RAILROAD DESIGN CRITERIA

E-80 @ 30 MPH

PASSENGER RAIL @ 30 MPH

PROJECT DESCRIPTION

REPLACE EXISTING WEST APPROACH STRUCTURE FROM STA. 98+24.42 TO EXISTING NORTH AND SOUTH BRANCH ABUTMENTS.

REFERENCE:

TRRA PRELIMINARY PLANS SURVEY
(DATED 11-7-11. 20 SHEETS)

LENGTH OF PROJECT

TERMINAL RAILROAD

BEGINNING OF PROJECT	STA.	98+24.42
END OF PROJECT (NORTH)	STA.	107+92.92
END OF PROJECT (SOUTH)	STA.	109+25.00
APPARENT LENGTH		1710.20 FEET
EQUATIONS AND EXCEPTIONS:		
TOTAL CORRECTIONS		0.00 FEET
NET LENGTH OF PROJECT		1710.20 FEET
STATE LENGTH		0.324 MILES

MISSOURI DEPARTMENT OF TRANSPORATION

STAKEHOLDER ACCEPTANCE OF CONCEPT

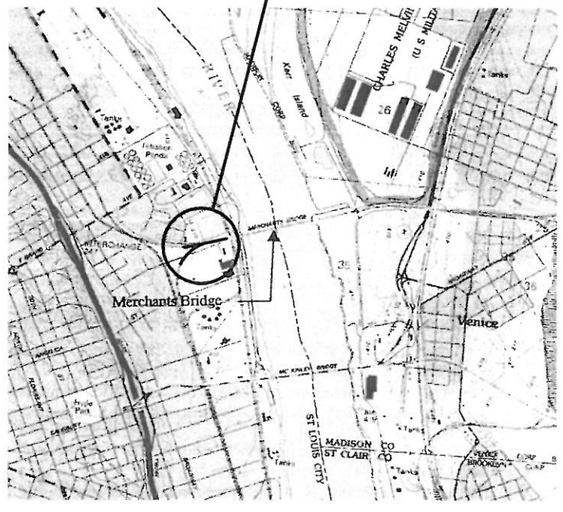
TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS ST. LOUIS, MISSOURI

PRELIMINARY PLANS FOR ST. LOUIS MERCHANTS BRIDGE OVER MISSISSIPPI RIVER WEST APPROACH REPLACEMENT

FEDERAL PROJECT NO. _____

N.T.S.

PROJECT LOCATION



St. Louis, Missouri

ST. LOUIS CITY

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
GENERAL ELEVATION AND PLAN	2-4
CROSS SECTIONS	5-7
TYPICAL BENT	8
UTILITY PLAN	9

INVOLVED RAIL CARRIERS

NAME	
TITLE	
SIGNATURE	
REPRESENTING	AMTRAK
DATE	
NAME	
TITLE	
SIGNATURE	
REPRESENTING	BNSF RAILWAY
DATE	
NAME	
TITLE	
SIGNATURE	
REPRESENTING	NORFOLK SOUTHERN RAILWAY
DATE	
NAME	
TITLE	
SIGNATURE	
REPRESENTING	UNION PACIFIC RAILROAD
DATE	
NAME	
TITLE	
SIGNATURE	
REPRESENTING	TERMINAL RR ASSOC. OF ST. LOUIS
DATE	

STATE OF MISSOURI
MISSOURI DEPARTMENT OF TRANSPORTATION

NAME	
TITLE	
SIGNATURE	
REPRESENTING	MISSOURI DEPT. OF TRANSPORTATION
DATE	

FEDERAL RAILROAD ADMINISTRATION

NAME	
TITLE	
SIGNATURE	
REPRESENTING	FEDERAL RAILROAD ADMINISTRATION
DATE	

DATE

DATE PREPARED 12-14-11

ROUTE | STATE MO

DISTRICT | SHEET NO. 1

COUNTY ST. LOUIS CITY

JOB NO.

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS
MERCHANTS BRIDGE OVER MISSISSIPPI RIVER
ST. LOUIS, MISSOURI
WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MODJESKI and MASTERS
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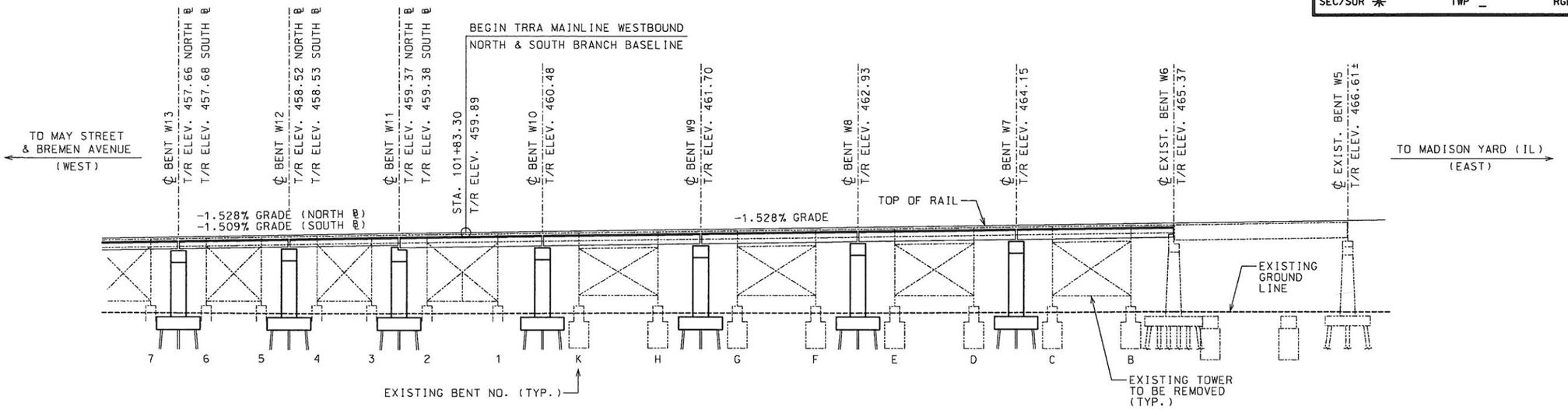
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

