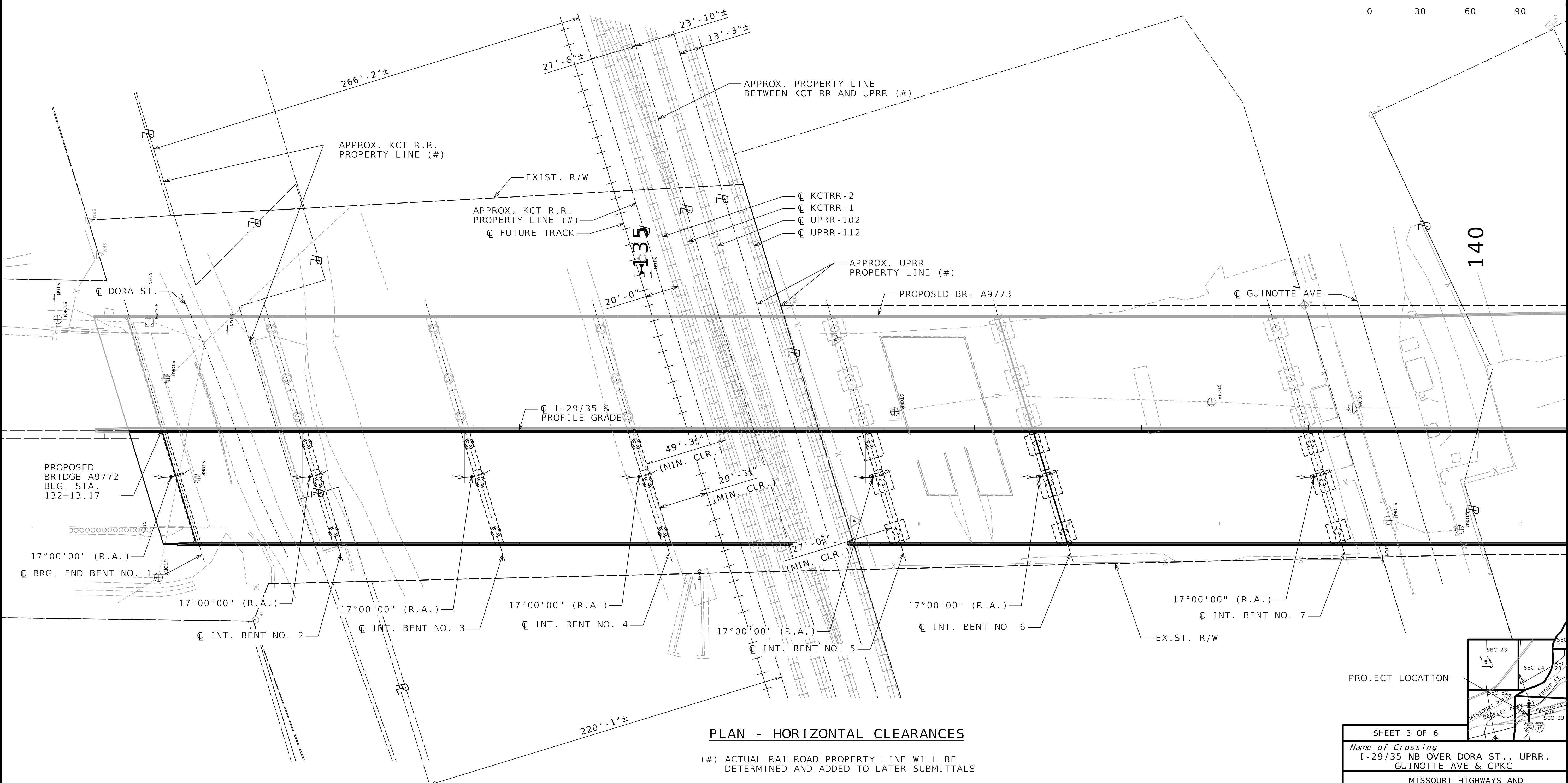
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.
Transportation Project Manager

PROJ. NO. STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9772

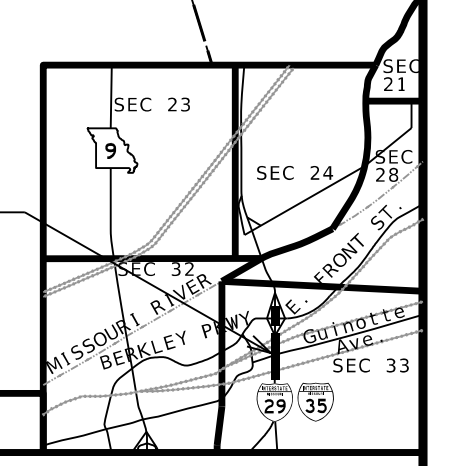


SCALE

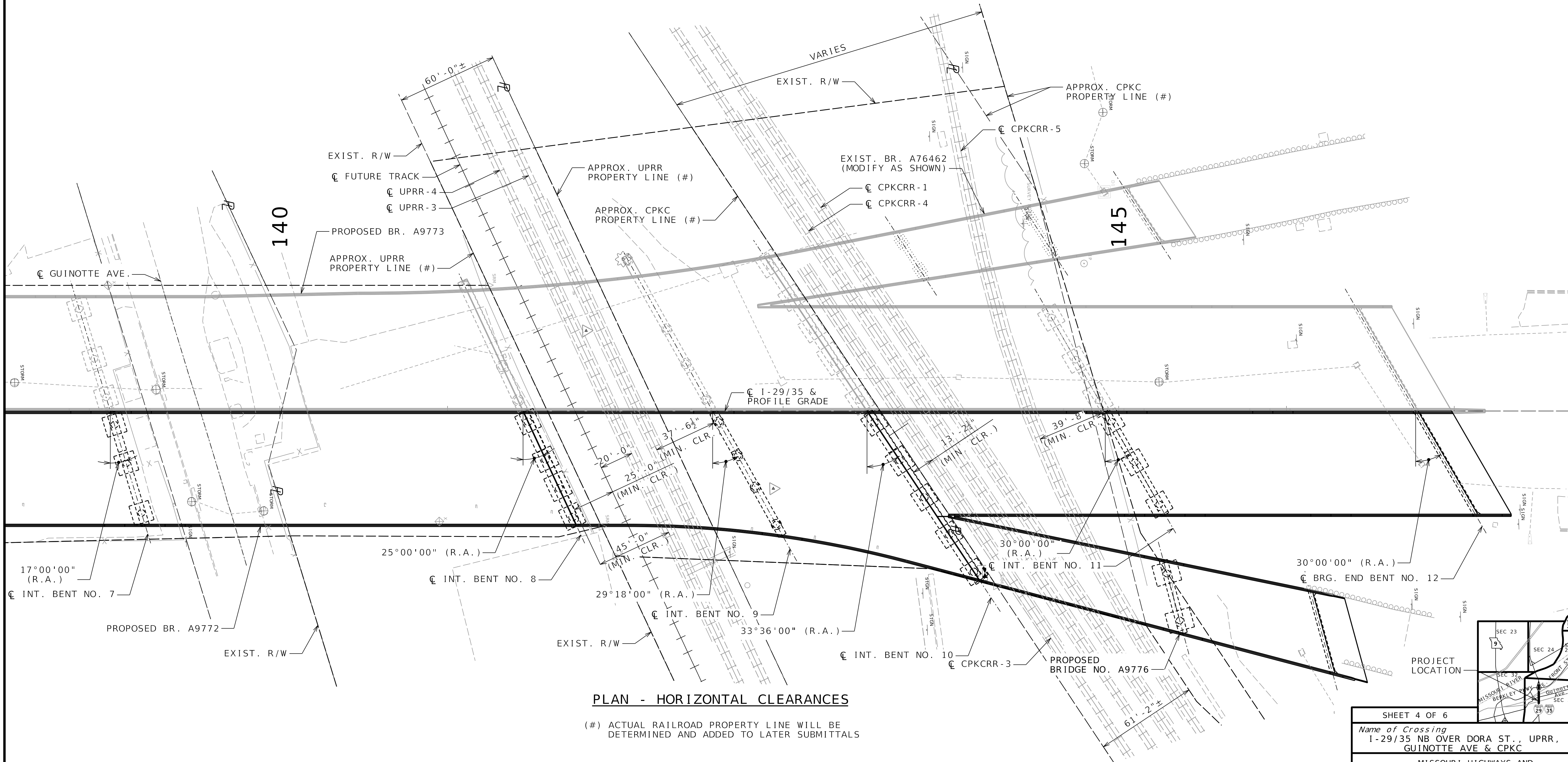
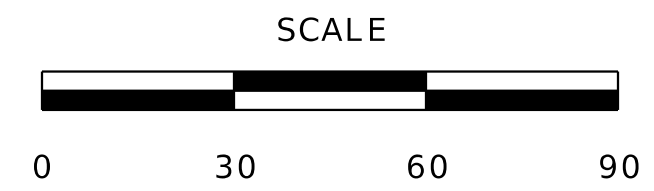


PLAN - HORIZONTAL CLEARANCES

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS



SHEET 3 OF 6	
Name of Crossing 1-29/35 NB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9772	



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

SHEET 4 OF 6

Name of Crossing
 I-29/35 NB OVER DORA ST., UPRR,
 GUINOTTE AVE & CPKC

MISSOURI HIGHWAYS AND
 TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W

ROUTE I-29 ; JACKSON COUNTY

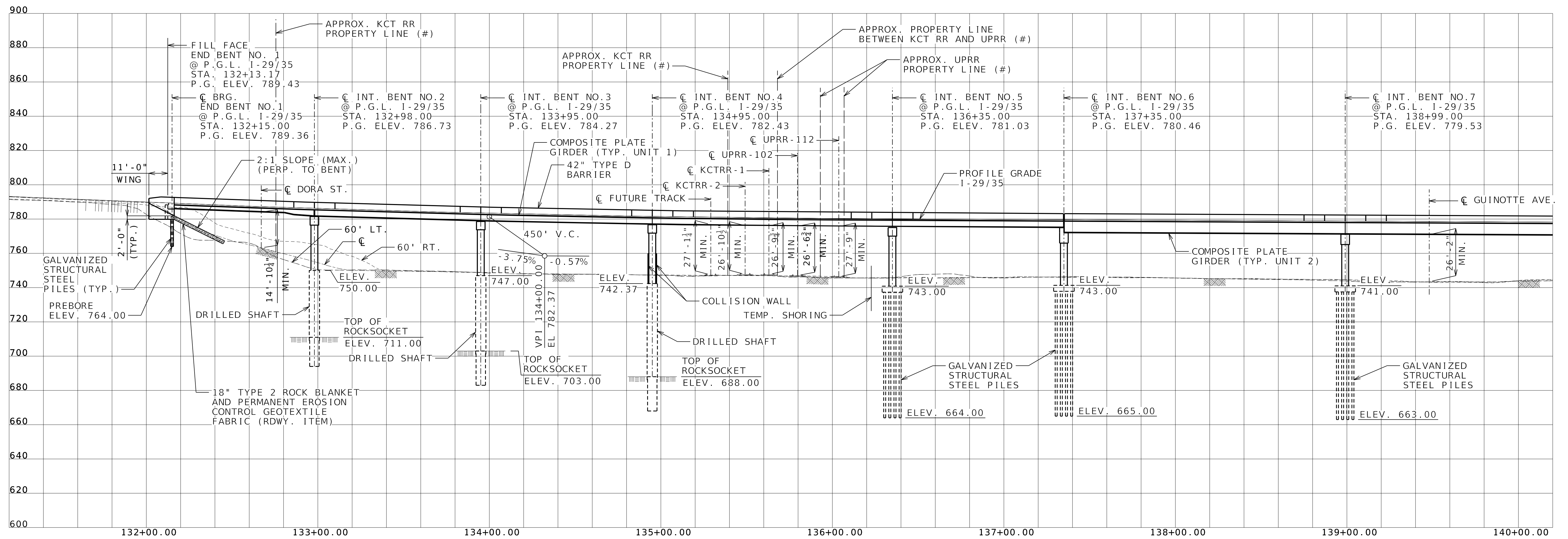
SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

PROJ. NO. STA. 132+13.17

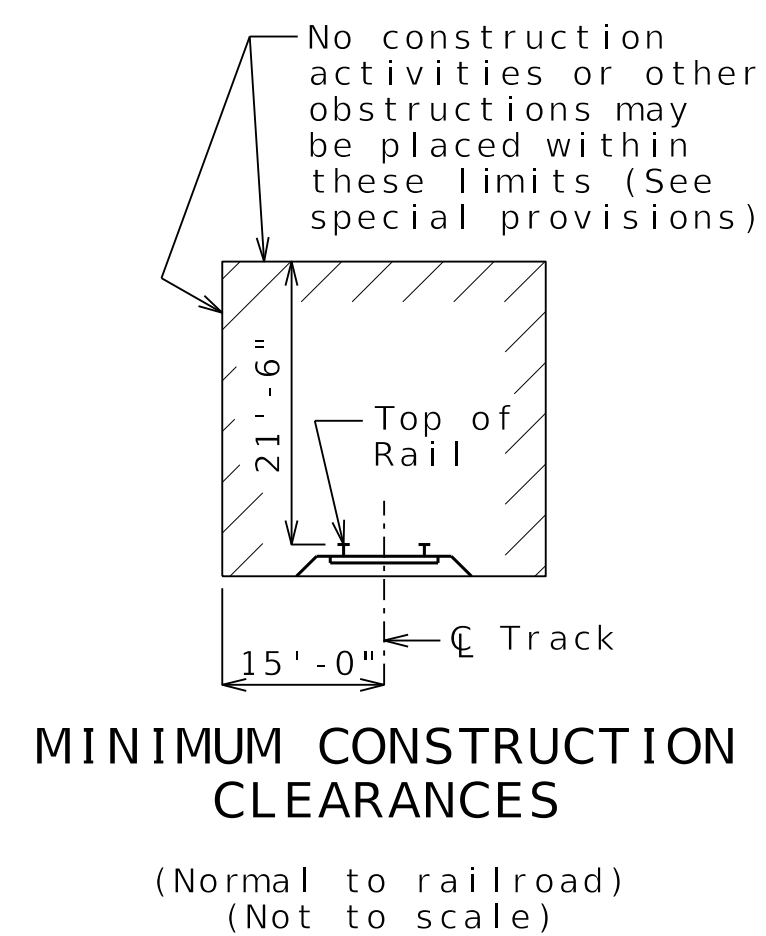
JOB NO. J413458 BRIDGE NO. A9772



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

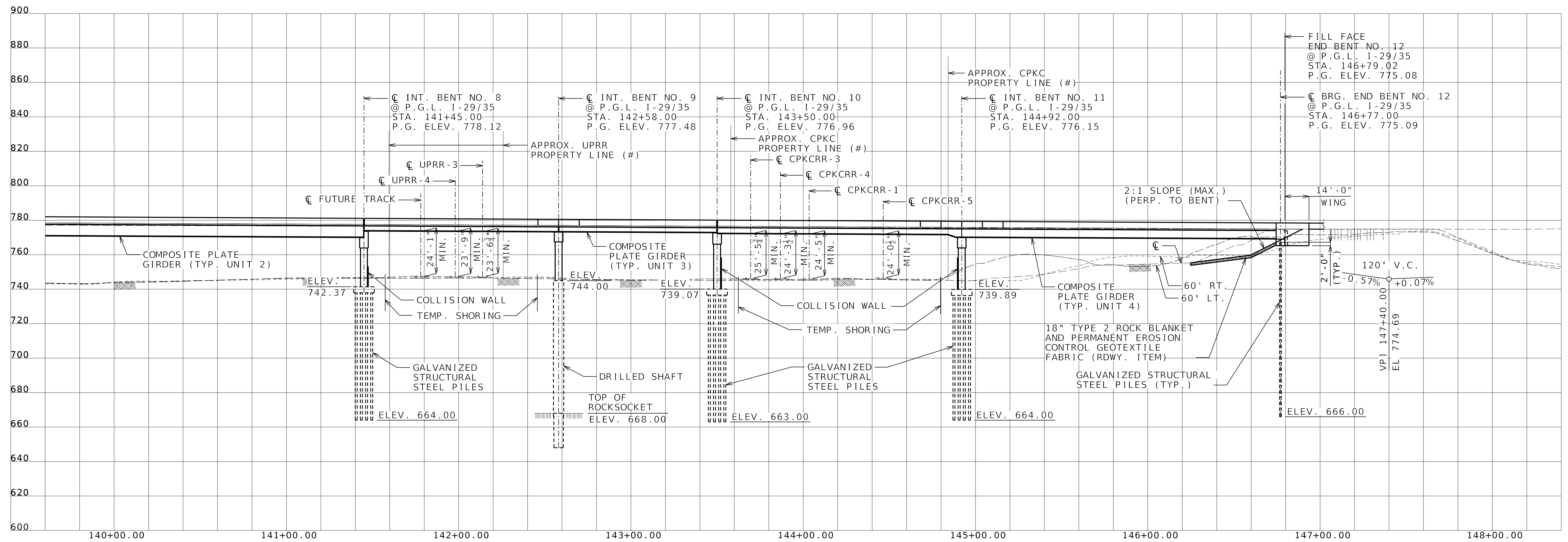
EXISTING GROUND PROFILES

- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE



NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.
VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 5 OF 6	
Name of Crossing I-29/35 NB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772



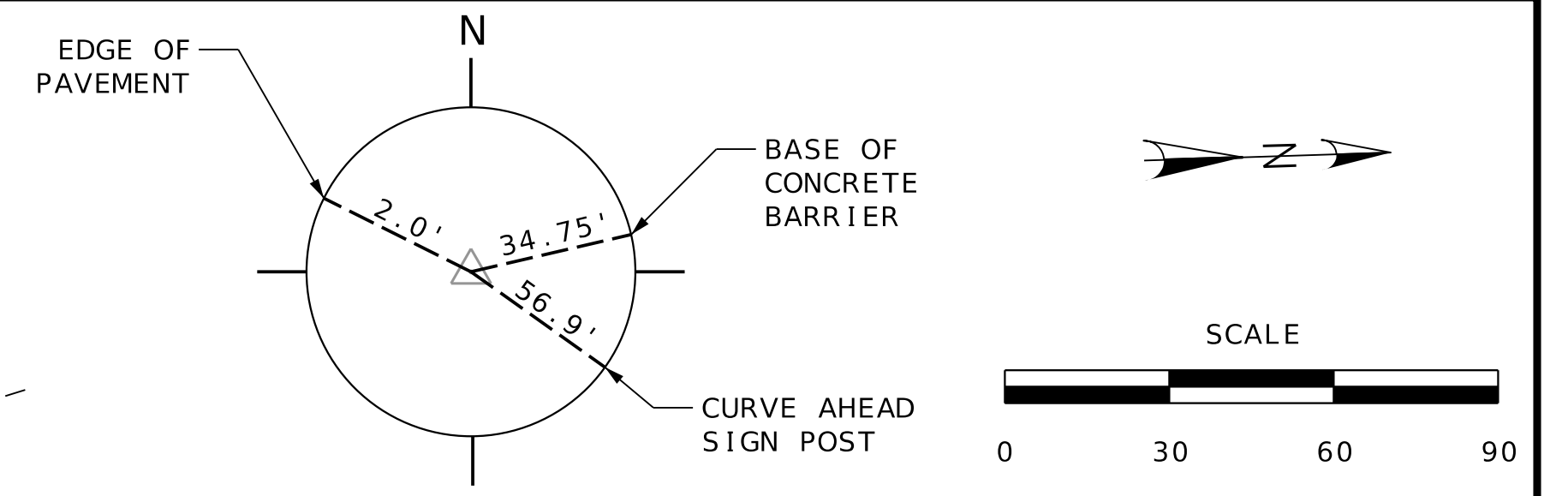
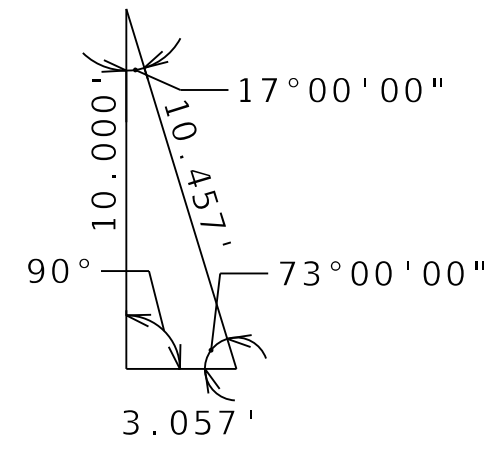
(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

EXISTING GROUND PROFILES

- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE

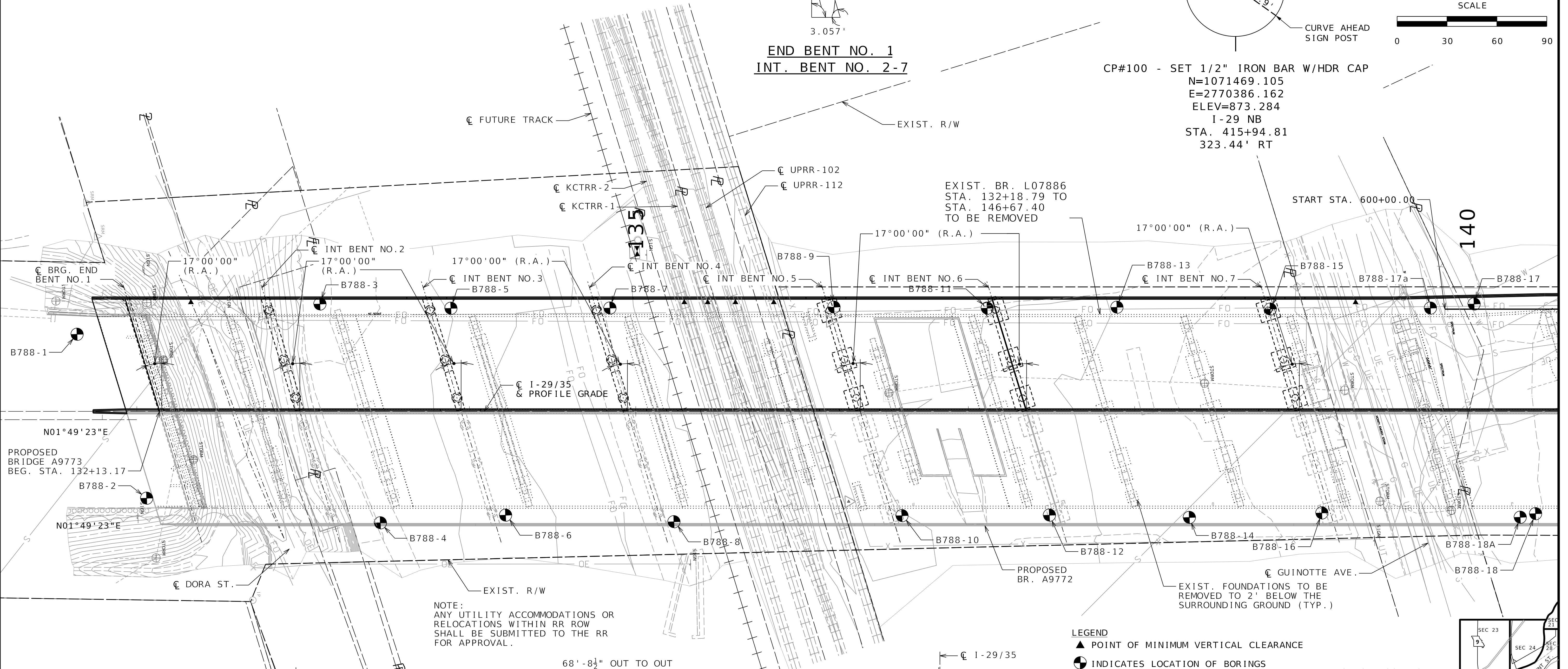
NOTES:
 BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.
 VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 6 OF 6	
Name of Crossing I-29/35 NB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772



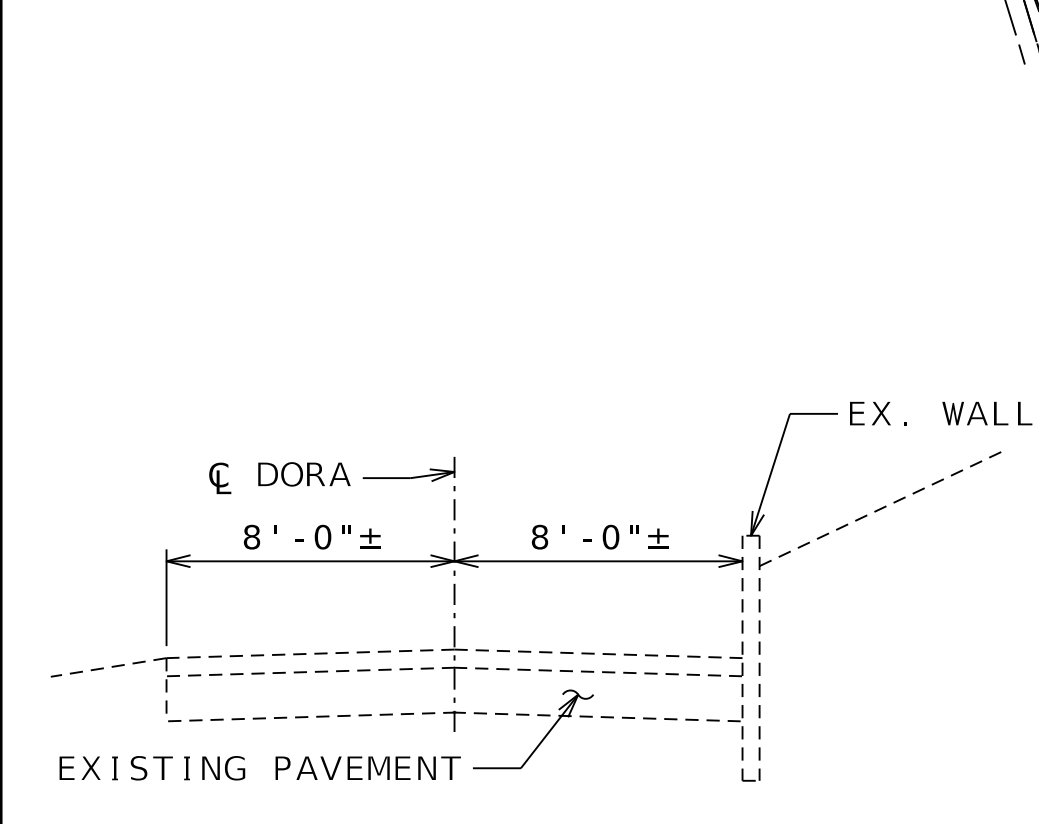
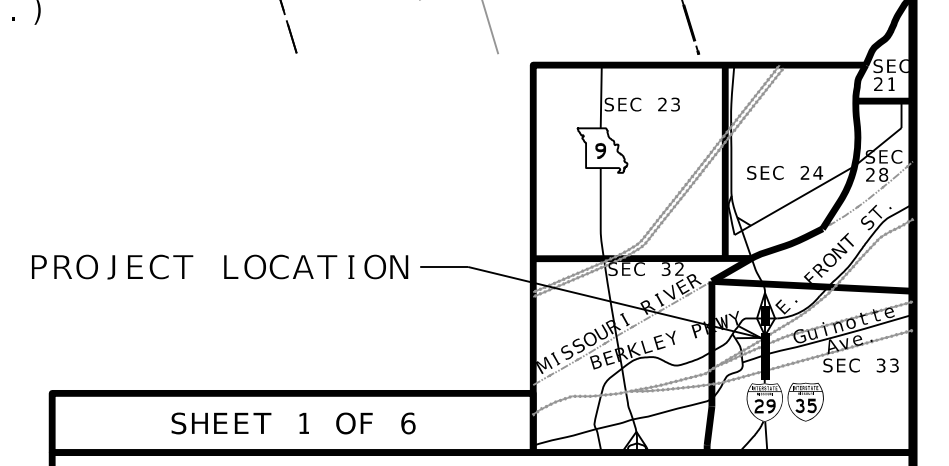
CP#100 - SET 1/2" IRON BAR W/HDR CAP
 N=1071469.105
 E=2770386.162
 ELEV=873.284
 I-29 NB
 STA. 415+94.81
 323.44' RT

END BENT NO. 1
 INT. BENT NO. 2-7

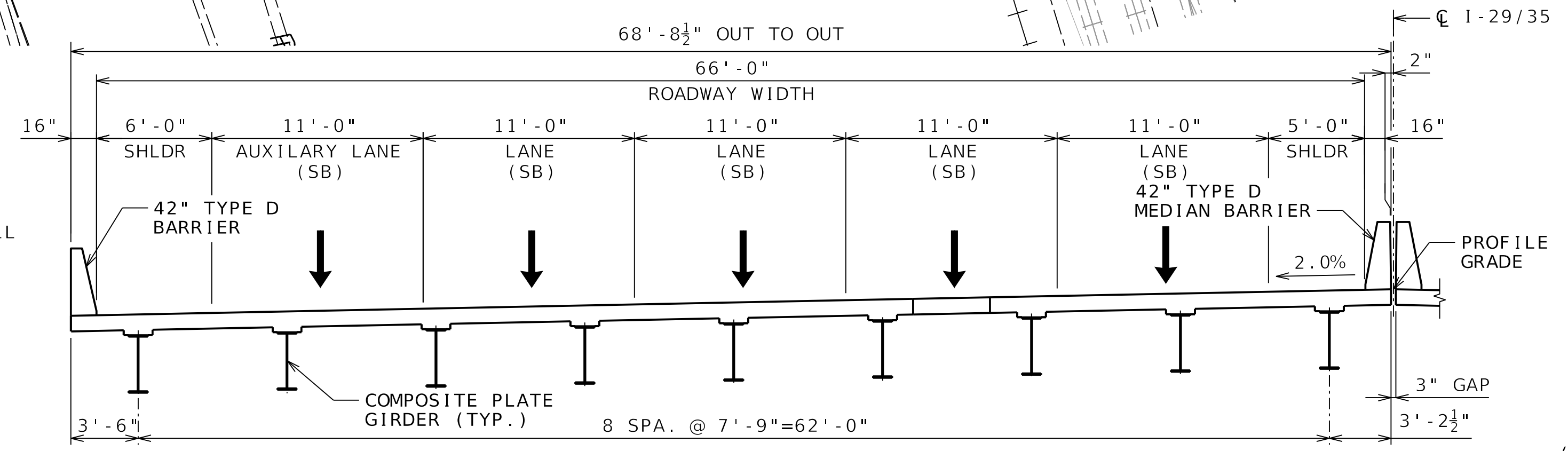


NOTE:
 ANY UTILITY ACCOMMODATIONS OR
 RELOCATIONS WITHIN RR ROW
 SHALL BE SUBMITTED TO THE RR
 FOR APPROVAL.

LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ● INDICATES LOCATION OF BORINGS



TYPICAL SECTION - DORA ST.



TYPICAL SECTION BRIDGE A9773
 UNIT 1 AND UNIT 2 SOUTH OF RAMP

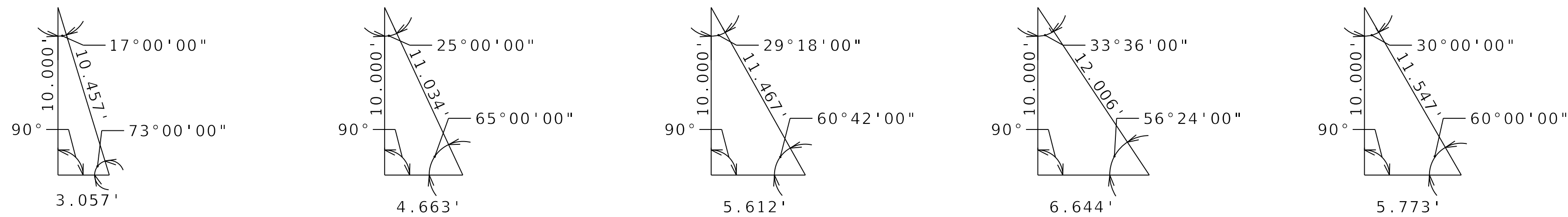
I-29/35 SB DESIGN TRAFFIC
 ADT - 2024 - 53,806
 AADT - 2050 - 77,329
 % TRUCKS = 7.0%
 DESIGN SPEED = 55 MPH

PROPOSED BRIDGE A9773
 STA. 132+13.17
 (83'-97'-100'-140'-100') (164'-246')
 (113'-92') (142'-185')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS

REMOVE EXIST. BRIDGE L07886
 STA. 132+21.40
 (51.7'-65.7'-10') (70'-93.5'-79.3'-63.7'-51.7')
 (12'-63.7'-63.7'-63.7'-63.7'-12') (80'-90.7'-74')
 (12'-87.5'-87.5'-12') (46'-58.2'-76.2'-54')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS

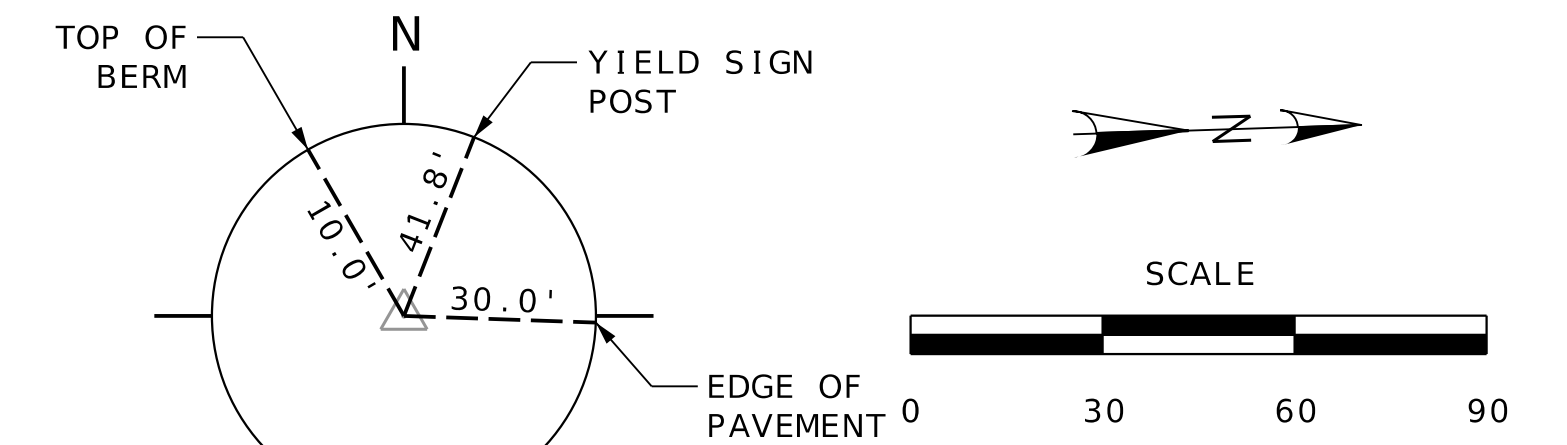
SHEET 1 OF 6	
Name of Crossing I-29/35 SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9773	

BRIDGE A9773



INT. BENT NO. 7 INT. BENT NO. 8 INT. BENT NO. 9 INT. BENT NO. 10 INT. BENT NO. 11
END BENT NO. 12

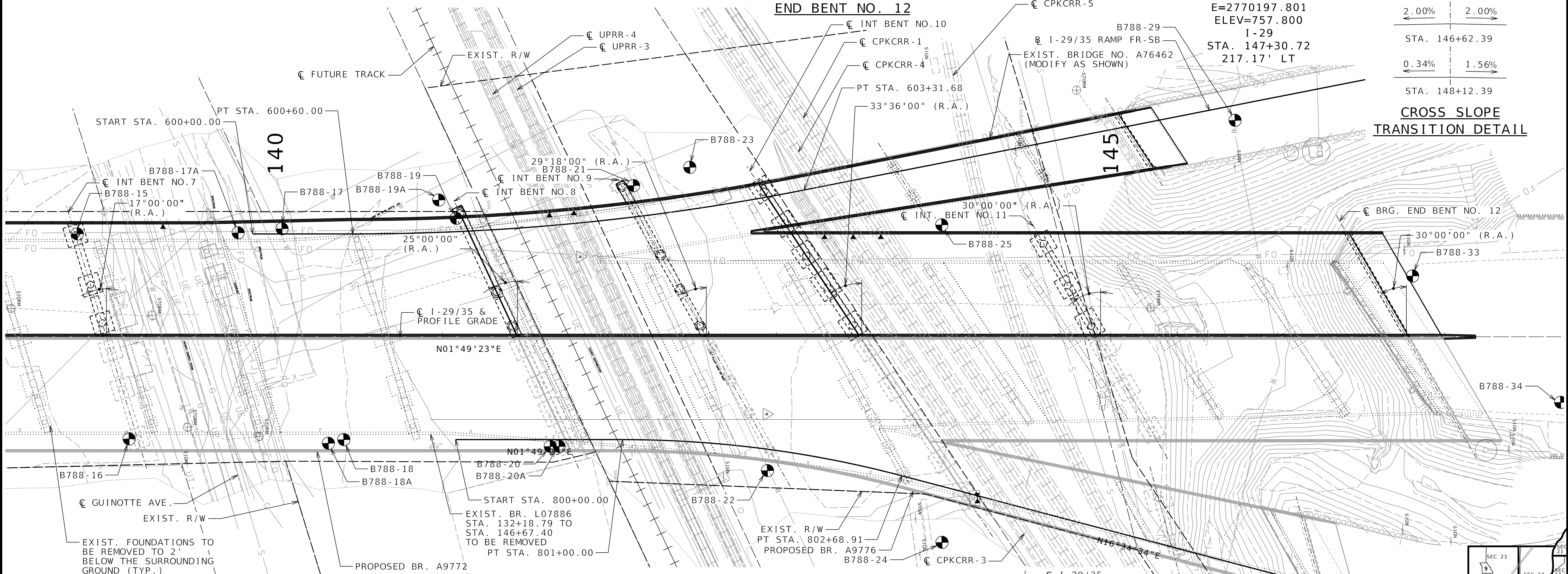
PI 601+96.27
PC 600+60.00
PT 603+31.68
Δ 11°7'6.7" (LT)
D 4°5'33.2"
L 271.68' (ARC)
T 136.27'
R 1,400.00'



CP#101 - SET 1/2" IRON BAR W/HDR CAP
N=1074675.785
E=2770197.801
ELEV=757.800
I-29
STA. 147+30.72
217.17' LT

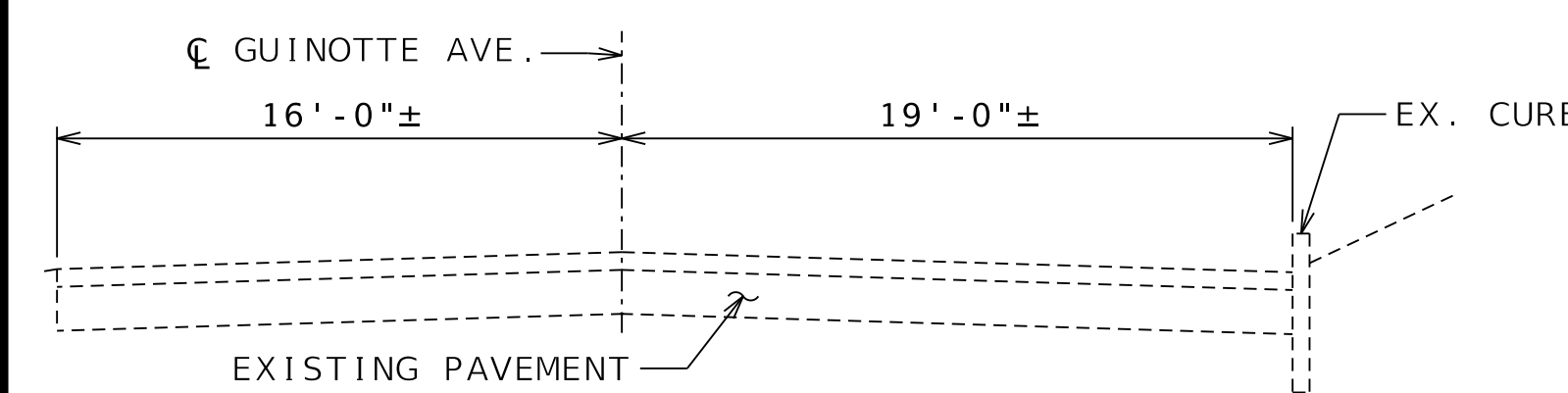
2.00%	2.00%
0.34%	1.56%
STA. 146+62.39	STA. 148+12.39

CROSS SLOPE TRANSITION DETAIL

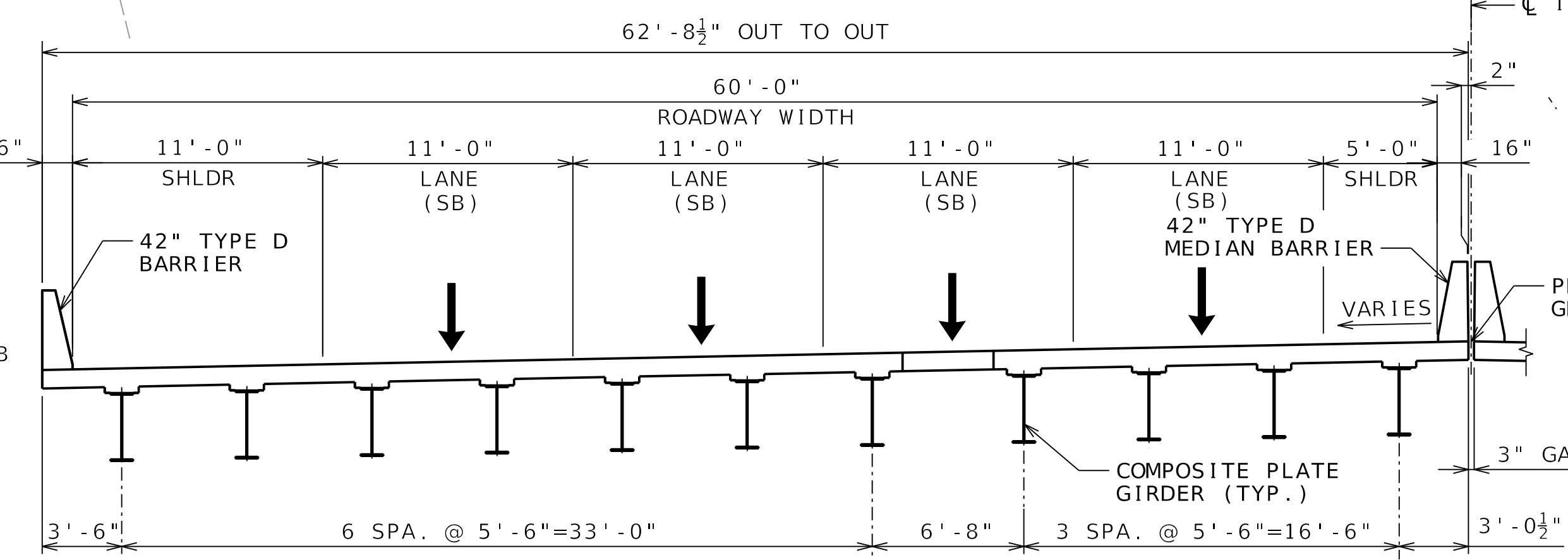


- LEGEND**
- ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 - INDICATES LOCATION OF BORINGS

NOTE:
ANY UTILITY ACCOMMODATIONS OR
RELOCATIONS WITHIN RR ROW
SHALL BE SUBMITTED TO THE RR
FOR APPROVAL.