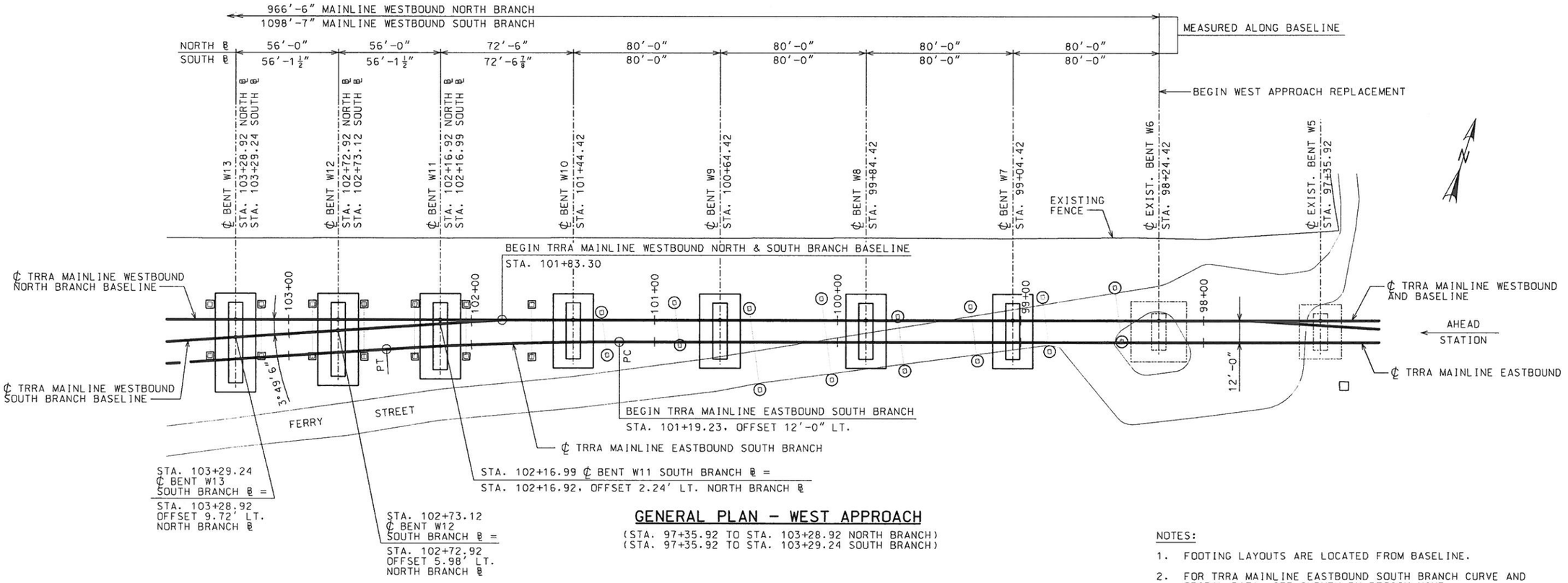
SEC/SUR ✳ TWP _ RGE _



ELEVATION – WEST APPROACH

(BENT W5 TO W13)

NOTE: TOP OF RAIL ELEVATIONS AT BENTS W5 THRU W10 ARE ALONG MAINLINE WESTBOUND BASELINE. TOP OF RAIL ELEVATIONS AT BENTS W11, W12, AND W13 ARE ALONG NORTH AND SOUTH BRANCH BASELINE.



GENERAL PLAN – WEST APPROACH

(STA. 97+35.92 TO STA. 103+28.92 NORTH BRANCH)
(STA. 97+35.92 TO STA. 103+29.24 SOUTH BRANCH)

NOTES:

1. FOOTING LAYOUTS ARE LOCATED FROM BASELINE.
2. FOR TRRA MAINLINE EASTBOUND SOUTH BRANCH CURVE AND SPIRAL DATA, SEE SURVEY BY DESIGN NINE.

Designed ACK
Detailed PRC
Checked DWP

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

DATE
DATE PREPARED 12-14-11
ROUTE
STATE MO
DISTRICT
SHEET NO. 2
COUNTY ST. LOUIS CITY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS
MERCHANTS BRIDGE OVER MISSISSIPPI RIVER
ST. LOUIS, MISSOURI
WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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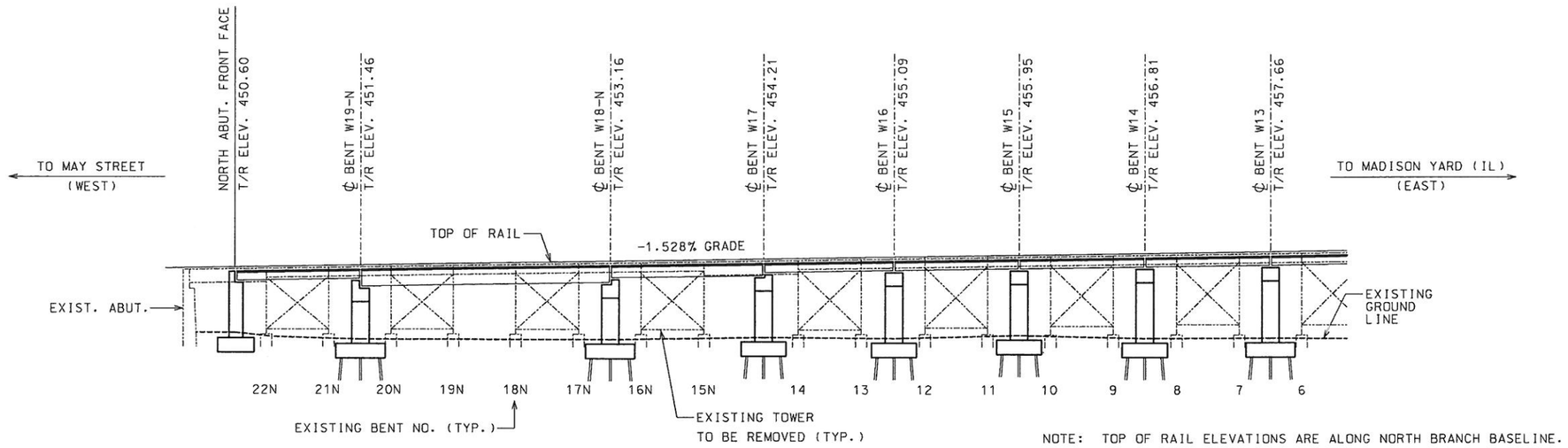
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

SEC/SUR ✳ TWP _ RGE _



NOTE: TOP OF RAIL ELEVATIONS ARE ALONG NORTH BRANCH BASELINE.

ELEVATION – WEST APPROACH (NORTH BRANCH)

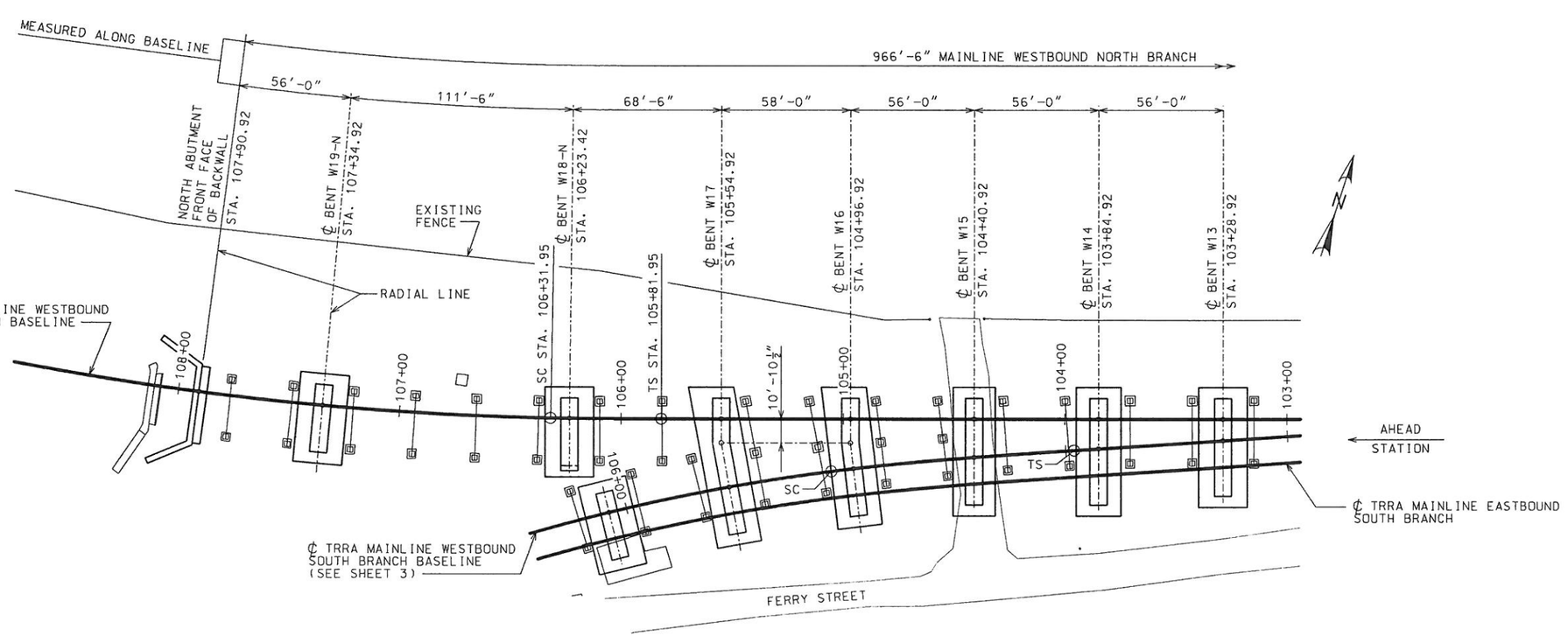
(BENT W13 TO NORTH ABUT.)

NORTH BRANCH ℄ SPIRAL DATA

PI STA. 106+15.28
Δs = 0°-59'-59"
Ls = 50.00'
Rc = 1432.69'
LT = 33.33'
ST = 16.67'
TS STA. 105+81.95
SC STA. 106+31.95
S.E. = 0.0417'

NORTH BRANCH ℄ CURVE DATA

PI STA. 109+70.09
Δ = 26°-33'-35"
D = 4°-00'-00"
R = 1432.69'
T = 338.14'
L = 664.13'
E = 39.36'
SC STA. 106+31.95
PT STA. 112+96.08
S.E. = 0.0417'



GENERAL PLAN – WEST APPROACH (NORTH BRANCH)

(STA. 103+28.92 TO STA. 107+90.92 NORTH BRANCH)

NOTES:

1. FOOTING LAYOUTS ARE LOCATED FROM BASELINE.
2. FOR TRRA MAINLINE EASTBOUND SOUTH BRANCH CURVE AND SPIRAL DATA, SEE SURVEY BY DESIGN NINE.

Designed ACK
Detailed PRC
Checked DWP

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

DATE
DATE PREPARED 12-14-11
ROUTE
STATE MO
DISTRICT
SHEET NO. 3
COUNTY ST. LOUIS CITY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS
MERCHANTS BRIDGE OVER MISSISSIPPI RIVER
ST. LOUIS, MISSOURI
WEST APPROACH REPLACEMENT

MODJESKI and MASTERS
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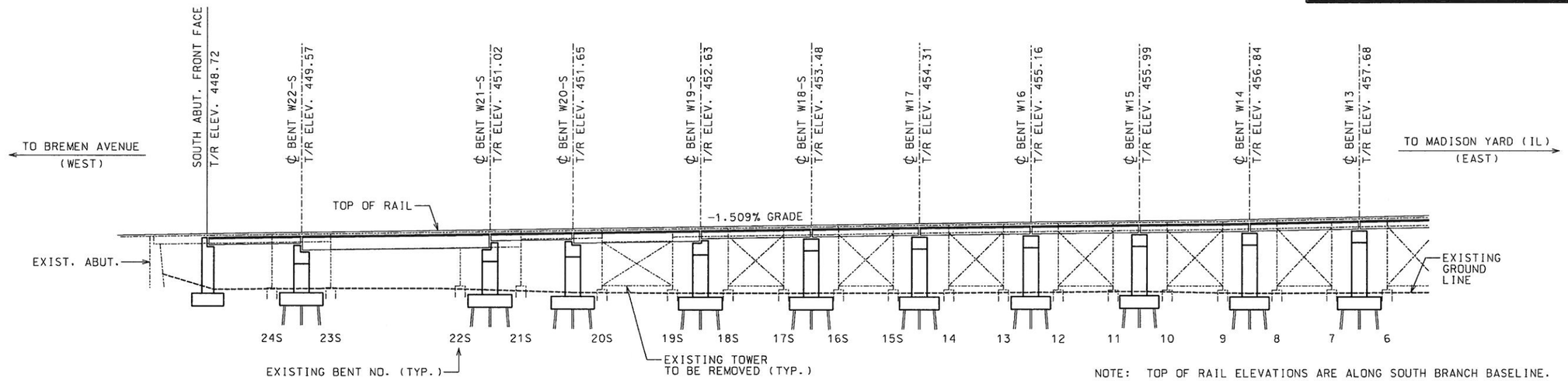
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