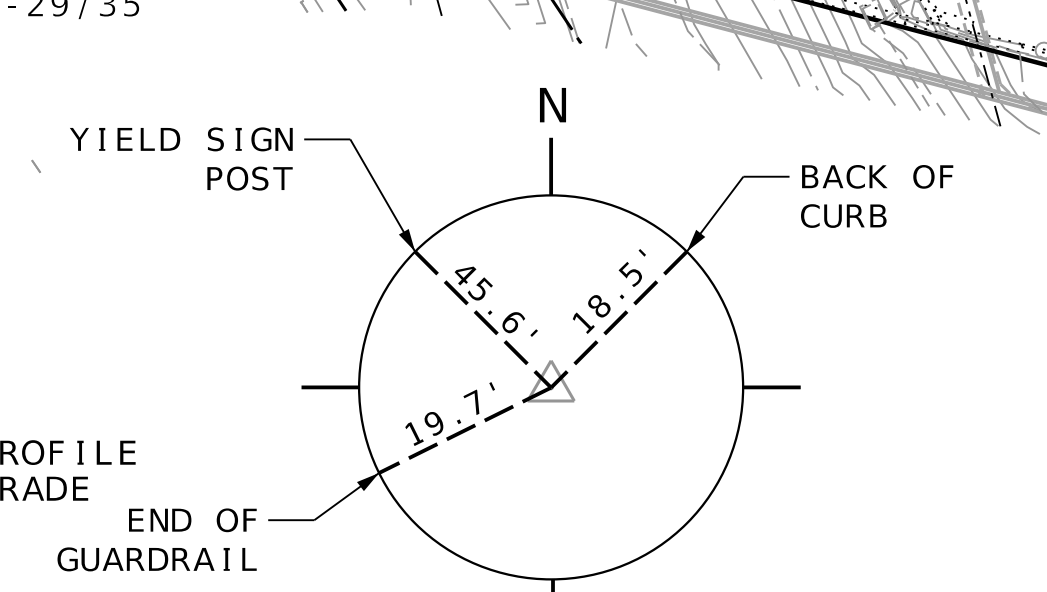


TYPICAL SECTION - GUINOTTE AVE.



TYPICAL SECTION BRIDGE A9773
UNIT 4

NOTE: SEE BRIDGE MEMO FOR
VARIABLE DECK WIDTH IN UNIT 3.



CP#102 - SET 1/2" IRON BAR W/HDR CAP
N=1075094.646
E=2770651.477
ELEV=759.064
I-29
STA. 151+59.31
233.38' RT

SHEET 2 OF 6

Name of Crossing
I-29/35 SB OVER DORA ST., UPRR,
GUINOTTE AVE & CPKC

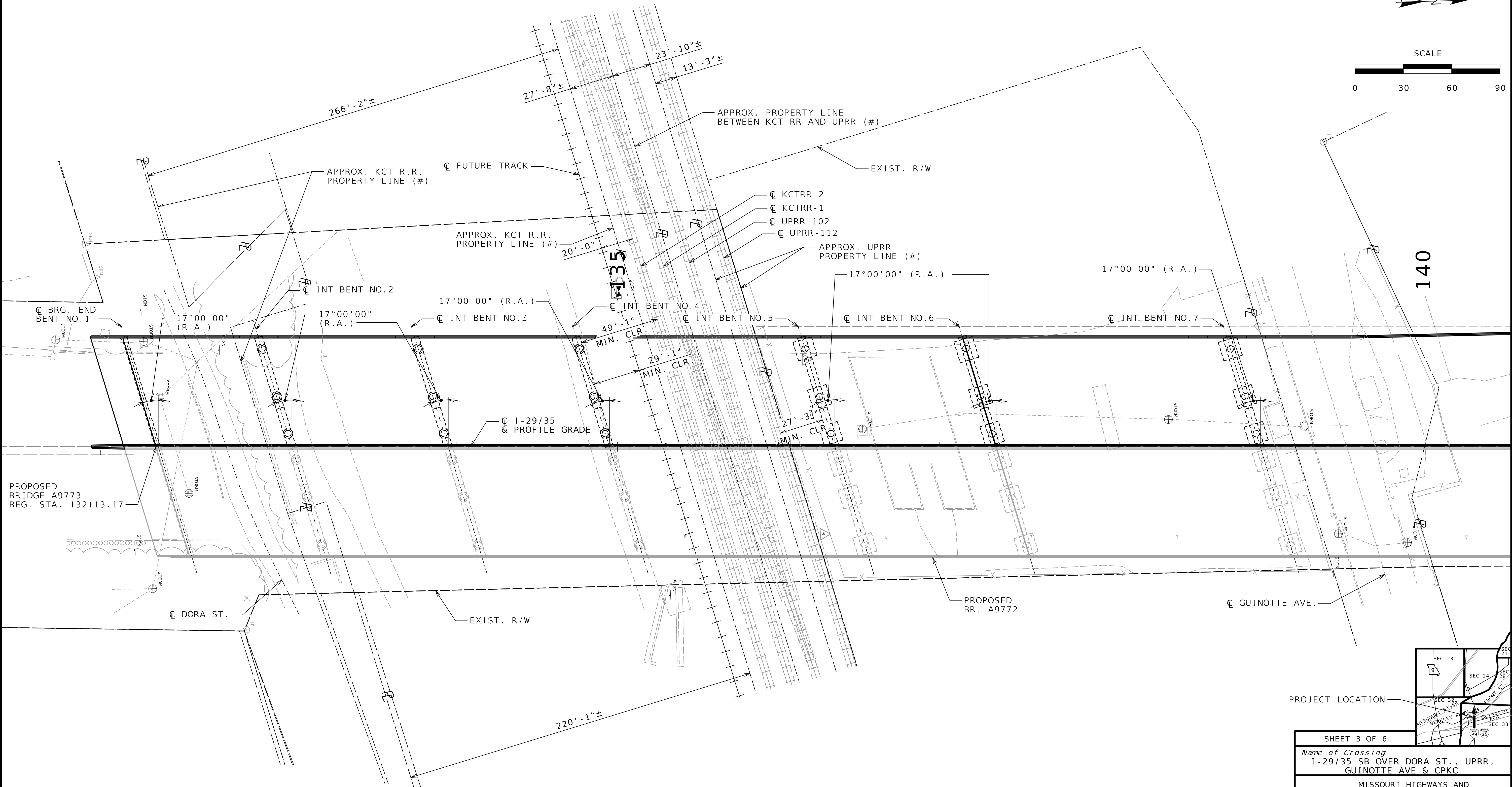
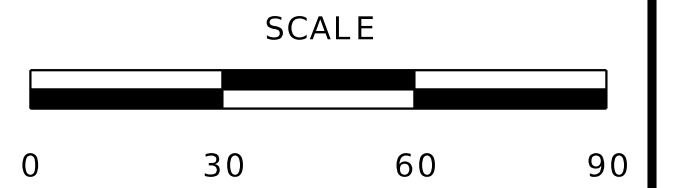
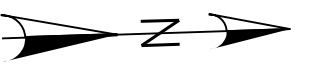
MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W
ROUTE I-29; JACKSON COUNTY
SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

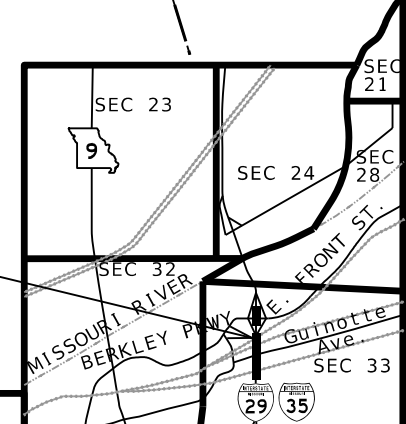
CHECKED BY HDR ENGINEERING INC.
Transportation Project Manager

PROJ. NO. STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9773



PLAN - HORIZONTAL CLEARANCES

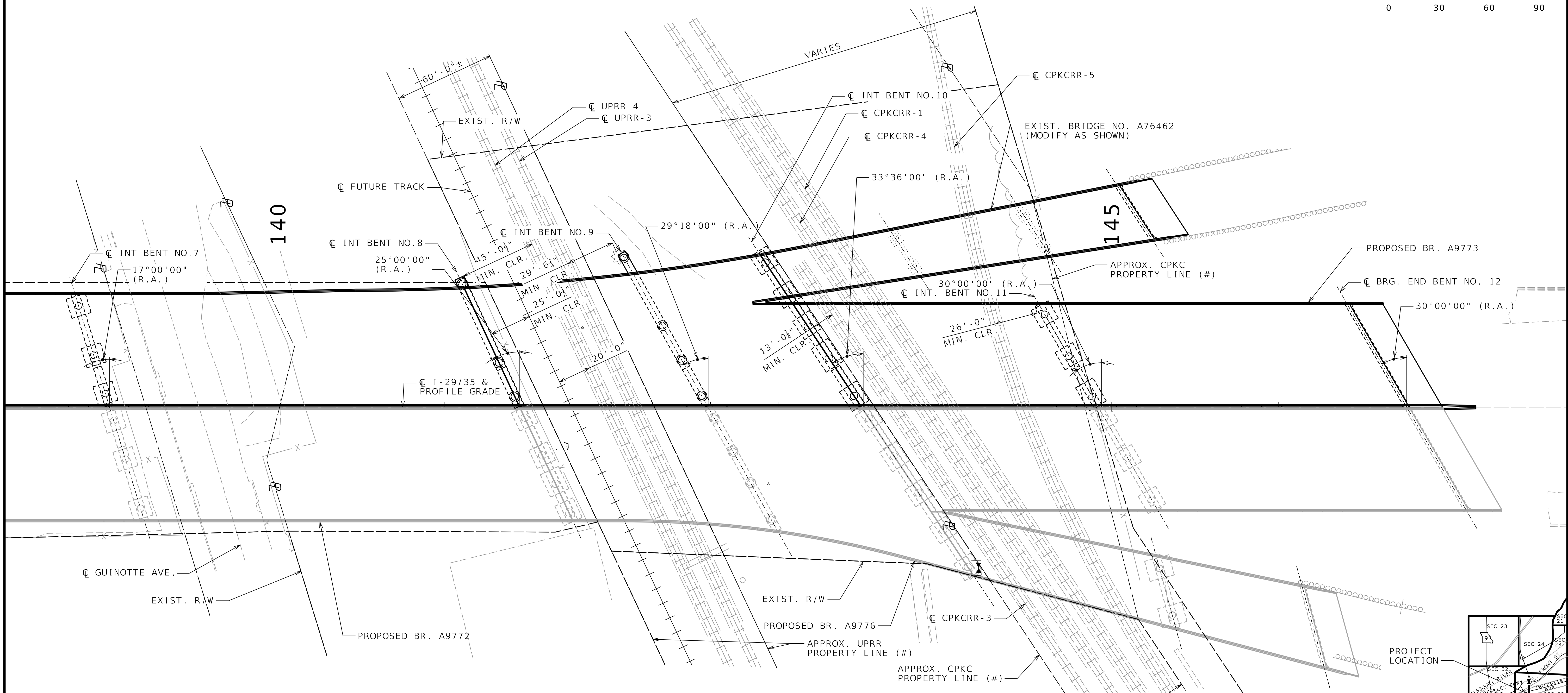
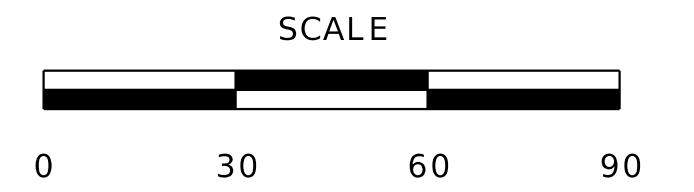
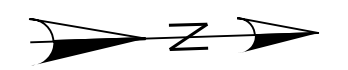
(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS



PROJECT LOCATION

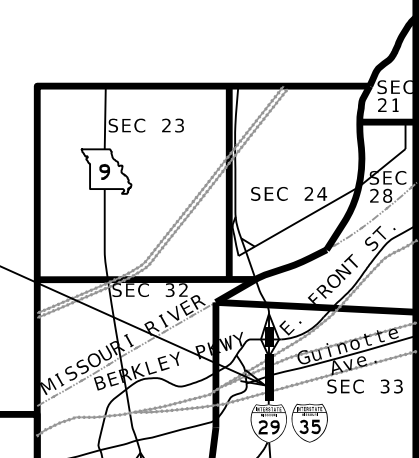
SHEET 3 OF 6

Name of Crossing	
I-29/35 SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9773	



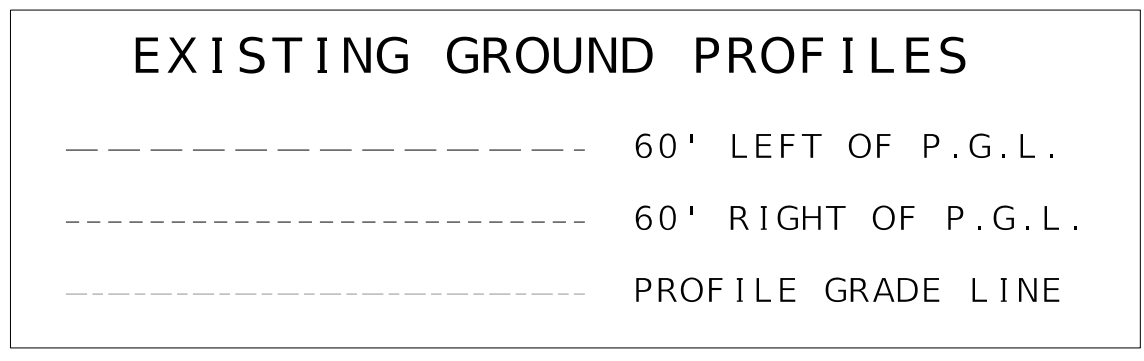
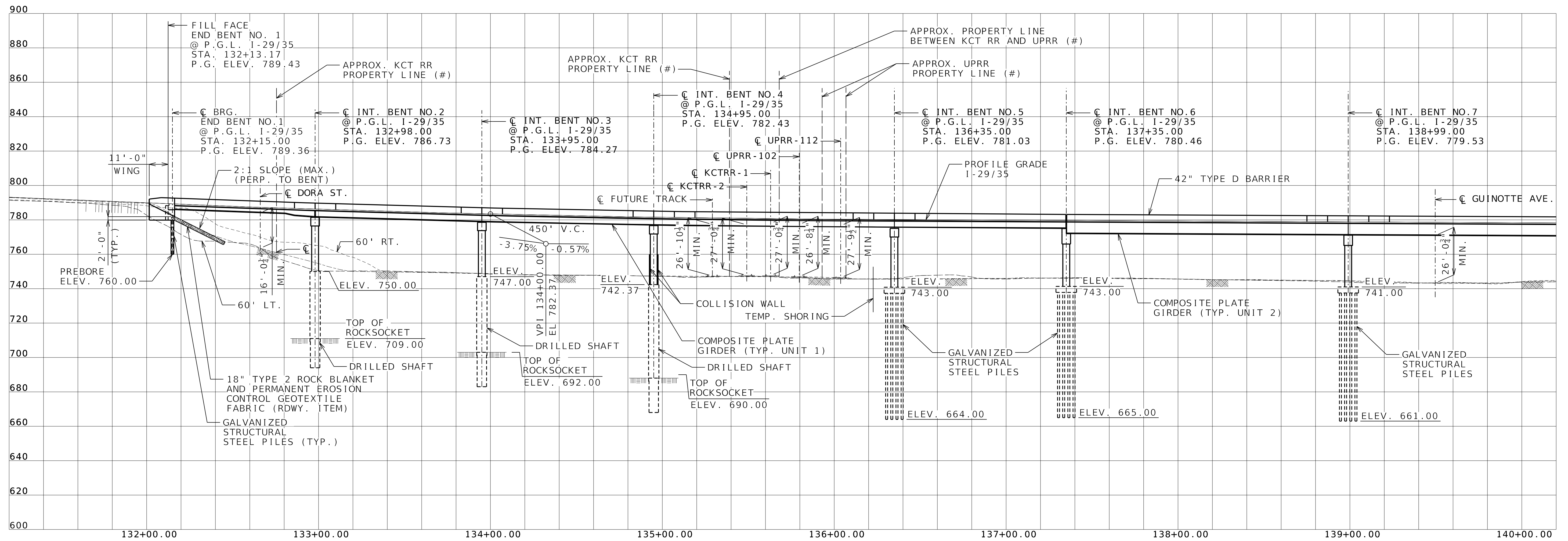
PLAN - HORIZONTAL CLEARANCES

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

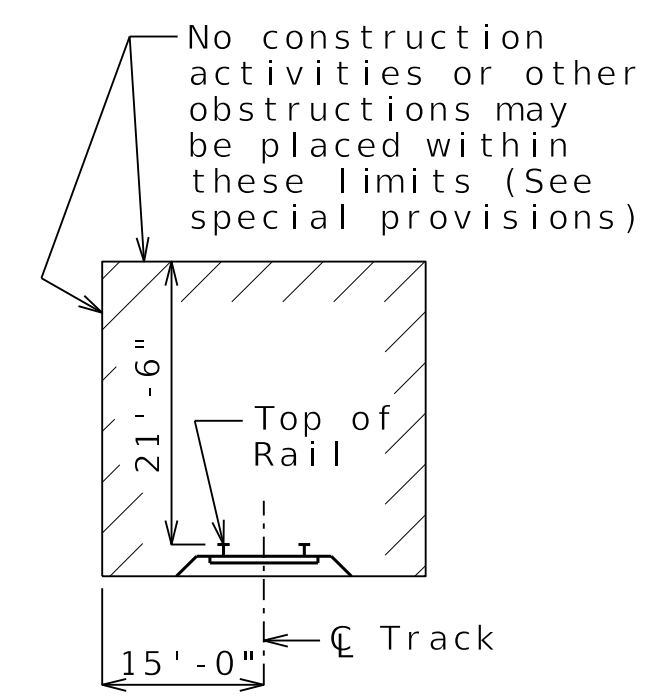


SHEET 4 OF 6

Name of Crossing I-29/35 SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9773	



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

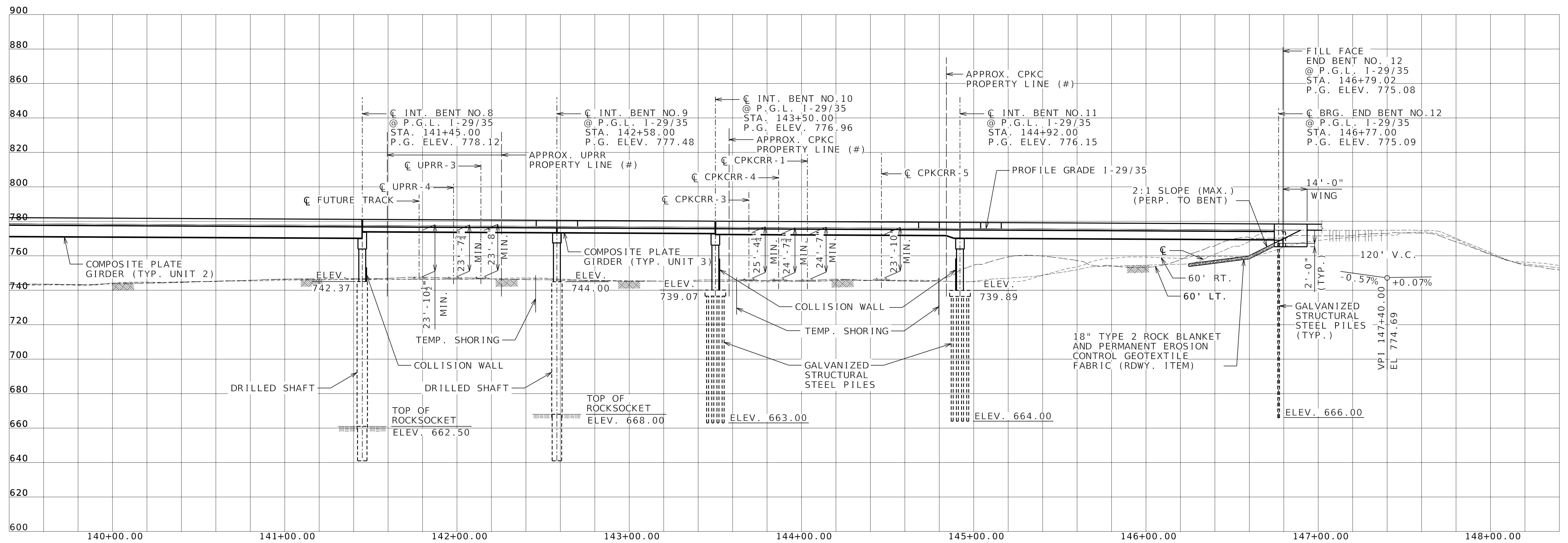


MINIMUM CONSTRUCTION CLEARANCES
(Normal to railroad)
(Not to scale)

NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.

VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 5 OF 6	
Name of Crossing I-29/35 SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. 132+13.17	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9773



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

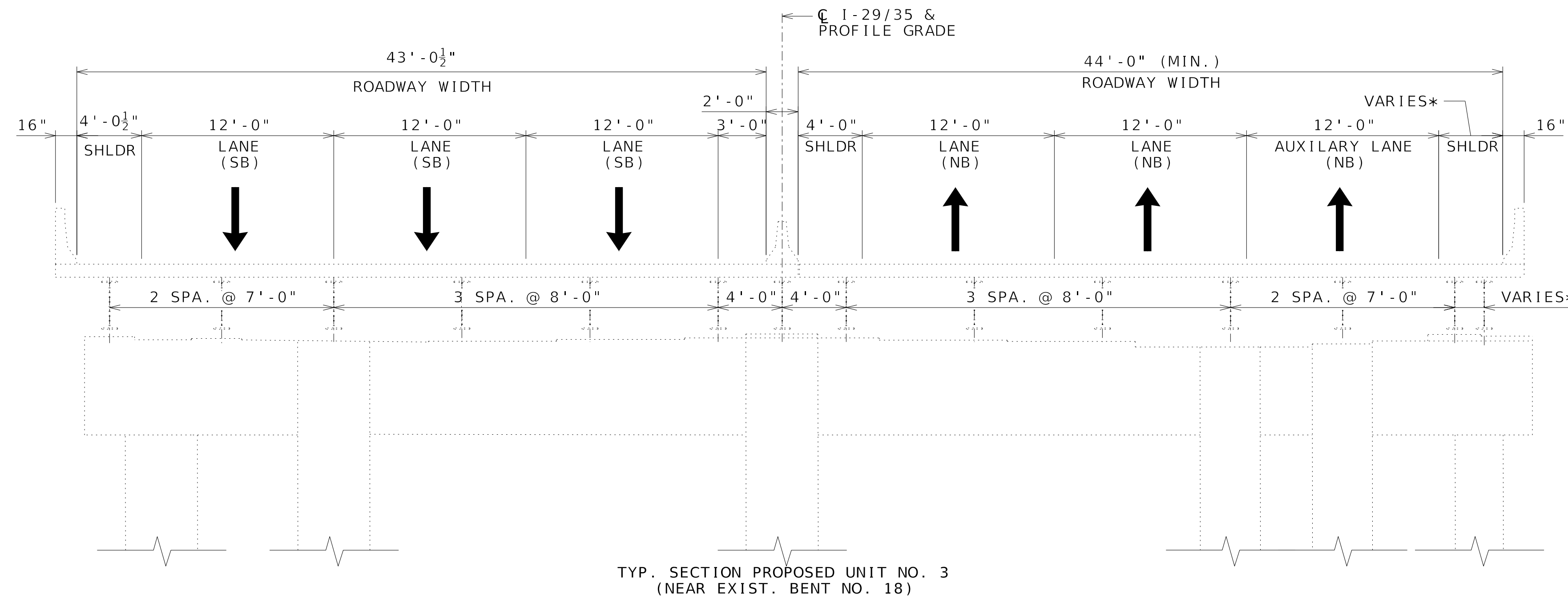
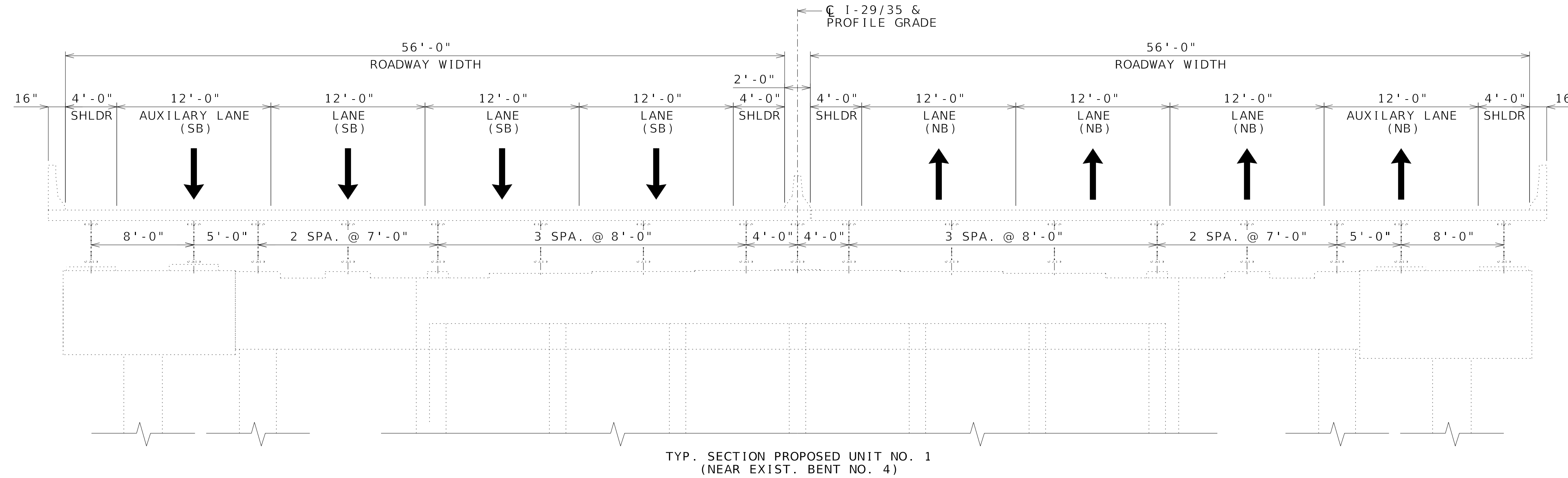
EXISTING GROUND PROFILES

- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE

NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.

VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 6 OF 6	
Name of Crossing I-29/35 SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. 132+13.17	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9773



EXISTING CONFIGURATION

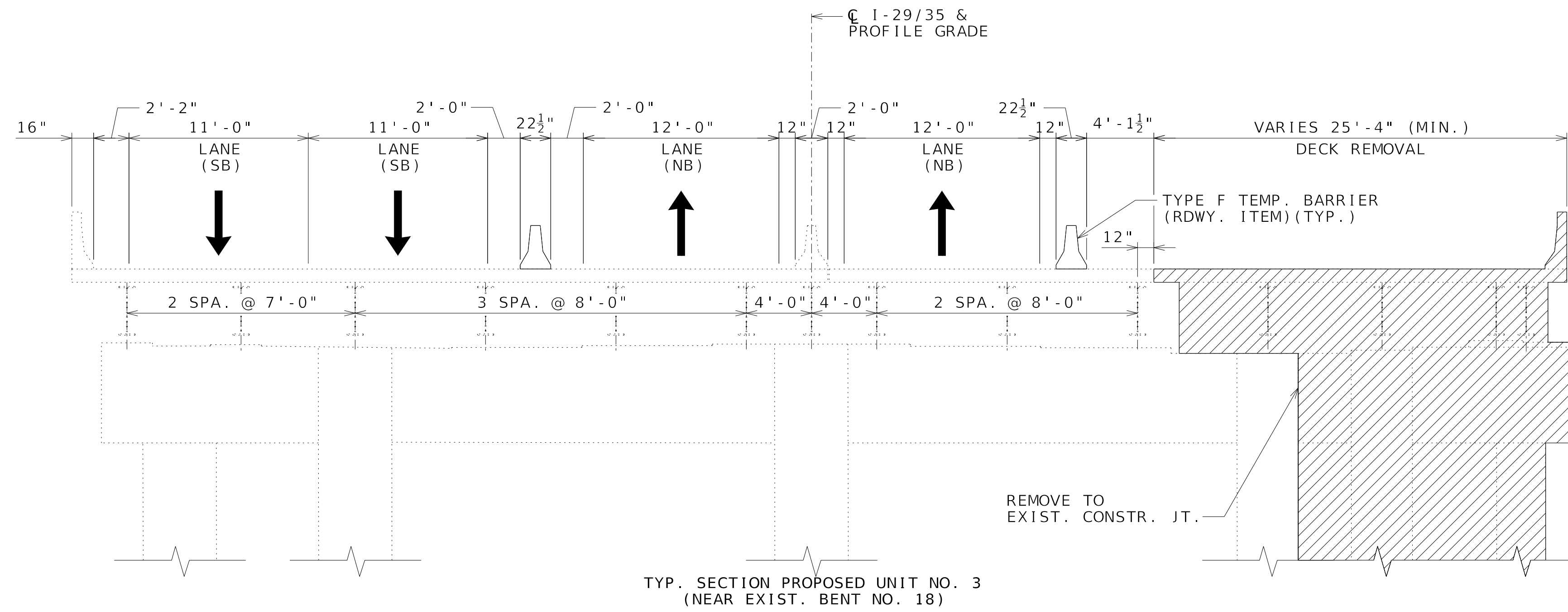
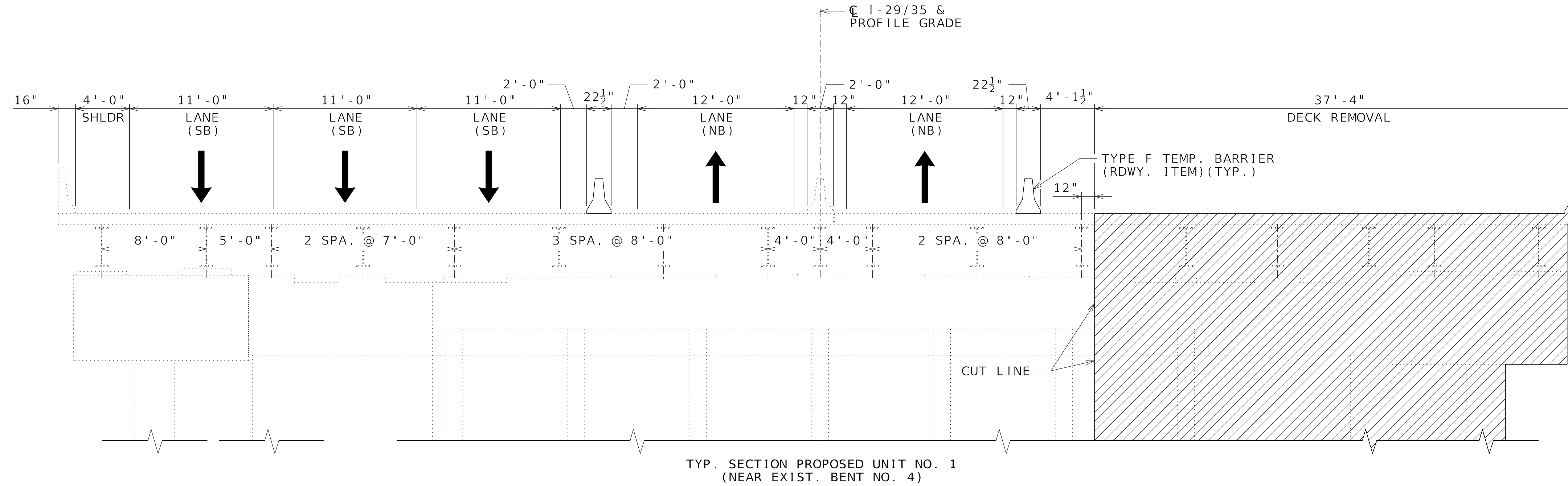
REPLACEMENT STAGING (1 OF 10)

NOTE:

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

* - 4' - 1 7/8" (MIN.)
** - 2' - 0 3/8" (MIN.)

SHEET 1 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9772/A9773	

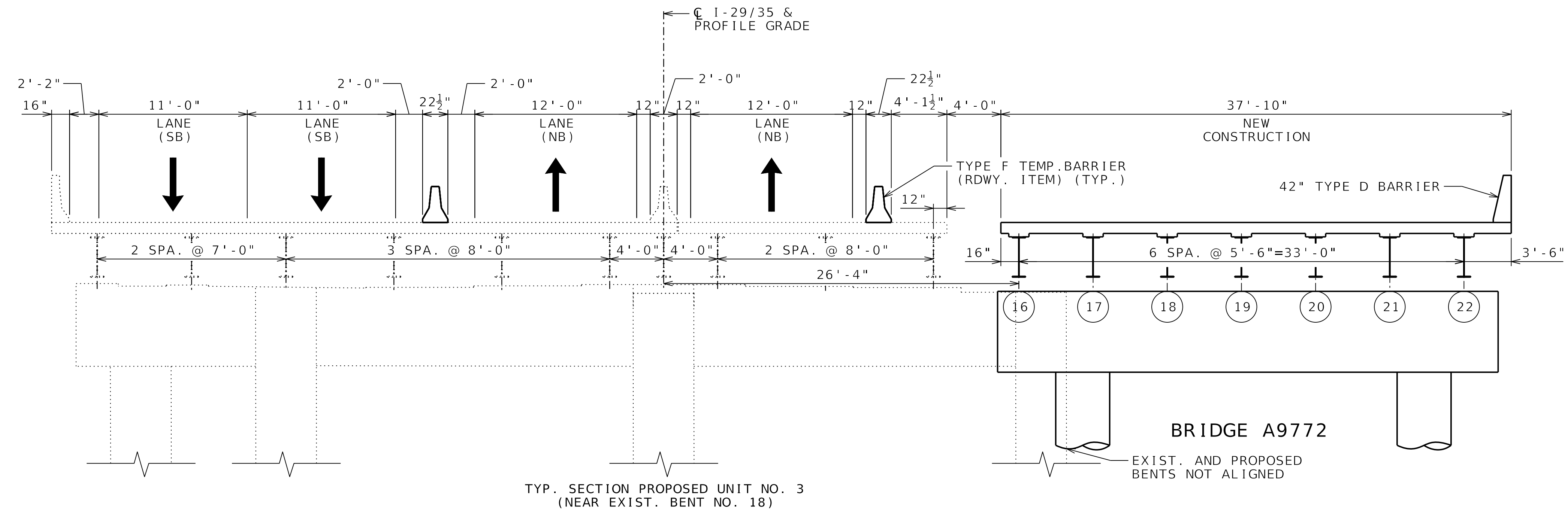
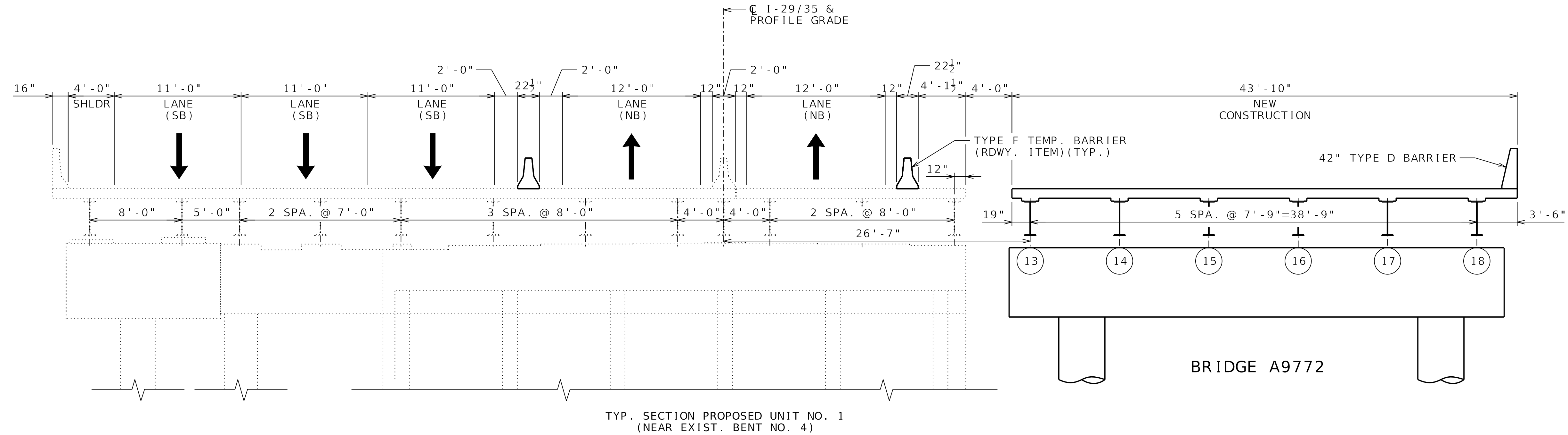


STAGE 1 REMOVAL

NOTE:
 THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (2 OF 10)

SHEET 2 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772/A9773



STAGE 1 CONSTRUCTION

REPLACEMENT STAGING (3 OF 10)

NOTE:

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

BRIDGE A9772
EXIST. AND PROPOSED
BENTS NOT ALIGNED

SHEET 3 OF 10

Name of Crossing
1-29/35 NB & SB OVER DORA ST.,
UPRR, GUINOTTE AVE & CPKC

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

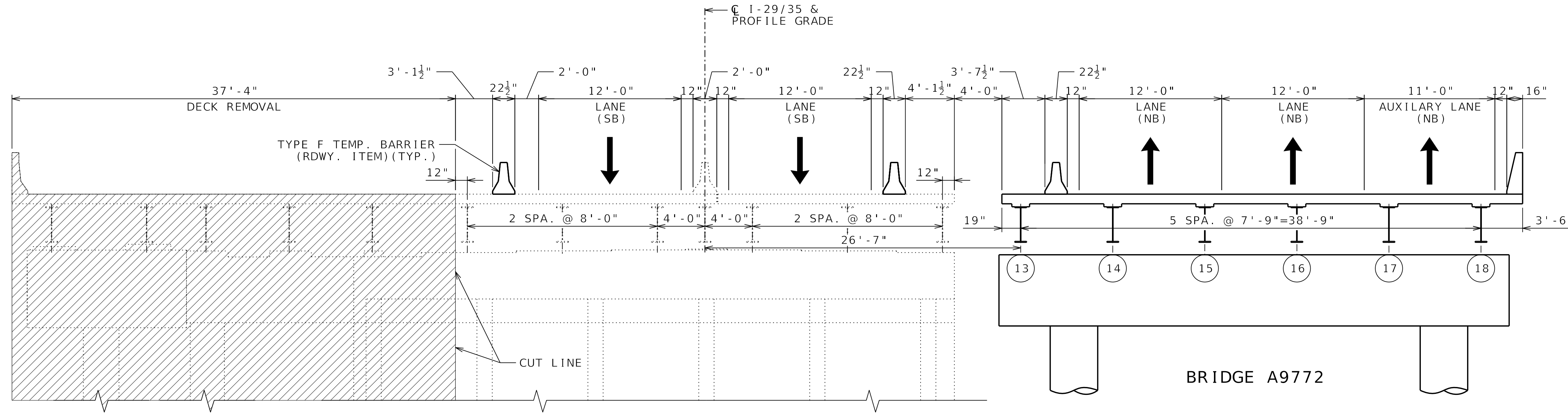
SEC. 33 T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY
SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

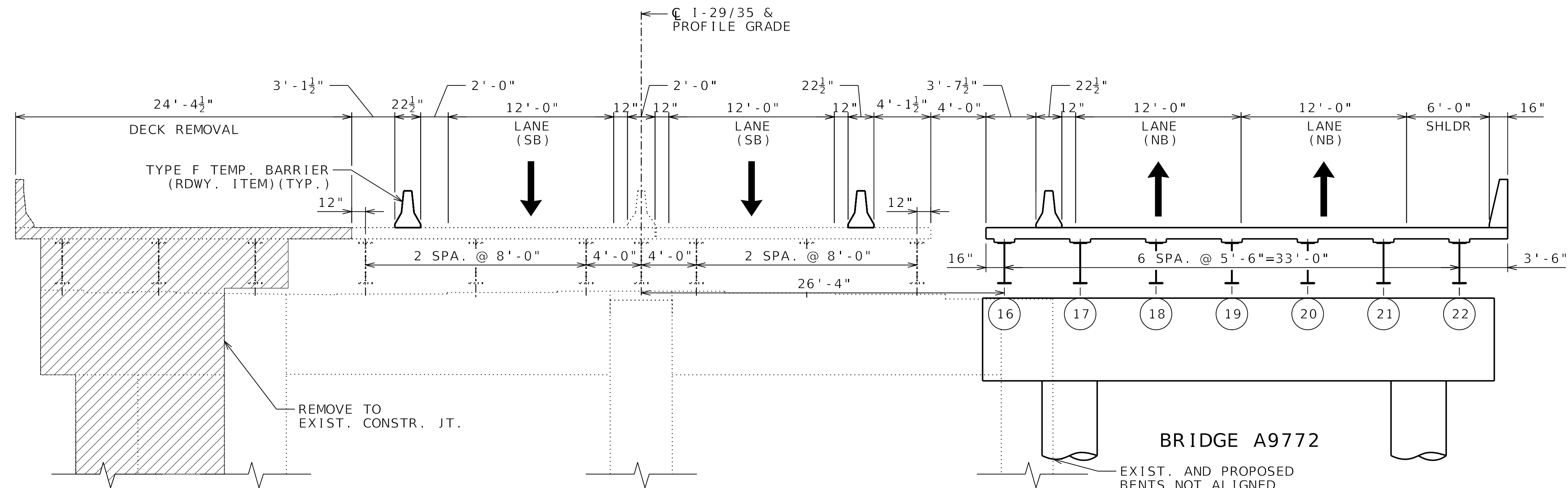
CHECKED BY HDR ENGINEERING INC.
Transportation Project Manager

PROJ. NO. STA. 132+13.17

JOB NO. J413458 BRIDGE NO. A9772/A9773



TYP. SECTION PROPOSED UNIT NO. 1
(NEAR EXIST. BENT NO. 4)



TYP. SECTION PROPOSED UNIT NO. 3
(NEAR EXIST. BENT NO. 18)

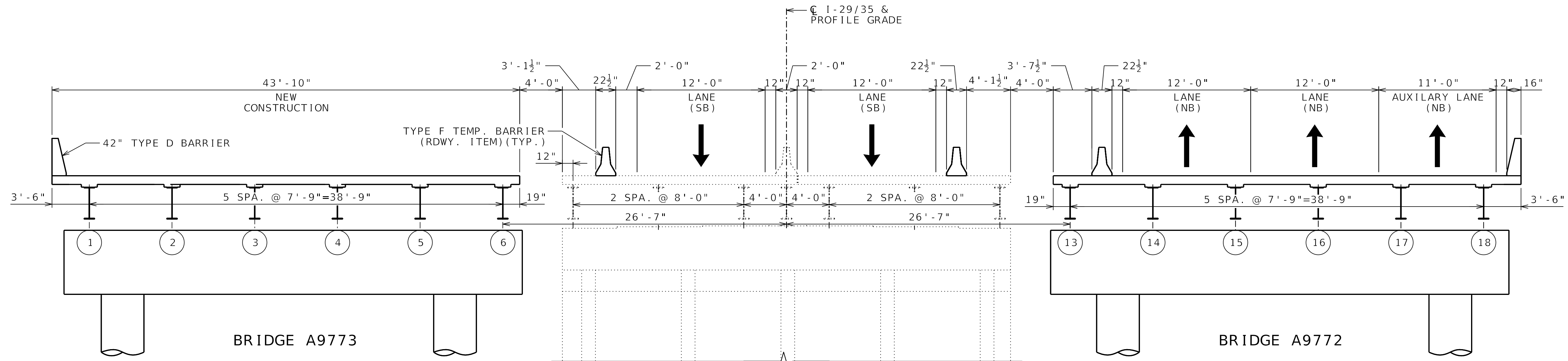
STAGE 2 REMOVAL

NOTE:

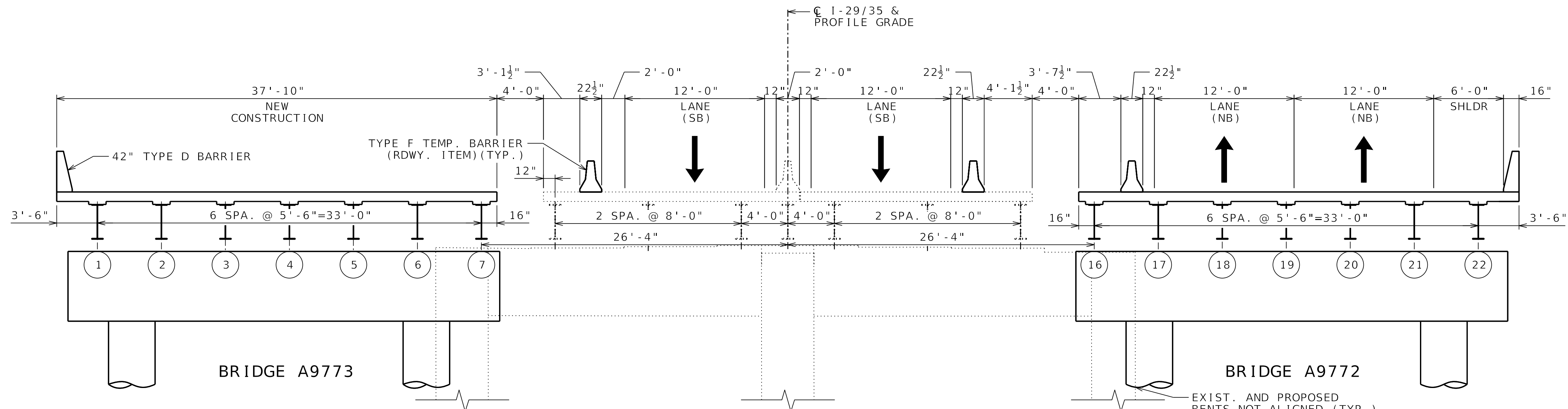
THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (4 OF 10)

SHEET 4 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772/A9773



TYP. SECTION PROPOSED UNIT NO. 1
(NEAR EXIST. BENT NO. 4)



TYP. SECTION PROPOSED UNIT NO. 3
(NEAR EXIST. BENT NO. 18)

STAGE 2 CONSTRUCTION

NOTE:

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (5 OF 10)

SHEET 5 OF 10

Name of Crossing
1-29/35 NB & SB OVER DORA ST.,
UPRR, GUINOTTE AVE & CPKC

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W

ROUTE 1-29 ; JACKSON COUNTY

SURVEY MADE BY HDR ENGINEERING INC.