SEC/SUR ✳ TWP _ RGE _



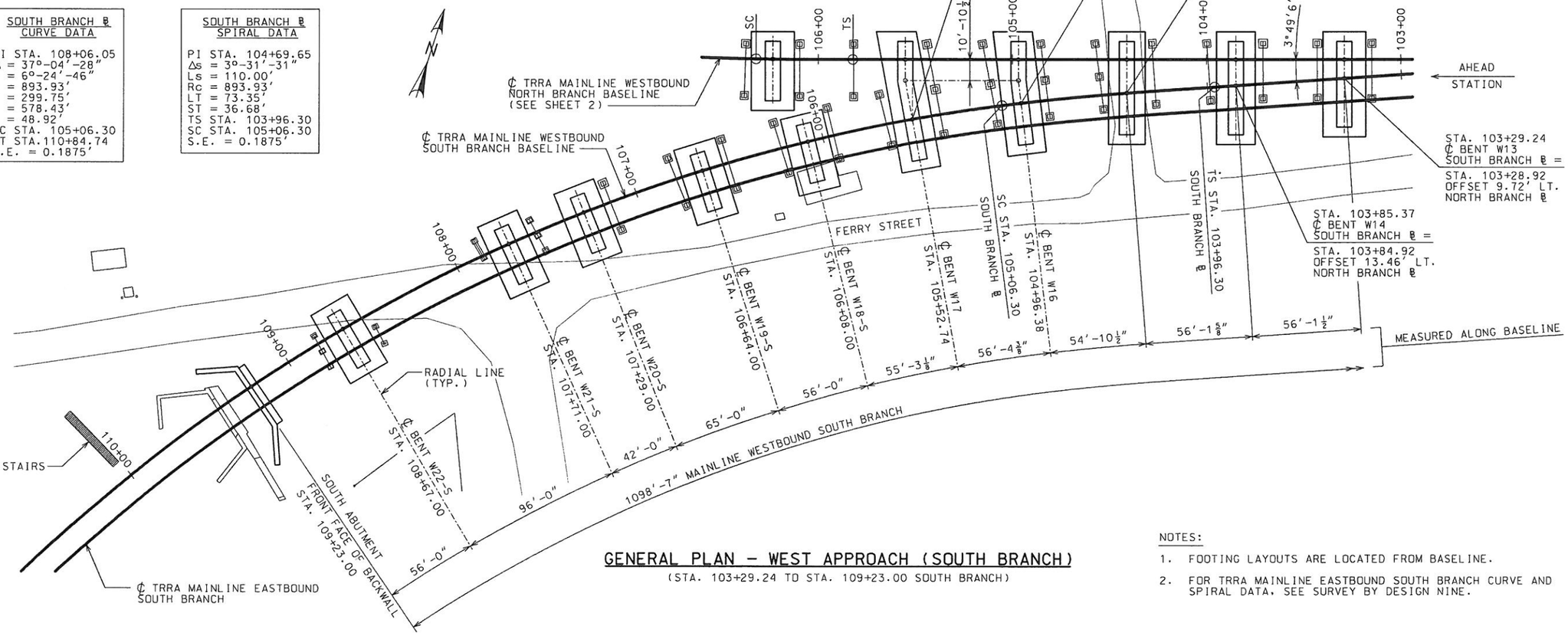
NOTE: TOP OF RAIL ELEVATIONS ARE ALONG SOUTH BRANCH BASELINE.

ELEVATION – WEST APPROACH (SOUTH BRANCH)

(BENT W13 TO SOUTH ABUT.)

SOUTH BRANCH ℄ CURVE DATA
PI STA. 108+06.05
Δ = 37°-04'-28"
D = 6°-24'-46"
R = 893.93'
T = 299.75'
L = 578.43'
E = 48.92'
SC STA. 105+06.30
PT STA.110+84.74
S.E. = 0.1875'

SOUTH BRANCH ℄ SPIRAL DATA
PI STA. 104+69.65
Δs = 3°-31'-31"
Ls = 110.00'
Rc = 893.93'
LT = 73.35'
ST = 36.68'
TS STA. 103+96.30
SC STA. 105+06.30
S.E. = 0.1875'



GENERAL PLAN – WEST APPROACH (SOUTH BRANCH)

(STA. 103+29.24 TO STA. 109+23.00 SOUTH BRANCH)

NOTES:

1. FOOTING LAYOUTS ARE LOCATED FROM BASELINE.
2. FOR TRRA MAINLINE EASTBOUND SOUTH BRANCH CURVE AND SPIRAL DATA, SEE SURVEY BY DESIGN NINE.

Designed ACK
Detailed PRC
Checked DWP

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

DATE

DATE PREPARED 12-14-11

ROUTE · STATE MO

DISTRICT · SHEET NO. 4

COUNTY ST. LOUIS CITY

JOB NO.

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS

MERCHANTS BRIDGE OVER MISSISSIPPI RIVER

ST. LOUIS, MISSOURI

WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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314-588-8115