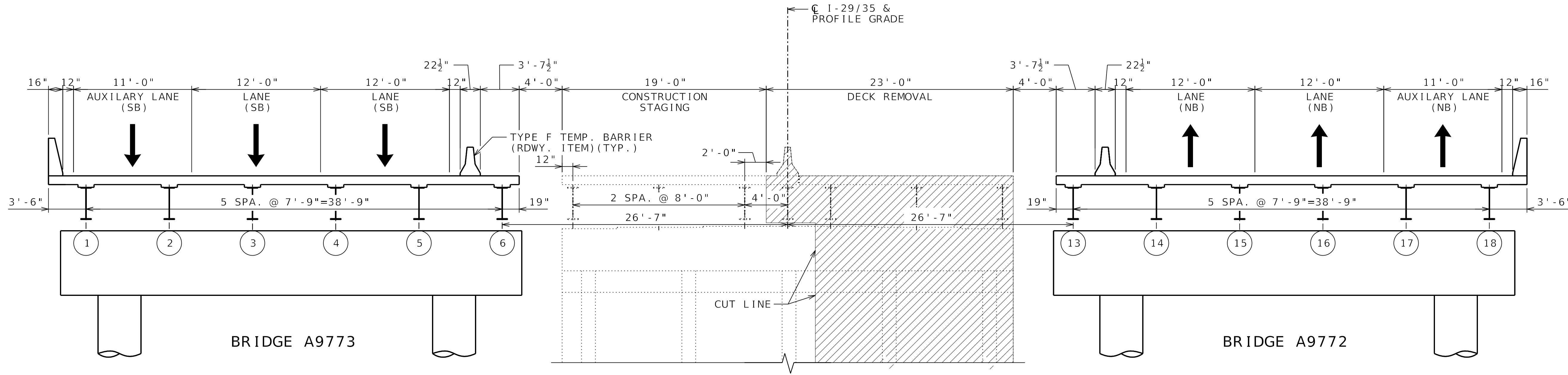
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.

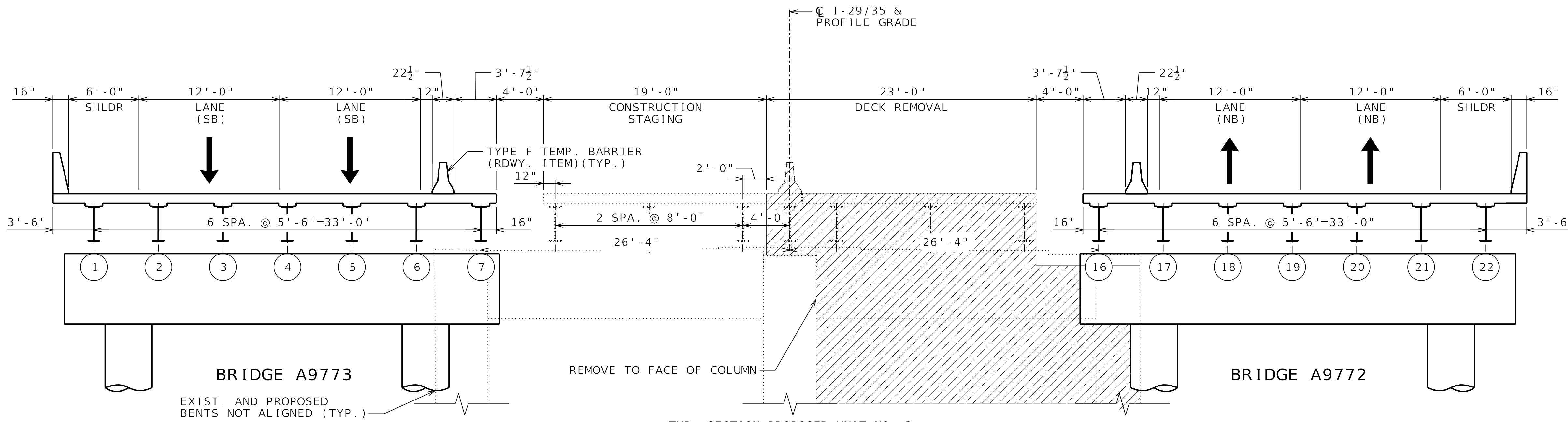
Transportation Project Manager

PROJ. NO. STA. 132+13.17

JOB NO. J413458 BRIDGE NO. A9772/A9773



TYP. SECTION PROPOSED UNIT NO. 1 (NEAR EXIST. BENT NO. 4)



TYP. SECTION PROPOSED UNIT NO. 3 (NEAR EXIST. BENT NO. 18)

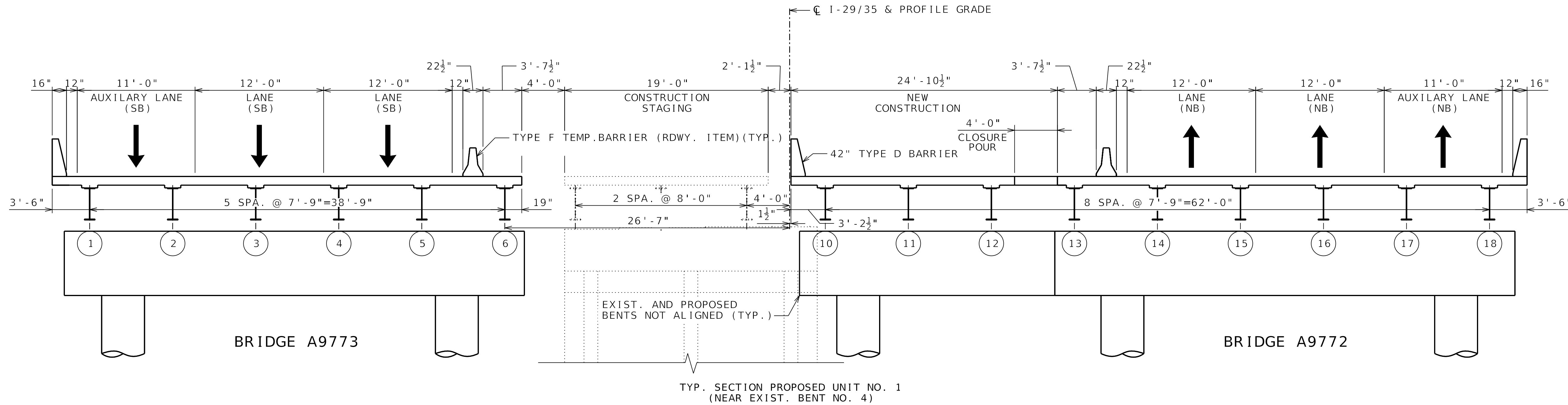
STAGE 3 REMOVAL

NOTE:

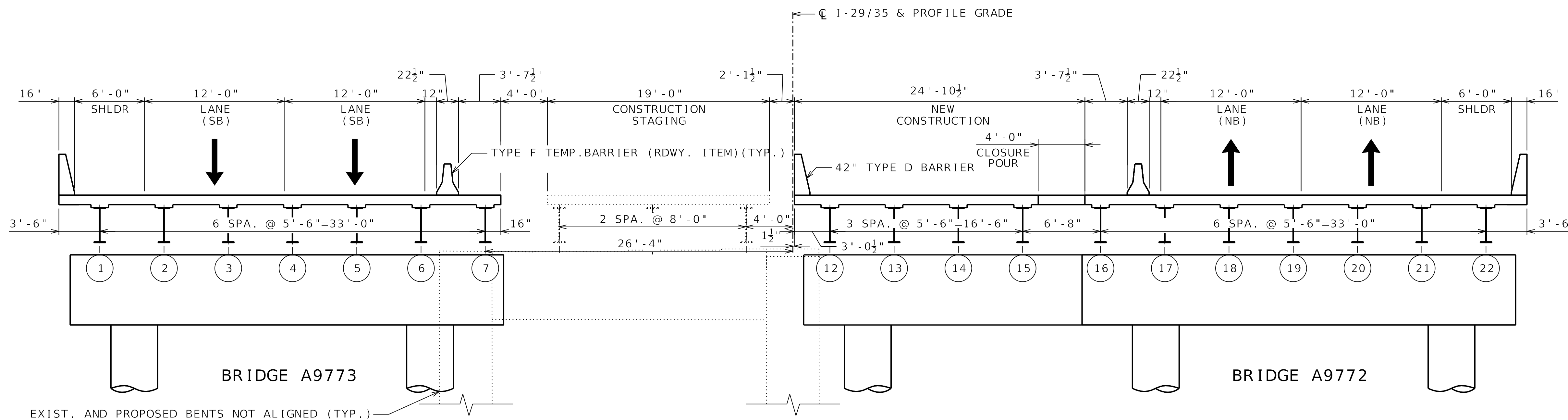
THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (6 OF 10)

SHEET 6 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 132+13.17
JOB NO. J413458 BRIDGE NO. A9772/A9773	



TYP. SECTION PROPOSED UNIT NO. 1
(NEAR EXIST. BENT NO. 4)



TYP. SECTION PROPOSED UNIT NO. 3
(NEAR EXIST. BENT NO. 18)

STAGE 3 CONSTRUCTION

NOTE:

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (7 OF 10)

SHEET 7 OF 10

Name of Crossing
1-29/35 NB & SB OVER DORA ST.,
UPRR, GUINOTTE AVE & CPKC

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W

ROUTE 1-29 ; JACKSON COUNTY

SURVEY MADE BY HDR ENGINEERING INC.

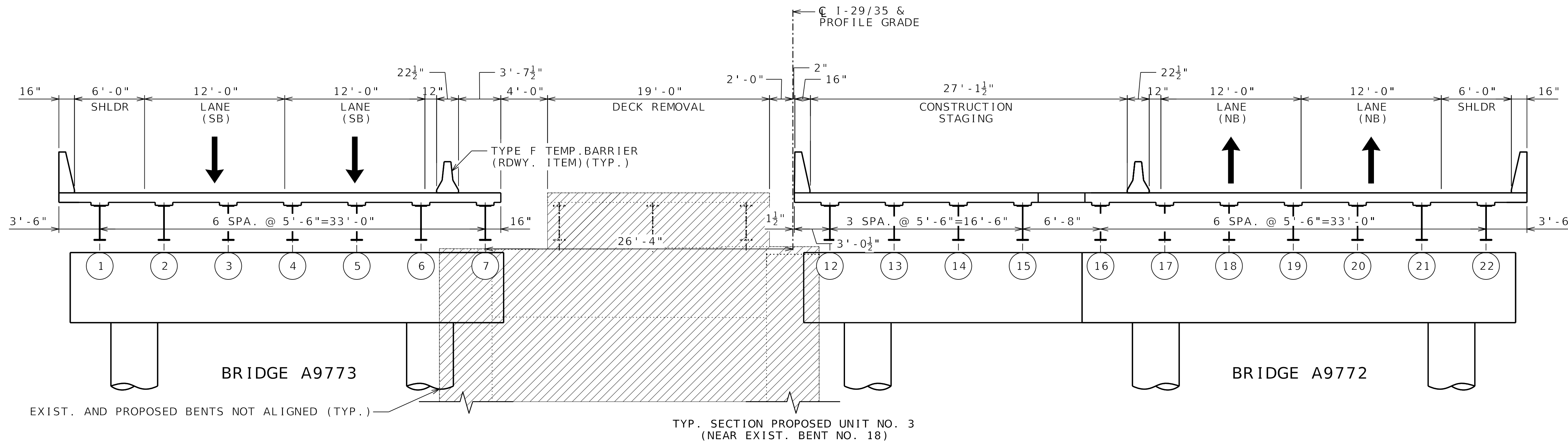
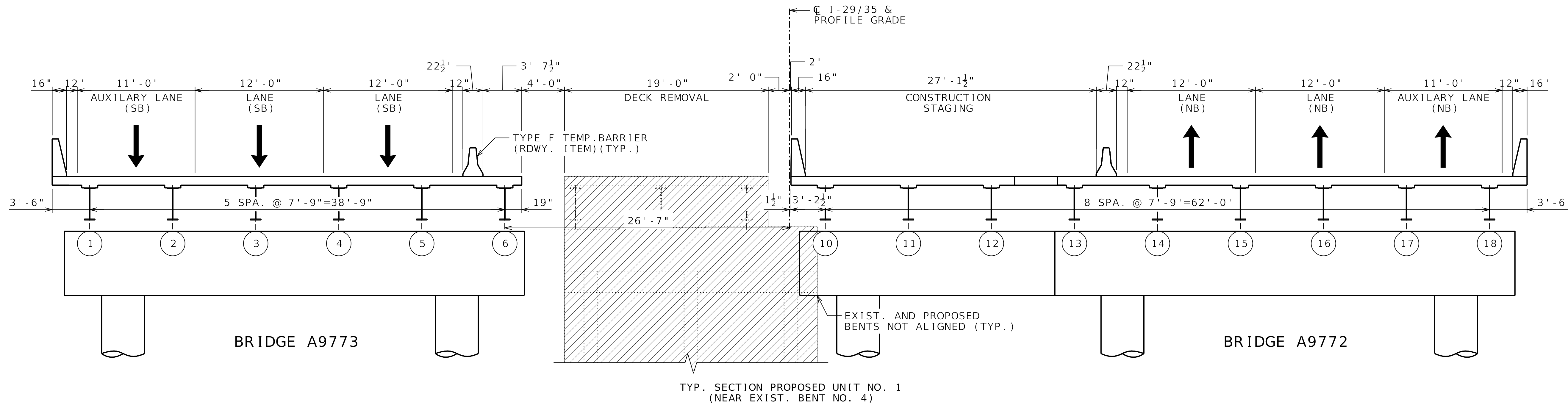
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.

Transportation Project Manager

PROJ. NO. STA. 132+13.17

JOB NO. J413458 BRIDGE NO. A9772/A9773



STAGE 4 REMOVAL

NOTE:

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 3 AND 4 AND EXIST. BENTS NO. 17 THRU 19. THE OTHER BENTS ARE CONFIGURED DIFFERENTLY BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (8 OF 10)

SHEET 8 OF 10

Name of Crossing
1-29/35 NB & SB OVER DORA ST.,
UPRR, GUINOTTE AVE & CPKC

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W

ROUTE 1-29 ; JACKSON COUNTY

SURVEY MADE BY HDR ENGINEERING INC.

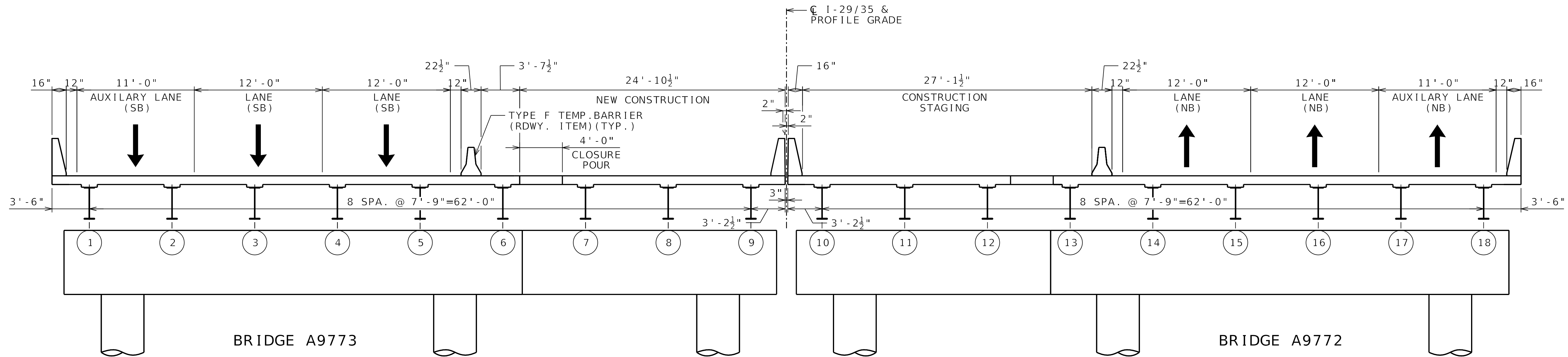
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.

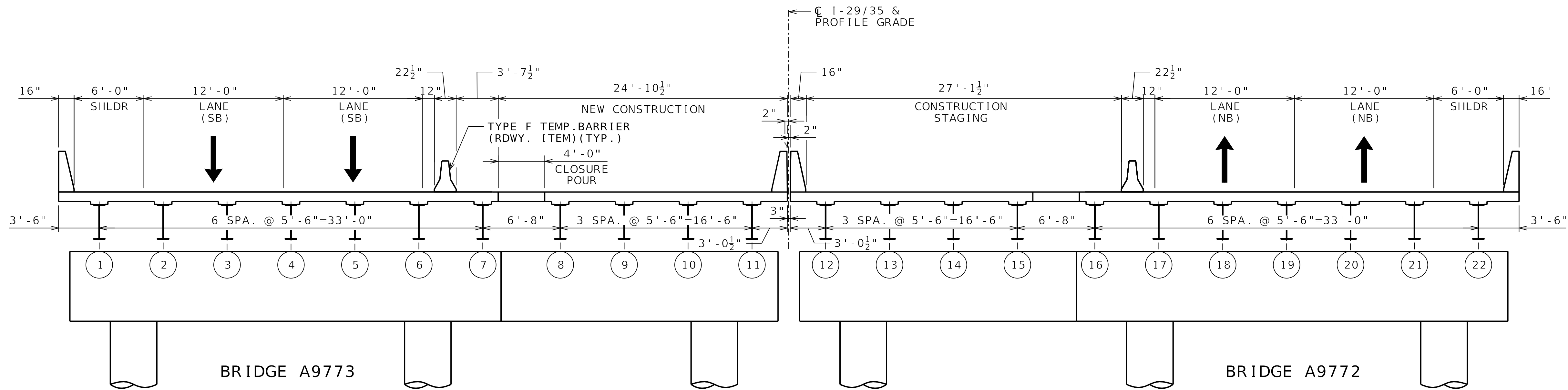
Transportation Project Manager

PROJ. NO. STA. 132+13.17

JOB NO. J413458 BRIDGE NO. A9772/A9773



TYP. SECTION PROPOSED UNIT NO. 1
(NEAR EXIST. BENT NO. 4)

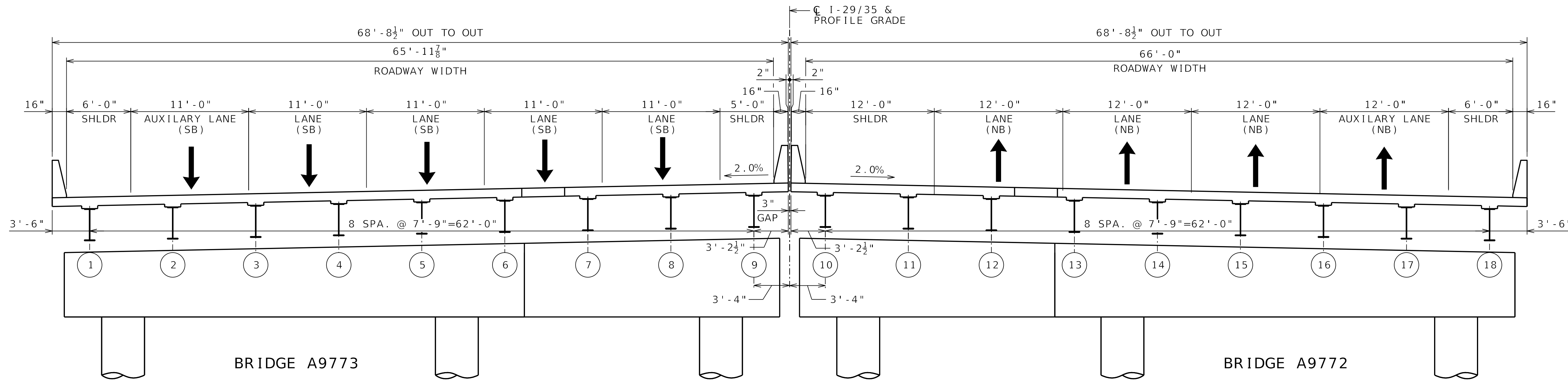


TYP. SECTION PROPOSED UNIT NO. 3
(NEAR EXIST. BENT NO. 18)

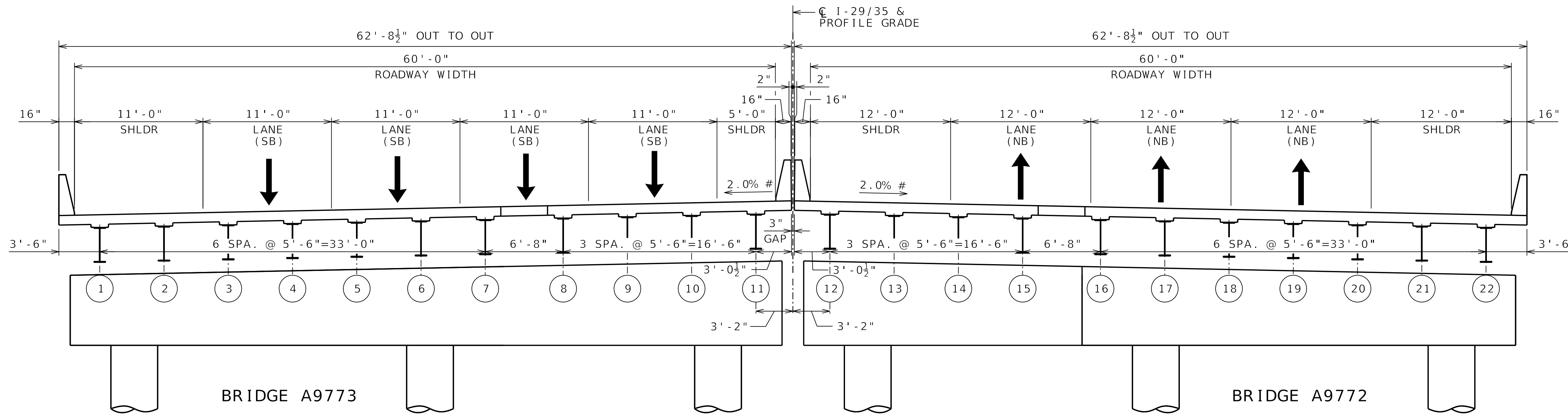
STAGE 4 CONSTRUCTION

REPLACEMENT STAGING (9 OF 10)

SHEET 9 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772/A9773



TYP. SECTION PROPOSED UNIT NO. 1
(NEAR EXIST. BENT NO. 4)



TYP. SECTION PROPOSED UNIT NO. 3
(NEAR EXIST. BENT NO. 18)

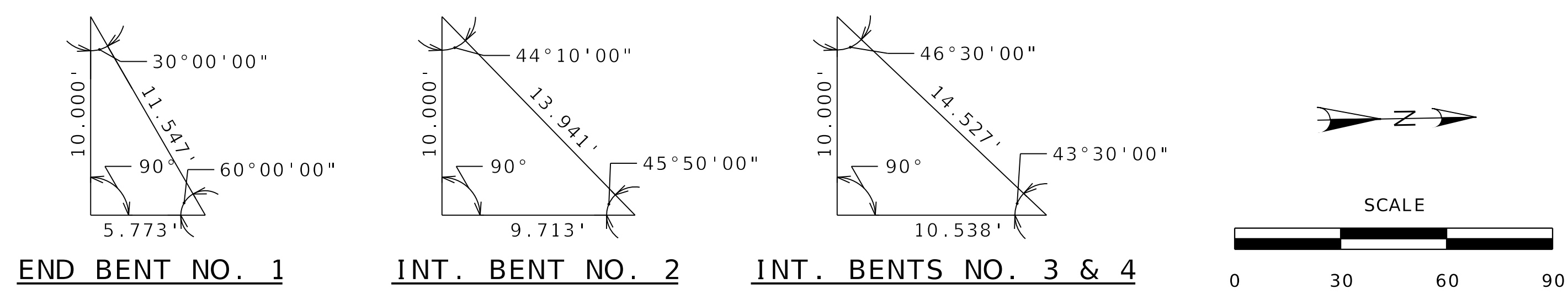
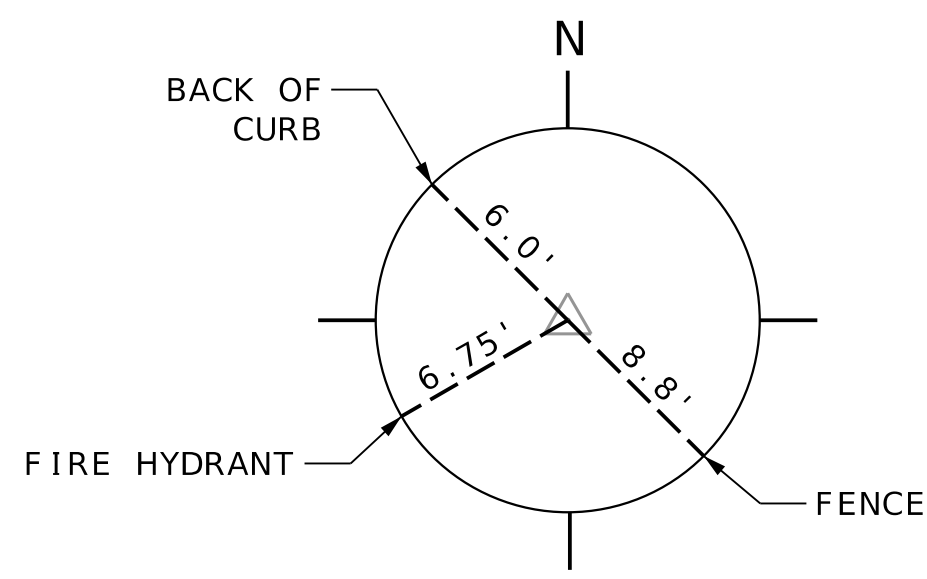
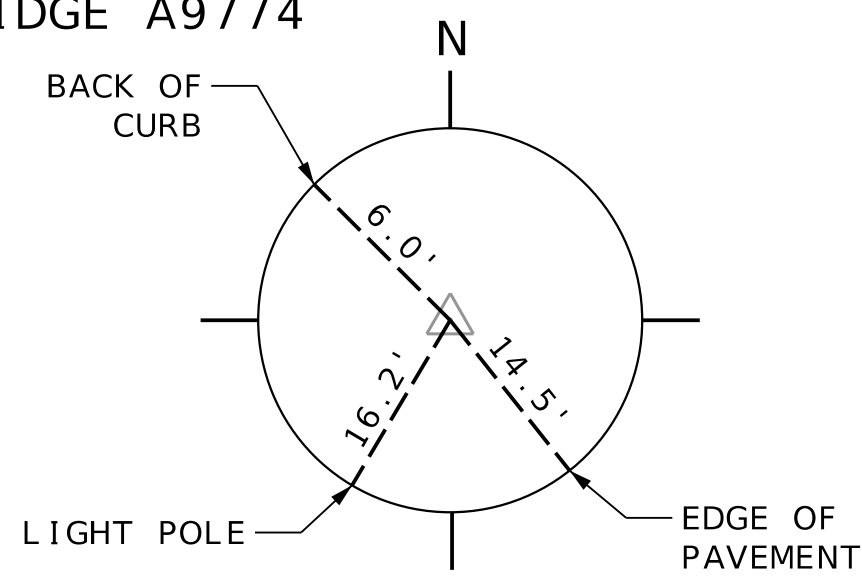
FINAL CONFIGURATION

#-CROSS SLOPE VARIES AT TRANSITION TO ADJACENT
ROADWAY CONFIGURATION NEAR END BENTS.

REPLACEMENT STAGING (10 OF 10)

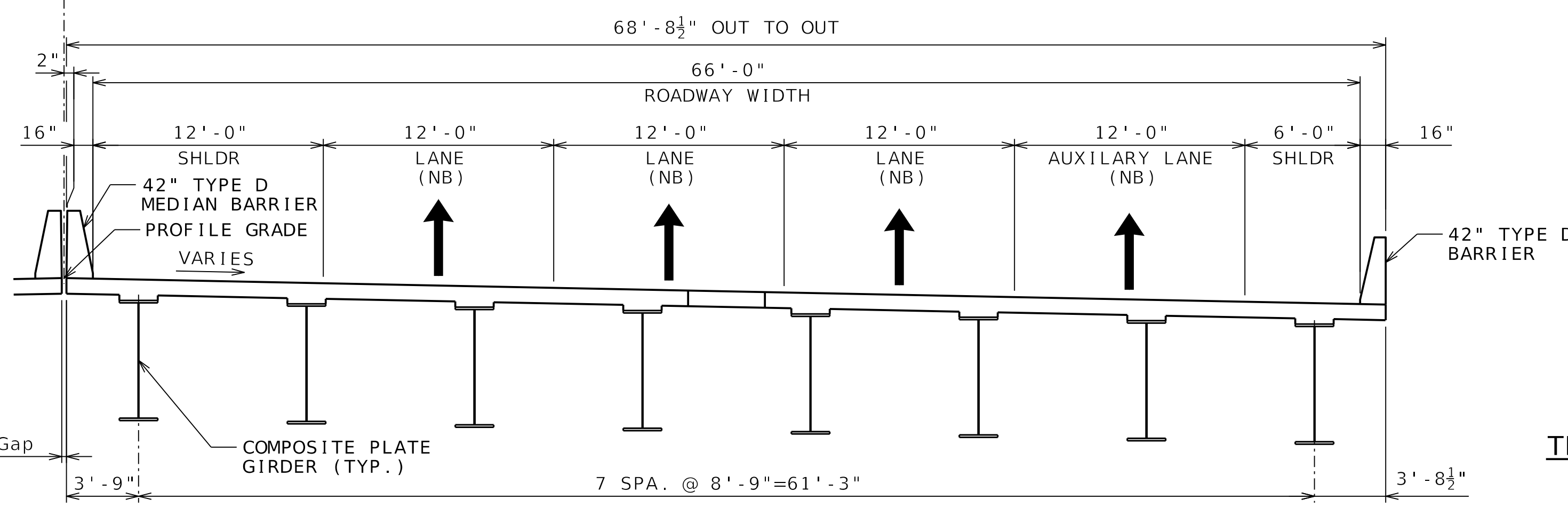
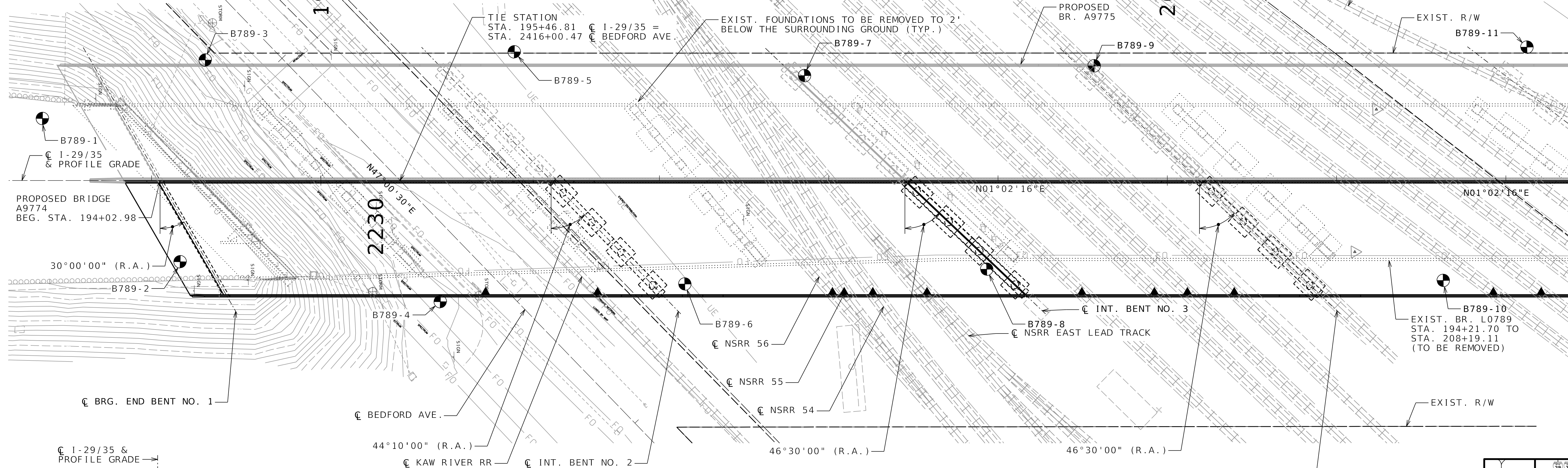
SHEET 10 OF 10	
Name of Crossing 1-29/35 NB & SB OVER DORA ST., UPRR, GUINOTTE AVE & CPKC	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 132+13.17
JOB NO. J413458	BRIDGE NO. A9772/A9773

BRIDGE A9774



CP#103 - SET 1/2" IRON BAR W/HDR CAP
 N=1079706.326
 E=2769868.597
 ELEV=738.013
 I-29
 STA. 199+33.71
 435.79' RT

CP#104 - SET 1/2" IRON BAR W/HDR CAP
 N=1079032.525
 E=2769146.912
 ELEV=739.335
 I-29
 STA. 192+46.95
 273.57' LT



TYPICAL SECTION BRIDGE A9774

LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ● INDICATES LOCATION OF BORINGS

CROSS SLOPE TRANSITION DETAIL

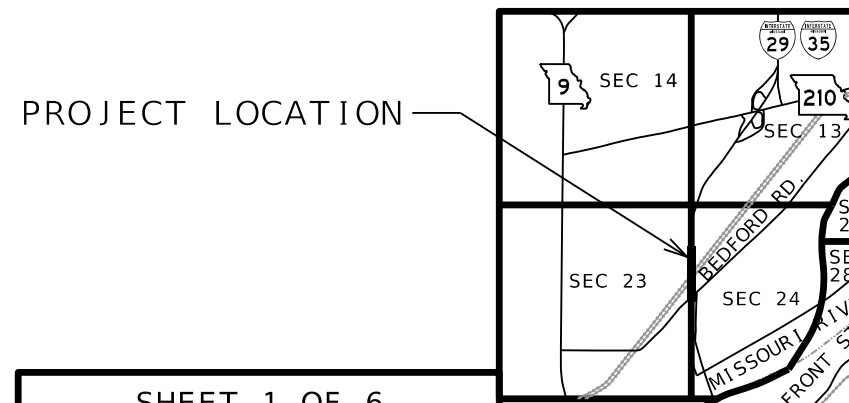
4.60% 4.60%
 STA. 188+57.00

2.00% 2.00%
 STA. 197+47.00

1-29/35 NB DESIGN TRAFFIC
 AADT - 2024 - 55,789
 AADT - 2050 - 77,441
 % TRUCKS = 7.0%
 DESIGN SPEED = 55 MPH

PROPOSED BRIDGE A9774
 STA. 194+02.98
 (231'-209') (174'-262'-176') (189'-209')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS

REMOVE EXIST. BRIDGE L0789
 STA. 194+21.70
 (80'-110'-12') (92.5'-126.4')
 (15'-188'-188.1'-15') (139.7'-136.2'-15')
 (60.4'-73.9'-77.9'-59.9')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS



SHEET 1 OF 6

Name of Crossing
**1-29/35 NB OVER KAW VALLEY RR,
 NSRR, BNSF & CITY STREETS**

MISSOURI HIGHWAYS AND
 TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

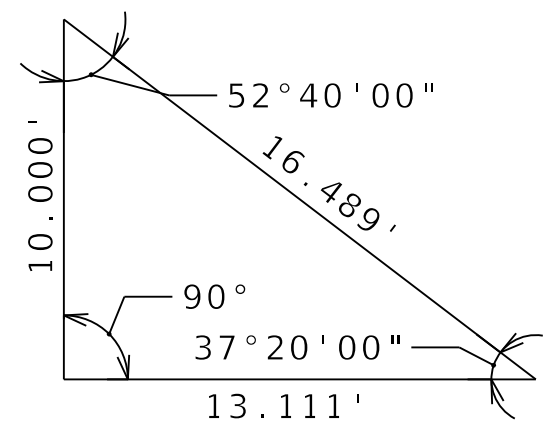
SEC. 24 T. 50N R. 33W
 ROUTE I-29 ; CLAY COUNTY
 SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

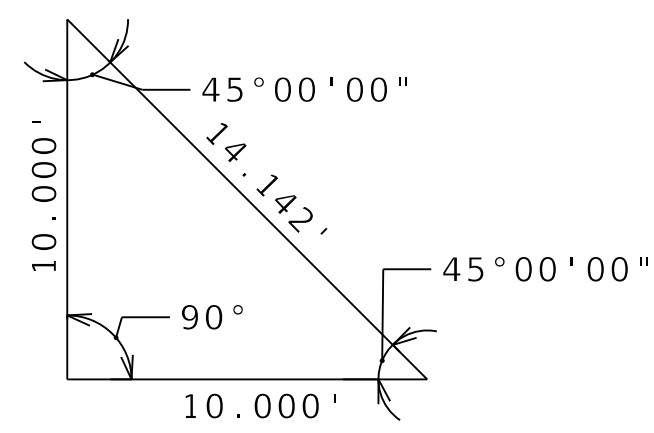
CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

PROJ. NO. STA. 194+02.98
 JOB NO. J413458 BRIDGE NO. A9774

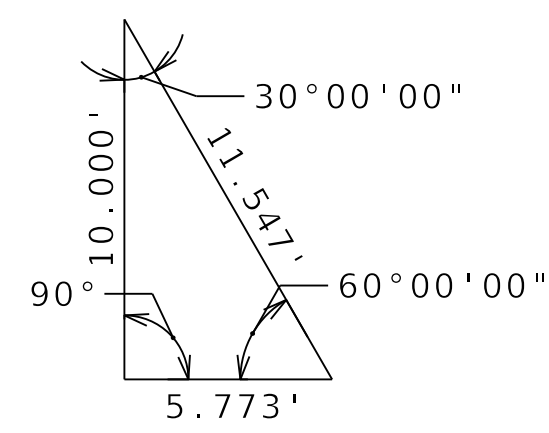
BRIDGE A9774



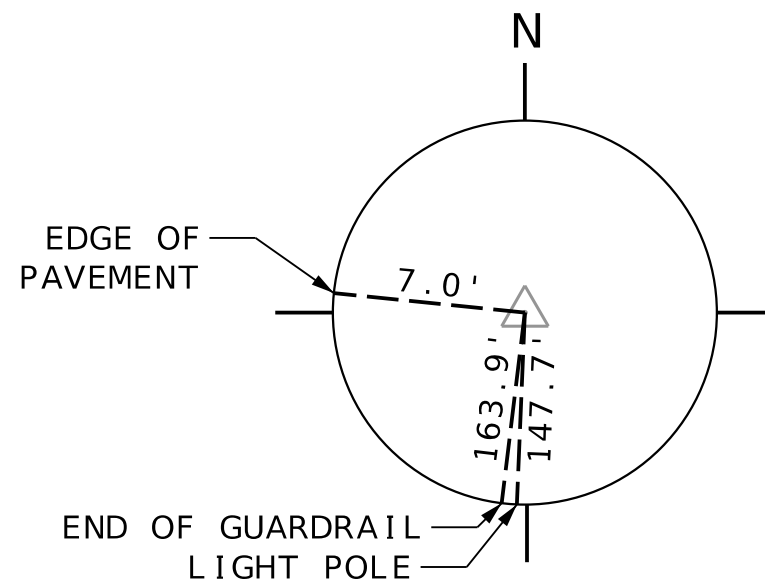
INT. BENTS NO. 5 & 6



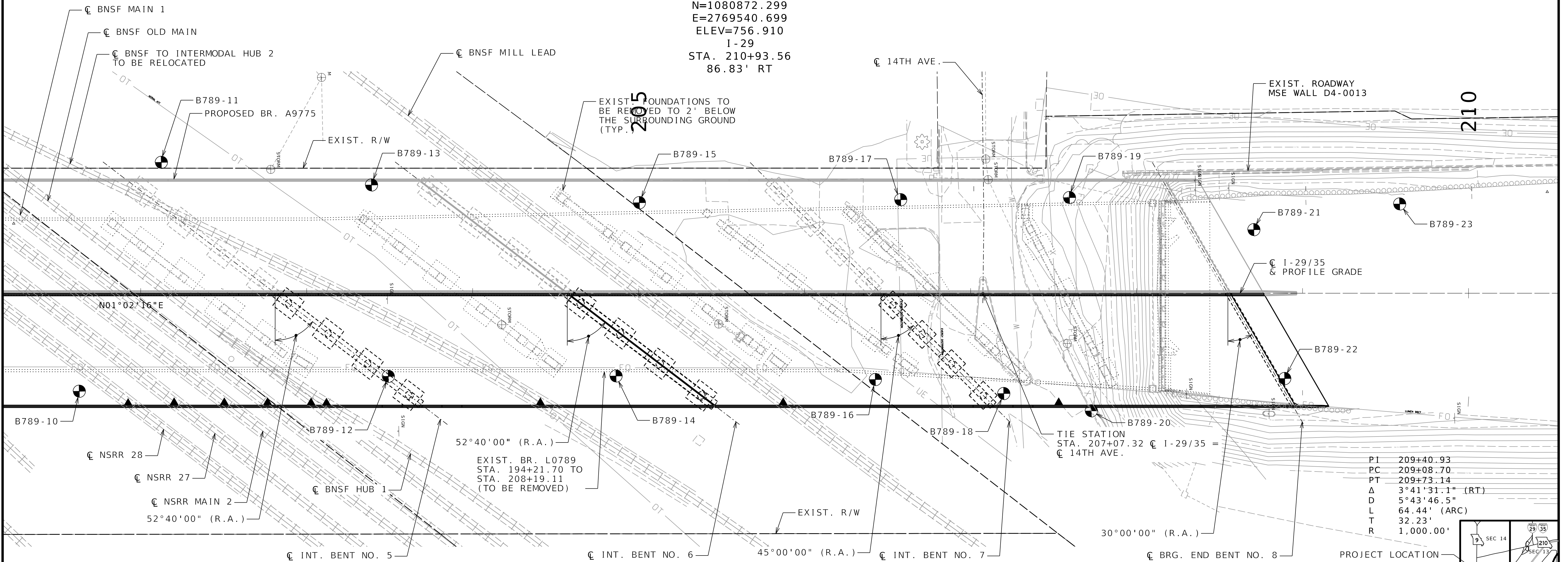
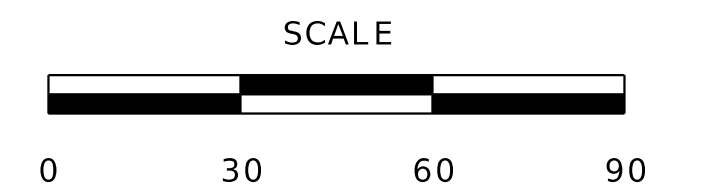
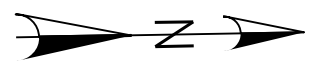
INT. BENT NO. 7