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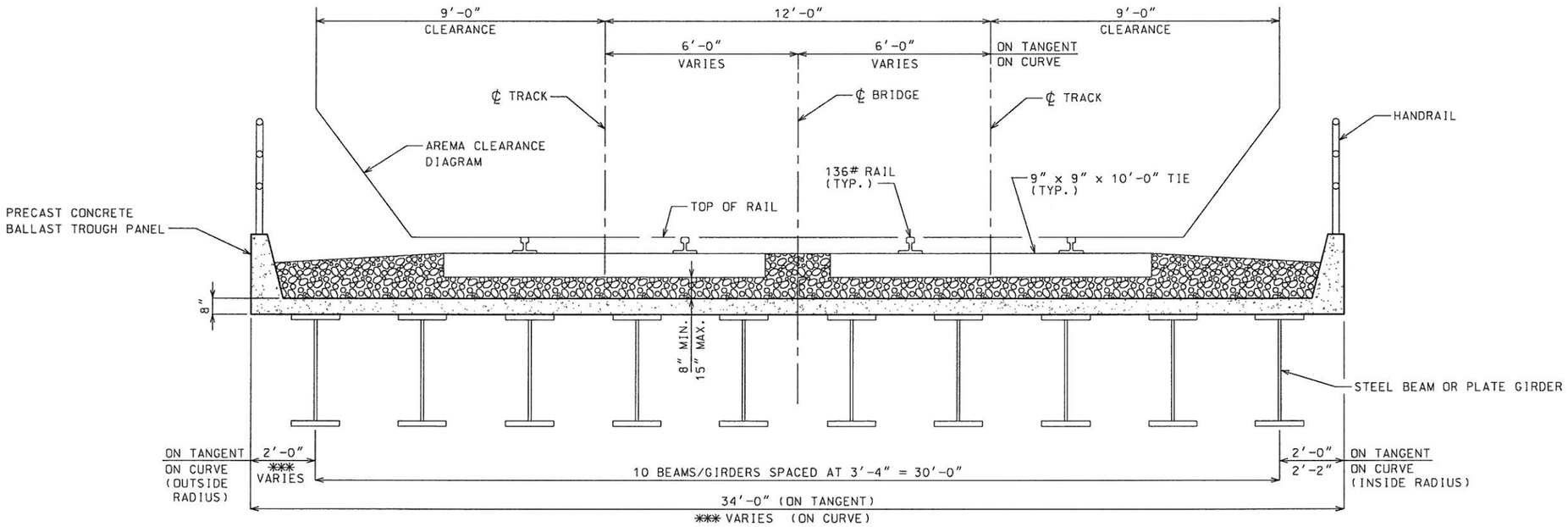
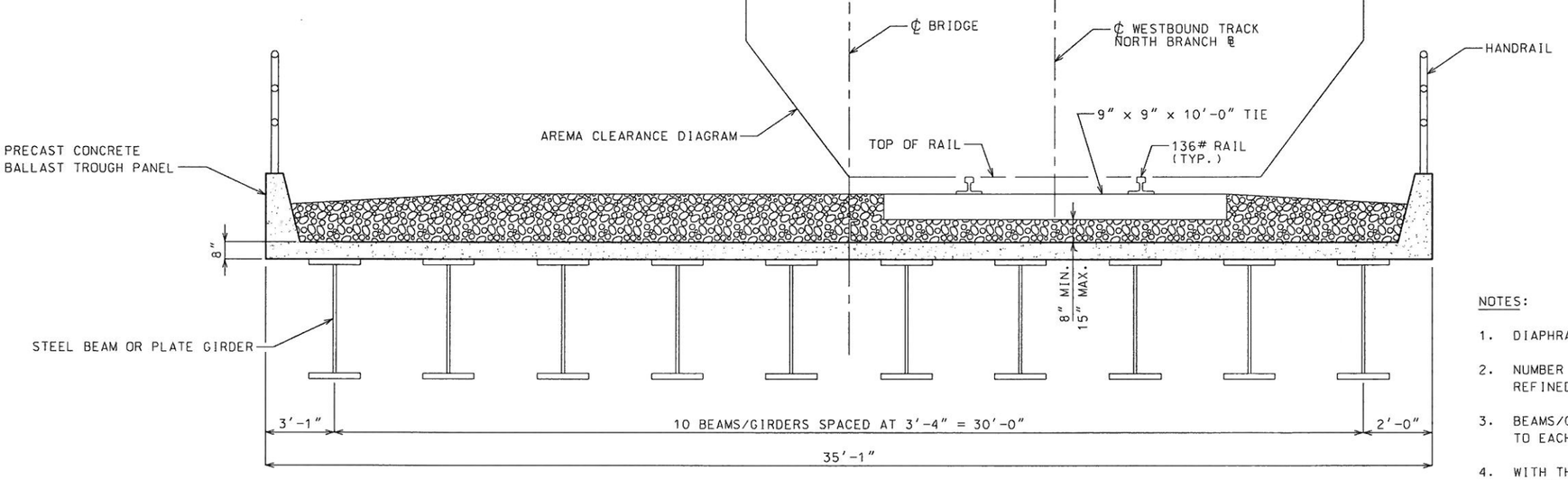
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

SEC/SUR ✳ TWP _ RGE _



TYPICAL CROSS SECTION MAIN SYSTEM (ON TANGENT)* SOUTH BRANCH (ON CURVE)**

(LOOKING UPSTATION)



TYPICAL CROSS SECTION NORTH BRANCH

STA. 107+34.92 TO STA. 107+90.92
(LOOKING UPSTATION)

✳ STA. 98+24.42 TO STA. 102+16.92

✳✳ STA. 106+08.00 TO STA. 107+71.00 AND STA. 108+67.00 TO STA. 109+23.00

✳✳✳ WIDTH VARIES FROM SPAN TO SPAN

NOTES:

1. DIAPHRAGMS NOT SHOWN FOR CLARITY.
2. NUMBER OF BEAMS/GIRDERS AND SPACING TO BE REFINED IN FINAL DESIGN.
3. BEAMS/GIRDERS TO BE PLACED PARALLEL (ON CHORD) TO EACH OTHER WITHIN SPAN.
4. WITH THE EXCEPTION OF NORTH APPROACH LEG, CONSTRUCTION SHALL BE STAGED IN A MANNER THAT WILL ALLOW AT LEAST ONE TRACK TO REMAIN IN SERVICE AT ALL TIMES. A SHORT, OUTAGE OF THE NORTH APPROACH LEG WILL BE ALLOWED.

Designed ACK
Detailed PRC
Checked DWP

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

DATE

DATE PREPARED 12-14-11

ROUTE | STATE MO

DISTRICT | SHEET NO. 5

COUNTY ST. LOUIS CITY

JOB NO.

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS

MERCHANTS BRIDGE OVER MISSISSIPPI RIVER

ST. LOUIS, MISSOURI

WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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NEW ORLEANS, LA
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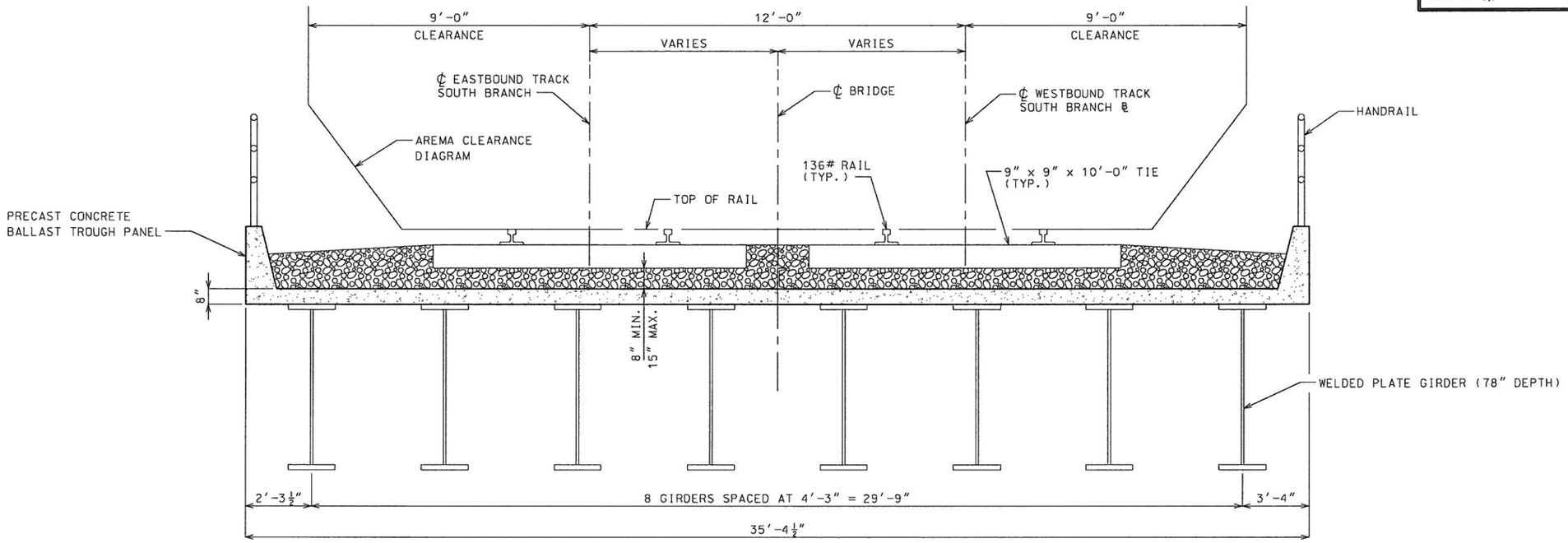
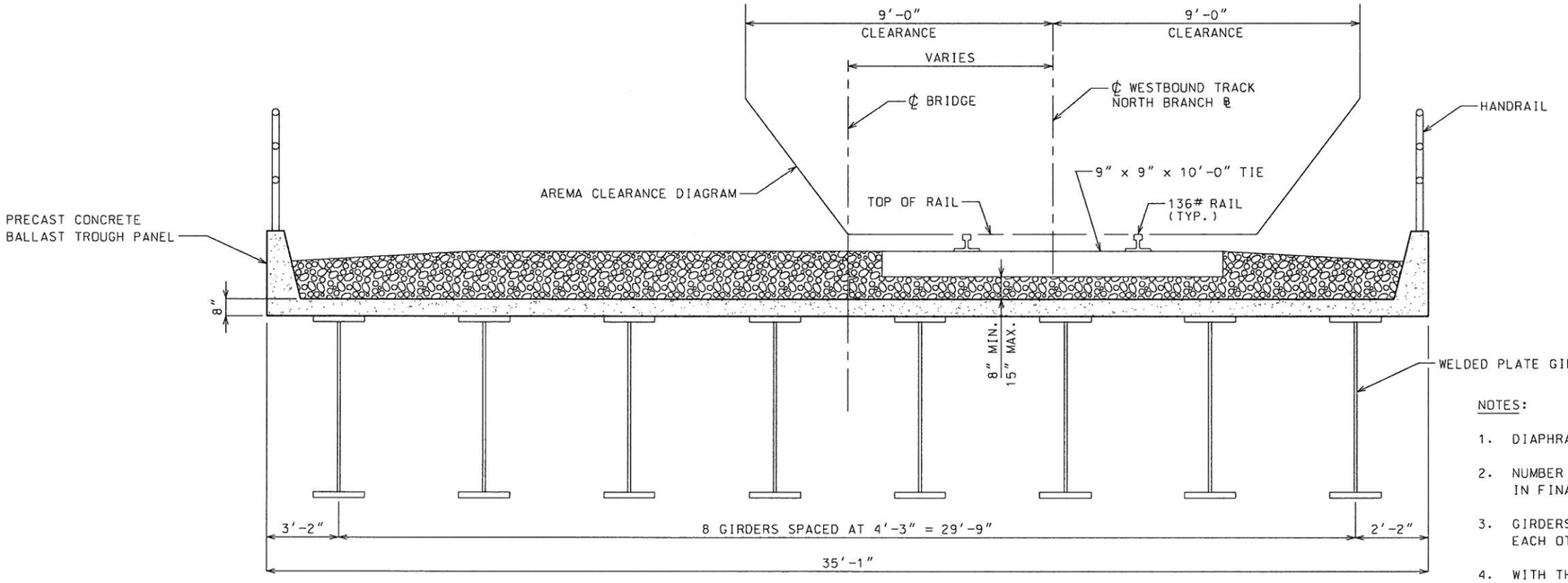
SEC/SUR ✳ TWP _ RGE _



96'-0" SPAN CROSS SECTION SOUTH BRANCH
(LOOKING UPSTATION)



111'-6" SPAN CROSS SECTION NORTH BRANCH
(LOOKING UPSTATION)

NOTES:

1. DIAPHRAGMS NOT SHOWN FOR CLARITY.
2. NUMBER OF GIRDERS AND SPACING TO BE REFINED IN FINAL DESIGN.
3. GIRDERS TO BE PLACED PARALLEL (ON CHORD) TO EACH OTHER WITHIN SPAN.
4. WITH THE EXCEPTION OF NORTH APPROACH LEG, CONSTRUCTION SHALL BE STAGED IN A MANNER THAT WILL ALLOW AT LEAST ONE TRACK TO REMAIN IN SERVICE AT ALL TIMES. A SHORT, OUTAGE OF THE NORTH APPROACH LEG WILL BE ALLOWED.

Designed ACK
Detailed PRC
Checked DWP

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

DATE

DATE PREPARED 12-14-11

ROUTE | STATE MO

DISTRICT | SHEET NO. 6

COUNTY ST. LOUIS CITY

JOB NO.

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS

MERCHANTS BRIDGE OVER MISSISSIPPI RIVER

ST. LOUIS, MISSOURI

WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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314-588-8115

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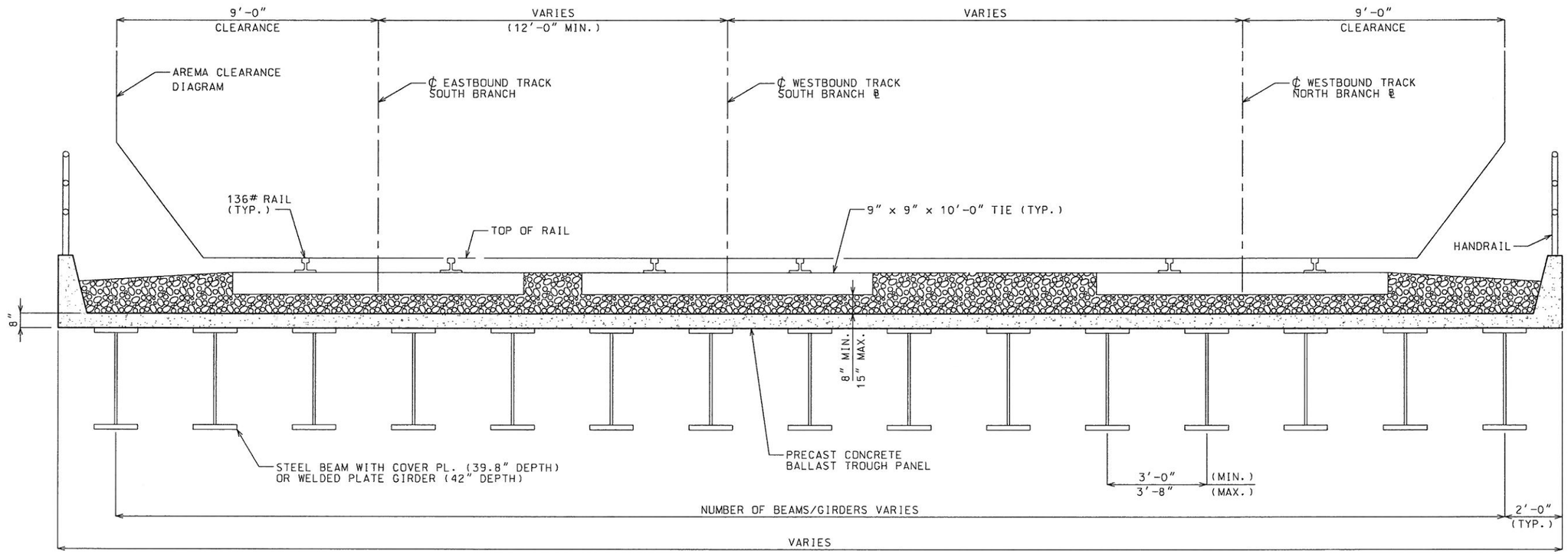
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