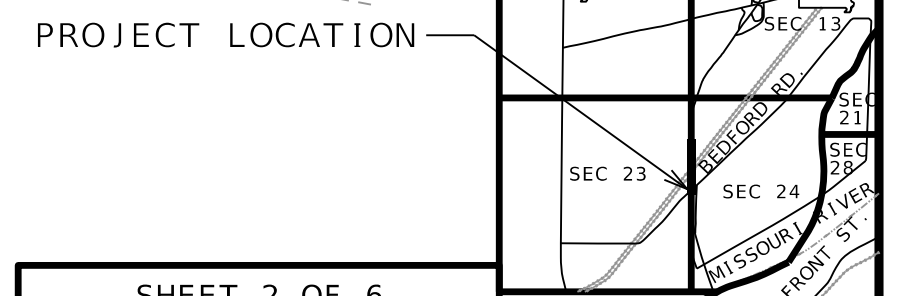
END BENT NO. 8



CP#105 - SET 1/2" IRON BAR W/HDR CAP
 N=1080872.299
 E=2769540.699
 ELEV=756.910
 I-29
 STA. 210+93.56
 86.83' RT

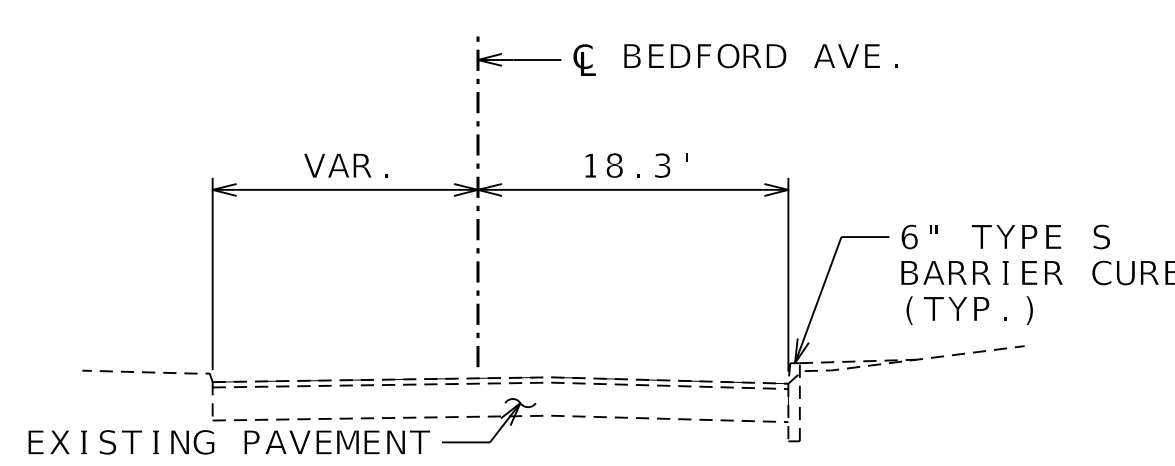


P1	209+40.93
PC	209+08.70
PT	209+73.14
Δ	3°41'31.1" (RT)
D	5°43'46.5"
L	64.44' (ARC)
T	32.23'
R	1,000.00'

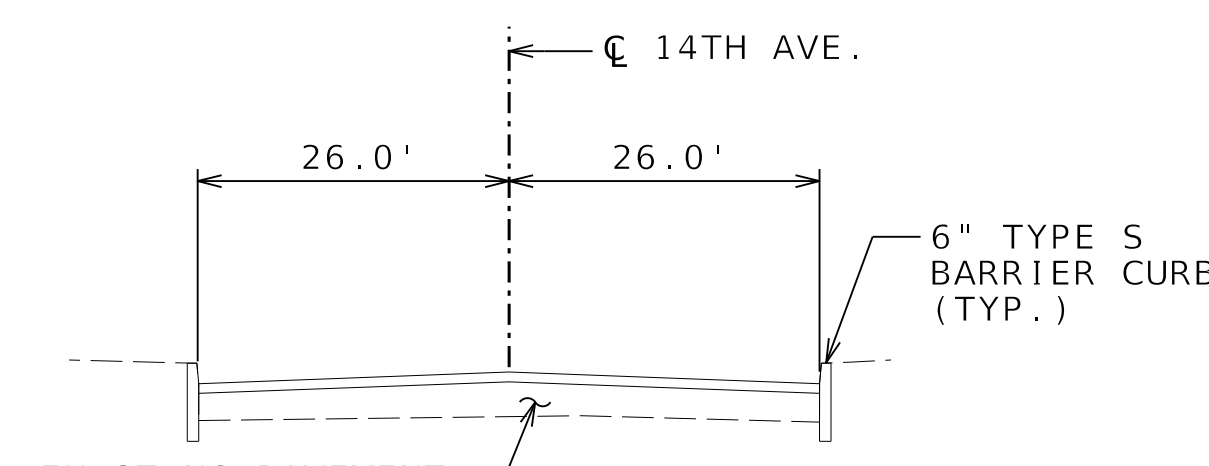


LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ● INDICATES LOCATION OF BORINGS

NOTE:
 ANY UTILITY ACCOMMODATIONS OR RELOCATIONS WITHIN RR ROW SHALL BE SUBMITTED TO THE RR FOR APPROVAL.

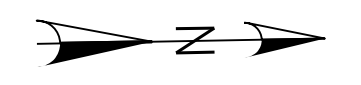


TYPICAL SECTION BEDFORD AVE

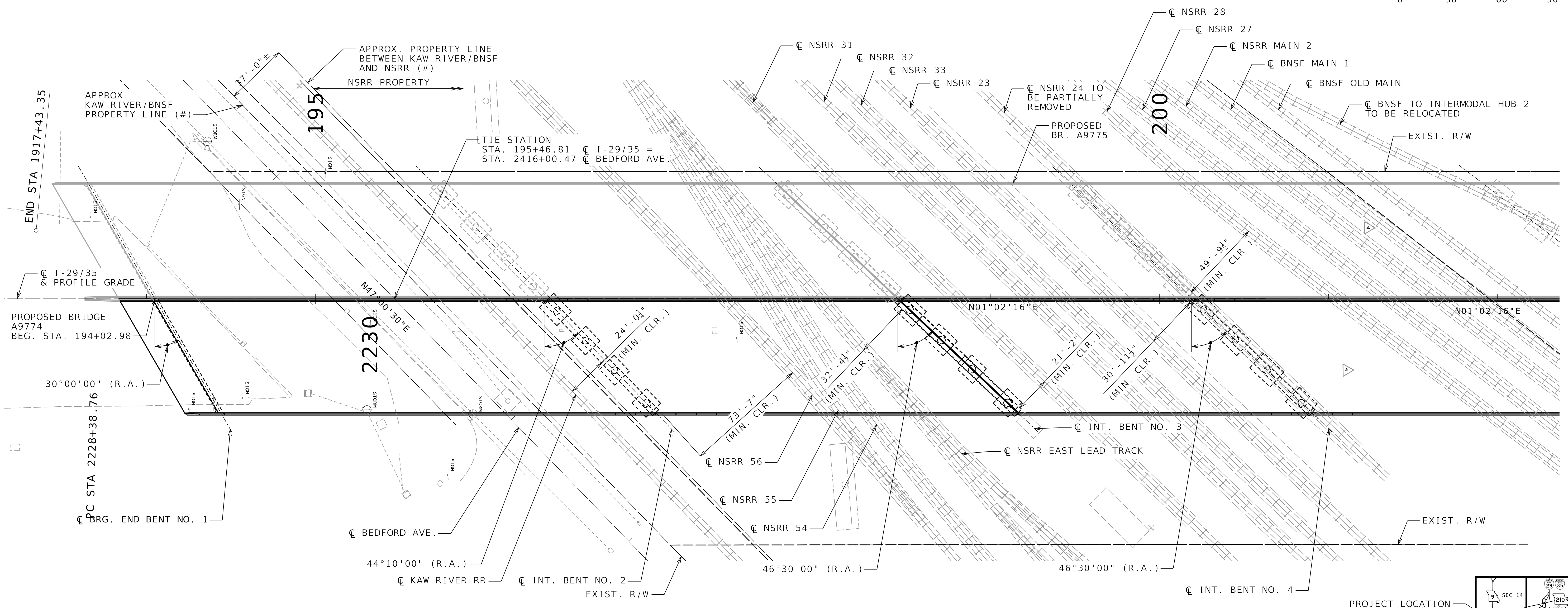
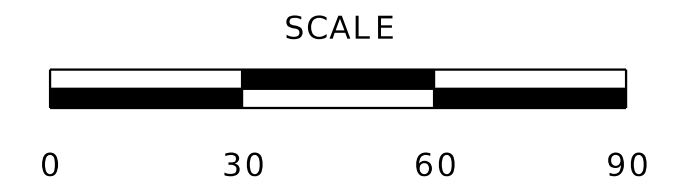


TYPICAL SECTION 14TH AVE

SHEET 2 OF 6	
Name of Crossing 1-29/35 NB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9774	

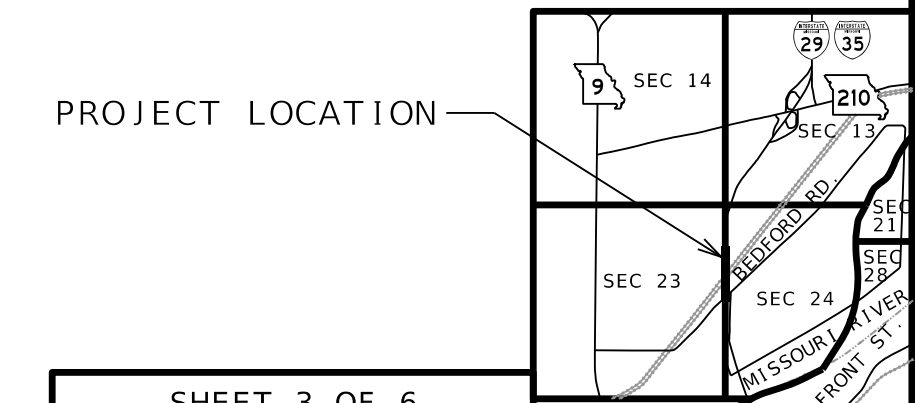


NOTE:
NSRR PROPERTY ADJACENT TO BNSF
RAILWAY PROPERTY, SHARED PROPERTY
LINE INFORMATION IS NOT AVAILABLE.

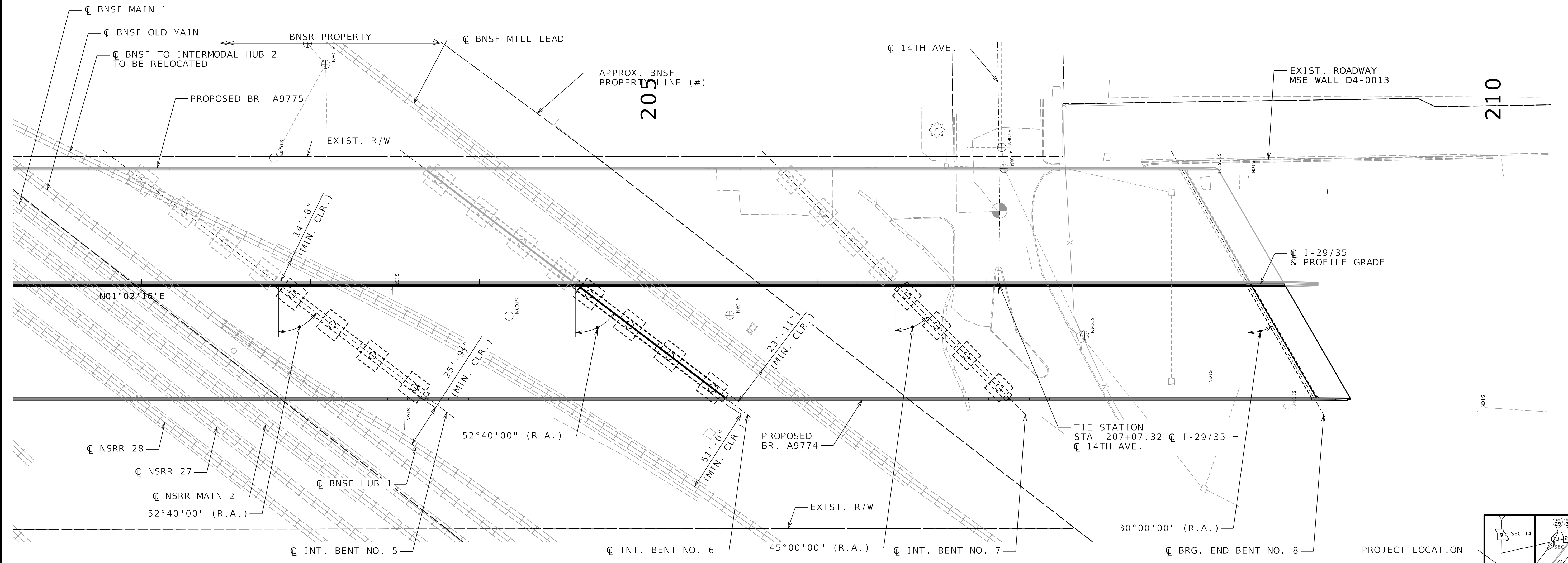
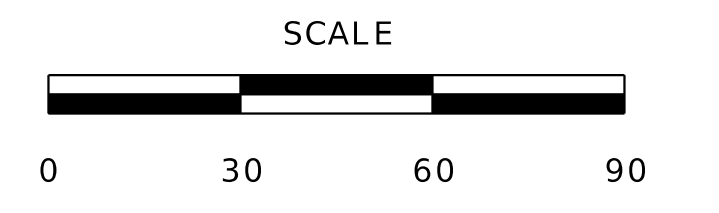
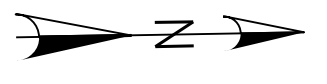


(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

NOTE:
PROPERTY LINE BETWEEN NSRR AND BNSF WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.



SHEET 3 OF 6	
Name of Crossing 1-29/35 NB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9774	



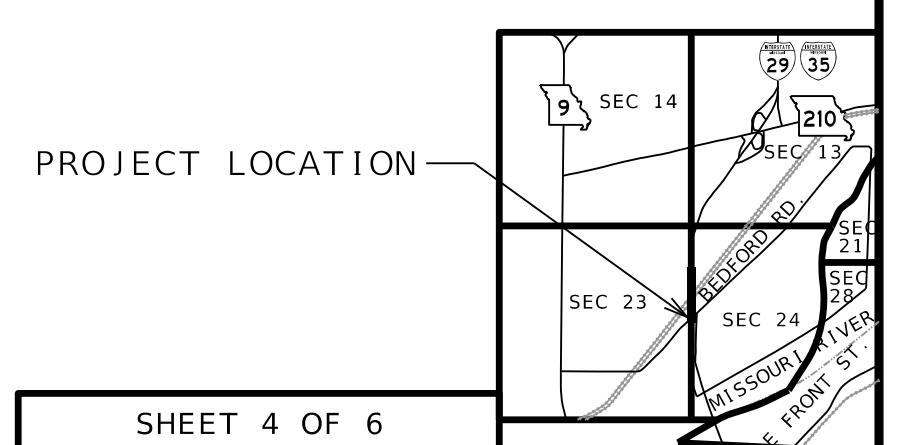
PLAN - HORIZONTAL CLEARANCES

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

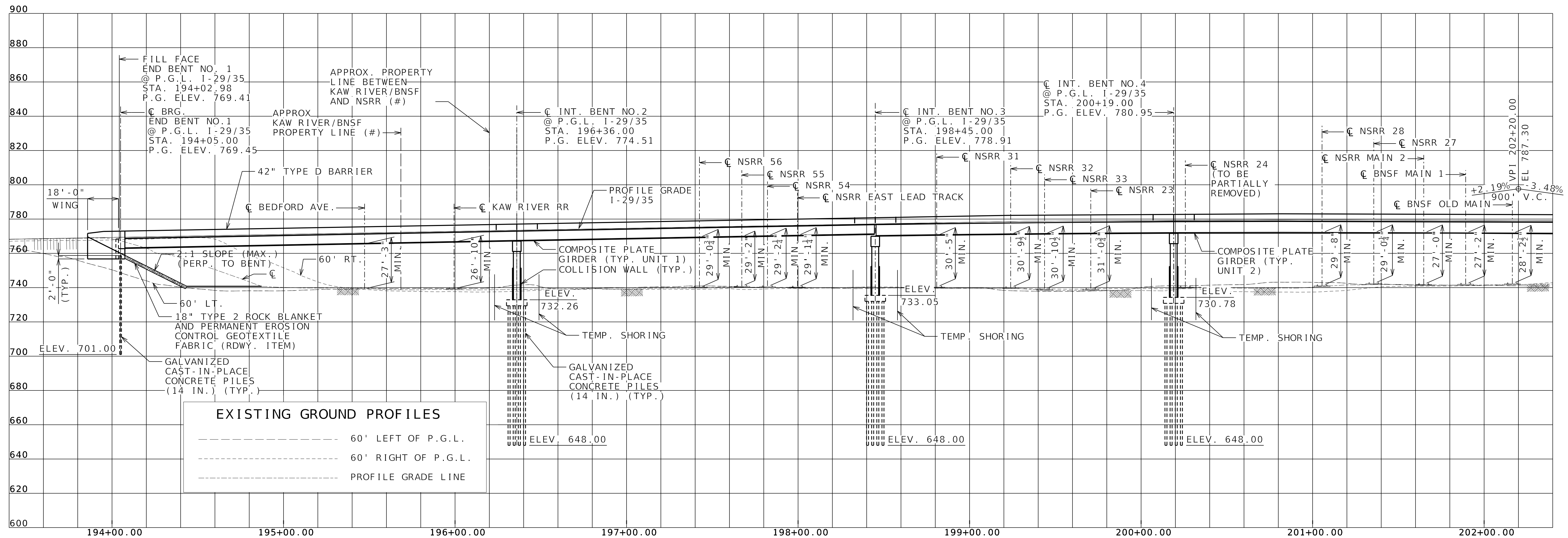
NOTE: PROPERTY LINE BETWEEN NSRR AND BNSF WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.

NOTE: HORIZONTAL CLEARANCE TO BNSF TO INTERMODAL HUB 2 IS SHOWN FOR EXISTING CONDITION.

FINAL HORIZONTAL CLEARANCE WILL BE DETERMINED AFTER COORDINATION WITH BNSF FOR PROPOSED TRACK REALIGNMENT.



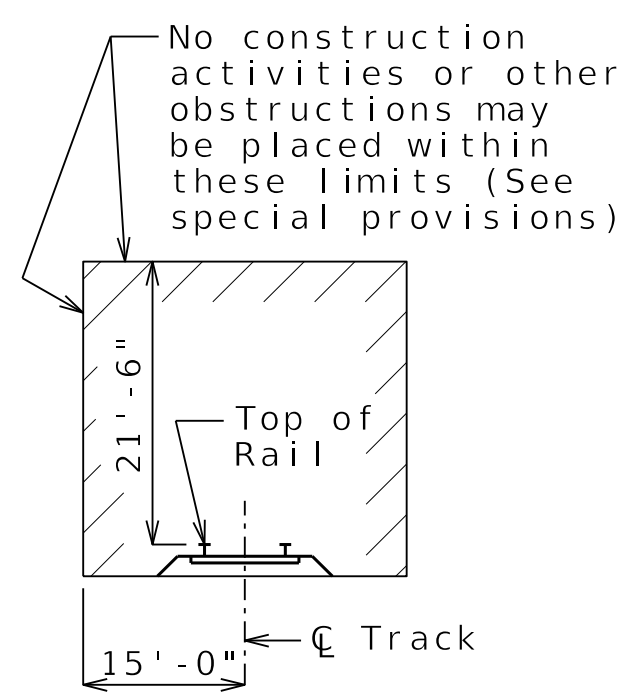
SHEET 4 OF 6	
Name of Crossing 1-29/35 NB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE I-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9774	



EXISTING GROUND PROFILES

- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

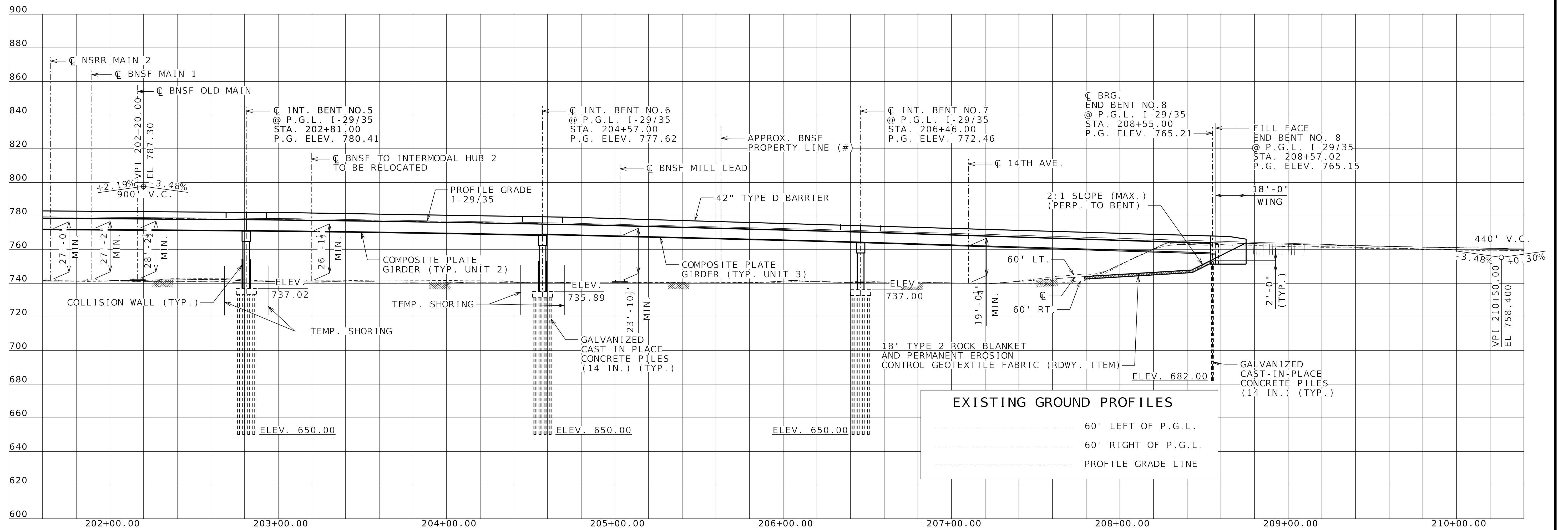


MINIMUM CONSTRUCTION CLEARANCES

(Normal to railroad)
(Not to scale)

NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND PIPED TO THE ENDS OF THE BRIDGE TO BE DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.
VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 5 OF 6	
Name of Crossing 1-29/35 NB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 194+02.98
JOB NO. J413458	BRIDGE NO. A9774



EXISTING GROUND PROFILES

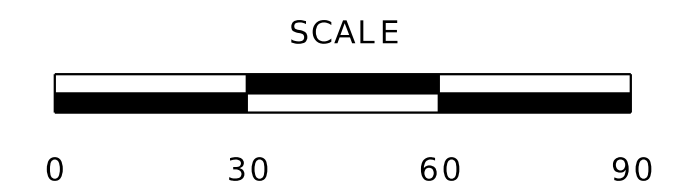
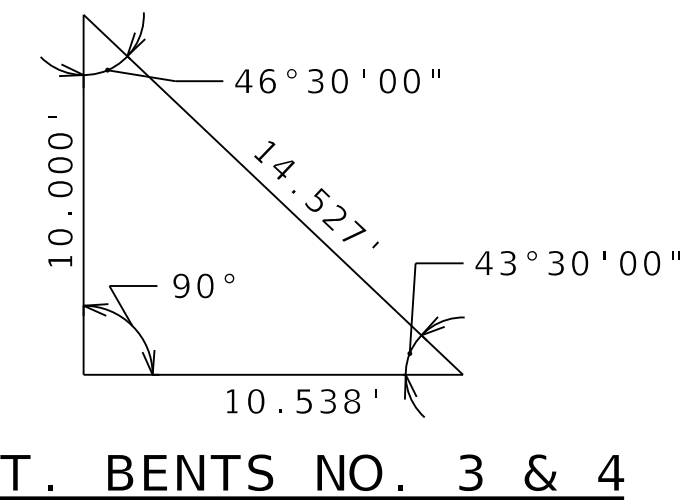
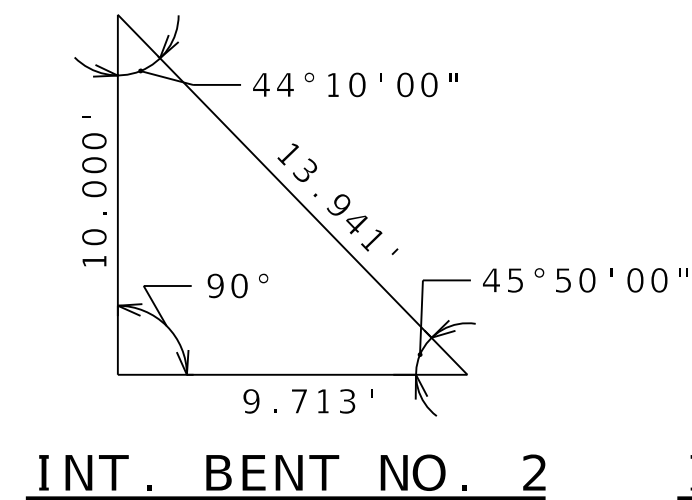
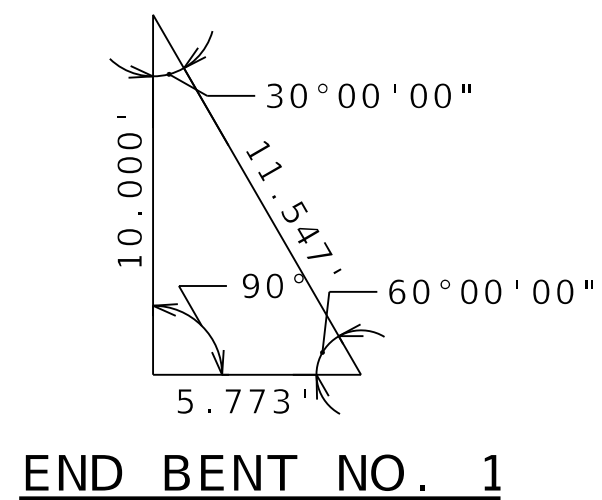
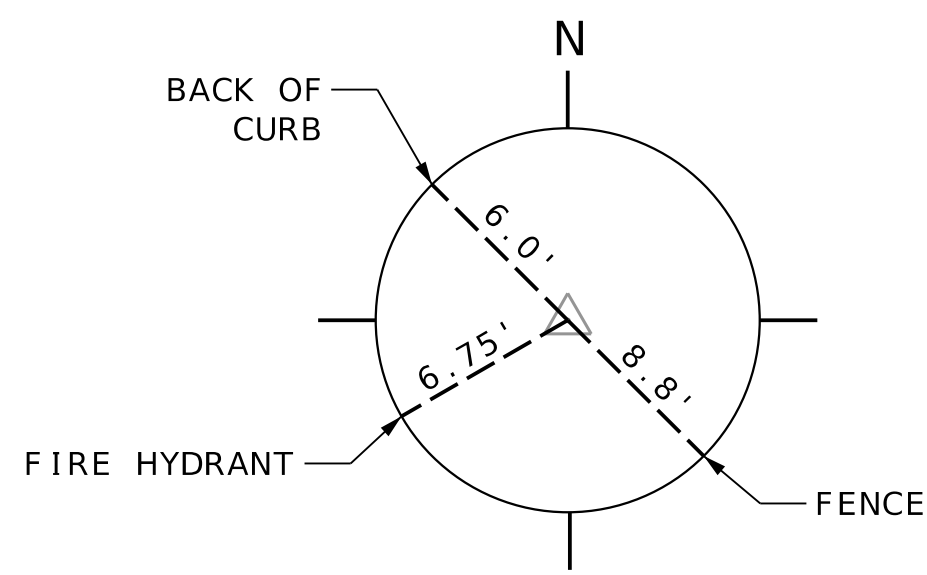
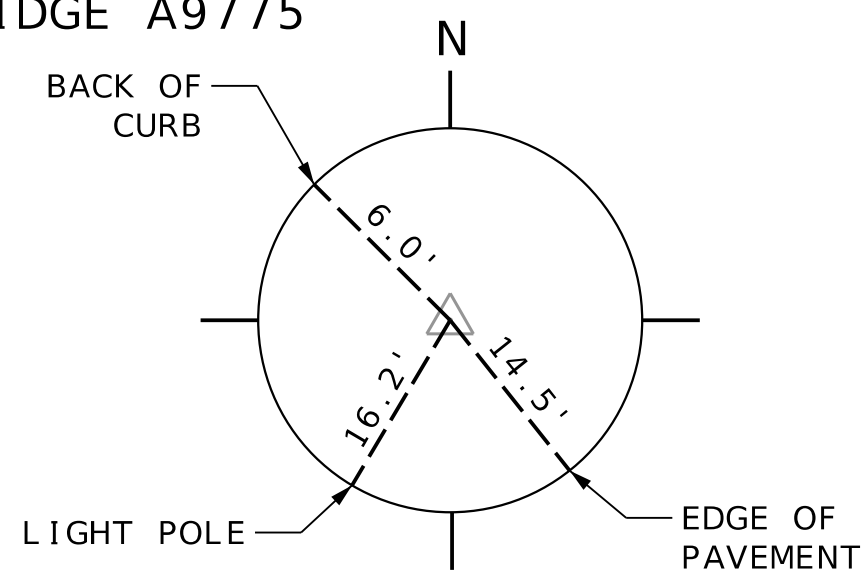
- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

NOTES:
 BRIDGE DRAINAGE WILL BE COLLECTED AND PIPED TO THE ENDS OF THE BRIDGE TO BE DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.
 VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

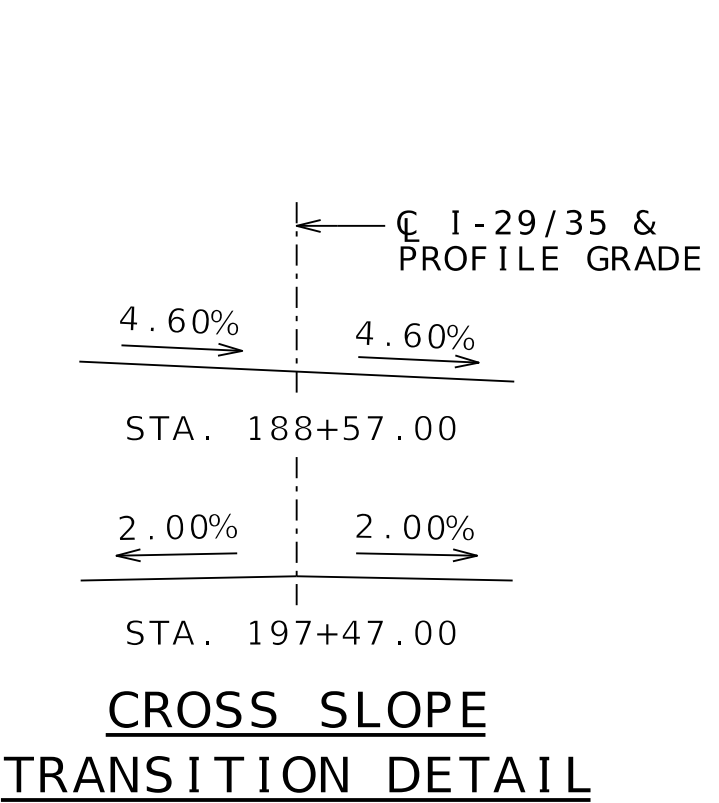
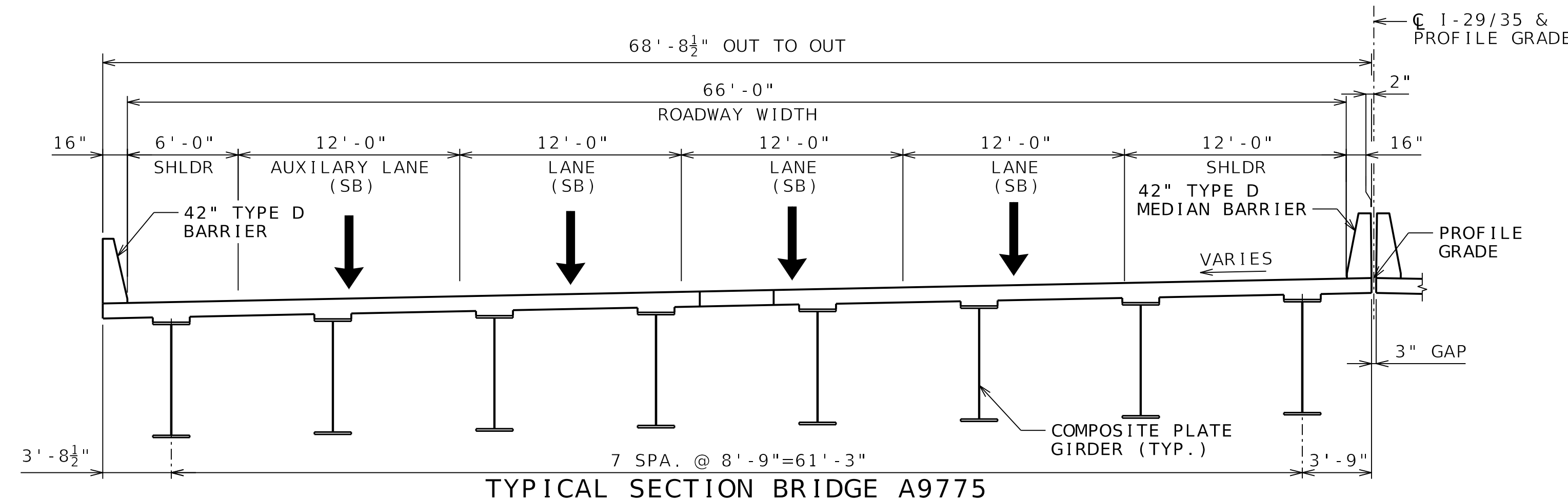
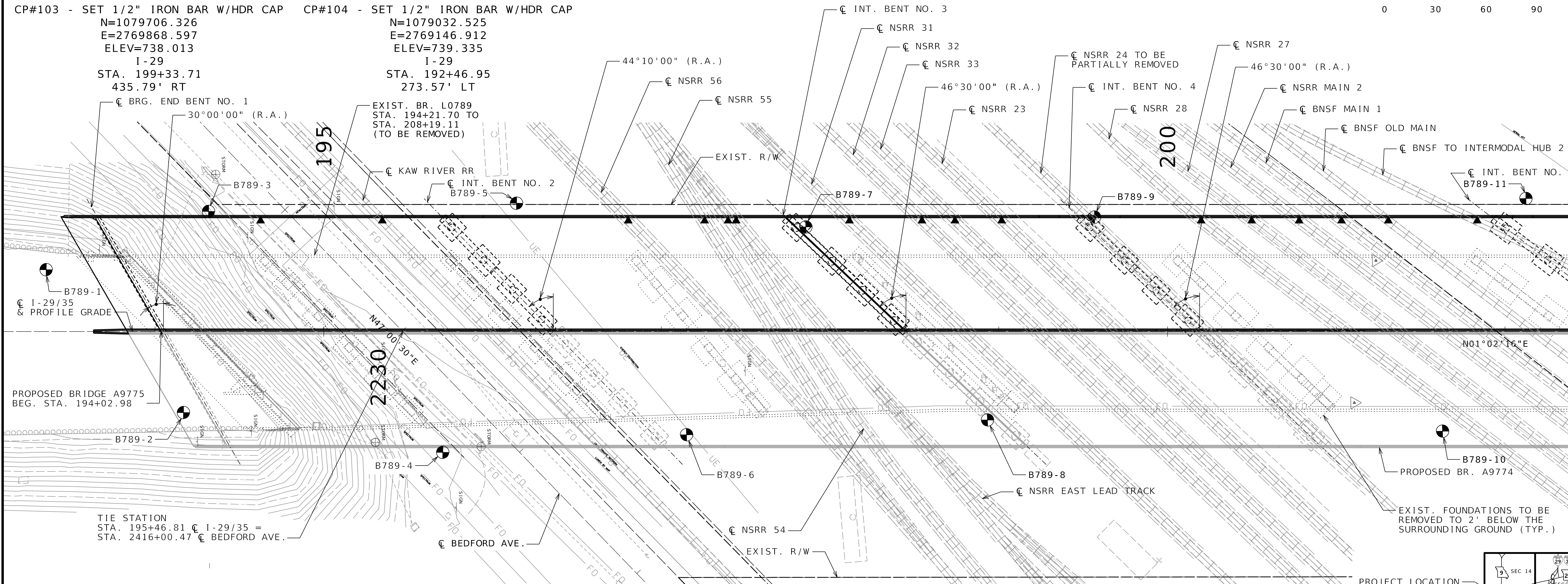
SHEET 6 OF 6	
Name of Crossing 1-29/35 NB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458	BRIDGE NO. A9774

BRIDGE A9775



CP#103 - SET 1/2" IRON BAR W/HDR CAP
 N=1079706.326
 E=2769868.597
 ELEV=738.013
 I-29
 STA. 199+33.71
 435.79' RT

CP#104 - SET 1/2" IRON BAR W/HDR CAP
 N=1079032.525
 E=2769146.912
 ELEV=739.335
 I-29
 STA. 192+46.95
 273.57' LT

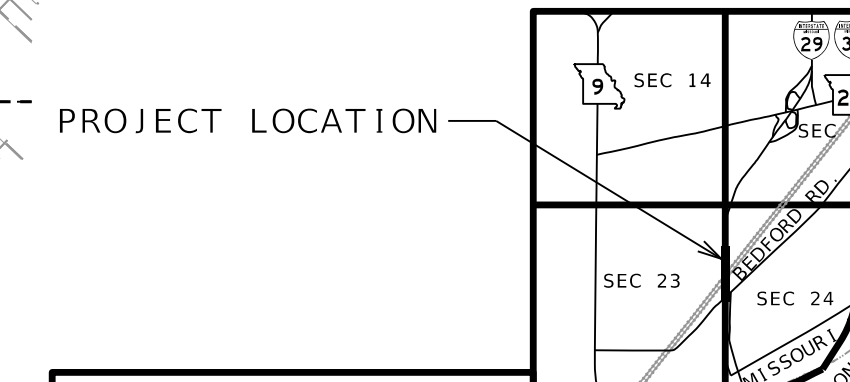


LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ● INDICATES LOCATION OF BORINGS

1-29/35 SB DESIGN TRAFFIC
 AADT - 2024 - 52,362
 AADT - 2050 - 72,684
 % TRUCKS = 7.0%
 DESIGN SPEED = 55 MPH

PROPOSED BRIDGE A9775
 STA. 194+02.98
 (231'-209') (174'-262'-176') (189'-209')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS

REMOVE EXIST. BRIDGE L0789
 STA. 194+21.70
 (80'-110'-12') (92.5'-126.4') (15'-188'-188.1'-15')
 (139.7'-136.2'-15') (60.4'-73.9'-77.9'-59.9')
 VARIABLE SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS



SHEET 1 OF 6

Name of Crossing
 1-29/35 SB OVER KAW VALLEY RR,
 NSRR, BNSF & CITY STREETS

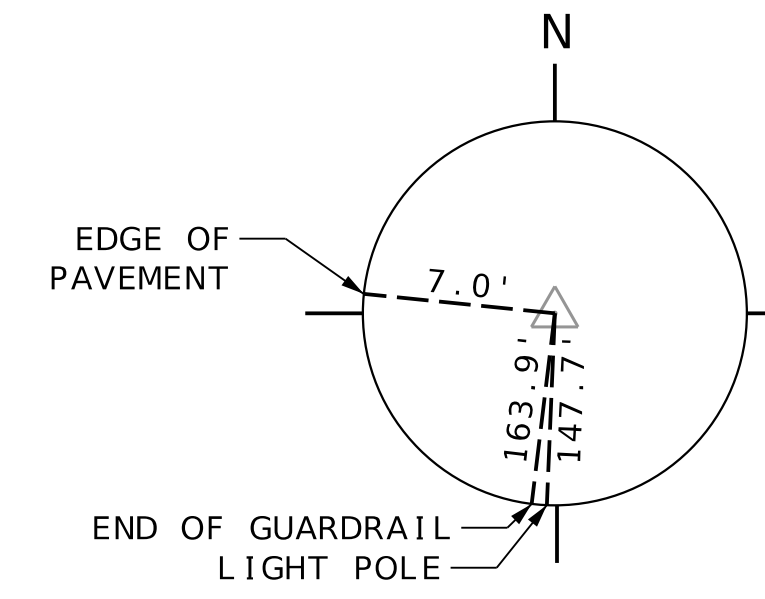
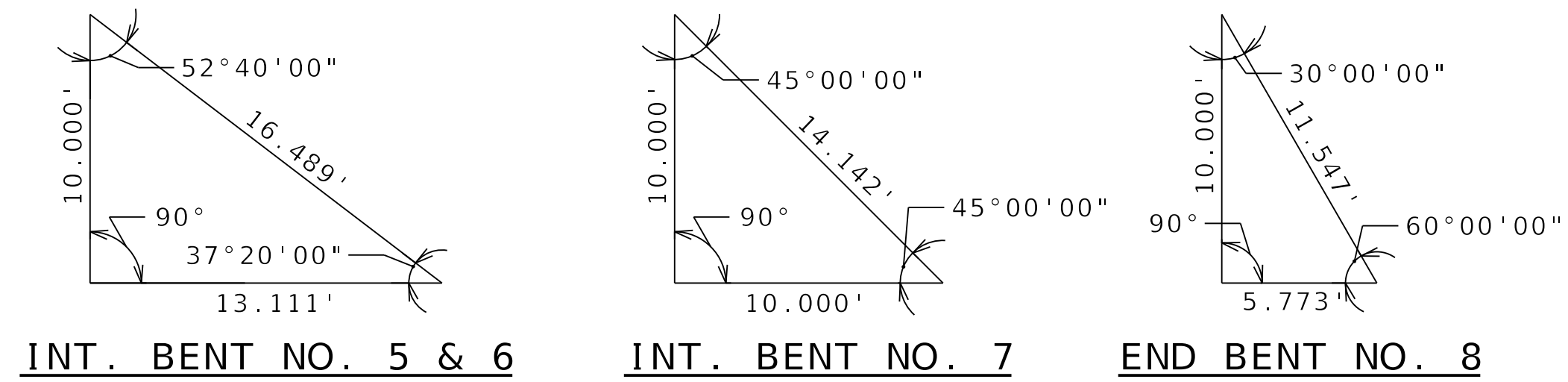
MISSOURI HIGHWAYS AND
 TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 24 T. 50N R. 33W
 ROUTE 1-29 ; CLAY COUNTY
 SURVEY MADE BY HDR ENGINEERING INC.