SEC/SUR ✳ TWP _ RGE _



WYE AREA CROSS SECTION
NORTH AND SOUTH BRANCH

STA. 102+16.92 TO STA. 105+54.92 - SHOWN
STA. 105+54.92 TO STA. 106+23.42 (NORTH BRANCH) - SIMILAR
STA. 105+52.74 TO STA. 106+08.00 (SOUTH BRANCH) - SIMILAR
(LOOKING UPSTATION)

NOTES:

1. DIAPHRAGMS NOT SHOWN FOR CLARITY.
2. NUMBER OF BEAMS/GIRDERS AND SPACING TO BE REFINED IN FINAL DESIGN.
3. WITH THE EXCEPTION OF NORTH APPROACH LEG, CONSTRUCTION SHALL BE STAGED IN A MANNER THAT WILL ALLOW AT LEAST ONE TRACK TO REMAIN IN SERVICE AT ALL TIMES. A SHORT, OUTAGE OF THE NORTH APPROACH LEG WILL BE ALLOWED.

Designed ACK
Detailed PRC
Checked DWP

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

DATE
DATE PREPARED 12-14-11
ROUTE
STATE MO
DISTRICT
SHEET NO. 7
COUNTY ST. LOUIS CITY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS
MERCHANTS BRIDGE OVER MISSISSIPPI RIVER
ST. LOUIS, MISSOURI
WEST APPROACH REPLACEMENT

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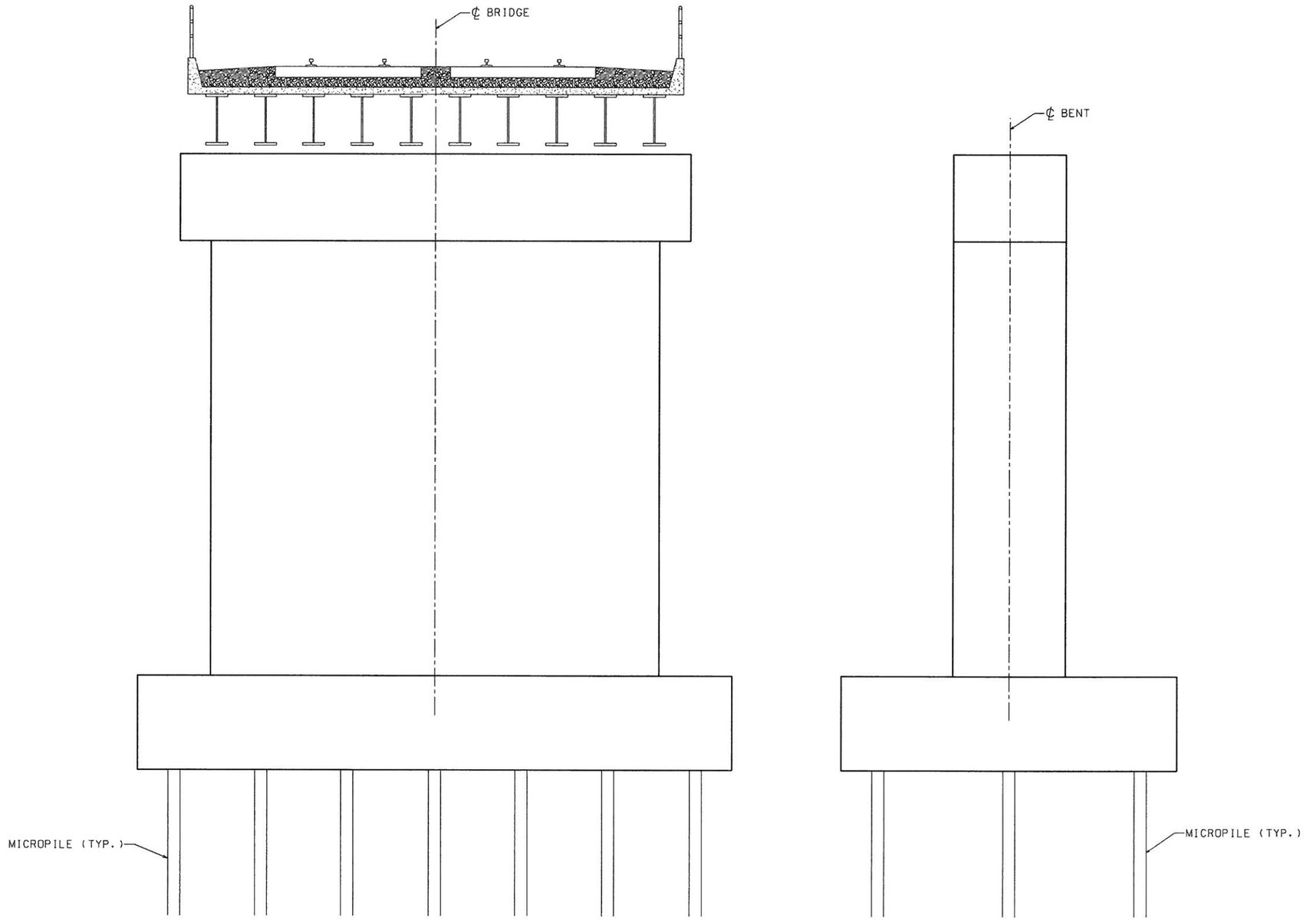
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SEC/SUR ✳ TWP _ RGE _



ELEVATION

SIDE ELEVATION

TYPICAL BENT

Designed ACK
Detailed PRC
Checked DWP

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

DATE

DATE PREPARED
12-14-11

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
	8

COUNTY
ST. LOUIS CITY

JOB NO.