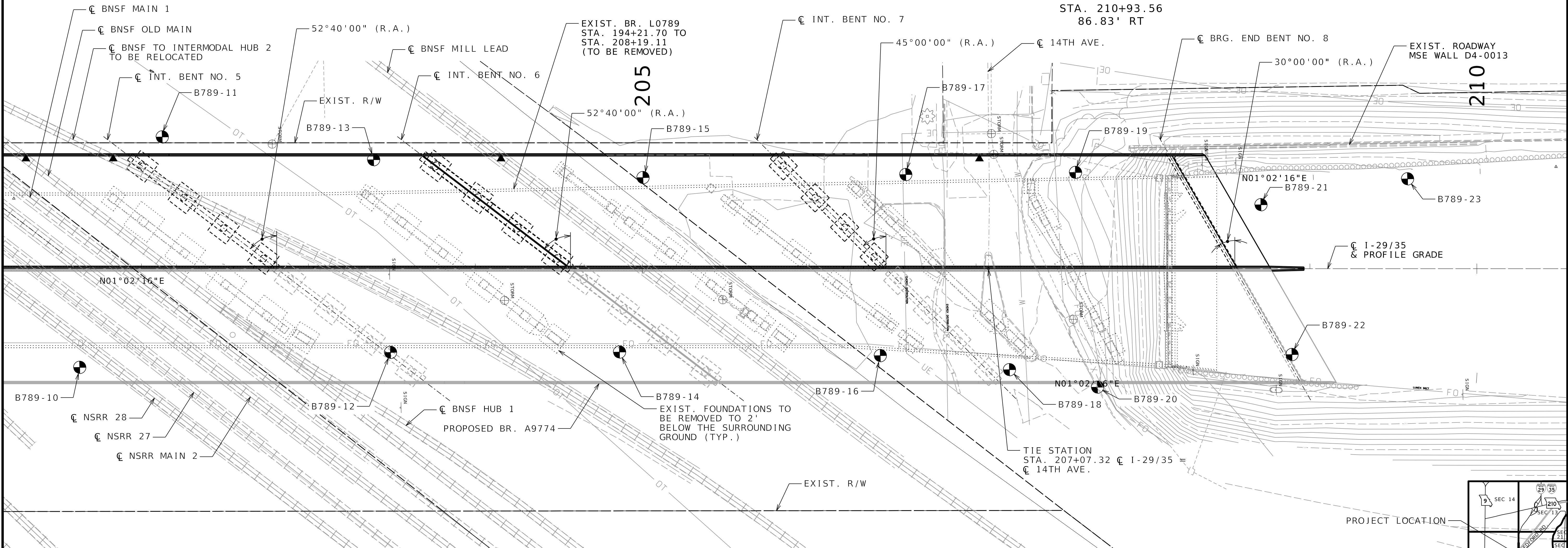
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

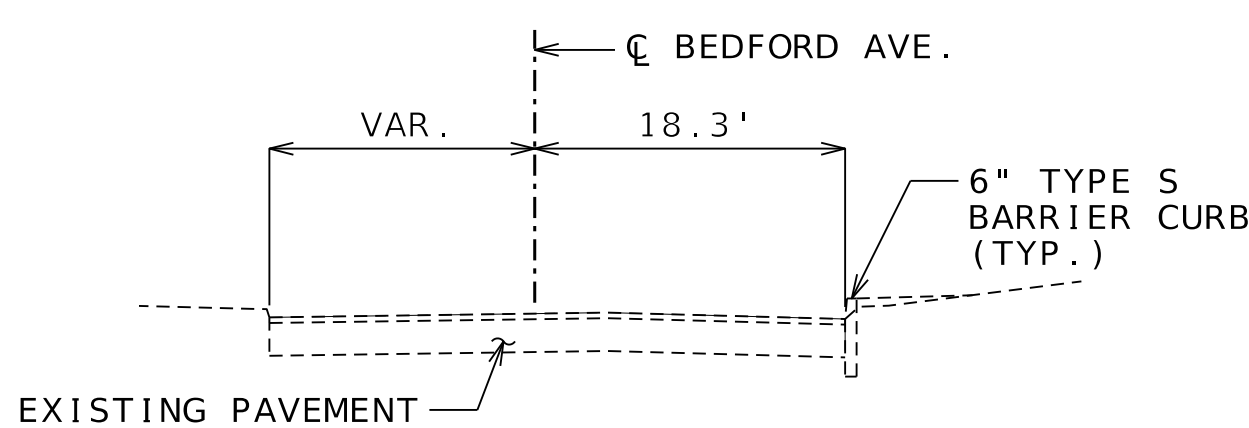
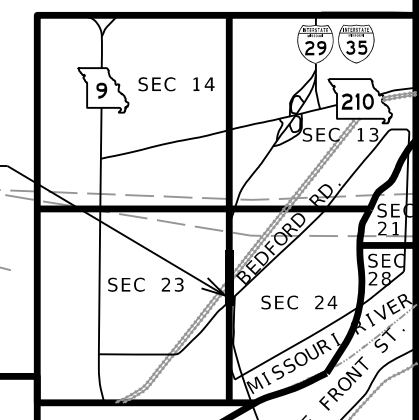
PROJ. NO. STA. 194+02.98
 JOB NO. J413458 BRIDGE NO. A9775



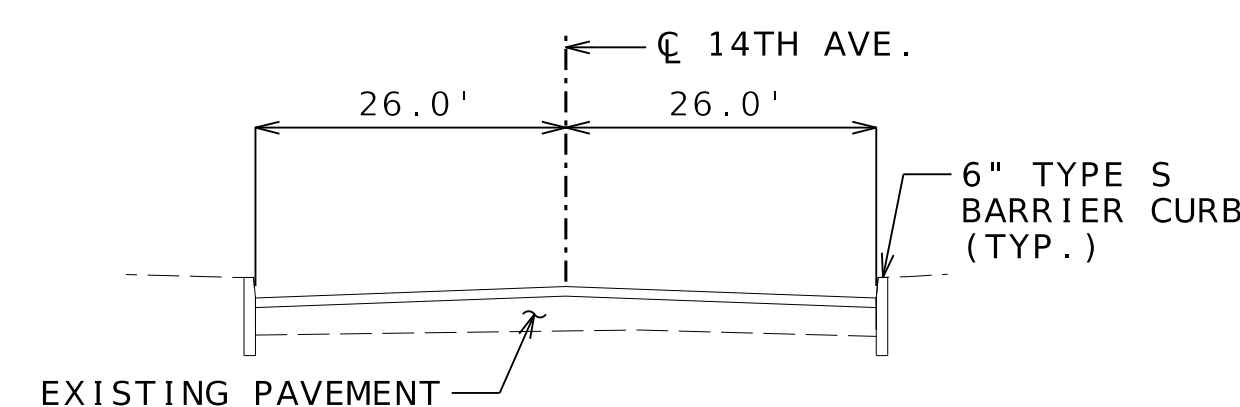
CP#105 - SET 1/2" IRON BAR W/HDR CAP
 N=1080872.299
 E=2769540.699
 ELEV=756.910
 1-29
 STA. 210+93.56
 86.83' RT



LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ● INDICATES LOCATION OF BORINGS

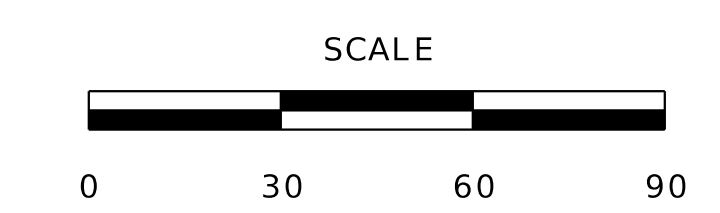


TYPICAL SECTION - BEDFORD AVE.

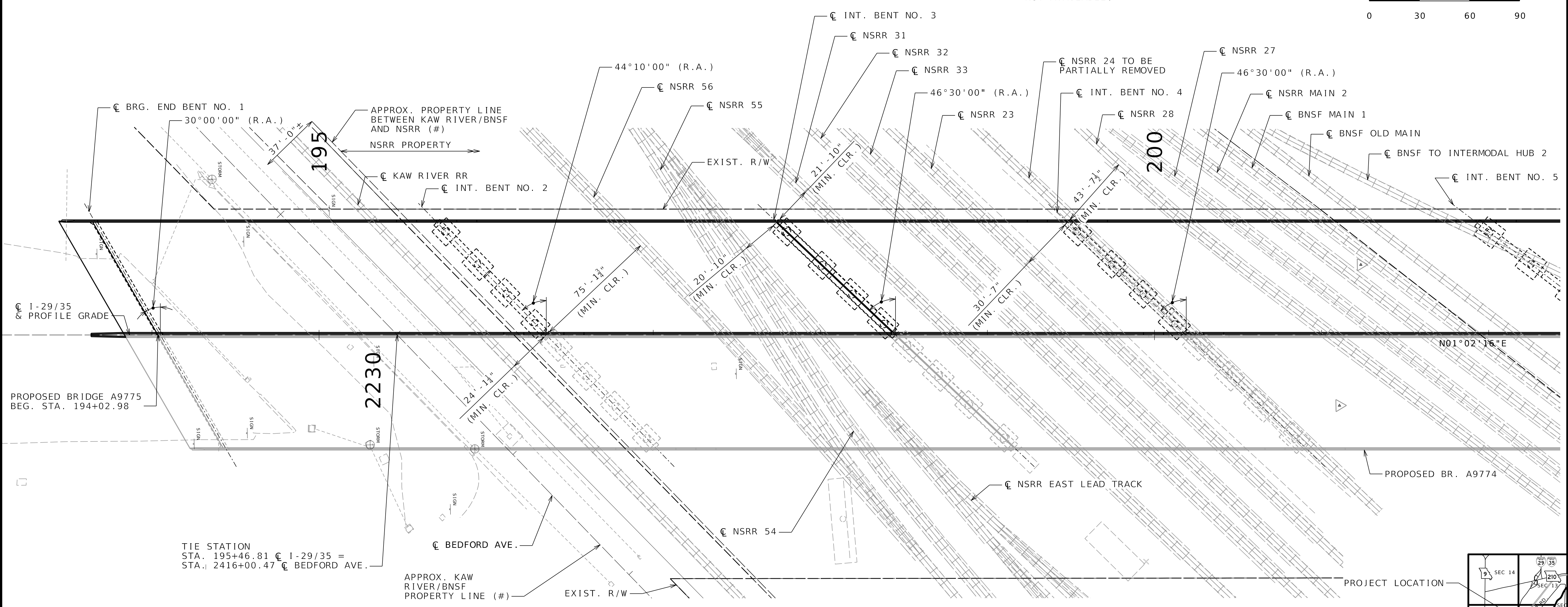


TYPICAL SECTION - 14TH AVE.

SHEET 2 OF 6	
Name of Crossing 1-29/35 SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9775	



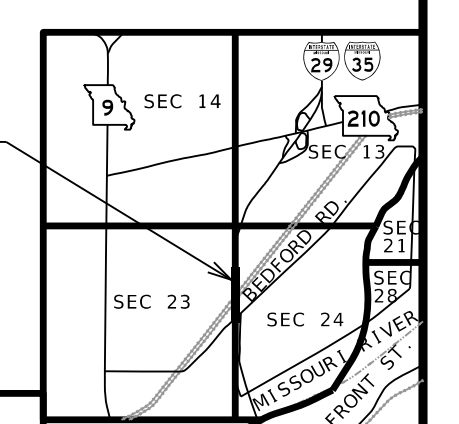
NOTE:
NSRR PROPERTY ADJACENT TO
BNSF RAILWAY PROPERTY, SHARED
PROPERTY LINE INFORMATION IS
NOT AVAILABLE.



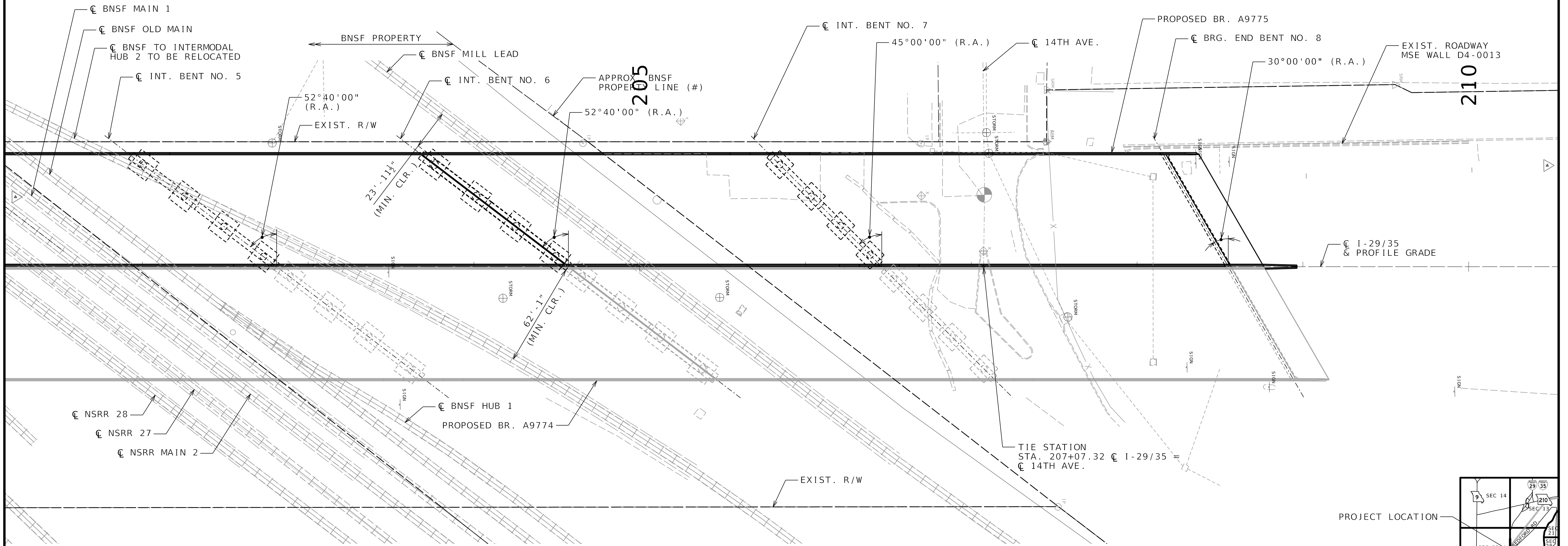
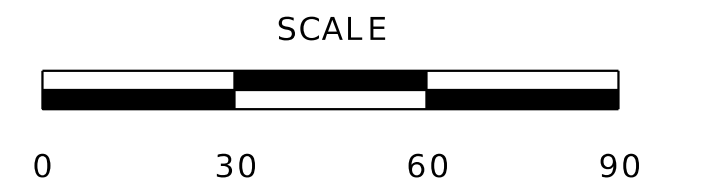
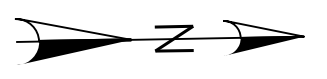
PLAN - HORIZONTAL CLEARANCES

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.

NOTE:
PROPERTY LINE BETWEEN NSRR AND BNSF WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.



SHEET 3 OF 6	
Name of Crossing 1-29/35 SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9775	

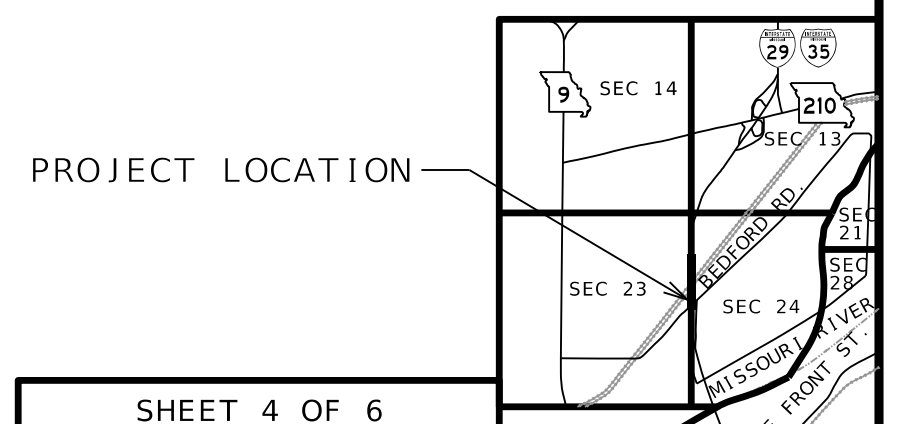


PLAN - HORIZONTAL CLEARANCES

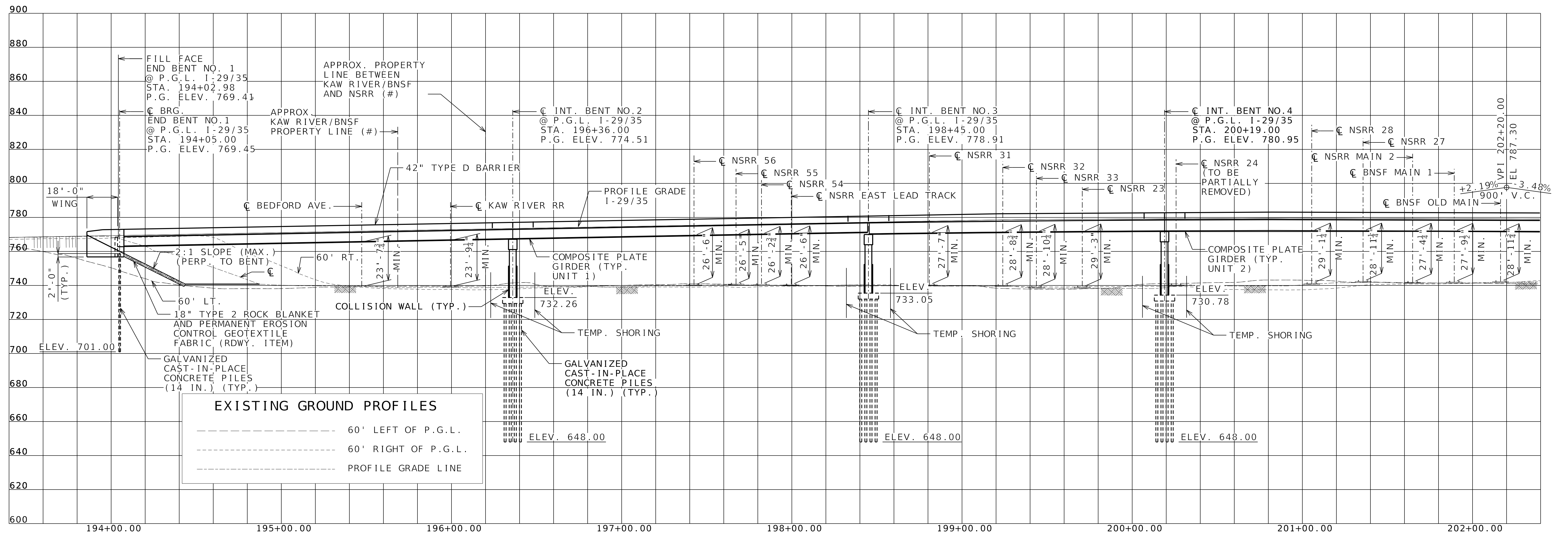
(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.

NOTE: PROPERTY LINE BETWEEN NSRR AND BNSF WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS.

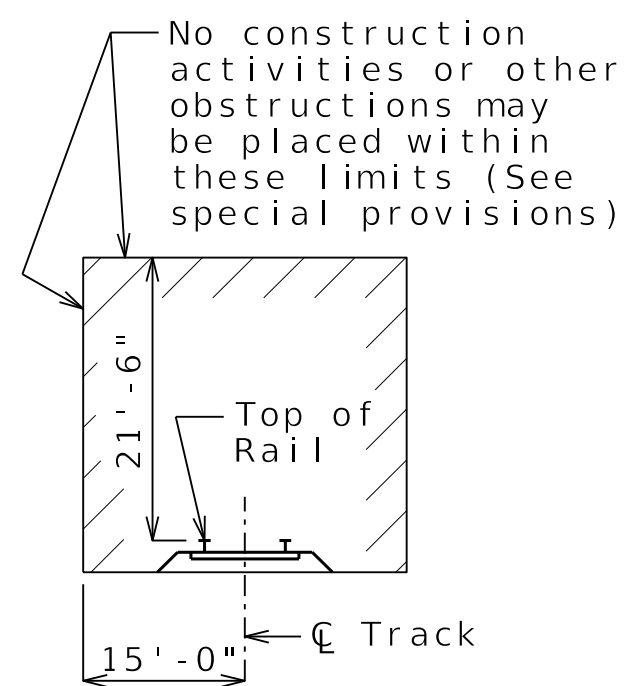
NOTE:
 HORIZONTAL CLEARANCE FROM INT. BENT NO. 5 TO BNSF TO INTERMODAL HUB 2 IS 0'-0" FOR EXISTING CONDITION.
 HORIZONTAL CLEARANCE FROM INT. BENT NO. 6 TO BNSF TO INTERMODAL HUB 2 IS SHOWN FOR EXISTING CONDITION.
 FINAL HORIZONTAL CLEARANCE WILL BE DETERMINED AFTER COORDINATION WITH BNSF FOR PROPOSED TRACK REALIGNMENT.



SHEET 4 OF 6	
Name of Crossing 1-29/35 SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9775	



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS



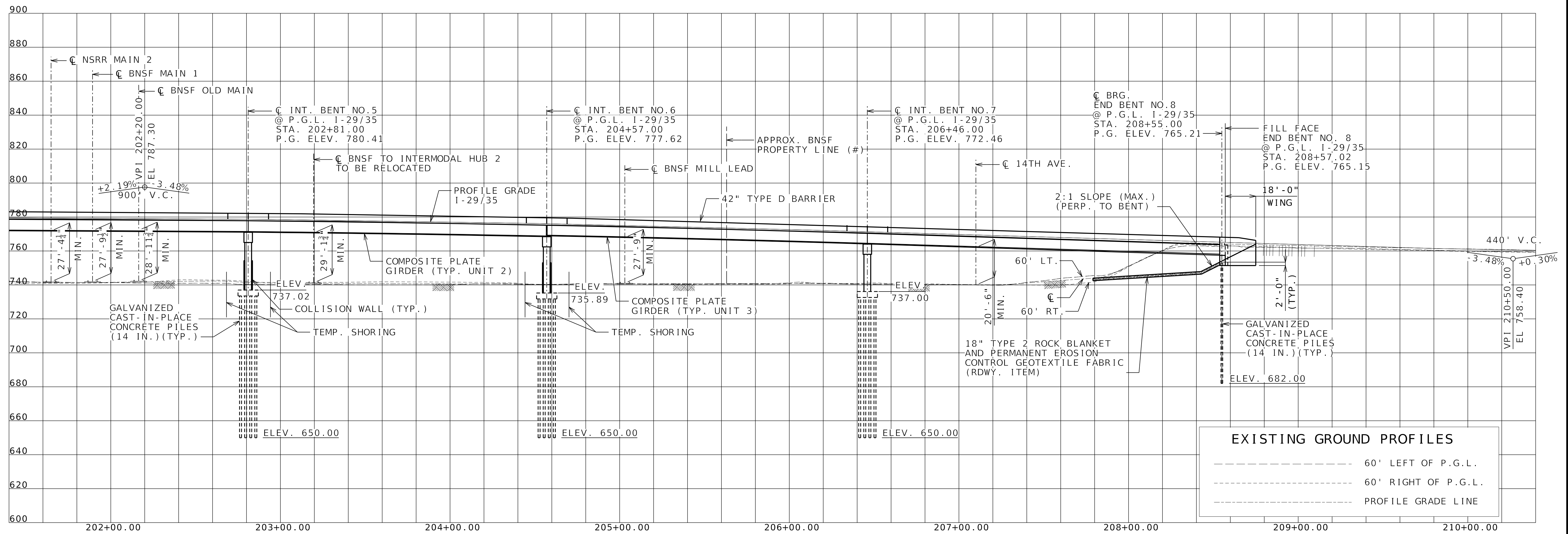
MINIMUM CONSTRUCTION CLEARANCES

(Normal to railroad)
(Not to scale)

NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND PIPED TO THE ENDS OF THE BRIDGE TO BE DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF THE RAILROAD ROW.

VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 5 OF 6	
Name of Crossing 1-29/35 SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9775	



EXISTING GROUND PROFILES

- 60' LEFT OF P.G.L.
- 60' RIGHT OF P.G.L.
- PROFILE GRADE LINE

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

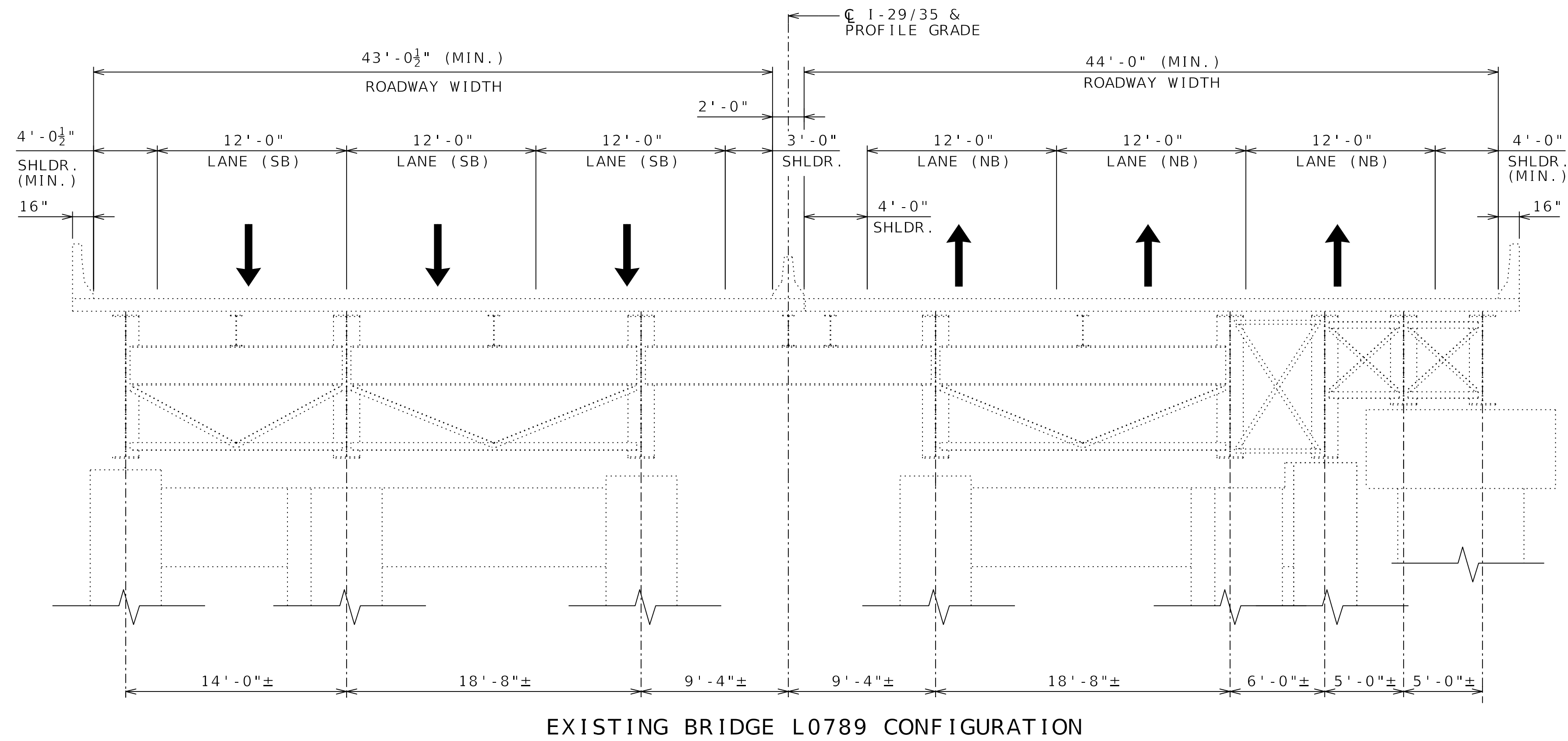
NOTES:
 BRIDGE DRAINAGE WILL BE COLLECTED AND PIPED TO THE ENDS OF THE BRIDGE TO BE DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF THE RAILROAD ROW.
 VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

SHEET 6 OF 6

Name of Crossing
 1-29/35 SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 24 T. 50N R. 33W
 ROUTE 1-29 ; CLAY COUNTY
 SURVEY MADE BY HDR ENGINEERING INC.
 PREPARED BY HDR ENGINEERING INC.
 CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager
 PROJ. NO. STA. 194+02.98
 JOB NO. J413458 BRIDGE NO. A9775



EXISTING BRIDGE L0789 CONFIGURATION

NOTE:

THE NARROWEST OVERALL WIDTH NEAR THE CENTER OF THE BRIDGE CONTROLS THE MAINTENANCE OF TRAFFIC AND IS SHOWN IN THIS DRAWING. THE STAGING NEAR THE ABUTMENTS IS SIMILAR.

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 1 THRU 8. EXIST. BENTS NO. 9 THRU 11 ARE CONFIGURED DIFFERENTLY, BUT THE STAGING IS SIMILAR.

REPLACEMENT STAGING (1 OF 6)

SHEET 1 OF 6

Name of Crossing
 1-29/35 NB & SB OVER KAW VALLEY RR,
 NSRR, BNSF & CITY STREETS

MISSOURI HIGHWAYS AND
 TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 24 T. 50N R. 33W

ROUTE 1-29 ; CLAY COUNTY

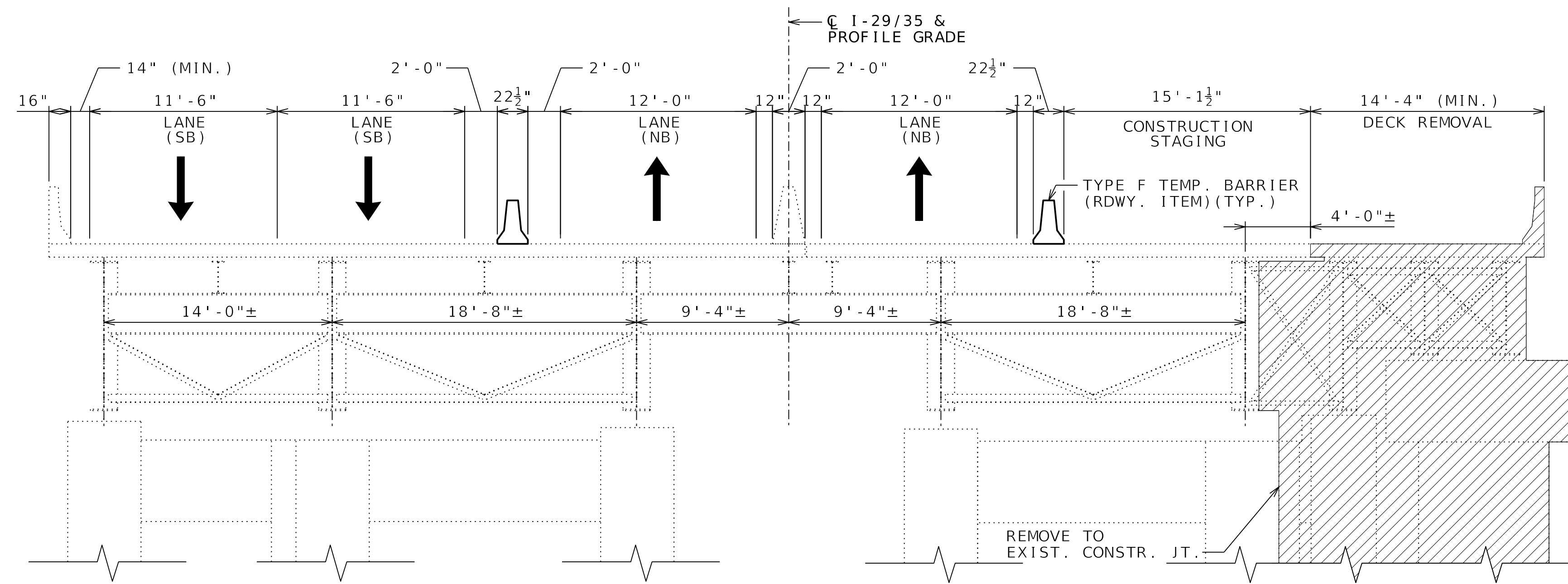
SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

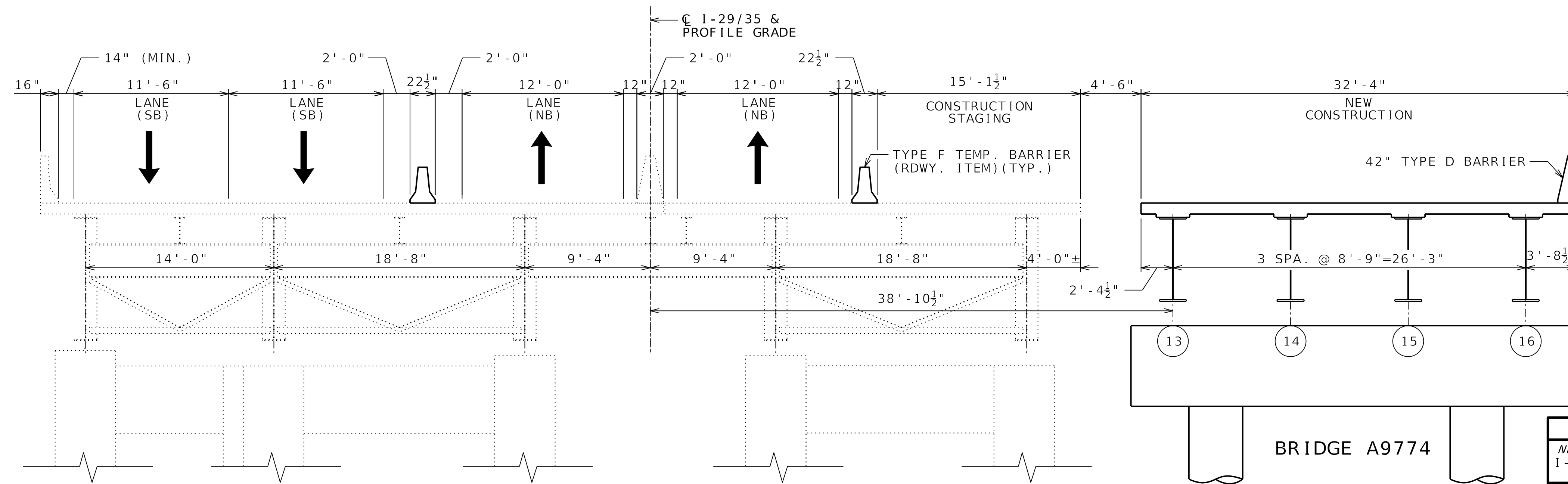
CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

PROJ. NO. STA. 194+02.98

JOB NO. J413458 BRIDGE NO. A9774/A9775



STAGE 1 DEMOLITION



STAGE 1 CONSTRUCTION

REPLACEMENT STAGING (2 OF 6)

NOTE:

THE NARROWEST OVERALL WIDTH NEAR THE CENTER OF THE BRIDGE CONTROLS THE MAINTENANCE OF TRAFFIC AND IS SHOWN IN THIS DRAWING. THE STAGING NEAR THE ABUTMENTS IS SIMILAR.

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 1 THRU 8. EXIST. BENTS NO. 9 THRU 11 ARE CONFIGURED DIFFERENTLY, BUT THE STAGING IS SIMILAR.

SHEET 2 OF 6

Name of Crossing
I-29/35 NB & SB OVER KAW VALLEY RR,
NSRR, BNSF & CITY STREETS

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

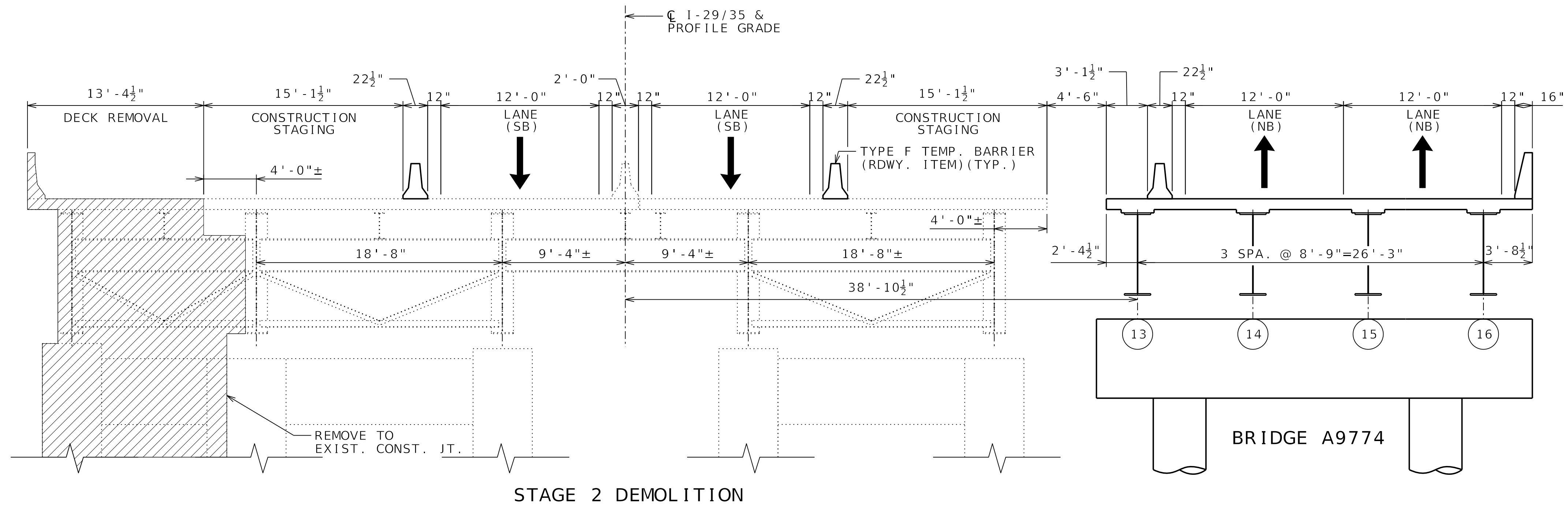
SEC. 24 T. 50N R. 33W
ROUTE I-29 ; CLAY COUNTY
SURVEY MADE BY HDR ENGINEERING, INC.

PREPARED BY HDR ENGINEERING, INC.

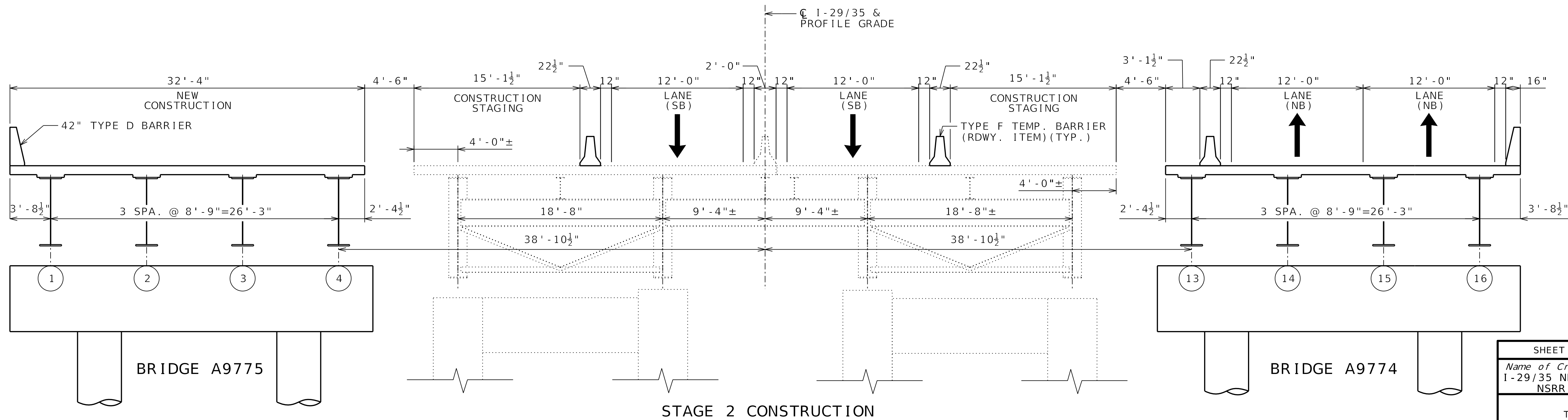
CHECKED BY HDR ENGINEERING, INC.
Transportation Project Manager

PROJ. NO. STA. 194+02.98

JOB NO. J413458 BRIDGE NO. A9774/A9775



STAGE 2 DEMOLITION



STAGE 2 CONSTRUCTION

REPLACEMENT STAGING (3 OF 6)

NOTE:

THE NARROWEST OVERALL WIDTH NEAR THE CENTER OF THE BRIDGE CONTROLS THE MAINTENANCE OF TRAFFIC AND IS SHOWN IN THIS DRAWING. THE STAGING NEAR THE ABUTMENTS IS SIMILAR.

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 1 THRU 8. EXIST. BENTS NO. 9 THRU 11 ARE CONFIGURED DIFFERENTLY, BUT THE STAGING IS SIMILAR.

SHEET 3 OF 6

Name of Crossing
I-29/35 NB & SB OVER KAW VALLEY RR,
NSRR, BNSF & CITY STREETS

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

SEC. 24 T. 50N R. 33W

ROUTE I-29 ; CLAY COUNTY

SURVEY MADE BY HDR ENGINEERING, INC.