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TERMINAL RAILROAD ASSOC. OF ST. LOUIS

MERCHANTS BRIDGE OVER MISSISSIPPI RIVER

ST. LOUIS, MISSOURI

WEST APPROACH REPLACEMENT

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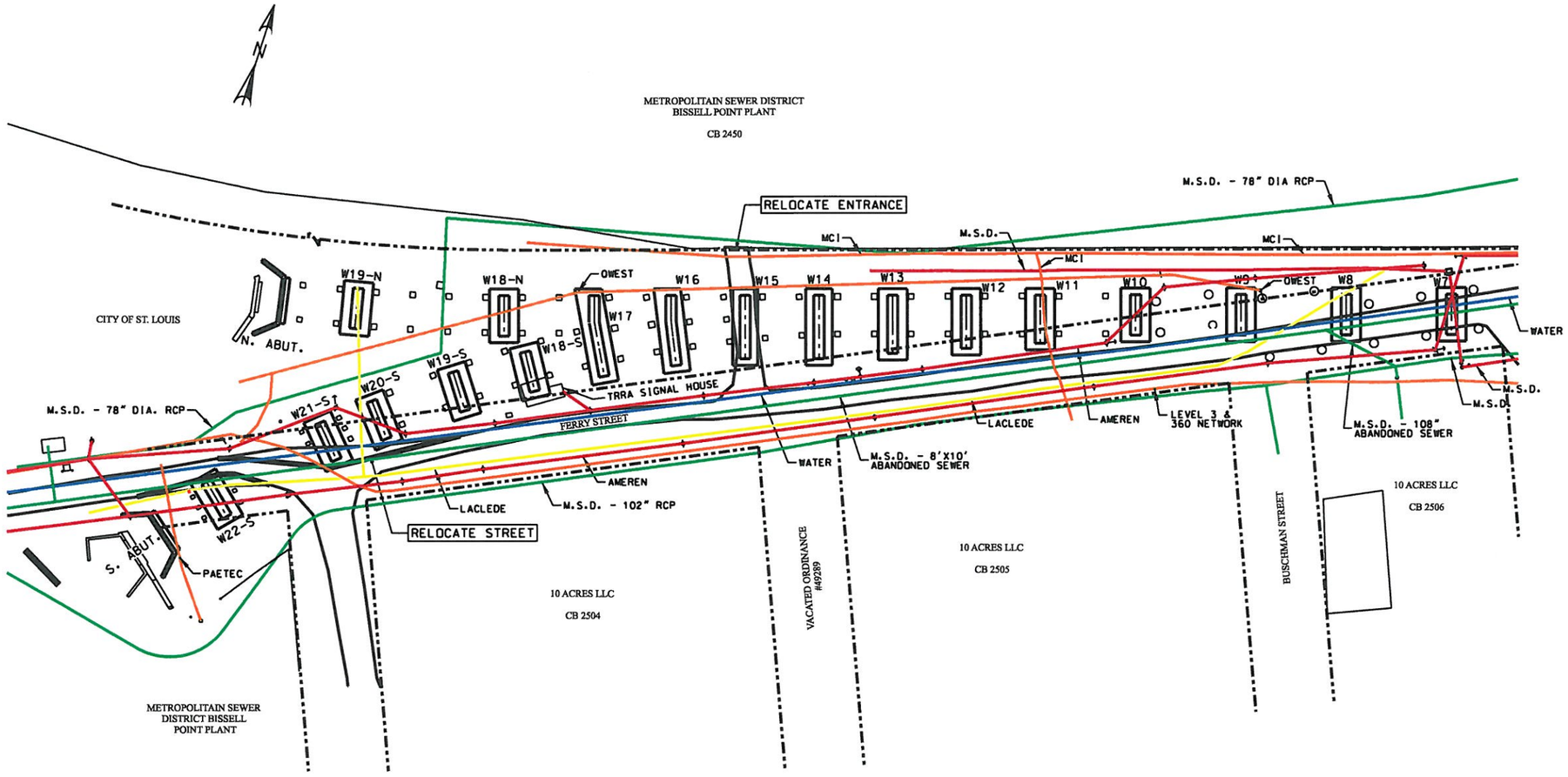
NEW ORLEANS, LA
POUGHKEEPSIE, NY

SEC/SUR * TWP _ RGE _



UTILITY PLAN - WEST APPROACH

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS THE EXISTENCE OF WHICH IS AT PRESENT NOT KNOWN. VERIFICATION OF THE LOCATIONS OF UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, WILL BE THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR.

LIST OF UTILITY RELOCATIONS:

BENT W7 - UNDERGROUND ELECTRIC, OVERHEAD ELECTRIC & WATER
BENT W8 - GAS & WATER
BENT W9 - FIBER OPTIC & WATER
BENT W10 - OVERHEAD ELECTRIC
BENT W11 - FIBER OPTIC
BENT W15 - FIBER OPTIC
BENT W16 - FIBER OPTIC
BENT W17 - FIBER OPTIC
BENT W18-N - FIBER OPTIC
BENT W18-S - TRRA SIGNAL HOUSE
BENT W19-N - GAS
BENT W20-S - GAS, OVERHEAD ELECTRIC & WATER
BENT W21-S - FIBER OPTIC, OVERHEAD ELECTRIC & WATER
BENT W22-S - GAS & OVERHEAD ELECTRIC
SOUTH ABUT. - FIBER OPTIC & OVERHEAD ELECTRIC
ON STRUCTURE - FIBER OPTIC & TRRA SIGNALS

Designed ACK
Detailed PRC
Checked DWP

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

DATE
DATE PREPARED 12-14-11
ROUTE . STATE MO
DISTRICT . SHEET NO. 9
COUNTY ST. LOUIS CITY
JOB NO.
CONTRACT ID.
PROJECT NO.
BRIDGE NO.

DESCRIPTION | DATE

TERMINAL RAILROAD ASSOC. OF ST. LOUIS
MERCHANTS BRIDGE OVER MISSISSIPPI RIVER
ST. LOUIS, MISSOURI
WEST APPROACH REPLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MODJESKI and MASTERS
MECHANICSBURG, PA
CHARLESTON, WV
EDWARDSVILLE, IL
MOORESTOWN, NJ
PHILADELPHIA, PA
NEW ORLEANS, LA
POUGHKEEPSIE, NY
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