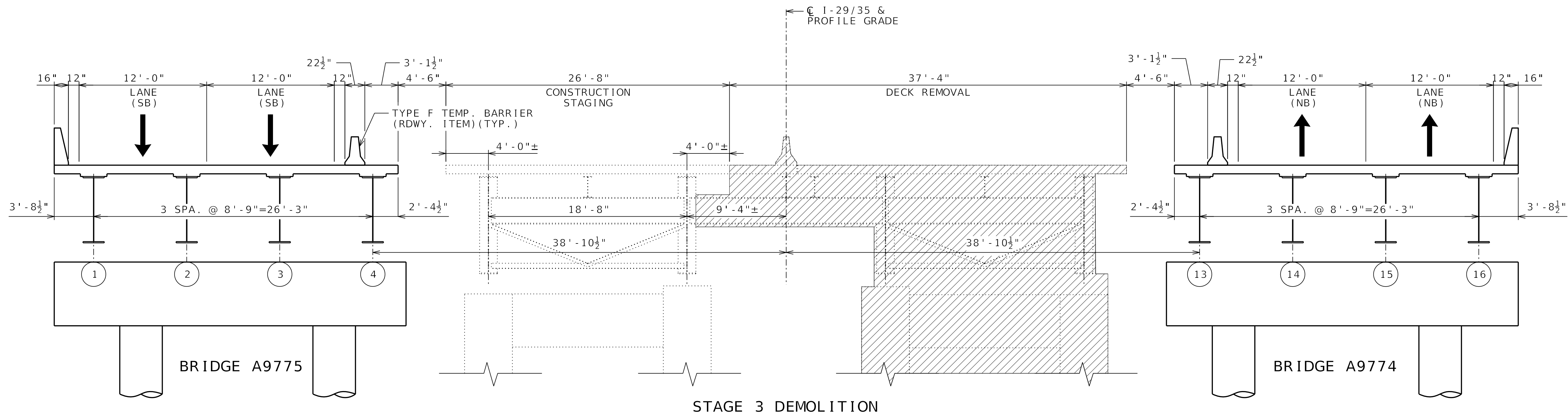
PREPARED BY HDR ENGINEERING, INC.

CHECKED BY HDR ENGINEERING, INC.

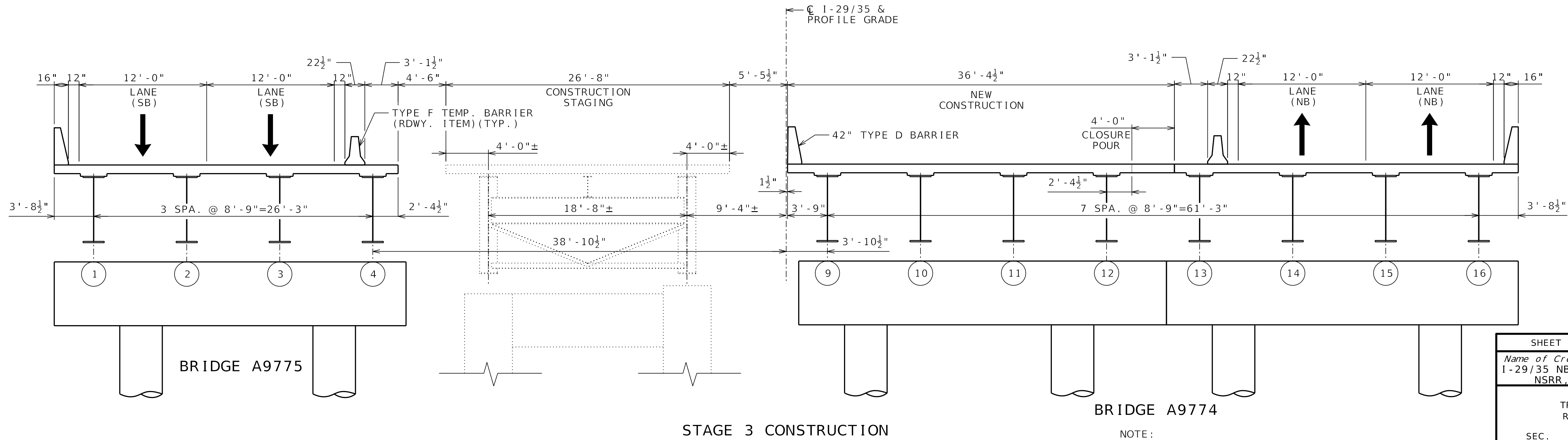
Transportation Project Manager

PROJ. NO. STA. 194+02.98

JOB NO. J413458 BRIDGE NO. A9774/A9775



STAGE 3 DEMOLITION



STAGE 3 CONSTRUCTION

REPLACEMENT STAGING (4 OF 6)

NOTE:

THE NARROWEST OVERALL WIDTH NEAR THE CENTER OF THE BRIDGE CONTROLS THE MAINTENANCE OF TRAFFIC AND IS SHOWN IN THIS DRAWING. THE STAGING NEAR THE ABUTMENTS IS SIMILAR.

THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 1 THRU 8. EXIST. BENTS NO. 9 THRU 11 ARE CONFIGURED DIFFERENTLY, BUT THE STAGING IS SIMILAR.

SHEET 4 OF 6

Name of Crossing
1-29/35 NB & SB OVER KAW VALLEY RR,
NSRR, BNSF & CITY STREETS

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION
REPORT OF BRIDGE SURVEY

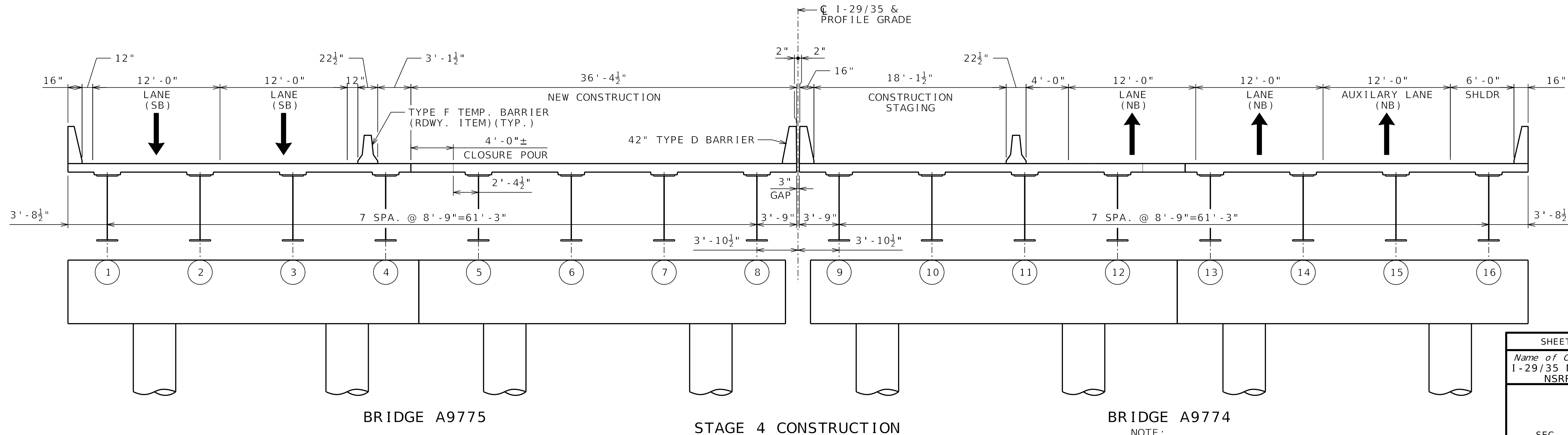
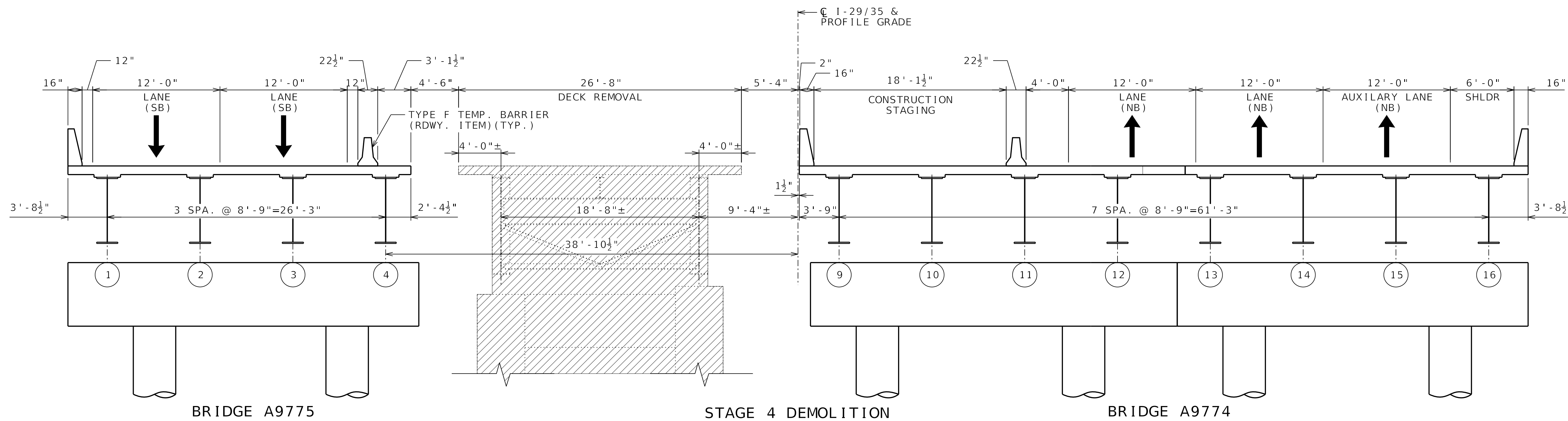
SEC. 24 T. 50N R. 33W
ROUTE 1-29 ; CLAY COUNTY
SURVEY MADE BY HDR ENGINEERING, INC.

PREPARED BY HDR ENGINEERING, INC.

CHECKED BY HDR ENGINEERING, INC.
Transportation Project Manager

PROJ. NO. STA. 194+02.98

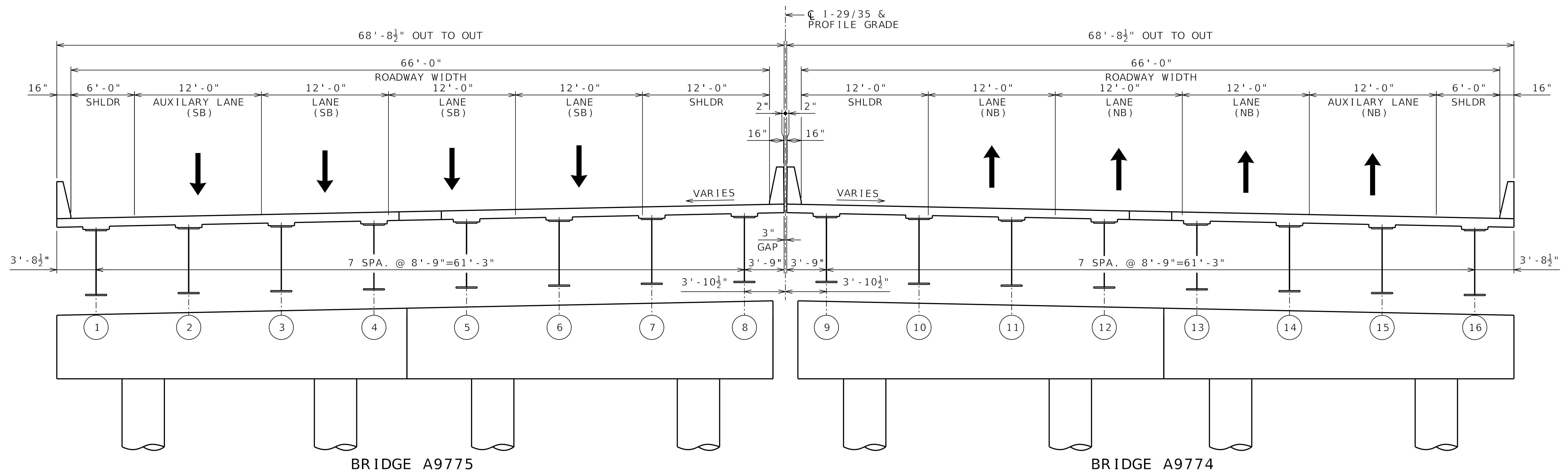
JOB NO. J413458 BRIDGE NO. A9774/A9775



REPLACEMENT STAGING (5 OF 6)

NOTE:
 THE NARROWEST OVERALL WIDTH NEAR THE CENTER OF THE BRIDGE CONTROLS THE MAINTENANCE OF TRAFFIC AND IS SHOWN IN THIS DRAWING. THE STAGING NEAR THE ABUTMENTS IS SIMILAR.
 THE EXIST. SUBSTRUCTURE ELEMENTS SHOWN ARE APPROXIMATELY CORRECT FOR EXIST. BENTS NO. 1 THRU 8. EXIST. BENTS NO. 9 THRU 11 ARE CONFIGURED DIFFERENTLY, BUT THE STAGING IS SIMILAR.

SHEET 5 OF 6	
Name of Crossing I-29/35 NB & SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE I-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 194+02.98
JOB NO. J413458 BRIDGE NO. A9774/A9775	



BRIDGE A9775

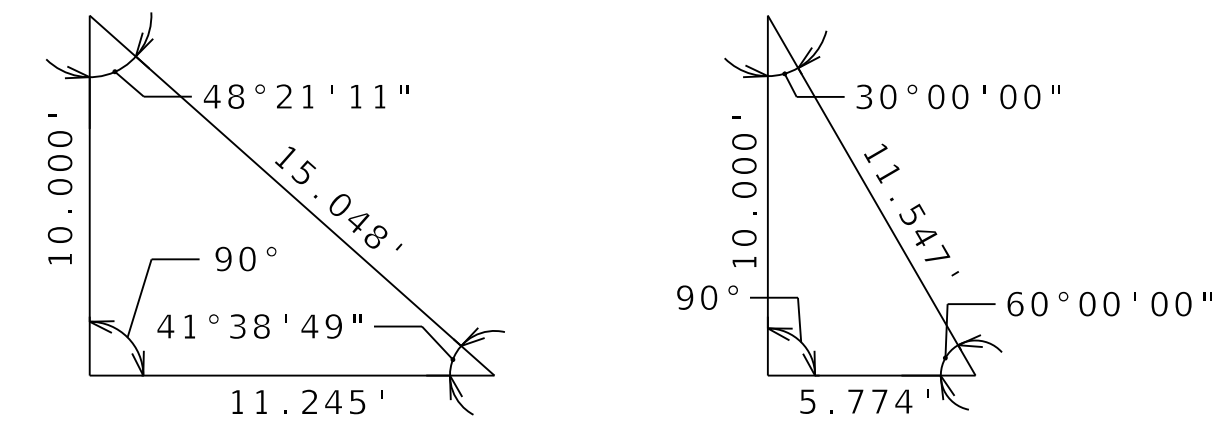
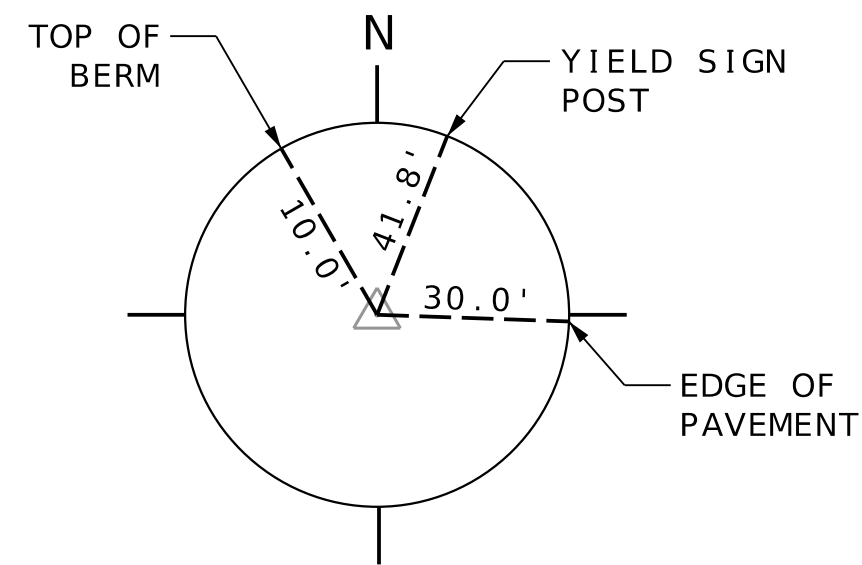
FINAL CONFIGURATION

BRIDGE A9774

REPLACEMENT STAGING (6 OF 6)

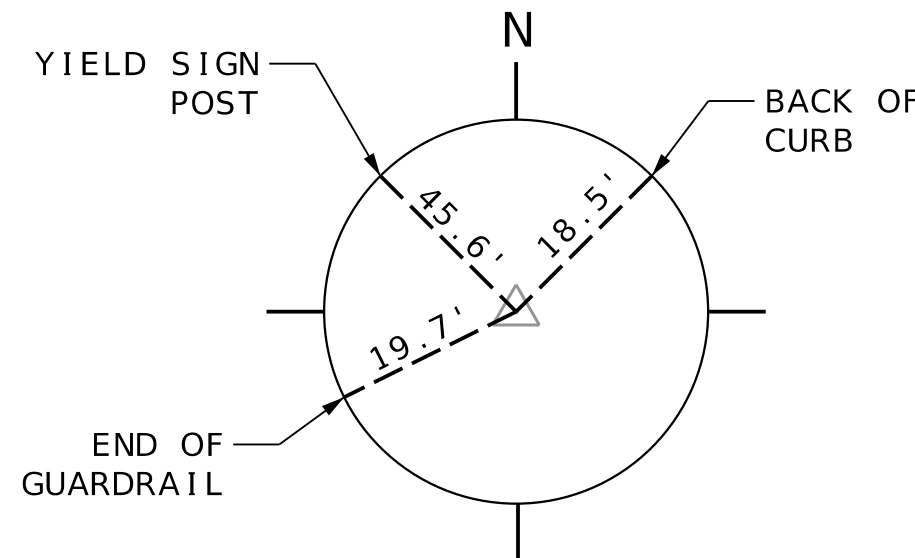
SHEET 6 OF 6	
Name of Crossing I-29/35 NB & SB OVER KAW VALLEY RR, NSRR, BNSF & CITY STREETS	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 24	T. 50N R. 33W
ROUTE I-29 ; CLAY COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 194+02.98
JOB NO. J413458	BRIDGE NO. A9774/A9775

BRIDGE A9776

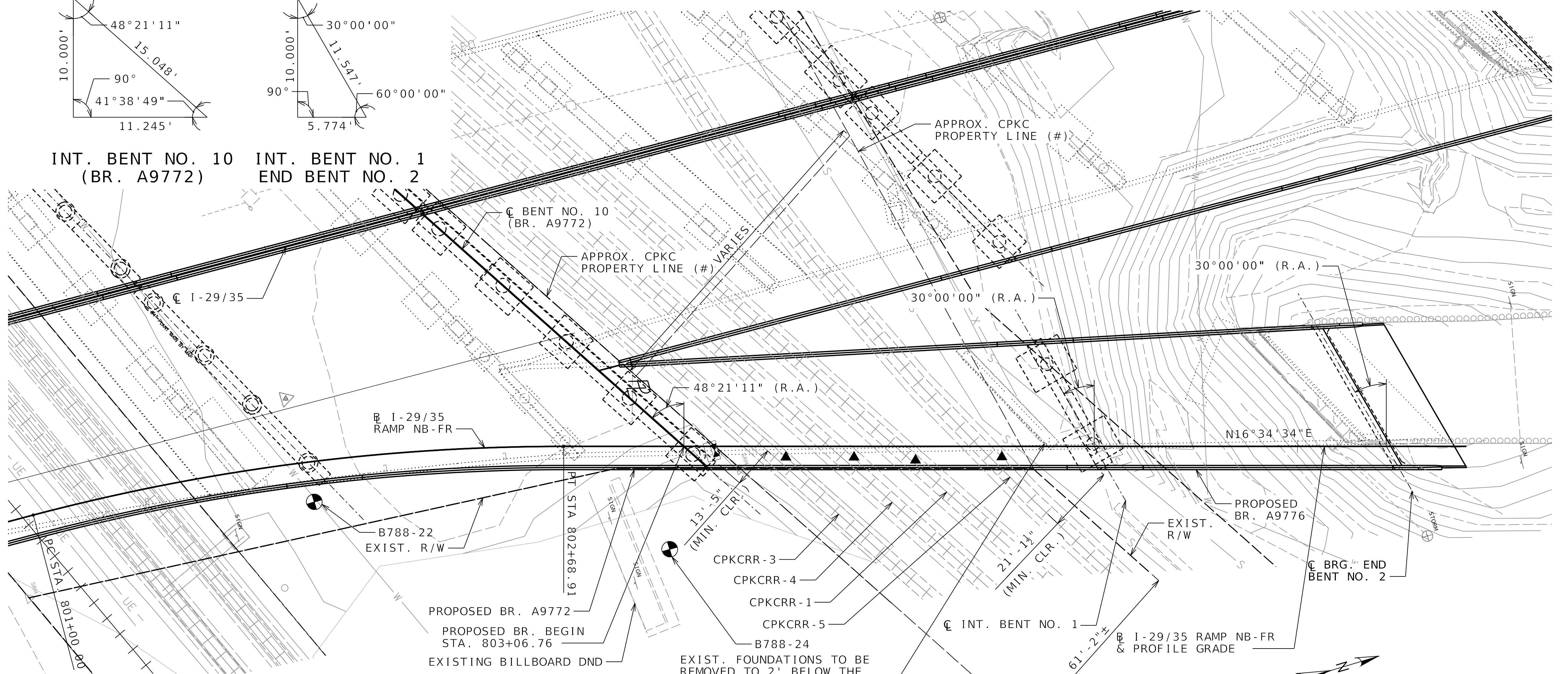


INT. BENT NO. 10 (BR. A9772) INT. BENT NO. 1 END BENT NO. 2

CP#101 - SET 1/2" IRON BAR W/HDR CAP
 N=1074675.785
 E=2770197.801
 ELEV=757.800
 I-29
 STA. 147+30.72
 217.17' LT



CP#102 - SET 1/2" IRON BAR W/HDR CAP
 N=1075094.646
 E=2770651.477
 ELEV=759.064
 I-29
 STA. 151+59.31
 233.38' RT

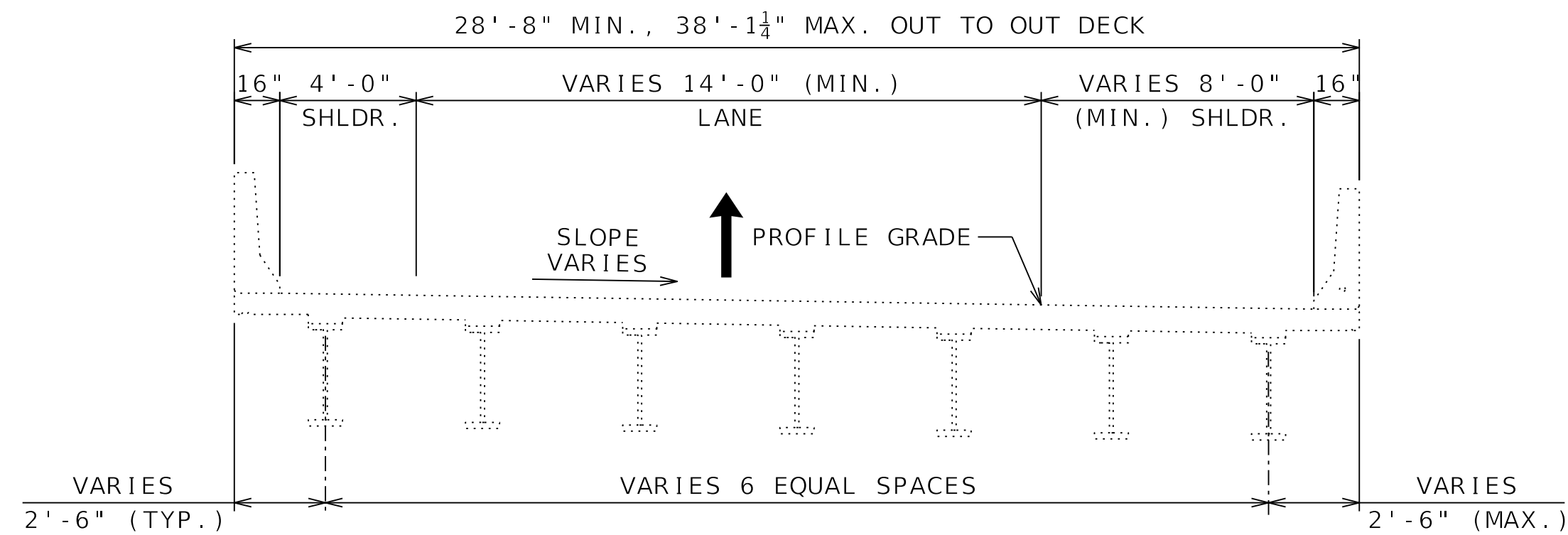


NOTE:
 ANY UTILITY ACCOMODATIONS OR RELOCATIONS WITHIN RR ROW SHALL BE SUBMITTED TO THE RR FOR APPROVAL.

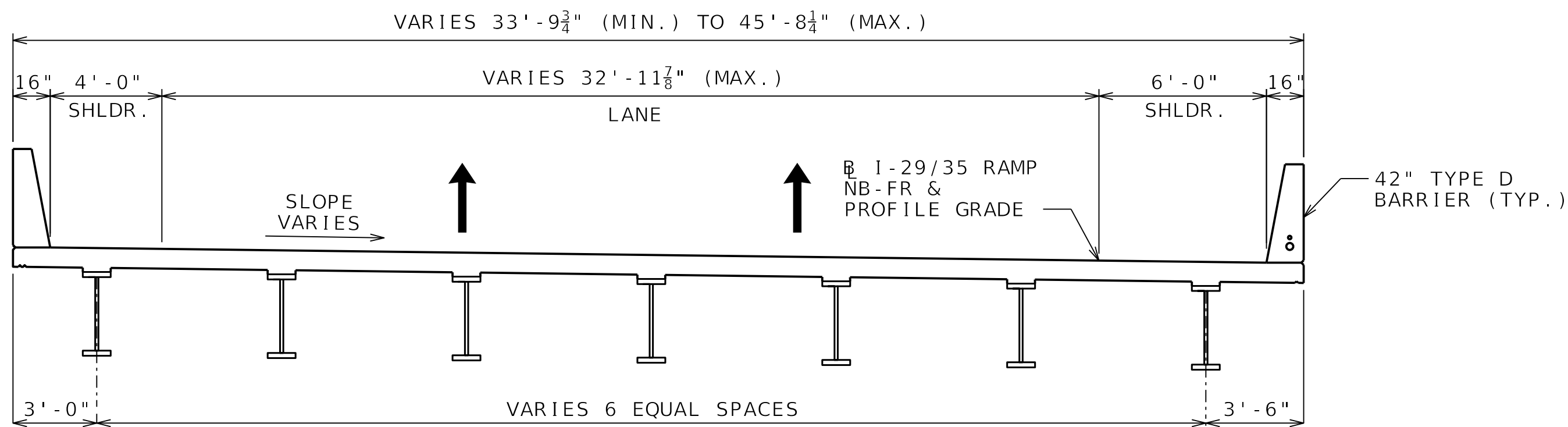
LEGEND
 ▲ POINT OF MINIMUM VERTICAL CLEARANCE
 ⊕ INDICATES LOCATION OF BORING

PC STA. 801+00.00
 PI STA. 801+84.93
 PT STA. 802+68.91
 Δ 14°45'11.4" RT.
 D 8°44'02.8"
 L 168.91' ARC
 T 84.93'
 R 656.00'

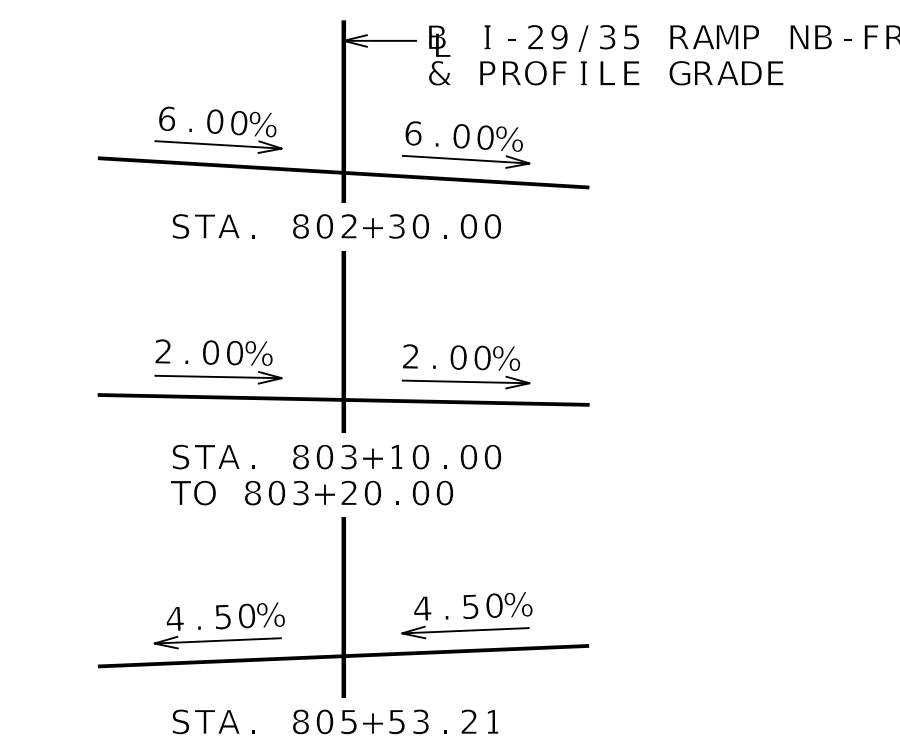
(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS



EXISTING BRIDGE A7645 (RAMP NB-FR) TYPICAL SECTION



PROPOSED BRIDGE A9776 (RAMP NB-FR) TYPICAL SECTION

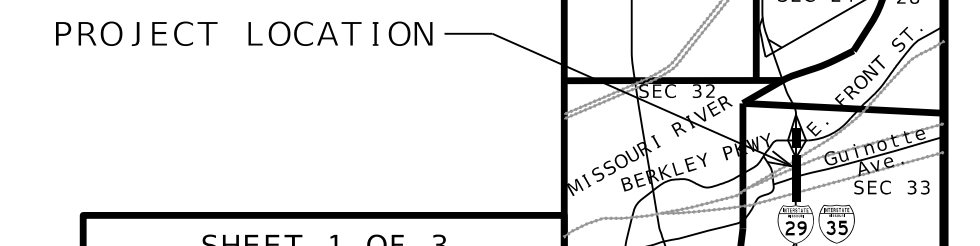


CROSS SLOPE TRANSITION DETAIL

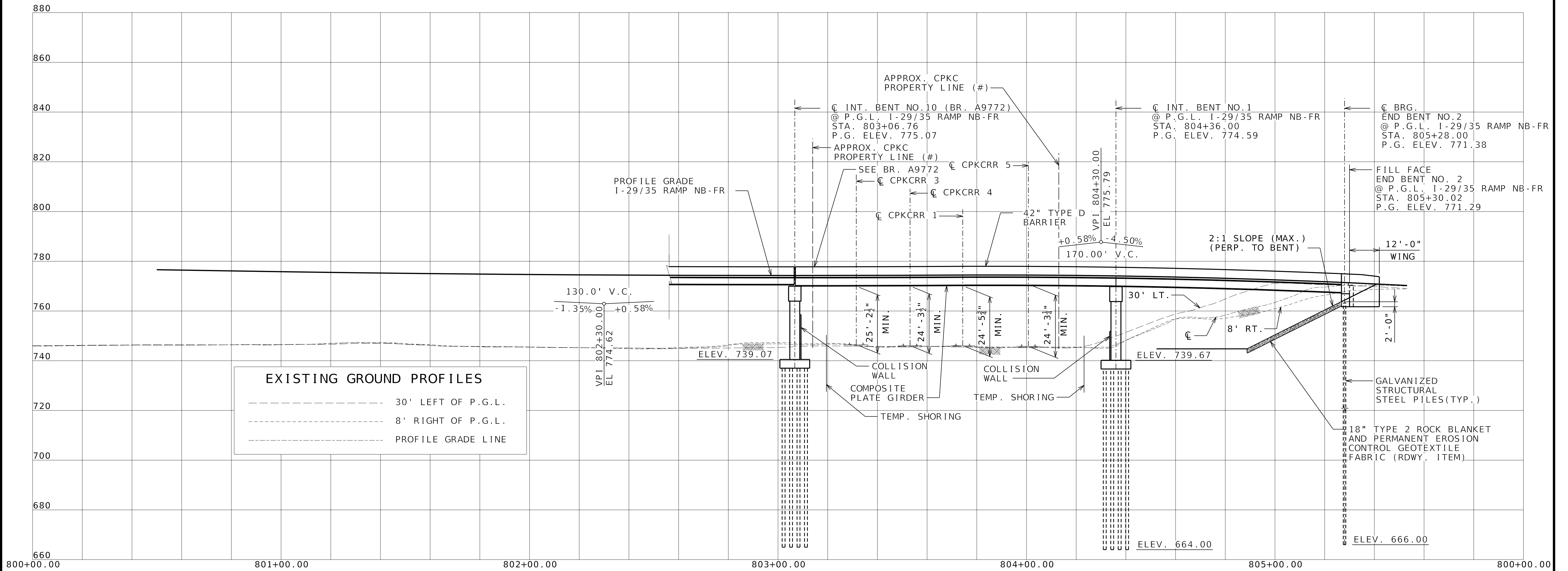
I-29/35 RAMP NB-FR DESIGN TRAFFIC
 AADT - 2024 - 10,113
 AADT - 2050 - 14,038
 % TRUCKS = 15%
 DESIGN SPEED = 45 MPH

PROPOSED BRIDGE A9776
 STA. 803+06.76
 129.2'-92', 30° SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS

REMOVE EXIST. BRIDGE A7645
 STA. 802+70.62
 148.2'-96.5', 44° SKEW
 CONT. COMPOSITE PLATE GIRDER SPANS



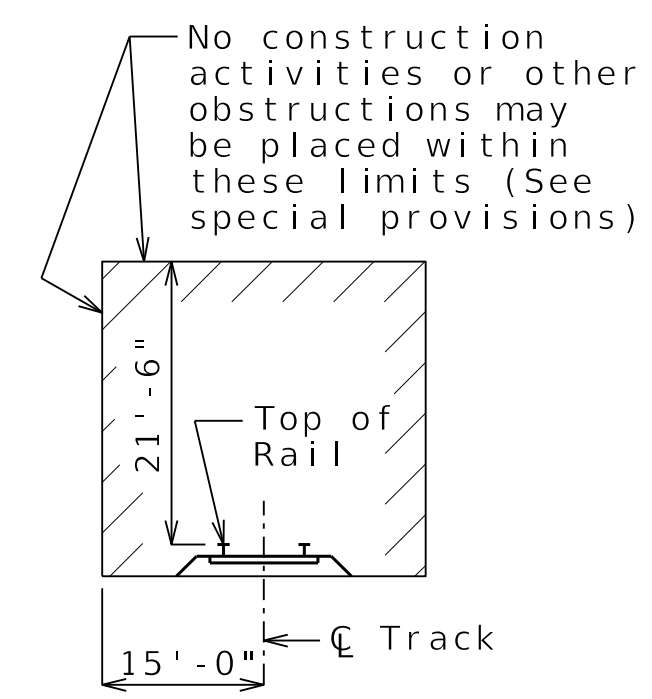
SHEET 1 OF 3	
Name of Crossing I-29/35 NB RAMP TO FRONT STREET OVER CPKC RR	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 803+06.76
JOB NO. J413458	BRIDGE NO. A9776



(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

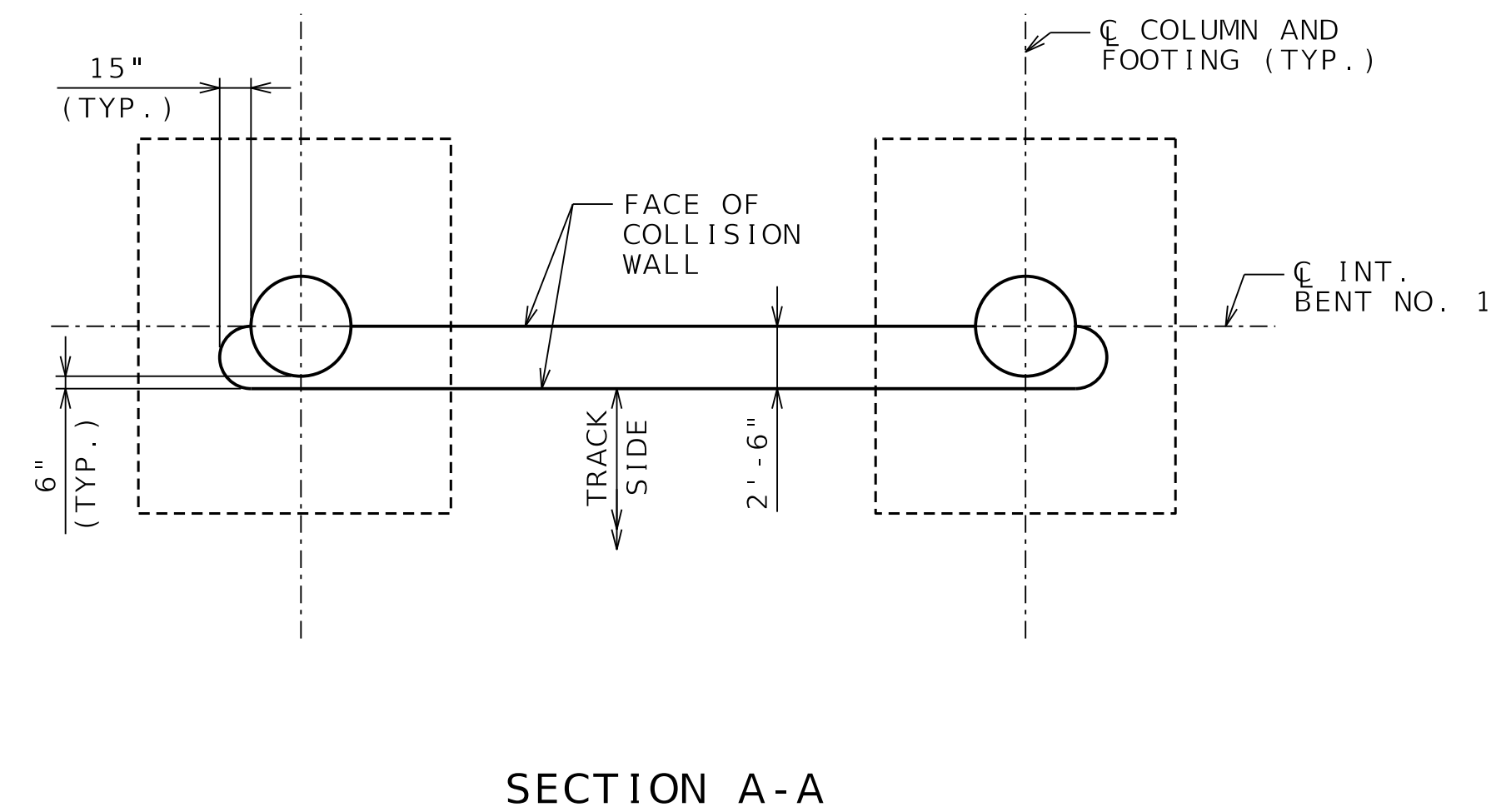
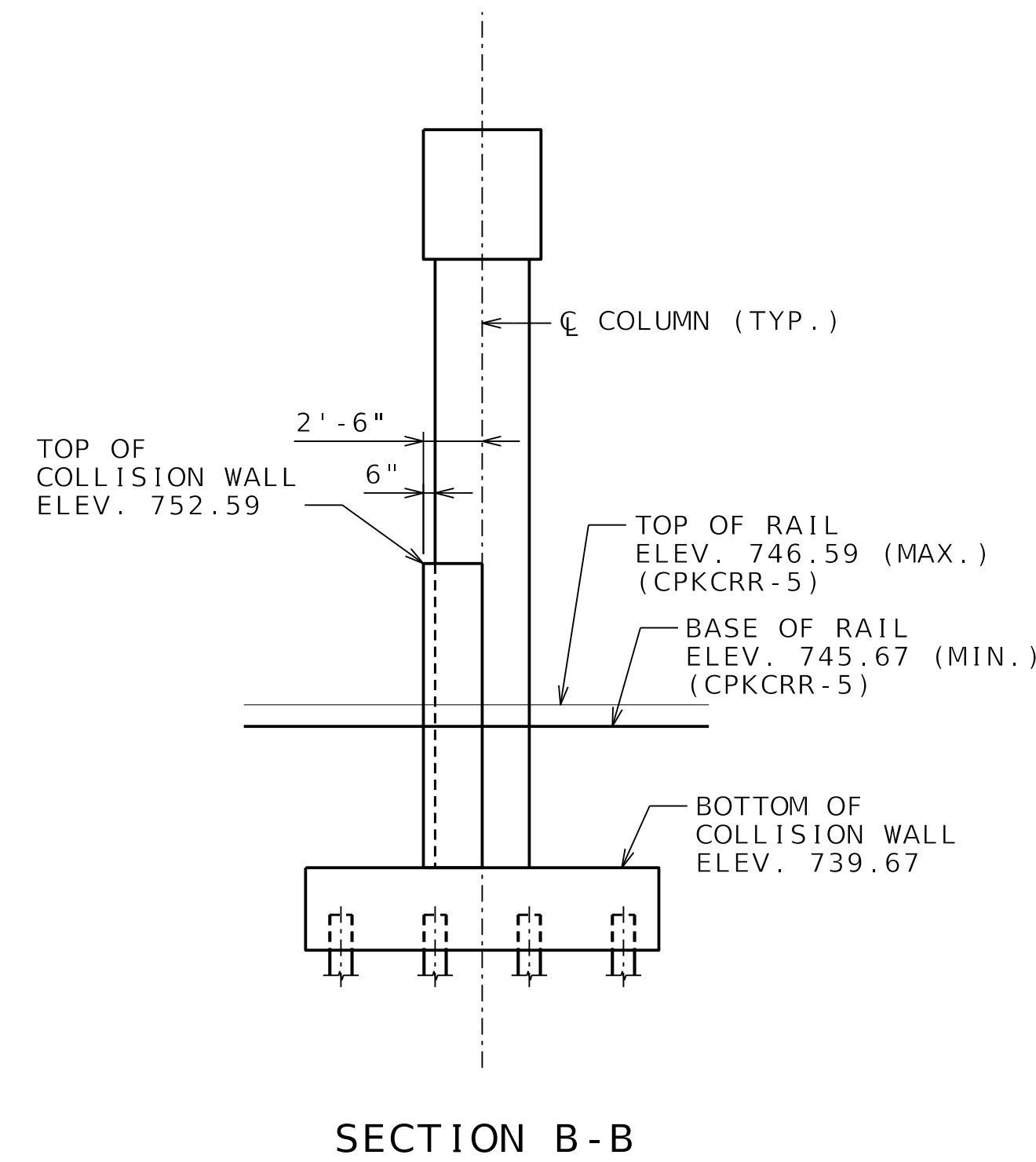
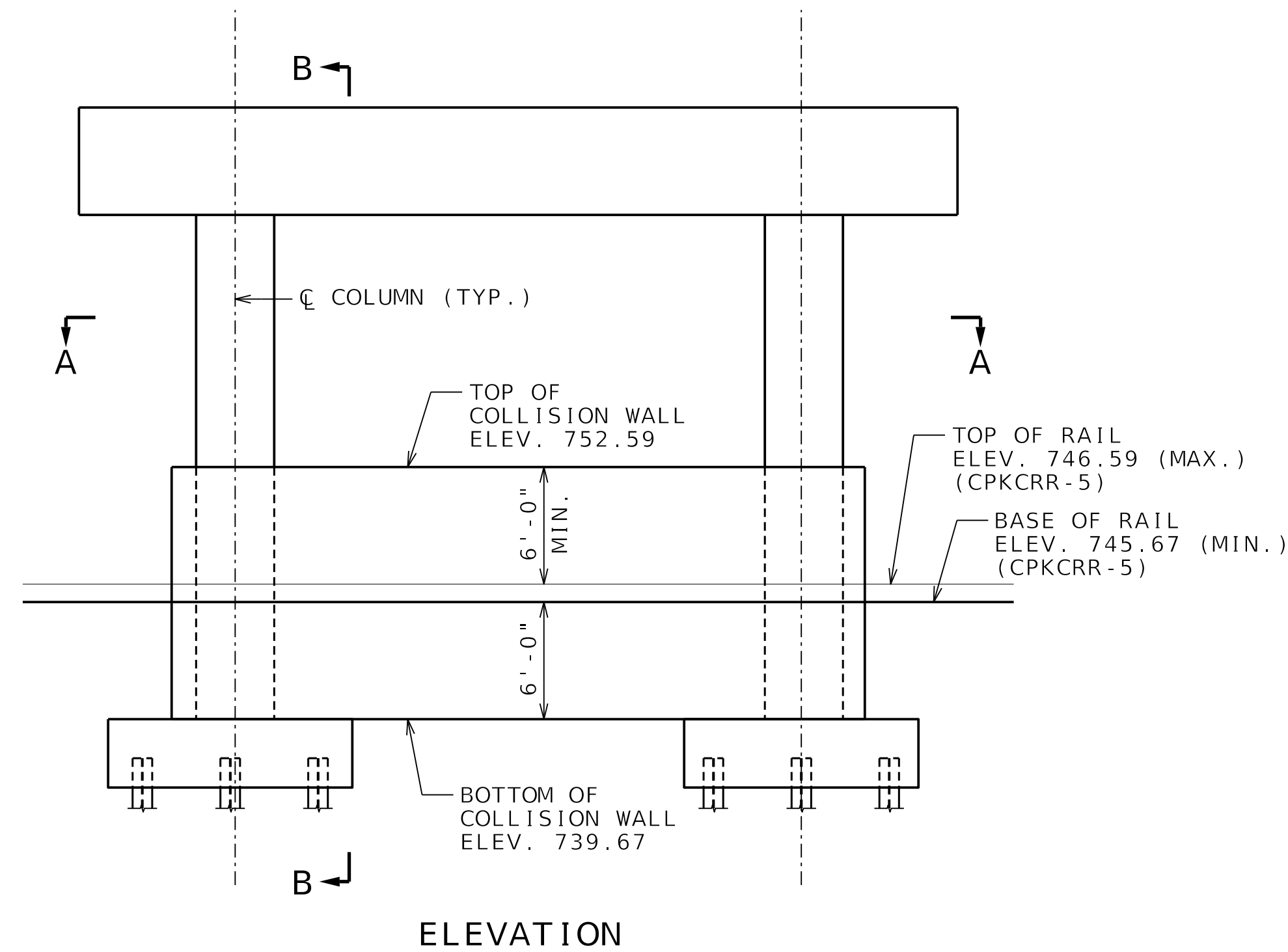
NOTES:
 BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.

VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.



MINIMUM CONSTRUCTION CLEARANCES
 (Normal to railroad)
 (Not to scale)

SHEET 2 OF 3	
Name of Crossing 1-29/35 NB RAMP TO FRONT STREET OVER CPKC RR	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 803+06.76
JOB NO. J413458	BRIDGE NO. A9776



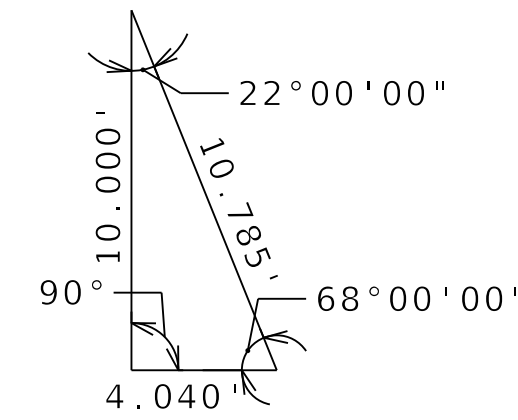
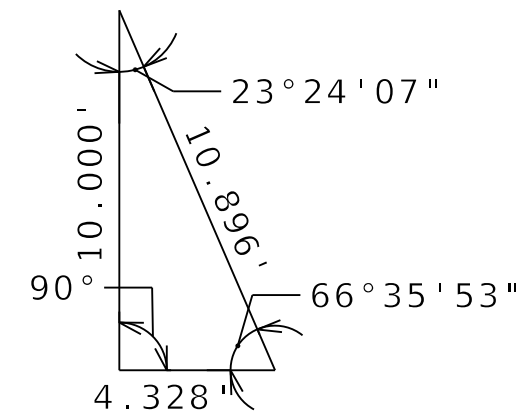
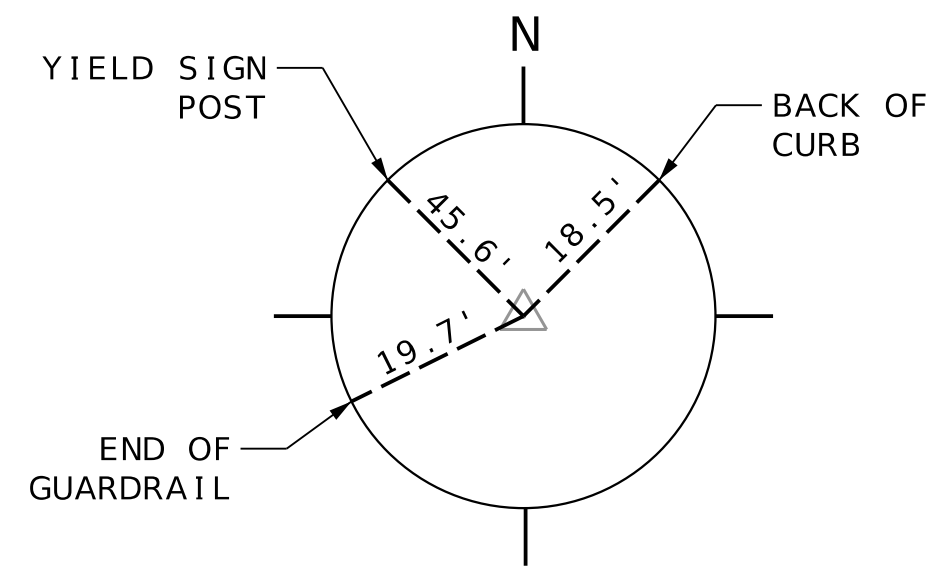
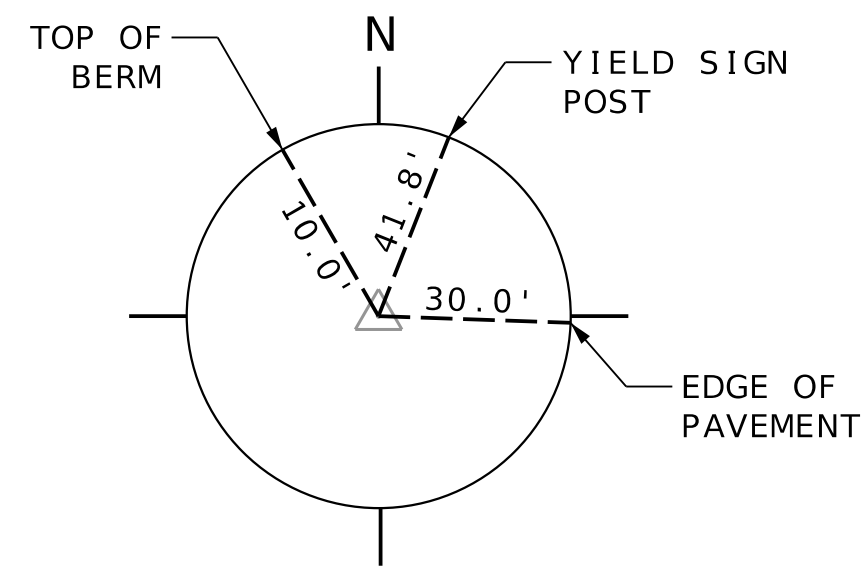
DETAILS SHOWING INT. BENT NO. 1 WITH COLLISION WALL ADJACENT TO RAILROAD TRACKS

CONSTRUCTION NOTES:

1. CONSTRUCTION WITHIN THE RAILROADS'S RIGHT-OF-WAY SHALL BE DESIGNED TO CAUSE NO INTERRUPTION TO THE RAILROAD'S OPERATIONS, ENABLING THE TRACK(S) TO REMAIN OPEN TO TRAFFIC PER THE RAILROAD'S REQUIREMENTS.
2. ANY SHORING SYSTEM THAT IMPACTS THE RAILROAD OPERATIONS AND/OR SUPPORTS RAILROAD EMBANKMENT SHALL BE DESIGNED AND CONSTRUCTED PER THE RAILROAD TEMPORARY SHORING REQUIREMENTS.
3. ALL DEMOLITION WITHIN THE RAILROAD RIGHT-OF-WAY AND/OR DEMOLITION THAT MAY IMPACT THE RAILROAD TRACKS OR OPERATIONS SHALL COMPLY WITH THE RAILROAD DEMOLITION REQUIREMENTS. DEMOLITION ACTIVITIES SHALL BE DESIGNED TO CAUSE NO INTERRUPTION TO THE RAILROAD'S OPERATION, ENABLING THE TRACK(S) TO REMAIN OPEN TO TRAFFIC PER THE RAILROAD'S REQUIREMENTS. THE METHOD OF DEMOLITION PERMISSIBLE IS DEPENDENT UPON THE AVAILABILITY OF TRACK WINDOWS, IF ANY.
4. ERECTION OVER THE RAILROAD RIGHT-OF-WAY SHALL BE DESIGNED TO CAUSE NO INTERRUPTION TO ALL RAILROAD OPERATIONS. ENABLING THE TRACK(S) TO REMAIN OPEN TO TRAFFIC PER THE RAILROAD'S REQUIREMENTS. THE METHOD OF ERECTION PERMISSIBLE IS DEPENDENT UPON THE AVAILABILITY OF TRACK WINDOWS, IF ANY.
5. THE ELEVATION OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RAILROAD PRIOR TO CONSTRUCTION.
6. THE PROPOSED GRADE SEPARATION PROJECT SHALL NOT CHANGE THE QUANTITY AND/OR CHARACTERISTICS OF THE FLOW IN RAILROAD DITCHES AND/OR DRAINAGE STRUCTURES.
7. THE CONTRACTOR MUST SUBMIT A PROPOSED METHOD OF EROSION AND SEDIMENT CONTROL AND HAVE THE METHOD APPROVED BY THE RAILROAD PRIOR TO BEGINNING ANY GRADING ON THE PROJECT SITE.
8. FOR RAILROAD COORDINATION PLEASE REFER TO THE RAILROAD'S COORDINATION REQUIREMENTS AS PART OF THE JOB SPECIAL PROVISIONS.
9. TEMPORARY CONSTRUCTION CLEARANCES, INCLUDING FALSEWORK CLEARANCES, SHALL COMPLY WITH THE MINIMUM CONSTRUCTION CLEARANCE ENVELOPE.
10. ALL PERMANENT CLEARANCES SHALL BE VERIFIED BEFORE PROJECT CLOSEOUT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RAILROAD.
11. RAILROAD REQUIREMENTS TO DO NOT ALLOW WORK WITHIN 50 FEET OF TRACK CENTERLINE WHEN A TRAIN PASSES THE WORK SITE AND ALL PERSONNEL MUST CLEAR THE AREA WITHIN 25 FEET OF THE TRACK CENTERLINE AND SECURE ALL EQUIPMENT.
12. E-MAIL BEFORE YOU DIG. PRIOR TO EXCAVATION, DISRUPTING, OR WORKING ON THE RAILROAD PROPERTY THE CONTRACTOR SHALL LOCATE AND PROTECT RAILROAD.

SHEET 3 OF 3	
Name of Crossing 1-29/35 NB RAMP TO FRONT STREET OVER CPKC RR	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. J413458	STA. 803+06.76
JOB NO. J413458	BRIDGE NO. A9776

BRIDGE A76462

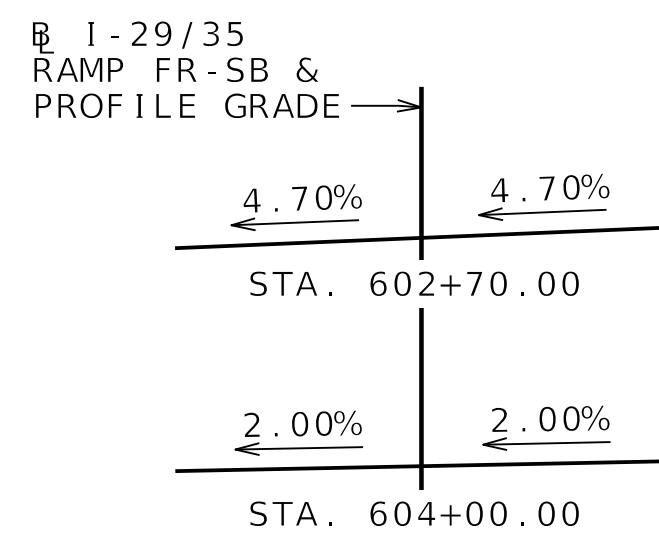
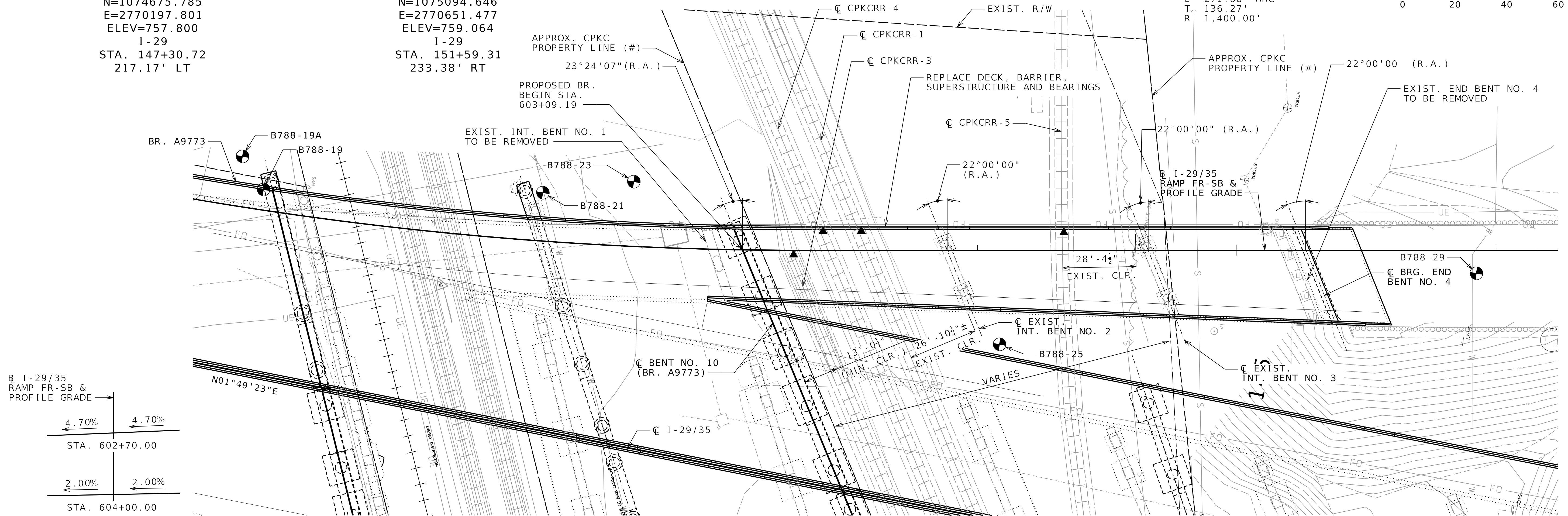
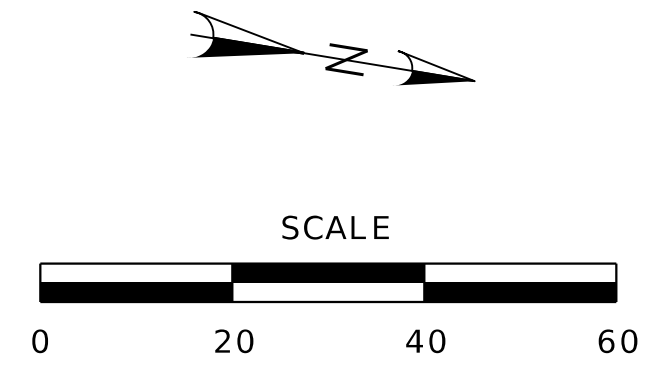


INT. BENT NO. 10 (BR. A9773) INT. BENTS NO. 2 & 3 END BENT NO. 4

CP#101 - SET 1/2" IRON BAR W/HDR CAP
N=1074675.785
E=2770197.801
ELEV=757.800
I-29
STA. 147+30.72
217.17' LT

CP#102 - SET 1/2" IRON BAR W/HDR CAP
N=1075094.646
E=2770651.477
ELEV=759.064
I-29
STA. 151+59.31
233.38' RT

PI 601+96.27
PC 600+60.00
PT 603+31.68
Δ 11°7'6.7" RT.
D 4°5'33.2"
L 271.68' ARC
T 136.27'
R 1,400.00'



CROSS SLOPE TRANSITION DETAIL

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

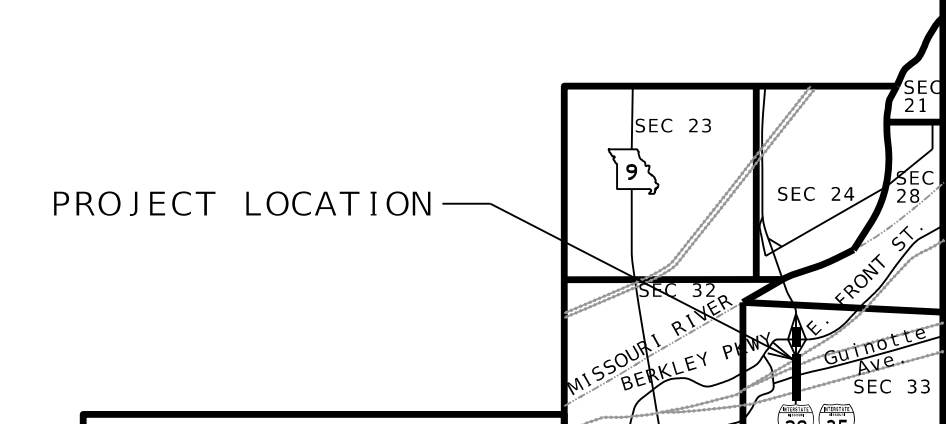
LEGEND
▲ POINT OF MINIMUM VERTICAL CLEARANCE
● INDICATES LOCATION OF BORINGS

NOTE:
ANY UTILITY ACCOMODATIONS OR RELOCATIONS WITHIN RR ROW SHALL BE SUBMITTED TO THE RR FOR APPROVAL.

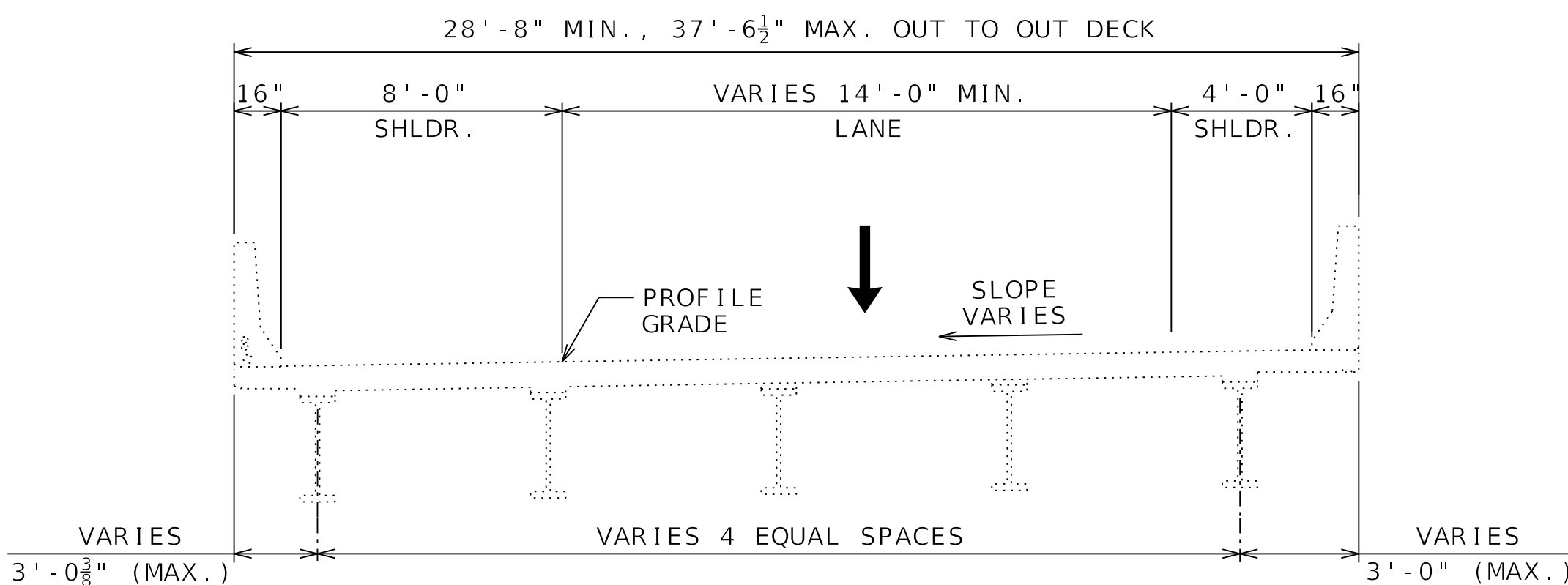
I-29/35 RAMP FR-SB DESIGN TRAFFIC
AADT - 2024 - 8,554
AADT - 2050 - 11,874
% TRUCKS = 15.0%
DESIGN SPEED = 45 MPH

PROPOSED BRIDGE A76462
STA. 603+09.19
79.1'-77.7'-61.1', 22° SKEW
CONT. COMPOSITE PLATE GIRDER SPANS

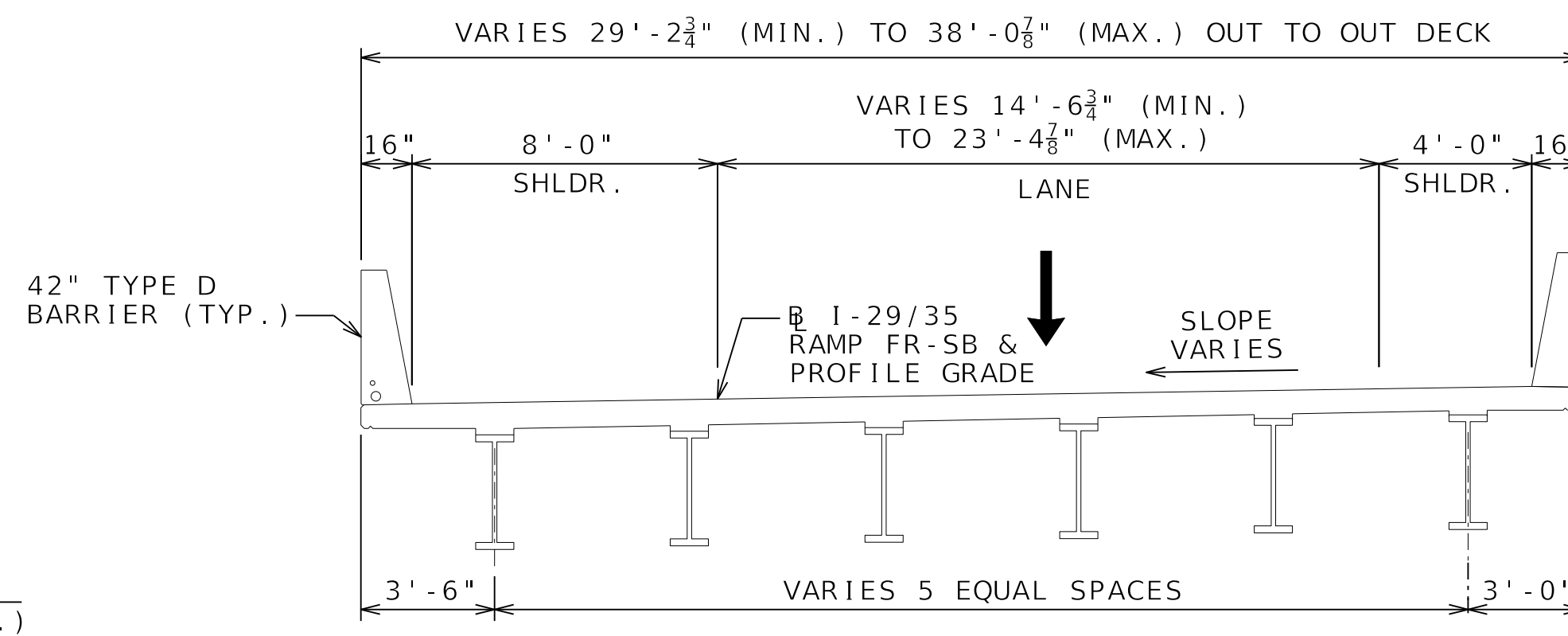
REMOVE EXIST. SUPERSTRUCTURE A76461
STA. 602+16.60
65.4'-90.3'-77.7'-54.1', 22° SKEW
CONT. COMPOSITE PLATE GIRDER SPANS



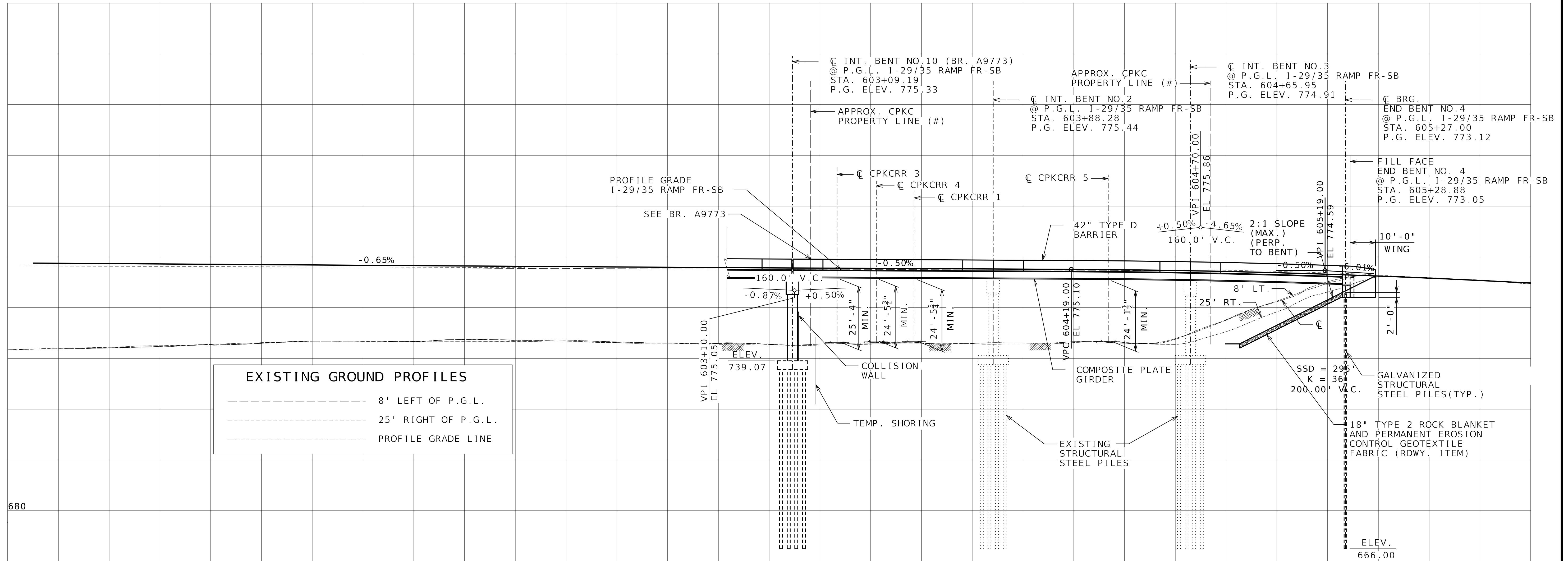
SHEET 1 OF 2	
Name of Crossing I-29/35 SB RAMP FROM FRONT STREET OVER CPKC RR	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 603+09.19
JOB NO. J413458	BRIDGE NO. A76462



EXISTING BRIDGE A76461 RAMP FR-SB TYPICAL SECTION



PROPOSED BRIDGE A76462 RAMP FR-SB TYPICAL SECTION



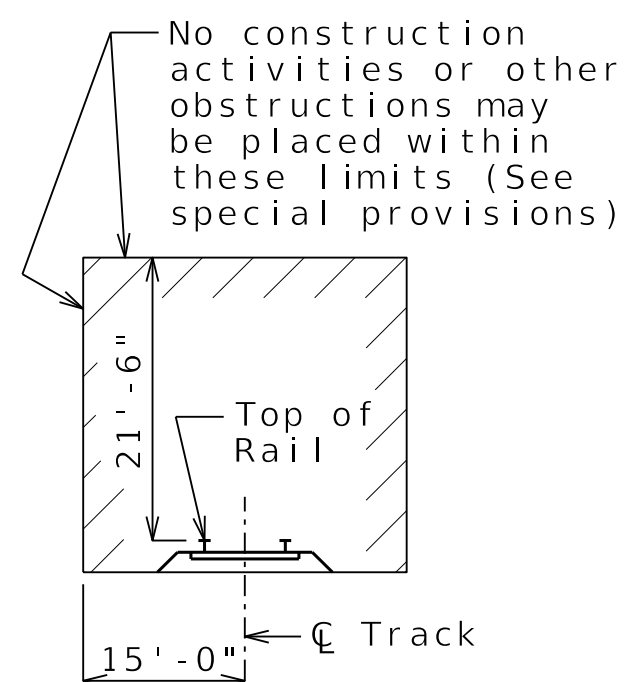
EXISTING GROUND PROFILES

- 8' LEFT OF P.G.L.
- 25' RIGHT OF P.G.L.
- PROFILE GRADE LINE

(#) ACTUAL RAILROAD PROPERTY LINE WILL BE DETERMINED AND ADDED TO LATER SUBMITTALS

NOTES:
BRIDGE DRAINAGE WILL BE COLLECTED AND DIRECTED INTO AN EXISTING COLLECTION SYSTEM OUTSIDE OF RAILROAD ROW.

VERTICAL CLEARANCES SHOWN ARE FROM THE TOP OF RAIL TO THE BOTTOM OF THE SUPERSTRUCTURE.

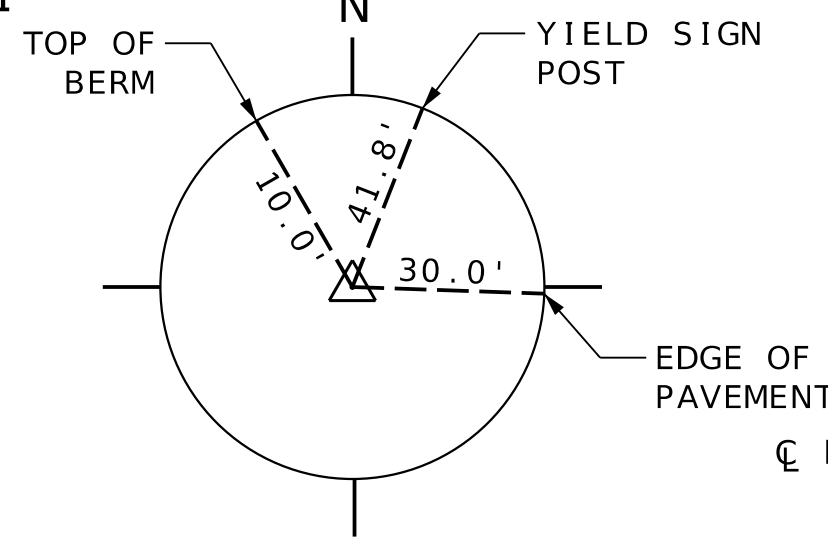


MINIMUM CONSTRUCTION CLEARANCES

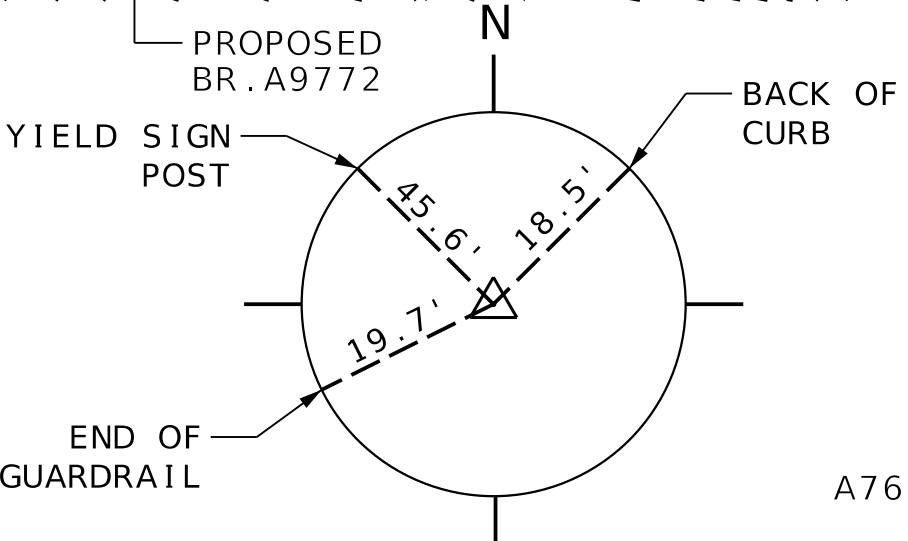
(Normal to railroad)
(Not to scale)

SHEET 2 OF 2	
Name of Crossing I-29/35 SB RAMP FROM FRONT STREET OVER CPKC RR	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 603+09.19
JOB NO. J413458	BRIDGE NO. A76462

BRIDGE A76471

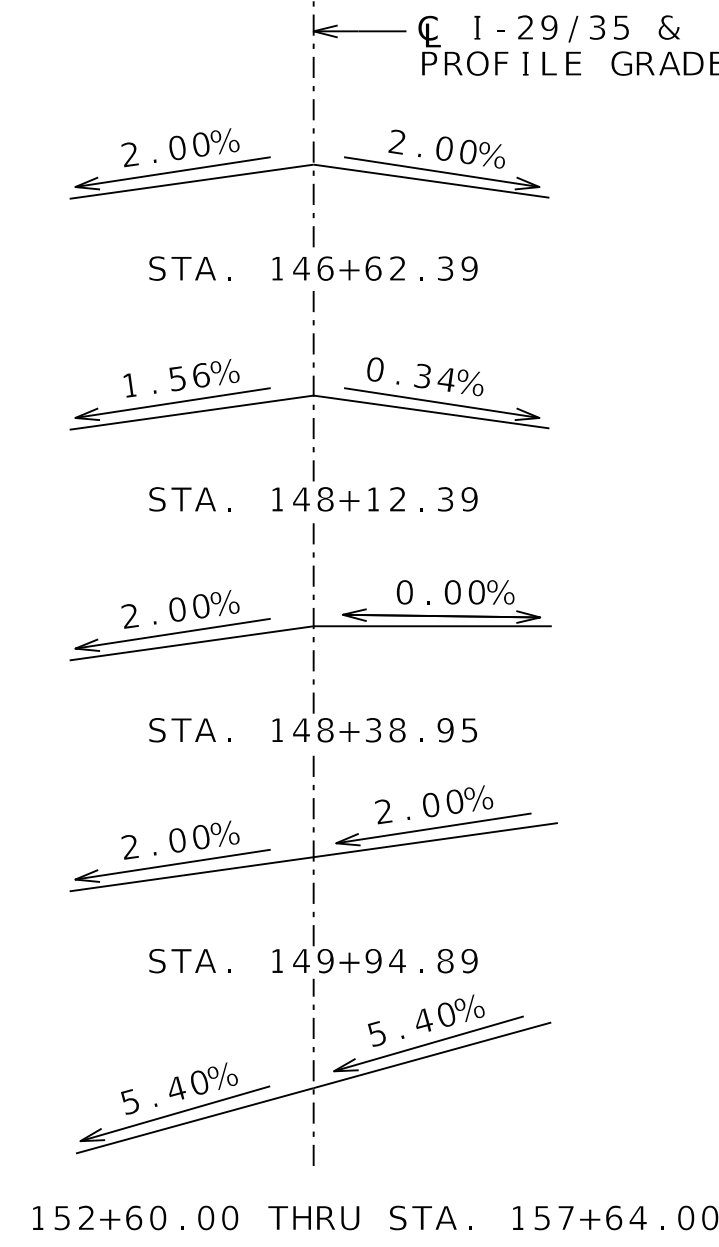
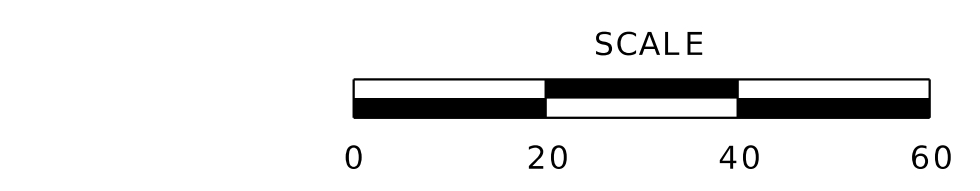


CP#101 - SET 1/2" IRON BAR W/HDR CAP
 N=1074675.785
 E=2770197.801
 ELEV=757.800
 I-29
 STA. 147+30.72
 217.17' LT



CP#102 - SET 1/2" IRON BAR W/HDR CAP
 N=1075094.646
 E=2770651.477
 ELEV=759.064
 I-29
 STA. 151+59.31
 233.38' RT

U.I.P. WIDEN AND REHABILITATE BRIDGE A76471
 BEG. STA. 148+36.89

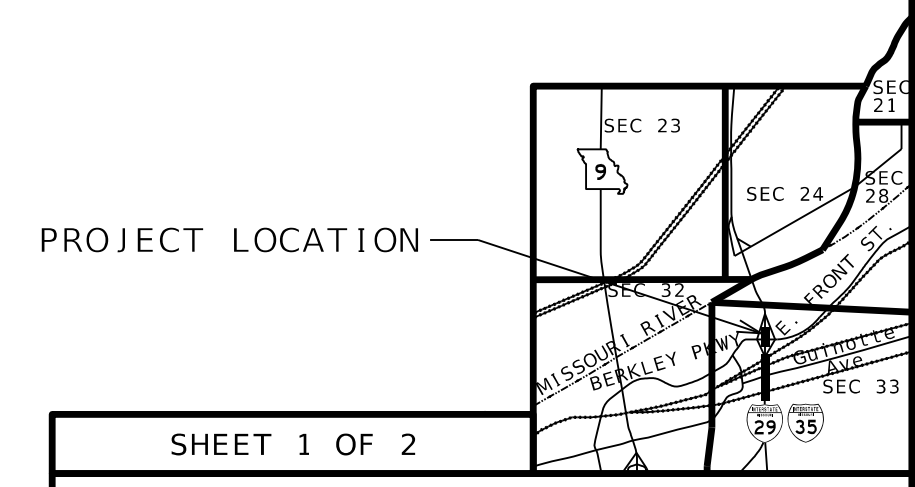


S.E. TRANSITION DETAIL

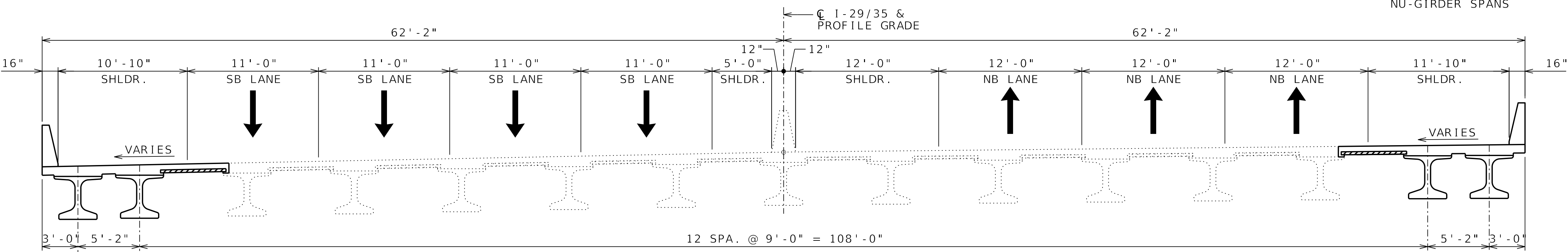
LEGEND
 INDICATES LOCATION OF BORINGS

I-29/35 DESIGN TRAFFIC
 AADT - 2024 - 92,466
 AADT - 2050 - 133,937
 % TRUCKS = 7.0%
 DESIGN SPEED = 55 MPH

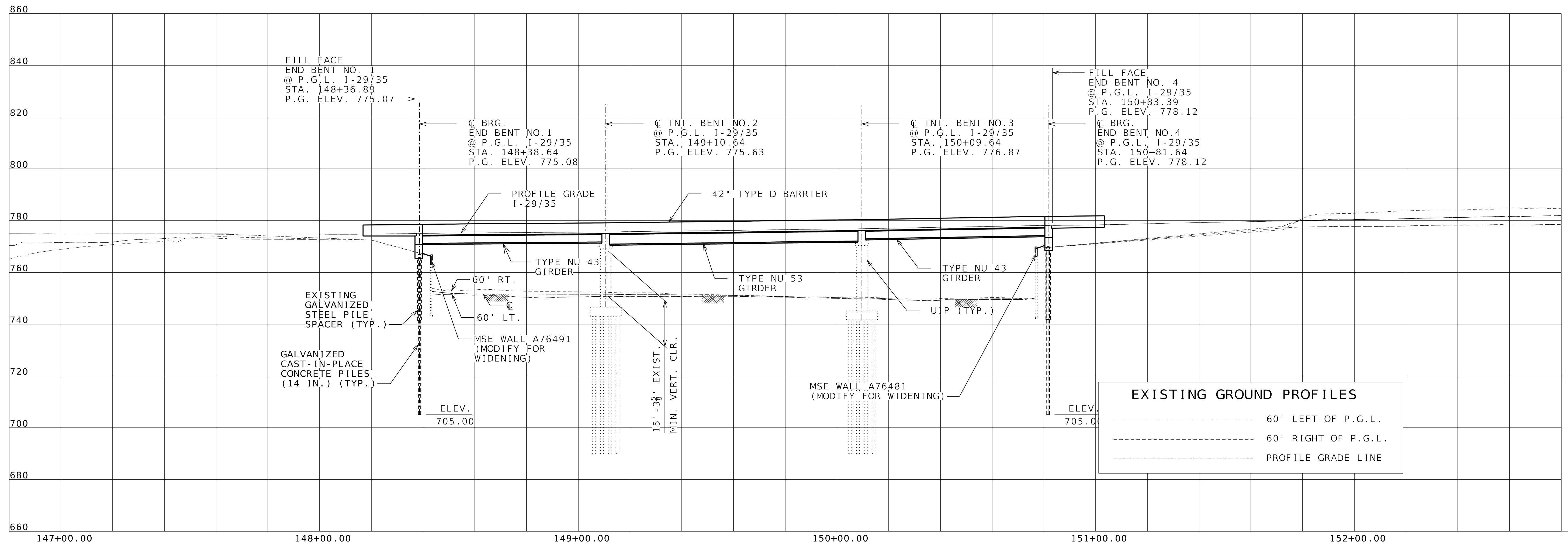
U.I.P. WIDEN AND REHABILITATE A76471
 STA. 148+36.89
 (72', 99', 72')
 SIMPLE PRESTRESSED CONCRETE
 NU-GIRDER SPANS



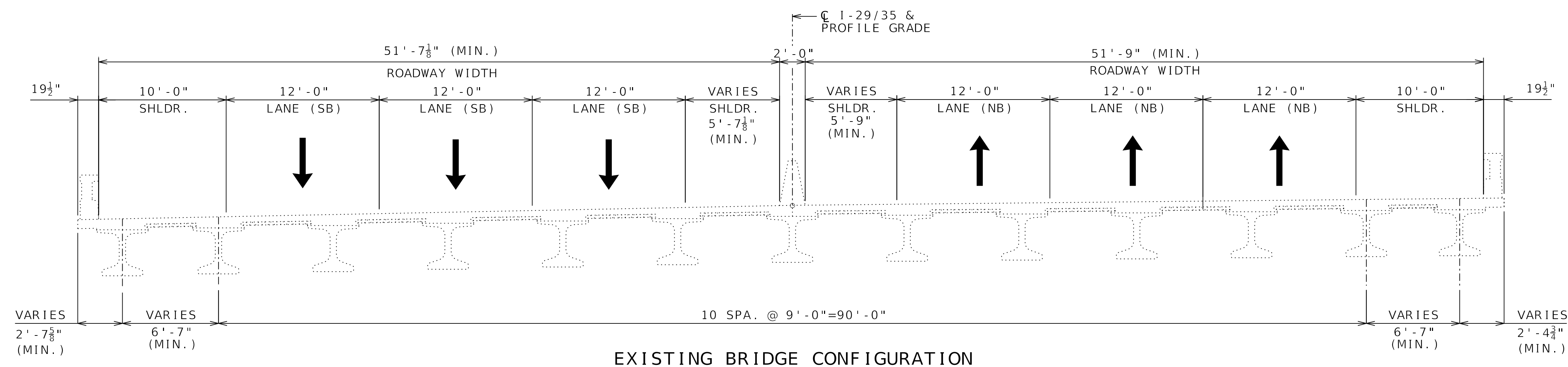
SHEET 1 OF 2	
Name of Crossing I-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 148+36.89
JOB NO. J413458	BRIDGE NO. A76471



TYPICAL SECTION BRIDGE A76471



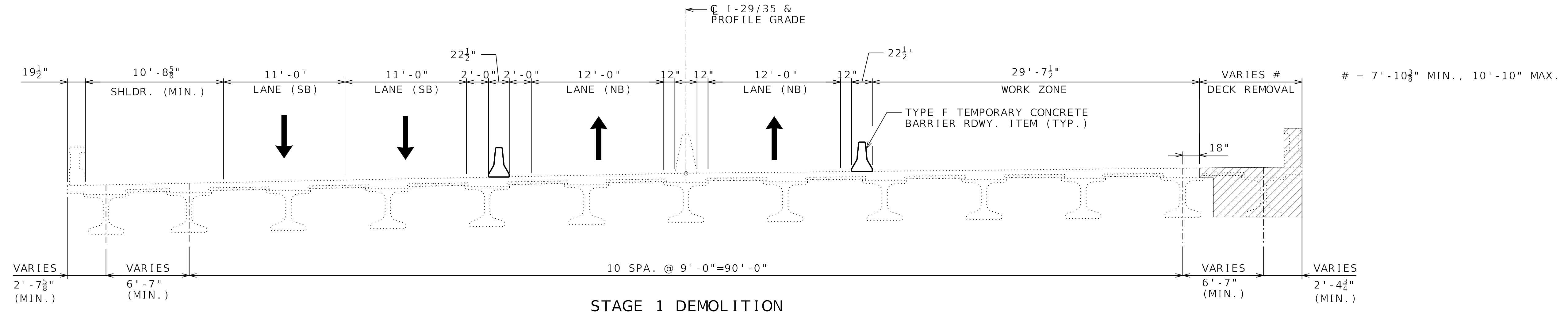
SHEET 2 OF 2	
Name of Crossing I-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. <i>Transportation Project Manager</i>	
PROJ. NO. J413458	STA. 148+36.89
JOB NO. J413458	BRIDGE NO. A76471



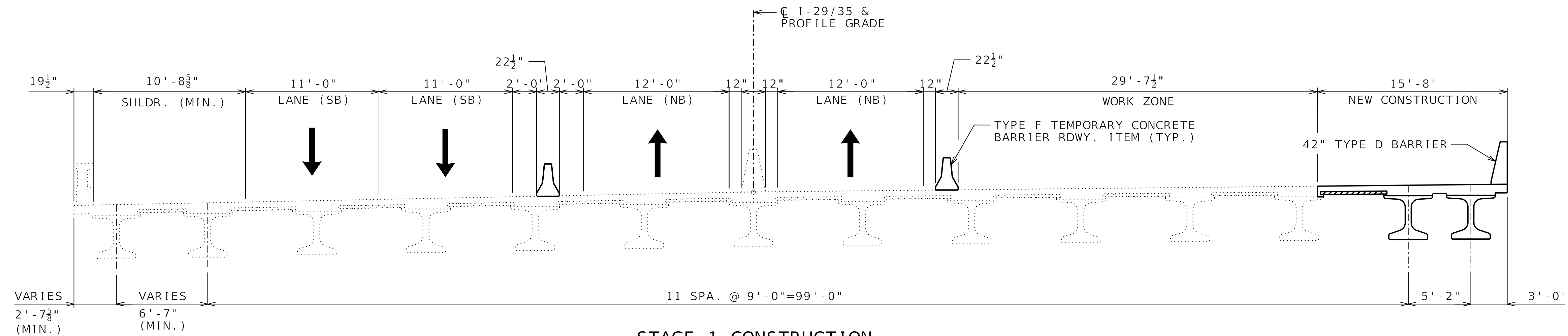
EXISTING BRIDGE CONFIGURATION

REHABILITATION STAGING (1 OF 5)

SHEET 1 OF 5	
Name of Crossing 1-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 148+36.89
JOB NO. J413458 BRIDGE NO. A76471	



STAGE 1 DEMOLITION

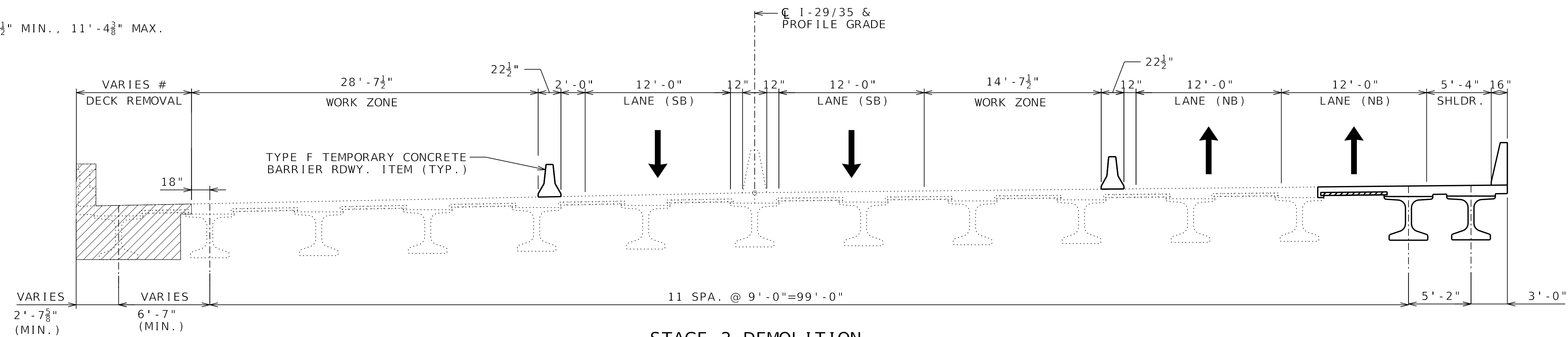


STAGE 1 CONSTRUCTION

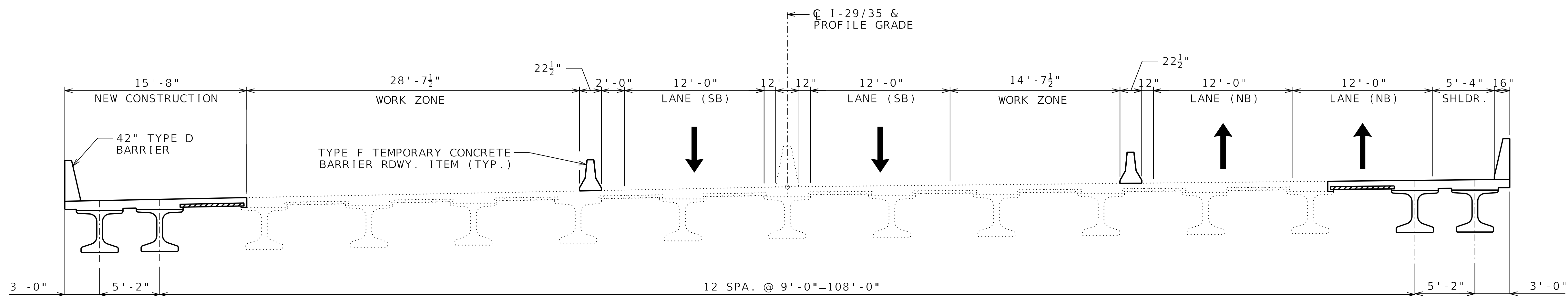
REHABILITATION STAGING (2 OF 5)

SHEET 2 OF 5	
Name of Crossing 1-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 148+36.89
JOB NO. J413458 BRIDGE NO. A76471	

= 7'-8 1/2" MIN., 11'-4 3/8" MAX.



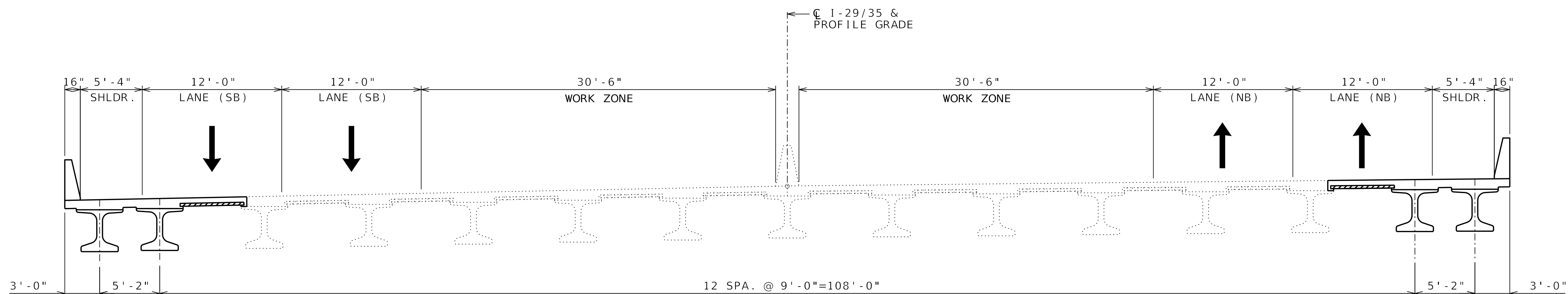
STAGE 2 DEMOLITION



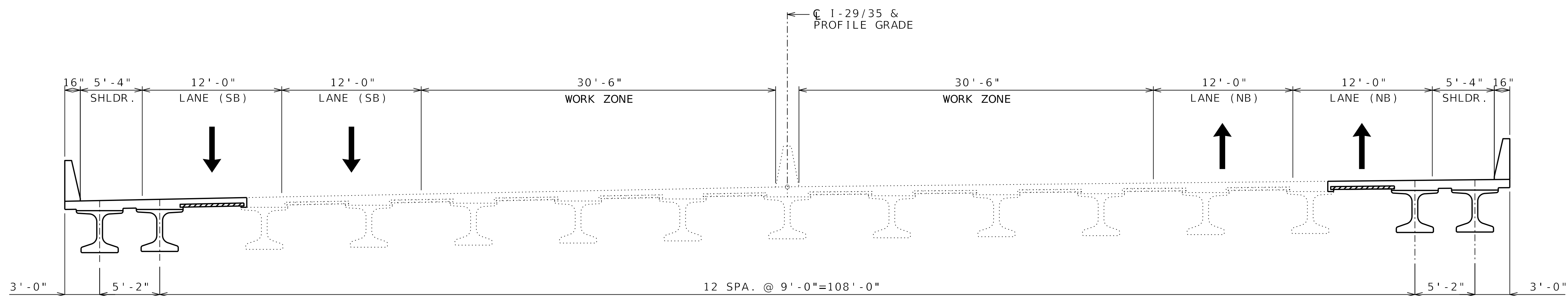
STAGE 2 CONSTRUCTION

REHABILITATION STAGING (3 OF 5)

SHEET 3 OF 5	
Name of Crossing I-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
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PROJ. NO.	STA. 148+36.89
JOB NO. J413458	BRIDGE NO. A76471



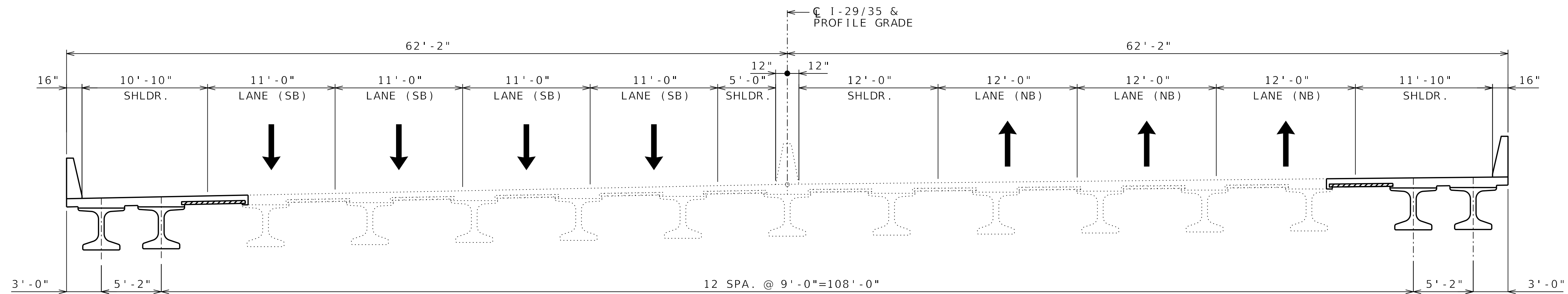
STAGE 3 CONFIGURATION



STAGE 4 CONFIGURATION

REHABILITATION STAGING (4 OF 5)

SHEET 4 OF 5	
Name of Crossing 1-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE 1-29 ; JACKSON COUNTY	
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CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO.	STA. 148+36.89
JOB NO. J413458	BRIDGE NO. A76471



FINAL CONFIGURATION

REHABILITATION STAGING (5 OF 5)

SHEET 5 OF 5	
Name of Crossing 1-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
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PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 148+36.89
JOB NO. J413458 BRIDGE NO. A76471	

WALL A7648 CURVE 1

PI	10+23.87
PC	10+00.00
PT	10+47.74
Δ	1°21'33.41" (RT)
D	2°50'49.18"
L	47.7444'
T	23.8733'
R	2012.5000'

WALL A7648 CURVE 2

PI	13+21.13
PC	12+77.26
PT	13+65.00
Δ	2°19'48.69" (LT)
D	2°39'20.36"
L	87.7445'
T	43.8783'
R	2157.5000'

WALL A7648 CURVE 3

PI	155+16.47
PC	151+19.15
PT	159+04.39
Δ	21°34'42.1" (LT)
D	2°44'52.8"
L	785.24' (ARC)
T	397.33'
R	2,085.00'

END WALL (A7648)
 STA. 13+65.00 =
 STA. 152+03.94, 72.5' RT
 I-29/35

BEGIN WALL (A7648)
 STA. 10+00.00 =
 STA. 151+68.61, 72.5' LT
 I-29/35

BEGIN WALL RECONSTRUCTION
 STA. 10+54.26

PC STA 151+19.15

END WALL RECONSTRUCTION
 STA. 12+71.06

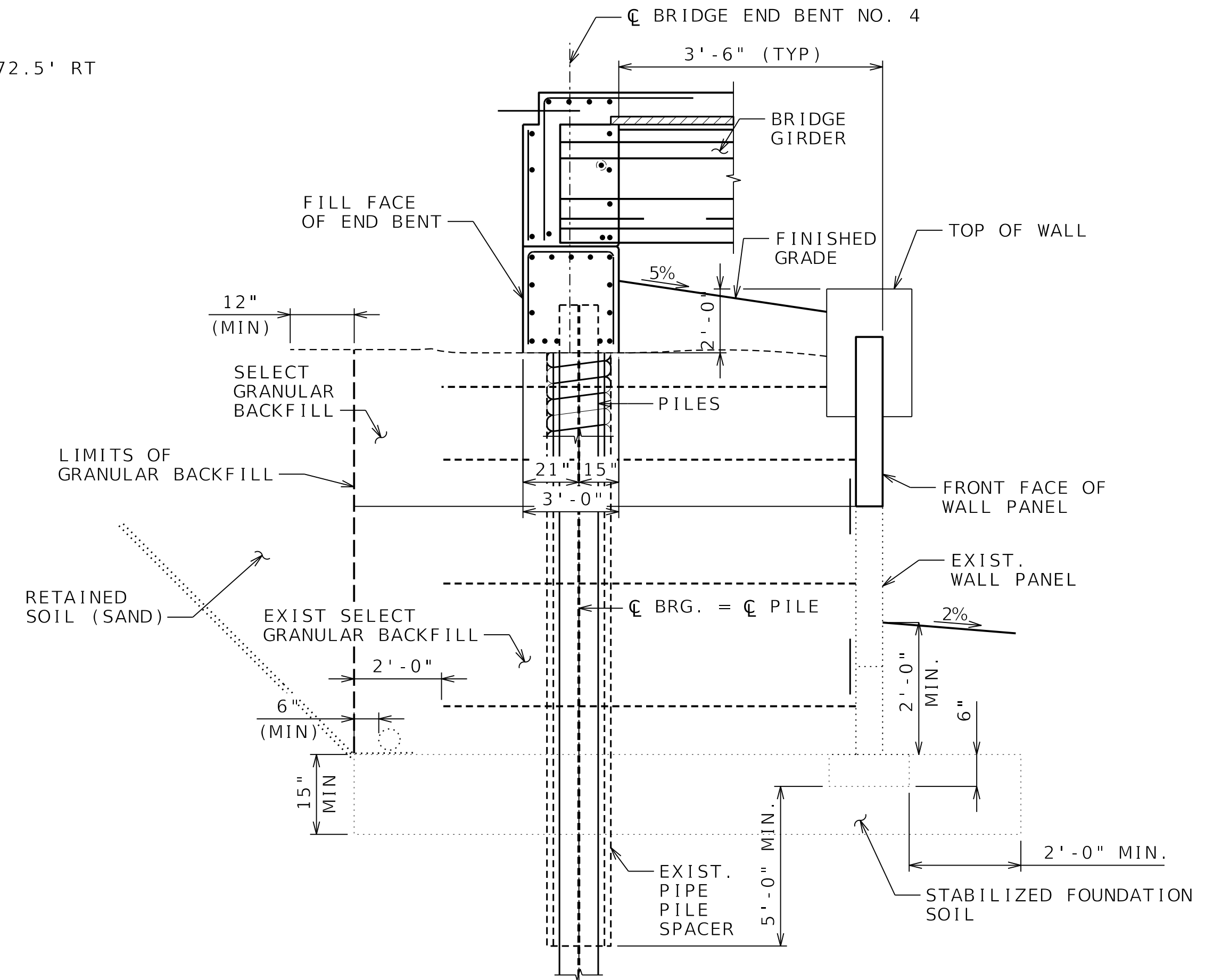
TIE STATION
 150+76.89
 C I-29/35=
 STA. 11+62.50
 FRONT FACE OF MSE WALL

PROPOSED 14" CIP PILE IN EXIST. PIPE PILE SPACER

P.I. STA. 12+35.00 =
 STA. 150+76.89, 72.5' RT I-29/35
 DEF = 90°00'00" LT

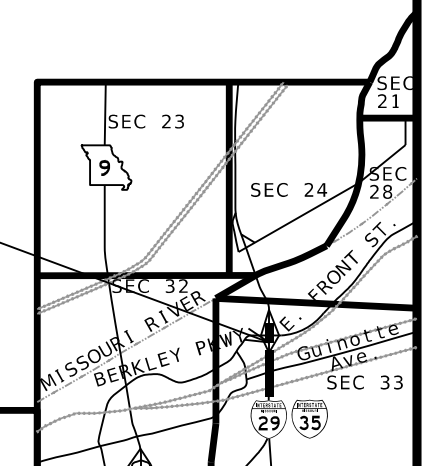
P.I. STA. 10+90.00 =
 STA. 150+76.89, 72.5' LT I-29/35
 DEF = 90°00'00" LT

PLAN - WALL A7648
 @ AT FRONT FACE OF WALL



TYPICAL SECTION - WALL A76481

THROUGH END BENT
 STA. 10+54.26 TO STA. 11+08.38
 STA. 12+16.62 TO STA. 12+71.06



SHEET 1 OF 2

Name of Crossing
 I-29/35 NB & SB OVER FRONT STREET

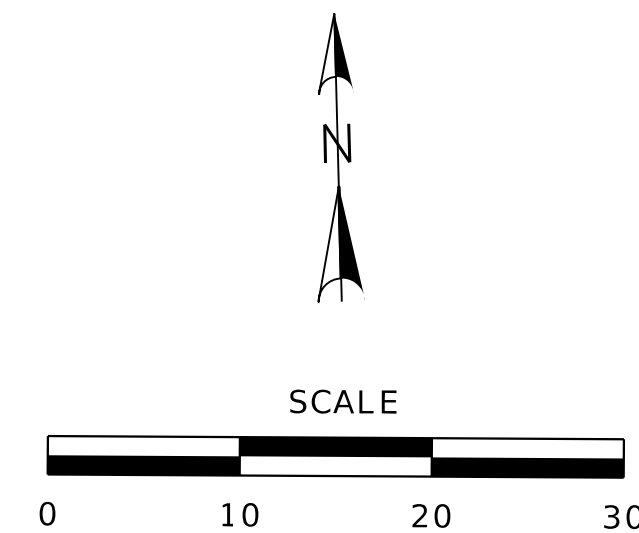
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W
 ROUTE I-29 ; JACKSON COUNTY
 SURVEY MADE BY HDR ENGINEERING INC.

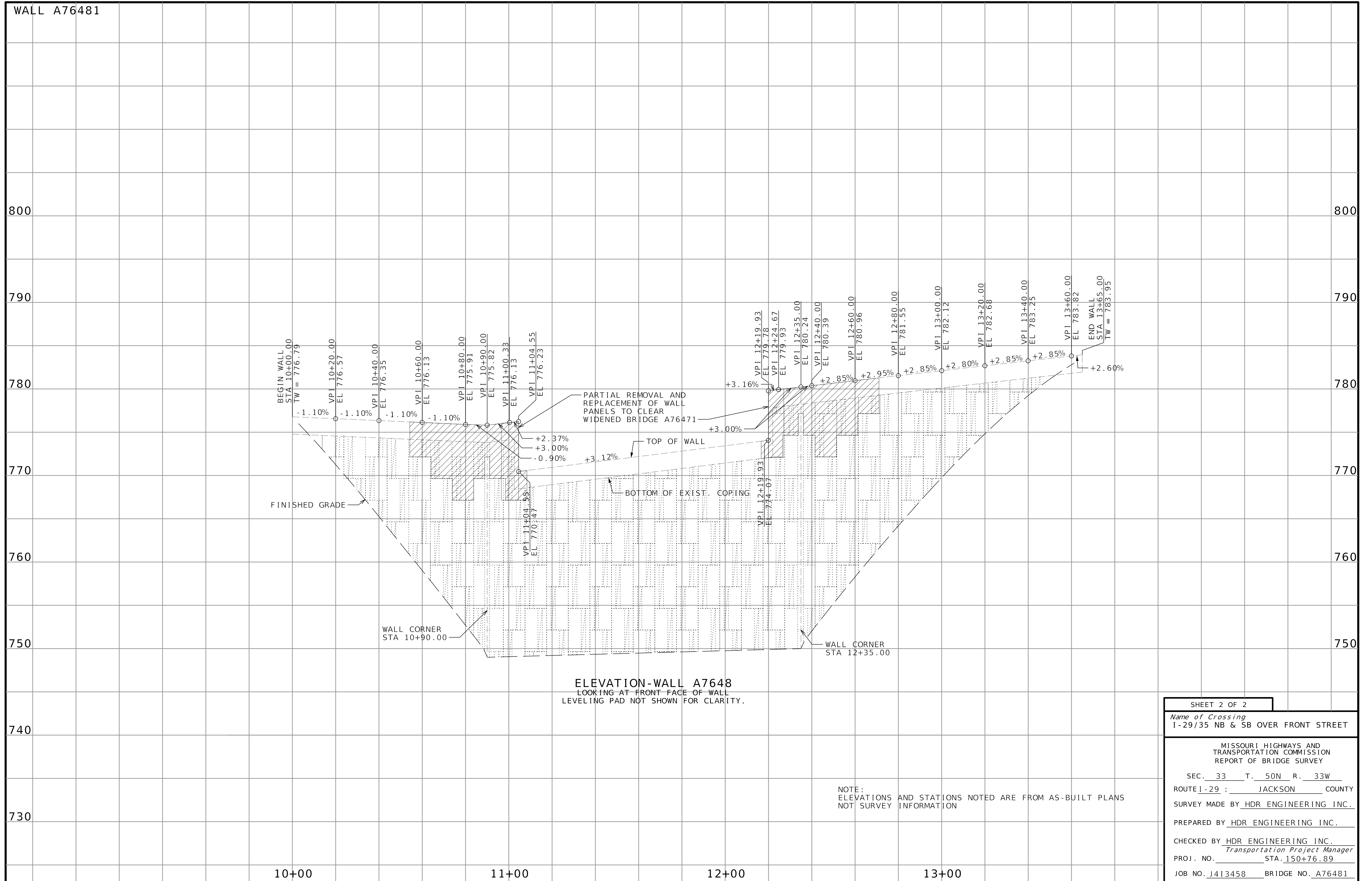
PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

PROJ. NO. STA. 150+76.89
 JOB NO. J413458 BRIDGE NO. A76481



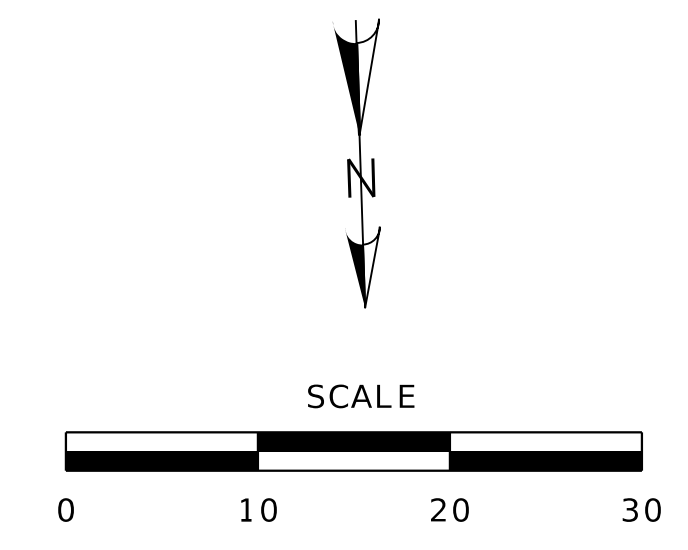
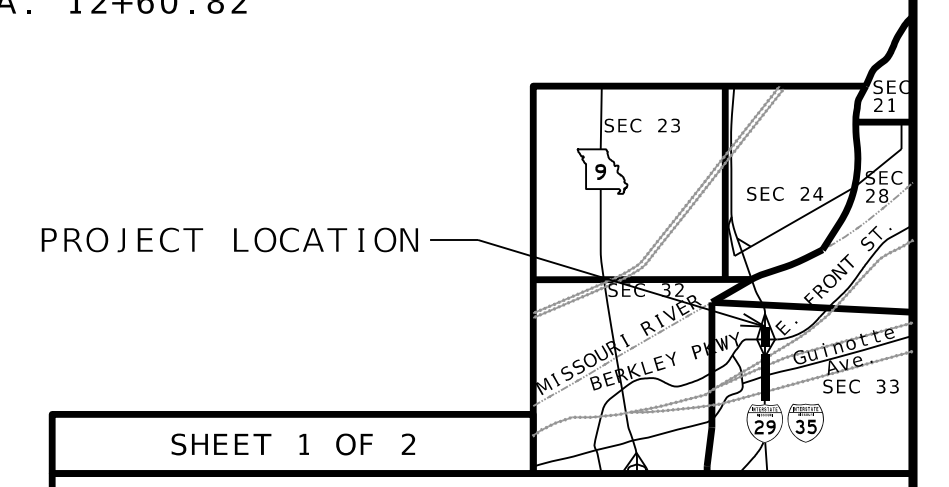
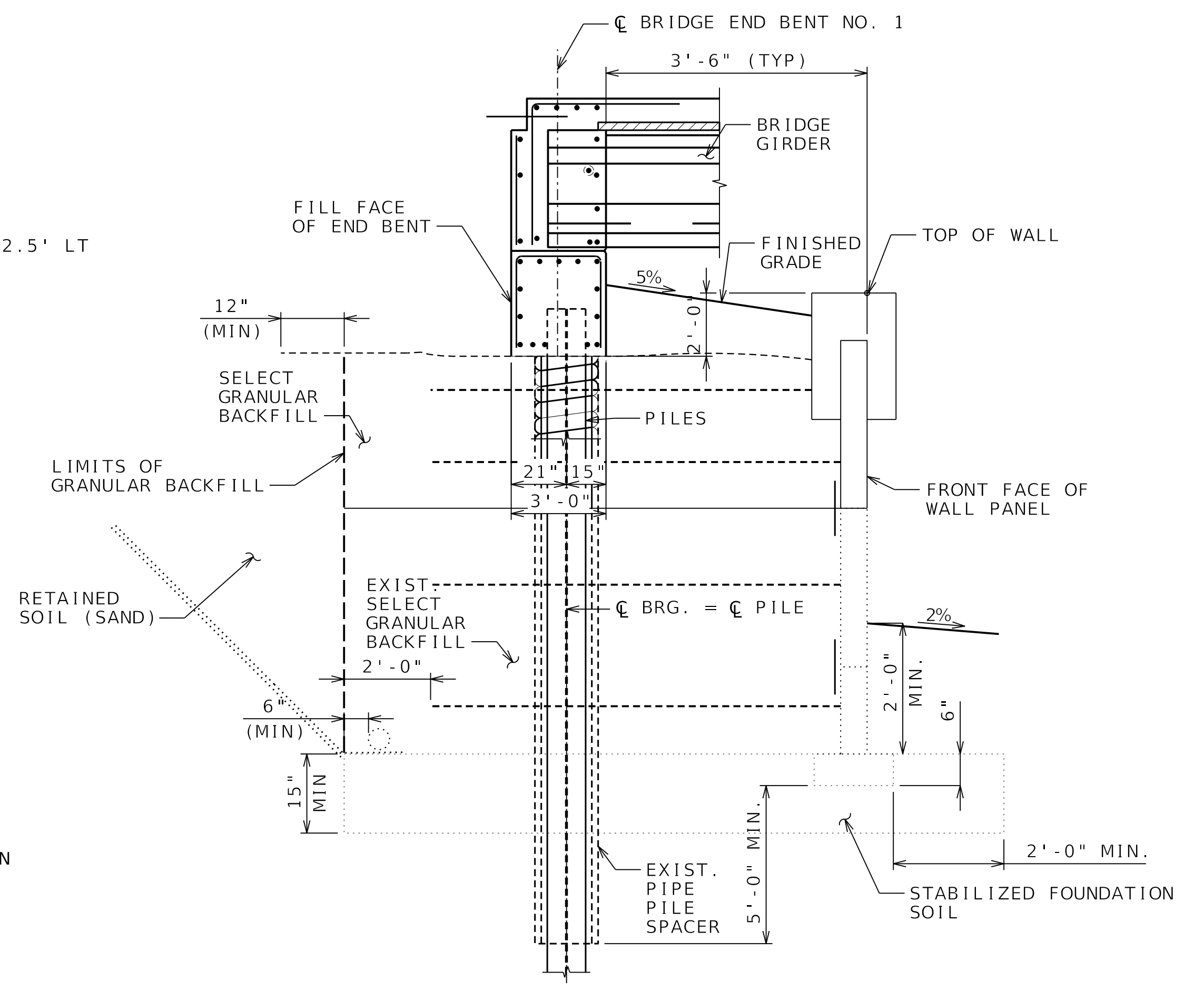
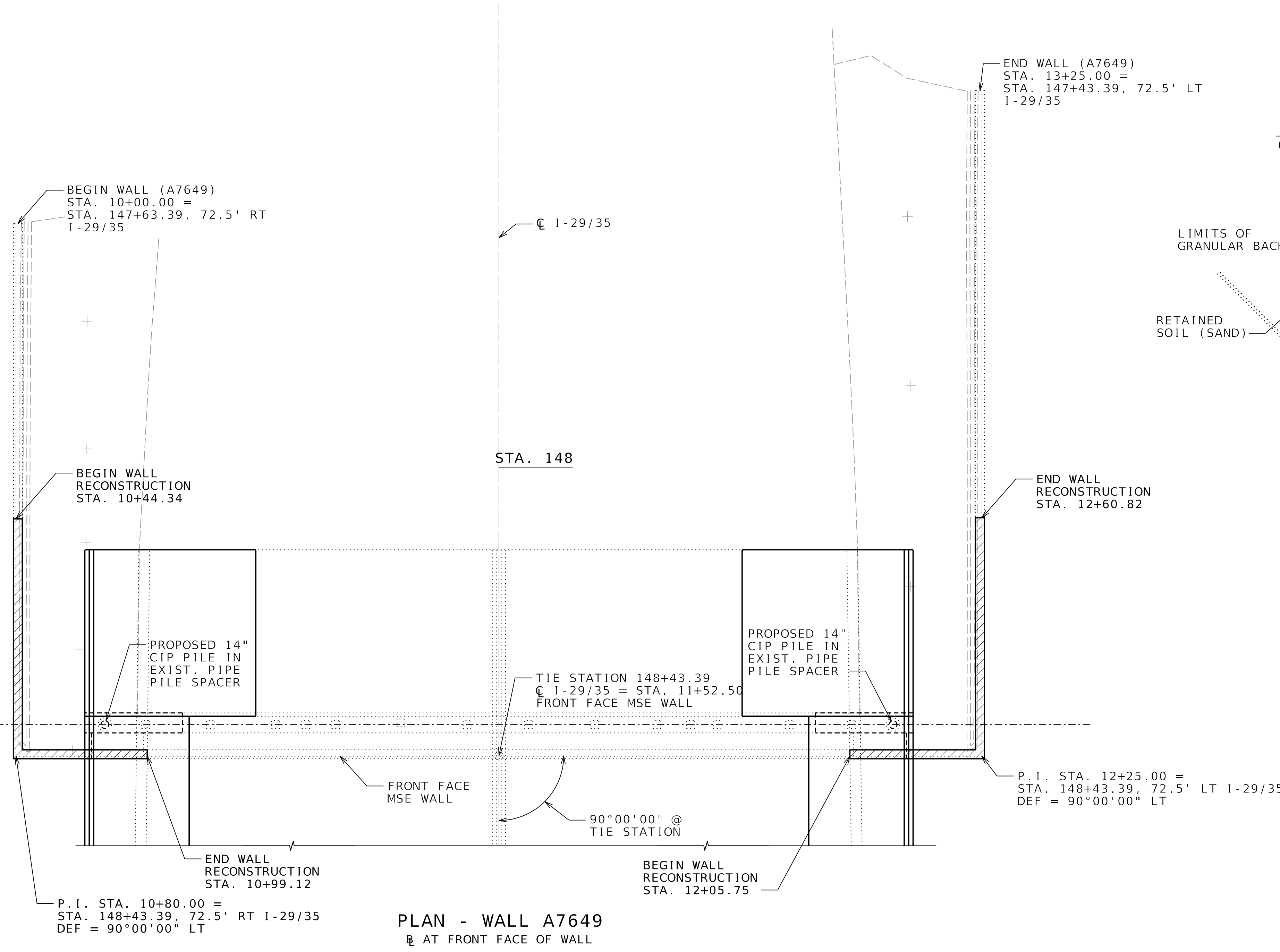
NOTE:
 ELEVATIONS AND STATIONS NOTED ARE FROM AS-BUILT PLANS
 NOT SURVEY INFORMATION.



ELEVATION-WALL A7648
 LOOKING AT FRONT FACE OF WALL
 LEVELING PAD NOT SHOWN FOR CLARITY.

NOTE:
 ELEVATIONS AND STATIONS NOTED ARE FROM AS-BUILT PLANS
 NOT SURVEY INFORMATION

SHEET 2 OF 2	
Name of Crossing 1-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
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PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. 150+76.89	STA. 150+76.89
JOB NO. J413458	BRIDGE NO. A76481



NOTE:
 ELEVATIONS AND STATIONS NOTED ARE FROM AS-BUILT PLANS
 NOT SURVEY INFORMATION.

SHEET 1 OF 2	
Name of Crossing I-29/35 NB & SB OVER FRONT STREET	
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION REPORT OF BRIDGE SURVEY	
SEC. 33	T. 50N R. 33W
ROUTE I-29 ; JACKSON COUNTY	
SURVEY MADE BY HDR ENGINEERING INC.	
PREPARED BY HDR ENGINEERING INC.	
CHECKED BY HDR ENGINEERING INC. Transportation Project Manager	
PROJ. NO. J413458	STA. 148+43.39
JOB NO. J413458 BRIDGE NO. A76491	

800

800

790

790

780

780

770

770

760

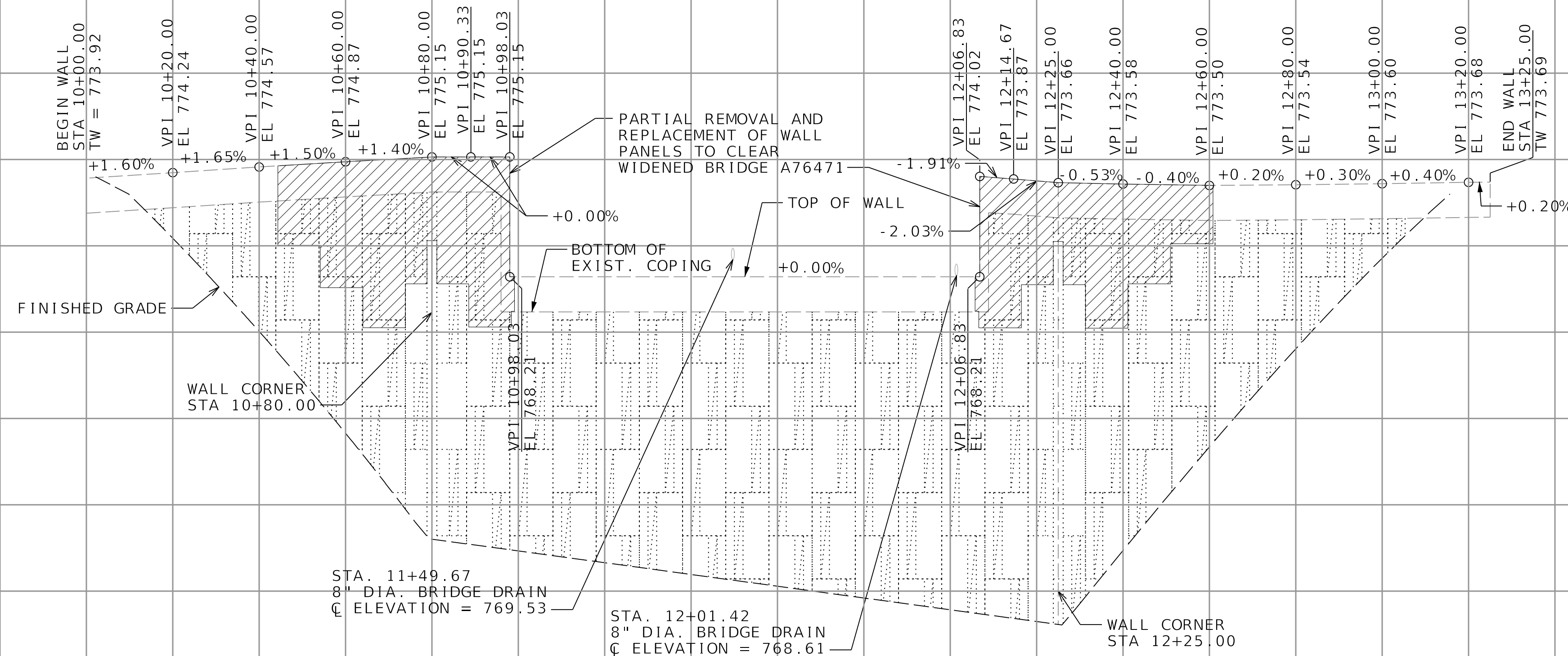
760

750

750

740

730



ELEVATION-WALL A7649
 LOOKING AT FRONT FACE OF WALL
 LEVELING PAD NOT SHOWN FOR CLARITY.

NOTE:
 ELEVATIONS AND STATIONS NOTED ARE FROM AS-BUILT PLANS
 NOT SURVEY INFORMATION

10+00

11+00

12+00

13+00

SHEET 2 OF 2

Name of Crossing
 1-29/35 NB & SB OVER FRONT STREET

MISSOURI HIGHWAYS AND
 TRANSPORTATION COMMISSION
 REPORT OF BRIDGE SURVEY

SEC. 33 T. 50N R. 33W
 ROUTE 1-29 ; JACKSON COUNTY
 SURVEY MADE BY HDR ENGINEERING INC.

PREPARED BY HDR ENGINEERING INC.

CHECKED BY HDR ENGINEERING INC.
 Transportation Project Manager

PROJ. NO. STA. 148+43.39

JOB NO. J413458 BRIDGE NO. A76491